

BOARD OF ENVIRONMENTAL REVIEW

FEBRUARY 26, 2021

9:00 am

DEQ ZOOM CONFERENCE

NOTE: Board members, the Board attorney, and secretary will be participating electronically. Interested persons, members of the public, and the media are welcome to attend via Zoom or telephonically. Members of the public and press also may join Board members with prior arrangement. Contact information for Board members is available on the Board's Website (<http://deg.mt.gov/DEQAdmin/ber/board>). The Board will make reasonable accommodations for persons with disabilities who wish to participate in this meeting. Please contact the Interim Board Secretary by e-mail at jwittenberg@mt.gov, no less than 24 hours prior to the meeting to advise her of the nature of the accommodation needed.

9:00 AM

I. MEMBER ORIENTATION

A. ONBOARDING INFORMATION FOR INCOMING MEMBERS

The Board has four newly appointed members.

1. How the agency interacts with the Board - Deputy Director George Mathieus
2. Legal duties and authority of the Board - Katherine Orr & Sarah Clerget
3. Administrative matters - Interim Board Secretary Joyce Wittenberg

II. ACTION ITEMS

A. NEW CONTESTED CASES

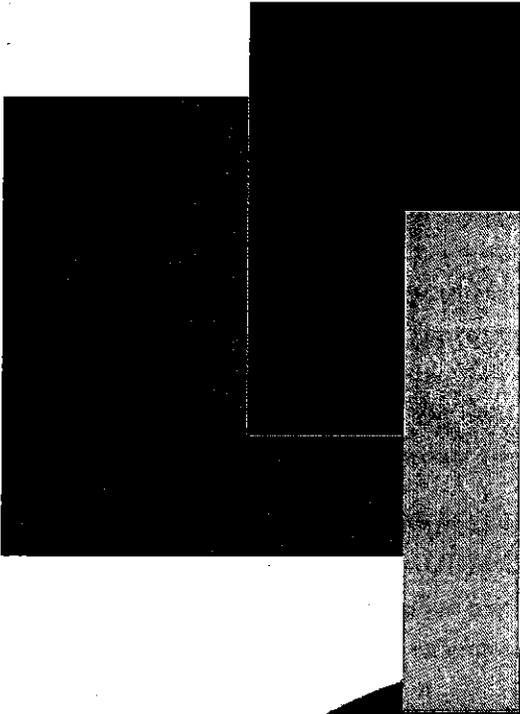
1. **In the matter of notice of contest and request for hearing by Talen Montana, LLC, regarding the selection of a remedy and setting of financial assurance for the Colstrip Steam Electric Station Units 1 & 2, BER 2020-07 MFSA/WQA.** The Board received the appeal December 17, 2020. The Board can decide to assign a hearings examiner for procedural issues in this case, hear the case itself, or assign a hearing examiner for the totality of the case.
2. **In the matter of the Notice of Appeal and request for hearing regarding DEQ's approval of Riverside Contracting, Inc.'s Opencut Mining Permit #3234 (Arrow Creek Site) by multiple appellants, BER 2020-08 OC.** The Board received the appeal December 23, 2020. The Board can decide to assign a hearings examiner for procedural issues in this case, hear the case itself, or assign a hearing examiner for the totality of the case.
3. **In the matter of the notice of appeal and request for hearing (by "Conservation Groups") regarding DEQ's issuance of a final Section 401 Water Quality Certification, #MT4011079 to Transcanada Keystone Pipeline LP for the Keystone XL Pipeline Project, BER 2021-01 WQ.** The Board received the appeal January 4, 2021. The Board can decide to assign a hearings examiner for procedural issues in this case, hear the case itself, or assign a hearing examiner for the totality of the case.

4. **In the matter of the Indigenous Environmental Network's and North Coast Rivers Alliance's appeal of the Montana Department of Environmental Quality's final determination to issue a 401 Water Quality Certification for the Keystone XL Pipeline, DEQ Application No. MT4011079, BER 2021-02 WQ.** The Board received the appeal February 1, 2021. The Board can decide to assign a hearings examiner for procedural issues in this case, hear the case itself, or assign a hearing examiner for the totality of the case.

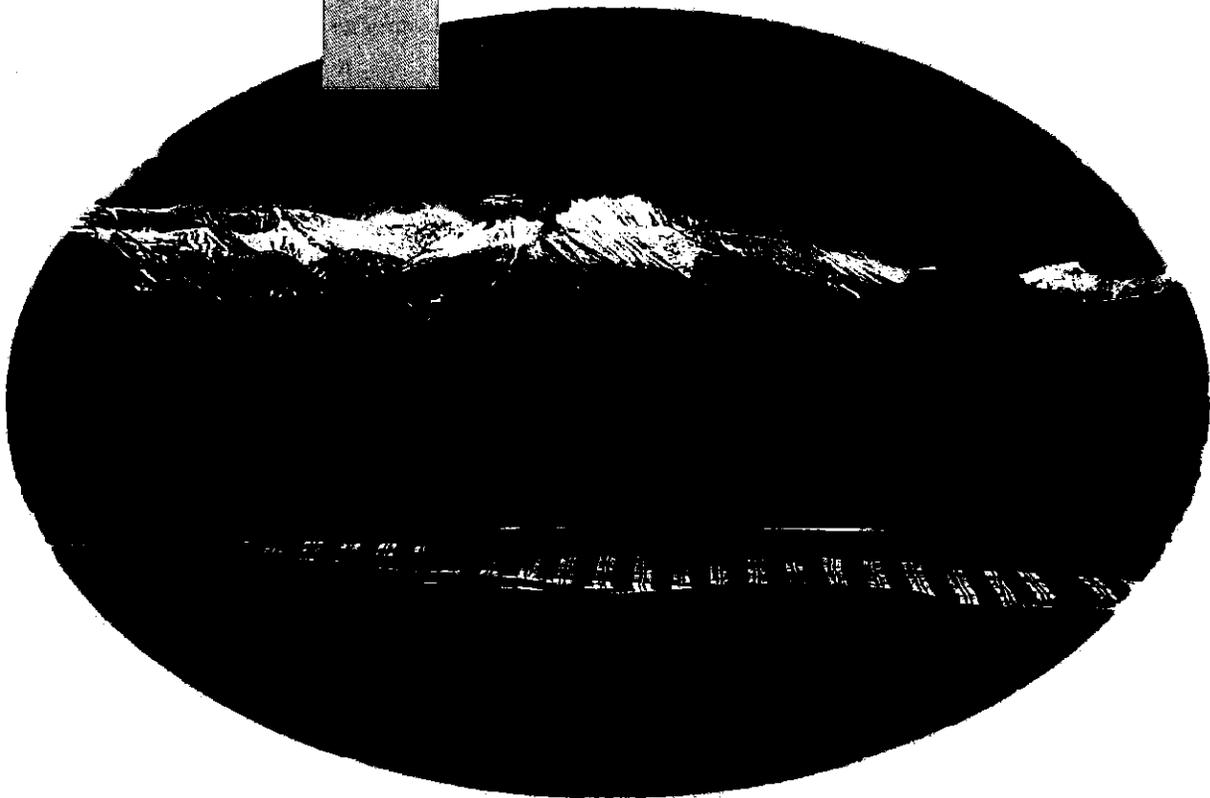
III. GENERAL PUBLIC COMMENT

Under this item, members of the public may comment on any public matter within the jurisdiction of the Board that is not otherwise on the agenda for the meeting. Individual contested case proceedings are not public matters on which the public may comment.

IV. ADJOURNMENT



Orientation Handbook



Montana's Boards, Councils and Commissions
October 2018

Photo Credits: Montana Office of Tourism and the Montana Tourism Advisory Council



GOVERNOR STEVE BULLOCK

Thank you for your commitment to Montana. It is my sincere hope that providing your experience, skills and knowledge to the state of Montana is as rewarding and enriching to you as it will be beneficial to all of Montana.

You have accepted great responsibility and we will be expecting wonderful insight and thoughtful leadership from you.

I look forward to working together over the next couple of years as we keep Montana one of the best places to work, live, raise a family and start or grow a business.

Boards, Councils and Commissions - Every board is unique in its purpose, authority, membership and mission. Becoming familiar with your board type and mission will help you be successful. Staff with your board, council and commission should provide specific orientation materials, background and any applicable forms or documents you might need. You can always contact staff with your board or the Governor's office for additional information.

Montana State Government - Every board, council or commission is attached to one branch of government, Executive, Legislative or Judicial. In the Executive Branch, there are agencies and every board is attached to an agency for management and administration.

Quasi-Judicial Boards - These boards make independent decisions and have unique governing structures. While many of them are allowed to make their own decisions, in most cases agency attorneys will still advise and direct quasi-judicial boards on their jurisdiction.

Advisory Councils - Advisory Councils are simply that, advisory in nature. They exist to advise their agency, department, elected official, etc. They typically do not direct staff, make binding decisions or set policy.

Authority to Act - Authority, when given, is always given to a board as a whole, not to an individual member. A board's majority must agree on a course of action, and individual members may not act without prior approval of the board as a whole.

Confidentiality - The Montana Constitution balances the public's right to know with an individual's right to privacy. As a board member it is important to understand what issues are required to be reviewed in public and which issues require confidentiality. Staff and attorney's with your board can assist with any questions you might have.

PUBLIC SERVICE

Public service is something we are all committed to and requires a unique set of skills and communication. In order to participate effectively, the following set of skills can be most useful: serve the public's interest first; perform your duties openly with the public; attend meetings regularly; come prepared; communicate; and have respect for others. Life, family, career and other obstacles can arise. If you feel you can no longer serve your board effectively, please contact the Governor's Office to make alternative arrangements.

Right of Participation – The Montana Constitution allows the public the right to access and participate in government.

Right to Know – The Constitution also allows the public to review documents and the deliberations of public bodies, except in cases where the demand of individual privacy clearly exceeds the merits of disclosure.

Open Government – Under Montana law, all meetings are open to the public regardless of the nature of the issues being discussed.

Closing Meetings – There are some boards that deal with cases or information where the right to individual privacy outweighs the public's right to know. Some examples include personnel reviews, medical case files or accusations of misconduct. In all such cases, staff with your agency will work with the board Chair to determine which portions of a meeting are conducted in closed session.

Communication – Meetings are required to be public anytime a quorum is present, and in small groups this can occur by any method, email, social media or phone calls. Make sure to respect the public's right to participate and know that email, text or social media communication can potentially be subject to public review and scrutiny.

Ethics – As a public officer, you are required to follow the state of Montana's code of ethics and conduct. When a personal or professional conflict arises in your work, it may be necessary to withdraw your vote or disclose the conflict. Substantial gifts are not allowed, and that includes anything valued over \$50. Confidential information may not be used for personal economic gain. Public property of the state may not be used in the benefit of private business. Proof of an ethics violation may be grounds for removal.

Safety and Threats – While extremely rare, sometimes the public may become incensed over an action or comment made by a board member. The public has the right to voice their disagreement, but you have the right to feel safe. If you ever encounter a scenario where you no longer feel safe or have received threats of harm against yourself or others, please notify both your local law enforcement as well as the staff at your board, council or commission immediately.

BOARD BUSINESS AND LEADERSHIP

Quorum - Typically a majority of membership constitutes a quorum, which is the minimum number of members who are required to be present in order to do any business. Check with your staff to determine if any special rules dictate your boards' quorum requirements, as some boards differ.

Meetings - While no two meetings are the same, all public meetings tend to follow similar protocol, most following Roberts Rule of Order. Many start with a call to order, a roll call/attendance, approval of past minutes, reports from officers, staff, standing committees, new business, public comment, announcements and adjournment.

Presiding Officer or Chair - All boards have a presiding officer or Chair. In some cases, the Governor selects this person, in others the board votes to select this person. Regardless of how they are chosen, they share the same responsibilities. Chairs work with staff to prepare agendas and schedules, and they run the meeting. Chairs must balance their role to guide the meeting with that of a board member to remain engaged in the meeting. Between meetings Chairs may do additional work to prepare the board and staff for future meetings or on projects as necessary.

Tips for Chairs

Time Management - Keep members and the public on schedule.

Agenda - Keep comments to the approved agenda items and topics.

Respectful - Keep comments, meetings and all discussions respectful.

Staffing - Provide services or other assistance to staff as they help your board by taking meeting minutes or other services.

Open Meetings - Ensure the public has the right to participate and that they introduce themselves when presenting or commenting.

Motions - Advise members when they need to clarify or adjust motions.

Rules - Ensure the meeting and board follows all applicable rules.

Voting - Keep discussion on the motion at hand, and follow general procedures which typically include a motion, a second, discussion and then a vote by members.

Recusal - When a Chair needs to leave early or has a conflict of interest, they may recuse themselves and the position by assigning it to their Vice Chair or another member, as guided by their rules.

LEGISLATIVE COMMUNICATIONS

Every legislative session, board members get involved in the legislative process. The most important distinction is to know whether you are participating as a private citizen or in your capacity as a board member. In order to participate and introduce yourself as representing your board, you must follow specific approval steps, including board, agency and then Gubernatorial approval.

Governor's Role - The Governor is the Chief Executive of the Executive Branch and is responsible for formulating and administering all of the policies of the Executive Branch and this includes all budgets, policies and priorities. This responsibility extends to boards connected to the Executive Branch. He and his office work diligently to coordinate these efforts both within and across all state agencies. Boards must work with their agency structure to coordinate all legislation and lobbying efforts.

Boards' Role - The most common role boards play is to advocate for bills correcting program defects, fixing statutory problems, resolving conflicts or supporting improvements in their area of expertise. Less frequently, they may become involved in controversial bills. In cases where conflict exists between boards, agencies or other policies, the Governor is empowered to resolve the conflict and make the final decision prior to legislative lobbying. This may mean that your board is not authorized to support legislation you previously voted to support.

Approval - Boards must work through public meeting rules to allow public input on bills of interest. Also a vote of approval must take place for a board to move forward in the approval process. A majority of members must support a bill or a general concept when flexibility is required during the legislative process. Then the board must seek agency approval. Again, agencies and the Executive Branch work to coordinate all efforts, to ensure there are not any duplicative or conflicting efforts.

Testimony - All board members should only give testimony that is factual, relevant and informative, and approved by their board. This information should be well understood and presented in a way that does not create conflict, confusion or surprise. They should introduce themselves as representing their board. There are times when a board member may disagree with the approved position of a majority of their board. Should they choose, these board members may appear and testify on their own behalf, but must state definitively that their views are not shared by their board and they are not eligible for any official support or reimbursements for doing so.

Advisory Councils - Advisory Council members are rarely approved to testify at the Legislature. As their service is advisory in nature, if their policy direction is adopted, an agency will pursue the legislation with that recommendation. Some may be asked to participate and with agency approval may do so. If approved, this testimony should also be simply advisory and a summary of what the Council may have advised their agency.

MEDIA COMMUNICATIONS

Media can attend meetings and report on statements, debates and actions taken by you and your board, council and commission. These members of the media may also contact you directly about your appointment, decisions and statements made. Public officials are expected to treat members of the media with respect and honesty.

As a board member you have the support of staff at your board, council or commission. You are encouraged to let them know if media contact you outside of a meeting either for assistance. This staff can help you with a response or keep other board members, the agency and the Governor's office informed of current and potential news stories.

Some quick tips to consider:

- Always ensure your interactions with the media are respectful.
- You have the right to not comment and/or request to have another person complete the conversation (staff or another board member).
- Your staff is available and wants to help you and the board be represented well in the media.
- You must follow all confidentiality rules as they apply to your work.
- If you are speaking on behalf of your board, please ensure you have the approval and support of your board along with an approved response.



Additional Resources

Governor's Office: www.governor.mt.gov

Boards and Appointments: www.boards.mt.gov

State Government: www.mt.gov

Montana State University's Burton K. Wheeler
Center: www.wheelercenter.org

Montana State Legislature and Montana Code:
www.leg.mt.gov

Commissioner of Political Practices:
www.politicalpractices.mt.gov

Administrative Rules: www.mtrules.org

Secretary of State: www.sos.mt.gov

State of Montana Ethics Guidelines: www.hr.mt.gov

NEW MEMBER ORIENTATION

I. General Statutes

II. Board Duties

III. Rulemaking Procedures

IV. Ethical Requirements

V. Open Meeting/Public Participation Laws

VI. Law of Contested Cases

MCA Contents / TITLE 2 / CHAPTER 15 / Part 35 / 2-15-3502 Board of env...

Montana Code Annotated 2017

TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION
CHAPTER 15. EXECUTIVE BRANCH OFFICERS AND AGENCIES
Part 35. Department of Environmental Quality

Board Of Environmental Review

2-15-3502. Board of environmental review. (1) There is a board of environmental review.

(2) The board consists of seven members appointed by the governor. The members must be representative of the geographic areas of the state. One member must have expertise or background in hydrology. One member must have expertise or background in local government planning. One member must have expertise or background in one of the environmental sciences. One member must have expertise or background as a county health officer or as a medical doctor.

(3) A vacancy occurring on the board must be filled by the governor in the same manner and from the same representative area as the original appointment.

(4) The board is designated as a quasi-judicial board for purposes of **2-15-124**.

(5) The board is attached to the department of environmental quality for administrative purposes only as provided in **2-15-121**.

History: En. Sec. 21, Ch. 418, L. 1995.

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MCA Contents / TITLE 2 / CHAPTER 15 / Part 1 / 2-15-124 Quasi-judicial...

Montana Code Annotated 2017

TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION
CHAPTER 15. EXECUTIVE BRANCH OFFICERS AND AGENCIES
Part 1. General Provisions

Quasi-Judicial Boards

2-15-124. Quasi-judicial boards. If an agency is designated by law as a quasi-judicial board for the purposes of this section, the following requirements apply:

(1) The number of and qualifications of its members are as prescribed by law. In addition to those qualifications, unless otherwise provided by law, at least one member must be an attorney licensed to practice law in this state.

(2) The governor shall appoint the members. A majority of the members must be appointed to serve for terms concurrent with the gubernatorial term and until their successors are appointed. The remaining members must be appointed to serve for terms ending on the first day of the third January of the succeeding gubernatorial term and until their successors are appointed. It is the intent of this subsection that the governor appoint a majority of the members of each quasi-judicial board at the beginning of the governor's term and the remaining members in the middle of the governor's term. As used in this subsection, "majority" means the next whole number greater than half.

(3) The appointment of each member is subject to the confirmation of the senate then meeting in regular session or next meeting in regular session following the appointment. A member so appointed has all the powers of the office upon assuming that office and is a de jure officer, notwithstanding the fact that the senate has not yet confirmed the appointment. If the senate does not confirm the appointment of a member, the governor shall appoint a new member to serve for the remainder of the term.

(4) A vacancy must be filled in the same manner as regular appointments, and the member appointed to fill a vacancy shall serve for the unexpired term to which the member is appointed.

(5) The governor shall designate the presiding officer. The presiding officer may make and second motions and vote.

(6) Members may be removed by the governor only for cause.

(7) Unless otherwise provided by law, each member is entitled to be paid \$50 for each day in which the member is actually and necessarily engaged in the performance of board duties and is also entitled to be reimbursed for travel expenses, as provided for in **2-18-501** through **2-18-503**, incurred while in the performance of board duties. Members who are full-time salaried officers or employees of this state or of a political subdivision of this state are not entitled to be compensated for their service as members except when they perform their board duties outside their regular working hours or during

time charged against their leave, but those members are entitled to be reimbursed for travel expenses as provided for in **2-18-501** through **2-18-503**. Ex officio board members may not receive compensation but must receive travel expenses.

(8) A majority of the membership constitutes a quorum to do business. A favorable vote of at least a majority of all members of a board is required to adopt any resolution, motion, or other decision, unless otherwise provided by law.

History: En. 82A-112 by Sec. 1, Ch. 272, L. 1971; amd. Sec. 12, Ch. 358, L. 1973; amd. Sec. 57, Ch. 439, L. 1975; amd. Sec. 1, Ch. 186, L. 1977; R.C.M. 1947, 82A-112(1), (2)(a), (3) thru (8); amd. Sec. 1, Ch. 83, L. 1983; amd. Sec. 1, Ch. 672, L. 1983; amd. Sec. 1, Ch. 650, L. 1985; amd. Sec. 73, Ch. 61, L. 2007.

Created by **LAWSON**

MCA Contents / TITLE 2 / CHAPTER 15 / Part 1 / 2-15-121 Allocation for...

Montana Code Annotated 2017

TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION
CHAPTER 15. EXECUTIVE BRANCH OFFICERS AND AGENCIES
Part 1. General Provisions

Allocation For Administrative Purposes Only

2-15-121. (Temporary) Allocation for administrative purposes only. (1) An agency allocated to a department for administrative purposes only in this chapter shall:

(a) (i) exercise its quasi-judicial, quasi-legislative, licensing, and policymaking functions independently of the department and without approval or control of the department except as provided in subsection (1)(a)(ii);

(ii) accede, if the agency is a licensing board regulated by the department of labor and industry under Title 37, to the active supervision required by **37-1-121(1)(d)**;

(b) submit its budgetary requests through the department; and

(c) submit reports required of it by law or by the governor through the department.

(2) The department to which an agency is allocated for administrative purposes only in this title shall:

(a) direct and supervise the budgeting, recordkeeping, reporting, and related administrative and clerical functions of the agency;

(b) include the agency's budgetary requests in the departmental budget;

(c) collect all revenues for the agency and deposit them in the proper fund or account. Except as provided in **37-1-101**, the department may not use or divert the revenues from the fund or account for purposes other than provided by law.

(d) provide staff for the agency. Unless otherwise indicated in this chapter, the agency may not hire its own personnel.

(e) print and disseminate for the agency any required notices, rules, or orders adopted, amended, or repealed by the agency.

(3) The department head of a department to which any agency is allocated for administrative purposes only in this chapter shall:

(a) represent the agency in communications with the governor;

(b) allocate office space to the agency as necessary, subject to the approval of the department of administration. (*Terminates July 1, 2021--sec. 8, Ch. 322, L. 2017.*)

2-15-121. (Effective July 2, 2021) Allocation for administrative purposes only. (1) An agency

allocated to a department for administrative purposes only in this chapter shall:

(a) exercise its quasi-judicial, quasi-legislative, licensing, and policymaking functions independently of the department and without approval or control of the department;

(b) submit its budgetary requests through the department;

(c) submit reports required of it by law or by the governor through the department.

(2) The department to which an agency is allocated for administrative purposes only in this title shall:

(a) direct and supervise the budgeting, recordkeeping, reporting, and related administrative and clerical functions of the agency;

(b) include the agency's budgetary requests in the departmental budget;

(c) collect all revenues for the agency and deposit them in the proper fund or account. Except as provided in **37-1-101**, the department may not use or divert the revenues from the fund or account for purposes other than provided by law.

(d) provide staff for the agency. Unless otherwise indicated in this chapter, the agency may not hire its own personnel.

(e) print and disseminate for the agency any required notices, rules, or orders adopted, amended, or repealed by the agency.

(3) The department head of a department to which any agency is allocated for administrative purposes only in this chapter shall:

(a) represent the agency in communications with the governor;

(b) allocate office space to the agency as necessary, subject to the approval of the department of administration.

History: En. 82A-108 by Sec. 1, Ch. 272, L. 1971; amd. Sec. 8, Ch. 358, L. 1973; R.C.M. 1947, 82A-108; amd. Sec. 1, Ch. 322, L. 2017.

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BOARD DUTIES (2015)

A. Rulemaking

The areas where the Board makes rules are:

1. Its own rules for the conduct of administrative appeals, rulemaking, and declaratory rulings.
2. Air Quality (Montana Clean Air Act, MCA § 75-2-101 et seq.)
3. Water Quality (MCA § 75-5-101 et seq.)
4. Public Water Supply (MCA § 75-6-101 et seq.)
5. Waste and Litter Control (MCA § 75-10-101 et seq.) (fee rules only)
6. Montana Major Facility Siting Act (MCA § 75-20-101 et seq.)
7. Montana Agricultural Chemical Ground Water Protection Act (MCA § 80-15-101 et seq.)
8. Strip and Underground Mine Siting Act (MCA § 82-4-101 et seq.)
9. Montana Strip and Underground Mine Reclamation Act (MCA § 82-4-201 et seq.)
10. Metal Mine Reclamation (MCA § 82-4-301 et seq.)
11. Opencut Mining Act (MCA § 82-4-401 et seq.)

B. Rulemaking Requirements.

The Montana Administrative Procedure Act, commencing at Mont. Code Ann. § 2-4-101 establish standards for procedure and content for any rulemaking agency, including the Board. The Acts basically spell out requirements for public notice, comments, and other proceedings a proposed rule must undergo. The Board has also enacted its own rules and adopted the Secretary of State's model rulemaking rules.

4. Water Quality (MCA § 75-5-101 et seq.)
5. Public Water Supply (MCA § 75-6-101 et seq.)
6. Waste and Litter Control (MCA § 75-10-101 et seq.)
7. Montana Solid Waste Management Act (MCA § 75-10-201 et seq.)
8. Montana Hazardous Waste Act (MCA § 75-10-401 et seq.)
9. Motor Vehicle Recycling and Disposal (MCA § 75-10-501 et seq.)
10. Comprehensive Environmental Cleanup and Responsibility Act (MCA § 75-10-701 et seq.)
11. Cesspool, Septic Tank, and Privy Cleaners (MCA § 75-10-1201 et seq.)
12. Montana Underground Storage Tank Installer Licensing and Permitting Act (MCA § 75-11-201 et seq.)
13. Montana Underground Storage Tank Act (MCA § 75-11-501 et seq.)
14. Montana Major Facility Siting Act (MCA § 75-20-101 et seq.)
15. Sanitation in Subdivisions (MCA § 76-4-101 et seq.)
16. Montana Strip and Underground Mine Siting Act (MCA § 82-4-101 et seq.)
17. Montana Strip and Underground Mine Reclamation Act (MCA § 82-4-201 et seq.)
18. Metal Mine Reclamation Act (MCA § 82-4-301 et seq.)
19. Opencut Mining Act (MCA § 82-4-401 et seq.)

**BOARD OF ENVIRONMENTAL REVIEW
MINUTES**

December 7, 2018

Call to Order

The Board of Environmental Review's meeting was called to order by Chairperson Deveny at 9:00 a.m., on Friday, December 7, 2018, in Room 111 of the Metcalf Building, 1520 East 6th Avenue, Helena, Montana.

Attendance

Board Members Present in person: Chairperson Christine Deveny, John DeArment,

Board Members Present by Phone: Chris Tweeten, Dexter Busby, Tim Warner

Board Members Absent: John Felton, Hillary Hanson

Board Attorney Present: Sarah Clerget, Attorney General's Office (AGO)

Board Liaison Present: George Mathieus

Board Secretary Present: Lindsay Ford

Court Reporter Present: Laurie Crutcher, Crutcher Court Reporting

Department Personnel Present: Sandy Scherer, Ed Hayes, Mark Lucas, Kirsten Bowers, Aaron Pettis, Sarah Christopherson, Kurt Moser, Nick Whitaker, Norm Mullen – LEGAL; Dan Freeland, Mindy McCarthy, Eric Sivers, Jason Garber, Jon Dilliard, Rachel Clark, Myla Kelly, Tim Davis, Eric Regensburger, Eric Urban, Jon Kenning, Mike Suplee, Darryl Barton, Joanna McLaughlin, Haley Sir, Derek Fleming, Emilie Erich Hoffman – WQD; Chad Anderson, Susan Bawden – ENF; Amy Steinmetz – WMRD; Julie Merkel, Rebecca Harbage, Liz Ulrich, Ed Warner, Shawn Juers, Carl Anderson, Ed Coleman, Dave Klemp, Chris Cronin, Chris Dorrington – AEMD

Interested & Other Persons Present: Wade Steer – Western Energy Co.; John Martin, Vicki Marquis – Holland and Hart; Greg Brice – Hydrometrics; Steve Story – DNRC Board of Water Well Contractors; John Tietz, Brian Thompson – BKBH; Landy Leep – Copper Ridge Development; Shiloh Hernandez – Western Environmental Law Center; Anne Hedges – MEIC;

Roll was called: two Board members were present in person and three Board members were present via teleconference, providing a quorum.

I.A. Administrative Items – Review and Approve Minutes

I.A.1. October 5, 2018 Meeting Minutes

Mr. DeArment MOVED to approve the meeting minutes. Chairperson Deveny SECONDED. The motion PASSED unanimously.

I.B.1. Establish the 2019 Meeting Schedule

Mr. DeArment MOVED to approve the 2019 meeting schedule. Chairperson Deveny SECONDED. The motion PASSED unanimously.

II.A.1. Briefing Items – Enforcement Cases assigned to the Hearing Examiner

II.A.1.a. In the matter of the Notice of Appeal and Request for Hearing by CMG Construction, Inc. Regarding Notice of Violations and Administrative Compliance and Penalty Order, Docket No. OC-17-12, BER 2017-08 OC.

Ms. Clerget said the parties are working out the technical details of the case and CMG will file a notice of dismissal once the parties have reached an agreement.

II.A.1.b. In the Matter of Appeal Revocation of Cosa, Fischer Land Development Subdivision [ES# 42-78-S3-173] and Fischer Homes [ES# 42-80-T1-15], Roger Emery, Sidney, Richland County, Montana. [FID# 2214], BER 2018-03 SUB.

Ms. Clerget stated the stay is still in place as the parties work on their settlement terms.

II.A.1.c. In the matter of violations of the Opencut Mining Act by Wagoner Family Partnership, d/b/a Wagoner's Sand and Gravel, at River Gravel Pit, Flathead County, Montana (Opencut No. 1798; FID 2512), BER 2017-02 OC.

Ms. Clerget said a stipulation for dismissal will be filed soon.

II.A.1.d. In the Matter of Violation of the Metal Mine Reclamation Act by Little Bear Construction, Inc. at Bob Weaver Pit, Granite County, Montana. (SMED NO. 46-117C; FID # 2567), BER 2018-02 MM.

Ms. Clerget stated there's a scheduling order in place and the parties are proceeding accordingly.

II.A.2. Briefing Items – Non-Enforcement Cases Assigned to a Hearing Examiner

II.A.2.b. An appeal in the matter of amendment application AM3, Signal Peak Energy LLC's Bull Mountain Coal Mine #1 Permit No. C1993017, BER 2016-07 SM.

Ms. Clerget said she extended all pretrial motions pending an issue that's before the District Court.

II.A.2.c. In the matter of Appeal Amendment AM4, Western Energy Company Rosebud Strip Mine Area B, Permit No. C1984003B, BER 2016-03 SM.

Ms. Clerget stated she has the proposed findings of facts and conclusions of law from the parties and will have a decision to the Board soon.

II.A.2.d. In the matter of the notice of appeal and request for hearing by Montanore Minerals Corporation Regarding Issuance of MPDES Permit No. MT0030279, Libby, Montana, BER 2017-03 WQ.

Ms. Clerget held a trial earlier in the week and the parties are working their proposed findings of facts and conclusions of law.

II.A.2.e. In the matter of the notice of appeal of final MPDES Permit No. MT0000264 issued by DEQ for the Laurel Refinery in Laurel, Yellowstone County, Montana, BER 2015-07 WQ.

Ms. Clerget stated there is a six month stay in place until February 25, 2019.

II.A.2.f. In the Matter of Notice of Appeal of Opencut Mining Permit #2351 Issued to Golden West Properties, LLC by Frank and Paulette Wagner Regarding Concerns and Unanswered Questions. BER 2018-04 OC, and In the Matter of Notice of Appeal of Opencut Mining Permit #2351 Issued to Golden West Properties, LLC by David Weyer on behalf of the Residents of Walden Meadows Subdivision. BER 2018-05 OC.

Ms. Clerget has issued a scheduling order and the parties are proceeding accordingly.

I.A.3. Briefing Items – Contested Cases Not Assigned to a Hearing Examiner

II.A.3.a. In the matter of the notice of appeal and request for hearing by Western Energy Company (WECO) regarding its MPDES Permit No. MT0023965 issued for WECO's Rosebud Mine in Colstrip, BER 2012-12 WQ.

Ms. Bowers stated Western Energy filed an unopposed motion for an extension of the due date to file the reply brief. The motion was granted and briefs are due January 2019. The matter is still before the Montana Supreme Court.

III.A. Action Items – APPEAL, AMEND, OR ADOPT FINAL RULES:

III.A.1. The Department will propose that the Board initiate rulemaking to add six human health ground water criteria into department Circular DEQ-7: diallate; dioxane, 1,4-; iron; manganese; perfluorooctane sulfonate (PFOS); and perfluorooctanoic acid (PFOA.)

Dr. Suplee briefed the Board and answered questions.

Chairperson Deveny opened the floor for public comment.

Mr. Brice asked the Board to delay any decision on initiating the rulemaking and stated his concerns.

Dr. Suplee, Mr. Mathieus, Tim Davis, Eric Urban answered questions.

Mr. Busby MOVED to continue with rulemaking for four of the criteria: diallate, dioxane 1, 4, and perfluorooctane and have a separate rulemaking for the other two: manganese and iron. Mr. Tweeten SECONDED for purpose of discussion. The motion FAILED to pass on a 1-4 vote.

Mr. DeArment MOVED to initiate rulemaking as requested by the Department and to assign the Board attorney as the Hearings Examiner for purposes of conducting a rulemaking hearing. Chairperson Deveny SECONDED. The motions PASSED on a 4-1 vote.

III.A.2. **The Department will propose that the Board initiate rulemaking to establish an air quality registration program for portable sources of emissions by amending and adopting the following air quality rules in ARM Title 17, Chapter 8:**

- a. **Amend ARM 17.8.744 to provide a general exclusion from the requirement to obtain a Montana air quality permit for facilities that register with the department in accordance with the proposed new rules.**
- b. **Adopt New Rules I-IX to establish a registration process, applicability criteria, and rules of operation for certain portable sources of emissions.**

Ms. Harbage briefed the Board and answered questions.

Chairperson Deveny opened the floor for public comment.

Mr. Thompson thanked the Air Quality Bureau for the hard work and outreach to stakeholders urged the Board to approve the rulemaking.

Mr. DeArment MOVED to initiate rulemaking as requested by the Department and to assign the Board attorney as the Hearings Examiner for purposes of conducting a rulemaking hearing and to change the date Ms. Harbage requested in the notice. Chairperson Deveny SECONDED. The motion PASSED unanimously.

III.A.3. **The Department will propose that the Board initiate rulemaking for proposed amendments to Administrative Rules of Montana (ARM) 17.30.1001, 17.30.1334, 17.38.101 and Department Circulars DEQ-1, DEQ-2, and DEQ-3. The amendments include adding or updating a citation to New Rule I. The 2017 Legislature required the Department to initiate rulemaking to implement HB 368 - establishing the minimum setback distance between a well and a lagoon. New Rule I implements HB 368 and establishes the minimum setback through Department rulemaking. New Rule I will be initiated concurrently with the Board rulemaking.**

Mr. Regensburger briefed the Board and answered questions.

Chairperson Deveny opened the floor for public comment. None were offered.

Mr. Tweeten MOVED to initiate rulemaking as requested by the Department and to assign the Board attorney as the Hearings Examiner for purposes of conducting a rulemaking hearing. The motion PASSED unanimously.

III.A.4. | **The Department will propose that the Board adopt amendments to Administrative Rules of Montana (ARM) 17.30.103, 17.30.106, 17.30.108 and 17.30.109 regarding 401 Certification.**

Mr. Garber briefed the Board and answered questions.

Chairperson Deveny opened the floor for public comment. None were offered.

Chairperson Deveny **MOVED** to adopt the amendments to the Administrative Rules of Montana pertaining to the 401 certifications. Mr. DeArment **SECONDED**. The motion **PASSED** unanimously.

III.B. Action on Contested Cases

III.B.1. | **In the matter of violations of the Water Quality Act by Reflections at Copper Ridge, LLC, at Reflections at Copper Ridge Subdivision, Billings, Yellowstone County (MTR105376), BER 2015-01 WQ and in the matter of violations of the Water Quality Act by Copper Ridge Development Corporation at Copper Ridge Subdivision, Billings, Yellowstone County (MTR105377), BER 2015-02 WQ.**

The Board heard oral arguments from parties on Copper Ridge's Motion to Strike. Chairperson Deveny **MOVED** to deny the motion to strike. Mr. Tweeten **SECONDED**, the motion **PASSED** unanimously. The Board began oral arguments on the issue of owner/operator, then broke for lunch. Upon returning from the lunch break there was not a quorum to continue to hear the case so oral arguments were postponed.

IV. Board Counsel Update

| Ms. Clerget had no updates.

V. General Public Comment

| None were offered.

VI. Adjournment

| Chairperson Deveny **MOVED** to adjourn. Mr. DeArment **SECONDED**. Chairperson Deveny adjourned the meeting at 1:10 p.m.

Board of Environmental Review December 7, 2018, minutes approved:

CHRISTINE DEVENY
CHAIRPERSON
BOARD OF ENVIRONMENTAL REVIEW

DATE

**FREQUENTLY ASKED QUESTIONS ABOUT THE PROCEDURE FOR APPEALING
DECISIONS OF THE DEPARTMENT OF ENVIRONMENTAL QUALITY TO THE
BOARD OF ENVIRONMENTAL REVIEW (rev. 6-6-05)**

These frequently asked questions summarize the process that the Board of Environmental Review employs in hearing contested case matters. While the requirements and deadlines provided below are only guidelines followed by the Board and may be modified given the issues presented and the needs of the particular case, the parties to any contested case should expect to follow those procedures throughout the contested case.

Q: How does a person aggrieved by a decision of the Department of Environmental Quality seek relief?

A: Under Montana law, some, but not all, decisions of the Department of Environmental Quality can be administratively appealed to the Board of Environmental Review, which conducts a contested case proceeding.

Q: What is a contested case?

A: A contested case is a proceeding before an agency (not a court) in which a determination of legal rights, duties, or privileges of a party is required by law to be made after an opportunity for hearing. Laws specifically pertaining to contested case procedures are in Montana Code Annotated, Title 2, chapter 4, part 6. The goal of the Board of Environmental Review is to provide fair and timely contested case hearings.

Q: What laws allow a person to request a contested case hearing with the Board of Environmental Review?

A: Many different laws allow a person to request a contested case hearing with the Board. A person's right to appeal, or seek review of, a decision of the Department of Environmental Quality varies with the subject matter and the specific terms of the applicable statute. Pertinent statutes include the following:

Montana Code Annotated Section 37-42-321 (appeal of order of Department of Environmental Quality revoking the certificate of a water treatment plant operator)

Montana Code Annotated Section 75-2-211 (appeal of approval or denial by Department of Environmental Quality of air quality permit for construction, installation, alteration, or use)

Montana Code Annotated Section 75-2-218 (appeal of approval or denial by Department of Environmental Quality of air quality operating permit)

Montana Code Annotated Section 75-2-401 (appeal of administrative enforcement action of Department of Environmental Quality for violation of air quality laws)

Montana Code Annotated Section 75-2-515 (appeal of administrative enforcement action of Department of Environmental Quality under Asbestos Control Act)

Montana Code Annotated Section 75-5-303 (appeal of decision of Department of Environmental Quality authorizing degradation of high-quality waters)

Montana Code Annotated Section 75-5-403 (appeal of denial or modification of water quality permit issued by Department of Environmental Quality by applicant or holder of water quality permit)

Montana Code Annotated Section 75-5-516(8)(10) (appeal of certain water quality fee assessments)

Montana Code Annotated Section 75-5-611 (appeal of order and administrative penalty issued by Department of Environmental Quality for violation of water quality laws)

Montana Code Annotated Section 75-6-108(5) (appeal of fee assessment of Department of Environmental Quality for public water supply system)

Montana Code Annotated Section 75-6-109 (appeal of administrative enforcement action of Department of Environmental Quality for violation of public water supply laws)

Montana Code Annotated Section 75-10-224 (appeal of denial or revocation of license to operate a solid waste management system issued by Department of Environmental Quality)

Montana Code Annotated Section 75-10-227 (appeal of administrative enforcement action of Department of Environmental Quality for violation of waste and litter control laws)

Montana Code Annotated Section 75-10-406 (appeal of denial or revocation of hazardous waste management permit issued by Department of Environmental Quality)

Montana Code Annotated Section 75-10-413 (appeal of administrative enforcement action of Department of Environmental Quality for violation of hazardous waste management laws)

Montana Code Annotated Section 75-10-515 (appeal of decision of Department of Environmental Quality to issue, deny, or revoke a motor vehicle wrecking facility license)

Montana Code Annotated Section 75-10-540 (appeal of administrative enforcement action of Department of Environmental Quality for violation of motor vehicle recycling and disposal laws)

Montana Code Annotated Section 75-10-1221 (appeal of denial or revocation of Septic Disposal License)

Montana Code Annotated Section 75-11-512 (appeal of administrative enforcement action of Department of Environmental Quality under Underground Storage Tank Act)

Montana Code Annotated Section 75-11-525 (appeal of administrative penalty order of Department of Environmental Quality under Underground Storage Tank Act)

Montana Code Annotated Section 75-20-223 (appeal of decisions under the Major Facility Siting Act)

Montana Code Annotated Section 76-4-108 (appeal of notice of violation of sanitation in subdivisions laws issued by Department of Environmental Quality)

Montana Code Annotated Section 76-4-126 (appeal of denial of approval of subdivision plans and specifications relating to environmental health facilities issued by Department of Environmental Quality)

Montana Code Annotated Sections 82-4-112, -129, -130 (appeals of orders to adopt remedial measures, suspending or revoking permits, or other final decisions of Department of Environmental Quality under Strip and Underground Mine Siting Act)

Montana Code Annotated Sections 82-4-205, -206, -254 (appeals of orders to adopt remedial measures, suspending or revoking permits, proposed administrative penalties, or other final decisions of Department of Environmental Quality under Strip and Underground Mine Reclamation Act)

Montana Code Annotated Sections 82-4-337, -338, -341, -353, -361, -362 (appeals of modifications or refusals to modify reclamation plans, bond level adjustments, orders to abate conditions or to commence reclamation, denials of applications for permits and licenses and amendments or revisions to permits or licenses, administrative penalties, revocation of permits and licenses and forfeiture of performance bond by Department of Environmental Quality under Metal Mine Reclamation Act)

Montana Code Annotated Sections 82-4-427, -441 (appeals of final decisions and proposed civil penalties issued by Department of Environmental Quality under the Opencut Mining Act)

The following chart summarizes most of subjects and laws relating to the right to initiate a contested case with the Board of Environmental Review:

SUBJECT MATTER	STATUTORY REFERENCE FROM THE MONTANA CODE ANNOTATED
Water treatment plant operator	37-42-321
Air quality permits	75-2-211 and 75-2-218
Air quality enforcement actions	75-2-401
Asbestos Control Act enforcement actions	75-2-515
Degradation of high-quality waters	75-5-303
Water quality permits	75-5-403
Water quality fee assessments	75-5-516(8)(10)
Water quality enforcement actions	75-5-611
Public water supply fee assessment	75-6-108(5)
Public water supply enforcement actions	75-6-109
Solid waste management system licenses	75-10-224
Waste and litter control enforcement actions	75-10-227

Hazardous waste management permits	75-10-406
Hazardous waste management enforcement actions	75-10-413
Motor vehicle wrecking facility licenses	75-10-515
Motor vehicle recycling and disposal enforcement actions	75-10-540
Septic disposal license	75-10-1221
Underground Storage Tank Act administrative enforcement actions	75-11-512
Underground Storage Tank Act administrative penalty orders	75-11-525
Decisions involving the Major Facility Siting Act	75-20-223
Subdivision sanitation notice of violations	76-4-108
Subdivision plans	76-4-126
Decisions involving the Strip and Underground Mine Siting Act	82-4-112, -129, -130
Decisions involving the Strip and Underground Mine Reclamation Act	82-4-205, -206, -254
Decisions involving the Metal Mine Reclamation Act	82-4-337, -338, -341, -353, -361, -362
Decisions involving the Opencut Mining Act	82-4-427, -441

Q: How does a person request a contested case hearing?

A: The process varies, depending on the statute that applies. Generally the request must be in writing and must be made within a time period specified in the applicable statute and must be made by a person adversely affected by the challenged decision. The person requesting the contested case hearing should read and comply with the applicable statute to ensure that the appeal is properly and timely filed.

Q: What procedures apply to contested cases?

A: The Board of Environmental Review has adopted the Attorney General's model procedural rules, which are published in the Administrative Rules of Montana. The specific rules for

contested cases are 1.3.211 through 1.3.225. The general provisions, rules 1.3.230 through 1.3.233, also apply to contested cases.

Q: Are contested case procedures similar to the procedures that apply in civil suits in Montana district courts?

A: Yes, the procedures are similar. Instead of a judge, a hearing examiner, who is a lawyer appointed by the Board of Environmental Review, regulates the course of contested case proceedings. Some of the Attorney General's model rules incorporate the Montana Rules of Civil Procedure, which are in Title 25, chapter 20 of the Montana Code Annotated. For example, 1.3.217, which is Model Rule 13, generally follows the discovery rules that apply to civil suits, and 1.3.232, which is Model Rule 27, generally provides that all motions and pleadings will be served in accordance with the Montana Rules of Civil Procedure. Usually, the party requesting the hearing has the burden of proof by the preponderance of the evidence.

Q: Besides the person requesting the hearing and the Department of Environmental Quality, who else may be a party in a contested case before the Board of Environmental Review?

A: In cases involving permitting decisions, in which the person requesting the hearing is not the permit applicant, the permit applicant will be notified of the request for hearing and may become a party (intervene) in the contested case by complying with the hearing examiner's prehearing order. When the permit applicant timely complies with the hearing examiner's order, a motion to intervene is not required. The hearing examiner's order will usually contain a paragraph similar to the following example:

A copy of this order is being provided to counsel for the permit applicant. No separate motion to intervene is required if the permit applicant complies with this order and proposes a schedule for further proceedings after consultation with the other parties. The permit applicant shall be considered to have intervened in these contested case proceedings by timely submitting a proposed schedule.

Q: How long does the contested case process take?

A: The goal of the Board of Environmental Review is that hearings be held within 120 days of the request for hearing.

Where the parties agree on a faster or slower schedule, the hearing examiner will normally approve their agreed schedule. If a party requests that the Board of Environmental Review hear the case, instead of a hearing examiner appointed by the Board, the time needed to bring the case to hearing may exceed 120 days.

Q: How is a schedule for a contested case established?

A: After a hearing is requested, the Standing Interim Hearing Examiner issues a prehearing order that is mailed to the parties and, if a permit applicant is not a party, to the permit applicant. The order will give the parties about two weeks to consult with each other and propose an agreed schedule to the hearing examiner. If the parties are unable to agree on a schedule, the hearing examiner will set a schedule for the contested case.

Q: Suppose that a hearing is requested on February 1 and the parties are not able to agree on a schedule by the February 15 deadline set in the hearing examiner's prehearing order. What would a typical scheduling order provide?

A: Here is an example scheduling order, based upon the dates suggested in the question.

The following schedule is set:

1. No later than February 28: disclosure by each party to the other parties of: (a) the name and address of each individual likely to have discoverable information that the disclosing party may use to support its claims or defenses, and (b) a copy of, or a description by category and location of, all documents and tangible things that are in the possession, custody, or control of the disclosing party and that the disclosing party may use to support its claims or defenses.

2. No later than March 7: joinder/intervention of additional parties.

3. No later than April 14: completion of discovery. Discovery requests should be served at least 30 days prior to that date in order to allow sufficient time for responses to be filed by the date for completion of discovery.

4. No later than April 22: submission of any motions and briefs in support.

5. No later than May 7, 2002: submission of answer/response briefs.

6. No later than May 14:
a. submission of reply briefs;
b. exchange of lists of witnesses and copies of documents that each party intends to offer at the hearing.

7. May 22, at 9 a.m.: pursuant to Mont. Code Ann. § 2-4-611, a prehearing conference shall be held by telephone. The hearing examiner shall initiate the telephone conference. The purpose of the prehearing conference is to consider simplification of facts and issues by consent of the parties, hear argument on any outstanding motions, and confirm a schedule for further proceedings, including the date, time, and place of hearing.

8. June 1, beginning at 9 a.m.: contested case hearing.

9. If this schedule becomes unworkable for any party, that person should consult with the other party and propose a revised schedule upon which the parties agree.

Q: May a party file documents with the hearing examiner by e-mail or facsimile?

A: Yes. The Board follows the Attorney General's model rules of procedure. Model Rule 27, which is Administrative Rule of Montana 1.3.232, generally provides that papers may be served in accordance with the Montana Rules of Civil Procedure. Rule 5(e) of the Montana Rules of Civil Procedure allows the filing of papers by facsimile or other electronic means, provided that the original document is filed within five business days of the receipt of the facsimile or electronic copy.

Q: How are papers filed with the Board?

A: By providing them to the Secretary, Board of Environmental Review, Department of Environmental Quality, Metcalf Building,

1520 East Sixth Avenue, P.O. Box 200901, Helena, MT 59620-0901.
The facsimile number is (406) 444-4386. The e-mail address is
ber@mt.gov. If papers are submitted by e-mail, the preferred
software is Microsoft Word 6.0, or later.

FREQUENTLY ASKED QUESTIONS ABOUT REQUESTS FOR HEARINGS REGARDING AIR QUALITY PERMITS

Q: What air quality permits are subject to appeal?

A: The Department of Environmental Quality issues two air quality permits that are subject to appeal. Appeals of a Montana air quality permit, commonly referred to as a pre-construction permit, are governed by Montana Code Annotated Section 75-2-211(10). Appeals of an air quality operating permit are governed by Montana Code Annotated Section 75-2-218(5).

Q: Montana Code Annotated Sections 75-2-211(10) and 75-2-218(5) both state that a request for a hearing before the Board must include an affidavit. What is an affidavit?

A: An affidavit is a written declaration under oath. Normally, an affidavit is notarized by a notary public. For more information about affidavits and specific requirements for affidavits made outside of Montana, see Montana Code Annotated Sections 26-1-1001 through -1006.

Q: What information should be included in the affidavit?

A: In most cases the affidavit should contain the following information:

The person making the affidavit should be identified, including name, address, and, capacity in which the person is filing the appeal. For example, an officer of a corporation, union, or other legal entity should state his or her title and provide information about the entity the officer represents.

The affidavit should state how the person (including a legal "person" such as a corporation) is adversely affected by the decision of the Department of Environmental Quality. The affidavit should set forth some connection between the decision being challenged and some legally-protected interest of the person making the affidavit.

Montana Code Annotated Sections 75-2-211(10) and 75-2-218(5) require that the affidavit set forth the grounds for the request. Because air quality permits are usually lengthy, the affidavit should state what specific provision(s) of the permit is/are challenged and state the reasons for the challenge. Vague, generalized statements, such as simply asserting that a

paragraph of a permit is "illegal" or "irrational" are not helpful. Instead, the affidavit should contain a succinct, clear statement of the reason for the challenge. A person who fails to provide a specific reason for the challenge may be requested to provide a more definite and detailed statement under Model Rule 12, which is Administrative Rule of Montana 1.3.216.

The affidavit should state what relief is requested.

Q: After an affidavit requesting a hearing has been submitted, may the grounds for requesting the hearing be changed?

A: It depends. The time within which to file a request for a hearing is 15 days for permits under Montana Code Annotated Section 75-2-211(10) and 30 days for permits under Montana Code Annotated Section 75-2-218(5). Suppose an affidavit requesting the hearing and setting forth the grounds for the request is filed before the statutory deadline. The person requesting the hearing would have until the statutory deadline to change the grounds for requesting the hearing. By comparison, if the request for hearing were filed on the day of the deadline, then a later change in the grounds for the request would be untimely, because it would be made after the time period allowed by the statute. As a practical matter, during the discovery process the grounds for requesting the hearing are often clarified. Some grounds may be modified and others abandoned. Nevertheless, after the statutory deadline has expired, the introduction of materially different grounds for appeal may prejudice the rights of the other party(ies) and unduly delay the proceedings. Unlike civil suits, in which amended and supplemental pleadings are liberally allowed, the Board may not allow liberal amendments in contested cases involving air quality permits. Therefore, amendments after the expiration of the statutory deadline should only clarify, but not expand, the grounds for appeal set forth in the affidavit.

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CHAPTER 4. ADMINISTRATIVE PROCEDURE ACT

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Part 7. Judicial Review of Contested Cases

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MCA Contents / TITLE 2 / CHAPTER 4 / Part 3

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- 2-4-322 Repealed
- 2-4-323 Repealed

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Montana Code Annotated 2017

TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 4. ADMINISTRATIVE PROCEDURE ACT

Part 3. Adoption and Publication of Rules

Notice, Hearing, And Submission Of Views

2-4-302. Notice, hearing, and submission of views. (1) (a) Prior to the adoption, amendment, or repeal of any rule, the agency shall give written notice of its proposed action. The proposal notice must include a statement of either the terms or substance of the intended action or a description of the subjects and issues involved, the reasonable necessity for the proposed action, and the time when, place where, and manner in which interested persons may present their views on the proposed action. The reasonable necessity must be written in plain, easily understood language.

(b) The agency shall state in the proposal notice the date on which and the manner in which contact was made with the primary sponsor as required in subsection (2)(d). If the notification to the primary sponsor was given by mail, the date stated in the proposal notice must be the date on which the notification was mailed by the agency. If the proposal notice fails to state the date on which and the manner in which the primary sponsor was contacted, the filing of the proposal notice under subsection (2)(a)(i) is ineffective for the purposes of this part and for the purposes of the law that the agency cites in the proposal notice as the authority for the proposed action.

(c) If the agency proposes to adopt, increase, or decrease a monetary amount that a person shall pay or will receive, such as a fee, cost, or benefit, the notice must include an estimate, if known, of:

(i) the cumulative amount for all persons of the proposed increase, decrease, or new amount; and

(ii) the number of persons affected.

(2) (a) (i) The proposal notice must be filed with the secretary of state for publication in the register, as provided in **2-4-312**. Except as provided in subsection (2)(a)(ii), within 3 days of publication, a copy of the published proposal notice must be sent to interested persons who have made timely requests to the agency to be informed of its rulemaking proceedings, and to the office of any professional, trade, or industrial society or organization or member of those entities who has filed a request with the appropriate administrative rule review committee when the request has been forwarded to the agency as provided in subsection (2)(b).

(ii) In lieu of sending a copy of the published proposal notice to an interested person who has requested the notice, the agency may, with the consent of that person, send that person an electronic notification that the proposal notice is available on the agency's website and an electronic link to the part of the agency's website or a description of the means of locating that part of the agency's website where the notice is available.

(iii) Each agency shall create and maintain a list of interested persons and the subject or subjects in which each person on the list is interested. A person who submits a written comment or attends a hearing in regard to proposed agency action under this part must be informed of the list by the agency. An agency complies with this subsection if it includes in the proposal notice an advisement explaining how persons may be placed on the list of interested persons and if it complies with subsection (7).

(b) The appropriate administrative rule review committee shall forward a list of all organizations or persons who have submitted a request to be informed of agency actions to the agencies that the committee oversees that publish rulemaking notices in the register. The list must be amended by the agency upon request of any person requesting to be added to or deleted from the list.

(c) The proposal notice required by subsection (1) must be published at least 30 days in advance of the agency's proposed action. The agency shall post the proposal notice on a state electronic access system or other electronic communications system available to the public.

(d) (i) When an agency begins to work on the substantive content and the wording of a proposal notice for a rule that initially implements legislation, the agency shall contact, as provided in subsection (8), the legislator who was the primary sponsor of the legislation to:

(A) obtain the legislator's comments;

(B) inform the legislator of the known dates by which each step of the rulemaking process must be completed; and

(C) provide the legislator with information about the time periods during which the legislator may comment on the proposed rules, including the opportunity to provide comment to the appropriate administrative rule review committee.

(ii) If the legislation affected more than one program, the primary sponsor must be contacted pursuant to this subsection (2)(d) each time that a rule is being proposed to initially implement the legislation for a program.

(iii) Within 3 days after a proposal notice covered under subsection (2)(d)(i) has been published as required in subsection (2)(a)(i), a copy of the published notice must be sent to the primary sponsor contacted under this subsection (2)(d).

(3) If a statute provides for a method of publication different from that provided in subsection (2), the affected agency shall comply with the statute in addition to the requirements contained in this section. However, the notice period may not be less than 30 days or more than 6 months.

(4) Prior to the adoption, amendment, or repeal of any rule, the agency shall afford interested persons at least 20 days' notice of a hearing and at least 28 days from the day of the original notice to submit data, views, or arguments, orally or in writing. If an amended or supplemental notice is filed, additional time may be allowed for oral or written submissions. In the case of substantive rules, the notice of proposed rulemaking must state that opportunity for oral hearing must be granted if requested by either 10% or 25, whichever is less, of the persons who will be directly affected by the proposed rule, by a governmental subdivision or agency, by the appropriate administrative rule review

committee, or by an association having not less than 25 members who will be directly affected. If the proposed rulemaking involves matters of significant interest to the public, the agency shall schedule an oral hearing.

(5) An agency may continue a hearing date for cause. In the discretion of the agency, contested case procedures need not be followed in hearings held pursuant to this section. If a hearing is otherwise required by statute, nothing in this section alters that requirement.

(6) If an agency fails to publish a notice of adoption within the time required by **2-4-305(7)** and the agency again proposes the same rule for adoption, amendment, or repeal, the proposal must be considered a new proposal for purposes of compliance with this chapter.

(7) At the commencement of a hearing on the intended action, the person designated by the agency to preside at the hearing shall:

(a) read aloud the "Notice of Function of Administrative Rule Review Committee" appearing in the register; and

(b) inform the persons at the hearing of the provisions of subsection (2)(a) and provide them an opportunity to place their names on the list.

(8) (a) For purposes of contacting primary sponsors under subsection (2)(d), a current or former legislator who wishes to receive notice shall keep the current or former legislator's name, address, e-mail address, and telephone number on file with the secretary of state. The secretary of state may also use legislator contact information provided by the legislative services division for the purposes of the register. The secretary of state shall update the contact information whenever the secretary of state receives corrected information from the legislator or the legislative services division. An agency proposing rules shall consult the register when providing sponsor contact.

(b) An agency has complied with the primary bill sponsor contact requirements of this section when the agency has attempted to reach the primary bill sponsor at the legislator's address, e-mail address, and telephone number on file with the secretary of state pursuant to subsection (8)(a). If the agency is able to contact the primary sponsor by using less than all of these three methods of contact, the other methods need not be used.

(9) This section applies to the department of labor and industry adopting a rule relating to a commercial drug formulary as provided in **39-71-704**. This section does not apply to the automatic updating of department of labor and industry rules relating to commercial drug formularies as provided in **39-71-704**.

History: En. Sec. 4, Ch. 2, Ex. L. 1971; amd. Sec. 5, Ch. 410, L. 1975; amd. Sec. 1, Ch. 482, L. 1975; amd. Sec. 8, Ch. 285, L. 1977; R.C.M. 1947, 82-4204(part); amd. Sec. 4, Ch. 243, L. 1979; amd. Sec. 1, Ch. 381, L. 1981; amd. Sec. 1, Ch. 429, L. 1983; amd. Sec. 1, Ch. 152, L. 1997; amd. Sec. 1, Ch. 340, L. 1997; amd. Sec. 2, Ch. 489, L. 1997; amd. Sec. 3, Ch. 19, L. 1999; amd. Sec. 1, Ch. 41, L. 1999; amd. Sec. 2, Ch. 210, L. 2001; amd. Sec. 2, Ch. 88, L. 2007; amd. Sec. 1, Ch. 207, L. 2007; amd. Sec. 2, Ch. 394, L. 2007; amd. Sec. 2, Ch. 21, L. 2009; amd. Sec. 2, Ch. 41, L. 2011; amd. Sec. 1, Ch. 53, L. 2011; amd. Sec. 1, Ch. 433, L. 2017.



July 23, 2015

Senator Jill Cohenour
2610 Colt Drive
East Helena, MT 59635-3442

RE: SB 249 Initial Implementation

Dear Sen. Cohenour:

Thank you again for agreeing to be the primary sponsor of SB 249 in the 2015 session. As you will recall, that bill generally modified the energy performance contracting statutes and authorized the Department to adopt rules to implement the bill.

Section 2-4-302(2)(d), MCA, provides that when an agency commences work on the substantive content and wording of a proposal notice for a rule that initially implements legislation, the agency shall notify the primary sponsor of the legislation. Therefore, I am advising you that this process has commenced for SB 249.

It is our goal to initiate rulemaking sometime in the late fall and have the rules adopted in early 2016. When we initiate rulemaking, the public will be given at least 28 days to comment. However, prior to the initiation, we intend to work with a stakeholder group to assist in drafting the proposed rules.

There is no legal deadline for initiation or adoption of these rules, except that the rules must be adopted within 6 months of the date that the notice of proposed rulemaking is published. In the case of an amended notice of proposed rulemaking, this 6-month deadline starts again from the date of the amended notice.

I have designated Laura Andersen, Chief of the Department's Energy & Pollution Prevention Bureau, to oversee this process. Her telephone number is 444-6588. Please feel free to contact her for additional information or to submit comments or suggestions.

In addition, you will be mailed a copy of the notice of proposed rulemaking when it is published. You may submit comments during the comment period in the manner indicated in the notice. You may also notify the Environmental Quality Council, which is the legislative rule review committee for the Department of Environmental Quality, of any objection you may have to the proposed rules contained in the notice. A rule review committee may take the following actions on a proposed rule:

1. Under 2-4-305(9), if a majority of the members of a rule review committee notify the presiding officer that they object to the notice of proposed rulemaking, the committee must notify the agency that the committee objects, and the agency cannot publish notice of adoption of the rule until the end of the 6-month period described above.



MEMO

TO: Board of Environmental Review
FROM: Norman J. Mullen, DEQ Staff Attorney 
SUBJECT: House Bill 521 (stringency) and House Bill 511 (takings) review of rulemaking concerning the amendment of ARM 17.8.101, 103, 201, 202, 204, and 230, and the repeal of ARM 17.8.206 (pertaining to air quality assurance project plans for ambient monitoring) in ARM Notice No. 17-367 (publ. 12/24/14)
DATE: January 15, 2015

HB 521 REVIEW
(Comparing Stringency of State and Local Rules
to Any Comparable Federal Regulations or Guidelines)

Sections 75-2-111 and 207, MCA, codify the air quality provisions of House Bill 521, from the 1995 legislative session, by requiring that the Board of Environmental Review, prior to adopting a rule to implement the Clean Air Act of Montana that is more stringent than a comparable federal regulation or guideline that addresses the same circumstances, make certain written findings after a public hearing and receiving public comment.

In this proceeding, the Board is proposing to amend ARM 17.8.101, 103, 201, 202, 204, and 230, and to repeal ARM 17.8.206. I conducted the following analysis to determine if any of these amendments were more stringent than a comparable federal regulation or guideline addressing the same circumstances

The amendments would add definitions of "board" and "department" to ARM 17.8.101, which contains definition used throughout ARM title 17, chapter 8. There is no stringency issue with the proposed amendment to ARM 17.8.101.

The amendment to ARM 17.8.103 would remove from that rule references to guidance and other documents that are already referenced in federal regulations that are incorporated by reference in ARM Title 17, chapter 8, subchapter 1. There is no stringency issue with the proposed amendments to ARM 17.8.103.

The amendment to ARM 17.8.202(1)(a) would adopt and incorporate by reference the updated 2013 version of the Montana Ambient Air Monitoring Program Quality Assurance Project Plan (QAPP) and remove the outdated 1996 version of the QAPP. Montana is required by 40 CFR Part 58, Appendix A, to have a QAPP for ambient monitoring conducted by the state. The

House Bill 521 and House Bill 311 Memo for
Rule Amendments Concerning Air Quality Assurance
Project Plans for Ambient Monitoring
ARM Notice No. 17-367
January 15, 2015
Page 3

specific QAPP for postconstruction monitoring. Therefore, the requirement in the proposed amendment is not more stringent than comparable federal regulations or guidance addressing the same or similar circumstances.

Regarding monitoring performed by an entity other than the Department that is required by a Montana air quality rule or to demonstrate compliance with such a rule, there is no comparable federal regulation. Therefore, the requirement in the proposed amendment is not more stringent than a comparable federal requirement addressing the same or similar circumstances.

Regarding non-PSD ambient monitoring required in an application for a permit or in a condition of a permit, there is no comparable federal regulation. Therefore, the requirement in the proposed amendment is not more stringent than a comparable federal requirement addressing the same or similar circumstances.

Regarding ambient air quality monitoring performed by an entity other than the Department to satisfy a requirement of the state or federal clean air acts or implementing regulations, there is no comparable federal regulation. Therefore, the requirement in the proposed amendment is not more stringent than a comparable federal requirement addressing the same or similar circumstances.

Regarding the proposed amendment addressing invalidation of data not obtained in compliance with ARM 17.8.204, 40 C.F.R. Part 58, Appendix A, ¶ 1(a), gives EPA discretion to invalidate data for use in making regulatory decision based on a "weight of the evidence" approach. The proposed amendment would give the Department similar discretion to invalidate data. Therefore, the requirement in the proposed amendment is not more stringent than a comparable federal requirement addressing the same or similar circumstances.

Regarding the proposed amendment to ARM 17.8.230, which would remove a reference to the semi-automated method for fluoride monitoring in Methods of Air Sampling and Analysis, which is incorporated by reference in ARM 17.8.202, and substitute a case-by-case determination of an appropriate method, there is no comparable federal regulation. Therefore, the proposed amendment would not result in a rule that is more stringent than a comparable federal requirement addressing the same or similar circumstances.

Regarding the proposed repeal of ARM 17.8.206, concerning methods and data requirements for ambient air quality monitoring, the board is proposing the repeal because the requirements are already contained in applicable Montana rules or federal regulations. Therefore, the repeal

PRIVATE PROPERTY ASSESSMENT ACT CHECKLIST
(using form prepared by Montana Department of Justice, Jan. 2011)

In the matter of the amendment of ARM.17.8:101, 103, 201, 202, 204, and 230, and the repeal of ARM 17.8.206 (pertaining to air quality assurance project plans for ambient monitoring) in ARM Notice No. 17-367 (publ. 12/24/14)

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PRIVATE PROPERTY ASSESSMENT ACT?

YES NO

- | | | |
|---------------|---------------|---|
| <u> </u> | <u> √ </u> | 1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights? |
| <u> </u> | <u> √ </u> | 2. Does the action result in either a permanent or indefinite physical occupation of private property? |
| <u> </u> | <u> √ </u> | 3. Does the action deprive the owner of all economically beneficial use of the property? |
| <u> </u> | <u> √ </u> | 4. Does the action require a property owner to dedicate a portion of property or to grant an easement? [If the answer is NO, skip questions 4a and 4b and continue with question 5.] |
| <u> </u> | <u> </u> | 4a. Is there a reasonable, specific connection between the government requirement and legitimate state interests? |
| <u> </u> | <u> </u> | 4b. Is the government requirement roughly proportional to the impact of the proposed use of the property? |
| <u> </u> | <u> √ </u> | 5. Does the action deny a fundamental attribute of ownership? |
| <u> </u> | <u> √ </u> | 6. Does the action have a severe impact on the value of the property? |
| <u> </u> | <u> √ </u> | 7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? [If the answer is NO, do not answer questions 7a-7c.] |
| <u> </u> | <u> </u> | 7a. Is the impact of government action direct, peculiar, and significant? |
| <u> </u> | <u> </u> | 7b. Has government action resulted in the property becoming practically inaccessible, waterlogged, or flooded? |
| <u> </u> | <u> </u> | 7c. Has government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question? |

Law School for Legislators: Administrative Rulemaking

John F. North, Chief Legal Counsel, Department of Environmental Quality

January 8, 2013

- I. What is a rule? The Montana Administrative Procedure Act (MAPA) (Title 2, Chapter 4, MCA), which governs most state agency rulemaking, defines it as an agency regulation, standard or statement that implements, interprets, or prescribes (establishes) law or policy. In other words, it is a requirement or procedure that affects the public. Most agency rules have the force and effect of law.
- II. Where are Montana's rules located? - Administrative Rules of Montana (ARM), which is published by the Secretary of State
- III. Why are rules adopted?
 - A. To "fill in the gaps" in legislation and provide the public with certainty as to what is required
 - B. To allow the public to have input into what the rules will be
- IV. Where do agencies get the authority to adopt rules? From the Legislature. MAPA Does not confer rulemaking authority but provides that, in order to adopt a rule, the agency must have statutory authority elsewhere to adopt the rule.
- V. Procedural Requirements (contained in Montana Administrative Procedure Act (MAPA))
 - A. The Agency gives public notice of proposed rules
 1. How
 - a. Publication in Montana Administrative Register (MAR), which is published by the Secretary of State
 - b. Mailing – Agencies must keep list of interested persons and mail to them.
 2. Contents of notice
 - a. Text of rules or rule amendments-
 - b. Statement of reasonable necessity—The agency must explain the principle reasons for proposing the rules
 - c. Notice of how public may provide comments
 - C. Agency takes public comment on proposed rules
 1. Comment period – Public must be given least 28 days to submit written comments.
 2. Public Hearing – Agencies often hold public hearings to take oral comments. An agency must hold a hearing if one is requested by 25 persons or 10% of persons affected.
 - D. Agency considers public comment
 - E. Agency takes final action
 1. Agency may adopt rule as proposed, adopt rule with amendments suggested by public, or decide not to adopt rule

VII. Legislative Participation in Rulemaking Process

A. Bill Sponsor Notification

1. Initial Notification--When an agency begins to draft initial rules to implement a bill, the agency must notify the primary bill sponsor. This allows the bill sponsor to have input into the drafting process.

2. Second Notification—The agency must also send the principal sponsor a copy of the notice of proposed rulemaking when the agency publishes it. This allows the bill sponsor to comment on the proposed rules.

3. Effect of Bill Sponsor Comments—If the agency adopts a rule that does not reflect the comments of the bill sponsor, the agency must provide an explanation of why the comments were not incorporated into the final rule.

B. Rule Review Committees

1. The law designates the following interim committees as rule review committees for the following agencies:

-Economic Affairs—Departments of Agriculture, Commerce, Labor and Industry, Livestock, State Auditor and Insurance Commissioner, Office of Economic Development, and State Compensation Insurance Fund

- Education and Local Government—State Board of Education, Board of Public Education, Board of Regents, and Office of Public Instruction.

-Children, Families, Health, and Human Services—Department of Health and Human Services

-Revenue and Transportation—Departments of Revenue and Transportation

-State Administration and Veterans' Affairs—Departments of Administration and Military Affairs, State Compensation Insurance Fund, and Secretary of State.

-Environmental Quality Council—Departments of Environmental Quality, Fish Wildlife and Parks, and Natural Resources and Conservation.

2. Authority of Rule Review Committees

a. Under 2-4-305(9), MCA, if a majority of the members of a rule review committee notify the presiding officer that they object to the notice of proposed rulemaking, the committee must notify the agency that the committee objects, and the agency cannot publish notice of adoption of the rule until the end of the 6-month period for rule adoption provided in the Montana Administrative Procedure Act. This action can be taken only before the rule is adopted.

b. Under 2-4-306(4)(c), MCA, if a rule review committee has

ETHICS PROVISIONS APPLICABLE TO BOARD MEMBERS

Article XIII, Section 4, of the Montana Constitution provides:
“The legislature shall provide a code of ethics prohibiting conflict between public duty and private interest for members of the legislature and all state and local officers and employees.”

To comply with this directive, the Montana Legislature in 1977 adopted the Code of Ethics (hereinafter “Code”), which is codified in Title 2, Chapter 2, part 1, of the Montana Code Annotated. A copy of the Code is attached. The Code provides standards for legislators, public officers, and public employees. Section 2-2-102(7) of the Code defines the term “public employee” to include “a member of a quasi-judicial board or commission or of a board, commission, or committee with rulemaking authority.” The Board of Environmental Review is a quasi-judicial board and has rulemaking authority. Members of the Board are therefore public employees under the Code.

Three sections of the Code are applicable to public employees. They are sections 2-2-104, 2-2-105, and 2-2-121. Each of these provisions contains a number of ethical standards. In addition, section 2-2-201, which is not part of the Code, contains standards of conduct relating to contracts. A copy of that statute is also attached. And finally, federal law contains a prohibition against an employee who has a decision-making role in the coal regulatory program from having an interest in a coal operation. I have summarized the standards and prohibition below and have grouped them by topic rather than by statute. The citation to the statute that contains the standard summarized is given at the end of each summary.

GIFTS

1. Acceptance of Gifts—A public employee may not accept a gift of substantial value or a substantial economic benefit tantamount to a gift that would tend to improperly influence the employee in the faithful and impartial discharge of duties or that the employee knows or should know is primarily for the purpose of rewarding him for action taken. The term “gift of substantial value” is defined as a gift of \$50 or more in value. The term “economic benefit tantamount to a gift” includes a loan at a rate of interest substantially lower than the prevalent commercial rate and compensation for services rendered at a rate substantially exceeding the fair market value of the services. 2-2-104(1)(b).

FINANCIAL INTERESTS AND TRANSACTIONS

1. Acquisition of Financial Interest— Except as provided in 2-2-105(4), a public employee may not acquire an interest in a business or undertaking that the employee has

business purposes or to solicit support for or opposition to any political committee, the nomination or election of any person to public office, or the passage of a ballot issue.¹ 2-2-121(2)(a).

2. Lobbying and Other Activities for an Organization—A public employee may not engage in any activity, including lobbying, on behalf of an organization, other than an organization or association of local government officials, of which the public employee is a member while performing the public employee's job duties. 2-2-121(5).

FORMER BOARD MEMBERS

1. Employment—A public employee may not, within 12 months following termination of employment, obtain employment in which the officer or employee will take direct advantage, unavailable to others, of matters with which the employee was directly involved in the course of employment. The term "matters" includes contested cases. 2-2-105(3).

2. Contracting—Section 2-2-201, which is not part of the Code of Ethics, provides that a former employee may not, within 6 months following termination of employment, contract with or be employed by an employer who contracts with the state involving matters with which the former employee was directly involved during the public employment. It is not clear whether this provision applies to Board members. Former Board members may wish to consult with a private attorney before entering into such a contract.

¹ There are two exceptions to this prohibition. It does not apply if the use is authorized by law or properly incidental to another activity authorized by law. These exceptions in the text because there is probably no instance in which either would apply to Board members.

**Chapter: Executive Policies and Procedures****Effective Date February 9, 2018**

Submitting Information Informally and Formally to the Montana Board of Environmental Review

PURPOSE: The purpose of this policy is to give the public, interested persons, and parties to contested cases guidance on how to submit documents or other information to the Montana Board of Environmental Review (BER). This policy will govern any materials submitted to the BER for the purpose of review or consideration and filings in contested cases, unless governed by other, specific rules, or by case-specific orders.

This policy is intended to apply to all documents or other materials submitted for BER consideration regarding any agenda action item for a scheduled meeting of the BER. This policy does not apply to any form of communication, correspondence, or comments made to the BER or to one of its appointed hearing examiners under specific rules or statutes. For example, comments on proposed rulemaking or other form of noticed BER action can be made as directed by the BER in its public notice announcement. In general, any item relating to a BER agenda action item that is not submitted to the BER in accordance with this policy may be refused or may not be considered by the BER, at the discretion of the chair in consultation with the Board attorney.

Any questions about submitting material to the BER which are not addressed by this policy should be directed to the Board Secretary at the contact information below.

With regard to action items as well contested cases, the BER encourages electronic submission because it assists in a more-timely dissemination of information to the public and BER members, and is environmentally conscious.

The Board Secretary can be contacted as follows:
Ms. Lindsay Ford
DEQ Director's Office Support Coordinator/Board Secretary
Email: Lindsay.Ford@mt.gov
Phone: (406) 444-5270
Mailing: 1520 East 6th Avenue, Helena, MT 59601

A. Submissions to the BER for agenda action items, other than Contested Cases:

1. All materials regarding an agenda action item for consideration by BER members must be submitted no later than two weeks (14 calendar days) before the scheduled meeting. All submissions must be made by sending the materials to the Board Secretary; materials should not be sent directly to any BER members.

2. Members of the general public and regulated entities are encouraged to submit all material to the BER electronically as set out in ¶¶ A.3-4 below.

3. Materials should be submitted utilizing the following computer software formats:

- Microsoft Word, 6.0 or later
- Microsoft Excel, 6.0 or later
- Microsoft Power Point, 6.0 or later
- Adobe Acrobat PDF (searchable)
- JPEG, MP4, or ZLC

4. Materials should be submitted to the BER via the Board Secretary at the e-mail address listed above. Return receipts are encouraged, but not required. It is the responsibility of those making the submission to ensure receipt by the Board Secretary. If materials are too large to attach to an email, the State of Montana's EPass File Share system, also called the file transfer system (FTS), should be used. Prior to submitting large attachments via FTS, please call or email the Board Secretary to arrange for the transfer of materials or for directions/questions on using the FTS.

5. The Department of Environmental Quality, and any employee thereof, must make all submissions to the BER electronically as described above, unless electronic submission is impossible or impractical. Materials that have been submitted to DEQ employees by the public and that are not in electronic format, should be scanned and submitted to the BER as searchable PDF files.

6. If electronic submission is impossible or impractical, a hard copy may be mailed or delivered to the Board Secretary at the address listed above.

7. Submissions should not be made directly to any BER members. The Board Secretary will ensure that information submitted to the BER is distributed to the appropriate BER members, personnel, and posted to the BER website in a timely manner. The Board Secretary will post copies of documents submitted to the BER on the BER's website, <http://deq.mt.gov/DEQAdmin/ber>, one week (7 calendar days) prior to each regularly scheduled meeting and at least 48 hours before any special meeting.

B. Submissions to the BER or Hearing Examiner in Contested Cases:

1. Hearings and all prehearing matters will be conducted pursuant to the Montana Administrative Procedures Act (MAPA), Title 2, Chapter 4, Part 6, MCA, the Montana Rules of Civil Procedure (Mont. R. Civ. P.), Montana Rules of Evidence (Mont. R. Evid.), and the Administrative Rules of Montana (ARMS), including but not limited to ARM 17.4.101, adopting the Attorney General's model rules.

2. The procedural status of contested cases will be discussed at subsequent BER meetings until a final agency decision is rendered and any appeal is complete. The schedule and agenda for BER meetings are available online at <http://deq.mt.gov/DEQAdmin/ber>, and all meetings are open to the public, either telephonically or in person. Parties in contested cases are encouraged, although not required, to check the website regularly for updates and attend any BER meeting where their case is included on the agenda.

3. Parties are responsible for notifying the BER or hearing examiner and the hearing assistant, of any change in contact information by making a formal filing, served on all parties.

4. **FILING.** After a contested case is initiated, if the BER assigns a hearing examiner, all filings in that case should be made to the hearing examiner and hearing assistant rather than to the BER directly, unless specifically directed otherwise. If the BER retains jurisdiction in a case or if the BER has not yet assigned the case (because, for example, the case is new and has not yet appeared on a BER meeting agenda), then all filings should be made to the BER, unless instructed otherwise. Parties may file by electronic or traditional (hard copy) means as set out below. Electronic filing is the preferred method of filing; hard copies will not be required if parties use electronic filing. Whatever method is used, all proposed orders or proposed findings of fact and conclusions of law must also be submitted in Microsoft Word format (in addition to .pdf format) so that the document can be edited by the BER or hearing examiner. Although discovery documents should not be routinely filed, when a motion or brief is filed making reference to discovery documents, the party filing the motion or brief should also attach the relevant discovery documents.

a. *Electronic Filing.* If a party chooses to use electronic filing, in addition to parties on the service list, e-mail filings must be sent to:

i. If the BER retains jurisdiction or a hearing examiner has not been assigned:

1. Lindsay Ford, Board Secretary: Lindsay.Ford@mt.gov

ii. If a hearing examiner has been assigned:

1. Sarah Clerget, hearing examiner: SClerget@mt.gov¹

2. Aleisha Solem, hearing assistant: Asolem@mt.gov

3. Lindsay Ford: Lindsay.Ford@mt.gov

Electronic filings will be accepted until midnight of the filing deadline unless the hearing examiner orders otherwise; the document will be deemed "filed" based on the date and time received by the hearing assistant, Aleisha Solem. All briefs

¹ If a hearing examiner other than Ms. Clerget is assigned, parties should substitute all references to Ms. Clerget and Aleisha Solem for the contact information of the Hearing Examiner and Hearing Assistant who is assigned to the case.

and motions filed electronically must be in PDF format, in a manner that is searchable by electronic means. A party may sign electronically filed documents using the /s/ method, rather than a hand signature; e.g., “/s/ Jane E. Attorney.”

b. *Traditional (Hard Copy) Filing.* If a party chooses to file traditionally, original documents must be sent or hand delivered for filing to the following address:

i. If the BER retains jurisdiction or a hearing examiner has not been assigned:

1. Lindsay Ford
Board Secretary
Board of Environmental Review
1520 East 6th Avenue
Helena, MT 59601

ii. If a hearing examiner has been assigned:

1. Sarah Clerget
Hearing Examiner
Agency Legal Services Bureau
1712 Ninth Avenue
P.O. Box 201440
Helena, MT 59620-1440

Any hard-copy filing that contains more than 100 pages of exhibits must be accompanied by an electronic copy of the exhibits which complies with the requirements of ¶ B.6.

5. JURISDICTION. If the BER has assigned a hearing examiner to issue a proposed decision, the hearing examiner will retain jurisdiction of the case for procedural purposes until a final decision is rendered by the BER, such that any filing made between the time that the hearing examiner issues the proposed decision and the final decision is issued by the BER should be directed to the hearing examiner, unless the BER specifically orders otherwise.

6. EXHIBITS. DEQ will use letters to mark its exhibits and Appellant will use numbers. Any exhibit provided in an electronic format—whether filed electronically or submitted on removal media pursuant to ¶ B.4.b above—must be its own individual file with the name of the exhibit and a brief description, in the following format: “Exhibit A – Affidavit of John Doe.” A single file containing multiple exhibits will be rejected and returned for reformatting. Any electronic exhibit too large to send via email must be provided in PDF form on removable media (thumb drive, CD-ROM, etc.); parties are also free to use the State’s FTS.

7. INTERVENTION. Parties or individuals wishing to move for intervention in any contested case, may file for intervention in accordance with Rule 24, Mont. R. Civ. P. Parties are encouraged to file such a requests using the Filing procedures outlined above at ¶ B.4.

8. **FORM OF FILINGS:** All filings should be in Times New Roman font, size 14, and double-spaced. A motion and supporting brief should be submitted as separate documents. **Briefs in support of a motion and response briefs are limited to 6500 words. Reply briefs are limited to 3250 words.** Word limitations are computed to exclude the caption, signature lines, tables, appendices or certificates of compliance and service. Any motion to file an over-length brief must be presented reasonably in advance of the briefing at issue. Any motion for over-length brief filed contemporaneously with an over-length brief will be denied. All briefs should cite to legal authority using a citation method that reasonably enables the reader to find the material, including pinpoint references; the hearing examiner follows the uniform system of citation in the most current edition of the ALWD Citation Manual. Tables of contents and tables of authority are not required but are highly recommended. Any motion or brief with more than three exhibits or affidavits attached should be accompanied by a table of exhibits.

9. **SUMMARY JUDGMENT:** Any party filing a motion for summary judgment must simultaneously file a separate Statement of Undisputed Facts. Any party opposing a motion for summary judgment must file a separate Statement of Disputed Facts simultaneously with (but separate from) their response brief.

a. The Statement of Undisputed Facts must set forth in serial form each fact on which the party relies to support the motion, along with a pinpoint cite to the specific evidence supporting each fact; failure to provide a pinpoint cite for an "undisputed" fact will result in the fact being treated as "disputed." The moving party must e-mail a word processing version of the Statement of Undisputed Facts to each party against whom summary judgment is sought.

b. The opposing party's Statement of Disputed Facts must set forth whether each fact in the moving party's Statement is "undisputed" or "disputed." Any "disputed" fact must be accompanied by a pinpoint citation to the specific piece of evidence to oppose the fact. Failure to provide a pinpoint cite for a "disputed" fact will result in the fact being treated as "undisputed."

i. Any party opposing a motion for summary judgment may also add to its Statement of Disputed Facts additional facts to oppose summary judgment. Any additional fact must be set forth in serial form, along with a pinpoint cite to the specific evidence to support the fact. The moving party may respond to any such additional facts in its reply brief.

c. In lieu of the foregoing, the parties can agree to file a Joint Statement of Stipulated Facts.

Failure to file a Statement of Undisputed Facts will be deemed an admission material facts are in dispute. Conversely, failure to file a Statement of Disputed Facts will be deemed an admission that no material facts are in dispute.

10. **SERVICE:** All parties are assumed to consent to service by electronic mail; if a party does not consent, it must so-state expressly in its Notice of Appearance. In its Notice of Appearance, each party must indicate its preferred electronic service address, as well as an address for physical service in the event e-service cannot be used. Parties may submit the name, physical address and electronic address of one

additional individual (e.g., paralegal or agency representative) to appear on the service list. If a party requires more than one additional representative on the service list, that party may make such a request in the form of a motion supported by good cause. Copies of all documents filed must be served upon the opposing party, preferably electronically. Each filed document must include, or be accompanied by, a certificate of service.

11. EX PARTE COMMUNICATIONS: The Montana Administrative Procedure Act (MAPA) in Mont. Code Ann. § 2-4-613, and the Attorney General's Model Rule 18 in Mont. Admin. R. 1.3.222, prohibit ex parte communications with a hearing examiner or the BER concerning any issue of fact or law in a contested case. Communication concerning any contested case with the hearing examiner or BER outside of the record is prohibited. This includes email, telephone, or in person communication. As with any other court proceeding, communication with the BER or the hearing examiner concerning this case will be conducted on the record, in the form of filings. The only exception will be for communication between the parties and the hearing assistant or Board Secretary for the purpose of scheduling, e.g. setting a date for a conference of the parties. In addition to observing this rule, parties should contact any opposing party before communicating with the assigned hearing examiner or the BER, even on purely procedural matters such as the need for a continuance.

Approved:

Chairperson,
Montana Board of Environmental Review

Date

MCA Contents / TITLE 2 / CHAPTER 2 / Part 1 / 2-2-101 Statement of p...

Montana Code Annotated 2017

TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 2. STANDARDS OF CONDUCT

Part 1. Code of Ethics

Statement Of Purpose

2-2-101. Statement of purpose. The purpose of this part is to set forth a code of ethics prohibiting conflict between public duty and private interest as required by the constitution of Montana. This code recognizes distinctions between legislators, other officers and employees of state government, and officers and employees of local government and prescribes some standards of conduct common to all categories and some standards of conduct adapted to each category. The provisions of this part recognize that some actions are conflicts per se between public duty and private interest while other actions may or may not pose such conflicts depending upon the surrounding circumstances.

History: En. 59-1701 by Sec. 1, Ch. 569, L. 1977; R.C.M. 1947, 59-1701.

Created by **LAWSON**

MCA Contents / TITLE 2 / CHAPTER 2 / Part 1 / 2-2-102 Definitions

Montana Code Annotated 2017

TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 2. STANDARDS OF CONDUCT

Part 1. Code of Ethics

Definitions

2-2-102. Definitions. As used in this part, the following definitions apply:

(1) "Business" includes a corporation, partnership, sole proprietorship, trust or foundation, or any other individual or organization carrying on a business, whether or not operated for profit.

(2) "Compensation" means any money or economic benefit conferred on or received by any person in return for services rendered or to be rendered by the person or another.

(3) (a) "Gift of substantial value" means a gift with a value of \$50 or more for an individual.

(b) The term does not include:

(i) a gift that is not used and that, within 30 days after receipt, is returned to the donor or delivered to a charitable organization or the state and that is not claimed as a charitable contribution for federal income tax purposes;

(ii) food and beverages consumed on the occasion when participation in a charitable, civic, or community event bears a relationship to the public officer's or public employee's office or employment or when the officer or employee is in attendance in an official capacity;

(iii) educational material directly related to official governmental duties;

(iv) an award publicly presented in recognition of public service; or

(v) educational activity that:

(A) does not place or appear to place the recipient under obligation;

(B) clearly serves the public good; and

(C) is not lavish or extravagant.

(4) "Local government" means a county, a consolidated government, an incorporated city or town, a school district, or a special district.

(5) "Official act" or "official action" means a vote, decision, recommendation, approval, disapproval, or other action, including inaction, that involves the use of discretionary authority.

(6) "Private interest" means an interest held by an individual that is:

(a) an ownership interest in a business;

- (b) a creditor interest in an insolvent business;
 - (c) an employment or prospective employment for which negotiations have begun;
 - (d) an ownership interest in real property;
 - (e) a loan or other debtor interest; or
 - (f) a directorship or officership in a business.
- (7) "Public employee" means:
- (a) any temporary or permanent employee of the state;
 - (b) any temporary or permanent employee of a local government;
 - (c) a member of a quasi-judicial board or commission or of a board, commission, or committee with rulemaking authority; and
 - (d) a person under contract to the state.
- (8) (a) "Public officer" includes any state officer and any elected officer of a local government.
- (b) For the purposes of **67-11-104**, the term also includes a commissioner of an airport authority.
- (9) "Special district" means a unit of local government, authorized by law to perform a single function or a limited number of functions. The term includes but is not limited to conservation districts, water districts, weed management districts, irrigation districts, fire districts, community college districts, hospital districts, sewer districts, and transportation districts. The term also includes any district or other entity formed by interlocal agreement.
- (10) (a) "State agency" includes:
- (i) the state;
 - (ii) the legislature and its committees;
 - (iii) all executive departments, boards, commissions, committees, bureaus, and offices;
 - (iv) the university system; and
 - (v) all independent commissions and other establishments of the state government.
- (b) The term does not include the judicial branch.
- (11) "State officer" includes all elected officers and directors of the executive branch of state government as defined in **2-15-102**.

History: En. 59-1702 by Sec. 2, Ch. 569, L. 1977; R.C.M. 1947, 59-1702; amd. Sec. 3, Ch. 18, L. 1995; amd. Sec. 1, Ch. 562, L. 1995; amd. Sec. 1, Ch. 122, L. 2001; amd. Sec. 1, Ch. 77, L. 2009.

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TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 2. STANDARDS OF CONDUCT

Part 1. Code of Ethics

Public Trust -- Public Duty

2-2-103. Public trust -- public duty. (1) The holding of public office or employment is a public trust, created by the confidence that the electorate reposes in the integrity of public officers, legislators, and public employees. A public officer, legislator, or public employee shall carry out the individual's duties for the benefit of the people of the state.

(2) A public officer, legislator, or public employee whose conduct departs from the person's public duty is liable to the people of the state and is subject to the penalties provided in this part for abuse of the public's trust.

(3) This part sets forth various rules of conduct, the transgression of any of which is a violation of public duty, and various ethical principles, the transgression of any of which must be avoided.

(4) (a) The enforcement of this part for:

(i) state officers, legislators, and state employees is provided for in **2-2-136**;

(ii) legislators, involving legislative acts, is provided for in **2-2-135** and for all other acts is provided for in **2-2-136**;

(iii) local government officers and employees is provided for in **2-2-144**.

(b) Any money collected in the civil actions that is not reimbursement for the cost of the action must be deposited in the general fund of the unit of government.

History: En. 59-1703 by Sec. 3, Ch. 569, L. 1977; R.C.M. 1947, 59-1703; amd. Sec. 216, Ch. 685, L. 1989; amd. Sec. 2, Ch. 562, L. 1995; amd. Sec. 2, Ch. 122, L. 2001.

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TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 2. STANDARDS OF CONDUCT

Part 1. Code of Ethics

Rules Of Conduct For Public Officers, Legislators, And Public Employees

2-2-104. Rules of conduct for public officers, legislators, and public employees. (1) Proof of commission of any act enumerated in this section is proof that the actor has breached the actor's public duty. A public officer, legislator, or public employee may not:

(a) disclose or use confidential information acquired in the course of official duties in order to further substantially the individual's personal economic interests; or

(b) accept a gift of substantial value or a substantial economic benefit tantamount to a gift:

(i) that would tend improperly to influence a reasonable person in the person's position to depart from the faithful and impartial discharge of the person's public duties; or

(ii) that the person knows or that a reasonable person in that position should know under the circumstances is primarily for the purpose of rewarding the person for official action taken.

(2) An economic benefit tantamount to a gift includes without limitation a loan at a rate of interest substantially lower than the commercial rate then currently prevalent for similar loans and compensation received for private services rendered at a rate substantially exceeding the fair market value of the services. Campaign contributions reported as required by statute are not gifts or economic benefits tantamount to gifts.

(3) (a) Except as provided in subsection (3)(b), a public officer, legislator, or public employee may not receive salaries from two separate public employment positions that overlap for the hours being compensated, unless:

(i) the public officer, legislator, or public employee reimburses the public entity from which the employee is absent for the salary paid for performing the function from which the officer, legislator, or employee is absent; or

(ii) the public officer's, legislator's, or public employee's salary from one employer is reduced by the amount of salary received from the other public employer in order to avoid duplicate compensation for the overlapping hours.

(b) Subsection (3)(a) does not prohibit:

(i) a public officer, legislator, or public employee from receiving income from the use of accrued leave or compensatory time during the period of overlapping employment; or

(ii) a public school teacher from receiving payment from a college or university for the supervision of student teachers who are enrolled in a teacher education program at the college or university if the supervision is performed concurrently with the school teacher's duties for a public school district.

(c) In order to determine compliance with this subsection (3), a public officer, legislator, or public employee subject to this subsection (3) shall disclose the amounts received from the two separate public employment positions to the commissioner of political practices.

History: En. 59-1704 by Sec. 4, Ch. 569, L. 1977; R.C.M. 1947, 59-1704; amd. Sec. 3, Ch. 562, L. 1995; amd. Sec. 1, Ch. 243, L. 1997.

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TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 2. STANDARDS OF CONDUCT

Part 1. Code of Ethics

Ethical Requirements For Public Officers And Public Employees

2-2-105. Ethical requirements for public officers and public employees. (1) The requirements in this section are intended as rules of conduct, and violations constitute a breach of the public trust and public duty of office or employment in state or local government.

(2) Except as provided in subsection (4), a public officer or public employee may not acquire an interest in any business or undertaking that the officer or employee has reason to believe may be directly and substantially affected to its economic benefit by official action to be taken by the officer's or employee's agency.

(3) A public officer or public employee may not, within 12 months following the voluntary termination of office or employment, obtain employment in which the officer or employee will take direct advantage, unavailable to others, of matters with which the officer or employee was directly involved during a term of office or during employment. These matters are rules, other than rules of general application, that the officer or employee actively helped to formulate and applications, claims, or contested cases in the consideration of which the officer or employee was an active participant.

(4) When a public employee who is a member of a quasi-judicial board or commission or of a board, commission, or committee with rulemaking authority is required to take official action on a matter as to which the public employee has a conflict created by a personal or private interest that would directly give rise to an appearance of impropriety as to the public employee's influence, benefit, or detriment in regard to the matter, the public employee shall disclose the interest creating the conflict prior to participating in the official action.

(5) A public officer or public employee may not perform an official act directly and substantially affecting a business or other undertaking to its economic detriment when the officer or employee has a substantial personal interest in a competing firm or undertaking.

History: En. 59-1709 by Sec. 9, Ch. 569, L. 1977; R.C.M. 1947, 59-1709; amd. Sec. 4, Ch. 562, L. 1995.

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TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 2. STANDARDS OF CONDUCT

Part 1. Code of Ethics

Rules Of Conduct For Public Officers And Public Employees

2-2-121. Rules of conduct for public officers and public employees. (1) Proof of commission of any act enumerated in subsection (2) is proof that the actor has breached a public duty.

(2) A public officer or a public employee may not:

(a) subject to subsection (7), use public time, facilities, equipment, supplies, personnel, or funds for the officer's or employee's private business purposes;

(b) engage in a substantial financial transaction for the officer's or employee's private business purposes with a person whom the officer or employee inspects or supervises in the course of official duties;

(c) assist any person for a fee or other compensation in obtaining a contract, claim, license, or other economic benefit from the officer's or employee's agency;

(d) assist any person for a contingent fee in obtaining a contract, claim, license, or other economic benefit from any agency;

(e) perform an official act directly and substantially affecting to its economic benefit a business or other undertaking in which the officer or employee either has a substantial financial interest or is engaged as counsel, consultant, representative, or agent; or

(f) solicit or accept employment, or engage in negotiations or meetings to consider employment, with a person whom the officer or employee regulates in the course of official duties without first giving written notification to the officer's or employee's supervisor and department director.

(3) (a) Except as provided in subsection (3)(b), a public officer or public employee may not use public time, facilities, equipment, supplies, personnel, or funds to solicit support for or opposition to any political committee, the nomination or election of any person to public office, or the passage of a ballot issue unless the use is:

(i) authorized by law; or

(ii) properly incidental to another activity required or authorized by law, such as the function of an elected public officer, the officer's staff, or the legislative staff in the normal course of duties.

(b) As used in this subsection (3), "properly incidental to another activity required or authorized by law" does not include any activities related to solicitation of support for or opposition to the nomination or election of a person to public office or political committees organized to support or oppose a candidate or candidates for public office. With respect to ballot issues, properly incidental activities are restricted to:

(i) the activities of a public officer, the public officer's staff, or legislative staff related to determining the impact of passage or failure of a ballot issue on state or local government operations;

(ii) in the case of a school district, as defined in Title 20, chapter 6, compliance with the requirements of law governing public meetings of the local board of trustees, including the resulting dissemination of information by a board of trustees or a school superintendent or a designated employee in a district with no superintendent in support of or opposition to a bond issue or levy submitted to the electors. Public funds may not be expended for any form of commercial advertising in support of or opposition to a bond issue or levy submitted to the electors.

(c) This subsection (3) is not intended to restrict the right of a public officer or public employee to express personal political views.

(d) (i) If the public officer or public employee is a Montana highway patrol chief or highway patrol officer appointed under Title 44, chapter 1, the term "equipment" as used in this subsection (3) includes the chief's or officer's official highway patrol uniform.

(ii) A Montana highway patrol chief's or highway patrol officer's title may not be referred to in the solicitation of support for or opposition to any political committee, the nomination or election of any person to public office, or the passage of a ballot issue.

(4) (a) A candidate, as defined in **13-1-101(8)(a)**, may not use or permit the use of state funds for any advertisement or public service announcement in a newspaper, on radio, or on television that contains the candidate's name, picture, or voice except in the case of a state or national emergency and then only if the announcement is reasonably necessary to the candidate's official functions.

(b) A state officer may not use or permit the use of public time, facilities, equipment, supplies, personnel, or funds to produce, print, or broadcast any advertisement or public service announcement in a newspaper, on radio, or on television that contains the state officer's name, picture, or voice except in the case of a state or national emergency if the announcement is reasonably necessary to the state officer's official functions or in the case of an announcement directly related to a program or activity under the jurisdiction of the office or position to which the state officer was elected or appointed.

(5) A public officer or public employee may not participate in a proceeding when an organization, other than an organization or association of local government officials, of which the public officer or public employee is an officer or director is:

(a) involved in a proceeding before the employing agency that is within the scope of the public officer's or public employee's job duties; or

(b) attempting to influence a local, state, or federal proceeding in which the public officer or public employee represents the state or local government.

(6) A public officer or public employee may not engage in any activity, including lobbying, as defined in **5-7-102**, on behalf of an organization, other than an organization or association of local government officials, of which the public officer or public employee is a member while performing the public officer's or public employee's job duties. The provisions of this subsection do not prohibit a public officer or public employee from performing charitable fundraising activities if approved by the public officer's or public employee's supervisor or authorized by law.

(7) A listing by a public officer or a public employee in the electronic directory provided for in **30-17-101** of any product created outside of work in a public agency is not in violation of subsection (2) (a) of this section. The public officer or public employee may not make arrangements for the listing in the electronic directory during work hours.

(8) A department head or a member of a quasi-judicial or rulemaking board may perform an official act notwithstanding the provisions of subsection (2)(e) if participation is necessary to the administration of a statute and if the person complies with the disclosure procedures under **2-2-131**.

(9) Subsection (2)(d) does not apply to a member of a board, commission, council, or committee unless the member is also a full-time public employee.

(10) Subsections (2)(b) and (2)(e) do not prevent a member of the governing body of a local government from performing an official act when the member's participation is necessary to obtain a quorum or to otherwise enable the body to act. The member shall disclose the interest creating the appearance of impropriety prior to performing the official act.

History: En. 59-1706 by Sec. 6, Ch. 569, L. 1977; R.C.M. 1947, 59-1706; amd. Sec. 1, Ch. 59, L. 1991; amd. Sec. 7, Ch. 562, L. 1995; amd. Sec. 3, Ch. 42, L. 1997; amd. Sec. 3, Ch. 122, L. 2001; amd. Sec. 1, Ch. 58, L. 2003; amd. Sec. 1, Ch. 145, L. 2005; amd. Sec. 3, Ch. 173, L. 2005; amd. Sec. 1, Ch. 437, L. 2005; amd. Sec. 1, Ch. 386, L. 2011; amd. Sec. 1, Ch. 14, L. 2013; amd. Sec. 1, Ch. 259, L. 2015.

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TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 2. STANDARDS OF CONDUCT

Part 1. Code of Ethics

Disclosure

2-2-131. Disclosure. A public officer or public employee shall, prior to acting in a manner that may impinge on public duty, including the award of a permit, contract, or license, disclose the nature of the private interest that creates the conflict. The public officer or public employee shall make the disclosure in writing to the commissioner of political practices, listing the amount of private interest, if any, the purpose and duration of the person's services rendered, if any, and the compensation received for the services or other information that is necessary to describe the interest. If the public officer or public employee then performs the official act involved, the officer or employee shall state for the record the fact and summary nature of the interest disclosed at the time of performing the act.

History: En. 59-1710 by Sec. 10, Ch. 569, L. 1977; R.C.M. 1947, 59-1710; amd. Sec. 9, Ch. 562, L. 1995; amd. Sec. 1, Ch. 65, L. 2005.

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TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 2. STANDARDS OF CONDUCT

Part 1. Code of Ethics

Enforcement For State Officers, Legislators, And State Employees -- Referral Of Complaint Involving County Attorney

2-2-136. Enforcement for state officers, legislators, and state employees -- referral of complaint involving county attorney. (1) (a) A person alleging a violation of this part by a state officer, legislator, or state employee may file a complaint with the commissioner of political practices. The commissioner does not have jurisdiction for a complaint concerning a legislator if a legislative act is involved in the complaint. The commissioner also has jurisdiction over complaints against a county attorney that are referred by a local government review panel pursuant to **2-2-144** or filed by a person directly with the commissioner pursuant to **2-2-144(6)**. If a complaint is filed against the commissioner or another individual employed in the office of the commissioner, the complaint must be resolved in the manner provided for in **13-37-111(5)**. The commissioner may request additional information from the complainant or the person who is the subject of the complaint to make an initial determination of whether the complaint states a potential violation of this part.

(b) The commissioner may dismiss a complaint that is frivolous, does not state a potential violation of this part, or does not contain sufficient allegations to enable the commissioner to determine whether the complaint states a potential violation of this part. If the issues presented in a complaint have been addressed and decided in a prior decision and the commissioner determines that no additional factual development is necessary, the commissioner may issue a summary decision without holding an informal contested case hearing on the complaint.

(c) Except as provided in subsection (1)(b), if the commissioner determines that the complaint states a potential violation of this part, the commissioner shall hold an informal contested case hearing on the complaint as provided in Title 2, chapter 4, part 6. The commissioner shall issue a decision based upon the record established before the commissioner.

(2) (a) Except as provided in subsection (2)(b), if the commissioner determines that a violation of this part has occurred, the commissioner may impose an administrative penalty of not less than \$50 or more than \$1,000.

(b) If the commissioner determines that a violation of **2-2-121(4)(b)** has occurred, the commissioner may impose an administrative penalty of not less than \$500 or more than \$10,000.

(c) If the violation was committed by a state employee, the commissioner may also recommend that the employing state agency discipline the employee. The employing entity of a state employee may take disciplinary action against an employee for a violation of this part, regardless of whether the commissioner makes a recommendation for discipline. The commissioner may assess the costs of the proceeding against the person bringing the charges if the commissioner determines that a violation did not occur or against the officer or employee if the commissioner determines that a violation did occur.

(3) A party may seek judicial review of the commissioner's decision, as provided in chapter 4, part 7, of this title, after a hearing, a dismissal, or a summary decision issued pursuant to subsection (1) (b).

(4) Except for records made public in the course of a hearing held under subsection (1) and records that are open for public inspection pursuant to Montana law, a complaint and records obtained or prepared by the commissioner in connection with an investigation or complaint are confidential documents and are not open for public inspection. The complainant and the person who is the subject of the complaint shall maintain the confidentiality of the complaint and any related documents released to the parties by the commissioner until the commissioner issues a decision. However, the person who is the subject of a complaint may waive, in writing, the right of confidentiality provided in this subsection. If a waiver is filed with the commissioner, the complaint and any related documents must be open for public inspection. The commissioner's decision issued after a hearing is a public record open to inspection.

(5) When a complaint is filed, the commissioner may issue statements or respond to inquiries to confirm that a complaint has been filed, to identify against whom it has been filed, and to describe the procedural aspects and status of the case.

(6) The commissioner may adopt rules to carry out the responsibilities and duties assigned by this part.

History: En. Sec. 15, Ch. 562, L. 1995; amd. Sec. 4, Ch. 42, L. 1997; amd. Sec. 4, Ch. 122, L. 2001; amd. Sec. 2, Ch. 386, L. 2011; amd. Sec. 1, Ch. 234, L. 2013.

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TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 2. STANDARDS OF CONDUCT

Part 2. Proscribed Acts Related to Contracts and Claims

Public Officers, Employees, And Former Employees Not To Have Interest In Contracts

2-2-201. Public officers, employees, and former employees not to have interest in contracts. (1) Members of the legislature; state, county, city, town, or township officers; or any deputies or employees of an enumerated governmental entity may not be interested in any contract made by them in their official capacity or by any body, agency, or board of which they are members or employees if they are directly involved with the contract. A former employee may not, within 6 months following the termination of employment, contract or be employed by an employer who contracts with the state or any of its subdivisions involving matters with which the former employee was directly involved during employment.

(2) In this section, the term:

(a) "be interested in" does not include holding a minority interest in a corporation;

(b) "contract" does not include:

(i) contracts awarded based on competitive procurement procedures conducted after the date of employment termination;

(ii) merchandise sold to the highest bidder at public auctions;

(iii) investments or deposits in financial institutions that are in the business of loaning or receiving money;

(iv) a contract with an interested party if, because of geographic restrictions, a local government could not otherwise reasonably afford itself of the subject of the contract. It is presumed that a local government could not otherwise reasonably afford itself of the subject of a contract if the additional cost to the local government is greater than 10% of a contract with an interested party or if the contract is for services that must be performed within a limited time period and no other contractor can provide those services within that time period.

(c) "directly involved" means the person directly monitors a contract, extends or amends a contract, audits a contractor, is responsible for conducting the procurement or for evaluating proposals or vendor responsibility, or renders legal advice concerning the contract;

(d) "former employee" does not include a person whose employment with the state was involuntarily terminated because of a reduction in force or other involuntary termination not involving violation of the provisions of this chapter.

History: En. Sec. 1020, Pol. C. 1895; re-en. Sec. 368, Rev. C. 1907; re-en. Sec. 444, R.C.M. 1921; Cal. Pol. C. Sec. 920; re-en. Sec. 444, R.C.M. 1935; amd. Sec. 1, Ch. 43, L. 1973; R.C.M. 1947, 59-501; amd. Sec. 1, Ch. 377, L. 1979; amd. Sec. 1, Ch. 458, L. 1981; amd. Sec. 1, Ch. 65, L. 1991; amd. Sec. 1, Ch. 322, L. 1993; amd. Sec. 1, Ch. 181, L. 2001.

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TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 2. STANDARDS OF CONDUCT

Part 2. Proscribed Acts Related to Contracts and Claims

Public Officers Not To Have Interest In Sales Or Purchases

2-2-202. Public officers not to have interest in sales or purchases. State, county, town, township, and city officers must not be purchasers at any sale or vendors at any purchase made by them in their official capacity.

History: En. Sec. 1021, Pol. C. 1895; re-en. Sec. 369, Rev. C. 1907; re-en. Sec. 445, R.C.M. 1921; Cal. Pol. C. Sec. 921; re-en. Sec. 445, R.C.M. 1935; R.C.M. 1947, 59-502.

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TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 2. STANDARDS OF CONDUCT

Part 2. Proscribed Acts Related to Contracts and Claims

Voidable Contracts

2-2-203. Voidable contracts. Every contract made in violation of any of the provisions of **2-2-201** or **2-2-202** may be avoided at the instance of any party except the officer interested therein.

History: En. Sec. 1022, Pol. C. 1895; re-en. Sec. 370, Rev. C. 1907; re-en. Sec. 446, R.C.M. 1921; Cal. Pol. C. Sec. 922; re-en. Sec. 446, R.C.M. 1935; R.C.M. 1947, 59-503.

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STATE OF MONTANA
DEPARTMENT OF JUSTICE
AGENCY LEGAL SERVICES BUREAU

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TO: WINNIE ORE, CHAIRPERSON
MONTANA PUBLIC SAFETY OFFICER STANDARDS AND
TRAINING COUNCIL – formerly and often referred to as POST:
PEACE OFFICERS STANDARDS AND TRAINING COUNCIL

FROM: NORMAN C. PETERSON
AGENCY LEGAL SERVICES BUREAU
MONTANA DEPARTMENT OF JUSTICE

DATE: APRIL 10, 2012

RE: EX PARTE CONTACTS WITH POST COUNCIL MEMBERS

You have requested that I review with the POST Council the subject of ex parte contacts with council members, and more importantly to inform council members what type of contacts are specifically impermissible.

In researching the issue, I found there were a considerable number of memorandums and legal opinions that have been written on the subject, and written specifically for boards much like, if not identical to the POST Council.

In particular I have attached one very detailed memorandum written for the California State Water Resources Control Board by its Chief Counsel. Along with my memorandum, I would recommend all board members read the California memorandum and keep it in their information packet. The last page of the latter memorandum has a nicely organized flow chart that a board member can use in deciding whether a contact is ex parte, and thus prohibited. I have also attached three administrative rules regarding ex parte contact; these are not POST Council rules, and are attached only for informational purposes. The body of this memorandum discusses the rules and statutes applicable to the POST Council.

A General Discussion of Ex Parte

“Ex parte” is a Latin term that means “by or for one party.” It has its origins in providing a fair and unbiased system of justice in which each party to a lawsuit has an equal opportunity to present and hear evidence, rebuttal and cross examination. Judges, by

common law, cannot communicate with one party to a lawsuit on the subject of the lawsuit without the knowledge or presence of the opposing party. Ex parte communications are considered inherently improper as they defeat the purpose of “due process” for all parties.

The same prohibition applies to administrative hearings and the decision makers in those hearings. For our purposes, it refers to communication between a Council member [decision maker] and a person interested in an application before the POST Council, without other interested persons, other Council members, or the public being present. The phrase “person interested” can be generally thought of as a person who has a stake in the subject, such as an employee or person that has a matter before the POST Council. It can also mean a person that has an identified personal interest as being opposed to the application.

“Ex parte” contacts are prohibited because if such contact occurs, several different problems could arise when that contact is eventually disclosed. Since other interested persons were not part of the discussion, disclosure makes those persons feel that the Council member involved has a personal stake in the outcome, or is now biased against their position, or can no longer be neutral in considering the application. There will be pressure for the Council member to disqualify him or herself from the matter being decided. If the Council member refuses to disqualify him or herself, the other interested persons will feel that the person making the ex parte contact has had an unfair advantage in the process.

If the decision is adverse to that other interested person, the ex parte contact creates a potential legal issue because it appears that “due process” has not been provided. Alternatively, these other parties could start making ex parte contacts of their own, causing the Council to lose control of its own procedure.

In some States, if any board decision has been reached as a result of the ex parte contact, the decision may be subject to attack as a violation of the Right to Know statutes, with the possibility of sanctions imposed. Montana has such statutes and while I know of no cases discussing this particular aspect of the law, it could certainly happen here.

Ex parte contacts could cause conflict within the Council and among its members. In addition, if one or more members are disqualified, there may be a problem with a quorum, possibly making it difficult to process the application in a timely and efficient manner.

In some states, Courts have concluded that proof of an ex parte communication by a quasi-judicial officer creates a rebuttable presumption of prejudice unless proven otherwise by competent evidence by the officer. The person affected adversely by the decision is entitled to a new and complete hearing, unless the party defending against a new hearing can show that the communication was not, in fact, prejudicial. For these reasons, among others, ex parte contacts about a case are not allowed.

Montana Statutory Law Applicable to POST

While there is no definition of ex parte contact in the Title 44 statutes, Mont. Code Ann. § 2-4-613 of the Montana Administrative Procedure Act defines ex parte consultation: **“Unless required for disposition of ex parte matters authorized by law, the person or persons who are charged with the duty of rendering a decision or to make findings of fact and conclusions of law in a contested case, after issuance of notice of hearing, may not communicate with any party or a party’s representative in connection with any issue of fact or law in the case except upon notice and opportunity for all parties to participate.”**

As you will read below, that statute applies to POST.

POST is created in Mont. Code Ann. § 2-15-2029, and is designated as a quasi-judicial board for purposes of Mont. Code Ann. § 2-15-124. That latter section describes the requirements of a quasi-judicial board, and for the purposes of this memorandum the main point is that a quasi-judicial board may make decisions in contested cases.

Mont. Code Ann. § 44-4-40, et seq. provides the powers and duties of POST. The contested case hearing procedures in the Montana Administrative Procedure Act, Title 2, Chapter 4, part 6, are made applicable to POST. The decision making power of POST will be exercised in a controlled contested case setting. Singular to POST, a decision of POST may be appealed to the Board of Crime Control as the final agency decision prior to any appeal to a Montana District Court.

The first sentence of Mont. Code Ann. § 2-4-613 of the Montana Administrative Procedure Act: **“Unless required for disposition of ex parte matters authorized by law”** generally references subjects such as domestic violence cases where there is an immediate and present danger, or mental commitment proceedings, or instances of imminent hazards created by hazardous substances; all of which may require or allow the proceeding to continue without a party being present.

To my knowledge, as regards POST, there are no **“ex parte mattes authorized by law”**,

so the qualifier in the first sentence has no application to POST. Therefore, Council members are subject to the prohibitions of Mont. Code Ann. § 2-4-613, and once a notice of hearing or staff action has been issued, no Council member may communicate with any named party [or employee of the party], or that party's representative or attorney regarding any issue of fact or law in that contested matter, unless there has been some notice and opportunity for all parties to participate. That prohibition would include the presentation of any written material, or e-mails, or information of any sort about the facts or merits of a case. It also prohibits the presenting of gifts or favors by an interested party. And communication is a two-way street; no Council member may initiate such a conversation or seek information once a notice of hearing has been issued.

Although not as common, the above ex parte prohibitions may apply to a hearing where the Council is adopting or considering the adoption of an administrative rule, and there has been a publication in the Montana Administrative Register of the Council's consideration of the rule. However, The Administrative Procedure Act allows rule making bodies to have informal and other conferences for purposes of getting information and opinions regarding any proposed rules. That being true, it appears that it is within the discretion of the agency to allow or not allow ex parte contact in such situations. I would recommend that the Council discuss the matter and decide how it wishes to proceed in regard to rule making and ex parte contacts.

Finally, the prohibition on "ex parte" communications does not extend to Council staff; any interested party can communicate with the staff on a procedural matter, or even on the merits of a matter that has been set for hearing, as long as the contact is documented.

As noted earlier, I have also attached to this memorandum other agency definitions of "ex parte" contact. They are not all that different from the Montana Code reference, and they do not apply to POST. They are included only for informational purposes.

Examples of Ex Parte Communications

Deliberate contacts are somewhat self explanatory. No Council member may reach out, in any manner, to an identified interested party and discuss – outside of the Council hearing – the facts or merits of an application that has been noticed for a hearing. Similarly, a Council member cannot discuss, when contacted in any manner by an identified interested party, the facts or merits of a matter that has been noticed for a hearing.

There are other less definitive examples, but each is prohibited as above.

1. An applicant may send a letter or an email to every Council member dealing with a pending application, but there is no notice that the letter or email was shared with the opposing party or the public. This is particularly difficult as this type of contact is quite common, particularly with citizen boards. The absence of information may cause the problem.

Therefore a Council member should always view such information as suspect, and may wish to proceed in this manner. Before viewing it, make sure of the source and who has had access to it. If the Council's staff has given it to the member, it is probably appropriate. If it came directly from an interested party, or the source is simply unknown, it would be best to leave it unread and to bring it to the full Council's attention at the hearing or if at all possible prior to the hearing.

Perhaps the best approach is for the Council, in its internal operating rules, to state that no information regarding a pending matter should be viewed or read unless it comes from staff, or unless it was requested by the Council itself, with all interested parties having the same opportunity.

2. An elected official or appointed official in your town or county, or a neighboring one, may send or forward some information, or talk on the telephone about a pending application, and the communication is not shared with other parties or other Council members. This is a prohibited ex parte contact, and members must avoid such conversations or contacts. This is a particularly difficult example, as in many rural or urban areas, it is simply the way business gets done. However, Council members must always be conscious of the fact that they are wearing their "Council member hats" when speaking of a Council matter that has been noticed for hearing. No matter how tempting, it is still prohibited ex parte conduct.

3. A technical expert assisting a party to a matter gives a report to a Council member, or all members, but does not file it as a hearing exhibit, or give notice that it is being used. This is again, prohibited. Council members must be cautious about the source of materials they view, and again, once a matter has been noticed for hearing, no material that has not come from staff should be viewed or considered prior to its presentation at the hearing.

The problem with much of the above is that the Council member did not initiate the contact nor did the member attempt to make an ex parte contact; but because of someone else's behavior, the member may have received information not made available to other board members, the public or other interested parties.

What Can You Talk About and Whom Can You Talk To?

Not to be flippant, but the simple answer is that as long as you are not discussing a pending application or pending administrative rule adoption [if the latter is included at the Council's choice] you can talk to anybody about anything. Almost anything else is fair game; as after all, you are the ones that know how the Council operates and you can address the questions of the public concerning the Council. This includes procedural questions, status requests, requests for information, or scheduling questions. The important thing to remember about ex parte contacts is a Council member must maintain his or her neutrality by avoiding discussions **about actual cases pending and possibly rule adoptions that have been noticed.**

In addition, you may talk with a party – **even on a pending matter** – on an issue of procedure, as you are not technically discussing the facts or merits of the pending matter. But this is a fairly delicate subject area that can get you in trouble, and avoidance is usually the best policy. For instance, a party asks you a procedural question about which party goes first and if they need an attorney to represent them, or if they need to present a certain type of evidence. You very carefully answer the question without discussing the merits, but at the Council hearing that person blurts out: "But I thought you told me I did not need to present this sort of information?" Ok, now you are in the soup as the rest of the Council and the other party are looking at you and stating: You talked about this case with this person? No matter how innocent the conversation, you are presented in a rather poor light.

My best advice – when you are asked about something by a party to a pending matter – is to always refer them to staff, unless it is an absolutely basic procedural question. If not, you may find yourself being disqualified, or delaying the proceedings, or worse yet, having the entire matter blow up into litigation because of what seemed like an innocent conversation.

How Can the Council or its Members Prevent Ex Parte Contacts?

Initially, there is little a Council member can do to stop such attempted contacts by the public, applicants, or consultants; as after all these matters have important consequences and it is natural for them to ask questions and seek information or advice on how best to advocate for their position. But things can be done.

Rule No. 1 is always to immediately stop the contact when the attempt is first made, and document the fact that the contact was made. A Council member should also relay that matter to the Chairperson or the Chairperson's designee for such purposes. If the contact is by email, it would be appropriate to forward that email to the Chairperson, who then would need to decide whether to share the information with the other board members and to send it to other identified interested parties. At the very least, it should be included in the file as an attempted contact.

If an ex parte contact is made and the Council member inadvertently and suddenly finds him or herself in the middle of a discussion that s/he realizes should not have taken place, the same approach should be taken, but with the addition of further information to the Chairperson about the contact and information received or discussed. At that point, the board member should consider recusing him or herself from a decision on the pending matter, or at least discuss it with the Chairperson or me.

The Chairperson, when receiving such information, should make it part of the file and probably note the contact at the hearing; or prior to the hearing notify any other interested party if that is possible.

If desirable, and requested, the Council can adopt an internal ex parte policy that all members can understand and follow, and which, if possible, can set out in black and white the options of the Council and its members. References can be made to very specific instances; thereby allowing a member a quick and certain means of avoiding certain conversations or situations without the possibility of causing offense. As noted earlier, any contact can be relayed to staff; they are, after all, the persons who are most familiar with the application and the procedure to be followed, and their job is to

keep things on track. They are also not charged with the responsibility of making the final “judicial” decision, and are thus free to discuss matters in greater detail than are board members.

One particular situation that is apparently recurring is when a single Council member, outside a Council meeting, meets with either applicants or the public or interested parties on a subject of interest, and Council member knows there is a hearing pending before the Council that deals with the same subject, and possibly involves some of the people at the meeting. These meetings simply increase the risk of ex parte contact and should be avoided. If they cannot be avoided, and I can see where avoidance would cause public relation problems, the individual Council member must remain on guard as concerns ex parte contacts. Most of the time it is sufficient if the member is simply aware of the facts that define an ex parte contact, as this makes it easier to avoid them.

There is also the situation where the offender is persistent in attempting to make contact when first rebuffed. In that instance, the Chairperson may need to become involved, but in all cases the matter must be brought to public scrutiny and have each and every contact disclosed to any identified interested party and to make it a part of the public record.

As one memorandum noted, the cure is to make the contact public and to provide a reasonable time for everyone else to react and have their say on the matter. Due process for all is the key concept. Everyone should have notice of all aspects of the proceeding, and an opportunity to be heard and to confront the evidence that the Council will be using in coming to a decision.

Conclusion

There is likely no greater temptation for the citizen Council member than to enter into ex parte contacts and rationalizing it with the thought that “I am doing it for personal education and doing the public good.”

While we like to think we know ourselves, we do not always recognize what influences our decisions. The public good is done when decisions are made in a controlled environment with all parties and the public having the same opportunity to present information and argue their cases before the unbiased and neutral decision maker. When you wear the hat of the public decision maker, you give up some personal freedom as regards public contact. You additionally owe a duty of fairness to your fellow board members, the public, and those who appear before you. The prohibition against ex parte contact is literally hundreds of years old and is founded on both law and common sense. Ex parte contact should be scrupulously avoided, and if it occurs, it must be immediately

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and honestly reported.

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Board of Environmental Review

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Board of Environmental Review

Board Authority

- Air Quality
- Water Quality
- Public Water Supply / Public Sewage System
- Mined Land Reclamation
- Major Facility Siting
- Megalandfill Siting
- Hazardous Waste
- Solid Waste
- Junk Vehicles
- Underground Storage Tanks
- Radioactive Materials

PROGRAMS WITH NO BOARD AUTHORITY

-

AIR QUALITY

Rulemaking - The Board has authority and duty to adopt all rules to implement the Clean Air Act of Montana. Included in this authority are:

1. procedural rules, such as reporting permitting and fee requirements;
2. rules establishing substantive standards, such as ambient air quality standards, emission and levels; and
3. enforcement rules establishing penalties for violations.

The Department has no rulemaking authority under the air quality law. Orders - The Board has authority to issue orders necessary to implement the law. These include orders establishing state implementation plans (SIPs) for areas not in compliance with ambient air standards. Hearings - The Board has the authority and duty to hold hearings involving:

1. appeals of preconstruction and operating permit decisions, fee determinations, and noncompliance orders;

2. requests for variances from emission restrictions;
3. approval of local air pollution control programs; and
4. emergency orders.

WATER QUALITY

Rules - The Board has authority to adopt:

1. fee rules;
2. substantive rules that:
 - i. establish water quality standards;
 - ii. classify streams (stream classifications must be reviewed every three years);
 - iii. set requirements to prevent significant degradation of water; and
 - iv. set standards for treatment of wastes;
3. rules establishing requirements for matching funds for construction of local water pollution control facilities;
4. rules governing loans from the Wastewater Treatment Revolving Fund Act.

Hearings - The Board has authority to hear appeals of:

1. Department permit decisions;
2. Department decisions on requirements for authorization to degrade; and
3. administrative orders issued by the Department as a result of violations of The Act.

Approval of Local Water Quality Control Program - A local water quality district may adopt a local water quality control program only with approval of the Board.

PUBLIC WATER SUPPLY/PUBLIC SEWAGE SYSTEM

This law provides that no public water supply or sewage system (generally defined as systems serving at least 15 families or 25 persons) may be constructed or altered without approval of the Department. The Board's functions are: Rulemaking - The Board adopts rules for:

1. procedural matters, such as record keeping reporting and fees;
2. substantive requirements, such as drinking water standards, construction and siting requirements, and variances; and
3. administrative penalties.

Orders - The Board may issue orders to implement the law. Hearings - The Board hears appeals of administrative orders issued by the Department.

MINED LAND RECLAMATION

The Board's only function under the mined land reclamation laws is to adopt all rules. These include both procedural rules, rules imposing environmental protection and reclamation requirements, and enforcement rules. Before July 1, 1995, this function was exercised by the Board of Land Commissioners.

MAJOR FACILITY SITING

This Act requires that persons who wish to construct certain electricity generator plants, transmission lines, pipelines, and coal gasification facilities, must obtain a certificate of environmental compatibility and public need before commencing construction of the facility. The Board's functions (which, before July 1, 1995, were exercised by the Board of Natural Resources) in this program are: Rulemaking - The Board has authority to adopt rules to implement the law. Issuance of Certificates - The Board has exclusive authority to grant or deny application for a certificate of environmental compatibility and public need and applications to amend a certificate. This includes authority to place conditions on the approval. Monitoring - The Board and the Department have the duty to monitor compliance with a certificate. Enforcement - Both the Board and the Department have authority to enforce the Act and provisions of certificates.

MEGALANDFILL SITING

Siting Decisions - No megalandfill may be constructed unless a certificate of site acceptability is issued by the Board. Rulemaking - The Board has authority to adopt procedural and substantive rules for approval of applications for site acceptability certificates. Reclamation - The Board has authority to forfeit megalandfill boards and reclaim, restore, or replace natural resources damaged or impaired by the operation of a megalandfill.

HAZARDOUS WASTE

Rulemaking - The Board has no rulemaking authority. All rules are adopted by the Department. Variances - The Board has authority to consider requests for variances from the hazardous waste provisions of the Montana Hazardous Waste and Underground Storage Tank Act and rules adopted under the authority of that Act. Hearings - The Board has authority to conduct hearings:

1. to review Department decisions to deny, revoke, or modify a hazardous waste management facility permit when requested by the permittee or permit applicant;
2. to review Department administrative orders when requested by the person named in the order;
3. regarding alleged violations of the hazardous waste laws with the Department requires the alleged violator to appear before the Board.

SOLID WASTE

Rulemaking - The Board has authority to adopt rules pertaining to solid waste management plans, local government grants, and local government loans. These rules were adopted in 1977 and amended in 1981. Note that no grant or loan monies have been available since the early 1980's. Solid Waste Management Plan - The Board has authority to approve and adopt the state solid waste management plan developed by the Department. Variances - The Board has authority to consider requests for variances from rules adopted under the authority of the Solid Waste Management Act. Appeals and Hearings - The Board has authority to:

1. consider appeals of decisions by local health officers to not validate solid waste management system licenses;
2. conduct hearings to review Department decisions to deny or revoke a solid waste management system license;
3. conduct hearings to review Department administrative orders when requested by the person named in the order; and
4. conduct hearings regarding alleged violations of the solid waste laws when the Department requires the alleged violator to appear before the Board.

JUNK VEHICLES

The Board's sole function in this program is to conduct hearings to review Department decisions to issue, deny, or revoke a motor vehicle wrecking facility license.

UNDERGROUND STORAGE TANKS

There are three legislative acts pertaining to underground storage tanks. First, they are regulated under the hazardous waste laws (see above); second, persons who install, modify, or close underground storage tanks are required to be licensed by the Department; and third, the Department and the Petroleum Tank Release Compensation Board administer a program to fund cleanups of releases from certain storage tanks, including underground storage tanks. The Board's sole function in the installer law is to hold hearings and review Department enforcement orders. The Board has no function in the release compensation program.

RADIOACTIVE MATERIALS

Hearings - The Board has authority to hold hearings on:

1. decisions of the Department to grant, suspend, revoke, or amend a license to use, manufacture, produce, or possess radioactive materials;
2. granting of exceptions to rules regulating radioactive materials; and
3. Department enforcement determinations.

PROGRAMS WITH NO BOARD AUTHORITY

The following is a list of some of the environmental programs in which the Board has no statutory authority and the administering agency:

Program	Administering Agency
Natural Streambed Preservation	Conservation Districts/Dept. of Fish, Wildlife & Parks
Lakeshore Protection	Local government
CERCLA (Federal Superfund)	EPA/DEQ
CECRA (State Superfund)	DEQ
Integrated Waste Management	DEQ
Infectious Waste Management	DEQ
Subdivisions	Local governments/DEQ
Floodplain Management	DNRC
Slash Disposal	DNRC
Streamside Management Zone Regulation	DNRC
Regulation of Herbicides and Pesticides	Department of Agriculture

Contact Joyce Wittenberg (<mailto:jwittenberg@mt.gov>) at (406) 444-2544 for more information on the Board of Environmental Review

About Us

The Montana Department of Environmental Quality is charged with protecting a clean and healthy environment as guaranteed to our citizens by our State Constitution. Our ultimate goal is to protect public health and to maintain Montana's high quality of life for current and future generations.

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2-4-602 Discovery

2-4-603 Informal disposition and hearings -- waiver of administrative proceedings -- recording and use of settlement proceeds

2-4-604 Informal proceedings

2-4-605 through 2-4-610 reserved

2-4-611 Hearing examiners -- legal services unit -- conduct of hearings -- disqualification of hearing examiners and agency members

2-4-612 Hearing -- rules of evidence, cross-examination, judicial notice

2-4-613 Ex parte consultations

2-4-614 Record -- transcription

2-4-615 through 2-4-620 reserved

2-4-621 When absent members render decision -- proposal for decision and opportunity to submit findings and conclusions -- modification by agency

2-4-622 When hearings officer unavailable for decision

2-4-623 Final orders -- notification -- availability

2-4-624 through 2-4-630 reserved

2-4-631 Licenses

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TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 4. ADMINISTRATIVE PROCEDURE ACT

Part 6. Contested Cases

Hearing Examiners -- Legal Services Unit -- Conduct Of Hearings -- Disqualification Of Hearing Examiners And Agency Members

2-4-611. Hearing examiners -- legal services unit -- conduct of hearings -- disqualification of hearing examiners and agency members. (1) An agency may appoint hearing examiners for the conduct of hearings in contested cases. A hearing examiner must be assigned with due regard to the expertise required for the particular matter.

(2) An agency may elect to request a hearing examiner from an agency legal assistance program, if any, within the attorney general's office or from another agency. If the request is honored, the time, date, and place of the hearing must be set by the agency, with the concurrence of the legal assistance program or the other agency.

(3) Agency members or hearing examiners presiding over hearings may administer oaths or affirmations; issue subpoenas pursuant to **2-4-104**; provide for the taking of testimony by deposition; regulate the course of hearings, including setting the time and place for continued hearings and fixing the time for filing of briefs or other documents; and direct parties to appear and confer to consider simplification of the issues by consent of the parties.

(4) On the filing by a party, hearing examiner, or agency member in good faith of a timely and sufficient affidavit of personal bias, lack of independence, disqualification by law, or other disqualification of a hearing examiner or agency member, the agency shall determine the matter as a part of the record and decision in the case. The agency may disqualify the hearing examiner or agency member and request another hearing examiner pursuant to subsection (2) or assign another hearing examiner from within the agency. The affidavit must state the facts and the reasons for the belief that the hearing examiner should be disqualified and must be filed not less than 10 days before the original date set for the hearing.

History: En. Sec. 11, Ch. 2, Ex. L. 1971; R.C.M. 1947, 82-4211(part); amd. Sec. 1, Ch. 467, L. 1979; amd. Sec. 2, Ch. 3, L. 1985.

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Hearing -- Rules Of Evidence, Cross-Examination, Judicial Notice

2-4-612. Hearing -- rules of evidence, cross-examination, judicial notice. (1) Opportunity shall be afforded all parties to respond and present evidence and argument on all issues involved.

(2) Except as otherwise provided by statute relating directly to an agency, agencies shall be bound by common law and statutory rules of evidence. Objections to evidentiary offers may be made and shall be noted in the record. When a hearing will be expedited and the interests of the parties will not be prejudiced substantially, any part of the evidence may be received in written form.

(3) Documentary evidence may be received in the form of copies or excerpts if the original is not readily available. Upon request, parties shall be given an opportunity to compare the copy with the original.

(4) All testimony shall be given under oath or affirmation.

(5) A party shall have the right to conduct cross-examinations required for a full and true disclosure of facts, including the right to cross-examine the author of any document prepared by or on behalf of or for the use of the agency and offered in evidence.

(6) Notice may be taken of judicially cognizable facts. In addition, notice may be taken of generally recognized technical or scientific facts within the agency's specialized knowledge. Parties shall be notified either before or during the hearing or by reference in preliminary reports or otherwise of the material noticed, including any staff memoranda or data. They shall be afforded an opportunity to contest the material so noticed.

(7) The agency's experience, technical competence, and specialized knowledge may be utilized in the evaluation of evidence.

History: En. Secs. 9, 10, 11, Ch. 2, Ex. L. 1971; R.C.M. 1947, 82-4209(3), 82-4210, 82-4211 (part).

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Ex Parte Consultations

2-4-613. Ex parte consultations. Unless required for disposition of ex parte matters authorized by law, the person or persons who are charged with the duty of rendering a decision or to make findings of fact and conclusions of law in a contested case, after issuance of notice of hearing, may not communicate with any party or a party's representative in connection with any issue of fact or law in the case except upon notice and opportunity for all parties to participate.

History: En. Sec. 14, Ch. 2, Ex. L. 1971; R.C.M. 1947, 82-4214; amd. Sec. 44, Ch. 61, L. 2007.

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TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 4. ADMINISTRATIVE PROCEDURE ACT

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When Absent Members Render Decision -- Proposal For Decision And Opportunity To Submit Findings And Conclusions -- Modification By Agency

2-4-621. When absent members render decision -- proposal for decision and opportunity to submit findings and conclusions -- modification by agency. (1) When in a contested case a majority of the officials of the agency who are to render the final decision have not heard the case, the decision, if adverse to a party to the proceeding other than the agency itself, may not be made until a proposal for decision is served upon the parties and an opportunity is afforded to each party adversely affected to file exceptions and present briefs and oral argument to the officials who are to render the decision.

(2) The proposal for decision must contain a statement of the reasons for the decision and of each issue of fact or law necessary to the proposed decision and must be prepared by the person who conducted the hearing unless that person becomes unavailable to the agency.

(3) The agency may adopt the proposal for decision as the agency's final order. The agency in its final order may reject or modify the conclusions of law and interpretation of administrative rules in the proposal for decision but may not reject or modify the findings of fact unless the agency first determines from a review of the complete record and states with particularity in the order that the findings of fact were not based upon competent substantial evidence or that the proceedings on which the findings were based did not comply with essential requirements of law. The agency may accept or reduce the recommended penalty in a proposal for decision but may not increase it without a review of the complete record.

(4) A hearings officer who is a member of an agency adjudicative body may participate in the formulation of the agency's final order, provided that the hearings officer has completed all duties as the hearings officer.

History: En. Sec. 12, Ch. 2, Ex. L. 1971; amd. Sec. 14, Ch. 285, L. 1977; R.C.M. 1947, 82-4212(part); amd. Sec. 4, Ch. 277, L. 1979; amd. Sec. 45, Ch. 61, L. 2007.

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Montana Code Annotated 2017

TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 4. ADMINISTRATIVE PROCEDURE ACT

Part 6. Contested Cases

Final Orders -- Notification -- Availability

2-4-623. Final orders -- notification -- availability. (1) (a) A final decision or order adverse to a party in a contested case must be in writing. A final decision must include findings of fact and conclusions of law, separately stated. Findings of fact, if set forth in statutory language, must be accompanied by a concise and explicit statement of the underlying facts supporting the findings. Except as provided in **75-2-213** and **75-20-223**, a final decision must be issued within 90 days after a contested case is considered to be submitted for a final decision unless, for good cause shown, the period is extended for an additional time not to exceed 30 days.

(b) If an agency intends to issue a final written decision in a contested case that grants or denies relief and the relief that is granted or denied differs materially from a final agency decision that was orally announced on the record, the agency may not issue the final written decision without first providing notice to the parties and an opportunity to be heard before the agency.

(2) Findings of fact must be based exclusively on the evidence and on matters officially noticed.

(3) Each conclusion of law must be supported by authority or by a reasoned opinion.

(4) If, in accordance with agency rules, a party submitted proposed findings of fact, the decision must include a ruling upon each proposed finding.

(5) Parties must be notified by mail of any decision or order. Upon request, a copy of the decision or order must be delivered or mailed in a timely manner to each party and to each party's attorney of record.

(6) Each agency shall index and make available for public inspection all final decisions and orders, including declaratory rulings under **2-4-501**. An agency decision or order is not valid or effective against any person or party, and it may not be invoked by the agency for any purpose until it has been made available for public inspection as required in this section. This provision is not applicable in favor of any person or party who has actual knowledge of the decision or order or when a state statute or federal statute or regulation prohibits public disclosure of the contents of a decision or order.

History: (1), (3) thru (6)En. Sec. 13, Ch. 2, Ex. L. 1971; amd. Sec. 15, Ch. 285, L. 1977; Sec. 82-4213, R.C.M. 1947; (2)En. Sec. 9, Ch. 2, Ex. L. 1971; Sec. 82-4209, R.C.M. 1947; R.C.M. 1947, 82-4209(7), 82-4213; amd. Sec. 3, Ch. 347, L. 2005; amd. Sec. 1, Ch. 571, L. 2005; amd. Sec. 2, Ch. 445, L. 2009.

STATE OF MONTANA
DEPARTMENT OF JUSTICE
AGENCY LEGAL SERVICES BUREAU

Tim Fox
Attorney General



1712 Ninth Avenue
P.O. Box 201440
Helena, MT 59620-1440

TO: The Montana Board of Environmental Review
FROM: Sarah Clerget, Board Attorney
RE: In the matter of Violations of the Water Quality Act by Reflections at Copper Ridge, LLC at Reflections at Copper Ridge subdivision, Billings, Yellowstone County, Montana (MTR105376)[FID 2288, Docket No. WQ-15-07] and in the matter of violations of the Water Quality Act by Copper Ridge, Development Corporation at Copper Ridge subdivision, Billings, Yellowstone County, Montana. (MTR105377)[FID 2289, Docket No. WQ-15-08]
DATE: November 30, 2018

The purpose of this memo is to assist BER when reviewing a hearing examiner's proposed decision in a contested case proceeding.

The record before the Board consists of a written record and an opportunity for the parties to make oral arguments to the Board. Pursuant to the contested cases provisions of the Montana Administrative Procedures Act (MAPA), Mont. Code Ann. § 2-4-601 *et seq.*, as the hearing examiner in this case, I issued *Proposed Findings of Fact, Conclusions of Law and Order* (Proposed Order) on July 16, 2018. I also issued an Order on Exceptions that same day.

My Proposed Order depends on prior decisions made by the previous hearing examiner, Andres Haladay, based on Summary Judgment motions before him. Mr. Haladay issued his Summary Judgment order on August 1, 2017. Copper Ridge has taken exceptions to both my Proposed Order and Mr. Haladay's Summary Judgment order. The Board's materials for the December 7th meeting therefore include not only my Proposed Order, but also Mr. Haladay's Order on Summary Judgment, Copper Ridge's Exceptions Brief, and DEQ's Response Brief. Additionally, on November 26, 2018 (after DEQ filed its response), Copper Ridge filed an additional Motion to Strike portions of DEQ's response brief as untimely. That Motion is currently pending before the Board, and it is therefore also included in the Board materials.

In addition to the written materials, the parties can make oral arguments to the Board at the December 7th meeting.

Based on the written record and the oral arguments before the Board, it must decide, by seconded motion, what to do with my Proposed Order. MAPA provides BER with the following options:

The agency may adopt the proposal for decision as the agency's final order. The agency in its final order may reject or modify the conclusions of law and interpretation of administrative rules in the proposal for decision but may not reject or modify the findings of fact unless the agency first determines from a review of the complete record and states with particularity in the order that the findings of fact were not based upon competent substantial evidence or that the proceedings on which the findings were based did not comply with essential requirements of law. The agency may accept or reduce the recommended penalty in a proposal for decision but may not increase it without a review of the complete record.

Mont. Code Ann. § 2-4-621(3).

In other words, BER has three options regarding what action to take upon review of a hearing examiner's proposed order:

- (1) Accept the Order on Summary Judgment and Proposed Order in their entirety and adopt them as the Board's final order;
- (2) Accept the findings of fact in the Order on Summary judgment and Proposed Order, but modify the conclusions of law or interpretations of administrative rules in either; or
- (3) Reject the Order on Summary judgment and/or the Proposed Order, review the entire record that was before the hearing examiner, find that the Proposed Order is not supported by substantial evidence, and modify the findings of fact and conclusions of law in the proposed order accordingly. This could mean a modified order on summary judgment, an order denying summary judgment and ordering a hearing, or some combination of the two.

When choosing among these three options, the Board should keep certain legal standards in mind. Regarding options (2) and (3), the agency may "correct a hearing examiner's incorrect conclusions of law" in a final order, without having to review the entire factual record. *Mont. Dept. Transp. v. Mont. Dept. Labor and Indus.*, 2016 MT 282, ¶ 23 (herein, *MDOT*); Mont. Code Ann. § 2-4-621(3). However, the agency is more

constrained with regard to modifying findings of fact. The agency cannot discard a hearing examiner's factual findings. *Mayer v. Bd. of Psychologists*, 2014 MT 85, ¶¶ 7, 27-29. "Under MAPA, an agency may reject a hearing officer's findings of fact only if, upon review of the complete record, the agency first determines that the findings were not based upon competent substantial evidence." *Blaine Cnty. v. Stricker*, 2017 MT 80, ¶ 25 ((internal quotations marks omitted; citing *Moran v. Shotgun Willies*, 270 Mont. 47, 51, 889 P.2d 1185, 1187 (1995), Mont. Code Ann. § 2-4-621(3)). "In reviewing findings of fact, the question is not whether there is evidence to support *different* findings, but whether competent substantial evidence supports the findings actually made." *Mayer*, ¶ 27 (citing *Knowles v. State ex rel. Lindeen*, 2009 MT 415, ¶ 21 (emphasis supplied in *Knowles*)).

"An agency abuses its discretion if it modifies the findings of a hearing officer without first determining that the findings were not supported by substantial evidence." *Stricker*, ¶ 25. "[A]n agency's rejection or modification of a hearing officer's findings cannot survive judicial review unless the court determines as a matter of law that the hearing examiner's findings are not supported by substantial evidence."¹ *Id.* (internal citations omitted). With regard to whether substantial credible evidence supports the factual findings, *Stricker* explained:

Substantial evidence is evidence that a reasonable mind might accept as adequate to support a conclusion. It consists of more [than] a mere scintilla of evidence but may be less than a preponderance. The evidence is viewed in the light most favorable to the prevailing party when determining whether findings are supported by substantial credible evidence.

Stricker, ¶ 26 (internal citations and quotations omitted); *see also Mayer*, ¶ 27 (quoting Black's Law Dictionary 635, 636, 639, 640 (Bryan A. Garner ed., 9th ed., Thomson Reuters 2009)).

Members of the Board may therefore look at any portions of the underlying record in order to decide whether or not findings of facts are supported by "competent substantial evidence," but once the Board determines that factual findings are not so supported, the Board must review the entire record before modifying any fact found by the Hearing Examiner.

Once a decision is made, BER may utilize the Board Secretary or Board Attorney to assist in drafting the final order memorializing the Board's substantive decision, for the

¹ This standard should not be confused with the legal determination of whether the facts, as found, meet a party's burden of proof by a preponderance of the evidence. *See Mont. Envtl. Info. Ctr. v. Mont. Dep't of Envtl. Quality*, 2005 MT 96, P17-26.

signature of the Board Chair. If the decision is dispositive (ending the case), then the aggrieved party may appeal to state District Court for review. If the Board's decision is not dispositive, the Board can decide to retain jurisdiction of this matter or assign it to a hearings examiner for further proceedings.

Environmental Review

This 7 day of February, 2017

at 1:47 o'clock p.m.

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW OF THE STATE OF MONTANA

By: [Signature]

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**IN THE MATTER OF:
VIOLATIONS OF THE OPENCUT
MINING ACT BY BIG ROCK, LLC AT
WHEELER GRAVEL PIT, MISSOULA
COUNTY, MONTANA (OPENCUT NO.
719; FID 2471)**

CASE NO. BER 2016-06 OC

FINDINGS OF FACT, CONCLUSIONS OF LAW AND PROPOSED ORDER

INTRODUCTION

Appellant Big Rock, LLC (Big Rock) requested a hearing regarding the Montana Department of Environmental Quality's (DEQ) cited violations of the Opencut Mining Act. A scheduling order was entered, and Big Rock has not complied. DEQ moved to dismiss this matter and Big Rock did not respond. A Show Cause Order was entered and Big Rock did not respond.

FINDINGS OF FACT

1. On May 11, 2016, DEQ issued a Notice of Violation and Administrative Compliance and Penalty Order against Big Rock.
2. On June 16, 2016, Big Rock filed a Notice of Request for Hearing in the Matter of Violations of the Opencut Mining Act by Big Rock, LLC at Wheeler Gravel Pit, Missoula County, Montana.
3. Big Rock did not provide a basis for its Request for Hearing.
4. The Board of Environmental Review assigned this matter to a Hearing Examiner.
5. On September 13, 2016, a Scheduling Order was entered.
6. The Scheduling Order required Big Rock to file a more definite statement setting forth with particularity the basis for this appeal, by September 30, 2016.

1 **A. DEQ’s Motion to Dismiss Is Deemed Well Taken.**

2 5. Montana Uniform District Court Rule 2(b), “Failure to File Briefs,”
3 provides:

4 Failure to file briefs may subject the motion to summary ruling. The
5 moving party’s failure to file a brief shall be deemed an admission
6 that the motion is without merit. *Failure to file an answer brief by
the opposing party within the time allowed shall be deemed an
admission that the motion is well taken.*

7 (emphasis added.)

8 6. When a motion is deemed “well-taken” pursuant to Uniform District
9 Court Rule 2(b), the Montana Supreme Court “will not hold a district court in error
10 for failing to address an issue that the parties did not raise.” *McDunn v. Arnold*,
11 2013 MT 138, ¶ 14, 370 Mont. 270, 303 P.3d 1279.

12 7. Pursuant to Uniform District Court Rule 2(b), Big Rock’s failure to
13 Respond to DEQ’s Motion to Dismiss constitutes an admission DEQ’s Motion is
14 well-taken.

15 8. Big Rock has not raised any arguments in response to DEQ and the
16 Board of Environmental Review cannot be held in error for failure to address issues
17 Big Rock did not raise.

18 9. DEQ’s Motion to Dismiss is deemed well taken, except to the extent
19 DEQ requests attorney fees. *See Infra*, ¶¶ 21-23.

20 10. This matter is dismissed, with prejudice.

21 **B. This Matter is Dismissed for Failure to Comply with the Scheduling
22 Order.**

23 11. A hearing examiner may set motion and briefing schedules, provide
24 for the taking of discovery, and generally “regulate the course of hearings.” Mont.
25 Code Ann. § 2-4-611; Mont. Admin R. 1.3.218.

26 12. “The purpose of a scheduling order is to instruct the parties to
27 complete certain pretrial activities such as discovery and filing pretrial motions by a

1 specific date. This scheduling order allows the district court to better control trial
2 proceedings by resolving many issues during the pretrial phase of the case.”

3 *Stevenson v. Felco Indus.*, 2009 MT 299, ¶ 32, 352 Mont. 303, 216 P.3d 763.

4 13. M.R.Civ.P. 16 provides guidance that a hearing examiner may impose
5 “just orders” if a party or attorney fails to obey a scheduling order or other pretrial
6 order. M.R.Civ.P. 16(f)(1)(C); *see also Kingsbury Ditch Co. v. Dep’t of Nat. Res. &*
7 *Conservation*, 223 Mont. 379, 381, 725 P.2d 1209, 1210 (1986) (considering,
8 without deciding, hearing officer’s decision to not employ sanctions for discovery
9 abuse). A “just order” may include the sanction of dismissal of an action in whole
10 or in part. *McKenzie v. Scheeler*, 285 Mont. 500, 511, 949 P.2d 1168, 1174 (1997).

11 14. “Rule 16(f), M.R.Civ.P., which provides that a district court may
12 impose sanctions for failure to obey a scheduling order, does not require that a party
13 be given notice of failure to comply or that sanctions could be imposed.” *Id.*

14 15. Big Rock appealed this matter pursuant to Mont. Code Ann. § 82-4-
15 441(5)(b), which required Big Rock to submit a “written request for hearing stating
16 the reason for the request.”

17 16. Due to Big Rock’s failure to include any “reason for the request,” the
18 Scheduling Order instructed Big Rock to provide a more definite statement setting
19 forth with particularity the basis for this appeal, by September 30, 2016.

20 17. Big Rock’s non-compliance with the Scheduling Order has interfered
21 with the undersigned’s ability to regulate the course of these proceedings.

22 18. Big Rock’s non-compliance with the Scheduling Order has resulted in
23 an inability to complete pre-trial activities in a timely and economical fashion.

24 19. Big Rock’s non-compliance with the Scheduling Order has resulted in
25 an inability to resolve issues during the pretrial phase of the case.

26 20. Although not required, Big Rock had notice of the Scheduling Order,
27 notice of non-compliance with the scheduling order and notice that further non-

1 compliance might result in dismissal. Big Rock had multiple opportunities to be
2 heard but did not respond.

3 21. Big Rock's non-compliance merits dismissal with prejudice.

4 22. M.R.Civ.P. 16(f)(2) provides that in the event of non-compliance with
5 Rule 16, the hearing examiner "must order the party, its attorney, or both to pay the
6 reasonable expenses – including attorney fees – incurred because of any
7 noncompliance with this rule, unless the noncompliance was substantially justified
8 or other circumstances make an award of expenses unjust."

9 23. Rule 16 is not expressly adopted by MAPA and the undersigned does
10 not find the expenses provision of the rule to provide guidance under these
11 circumstances.

12 24. Moreover, even if Rule 16 applied, the procedural disposition of this
13 case renders an award of expenses unjust. Based on Big Rock's non-compliance,
14 this matter is in its procedural infancy. DEQ has filed a motion to dismiss,
15 analogous to M.R.Civ.P. 12(b)(6). This is not a situation where DEQ has repeatedly
16 moved to compel Big Rock's compliance with the scheduling order or discovery
17 rules, expending valuable time and energy on repetitive procedural battles. Rather,
18 DEQ has requested, and received, outright dismissal of this matter, with prejudice.
19 Big Rock will have a final order entered against it, including monetary penalties.
20 The undersigned concludes it would be unjustified, under these circumstances, to
21 impose further monetary obligations on Big Rock.

22 **C. This Matter is Dismissed Based on Big Rock's Failure to Comply with**
23 **Orders.**

24 25. Montana R.Civ.P. 41(b) provides, "[i]f the plaintiff fails to prosecute
25 or to comply with these rules or a court order, a defendant may move to dismiss the
26 action or any claim against it."

27

1 26. Montana’s Rule 41(b) was amended in 2010 to “conform to the recent
2 changes in the Federal Rules.” M.R.Civ.P. 41, Committee Notes.

3 27. Rule 41(b) has “long been interpreted to permit courts to dismiss
4 actions sua sponte for a plaintiff’s failure to prosecute or comply with the rules of
5 civil procedure or court’s orders.” *Hells Canyon Pres. Council v. United States*
6 *Forest Serv.*, 403 F.3d 683, 689 (9th Cir. 2005) (quoting *Olsen v. Mapes*, 333 F.3d
7 1199, 1204 n.3 (10th Cir. 2003)).

8 28. Montana analyzes four factors to determine whether a tribunal, in its
9 discretion, may dismiss pursuant to 41(b):

- 10 (1) the plaintiff’s diligence in prosecuting his claims;
11 (2) the prejudice to the defense caused by the plaintiff’s delay;
12 (3) the availability of alternate sanctions; and
13 (4) the existence of a warning to plaintiff that his case is in danger of
14 dismissal.

15 *Watson v. West*, 2009 MT 342, ¶ 25, 353 Mont. 120, 218 P.3d 1227.

16 29. The Board of Environmental Review is in the best position to
17 “consider the circumstances of each case and decide questions of good faith in
18 situations that may warrant sanctions.” *Id.* ¶ 31.

19 30. Big Rock has not exercised diligence in this case. Big Rock requested
20 a hearing before the Board of Environmental Review but did not comply with the
21 statutory requirement it provide the basis for the appeal. Big Rock did not comply
22 with the Scheduling Order, requiring a more specific statement of its basis for
23 appeal. Big Rock did not respond to DEQ’s motion to dismiss. Big Rock did not
24 respond to the Show Cause Order. In short, Big Rock’s objective conduct
25 establishes it has not been diligent.

26 31. Big Rock’s lack of diligence has resulted in prejudice to DEQ. Waste
27 of time and delay constitute sufficient prejudice when they arise from another
28 party’s lack of diligence and disregard for a tribunal’s orders. *Watson*, ¶ 28.

29 Moreover under the Scheduling Order, discovery closed without Big Rock ever

1 disclosing the specific reasons for its appeal, leaving DEQ without knowledge of the
2 legal or factual basis for Big Rock's appeal.

3 32. The undersigned has considered whether to impose something other
4 than involuntary dismissal. *See* M.R.Civ.P. 37(b)(2)(A)(i)-(iv). Given that Big
5 Rock has been unresponsive to multiple orders, missed discovery deadlines, has not
6 responded to DEQ's motion and has not demonstrated objective inclination to
7 participate in these proceedings, anything less than dismissal would unnecessarily
8 prolong these proceedings to the prejudice of DEQ, frustrate judicial economy and
9 be a waste of time.

10 33. Big Rock received two warnings that its case was in danger of
11 dismissal. First, Big Rock received DEQ's Motion to Dismiss. Big Rock did not
12 respond. Second, Big Rock was ordered to Show Cause why this matter should not
13 be dismissed pursuant to Rule 41(b). Big Rock did not respond.

14 34. Based on the foregoing, Big Rock's appeal is dismissed with
15 prejudice.

16 **D. Default Is Entered Against Big Rock.**

17 35. The Attorney General's Model Rule 10(1) (Mont. Admin. R.
18 1.3.214(1)) states:

19 If a party does not appear to contest an intended agency action, the agency
20 may enter a default order. If a default is entered, the order must contain
findings of fact and conclusions of law.

21 36. As set forth in the Findings of Fact, Big Rock was afforded
22 opportunity for hearing in this case. Big Rock had notice of the Scheduling Order,
23 the applicable deadlines, and its responsibilities. Big Rock had notice of the
24 pending Motion to Dismiss. Big Rock had notice of the Show Cause Order. Big
25 Rock did not comply with the scheduling order, did not participate in briefing in this
26 matter and did not respond to the Show Cause Order. Big Rock has not appeared to
27 contest the intended agency action by DEQ. Therefore, Big Rock will be defaulted.

MCA Contents / TITLE 2 / CHAPTER 4 / Part 7

Montana Code Annotated 2017

TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION
CHAPTER 4. ADMINISTRATIVE PROCEDURE ACT

Part 7. Judicial Review of Contested Cases

- 2-4-701 Immediate review of agency action
- 2-4-702 Initiating judicial review of contested cases
- 2-4-703 Receipt of additional evidence
- 2-4-704 Standards of review
- 2-4-705 through 2-4-710 reserved
- 2-4-711 Appeals -- staying agency decision

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MCA Contents / TITLE 2 / CHAPTER 4 / Part 7 / 2-4-704 Standards of re...

Montana Code Annotated 2017

TITLE 2. GOVERNMENT STRUCTURE AND ADMINISTRATION

CHAPTER 4. ADMINISTRATIVE PROCEDURE ACT

Part 7. Judicial Review of Contested Cases

Standards Of Review

2-4-704. Standards of review. (1) The review must be conducted by the court without a jury and must be confined to the record. In cases of alleged irregularities in procedure before the agency not shown in the record, proof of the irregularities may be taken in the court. The court, upon request, shall hear oral argument and receive written briefs.

(2) The court may not substitute its judgment for that of the agency as to the weight of the evidence on questions of fact. The court may affirm the decision of the agency or remand the case for further proceedings. The court may reverse or modify the decision if substantial rights of the appellant have been prejudiced because:

- (a) the administrative findings, inferences, conclusions, or decisions are:
 - (i) in violation of constitutional or statutory provisions;
 - (ii) in excess of the statutory authority of the agency;
 - (iii) made upon unlawful procedure;
 - (iv) affected by other error of law;
 - (v) clearly erroneous in view of the reliable, probative, and substantial evidence on the whole record;
 - (vi) arbitrary or capricious or characterized by abuse of discretion or clearly unwarranted exercise of discretion; or
- (b) findings of fact, upon issues essential to the decision, were not made although requested.

(3) If a petition for review is filed challenging a licensing or permitting decision made pursuant to Title 75 or Title 82 on the grounds of unconstitutionality, as provided in subsection (2)(a)(i), the petitioner shall first establish the unconstitutionality of the underlying statute.

History: En. Sec. 16, Ch. 2, Ex. L. 1971; amd. Sec. 17, Ch. 285, L. 1977; R.C.M. 1947, 82-4216(6), (7); amd. Sec. 2, Ch. 83, L. 1989; amd. Sec. 3, Ch. 361, L. 2003.

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Mont. Env'tl. Info. Ctr. v. Mont. Dep't of Env'tl. Quality

Supreme Court of Montana

December 22, 2004, Submitted on Briefs ; April 19, 2005, Decided

No. 04-247

Reporter

2005 MT 96 *; 326 Mont. 502 **; 112 P.3d 964 ***; 2005 Mont. LEXIS 166 ****

MONTANA ENVIRONMENTAL INFORMATION CENTER and ENVIRONMENTAL DEFENSE, Petitioners and Appellants, v. MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY and BULL MOUNTAIN DEVELOPMENT CO. NO. 1 LLC, Respondents and Respondents.

Subsequent History: [****1] Released for Publication: May 31, 2005.

Rehearing denied by *Mont. Env'tl. Info. Ctr. v. Dep't of Env'tl. Quality*, 2005 Mont. LEXIS 229 (Mont., May 31, 2005)

Prior History: APPEAL FROM: District Court of the Fourteenth Judicial District, In and For the County of Musselshell, Cause No. DV-03-50, Honorable Richard A. Simonton, Presiding Judge.

Disposition: Affirmed in part, reversed in part and remanded.

Core Terms

visibility, contested case, district court, department's decision, adverse impact, air quality, proposed project, emissions, impacts, conclusions of law, fact finding, abuse of discretion, clearly erroneous, Department's, provisions, arbitrary and capricious, burden of proof, correctly, preponderance of the evidence, deferred, provides, asserts, agency's decision, judicial review, federal land, demonstrates, conclusions, regulations, modeling, notice

Case Summary

Procedural Posture

Respondent Montana Department of Environmental Quality's issued an air quality permit to respondent developer. The Montana Board of Environmental Review entered an order approving the decision, and the Fourteenth Judicial District Court, Musselshell County, Montana, affirmed the Board's findings of fact and conclusions of law. Appellant environmental center challenged the judgment.

Overview

The developer proposed to build a coal-fired power plant in a Class I area. The issues the supreme court considered on appeal were: (1) whether the district court erred in determining the Board correctly concluded that the center had the burden of proof; (2) whether the district court erred in determining the Board applied the correct standards; and (3) whether the district court erred in determining the Board correctly concluded that federal land managers (FLMs) had responsibility to protect visibility in Class I areas and whether deference to the conclusions of the FLMs was appropriate. The center had the burden of presenting the evidence necessary to establish the essential facts, pursuant to *Mont. Code Ann. § 26-1-401* and *Mont. Code Ann. § 26-1-402*. Nevertheless, the Board applied a standard of review not legally available to it under the Montana Administrative Procedure Act. Finally, although FLMs were charged with the responsibility for management of Class I areas, the Department was

2005 MT 96, *96; 326 Mont. 502, **502; 112 P.3d 964, ***964; 2005 Mont. LEXIS 166, ****1

precluded from issuing a permit unless there was an affirmative showing that the project would not cause an adverse impact on visibility. Deference to the FLMs was inappropriate.

Outcome

The supreme court affirmed the judgment, in part, and it reversed the judgment, in part. The supreme court remanded the matter for further proceedings.

LexisNexis® Headnotes

Administrative Law > Agency Adjudication > Hearings > General Overview

Environmental Law > Administrative Proceedings & Litigation > Judicial Review

Administrative Law > Judicial Review > Standards of Review > General Overview

HN1 [v] Agency Adjudication, Hearings

A district court reviews a decision in a Montana Administrative Procedure Act contested case proceeding pursuant to Mont. Code Ann. § 2-4-704.

Administrative Law > Agency Adjudication > Hearings > General Overview

Administrative Law > Judicial Review > Standards of Review > General Overview

HN2 [v] Agency Adjudication, Hearings

See Mont. Code Ann. § 2-4-704.

Administrative Law > Judicial Review > Standards of Review > General Overview

Environmental Law > Administrative Proceedings & Litigation > Judicial Review

HN3 [v] Judicial Review, Standards of Review

The supreme court employs the same standard set forth in Mont. Code Ann. § 2-4-704 when reviewing a district court's order affirming or reversing an administrative decision.

Administrative Law > ... > Hearings > Evidence > General Overview

Environmental Law > Air Quality > Enforcement > Administrative Proceedings

Administrative Law > Agency Adjudication > Hearings > General Overview

Environmental Law > Air Quality > General Overview

HN4  **Hearings, Evidence**

A person who is jointly or severally adversely affected by the Montana Department of Environmental Quality's decision may request a hearing before the board, and that the contested case provisions of the Montana Administrative Procedure Act (MAPA) apply to hearings before the Montana **Board of Environmental Review**. Under the contested case provisions of the MAPA, all parties to such a proceeding must be afforded the opportunity to respond and present evidence and argument on the issues raised. Mont. Code Ann. § 2-4-612(1). Furthermore, contested case hearings are bound by the common law and statutory rules of evidence unless otherwise provided by a specific statute. Mont. Code Ann. § 2-4-612(2).

Evidence > Burdens of Proof > General Overview

HN5  **Evidence, Burdens of Proof**

See Mont. Code Ann. § 26-1-401.

Evidence > Burdens of Proof > General Overview

HN6  **Evidence, Burdens of Proof**

See Mont. Code Ann. § 26-1-402.

Administrative Law > Agency Adjudication > Review of Initial Decisions

Environmental Law > Natural Resources & Public Lands > National Environmental Policy Act > General Overview

Administrative Law > Judicial Review > Standards of Review > General Overview

Environmental Law > Administrative Proceedings & Litigation > Judicial Review

HN7  **Agency Adjudication, Review of Initial Decisions**

Under the Montana Administrative Procedure Act, the standards for court review of agency decisions are in Mont. Code Ann. § 2-4-704(2). The Montana **Board of Environmental Review** should apply the same standards when hearing a challenge to a decision made by Montana Department of Environmental Quality, to the extent that the standards are applicable to the Board.

Administrative Law > Agency Adjudication > Hearings > General Overview

Environmental Law > Air Quality > Enforcement > Administrative Proceedings

Environmental Law > Air Quality > General Overview

2005 MT 96, *96; 326 Mont. 502, **502; 112 P.3d 964, ***964; 2005 Mont. LEXIS 166, ****1

Environmental Law > Natural Resources & Public Lands > National Environmental Policy Act > General Overview

HN8 Agency Adjudication, Hearings

A party adversely affected by a Montana Department of Environmental Quality decision approving or denying an air quality permit may request a hearing before the Board to be conducted pursuant to the contested case provisions of the Montana Administrative Procedure Act (MAPA). Mont. Code Ann. § 75-2-211(10). The contested case provisions of the MAPA are contained in Mont. Code Ann. tit. 2, ch. 4, pt. 6. Under those provisions, all parties shall be given opportunity to appear and present evidence and argument regarding all the issues raised in the proceeding. Mont. Code Ann. § 2-4-612(1).

Administrative Law > Agency Adjudication > Hearings > General Overview

Administrative Law > Agency Adjudication > Review of Initial Decisions

HN9 Agency Adjudication, Hearings

See Mont. Code Ann. § 2-4-623.

Administrative Law > Agency Adjudication > Hearings > General Overview

Environmental Law > Administrative Proceedings & Litigation > Jurisdiction

Evidence > Burdens of Proof > General Overview

HN10 Agency Adjudication, Hearings

Findings of fact in a civil matter must be based on a preponderance of the evidence. Mont. Code Ann. § 26-1-403(1). Thus, the Montana **Board of Environmental Review**'s role in a contested case proceeding is to receive evidence from the parties, enter findings of fact based on the preponderance of the evidence presented and then enter conclusions of law based on those findings.

Administrative Law > Judicial Review > General Overview

Civil Procedure > Appeals > Standards of Review > Clearly Erroneous Review

Environmental Law > Administrative Proceedings & Litigation > Judicial Review

Administrative Law > Agency Adjudication > Hearings > General Overview

Administrative Law > Judicial Review > Standards of Review > General Overview

Administrative Law > Judicial Review > Standards of Review > Abuse of Discretion

Administrative Law > Judicial Review > Standards of Review > Arbitrary & Capricious Standard of Review

2005 MT 96, *96; 326 Mont. 502, **502; 112 P.3d 964, ***964; 2005 Mont. LEXIS 166, ****1

Administrative Law > Judicial Review > Standards of Review > Clearly Erroneous Standard of Review

Civil Procedure > Appeals > Standards of Review > General Overview

HN11 **Administrative Law, Judicial Review**

Mont. Code Ann. tit. 2, ch. 4, pt. 7 provides for judicial review by a district court of an agency decision in a contested case proceeding under the Montana Administrative Procedures Act (MAPA). As set forth above, a district court reviews a final agency decision in a contested case proceeding pursuant to Mont. Code Ann. § 2-4-704. Pursuant to this statute, a district court may determine whether an agency decision is clearly erroneous, arbitrary and capricious, or an abuse of discretion. Mont. Code Ann. § 2-4-704(2)(v) and (vi). These standards of review are expressly limited to a district court's review of an agency decision under part 7 of the MAPA. The standards of clearly erroneous, arbitrary and capricious, and abuse of discretion are not available to an agency acting as a factfinder under the contested case provisions contained in part 6 of the MAPA.

Administrative Law > Agency Adjudication > Hearings > General Overview

HN12 **Agency Adjudication, Hearings**

Mont. Code Ann. § 75-2-211(10) expressly states that the hearing before the Montana **Board of Environmental Review** must be conducted pursuant to the contested case provisions of part 6 of the Montana Administrative Procedure Act.

Environmental Law > Air Quality > General Overview

HN13 **Environmental Law, Air Quality**

Montana Department of Environmental Quality regulations require an applicant for an air quality permit to include in the application information regarding the types of pollutants the proposed project is predicted to emit, the predicted rates of such emissions and proposed methods of controlling the emissions. The regulations also require a permit applicant to provide a visibility analysis demonstrating that the predicted emissions will not cause or contribute to an adverse impact on visibility in any area designated as a Class I area. Mont. Admin. R. 17.8.1106. The effect of emissions on visibility in Class I areas must be estimated using an approved computer air quality dispersion modeling program. Mont. Admin. R. 17.8.1107. The Department may not issue an air quality permit unless the applicant demonstrates that there will be no resulting adverse impact on visibility in Class I areas. Mont. Admin. R. 17.8.1106(1) and Mont. Admin. R. 17.8.1109(2).

Environmental Law > Natural Resources & Public Lands > National Environmental Policy Act > General Overview

Governments > Federal Government > Employees & Officials

Administrative Law > Agency Adjudication > Review of Initial Decisions

Environmental Law > Air Quality > General Overview

2005 MT 96, *96; 326 Mont. 502, **502; 112 P.3d 964, ***964; 2005 Mont. LEXIS 166, ****1

Environmental Law > Administrative Proceedings & Litigation > Jurisdiction

Governments > Federal Government > Property

HN14 **Natural Resources & Public Lands, National Environmental Policy Act**

If, upon initial review of an application, the Montana Department of Environmental Quality determines that a proposed project will or may impact on visibility in a Class I area, the Department must provide notice of the anticipated visibility impact to the environmental protection agency (EPA) and to the federal land manager (FLM) charged with direct responsibility for the management of the Class I area involved. Mont. Admin. R. 17.8.1108.

Environmental Law > Air Quality > General Overview

Governments > Federal Government > Employees & Officials

Governments > Federal Government > Property

HN15 **Environmental Law, Air Quality**

The federal land manager (FLM) and the federal official charged with direct responsibility for management of Class I lands have an affirmative responsibility to protect the air quality related values (including visibility) of any such lands and to consider whether a proposed source or modification would have an adverse impact on such values.

Environmental Law > Air Quality > General Overview

Governments > Federal Government > Property

Environmental Law > Administrative Proceedings & Litigation > Jurisdiction

Environmental Law > Natural Resources & Public Lands > National Environmental Policy Act > General Overview

HN16 **Environmental Law, Air Quality**

Upon receiving the Montana Department of Environmental Quality's notice, the federal land manager may present the Department with a demonstration that emissions from the proposed project will adversely impact the visibility of the Class I area at issue. Mont. Admin. R. 17.8.825(3) and 17.8.1109(1).

Environmental Law > Natural Resources & Public Lands > National Environmental Policy Act > General Overview

Governments > State & Territorial Governments > Licenses

Environmental Law > Air Quality > General Overview

Governments > Federal Government > Property

HN17  **Natural Resources & Public Lands, National Environmental Policy Act**

If the federal land manager (FLM) determines that a project will result in an adverse impact on visibility, then an applicant may demonstrate to the FLM that the emissions from such source would have no adverse impact on the air quality-related values of such lands (including visibility). If the FLM concurs with such demonstration and so certifies to the Montana Department of Environmental Quality, the Department may, provided that applicable requirements are otherwise met, issue the permit under Mont. Admin. R. 17.8.825(4). Mont. Admin. R. 17.8.1109, further provides that the department will consider the comments of the FLM in its determination of whether adverse impact on visibility may result. Should the Department determine that such impairment may result, a permit for the proposed source will not be granted. Where the department finds the FLM's analysis does not demonstrate to the satisfaction of the Department that an adverse impact on visibility will result, the department will provide written notification to the affected FLM within five days of the Department's final decision on the permit. The notification will include an explanation of the Department's decision or give notice as to where the explanation can be obtained.

Environmental Law > Air Quality > General Overview

Environmental Law > Natural Resources & Public Lands > National Environmental Policy Act > General Overview

HN18  **Environmental Law, Air Quality**

Federal land managers are charged with the responsibility for management of Class I areas and have an affirmative responsibility to protect the air quality-related values of those areas by, in part, considering whether a proposed project would have an adverse impact on visibility. Mont. Admin. R. 17.8.825(2). However, the Montana Department of Environmental Quality is precluded from issuing an air quality permit unless the applicant affirmatively demonstrates to it that the proposed project will not cause or contribute to an adverse impact on visibility in Class I areas. Mont. Admin. R. 17.8.1106(1) and Mont. Admin. R. 17.8.1109(2).

Environmental Law > Natural Resources & Public Lands > National Environmental Policy Act > General Overview

Environmental Law > Air Quality > General Overview

HN19  **Natural Resources & Public Lands, National Environmental Policy Act**

See Mont. Admin. R. 17.8.1109.

Environmental Law > Air Quality > General Overview

Governments > Federal Government > Property

Environmental Law > Natural Resources & Public Lands > National Environmental Policy Act > General Overview

HN20  **Environmental Law, Air Quality**

2005 MT 96, *96; 326 Mont. 502, **502; 112 P.3d 964, ***964; 2005 Mont. LEXIS 166, ****1

While opinions of federal land managers (FLMs) and analyses regarding adverse visibility impacts on Class I areas carries weight in the overall determination of whether an applicant has established that a proposed project's emissions will not cause such adverse impacts, the Montana Department of Environmental Quality own regulations require it to make its own independent determination on the issue by considering all the information presented to it. The Department may not simply defer to the opinion of the relevant FLMs.

Counsel: For Appellants: Jennifer S. Hendricks; Meloy Trieweller, Helena, Montana. George E. Hays, Attorney at Law, San Francisco, California.

For Respondents: J. Daniel Hoven, Sara B. Stanton; Browning, Kaleczyc, Berry & Hoven, Helena, Montana, (for Bull Mountain Development Co. No. 1 LLC). David M. Rusoff, Special Assistant Attorney General, Department of Environmental Quality, Helena, Montana, (for Department of Environmental Quality).

Judges: KARLA M. GRAY. We concur: JAMES C. NELSON, PATRICIA O. COTTER, W. WILLIAM LEAPHART, JOHN WARNER. Chief Justice Karla M. Gray delivered the Opinion of the Court.

Opinion by: Karla M. Gray

Opinion

[503]** **[***965]** Chief Justice Karla M. Gray delivered the Opinion of the Court.

[*P1] **[****2]** The Montana Environmental Information Center and Environmental Defense (collectively, MEIC) appeal from the judgment entered by the Fourteenth Judicial District Court, Musselshell County, on its order affirming findings of fact, conclusions of law and an order entered by the Montana Board of Environmental Review (the Board). In its order, the Board approved the decision of the Montana Department of Environmental Quality (the Department) to issue an air quality permit to Bull Mountain Development Co. No. 1 LLC (Bull Mountain). We affirm in part, reverse in part and remand for further **[**504]** proceedings consistent with this opinion.

[*P2] Although MEIC raises seven issues in its appeal of the District Court's order, we need address only the following:

[*P3] 1. Did the District Court err in determining the Board correctly concluded that MEIC had the burden of proof in the contested case proceeding?

[*P4] 2. Did the District Court err in determining the Board applied the correct standards in the contested case proceeding?

[*P5] 3. Did the District Court err in determining the Board correctly concluded **[****3]** that federal land managers have responsibility to protect visibility in Class I areas and, therefore, the Department appropriately deferred to the federal land managers' conclusions regarding visibility impacts in those areas?

FACTUAL AND PROCEDURAL BACKGROUND

[*P6] This case stems from a proposal by Bull Mountain to build a 780 megawatt pulverized coal-fired power plant in Musselshell County, approximately 12 miles southeast of Roundup, Montana. The plant would use coal from the Bull Mountain Mine, located adjacent to the site for the proposed plant, as fuel for two boilers to produce steam which would power turbine generators and produce electricity.

[*P7] In January of 2002, Bull Mountain submitted an air quality permit application for the proposed power plant to the Department as required by § 75-2-211, MCA, and the administrative rules promulgated thereunder. Bull Mountain also published notice of its application in various local newspapers. After Bull Mountain provided supplementary information, the Department deemed the application complete in July of 2002. The Department issued a draft permit **[****4]** in August of 2002 and a draft environmental impact statement (EIS) the following

November. The Department provided for public comment periods on the application, the draft permit and the draft EIS. In early January of 2003, the Department issued its final EIS and, later that month, issued its decision proposing that the air quality permit be granted with conditions.

[*P8] MEIC timely requested a hearing before the Board pursuant to § 75-2-211(10), MCA, challenging the Department's decision to grant Bull Mountain an air quality permit for the proposed power plant. MEIC asserted that both Bull Mountain's application and the Department's decision to grant the permit suffered from various procedural and substantive deficiencies. The Board held a contested case hearing pursuant to the Montana Administrative Procedure Act [**505] (MAPA) and issued findings of fact, conclusions of law and an order approving the Department's decision to grant the permit. MEIC then petitioned for judicial review of the Board's order. The District Court affirmed the Board's findings of fact, conclusions [****5] of law and order. MEIC appeals.

[***966] STANDARD OF REVIEW

[*P9] HN1 [↑] A district court reviews a decision in a MAPA contested case proceeding pursuant to § 2-4-704, MCA, which provides as follows:

HN2 [↑] (1) The review must be conducted by the court without a jury and must be confined to the record. In cases of alleged irregularities in procedure before the agency not shown in the record, proof of the irregularities may be taken in the court. The court, upon request, shall hear oral argument and receive written briefs.

(2) The court may not substitute its judgment for that of the agency as to the weight of the evidence on questions of fact. The court may affirm the decision of the agency or remand the case for further proceedings. The court may reverse or modify the decision if substantial rights of the appellant have been prejudiced because:

(a) the administrative findings, inferences, conclusions, or decisions are:

(i) in violation of constitutional or statutory provisions;

(ii) in excess of the statutory authority of the agency;

(iii) made upon unlawful procedure;

(iv) affected by other [****6] error of law;

(v) clearly erroneous in view of the reliable, probative, and substantial evidence on the whole record;

(vi) arbitrary or capricious or characterized by abuse of discretion or clearly unwarranted exercise of discretion;

or

(b) findings of fact, upon issues essential to the decision, were not made although requested.

HN3 [↑] We employ this same standard when reviewing a district court's order affirming or reversing an administrative decision. Juro's United Drug v. Public Health, 2004 MT 117, P9, 321 Mont. 167, P9, 90 P.3d 388, P9.

DISCUSSION

[*P10] 1. Did the District Court err in determining the Board correctly concluded that MEIC had the burden of proof in the contested case [**506] proceeding?

[*P11] During the contested case proceeding before the Board, the question arose regarding which party had the burden of proving that the air quality permit should or should not be issued to Bull Mountain. The Board determined that, as the party challenging issuance of the permit, MEIC had the burden of proof. MEIC challenged this determination in its petition for judicial review. The District Court [****7] concluded that the Board correctly determined that MEIC had the burden of proof. MEIC asserts error.

[*P12] MEIC asserts that, when Bull Mountain applied for the air quality permit, Bull Mountain had the burden of proving to the Department that all statutory and regulatory criteria for issuance of the permit were satisfied. From that premise, MEIC contends that Bull Mountain's initial burden of proof in this regard extended to the contested case hearing before the Board and required Bull Mountain--as well as the Department--to establish that the application met the permit criteria. Bull Mountain and the Department respond that MEIC, as the party contesting

the decision to issue the permit, had the burden of proving to the Board that the application did not meet the permit criteria.

[*P13] As stated above, MEIC challenged the Department's decision to issue the air quality permit by requesting a hearing before the Board pursuant to § 75-2-211(10), MCA. Section 75-2-211(10), MCA, provides that **HN4** "a person who is jointly or severally adversely affected by the department's ******8** decision may request a hearing before the board," and that the contested case provisions of the MAPA apply to hearings before the Board. Under the contested case provisions of the MAPA, all parties to such a proceeding must be afforded the opportunity to respond and present evidence and argument on the issues raised. Section 2-4-612(1), MCA. Furthermore, contested case hearings are bound by the common law and statutory rules of evidence unless otherwise provided by a specific statute. Section 2-4-612(2), MCA. The parties do not contend that any statute relating directly to the Department or the Board provides for alternative evidentiary rules in a hearing before the Board. Consequently, Montana's general common law and statutory *****967** rules of evidence apply to a contested case hearing before the Board under § 75-2-211(10), MCA.

[*P14] The statutory evidentiary provisions pertinent to this issue state that **HN5** " the initial burden of producing evidence as to a particular fact is on the party who would be defeated if no evidence were given on either ******9** side[;]" in addition, **HN6** "a party has the burden of persuasion as to *****507** each fact the existence or nonexistence of which is essential to the claim for relief or defense he is asserting." Sections 26-1-401 and -402, MCA. Thus, the party asserting a claim for relief bears the burden of producing evidence in support of that claim. Wright Oil & Tire Co. v. Goodrich (1997), 284 Mont. 6, 11, 942 P.2d 128, 131.

[*P15] Here, MEIC challenged the Department's decision to issue an air quality permit to Bull Mountain by requesting a contested case hearing before the Board. MEIC filed a petition and affidavit with the Board alleging that the Department approved the permit in violation of Montana statutes and administrative regulations, and requesting the following relief: 1) that the Board order a contested case hearing to determine the validity of the permit; 2) that the Board stay the Department's decision to grant the permit pending the hearing and final decision; 3) that the Board vacate and remand the decision to issue the permit pending compliance with all applicable ******10** laws and regulations; and 3) that the Board provide any and all other relief it may deem appropriate.

[*P16] The claim MEIC asserted before the Board was that the Department's decision to issue the air quality permit violated Montana law. If no challenge had been made or, as in this case, no evidence were presented at the contested case hearing establishing that issuance of the permit violated the law, the Board would have no basis on which to determine the Department's decision was legally invalid. Thus, as the party asserting the claim at issue, MEIC had the burden of presenting the evidence necessary to establish the facts essential to a determination that the Department's decision violated the law. See §§ 26-1-401 and -402, MCA. We hold, therefore, that the District Court did not err in determining the Board correctly concluded that MEIC had the burden of proof in the contested case proceeding.

[*P17] 2. Did the District Court err in determining the Board applied the correct standards in the contested case proceeding?

[*P18] In its petition and ******11** affidavit filed with the Board challenging the Department's decision to issue the air quality permit, MEIC alleged numerous procedural and substantive errors regarding the issuance of the permit. MEIC's petition set forth each allegation of error in separate subsections and asserted with regard to each error that the Department's act or omission was clearly erroneous, arbitrary and capricious, and an abuse of discretion. Prior to the contested case hearing, the question arose as to the Board's proper role in addressing the Department's decision and MEIC's asserted claims of error. MEIC contended that, notwithstanding the clearly erroneous/arbitrary and *****508** capricious/abuse of discretion language used in its petition, the Board was to act as a finder of fact and make legal determinations based on the preponderance of the evidence presented. The Department and Bull Mountain asserted that the Board should review the Department's decision with deference to the Department's expertise in the subject matter.

[*P19] At the beginning of the hearing, the attorney advising the Board as to procedural and evidentiary matters presented a memorandum regarding [****12] the standards the Board should use in the proceeding. The opening paragraph of the memorandum stated as follows:

HN7 [↑] Under the *Montana Administrative Procedure Act*, the standards for court review of agency decisions are in *MCA § 2-4-704(2)*. The Board should apply the same standards when hearing a challenge to a decision made by [the Department], to the extent that the standards are applicable to the Board.

The memorandum then generally referred to the standards set forth in *subsections (1) through (4) of § 2-4-704(2)(a), MCA*. With regard to the standards provided in *§ 2-4-704(2)(a)(5) and (6), MCA*, the memorandum [***968] provided specific definitions of the terms "clearly erroneous," "arbitrary," "capricious" and "abuse of discretion." Additionally, at the beginning of the Board's deliberations after the hearing, the Board's attorney again mentioned his earlier memorandum and advised the Board that

these are the standards used by a court review of agency decisions. So [****13] if the decisions made by this Board were to be reviewed by a court, the court would apply those standards to the Board's decisions. When the Board looks, then, at what [the Department] did, at a minimum, [the Department's] actions have to fit those standards to be sustained.

The attorney also advised the Board that it had the power to enter findings of fact based on a preponderance of the evidence and that, as to MEIC's allegations that the Department's actions were clearly erroneous, arbitrary and capricious or an abuse of discretion, "the question is, did the petitioners, by a preponderance of the evidence, establish that the decision was arbitrary and capricious?"

[*P20] The Board subsequently issued its findings of fact, conclusions of law and order which generally affirmed, with modifications, the Department's determination to issue the air quality permit. The Board's decision addressed each allegation contained in MEIC's petition separately. As to each allegation, the Board made findings of fact based on a preponderance of the evidence presented to it at the [**509] contested case hearing, a conclusion of law based on those findings and an [****14] ultimate decision--based on the findings and conclusion--regarding the allegation at issue. However, as stated above, certain of the allegations in MEIC's petition to the Board asserted that the Department's actions were "clearly erroneous, arbitrary and capricious, and an abuse of discretion." Regarding those allegations, the Board entered findings of fact stating that "the Board finds, by the preponderance of the evidence, that the conduct of the Department . . . was not clearly erroneous, arbitrary and capricious, and an abuse of discretion."

[*P21] In petitioning the District Court for judicial review, MEIC contended the Board erred by utilizing incorrect standards when it determined whether the Department's decision was clearly erroneous, arbitrary or capricious, or an abuse of discretion. The District Court concluded that "it would seem that the Board's role in determining whether a permit should be issued would not be de novo, but would be to review a decision of the experts [the Department] to determine if there is substantial evidence to support its decision." The court further concluded that the standards stated by the Board's attorney [****15] were the appropriate standards for the Board to apply in reviewing a Department decision. MEIC asserts the District Court's conclusions are erroneous.

[*P22] As stated above, HN8 [↑] a party adversely affected by a Department decision approving or denying an air quality permit may request a hearing before the Board to be conducted pursuant to the contested case provisions of the MAPA. *Section 75-2-211(10), MCA*. The contested case provisions of the MAPA are contained in Title 2, chapter 4, part 6 of the Montana Code Annotated (MCA). Under those provisions, all parties shall be given opportunity to appear and present evidence and argument regarding all the issues raised in the proceeding. *Section 2-4-612(1), MCA*. Additionally, *§ 2-4-623, MCA*, provides, in pertinent part, as follows:

HN9 [↑] (1) A final decision or order adverse to a party in a contested case shall be in writing or stated in the record. A final decision shall include findings of fact and conclusions of law, separately stated. Findings of fact, if set forth in statutory language, shall be [****16] accompanied by a concise and explicit statement of the underlying facts supporting the findings.

(2) Findings of fact shall be based exclusively on the evidence and on matters officially noticed.

(3) Each conclusion of law shall be supported by authority or **[**510]** by a reasoned opinion.

Furthermore, **HN10**^(↑) findings of fact in a civil matter must be based on a preponderance of the evidence. Section 26-1-403(1), MCA. Thus, the Board's role in the contested case proceeding was to receive evidence from the parties, enter findings of fact based on the **[***969]** preponderance of the evidence presented and then enter conclusions of law based on those findings.

[*P23] In contrast, **HN11**^(↑) Title 2, chapter 4, part 7 of the MCA provides for judicial review by a district court of an agency decision in a contested case proceeding under the MAPA. As set forth above, a district court reviews a final agency decision in a contested case proceeding pursuant to § 2-4-704, MCA. Pursuant to this statute, a district court may determine whether an agency decision is clearly erroneous, arbitrary **[****17]** and capricious, or an abuse of discretion. See § 2-4-704(2)(a)(5) and (6), MCA. These standards of review are expressly limited to a district court's review of an agency decision under part 7 of the MAPA. The standards of clearly erroneous, arbitrary and capricious, and abuse of discretion are not available to an agency acting as a factfinder under the contested case provisions contained in part 6 of the MAPA.

[*P24] Situations exist in which an administrative body acts in an appellate capacity when reviewing decisions, acting outside the purview of the MAPA contested case provisions and using a deferential standard of review. For example, administrative regulations governing school controversies provide that a decision of a local school board of trustees may be appealed to the county superintendent. See Rule 10.6.103, ARM. The county superintendent conducts an evidentiary hearing and enters a written final order containing findings of fact and conclusions of law. Rules 10.6.116 and 10.6.119, ARM. A party aggrieved by the county superintendent's final order then may appeal **[****18]** to the state superintendent of public instruction. Rule 10.6.121(3), ARM. The state superintendent reviews the county superintendent's decision in an appellate capacity, confined to the record established at the hearing before the county superintendent and applying a standard of review substantially similar to that applied by a district court in judicial review of a contested case under § 2-4-704(2), MCA, of the MAPA. Rules 10.6.121 and 10.6.125, ARM.

[*P25] In the present case, however, **HN12**^(↑) § 75-2-211(10), MCA, expressly states that the hearing before the Board must be conducted pursuant to the contested case provisions of part 6 of the MAPA. To that end, the Board entered findings of fact based on the evidence presented and conclusions of law based on those findings. However, as to certain of **[**511]** MEIC's allegations, the Board determined that the Department's actions were not clearly erroneous, arbitrary or capricious, or an abuse of discretion. In making these latter findings, the Board responded to the language utilized in MEIC's petition, and also relied on the imprecise **[****19]** advice of the Board's attorney regarding its role vis-a-vis the Department's decision. It is clear, however, that the Board applied a standard of review not legally available to it as the finder of fact in a contested case proceeding pursuant to the MAPA.

[*P26] We conclude, therefore, that the District Court erred in determining the Board applied the correct standards in the contested case proceeding. We further conclude that this case must be remanded to the District Court with instructions to remand to the Board for entry of new findings of fact and conclusions of law in conformity with part 6 of the MAPA. In entering new findings of fact and conclusions of law, the Board may, in its discretion, rely entirely on the record before it or receive additional evidence on such matters as it may deem appropriate.

[*P27] 3. Did the District Court err in determining the Board correctly concluded that federal land managers have responsibility to protect visibility in Class I areas and, therefore, the Department appropriately deferred to the federal land managers' conclusions regarding visibility impacts in those areas?

[*P28] **[****20]** **HN13**^(↑) Department regulations require an applicant for an air quality permit to include in the application information regarding the types of pollutants the proposed project is predicted to emit, the predicted rates of such emissions and proposed methods of controlling the emissions. The regulations also require a permit applicant to provide a visibility analysis demonstrating that the predicted emissions will not cause or contribute to an adverse impact on visibility in any area designated as a Class I area. See Rule 17.8.1106, ARM. The effect of

emissions on [***970] visibility in Class I areas must be estimated using an approved computer air quality dispersion modeling program. Rule 17.8.1107, ARM. The Department may not issue an air quality permit unless the applicant demonstrates that there will be no resulting adverse impact on visibility in Class I areas. Rules 17.8.1106(1) and 17.8.1109(2), ARM.

[*P29] HN14 [↑] If, upon initial review of the application, the Department determines that a proposed project will or may impact on visibility in a Class I area, the Department must provide notice of the anticipated visibility impact to the environmental protection [****21] agency (EPA) and to the federal land manager (FLM) charged with direct responsibility for [**512] the management of the Class I area involved. Rule 17.8.1108, ARM.

HN15 [↑] The [FLM] and the federal official charged with direct responsibility for management of Class I lands have an affirmative responsibility to protect the air quality related values (including visibility) of any such lands and to consider . . . whether a proposed source or modification would have an adverse impact on such values.

Rule 17.8.825(2), ARM.

[*P30] HN16 [↑] Upon receiving the Department's notice, the FLM may present the Department with a demonstration that emissions from the proposed project will adversely impact the visibility of the Class I area at issue. Rules 17.8.825(3) and 17.8.1109(1), ARM. HN17 [↑] If the FLM determines that such an adverse impact on visibility will result, then

the [applicant] may demonstrate to the [FLM] that the emissions from such source would have no adverse impact on the air quality-related values of such lands (including visibility) If the [FLM] concurs with such demonstration and so certifies to the department, the department may, provided [****22] that applicable requirements are otherwise met, issue the permit

Rule 17.8.825(4), ARM. Rule 17.8.1109, ARM, further provides that

(2) The department will consider the comments of the [FLM] in its determination of whether adverse impact on visibility may result. Should the department determine that such impairment may result, a permit for the proposed source will not be granted.

(3) Where the department finds [the FLM's] analysis does not demonstrate to the satisfaction of the department that an adverse impact on visibility will result, the department will provide written notification to the affected [FLM] within five days of the department's final decision on the permit. The notification will include an explanation of the department's decision or give notice as to where the explanation can be obtained.

[*P31] In its application, Bull Mountain identified four Class I areas within which visibility potentially could be impacted by emissions from the proposed plant: Yellowstone National Park (Yellowstone), the UL Bend Wilderness area (UL Bend), the North Absaroka Wilderness area (North Absaroka) and the Northern Cheyenne Indian [****23] Reservation (NCIR). In conducting its visibility analysis, Bull Mountain used a computer modeling program called CALPUFF to estimate whether, and to what extent, visibility impacts would occur in those areas. The CALPUFF modeling revealed that visibility impacts would occur in varying degrees in each of the four areas. Consequently, the [**513] Department notified the EPA; the United States Department of Agriculture Forest Service (Forest Service), the FLM for North Absaroka; the United States Department of Interior for Fish, Wildlife and Parks (FWP), the FLM for Yellowstone and UL Bend; and the NCIR of the potential visibility impacts resulting from emissions from the proposed project.

[*P32] The Forest Service did not respond to the notification on behalf of North Absaroka. The NCIR submitted comments concerning visibility impairment on the reservation resulting from the proposed project, but did not provide data or analysis demonstrating that emissions would or would not cause or contribute to an adverse impact on visibility as contemplated by Rules 17.8.825(3) and 17.8.1109(1), ARM. The FWP responded with a letter to the Department stating [****24] that the FWP had conducted its own computer modeling analysis and concluded that emissions [***971] from the proposed project would have an adverse impact on visibility in Yellowstone and UL Bend on a significant number of days in a year. The FWP appended documentation of its computer modeling

analysis to the letter. The FWP also observed that, although it was not the FLM for North Absaroka or the NCIR, its computer modeling analysis included those areas for completeness and determined there would be adverse visibility impacts in those areas as well.

[*P33] In response the FWP letter, Bull Mountain conducted an additional visibility analysis using weather data specific to the Yellowstone area. This analysis determined that, on the majority of the days on which the FWP asserted the proposed project would adversely impact visibility in Yellowstone, there were weather conditions such as rain, snow or fog which would cause visibility impairment naturally. As a result, according to Bull Mountain, any adverse visibility impact from the proposed project would be obscured by the natural weather conditions and be imperceptible to Yellowstone visitors. In [****25] other words, Bull Mountain asserted that, on the majority of those days, the proposed project would not cause or contribute to an adverse impact on visibility in Yellowstone. Bull Mountain also observed that it could not conduct a similar analysis for the UL Bend area because there was no historical weather data available, but indicated it was "likely" that such natural visibility impairment also would occur in that area. Bull Mountain provided documentation of its additional visibility analysis in Yellowstone to the Department and the FWP.

[*P34] After receiving Bull Mountain's additional visibility analysis, the FWP withdrew its initial adverse visibility impact determination for Yellowstone and UL Bend. In its subsequent decision to issue Bull [**514] Mountain an air quality permit, the Department observed that the FLMs initially indicated the proposed project's emissions would lead to an adverse impact on visibility in nearby Class I areas, but that "the FLMs withdrew their determination that an adverse impact would result from" the proposed project. Thus, although not expressly stated in its decision, the Department implicitly determined [****26] that emissions from Bull Mountain's proposed project would not "cause or contribute to adverse impact on visibility" in nearby Class I areas. See Rules 17.8.1106(1) and 17.8.1109(2), ARM.

[*P35] At the hearing before the Board, MEIC asserted that the Department improperly deferred to the FWP's opinion regarding visibility impacts rather than reaching its own independent assessment of whether the proposed project's emissions would result in visibility impacts. The Board determined that, by law, FLMs have responsibility to protect visibility in Class I areas and the Department properly relied on the FWP's opinion that the proposed project would not adversely impact visibility in those areas. MEIC challenged this determination in its petition for judicial review by the District Court. The District Court concluded as follows:

[FLMs] determined the impact on visibility at Yellowstone National Park, UL Bend Wilderness Area, and Northern Absaroka Wilderness Area, or the closest areas where data are available. They are the experts upon which [the Department] relies and they are the ones responsible for determining impacts on federal lands. With [****27] the exception of the initial report on Yellowstone National Park, the FLMs did not find adverse air quality impacts that would preclude the project. After review of the data on Yellowstone National Park, the initial adverse report was amended. The Board spent considerable time receiving testimony and other evidence, appeared to carefully review it, and its conclusions are not arbitrary, capricious, or an abuse of discretion. MEIC asserts the court's conclusion that the Department properly relied on, and deferred to, the FLM opinion is erroneous. We agree.

[*P36] Bull Mountain and the Department correctly observe that HN18[↑] FLMs are charged with the responsibility for management of Class I areas and have an affirmative responsibility to protect the air quality-related values of those areas by, in part, considering whether a proposed project would have an adverse impact on visibility. See Rule 17.8.825(2), ARM. However, the Department is precluded from issuing an air quality permit unless the applicant affirmatively demonstrates [**515] to it that the proposed project will not cause or contribute to an [***972] adverse impact on visibility [****28] in Class I areas. See Rules 17.8.1106(1) and 17.8.1109(2), ARM. Moreover, as set forth above, Rule 17.8.1109, ARM, provides that

HN19[↑]

(2) The department will *consider* the comments of the [FLM] in *its determination* of whether adverse impact on visibility may result. Should the department determine that such impairment may result, a permit for the proposed source will not be granted.

(3) Where the department finds [the FLM's] analysis does not demonstrate to the satisfaction of the department that an adverse impact on visibility will result, the department will provide written notification to the affected [FLM] within five days of the department's final decision on the permit. The notification will include an explanation of the department's decision or give notice as to where the explanation can be obtained. [Emphasis added.]

[*P37] Thus, HN20 while FLMs' opinions and analyses regarding adverse visibility impacts on Class I areas carries weight in the overall determination of whether an applicant has established that a proposed project's emissions will not cause such adverse impacts, the Department's own regulations require it to [*29] make its own independent determination on the issue by considering all the information presented to it. The Department may not simply defer to the opinion of the relevant FLMs.

[*P38] We hold, therefore, that although the Board correctly concluded that FLMs have responsibility to protect visibility in Class I areas, the District Court erred in determining the Department appropriately deferred to the FLMs' conclusions regarding visibility impacts in those Class I areas potentially impacted by emissions from the proposed project. Thus, on remand the Board shall enter findings of fact and conclusions of law determining whether, based on all the evidence presented, Bull Mountain established that emissions from its proposed project will not cause or contribute to adverse impact on visibility in the Class I areas at issue.

[*P39] Affirmed in part, reversed in part and remanded for further proceedings consistent with this opinion.

/S/ KARLA M. GRAY

We concur:

/S/ JAMES C. NELSON

/S/ PATRICIA O. COTTER

/S/ W. WILLIAM LEAPHART

/S/ JOHN WARNER

End of Document

TO: Sarah Clerget, Hearing Examiner
Board of Environmental Review

FROM: Joyce Wittenberg, Board Secretary [interim/acting] 
P.O. Box 200901
Helena, MT 59620-0901

DATE: December 17, 2020

SUBJECT: Board of Environmental Review Case No. BER 2020-07 MFSA/WQA

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

IN THE MATTER OF: NOTICE OF
CONTEST AND REQUEST FOR HEARING
BY TALEN MONTANA, LLC, REGARDING
THE SELECTION OF A REMEDY AND
SETTING OF FINANCIAL ASSURANCE
FOR THE COLSTRIP STEAM ELECTRIC
STATION UNITS 1 & 2 BY THE
MONTANA DEPARTMENT OF
ENVIRONMENTAL QUALITY.

Case No. BER 2020-07 MFSA/WQA

On December 17, 2020, the BER has received the attached request for hearing via email. Please serve copies of pleadings and correspondence on me and on the following DEQ representatives in this case.

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Attachments

Filed with the
MONTANA BOARD OF ENVIRONMENTAL REVIEW
December 17, 2020 jw

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December 17, 2020

VIA OVERNIGHT DELIVERY

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Re: Talen Montana, LLC's Protective Notice of Contest and Request for Hearing

On behalf of Talen Montana, LLC ("Talen Montana"), please find enclosed for filing with the Board of Environmental Review the following documents:

- (1) **Protective Notice of Contest and Request for Hearing by Talen Montana** in the matter of the selection of a remedy and setting of financial assurance for the Colstrip Steam Electric Station Units 1 & 2 by the Montana Department of Environmental Quality ("Notice of Contest")
- (2) **Affidavit of Robert Sterup** supporting the Notice of Contest
- (3) **List of Exhibits** supporting the Notice of Contest
- (4) **Exhibits 1-9** (hard copy and electronically by flash drive)
- (5) **Motion to Hold Proceedings in Abeyance by Talen Montana**
- (6) **Proposed Order** granting Motion to Hold Proceedings in Abeyance

With the exception of the exhibits, electronic copies of these documents are also being conveyed by email. The exhibits are being conveyed electronically via the State of Montana File Transfer Service in addition to the enclosed flash drive. Please do not hesitate to let me know if you have any questions regarding these filings.

Brown Law Firm, P.C.
December 17, 2020
Page 2 of 2

Sincerely,



Robert L. Sterup

Encl.

cc:

Ms. Lindsay Ford, Board Secretary (*via E-mail Lindsay.Ford@mt.gov*)
Sarah Clerget (*via E-mail SClerget@mt.gov*)
Aleisha Solem (*via E-mail asolem@mt.gov*)
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Martha S. Thomsen (*via E-mail martha.thomsen@bakerbotts.com*)

**BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA**

In the matter of the selection of a remedy and setting of financial assurance for the Colstrip Steam Electric Station Units 1 & 2 by the Montana Department of Environmental Quality

NOTICE OF CONTEST AND
REQUEST FOR HEARING BY
TALEN MONTANA, LLC

Notice of Contest and Request for Hearing

1. Talen Montana, LLC (“Talen Montana” or “Contester”) contests the Montana Department of Environmental Quality’s (“MDEQ” or “Department”) November 17, 2020 selection of a remedy for the Colstrip Steam Electric Station (“CSES”) Units 1 & 2 Stage One Evaporation Pond (“SOEP”) and Stage Two Evaporation Pond (“STEP”) and MDEQ’s related demand for \$285,438,000.00 in financial assurance. These decisions are contained in a November 17, 2020 cover letter from MDEQ to Gordon Criswell (“November 17 MDEQ Letter,” attached as **Exhibit 1**) and decision document entitled “DEQ’s approval of the *Units 1 & 2 Stage I and II Evaporation Ponds, Revised Remedy Evaluation – Integrated Report*, and *the Integrated Report Addendum* (Remedy Evaluation Report) and selection of a remedial alternative for the Units 1 & 2 SOEP and STEP area” (“Remedy Decision Document,” attached as **Exhibit 2**).

2. MDEQ's remedy selection and financial assurance directives contained in the November 17 MDEQ Letter and Remedy Decision Document were rushed decisions that failed to properly account for the risks to human health and the environment posed by MDEQ's selected remedy, failed to consider compliance with state and federal law, failed to comply with the administrative order on consent between MDEQ and Talen Montana, and were generally arbitrary, capricious, and abuses of discretion.

3. The November 17 MDEQ Letter, the Remedy Decision Document, and the decisions contained therein prejudice the substantial rights of Contester.

4. These remedy selection and financial assurance decisions violate constitutional and statutory provisions, exceed the authority of MDEQ and the Board of Environmental Review ("Board"), are made upon unlawful procedure, are affected by other errors of law, are clearly erroneous in view of reliable, probative, and substantial evidence to be adduced on the record in this contest proceeding, are arbitrary and capricious, and are characterized by an abuse of discretion and/or a clearly unwarranted exercise of discretion. MCA 2-4-704(2).

5. The relevant facts and specific deficiencies that Talen Montana has identified to date are set forth in this Notice of Contest. Talen Montana specifically reserves the right to amend this Notice of Contest should additional relevant facts be

ascertained during discovery before the Board, during dispute resolution (*see* Paragraphs 55-57), or otherwise.

6. As discussed in further detail in Paragraphs 77-79 below, Talen Montana is filing this Notice of Contest today to preserve its rights in the event that the Board determines that the November 17 MDEQ Letter and the Remedy Decision Document constitute a “final decision” of the Department. On December 17, 2020, Talen Montana initiated dispute resolution proceedings with MDEQ regarding both the November 17 MDEQ Letter and the Remedy Decision Document and is contemporaneously filing a request to stay proceedings related to this Notice of Contest pending the outcome of dispute resolution with the Department.

Statement of Relevant Background and Facts

A. The CSES Facility and MFSA Certificate

7. CSES Units 1 & 2 are located in Section 34, Township 2 North, Range 41 East, Rosebud County, Montana. Units 1 & 2 ceased operation in early 2020.

8. CSES Units 1 & 2 are collocated with Units 3 & 4.

9. Talen Montana is the operator and co-owner of CSES Units 1 & 2, as well as Units 3 & 4. Puget Sound Energy, Inc. (“PSE”) is a co-owner of all four units, and additional entities also co-own Units 3 & 4.

10. CSES Units 3 & 4 are subject to a certificate issued under the Major Facility Siting Act, MCA 75-20-101 *et seq.* (“MFSA”). The MFSA certificate as

originally issued in 1976 incorporated the findings of the Board of Health and Environmental Science (“BHES Findings”) and the Board of Natural Resources and Conservation (“BNRC Findings”) (collectively attached as **Exhibit 3**).

11. Although the MFSA certificate and findings primarily relate to Units 3 & 4, ¶¶ XXIX-XXXI of the BHES Findings contain provisions related to Units 1-4, specifically the “closed loop water system” that “was adopted for Units 1-4” and the ponds that receive waste streams from Units 1-4. **Exhibit 3** at 18-19.

12. Paragraph XXXI of the BHES Findings describe “[t]he first two permanent disposal areas [that are] developed will be located approximately 10,000 feet northwest from the plants in Sections 20, 21, 28 and 29, Township 2 North, Range 41 East.” These two disposal areas are now referred to as the SOEP and the STEP. **Exhibit 3** at 19.

13. Paragraph XXXI of the BHES Findings further provides that “[a]fter these ponds are filled with waste, they will be dried up, covered with dirt, and reclaimed.” **Exhibit 3** at 19.

14. The SOEP began operating in 1975, was filled with waste in 1997, and was reclaimed with an MDEQ-approved engineered evapotranspiration (“ET”) cap that was completed in 2002.

15. The STEP began operating in 1992 and currently has three cells (STEP A Cell, STEP E Cell, and STEP Old Clearwell) containing coal combustion residuals

(“CCR”) in the form of paste overlying fly ash. STEP A Cell ceased receipt of CCR prior to October 19, 2015, and also did not impound any water as of that date. STEP E Cell and Old Clearwell were removed from operation in January 2020. STEP B Cell stored decant water and is currently used to transfer legacy water to the forced evaporation system. STEP D Cell stores excess legacy water only. None of the STEP cells have been capped or reclaimed.

16. All STEP cells have either a double-lined reinforced polypropylene liner with an underdrain collection system, or else a high-density polyethylene liner. The SOEP has a partial liner of compacted clay.

B. The 2012 AOC

17. In 2012, PPL Montana, LLC, as operator of the CSES, and MDEQ entered an “Administrative Order on Consent Regarding Impacts Related to Wastewater Facilities Comprising the Closed-Loop System at Colstrip Steam Electric Station, Colstrip Montana” (“AOC”) (attached as **Exhibit 4**).

18. Talen Montana, LLC was formerly known as PPL Montana, LLC.

19. The AOC was entered pursuant to MDEQ’s statutory authority under MFSA as well as the Montana Water Quality Act, MCA 75-5-101 *et seq.* **Exhibit 4** at 1.

20. The AOC was entered into to address alleged “ground water contamination from seepage,” including from the SOEP and STEP. **Exhibit 4** at 9-

10. For purposes of the AOC, the CSES facility was divided into several areas, one of which was the SOEP/STEP area. **Exhibit 4** at 10. Other areas to be addressed included the main plant site and the Units 3 & 4 effluent holding pond area. **Exhibit 4** at 10.

21. The AOC contains various requirements for each area covered by the AOC, including the SOEP/STEP area. These requirements may include (1) a site report, (2) a cleanup criteria and risk assessment report, (3) a remedy evaluation report, (4) a remedial design/remedial action work plan, (5) a final remedial action report, and (6) a facility closure plan. **Exhibit 4** at 17, 20-23, 25, & 28.

C. Remedy Selection and Financial Assurance Decisions Related to Plant Site Area and Units 3&4

22. MDEQ approved Talen Montana's proposed remedy for the plant site area in October 2018, and Talen Montana and the CSES co-owners collectively provided \$90,002,065 in financial assurance as requested by MDEQ to cover this remedial work and the associated closure plans.

23. MDEQ conditionally approved Talen Montana's proposed remedy for the Units 3 & 4 effluent holding pond area in February 2020, and Talen Montana and the Units 3 & 4 co-owners collectively provided \$107,362,681 in financial assurance as requested by MDEQ to cover this remedial work and the associated closure plans.

24. Financial assurance for all costs described in Paragraphs 22-23 was based on net present value of estimates calculated by Talen Montana and its consultants for the work at a 3% discount rate.

D. Remedy Selection Process Related to Units 1&2

25. In November 2018, MDEQ conditionally approved Talen Montana's cleanup criteria and risk assessment report for the Units 1 & 2 SOEP/STEP area.

26. In December 2018, MDEQ conditionally approved Talen Montana's revised closure plan for the Units 1 & 2 SOEP/STEP. As requested by MDEQ, Talen Montana and PSE collectively provided \$26,982,000 in financial assurance to cover this closure plan work. As with the other CSES areas, financial assurance was based on the net present value of estimates calculated by Talen Montana and its consultants for the work at a 3% discount rate.

27. The conditionally approved Units 1 & 2 SOEP/STEP closure plan included provisions that the SOEP and STEP would be closed in place consistent with the BHES Findings rather than closed by excavation and removal.

28. In February 2019, Talen Montana submitted a revised closure plan for the Units 1 & 2 SOEP/STEP to address the comments MDEQ included in its conditional approval. The revised closure plan continued to specify that the STEP would be closed in place with a cap to prevent infiltration, and the SOEP would

remain closed in place with the MDEQ-approved evapotranspiration cover that was constructed in 2002.

29. In May 2018, Talen Montana submitted a remedy evaluation report for the Units 1 & 2 SOEP and STEP area. Consistent with the closure plan, the remedy evaluation report evaluated several remedial action alternatives that involved aggressive groundwater remediation measures and closing the SOEP/STEP in place.

30. In August 2018, MDEQ responded with comments and requested that Talen Montana evaluate more aggressive measures.

31. In January 2019, Talen Montana submitted a revised remedy evaluation report. The revised remedy evaluation report included evaluation of an alternative that would close the SOEP (but not the STEP) by removal. Based on its evaluation, Talen Montana did not recommend this alternative be selected.

32. In April 2019, MDEQ responded with further comments on the January 2019 revised remedy evaluation report and requested that the alternatives Talen Montana considered be modified to address certain issues. MDEQ did not request that Talen Montana include an alternative that evaluated closure by removal of the STEP, but instead requested that Talen Montana develop a “contingency plan for removal” for STEP A Cell, E Cell, and Old Clearwell in the event those ponds prove to be a source of contaminants.

33. In subsequent discussions between Talen Montana and MDEQ, the parties agreed to bifurcate the remedy evaluation report going forward. Part 1 of the report would address identified impacts to groundwater and involve analysis of existing source control components and select additional source control measures. Part 2 of the report would evaluate further source control measures, specifically for the SOEP.

34. Part 1 of the revised remedy evaluation report was submitted by Talen Montana to MDEQ in October 2019.

35. In a meeting between MDEQ and Talen Montana on March 13, 2020, MDEQ requested that Talen Montana include another alternative for evaluation: closure by removal of both the SOEP and all STEP cells. In subsequent correspondence and follow-up, MDEQ repeatedly pressured Talen Montana to complete evaluation of this additional alternative (referred to as “Alternative 10”) and provide a new remedy evaluation report on an extremely expedited timeframe. MDEQ further pressured Talen Montana not to consider any other new alternatives other than Alternative 10.

36. On May 21, for instance, MDEQ sent Talen Montana a letter demanding that Talen Montana complete evaluation of Alternative 10 no later than July 3, 2020, effectively demanding that Talen Montana complete evaluation of a

remedy costing well over \$100 million dollars and expected to take decades to complete - in six weeks.

37. In the same May 21 letter, MDEQ demanded that Talen Montana eliminate evaluation of all other additional alternatives Talen Montana had proposed.

38. MDEQ ultimately agreed to a slightly longer schedule (allowing Talen Montana until September 2020) to complete a new revised remedial evaluation report evaluating Alternative 10 and several other alternatives. MDEQ made this concession only after Talen Montana wrote to MDEQ on June 5 that (1) the schedule demanded by MDEQ was not only unreasonable but infeasible, and (2) demanding Talen Montana only evaluate Alternative 10 was an apparent attempt by MDEQ to prejudge the ultimate remedy selection.

39. In the meantime, on June 8, 2020, MDEQ conditionally approved remedial action elements for the SOEP/STEP that could be implemented regardless of the final remedy selected. MDEQ requested, and Talen Montana and PSE collectively provided, an additional \$16,231,270 in financial assurance to cover this work. Financial assurance was again based on the net present value of estimates calculated by Talen Montana and its consultants for the work at a 3% discount rate.

40. Completing the new revised remedy evaluation report by September 2020 was still an extremely expedited schedule, as Talen Montana advised MDEQ

on multiple occasions. The schedule was made even more challenging by the COVID-19 pandemic.

41. Nevertheless, Talen Montana met this expedited schedule.

42. On August 7, 2020, at MDEQ's request, Talen Montana submitted an "Interim Report Addendum" addressing only Alternative 10. Talen Montana cautioned that the risks and effectiveness of Alternative 10 would be compared to the risks and effectiveness of the other retained alternatives in the forthcoming September report, and that no conclusions regarding remedy selection or the overall performance of Alternative 10 could be drawn until the final report was submitted.

43. On September 4, 2020, Talen Montana submitted a "Revised Remedy Evaluation – Integrated Report" ("Integrated Report") (narrative, tables, and figures attached as **Exhibit 5**) to the Department. The Integrated Report evaluated and compared the following four remedial alternatives:

- a. **Alternative 6A:** closure of the SOEP in place with a new geomembrane cap, and dewatering and closure in place of the STEP cells with geomembrane caps. Based on Talen Montana's calculations, this remedy is estimated to cost \$96,803,000 net present value at a 3% discount rate.
- b. **Alternative 7C:** closure by removal of the SOEP, with the SOEP ash excavated and removed to an undeveloped greenfield, and dewatering

and closure in place of the STEP cells. Based on Talen Montana's calculations, this remedy is estimated to cost \$123,953,000 net present value at a 3% discount rate.

c. **Alternative 10:** closure by removal of both the SOEP and the STEP, with the ash excavated and removed to an undeveloped greenfield. Based on Talen Montana's calculations, this remedy is estimated to cost \$151,357,000 net present value at a 3% discount rate.

d. **Alternative 11:** closure in place of both the SOEP and STEP, but ash would be moved and consolidated within the existing SOEP/STEP footprint such that no ash would remain within five feet of the highest projected future groundwater levels. Based on Talen Montana's calculations, this remedy is estimated to cost \$119,796,000 net present value at a 3% discount rate.

44. On September 18, 2020, as agreed with MDEQ, Talen Montana submitted to MDEQ a brief addendum providing additional detail on Alternative 11 (the "Alternative 11 Addendum") (**attached as Exhibit 6**).

45. In the Integrated Report, Talen Montana stated that Alternative 6A was the best technically appropriate remedy to address groundwater impacts in the SOEP and the STEP and should be selected.

46. Nevertheless, because MDEQ had repeatedly stated that it would not accept Alternative 6A – notwithstanding the fact that Alternative 6A performed the best when all evaluation criteria were considered – Talen Montana recommended that MDEQ select Alternative 11 as a compromise.

47. Talen Montana’s recommendation was based on repeated statements by MDEQ that it would not allow Talen Montana to leave “a source” of contaminants in contact with groundwater. MDEQ’s statements to this effect ignored that under Alternative 6A (as well as under Alternative 7C and Alternative 11), the ash in the SOEP/STEP would not be an ongoing source of contaminants to groundwater as demonstrated in the Integrated Report (**Exhibit 5**).

48. Because Alternative 11 further prevented any contact between ash and groundwater, however, Talen Montana proposed it to MDEQ to address MDEQ’s stated concerns.

49. On September 21, 2020, MDEQ issued a press release soliciting feedback on the Integrated Report. MDEQ requested public comment by October 26, 2020, and held a public hearing on Talen Montana’s Integrated Report on October 14, 2020.

50. During the public comment period and after, Talen Montana repeatedly offered to (1) have a dialog with the Department generally to discuss any concerns MDEQ had about remedy selection, and (2) set up a meeting between Talen

Montana’s modeling team and MDEQ’s modeling team to walk through the groundwater model in real time and address any MDEQ concerns. Other than a meeting to walk through some technical comments and questions MDEQ had however, MDEQ largely rejected these offers.

E. MDEQ’s November 2020 Remedy Decision Document for the SOEP/STEP

51. On November 17, 2020, MDEQ issued its Remedy Decision Document (**Exhibit 2**) selecting Alternative 10. Through the associated cover letter, MDEQ demanded \$285,438,000.00 in financial assurance within 60 days (**Exhibit 1**).

52. MDEQ’s demand for approximately \$285 million in financial assurance failed to account for the fact that Talen Montana and PSE have collectively already provided a portion (approximately \$43 million) of this amount.

53. MDEQ referred to the Remedy Decision Document as an “approval” of the Integrated Report, even though MDEQ (1) rejected Talen Montana’s proposed remedy, (2) rejected Talen Montana’s calculation of financial assurance, and (3) rejected various aspects of the analysis in the Integrated Report, including the groundwater modeling and metrics used to compare and assess the four alternatives.

54. On financial assurance, MDEQ acknowledged that Talen Montana’s estimate for Alternative 10 (\$191,054,000 undiscounted; \$151,357,000 net present value at a 3% discount rate) was “accurate if Talen performs the work.” **Exhibit 2** at 17. MDEQ nevertheless demanded \$285,438,000.00 in financial assurance.

F. Invocation of Dispute Resolution

55. The AOC allows Talen Montana to invoke dispute resolution, **Exhibit 4** at 10, and the Remedy Decision Document explicitly states that it is subject to dispute resolution if Talen Montana sends written notice to the Department within 30 days, **Exhibit 2** at 17.

56. On December 17, 2020 Talen Montana sent a letter to the Department (**Exhibit 7**) invoking dispute resolution under the AOC regarding both the selection of Alternative 10 and the imposition of \$285,438,000.00 in financial assurance.

57. The AOC specifies that dispute resolution lasts 45 days unless mutually extended by the parties. **Exhibit 4** at 32-33. After the dispute resolution period, the MDEQ “Director shall issue a final decision” on remedy selection and financial assurance. **Exhibit 4** at 33.

G. Applicability of the Federal CCR Regulations to the SOEP and STEP

58. The federal CCR regulations located at 40 C.F.R. § 257.53 *et seq.* (the “CCR Rule”) supply requirements for certain units within the United States containing CCR. For units regulated by the CCR Rule, those requirements include provisions related to the cleanup and closure of the units.

59. Based on the dates on which they stopped receiving waste and were dewatered, neither the SOEP nor STEP A Cell are subject to the federal CCR Rule.

60. STEP B Cell and STEP D Cell are not currently subject to the federal CCR Rule because they do not currently hold CCR, nor have they in the past.

61. STEP E Cell and STEP Old Clearwell are subject to the federal CCR Rule.

62. The AOC does not and cannot override the requirements of STEP E Cell and STEP Old Clearwell to comply with the federal CCR Rule.

Nature of Hearing

63. This contest challenging MDEQ's Remedy Decision Document (and associated remedy selection and financial assurance decisions) is a de novo proceeding under the Montana Administrative Procedure Act. MCA 75-20-223(1)(a).

64. This contest does not relate to decision by MDEQ on an "application" for a certificate or a certificate amendment, such that the first sentence of MCA 75-20-223(1)(b) does not apply. Further, MDEQ did not provide for a meaningful opportunity to comment on the material changes it made to its decision-making and analysis in the Remedy Decision Document as compared to the Talen Montana Integrated Report.

65. MCA 75-20-223(2) likewise does not apply because this contest does not relate to a decision by MDEQ on "an application for amendment of a certificate."

66. The Board will first consider this Notice of Contest at its next scheduled meeting. As discussed in Paragraph 78, however, Talen Montana is requesting that this Notice of Contest be stayed.

67. Talen Montana has the right to elect to have this contest proceed in district court rather than the Board. MCA 75-20-223(1)(c).

68. The time and place of the contest hearing will be determined by the Board, the hearing officer, or district court, as applicable.

69. A formal proceeding may be waived pursuant to MCA 2-4-603. Talen Montana does not intend to waive its right to a formal proceeding.

70. The Contester shall prevail to show that MDEQ's decisions violate state and federal law and regulations and are otherwise arbitrary, capricious, an abuse of discretion, and without basis.

Statement of Legal Authority and Jurisdiction

71. The Board has legal authority and jurisdiction pursuant to MCA 75-20-223, the AOC, and the relevant provisions of the Montana Administrative Procedure Act, MCA 2-4-101 et seq.

72. MCA 75-20-223 provides that a “person aggrieved by the final decision of [MDEQ] on an application for a certificate or the issuance of an air or water quality decision, opinion, order, certification, or permit under [MFSA] may within 30 days appeal the decision to the board.” MCA 75-20-223(1)(a) (emphasis added).

73. The AOC was entered under MFSA.

74. Issuance of orders by MDEQ under the AOC are therefore orders or decisions subject to review by this Board under MCA 75-20-223.

75. The AOC does not specify a different route of appeal to the Board and/or court.

76. Whether the November 17 MDEQ Letter (**Exhibit 1**) and the Remedy Decision Document (**Exhibit 2**) is a final decision or order reviewable now or only after the dispute resolution process has been completed is unclear.

77. Because MCA 75-20-223 requires parties to appeal the decision or order to the Board within 30 days, Talen Montana is filing this Notice of Contest in order to preserve its right to appeal to the Board in the event that the Board determines that the November 17 MDEQ Letter (**Exhibit 1**) and the Remedy Decision Document (**Exhibit 2**) are reviewable now and triggered a 30-day deadline to file a Notice of Contest with the Board.

78. Talen Montana contemporaneously is filing a request that the Board stay proceedings related to this Notice of Contest pending the completion of dispute resolution.

79. Once the dispute resolution is complete and the MDEQ Director issues a final decision or order, Talen Montana will if necessary re-file or amend its Notice of Contest within 30 days of that decision or order under MCA 75-20-223.

Statement of Asserted Matters in Contest and Issues Involved

80. The following are short and plain statements of the matters asserted in contest and the issues involved. The Contester is unable to provide detail at this time as to all procedural and substantive flaws in MDEQ's decision-making due to inadequacies in MDEQ's Remedy Decision Document and the unavailability of important relevant documents and communications by MDEQ associated with the remedy selection.

A. MDEQ's Remedy Selection in the Remedy Decision Document Violates Specific Provisions of the AOC

81. MDEQ violated Section XII of the AOC by characterizing the Remedy Decision Document as an "approval" of Talen Montana's Integrated Report. **Exhibit 2** at 1; **Exhibit 4** at 30-31. Had MDEQ correctly characterized its response to the Integrated Report as a "disapproval" or – at most – a partial approval, Talen Montana would have had 60 days to provide a written response to MDEQ's concerns before having to invoke dispute resolution or file this Notice of Contest with the Board.

82. MDEQ violated Section I.M of the AOC by failing to consider whether the selected Alternative 10 is consistent with "Montana's generally applicable environmental laws," including the Comprehensive Environmental Cleanup Responsibility Act, MCA 75-10-705 *et seq.* ("CECRA"). **Exhibit 4** at 9.

83. MDEQ violated Section I.M of the AOC by failing to consider whether adaptive management would be appropriate. **Exhibit 4** at 9.

84. MDEQ violated Sections VI.C.1 and X of the AOC by demanding deliverables by unreasonable deadlines without going through the annual meeting and scheduling process set forth in Section X. **Exhibit 4** at 21, 29.

85. MDEQ violated the AOC by selecting a remedy that does not comply with MDEQ's conditionally approved Units 1 & 2 SOEP/STEP closure plan under Section IX of the AOC. **Exhibit 4** at 28-29.

86. Accordingly, the Remedy Decision Document must be remanded to MDEQ for further proceedings consistent with the AOC.

B. MDEQ's Remedy Selection in the Remedy Decision Document Violates the Administrative Rules of Montana Because it Failed to Allow for Adequate Public Participation

87. MDEQ through ARM 17.4.101 has adopted various provisions of the Attorney General's Organizational and Procedural Rules, as well as the Secretary of State's Organizational and Procedural Rules, including ARM 1.3.102.

88. ARM 1.3.102 requires that prior to making a "final decision that is of significant interest to the public, the agency shall afford reasonable opportunity for public participation."

89. Public participation requires notice and an opportunity to comment on the Department's proposed decision. *See* ARM 1.3.102.

90. The Department did not provide an opportunity for public participation on its proposed decision. Rather, the Department allowed public participation only on Talen Montana's Integrated Report, which proposed a different remedy and a different amount of financial assurance. Talen Montana thus was not given the opportunity to comment on the Department's proposed decision.

91. By failing to give Talen Montana and the public an opportunity to comment on MDEQ's proposed remedy and reasoning supporting that remedy, which differed from that proposed by Talen Montana in the Integrated Report, MDEQ has failed to afford reasonable opportunity for public participation.

92. Accordingly, the Remedy Decision Document must be remanded to MDEQ for further proceedings consistent with the Administrative Rules of Montana.

C. MDEQ Has Not Considered Whether Its Remedy Selection May Violate Federal Regulations

93. Select cells of the STEP are regulated by the CCR Rule, as discussed in Paragraph 61.

94. MDEQ assessed Alternative 11's compliance with the federal CCR Rule in the Remedy Decision Document.

95. MDEQ did not, however, assess whether Alternative 10 would be compliant with the federal CCR Rule. MDEQ provided no basis for failing to assess the compliance of Alternative 10, especially where MDEQ assessed the compliance

of Alternative 11. This failure to assess the compliance of Alternative 10 is arbitrary and capricious, an abuse of discretion, and without basis.

96. Further, it is unclear whether groundwater work at CSES could be completed quickly enough under Alternative 10 to be compliant with the CCR Rule.

97. The CCR Rule requires that regulated units complete closure within five years of initiating closure. 40 C.F.R. § 257.102(f)(1)(ii).

98. Extensions allowing for up to fifteen years total to complete closure are available for units larger than 40 acres. 40 C.F.R. § 257.102(f)(2)(ii). The STEP is larger than 40 acres in size.

99. For units closing by removal, the federal CCR Rule currently states that closure is not complete until “constituent concentrations throughout the CCR unit and any areas affected by releases from the CCR unit have been removed and groundwater monitoring concentrations do not exceed the groundwater protection standard established pursuant to § 257.95(h) for constituents listed in appendix IV to this part.” 40 C.F.R. § 257.102(c).

100. Accordingly, units closing by removal are required not just to complete removal of CCR from the unit within the 5-15 year period, but also required to complete cleanup of the surrounding groundwater in the 5-15 year period.

101. The groundwater modeling does not demonstrate that Alternative 10 can meet these deadlines. Further, Alternative 10 actually delays the initiation of

some groundwater cleanup activities compared to other alternatives assessed in the Integrated Report, further jeopardizing compliance with the federal CCR Rule deadlines.

102. Although units closing in place must also complete closure in 5-15 years under the federal CCR Rule, they are not required to complete the groundwater work within that timeframe and can continue groundwater cleanup after completing closure. *See generally* 40 C.F.R. § 257.102(d). Accordingly, this 5-15 year deadline to complete groundwater cleanup does not apply to either Alternative 6A or Alternative 11.

103. On March 3, 2020, the U.S. Environmental Protection Agency (“EPA”) published at 85 Fed. Reg. 12,456 a proposed rule entitled “Hazardous and Solid Waste Management System: Disposal of CCR; A Holistic Approach to Closure Part B: Alternate Demonstration for Unlined Surface Impoundments; Implementation of Closure” (“Proposed Part B Amendments”) (attached as **Exhibit 8**).

104. The Proposed Part B Amendments contained various proposed changes to the federal CCR Rule. Among other changes, the Proposed Part B Amendments proposed to amend 40 C.F.R. § 257.102(c) to allow companies closing CCR units by removal to continue groundwater cleanup work beyond the 5-15 year deadline to complete all other closure activities. **Exhibit 8** at 12,477.

105. Accordingly, the Proposed Part B Amendments to the federal CCR Rule had been proposed as of the time Talen Montana submitted the Integrated Report in September 2020. If finalized, the Proposed Part B Amendments likely would have amended 40 C.F.R. § 257.102(c) such that Alternative 10 might be compliant with that provision of the CCR Rule.

106. On November 12, 2020, after Talen Montana submitted the Integrated Report but before MDEQ issued its Remedy Decision Document, EPA published at 85 Fed. Reg. 72,506 its final rule entitled “Hazardous and Solid Waste Management System: Disposal of CCR; A Holistic Approach to Closure Part B: Alternate Demonstration for Unlined Surface Impoundments” (“Final Part B Amendments”) (attached as **Exhibit 9**).

107. Although the Final Part B Amendments finalized some changes included in the Proposed Part B Amendments, the Final Part B Amendments did not finalize any amendment to 40 C.F.R. § 257.102(c). **Exhibit 9** at 72,542.

108. EPA stated in the preamble that the other provisions contained in the Proposed Part B Amendments might be addressed in a future rulemaking, but it provided no indication of whether and how the proposed changes to 40 C.F.R. § 257.102(c) would be finalized.

109. Alternative 10 therefore may not be able to comply with the federal CCR Rule and specifically 40 C.F.R. §§ 257.102(c) & 257.102(f) as they are currently in effect.

110. MDEQ cannot order Talen Montana to undertake work that will violate the federal CCR Rule, and any attempt by MDEQ to do so would be barred by the doctrine of conflict preemption.

111. MDEQ had further committed that “it would not accept a remedy that violates provisions of the CCR Rule” and “will not approve a remedy that does not comply with the CCR Rule.” **Exhibit 2** at 11, 17. As indicated in Paragraph 95, however, MDEQ in the Remedy Decision Document did not even assess whether Alternative 10 would be compliant with the federal CCR Rule.

112. MDEQ’s failure to consider compliance with federal regulations before selecting Alternative 10 was arbitrary, capricious, and an abuse of discretion.

113. The Remedy Decision Document must be remanded to MDEQ for further proceedings consistent with federal law.

D. MDEQ Has Not Considered Whether Its Remedy Selection May Violate MFSA

114. The CSES MFSA certificate provides that both the SOEP and STEP will close in place: “[a]fter these ponds are filled with waste, they will be dried up, covered with dirt, and reclaimed.” **Exhibit 3** at 19.

115. The CSES MFSA certificate does not provide for the construction or operation of a new CCR landfill at the CSES facility.

116. Accordingly, Alternative 10 may require a MFSA certificate amendment to, at minimum, (1) change the closure method for the SOEP and the STEP, and (2) allow for the construction of a new landfill in a greenfield area. MCA 75-20-219; ARM 17.20.1804.

117. Under certain circumstances, ARM 17.20.1804 may not permit a certificate amendment that would materially alter the findings that were the basis for the original certificate.

118. MDEQ's Remedy Decision Document contains no consideration of whether MDEQ may lawfully grant the certificate amendment, and MDEQ ultimately may not have the authority to grant the MFSA certificate amendment necessary to implement Alternative 10.

119. Accordingly, MDEQ cannot select Alternative 10 for implementation at the SOEP/STEP without considering if it can grant the requisite amendment, and cannot force Talen Montana to undertake work that that MDEQ ultimately may not be able to permit under existing state law, regulation, and the determination of this Board.

120. The Remedy Decision Document must be remanded to MDEQ for further proceedings consistent with state law and regulation.

E. MDEQ's Remedy Selection is Otherwise Arbitrary, Capricious, and an Abuse of Discretion

121. MDEQ's analysis underlying its selection of Alternative 10 is riddled with flawed assumptions, baseless reasoning, and failure to consider crucial facts and factors. The following Paragraphs 122-133 are a non-exhaustive list of examples of the errors and flaws that permeate the Remedy Decision Document, **Exhibit 2**.

122. MDEQ rushed the selection of a remedy for the SOEP/STEP in a manner that was arbitrary, capricious, and an abuse of discretion. Specifically, MDEQ pushed Talen Montana to adhere to an unreasonable schedule for the Integrated Report and MDEQ issued its own Remedy Decision Document a mere three weeks after the public comment period closed. The errors in the Remedy Decision Document, and the many factors MDEQ failed to consider, are evidence of the unnecessary and unreasonable rush.

123. MDEQ failed to consider the impacts of siting a large new landfill in a greenfield area.

124. MDEQ's Remedy Decision Document repeatedly and incorrectly stated that Alternative 10 is the only remedy to permanently remove the "source" of constituents to groundwater. **Exhibit 2** at 12-13, 15.

125. MDEQ's Remedy Decision Document misinterprets and misunderstands the groundwater model submitted by Talen Montana as part of the Integrated Report, **Exhibit 5**.

126. MDEQ's Remedy Decision Document improperly concludes that Alternative 11 cannot prevent contact between groundwater and CCR. **Exhibit 2** at 13.

127. MDEQ's Remedy Decision Document is at odds with pre-2020 statements and approvals by MDEQ, including MDEQ's conditional approval for closure in place of the SOEP/STEP and its prior request that Talen Montana develop a "contingency plan" only for removing CCR from the STEP. *See* Paragraph 32.

128. As discussed in Paragraphs 35-50 and upon information and belief, MDEQ's conduct in 2020 demonstrates that it had pre-selected Alternative 10 prior to any analysis being conducted or submitted to the MDEQ regarding Alternative 10 (or Alternative 11). This is evidenced in part by (1) MDEQ trying to force Talen Montana to consider only Alternative 10, (2) MDEQ forcing Talen Montana to acquiesce to an unreasonable schedule in violation of the scheduling protocol set forth in the AOC, and (3) MDEQ's issuance of its Remedy Decision Document only three weeks after the comment period on the Integrated Report closed.

129. MDEQ dismissed without basis consideration of a variety of key factors for comparing the four alternatives presented in the Integrated Report, including the

time to achieve cleanup criteria and environmental/implementation risk. **Exhibit 2**
at 15.

130. MDEQ specifically failed to consider cost and cost-effectiveness and provided no basis for its failure to consider these factors.

131. MDEQ further failed to consider adaptive management and provided no basis for its failure to consider adaptive management.

132. Full consideration of the key factors presented in the Integrated Report demonstrates that Alternatives 6A, 7C, and 11 all perform as well or better than Alternative 10 at significantly lower cost. Alternative 6A, in particular, is much more cost-effective than Alternative 10.

133. MDEQ's sole consideration in selecting Alternative 10 appears to have been "permanence," which is arbitrary and capricious because (1) the other proposed remedies also provide permanent cleanup and (2) "permanence" as the sole criteria ignores collateral health and safety risks, delays in achieving "permanent" cleanup, and other key factors.

134. MDEQ's selection of Alternative 10 is therefore arbitrary, capricious, and an abuse of discretion, and must be vacated.

135. Further, MDEQ's failure to select Alternative 6A, or at minimum Alternative 7C or 11, is arbitrary, capricious, and an abuse of discretion.

F. MDEQ's Financial Assurance Demand Violates Provisions of the AOC

136. MDEQ agreed that Talen Montana’s cost estimate for Alternative 10 (\$191,054,000 undiscounted; \$151,357,000 net present value at a 3% discount rate) was “accurate if Talen performs the work.” **Exhibit 2** at 17.

137. MDEQ nevertheless demanded financial assurance in the amount of \$285,438,000.00. **Exhibit 1** (based on a 3% discount rate and MDEQ’s estimate of what Alternative 10 would cost if MDEQ took the work over).

138. This demand is arbitrary and capricious, and an abuse of discretion, because it fails to account for the approximately \$43 million that Talen Montana and PSE have already provided pursuant to the AOC.

139. Further, the only portion of AOC, Section VIII, to address how the amount of financial assurance is set states that financial assurance is based on “the projected costs for the operation and maintenance of the remedial and closure actions.” **Exhibit 4** at 27.

140. For the Alternative 10 remedial action, the projected costs of operation and maintenance is \$151,357,000 net present value at a 3% discount rate.

141. Even if MDEQ’s selection of Alternative 10 is upheld, MDEQ had no basis under the AOC to arbitrarily increase the amount of financial assurance demanded – by over \$130 million – based on MDEQ’s estimate of what Alternative 10 might cost in the hypothetical event MDEQ takes over the cleanup work, as opposed to actual projected costs.

142. MDEQ's demand for financial assurance in the November 17 MDEQ Letter (**Exhibit 1**) and the Remedy Decision Document (**Exhibit 2**) must therefore be vacated and enjoined.

G. MDEQ's Financial Assurance Demand Violates the Course of Performance Under the AOC

143. For all past demands for financial assurance under the AOC, MDEQ set financial assurance at the amount Talen Montana estimated based on Talen Montana's performance of the work. *See* Paragraphs 22-24.

144. MDEQ's sudden rejection of Talen Montana's estimate – despite admitting that it was accurate – and imposition of financial assurance almost twice the amount estimated by Talen Montana for Alternative 10 violates the course of performance by the parties under the AOC.

145. MDEQ's violation of the course of performance without basis is arbitrary, capricious, and an abuse of discretion.

146. MDEQ's demand for financial assurance in the November 17 MDEQ Letter (**Exhibit 1**) and the Remedy Decision Document (**Exhibit 2**) must therefore be vacated and enjoined.

H. MDEQ's Financial Assurance Demand Violates the Covenant of Good Faith and Fair Dealing

147. Prior to November 17, Talen Montana had no reason to expect MDEQ would deviate substantially from past practice and demand financial assurance in an

amount \$130 million greater than the highest estimate for any alternative in the Integrated Report.

148. MDEQ did not provide Talen Montana any notice of its demand or opportunity to comment on it before MDEQ ordered Talen Montana, on November 17, to post \$285 million within 60 days. **Exhibit 1**.

149. MDEQ did not provide Talen Montana any notice despite repeated efforts by Talen Montana to engage with MDEQ prior to its selection of the remedy and demand for financial assurance.

150. Further, MDEQ based its estimate of \$285 million based on MDEQ's estimate of "the costs of the remedy in the event that Talen were unable to perform the work and remedy completion was left to the State." **Exhibit 2** at 17. This number is over \$130 million higher than Talen Montana's estimate, which MDEQ concedes is accurate if Talen Montana completes the work.

151. MDEQ also failed to account for the approximately \$43 million that Talen Montana and PSE have already provided.

152. MDEQ's sudden imposition of grossly inflated financial assurance in deviation with past practice and without opportunity for comment or engagement violates the covenant of good faith and fair dealing and constitutes an abuse of discretion.

153. MDEQ's demand for financial assurance in the November 17 MDEQ Letter (**Exhibit 1**) and the Remedy Decision Document (**Exhibit 2**) must therefore be vacated and enjoined.

I. *MDEQ's Financial Assurance Demand is Arbitrary, Capricious, Abuse of Discretion and Without Basis*

154. MDEQ's "calculation" of \$285 million does not provide sufficient detail or backup for Talen Montana to meaningfully comment, and is therefore arbitrary, capricious, an abuse of discretion, and without basis.

155. Even without sufficient backup, it is apparent that MDEQ's \$285 million calculation is arbitrary and capricious. MDEQ agreed that Talen Montana's estimate for Alternative 10 of approximately \$151 million was accurate if Talen Montana conducted the work. It would be facially absurd for the work to cost MDEQ \$130 million more – almost doubling the cost - if MDEQ took over the work.

156. MDEQ's imposition of a 10% contingency on top of already inflated estimates is further without basis.

157. MDEQ failed to consider steps that could be taken other than having the state take over the work at apparently excessive cost. First, PSE is also co-owner of Units 1 & 2 and available to take over the work in the event Talen Montana is not. Second, contracts could be drafted to inure to the benefit of the state in the event Talen Montana cannot continue the work, such that the state would have access to

the same pricing as Talen Montana. MDEQ's failure to consider these other steps was arbitrary, capricious, and an abuse of discretion.

158. MDEQ's demand for financial assurance in the November 17 MDEQ Letter (**Exhibit 1**) and the Remedy Decision Document (**Exhibit 2**) must therefore be vacated and enjoined as arbitrary, capricious, an abuse of discretion, and without basis.

Prayer for Relief

In light of the foregoing, Contester respectfully requests the Board of Environmental Review deem MDEQ's Remedy Decision Document and related selection of a remedy and imposition of financial assurance void *ab initio*, vacated, set aside, enjoined, and remanded to MDEQ for further review in conformance with the requirements of the AOC, MFSA, MAPA, Administrative Rules of Montana, and federal regulations. Contesters also request that the Board stay MDEQ's remedy selection and financial assurance decisions pending resolution of this matter by the Board and through the duration of any appeals, and further request all preliminary and other relief that the Board deems just and appropriate.

Respectfully submitted this 17th day of December 2020.

/s/ Robert L. Sterup_____

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Certificate of Service

I certify that on December 17, 2020, in accordance with BER Policy No. 2002.01.01 and applicable law, I mailed an original copy of this Notice of Contest with all accompanying exhibits to the Secretary, Board of Environmental Review, Department of Environmental Quality, Metcalf Building, 1520 East Sixth Avenue, Helena, MT 59620, with copies by email to the following:

Board of Environmental Review, at ber@mt.gov

Ms. Lindsay Ford, Board Secretary, at Lindsay.Ford@mt.gov

Sarah Clerget, at SClerget@mt.gov

Aleisha Solem, at asolem@mt.gov

Edward Hayes, at ehayes@mt.gov

Nicholas Whitaker, at Nicholas.Whitaker@mt.gov

/s/ Robert L. Sterup _____
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TO: Sarah Clerget, Hearing Examiner
Board of Environmental Review

FROM: Joyce Wittenberg, Board Secretary [interim/acting] 
P.O. Box 200901
Helena, MT 59620-0901

DATE: December 28, 2020

SUBJECT: Board of Environmental Review Case No. BER 2020-08 OC

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW OF THE STATE OF MONTANA	
IN THE MATTER OF: NOTICE OF APPEAL AND REQUEST FOR HEARING REGARDING DEQ'S APPROVAL OF RIVERSIDE CONTRACTING, INC.'S OPENCUT MINING PERMIT #3234 (ARROW CREEK SITE)	Case No. BER 2020-08 OC

On December 23, 2020, the BER received the attached request for hearing via email. Please serve copies of pleadings and correspondence on me and on the following DEQ representatives in this case.

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Ed Coleman, Bureau Chief
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Attachments

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FILED with the Board of Environmental Review
December 23, 2020 jw

Attorneys for Appellants

IN THE MATTER OF:

THE NOTICE OF APPEAL AND REQUEST
FOR HEARING REGARDING DEQ'S
APPROVAL OF RIVERSIDE
CONTRACTING, INC.'S APPROVAL OF
PERMIT #3234 (ARROW CREEK SITE)

BER 2020- 08 OC

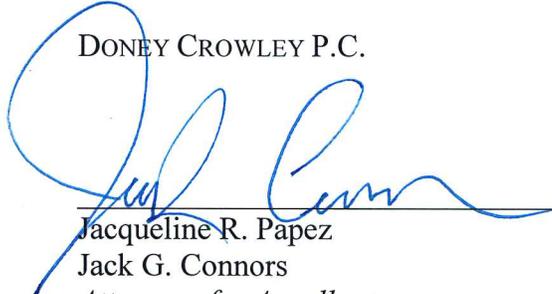
**NOTICE OF APPEAL AND REQUEST
FOR HEARING**

COME NOW Appellants Wayne and Michelle Cain; Tim and Colleen Moullet; Richard and Dawn Grosskopf; Rance and Christy Gerdes; Fred and Doreen McMurry; Jeremy and Taylor Hauge; Charles and Jeannie Gandy; Clint and Corinne Hammond; Scott and Nancy Morrison; Ted Hash; Hash Ranch LLC; Joey and Sarah Perkerewicz; Gary and Linda Frank; and Steve Siewert, by and through their undersigned counsel, and, pursuant to Mont. Code Ann. § 82-4-427(1), appeal the Department of Environmental Quality, Coal and Opencut Mining Bureau's ("Opencut") approval of Riverside Contracting, Inc.'s Application for Opencut Mining for Site No. #3234.

Appellants appeal and request that, following a period of discovery, the Board of Environmental Review set a hearing on the propriety of Opencut's decision to grant an opencut mining permit to Riverside Contracting, Inc. for Site No. 3234. The basis for this appeal is that Opencut granted Riverside's application contrary to applicable statutes, regulations, and the Montana Constitution, and that Opencut's decision to grant the application was arbitrary and capricious, and an unwarranted departure of Opencut's past practices as compared to Opencut's consideration of applications for other opencut mining sites.

DATED this 23rd day of December, 2020.

DONEY CROWLEY P.C.



Jacqueline R. Papez
Jack G. Connors
Attorneys for Appellants

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing *Notice of Appeal and Request for Hearing* was served on this 23rd day of December, 2020, upon the following:

Lindsay Ford
Joyce Wittenberg
Board Secretary
Board of Environmental Review
1520 East 6th Avenue
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Sandra H. Rolan
Paralegal



TO: Sarah Clerget, Hearing Examiner
Board of Environmental Review

FROM: Joyce Wittenberg, Board Secretary [interim/acting] 
P.O. Box 200901
Helena, MT 59620-0901

DATE: January 4, 2021

SUBJECT: Board of Environmental Review Case No. BER 2021-01 WQ

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

IN THE MATTER OF: NOTICE OF APPEAL
AND REQUEST FOR HEARING REGARDING
DEQ'S ISSUANCE OF A FINAL SECTION
401 WATER QUALITY CERTIFICATION
#MT4011079 TO TRANSCANADA KEYSTONE
PIPELINE LP FOR THE KEYSTONE XL
PIPELINE PROJECT

Case No. BER 2021-01 WQ

On January 4, 2021, the BER received the attached request for hearing via email. Please serve copies of pleadings and correspondence on me and on the following DEQ representatives in this case:

Kurt Moser
Legal Counsel
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Attachments

Submitted via hardcopy CERTIFIED MAIL and electronic mail to shaun.mcgrath@mt.gov, cmdeveny7@gmail.com, jwittenberg@mt.gov

Board Chair Deveny
Board Secretary Wittenberg
Board of Environmental Review
Director McGrath
Department of Environmental Quality
Metcalf Building
1520 East Sixth Avenue
PO Box 200901
Helena, Montana 59620-0901

**Re: Appeal of Section 401 Water Quality Certification Issued for DEQ
Application Number MT4011079, the Keystone XL Pipeline Project**

NOTICE OF APPEAL & REQUEST FOR HEARING

Northern Plains Resource Council and Sierra Club (collectively, “Conservation Groups”), pursuant to Montana Code Annotated § 2-4-101 *et seq.*, and Administrative Rule of Montana 17.30.109, hereby file this notice of appeal and request for a hearing concerning the Montana Department of Environmental Quality’s (hereinafter “DEQ”) December 31, 2020 issuance of a final Section 401 Water Quality Certification (hereinafter the “Certification”) to TransCanada Keystone Pipeline LP (hereinafter “TransCanada”), for the Keystone XL Pipeline Project (hereinafter the “Project”) in Phillips, Valley, McCone, Dawson, Prairie and Fallon Counties. The undersigned request that the Board of Environmental Review or its appointed hearing examiner hold a hearing on this appeal, pursuant to ARM 17.30.109(1)(b).

The Project as proposed, even with the conditions that DEQ includes in the Certification, does not assure compliance with water quality standards and violates law. In submitted comments (“Petitioners’ Comments”), the Conservation Groups have articulated in detail the reasons why, contrary to the Certification, DEQ has not met its burden to assure compliance with

all relevant provisions of the Clean Water Act and Montana's state water quality standards. Further, by its own admission DEQ has not reviewed or responded to public comment concerning the Project and thereby violated agency public participation duties, abused its discretion, and rendered its decisionmaking arbitrary and capricious. Therefore, the Board of Environmental Review should declare DEQ's Certification unlawful, and reverse and remand for further consideration.

DEQ's issuance of a 401 Certification for the Keystone XL Project is flawed. The grounds of DEQ's errors include, but are not limited to, the following:

1. The federal Clean Water Act (CWA), 33 U.S.C. §§ 1251 *et seq.*, was passed in 1972 to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). Section 401(a) of the CWA provides, in relevant part, that any applicant for a federal license or permit to conduct any activity that may result in discharge into navigable waters must provide the licensing or permitting agency with a water quality certification ("Certification") from the State in which the discharge originates. 33 U.S.C. § 1341(a).
2. If DEQ chooses to issue a Certification, it must ensure that all discharges from the activity will comply with the Act, including all applicable state water quality standards and requirements. *Id.* See also ARM 17.30.101(1)-(2). Specifically, any Certification "*shall set forth any effluent limitations or other limitations, and monitoring requirements necessary to assure*" that the applicant's discharges and other activities will comply with all applicable state water quality standards and requirements set forth in the Certification. 33 U.S.C. § 1341(d) (emphasis added).

3. The clear statutory directive of Section 401 requires the issuing authority to reconcile how a Certification is capable of assuring a project will protect water quality standards. *See* 33 USC § 1341(d). This requirement represents an affirmative duty to demonstrate, based on record evidence, that a Certification “will comply” with—and therefore “assure” no violations of—water quality standards.
4. Congruent with the direction of § 1341, the CWA “requires each state, subject to federal approval, to institute comprehensive water quality standards establishing water quality goals for all intrastate waters.” PUD No. 1 of Jefferson County v. Washington Dep’t of Ecology, 511 U.S. 700, 704 (1994). State water quality standards “consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based on such uses[,]” 33 U.S.C. § 1313(c)(2)(A), and must “include ‘a statewide antidegradation policy’ to ensure that ‘[e]xisting instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected.’” PUD No. 1, 511 U.S., at 705 (quoting 40 C.F.R. § 131.12).
5. Thus, ensuring compliance with water quality standards lies at the heart of the Certification required under Section 401 of the CWA. EPA regulations in place at the time of the Project’s submission to DEQ require that certifications include a “statement that there is a reasonable assurance that the activity will be conducted in a manner which will not violate applicable water quality standards.” 40 C.F.R. § 121.2(a)(3). Therefore, to certify that there is a reasonable assurance that a federally permitted activity will be conducted in a manner that will not violate applicable water quality standards, a state must provide a record-based finding that includes analysis of (1) designated uses, (2) numeric and narrative water quality criteria, and (3) the state’s antidegradation policy. EPA has made clear that States “must

apply antidegradation requirements to ... any activity requiring a CWA §401 certification.”
63 Fed. Reg. 36,742, 36,780 (July 7, 1998).

6. Montana has adopted water quality standards, including an antidegradation policy (called the nondegradation policy in Montana). *See* 75-5-303 MCA; 17.30.601 *et seq.* Degradation of high-quality waters is prohibited unless under limited circumstances, ARM 17.30.706, and then only pursuant to the procedures and findings required pursuant to 17.30.706. Because Montana’s nondegradation policy is part of its water quality standards, DEQ must consider whether a federally permitted activity complies with that policy before certifying such activity under Section 401. 40 C.F.R. § 121.2(a)(3), 63 Fed. Reg. at 36,780.
7. DEQ must also solicit and respond to significant public comment before decisionmaking to “permit an exchange of views, information, and criticism between interested persons and the agency.” Home Box Office, Inc. v. FCC, 567 F.2d 9, 35 (D.C. Cir.), *cert. denied*, 434 U.S. 829, 98 S.Ct. 11, 54 L.Ed.2d 89 (1977); Article II, Section 8, Montana Constitution (“[t]he public has the right to expect governmental agencies to afford such reasonable opportunity for citizen participation in the operation of the agencies prior to the final decision”); *see also* 2-3-101, MCA (citizens are to be afforded reasonable opportunity to participate). An agency is obligated to identify and comment on the relevant and significant issues raised during a proceeding. Home Box Office, 567 F.2d at 35 n. 58; Community Nutrition Institute v. Bergland, 493 F. Supp. 488, 492-93 (D.C. 1980); ARM 17.30.101 (“the department shall ensure that any activity that requires a federal license or permit and that may result in a discharge to state waters shall fulfill the requirements of ARM Title 17, chapter 30 and thereby also fulfill the requirements of 33 U.S.C sections 1311-1313, 1316, and 1317”); *see* 33 U.S.C. § 1251(e) (public’s right to participate in the development of

pollution permit limits guaranteed by the CWA); *see also* ARM 17.30.1377 (DEQ must respond to public comments).

8. DEQ issued a final 401 Certification for the Project on December 31, 2020 suffering from a number of significant flaws that violate important provisions of the Clean Water Act and Montana law.
9. First, DEQ's Certification fails to assure the Project—as a whole—will not violate water quality standards. DEQ made an error of law when it constrained its scope of review only to planned construction-related stream crossing and wetland impacts of the Project. Doing so ignored key Project impacts directly relevant to assuring compliance with Montana's water quality standards, such as consideration of the overall Project's footprint and impacts on Montana waters in addition to stream crossings, including upland water quality impacts from associated facilities, reasonably foreseeable water quality impacts from pipeline operation and/or pipeline spills, and the cumulative impacts associated with numerous crossings in close proximity. The U.S. Supreme Court has expressly rejected DEQ's myopic scope of review for a 401 Certification and confirmed that the Clean Water Act requires a 401 Certification to consider all Project related activities and facilities, planned and potential discharges, during both construction and operation of a Project. PUD No. 1 of Jefferson County v. Washington Dept. of Ecology, 511 U.S. 700, 711-12 (1994); *see also* 33 U.S.C. § 1341(a). DEQ, in limiting its Certification review solely to construction-related stream crossings and wetland impacts, rather than considering impacts of the entire “activity,” committed clear legal error and therefore its Certification is unlawful, arbitrary and capricious.

10. Second, DEQ's Certification was issued despite the absence of material information concerning the Project's impacts on water resources, information required prior to decisionmaking under ARM 17.30.103(3) and which is critical to assessing water quality impacts. Missing material Project information required by DEQ's rules includes but is not limited to: the volume of discharge at each crossing of a wetland or waterbody within Montana, the biological, chemical, physical, and radiological characteristics of discharges, a description of the existing environment at each of the sites of discharge, or identification of all potentially affected Waters of the United States. *Id.* Similarly, the Project's application fails to provide meaningful detail qualifying the permanence or ongoing propensity of Project activities and facilities to degrade water quality beyond initial construction and crossing activities. The record does not reflect adequate consideration of these Project impacts, without which DEQ could not reasonably determine whether the Project, including all its connected and associated activities and facilities, will assure compliance with water quality standards. Therefore, DEQ's failure to require material data essential to its Certification represents a decision based upon unlawful procedure, and the failure to adequately consider such renders its Certification legal error, arbitrary and capricious.
11. Third, the record does not support DEQ's Certification and finding that the Project will be constructed in compliance with the Clean Water Act and assure compliance with water quality standards. DEQ's Certification was clearly erroneous, in violation of the law, and arbitrary and capricious because it: (a) failed to account for water quality impacts on numerous wetlands and upland areas that would be affected by construction and operation; (b) ignored permanent impacts to water quality from pipeline construction; (c) failed to consider the Project's cumulative effects and ability to, long-term, assure compliance with

water quality standards; (d) inadequate consideration of less-harmful alternatives in determining Project compliance with water quality standards; (e) failed to consider the risks and impacts of frac-outs on the Project's ability to assure compliance with water quality standards; and (f) failed to evaluate the risks and impacts of oil spills during pipeline operation as part of evaluating the Project's ability to assure compliance with water quality standards. Petitioner's submitted substantial evidence during the Certification comment period raising these water quality impacts and identifying less-degrading alternatives, issues DEQ failed to reasonably consider.

12. In sum, the record for DEQ's Certification falls short of providing a reasonable assurance that the Project will maintain and protect existing water quality, and nowhere does DEQ explain its omissions or failure to identify or consider significant water quality impacts of the Project. Nor does the record reasonably allow DEQ to conclude that there are no prudent and feasible alternatives available that would avoid or minimize adverse impacts to water quality, or that the Project would avoid creating a permanent obstacle to attaining and maintaining water quality standards. In such circumstances DEQ's decision to issue the Certification was clearly erroneous, in violation of law, and arbitrary and capricious.

13. Fourth, upon information and belief, DEQ utterly failed to perform nondegradation review with regard to the numerous streams and wetlands that would receive discharges from the Project's construction and operation. That failure renders DEQ's issuance of the Certification inconsistent with the requirements of Section 401, the CWA, and error as a matter of law. To the extent DEQ conducted any form of nondegradation review supporting a conclusion that the Project's impacts were nonsignificant, that review was clearly erroneous and an abuse of discretion. The record contains, at best, inadequate consideration

of the Project's water quality impacts and proscribes generic best management practices, neither of which satisfy the rigorous review mandated by ARM 17.30.701 *et seq.* or 75-5-303 MCA. DEQ's abbreviated discussions do not satisfy required regulatory criteria, prohibit unlawful degradation, or represent a reasonable basis supporting the Certification's finding that the Project will not violate water quality standards. Therefore, the Certification was clearly erroneous, unlawful, arbitrary and capricious.

14. Similarly, DEQ also abused its discretion when it failed to analyze the effect(s) of Project discharges to impaired waterways on the State's 303(d) List, or to ensure adequate plans exist to bring impaired waters into compliance with water quality standards before allowing increased pollution through issuing its Certification. *See Friends of Pinto Creek v. U.S. E.P.A.*, 504 F.3d 1007, 1014 (9th Cir. 2007); 40 C.F.R. § 122.4. Among other impacts, a primary Project effect is the discharge of increased turbidity and sedimentation, which may also carry other pollutants of concern, into waterways. Discharges of additional pollutants of concern for each respective impaired waterway will exacerbate existing impairments. Doing so will result in violations of water quality standards, in violation of Section 401 and the Clean Water Act.
15. Fifth, DEQ violated its statutory and constitutional duty to provide a meaningful public comment process that satisfies the public's right to a reasonable opportunity to participate. DEQ's final Certification admits that "[DEQ] cannot meaningfully consider and answer all the public comments it received." Public participation statutes and Montana's constitutional guarantees of public participation contemplate more than merely eliciting public comment. Art. II, Sec. 8, Montana Constitution; 2-3-101 MCA *et seq.*; *see also* ARM 17.30.1377; *see supra* Home Box Office, 567 F.2d at 35 n. 58. Upon information and belief, DEQ received

hundreds of comments opposed to and questioning varying aspects of its tentative decision to certify the Project, yet by its own admission DEQ failed to consider, much less respond to significant, public comments and Petitioners are unaware of any Response to Comments document supporting the Certification as of the filing of this appeal. Accordingly, DEQ's issuance of the Certification violated public participation mandates and was unlawful, arbitrary and capricious.

16. The Conservation Groups respectfully request that BER declare the Keystone XL Pipeline Project 401 Certification unlawful, void ab initio, and remand this matter to DEQ to reassess the application consistent with the requirements of the Clean Water Act and Montana law.

Respectfully submitted this 4th day of January, 2021.



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*Counsel for Northern Plains Resource Council
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TO: Agency Legal Services Bureau, BER Hearing Examiner
Board of Environmental Review

FROM: Joyce Wittenberg, Interim Board Secretary 
P.O. Box 200901
Helena, MT 59620-0901

DATE: February 1, 2021

SUBJECT: Board of Environmental Review Case No. BER 2021-02 WQ

BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

IN THE MATTER OF: INDIGENOUS ENVIRONMENTAL NETWORK'S AND NORTH COAST RIVERS ALLIANCE'S APPEAL OF THE MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY'S FINAL DETERMINATION TO ISSUE A 401 WATER QUALITY CERTIFICATION FOR THE KEYSTONE XL PIPELINE, DEQ APPLICATION NO. MT4011079	Case No. BER 2021-02 WQ
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On February 1, 2021, the BER received the attached request for hearing via email. Please serve copies of pleadings and correspondence on me and on the following DEQ representatives in this case.

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January 29, 2021

via Email and U.S. Mail

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**Re: Indigenous Environmental Network's and North Coast Rivers Alliance's
Appeal of the Montana Department of Environmental Quality's Final
Determination to Issue a 401 Water Quality Certification for the Keystone
XL Pipeline, DEQ Application No. MT4011079**

Dear Board Chair Deveny and Boardmembers Lehnerr, Busby, Hanson, DeArment, Tweeten,
and Lynch:

In accordance with section 17.30.109 of the Administrative Rules of Montana ("ARM")
and section 75-5-303 of the Montana Code Annotated ("MCA"), the Indigenous Environmental
Network ("IEN") and North Coast Rivers Alliance ("NCRA") respectfully submit the following
appeal of the Montana Department of Environmental Quality's ("DEQ's") December 31, 2020
Final Determination to issue a Clean Water Act ("CWA") section 401 Water Quality
Certification ("Certification") for the Keystone XL Pipeline ("Keystone" or "Project"). Members
of IEN and NCRA use and enjoy Montana rivers and wetlands that the Project would cross and

whose water quality it would harm. DEQ's Certification fails to ensure compliance with numerous state and federal water quality standards, including Montana's Nondegradation Policy. MCA 75-5-303. Furthermore, the Certification was issued prematurely, in violation of DEQ's responsibility to ensure adequate and meaningful public participation. Montana Const. Art. II, § 8; MCA 2-3-101; ARM 17.30.108.

IEN and NCRA submitted comments to the United States Department of State ("State Department") on the August 2011 Final Environmental Impact Statement for the Project ("2011 FEIS") on October 9, 2011, on the March 2013 Draft Supplemental Environmental Impact Statement for the Project ("2013 DSEIS") on April 22, 2013, on the January 2014 Final Supplemental Environmental Impact Statement for the Project ("2014 SEIS") on February 24, 2014, on the September 2018 Draft Supplemental Environmental Impact Statement on the Keystone XL Mainline Alternative Route ("2018 DSEIS") on November 8, 2018, and on the October 2019 Draft Supplemental Environmental Impact Statement for the Project ("2019 DSEIS") on November 18, 2019. IEN and NCRA also submitted comments on DEQ's Tentative Determination on November 30, 2020, which attached and incorporated their previous comments on the EIS. Those comments were all before DEQ at the time it made its Final Determination – although DEQ has admitted it did not complete its review of public comments as required before it issued this illegal Certification.

INTRODUCTION

The momentum for the Keystone Project is evaporating as its unacceptable oil-spilling risks and climate-wrecking impacts are being revealed. On January 20, 2021, President Biden issued Executive Order 13990, which, in part, revoked the Presidential Permit issued for the

Project in 2019. 86 Fed.Reg. 7037-7043 (Jan. 25, 2021), attached hereto as **Exhibit 1**. That same day, TC Energy announced that it had ceased all construction activity on the Project. *Work on Keystone Pipeline Suspended Ahead of Biden Action*, Boston Herald, Jan. 20, 2021, attached hereto as **Exhibit 2**. Yet DEQ's Final Determination – which violates both state and federal water quality standards – remains in place.

The Keystone Project has a long and troubled history. On August 18, 2018, Montana Federal District Court Judge Brian Morris issued an Order directing the State Department to supplement its review under the National Environmental Policy Act (“NEPA”) to analyze the Project's revised “Main Line Alternative” Route, or “MAR,” through Nebraska. *Indigenous Environmental Network v. Department of State (“IEN v. State I”)* 317 F.Supp.3d 1118, 1123 (D. Mont. 2019). On November 8, 2018, Judge Morris issued a second Order (“November 2018 Order”) vacating the State Department's entire Record of Decision approving the Project (“ROD”), and ordering the State Department to supplement its 2014 SEIS because it ignored or understated the Project's significant environmental and cultural impacts in several significant respects. *Indigenous Environmental Network v. Department of State (“IEN v. State II”)*, 347 F.Supp.3d 561, 575-584, 590-591 (D.Mont. 2018). In his latter ruling, Judge Morris also set aside the State Department's 2012 Biological Assessment and the U.S. Fish and Wildlife Department's 2013 Biological Opinion, ordering those agencies to reconsider the Project's potential adverse impacts to endangered species from oil spills. *IEN v. State II*, 347 F.Supp.3d at 590-591. Judge Morris also ruled that the State Department had failed to provide “a reasoned explanation for disregarding facts and circumstances that underlay or were ordered by the prior policy” of the Department that Keystone would not serve the national interest. *IEN v. State II*,

347 F.Supp.3d at 591.

In an effort to at least appear to comply with the Court's November 2018 Order, the State Department commenced preparation of an SEIS. However, long before that SEIS was released on December 20, 2019, President Trump attempted to sidestep the Court's rulings altogether by issuing on March 29, 2019 a new "Presidential Permit" purportedly "grant[ing] permission" for TC Energy "to construct, connect, operate and maintain" its proposed Project without first awaiting State Department review including completion of the SEIS ordered by Judge Morris. President Trump's purported approval violated Executive Order 13337 – which was then in effect and required such permits to be reviewed and vetted by the State Department, and forbade their approval unless the State Department found they would serve the public interest. This required State Department review never took place, and the required finding by the State Department that the Project would serve the public interest was never made. For these reasons among others, the 2019 Presidential Permit is unconstitutional and the subject of litigation. And, because the SEIS released by the State Department on December 20, 2019 is deficient, that SEIS has also been challenged in federal court.

Now DEQ has issued a CWA 401 Water Quality Certification for the Project, but as explained below, such an approval is only another transgression in the long line of illegal and unconstitutional approvals surrounding Keystone, whose primary approval – the 2019 Presidential Permit – has already been revoked. Because DEQ's Certification violates numerous state and federal laws, despite the conditions placed on the Certification, this Board of Environmental Review ("Board") must overturn and vacate DEQ's Certification.

I. THE CERTIFICATION VIOLATES FEDERAL AND STATE WATER LAW

A. CLEAN WATER ACT

The CWA’s central “objective . . . is to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” 33 U.S.C. § 1251. In furtherance of that objective, the CWA has developed a permitting scheme that integrates both state and Federal agency responsibility to ensure our nations waters are protected. See Certification at 2. The CWA commands that “[a]ny applicant for a Federal license or permit to conduct any activity . . . which may result in any discharge into the navigable waters, shall provide the licensing or permitting agency a certification from the State in which the discharge originates or will originate.” 33 U.S.C. § 1341(a)(1).

Furthermore, any 401 certification must “set forth any effluent limitations and other limitations, and monitoring requirements necessary to assure . . . compl[iance] with any applicable effluent limitations and other limitations, under [the CWA], and with any other appropriate requirement of State law set forth in such certification.” 33 U.S.C. § 1341(d). In fact, the CWA even goes so far as to make state law requirements “a condition on any Federal license or permit.” *Id.* Therefore, ensuring compliance with state water quality standards is a central component to issuing a 401 water quality certification, and a failure to ensure compliance with those standards is a violation of the CWA.

DEQ is the agency within Montana charged with administering water quality certifications. ARM 17-30-103 (forbidding “construction for any activity requiring [CWA 401 certification], unless [DEQ] has issued certification, issued with conditions, or waived certification”). As such, DEQ must “ensure that any activity that requires a federal license or

permit and that may result in a discharge to state waters shall fulfill the requirements” of both state water quality standards and the CWA. ARM 17-30-101(2). DEQ’s failure to ensure compliance with state water quality standards, as discussed below, therefore violates the CWA.

B. MONTANA WATER QUALITY STANDARDS

Montana’s commitment to the protection of environmental quality and natural resources can be seen even in the State’s Constitution. Section IX of the Montana Constitution declares that the “state and each person shall maintain and improve a clean and healthful environment in Montana for present and future generations.” Montana Const. Art. IX, § 1. It tasks the legislature with providing “administration and enforcement of this duty,” and “adequate remedies to prevent unreasonable depletion and degradation of natural resources.” Montana Const. Art. IX, § 1.

This environmental protection extends specifically to waters of the state, which “are the property of the state for the use of its people.” Montana Const. Art. IX, § 3. Montana has established statutes and regulations to ensure the adequate protection of its important waterways. *See* MCA Ch. 75-5, Part 3 (Water Quality Classifications and Standards); ARM Ch. 17-30. Notably, Montana has a “Nondegradation Policy” included in its water quality standards, which demands “the quality of high-quality waters must be maintained.” MCA 75-5-303. Indeed, DEQ “may not authorize degradation of high-quality waters” except in very limited circumstances, where the applicability of those circumstances “has been affirmatively demonstrated by a preponderance of evidence.” MCA 75-5-303(3).

Pursuant to Montana’s water quality statutory mandates, DEQ promulgated regulations setting surface water quality standards and procedures, including general prohibitions designed to

protect against degradation. ARM Ch. 17.30, Subpart 6. The water quality regulations specifically demand that “State surface waters must be free from substances attributable to municipal, industrial, agricultural practices or other discharges [including spills or leaks] that will . . . (a) settle to form objectionable sludge deposits . . . ; [or] (d) create concentrations or combinations of materials which are toxic or harmful to human, animal, plant, or aquatic life.” ARM 17.30.637(1).

The duty to adequately preserve and protect Montana’s waterways can be seen throughout the state’s water quality framework. The state’s waters must be protected for public use. Any 401 water quality certification that fails to ensure that high-quality waters are not degraded therefore violates Montana’s water quality standards, and in turn, the CWA.

C. THE PROJECT WILL DEGRADE WATER QUALITY IN VIOLATION OF MONTANA WATER QUALITY STANDARDS

The Keystone Project *will* degrade water quality in numerous ways. First, Project construction at waterway crossings will cause sedimentation and the release of toxic drilling fluids into Montana public waters, significantly impairing water quality and harming the species that rely on those waters. Second, it is inevitable that the Project’s pipeline will leak, and such a spill will likely cause long-term damage to water quality.

The Project crosses “201 wetland and waterbody features.” Public Notice at 1. TC Energy admits that “[i]n Montana, the construction of the Project will result in the permanent disturbance of 0.06 acres of wetlands due to the construction of the permanent access road CAR-128.” TC Energy, Responses to June 30, 2020 Administrative Completeness Review of the Keystone XL Project, Application for Certification, DEQ Water Quality Certification No.

MT4011079, Montana Department of Environmental Quality, July 24, 2020 (“Responses”) at 1. TC Energy also admits that “construction of the Project will result in the permanent disturbance of 0.037 acres of waterbodies due to the construction of the permanent access roads.” TC Energy, Responses at 1. The actual impacts on Montana waterbodies and wetlands would be much greater, however. As discussed below, the Project would, like the existing Keystone Pipeline (“Keystone I”), inevitably leak oil, and there is a substantial likelihood that those inevitable leaks would find their way into Montana’s surface waters, in direct violation of state water quality standards, and consequently, the CWA. Yet, TC Energy “is not proposing compensatory mitigation” to offset the serious water quality impacts associated with construction and operation of the Project. Public Notice at 1. This omission is particularly troubling, since the harm from oil spills tends to be severe and long-lasting.

1. Construction Activities

Water crossing construction for the Project will significantly degrade water quality, in violation of, at a minimum, Montana’s nondegradation policy and general prohibitions protecting surface water quality. MCA 75-5-303; ARM 17.30.637. Notably, Montana Federal District Court Judge Brian Morris has ruled that the discharges from Project construction *will cause sedimentation and turbidity* sufficiently to harm wildlife habitat, and consequently impact listed species. *Northern Plains Resources Council v. U.S. Army Corps of Engineers* (“*Northern Plains*”), Mont. Dist. Ct. Case No. CV-19-44-GF-BMM, Order filed April 15, 2020 at 14-16, attached hereto as **Exhibit 3**. But such sedimentation is prohibited under Montana law. “State surface waters must be free from substances attributable to . . . discharges that will . . . create concentrations or combinations of materials which are toxic or harmful to human, animal, plant,

or aquatic life.” ARM 17.30.637(1)(d). And as the District Court has already determined, sedimentation from construction will harm wildlife. That determination is dispositive; Project construction will violate Montana water quality provisions and consequently, the CWA.

The Certification’s claim that turbidity will not be an issue because “[a]ll practical BMPs on disturbed banks and within waters must be implemented to minimize turbidity during incidental in-water work,” fails. Certification at 3. This vague and unenforceable condition provides no methods or standards specifying just how turbidity will be reduced, let alone assuring that turbidity will not harm water quality and dependent beneficial uses. Nor does it address turbidity and sedimentation from work that its performed near – but not in – waterways. This condition does nothing to *actually ensure* that water quality will not be degraded.

As DEQ acknowledges, TC Energy’s CWA section 404 Dredge and Fill application to the U.S. Army Corps of Engineers is inextricably intertwined with its section 401 water quality certification. Responses at 4. And the Montana Federal District Court has already held that “[t]here exists ‘resounding evidence’ from experts and from the Corps that the discharges authorized by NWP 12 [i.e., CWA section 404 Nationwide Permit 12] may affect listed species and critical habitat” due to significant water quality degradation. Exhibit 3 at 15-16 (internal citations omitted). Indeed, “[t]wo experts have declared that the discharges authorized by NWP 12 will affect endangered species. The Corps itself has acknowledged that the discharges will contribute to the cumulative effects to wetlands, streams, and other aquatic resources.” *Id.* at 15.

Martin J. Hamel, Ph.D., an expert in anthropogenic and invasive species’ impacts on native riverine species, confirmed that endangered “pallid sturgeon remain susceptible to harm from pollution and sedimentation in rivers and streams” and that the Project’s “[c]onstruction

activities that increase sediment loading pose a significant threat to the pallid sturgeon populations in . . . Montana.” *Id.* at 14. An expert on the endangered American burying beetle, Dr. Jon Bedick, likewise confirmed that the Project’s construction activities, including its water crossings, would harm this imperiled beetle. *Id.* at 15.

Even the Corps acknowledges that the construction methods proposed for the majority of water crossings will impair water quality. In distinguishing between the “open-cut, dry trenching method” used for the majority of crossings and the “trenchless horizontal directional drilling method” used for only a few water bodies, the Corps admits that the “trenchless horizontal directional drilling method” is utilized specifically “to avoid water quality impacts” that would occur otherwise at the other water crossing where HDD will *not* be employed. Public Notice at 1. These serious water quality impacts from dry trenching are confirmed by Dr. Hamel. Exhibit 3 at 15. Furthermore, Dr. Hamel also points out that horizontal directional drilling is not without its own significant water quality impacts: It can result in an inadvertent return of drilling fluid, which would cause “increased sedimentation and turbidity, which would affect aquatic biota such as pallid sturgeon and the species sturgeon rely on as food sources.” *Id.*

The Federal District Court’s holding that Project construction will cause sedimentation and turbidity, thereby impairing water quality and harming imperiled species, is dispositive. The Project will significantly degrade water quality in violation of CWA section 404, and therefore DEQ’s 401 Certification is unlawful.

2. Accidental Spills

If the Project’s pipeline becomes operational, it *will* leak and spill. All the parties agree that it is not a question of “if,” but when, and how much, it will spill. And history shows that

there will be relatively large, frequent spills. There have been two major spills on TC Energy's existing Keystone I Pipeline in the last three years alone.¹ In 2017, an estimated 408,492 gallons of crude oil spilled from the Keystone I pipeline in South Dakota. 2019 Final Supplemental Environmental Impact Statement ("FSEIS") at 5-13, attached hereto as **Exhibit 6**²; Exhibit 4 at 2; Exhibit 5 at 2-3. And on October 29, 2019 the Keystone I pipeline leaked again, this time an estimated 383,000 gallons of crude oil in North Dakota. Exhibit 4 at 1-2; Exhibit 5 at 1-3. This most recent spill covered an estimated half-acre of wetland on the surface (and a much greater subsurface area) and leaked enough oil to fill one half of an Olympic-size swimming pool. Exhibit 5 at 1. Both spills were of tar sands crude, or "dilbit," a particularly pernicious crude that is extremely difficult to clean up. Dilbit "is known to be difficult to clean up for many reasons. For example, it sinks rather than floats in water, and attaches to the beds and banks of water bodies." See, e.g., Declaration of Dr. Yan Linhart Regarding Deficiencies in the Biological Assessment and Biological Opinion for the Keystone XL Pipeline, December 29, 2017, attached hereto as **Exhibit 7** at ¶ 5.

As evidenced by the numerous, sizable spills along the Keystone I Pipeline, spills along the Project are unavoidable. But Montana water quality standards demand that "State surface waters . . . be free from substances . . . that will: (a) settle to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shorelines." ARM 17.30.637(1).

¹ *Portion of Keystone Pipeline shut down after 380,000-gallon oil leak in North Dakota*, USA Today, November 1, 2019, attached as **Exhibit 4**; Rueb, Emily and Chokshi, Niraj, *Keystone Pipeline Leaks 383,000 Gallons of Oil in North Dakota*, The New York Times, October 31, 2019, updated November 2, 2019, attached as **Exhibit 5**.

² All future citations to Exhibit 6 are cited as 2019 FSEIS pages.

That cannot be accomplished while the Keystone pipeline is operational because leaks and spills *will* occur, and as further discussed below, they will be difficult to detect and clean up, particularly during the winter, greatly exacerbating the Project's degradation of water quality.

a. Leak Detection

The 2019 FSEIS reveals that a pinhole leak – a leak from a 1/32-inch diameter hole – would allow up to 28 barrels of oil to spill each day from Keystone's pressurized pipeline, in violation of Montana's nondegradation policy and other water quality standards. 2019 FSEIS 5-17; MCA 75-5-303; ARM 17.30.637. It admits that such a leak "could continue unnoticed until the released volume is observed at the ground or water surface or is identified during a pipeline integrity inspection." 2019 FSEIS 5-17. But Keystone's automatic leak detection system would miss more than just those pinhole leaks, as damaging as they would be by themselves.

TC Energy's automatic leak detection systems are only able to sense leaks when they exceed approximately 1.5 to 2 percent of the pipeline's flow rate. 2019 FSEIS D-70; *see also* TC Energy's January 17, 2020, Keystone XL Pipeline Project Final Plan of Development ("POD") 139, attached hereto as **Exhibit 8**. The Project is designed "to transport up to 830,000 barrels per day (bpd)," which equates to 34,583 barrels per hour. 2019 FSEIS 1-8. Thus, a spill of up to two percent of the flow of the pipeline, which can be expressed as approximately 692 barrels per hour or 16,600 barrels per day, would not be detected "in real time" by the automatic leak detection systems. 2019 FSEIS D-70; Exhibit 8 at 139. The 2019 FSEIS relies upon direct observations – although there is no provision for posting of trained observers – and non-real time, computer-based, pipeline volume "trend analysis" to detect these leaks. *Id.*

Neither proposal would work. Visual observation would not detect leaks “until the spill volume is expressed on the surface.” 2019 FSEIS D-70. But the 2019 FSEIS assumes that leaking oil would be visible. During the winter, ice forms on the surface, directly blocking detection of spills from surface observation. Ice formation on the Missouri River below the Fort Peck Dam where Keystone would cross under the water begins in late November and lasts until late March or longer. During this time snow accumulates on top of the ice. Thus, for at least four months of the year, oil spills into the Missouri River would not be visible on the surface. U.S. Army Corps of Engineers, Missouri River Mainstem Reservoir System Water Control Manual Volume 2, Fort Peck Dam – Fort Peck Lake (2018), III-11, attached hereto as **Exhibit 9**. The initial ice formation usually begins 204 miles downstream at the headwaters of the Garrison reservoir, and continues upstream – past the intake for the Assiniboine and Sioux Rural Water Supply System near Wolf Point, and then all the way to the reach immediately below Fort Peck Dam. *Id.*, at VII-8. During this approximately four-month period each year, it is unlikely that lower-volume oil spills in the river would be visible due to the iced-over condition. This omission cripples public evaluation of the magnitude of the oil spills that could occur before detection – let alone before the exact source is located and the leak is halted.

The inadequacy of this leak detection system became evident with the operation of TC Energy’s original Keystone pipeline. In May 2011, the Keystone I pipeline spilled between 17,000 and 22,000 gallons of crude oil. “That spill was discovered by a North Dakota rancher, Bob Banderet, on May 7, 2011, when he saw oil gushing from the Keystone I Pipeline’s Ludden pumping station near his land. He reportedly called the emergency phone number that TransCanada Corporation (now TC Energy) had provided him as a volunteer firefighter to alert

TransCanada’s emergency response dispatcher to the spill.” Kandi White Declaration (*IEN v. Trump*, Case No. 19-cv-00028-BMM, Dkt. 27-24) at ¶ 6, attached hereto as **Exhibit 10**. To cover up the fact that its detection system had failed, “TransCanada asked the Pipeline and Hazardous Materials Safety Administration to amend its shutdown order to state that TransCanada’s internal sensors – rather than Mr. Banderet – had first discovered the leak. TransCanada subsequently referred to this spill as proof that ‘the system worked as it was designed to do.’” *Id.* But the leak detection system had, to the contrary, failed, even with this extremely large leak. And TC Energy has not provided any reason why the same failure should not be expected here.

The 2019 FSEIS’s analysis of oil released in waterways is limited to “the distance the released crude oil might travel within 6 hours.” 2019 FSEIS 5-3. This limitation is derived from the flawed assumption that TC Energy will prevent additional oil from spilling within six hours of when a spill starts. *Id.* The 2019 FSEIS states that “the 6-hour response time was used as it represents the maximum response time along the Missouri River stipulated by federal pipeline safety regulations.” 2019 FSEIS D-60. But these regulations merely require that TC Energy *begin to respond* within six hours “after *discovery* of a worst case discharge,” not that the discovery – let alone the completed response – must occur within six hours of the leak. 49 C.F.R. § 194.115 (emphasis added). As seen, TC Energy’s discovery might be delayed for months. And, of course, even after the leak is discovered, these regulations do not require that TC Energy complete its response within six hours of every spill’s discovery. *Id.*

None of these measures or claims remedy the fact that the Project will inevitably, and undoubtedly leak oil, and that it will very likely go undetected for at least some significant

amount of time before identification, research, and remediation can even *begin* to take place. If not visible from the surface, leaks would never be detected unless their volume exceeds up to 2 percent of Keystone's entire flow. As noted, the 2 percent threshold is a whopping 16,600 barrels of oil per day. At 44 gallons per barrel, that totals 730,000 gallons per day. DEQ's 401 Water Quality Certification cannot be upheld where this spill volume, and subsequent failure to detect, is inevitable in violation of Montana's Nondegradation Policy and other water quality standards. 2019 FSEIS 5-38, D-63 to D-64.

In addition to unreasonably assuming rapid detection of spills, DEQ's 401 Water Quality Certification relies on impact modeling that unreasonably assumes that oil spills in waterways will *always* be contained before oil can travel more than 40 river miles. 2019 FSEIS 5-2, D-58. This is demonstrably unsupported and unsupportable. As noted, during winter, leaking oil may flow hundreds of miles down river, hidden by ice and snow, before detection. Tacitly conceding this fact, the 2019 FSEIS states that even if the sheen and globules from an oil spill might travel beyond the 40-mile distance assumed in the impact analysis, this contamination would not pose a significant impact. 2019 FSEIS 5-2. But DEQ's Water Quality Certification cannot rely on this contradictory analysis, and then "certify[y] that the Project in its current form following the conditions in the 401 Certification will not violate water quality standards" unless and until DEQ can confirm that any and all leaks will be detected and contained at all, let alone quickly.

b. Spill Impacts

DEQ's 401 Certification also fails to ensure that any spill – whether detected or not – will not degrade the high-quality waters within the state or harm the humans and wildlife that rely on those waters in violation of Montana water quality standards and the CWA. MCA 75-5-303;

ARM 17.30.637; 33 U.S.C. § 1341. “One of the most challenging aspects of responding to spills, particularly dilbit spilled in water, is detecting, containing and recovering submerged and sunken oil. Submerged and sunken oil is difficult to detect because it is often not visible from the surface. Methods to detect submerged and sunken oil are typically slow, limited by water conditions and provide only a ‘snapshot’ of a given area.” 2019 FSEIS 5-26. Containment of submerged and sunken dilbit is just as challenging as detection. 2019 FSEIS 5-26. It requires specialized equipment, the effectiveness of which is limited by surrounding environmental conditions. *Id.*

“Submerged crude oil [such as dilbit] could result in a persistent source of contamination [in surface water] because of the slow rate of natural degradation of this material.” 2019 FSEIS 5-37. “Dilbit is more likely than lighter crude oils to persist within wetlands because of the higher amount of residual oil left behind after weathering, increased adhesion and resistance of dilbit to biodegradation.” 2019 FSEIS 5-42. The 2019 FSEIS admits that “[r]emoval of submerged product from the water column can be a difficult and long process,” citing a 2010 spill in Michigan where cleanup efforts “including dredging, excavation and aeration, continued for 4 years after the spill.” 2019 FSEIS 5-37 to 5-38. Indeed, “sunken oil may become buried under or mixed within stream sediment and soil along streambanks, where it may become trapped and remain for an extended duration. This buried oil may slowly biodegrade into soluble components or volatilize over time. Future disturbances to the aquatic environment, such as dredging, wave action, boat propellers or bioturbation, could re-suspend buried oil or its weathered components. The potential re-suspended oil could represent a source of contamination for an extended duration.” 2019 FSEIS 5-38.

The Project's likely discharge of crude oil into Montana waters directly violates Montana Nondegradation Policy, which demands that "the quality of high-quality waters must be maintained." MCA 75-5-303. It also violates Montana's prohibition against substances that "settle to form objectionable sludge deposits or emulsions beneath the surface of the water or upon adjoining shoreline. . . ; [or] (d) create concentrations or combinations of materials which are toxic or harmful to human, animal, plant, or aquatic life." ARM 17.30.637(1). And in turn, it violates the CWA's mandate that all 401 water quality certifications comply with state water quality standards. 33 U.S.C. § 1341.

The difficulty in detecting and containing dilbit spills gravely exacerbates the impact of such a spill on the surrounding environment and the many species that rely on these waters. Dr. Linhart has identified numerous species that will be significantly impacted by a spill from the Project's pipeline, including the pallid sturgeon, the whooping crane, the piping plover, and the interior least tern. Exhibit 7 at ¶¶ 11, 14, 16, 17. Notably, "because tar sands oil is thicker and more viscous than conventional crude oil, it is more difficult to clean up. This is especially problematic for the pallid sturgeon, because as noted they are bottom-dwellers likely to encounter the heavy dilbit." Exhibit 7 at ¶ 5. Because these impacts are inevitable if the Keystone pipeline becomes operational, the Project violates Montana water quality standards that demand that surface waters be free from substances that "are toxic or harmful to human, animal, plant, or aquatic life." ARM 17.30.637(1)(d). It was, therefore, unlawful for DEQ to issue a 401 water quality certification for the Project.

The impact of large oil spills from the Project on water quality, particularly on waterways used for both domestic consumption and irrigation, such as the Missouri and Yellowstone rivers,

would be potentially catastrophic. Yet the State Department – and now, DEQ – have blithely assumed that (1) no impacts would occur more than 40 miles downstream of a spill, and (2) any impacts would be mitigated through TC Energy’s provision of “an alternate water supply” or payment of compensation. 2019 FSEIS 5-38 to 5-41. These assumptions are baseless and therefore false. There is no evidence that contaminants would not extend more than 40 miles downstream, and there are no alternative water supplies for many affected communities, such as the Fort Peck Indian Reservation which is located immediately downstream of the Project’s crossing of the Missouri River. See, e.g. Declaration of Bill Whitehead (*IEN v. Trump*, Case No. 19-cv-00028-BMM, Dkts. 27-26 and 27-27) at paragraphs 4-13 and Exhibit 1 thereto, which are attached as **Exhibit 11** hereto. Moreover, no amount of “compensation” could ever replace the loss of a community’s only source of potable water.

Many of the waterways directly impacted by the Project are of great importance to the Indigenous communities because they depend on these waters for drinking, irrigation, livestock, and their cultural and religious practices. A spill from the pipeline – which seems certain to occur – would significantly impact and potentially poison drinking and irrigation water for tens of thousands of people and their farmland.

“The Keystone XL Pipeline would cross under the Milk River and the Missouri River just 10 and 14 miles upstream of [the] Wyota and Frazer irrigation intakes on the Missouri River, which supply the Fort Peck Reservation’s extensive irrigation system, providing water to about 19,000 acres of highly productive farmland. Downstream of the Wyota and Frazer irrigation intakes is the intake for the Wambdi Wahachanka “Eagle Shield” Water Treatment Plant that pumps water from the Missouri River, for potable use, to the inhabitants of the Fort Peck Reservation as well as other communities within Montana’s four northeastern counties.”

Exhibit 11 at ¶ 6. A pipeline spill upstream of these intakes would be devastating to the Fort Peck Reservation for two reasons. First, that Reservation is wholly dependent on these three intakes for its potable water supply, as noted. Second, an upstream oil spill would disable its water treatment plant. The Fort Peck Reservation’s water treatment plant “is not designed nor equipped to remove hydrocarbon contaminants . . . that are present in crude oil and the diluent that is used to facilitate its passage through pipelines. Were there to be a tar sands crude oil leak contaminating the Missouri River, [the] water treatment plant would have to close, resulting in the loss of the sole water supply for over 30,000 residents of the Fort Peck Reservation and surrounding communities . . . , including four hospitals and thirteen public schools.” *Id.* at ¶ 7.

Water supply contamination would have serious health impacts on Indigenous communities that cannot be ignored. There are many vulnerable families and individuals residing in the affected Indigenous communities who have “cancer and other diseases attributed to contamination of their water supply.” Declaration of Angeline Cheek (*IEN v. Trump*, Case No. 19-cv-00028-BMM, Dkt. 27-6), attached hereto as **Exhibit 12** at ¶ 11. These ongoing health risks and illnesses would be made worse should an oil spill from Keystone prevent use of surface waters and force these communities to resume reliance on the contaminated groundwater supplies that caused their ill health in the first place.

The impacted Indigenous communities rely on these rivers not only for drinking water, but also for native medicines and edible plants that grow along their riverbanks. Because of their unique dependence upon and interdependence with the natural world, these communities would be profoundly and disproportionately harmed if Keystone spilled oil into their rivers. As Indigenous community resident and spokesperson Joye Braun has testified to the Montana

Federal District Court regarding the harm from a spill into the Cheyenne River downstream in South Dakota,

“[i]f the Keystone XL Pipeline should leak into any of these rivers, our people, our water supply, and our health and safety would be immediately impacted. I frequently harvest native medicines and berries along the Cheyenne River downstream from where the KXL Pipeline would be constructed. My family and I rely on these foods and medicines for our sustenance and health.”

Declaration of Joye Braun (*IEN v. Trump*, Case No. 19-cv-00028-BMM, Dkt. 27-4), attached hereto as **Exhibit 13** at ¶ 3. The same impacts would occur if the Project spills into Montana waters such as the Missouri River that are used by the Indigenous communities such as the Fort Peck Indian Reservation, as documented in the Whitehead Declaration summarized above.

A spill would destroy more than just native foods and medicines. It would also harm the spiritual, religious, cultural, and personal connections that many members of the impacted Indigenous communities have with these waters. As Indigenous community resident Elizabeth Lone Eagle has testified to the Montana Federal District Court,

“[f]or us, life begins and ends with water. We are born from and nourished by water. It is our first medicine. It enables our food to grow, our fish to live, and our game to thrive. Our horses use the river to water, swim, frolic, and to clean themselves. . . .Should the KXL Pipeline rupture— as appears to us inevitable and has been predicted by the Final Environmental Impact Statement for the project — and leak into the Cheyenne River, White River or their tributaries, the resulting contamination of our water supply would be devastating to my family, our community, and the entire way of life on which our Tribes depend for survival.”

Declaration of Elizabeth Lone Eagle (*IEN v. Trump*, Case No. 19-cv-00028-BMM, Dkt. 27-15), attached hereto as **Exhibit 14** at ¶¶ 3, 6. As noted, the same ill effects would befall the Indigenous communities such as the Fort Peck Indian Reservation that are dependent on water from Montana rivers such as the Missouri.

Indigenous community leader Kandi White has similarly attested to the fact that if Keystone should spill into Montana rivers such as the Yellowstone and Missouri that are used by the Indigenous communities in this state, those communities would suffer a profoundly deep sense of loss:

“[c]ontamination of a river in this way is particularly painful for me and my people. As Mandan, Hidatsa, Arikara people, we always lived along waterways and farmed along the fertile floodplains. Consequently, it is very important to us that we remain close to and make frequent use of our rivers.”

Exhibit 10 at ¶ 10. In testimony to the Montana Federal District Court, Indigenous community resident LaVae High Elk Red Horse has summed up the totality of this impact on the Indigenous communities in South Dakota, whose injuries would be no different than those of the Indigenous communities dependent on Montana rivers:

“[b]ecause we . . . depend on the great Cheyenne River and its tributaries for our sustenance, the Keystone XL Pipeline would threaten all that we live for and our cultural and religious legacy as we live it every day.”

Declaration of Lavae High Elk Red Horse (*IEN v. Trump*, Case No. 19-cv-00028-BMM, Dkt. 27-19), attached hereto as **Exhibit 15**, at ¶ 4.

The Certification’s incomplete attempt to address these devastating impacts is nothing more than lip service to a people, with a long and cultured history deeply dependent on the Missouri River’s unsullied waters, who were ignored when Keystone was approved, and who deserve far better. The Certification states:

All work and discharges upstream of Waters of the Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation shall maintain the beneficial uses of Waters of the Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation. Keystone shall consult with OEP prior to construction of the Project to ensure compliance with the applicable and federally-approved water quality requirements of the Assiniboine & Sioux Tribes of the Fort Peck Indian Reservation.

Certification at 3. But no uses are described, no means of protecting those uses are discussed, and the Tribes themselves are not identified as parties to discussions about preserving *their own beneficial uses*. As the Chairman of the Assiniboine & Sioux Rural Water Supply System Bill Whitehead has testified in his declaration quoted above, Keystone poses an extreme and unacceptable threat to the Fort Peck Indian Reservation's only water supply. Far more than the vague and unenforceable platitudes tossed into the 401 Certification as window dressing is needed to ensure that these Tribes' "[e]xisting uses of state waters and the level of water quality necessary to protect those uses [is] maintained and protected." MCA 75-5-303(1). Without that assurance, supported by a preponderance of the evidence that those uses "will be fully protected," DEQ's 401 Certification is unlawful. MCA 75-5-303(3)©.

TC Energy has an abysmal oil spill record. As noted, TC Energy has had two large spills on Keystone I in the last three years alone, which far exceeds the industry average. A large spill – like either of the two that occurred on TC Energy's Keystone I pipeline in the last two years – into Montana waterways would cause permanent irreparable damage to water quality. It is therefore neither reasonable, nor scientifically sound, to issue a 401 water quality certification for the Project. Since DEQ failed as the last line of defense for protecting Montana's magnificent and irreplaceable waterways, it is vitally important that this Board look carefully at the inevitable and irreversible impacts of this Project on water quality and the communities and species that rely on those waters, and following that review, overturn DEQ's unlawful Certification.

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D. DEQ HAS NOT DEMONSTRATED THAT DEGRADATION IS APPROPRIATE

DEQ claims “the Project in its current form following the conditions in the 401 Certification will not violate water quality standards.” Certification at 4. As shown above, that is simply not true. At a minimum, the Project will undoubtedly violate Montana’s Nondegradation Policy. And none of the circumstances surrounding the Project could possibly justify such a violation. MCA 75-5-303(3). Montana’s stringent water quality laws unambiguously command that:

“[DEQ] may not authorize degradation of high-quality waters unless it has been affirmatively demonstrated by a preponderance of evidence to the department that:

- (a) degradation is necessary because there are no economically, environmentally, and technologically feasible modifications to the proposed project that would result in no degradation;
- (b) the proposed project will result in important economic or social development and that the benefit of the development exceeds the costs to society of allowing degradation of high-quality waters;
- © existing and anticipated use of state waters will be fully protected; and
- (d) the least degrading water quality protection practices determined by the department to be economically, environmentally, and technologically feasible will be fully implemented by the applicant prior to and during the proposed activity.”

MCA 75-5-303(3).

DEQ failed to confirm that the significant degradation caused by the Project meets any one of the above criteria, let alone all four. Certification at 2-4. Indeed, it cannot because none of the required conditions could be met. Even if DEQ had attempted to justify the Project’s water quality impacts, its 401 Certification would still violate Montana water quality standards and the CWA.

III. DEQ FAILED TO ENSURE ADEQUATE PUBLIC PARTICIPATION

Like environmental protection, public participation in governmental operations is a central tenet of Montana law. The Montana Constitution declares “[t]he public has the right to expect governmental agencies to afford such reasonable opportunity for citizen participation in the operation of the agencies prior to the final decision as may be provided by law.” Montana Const. Art. II, § 8. In furtherance of that mandate, the Montana Code contains an entire chapter devoted to public participation in governmental operations in order “to secure to the people of Montana their constitutional right to be afforded reasonable opportunity to participate in the operation of governmental agencies prior to the final decision of the agency.” MCA 2-3-101.

In light of the State’s public participation goals, Montana’s Nondegradation Policy specifically requires that DEQ “provide public notice [of its tentative determination] and a 30-day comment period prior to issuing a final decision.” MCA 75-5-303(4). And DEQ’s regulations specifically require the same. ARM 17.30.108 (DEQ “shall provide public notice of the department’s tentative determination” and allow for public comment for “30 days from the date of issuance of the public notice” or 15 days from the date of the hearing).

Indeed, DEQ admits it “is required to consider *and answer* all substantial public comments in making a final 401 Certification decision.” Certification at 1 (citing ARM 17.30.108 and MCA 75-5-402, emphasis added). But it did not do so here. In the same paragraph it admits that it did not “meaningfully consider and answer all the public comments it received.” Certification at 1. Instead, DEQ “grant[ed] the 401 Certification with conditions” as if that would rectify its complete failure to respond to the public’s constitutionally- and

statutorily-protected right to participate. Certification at 1; Montana Const. Art. II, § 8; MCA 75-5-401; ARM 17.30.108.

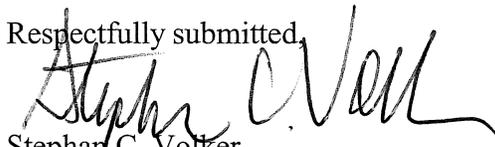
But the public's loss of its right to be heard cannot be so casually brushed aside. Since DEQ has admitted that it "is required to consider and answer all substantial public comments in making a final 401 Certification decision," and did not do so here, its 401 Certification cannot stand. Because that Certification squarely violates the governing statutory and regulatory requirement that public comments be fully considered and answered, it must be vacated by this Board.

CONCLUSION

The Keystone XL Pipeline will significantly degrade water quality, in violation of both federal and state water quality law. Furthermore, it will harm endangered species and potentially destroy irreplaceable sources of drinking and irrigation water. In purporting to approve this 401 Certification for Keystone, DEQ admits that it failed to fully consider and answer all substantive comments it received from the public, including the undersigned organizations.

Accordingly, DEQ's 401 Water Quality Certification is unlawful and must be set aside.

Respectfully submitted,



Stephan C. Volker

Attorney for Indigenous Environmental Network and North
Coast Rivers Alliance

LIST OF EXHIBITS

1. Executive Order 13990 (Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis), 86 Fed.Reg. 7037-7043 (Jan. 25, 2021)
2. *Work on Keystone Pipeline Suspended Ahead of Biden Action*, Boston Herald, Jan. 20, 2021
3. *Northern Plains Resources Council v. U.S. Army Corps of Engineers* (“Northern Plains”), Mont. Dist. Ct. Case No. CV-19-44-GF-BMM, Order filed April 15, 2020
4. *Portion of Keystone Pipeline shut down after 380,000-gallon oil leak in North Dakota*, USAToday, November 1, 2019
5. Rueb, Emily and Chokshi, Niraj, *Keystone Pipeline Leaks 383,000 Gallons of Oil in North Dakota*, The New York Times, October 31, 2019, updated November 2, 2019
6. 2019 FSEIS Excerpts
7. Declaration of Dr. Yan Linhart Regarding Deficiencies in the Biological Assessment and Biological Opinion for the Keystone XL Pipeline, December 29, 2017
8. TC Energy’s January 17, 2020, Keystone XL Pipeline Project Final Plan of Development Excerpt
9. U.S. Army Corps of Engineers, Missouri River Mainstem Reservoir System Water Control Manual Volume 2, Fort Peck Dam – Fort Peck Lake (2018) Excerpt
10. Declaration of Kandi White (*IEN v. Trump*, Case No. 19-cv-00028-BMM, Dkt. 27-24)
11. Declaration of Bill Whitehead (*IEN v. Trump*, Case No. 19-cv-00028-BMM, Dkts. 27-26 and 27-27)
12. Declaration of Angeline Cheek (*IEN v. Trump*, Case No. 19-cv-00028-BMM, Dkt. 27-6)
13. Declaration of Joye Braun (*IEN v. Trump*, Case No. 19-cv-00028-BMM, Dkt. 27-4)
14. Declaration of Elizabeth Lone Eagle (*IEN v. Trump*, Case No. 19-cv-00028-BMM, Dkt. 27-15)
15. Declaration of Lavae High Elk Red Horse (*IEN v. Trump*, Case No. 19-cv-00028-BMM, Dkt. 27-19)

EXHIBIT

1

Presidential Documents

Executive Order 13990 of January 20, 2021

Protecting Public Health and the Environment and Restoring Science To Tackle the Climate Crisis

By the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. Policy. Our Nation has an abiding commitment to empower our workers and communities; promote and protect our public health and the environment; and conserve our national treasures and monuments, places that secure our national memory. Where the Federal Government has failed to meet that commitment in the past, it must advance environmental justice. In carrying out this charge, the Federal Government must be guided by the best science and be protected by processes that ensure the integrity of Federal decision-making. It is, therefore, the policy of my Administration to listen to the science; to improve public health and protect our environment; to ensure access to clean air and water; to limit exposure to dangerous chemicals and pesticides; to hold polluters accountable, including those who disproportionately harm communities of color and low-income communities; to reduce greenhouse gas emissions; to bolster resilience to the impacts of climate change; to restore and expand our national treasures and monuments; and to prioritize both environmental justice and the creation of the well-paying union jobs necessary to deliver on these goals.

To that end, this order directs all executive departments and agencies (agencies) to immediately review and, as appropriate and consistent with applicable law, take action to address the promulgation of Federal regulations and other actions during the last 4 years that conflict with these important national objectives, and to immediately commence work to confront the climate crisis.

Sec. 2. Immediate Review of Agency Actions Taken Between January 20, 2017, and January 20, 2021. (a) The heads of all agencies shall immediately review all existing regulations, orders, guidance documents, policies, and any other similar agency actions (agency actions) promulgated, issued, or adopted between January 20, 2017, and January 20, 2021, that are or may be inconsistent with, or present obstacles to, the policy set forth in section 1 of this order. For any such actions identified by the agencies, the heads of agencies shall, as appropriate and consistent with applicable law, consider suspending, revising, or rescinding the agency actions. In addition, for the agency actions in the 4 categories set forth in subsections (i) through (iv) of this section, the head of the relevant agency, as appropriate and consistent with applicable law, shall consider publishing for notice and comment a proposed rule suspending, revising, or rescinding the agency action within the time frame specified.

(i) Reducing Methane Emissions in the Oil and Gas Sector: “Oil and Natural Gas Sector: Emission Standards for New, Reconstructed, and Modified Sources Reconsideration,” 85 FR 57398 (September 15, 2020), by September 2021.

(ii) Establishing Ambitious, Job-Creating Fuel Economy Standards: “The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program,” 84 FR 51310 (September 27, 2019), by April 2021; and “The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks,” 85 FR 24174 (April 30,

2020), by July 2021. In considering whether to propose suspending, revising, or rescinding the latter rule, the agency should consider the views of representatives from labor unions, States, and industry.

(iii) Job-Creating Appliance- and Building-Efficiency Standards: “Energy Conservation Program for Appliance Standards: Procedures for Use in New or Revised Energy Conservation Standards and Test Procedures for Consumer Products and Commercial/Industrial Equipment,” 85 FR 8626 (February 14, 2020), with major revisions proposed by March 2021 and any remaining revisions proposed by June 2021; “Energy Conservation Program for Appliance Standards: Procedures for Evaluating Statutory Factors for Use in New or Revised Energy Conservation Standards,” 85 FR 50937 (August 19, 2020), with major revisions proposed by March 2021 and any remaining revisions proposed by June 2021; “Final Determination Regarding Energy Efficiency Improvements in the 2018 International Energy Conservation Code (IECC),” 84 FR 67435 (December 10, 2019), by May 2021; “Final Determination Regarding Energy Efficiency Improvements in ANSI/ASHRAE/IES Standard 90.1–2016: Energy Standard for Buildings, Except Low-Rise Residential Buildings,” 83 FR 8463 (February 27, 2018), by May 2021.

(iv) Protecting Our Air from Harmful Pollution: “National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units—Reconsideration of Supplemental Finding and Residual Risk and Technology Review,” 85 FR 31286 (May 22, 2020), by August 2021; “Increasing Consistency and Transparency in Considering Benefits and Costs in the Clean Air Act Rulemaking Process,” 85 FR 84130 (December 23, 2020), as soon as possible; “Strengthening Transparency in Pivotal Science Underlying Significant Regulatory Actions and Influential Scientific Information,” 86 FR 469 (January 6, 2021), as soon as possible.

(b) Within 30 days of the date of this order, heads of agencies shall submit to the Director of the Office of Management and Budget (OMB) a preliminary list of any actions being considered pursuant to section (2)(a) of this order that would be completed by December 31, 2021, and that would be subject to OMB review. Within 90 days of the date of this order, heads of agencies shall submit to the Director of OMB an updated list of any actions being considered pursuant to section (2)(a) of this order that would be completed by December 31, 2025, and that would be subject to OMB review. At the time of submission to the Director of OMB, heads of agencies shall also send each list to the National Climate Advisor. In addition, and at the same time, heads of agencies shall send to the National Climate Advisor a list of additional actions being considered pursuant to section (2)(a) of this order that would not be subject to OMB review.

(c) Heads of agencies shall, as appropriate and consistent with applicable law, consider whether to take any additional agency actions to fully enforce the policy set forth in section 1 of this order. With respect to the Administrator of the Environmental Protection Agency, the following specific actions should be considered:

(i) proposing new regulations to establish comprehensive standards of performance and emission guidelines for methane and volatile organic compound emissions from existing operations in the oil and gas sector, including the exploration and production, transmission, processing, and storage segments, by September 2021; and

(ii) proposing a Federal Implementation Plan in accordance with the Environmental Protection Agency’s “Findings of Failure To Submit State Implementation Plan Revisions in Response to the 2016 Oil and Natural Gas Industry Control Techniques Guidelines for the 2008 Ozone National Ambient Air Quality Standards (NAAQS) and for States in the Ozone Transport Region,” 85 FR 72963 (November 16, 2020), for California, Connecticut, New York, Pennsylvania, and Texas by January 2022.

(d) The Attorney General may, as appropriate and consistent with applicable law, provide notice of this order and any actions taken pursuant to section 2(a) of this order to any court with jurisdiction over pending litigation related to those agency actions identified pursuant to section (2)(a) of this order, and may, in his discretion, request that the court stay or otherwise dispose of litigation, or seek other appropriate relief consistent with this order, until the completion of the processes described in this order.

(e) In carrying out the actions directed in this section, heads of agencies shall seek input from the public and stakeholders, including State local, Tribal, and territorial officials, scientists, labor unions, environmental advocates, and environmental justice organizations.

Sec. 3. *Restoring National Monuments.* (a) The Secretary of the Interior, as appropriate and consistent with applicable law, including the Antiquities Act, 54 U.S.C. 320301 *et seq.*, shall, in consultation with the Attorney General, the Secretaries of Agriculture and Commerce, the Chair of the Council on Environmental Quality, and Tribal governments, conduct a review of the monument boundaries and conditions that were established by Proclamation 9681 of December 4, 2017 (Modifying the Bears Ears National Monument); Proclamation 9682 of December 4, 2017 (Modifying the Grand Staircase-Escalante National Monument); and Proclamation 10049 of June 5, 2020 (Modifying the Northeast Canyons and Seamounts Marine National Monument), to determine whether restoration of the monument boundaries and conditions that existed as of January 20, 2017, would be appropriate.

(b) Within 60 days of the date of this order, the Secretary of the Interior shall submit a report to the President summarizing the findings of the review conducted pursuant to subsection (a), which shall include recommendations for such Presidential actions or other actions consistent with law as the Secretary may consider appropriate to carry out the policy set forth in section 1 of this order.

(c) The Attorney General may, as appropriate and consistent with applicable law, provide notice of this order to any court with jurisdiction over pending litigation related to the Grand Staircase-Escalante, Bears Ears, and Northeast Canyons and Seamounts Marine National Monuments, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, pending the completion of the actions described in subsection (a) of this section.

Sec. 4. *Arctic Refuge.* (a) In light of the alleged legal deficiencies underlying the program, including the inadequacy of the environmental review required by the National Environmental Policy Act, the Secretary of the Interior shall, as appropriate and consistent with applicable law, place a temporary moratorium on all activities of the Federal Government relating to the implementation of the Coastal Plain Oil and Gas Leasing Program, as established by the Record of Decision signed August 17, 2020, in the Arctic National Wildlife Refuge. The Secretary shall review the program and, as appropriate and consistent with applicable law, conduct a new, comprehensive analysis of the potential environmental impacts of the oil and gas program.

(b) In Executive Order 13754 of December 9, 2016 (Northern Bering Sea Climate Resilience), and in the Presidential Memorandum of December 20, 2016 (Withdrawal of Certain Portions of the United States Arctic Outer Continental Shelf From Mineral Leasing), President Obama withdrew areas in Arctic waters and the Bering Sea from oil and gas drilling and established the Northern Bering Sea Climate Resilience Area. Subsequently, the order was revoked and the memorandum was amended in Executive Order 13795 of April 28, 2017 (Implementing an America-First Offshore Energy Strategy). Pursuant to section 12(a) of the Outer Continental Shelf Lands Act, 43 U.S.C. 1341(a), Executive Order 13754 and the Presidential Memorandum of December 20, 2016, are hereby reinstated in their original form, thereby restoring the original withdrawal of certain offshore areas in Arctic waters and the Bering Sea from oil and gas drilling.

(c) The Attorney General may, as appropriate and consistent with applicable law, provide notice of this order to any court with jurisdiction over pending litigation related to the Coastal Plain Oil and Gas Leasing Program in the Arctic National Wildlife Refuge and other related programs, and may, in his discretion, request that the court stay the litigation or otherwise delay further litigation, or seek other appropriate relief consistent with this order, pending the completion of the actions described in subsection (a) of this section.

Sec. 5. *Accounting for the Benefits of Reducing Climate Pollution.* (a) It is essential that agencies capture the full costs of greenhouse gas emissions as accurately as possible, including by taking global damages into account. Doing so facilitates sound decision-making, recognizes the breadth of climate impacts, and supports the international leadership of the United States on climate issues. The “social cost of carbon” (SCC), “social cost of nitrous oxide” (SCN), and “social cost of methane” (SCM) are estimates of the monetized damages associated with incremental increases in greenhouse gas emissions. They are intended to include changes in net agricultural productivity, human health, property damage from increased flood risk, and the value of ecosystem services. An accurate social cost is essential for agencies to accurately determine the social benefits of reducing greenhouse gas emissions when conducting cost-benefit analyses of regulatory and other actions.

(b) There is hereby established an Interagency Working Group on the Social Cost of Greenhouse Gases (the “Working Group”). The Chair of the Council of Economic Advisers, Director of OMB, and Director of the Office of Science and Technology Policy shall serve as Co-Chairs of the Working Group.

(i) **Membership.** The Working Group shall also include the following other officers, or their designees: the Secretary of the Treasury; the Secretary of the Interior; the Secretary of Agriculture; the Secretary of Commerce; the Secretary of Health and Human Services; the Secretary of Transportation; the Secretary of Energy; the Chair of the Council on Environmental Quality; the Administrator of the Environmental Protection Agency; the Assistant to the President and National Climate Advisor; and the Assistant to the President for Economic Policy and Director of the National Economic Council.

(ii) **Mission and Work.** The Working Group shall, as appropriate and consistent with applicable law:

(A) publish an interim SCC, SCN, and SCM within 30 days of the date of this order, which agencies shall use when monetizing the value of changes in greenhouse gas emissions resulting from regulations and other relevant agency actions until final values are published;

(B) publish a final SCC, SCN, and SCM by no later than January 2022;

(C) provide recommendations to the President, by no later than September 1, 2021, regarding areas of decision-making, budgeting, and procurement by the Federal Government where the SCC, SCN, and SCM should be applied;

(D) provide recommendations, by no later than June 1, 2022, regarding a process for reviewing, and, as appropriate, updating, the SCC, SCN, and SCM to ensure that these costs are based on the best available economics and science; and

(E) provide recommendations, to be published with the final SCC, SCN, and SCM under subparagraph (A) if feasible, and in any event by no later than June 1, 2022, to revise methodologies for calculating the SCC, SCN, and SCM, to the extent that current methodologies do not adequately take account of climate risk, environmental justice, and intergenerational equity.

(iii) Methodology. In carrying out its activities, the Working Group shall consider the recommendations of the National Academies of Science, Engineering, and Medicine as reported in *Valuing Climate Damages: Updating Estimation of the Social Cost of Carbon Dioxide (2017)* and other pertinent scientific literature; solicit public comment; engage with the public and stakeholders; seek the advice of ethics experts; and ensure that the SCC, SCN, and SCM reflect the interests of future generations in avoiding threats posed by climate change.

Sec. 6. *Revoking the March 2019 Permit for the Keystone XL Pipeline.*

(a) On March 29, 2019, the President granted to TransCanada Keystone Pipeline, L.P. a Presidential permit (the “Permit”) to construct, connect, operate, and maintain pipeline facilities at the international border of the United States and Canada (the “Keystone XL pipeline”), subject to express conditions and potential revocation in the President’s sole discretion. The Permit is hereby revoked in accordance with Article 1(1) of the Permit.

(b) In 2015, following an exhaustive review, the Department of State and the President determined that approving the proposed Keystone XL pipeline would not serve the U.S. national interest. That analysis, in addition to concluding that the significance of the proposed pipeline for our energy security and economy is limited, stressed that the United States must prioritize the development of a clean energy economy, which will in turn create good jobs. The analysis further concluded that approval of the proposed pipeline would undermine U.S. climate leadership by undercutting the credibility and influence of the United States in urging other countries to take ambitious climate action.

(c) Climate change has had a growing effect on the U.S. economy, with climate-related costs increasing over the last 4 years. Extreme weather events and other climate-related effects have harmed the health, safety, and security of the American people and have increased the urgency for combatting climate change and accelerating the transition toward a clean energy economy. The world must be put on a sustainable climate pathway to protect Americans and the domestic economy from harmful climate impacts, and to create well-paying union jobs as part of the climate solution.

(d) The Keystone XL pipeline disserves the U.S. national interest. The United States and the world face a climate crisis. That crisis must be met with action on a scale and at a speed commensurate with the need to avoid setting the world on a dangerous, potentially catastrophic, climate trajectory. At home, we will combat the crisis with an ambitious plan to build back better, designed to both reduce harmful emissions and create good clean-energy jobs. Our domestic efforts must go hand in hand with U.S. diplomatic engagement. Because most greenhouse gas emissions originate beyond our borders, such engagement is more necessary and urgent than ever. The United States must be in a position to exercise vigorous climate leadership in order to achieve a significant increase in global climate action and put the world on a sustainable climate pathway. Leaving the Keystone XL pipeline permit in place would not be consistent with my Administration’s economic and climate imperatives.

Sec. 7. *Other Revocations.* (a) Executive Order 13766 of January 24, 2017 (Expediting Environmental Reviews and Approvals For High Priority Infrastructure Projects), Executive Order 13778 of February 28, 2017 (Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the “Waters of the United States” Rule), Executive Order 13783 of March 28, 2017 (Promoting Energy Independence and Economic Growth), Executive Order 13792 of April 26, 2017 (Review of Designations Under the Antiquities Act), Executive Order 13795 of April 28, 2017 (Implementing an America-First Offshore Energy Strategy), Executive Order 13868 of April 10, 2019 (Promoting Energy Infrastructure and Economic Growth), and Executive Order 13927 of June 4, 2020 (Accelerating the Nation’s Economic Recovery from the COVID–19 Emergency by Expediting Infrastructure Investments and Other Activities), are hereby revoked. Executive Order 13834 of May 17, 2018

(Efficient Federal Operations), is hereby revoked except for sections 6, 7, and 11.

(b) Executive Order 13807 of August 15, 2017 (Establishing Discipline and Accountability in the Environmental Review and Permitting Process for Infrastructure Projects), is hereby revoked. The Director of OMB and the Chair of the Council on Environmental Quality shall jointly consider whether to recommend that a replacement order be issued.

(c) Executive Order 13920 of May 1, 2020 (Securing the United States Bulk-Power System), is hereby suspended for 90 days. The Secretary of Energy and the Director of OMB shall jointly consider whether to recommend that a replacement order be issued.

(d) The Presidential Memorandum of April 12, 2018 (Promoting Domestic Manufacturing and Job Creation Policies and Procedures Relating to Implementation of Air Quality Standards), the Presidential Memorandum of October 19, 2018 (Promoting the Reliable Supply and Delivery of Water in the West), and the Presidential Memorandum of February 19, 2020 (Developing and Delivering More Water Supplies in California), are hereby revoked.

(e) The Council on Environmental Quality shall rescind its draft guidance entitled, "Draft National Environmental Policy Act Guidance on Consideration of Greenhouse Gas Emissions," 84 FR 30097 (June 26, 2019). The Council, as appropriate and consistent with applicable law, shall review, revise, and update its final guidance entitled, "Final Guidance for Federal Departments and Agencies on Consideration of Greenhouse Gas Emissions and the Effects of Climate Change in National Environmental Policy Act Reviews," 81 FR 51866 (August 5, 2016).

(f) The Director of OMB and the heads of agencies shall promptly take steps to rescind any orders, rules, regulations, guidelines, or policies, or portions thereof, including, if necessary, by proposing such rescissions through notice-and-comment rulemaking, implementing or enforcing the Executive Orders, Presidential Memoranda, and draft guidance identified in this section, as appropriate and consistent with applicable law.

Sec. 8. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director of the Office of Management and Budget relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented in a manner consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

A handwritten signature in black ink, appearing to read "J. R. Biden, Jr.", is centered on a light gray rectangular background.

THE WHITE HOUSE,
January 20, 2021.

EXHIBIT

2

BUSINESS

**Work on Keystone XL pipeline
suspended ahead of Biden action**



In this Dec. 18, 2020 photo, pipes to be used for the Keystone XL pipeline are stored in a field near Dorchester, Neb. Canadian Prime Minister Justin Trudeau says his officials have been in frequent contact with President-elect Joe Biden's incoming administration making the case for a long disputed oil pipeline that reports say Biden will cancel on his first day in office. (Chris Machian /Omaha World-Herald via AP)

By **ASSOCIATED PRESS** |

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TORONTO — The Canadian company behind the Keystone XL oil pipeline said Wednesday it has suspended work on the pipeline in anticipation of incoming U.S. President Joe Biden revoking its permit.

Biden's Day One plans included moving to revoke a presidential permit for the pipeline.

The 1,700-mile pipeline would carry roughly 800,000 barrels of oil a day from Alberta to the Texas Gulf Coast, passing through Montana, South Dakota, Nebraska, Kansas and Oklahoma.

"As a result of the expected revocation of the Presidential Permit, advancement of the project will be suspended," the Calgary, Alberta-based company said in a statement.

First proposed in 2008, the pipeline has become emblematic of the tensions between economic development and curbing the fossil fuel emissions that are causing climate change. The Obama administration rejected it, but President Trump revived it and has been a strong supporter. Construction already started.

Kirsten Hillman, Canada's ambassador to the United States, said Canada needs to move on now that Biden has made a decision.

"Of course we're disappointed. We worked hard over the past number of months trying to make the case for Keystone XL," Hillman told the Canadian Broadcasting Corp.

"He had made a commitment during his campaign and he lived up to that commitment. I think we have to accept that and move forward."

Prime Minister Justin Trudeau raised Keystone XL as a top priority when he spoke with Biden in a phone call in November. The project is meant to expand critical oil exports for Canada, which has the third-largest oil reserves in the world.

Critics of Canada's oil sands say the growing operations increase greenhouse gas emissions and threaten Alberta's rivers and forests. But Marty Durbin, president of the U.S. Chamber of Commerce's Global Energy Institute, said Biden's decision is not grounded in science and will put thousands of Americans out of work.

"The pipeline — the most studied infrastructure project in American history — is already under construction and has cleared countless legal and environmental hurdles," Durbin said in a statement. "Halting construction will also impede the safe and efficient transport of oil, and unfairly single out production from one of our closest and most important allies."

Tags: [Biden](#), [Canada](#), [Joe Biden](#), [Keystone XL pipeline](#)

Associated Press

EXHIBIT

3

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
GREAT FALLS DIVISION**

NORTHERN PLAINS RESOURCE COUNCIL, et al.,

Plaintiffs,

v.

U.S. ARMY CORPS OF ENGINEERS, et al.,

Defendants,

TC ENERGY CORPORATION, et al.,

Intervenor-Defendants,

STATE OF MONTANA,

Intervenor-Defendant,

AMERICAN GAS ASSOCIATION, et al.,

Intervenor-Defendants.

CV-19-44-GF-BMM

ORDER

Northern Plains Resource Council, et al. (“Plaintiffs”) filed this action to challenge the decision of the United States Army Corps of Engineers (“Corps”) to reissue Nationwide Permit 12 (“NWP 12”) in 2017. (Doc. 36.) Plaintiffs allege five claims in their Amended Complaint. (*Id.*) Claims Three and Five relate to the Corps’ verification of the Keystone XL Pipeline crossings of the Yellowstone River and the Cheyenne River. (Doc. 36 at 78-81, 85-87.) The Court stayed

Plaintiffs' Claims Three and Five pending further action by the Corps. (Doc. 56 at 1.)

Plaintiffs' Claims One, Two, and Four relate to the Corps' reissuance of NWP 12 in 2017. Plaintiffs allege that the Corps' reissuance of NWP 12 violated the Endangered Species Act ("ESA"), the National Environmental Policy Act ("NEPA"), and the Clean Water Act ("CWA"). (Doc. 36 at 73-77, 81-84.)

Plaintiffs, Defendants the Corps, et al. ("Federal Defendants"), and Intervenor-Defendants TC Energy Corporation, et al. ("TC Energy") filed cross-motions for partial summary judgment regarding Plaintiffs' Claims One, Two, and Four.

(Docs. 72, 87, 90.) Intervenor-Defendants the State of Montana and American Gas Association, et al., filed briefs in support of Defendants. (Docs. 92 & 93.) Amici Curiae Edison Electric Institute, et al., and Montana Petroleum Association, et al., also filed briefs in support of Defendants. (Docs. 106 & 122.)

BACKGROUND

Congress enacted the CWA to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters." 33 U.S.C. § 1251(a). To that end, the Corps regulates the discharge of any pollutant, including dredged or fill material, into jurisdictional waters. *See* 33 U.S.C. §§ 1311, 1362(6), (7), (12). Section 404 of the CWA requires any party seeking to construct a project that will

discharge dredged or fill material into jurisdictional waters to obtain a permit. *See* 33 U.S.C. § 1344(a), (e).

The Corps oversees the permitting process. The Corps issues individual permits on a case-by-case basis. 33 U.S.C. § 1344(a). The Corps also issues general nationwide permits to streamline the permitting process for certain categories of activities. 33 U.S.C. § 1344(e). The Corps issues nationwide permits for categories of activities that are “similar in nature, will cause only minimal adverse environmental effects when performed separately, and will have only minimal cumulative adverse effect on the environment.” 33 U.S.C. § 1344(e)(1). Nationwide permits may last up to five years, at which point they must be reissued or left to expire. 33 U.S.C. § 1344(e)(2).

The Corps issued NWP 12 for the first time in 1977 and reissued it most recently in 2017. 82 Fed. Reg. 1860, 1860, 1985-86 (January 6, 2017). NWP 12 authorizes discharges of dredged or fill material into jurisdictional waters as required for the construction, maintenance, repair, and removal of utility lines and associated facilities. 82 Fed. Reg. at 1985-86. Utility lines include electric, telephone, internet, radio, and television cables, lines, and wires, as well as any pipe or pipeline for the transportation of any gaseous, liquid, liquescent, or slurry substance, including oil and gas pipelines. 82 Fed. Reg. at 1985. The discharge may not result in the loss of greater than one-half acre of jurisdictional waters for

each single and complete project. 82 Fed. Reg. at 1985. For linear projects like pipelines that cross a single waterbody several times at separate and distant locations, or cross multiple waterbodies several times, each crossing represents a single and complete project. 82 Fed. Reg. at 2007. Activities meeting NWP 12's conditions may proceed without further interaction with the Corps. *See Nat'l Wildlife Fed'n v. Brownlee*, 402 F. Supp. 2d 1, 3 (D.D.C. 2005).

A permittee must submit a preconstruction notification ("PCN") to the Corps' district engineer before beginning a proposed activity if the activity will result in the loss of greater than one-tenth acre of jurisdictional waters. 82 Fed. Reg. at 1986. Additional circumstances exist under which a permittee must submit a PCN to a district engineer. *See* 82 Fed. Reg. at 1986. The PCN for a linear utility line must address the water crossing that triggered the need for a PCN as well as the other separate and distant crossings that did not themselves require a PCN. 82 Fed. Reg. at 1986. The district engineer will evaluate the individual crossings to determine whether each crossing satisfies NWP 12. 82 Fed. Reg. at 2004-05. The district engineer also will evaluate the cumulative effects of the proposed activity caused by all of the crossings authorized by NWP 12. *Id.*

All nationwide permits, including NWP 12, remain subject to 32 General Conditions contained in the Federal Regulations. 82 Fed. Reg. 1998-2005. General Condition 18 prohibits the use of any nationwide permit for activities that are

likely to directly or indirectly jeopardize threatened or endangered species under the ESA or destroy or adversely modify designated critical habitat for such species. 82 Fed. Reg. at 1999-2000.

The ESA and NEPA require the Corps to consider the environmental impacts of its actions. Section 7(a)(2) of the ESA requires the Corps to determine “at the earliest possible time” whether any action it takes “may affect” listed species and critical habitat. 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a). If the Corps’ action “may affect” listed species or critical habitat, the Corps must consult with U.S. Fish and Wildlife Service (“FWS”) and/or National Marine Fisheries Service (“NMFS”) (collectively, “the Services”). 16 U.S.C. § 1536(a)(2); 50 C.F.R. § 402.14(a). Under NEPA, the Corps must produce an environmental impact statement unless it issues a finding of no significant impact (FONSI). 42 U.S.C. § 4332(C); 40 C.F.R. § 1508.9.

The Corps issued a final Decision Document explaining NWP 12’s environmental impacts when it reissued NWP 12 in 2017. NWP005262-5349. The Corps determined that NWP 12 would result in “no more than minimal individual and cumulative adverse effects on the aquatic environment” under the CWA. NWP005340. The Corps also concluded that NWP 12 complied with both the ESA and NEPA. NWP005324, 5340. The Decision Document comprised a FONSI under NEPA. NWP005340.

The Corps explained that its 2017 reissuance of NWP 12 complied with the ESA because NWP 12 would not affect listed species or critical habitat. NWP005324. The Corps did not consult with the Services based on its “no effect” determination. NWP005324-25. A federal district court in 2005 concluded that the Corps should have consulted with FWS when it reissued NWP 12 in 2002. *Brownlee*, 402 F. Supp. 2d at 9-11. The Corps initiated formal programmatic consultation with the Services when it reissued NWP 12 in 2007. NWP031044. The Corps continued the programmatic consultation when it reissued NWP 12 in 2012. *Id.*

LEGAL STANDARD

A court should grant summary judgment where the movant demonstrates that no genuine dispute exists “as to any material fact” and the movant is “entitled to judgment as a matter of law.” Fed. R. Civ. P. 56(a). Summary judgment remains appropriate for resolving a challenge to a federal agency’s actions when review will be based primarily on the administrative record. *Pit River Tribe v. U.S. Forest Serv.*, 469 F.3d 768, 778 (9th Cir. 2006).

The Administrative Procedure Act’s (“APA”) standard of review governs Plaintiffs’ claims. *See W. Watersheds Project v. Kraayenbrink*, 632 F.3d 472, 481 (9th Cir. 2011). The APA instructs a reviewing court to “hold unlawful and set

aside” agency action deemed “arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law.” 5 U.S.C. § 706(2)(A).

DISCUSSION

I. ENDANGERED SPECIES ACT

A. ESA Section 7(a)(2) Consultation

Section 7(a)(2) of the ESA requires the Corps to ensure any action that it authorizes, funds, or carries out is not likely to jeopardize the continued existence of any listed species or destroy or adversely modify designated critical habitat. 16 U.S.C. § 1536(a)(2). The Corps must review its actions “at the earliest possible time” to determine whether an action “may affect” listed species or critical habitat. 50 C.F.R. § 402.14(a). The Corps must initiate formal consultation with the Services if the Corps determines that an action “may affect” listed species or critical habitat. 50 C.F.R. § 402.14; 16 U.S.C. § 1536(a)(2). The ESA does not require Section 7(a)(2) consultation if the Corps determines that a proposed action is not likely to adversely affect any listed species or critical habitat. 50 C.F.R. § 402.14(b)(1).

Formal consultation is a process that occurs between the Services and the Corps. 50 C.F.R. § 402.02. The process begins with the Corps’ written request for consultation under ESA Section 7(a)(2) and concludes with the Services’ issuance of a biological opinion. 50 C.F.R. § 402.02. A biological opinion states the

Services' opinion as to whether the Corps' action likely would jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. *Id.*

Programmatic consultation involves a type of consultation that addresses multiple agency actions on a programmatic basis. 50 C.F.R. § 402.02.

Programmatic consultations allow the Services to consult on the effects of a programmatic action such as a "proposed program, plan, policy, or regulation" that provides a framework for future proposed actions. *Id.*

B. The Corps' Reissuance of NWP 12 in 2017

The Corps concluded that its reissuance of NWP 12 in 2017 would have no effect on listed species or critical habitat. 82 Fed. Reg. at 1873-74; *see also* 81 Fed. Reg. 35186, 35193 (June 1, 2016). General Condition 18 provides that a nationwide permit does not authorize an activity that is "likely to directly or indirectly jeopardize the continued existence of a" listed species or that "will directly or indirectly destroy or adversely modify the critical habitat of such species." 82 Fed. Reg. at 1999.

A non-federal permittee must submit a PCN to the district engineer if a proposed activity "might" affect any listed species or critical habitat. 82 Fed. Reg. at 1999. The permittee may not begin work on the proposed activity until the district engineer notifies the permittee that the activity complies with the ESA and

that the activity is authorized. *Id.* The Corps determined that General Condition 18 ensures that NWP 12 will have no effect on listed species or critical habitat. NWP005324-26. The Corps declined to initiate Section 7(a)(2) consultation based on that determination. *Id.*

C. The Corps Acted Arbitrarily and Capriciously

Plaintiffs argue that the Corps' failure to initiate Section 7(a)(2) consultation violates the ESA. (Doc. 36 at 6.) Plaintiffs assert that the Corps should have initiated programmatic consultation when it reissued NWP 12 in 2017. (Doc. 36 at 6.) Defendants argue that the Corps properly assessed NWP 12's potential effects and did not need to initiate Section 7(a)(2) consultation. (Doc. 88 at 43.) Defendants assert that the Corps did not need to conduct programmatic consultation because project-level review and General Condition 18 ensure that NWP 12 will not affect listed species or critical habitat. (Doc. 88 at 46.)

To determine whether the Corps' "no effect" determination and resulting failure to initiate programmatic consultation proves arbitrary and capricious, the Court must decide whether the Corps "considered the relevant factors and articulated a rational connection between the facts found and the choice made." *See Nat'l Ass'n of Home Builders v. Norton*, 340 F.3d 835, 841 (9th Cir. 2003) (quoting *Baltimore Gas & Elec. Co. v. Natural Res. Def. Council*, 462 U.S. 87, 105 (1983)). The Corps' decisions are entitled to deference. *See Kisor v. Wilkie*, 139 S.

Ct. 2400, 2417-18 (2019); *Chevron, U.S.A. v. Nat. Res. Def. Council*, 467 U.S. 837, 844 (1984).

Programmatic consultation proves appropriate when an agency's proposed action provides a framework for future proposed actions. 50 C.F.R. § 402.02. Federal actions subject to programmatic consultation include federal agency programs. *See* 80 Fed. Reg. 26832, 26835 (May 11, 2015); 50 C.F.R. 402.02. A federal agency may develop those programs at the national scale. *Id.* The Services specifically have listed the Corps' nationwide permit program as an example of the type of federal program that provides a national-scale framework and that would be subject to programmatic consultation. *See* 80 Fed. Reg. at 26835.

Programmatic consultation considers the effect of an agency's proposed activity as a whole. A biological opinion analyzes whether an agency action likely would jeopardize a listed species or adversely modify designated critical habitat. 50 C.F.R. §§ 402.02, 402.14(h). This type of analysis allows for a broad-scale examination of a nationwide program's potential impacts on listed species and critical habitat. *See* 80 Fed. Reg. at 26836. A biological opinion may rely on qualitative analysis to determine whether a nationwide program and the program's set of measures intended to minimize impacts or conserve listed species adequately protect listed species and critical habitat. *Id.* Programmatic-level biological opinions examine how the overall parameters of a nationwide program align with

the survival and recovery of listed species. *Id.* An agency should analyze those types of potential impacts in the context of the overall framework of a programmatic action. A broad examination may not be conducted as readily at a later date when the subsequent activity would occur. *Id.*

The Ninth Circuit in *Western Watersheds Project v. Kraayenbrink*, 632 F.3d at 472, evaluated amendments that the Bureau of Land Management (“BLM”) made to national grazing regulations. BLM viewed the amendments as purely administrative and determined that they had “no effect” on listed species or critical habitat. *Id.* at 496. The Ninth Circuit rejected BLM’s position based on “resounding evidence” from experts that the amendments “‘may affect’ listed species and their habitat.” *Id.* at 498. The amendments did not qualify as purely administrative. The amendments altered ownership rights to water on public lands, increased barriers to public involvement in grazing management, and substantially delayed enforcement of failing allotments. *Id.* The amendments would have a substantive effect on listed species. *Id.*

There similarly exists “resounding evidence” in this case that the Corps’ reissuance of NWP 12 “may affect” listed species and their habitat. NWP 12 authorizes limited discharges of dredged or fill material into jurisdictional waters. 82 Fed. Reg. at 1985. The Corps itself acknowledged the many risks associated

with the discharges authorized by NWP 12 when it reissued NWP 12 in 2017. NWP005306.

The Corps noted that activities authorized by past versions of NWP 12 “have resulted in direct and indirect impacts to wetlands, streams, and other aquatic resources.” NWP005306. Discharges of dredged or fill material can have both permanent and temporary consequences. *Id.* The discharges permanently may convert wetlands, streams, and other aquatic resources to upland areas, resulting in permanent losses of aquatic resource functions and services. The discharges also temporarily may fill certain areas, causing short-term or partial losses of aquatic resource functions and services. *Id.*

The Corps examined the effect of human activity on the Earth’s ecosystems. NWP005307. Human activities affect all marine ecosystems. *Id.* Human activities alter ecosystem structure and function by changing the ecosystem’s interaction with other ecosystems, the ecosystem’s biogeochemical cycles, and the ecosystem’s species composition. *Id.* “Changes in land use reduce the ability of ecosystems to produce ecosystem services, such as food production, reducing infectious diseases, and regulating climate and air quality.” *Id.* Water flow changes, land use changes, and chemical additions alter freshwater ecosystems such as lakes, rivers, and streams. NWP005308. The construction of utility lines “*will* fragment terrestrial and aquatic ecosystems.” *Id.* (emphasis added).

The Corps more specifically discussed that land use changes affect rivers and streams through increased sedimentation, larger inputs of nutrients and pollutants, altered stream hydrology, the alteration or removal of riparian vegetation, and the reduction or elimination of inputs of large woody debris. NWP005310. Increased inputs of sediments, nutrients, and pollutants adversely affect stream water quality. *Id.* Fill and excavation activities cause wetland degradation and losses. NWP005310-11. The Corps emphasized that, although “activities regulated by the Corps under Section 404 of the [CWA]” are “common causes of impairment for rivers and streams, habitat alterations and flow alterations,” a wide variety of causes and sources impair the Nation’s rivers and streams. NWP005311.

The ESA provides a low threshold for Section 7(a)(2) consultation: An agency must initiate formal consultation for any activity that “may affect” listed species and critical habitat. 50 C.F.R. § 402.14; 16 U.S.C. § 1536(a)(2). The Corps itself has stated that discharges authorized by NWP 12 “*will* result in a minor incremental contribution to the cumulative effects to wetlands, streams, and other aquatic resources in the United States.” NWP005313. The types of discharges that NWP 12 authorizes “may affect” listed species and critical habitat, as evidenced in the Corps’ own Decision Document. The Corps should have initiated Section 7(a)(2) consultation before it reissued NWP 12 in 2017.

Plaintiffs' experts' declarations further support the Court's conclusion that the Corps should have initiated Section 7(a)(2) consultation. These expert declarants state that the Corps' issuance of NWP 12 authorizes discharges that may affect endangered species and their habitats. The ESA's citizen suit provision allows the Court to consider evidence outside the administrative record in its review of Plaintiffs' ESA claim. *See* 16 U.S.C. § 1540(g); *W. Watersheds*, 632 F.3d at 497.

Martin J. Hamel, Ph.D., an assistant professor at the University of Georgia who studies anthropogenic and invasive species' impacts on native riverine species, submitted a declaration stating that the discharges authorized by NWP 12 may affect adversely pallid sturgeon, an endangered species. (Doc. 73-4 at 2, 4, 6.) Pallid sturgeon remain susceptible to harm from pollution and sedimentation in rivers and streams because pollution and sedimentation can bury the substrates on which sturgeon rely for feeding and breeding. (*Id.* at 4.) Fine sediments can lodge between coarse grains of substrate to form a hardpan layer, thereby reducing interstitial flow rates and ultimately reducing available food sources. Construction activities that increase sediment loading pose a significant threat to the pallid sturgeon populations in Nebraska and Montana. (*Id.*)

Dr. Hamel also stated his understanding that the horizontal directional drilling method ("HDD") for crossing waterways may result in less sedimentation

of the waterway than other construction methods, such as open trench cuts. (Doc. 73-4 at 5.) HDD can result, however, in an inadvertent return of drilling fluid. An inadvertent return of drilling fluid would result in increased sedimentation and turbidity, which would affect aquatic biota such as pallid sturgeon and the species sturgeon rely on as food sources. (*Id.*)

Jon C. Bedick, Ph.D., a professor of biology at Shawnee State University who has worked extensively with the endangered American burying beetle, submitted a declaration detailing his concerns regarding the Corps' failure to analyze NWP 12's threat to the American burying beetle. (Doc. 73-1 at 2-3, 5.) Certain construction activities, including those approved by NWP 12, can cause harm to species such as the American burying beetle. (*Id.* at 5.) Dr. Bedick relayed his concern that the Corps failed to undertake a programmatic consultation with FWS regarding its reissuance of NWP 12. (*Id.*)

NWP 12 authorizes actual discharges of dredged or fill material into jurisdictional waters. 82 Fed. Reg. at 1985. Two experts have declared that the discharges authorized by NWP 12 will affect endangered species. (Docs. 71-1 & 71-3.) The Corps itself has acknowledged that the discharges *will* contribute to the cumulative effects to wetlands, streams, and other aquatic resources. NWP005313. There exists "resounding evidence" from experts and from the Corps that the

discharges authorized by NWP 12 may affect listed species and critical habitat. *See W. Watersheds*, 632 F.3d at 498.

The Corps cannot circumvent ESA Section 7(a)(2) consultation requirements by relying on project-level review or General Condition 18. *See* 82 Fed. Reg. 1999; *Conner v. Burford*, 848 F.2d 1441, 1457-58 (9th Cir. 1988). Project-level review does not relieve the Corps of its duty to consult on the issuance of nationwide permits at the programmatic level. The Corps must consider the effect of the entire agency action. *See Conner*, 848 F.2d at 1453-58 (concluding that biological opinions must be coextensive with an agency's action and rejecting the Services' deferral of an impacts analysis to a project-specific stage). The Federal Regulations make clear that "[a]ny request for formal consultation may encompass . . . a number of similar individual actions within a given geographical area, a programmatic consultation, or a segment of a comprehensive plan." 50 C.F.R. § 402.14(c)(4). The regulations do "not relieve the Federal agency of the requirements for considering the effects of the action or actions as a whole." *Id.*; *see also Cottonwood Envtl. Law Center v. U.S. Forest Serv.*, 789 F.3d 1075, 1085 (9th Cir. 2015) (concluding that the Forest Service needed to reinitiate consultation at programmatic level); *Pac. Coast Fed'n of Fishermen's Ass'ns v. Nat'l Marine Fisheries Serv.*, 482 F. Supp. 2d 1248, 1266-

67 (W.D. Wash. 2007) (holding that deferral of analysis to the project level “improperly curtails the discussion of cumulative effects”).

The Ninth Circuit in *Lane County Audubon Soc’y v. Jamison*, 958 F.2d 290 (9th Cir. 1992), analyzed what had become commonly known as the “Jamison Strategy.” Under the Jamison Strategy, BLM would select land for logging consistent with the protection of the spotted owl. *Id.* at 291. BLM would submit individual timber sales for ESA consultation with FWS, but would not submit the overall logging strategy itself. *Id.* at 292. The Ninth Circuit determined that the Jamison Strategy constituted an action that may affect the spotted owl, because the strategy set forth criteria for harvesting owl habitat. *Id.* at 294. BLM needed to submit the Jamison Strategy to FWS for consultation before BLM implemented the strategy through the adoption of individual sale programs. BLM violated the ESA by not consulting with FWS before it implemented the Jamison Strategy. *Id.*

The district court in *National Wildlife Federation v. Brownlee*, 402 F. Supp. 2d at 10, relied, in part, on the Ninth Circuit’s holding in *Lane County* when it determined that the Corps’ reissuance of NWP 12 in 2002 violated the ESA. In *Brownlee*, the Corps had failed to consult with FWS when it reissued NWP 12 and three other nationwide permits in 2002. *Id.* at 2, 10. Two environmental groups challenged the Corps’ failure to consult. *Id.* at 2. The environmental groups argued

that the nationwide permits, including NWP 12, authorized development that threatened the endangered Florida panther. *Id.*

The Corps asserted that NWP 12 complied with the ESA because project-level review would ensure that no harm befell Florida panthers and their habitats. *Id.* at 10. The court disagreed. *Id.* NWP 12 and the other nationwide permits authorized development projects that posed a potential threat to the panther. *Id.* at 3. Large portions of panther habitat existed on lands that could not be developed without a permit from the Corps. *Id.* at 3. Project-level review did not relieve the Corps from considering the effects of NWP 12 as a whole. *Id.* at 10 (citing 50 C.F.R. § 402.14(c)). The Corps needed to initiate overall consultation for the nationwide permits “to avoid piece-meal destruction of panther habitat through failure to make a cumulative analysis of the program as a whole.” *Id.*

The same holds true here. Programmatic review of NWP 12 in its entirety, as required by the ESA for any project that “may affect” listed species or critical habitat, provides the only way to avoid piecemeal destruction of species and habitat. *See Brownlee*, 402 F. Supp. 2d at 10; 50 C.F.R. § 402.14(c). Project-level review, by itself, cannot ensure that the discharges authorized by NWP 12 will not jeopardize listed species or adversely modify critical habitat. The Corps has an ongoing duty under ESA Section 7(a)(2) to ensure that its actions are not likely to jeopardize the continued existence of endangered and threatened species or result

in the destruction or adverse modification of critical habitat. 16 U.S.C.

§ 1536(a)(2). The Corps failed to fulfill that duty when it reissued NWP 12 in 2017.

The Court certainly presumes that the Corps, the Services, and permittees will comply with all applicable statutes and regulations. *See, e.g., United States v. Norton*, 97 U.S. 164, 168 (1887) (“It is a presumption of law that officials and citizens obey the law and do their duty.”); *Brownlee*, 402 F. Supp. 2d at 5 n.7 (presuming that permittees will comply with the law and seek the Corps’ approval before proceeding with activities affecting endangered species). That presumption does not allow the Corps to delegate its duties under the ESA to permittees.

General Condition 18 fails to ensure that the Corps fulfills *its* obligations under ESA Section 7(a)(2) because it delegates the Corps’ initial effect determination to non-federal permittees. The Corps must determine “at the earliest possible time” whether its actions “may affect listed species or critical habitat.” *See* 50 C.F.R. § 402.14(a). The Corps decided that NWP 12 does not affect listed species or critical habitat because General Condition 18 ensures adequate protection. NWP005324-26. General Condition 18 instructs a non-federal permittee to submit a PCN to the district engineer if the permittee believes that its activity “might” affect listed species or critical habitat. 82 Fed. Reg. at 1999-2000. In that sense, General Condition 18 turns the ESA’s initial effect determination

over to non-federal permittees, even though the Corps must make that initial determination. *See* 50 C.F.R. § 402.14(a). The Corps' attempt to delegate its duty to determine whether NWP 12-authorized activities will affect listed species or critical habitat fails.

The Corps remains well aware that its reauthorization of NWP 12 required Section 7(a)(2) consultation given the fact that it initiated formal consultation when it reissued NWP 12 in 2007 and continued that consultation during the 2012 reissuance. NWP031044. NMFS released a biological opinion, which concluded that the Corps' implementation of the nationwide permit program has had "more than minimal adverse environmental effects on the aquatic environment when performed separately or cumulatively." (Doc. 75-9 at 222-23.) The Corps reinitiated consultation to address NMFS's concerns, and NMFS issued a new biological opinion in 2014. NWP030590. The Corps' prior consultations underscore the need for programmatic consultation when the Corps reissued NWP 12 in 2017.

Substantial evidence exists that the Corps' reissuance of NWP 12 "may affect" listed species and critical habitat. This substantial evidence requires the Corps to initiate consultation under ESA Section 7(a)(2) to ensure that the discharge activities authorized under NWP 12 comply with the ESA. *See* 16 U.S.C. § 1536(a)(2); 50 C.F.R. §§ 402.02, 402.14. The Corps failed to consider relevant

expert analysis and failed to articulate a rational connection between the facts it found and the choice it made. *See W. Watersheds*, 632 F.3d at 498. The Corps’ “no effect” determination and resulting decision to forego programmatic consultation proves arbitrary and capricious in violation of the Corps’ obligations under the ESA. The Corps should have initiated ESA Section 7(a)(2) consultation before it reissued NWP 12 in 2017. The Corps’ failure to do so violated the ESA.

These failures by the Corps entitle the Plaintiffs to summary judgment regarding their ESA Claim. The Court will remand NWP 12 to the Corps for compliance with the ESA. The Court vacates NWP 12 pending completion of the consultation process. The Court further enjoins the Corps from authorizing any dredge or fill activities under NWP 12.

II. PLAINTIFFS’ REMAINING CLAIMS

Plaintiffs further allege that NWP 12 violates both NEPA and the CWA. (Doc. 36 at 73-77, 81-84.) Plaintiffs, the Corps, and TC Energy each have moved for summary judgment regarding Plaintiffs’ NEPA and CWA Claims. (Doc. 72 at 2; Doc. 87 at 2; Doc. 90 at 2.) The Court already has determined that the Corps’ reissuance of NWP 12 violated the ESA, remanded NWP 12 to the Corps for compliance with the ESA, and vacated NWP 12 pending completion of the consultation process.

The Court anticipates that the Corps may need to modify its NEPA and CWA determinations based on the Corps' ESA Section 7(a)(2) consultation with the Services, as briefly discussed below. The Court will deny without prejudice all parties' motions for summary judgment regarding Plaintiffs' NEPA and CWA claims pending ESA Section 7(a)(2) consultation and any further action by the Corps.

A. The National Environmental Policy Act

Plaintiffs allege that NWP 12 violates NEPA because the Corps failed to evaluate adequately NWP 12's environmental impacts. (Doc. 36 at 4.) Congress enacted NEPA to ensure that the federal government considers the environmental consequences of its actions. *See* 42 U.S.C. 4331(b)(1). NEPA proves, in essence, to be a procedural statute designed to ensure that federal agencies make fully informed and well-considered decisions. *Sierra Club v. U.S. Army Corps of Eng'rs*, 990 F. Supp. 2d 9, 18 (D.D.C. 2013). NEPA does not mandate particular results, but instead prescribes a process to ensure that agencies consider, and that the public is informed about, potential environmental consequences. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989).

NEPA requires a federal agency to evaluate the environmental consequences of any major federal action "significantly affecting the quality of the human environment" before undertaking the proposed action. 42 U.S.C. § 4332(C). A

federal agency evaluates the environmental consequences of a major federal action through the preparation of a detailed environmental impact statement (“EIS”). 40 C.F.R. § 1501.4. An agency may opt first to prepare a less-detailed environmental assessment (“EA”) to determine whether a proposed action qualifies as a “major federal action significantly affecting the quality of the human environment” that requires an EIS. *Id.* The agency need not provide any further environmental report if the EA shows that the proposed action will not have a significant effect on the quality of the human environment. 40 C.F.R. § 1501.4(e); *Dep’t of Transp. v. Pub. Citizen*, 541 U.S. 752, 757-58 (2004).

The Corps conducted an EA in the process of reissuing NWP 12. NWP005289. The Corps determined that the issuance of NWP 12 would not have a significant impact on the quality of the human environment. NWP005340. The Corps accordingly concluded that it did not need to prepare an EIS. *Id.* Plaintiffs argue that the EA proves insufficient under NEPA for various reasons. (Doc. 73 at 17-34.)

The Decision Document detailed NWP 12’s environmental consequences. NWP005303-5317. The Court anticipates that the ESA Section 7(a)(2) consultation will further inform the Corps’ NEPA assessment of NWP 12’s environmental consequences. Armed with more information, the Corps may decide to prepare an EIS because NWP 12 represents a major federal action that

significantly affects the quality of the human environment. *See* 42 U.S.C.

§ 4332(C); 40 C.F.R. § 1501.4.

B. The Clean Water Act

Section 404(e) of the CWA allows the Corps to issue nationwide permits for categories of activities that “will cause only minimal adverse environmental effects when performed separately, and will have only minimal cumulative adverse effect on the environment.” 33 U.S.C. § 1344(e)(1). The Decision Document evaluated NWP 12’s compliance with CWA Section 404 permitting guidelines. NWP005340. The Corps concluded that the discharges authorized by NWP 12 comply with the CWA. *Id.* The Corps specifically noted that the activities authorized by NWP 12 “will result in no more than minimal individual and cumulative adverse effects on the aquatic environment.” *Id.*

Plaintiffs allege that NWP 12 violates the CWA because NWP 12 authorizes activities that will cause more than minimal adverse environmental effects. (Doc. 36 at 5.) Plaintiffs note that, although NWP 12 authorizes projects that would result in no more than one-half acre of water loss, linear utility lines may use NWP 12 repeatedly for many water crossings along a project’s length. Plaintiffs argue that this repeated use causes more than minimal adverse environmental effects. (*Id.*)

The Court similarly anticipates that the ESA Section 7(a)(2) consultation will inform the Corps’ CWA assessment of NWP 12’s environmental effects. The

Corps' adverse effects analyses and resulting CWA compliance determination may change after ESA Section 7(a)(2) consultation brings more information to light.

At this point in the litigation, the Court does not need to determine whether the Corps made a fully informed and well-considered decision under NEPA and the CWA when it reissued NWP 12 in 2017. The Court has remanded NWP 12 to the Corps for ESA Section 7(a)(2) consultation. The Court anticipates that the Corps will conduct additional environmental analyzes based on the findings of the consultation.

ORDER

It is hereby **ORDERED** that:

1. Plaintiffs' Motion for Partial Summary Judgment (Doc. 72) is **GRANTED, IN PART, and DENIED WITHOUT PREJUDICE, IN PART**. The Court grants Plaintiffs' motion for summary judgment regarding Plaintiffs' ESA Claim, Claim Four. The Court denies without prejudice Plaintiffs' motions for summary judgment regarding Plaintiffs' NEPA and CWA Claims, Claims One and Two.

2. Federal Defendants' Motion for Partial Summary Judgment (Doc. 87) is **DENIED, IN PART, and DENIED WITHOUT PREJUDICE, IN PART**. The Court denies Federal Defendants' motion for summary judgment regarding Plaintiffs' ESA Claim, Claim Four. The Court denies without prejudice Federal

Defendants' motions for summary judgment regarding Plaintiffs' NEPA and CWA Claims, Claims One and Two.

3. TC Energy's Motion for Partial Summary Judgment (Doc. 90) is **DENIED, IN PART, and DENIED WITHOUT PREJUDICE, IN PART.** The Court denies TC Energy's motion for summary judgment regarding Plaintiffs' ESA Claim, Claim Four. The Court denies without prejudice TC Energy's motions for summary judgment regarding Plaintiffs' NEPA and CWA Claims, Claims One and Two.

4. NWP 12 is remanded to the Corps for compliance with the ESA.

5. NWP 12 is vacated pending completion of the consultation process and compliance with all environmental statutes and regulations.

6. The Corps is enjoined from authoring any dredge or fill activities under NWP 12 pending completion of the consultation process and compliance with all environmental statutes and regulations.

DATED this 15th day of April, 2020.



Brian Morris, Chief District Judge
United States District Court

EXHIBIT

4

Portion of Keystone Pipeline shut down after 380,000-gallon oil leak in North Dakota

 [usatoday.com/story/news/nation/2019/11/01/keystone-pipeline-leak-oil-spilled-north-dakota/4121954002](https://www.usatoday.com/story/news/nation/2019/11/01/keystone-pipeline-leak-oil-spilled-north-dakota/4121954002)

A portion of the Keystone Pipeline in North Dakota was shut down this week after more than 380,000 gallons of oil leaked, the pipeline owner said in a statement. 

Meanwhile, environmental groups argue that the spill and the pipeline's volatility is why the separate Keystone XL pipeline should not be built. 

Pipeline owner TC Energy said Thursday that an estimated 9,120 barrels of oil spilled near Edinburg, North Dakota, affecting 22,500 square feet of wetlands about an hour from the Canadian border. 


The oil leak, which would fill about half of an Olympic size swimming pool, was discovered Tuesday and prompted the shuttering of a portion of the pipeline.

Drinking water sources were not affected, though the oil spill will harm vegetation and soil within the wetland area, said Karl Rockeman, director of North Dakota's Division of Water Quality. He said the leak has been contained within the initial spill zone.

"At this time, we don't see any impact to public health," Rockeman told USA TODAY, adding that "there should be no disruption and no reason for any special precautions" for residents in the area.

The spill comes amid the debate over Keystone XL pipeline, a proposal initially rejected in 2015 by the Obama administration but approved two years later by the Trump administration. The pipeline would carry tar sands oil from Alberta, Canada, through Nebraska and ultimately to refineries in Texas. A judge will soon decide whether Trump had the authority to issue an executive order approving the \$8 billion project.

"This is exactly the kind of spill we are worried about when it comes to Keystone XL being built," Joye Braun, an Indigenous Environmental Network frontline community organizer, told CNN Wire. "It has never been 'if' a pipeline breaks but rather 'when'." 


Sierra Club associate director Catherine Collentine said in a statement that pipeline spills have no end in sight.

"We've always said it's not a question of whether a pipeline will spill, but when, and once again TC Energy has made our case for us," Collentine said.

Both the Indigenous Environmental Network and the Sierra Club have been involved in litigation against the Keystone XL.

TC Energy, based in Calgary, Canada, said it immediately started to shut down the pipeline after identifying a drop in pressure Tuesday night. The company then worked to contain the spill. TC Energy said there were no injuries.

North Dakota Gov. Doug Burgum said Friday that TC Energy assured him the pipeline leak would be cleaned up "as thoroughly and quickly as possible," the Associated Press reports.

Leaks have been a frequent occurrence in the Keystone Pipeline in recent years. Two years ago, 407,000 gallons of oil spilled onto farmland in northeastern South Dakota. The company initially reported the spill at around half that size.

The current figures for this week's spill are estimates — TC Energy will not know the exact numbers until after the cleanup effort is complete, the company said.

Opened in 2011, the Keystone Pipeline spans from Canada to the Midwestern United States. Crude oil flows from the Canadian provinces of Saskatchewan and Manitoba and through North Dakota, South Dakota, Nebraska, Kansas and Missouri, ending in Illinois and Oklahoma where refineries are located.

Each day, the Keystone Pipeline can handle about 23 million gallons.

Associated Press contributed reporting.



EXHIBIT
5

Keystone Pipeline Leaks 383,000 Gallons of Oil in North Dakota

The spill in the northeastern part of the state, which occurred along a different stretch than the controversial XL pipeline addition, coated an estimated half-acre of wetland, officials said.

By **Emily S. Rueb** and **Niraj Chokshi**

Published Oct. 31, 2019 Updated Nov. 2, 2019

The Keystone pipeline system, an addition to which has been the subject of environmental protests for years, leaked about 383,000 gallons of crude oil in North Dakota, covering an estimated half-acre of wetland, state environmental regulators said.

The spill, which began on Tuesday night and has been contained, occurred in a low-gradient drainage area near the small town of Edinburg in northeast North Dakota, less than 50 miles from the Canadian border, according to Karl Rockeman, the director of the state Department of Environmental Quality's division of water quality.

"It is one of the larger spills in the state," he said in an email on Thursday.

There are no residences near the site and the wetland is not a source of drinking water, he said.

Emergency crews have begun cleaning up the leaked oil, which would fill about half of an Olympic-size swimming pool, with vacuum trucks, backhoes and other equipment, according to its operator, TC Energy.

The cause will not be known until an internal investigation is complete and the pipeline is analyzed by federal officials, the company said in a statement.

"We are establishing air quality, water and wildlife monitoring and will continue monitoring throughout the response," the company added.



The spill, which has been contained, covered an estimated half-acre of wetland, state environmental regulators said. via Taylor DeVries

Catherine Collentine, an associate director with the Sierra Club, which opposes the Keystone XL addition, said in a statement that this week's leak was further proof that such spills are inevitable.

"We don't yet know the extent of the damage from this latest tar sands spill, but what we do know is that this is not the first time this pipeline has spilled toxic tar sands, and it won't be the last," she said. "We've always said it's not a question of whether a pipeline will spill, but when, and once again TC Energy has made our case for us."

On Thursday, another oil spill was reported on an aboveground pipeline operated by New Horizon Resources, more than 300 miles west of Edinburg. According to the state's Department of Environmental Quality, about 84,400 gallons leaked into pastureland in McKenzie County, about 15 miles north of Alexander, near the Montana border.

Mr. Rockeman, the Department of Environmental Quality director, said the spill had been contained and no water was affected. The company was scraping up the spill at the site, he said, and the department would continue to monitor the investigation and remediation.

Efforts to reach the company were unsuccessful on Friday.

Tuesday's leak occurred along a stretch of the existing Keystone pipeline system, not the 1,179-mile addition to that system known as the Keystone XL pipeline, he said. Keystone XL has been the subject of environmental protests for years. President Barack Obama denied it a permit in 2015, but just days after taking office, President Trump cleared a path for its operator, formerly known as TransCanada, to proceed.

This is the second major incident for the pipeline system in the last two years. In 2017, a spill coated a

stretch of grassland in South Dakota with more than 407,000 gallons of leaked Canadian crude oil, which was nearly twice as much as originally estimated, according to the company. The pipeline also leaked about 16,000 gallons each in spills in 2011 in North Dakota and in 2016 in South Dakota.

The original Keystone pipeline system began operation in 2010 and carries crude oil from Alberta, Canada, south to Texas. The system contains 2,687 miles of pipeline.

In Billings, Mont., on Wednesday, hundreds of people voiced worries and support to the State Department, which held a public meeting for its updated environmental analysis of the Keystone XL.

According to The Billings Gazette, the event was “heated.”

“We weren’t even considered or given a hearing about this dangerous project,” State Senator Frank Smith, a Democrat, told the newspaper. “I had to drive almost five hours and 300 miles to be here today. I didn’t see why the department organized this meeting so far away and not in our community.”

James Dewey, a spokesman for the State Department, told NPR that the department had received fewer than 100 comments as of Wednesday.

“I know there’s a lot more people out there that have comments to give,” he said.

Alain Delaqu erie contributed research.

Read more energy coverage.

Keystone XL Pipeline Plan Is Approved by Nebraska Supreme Court Aug. 23, 2019



E.P.A. to Roll Back Rules to Control Toxic Ash from Coal Plants Oct. 31, 2019



Oil Giants, Under Fire From Climate Activists and Investors, Mount a Defense Sept. 23, 2019



Niraj Chokshi is a general assignment reporter based in New York. Before joining The Times in 2016, he covered state governments for The Washington Post. He has also worked at The Atlantic, National Journal and The Recorder, in San Francisco. @nirajc

A version of this article appears in print on Nov. 1, 2019, Section A, Page 17 of the New York edition with the headline: Keystone Pipe Leaks Crude Into Wetland

EXHIBIT
6



United States Department of State

Bureau of Oceans and International Environmental and Scientific Affairs
Office of Environmental Quality and Transboundary Issues

Final Supplemental Environmental Impact Statement for the Keystone XL Project

Volume I

December 2019



1.2 PURPOSE AND NEED

This SEIS is being prepared to update the evaluation of the Keystone XL Project presented in the 2014 Keystone XL Final SEIS based on changes to the Project including the MAR and consideration of new information available since the 2014 Keystone XL Final SEIS. Those previous impact statements included statements of Purpose and Need applicable to the Department. Due to the fact that the President issued a Presidential Permit on March 29, 2019 authorizing construction, connection, maintenance and operation of the Project at the United States-Canada border, there is no longer any action for the Secretary of State or his delegate to take in respect to the Project. Nothing in this SEIS is to the contrary or may be construed to the contrary. The Department, in cooperation with other agencies, completed this SEIS because it began work on the SEIS before the Presidential Permit issued on March 29, 2019 and it was useful and efficient for the Department to complete its work as applied to the “Facilities” defined in the March 29, 2019 Presidential Permit. Finally, nothing in this SEIS should be construed as the Department exercising authority over the “Border Facilities” as defined in the March 29, 2019 Presidential Permit. The construction, connection, operation, and maintenance of the Keystone XL Project’s “Border Facilities” are governed by the authority of the March 29, 2019 Presidential Permit.

1.2.1 Project Purpose and Need

The primary purpose of the proposed Keystone XL pipeline is to provide the infrastructure to transport up to 830,000 barrels per day (bpd) of crude oil from the WCSB in Canada and the Bakken Shale Formation in the United States to existing pipeline facilities near Steele City, Nebraska for onward delivery to Cushing, Oklahoma and the U.S. Gulf Coast area.

In order to consider the validity of the need for the proposed Keystone XL pipeline since the 2014 Keystone XL Final SEIS, the Department reviewed current market conditions, taking into consideration the state of the global crude oil market, western Canadian market and infrastructure to support western Canadian market demand (see Section 1.4). Overall, the updated market analysis, similar to the market analysis sections in the 2011 Keystone XL Final Environmental Impact Statement (2011 Keystone XL Final EIS) and 2014 Keystone XL Final SEIS, concludes that there is continued strong demand for transport of WCSB by pipeline, including by the proposed Project, under current and projected market conditions. This market analysis considers the most recent information from the EIA, the International Energy Agency (IEA) and CAPP.

1.2.2 Bureau of Land Management Purpose and Need

BLM has agreed to continue to be a cooperating agency for this SEIS **and will utilize the Department’s NEPA documentation in issuing a decision on Keystone’s proposed ROW to cross federal lands in Montana.** The proposed Keystone XL pipeline would cross **44.4 miles of** federal lands managed by the BLM and **1.88 miles of lands managed by USACE, both** in Montana. The BLM’s purpose and need is to respond to the Keystone application under Section 28 of the Mineral Leasing Act, as amended, for a ROW grant and Temporary Use Permit to construct, operate, maintain and decommission a crude oil pipeline and related facilities on federal lands in compliance with the Mineral Leasing Act, BLM ROW regulations and other applicable federal laws. The BLM must consider Keystone’s ROW application in accordance with its multiple-use mandate and applicable land use plans. The ROW decision on the **Mineral Leasing Act** ROW application would also require USACE permission under Section 14 of the Rivers and Harbors Act of 1899, 33 USC § 408, to make alterations to federal property administered by the USACE, provided it is determined the proposed alteration will not be injurious to the public interest and will not impair the usefulness of a Civil Works project.

The BLM will decide whether to approve, approve with modification or deny issuance of a ROW grant and Temporary Use Permit to Keystone for the proposed Keystone XL pipeline, and if approved, under what terms and conditions. The BLM's **decision on Keystone's Mineral Leasing Act ROW application to cross federal land in Montana will rely on the environmental analysis** in this SEIS, the 2011 Keystone XL Final Environmental Impact Statement (2011 Keystone XL Final EIS) and the 2014 Keystone XL Final SEIS, as well as other information **considered or included with** those documents. **Keystone's Mineral Leasing Act ROW application to use federal lands in Montana is analyzed in the 2011 Keystone XL FEIS and the 2014 Keystone XL Final SEIS. There have been no re-alignments or modifications of the proposed Mineral Leasing Act ROW on federal land in Montana since the 2014 Keystone XL Final SEIS. This SEIS primarily analyzes the impacts associated with the MAR as a new alternative. It also supplements the 2014 Keystone XL Final SEIS by providing additional analysis regarding the effects of current oil prices, cumulative effects of greenhouse gas emissions, cultural resources and accidental release modeling, consistent with the direction in the U.S. District Court for the District of Montana's November 18, 2018, decision. This SEIS also documents and considers additional cultural resource surveys that have been completed on BLM lands in Montana since publication of the 2014 Keystone XL Final SEIS. Finally, the BLM conducted an in-depth review of the federal actions associated with the proposed Project and connected actions in this SEIS to evaluate anticipated effects of the Project on federally protected and candidate species and federally designated critical habitat. Pursuant to Section 7 of the Endangered Species Act, BLM prepared a Biological Assessment, which updates the December 2012 Final Biological Assessment for the Keystone XL Project (see Appendix H of the 2014 Keystone XL Final SEIS). Accordingly, BLM will consider and rely on the 2011 Keystone XL FEIS, the 2014 Keystone XL Final SEIS, and this SEIS in issuing a decision on Keystone's application for Mineral Leasing Act ROW on federal lands in Montana.**

1.2.3 Western Area Power Administration Purpose and Need

WAPA has agreed to continue to be a cooperating agency for this SEIS (similar to its role for the 2014 Keystone XL Final SEIS) and intends to use this document as a basis for issuing a Record of Decision.

WAPA's mission allows open access to the federal transmission system. Any entity requesting interconnection to the federal transmission system must submit an application for interconnection. Local power cooperatives have submitted requests to interconnect with the WAPA transmission system in order to serve the electrical needs of Pump Stations 9 through 13 and Pump Stations 17 through 19, as well as Pump Station 21. WAPA's purpose and need is to consider and respond to these interconnection requests from the local power cooperatives, and the related construction or upgrading of any WAPA-owned facilities as a result of the requests.

1.2.4 Rural Utilities Service Purpose and Need

RUS has agreed to continue to be a cooperating agency for this SEIS and intends to use this document in support of issuing a Record of Decision. RUS's purpose and need for taking action is to determine whether to provide federal financing to electric cooperatives through loans and loan guarantees for the construction, operation and improvement of electric transmission and generation facilities in rural areas. In regard to the proposed Keystone XL Project, this would include the Grand Electric Cooperative, West Central Electric Cooperative and Rosebud Electric Cooperative in South Dakota, which have applied for RUS financing for the construction of power lines to deliver power to Pump Stations 15 through 21.

1.2.5 U.S. Army Corps of Engineers Purpose and Need

The USACE has agreed to continue to be a cooperating agency for this SEIS and intends to use this document to support its determination whether to grant permission for Keystone to modify lands administered by the USACE at the Fort Peck project by concurring with the BLM's inclusion of USACE

project land in the proposed ROW grant to Keystone for the Keystone XL Project. In addition to the permits, approvals and regulatory requirements listed in Section 1.9 of the 2014 Keystone XL Final SEIS, the USACE is considering issuance of Section 408 Permission (River and Harbors Appropriation Act of 1899 (33 USC 408)) required for alterations proposed within the lands and real property interests identified and acquired for a USACE project and to lands available for USACE projects under the navigation servitude. Under Section 408, the Secretary of the Army may, on recommendation of the Chief of Engineers, grant permission for the alteration of a public work so long as that alteration is not injurious to the public interest and will not impair the usefulness of the work.

USACE's purpose and need is to determine whether USACE may allow the BLM to include federal land administered by USACE for the Fort Peck Project in a ROW granted by BLM to Keystone for the installation of the proposed Keystone XL pipeline on Fort Peck Project land. USACE anticipates receiving and acting upon applications submitted by Keystone pursuant to Section 404 of the Clean Water Act of 1972 (33 USC 1344) (Section 404).

1.3 FEDERAL DECISIONS

1.3.1 Bureau of Land Management

BLM's Federal Decision includes whether to approve, approve with modification or deny issuance of a ROW grant and Temporary Use Permit to Keystone under Section 28 of the Mineral Leasing Act for the proposed Keystone XL pipeline, and if approved, under what terms and conditions. The ROW grant and Temporary Use Permit would cover the 44.4 miles of BLM land in Montana and **1.88 miles of lands administered by USACE** (described in Section 1.3.4.). **Keystone's Mineral Leasing Act ROW application to use federal lands in Montana is analyzed in the 2011 Keystone XL FEIS and the 2014 Keystone XL Final SEIS. There have been no re-alignments or modifications of the proposed Mineral Leasing Act ROW on federal land in Montana since the 2014 Keystone XL Final SEIS. This SEIS primarily analyzes the impacts associated with the MAR as a new alternative. It also supplements the 2014 Keystone XL Final SEIS by providing additional analysis regarding the effects of current oil prices, cumulative effects of greenhouse gas emissions, cultural resources and accidental release modeling, consistent with the direction in the U.S. District Court for the District of Montana's November 18, 2018, decision. This SEIS also documents and considers additional cultural resource surveys that have been completed on BLM lands in Montana since publication of the 2014 Keystone XL Final SEIS. Finally, the BLM conducted an in-depth review of the federal actions associated with the proposed Project and connected actions in this SEIS to evaluate anticipated effects of the Project on federally protected and candidate species and federally designated critical habitat. Pursuant to Section 7 of the Endangered Species Act, BLM prepared a Biological Assessment, which updates the December 2012 Final Biological Assessment for the Keystone XL Project (see Appendix H of the 2014 Keystone XL Final SEIS). Accordingly, BLM will consider and rely on the 2011 Keystone XL FEIS, the 2014 Keystone XL Final SEIS, and this SEIS in issuing a decision on Keystone's application for Mineral Leasing Act ROW on federal lands in Montana.**

BLM also is considering other ROW applications under Title V of the Federal Land Policy and Management Act, 43 U.S.C. § 1761, which were filed by other applicants, for transmission and distribution lines for the proposed electrical power lines associated with Pump Station 9 and 10 of the proposed Keystone XL pipeline in Montana. Although BLM is evaluating these ROW applications in separate environmental assessments (EAs), the potential environmental effects of these ROWs are analyzed in Chapter 6, **Electrical Power Infrastructure** and Chapter 7, **Cumulative Impacts** of this document **as connected actions**.

5 ENVIRONMENTAL CONSEQUENCES FROM ACCIDENTAL RELEASES

5.1 INTRODUCTION

This chapter addresses the likelihood of potential accidental releases resulting from the Proposed Action and introduces information on pipeline and crude oil characteristics. This chapter also describes the potential consequences that could occur to the resources described in Chapter 3, Affected Environment, if a release of product were to occur along the proposed pipeline route, including the MAR. Table 5-1 presents key terms and definitions used in this chapter.

Table 5-1. Key Terms

Types of Releases	
Release	A <i>release</i> is a loss of integrity of a container (i.e., pipeline or its associated components) that results in a failure to contain liquid as designed.
Leak	A <i>leak</i> is a release over time.
Spill	A <i>spill</i> is a volume of liquid that escapes a containment system and enters the environment.
Categories of Spill Sizes	
Incidental Spills	<i>Incidental spills</i> release less than 0.1 barrel (5 gallons). Incidental spills are typically associated with normal operations and are further discussed in Chapter 4, Environmental Consequences from Construction and Normal Operations.
Small Spills	<i>Small spills</i> range from greater than 0.1 barrel (5 gallons) to less than or equal to 50 barrels (2,100 gallons).
Medium Spills	<i>Medium spills</i> range from greater than 50 barrels (2,100 gallons) to less than or equal to 1,000 barrels (42,000 gallons).
Large Spills	<i>Large spills</i> range from greater than 1,000 barrels (42,000 gallons) to less than or equal to 10,000 barrels (420,000 gallons).
Catastrophic Spills	<i>Catastrophic spills</i> release more than 10,000 barrels (420,000 gallons).

Source: 42 USC 9601 et seq

5.2 METHODOLOGY

To evaluate the potential effects of accidental releases of products that could be transported along the proposed pipeline, this SEIS considers the likelihood of a release and the range of potential consequences that could result if a release were to occur. The analysis of spill risk includes a review of pipeline mileage and accident data as recorded in the U.S. Department of Transportation's (USDOT's) Pipeline and Hazardous Materials Safety Administration (PHMSA) databases. The Department analyzed four spill sizes (small, medium, large and catastrophic [see Table 5-1]) and determined spill incident rates for each spill size, based on historical pipeline accident data (see Section 5.3).

The 2014 Keystone XL Final SEIS assessed effects associated with potential spills along the Preferred Route and addressed the potential for spills to affect sensitive resources within the ROI. This SEIS expands upon the analysis presented in the 2014 Keystone XL Final SEIS to consider new information related to oil spills, accident data from PHMSA through 2018, new studies related to spills of crude oil and the cleanup of dilbit, and any new or unique features or resources identified within the ROI. In addition, the methodology for assessing the likelihood of a release and the range of potential consequences has been updated to apply the Department's most current approach to assessing the potential for impacts related to spills from crude oil pipelines.

To evaluate the range of consequences related to different spill types, the Department reviewed information on accidental releases during the pipeline transport of products, including those potentially transported under the Proposed Action. This review included an evaluation of the causes and circumstances surrounding documented releases, as well as the range of environmental effects. This analysis uses analogous cases as the basis for establishing the types and extent of impacts that could occur within the environmental setting described in Chapter 3, Affected Environment. In addition, incident rates for each spill size serve as the basis for determining the likelihood of each spill size **occurring in the vicinity of a resource**. The analysis uses GIS data sets to establish the presence of environmental resources that would be susceptible to impacts from spills of different sizes.

The ROI is the area that is susceptible to a release of crude oil along the proposed pipeline route. The analysis assumes the ROI is the estimated distance the crude oil would spread over land, as well as the additional distances that crude oil and its dissolved components could travel upon reaching a water source. In the case of overland flow, the analysis includes spill modeling to estimate the overland distance that crude oil could travel after a release. The model takes into account the volume released and the permeability and saturation of soil to estimate the potential areal extent of spills for each spill size category. This analysis determined that a 50-barrel (small) spill could spread over land up to 150 feet from the site of a spill; a 1,000-barrel (medium) spill could spread up to 500 feet; and a 10,000-barrel (large) spill could spread up to 1,200 feet over land from the release point. In areas of moderate to steep slopes (greater than 9 percent), the Department determined that large spills could extend up to 5,000 feet downslope from the point of release along the pipeline.

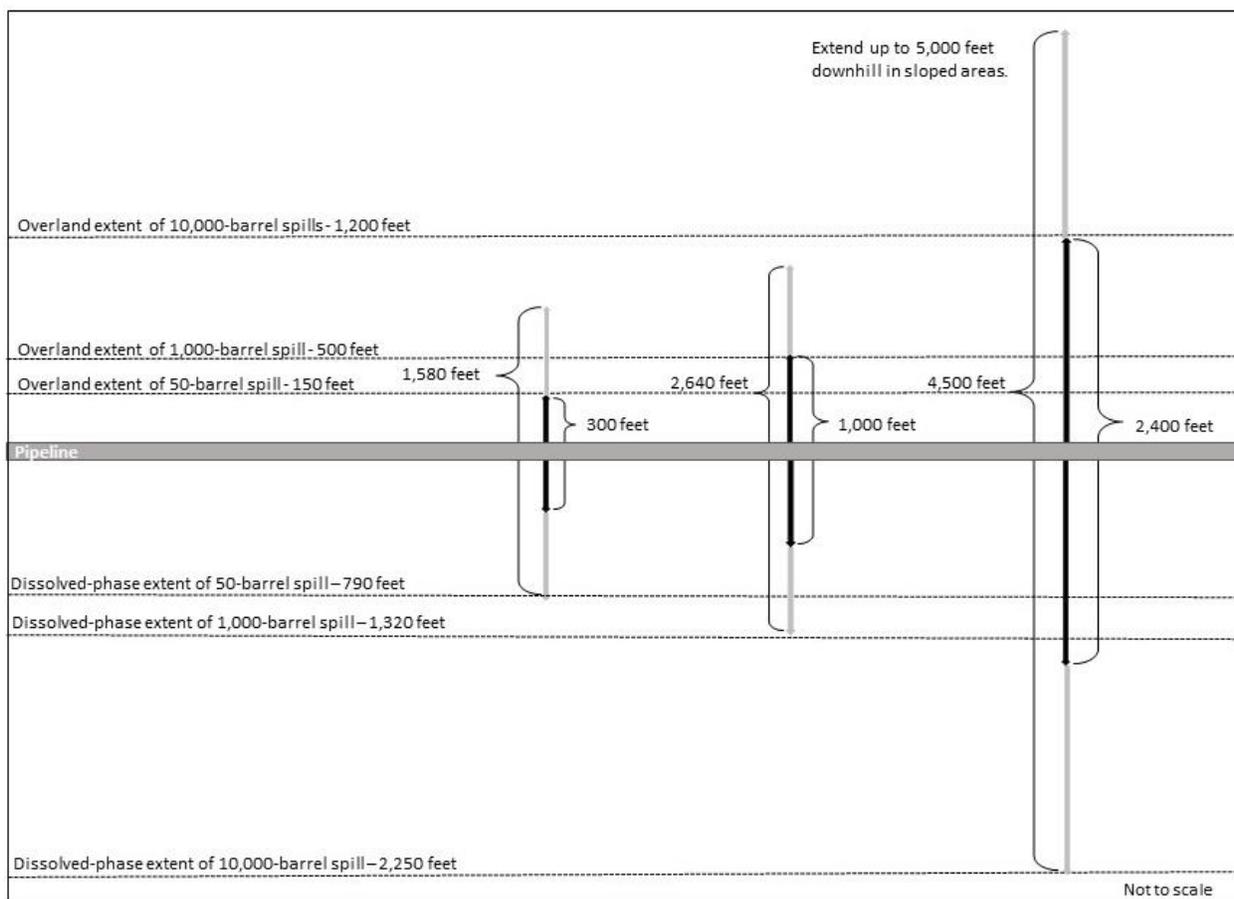
If released crude oil reached groundwater, the screening modeling conducted for the 2014 Keystone XL Final SEIS found that components in the oil, such as benzene, could spread downgradient in groundwater an additional 640 feet for a 50-barrel spill, 820 feet for a 1,000-barrel spill and 1,050 feet for a 20,000-barrel spill. This modeling effort also indicated that these spill volumes could reach groundwater at a depth of 50 feet, although larger volumes could be expected to reach groundwater at deeper depths. The results of the prior modeling were carried over to this analysis even though the volume used for large spills was 20,000 barrels, versus the 10,000 barrels used for the overland flow analysis. This permitted the Department to incorporate a more conservative approach for large spills, while continuing to use the previous modeling analysis. Thus, as shown in Figure 5-1, the greatest migration distance for a spill would be represented by a combination of the overland distance and the additional dissolved phase distance. Along surface water features where a release could spread over the extent of the waterbody's surface area, including flowing streams and rivers, lakes and wetlands, the Department also assessed the hydraulic pathways that would be susceptible to a release of crude oil from the pipeline and their interconnections with other downstream waters.

The Department used the results of modeling data from worst-case analysis of a release on the Missouri River and information from other major oil spills to develop a maximum reasonable transport distance of 40 river-miles for reviewing potential downstream effects. The Department acknowledges that oil sheens and oil globules (small round particle) from two releases (see Laurel, Montana [2011] and Glendive, Montana [2015] in Section 5.3.4) were observed at greater downstream distances than the 40 river-mile ROI assessed within this SEIS. At a distance of 40 river-miles downstream from a spill, it would typically be expected that response resources have been able to contain the majority of the spill before it gets to that point. While circumstances may allow oil sheens or globules of oil to travel beyond this distance, their presence and potential for impacts would be limited. This is due mainly to the volume of the spilled oil present as compared with the potentially impacted water resource.

An oil sheen is typically approximately 1 micron in thickness and contains very little oil (for comparison, the thickness of a human hair ranges from 17 to 180 microns). The volume of oil in a typical sheen is less than one cubic liter per square kilometer (Goodman 2019). Sheens are readily dispersed by weathering

and wave action. Oil globules are typically small in size (about the size of a coin) and will eventually sink, float ashore or stick to aquatic vegetation. At distances beyond 40 river-miles, oil globules would typically accumulate in depositional areas at concentrations that would not typically result in significant impacts to aquatic biota.

A Site-Specific Risk Assessment was prepared by Keystone as part of its Section 408 permit application to USACE for the Keystone XL Project’s Missouri River crossing near the Fort Peck Reservoir in Montana (TransCanada 2017). The model analysis calculated downstream transport distances of crude oil along the Missouri River under a worst-case discharge scenario, which according to the report, would have a probability of occurring once in 2,230,000 years. The analysis calculated the distance the released crude oil might travel within 6 hours, which is the maximum response time in high-volume areas stipulated by federal pipeline safety regulations in Title 49 *Code of Federal Regulations* Part 194 (49 CFR 194). The downstream transport distance ranged from approximately 0.3 mile (at very low flow) to a maximum worst-case scenario of 33 miles (using record 2011 historic flood conditions) (TransCanada 2017). In addition, review of other major oil spill data indicates in most instances, resource impacts primarily occur within the 40 river-mile ROI being used in this SEIS to review potential downstream effects (see Section 5.3.4).



Source: U.S. Department of State 2014

Note: The potential extent of a spill is the estimated overland distance (150 feet for a 50-barrel spill; 500 feet for a 1,000-barrel spill; and up to 1,200 feet for a 10,000-barrel spill) plus the additional dissolved phase distance in groundwater (640 feet for a 50-barrel spill, 820 feet for a 1,000-barrel spill and 1,050 feet for a 10,000-barrel spill).

Figure 5-1. Spill Distances Used in the Likelihood Analysis

As part of the USACE Section 408 review process, Keystone prepared a similar site-specific risk assessment for the pipeline's Bear Creek crossing in Montana to further analyze the potential for impacts to the Fort Peck Reservoir (TransCanada 2017). The model analysis calculated downstream transport distances of crude oil along Bear Creek under several scenarios, including incidental, small, medium, large and worst-case discharge scenarios. The analysis calculated the probability of a release of any size occurring at the Bear Creek crossing to be once in 16,600 years, while the probability of a worst-case discharge occurring was calculated to be once in 5,940,000 years. The analysis also calculated maximum transport distance scenarios. The Bear Creek crossing is located 15 stream miles upstream of the mouth of Bear Creek Bay, 20.9 miles upstream of the main portion of the Fort Peck Reservoir, and 22.8 miles and 23.5 miles upstream of the Fort Peck Spillway and Fort Peck Dam, respectively. Unlike the Missouri River, which is a perennial waterbody, Bear Creek is an ephemeral stream that typically has no stream flow to help facilitate downstream movement of crude oil. However, crude oil transport distance modeling was performed under both flow and no-flow conditions. The model determined that maximum downstream transport distance would be 2.0 miles during a no-flow scenario. Under a representative high flow scenario, the model estimated that a release would take approximately 3.8 hours to reach Bear Creek Bay, and another 31.4 hours to reach the reservoir. After reaching the reservoir, the same release would take an additional 10.2 to 14.4 hours to reach the Fort Peck Spillway or Fort Peck Dam, respectively. In total, the analysis determined it would take almost 45 to 50 hours for a release at the Bear Creek Crossing to reach the Fort Peck Spillway or Fort Peck Dam. This would allow for ample time for emergency response intervention.

The 40 river-mile ROI was determined to be reasonable and appropriate for this SEIS based on the worst-case modeling results for the Missouri River crossing and because of differences in the characteristics of these releases, including pipeline construction technique at the release location (i.e., open trench versus HDD), the depth of the pipeline beneath the waterway and different product type (light crude oil versus dilbit). Both the Laurel, Montana (2011) and Glendive, Montana (2015) spills occurred at Yellowstone River crossings in which the pipeline involved was installed using open trench methods (see Section 5.3.4). As currently proposed, Keystone would utilize HDD methods (versus open trench) at 18 waterbody crossings along the proposed pipeline, including the Yellowstone River. Waterbodies that Keystone has considered for HDD include commercially navigable waterbodies, waterbodies wider than 100 feet, waterbodies with terrain features that prohibit open crossing methods, waterbodies adjacent to features such as roads and railroads, and sensitive environmental resource areas.

To evaluate the range of consequences related to different spill types, the Department reviewed information from a variety of sources related to the causes and circumstances surrounding documented crude oil releases. Sources included reports prepared by the National Academies of Sciences, Engineering and Medicine and the National Research Council, accident reports, government-sponsored studies and databases, academic research papers and others as cited throughout this chapter. The Department used analogous cases (e.g., the 2010 spill near Marshall, Michigan, as well as more recent releases such as the November 2017 spill near Amherst, South Dakota) as the basis for establishing the types and extent of impacts that could occur within the environmental setting described in Chapter 3, Affected Environment. In addition, accident rates for each spill size serve as the basis for determining the likelihood of each spill size **occurring in the vicinity of** a resource. In order to estimate the potential likelihood of an accidental release **occurring in proximity to** sensitive resources along the proposed route, the Department used GIS to measure the intersection distance between each of the modeled spill distances shown in Figure 5-1 and considered resources discussed throughout the remainder of this chapter. The Department then multiplied that intersection distance, measured in miles, by the calculated annual rate of spills per mile to estimate the annual number of spills that could **occur in proximity to** that particular resource. Tables presented in Section 5.5 provide the results of these calculations.

The 2014 Keystone XL Final SEIS considered a range of potential scenarios that could occur under the No Action Alternative, including rail/pipeline, rail/tanker and rail direct to the Gulf Coast as alternate means of crude oil transport if the Keystone XL Project were not constructed or operated. Under those No Action scenarios, impacts are anticipated to be consistent with the findings of the 2014 Keystone XL Final SEIS contained in Chapter 5, Alternatives, and are incorporated by reference.

5.3 INCIDENT ANALYSIS

This section reviews pipeline accident data for onshore crude oil pipelines in the United States in order to determine the likelihood of different types of accidental releases for consideration in this SEIS's impacts analysis.

5.3.1 Pipeline Incident Analysis

While several different sources of pipeline accident data support the pipeline incident analysis, the primary source of data is the PHMSA hazardous liquids accident database. This database contains information regarding each accident reported to PHMSA, as required under 49 CFR 195, including events involving a pipeline that result in any of the following:

- Explosion or fire not intentionally set by operator;
- Release of 5 gallons or more, except that no report is required for a release of less than 5 barrels (210 gallons) resulting from a pipeline maintenance activity if the release is:
 - Not otherwise reportable under this section;
 - Not one described in Section 195.52(a)(4) (i.e., not one that resulted in pollution of any stream, river, lake, reservoir or other similar body of water that violated applicable water quality standards, caused a discoloration of the surface of the water or adjoining shoreline, or deposited a sludge or emulsion beneath the surface of the water or upon adjoining shorelines);
 - Confined to company property or pipeline ROW; and
 - Cleaned up promptly;
- Death of any person;
- Personal injury necessitating hospitalization; and/or
- Estimated property damage, including cost of cleanup, the value of lost product and damage to property of the operator or others, or both, exceeding \$50,000.

As indicated above, with a few exceptions, federal law requires pipeline operators to report to PHMSA any release that results in a spill that is 5 gallons or larger in size. Spills of less than 5 gallons (incidental spills) typically occur at pipeline facilities during normal maintenance and operational activities. Although incidental spills are common, they can readily be contained and remediated resulting in negligible impacts. Incidental spills have not been included in the incident analysis since they are not required to be reported and have very little potential to result in impacts.

A review and analysis of PHMSA pipeline accident data provide information used to calculate the frequency of spills from U.S. onshore pipelines carrying crude oil. This SEIS uses a subset of data for the period 2010 to 2018 to calculate incident rates because it represents the most complete data set and is more representative of modern-day pipeline facilities. **The Department also reviewed and analyzed data through the month of October 2019 to supplement the analysis. The data used for the incident**

analysis does not include spills from offshore pipelines or pipelines transporting other products, such as refined petroleum products or highly volatile liquids.

Table 5-2 provides PHMSA accident data compiled between 2010 and 2018 for small, medium, large and catastrophic spills. The table also includes pipeline mileage per year and the total volume of crude oil spilled each year. Pipeline mileage has increased each year over this time period, increasing by approximately **52** percent between 2010 and 2018. Of the **1,747** onshore crude oil spills reported between 2010 and 2018 releasing 5 gallons or more, small spills accounted for approximately **81.2** percent, medium spills for approximately **16.2** percent, large spills for approximately **2.2** percent and catastrophic spills for approximately **0.3** percent.

Table 5-2. Summary of Pipeline Accident Data

Year	Small Spills	Medium Spills	Large Spills	Catastrophic Spills	Miles of Onshore Crude Oil Pipelines	Volume Spilled (barrels)	Volume Spilled per Thousand Miles of Pipeline (barrels)
2010	118	24	5	2	49,460	52,710	1,066
2011	106	28	5	1	51,052	35,276	691
2012	147	31	4	0	52,657	15,025	285
2013	167	28	4	1	56,170	43,047	766
2014	196	37	1	0	61,888	17,620	285
2015	199	38	3	0	67,896	20,686	305
2016	149	37	5	1	70,611	42,394	600
2017	156	35	6	1	74,072	40,603	548
2018	181	25	6	0	75,400	26,022	345

Source: PHMSA 2019a, 2019b

Table 5-3A summarizes the average annual incident frequencies and volume released for each spill size category **for the overall pipeline system, spills from the mainline pipe and those from larger diameter pipe (i.e., greater than 16 inches in diameter), while Table 5-3B summarizes incidents that were caused by a component (i.e., tank, valve or pump station) failure. Table 5-3A presents the annual incident rate in total number of incidents for every 1,000 miles of pipeline. Incident rates were not calculated for pipeline components in Table 5-3B because the numbers of tanks, valves and pump stations in operation are not documented or reported. In both tables, the majority of releases were small in size (i.e., ranging from 63 percent of releases along large-diameter mainline pipelines to 89 percent of releases occurring at valves) regardless of the source. While small spills occur more frequently across all pipeline components, large and catastrophic spills account for a higher percentage of volume released. Valves are the only component for which this trend does not apply; medium spills account for the greatest volume lost from incidents involving valves.**

Table 5-3A. Spill Volume Distribution on Mainline Pipe

Pipeline Component (number of reported releases)	% Spills of Each Size Category				% Volume Spilled by Size Category				Pipeline Mileage ^b	Annual Incident Rate per 1,000 Mile-Years ^b
	Small	Medium	Large	Catastrophic	Small	Medium	Large	Catastrophic		
Pipeline System, All Elements (1,747)									559,207	3.12
Mainline Pipe (526) ^a									559,207	0.94
Mainline Pipe, 16-inch Diameter and Greater (158) ^a									174,782	0.90

Source: PHMSA 2019a, 2019b

- ^a The PHMSA data (2010 – 2018) includes a total of **66** releases involving mainline pipe for which no pipeline diameter was reported. Therefore, these releases have been included in the total number of incidents involving mainline pipe, but are not accounted for in the number of incidents involving mainline pipe 16 inches or greater in diameter.
- ^b **The number of existing tanks, valves or pump stations not known based on available information. Therefore, this table does not present the number of these components in operation nor the associated incident rates for tanks, valves and pump stations.**

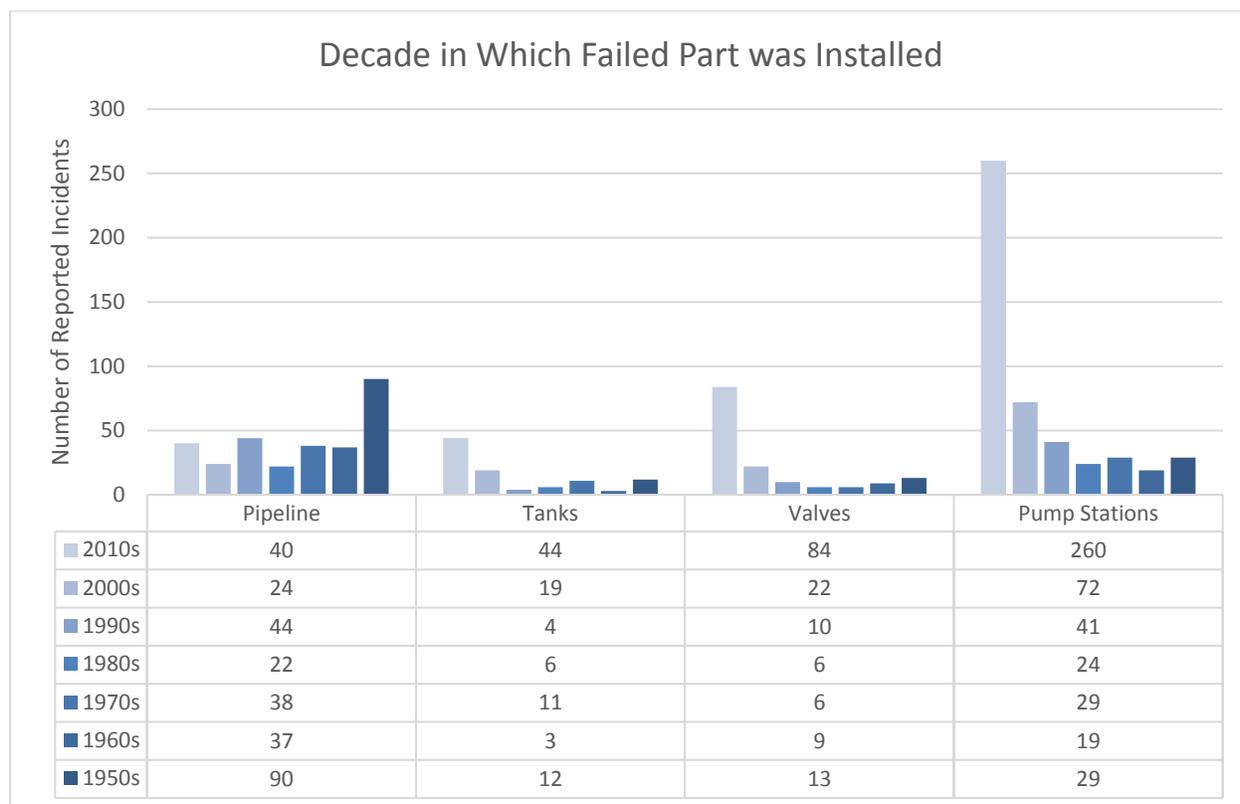
Table 5-3B. Spill Volume Distribution by Pipeline Component

Pipeline Component (number of reported releases)	% Spills of Each Size Category				% Volume Spilled by Size Category			
	Small	Medium	Large	Catastrophic	Small	Medium	Large	Catastrophic
Pipeline System, Tanks (131)		77	18	4%	2%	21%	23%	60%
Pipeline System, Valves (255)		89%	10%	0%	0%	11%	75%	17%
Pipeline System, Pump Stations (839)		87%	12%	1%	0%	6%	33%	46%

Source: PHMSA 2019a, 2019b

Throughout the rest of this chapter, the Department uses an overall incident rate that represents the entire pipeline system as an upper bound to support the impact analysis. The overall incident rate overestimates incidents occurring along the pipeline ROW and underestimates incidents occurring at fixed facilities, such as tanks and pump stations. **As shown in Table 5-3A, approximately 30 percent of incidents occurred along the mainline pipe, while the remaining 70 percent occurred at components, most of which are located at pipeline operator-controlled facilities.** Despite the difference in incident rates between fixed facilities and the pipeline ROW, the impact analysis in the SEIS is not dependent upon incident rates for specific features within the pipeline system, but rather estimates the likelihood for spills to occur at any point along the pipeline system.

As presented in Figure 5-2, the data reveal a higher incidence of failure for older mainline pipes, but also a higher incidence of failure for newer pump stations and valves (PHMSA 2019b). This is likely the result of pump stations and valves experiencing a “burn-in phase,” which refers to the beginning of the working lifetime of these components. During this time, pump stations and valves are more susceptible to failure resulting from defects that can develop during manufacturing and construction. After this initial phase passes, these components experience a low constant failure rate until the end of their working lifetime, during which time there is once again a higher probability of failure (Muhlbauer 2004).



Source: PHMSA 2019b

Figure 5-2. Decade in which Failed Part was Installed

5.3.2 Pipeline Incident Causes

Threats to pipeline and component integrity arise from numerous sources. According to the American Society of Mechanical Engineers, threats fall within three categories: time-dependent, stable and time independent. Time-dependent threats are those that tend to increase over time. Stable threats are threats

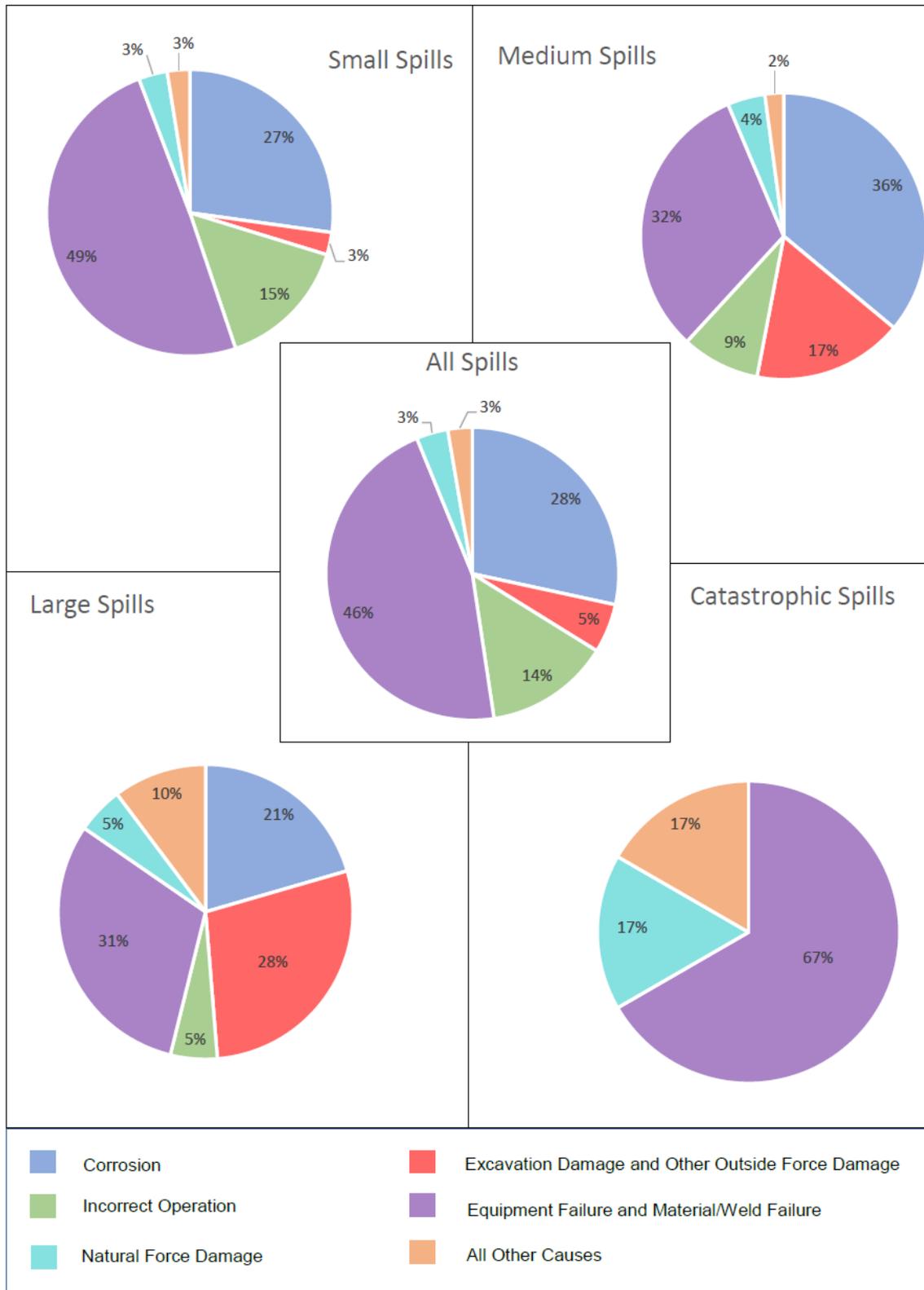
that are constantly present, but that do not manifest unless activated by a change in operations or the surrounding environment. Time-independent threats are those that are not influenced by the passing of time (ASME 2010).

Time-dependent threats include internal corrosion, external corrosion and stress corrosion cracking. Corrosion is defined as the deterioration of a material, usually a metal, by chemical reaction with its environment. Over time, this deterioration may lead to a loss of pipeline integrity and result in an accidental release. The corrosion process involves the oxidization of the metal of the pipe. This occurs as a result of electric currents flowing through the pipe body that induce the metal to combine with oxygen, creating a non-metallic by-product known as rust. In order for corrosion to occur, an oxidizing agent (most commonly water) must be present. In the case of a pipeline, water can be present inside the pipe, originating from the fluid being transported, or it can be present outside, such as from soil moisture (API 2001). External corrosion occurs when the pipeline walls, seam welds or joint welds weaken from corrosive action on the exterior surface of the pipe. Factors causing or affecting the rate at which external corrosion occurs include exposure time, pipeline coatings, cathodic protection, pitting (corrosion occurring at a surface defect in the pipeline or point where the protective coating has broken down), stray currents from underground facilities or utilities, seasonal variability in soil moisture content and temperature, and microbial activity. Internal corrosion similarly weakens the pipeline system through corrosive action on the interior surface of the pipe. Sediment and water in the pipeline can lead to internal corrosion. Factors influencing whether water may separate from the oil flowing through the pipeline include flow rate, water content, pipe diameter, physical properties of the oil and chemical additives (National Research Council 2013). Stress corrosion cracking occurs when the combined action of corrosion and applied stress results in the formation of cracks. Stresses may include normal expansion and contraction of the pipeline due to temperature changes and normal operational cycling of the pipeline's internal pressure, as well as external stresses such as vibrations or frost heaving.

Stable threats include manufacturing, construction and equipment threats. Manufacturing threats result from defects in the pipeline system during the manufacturing of the components. Construction threats result from defects caused during the construction, installation or fabrication of the pipe and its components. Equipment threats result from a failure of the equipment to perform its intended design or its operational or functional purpose.

Time-independent threats include third-party damage, incorrect operations and damage from weather or other natural forces. Third-party damage threats consist of potential actions by the pipeline operator and/or other parties that could compromise the integrity of the pipeline. Incorrect operations are those caused by human error leading to the incorrect operation of the pipeline system, which could ultimately lead to a release. Some natural hazards, such as earthquakes, floods and tornadoes, have the capacity to directly damage the pipeline and cause a leak through affecting the stability of the buried pipe, interrupting communications with the monitoring systems, directly damaging aboveground elements, shorting out electrical systems or creating corrosive conditions. Heavy rains, snowfall and high winds may produce conditions that could affect system integrity over time. Flooding may also lead to scour where continuous water currents can threaten the integrity of a pipeline. Scour is the gradual erosion by hydrodynamic forces of soil, sediment or stone surrounding a buried pipe, such that the pipe itself could become dislodged and exposed, causing it to be at higher risk of failure from fracturing or corrosion.

A review of the PHMSA accident data revealed that corrosion and equipment failure were the two primary causes of pipeline incidents; together they accounted for approximately 75 percent of the incidents reported between 2010 and 2018. The Department notes that, per the PHMSA accident database, the two notable recent spills along TransCanada-owned pipelines, as discussed in Section 5.3.3, were caused by material failure of the pipe or weld (i.e., a welding anomaly) and other incident cause (i.e., mechanical damage caused during pipeline construction). Figure 5-3 depicts the cause of pipeline incident by incident size.



Source: PHMSA 2019b

Note: Values may not add up to 100% due to rounding.

Figure 5-3. Reported Incident Cause by Spill Size

5.3.3 Incident Analysis for TransCanada

While several different sources of pipeline incident data support the pipeline incident analysis, the primary source of data is the PHMSA accident database. The Department reviewed information compiled in PHMSA data sets for accidents occurring between 2010 and 2018. This PHMSA pipeline accident data provides information used to calculate the frequency of spills from U.S. onshore pipelines carrying crude oil. This analysis does not include spills from offshore pipelines or pipelines transporting other products, such as refined petroleum products or highly volatile liquids.

Table 5-4 compares this industry incident rate to that of a subset of pipeline accident data for pipeline facilities operated by TransCanada (the parent company of Keystone) and presents the number of incidents per 1,000 miles of industry or TransCanada-operated pipeline. **The second row presents the industry data without including incidents along TransCanada-operated pipelines, allowing for a comparison of TransCanada's record with pipelines operated by other companies.** During the period between 2010 and 2018, TransCanada-operated pipeline facilities experienced 12 small spills, 2 medium spills and 1 large spill. No catastrophic spills occurred on TransCanada-operated pipelines during this time period (PHMSA 2019b). **As shown in Table 5-4, TransCanada's incident rate for small and medium spills is more than three times lower than the industry average, while the rate is consistent for large spills and less for catastrophic. When the incident data through October 2019 is included in this assessment, the rate for large spills from TransCanada pipelines rises to 0.12, which is 1.7 times higher than the industry average. Other incident rates remain consistent with those shown below.**

Table 5-4. Incident Rate Summary (2010-2018)

Pipeline Operator	Incident Rate Per 1,000 Miles of Onshore Crude Oil Pipeline				Total Volume Spilled (bbl)
	Small Spills	Medium Spills	Large Spills	Catastrophic Spills	
Industry Average (including TransCanada)	2.54	0.51	0.07	0.01	293,383
Industry Average (NOT including TransCanada)	2.58	0.52	0.07	0.01	285,949
TransCanada	0.81	0.14	0.07	0.00	7,434

Source: PHMSA 2019a, 2019b

bbl = barrel

The incident data from 2019 includes two new releases from TransCanada-operated pipelines. The most recent spill occurred along the existing Keystone pipeline operated by TransCanada near Edinburg, North Dakota on October 29, 2019. TransCanada shut down the affected pipeline at the point of release after the release was detected and reported the incident to PHMSA and the National Response Center. Over 9,000 barrels of crude oil were released in this large spill. While the cause of the incident remains unknown, the affected area was limited to a 4.8-acre containment area (TransCanada 2019).

A release from the existing Keystone pipeline operated by TransCanada was discovered on **February 6, 2019**, near St. Louis, Missouri. Upon discovery, TransCanada shut down the affected section of pipeline and reported the incident to PHMSA. **This 17-barrel (714-gallon) crude oil release was caused by an inadequate composite wrap applied to an area of pipeline experiencing an accelerated rate of corrosion due to stray direct current interference.**

A large spill occurred along the 30-inch TransCanada-operated existing Keystone Mainline releasing 9,726 barrels (408,492 gallons) of crude oil on November 16, 2017 near Amherst, South Dakota (PHMSA 2019b). Personnel initiated pipeline shutdown and isolation 3 minutes after the SCADA system detected a drop in pressure and increase in flow rate. The release occurred in a rural agricultural area and resulted from previously undetected mechanical damage caused during construction of the pipeline in 2008 (PHMSA 2017). All remediation efforts, consisting primarily of soil removal, replacement and reseeded, have since been completed. Twelve groundwater monitoring wells were installed, but no groundwater contamination was detected as a result of this release (Exp 2018). In November 2018 PHMSA approved a request from TransCanada to revise the reported release volume to 6,592 barrels (276,864 gallons), but this change was not yet reflected in the version of the PHMSA database that was used for the incident analysis in this **Final SEIS**. Since both spills are classified as large spills, the updated spill volume would not change the incident rates calculated in this SEIS.

A medium spill occurred on April 2, 2016 when the existing Keystone Mainline released approximately 400 barrels (16,800 gallons) of crude oil onto a rural agricultural area near Freeman, South Dakota. A landowner notified a One-Call center, which then notified TransCanada. A welding anomaly caused the spill. An anomaly is a defect or imperfection, such as a change in wall thickness resulting from metal loss, a deformation of the pipe wall or a crack. During excavation, oil was discovered to have migrated into the soil farther than initially estimated. A shutdown of the affected segment of the pipeline lasted for 7 days, under the direction of PHMSA, before beginning to operate again on April 9 under increased supervision (PHMSA 2016). The state's environmental response agency stated that the release did not affect aquifers (Egan 2016).

5.3.4 Major Spills by Other Companies

The Department reviewed available data for the following major spills of crude oil on pipelines operated by companies other than TransCanada, selected based on their sizes, impacts and similar product properties, to further support the analysis of impacts resulting from releases.

- **Marshall, Michigan 2010.** A spill near Marshall, Michigan in July 2010 released approximately 20,082 barrels (843,444 gallons) of dilbit, a heavy crude oil, into a wetland, which flowed into Talmadge Creek and ultimately to the Kalamazoo River. Heavy rainfall during the 3 days preceding the spill in this same area caused the Kalamazoo River to flow near the peak of an approximate 25-year flood at the time of the spill near Marshall (USGS stream gauge station number 04103500), meaning that the water flowed higher and faster than usual (Hoard et al. 2010). Observable floating and submerged oil from the release traveled 40 river-miles downstream along the Kalamazoo River and to the western side of Morrow Lake (National Transportation Safety Board 2012). Water sampling showed no spill-related contamination below Morrow Dam to Lake Michigan (USEPA 2010). This dam, located at the western end of Morrow Lake, constrained further migration of the spill and represents the end of the 40 river-mile extent exposed to visually observed crude oil. In addition, the Ceresco and Monroe Street dams, located between the release point and Morrow Lake, and spill response containment boundaries affected the behavior and transport of crude oil within the Kalamazoo River (USEPA 2016). While this spill represents extreme circumstances regarding the volume of oil released to the environment and the flow rate of the waterway, the Marshall spill provides a conservative example of what impacts could result from a spill along a waterway.
- **Laurel, Montana 2011.** On July 1, 2011, the Silvertip Pipeline, owned by Exxon Mobil Pipeline Company, released approximately 1,509 barrels (63,378 gallons) of light, sweet crude oil into the Yellowstone River near Laurel, Montana. The Yellowstone River flowed at the peak of a 30-year flood at the time of the rupture (MDEQ 2016a). River scour and erosion had exposed the pipeline (which was installed using the open trench method and buried 5 to 8 feet below the riverbed

according to a January 2011 depth-of-cover survey), and debris became caught on the exposed line. The pressure caused by the debris and the flood-stage river flow gradually increased external stress until the pipeline failed (PHMSA 2015). The river was under flood conditions when the release occurred, which increased the river flow and allowed visible signs of the oil to spread over 70 miles downstream of the release point. The flooding also raised safety concerns, resulting in a delayed spill response. According to a USEPA incident report (USEPA 2011a), although oil was observed on land and vegetation up to 72 miles downstream from the release, no significant oil was reported beyond Pompey's Pillar (approximately 45 miles from the spill site). Beyond Pompey's Pillar, the oil observed included "only a few small sightings of pockets of emulsified oil" (i.e., globules of oil) (USEPA 2011b). The majority of the impacted areas appeared to be in a 20-mile area between Laurel and Billings, Montana. The floodwaters forced oil to wash ashore into agricultural fields along the river. Samples of groundwater and drinking water sources found no evidence of spill-related contamination (MDEQ 2016a). In 2012, ExxonMobil Pipeline Company paid \$1.6 million in penalties, cleanup costs and payments of the state's costs (MDEQ 2016a). A 2015 final order from PHMSA ordered the payment of an additional \$1.05 million in civil penalties (PHMSA 2015).

- **Mayflower, Arkansas 2013.** On March 29, 2013, a 3,190-barrel (133,980-gallon) Wabasca Heavy crude oil spill occurred from a 20-inch pipeline operated by ExxonMobil Pipeline Company in a residential neighborhood in Mayflower, Arkansas (Fariello 2013; PHMSA 2019b). Metallurgical analysis determined that the spill resulted from a crack in the pipeline (Hurst Metallurgical Research Laboratory, Inc. 2013). Valves closed 16 minutes after detecting a pressure drop in the pipeline. The release did not cause any known injuries, fatalities or fires, but the city of Mayflower recommended the evacuation of 22 homes near the release. The Mayflower Police Department notified residents of these homes as to the city's recommendation. Sampling efforts conducted in support of the spill response detected elevated levels of polycyclic aromatic hydrocarbons and benzene in a small percentage of collected soil samples. The air quality remained within acceptable levels with the exception of the high pooling areas, where response crews worked with safety equipment (Arcadis 2014a). Total costs to respond, remediate and address property damage resulting from the spill exceeded \$81 million.
- **Mountrail, North Dakota 2013.** On September 29, 2013, a local farmer observed oil in an agricultural field in Mountrail, North Dakota. An underground pipeline operated by Tesoro High Plains Pipeline had released 20,600 barrels (865,200 gallons) of Bakken crude oil (PHMSA 2019b; Sider 2013). This spill was one of the largest in state history. At the time of the release, continuous leak detection equipment was not installed, nor required for the segment of pipeline affected (Frosch 2013). The spill was contained within a 7-acre spill zone, according to the North Dakota Department of Health, and 13 acres of land were excavated as part of the remediation phase (Nemec 2016). The spilled oil seeped into the soil to a depth of at least 30 feet, but was still well above the water table (Smith 2014). The root-cause analysis conducted by the pipeline operator determined that the release occurred at the site of a hole created by an electrical discharge through the soil, which could have been the result of a lightning strike (PHMSA 2019b).
- **Glendive, Montana 2015.** On January 17, 2015, a pipeline operated by Bridger Pipeline ruptured beneath the Yellowstone River in Montana and released over 758 barrels (31,836 gallons) of Bakken crude oil (PHMSA 2019b). The spill occurred from a breach in the pipe body, which had been installed using the open trench method, caused by river scour. The frozen Yellowstone River impeded cleanup efforts. USEPA Pollution Report 12 (POLREP #12; 24 March 2015) indicated that a sheen from this spill was reportedly observed as far as Crane, Montana, located 59 river-miles downstream from the pipeline crossing. Sampling efforts detected benzene at a water intake associated with the city of Glendive's public drinking water

supply located 7 miles downstream. Glendive's water treatment plant used activated carbon filtration to remove VOCs from drinking water. Daily sampling continued at the treatment plant prior to the installation of an alarm system that would shut down the plant if benzene levels reached 2 ppb (less than half of the maximum contaminant level allowed by the Clean Water Act) (MDEQ 2016b). More than a month after the release, Montana Fish, Wildlife and Parks personnel caught and tested fish in the affected area. They found detectable levels of polycyclic aromatic hydrocarbons in some of the fish muscle tissues (Montana Fish, Wildlife and Parks 2015). Section 5.5.7 provides additional information regarding potential impacts to fish and wildlife from exposure to polycyclic aromatic hydrocarbons. The section of damaged pipeline was removed from the river and sent to a lab in Oklahoma for metallurgical testing (MDEQ 2016b). Bridger and the Montana Department of Environmental Quality signed a Consent Order for the incident on February 8, 2017. In accordance with this agreement, Bridger will pay a \$1 million civil penalty, which will include \$200,000 toward the State's general fund and \$800,000 on Supplemental Environmental Projects approved by the Montana Department of Environmental Quality (MDEQ 2017).

5.4 CRUDE OIL RELEASES

This section summarizes key information that is required to understand how crude oil behaves following release to the environment. The following characteristics are of particular importance with respect to environmental effects from a spill.

5.4.1 Characteristics of Crude Oil

Crude oils differ in their solubility, toxicity, persistence and other properties that affect their impact on the environment. The following characteristics of crude oil are of particular importance with respect to environmental effects from a spill:

- Density – determines whether the crude oil is classified as light, medium or heavy.
- American Petroleum Institute (API) gravity – (measured in degrees) indicates whether the crude oil would sink or float upon release to a waterbody.
- Viscosity – a measure of how easily the oil would flow. Typically, viscosity increases (meaning it does not flow as easily) as temperature decreases.
- Pour point – the lowest temperature at which the oil changes from a free-flowing liquid to a material that does not flow freely.
- Proportions of volatile fractions (e.g., benzene, toluene, ethylbenzene and xylenes [BTEX]) and semi-volatile fractions (e.g., polycyclic aromatic hydrocarbons) – an indicator of (1) the portion of oil that would more readily evaporate, (2) the portion of oil that would more likely physically persist in the environment (3) the portion of oil that could dissolve or disperse into an aquatic environment and cause potential toxicological effects on animals and plants. Many of the volatile and semi-volatile compounds are considered key toxic components of crude oil.
- Proportions of other elements and compounds, including sulfur and metals. Typically, crude oil with a sulfur content greater than 0.5 percent by weight is considered sour, and crude oil with less than 0.5 percent sulfur is considered sweet.

The API introduced the term API gravity (measured in degrees) to reflect how heavy or light petroleum products are in comparison with water (i.e., the product's density). If the API gravity of the oil is greater than 10 degrees, the oil is less dense than water and thus floats on water. If the API gravity of the oil is less than 10 degrees, it is denser than water and thus sinks in water (though the heavier and lighter

components of crude oil may separate and behave differently in water under certain conditions, as described in Section 5.4.3.2). API gravity allows for the comparison of the relative densities of various crude oils. The higher the API gravity is, the lighter the crude oil. Light crude oil typically has an API gravity of 33 degrees or more, while heavy crude oil typically has an API gravity of 28 degrees or less (Platts 2018). However, different organizations use slightly different values of API gravity to differentiate between heavy and light crude oils.

Under the Proposed Action, the pipeline would transport a variety of crude oils. These can be categorized into three general categories: conventional light crude oil (from the Bakken formation), synthetic crude oil (e.g., Suncor Synthetic A) and dilbit (e.g., Western Canadian Blend). Table 5-5 summarizes the characteristics of these products. These products would be transported in **segregated** batches. **Mixing could occur but only at the interface point between batches; however, this mixing would be minimal. Drag reducing agents (DRA) could be added in trace amounts to the Keystone XL Pipeline to facilitate operations by reducing the viscosity of the crude oil and allowing it to flow more easily through the pipeline. Common constituents of the DRA include ethylene glycol, hydrocarbon solvents and alcohols.**

Table 5-5. Average Physiochemical Properties of Crude Oils Transported on the Keystone XL Pipeline

Parameter	Unit	Measure	Light Conventional (Bakken)	Synthetic (Suncor Synthetic A)	Dilbit (Western Canadian Blend)
Density	g/ml	Mean	0.82	0.86	0.92
Gravity	API	Mean	42.1	32.5	21.8
Viscosity	cSt @ 38°C	Mean	3.4	4.5	63
Pour Point	°C	Mean	3	-72	-45

Source: Crude Quality, Inc 2018a, 2018b, 2015; North Dakota Petroleum Council 2014; TransCanada 2017

% = percent; °C = degrees Celsius; API = American Petroleum Institute; cSt = centistoke; dilbit = diluted bitumen; g/ml = grams per milliliter

Conventional light crude oil, such as products derived from the Bakken formation, typically contains high concentrations of light-end petroleum hydrocarbons, such as methane, ethane, propane and butane, and may also include hydrogen sulfide. Bakken crude oil has a very high API gravity and therefore would be more volatile and buoyant in water than the heavier crude oils.

Synthetic crude oil is created when raw bitumen is partially refined (i.e., upgraded) through a process that removes many of the high molecular weight compounds present in the bitumen (e.g., asphaltenes). Synthetic crude oil is comparable to mid-weight conventional crude oils. The representative synthetic crude oil (Suncor Synthetic A) has an API gravity of 32.5, indicating that it will behave in a manner between a light and a heavy crude oil upon release to the environment with respect to spreading, evaporation or emulsification.

Dilbit is created when the highly viscous raw petroleum product extracted from the Alberta oil sands (called bitumen) is diluted so it can be transported by pipeline. Bitumen is composed of high-molecular-weight hydrocarbons, commonly called asphaltenes. Asphaltenes primarily contain heavy hydrocarbons, nitrogen, oxygen, sulfur and traces of heavy metals like nickel and vanadium. At room temperature, bitumen is a dark, sticky sand that looks similar to topsoil. In order to transport through a pipeline, diluents are added to reduce the viscosity of the product. Diluents typically include natural gas condensate, naphtha or a mixture of other light hydrocarbons. However, diluent types vary, and the mixture typically remains a trade secret. Natural gas condensate (a by-product of natural gas production)

is currently the primary type of diluent used for Canadian heavy crude oil. Typically, dilbit consists of 30 percent diluent and 70 percent bitumen (Crosby et al. 2013). The ratio of diluent to bitumen in dilbit is such that it will still flow at the lowest pipeline operating temperature (42°F or 6°C). Like all the crude oils transported on the proposed pipeline, dilbit has an API gravity higher than 10, indicating it will initially float on water. In addition, dilbit is more viscous than either synthetic or conventional light crude oils, so it will spread over land and across water at a slower rate. Due to their high viscosity, heavy crude oils do not disperse in the environment as quickly as light crude oils. Heavy crude oil like Western Canadian Blend has a greater proportion of heavy molecular weight compounds (e.g., asphaltenes, resins), and tends to be more stable and thus have longer environmental persistence than lighter crude oils.

5.4.2 Propagation of Spills

Many variables influence the speed and distance a released product travels from the site of a release (referred to as propagation). This section first discusses the types of releases that could occur, and then discusses the factors specific to surface releases and water releases. Section 5.5 discusses how these general factors apply to the specific resources and conditions found within the proposed pipeline ROI.

5.4.3 Release Type

One major characteristic that affects the volume of a release is the release type (e.g., leak versus rupture). A leak is a release over time, typically over an extended duration. Leaks can result from a small crack or hole in a pipeline and may be difficult to detect. Pinhole leaks are a notable subset of this category, as the release point is very small, and therefore product may flow slowly out of the pipeline. The volume of product released would fall below the detection threshold of the SCADA system, and could continue unnoticed until the released volume is observed at the ground or water surface or is identified during a pipeline integrity inspection. An engineering study performed for the Keystone XL pipeline determined that a pinhole leak (defined as a hole with a 1/32-inch diameter) could release approximately 28 bpd (880 gallons per day) (Leis et al. 2013). Pinhole leaks may result from defects in material or faulty construction or fabrication of the pipeline.

A rupture, however, occurs because of a significant failure of the pipeline system. A rupture produces an opening in the pipeline that is capable of releasing product at a relatively high flow rate. A rupture generally renders the pipeline inoperable, as opposed to a leak, which may remain undetected during the operation of the pipeline and its facilities. Leaks and ruptures also differ in terms of fluid lost per unit of time; ruptures have a much higher rate of release than leaks. As a result, ruptures are typically easier for a leak detection system to identify, but the higher release rate could result in a larger spill.

The total volume of a pipeline release depends on a number of factors, such as the type of release, hole size, pipeline pressure, pipeline elevation and the distance between isolation valves. After detecting and confirming a leak, the pipeline control center personnel would shut down the pump stations on the pipeline, thus eliminating the force maintaining pressure on the pipeline. Personnel would then begin closing valves to isolate the leak. The volume contained in the mainline pipe between the isolation valves could also contribute to the spill even after the isolation valves are closed. The time it takes to shut down the pipeline and close valves directly affects the volume of product that escapes and depends on the pipeline equipment. For example, valves with manual controls (referred to as “manual valves”) require a person to arrive onsite and either turn a wheel crank or activate a push-button actuator. Valves that can be closed without a person at the valve’s location (referred to as “automated valves”) include remote-control valves, which can be closed via a command from a control room, and automatic-shutoff valves, which can close without human intervention based on sensor readings.

In accordance with Subpart D of 49 CFR 195, Keystone would locate remotely activated valves along the proposed pipeline at pump stations and receipt facility sites, as well as at upstream and downstream sides of each waterbody crossing greater than 100 feet in width. When planning valve placements, Keystone would consider topography, access and proximity to power.

5.4.3.1 Surface Release

The behavior and distance that spilled crude oil could travel over land from the site of a release depends upon many factors, including the viscosity of the crude oil, the topography of the area, location of the release, soil type, land cover, weather, volume of the release and the timing and effectiveness of the spill response.

Crude oil released from an underground pipeline would absorb into the soil in the area of the release. A leak with a very low flow rate would saturate the soils around the site of the release and would likely flow downwards toward the water table, potentially resulting in the contamination of groundwater. If the flow rate of the release were large enough, the product could flow to the surface and create overland flow. Lighter crude oil products, such as Bakken crude oil, have lower viscosities than heavier crude oils and could therefore spread faster from a release point than heavier products like dilbit, and they could permeate into the soil more readily.

A release that makes it to the surface would initially accumulate at the site of the release and then spread along the surface of the land. As the oil is released and spreads from the site of the release, weathering and dispersion would occur. Major weathering and dispersion processes in soil include sorption (attachment of free oil product to soil particles), evaporation (vaporization of volatile components), photodegradation (degradation caused by sunlight) and biodegradation (degradation caused by microorganisms). These processes may act on crude oils at different rates. For instance, a spill of light crude oil would have a higher evaporation rate compared to heavy crude oils. Through evaporation, the lighter components of the crude oil would transfer from the liquid phase to the vapor phase. Evaporation would begin immediately after a release and result in a significant reduction in the volume of the release. Light crude oils can lose up to 75 percent of their released volume after just a few days because of evaporation, while medium crude oils can lose up to 40 percent of their released volume in that time period. Heavy or residual crude oils may only lose up to 10 percent of their initial volume from evaporation in the first few days following a spill (National Research Council 2003).

Weathering – The weathering process includes a series of physical and chemical changes, which begin to occur immediately following a release of product into the environment. The weathering process can affect the properties of the released oil, including increasing the product's density, viscosity, flash point and adhesion. Weathering typically occurs more quickly under higher temperatures and slows as temperatures approach freezing (National Academies of Sciences, Engineering and Medicine 2016).

A report prepared by Tsapraillis (2014) documents an analysis of crude oil dispersion and an examination of how quickly representative light, medium and heavy conventional crude oils penetrated columns of sand compared to a representative dilbit. Light and medium crude oils penetrated the sand column most quickly, but heavy conventional crude oil also dispersed more quickly through the sand than dilbit, despite having a similar viscosity. These results may arise from the increasing viscosity of dilbit during the experiment as the diluent component evaporated. These conclusions suggest that, “land-based dilbit releases would not penetrate vertically into the ground as quickly as conventional crudes” (Tsapraillis 2014). The slower penetration of dilbit through the soil column may also result from the product's greater adhesion in relation to conventional crude oils. Because of the higher percentages of resins and asphaltenes in dilbit and the evaporation of the volatile diluent following a release, this type of crude oil is more likely to adhere to the surfaces with which it comes into contact, including soil particles. As such, dilbit will likely spread over and/or penetrate the ground more slowly than the less adhesive lighter conventional crude oils (National Academies of Sciences, Engineering and Medicine 2016).

The topography or terrain near the spill would affect the extent of a potential overland flow. A spill released to level, flat ground would generally not migrate as far from the release site as a spill on sloped ground. Hills, valleys, low areas and other land features could contain a release or affect how a release migrates over the ground surface. A steep slope could accelerate the rate of oil migration and cause the spill to cover a greater area. Releases near low areas or confined valleys could pool, contain the oil and reduce areal coverage of the release. A spill that flows into a drainage ditch or channel might flow a greater distance from the release site because of the funneling of oil and the slope of the channel. Smaller drainage channels could eventually connect to larger channels, which could empty to a surface water feature and increase the impacts of a spill.

Whether a release occurs in an urban, suburban or rural setting can also greatly affect spill volume and impact. In urban and suburban areas, spill response time is typically prompt, which generally decreases the size and duration of a spill event. In urban and suburban areas, excavation and construction activities occur more frequently, increasing the chances of pipeline damage and a release. Another important consideration in urban and suburban areas is population size. Because these areas are more populated than rural areas, potential release impacts to residents could be greater.

The type of soil at the site of the release also affects the spread of the spill. Sands and gravels have larger pore sizes, so the soil particles are spaced farther apart. Soils with a larger pore size allow liquid to pass through them more quickly. A release that occurs in an area of sandy soils could soak into the soil more quickly than a release that occurs in soils that are more tightly packed. Clays and silts have smaller pore sizes, which restrict crude oil from moving as freely. Thus, a spill of equal volume on sandy soils would tend to penetrate deeper than in clays and silts. Because spills are more likely to move downward in sandy soil, there are generally fewer impacts to the surface, but increased potential for impacts to groundwater. The reverse is true with clay soils. In areas with a rocky surface, spills would tend to both cover and pool between the rocks.

The moisture content of soil also influences its ability to soak up liquids. In wet or saturated soil, water partially or completely fills the pores between the soil particles, leaving little or no room for the less dense oil to move downward. A lack of downward movement generally leads to a spill that covers a larger surface area. As a spill spreads over land, the oil adheres to dry surfaces. Because saturated soils are less susceptible to the downward movement of crude oil, they tend to allow oil to flow over the ground surface.

Ground cover also affects the ability of a spill to flow over the ground surface. Ground covers, including grasses, forests, saturated ground and hardscape (e.g., concrete or asphalt) all retain different amounts of oil. Crude oil that flows over the ground surface would coat vegetation. The surface area of the affected plants and the amount of oil retained would affect the overall extent of the spill. Where the oil flows into forested areas, shallow root zones may act as conduits and allow the oil to penetrate deeper into the soil. In hardscapes, oiling tends to be surficial, except where expansion joint seams, cracks or other deformities in the cover's surface exist. Cracks and joints in roadways could allow oil to reach the potentially more permeable underlying soils and increase the depth of the impact.

5.4.3.2 Water Release

The crude oils to be transported on the proposed pipeline have an API gravity higher than 10 (see Table 5-5), indicating that if a release occurred in or flowed to a waterbody, the crude oil would initially float on the surface of the water. As the oil floats, some constituents within the crude oil would evaporate and others would dissolve. Lighter crude oils with lower densities (higher API gravities) and a higher proportion of volatile compounds have a greater propensity to float in water and evaporate more readily than heavier crude oils. In turn, the lighter components create a very thin sheen of oil that can spread farther and affect a larger area than what would be expected of a heavy crude oil (e.g., refer to Section 5.3.4 discussion of the Laurel, Montana 2011 spill of light sweet crude oil into the Yellowstone River that resulted in visible signs of oil at least 70 miles downstream). Physical factors that could affect the crude oil's mobility in water include wind speed, waterbody currents, waves, waterbody flow velocity and temperature. As the product floats, some constituents would evaporate and others would dissolve; eventually some material would disperse into the water and the remainder would sink. Heavier crude oils are more viscous than either synthetic or conventional light crude oils and would spread across water at a slower rate. As such, heavier crude oils do not disperse into the environment as much or as quickly as light crude oils following a water release. Turbulence in the water promotes dispersion, such that during storm events, dispersion can be the chief removal mechanism of the slick. During storms, the majority of the oil can be dispersed into the water column. For releases under more normal weather conditions, dispersion generally is nominal, and evaporation is the primary environmental fate process.

Flood conditions can increase the downstream spread of released crude oil, as observed following the 2010 release in Marshall, Michigan and the 2011 release in Laurel, Montana (see Section 5.3.4). Under such conditions, the rate of water flow increases, causing faster transport of product and increasing the distance over which product floats before becoming submerged. In addition, spill detection and response activities may become inhibited, unsafe and less effective during storm-related floods due to weather conditions or rate of water flow.

While crude oil would initially float on water following a release, the heavy compounds remaining after the volatile constituents evaporate are more likely to become submerged or sink after product weathering and adhere to sediment or other particles within the water column. Submerged products are heavier than water, which causes them to sink below the water surface and become suspended in the water column by current forces, whereas sunken products reach the floor of the waterbody and will collect in low-lying areas. Flowing water systems could transport submerged or sinking product downstream or result in deposits in river or stream bottoms. These deposits could become a continual source of contamination as stream flow continues to distribute them.

Evaporation is the primary mechanism responsible for the reduction in crude oil volume, particularly in the first few days following a release, through the loss of low molecular weight constituents and light oil products. Evaporation increases with spreading of a slick, higher temperature, and wind and wave action. As lighter components evaporate, remaining crude oil becomes denser and more viscous. While evaporation usually reduces the toxicity of the oil, it can also lead to greater persistence within the water if the remaining oil is not cleaned up quickly.

Dissolution of crude oil in water is not a primary fate process since most components of crude oil are relatively insoluble. Dissolution increases based on evaporation, increasing temperature, decreasing salinity and increasing concentrations of dissolved organic matter (MassDEP 2015). Photodegradation (decomposition of the oil by sunlight) is also not a primary fate process. Photodegradation tends to enhance the solubility of crude oil in water but can also increase its toxicity.

Cold temperatures could freeze waterways and greatly complicate the response to an oil release into water. The presence of ice inhibits initial detection of a spill, observations of the presence of oil and estimates of the extent of the oil within the waterway (MDEQ 2016b). A Bakken crude oil spill near Glendive, Montana in January 2015 occurred when an underwater section of the Poplar Pipeline, operated by Bridger Pipeline, LLC, ruptured and released 758 barrels (31,836 gallons) of product into the frozen Yellowstone River (PHMSA 2019b). The ice slowed the oil's travel downstream, but also trapped VOCs within the water column that would have otherwise quickly dissipated in open water. These VOCs affected drinking water intakes downstream of the spill (Nunez 2015). Response personnel carved ice slots along the Yellowstone River to find and recover the oil. Fractures in the ice trapped some of the oil found on the surface of the frozen river (MDEQ 2016b; Nunez 2015). Oil recovery took place slowly, potentially increasing the downstream distance affected by the release.

As explained in Section 5.3.2, continuous scour caused by water currents or other hydrodynamic forces can threaten the integrity of pipelines buried beneath or along water bodies. As part of the USACE Section 408 review process (as codified at 33 USC 408), Keystone prepared a Missouri River Scour Analysis on the integrity of the Keystone XL pipeline to withstand scour action at the proposed Missouri River water crossing in Montana. At this crossing location (downstream of the Fort Peck spillway), the pipeline would be installed using HDD for 2,592 feet at a depth of approximately 53 feet below the lowest surveyed river elevation. In accordance with the Emergency Response Plan, pipeline inspections would be conducted following flash flood events to inspect for damage to or exposure of the pipeline caused by soil erosion. The hydraulic model and scour analysis estimated that the 500-year flood frequency event could result in a river-bottom scour depth of 11.9 feet, which would leave 22.1 feet of covering over the pipe. The analysis also considered a worst-case scenario, the equivalent of a 40,000-year event, whereby the Fort Peck spillway outflows exceed design capacity (resulting in a full spillway release) adding an additional 350,000 cubic feet per second of flow. Modeling indicated that this type of event could generate a river-bottom scour depth of 21.7 feet, leaving 12.3 feet of cover over the Keystone XL pipeline. Based on the hydraulic modeling analysis, the report concluded that the current design depth would be adequate to protect against potential scouring (TransCanada 2018a).

Similar modeling was also conducted for the Yellowstone River. As part of the Montana Facility Siting Act (MFSA) review, Keystone prepared a 100- and 500-year flood event scour and lateral migration analysis of the Yellowstone River. The modeling and reports were part of the 2011 FEIS and MDEQ analysis under the MFSA. The scour analysis for the Yellowstone River found that the maximum scour resulting from a 500-year event would still remain 19 feet away from the pipeline (Morrison Maierle, Inc. 2011).

Potential accidental releases into surface waters could result in impacts to vegetation, wildlife and fisheries as discussed in the 2014 Keystone XL Final SEIS and within this chapter. The intensity of impact to the resource would depend on the proximity and size of release. As discussed in Section 5.2, the Department has estimated that maximum reasonable distance for downstream transport and resulting impacts would be up to 40 river-miles downstream from the release point. Impacts to vegetation, wildlife and fisheries also have the potential to impact subsistence activities including impacts to hunting and fishing rights. The loss of access to subsistence resources as a result of an accidental release would require individuals dependent on these resources to hunt, gather, harvest and fish elsewhere until the site of an accidental release is remediated.

As discussed in the 2014 Keystone XL Final SEIS, if an accidental release did affect surface water, Keystone would be liable for all costs associated with cleanup and restoration, including damages to natural resources and for the loss of subsistence use of these natural resources (U.S. Department of State 2014).

5.4.3.3 Fire and Explosion

While crude oils are flammable petroleum products, a fire or explosion would only occur under the following conditions:

- **Fuel** – The vapors produced from the crude oil must mix with the air to a sufficient concentration (lower flammable threshold) at which the mixture would ignite.
- **Oxygen** – Oxygen must be present in the air at a concentration to support ignition.
- **Heat** – The temperature of the fuel must be heated to a point where sufficient vapors are given off for ignition to occur.

By federal definition, a substance is flammable when it has a flash point between 20°F (-6.7°C) and 100°F (37.8°C) (16 CFR 1500.3). The flash point is the temperature at which a substance reaches a sufficient fuel-to-air concentration to ignite when exposed to an open flame (Tsaprailis 2014; Platts 2018). By this flash point definition, crude oil is a flammable product. However, the appropriate concentrations of flammable vapors from the crude oil and oxygen would need to be available in the presence of an ignition source for a fire to occur. Crude oil released into confined areas could generate a sufficient concentration of flammable vapors to ignite, while crude oil released in an open environment would be less likely to reach the concentration necessary to cause a fire or explosion since the flammable vapors released from the oil would disperse throughout the surrounding area. Very low oxygen levels and the lack of an ignition source inside a closed pipeline make it unlikely that an explosion or fire would occur.

After a spill, the flammability of crude oil decreases through natural weathering and the loss of volatile components. This occurs through processes such as evaporation, wave and wind action, dispersion, dissolution, sedimentation and biodegradation, among others. The location of an oil spill plays a role in the rate of weathering, and therefore the length of time that the oil remains flammable.

The range of values reported for the flash point of Bakken crude oil varies significantly with some values reported on safety data sheets as low as less than -20°F (-28.9°C) (ConocoPhillips 2014), but more typically reported as less than 73°F (22.8°C). One reason for this variability is the test methods that are used to determine the flash point in the laboratory may allow some of the lighter compounds to evaporate from the product during sampling and analysis, which would bias the test for a higher flash point (Sandia National Labs 2015). Since it is the vapor emissions that actually burn, products containing more light components, such as Bakken crude oil, have lower flash points and are more flammable than heavier crude oils.

Dilbit, although classified as a heavy crude oil, initially acts more like a lighter crude oil, governed by the 20 to 30 percent volume of diluent component (Tsaprailis 2014). The abundance of volatile compounds in dilbit allows the product to be potentially flammable for a day or longer after a release (National Academies of Sciences, Engineering and Medicine 2016). Cold weather conditions slow the volatilization process and thus may extend the period during which the product is flammable (Tsaprailis 2014). The flash point of dilbit is comparable to light crude oil before it is released. However, initial weathering of dilbit occurs very rapidly after a release, which causes its flash point to quickly rise above the flammable limit (e.g., to greater than 148°F [60°C]) (National Academies of Sciences, Engineering and Medicine 2016).

5.4.4 Response and Remediation of Spills

After safety, the highest priority for spill response is to prevent released product from reaching water and then to reduce or avoid product migration out of the source area. When a spill occurs, one of the first challenges that first responders face is containing and recovering the spilled product. The faster a spill can be contained, the smaller the area (and number or extent of resources) that the spill would affect. The methods and technologies used to contain a spill depend on whether the spill occurs over land or water.

Many of the methods used to detect, contain and recover spilled product are well established and have been used over the past several decades. Technological refinements and advances in addressing spills continue to improve and increase the ability of responders to contain and clean up spills. Whichever methods response crews use to contain and recover the spilled product, they must weigh the effectiveness of the response and remediation technique against the intrusiveness of the remedial effort on the environment and potential receptors. Response personnel need to select technologies that provide the greatest degree of protection to human health and environmental resources.

All spill prevention, mitigation and remediation plans developed for the Keystone XL Project and discussed in the 2014 Keystone XL Final SEIS would apply to the proposed Project (refer to Section 3.13.1 and Appendix B of the 2014 Keystone XL Final SEIS). The combined implementation of industry standards and practices that Keystone would implement as part of construction and operation of the Keystone XL Project would aid in reducing the potential for spill incidents associated with the proposed Project. The standards were developed by the National Association of Corrosion Engineers, International and American Society of Mechanical Engineers, and other industry leaders.

The Department, in consultation with PHMSA, have determined that these standards and practices, combined with PHMSA regulatory requirements and the set of proposed Project-specific Special Conditions developed by PHMSA, would result in a degree of safety over any other typically constructed domestic oil pipeline system under current code and a degree of safety along the entire length of the proposed pipeline system, similar to that required in high consequence areas as defined in 49 CFR 195.450. The Project-specific Special Conditions include a list of 59 items, or “considerations,” that PHMSA recommended be included in the written design, construction, operating and maintenance plans and procedures for the Keystone XL pipeline (refer to Appendix B of the 2014 Keystone XL Final SEIS). These considerations exceed existing federal standards and would be implemented along the proposed pipeline. The 59 conditions include, among others, the items listed below separated into four categories:

- **Material requirements** for the steel used to manufacture the pipeline, manufacturing standards, fracture control measures, quality control measures, puncture resistance and pipe coatings.
- **Construction requirements** for coatings, fittings, pipeline design factor, temperature control, overpressure protection control, welding procedures, depth of cover and pressure tests.
- **Operations and Maintenance** requirements for the SCADA system, pipeline inspection, corrosion surveys, cathodic protection, pipeline markers, a damage prevention program and anomaly evaluation and repair.
- **Reporting, records retention and senior-level certification requirements.**

In accordance with 49 CFR 195, Keystone would maintain an Integrity Management Program required for pipelines that could affect a high consequence area. As stated in Section 3.13-1 of the 2014 Keystone XL Final SEIS, a Facility Response Plan would be prepared and submitted to PHMSA prior to initiating operation of the proposed Project, in accordance with requirements of 49 CFR 194. This plan relies on final permitting requirements and detailed design and construction information. A proposed Project-

specific, worst-case spill scenario including location, available resources and response actions would be addressed in the Facility Response Plan once the final permitting, detailed design and construction information were available. Under current regulations, Keystone would be required to submit these plans to PHMSA for review and approval prior to operation of the proposed Project.

In addition to the above, Keystone's Emergency Response Plan details overarching strategies and specific tactics to manage various emergencies, including a potential release of crude oil into the environment. Within the Emergency Response Plan, detailed Geographic Response Plans identify specific resources and tactics that would be used if a release occurred within a specific area. A Geographic Response Plan is the corresponding tactical plan that guides emergency responders in the event of an oil release. It is composed of a series of maps and site-specific response locations termed priority protection areas. Each Geographic Response Plan map serves as a quick reference guide to the equipment and deployment tactics anticipated for a response, as well as identification of sensitive resources and a corresponding protection strategy to be used during an emergency response.

5.4.4.1 Spill Response and Containment

This section provides a summary of typical response and containment measures. All authorized response activities are discussed in the applicable Regional Contingency Plan and/or Area Contingency Plans prepared by the U.S. National Response Team. Regional and Area Contingency Plans are reference documents prepared for the use of all agencies engaged in responding to environmental emergencies within a defined geographic area. They provide a mechanism to ensure that all responders have access to essential area-specific information and promote inter-agency coordination to improve the effectiveness of responses.

Mechanical containment and recovery is the primary method used in spill response. The equipment used in this method includes booms, skimmers, temporary dams or berms, sorbent materials and vacuum equipment/trucks, which response crews use to contain, capture, temporarily store and recover spilled product until it can be properly disposed. Once oil has been contained, it can be recovered using booms, skimmers, sorbents and vacuum equipment/trucks (National Academies of Sciences, Engineering and Medicine 2016).

- **Booms** – Containment booms are floating, physical barriers used to contain spills over water by blocking the flow of oil over the surface of the water. Booms float on the water's surface, while a portion called a boom skirt extends beneath the surface of the water. Responders deploy booms using mooring systems, such as anchors and landlines. Response crews can also use booms to divert floating oil or exclude floating oil from reaching selected areas and protect sensitive shoreline and resources. Booms are a common first response method, but they work best when deployed correctly and quickly in areas where released oil is contained within the banks of a waterway. Effectiveness of booms decreases with high flow rate, turbulent water and time as floating oil weathers and sinks below the water surface (National Academies of Sciences, Engineering and Medicine 2016). Since booms are only used for containment, they would be used in combination with skimmers or sorbents to recover the oil.
- **Skimmers** – Skimmers are mechanical devices used to recover floating oil from the surface of water. Skimmers may be self-propelled and may be used from the shore or operated from vessels. There are several different kinds of skimmers, but they all include some means of vacuuming or retaining oil that passes into the device. Below are three common types of skimmers provided by the USEPA (1999).
 - *Weir skimmers* use a dam or enclosure positioned at the oil/water interface. Oil floating on top of the water will spill over the dam and be trapped in a well inside, bringing with it as little water as possible. The trapped oil and water mixture can then be pumped out through a

- pipe or hose to a storage tank for recycling or disposal. These skimmers are prone to becoming jammed and clogged by floating debris.
- *Oleophilic (oil-attracting) skimmers* use belts, disks or continuous mop chains of oleophilic materials to blot the oil from the water surface. The oil is then squeezed out or scraped off into a recovery tank. Oleophilic skimmers have the advantage of flexibility, allowing them to be used effectively on spills of any thickness. Some types, such as chain or “rope-mop” skimmers, work well on water that is choked with debris or rough ice.
 - *Suction skimmers* operate like a household vacuum cleaner. Oil is sucked up through wide floating heads and pumped into storage tanks. Although suction skimmers are generally very efficient, they are vulnerable to becoming clogged by debris and require constant skilled observation. Suction skimmers operate best on smooth water where oil has collected against a boom or barrier.
 - **Temporary dams or berms** – For spills that occur on land, response crews can create or deploy temporary dams or berms to block the flow of crude oil so that it can be contained to the greatest extent possible. Response crews typically use these methods to protect priority areas such as inlets to drains, sewers, ducts and watercourses. Materials commonly used to construct dams include soil, sandbags, absorbents, planks and pillow dams inflated with air or water. The terrain would dictate the placement of the dams. Another method of containment is to dig collection pits. This creates a new low point into which the oil will flow, providing a recovery point for removal. Temporary berms and dams are primarily used for containment only and therefore must be combined with a secondary methodology, such as skimmers, used for recovering the oil.
 - **Underflow dams and weirs** – Underflow dams and weirs use inclined culverts or pipes to move water downstream while leaving the floating oil contained behind the dam. Response crews use underflow dams when there is too much water flow to allow for a complete blockage of a drainage channel, stream or river. Materials used to build the dam or weir include earth, gravel or other barriers such as sandbags or plywood sheets. Overflow dams are similar devices used for retaining spilled products heavier than water while still allowing water to flow above them. While typically effective, these methods can be subject to erosion, requiring constant maintenance. In addition, low flow rates and clogging of pipes with debris can also be problematic.
 - **Sorbent materials** – Sorbents are sponge-like materials used to soak up small volumes of oil. In general, response crews use sorbents only for small spills and during the final stages of cleanup. In urban locations, such as city streets or concrete drainage ditches, a combination of sorbent booms in front of a layer of sandbags holding the boom in place can serve as an effective means to create containment along with some collection. Sorbents alone are typically insufficient; therefore, these are often used in combination with one or more of the techniques described above.

In situ burning, or burning the product in place, is a far less commonly used method of containment for inland oil spills. Response crews typically use this method only for major spills in areas where the burn can be easily controlled and confined, and it is most effective for fresh spills under calm weather conditions. In such circumstances, burning provides the only practicable means to eliminate large volumes of product quickly when they cannot contain or recover the product readily using other means. When responders burn spills over water, they can retain better control over a fire by using fire-resistant booms to cordon off portions of the overall spill, rather than igniting the entire spill at once (Barnea 1995). If utilized as a method of containment, the federal on-scene coordinator, a state representative and the responsible party must approve the use of in situ burning and conduct the process in accordance with an In Situ Burn Plan. Light crude oil has a high burnability with an efficiency range of 85 to 98 percent,

compared to an efficiency range of 75 to 90 percent for heavy crude oil (MassDEP 2015). Dilbit, after weathering for 1 day, has been shown to have a lower burnability with an efficiency range of 50 to 75 percent (National Academies of Sciences, Engineering and Medicine 2016). Many regulatory agencies strictly regulate burning as a means of response; procedures for obtaining permissions for an in-situ burn can be found in applicable Regional and Area Contingency Plans.

Spills of dilbit initially float on water and therefore responders can employ the same tactics as would be used for a spill of conventional crude oil. However, the properties of dilbit change as it weathers. The lighter components volatilize, and the product becomes more dense causing it to sink below the water surface (National Academies of Sciences, Engineering and Medicine 2016). One of the most challenging aspects of responding to spills, particularly dilbit spilled in water, is detecting, containing and recovering submerged and sunken oil. Submerged and sunken oil is difficult to detect because it is often not visible from the surface. Methods to detect submerged and sunken oil are typically slow, limited by water conditions and provide only a “snapshot” of a given area (National Academies of Sciences, Engineering and Medicine 2016). Visual observation is a viable detection method in shallow water, although expert analysis is essential for this technique as aquatic biota (vegetation) in the water may be mistaken for oil. Currently, the best method for detecting submerged oil is to drop weighted sorbent materials into low areas for short distances and then visually inspect them for oil to map oil distribution. By examining the sorbent, the presence or absence of submerged or sunken oil can be determined. Collecting core samples can also detect sunken oil during subsurface contamination assessments, but the sampling area of the core may be too small to be effective. Special equipment may also be required to detect submerged oil, including the use of sonar, which response crews have used to locate submerged oil in calm water such as lakes, ponds and bays with some success. Remote and diver-operated underwater video detection systems may also be used, but success depends on visibility and the water’s current. The USEPA recommends using multiple approaches to detect submerged oil. In addition to the methods discussed above, these lines of evidence would include agitation of sediments, mapping of sheens, coring, geomorphological science, fluorescence and laboratory analysis.

The containment of submerged and sunken oil also poses significant challenges. Specialized response equipment is required to contain sunken and submerged oil, including net booms, bottom-hugging weighted booms and watergate dams, submerged booms with anchored skirts, sediment traps, silt curtains and gabion baskets lined with impermeable membranes. Filter fences lined with impermeable membranes and booms with deep skirts help contain submerged oil for recovery. Response crews can use large porous containers filled with sorbent materials to capture sunken and submerged oil. Any of several types of porous containers, such as gabion baskets, prawn or crab traps, silt fences and chicken wire, can serve as the basis for the filter. The container holds sorbent materials, such as oil snares, and submerges into the water column when weighted down. Response personnel monitor the sorbent materials and replace them as needed for oil recovery. They may also use vacuum systems to recover submerged oil. In shallow water where oil remains visible from the surface, response crews have successfully used dip nets or pool nets as an effective way to collect oil. This method is useful if the oil has emulsified or is thick enough to scoop up with the nets. Another common method is to dredge the bottom and remove the oil. Where appropriate, dredging serves as a useful technique to remediate contaminated sites but may generate a large amount of waste material to manage and transport for disposal; increase sediment within the waterway; disturb plant, fish and wildlife habitat; and adversely affect water quality. However, such impacts would be temporary compared to the long-term effects of oil contamination.

5.4.4.2 Remediation

Excavation, or removal of contaminated soil and sediments, is a very common remediation method employed at spill sites. Excavation is similar to dredging, but the term dredging typically applies to work done in water, while excavation may occur on completely dry land or on streambanks. In both cases,

trucks haul the contaminated soil, sediment and any associated vegetation to an approved location for treatment and disposal. For contaminated ground that cannot be removed, such as paved roads, concrete curbing or concrete drainage ditches, heated pressure washing is an effective cleaning method. The collection of wastewater, including the water used for cleaning, is important; therefore, a vacuum truck or some other type of collection must be available. Once the spill remediation effort is no longer effective or efficient, response personnel may implement more passive remediation methods to further the remediation and restoration of affected soil, groundwater and surface water.

The incorporation of hydrocarbon-affected soils into road base or in asphalt mixtures (as approved by the appropriate agencies) is one way to reuse oils affected by a crude oil spill. The remediation crew could recycle recovered product from skimming or vacuum operations by removing water and debris and re-blending. Incineration or burning of contaminated waste from spill response and remediation for energy recovery may be an option in some areas. Disposal of contaminated soil and debris at a solid or hazardous waste landfill is the least environmentally sound method of disposal and would be considered only as the last option.

Excavation would typically represent the most intrusive of the many potential options to address contaminated soil, water and groundwater. As a result, impacts to sensitive resources from excavation would be greater than those encountered through the use of other remedial technologies. In the event of a release that requires remediation, remedial technologies would be selected in accordance with state and federal regulations and in consultation with the regulators overseeing the remediation efforts.

Cleanup endpoints are those criteria set in order to determine whether response actions have been effective. Cleanup endpoints for inland oil spills generally require more specialized equipment and must meet higher standards than those for spills to water for the following reasons (National Academies of Sciences, Engineering and Medicine 2016):

- Inland habitats lack some of the physical processes that can speed the rate of natural removal of oil residues.
- The direct human uses of inland habitats, such as for drinking water, recreation and irrigation, require a higher degree of treatment to avoid human health and socioeconomic impacts.
- Spills in close proximity to where people live, work or recreate may require treatment to a higher level.
- Many states have sediment quality guidelines that must be met during the remediation phase.

5.5 IMPACTS OF RELEASES

5.5.1 Introduction

A spill of crude oil could result in impacts to the various resources discussed in Chapter 3, Affected Environment. The nature and extent of impacts would depend on many factors, including the size of the release, the proximity of the release to sensitive resources, the proximity to features that would promote the transport and migration of the crude oil, and weather conditions that could affect the mobility of the oil and accessibility of areas for response actions. This section provides a qualitative and, where practicable, quantitative description of the types of impacts that could occur from spills and the likelihood of various spill sizes affecting resources.

The remainder of this chapter addresses the likelihood and consequences of spills associated with each of the resource areas analyzed in this SEIS. This analysis takes into account the location of sensitive resources near the proposed pipeline route by evaluating which resources exist nearby that could experience adverse impacts in the event of a spill. The 2014 Keystone XL Final SEIS considered the risk of an accidental

release along the Preferred Route, as well as the potential effects of such a release. This SEIS builds upon the conclusions of the prior document and assesses the risk to resources located along the entire proposed pipeline route, including the MAR, and evaluates whether any new or unique features or resources may be present along the MAR that were not previously considered in the 2014 Keystone XL Final SEIS.

A spill of crude oil from the Keystone XL Project could result in impacts to the various resources presented in Chapter 3, Affected Environment. As discussed in the 2014 Keystone XL Final SEIS and within this chapter, the nature and extent of impacts of a spill depends on many factors including the product spilled, the size of the release, the proximity of the release to sensitive resources, the proximity to features that would promote the transport and migration of the crude oil, the response time and actions taken by responders, the weather conditions that could affect the mobility of the oil and the accessibility of areas for response actions. This section provides a qualitative and, where practicable, quantitative description of the types of impacts that could occur from spills as well as the likelihood of various spill sizes affecting resources along the proposed pipeline route. This analysis considers the location of sensitive resources by evaluating which resources exist nearby that could experience adverse impacts in the event of a spill.

As explained in Section 5.2, this analysis incorporates and updates the screening-level spill modeling conducted during preparation of the 2014 Keystone XL Final SEIS to estimate the distance that crude oil could travel after a spill. This analysis determined that a 50-barrel (small) spill could spread over land up to 150 feet from the site of a spill; a 1,000-barrel (medium) spill could spread up to 500 feet; and a 10,000-barrel (large) spill could spread up to 1,200 feet over land from the release point. In areas of moderate to steep slopes, the Department has further estimated that large spills could extend up to 5,000 feet downslope from the pipeline. If released crude oil reached groundwater, the screening modeling conducted for the 2014 Keystone XL Final SEIS found that components in the oil, such as benzene, could spread downgradient in groundwater an additional 640 feet for a 50-barrel spill, 820 feet for a 1,000-barrel spill and 1,050 feet for a 20,000-barrel spill. This modeling effort also indicated that the three spill volumes could reach groundwater at a depth of 50 feet, although larger volumes could be expected to reach groundwater at deeper depths. Thus, as shown in Figure 5-1, the full extent of a spill could reach the overland distance plus the additional dissolved phase distance. Refer to the 2014 Keystone XL Final SEIS for further discussion of the screening-level modeling effort and the calculation of these distances.

The Department also considered a 40 river-mile downstream distance as the distance crude oil released to water could travel (see Section 5.2) and result in impacts to sensitive resources. For each of the modeled spill distances, the Department assessed the likelihood that a spill could affect sensitive resources, based on spill incident rates and the amount of the resource present within these areas determined to be susceptible to a spill. The following subsections present the likelihood of resources along the proposed pipeline route being affected by potential small, medium, large and catastrophic spills.

Depending upon the resource, a release could have a variety of impacts. For example, a release of crude oil could have a negligible impact on geology but could contaminate soils and groundwater. Other resources, such as biological resources and surface waters, contain sensitive receptors. Sensitive receptors can include habitat for protected species and drinking water intakes, which could experience substantial adverse effects in the event of a release. The impacts of a spill on other resources such as air quality (by the volatilization of organic compounds in the oil) and socioeconomics (through changes to commercial activity and residential properties) may also affect local residents adversely. Therefore, the analysis of impacts from a release requires a balanced consideration of the resources affected and the particular receptors that would be most at risk.

Impacts that result from accidental releases of crude oil may be short- or long-term in duration. Short-term impacts generally signify that a resource can recover within a reasonable length of time. Removal of the spilled oil typically can mitigate short-term impacts. Examples of short-term impacts include the noise and visual impacts associated with cleanup efforts, or the potential impact on air quality near the spill site. Long-term (chronic) impacts may signify that affected resources require many years to return to pre-spill conditions, or that an affected resource will not return to pre-spill conditions. Such impacts may include the substantial alteration of an existing habitat, recreational area or **historic property** to the point that it no longer serves its original function. Whether an impact is short- or long-term depends on factors such as the location of a spill, the geographic extent of a spill, resources present within that spill area and the volume of product released.

The volume of crude oil released during a spill can substantially affect the potential for impacts. However, a more critical factor is the location of the spill in relation to sensitive resources, such as waterbodies and population centers. A small spill that occurs near a sensitive resource may result in greater impacts than a large spill in an area devoid of sensitive resources and receptors. Therefore, location (i.e., proximity of the spill to sensitive resources) is a key factor that influences the actual consequences of a spill.

The location of a release relative to areas of human activity could affect its overall impact. Generally, most spills would occur within or near the pipeline ROW or ancillary features (e.g., access roads, pump stations). Spills in populated areas have a greater probability of early discovery and easier access than those that occur in a rural setting, which shortens the response time and can mitigate the extent of the impact. A spill in an urban setting generally may have different effects on human health and the environment from one in a rural setting. Spills in populated areas are much more likely to affect human receptors and their property. However, a release in a remote setting, such as a wetland or forest, may be difficult to access by response vehicles and equipment. The sparse population and infrequency of passersby may also delay the initial discovery of a spill in remote areas.

5.5.2 Land Use, Recreation and Visual Resources

An accidental release of crude oil along the proposed pipeline route could result in short- or long-term effects to land use, recreation and visual resources existing within the ROI summarized in Section 3.2. Typically, the extent of each effect would be small relative to the overall land area. However, effects from even small spills become more severe within areas of unique land use, important or unique recreation opportunities or exceptional aesthetic quality. These resources would typically be most susceptible to the physical effects of a potential release, such as physical coating of crops, recreational areas and fishing areas, including the potential accompanying nuisance odors and visual effects from the product or associated cleanup efforts. The remainder of this section discusses potential impacts to the two predominant land uses susceptible to impacts from accidental releases: agricultural and recreational land uses. Table 5-6 lists the potential direct and indirect effects to land use and recreation resulting from a release of crude oil.

Table 5-6. Potential Effects to Land Use, Recreation and Visual Resources from a Release

Resource	Direct Effect	Indirect Effect
Agricultural Land Use	Physical coating of vegetation (see Section 5.5.7).	Contaminated forage for livestock. Loss of commercial crops.
	Contaminated water (see Section 5.5.6).	Contaminated water for livestock. Contaminated irrigation water.
	Contamination of prime farmland soils (see Section 5.5.3).	Reduced soil productivity.
Recreational Land Use	Contaminated water (see Section 5.5.6).	Restricted access for boating, swimming, fishing, etc.
	Physical and toxicological effects to fish (see Section 5.5.7).	Short- or long-term loss of fishing areas or fish consumption restriction.

5.5.2.1 Agricultural Land Use

Cultivated farmland represents the dominant land use within the areas crossed by the proposed pipeline route, including corn, alfalfa, winter wheat, oats, grain sorghum, soybeans and hay. An accidental release has the potential to coat vegetation, including row crops, wild lands and rangelands; the crops within these areas might not survive or may experience physical impacts caused by oiling (see Section 5.5.7.1 for further discussion regarding potential impacts to vegetation). Affected vegetation may not be suitable for grazing animals, and any affected commercial row or field crops would likely not be marketable. Other effects on agriculture, which include farming and ranching, could occur if a water supply that is contaminated by an oil spill is used to irrigate fields or support livestock (see Section 5.5.6). Potential impacts could include loss of agricultural land use, limited production, reduced crop yields and associated income, and adverse health impacts to livestock. Additional long-term impacts may require the use of alternative sources of drinking water for livestock and water for irrigation.

Keystone has committed to a number of measures beyond spill cleanup measures, which are addressed in Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS. In the event that a spill contaminates water supplies used for industrial, **municipal** or irrigation purposes, Keystone may provide either an alternate supply of water or appropriate compensation for those facilities impacted.

The extent and duration of the effects would depend on the number of productive areas affected, the response time, the remediation method implemented and the length of time required to return the land to pre-spill conditions. Short-term disruption in local agricultural production could result from a spill that enters agricultural lands or wild lands used by grazing livestock. A medium spill is less likely to contaminate large acreage of agricultural land. However, oil adsorbed or otherwise adhered to soil particles may be transported extended distances by processes such as wind or water erosion. Oil migration could contaminate and adversely affect agricultural land use in areas beyond the initial spill location. Contamination by a large spill could affect soil productivity adversely, and the beneficial use for farming or grazing would be restricted for the duration of the remedial period or longer. In some cases, including large-scale removal of contaminated soils during spill remediation, soil productivity would not likely return to prior levels. In an extreme event, a spill could result in the permanent loss of agricultural lands.

In order to evaluate and characterize the potential for environmental impacts to agricultural land, the Department reviewed the prevalence of these resources near potential release locations along the proposed pipeline route. The potential for a spill that could affect each resource type based on the proximity criteria presented in Section 5.2 was determined using incident rate data for the various spill sizes and the linear distances along the proposed pipeline route that met each criterion.

As presented in Table 5-7, the likelihood of a release **occurring in proximity to** agricultural lands is greatest for cultivated crops, with the highest annual incident rate being 1.1 incidents per year for any size spill that could **occur within 150 feet of** this resource. This incident rate is very high due to the presence of croplands along much of the pipeline route and the higher incident rate for small spills (2.54 per 1,000 pipeline mile-years). The highest projected annual incident rate for pasture/hay is 0.02 incident per year of any size **that could occur within 150 feet of** such lands.

Table 5-7. Annual Likelihood of Spills Occurring in Proximity to Agricultural Land

Resource	Area within 150 Feet ^a	Area within 500 Feet ^b	Area within 1,200 Feet ^c
Cultivated crops	1.1	0.2	0.04
Pasture/hay	0.02	0.008	0.003

Source: USDA/NRCS 2011; USGS 2011a

^a. The area within 150 feet of the pipeline that is susceptible to small, medium, large and catastrophic spills.

^b. The area within 500 feet of the pipeline that is susceptible to medium, large and catastrophic spills.

^c. The area within 1,200 feet (up to 5,000 feet in areas of moderate or steep slope) of the pipeline that is susceptible to large and catastrophic spills.

5.5.2.2 Recreational Land Use

If a spill reached recreational lands and/or waterways, areas used for hunting, fishing, sightseeing and other recreational activities could experience a short-term negative effect that could last the duration of the cleanup effort. Impacts on fish species prized for recreational fishing would be as discussed in Section 5.5.7. During response and restoration actions, access to affected areas would generally be limited or prohibited to anyone except the response and remediation personnel, thus limiting the use of recreational areas, such as NHTs or designated recreational waterbodies. Adverse publicity regarding the impacts of large spills could reduce use by recreationists for an extended period. For small spills, there would likely be a negligible effect to businesses relying on recreational uses, and it is possible that cleanup responses would not require resource closure. Once the area is clean, normal activities would likely resume. However, more long-term and damaging impacts can occur when members of the public perceive an area to be polluted even after the oil has been removed.

The Marshall, Michigan release of dilbit that occurred on July 25, 2010 provides examples of actual recreation and land use effects caused by a large spill. This incident released approximately 20,082 barrels (843,444 gallons) of dilbit into waterways near the town of Marshall, Michigan; the oil then flowed into the Kalamazoo River and Morrow Lake, which serve as recreational boating and fishing areas. Soon after the spill occurred, the Kalamazoo and Calhoun County health departments prohibited the use of affected surface waters for irrigation and the watering of livestock. The Calhoun County Public Health Department also banned recreation activities, including boating, swimming and fishing. All affected areas of Talmadge Creek and the Kalamazoo River remained closed to recreational use for almost 2 years (National Transportation Safety Board 2012).

This SEIS considers the annual likelihood of a potential release **occurring in proximity to** recreational land use within the ROI. As presented in Table 5-8, the analysis found that the highest annual incident rate for recreational land use along the proposed pipeline route was 0.004 incident per year for any size spill that could **occur within 150 feet of** a recreational waterbody. The highest annual incident rate for any size spill that could **occur within 150 feet of** an NHT is 0.0006 incident per year. Crude oil spills **that affect** NHTs and recreational waterbodies could also result in adverse impacts **on historic properties** (see Section 5.5.9), surface waters (see Section 5.5.6) and aquatic organisms (see Section 5.5.7).

Table 5-8. Annual Likelihood of Spills Occurring in Proximity to Recreational Land Use

Resource	Area within 150 Feet ^a	Area within 500 Feet ^b	Area within 1,200 Feet ^c
National Historic Trail	0.0006	0.0006	0.0002
Recreational Waterbody	0.004	0.003	0.002

Source: Montana Fish, Wildlife and Parks 2018; NDEQ 2016; South Dakota Game, Fish and Parks 2018; USFWS 2005

^a. The area within 150 feet of the pipeline that is susceptible to small, medium, large and catastrophic spills.

^b. The area within 500 feet of the pipeline that is susceptible to medium, large and catastrophic spills.

^c. The area within 1,200 feet (up to 5,000 feet in areas of moderate or steep slope) of the pipeline that is susceptible to large and catastrophic spills.

5.5.3 Geology and Soils

As presented in Section 3.3.1, no known seismic faults or oil, natural gas or coal mining operations exist along the proposed pipeline route, and therefore, a release of crude oil is not anticipated to adversely affect the underlying geology. As such, this section focuses on soil resources. An accidental release of crude oil along the proposed pipeline route could result in short- or long-term effects to soil resources existing within the ROI summarized in Section 3.3. Table 5-9 lists the potential direct and indirect effects to soils that could result from a crude oil spill. The extent of these potential effects depends on the location of the spill and the volume of oil released.

Table 5-9. Potential Effects to Geology and Soils from a Crude Oil Release

Direct Effects	Indirect Effects
Contamination of hydric soils.	Adverse impacts to wetlands (see Section 5.5.6).
Contamination of coarse-textured soils.	Infiltration to groundwater (see Section 5.5.6).
Contamination of prime farmland soils.	Reduced soil productivity. Restricted farming or grazing.

Prime farmland soils are prevalent within the ROI. Contamination of prime farmland soils could adversely affect soil productivity, and the use of the land for farming or grazing would be restricted during remediation of the spill and potentially after remediation is complete. Remediation may require the excavation and removal of contaminated soils, which would result in a permanent loss of prime farmland soils. Vehicles and equipment used to respond to and remediate a spill may increase the potential for soil disturbance (e.g., rutting, compaction and erosion). It is also possible that wind or water erosion could carry contaminated soils off a spill site and adversely affect prime farmland soils in areas beyond the spill location.

The existence of hydric soils is one indicator of wetlands, so an accidental release near hydric soils could potentially result in wetland contamination. Section 5.5.6.3 addresses the potential for wetland contamination from an accidental release. Likewise, the existence of soils with higher permeability (e.g., with a coarse texture) could allow spilled oil to seep more readily into groundwater resources. Section 5.5.6.1 discusses the potential effects of released crude oil reaching groundwater.

As presented in Table 5-10, the analysis determined that the likelihood of a release **occurring in proximity to** designated farmland soils is greatest for farmland of statewide importance where there is a projected annual rate of 0.9 incident per year for any size spill that could **occur within 150 feet of** such soils. For prime farmland soil, there is an annual likelihood of 0.6 incident per year of any size spill **occurring** within 150 feet of **such soils** along the proposed pipeline route. **It should be noted that no significant paleontological sites were identified within these areas.**

Table 5-10. Annual Likelihood of Spills Occurring in Proximity to Designated Farmland Soils

Resource	Area within 150 Feet ^a	Area within 500 Feet ^b	Area within 1,200 Feet ^c
Prime Farmland Soil	0.6	0.2	0.04
Farmland of Statewide Importance	0.9	0.2	0.05
Significant Paleo Sites^d	0	0	0

Source: USDA/NRCS 2018a, 2018b; **Exp and Paleo Solutions Inc. 2018**

a. The area within 150 feet of the pipeline that is susceptible to small, medium, large and catastrophic spills.

b. The area within 500 feet of the pipeline that is susceptible to medium, large and catastrophic spills.

c. The area within 1,200 feet (up to 5,000 feet in areas of moderate or steep slope) of the pipeline that is susceptible to large and catastrophic spills.

d. **No significant sites found.**

5.5.4 Air Quality

An accidental release of crude oil along the proposed pipeline route could result in short- or long-term effects to air quality within the ROI summarized in Section 3.4. These direct and indirect air quality impacts would be short term in nature, ranging from a few hours to several weeks. A release of crude oil could contribute to air pollution from fugitive emissions, from combustion of fuel in vehicles and equipment used for spill response and remediation actions, and from combustion of spilled crude oil in the event of a fire. Table 5-11 presents the potential direct and indirect effects to air quality from a spill.

The most notable impacts related to air quality are adverse effects on human health. Human health impacts arise from inhalation of the hydrocarbons (organic molecules made of hydrogen and carbon atoms) that make up crude oil. The hydrocarbons that are of particular importance with respect to air quality are volatile and semi-volatile compounds, which readily evaporate and disperse through the air. Health effects from exposure depend on the concentration of the chemical in the air and the duration of exposure. In addition, degraded air quality and visual obstructions caused by smoke can disrupt professional and/or recreational activities in affected areas, negatively affecting the aesthetic and economic value of affected regions.

Table 5-11. Potential Effects to Air Quality from a Crude Oil Release

Direct Effects	Indirect Effects
Air quality degradation resulting from volatilization of hydrocarbons.	Temporary adverse effects to human health related to inhalation of hydrocarbons. Temporary adverse effects to birds and mammals related to inhalation of hydrocarbons (see Section 5.5.7).
Air quality degradation resulting from burning of crude oil.	Temporary adverse effects to human health related to inhalation of hydrocarbons and particulate matter. Temporary adverse effects to birds and mammals related to inhalation of hydrocarbons and particulate matter (see Section 5.5.7). Temporary adverse effects to recreational activities (see Section 5.5.2).

In the event of a crude oil spill, the effects on air quality would depend on the size of the spill, the type of oil spilled, environmental conditions (i.e., topography) and the weather. Oil spills spread over the ground or via waterways. The volatile and semi-volatile compounds then vaporize, emitting odors and airborne contaminants. Volatile and semi-volatile organic compounds (including BTEX and polycyclic aromatic hydrocarbons) evaporate most rapidly and disperse according to the ambient temperature and wind strength and direction. Conditions with no wind could result in the highest air concentrations, as wind serves to dissipate the contaminants. The extent of the impacts would depend on the volume of oil spilled, the size of the plume, the proximity of the incident to populated areas, the evaporative and dispersion characteristics of the weather and wind conditions, and the effectiveness of the spill response. While any release of crude oil may have an immediate and direct impact on the air quality near the release site, the potential for air quality impacts reduces with time as the material evaporates.

Emergency response teams sometimes initiate controlled burning as a measure to mitigate impacts from spills. Burning crude oil can create substantial air quality impacts, depending on the volume and type of crude oil and the wind and weather conditions. Smoke plumes can reach several hundred to several thousand feet high, carried by prevailing winds. Most of the oil burned converts to CO₂ and water. However, particulates, mostly soot, make up approximately 10 to 15 percent of the smoke plume. The combustion process also releases small amounts of sulfur dioxide, nitrogen dioxide, carbon monoxide and small amounts of polycyclic aromatic hydrocarbons. Depending on environmental conditions, the gases in the burn plume would likely dissipate to background concentrations several miles downwind and would not significantly affect human inhalation exposure to the air contaminants, unless weather conditions caused the plume to descend to ground level (Barnea 1995).

After the July 25, 2010 Marshall, Michigan oil spill, the Michigan Department of Community Health and the U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry, developed air monitoring protocols for testing, levels of concern and decision trees for evacuation and re-occupancy based on benzene levels. The initial “real-time” readings at the spill site did not detect combustible gas at concentrations above the protective screening level for explosives, and all measured oxygen and carbon monoxide concentrations were within normal limits. However, measurements found elevated levels of the screening compounds of benzene, total VOCs and hydrogen sulfide. This warranted the voluntary evacuations of residents from approximately 50 houses within a designated area of approximately 400 acres between the spill site and the Kalamazoo River. During the first 3 weeks following the Marshall, Michigan spill, people in the spill area who inhaled oil-related chemicals reported short-term health effects, including headaches, nausea, respiratory discomfort and eye irritation. These short-term effects diminished or stopped when people were no longer breathing the contaminated air. By August 18, 2010 (i.e., the end of the voluntary evacuation period), approximately 3 weeks after the spill, concentrations of air contaminants fell below human health screening levels, such that individuals near the oil did not breathe oil-related chemicals at concentrations or for durations of time that would cause long-term adverse health effects (Michigan Department of Community Health 2014).

The USEPA Environmental Response Team conducted pilot scale studies of Bakken crude oil spills under both cold weather and warm weather scenarios to evaluate the difference in chemical emissions which could impact human health, particularly for first responders. These studies showed that benzene is of concern for several hours after a release and that downwind oxygen suppression occurs after a release to the point that first responders would need supplied air during the first few hours after a release (USEPA ERT 2018).

5.5.5 Noise and Vibration

An accidental release of crude oil along the proposed pipeline route could result in short-term noise impacts within the ROI summarized in Section 3.5. Noise impacts would occur primarily during response, restoration and remediation activities. Potential impacts from noise would likely be associated

with the equipment and vehicles used for site access, cleanup and restoration efforts. These impacts would be similar to those of a construction site, but the activities could occur at all hours of the day and night. Equipment would likely include vehicles and construction equipment, such as bulldozers, excavators and dump trucks, as well as various types of all-terrain vehicles. In addition, response and cleanup efforts could also include the use of watercraft and aircraft.

Elevated noise levels would be similar to those related to construction activities, with noise levels in the immediate vicinity of the site generally in the range of 80 to 90 dBA. These elevated noise levels would dissipate with distance and would have the greatest effect if they were to occur near receptors during the nighttime hours, when unwanted noise is most obtrusive. The nature (i.e., location of the release and environmental setting conditions) and size of the spill would likely govern the intensity and duration of response and cleanup efforts and the related increase in noise levels. Large spills would be more likely to result in elevated noise levels across a larger area and for a longer duration. Conversely, small spills would be more localized and less likely to affect noise receptors. Regardless of spill size, however, effects from increases in noise levels would be limited to the duration of response and cleanup activities. Furthermore, residents most vulnerable to noise during the spill response would likely be the same people that officials overseeing the response effort would evacuate for health and safety reasons.

Similar to human sensitive receptors, wildlife can experience impacts from exposure to noise and vibration resulting from human activities during response, restoration and remediation activities. These impacts to wildlife species could include stress, avoidance of feeding and decreased breeding success.

5.5.6 Water Resources

An accidental release of crude oil along the proposed pipeline route could result in short- or long-term effects to existing groundwater, surface water, wetlands and floodplains within the ROI summarized in Section 3.6, if released crude oil reached these resources. This section considers potential impacts to water quality as they relate to the potential uses of the water resources, including for purposes of potable water, as summarized in Table 5-12. Section 5.5.7 presents the potential impacts of a surface water release to aquatic habitats and species.

As discussed in Section 5.4.4, in accordance with 49 CFR 195, Keystone would maintain an Integrity Management Program required for pipelines that could affect high consequence areas, which include surface water unusually sensitive areas and groundwater unusually sensitive areas identified for their potential as a drinking water resource (49 CFR 195.6 and 195.450) (refer to Section 4.13 Potential Releases of the 2014 Keystone XL Final SEIS for further discussion on drinking water resources).

Table 5-12. Potential Effects to Water Resources from a Release

Direct Effects	Indirect Effects
Contamination of groundwater by free product and dissolved hydrocarbons.	Water quality degradation downgradient of spill site. Temporary closure of groundwater wells resulting in disruption of municipal water service. Temporary human health hazards resulting from short-term ingestion or exposure to dissolved hydrocarbons.
Contamination of open waters by free product and dissolved hydrocarbons.	Water quality degradation downstream of spill. Adverse impacts to aquatic ecosystem (see Section 5.5.7). Water quality degradation to impaired waters resulting in more severe impairment. Water quality degradation of NRI streams potentially limiting use and quality of these streams. Temporary human health hazards resulting from short-term ingestion or exposure to dissolved hydrocarbons.

NRI = Nationwide Rivers Inventory

5.5.6.1 Groundwater

As stated in Section 3.6.1, principal groundwater aquifers underlying the proposed pipeline route include alluvial aquifers and the Northern High Plains Aquifer, a nationally important water resource that underlies much of the ROI; and the Lower Cretaceous Aquifer. Groundwater impacts resulting from a release are focused on the physical fate of the product, rather than the volatilization properties. Factors that influence the potential for migration into groundwater include the type of release, areal extent of the spill, soil conditions and characteristics, and the depth to groundwater. Shallow (surficial) aquifers, particularly those overlain by hydric and coarse-textured soils, would be more susceptible to impacts than confined or deep aquifers because of their susceptibility to infiltration from the surface.

Coarse-textured soils, or sandy soils, allow for easier percolation of liquid through the soils to reach groundwater. If a spilled product reached these soils, infiltration rates could be greater than in other areas. Because the infiltration rate of the product into the underlying soil controls vertical migration, rapid emergency response measures to control the release, contain it and collect the released product would mitigate the potential for groundwater contamination. Released crude oil would become more viscous in the environment as the lighter hydrocarbons volatilize. Cooling of the product after its release would increase its viscosity, particularly in the cooler months of the year. Increasing viscosity tends to reduce vertical migration rates in soil profiles and infiltration into the shallow groundwater table. If crude oil were to infiltrate into the soil and encounter groundwater, it would tend to form a distended layer above and slightly below the water table, largely based on the size and duration of the spill and the associated vertical hydraulic pressure. The crude oil plume would then spread horizontally, primarily in the down-gradient direction, until reaching a steady state based on the crude oil hydraulic pressure, groundwater flow rate and soil characteristics. This local contamination would not be anticipated to affect the entire aquifer. Lighter crude oils would be less viscous and less adhesive when released, which could result in greater vertical migration rates than heavy crude oils (Tsaprailis 2014). As such, lighter crude oils could penetrate more deeply into the soil and could result in a greater risk of groundwater contamination. Lighter crude oils also carry higher proportions of lighter volatile hydrocarbons, which readily dissolve in water.

Impacts to groundwater resulting from a release would include water quality impacts, similar to those presented in Section 5.5.6.2 for surface water. Groundwater that serves as a source of drinking water or irrigation is of particular concern when assessing the potential for impacts, because contamination of a drinking water aquifer could affect human health. For this reason, the Department identifies private wells within 100 feet of the proposed pipeline route (see Table 3.6-2) and wellhead protection areas within 1 mile (see Table 3.6-3). Spills that occur near these areas would have the potential to impact groundwater aquifers that are used as a source of drinking water.

Keystone has committed to conducting baseline water quality testing for domestic and livestock wells within 300 feet of the final centerline of the approved route upon the request of individual landowners (NDEQ 2013). These baseline samples would be collected prior to placing the pipeline in service. Subsequently, in the event of a significant spill in the area, Keystone would conduct water well testing as required by NDEQ pursuant to Title 118, Nebraska Administrative Code. Keystone would also provide an alternative water supply for any well where water quality was found to be compromised by the spill. Should a release occur from the Keystone XL pipeline, Keystone has committed to clean up any releases that might occur. Keystone is also legally required to clean up spills under Title 118, Nebraska Administrative Code and the federal Oil Pollution Act of 1990. The Keystone XL CMRP (located in Appendix G of the 2014 Keystone XL Final SEIS) describes measures that Keystone would implement to minimize impacts on groundwater resources near the pipeline during and after construction.

The Department analyzed the annual likelihood of a potential release occurring in an area overlying the groundwater resources within the ROI. As discussed in Section 5.2, the ROI used to assess groundwater extends farther from a potential release point than the ROI discussed for an overland spill due to the potential for dissolved components of released crude oil to travel a farther distance (refer to Section 5.2 and Figure 5-1). As presented in Table 5-13, the likelihood of a release **occurring in proximity to** groundwater resources is greatest for surficial aquifers; there is an annual likelihood of 0.4 incident per year of any size spill **occurring** within 790 feet of the release point. The Department also calculated an annual rate of 0.2 incident per year of any size spill **occurring within 790 feet of an active well** and 0.001 incident per year of spills releasing more than 50 barrels **occurring within 1,320 feet of a wellhead** protection area.

Table 5-13. Annual Likelihood of Spills Occurring in Proximity to Groundwater Resources

Resource	Area within 790 Feet ^a	Area within 1,320 Feet ^b	Area within 2,250 Feet ^c
Surficial Aquifer	0.4	0.08	0.01
Wellhead Protection Area	0	0.001	0.0005
Active Well	0.2	0.1	0.02

Source: NDEQ 2018d; NDNR 2018; SD DENR 2018a; USGS 2002

^a. The area within 790 feet of the pipeline that is susceptible to small, medium, large and catastrophic spills.

^b. The area within 1,320 feet of the pipeline that is susceptible to medium, large and catastrophic spills.

^c. The area within 2,250 feet of the pipeline that is susceptible to large and catastrophic spills.

Note: The potential extent of a groundwater spill is the estimated overland distance (150 feet for a 50-barrel spill, 500 feet for a 1,000-barrel spill and up to 1,200 feet for a 10,000-barrel spill) plus the additional dissolved phase distance in groundwater (640 feet for a 50-barrel spill, 820 feet for a 1,000-barrel spill and 1,050 feet for a 10,000-barrel spill).

5.5.6.2 Surface Water

A crude oil spill in a stream, river or lake would have impacts resulting from the tendency of crude oil to float on the water surface and to mix with water. These impacts could include the degradation of water quality from dissolution and mixing of the oil in the water column, contamination of the water by chemical constituents (i.e., hydrocarbons) within crude oil and related degradation by-products and secondary effects such as lower levels of dissolved oxygen that occur from biodegradation of these compounds. The intensity and severity of water quality impacts would be dependent on several variables, including the volume of crude oil released into the waterbody and the characteristics of the waterbody (e.g., size, flow volume and rate at the time of the spill, etc.), which would influence propagation of the crude oil.

The hydrocarbons that make up crude oil include volatile and semi-volatile compounds, which behave differently after a release. Most of the lightweight volatile hydrocarbons, which comprise the majority of light crude oils, readily evaporate when a release occurs. However, volatile hydrocarbons (such as BTEX) also tend to be water-soluble and as a result, some portion would dissolve into the water column. Heavier semi-volatile hydrocarbons, including polycyclic hydrocarbons, are not very volatile or water-soluble and may remain in the water environment longer than lightweight volatile compounds. The more water-soluble fraction of the crude oil that volatilizes may later be washed out of the atmosphere in precipitation and reenter surface waters. The heavier constituents are generally less toxic than other more soluble compounds. Based on the combination of toxicity, solubility and bioavailability, benzene is the most toxic hydrocarbon associated with crude oil spills.

The crude oil products with higher proportions of heavier components are more likely to submerge beneath the water's surface due to their density compared to water. Submerged crude oil could result in a persistent source of contamination because of the slow rate of natural degradation of this material. Thus,

submerged crude oil could result in the slow release of dissolved hydrocarbons, resulting in long-term chronic toxicological impacts to aquatic organisms (see Section 5.5.7). Removal of submerged product from the water column can be a difficult and long process, as observed in the response and cleanup efforts related to the July 2010 release in Marshall, Michigan. Cleanup efforts to remove the submerged oil from the Kalamazoo River, including dredging, excavation and aeration, continued for 4 years after the spill (Parker 2014).

The magnitude of impacts that could occur from a spill would largely depend on the size of the spill and the affected waterbody. Small releases into or close to a surface waterbody could result in minor short-term degradation of surface water quality, particularly for small waterbodies with low flow energy. Similar spills that reach larger lakes or rivers would result in minimal effects on overall water quality, assuming the lake or river volume is substantially larger than the volume of spilled product and that the flow rate of the river is sufficient to dilute the released product. Direct toxicity and contamination in small, low-flow waterbodies would generally occur at the point of the release because of the inability of the waterbody to transport and dilute the contaminants. Toxicity impacts in larger waterbodies would be unlikely or would last for relatively short periods because of the high dilution volume in these lakes or rivers, and the rapid evaporation of most of the potentially toxic lighter hydrocarbons. However, in surface waters with high energy (e.g., turbulent river flows and/or high sediment deposition), sunken oil may become buried under or mixed within stream sediment and soil along streambanks, where it may become trapped and remain for an extended duration. This buried oil may slowly biodegrade into soluble components or volatilize over time. Future disturbances to the aquatic environment, such as dredging, wave action, boat propellers or bioturbation, could re-suspend buried oil or its weathered components. The potential re-suspended oil could represent a source of contamination for an extended duration.

Cold weather, in which surface waters become partially or completely covered by ice, could affect the behavior and downstream transport of crude oil following an accidental release. The presence of ice would inhibit initial detection of a spill, observations of the presence of oil and estimates of the extent of the oil within the affected waterway (MDEQ 2016b). In addition, the light compounds that would initially volatilize under open-water (i.e., non-ice) conditions would become trapped below the ice surface and travel further downstream than under open-water conditions. One such spill occurred in January 2015 spill near Glendive, Montana (discussed in Section 5.4.3.2) during which 758 barrels of crude oil was spilled into the frozen Yellowstone River. Response crews carved ice slots downstream of the release point to collect oil from the water surface, and the detection of volatile hydrocarbons at a water intake near Glendive prompted a water consumption advisory regarding water provided by this treatment plant. This “do not drink” advisory was lifted on January 23, 5 days after the spill was initially reported. Bottled drinking water was provided to residents while this advisory was in effect, and a public meeting was held to advise residents on how to flush the water lines in their homes and businesses. A final containment area was established 30-40 miles downstream of the release point, but no oil was observed at this distance (MDEQ 2016b). It is important to note that a direct release into an ice-covered waterway is a rare occurrence; the PHMSA database only includes one such incident for the years 2010 through October 2019 (PHMSA 2019b). Potential impacts arising from a such an incident would depend upon many factors, including whether the spill was under or on top of ice, and whether the ice was structurally competent or broken up.

As discussed and considered in the 2014 Keystone XL Final SEIS, the potential adverse effects of a large spill to water could have potentially significant adverse effects on water quality. Following the Marshall, Michigan spill, water quality effects occurred as far as 40 river-miles downstream from the spill location, and submerged oil contaminated large areas of the river bottom. Small streams and ponds with low flow energy would be more susceptible to substantial adverse impacts from large spills, but any waterbody that experiences a spill of this magnitude could experience both short-term (during response and remediation) and long-term (dissolution of residual product) adverse impacts to water quality. Response and

remediation activities would likely return the waterbody to near pre-spill conditions, but remediation could take years to complete. However, it is possible that waterbodies may not return to pre-spill conditions, as it would depend on the size and location of the spill.

The Department identified rivers and lakes within the ROI for the Proposed Action (see Section 3.6). The Department also identified four categories of waterbodies that are of particular concern with regard to potential impacts from a crude oil spill: major rivers, lakes, perennial streams with state water classifications and impaired waterbodies. The proposed pipeline route currently crosses 23 major rivers; 20 lakes, ponds or man-made reservoirs/impoundments; and 26 impaired or contaminated waterbodies. Water quality degradation resulting from a spill could affect the value of these waters and result in short- or long-term loss of scenery, habitat, recreational use, fishing and other uses or benefits. Tribal groups may be disproportionately negatively impacted by the impacts of spills on surface water resources since they typically have a greater dependence on natural resources than non-tribal members; refer to Section 5.5.9 for further discussion on impacts to Indian tribes. Impaired waters, listed under Section 303(d) of the Clean Water Act, are under environmental stress and are likely to have a lower capacity for recovery in the event that a spill was to impact the water quality of one of these waterbodies.

The Department also identified sensitive resources within the maximum reasonable transport distance of 40 river-miles for reviewing potential downstream effects. This analysis included major rivers, lakes (including reservoirs), perennial streams, impaired waterbodies, national scenic rivers and water intakes, **including drinking water and irrigation water intakes identified by tribes during the SEIS process.** A total of 1,524 miles of perennial streams with a state water classification were identified as potentially susceptible to an upstream spill, including nearly 1,100 miles of major rivers. In addition, a total of 24 named lakes and reservoirs were identified within the 40 river-mile downstream analysis. The analysis also identified 77 impaired waterbodies, totaling approximately 975 miles, as susceptible to an upstream spill. Only one national scenic river was identified as susceptible from an upstream spill; a 3.5-mile section of the Niobrara River (see Section 5.2). Four different categories of active surface water intakes were identified within the 40 river-mile downstream distance (see Table 5-14).

The first type of surface water intake that was identified within the 40-mile area is municipal water intakes, which are used to supply drinking water to a public utility. Only three such intakes were identified, all of which are located in Montana (MDEQ 2018; Montana Department of Natural Resources Conservation 2019). These included the following intakes:

- Town of Fort Peck (intake located on Fort Peck Lake),
- City of Glasgow (intake located on the Missouri River) and
- Montana Aviation Research Company (intake located on the Missouri River).

Table 5-14. Number and Type of Surface Water Intakes Within 40 River-Mile Downstream Area

Location	Municipal (public, potable)	Domestic (private, potable)	Irrigation	Other ^a
Montana	3	22	925	2,522
North Dakota	0	0	41	0
South Dakota	0	2	21	3
Nebraska	0	6	1,340	174
Kansas	0	0	99	7

Source: Kansas Department of Health and the Environment 2019; MDEQ 2018; Montana Department of Natural Resources Conservation 2019; NDNR 2019a, 2019b; North Dakota Information Technology Department 2019; SD DENR 2018b; University of Kansas 2019

^a. Other uses include one or more of the following: agricultural spraying, commercial, fish and wildlife habitat/propagation, fisheries, flood control, industrial, institutional, lawn and garden, manufacturing, mining, power generation, recreation, stock water, storage and/or wetland habitat.

Based on the maximum reasonable 40 river-mile downstream transport distance used within this analysis (see Section 5.2), two additional potable water intake withdrawals considered in the 2014 Keystone XL Final SEIS would be beyond the 40-mile distance and therefore unlikely to experience impacts resulting from a release. As described in the 2014 Keystone XL Final SEIS, both the Assiniboine and Sioux Rural Water Supply System and the Mni Wiconi Rural Water Supply System (MWRWSS) operate water intakes on the Missouri River to provide potable water. The distance from the pipeline crossing at the Missouri River to the Assiniboine and Sioux Rural Water Supply System is approximately 57 miles, and the distance from the Missouri River crossing to the MWRWSS intake is over 100 miles; therefore, no impacts are anticipated.

The second group of intakes are those categorized for domestic use. These include intakes that are used to supply drinking water to private residences. A total of 22 surface water intakes in Montana, 2 surface water intakes in South Dakota and 6 surface water intakes in Nebraska are identified as domestic-use. No domestic-use surface water diversions were identified in the 40 river-mile downstream area located in North Dakota or Kansas. In Montana, the source water for these domestic-use surface water diversions include the Missouri, Yellowstone and Milk rivers, Unger Coulee, Upper Sevenmile Creek and unnamed tributaries to Cherry Creek and Frenchman Creek (Montana Department of Natural Resources Conservation 2019). In South Dakota, domestic-use surface water sources include Wolf Creek and surface water runoff in the Lower Cheyenne and Moreau River basins (SD DENR 2018b). In Nebraska, the source water for domestic-use surface water intakes identified include Big Blue River, Big Sandy Creek, Coon Creek and an unnamed tributary to Redbird Creek (NDNR 2019a).

The final two categories of intakes include those used for irrigation and other uses. This includes intakes that are used to support agriculture and livestock operations as well as other commercial and governmental operations. As shown in Table 5-14, many of these intakes were identified within the 40 river-mile downstream area, which includes portions of North Dakota and Kansas. This included a total of 13 irrigation intakes along the Milk River, all located within 15 river-miles downstream of the proposed pipeline crossing (Montana Department of Natural Resources Conservation 2019). Two of these intakes **located on the Fort Peck Reservation at Wiota and Frazer are part of the Fort Peck Irrigation Project** used to irrigate Tribal lands within the Fort Peck Reservation and are reportedly located 10 and 14 river-miles downstream of the proposed crossing. **The Fort Peck Irrigation Project was authorized by Congress in Section 2 of the Act of May 30, 1908 as part of the federal government's policy of promoting tribal irrigated agriculture. Pursuant to the 1908 Act, the federal government allotted 40 acres of land near the Missouri River to the head of each family on the Fort Peck Reservation on land requiring irrigation to be successfully farmed. The irrigation project is the sole source of irrigation water for approximately 19,000 acres of land, including trust land on the reservation and the croplands it supports represents a sizeable portion of the reservation's agricultural economy.**

A release to surface water located upstream, and in the vicinity of any of these intakes identified, could produce both short- and long-term effects on the suitability or usability of these intakes. The degree of impacts to surface water intakes from a release would depend on many factors, such as the size of the release, the time of year of the release and the response time to address the release. A spill that contaminates an intake may make it unusable for an extended period of time until spill response and recovery activities have been completed. **Loss of these irrigation intakes during the growing season would result in economic losses to farmers, including Fort Peck's agricultural economy. For example, the January 2015 spill near Glendive, Montana resulted in the detection of volatile compounds at the town of Glendive's drinking water treatment facility, which draws raw water from the Yellowstone River. Residents were advised not to drink water from the this treatment system, and bottled drinking water was trucked in for the affected residents. The "do not drink" advisory was lifted 5 days after the spill occurred (MDEQ 2016b).**

Keystone has committed to a number of measures beyond spill cleanup measures, which are addressed in Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS. In the event that a spill contaminates water supplies used for industrial, **municipal** or irrigation purposes, Keystone has committed to **temporarily** provide an alternate water supply for any users of wells or irrigation intakes where water quality is affected by a spill **until the water supply is restored. Keystone would work with regulators to restore the water supply as quickly as practical. In the meantime, Keystone would provide either an alternate supply of water or appropriate compensation for those facilities impacted, as may be agreed upon among the affected parties and Keystone. Keystone would memorialize such arrangements through an appropriate written agreement with the USEPA. Crop loss as a result of a spill that was not covered by a farmer's liability insurance would involve a third-party claim that would have to be directed to Keystone for review and payment.**

Surface waters contaminated with dissolved hydrocarbons could also cause indirect impacts to groundwater resources in instances where surface waters recharge these resources. The connection between surface water and groundwater is dynamic throughout the region because of the presence of shallow aquifers and coarse-textured soils. Most groundwater recharge occurs from the percolation of rainwater through surficial soils and from lakes and streams into shallow aquifers. In these areas, the potential exists for dissolved hydrocarbons from surface water to migrate to groundwater through the process of groundwater recharge.

In wet or saturated soil, water partially or completely fills the pores between the soil particles, leaving little or no room for the less dense oil to move downward. A lack of downward movement generally leads to a spill that covers a larger horizontal area. In these scenarios, shallow portions of the aquifer will be impacted, while deeper portions of the aquifer will not. As described in the 2014 Keystone XL Final SEIS, available studies and reports indicate that, in general, impacts from farming operations are present in areas of shallow groundwater water. Shallow groundwater within the Northern High Plains Aquifer and alluvial aquifers in the state exhibit low concentrations of total dissolved solids, making the water in the shallow aquifers generally suitable for irrigation, potable and industrial uses.

Table 5-15 presents the likelihood of a spill **occurring in proximity to** surface water resources, including major rivers, lakes, perennial streams with state water classifications and impaired waterbodies. As presented in Table 5-15, the likelihood of a release **occurring in proximity to these** resources is greatest for perennial streams with state water classifications, with the highest annual rate of 0.2 incident of any size spill **occurring within 150 feet of** this resource. Annual likelihoods of a potential spill of any size **occurring within 150 feet of** other surface water resources range from 0.02 incident per year for lakes to 0.003 incident per year for **impaired waterbodies**.

Table 5-15. Annual Likelihood of Spills Occurring in Proximity to Surface Water Resources

Resource	Area within 150 Feet ^a	Area within 500 Feet ^b	Area within 1,200 Feet ^c
Major River	0.004	0.004	0.003
Lake	0.02	0.03	0.02
Perennial Stream with State Water Classification	0.2	0.2	0.04
Impaired Waterbody	0.003	0.003	0.002

Source: USGS 2018a; USDA/NRCS 2016; USEPA 2015

^a. The area within 150 feet of the pipeline that is susceptible to small, medium, large and catastrophic spills.

^b. The area within 500 feet of the pipeline that is susceptible to medium, large and catastrophic spills.

^c. The area within 1,200 feet (up to 5,000 feet in areas of moderate or steep slope) of the pipeline that is susceptible to large and catastrophic spills.

5.5.6.3 Wetlands

Wetlands are biologically diverse and provide habitat for many types of animals and plants. When crossing saturated wetlands with flowing waterbodies using the open-cut method, the pipe coating would be covered with reinforced concrete or concrete weights to provide negative buoyancy. The need for weighted pipe would be determined by detailed design and site conditions at the time of construction.

A spill from the proposed pipeline would impact vegetation and wildlife that directly and indirectly rely on an affected wetland. Direct impacts to wetlands would range from stress of vegetation and wildlife to species mortality and the degradation of wetland habitat and function. The severity of impacts on wetlands depends upon the volume and type of product spilled, environmental factors (e.g., time of year, type of vegetation, amount of surface water present) and the cleanup response actions. Product type is a major factor in determining the degree and type of impacts on wetland vegetation and wildlife (see Section 5.5.7).

Lighter products are more acutely toxic than heavier products. Heavy products affect wetlands through the smothering of leaves and soils (Michel and Rutherford 2013). The viscosity of the heavy products would likely restrict the geographic extent of potential spills, particularly in cooler months. Spills of less viscous crude oil, such as light crude oil extracted from the Bakken formation, could spread a farther distance and affect a larger area than the more viscous dilbit because of the higher proportion of lighter components. However, the lower viscosity of light crude oil may allow the product to migrate downward through the soil more easily and quickly than dilbit (National Academies of Sciences, Engineering and Medicine 2016). As such, light crude oil may also seep into soil more readily and therefore limit the horizontal extent of the spill.

In the event of a spill of heavy crude oil, dense stands of emergent vegetation could act like booms and collect the product at the edges of the stands, particularly given the viscosity of heavier products. Spills in interior wetlands are also likely to result in thicker product residues, higher levels of wetlands impacts and slower natural removal rates of product residues. The higher level of impacts to interior wetlands and increased product persistence are attributable to product settling and penetrating into the hydric soils. Persistence increases with deeper product penetration, soils high in organic matter and sites such as interior wetlands that are sheltered from natural removal processes. In comparison, reduced persistence occurs in coastal, riverine and open water wetlands as the active movement of surface water weathers the crude oil contents. Dilbit is more likely than lighter crude oils to persist within wetlands because of the higher amount of residual oil left behind after weathering, increased adhesion and resistance of dilbit to biodegradation (National Academies of Sciences, Engineering and Medicine 2016). Lighter crude oil would be apt to spread more quickly over the ground surface, but it can also penetrate more easily into the soil and spread vertically. Vegetation recovers more quickly from spills of any type of product during the non-growing season, compared to a spill during the growing season (Michel and Rutherford 2013).

Following a release, aggressive and intrusive cleanup methods would cause impacts to wetlands from excavation and the removal of hydric soils. Cleanup could also increase the potential for the product to mix with water and sediments. Disturbance to wetlands sediments would lead to longer lasting impacts to the wetlands by inhibiting plant growth and recovery. If the cleanup effort requires excavation, the contours of the wetland area would be restored as close to the previously existing contours as practical, and the disturbed area would subsequently be revegetated to match, as close as practicable, the pre-existing vegetation. Large spills that have wider geographic extents may have the most impact on wetlands because of the more extensive remedial requirements. In lieu of excavation, igniting the spilled product floating on the water surface in a controlled manner (in situ burning) could reduce the physical disruption of wetland resources below the water line, but would result in smoke and the potential associated effects to air quality, biological resources and human health.

Passive cleanup methods (including natural attenuation) would cause less impact to wetland resources. If no active remediation activities were undertaken, with concurrence of the regulatory body, natural biodegradation and attenuation could ultimately allow a return to preexisting conditions in both soil and groundwater. However, recovery would likely require a timeframe measured in decades.

As presented in Table 5-16, the likelihood of a release **occurring in proximity to** wetlands along the proposed pipeline route is greatest for palustrine emergent wetlands, with the highest annual incident rate being 0.1 incident per year of any size spill that could **occur within 150 feet of** these resources. The highest annual incident rates for palustrine forested and palustrine scrub-shrub wetlands were 0.005 and 0.0009 incident per year of any size spill, respectively.

Table 5-16. Annual Likelihood of Spills Occurring in Proximity to Wetlands

Resource	Area within 150 Feet ^a	Area within 500 Feet ^b	Area within 1,200 Feet ^c
Palustrine Emergent	0.1	0.07	0.04
Palustrine Forested	0.005	0.004	0.006
Palustrine Scrub-Shrub	0.0009	0.0006	0.002

Source: Exp and Westech 2018a; USFWS 2018b, 2018h

a. The area within 150 feet of the pipeline that is susceptible to small, medium, large and catastrophic spills.

b. The area within 500 feet of the pipeline that is susceptible to medium, large and catastrophic spills.

c. The area within 1,200 feet (up to 5,000 feet in areas of moderate or steep slope) of the pipeline that is susceptible to large and catastrophic spills.

5.5.6.4 Floodplains

A release of product to a floodplain would not have direct impacts to the floodplain. Potential impacts to the specific landscapes and habitats located within nearby floodplains would remain consistent with those impacts discussed for similar resources throughout this chapter. Floodplains would, however, actively convey and disperse crude oil within the floodplain boundary if a release were to happen during a flood event. As discussed in Section 3.6.1.5, portions of the pipeline ROW are classified by FEMA as 100-year floodplains, and the remaining portions of the pipeline ROW are classified as areas of minimal flooding (FEMA 2018). These 100-year floodplains are the most likely portions of the pipeline ROW to experience flooding; areas within a 100-year floodplain have a 1 percent annual likelihood of experiencing a flood. When crossing saturated portions of the floodplains using the open-cut method, the pipe coating would be covered with reinforced concrete or concrete weights to provide negative buoyancy. The need for weighted pipe would be determined by detailed design and site conditions at the time of construction.

By definition, floodplains are areas which are more likely to experience flood events at a given time as compared to areas outside the floodplain. Consequently, these areas are more likely to be inaccessible at certain times of the year as a result of standing water. Keystone therefore would, to the extent possible, avoid the placement of ancillary equipment within floodplain areas, as releases from these features may be more difficult to remediate during flood events. As stated in the 2014 Keystone XL Final SEIS, at least one pump station (Pump Station 24 in Nance County, Nebraska) is located in a known floodplain and may be inaccessible during periods of flood. Most, if not all, access roads to Pump Station 24 cross significant floodplain areas associated with the Loup River and Prairie Creek systems; if both are experiencing flood events, Pump Station 24 could be inaccessible.

Flood events may also increase the potential for a pipeline release because of erosion and channel migration. Erosion may arise from seasonal flood events or increased stream velocities, which in turn undermine support soils, increase lateral water force and increase the impact from waterborne debris.

If a pipeline release does occur during a flood, pipeline components (e.g., valves, regulators, relief sets, pressure sensors, etc.) may become submerged and either inoperable or inaccessible. During a flood, submerged pipeline components would experience a greater risk of damage caused by floating debris, river currents and watercraft. The areas showing the highest flood hazard along the proposed route include areas along the Milk, Missouri and Yellowstone rivers in Montana; areas along various waterbodies within Butte, Harding, Meade and Tripp counties in South Dakota; and areas along the Elkhorn, Platte, Big Blue and Little Blue rivers in Nebraska. A release of product into these floodplains during a flood event could cause widespread dispersal of the product within the floodplain, especially because of flat topography in these areas.

Based upon its size, flow volumes and flow rates, erosion (i.e., scour and lateral migration) is a concern at the Missouri River crossing. A lateral migration analysis was performed as a part of the scour analysis at the crossing location. Lateral migration of up to 100 feet is projected for a 100-year project life. The scour analysis results incorporate a potential lateral migration of up to 100 feet. The potential for lateral migration of the river has been taken into account in the design for the crossing. The proposed HDD entry point is located 328 feet from the bank on the north side, while the proposed HDD exit point is located more than 1,000 feet from the bank on the south side. At these distances, it is anticipated that the pipeline would not be impacted by lateral migration.

To further mitigate the potential for a pipeline release resulting from scour along the Missouri River, Keystone would monitor the pipeline crossing for lateral migration, including obtaining a survey of the stream cross-sections at 100-foot intervals beginning 500 feet upstream and continuing to a point 500 feet downstream of the crossing location to establish baseline conditions. Thereafter, when advance notice is received from USACE for a spillway release and the flow rate is expected to exceed 20,000 cubic feet per second, Keystone would mobilize survey crews to remeasure stream cross-sections. This information would be used for verification of the scour model and to determine the extent of any lateral migration. If lateral migration greater than 50 feet is measured, additional mitigative measures would be considered to prevent further encroachment of the bank (Missouri River Waterbody Crossing Plan, 27 September 2017, Document No. KXL1399-EXP-A-PLN-0001).

Remediation efforts could encroach upon floodplains because of the movement of remedial equipment and vehicles. However, the encroachment would be short-term and minor because response personnel would not install any permanent aboveground structures in floodplains. If the cleanup effort requires excavation, the contours of the floodplain area would be restored as close to the previously existing contours as practical, and the disturbed area would subsequently be revegetated. In general, the greatest threat for impacts in the remediation phase would be the movement of heavy equipment or vehicles. Large spills that have wider geographic extents may have the most impact on floodplains because of the more extensive remedial requirements. Small or medium spills would have negligible to minor impacts on floodplains.

5.5.7 Biological Resources

An accidental release of crude oil along the proposed pipeline route could result in a variety of short- or long-term direct and indirect physical and toxicological impacts on the biological resources summarized in Section 3.7. A spill would have localized impacts on vegetation generally limited to the physical bounds of the spill, but the spill may have impacts on wildlife that could extend beyond the spill area.

Physical impacts could arise from direct contact with released crude oil. Toxicological impacts result from the chemical and biochemical actions of crude oil constituents on the biological processes of individual organisms. Toxicological impacts resulting from releases are a function of the chemical composition of the product, the solubility of each class of compounds and the sensitivity of the receptor. Toxicological

impacts could include direct and acute mortality; sub-acute interference with feeding or reproductive capacity; disorientation or confusion; reduced resistance to disease; tumors; reduction or loss of various sensory perceptions; interference with metabolic, biochemical and genetic processes and many other acute or chronic effects. Biological resources encompass a wide variety of habitats, flora and fauna, all of which could experience different impacts during a release. Table 5-17 summarizes these specific resources and the potential physical and chemical effects experienced during a spill. The following subsections provide details pertaining to each of these resources and the associated specific potential impacts.

Any release of crude oil may have an immediate and direct effect on local populations of flora and fauna. The potential for physical and toxicological effects from a release of crude oil reduces with time as the volume of material diminishes, leaving behind more persistent, less volatile and less water-soluble compounds (i.e., heavy aromatic compounds, including polycyclic aromatic hydrocarbons). Although many of these remaining compounds are toxic and potentially carcinogenic, they do not readily disperse in the environment and do not bioaccumulate; thus, they have less potential for widespread impacts. Lighter products contain higher proportions of the light, more volatile and soluble compounds. The risk of impacts reduces with time as concentrations of toxic compounds dissipate, but these volatile or soluble components bioaccumulate more readily than those found in heavier products, potentially resulting in toxic effects of the magnification of impacts as the toxins move up the food chain.

Table 5-17. Potential Effects to Biological Resources from a Release

Resource	Physical Effects to Resource	Chemical Effects to Resource
Vegetation	Coating leaves could inhibit gas exchange and respiration.	Coating soil could inhibit nutrient uptake. Uptake of dissolved toxic compounds.
Wildlife and Fisheries	Short- or long-term loss of habitat. Coated fur or skin could lead to loss of insulation or buoyancy, as well as reduced cutaneous respiration in amphibians. Transfer of product to eggs or young. Physical abnormalities and poor health caused by direct exposure.	Toxicological impacts through consuming contaminated food or ingesting product while cleaning feathers or fur. Effects to eggs laid in contaminated water or substrates leading to death or physical abnormalities. Decreased dissolved oxygen.

5.5.7.1 Vegetation

A spill of crude oil could affect vegetation in several ways. A surface release could produce localized effects, in which product permeates through the soil, coating sediments and soils, which could impact plant populations. This affects the root systems and indirectly affects plant respiration and nutrient uptake by inhibiting water and gas exchange. Aboveground, physical coating of leaves could disrupt photosynthesis and further reduce the plant's ability to perform vital life processes. Without complete remediation of contaminated soil in a vegetation zone, long-term effects on vegetation could occur.

Section 3.7 discusses the biologically unique landscapes and areas of conservation concern found in areas traversed by the proposed pipeline route. While impacts to the vegetation found in these communities would be similar to those discussed above, these impacts would be amplified because of the communities' sensitivity and limited size. Table 5-18 summarizes the annual likelihood of a potential release **occurring in proximity to** biologically unique landscapes and areas of conservation concern. As shown in this table, the greatest annual rate of spills affecting one of these resources occurs within biologically unique landscapes, where 0.2 incident per year of any size spill could **occur within 150 feet of** this resource.

Table 5-18. Annual Likelihood of Spills Occurring in Proximity to Biologically Unique Landscapes and Areas of Conservation Concern

Resource	Area within 150 Feet ^a	Area within 500 Feet ^b	Area within 1,200 Feet ^c
Biologically Unique Landscape ^d	0.2	0.03	0.005
Perennial Waterway with Fishery Status	0.01	0.008	0.005
Wildlife Management Area	0	0	0.0004
USFWS Critical Habitat	0.1	0.02	0.003
Wild Turkey Habitat	0.03	0.007	0.001

Source: Westech 2018; USFWS 2005

a. The area within 150 feet of the pipeline that is susceptible to small, medium, large and catastrophic spills.

b. The area within 500 feet of the pipeline that is susceptible to medium, large and catastrophic spills.

c. The area within 1,200 feet (up to 5,000 feet in areas of moderate or steep slope) that is susceptible to large and catastrophic spills.

d. Biologically unique landscapes have only been identified in the state of Nebraska.

USFWS = U.S. Fish and Wildlife Service

In addition to impacts related to the actual release, cleanup efforts could also generate impacts to terrestrial vegetation, including disturbance and the inadvertent spread of invasive species. Response activities create disturbances through movement of vehicles and personnel and through the implementation of cleanup methods, including excavation, dredging and in situ burning. Creating a disturbance may remove existing, native vegetation or alter the landscape, which enables non-native species to become invasive or spread to new areas. The movement of vehicles and equipment from one area to another in support of spill response and remediation activities also increases the opportunity to transport species into new areas. The implementation of appropriate preventive measures or monitoring regimes could reduce the impact of invasive species.

5.5.7.2 Wildlife and Fisheries

A release of crude oil could affect terrestrial wildlife directly or indirectly through impacts to their habitat or sources of food. For example, surface spills could affect vegetation, which is the principal food source of wild and domestic herbivorous mammals. Some of these animals probably would not ingest contaminated vegetation because of selective grazing. In these cases, such animals would need to seek out other food sources or temporarily relocate for the duration of the spill impacts. Contaminated vegetation would temporarily reduce local forage availability, but a spill would not substantially reduce the overall abundance of food for large herbivorous mammals. Unlike aquatic organisms that often cannot avoid spills in their habitats, the behavioral response of terrestrial wildlife may help reduce potential adverse effects.

Toxicological impacts arising from ingestion of petroleum products could include direct and acute mortality; sub-acute interference with feeding or reproductive capacity; disorientation or confusion; reduced resistance to disease; tumors; reduced or lost sensory perceptions; interference with metabolic, biochemical and genetic processes; and many other acute or chronic effects.

Beyond the direct impacts caused by a potential spill, response activities could have additional adverse consequences on local flora and fauna. Cleanup activities would potentially increase local boat, vehicle and human traffic. Excavation in contaminated areas would remove soil and vegetation. Spill response activities may disturb and/or remove soil and vegetation or temporarily relocate local species. This impact increases if the species use specialized habitats or if disturbed during sensitive periods, such as nesting. Federal agencies have developed a general process for protecting listed species and critical habitat during spill planning and response activities (U.S. Coast Guard et al. 2001).

Amphibians and reptiles are by nature unable to relocate quickly to avoid physical impacts from released crude oil. Amphibians obtain a portion of their oxygen through cutaneous respiration (i.e., they breathe through their moist, porous skin). This makes amphibians particularly at risk for suffering potential toxicological impacts. Together, amphibians and reptiles represented over 93 percent of the 3,970 animals treated at the wildlife response center established by the USFWS and Michigan Department of Natural Resources and Environment following the July 2010 spill of dilbit in Marshall, Michigan (USFWS 2015a). Contact with product in the water could lead to developmental deformities as amphibians hatch or undergo metamorphosis. Water contamination after a spill or habitat disturbance during spill response efforts could lead to temporary or permanent habitat loss for these species.

Birds may experience many chemical and toxicological effects following a spill. Acute toxic effects include drying of the skin, irritation of mucous membranes, diarrhea, narcotic effects and possible mortality. Birds are likely to ingest released crude oil as they preen their feathers in an attempt to remove the product. The ingested product may cause acute liver, gastrointestinal and other systemic impacts resulting in mortality, reduced reproductive capacity, loss of weight, inability to feed and similar effects. Stress from ingested product could be an additive to ordinary environmental stresses, such as low temperatures and metabolic costs of migration. Physical impacts experienced by physically coated birds could lead to loss of water repellency and insulative capacity of feathers, and affected birds could subsequently drown or experience hypothermia. Coated females could transfer product to their eggs, which at this stage could cause mortality, reduced hatching success or potential deformities in young.

Many predators and scavengers could also experience toxic effects through feeding on birds, other mammals, reptiles or fish that have been killed or injured by the oil spill. However, polycyclic aromatic hydrocarbons, which are some of the most toxic constituents of crude oil, do not reside for long periods within the body because fish, birds and mammals are able to metabolize and excrete these compounds (Lee et al. 2011; Navarro 2013; Neff 1979; Sheffield et al. 2012; USFWS 2015b). As such, predatory or scavenging species would experience limited acute (short-term) toxic impacts through ingestion of affected food sources. However, polycyclic aromatic hydrocarbons are lipid soluble and may be carcinogenic, mutagenic or teratogenic (Sheffield et al. 2012). Some species may also experience a loss of fitness (such as illness or decreased reproduction) while detoxifying systems are overwhelmed by polycyclic aromatic hydrocarbons (Lee et al. 2011).

Fish and aquatic invertebrates could experience toxicological impacts from spilled product, and the potential impacts would generally be greater in standing water habitats (e.g., wetlands, lakes and ponds) than in flowing rivers and creeks. In general, the potential impacts would be lower in larger rivers and lakes and much lower under flood conditions since the water would rapidly dilute toxic hydrocarbon concentrations. In smaller streams, a spill could create direct aquatic toxicity in the water column because of the lower relative volume and rate of water flow. Therefore, there would be a higher likelihood of direct contact between the biota and the dispersed product. Some toxicity might persist in these streams for a few weeks or longer, until water washes out the toxic compounds trapped in the sediment or until cleaner sediment covers the contaminated sediment. Fish hatched from eggs laid on contaminated substrates have shown “frequent death or physical abnormalities, including spinal deformities, lesions, hematomas, and eye defects” (Crosby et al. 2013; Colavecchia et al. 2007, 2006, 2004).

Long-term aquatic toxicity is less likely to occur in larger lakes and rivers because currents, wind and wave action would dilute or disperse the oil within the sediment over large areas. Spills into larger rivers and creeks might result in some toxicity within the water column itself. In larger rivers, because of the large and rapid dilution of the oil relative to the flow volumes, these impacts would likely be limited to back eddies, calm water regions and reservoir pools downstream of the release point. In smaller streams, an oil spill could create direct aquatic toxicity in the water column because of the lower relative volume and rate of water flow, and thus there would be a higher likelihood of direct contact between the biota and

the dispersed oil. Some toxicity might persist in these streams for a few weeks or longer, until water washes out the toxic compounds trapped in the sediment or until cleaner sediment covers the oiled sediment.

A spill that reaches a surface waterbody could also reduce dissolved oxygen concentrations, particularly from dissolved-phase hydrocarbons (e.g., BTEX). Because surficial petroleum slicks are less permeable to oxygen than water, spilled material that reaches wetlands, ponds or small lakes could lower dissolved oxygen concentrations caused by a decreased influx of atmospheric oxygen. A reduced dissolved oxygen concentration results in a lower sustainable capacity for aquatic life, thus reducing the overall waterbody population. Decreases in dissolved oxygen levels would be negligible in most cases but may be greater in large spills that cover much of the water surface for a day or more.

5.5.7.3 Threatened and Endangered Species

Threatened and endangered species, by definition, have declining population numbers, restricted habitats or are sensitive to human and natural influences. A spill that directly affects individuals of such species or indirectly affects their food sources or habitats would have a much greater impact on a threatened or endangered species than an unlisted species. Threatened and endangered species would not have the flexibility to find alternative food sources or relocate to other suitable habitat. These already limited populations would experience greater impacts through the loss of a few individuals. Impacts experienced by these plant and animal species would be similar to those discussed in Sections 5.5.7.1 and 5.5.7.2, but amplified because of the species' sensitivity and limited population numbers and range.

Major river crossings are subject to an intensive integrity management program stipulated by the USDOT (Integrity Management Rule, 49 CFR 195) and require heavier wall pipe to be used for the HDD method. To avoid surface water impacts HDD would result in a burial depth of 25 feet or more below river bottoms.

As presented in Table 3.7-3, the following federally listed threatened and endangered species have the potential to occur along the proposed pipeline route: interior least tern, piping plover, rufa red knot, whooping crane, pallid sturgeon, Topeka shiner, American burying beetle, northern long-eared bat, black-footed ferret and western prairie fringed orchid.

Table 5-19 presents the likelihood of a release to **occur within** these species' ranges along the entire Keystone XL pipeline route. The species range for piping plover exhibits the highest likelihood of 1.9 incidents per year of any size spill. This incident rate is very high due to the presence of piping plover species range along most of the pipeline route in combination with the higher incident rate for small spills (2.5 per 1,000 pipeline mile-years).

Table 5-19. Annual Likelihood of Spills Occurring within the Range of Threatened and Endangered Species

Resource (Species Range)	Area within 150 Feet ^a	Area within 500 Feet ^b	Area within 1,200 Feet ^c
Interior Least Tern	0.2	0.04	0.006
Piping Plover	1.9	0.4	0.05
Rufa Red Knot	1.5	0.3	0.04
Whooping Crane	1.7	0.3	0.04
Pallid Sturgeon	0.2	0.04	0.005
Topeka Shiner	0.03	0.005	0.0008
American Burying Beetle	0.5	0.1	0.01
Northern Long-eared Bat	1.3	0.2	0.04
Black-footed Ferret	0.9	0.2	0.02
Western Prairie Fringed Orchid	0.5	0.08	0.01

Source: NGPC 2018d, 2017a, 2017b, 2015, 2014, 2011a, 2011b, 2011c

^a. The area within 150 feet of the pipeline that is susceptible to small, medium, large and catastrophic spills.

^b. The area within 500 feet of the pipeline that is susceptible to medium, large and catastrophic spills.

^c. The area within 1,200 feet (up to 5,000 feet in areas of moderate or steep slope) of the pipeline that is susceptible to large and catastrophic spills.

Table 5-20 summarizes the types of adverse effects these species may suffer during a potential oil spill; **findings are consistent with the amended BA (BLM 2019). Significant impacts are unlikely, due to the likelihood that most spills would be small in size, the low probability of a spill contacting suitable habitat, and the low probability of the spill coinciding with the presence of individuals of any protected species other than the American burying beetle. For the American burying beetle, the Biological Assessment estimates that approximately four individuals would be affected by spills, leading to less-than-significant impacts to the species.**

Table 5-20. Federally Listed Species Potentially Affected by an Oil Spill along the Keystone XL Pipeline

Species	Habitat along the Keystone XL Pipeline	Food Source	Potential Effects from an Oil Spill
Interior least tern	Breeding and foraging habitat includes sandbars and sand/gravel pits along the Missouri and Yellowstone rivers in Montana; the Cheyenne River in South Dakota; and the Platte and Niobrara rivers in Nebraska.	Fish	<p>May Affect, Not Likely to Adversely Affect.</p> <p>Depending on the oil spilled, some components of the released oil may bioaccumulate and result in potential toxicological impacts if interior least terns consume contaminated prey. While the most toxic components of crude oil do not bioaccumulate to high degrees, this species could still experience direct physical or toxicological adverse impacts from an oil spill due to ingesting oil while preening. Direct physical impacts could result from oiling, leading to loss of water repellency and insulative capacity of feathers or transfer of crude oil to eggs, which at this stage could cause mortality, reduced hatching success or potential deformities in young.</p> <p>Adverse effects to interior least terns would be highly unlikely, due to the low probability of a spill occurring near suitable habitat.</p>

Table 5-20. Federally Listed Species Potentially Affected by an Oil Spill along the Keystone XL Pipeline

Species	Habitat along the Keystone XL Pipeline	Food Source	Potential Effects from an Oil Spill
Piping plover	Breeding and foraging habitat includes sandbars and sand/gravel pits along the Missouri and Yellowstone rivers in Montana; the Cheyenne River in South Dakota; and the Platte and Niobrara rivers in Nebraska.	Invertebrates	<p>May Affect, Not Likely to Adversely Affect.</p> <p>Depending on the oil spilled, some components of the released oil may bioaccumulate and result in potential toxicological impacts if piping plovers consume contaminated prey. While the most toxic components of crude oil do not bioaccumulate to high degrees, this species could still experience direct physical or toxicological adverse impacts from an oil spill due to ingesting oil while preening. Direct physical impacts could result from oiling, leading to loss of water repellency and insulative capacity of feathers or transfer of crude oil to eggs, which at this stage could cause mortality, reduced hatching success or potential deformities in young.</p> <p>Adverse effects to piping plover would be highly unlikely due to the low probability of a spill occurring near suitable habitat and the low probability of the spill coinciding with the presence of piping plover individuals.</p>
Rufa red knot	The rufa red knot occurs as a sporadic and somewhat uncommon migrant throughout the area of the proposed Project. Preferred stopover habitat includes ponds and wetlands with adequate mollusk foraging opportunity, which is highly limited in the Project area due to agricultural practices.	Mollusks, insects	<p>May Affect, Not Likely to Adversely Affect.</p> <p>Depending on the oil spilled, some components of the released oil may bioaccumulate and result in potential toxicological impacts if rufa red knots consume contaminated prey. While the most toxic components of crude oil do not bioaccumulate to high degrees, this species could still experience direct physical or toxicological adverse impacts from an oil spill due to ingesting oil while preening. Direct physical impacts could result from oiling, leading to loss of water repellency and insulative capacity of feathers or transfer of crude oil to eggs, which at this stage could cause mortality, reduced hatching success or potential deformities in young.</p> <p>Adverse effects to rufa red knot would be unlikely due to the low probability of a spill, low probability of the spill coinciding with the presence of rufa red knot individuals, and low probability of the spill reaching a major waterbody in sufficient amounts to cause toxic effects.</p>

Table 5-20. Federally Listed Species Potentially Affected by an Oil Spill along the Keystone XL Pipeline

Species	Habitat along the Keystone XL Pipeline	Food Source	Potential Effects from an Oil Spill
Whooping crane	The whooping crane occurs as a migrant throughout the proposed Project area. Possible areas used by whooping cranes during migration include major river systems and their associated wetlands, as well as palustrine wetlands and shallow areas of reservoirs, stock ponds and other lacustrine wetlands for roosting with agricultural croplands for foraging in the vicinity. All of the proposed Project route in Montana and a portion of the Project route in South Dakota are located west of the 95 percent flyway migration corridor.	Insects, crustaceans	<p>May Affect, Not Likely to Adversely Affect.</p> <p>Depending on the oil spilled, some components of the released oil may bioaccumulate and result in potential toxicological impacts if whooping cranes consume contaminated prey. While the most toxic components of crude oil do not bioaccumulate to high degrees, this species could still experience direct physical or toxicological adverse impacts from an oil spill due to ingesting oil while preening. Direct physical impacts could result from oiling, leading to loss of water repellency and insulative capacity of feathers or transfer of crude oil to eggs, which at this stage could cause mortality, reduced hatching success or potential deformities in young.</p> <p>Adverse effects to whooping cranes would be unlikely due to the low probability of a spill, low probability of the spill coinciding with the presence of migrating whooping cranes or migration habitats, and low probability of a whooping crane contacting the spilled crude oil.</p>
Pallid sturgeon	The potential for pallid sturgeon occurring within the proposed Project area exists at the crossing of the Milk River above the Fort Peck Reservoir, at the crossing of the Missouri River below Fort Peck Dam, at the crossing of the Yellowstone River downstream of Fallon, Montana, and the crossing of the Platte River southeast of Columbus, Nebraska.	Insects, crustaceans, mollusks, fish	<p>May Affect, Not Likely to Adversely Affect.</p> <p>Depending on the oil spilled, some components of the released oil may bioaccumulate and result in potential toxicological impacts if pallid sturgeon consume contaminated prey. However, the most toxic components of crude oil do not bioaccumulate to high degrees. Direct toxicological effects could result from physical oiling although the likelihood of such impacts to pallid sturgeon are low due to their preferred habitat in flowing rivers, which would dilute and disperse spilled product. Indirect effects could result from sunken product smothering the benthic habitat, leading to reduced ability to forage or decreased reproductive success.^a</p>

Table 5-20. Federally Listed Species Potentially Affected by an Oil Spill along the Keystone XL Pipeline

Species	Habitat along the Keystone XL Pipeline	Food Source	Potential Effects from an Oil Spill
Topeka shiner	In the general region surrounding the proposed Project area, the estimated current range of the Topeka shiner is very localized, limited to a portion of Madison and Stanton counties in Nebraska. The proposed MAR would pass through the Union Creek system in this area.	Invertebrates	<p>May Affect, Not Likely to Adversely Affect.</p> <p>Depending on the oil spilled, some components of the released oil may bioaccumulate and result in potential toxicological impacts if Topeka shiners consume contaminated prey. However, the most toxic components of crude oil do not bioaccumulate to high degrees. Direct toxicological effects could result from physical oiling if released product entered inhabited waterways.^a</p>
American burying beetle	The American burying beetle occurs in South Dakota and Nebraska, but it does not occur in Montana. Typical habitat includes mesic areas such as wet meadows, streams and wetlands in association with relatively undisturbed semi-arid, sandhill and loam grasslands.	Scavenger	<p>May Affect, Is Likely to Adversely Affect (if a spill release were to occur in American burying beetle habitat).</p> <p>Depending on the oil spilled, some components of the released oil may bioaccumulate and result in potential toxicological impacts if American burying beetles consume contaminated carrion. However, the most toxic components of crude oil do not bioaccumulate to high degrees, and this species would not experience direct physical or toxicological adverse impacts from an oil spill.</p> <p>Adverse effects from this factor would be highly improbable due to the low probability of a spill and low probability of a spill coinciding with the presence of American burying beetles.</p>

Table 5-20. Federally Listed Species Potentially Affected by an Oil Spill along the Keystone XL Pipeline

Species	Habitat along the Keystone XL Pipeline	Food Source	Potential Effects from an Oil Spill
Northern long-eared bat	The northern long-eared bat's range relative to the proposed Project includes all of South Dakota and Nebraska as well as all of Dawson, Prairie and Fallon counties in Montana.	Insects	<p>May Affect, Not Likely to Adversely Affect.</p> <p>The northern long-eared bat may experience adverse toxicological impacts from ingestion of contaminated water. Depending on the oil spilled, some components of the released oil may bioaccumulate and result in potential toxicological impacts if northern long-eared bats consume contaminated prey. However, the most toxic components of crude oil do not bioaccumulate to high degrees, and this species would not experience direct physical or toxicological adverse impacts from an oil spill. Areas surrounding wetlands remain susceptible to effects resulting from oil spills and associated response efforts (see Section 5.5.6). As such, local habitat for this sensitive species may experience short-term impacts from a release of crude oil. If a spill substantially alters the function of an existing wetland, long-term impacts could also occur.</p> <p>Adverse effects to northern long-eared bat would be unlikely due to the low probability of a spill and low probability of a northern long-eared bat contacting the spilled crude oil.</p>
Black-footed ferret	The proposed Project crosses the historical range of the black-footed ferret in Montana, South Dakota and Nebraska. Black-footed ferrets are not known to exist outside reintroduced populations in the western United States. Eleven reintroductions of black-footed ferrets have occurred in Montana, South Dakota and Kansas; these were outside the Keystone XL pipeline ROW.	Small mammals (prairie dogs)	<p>May Affect, Not Likely to Adversely Affect.</p> <p>Impacts could occur because of oiling, leading to loss of insulative capacity of fur and adverse toxicological impacts from ingestion of contaminated water or from direct ingestion of oil during grooming. Similar impacts to prey species could lead to additional toxicological impacts and reduced prey availability.</p> <p>Adverse effects to the black-footed ferret would be unlikely due to the low probability of a spill, the low probability of a spill coinciding with the presence of black footed ferrets, and the low probability of a ferret contacting the spilled crude oil.</p>

Table 5-20. Federally Listed Species Potentially Affected by an Oil Spill along the Keystone XL Pipeline

Species	Habitat along the Keystone XL Pipeline	Food Source	Potential Effects from an Oil Spill
Western prairie fringed orchid	The western prairie fringed orchid grows in wet to somewhat drier prairies in the eastern portion of Nebraska and its estimated current range overlaps the proposed MAR in Antelope, Madison, Stanton, Seward and Saline counties. However, the majority of the lands crossed by the proposed MAR are disturbed agricultural lands and are not likely to support this species.	Not applicable	May Affect, Not Likely to Adversely Affect. Impacts could occur because of direct physical oiling of plants or supporting soils or through increased human and vehicle traffic during spill response activities. Adverse effects to western prairie fringed orchid would be unlikely due to the low probability of a spill and the low probability of the spill coinciding with western prairie fringed orchid populations.

Source: Jorgensen 2015; NatureServe Explorer 2018; NGPC 2017a, 2017b, 2015, 2014, 2011a, 2011b, 2011c; USFWS 2017a

^a. Major river crossings are subject to an intensive integrity management program stipulated by the USDOT (Integrity Management Rule, 49 CFR 195) and require heavier wall pipe to be used for the HDD method. To avoid surface water impacts HDD would result in a burial depth of 25 feet or more below river bottoms

CFR = Code of Federal Regulations; HDD = horizontal directional drill; MAR = Mainline Alternative Route; ROW = right-of-way; USDOT = U.S. Department of Transportation

The bald eagle, a predatory bird species, is no longer listed under the ESA, but remains protected under federal regulations. The Bald and Golden Eagle Protection Act usually requires the maintenance of minimum buffers between a nesting bald eagle and any new or intermittent activities (such as a recovery effort after a spill), or it requires the seasonal restriction of activities that may disturb these birds or their nests. While violations of this act may carry penalties of monetary fines and/or imprisonment, criminal penalties only apply when a person without a permit “knowingly or with wanton disregard for the consequences of his act” takes an eagle or any part, feature or nest. A release of crude oil into a waterway could affect important bald eagle food sources, and spill response activities may disturb these birds. However, disturbances in these cases would be accidental and short term in nature. Should a spill alter the function of a surface water-related food source, a long-term impact could result and the bald eagle may relocate permanently.

5.5.8 Socioeconomics and Environmental Justice

An accidental release of crude oil along the proposed pipeline route could result in short- or long-term effects to the existing socioeconomic and environmental justice conditions within the ROI summarized in Section 3.8.

5.5.8.1 Socioeconomics

Potential socioeconomic effects from a release of crude oil include impacts to agricultural production, hunting and fishing, local property values and commercial activity. The extent and duration of the socioeconomic impacts would depend on the properties and uses affected, the response time, the remedial method employed by the response team, and the length of time required to return properties to conditions similar to those prior to the spill. The terrain near a spill location and the proximity of surface waters, residences and commercial uses are important factors that affect the extent of socioeconomic impacts. Releases in residential or commercial areas could require the evacuation of some residents and closure of businesses for an indeterminate period. During response and restoration actions, access to areas contaminated by crude oil would generally be limited or prohibited to anyone except the cleanup and monitoring crews. Table 5-21 lists the potential direct and indirect socioeconomic effects resulting from a crude oil release.

Table 5-21. Potential Socioeconomics Effects from a Crude Oil Release

Direct Effects	Indirect Effects
Physical covering or contamination of residential or commercial property by crude oil.	Evacuation of affected residences and businesses during response and remedial activity. Restricted access or impeded travel to residences, schools and businesses for the duration of remedial activity. Loss of business revenues and employee salaries during commercial closures. Adverse impact on property value. Noise, nuisance odors and visual effects.
Physical covering or contamination of recreational or economic resource by crude oil.	Restricted access to recreational resource area for the duration of remedial activity. Loss of business revenues associated with the resource. Loss of revenues from affected farmland, hunting or fishing resources. Potential permanent effect on recreational resources from residual contamination or perceived stigma.
Destruction of property during physical cleanup, including grading, excavation and dredging.	Accidental or intentional destruction of property during response and remedial efforts. Loss of residential property. Loss of business revenues. Adverse economic impacts for the municipal jurisdiction. Beneficial effects for some businesses (remediation firms, lodging providers, food and service businesses). Loss of cultural practices or beliefs of a living community.

The effects of a spill on agricultural production could result in a loss of revenue to farmers by the destruction of crops or the contamination of grazing lands. Depending upon the timing of an incident during the growing cycle and the acreage affected, a year's production could be lost in some cases. Furthermore, if the soils require substantial decontamination in the event of a large spill, losses in agricultural revenues could extend to subsequent growing seasons for the farmland affected.

Releases that occur near commercial businesses could potentially cause their closure. This would result in lost revenues to the business owners and lost income for employees. The magnitude of potential losses would depend greatly on the extent of the release and the duration and effectiveness of cleanup operations. The stigma of an oil spill, particularly in areas that are viewed as prime recreational areas or areas perceived as being of pristine environmental character, and perception of contamination for members of the public could affect some businesses well beyond the remediation phase. In particular, businesses dependent upon recreational lands contaminated by an oil spill could experience longer-term impacts from diminished public interest in the locations, even after successful remediation. In addition, industries that experience indirect economic benefits from the influx of recreational users to the area could also be affected, including food services, hotel and accommodation providers, and retail.

First responders to the scene of an accidental release would consist of police, fire and emergency medical services. Depending on the size of the spill, communities would initiate actions under mutual aid agreements during the response. In addition, police could be required throughout the duration of the

cleanup effort to secure the area near the spill and prevent entry into the affected area. This could result in temporary impacts to local police forces in the area of the release.

In the event that a spill would require extensive response and remediation efforts, additional cleanup workers and police, fire and medical services could be present throughout the duration of these activities. Depending upon the size and location of the spill, as well as the corresponding size of the response team, temporary stresses to police, fire and medical services could occur. Temporary housing would also be necessary for the dedicated response team throughout the duration of cleanup. Temporary housing is available throughout the regional setting, as discussed in Section 3.8. Depending on the size of the response team, location of the spill and local availability of housing, temporary impacts to housing availability could occur. The response could stress local hospital capacity depending on the extent and severity of human exposure. Exposure pathways could include direct contact with oil, inhalation of airborne emissions or consumption of contaminated food or water.

5.5.8.2 Environmental Justice

CEQ guidance for the consideration of environmental justice during NEPA evaluations directs federal agencies to consider the following three factors to determine whether an action may have a disproportionately high and adverse impact on minority and low-income populations:

- Whether there would be a “significant” (as employed by NEPA) ecological, cultural, human health, economic or social impact that would adversely affect a minority population, low-income population or Indian tribe;
- Whether “significant” (as employed by NEPA) impacts on minority populations, low-income populations or Indian tribes may appreciably exceed those experienced by the general population; and
- Whether cumulative or multiple adverse exposures from environmental hazards would affect a minority population, low-income population or Indian tribe (CEQ 1997a).

Therefore, if a product released from the proposed pipeline would affect an environmental resource, and if the release were to occur in a Census block group or tract identified in Section 3.8, then minority or low-income populations may experience adverse effects. Impacts to these communities and environmental resources would be similar to the effects described throughout this chapter.

Because it is not possible to predict the location of a release, it is not possible to determine whether a disproportionately high and adverse impact would occur for minority or low-income populations from an accidental release potentially occurring along the proposed pipeline route. However, as discussed in Section 3.8, minority and low-income populations exist in block groups located within 2 miles of the proposed pipeline route. Section 3.8 also describes Health Professional Shortage Areas and Medically Underserved Areas/Populations. Depending on the location and extent of a spill, minority or low-income populations could be more vulnerable to health impacts associated with a crude oil release because of reduced access to health care services. This could result in disproportionately high and adverse impacts to minority and low-income populations in the event of a large release.

Section 4.10 of the 2014 Keystone XL Final SEIS describes a series of consultation meetings the Department conducted in which some of the Indian tribes identified hunting, fishing, trapping and gathering activities as important for numerous reasons, including food supply, personal income and the continuance of cultural customs and traditions.

Additionally, as part of the USACE Section 408 review process, the USACE has solicited input from Indian tribes on water supply; on the cultural importance of water, plants and wildlife as it relates to sacred and spiritual practices; and on tribal fishing and hunting rights, subsistence living and use of plants

for medicinal purposes. Information provided by the Indian tribes to the USACE during this process addressed tribal water supplies and the importance of hunting, fishing, water, plants and wildlife resources on tribal culture.

It is recognized that Indian tribes **and tribal members** could be disproportionately negatively impacted by the proposed Project because they could have a greater dependence on natural resources than non-tribal members. This includes subsistence use within treaty lands in southeastern Montana, western South Dakota and northwestern Nebraska where Indian tribes still claim rights to hunting, fishing and water use. Large oil spills could significantly impact aquatic and terrestrial resources, including those considered important by Indian tribes or used in sacred and spiritual practices. Because many of the plant and animal species identified by the Indian tribes may be associated with wetland, riparian, aquatic and sagebrush habitats at the Missouri River crossing at Fort Peck, the proposed Project has the potential to impact fish and wildlife species important to Indian tribes.

Comments received from tribes and tribal members during the Draft SEIS comment period emphasized the importance of these natural resources to their culture and way of life. Rivers sustain the tribes in part by providing the water for traditional religious and cultural practices such as the Sundance and sweat lodges. These practices require water and resources, such as cottonwood trees and gathered plants, which rely on water from the rivers to thrive. Specifically, the Missouri River in certain tribal traditional beliefs holds sacred spiritual beings which would be threatened by contamination. Members of tribes also rely on rivers for subsistence including hunting of large mammals and game birds as well as gathering of plants which rely on the rivers. These subsistence activities are often used to supplement fixed incomes, and loss of these resources in the event of a spill would be a significant impact to these individuals. Contamination of these resources in the event of an accidental release would adversely affect these resources and significantly affect tribal culture and beliefs and threaten the transfer of these traditions to younger generations. Depending on the location of the accidental release, these effects could be disproportionately high and adverse to tribal communities affected by a spill.

While the impact analysis in the 2014 Keystone XL Final SEIS and this SEIS is not specific to tribal natural resources, the analysis regarding environmental resources provides insight as to how resources important to Indian tribes could be affected by the Project. For example, Sections 4.6 and 4.7 of the 2014 Keystone XL Final SEIS describe environmental consequences of, and mitigation for, the construction and operation of the project on hunting and fishing and other natural resources. Specifically, Section 4.6.3 discusses potential impacts to big and small game animals and waterfowl. Section 4.7.3 describes potential impacts to fisheries during construction (4.7.3.2) and operations (4.7.3.3).

Two Tribal lands are located adjacent to waterways within the 40-river-mile downstream area included in the ROI for the proposed Project. Cherry Creek and the Cheyenne River extend along a combined total of 40.3 miles of the Cheyenne River Reservation in South Dakota, while the Milk and Missouri Rivers border a total of 58.8 miles of the Fort Peck Reservation in Montana. Table 5-22 presents the likelihood of a release to occur within proximity to Tribal Trust Lands.

Table 5-22. Annual Likelihood of Spills Occurring in Proximity to Tribal Trust Lands

Resource	Area within 150 Feet ^a	Area within 500 Feet ^b	Area within 1,200 Feet ^c
Cultural Sites (Tribal Trust Lands)	0	0	0.0008

Source: U.S. Census Bureau 2017e

^a. The area within 150 feet of the pipeline that is susceptible to small, medium, large and catastrophic spills.

^b. The area within 500 feet of the pipeline that is susceptible to medium, large and catastrophic spills.

^c. The area within 1,200 feet (up to 5,000 feet in areas of moderate or steep slope) of the pipeline that is susceptible to large and catastrophic spills.

A specific concern raised by Assiniboine & Sioux Tribes of the Fort Peck Reservation is proximity of the proposed pipeline to the Assiniboine and Sioux Rural Water Supply System, the tribal municipal and industrial water supply system with an intake on the Missouri River approximately 57 miles downstream of the pipeline's proposed Missouri River crossing. The system supplies raw water to the Assiniboine and Sioux Rural Water Supply System water treatment plant in Poplar, Montana, and potable water to the Fort Peck Indian Reservation as well as to the residents of portions of Valley, Daniels, Sheridan and Roosevelt counties in Montana through the Dry Prairie Rural Water Association (see Section 3.8.2.4). In the event of a release to the Missouri River, Keystone has prepared a Site-Specific Risk Assessment (refer to Section 5.2) and a Geographic Response Plan (refer to Section 5.4.4) for the Missouri River crossing to support both the protection of environmentally sensitive areas and the protection of the public's health and safety if a release were to occur. These documents were prepared to evaluate the risk of a release, the potential effects that may result in the event of a release and the tactics for responding to a release.

Information provided by the Water Commission for the Assiniboine & Sioux Rural Water Supply System state their water treatment plant is not designed nor equipped to remove hydrocarbon contaminants such as benzene, ethylbenzene and p-xylene that are present in crude oil and dilbit. If oil were to reach the intakes on the Missouri River, the water treatment plant would have to close, resulting in the loss of the sole water supply for over 30,000 residents of the Fort Peck Reservation and surrounding communities within Valley, Daniels, Sheridan and Roosevelt counties, including 4 hospitals and 13 public schools. The Assiniboine & Sioux Rural Water Supply System water supply system intake along the Missouri River is beyond the 40-river-mile downstream maximum reasonable transport distance. However, Keystone has committed to a number of measures beyond spill cleanup measures, which are addressed in Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS. In the event that a spill contaminates water supplies used for industrial, municipal or irrigation purposes, Keystone has committed to provide an alternate water supply for any users of wells or irrigation intakes where water quality is affected by a spill. Keystone would provide either an alternate supply of water or appropriate compensation for those facilities impacted, as may be agreed upon among the affected parties and Keystone.

Water intakes used to irrigate Tribal lands within the Fort Peck Reservation are reportedly located 10 and 14 river-miles downstream of the proposed crossing. As stated in Section 5.5.6.2 of this SEIS, a release to surface water located upstream, and in the vicinity of any of these intakes identified, could produce both short- and long-term effects on the suitability or usability of these intakes. The degree of impacts to surface water intakes from a release would depend on many factors, such as the size of the release, the time of year of the release and the response time to address the release. A spill that contaminates an intake may make it unusable for an extended period of time until spill response and recovery activities have been completed. Loss of these irrigation intakes during the growing season would result in economic losses to farmers, including Fort Peck's agricultural economy. Crop loss as a result of a spill that was not covered by a farmer's liability insurance would involve a third-party claim that would have to be directed to Keystone for review and payment.

As stated within this chapter, Keystone has committed to a number of measures beyond spill cleanup measures, which are addressed in Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS. In the event that a spill contaminates water supplies used for industrial, **municipal** or irrigation purposes, Keystone may provide either an alternate supply of water or appropriate compensation for those facilities affected. Additionally, Keystone would also provide an alternative water supply for any well water quality that was found to be compromised by the spill.

5.5.9 Cultural Resources

An accidental release of crude oil along the proposed pipeline route could result in short- or long-term adverse effects to known or unidentified **historic properties** that exist within the ROI summarized in Section 3.9. While the extent of potential effects depends on the location of the spill and the volume of crude oil released, short- and long-term effects could occur through the physical contamination of **historic properties**. Impacts could also result from cleanup efforts or a lack of access to sites during cleanup efforts. To mitigate potential impacts, Keystone has committed, whenever feasible, to avoid known **historic properties during siting of the pipeline**, minimize impacts when avoidance is not possible (e.g., **HDD beneath unavoidable sites**) and mitigate impacts when minimization is not sufficient. Table 5-23 lists the potential **adverse** effects to **historic properties** resulting from a crude oil release.

Table 5-23. Potential Effects to Historic Properties from a Crude Oil Release

Direct Physical Effects	Other Direct Effects
Contamination of the historic property (surface soils and subsurface features/artifacts) from crude oil.	Restricted access to historical properties such as limiting use of historic structures and landscapes. Acceleration of deterioration of the historic property . Noise, nuisance odors and visual effects surrounding the historic property .
Physical covering of site by crude oil.	Restricted access prevents contaminated historic property from being properly researched and documented. Inability to use radiocarbon dating.
Disturbance to historic properties from physical cleanup, including grading, excavation and dredging, in situ burning and water flushing.	Accidental or intentional destruction of historic properties during cleanup efforts.

TCP = Traditional Cultural Property

The emergency provisions contained in the regulations that implement Section 106 of the NHPA do not directly address the requirements for emergency response in the event of an oil release. Therefore, in June of 1997, the Chairman of the Advisory Council on Historic Preservation signed a Nationwide Programmatic Agreement that established a national policy and procedures for the protection of **historic properties** during emergency response under the National Contingency Plan. The USEPA, USDOT, U.S. Coast Guard, the National Conference of State Historic Preservation Officers and the U.S. Department of the Interior also signed. Responsibility for implementation of the National Contingency Plan fell to the U.S. Coast Guard for coastal areas and the USEPA for inland Areas (Advisory Council on Historic Preservation **2002**).

The Nationwide Programmatic Agreement establishes the procedures for a response to an “emergency” circumstance. An “emergency” is a situation that dictates a response action to a spill that must take place expeditiously, such that normal consideration of the Section 106 process is not reasonably practicable. The Nationwide Programmatic Agreement designates a federal on-scene coordinator to make emergency response decisions regarding **historic properties** and outlines procedures for making informed decisions that consider cultural resource information before authorizing actions that might affect such properties. In the event of a conflict between public health and safety and the protection of historic properties, the responsibility of the federal government in protecting public health and safety is paramount.

5.5.10 Greenhouse Gases and Climate Change

An accidental release of crude oil along the proposed pipeline route could result in an increase in greenhouse gas emissions within the ROI with potential impacts to climate change as summarized in Section 3.10. A release of crude oil could contribute to greenhouse gases from fugitive emissions from spilled crude oil, from combustion of fuel in vehicles and equipment used for spill response and remediation actions, and from combustion of spilled crude oil in the event of a fire. Table 5-24 presents the potential direct and indirect effects to greenhouse gases from a spill.

Table 5-24. Potential Effects to Greenhouse Gases and Climate Change from a Crude Oil Release

Direct Effects	Indirect Effects
Fugitive emissions of greenhouse gases.	Greenhouse gas emissions from vehicles and equipment used in spill response and remediation.
Greenhouse gas emissions from potential fire caused by spontaneous ignition or explosion during spill incident.	Greenhouse gas emissions from fire intentionally ignited for spill containment.

Emergency response teams sometimes initiate controlled burning as a measure to mitigate impacts from spills. Most of the oil burned converts to CO₂ and water. However, particulates, mostly soot, make up approximately 10 to 15 percent of the smoke plume (Barnea 1995). Greenhouse gas emissions could occur from open burning of released crude oil in the event of a fire occurring in conjunction with a crude oil spill. Because the lifecycle greenhouse gas impacts of the proposed Project include the combustion of fuels produced from the crude oil, crude oil fires would not greatly increase total greenhouse gas emissions. However, crude oil fires could emit greater amounts of black carbon and other particulates that contribute to atmospheric warming. Black carbon has a relatively short atmospheric lifetime of days to weeks, as compared to the longer atmospheric lifetime of the dominant greenhouse gases (Melillo et al. 2014).

APPENDIX D COMMENT RESPONSE DOCUMENT

D.4.12 Accidental Releases (ACR)

The Department received comments related to the following topics: methodology used for the analysis; past incident records; impact conclusions; pipeline, safety and leak detection; human health and safety; remediation, response and liability; impacts to tribal resources and water intakes; and enforcement.

Theme	SEIS Location	Sub-Themes
Accidental Releases (ACR)	Chapter 5	<ul style="list-style-type: none"> • General (5-0) • Guiding Principles, Policies, Regs and Laws (5-1) • Methodology and Assumptions (5-2) • TransCanada Track Record on Spills and Cleanup (5-3) • Conclusions (5-4) • Mitigation, Response and Remediation (5-5) • Pipeline Safety (5-6) • Human Health and Safety (5-7) • Impacts to Water Quality (5-8) • Impacts to Tribal Rights and Resources (5-9) • Drinking Water Intake (5-10) • Riverbed Scour and Sufficiency of Burial Depth (5-11)

ACR Sub-Theme – General (5-0)

Synopsis:

Commenters expressed concern that the SEIS did not comprehensively address all of the product types that would be transported by the pipeline. In addition, a commenter requested that oil spills should be referred to as "discharge" and not "release," since release is a term specifically used in Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

Response:

Section 3.13.3 of the 2014 Keystone XL Final SEIS and Section 5.4.1 of the 2019 Keystone SEIS compare the physical and chemical properties of several types of crude oils, including dilbit, that may be transported by the proposed Project. Distinctions between oil types (especially light Bakken and dilbit) are made throughout Chapter 5 when addressing release type, impacts or oil behavior. Because the described products are similar to the products that may be transported by the proposed Project, the cleanup methods and approaches are considered relevant and are included in Appendix G and Appendix I of the 2014 Keystone XL Final SEIS.

The term "release" is defined in relation to this SEIS in Table 5-1. Although the term "release" has a specific regulatory definition under CERCLA, it has been used here and in previous NEPA documents prepared by the Department in its general form. Since this document does not use this term in accordance with its definition under CERCLA, there is little chance that it would be confused with the regulatory definition in this document. To remain consistent with previous analysis and use generic language that is easily understood by the public, the Department has elected to continue using the term.

ACR Sub-Theme – Guiding Principles, Policies, Regs and Laws (5-1)

Synopsis:

Commenters requested that TransCanada be required to follow current industry standards, including American Petroleum Institute (API) Recommended Practice (RP) 1133, Guidelines for Onshore Hydrocarbon Pipelines Affecting High Consequence Floodplains, and API RP 1173, Pipeline Safety Management Systems, and API RP 1175, Pipeline Leak Detection Program.

Comments also questioned who would be held liable for damages and recovery in the event of an accidental release. Specific concerns included the private property owner or municipality being responsible for damages to property, resources (e.g., wells, wetlands, farmland soils) and infrastructure (e.g., water supplies, water treatment systems, irrigation systems).

Response:

TransCanada has committed to ensuring that the design, construction and operational practices for the Keystone pipeline are consistent with the API RP standards 1133, 1173 and 1175; however, these standards are not required by PHMSA.

The Oil Spill Liability Trust Fund (OSLTF) is typically used to pay for and expedite the response and cleanup activities associated with a large oil spill. The OSLTF can be used to cover costs incurred by federal and state responses, payments for natural resource damage assessments and restoration, payment of claims for uncompensated costs or damages, research and development, and other allocations. Although Keystone has asserted that dilbit is exempt from the federal excise tax that contributes to the OSLTF, OSLTF resources could nonetheless be used to assist cleanup of a spill associated with the proposed Project. The OSLTF is financed in part by the recovery of costs and damages from the responsible parties for response and remediation activities as well as the fines or civil penalties incurred by the responsible parties liable for incidents.

Section 4.13.6.2, Safety and Spill Response, of the 2014 Keystone XL Final SEIS describes Keystone's liability and responsibility as the pipeline operator under potentially applicable federal and state soil, surface water and groundwater clean-up regulations. In the event that a release of crude oil contaminates groundwater, Keystone has agreed that it would be responsible for cleanup and restoration and, where appropriate, for providing an alternative water supply for groundwater that was used as a source of potable water or for irrigation or industrial purposes. See Section 4.13.6.2, Safety and Spill Response (see subsection Spill Liability and Responsibility) and Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS, for additional information.

Keystone could also be liable for damages to natural or other resources. There are no regulatory limits to these liabilities. Keystone could also be subject to the civil and criminal penalty provisions of the Clean Water Act, Rivers and Harbors Act, and the Pipeline Safety Act. In the event of a spill, state, tribal and federal natural resource trustee agencies could require a Natural Resource Damage Assessment under either the Oil Pollution Act or the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), depending on the types of materials spilled and the assessment of the magnitude of the impacts. The assessment would identify the extent of resource injuries, the best methods for restoring those resources, and the type and amount of restoration required in the event of a spill. The funds recovered from these civil and criminal penalties would also be returned to the OSLTF.

If a release is caused by negligent or willful acts of others, Keystone may ultimately recover costs from those committing the acts since individuals are not automatically protected from liability associated with negligent acts or willful misconduct leading to property destruction and environmental damage. Specific liability warrants and indemnifications are included within individual easement agreements.

ACR Sub-Theme – Methodology and Assumptions (5-2)

Synopsis:

Commenters questioned the methodology used to perform the accidental release analysis in Chapter 5 of the SEIS. This included requesting justification for the maximum reasonable transport distance of 40 river-miles, requesting the use of past incident data to include the recent spill on the existing Keystone Mainline on October 29, 2019, and questioning the general calculation of incident rates compared to TransCanada's track record. Commenters also claimed that the impact analysis did not fully address spills to streams that are ice covered and the challenges associated with response and recovery operations.

Response:

Maximum reasonable transport distance. Several commenters called into the question whether the 40-river-mile maximum reasonable transport distance used to establish the region of influence extends far enough to support the analysis of potential impacts. Commenters reference two spills in Montana where oil was observed more than 40 miles downstream (see Laurel, Montana [2011] and Glendive, Montana [2015] in Section 5.3.4) and state that the spill in Marshall, Michigan was artificially constrained by dams at a downstream distance of approximately 40 river-miles. In addition, comments stated that the analysis should be completed using all the possible spill response times specified in 49 CFR 194.115(b).

As discussed in Section 5.2 of the SEIS, the Department established a 40-river-mile distance as the maximum reasonable transport distance to evaluate potential downstream impacts from a spill that flows into a surface water body. This distance is used in the SEIS to establish the region of influence for the evaluation of potential impacts that encompass a range of potential accidental release types and conditions. The Department established the maximum reasonable transport distance based on numerous factors including the results of project-specific modeling data from a worst-case analysis of a release on the Missouri River, information from and the characteristics of other major oil spills including construction techniques and pipeline age, prior accident analysis from similar pipelines, and characteristics and safety measures integrated into the design and operation of the proposed Keystone XL pipeline. Therefore, the maximum reasonable transport distance includes consideration of prior events that have both a range of response times and spill conditions. Based on this review, the Department considers a maximum reasonable transport distance of 40 river-miles to be within the rule of reason as an upper bound for evaluating potential impacts for a release from the Keystone XL pipeline. Worst-case and response zone-specific spill scenario analysis, as required under 49 CFR 194, would appropriately be addressed to support development and approval of a Facility Response Plan prior to operation of the pipeline.

The Department considers accidental releases with the potential for effects beyond the maximum reasonable transport distance to be extremely unlikely. However, in the unlikely event that a spill were to impact resources beyond the 40-river-mile distance, including water quality or intake structures, those impacts would be expected to be similar in nature, but much smaller in degree, to those presented in Chapter 5 of the SEIS.

The Department considered both the Laurel, Montana and Glendive, Montana spills, as presented on page 5-2 of the Draft SEIS, which includes a discussion of oil sheens and oil globules (small round particles) being observed at distances greater than 40 river-miles. Observations beyond 40 river-miles from these spills were limited to light and very light amounts of oil. As a result, water quality impacts were extremely limited in magnitude and extent or did not occur beyond this distance. It is important to note that both of these spills involved different product types and occurred at Yellowstone River crossings in which the pipeline had been installed using open trench methods, which presents a substantially greater risk for a release to the river as compared to the horizontal directional drilling (HDD) technique that would be used for the proposed Keystone XL pipeline.

During the 2011 Laurel, Montana spill, the Yellowstone River was experiencing flood conditions, which increased the river's flow rate and therefore the downstream transport distance of released oil. Even so, the majority of observed oil was located within the first 28 miles downstream of the release point. EPA Region 8 used the shoreline cleanup and assessment technique (SCAT) during the spill response to support cleanup operations, in which the floodplain for the Yellowstone River was divided into three divisions: Division A (spill origin to 10 miles downstream), Division B (10 to 28 miles downstream) and Division C (28 to 85 miles downstream). SCAT observations during the response period were characterized as either no oil observed, very light, light, moderate or heavy. Approximately 70 percent of Division C had no observations of oil. Of the remainder, approximately 28 percent of observations

(2,069 acres) were classified as very light. Only 0.1 percent of the distance beyond 28 miles downstream of the release point had observations of moderate oil (USEPA 2011c). However, oiled soils and woody debris are not indicative of water quality effects to drinking water. Samples were collected from near the release point up to 260 miles downstream; none of these samples detected hydrocarbons at concentrations exceeding Montana Numeric Quality Standards with Tier 1 Risk Based Screening Levels (Arcadis 2014b).

For the 2015 Glendive spill, the final containment recovery site was located 30 to 40 miles downstream of the spill near Crane, Montana. This recovery site was established beyond the known extent of contamination as the point at which no oil would be allowed to travel; no observations of oil were made at this downstream distance.

The 2010 Marshall, Michigan dilbit spill into Talmadge Creek and the Kalamazoo River occurred during a planned shut-down procedure, and pipeline operators did not initially recognize the loss of pipeline pressure as a release. The release went unreported for over 17 hours, delaying response efforts and thereby increasing the downstream area affected. Flood conditions in the Kalamazoo River also increased river flow rates and the downstream extent of effects. However, as discussed in the Draft SEIS, dams located along the Kalamazoo River impeded the downstream flow of released crude oil. It is important to note that a spill response boundary that was established just upstream of the dam at the western end of Morrow Lake acted as an effective barrier that prevented further downstream migration of spilled dilbit. It is unclear whether spilled product could have flowed beyond the dam at Morrow Lake if not for the response effort that took place there. According to the Federal On-Scene Coordinator for the 2010 Marshall, Michigan response effort, “EPA observed that the oil covered the entire surface of Talmadge Creek over its 2.2 mi reach to the river, entered the Kalamazoo River, and remained as bank to bank coverage until the Ceresco Dam, which was approximately six miles downstream from the confluence of Talmadge Creek and the Kalamazoo River. At the downstream side of the dam, oil was still pervasive but diminished to approximately 50% coverage of the river surface area due to mixing and breaking up while flowing over the dam” (USEPA 2016).

Commenters also cited spill events in which the 6-hour response time was not adhered to, including a spill on a Chevron Pipeline Company in Salt Lake City, Utah in June 2010, the 2010 spill in Marshall Michigan, and a spill from Belle Fourche Pipeline Company’s Bicentennial Pipeline system in December 2016. The commenters state that the risk analysis conducted for the Missouri River crossing wrongly concludes that a 6-hour response time would be appropriate for calculating the downstream flow distance for a spill since other spills have taken much longer to detect and initiate response efforts. For the purpose of the risk analysis, the 6-hour response time was used as it represents the maximum response time along the Missouri River stipulated by federal pipeline safety regulations (49 CFR 194). It is important to note that this modeling for the risk analysis produced downstream transport distances from less than 1 mile for low flow conditions to up to of 33.33 miles for extreme flood conditions, which is well within the 40-mile transport distance considered in the SEIS.

The Missouri River analysis and modeling was only one of several factors used in evaluating the maximum reasonable transport distance for the SEIS analysis. As mentioned earlier, the Department used a number of factors to identify the downstream distance region of influence, including the Missouri River analysis and a review of spill report data for several other spills to surface water including those listed above. In all of those cases, observations beyond 40 miles (if any) were limited to sheen and sporadic presence of globules. For example, following the spill in December 2016 on the Bicentennial Pipeline, 70 percent of the oil was contained in the first mile and an additional 15 percent was contained in the next 4 miles downstream, while the leading edge of the plume was estimated at 6.5 miles downstream. This was a much smaller (6-inch) pipeline; however, as the commenter noted response time exceeded 48 hours.

The 40-river-mile maximum downstream distance remains a reasonable boundary for the assessment of potential impacts resulting from an accidental release along the pipeline. It is also important to take into account the fact that all major crossings (greater than 100 feet in width) will be crossed using HDD at a depth of at least 25 feet beneath the bottom of the waterbody, which substantially reduces the risk of an in-water release, as occurred in the Laurel and Glendive spills. Keystone has also agreed to install pipelines across smaller streams with a minimum of 5 feet of cover instead of the 3 feet of cover required by code. Additionally, the crossing distance for these streams has been identified by conducting lateral migration studies to maintain that 5-foot depth while accounting for future stream channel migration. These measures also reduce the likelihood of a spill occurring in close proximity to streams.

Incident Rates. Within the SEIS, the Department applied an approach consistent with the recommendation for analyzing accidents under NEPA developed by the Department of Energy (U.S. Department of Energy 2002). As discussed in Section 5.3.1 of the SEIS, the Department utilizes data from the PHMSA to calculate incident rates along U.S. onshore pipelines. The incident rates developed for the SEIS are based on spills of crude oil from U.S. onshore pipeline systems. These rates are conservative in nature as they have not been adjusted to reflect specific engineering factors that reduce risk or incorporate different incident rates for the various pipeline system elements. For example, releases occur more frequently at fixed facilities, such as terminals and pump stations, but incidents involving these system components are more likely to be contained within operator-controlled property as opposed to affecting offsite sensitive resources. The SEIS analyzed differences in incident rates for the various pipeline components but did not use this data to calculate incident rates.

To address the concern related to the fact that the overall incident rate overstates the potential for a release to occur within the right-of-way (ROW) for the mainline pipe, the Department has prepared a summary of incident rates for the mainline pipe versus fixed facilities, which uses the same data set (PHMSA 2019b) and spill size categories (as defined in Table 5-1 of the SEIS). Table D.4.12-1 summarizes pipeline incident data between the years 2010 to 2018 (inclusive) from the PHMSA incident database. The overall incident rate in the SEIS was also updated to incorporate incident data through 2018. A qualitative assessment of data through October 2019 was also incorporated into the analysis for the SEIS. In Table D.4.12-1, incidents have been sorted into two groups, those occurring along the pipeline ROW and those occurring at fixed facilities. Incidents occurring along the pipeline ROW would include incidents from the mainline pipe or a valve, while incidents at fixed facilities would include leaks and spills from any of the pipeline system components located at a pump station or tank terminal.

**Table D.4.12-1. Annual Incident Rates for Crude Oil Pipeline ROW and Fixed Facilities
(per 1,000 pipeline miles)**

	Small	Medium	Large	Catastrophic	All Spill Sizes
Overall Pipeline System	2.54	0.51	0.07	0.010	3.12
Pipeline ROW Only	0.58	0.21	0.04	0.005	0.84
Fixed Facilities Only	1.96	0.29	0.03	0.005	2.28

Source: PHMSA 2019a, 2019b

Note: Values may not add up due to rounding.

As shown in the Table D.4.12-1, the incident rate for small spills, which account for over 80 percent of all reported incidents, is 3.4 times higher at fixed facilities (1.96 incidents per 1,000 miles of pipeline) as compared with spills occurring in the pipeline ROW (0.58 incident per 1,000 miles of pipeline). The incident rate for medium spills is slightly higher for fixed facilities (0.29 incident per 1,000 miles of pipeline) than for the pipeline ROW (0.21 incident per 1,000 miles of pipeline), while the rate for large

spills occurring within the pipeline ROW (0.04 incident per 1,000 miles of pipeline) is nearly the same as the incident rate for large spills at fixed facilities (0.03 incident per 1,000 miles of pipeline). The incident rates for catastrophic spills occurring within the pipeline ROW and those at fixed facilities are the same (0.005 incident per 1,000 miles of pipeline).

The Department has determined that despite the difference in incident rates between fixed facilities and the pipeline ROW, it is still reasonable and appropriate to use an overall incident rate that represents the entire pipeline system as an upper bound to support the impact analysis. The overall incident rate overestimates incidents occurring along the pipeline ROW and underestimates incidents occurring at fixed facilities; however, the impact analysis in the SEIS is not dependent upon incident rates for specific features within the pipeline system, but rather estimates the likelihood for spills to occur at any point along the pipeline system. The Department updated Section 5.3.1 of the SEIS to acknowledge these differences in incident rates to better frame the analysis.

In response to the comment regarding the fact that the number of pump stations, valves and tanks is not known and estimating this number cannot be supported with existing data and may be speculative, the Department agrees that Table 5-3 in Section 5.3.1 of the SEIS should be updated to remove the estimate on the numbers of these equipment and the likelihood of release. This table discusses incident rates in terms of incidents per 1,000 equipment-year, where equipment-years are calculated by counting the total estimated number of equipment (i.e., valves, pumps, etc.) in operation from 2010 to 2018 and dividing by the number of years, in this case, 9 years. While the total number of tanks, valves and pump stations supporting U.S. onshore crude oil pipelines are not known based on available data, the Department used information from the proposed Project to make reasonable estimates. For example, under the proposed Project, valves would be located at 20-mile intervals along the pipeline route, and pump stations would occur every 46 miles. The Department divided the number of existing U.S. onshore crude oil pipeline miles by 20 and 46 to estimate the number of valves and pump stations, respectively, for use in calculating the incidents per equipment-year presented in Table 5-3. Given the uncertainty related to these calculations and the fact that the analysis is not dependent upon these equipment-specific incident rates, the Department has elected to remove the last two columns from Table 5-3 for tanks, valves and pump stations.

A comment claimed that the SEIS analysis is inaccurate as it is based on a single project and speculation instead of definitive numbers of existing equipment. The analysis relies on industry-wide estimates and information from this specific project; however, the conclusions presented in the text of the SEIS are supported by the information presented in Table D.4.12-1. Most spills, regardless of location or component that failed, are small in size, and most spills occur at fixed facilities. No change was made to the methodology for calculating the incident rates presented in Section 5.3.1 and Table 5-3, but the numbers were updated to include 2018 incident and pipeline mileage data from PHMSA (PHMSA 2019a, 2019b).

Another comment states that the incident analysis and resulting impact analysis is overly conservative because it does not account for the fact that most pipeline spills occur at fixed facilities, such as tank farms, where containment systems lessen or prevent impacts to the environment. The Department has prepared a summary of incident data for spills occurring at fixed facilities and along the pipeline ROW. Table D.4.12-2 compares the number of incidents and percent product lost for releases occurring within pipeline ROWs with those occurring at fixed facilities. The percent product lost represents the fraction of the total released volume that was not recovered following the spill. The total volume lost in barrels is also presented to provide context for the discussion.

Table D.4.12-2. Comparison of Percent Crude Oil Lost Following a Release

	Small		Medium		Large		Catastrophic		All Spill Sizes	
	Total No.	% Lost (bbl)	Total No.	% Lost (bbl)	Total No.	% Lost (bbl)	Total No.	% Lost (bbl)	Total No.	% Lost (bbl)
Pipeline ROW	324	23.0% (585)	120	21.2% (7,782)	24	26.3% (22,349)	3	45.7% (24,357)	471	31.0% (5,5073)
Fixed Facility	1,095	11.6% (727)	163	9.6% (3,828)	15	6.7% (2,510)	3	27.8% (9,023)	1,276	13.9% (16,089)

Source: PHMSA 2019b

For those spills that occurred at fixed facilities, approximately 14 percent of spilled crude oil was lost, while for spills of crude oil that occurred along the pipeline ROW, the rate of spilled crude oil lost was more than double at 31 percent. Although the total number of spills is higher at fixed facilities, the recovery rate is also higher at those facilities. More product is lost from spills occurring along the ROW than at fixed facilities.

The data summarized in Table D.4.12-2 confirms that more product is recovered at fixed facilities, but based on the information available in the PHMSA database, it cannot be determined whether this is because of product being more readily contained or whether the incident was more quickly identified and remediated by staff at the fixed facilities as compared to an incident occurring somewhere along a pipeline ROW. Section 5.3.1 of the SEIS has been updated to acknowledge this fact; however, the Department has not made changes to the incident analysis because it represents a reasonable and conservative estimate of the potential for an incident to occur.

Using PHMSA information, the Department also performed an analysis to determine the number of incidents which only impacted property controlled by the operator as compared to those which impacted off-site properties or properties within the ROW. Overall, nearly 75 percent of all incidents impacted only operator-controlled properties. This rate was higher (92 percent) for incidents which occurred at fixed facilities, where spills are smaller and where additional containment measures are in place. For large and catastrophic spills, only 13 out of 45 incidents (29 percent) between 2010 and 2018 were completely contained on operator-controlled property.

Commenters raised a concern regarding the way that the tables in Section 5.5 are overstating the potential for spills to affect the listed resources. They pointed out that most spills occur on operator-controlled property and are contained and cleaned up with no impacts to resources. As pointed out in the previous paragraph, nearly 75 percent of spills have only impacted operator-controlled properties. The tables in Section 5.5 are showing the potential for a spill to occur in the vicinity of a resource and do not, as the commenter pointed out, directly represent the likelihood that a spill would affect these resources. As a result, the table titles have been changed to address this fact. For example, Table 5-7 has been renamed from “Likelihood of Spills Affecting Agricultural Land Use per Year” to “Likelihood of Spills Occurring in Proximity to Agricultural Land per Year.”

A commenter raised the concern that the distance (over 1,000 feet for large spills) used to estimate the length of a groundwater plume assumes that the crude oil spill remains in place without cleanup, which is unrealistic for larger releases. Although the Department does acknowledge that the methodology in this case is conservative, especially for modeling large spills, the Department has elected not to change this methodology since it is consistent with previous analysis conducted by the Department and conservatively identifies the resources with the potential for impacts from a release.

See ACR Sub-theme TransCanada Track Record on Spills and Cleanup (5-3) regarding TransCanada's track record on spills, including information considered on the recent October 29, 2019 spill along the existing Keystone Mainline pipeline.

Consideration of Ice-Covered Streams. Commenters claimed that the SEIS does not analyze a spill scenario during winter conditions when a stream is partially or completely ice covered. Section 5.4.3.2 addresses impacts related to spills to frozen waterways. As mentioned in that section, these spills would have the potential to be trapped under the ice, especially any spills originating at the river crossing. The presence of ice inhibits initial detection of a spill, observations of the presence of oil and estimates of the extent of the oil within the waterway (MDEQ 2016b). The section goes on to describe what occurred during the January 2015 spill near Glendive, Montana to the Yellowstone River when the river was frozen, including the fact that the ice trapped volatile organic compounds within the water column that would have dissipated to the air otherwise.

Section 5.5.6.2 has been expanded to include more details regarding potential for impacts from a spill to a frozen waterway. As would be expected, impacts would depend upon many factors including whether the spill was under or on top of ice, and whether the ice was structurally competent or broken up. This section has also been expanded to include additional details from the January 2015 spill. It is important to note that a spill like the one that occurred near Glendive, Montana in which a pipeline ruptured underneath a frozen river is extremely unlikely. As previously discussed, the pipeline associated with this release was installed using open trench methods, which presents a substantially greater risk for a release to the river as compared to HDD construction. In addition, there was no other similar reported spill in the PHMSA database (2010 through 2019) that involved a spill underneath an ice-covered stream. Regardless of how unlikely such a spill would be, TransCanada would include response procedures in their Facility Response Plan specific to responding to spills to ice-covered waterways. This will help to ensure that TransCanada's response team is ready to respond to spills to waterways, even when they are covered with ice.

ACR Sub-Theme – TransCanada Track Record on Spills and Cleanup (5-3)

Synopsis:

Commenters questioned TransCanada's track record of pipeline safety and accidental releases, including the track record of the existing Keystone pipeline highlighting recent events such as the October 29, 2019 incident in North Dakota. Commenters claimed that TransCanada's recent spills indicate that the spill frequency should be revisited since it may not be indicative of TransCanada's recent record.

Response:

For the analysis of impacts from spills in the SEIS, spill data is used in two ways. Spill data from spill reporting over each preceding year is used to calculate the frequency of spills in the past, which in turn is used to estimate the potential for spills to occur in the future. In addition, other available information, such as response and investigation reports, are used to evaluate the details of large or catastrophic spills and integrate that information into the analysis as appropriate.

Spill response information and investigation information were reviewed to assess spills that originated from the proponent's infrastructure, which are documented in the SEIS. However, this becomes challenging when a new spill occurs for which all reporting is preliminary and an investigation has not yet been completed. In this case the information that can be incorporated into the SEIS is limited to general information reported during the initial response, including the location and volume of the spill, and details on the area that has been affected. This is the case or a recent spill that occurred on the existing Keystone pipeline in October 2019. Available information from that spill has been incorporated into the analysis, as appropriate. The most recent spill was also compared against the current statistical analysis (2010

through 2018) to make a determination whether any changes/updates should be made related to the analysis of spills originating from pipelines operated by the proponent and by crude oil pipelines nationwide. In addition, the statistical analysis was updated to quantitatively incorporate spill reports from 2018 and qualitatively review and assess incident rates through the present (October 2019).

Section 5.3.3 discusses the incident history for TransCanada, and Table 5-4 compares the rates of incidents occurring along TransCanada-operated pipelines to the industry average for U.S. onshore crude oil pipelines. Note that the statistical analysis has been updated to incorporate spill reports from 2018. While not included in the statistical analysis, Section 5.3.3 also includes text regarding two incidents involving TransCanada-operated pipelines in 2019, including the most recent release occurring on October 29, 2019 near Edinburg, North Dakota. In addition, Table D.4.12-3 compares the rate of incidents occurring along TransCanada-operated pipelines to the industry average incident rate per 1,000 pipeline miles. This table incorporates incident data through October 2019, including TransCanada's recent spills. The table shows how recent spills along TransCanada-operated pipelines in 2019 have affected the company's incident rate; the rates of small and large spills per 1,000 pipeline miles have increased, while the incident rate for medium spills decreased slightly. TransCanada's incident rates for small and medium spills are well under those for the rest of the industry (2.5 times less for small spills and 4 times less for medium spills), while TransCanada's incident rate for large spills is about 1.7 times higher than the average for the rest of the industry. By using the overall industry average rate, as shown in Table 5-4, the analysis of potential impacts in the SEIS reflects the potential for releases to occur from TransCanada-operated pipelines.

Table D.4.12-3. TransCanada Annual Incident Rate Per 1,000 Miles of Pipeline

	Incident Rate Per 1,000 Miles of Pipeline			
	Small Spills	Medium Spills	Large Spills	Catastrophic Spills
TransCanada (2010-2018) (from Table 5-4 of SEIS)	0.81	0.14	0.07	0.00
Industry-wide (without TransCanada) (2010-2018)	2.58	0.52	0.07	0.01
TransCanada (2010-October 2019)	0.98	0.12	0.12	0.00
Industry-wide (without TransCanada) (2010-October 2019)	2.51	0.50	0.07	0.01

Note: Incident rates for 2019 were calculated using available incident data from PHMSA through October 2019 and the existing 2018 U.S. onshore pipeline mileage. The mileage was then prorated for the partial year by multiplying by the fraction of 2019 being accounted for, in this case, 10 out of 12 months.

ACR Sub-Theme – Conclusions (5-4)

Synopsis:

Commenters questioned the conclusions in the SEIS based on past incident rates and the extent of impacts a release could cause in sensitive resources such as streams, wetlands, aquifers, farmland, plants and wildlife, in addition to tribal lands and effects to the local economy and recreation. The commenters believe the level of effects to resources discussed within the SEIS are minimalized. Commenters also requested that the socioeconomic analysis in Chapter 5 of the SEIS consider the potential costs of an accidental release to surrounding communities, including tribes. Additional concerns included that the Department's application of the IMPLAN model contains no quantitative analysis of non-positive

socioeconomic impacts of either construction or operations of the pipeline and should include negative factors, such as increased law enforcement costs and potential revenue losses (e.g., tourism and agriculture). Commenters also state the potential impacts from a crude oil release to environmental justice communities along the pipeline are not considered. Commenters also questioned the conclusion of no impacts to cultural resources in the event of a crude oil release and stated that other culturally significant sites such as Ponca corn and the effect of soil productivity to the corn's growth must be considered.

Response:

Regarding impacts to water and biological resources, potential impacts to water resources (groundwater, drinking water and surface water), wetlands, wildlife, vegetation and the public due to a spill along the proposed project route are discussed in detail in SEIS Section 5.5, Impacts of Releases. Section 5.5 provides an overview of each resource area and potential direct and indirect effects to the resources in the event of a spill. This section also provides the probability of a release, by release size, occurring within proximity to a resource based the occurrence of the resource along the proposed pipeline and the incident rates reported to PHMSA through the 2018 calendar year (also see response to ACR Sub-theme TransCanada Track Record on Spills and Cleanup (5-3) regarding calculation of incident rates). The SEIS analysis uses updated federal and state databases on protected species and field surveys with a maximum reasonable transport distance of 40 river-miles downstream, which is more conservative than the region of influence assessed in the 2014 Keystone XL Final SEIS.

The SEIS evaluates potential impacts to local ecosystems, communities and the public due to a spill along the proposed pipeline route based on spill size and likely distance traveled (see Section 5.2 for additional information). A detailed discussion of potential receptors along the proposed route is contained in Section 5.5, including high consequence areas, unusually sensitive areas, vegetation and soil ecosystems, agricultural lands, wildlife, cultural resources and water resources. Biological and ecological impacts may manifest in local populations, communities or entire ecosystems depending on the location, size, type, season, duration and persistence of the spill, as well as the type of habitats and biological resources exposed to spilled oil.

The effects of a spill on a community would depend on the size of the spill and the size of the population in the impacted area. Populated areas are divided into two categories by the USDOT: High Population Areas and Other Populated Areas. The potential impacts to local communities and the general public could include interruptions in daily activities such as access to safe drinking water, decreased air quality, socioeconomic effects and/or temporary relocation of the population in impacted areas during spill response procedures.

Sections 5.5.3 and 5.5.6 of the SEIS consider the soils and soil properties effects on contamination and migration into groundwater. Coarse-textured soils, or sandy soils, allow for easier percolation of liquid through the soils to reach groundwater. If a spilled product reached these soils, infiltration rates could be greater than in other areas. Because the infiltration rate of the product into the underlying soil controls vertical migration, rapid emergency response measures to control the release, contain it and collect the released product would mitigate the potential for groundwater contamination (also see response to ACR Sub-theme – Mitigation, Response and Remediation (5-5)). The analysis also includes consideration of external temperature and viscosity of the crude oil for migration with increasing viscosity (from lower temperatures) tends to reduce vertical migration rates in soil profiles and infiltration into the shallow groundwater table.

Sections 5.5.2.1 and 5.5.3 of the SEIS summarize potential impacts of an accidental release on local agricultural activities and prime farmland soils. These effects include oiled crops or grazing areas, loss of soil productivity and contaminated water supplies that irrigate fields or support livestock. In addition to

general soil clean up measures that could be employed following a release, Keystone has committed to a number of additional measures, which are addressed in Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS. In the event that a spill contaminates water supplies used for industrial or irrigation purposes, Keystone may provide either an alternate supply of water or appropriate compensation for those facilities affected.

Regarding wetlands, SEIS Sections 3.6, 4.6, 5.5.6 and 6.4.3 discuss water resources including wetlands. Appendix G, CMRP, of the 2014 Keystone XL Final SEIS includes an expanded discussion of wetland avoidance and minimization efforts, documents wetland impacts using the best available information (i.e., based on field delineations supplemented with desktop review of other wetland mapping databases), and quantifies the permanent loss and temporary conversion of wetlands. The Appendix also assesses the effects of these impacts on wetland functions and values, references Executive Order 11990 regarding the no net loss of wetlands policy, and discusses likely mitigation requirements by providing an overview of USACE mitigation policy. The SEIS does not affect the USACE's jurisdiction over wetland permitting and mitigation. This permitting authority is granted to USACE under Section 404 of the Clean Water Act.

Regarding groundwater, one of the factors affecting downward migration of spills to groundwater would be the depth to groundwater, which factors into the travel time of a spill from the point of release to an underlying groundwater resource. As discussed in Section 4.3.3.1, Groundwater, of the 2014 Keystone XL Final SEIS, extended periods of drought would tend to lower the water table and increase the depth to groundwater in shallow, unconfined aquifers such as alluvial aquifers and the Ogallala Aquifer. Thus, increased depths to groundwater resulting from drought conditions would increase the time required for spills to reach and affect groundwater resources. That relationship notwithstanding, Keystone is not relying on increased depth to groundwater as a mitigation measure for potential spills and has instead committed to a comprehensive spill prevention and response program.

Regarding biological resources, Chapter 5 addresses the risk of bioaccumulation in Section 5.5.7 by stating that heavy components of released product do not bioaccumulate, but the light, more soluble components bioaccumulate more readily. Bioaccumulation could result in toxic effects as these compounds move up the food chain. The topic is also addressed in Table 5-20 as it pertains to listed species found in areas potentially affected by the proposed Project.

Regarding socioeconomic impacts in the event of a crude oil release, the SEIS does discuss the range of negative effects which could occur. Both direct and indirect effects to socioeconomic conditions are highlighted in Section 5.5.8.1. As stated at the beginning of the section, the analysis acknowledges the extent and duration of the impact (including financial losses) would depend on the properties affected, the uses of those properties (including resources used for hunting, recreation and agriculture), the response time, remedial method used and the length of time required to restore conditions. These highly variable factors would result in speculative dollar estimates of actual economic losses that could occur in the event of a crude oil release.

Regarding environmental justice impacts, Section 5.5.8.2 includes a discussion of potential impacts to minority populations along the route. The discussion has been expanded to include specific concerns raised by tribes and tribal members during the public comment period on the Draft SEIS (see ACR Sub-Theme – Impacts to Tribal Rights and Resources (5-9)).

Regarding impacts to historic properties, Section 5.5.9 contains a discussion of the direct effects which could occur to historic properties if they are present in the area affected by a crude oil release. Table 5-23 of the Draft SEIS has been moved to Section 5.5.8.2 under environmental justice as the information contained within the table is related to tribal trust lands and not historic properties. The information

regarding paleontological sites has been moved to Section 5.5.3 under the discussion of geological resources. As stated at the beginning of Section 5.5.9, to mitigate potential impacts, Keystone has committed, whenever feasible, to avoid known historic properties during siting of the pipeline, minimize impacts when avoidance is not possible (e.g., HDD beneath unavoidable sites) and mitigate impacts when minimization is not sufficient.

Regarding potential impacts to soil productivity and Ponca corn, Section 4.13.5, Potential Impacts (Potential Releases), of the 2014 Keystone XL Final SEIS and Section 5.5.8.1 of this SEIS discuss the potential impacts to agricultural and rangeland due to a spill from the proposed pipeline. The extent and duration of the impacts to soil productivity would depend on the number of productive acres affected, the response time, the remedial method selected and implemented by the response team, and the length of time required to return land services to conditions similar to those existing prior to the spill. These effects would be similar to the location of Ponca corn planting on the deeded Tanderup property. Section 4.9.3.2, Land Use, and Appendix G, CMRP, of the 2014 Keystone XL Final SEIS describe mitigation measures to reduce impacts, procedures to protect soil productivity and compensation procedures should a decrease in soil productivity occur.

ACR Sub-Theme – Mitigation, Response and Remediation (5-5)

Synopsis:

Commenters expressed concern regarding liability and associated costs for cleanup and for loss of resource use (e.g., water supplies, agricultural land) in the event of an oil spill; some commenters suggested a separate fund be established by TransCanada for cleanup costs in the event of a spill. Commenters requested that TransCanada provide the Emergency Response Plan for the project so that state, local and tribal organizations could review the plan. Commenters also expressed concern regarding the ability to access sites and perform cleanup during inclement weather, and the length of time required for a site of a release to be fully restored.

Response:

Spill response and remediation measures are described in the SEIS, Section 5.4.4, Response and Remediation of Spills, and the 2014 Keystone XL Final SEIS, Section 4.13.1, Introduction (Potential Releases). The proposed Project would include processes, procedures and systems to prevent, detect and mitigate potential oil spills that could occur during operation of the pipeline. Keystone's Emergency Response Plan (ERP) details overarching strategies and specific tactics to manage various emergencies, including a potential release of crude oil into the environment. Within the Emergency Response Plan, detailed Geographic Response Plans identify specific resources and tactics that would be used if a release occurred within a specific area. A Geographic Response Plan is the corresponding tactical plan that guides emergency responders in the event of an oil release. It is composed of a series of maps and site-specific response locations termed priority protection areas. Each Geographic Response Plan map serves as a quick reference guide to the equipment and deployment tactics anticipated for a response, as well as identification of sensitive resources and a corresponding protection strategy to be used during an emergency response.

A draft ERP was provided through the Montana Facility Siting Act (MFSA) review process and in the first Environmental Impact Statement (EIS) completed for the Project. That ERP is found in Appendix C of the Draft EIS published in 2010 and Appendix C of the Final EIS published in 2011, and an updated, redacted ERP was filed as Appendix I of the Final Supplemental EIS in 2014. This project-specific ERP contains further details on response procedures and will be reviewed by PHMSA prior to granting permission to operate the proposed pipeline.

A Facility Response Plan (FRP) would be prepared and submitted to PHMSA and USEPA prior to initiating operation of the proposed Project, in accordance with requirements of 49 CFR 194. This plan relies on final permitting requirements and detailed design and construction information. A proposed Project-specific, worst-case spill scenario including location, available resources and response actions would be addressed in the FRP once the final permitting, detailed design and construction information were available. Project-specific spill prevention, control, and countermeasure (SPCC) plans would be prepared for specific stages of the construction. Both sets of plans rely on final permitting requirements and detailed design and construction information. As these details are not yet known, draft plans cannot be prepared or provided at this time. The FRP would be prepared and submitted to the USEPA Regional Administrators for Regions 7 and 8 for review and approval prior to operation. Project-specific SPCC plans would be reviewed and certified by a Professional Engineer prior to commencement of construction activities. Under current regulations, Keystone also would be required to submit these plans to PHMSA for review and approval prior to operation of the proposed Project. As stated in Section 5.4.4 of this SEIS, Keystone would maintain an Integrity Management Program required for pipelines that could affect a high consequence area in accordance with 49 CFR 195.

The 2014 Keystone XL Final SEIS, Section 4.13.6, Additional Mitigation, addresses the additional measures that are recommended to increase safety and reduce the severity and likelihood of a spill. Increased levels of protection are provided by implementing the PHMSA Special Conditions discussed in the 2014 Keystone XL Final SEIS, Section 4.13.6.1, PHMSA Special Conditions. These measures provide for an additional safety factor on the proposed Project that exceeds those typically applied to a domestic oil pipeline projects. If a spill occurred, pre-defined and systematic plan response actions can take effect to quickly mitigate the impact. The 2014 Keystone XL Final SEIS, Section 4.13.6.2, Safety and Spill Response (see subsection Response Actions), describes the written procedures that Keystone has identified and prepared to address a response action. Potential emergencies include response for public safety measures, fire, line break or leak, release to groundwater, severe thunderstorm/flash flooding/landslide, tornadoes, earthquakes, volcanic eruptions and human-related emergencies, such as bomb threat/terrorist activity and abnormal operations.

In the event of a spill, Keystone would be liable for costs associated with cleanup and restoration, as well as other compensation, under a number of federal, state and tribal laws as outlined in Table 4.13-40 of the 2014 Keystone XL Final SEIS. Keystone is legally required to clean up spills, and has agreed that it would be responsible for cleanup and restoration of areas affected by a spill, including groundwater. These statutes have various types of liability and fines associated with spills, and Keystone would be responsible for meeting the requirements of the applicable statutes. See ACR Sub-theme – Guiding Principles, Policies, Regs and Laws (5-1) for additional information regarding liability in the event of an accidental release.

ACR Sub-Theme – Pipeline Safety (5-6)

Synopsis:

Comments regarding pipeline safety involved both leak detection methods and construction quality of the pipeline. This included quality of construction and pipeline safety training to mitigate potential risks. Commenters were concerned that the pipeline monitoring systems would not be able to detect pinhole leaks and that in general leak detections systems would be inadequate. Commenters also expressed concern that the SEIS did not address potential impacts associated with a release caused by an act of terrorism.

Response:

Regarding pinhole leaks, TransCanada supplements real-time Supervisory Control and Data Acquisition (SCADA) detection methods with non-real-time methods to inspect, monitor and protect their pipelines. The systems currently in place are capable of detecting leaks as small as 1.5 percent of flow in 2 hours. For even smaller leaks, TransCanada would depend upon facility maintenance and inspection activities to identify leaks, as required by Special Condition No. 27. Inspection activities would include smart ball (identified in the 2014 Keystone XL Final SEIS) inspections and aerial and ground patrols. These would be supplemented by third-party reporting and a landowner awareness program.

Figure 5-2 of this SEIS depicts the number of incidents by the installation decade of the part (pipeline, tank, valve or pump station) that failed and caused the release. This figure does show a higher incidence of failure along older mainline pipes. However, an exact failure rate for pipes of a certain age cannot be determined, as pipeline integrity relies on a range of factors including material, construction and maintenance.

Regarding inspection and pipeline safety during construction, the details of the monitoring and enforcement programs are presented in Appendix G, CMRP of the 2014 Keystone XL Final SEIS. The inspection frequencies would be determined by PHMSA requirements, other permitting requirements and as outlined in the CMRP. In addition, as described in Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS, Keystone must prepare and follow an Operator Qualification Program for construction tasks that could affect pipeline integrity. The Construction Operator Qualification Program must comply with 49 CFR 195.501 (Qualification of Pipeline Personnel—Scope) and must be followed throughout the construction process to help ensure the qualifications of individuals performing tasks on the pipeline. Appendix B also includes a PHMSA Special Condition addressing third-party monitoring requirements.

Section 4.13.1, Introduction (Potential Releases), of the 2014 Keystone XL Final Supplemental EIS addresses the issue of spill detection. Pipeline conditions along the entire proposed Project route would be continuously monitored 24 hours per day, 7 days per week using a SCADA system with over 16,000 sensors along its length and multiple overlapping state-of-the-art leak detection systems. The SCADA sensors are designed to automatically detect leaks large enough to produce noticeable changes in pipeline pressure and flow rates in real time. For small leaks outside the range of the SCADA system, computer-based, non-real time, accumulated gain/loss volume trending would be used to assist in identifying low rate or seepage releases below the 1.5 percent to 2-percent-by-volume detection thresholds. A pinhole-sized leak resulting in drips from defects in materials or faulty construction/fabrication of the pipeline could occur along any segment of the pipeline. As the majority of the pipeline would be buried, these small, continuous-type releases may go unnoticed for an extended period until the spill volume is expressed on the surface. This volume of spill generally would remain within the pipeline ROW unless the oil was released adjacent to a channel or surface waterbody that could facilitate spreading. Smaller leaks may also be identified by pipeline patrolling (the objectives and patrol interval are prescribed in Special Condition 41) and integrity inspections (the frequency of inline inspection are prescribed in Special Condition 44).

Keystone has agreed to incorporate the PHMSA Special Conditions, developed with the USDOT, to enhance the overall safety of the proposed Project. Section 2.1.7.1, Pipeline Design, of the 2014 Keystone XL Final Supplemental EIS discusses the design and manufacture criteria for the proposed Project. The design would reflect four minimum pipeline wall thicknesses ranging from 0.465 inch for areas where normal installation methods and cross country conditions prevail, to 0.748 inch for directionally drilled crossings and uncased railroad crossings. Section 4.13.6.1, PHMSA Special Conditions, of the 2014 Keystone XL Final SEIS discusses how the PHMSA Special Conditions encompass design, construction, operation, maintenance and monitoring. These are further detailed in

Appendix B, Potential Releases and Pipeline Safety, of the 2014 Keystone XL Final SEIS. The additional design standards enable the entire length of the pipeline system to have a degree of safety similar to that which is required in a high-consequence area, as defined in 49 CFR 195.450 (Definitions). PHMSA Special Condition 19, Depth of Cover, and PHMSA Special Condition 21, Mainline and Check Valve Control, address potential weather issues.

Several other aspects of the PHMSA Special Conditions address the proposed Project's specifications and environmental factors. Overpressure protection control and pipeline integrity is covered by several PHMSA Special Conditions: PHMSA Special Condition 16, Overpressure Protection Control; PHMSA Special Condition 32, Mainline and Check Valve Control; and PHMSA Special Condition 45, Verification Reassessment Interval.

As stated in the 2011 Keystone XL Final EIS, the Department, in consultation with PHMSA, has determined that incorporation of industry standards and practices, PHMSA regulatory requirements and the set of proposed Project-specific Special Conditions developed by PHMSA would result in a Project that would have a degree of safety over any other typically constructed domestic oil pipeline system under current code and a degree of safety along the entire length of the pipeline system similar to that which is required in high-consequence areas, as defined in 49 CFR 195.450.

Procedures for repair and/or replacement of damaged or faulty sections of the pipeline (regardless of location) would be described in the Pipeline Spill Response Plan, which would be developed by Keystone and submitted to PHMSA prior to commencement of operations. In addition, as required by 49 CFR 195.402 (Procedural Manual for Operations, Maintenance, and Emergencies), and as described in Section 2.1.7, Pipeline System Design and Construction Procedures of the 2014 Keystone XL Final SEIS, Keystone would prepare and follow a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies that would include the Keystone XL ERP.

While the probability of intentional destructive events (i.e., sabotage or terrorism) cannot be estimated, the effects related to such acts would likely be similar to the range of effects described for accidental releases. Although sabotage and terrorism was not directly referenced in the SEIS, the engineering of the proposed Project considers the Transportation Security Administration (TSA) Pipeline Security Guidelines as mentioned in Section 3.13.3.11, Time-Independent Threats, of the 2014 Keystone XL Final SEIS. In March of 2018, the TSA Pipeline Security Branch updated the TSA Pipeline Security Guidelines, which provides recommendations for pipeline industry security practices. These updated guidelines include the advancement of security practices to meet the ever changing threat environment in both the physical and cyber security realms. A copy of the TSA Pipeline Security Guidelines is available at the TSA Pipeline Security website. The TSA has also developed a National Terrorism Advisory System Threat Level Protective Measures Supplement to the TSA Pipeline Security Guidelines. This supplemental document contains a series of progressive security measures to reduce vulnerabilities to pipeline systems and facilities during periods of heightened threat conditions. The Keystone Corporate Security Policy and Information Security Policy provide direction and oversight for the Security Management Program (SMP). These policies reference a number of Keystone operating procedures, plans, processes and internal procedures which formulate the SMP. The existing SMP was developed to meet the needs of the business and continues to evolve. All elements of the TSA Pipeline Security Guidelines have been considered and addressed in the development of these processes. Keystone also employs the above noted procedures, processes and security vulnerability assessments to identify potential risks, to implement the appropriate physical or cyber security measures, and to address the TSA Pipeline Security Guidelines with respect to physical and cyber security.

EXHIBIT

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
GREAT FALLS DIVISION

INDIGENOUS ENVIRONMENTAL
NETWORK and NORTH COAST RIVERS
ALLIANCE,

Plaintiffs,

vs.

UNITED STATES DEPARTMENT OF
STATE, et al.,

Federal Defendants,

CAPTION CONTINUED ON NEXT PAGE

Civ. No. 4:17-cv-00029-BMM

EXHIBIT 1 TO

**PLAINTIFFS' DESIGNATION
OF EXPERT WITNESS AND
DISCLOSURE OF EXPERT
REPORT PER Fed.R.Civ.P.
26(a)(2)(B)**

Hearing: N/A
Time: N/A

Judge: Hon. Brian M. Morris

and
TRANSCANADA KEYSTONE PIPELINE
and TRANSCANADA CORPORATION,

Defendant-Intervenors.

**REPORT OF DR. YAN LINHART SUBMITTED ON BEHALF OF
PLAINTIFFS INDIGENOUS ENVIRONMENTAL NETWORK AND
NORTH COAST RIVERS ALLIANCE REGARDING DEFICIENCIES IN
THE BIOLOGICAL ASSESSMENT PREPARED BY THE U.S.
DEPARTMENT OF STATE AND THE BIOLOGICAL OPINION
PREPARED BY THE U.S. FISH AND WILDLIFE SERVICE REGARDING
THE KEYSTONE XL PIPELINE**

I. QUALIFICATIONS OF PROFESSOR LINHART

1. I am a Professor of Biology, Emeritus, at the University of Colorado. I received my Bachelor of Science degree from Rutgers University in 1961, a Masters of Forestry Science degree from Yale University in 1963, and a Ph.D. in Biology from the University of California, Berkeley in 1972. In 1971 I commenced my academic career with the University of Colorado as an Assistant Professor of Biology. In 1977 I was awarded tenure as an Associate Professor of Biology. In 1983 I became a Full Professor of Biology. I continued to teach until my retirement in 2009. During my tenure at the University of Colorado, I served as the Associate Chair of the Department of Ecology and Evolutionary Biology and the Associate Curator of the University of Colorado Museum in Boulder,

Colorado.

2. I have published over 100 papers and articles in scientific books and journals in the fields of ecology, evolution and conservation biology. My research and publications have included field work and studies in the grasslands and forests of North America. I have served as a member of the Review Panels of the National Science Foundation and the Smithsonian Institution, and as an Associate Editor of *Evolution*, the journal of the Society for the Study of Evolution. I am a member of the American Society of Naturalists, Botanical Society of America, Society for the Study of Evolution, and American Association for the Advancement of Science. A short form of my Curriculum Vitae, including all publications during the last ten years, is attached as Exhibit A.

II. OPINION

3. The Biological Opinion (“BiOp”) prepared by the defendant U.S. Fish and Wildlife Service (“FWS”) is deficient because it omits essential information regarding the Project’s potential impacts on threatened and endangered species and their environments.

III. DATA AND DOCUMENTS REVIEWED AND ANALYSIS PERFORMED

A. INTRODUCTION

4. I have been retained by plaintiffs Indigenous Environmental Network

and North Coast Rivers Alliance (collectively “IEN”) to assess the adequacy of the Biological Assessment (“BA”) prepared by the U.S. Department of State (“State Department”) and the Biological Opinion prepared by FWS for the Keystone XL Pipeline (“Project”). Accordingly, I have reviewed the Biological Assessment prepared by the State Department in 2012 and the Biological Opinion prepared by FWS in 2013 for the Project together with materials they reference, related studies I have researched, and relevant scientific literature. I then evaluated the adequacy of the Biological Assessment and Biological Opinion based on my familiarity with applicable principles of ecology and conservation biology.

B. ANALYSIS PERFORMED

I have reviewed the Biological Assessment prepared by the Department of State and the Biological Opinion prepared by FWS for the Keystone XL Pipeline. I have also reviewed many of the underlying studies cited in those documents, and examined the relevant scientific literature pertaining to the threatened and endangered species that utilize the lands and waters that the Project would impact. I have also drawn from my five decades of research, field study and teaching experience in conservation biology regarding the plants and animals that inhabit the Project’s route. Applying my familiarity with the principles of conservation biology and my extensive experience in analyzing the biological needs of these

plants and animals, I critically examined the Biological Assessment and the Biological Opinion to determine if they adequately addressed the Project's potential for causing harm to these threatened and endangered species. I concluded that these documents failed to provide information essential to an informed understanding of the Project's potential impacts on threatened and endangered species. My specific conclusions are set forth below.

C. CONCLUSIONS DRAWN

5. The Project would pass through habitat currently or historically occupied by threatened and endangered species, as well as their identified recovery habitat. The Project would cross more than 1000 water bodies and many aquifers, including the large Ogallala Aquifer in South Dakota and Nebraska. It is well known that steel pipelines such as the Project are prone to corrosion and leakage. Oil derived from tar sands, known as dilbit, is known to be difficult to clean up for many reasons. For example, it sinks rather than floats in water and attaches to the beds and banks of water bodies. The presence of dilbit can be especially problematic for aquatic, bottom-dwelling species such as the pallid sturgeon. See paragraph C-14 below.

6. The Project would expose these listed species to hazards such as contact with toxic spills, surface- and ground-water contamination, injury or

displacement by construction and maintenance activities, collisions with power lines, power poles and other infrastructure, excessive noise, disruptive night-time lighting, habitat destruction and fragmentation, predation, competition and displacement by introduced and invasive species, and poaching or other forms of physical harassment by humans.

7. The listed species affected include the endangered black-footed ferret, northern swift fox, whooping crane, interior least tern, pallid sturgeon, and American burying beetle, and the threatened piping plover, rufa red knot, northern long-eared bat and western prairie fringed orchid, among others.

8. The State Department, in its BA, and FWS, in its BiOp, did not adequately consider the Project's potential impacts associated with the hazards I have enumerated above on these listed species. In concluding that the Project would not adversely affect these species, these agencies also relied on mitigation measures that are vague, ineffectual or unenforceable.

9. Although the Project's operational impacts include pipeline rupture and oil spills, the BA and BiOp focus on construction stage impacts. For example, the BiOp suggests that construction should be halted if species such as the piping plover, interior least tern, and whooping crane are observed during monitoring surveys. *See, e.g.*, BiOp 24, 26, 29. But the BiOp only discusses crude oil spills

in relation to the American burying beetle, and that discussion only mentions soil compaction and soil disturbance. BiOp 65. The BiOp states that oil spills are not covered by any take permit, and that the U.S. Environmental Protection Agency (“EPA”) will consult with FWS about species impacts *after* a spill takes place and the resulting damage has occurred, which is too late.

10. The Project would impact iconic species of extraordinary rarity and biological importance. For example, the endangered whooping crane is one of the rarest birds in North America, as only about 400 to 500 remain in the wild. Both the BA and Final Supplemental Environmental Impact Statement (“FSEIS”) acknowledge that the Project’s transmission lines will pose a collision hazard to whooping cranes, as well as many other birds. *See, e.g.*, FSEIS 4.6-1, 4.6-3, 4.6-18 through 4.6-20; BA 3.0-20 (“[p]ower lines associated with the proposed Project are collision hazards to migrant whooping cranes”). The Project poses a particular risk to whooping cranes because its route through Nebraska coincides with the migration corridor used by 90 percent of whooping cranes, including areas where they stop to rest and feed on the Niobrara, Platte, and North and Middle Loup rivers.

11. In addition, the BiOp fails to analyze and mitigate the risk that a pipeline spill at these locations would harm or kill these rare birds. Instead of

analyzing the hazards to birds such as the whooping crane posed by the Project's power lines, the BA and BiOp defer analysis to vague future consultations that would discuss mitigation of these impacts. BA 3.0-2; BiOp 10. These impacts should be examined now so that the efficacy of proposed mitigations can be evaluated *before* the Project and its route are approved.

12. These agencies appear to assume that the risks to the whooping crane can be mitigated with bird flight diverters ("BFDs") on power lines. However, neither the State Department nor FWS has studied, let alone demonstrated, how whooping cranes would respond to BFDs.

13. The BA and BiOp also fail to address the Project's impacts on whooping cranes in Canada, where this species is likewise listed as endangered, and its survival potentially jeopardized by tar sands development. Tar sands mining creates tailings ponds containing toxic chemicals and heavy metals that remain on or near the soil surface indefinitely. Tar sands tailings ponds have already poisoned thousands of birds, and the additional tar sands development the Project will utilize poses a significant risk to the whooping crane. FSEIS 4.15-113. Yet the State Department and FWS declined to consider impacts to whooping cranes in Canada.

14. The Project's potential to leak oil poses hazards to the plants and

animals that inhabit the many water bodies it would cross. These species include the pallid sturgeon, which has been listed as endangered since 1990. The Project would pass through (or upstream of) its habitat in the Missouri, Yellowstone, and lower Platte rivers. Although the BA acknowledges that a spill “could result in adverse toxicological effects” to the pallid sturgeon, it and the BiOp claim that such effects are “unlikely due to the low probability of a spill,” and that “if a significant spill event were to occur, federal and state laws would require cleanup.” BA 3.0-30; BiOp 9. Yet in the FSEIS the State Department acknowledges that the pipeline will spill an average of 1.9 times annually, for a total of 34,000 gallons of oil each year. FSEIS Appendix K, Tables 6-9. As I noted above, because tar sands oil is thicker and more viscous than conventional crude oil, it is more difficult to clean up. This is especially problematic for the pallid sturgeon, because as noted they are bottom-dwellers likely to encounter the heavy dilbit.

15. The Project would impact habitat for the black-footed ferret. This species is extremely rare, and has been listed as endangered since 1967. 32 Fed.Reg. 4001 (3-11-1967). Black-footed ferrets feed primarily on prairie dogs, and use prairie dog burrows as their only shelter. BA 3.0-2. Because the Project would pass through eight prairie dog towns, it would threaten habitat that ferrets

may require to recover. BA 3.0-3. Yet the BA and the BiOp fail to address this impact on recovery of this rare species.

16. The Project will impact several other imperiled birds, including the endangered interior least tern and the threatened piping plover and rufa red knot. It would pass through endangered interior least tern habitat in Montana, South Dakota, and Nebraska, including important breeding areas along the Yellowstone, Cheyenne, Platte, Loup, and Niobrara rivers. BA 3.0-5 through 3.0-6. Although the Project's route would thus expose the rare interior least tern to the risk of oil spills, construction noise and activity, habitat loss, and power line collisions, the State Department decided not to fully analyze the impacts of the Project's power line, citing future consultations with power providers. BA 3.0-8 through 3.0-11. But the Project would be built by then.

17. The Project will pass through habitat of the threatened piping plover in Nebraska and Montana, skirting nesting areas near the Platte, Loup, and Niobrara rivers and the Fort Peck Reservoir. BA 3.0-66. The Project's power lines pose a collision risk, and their towers would create perches for raptors, increasing predation of the piping plover. BA 3.0-67 through 3.0-68. Again, the State Department deferred analysis of these risks until after Project approval. BA 3.0-68.

18. The rufa red knot is a migratory bird species that may use lands along the Project's route. The FWS has observed that "in years when conditions favor it, a large proportion of midcontinental migrants may use Northern Plains stopovers in spring. In addition, birds using the Northern Plains as a spring stopover stayed an average of 16.2 days (Newstead et al. 2013, Table 3); this was not a short stop but actually similar to the stopover duration in Delaware Bay." 79 Fed.Reg. 73706, 73716 (12-11-2014) listing notice). The rufa red knot has been observed stopping over in Montana and South Dakota, and may possibly stop over in Nebraska. *Id.* Although this species may therefore be impacted by the Project, the FSEIS and BA never address the rufa red knot. Although the State Department's 2017 Record of Decision states that it consulted with FWS on the Project's impacts to this species, the Biological Opinion fails to address the conflicts between the rufa red knot's migration patterns and the potential harms caused by Project construction and operation. None of the Project's mitigation measures provide protections for the rufa red knot during construction or operation, and no survey protocols were included in the BiOp or FSEIS. These omissions prevent informed assessment of the Project's impacts on this species.

19. FWS did not list the northern long-eared bat – which is a threatened species as a result of human disturbance, habitat destruction and fragmentation

and fungal disease – until after the BA and BiOp were prepared. FSEIS 4.8-7 through 4.8-8. The State Department’s analysis of potential threats to this species acknowledges that the northern long-eared bat “occur[s] within the proposed Project area,” FSEIS 4.8-5, and that the bat “may be impacted by proposed Project construction or operations.” FSEIS 4.8-8. However, the State Department failed to determine what those impacts would be, precluding consideration of any measures to mitigate or avoid them. FSEIS 4.8-4 (Table 4.8-1 shows that no conservation measures were developed for the northern long-eared bat). In addition, the State Department did not conduct surveys to determine whether there are roosts in the Project area.

20. The threatened western fringed prairie orchid is present in the Project area in Nebraska, and may be present in South Dakota, though uncertainty remains due to insufficient surveying. BA 3.0-70. Clearing for construction would disturb existing fringed orchids, and “introduce or expand invasive species” that would compete with the orchid, hastening its decline and impeding its recovery. BA 3.0-72; BiOp 31.

21. The BiOp states that conservation measures would prevent the Project from adversely affecting this species, but the conservation measures are deficient for four reasons. First, they rely on TransCanada’s employees avoiding

the plant, which in my experience is problematic since identification of this plant requires the active presence of a trained biologist, even when it is in flower.

Second, these measures overlook the fact that the plant may be difficult to detect at certain points in its growth cycle. BiOp 10. It is very difficult to spot when not in flower. The effectiveness of these measures is therefore far from certain.

Third, these conservation measures fail to address the risk posed by invasive species introduced by the Project. Fourth, these measures fail to address the fact that the orchid's pollination requires the hawk moth, which could be harmed by herbicides used to maintain the pipeline's right of way.

22. The BA and the BiOp fail to analyze the Project's potential impacts on the northern swift fox (*vulpes velox hebes*). This species is federally listed in Canada, and was previously listed in Montana and South Dakota. 50 C.F.R. § 17.11(h). It may again be listed in those states because its population has remained depressed due to habitat loss. The Project will pass through areas where the swift fox is beginning to reestablish itself, as well as additional suitable habitat in these two states. The Project would affect northern swift foxes in these states because it could crush the fox's dens and introduce harmful noise and dust. FSEIS 4.8-36. The State Department's assumption that this species will return to the Project area after construction is completed, and that any fox mortality will have

“no significant population effects,” is bereft of any supporting facts and analysis. FSEIS 4.8-36.

23. Finally, as noted above, a recurring omission in the BA and BiOp is the failure to address the pernicious effects of pesticide and herbicide use that the Project’s construction and maintenance are likely to introduce. According to the FSEIS for the Project, the applicant is required to use pesticides to manage weeds during pipeline construction and operation. It must “limit the potential for spread of weeds by providing weed control by a state-licensed pesticide applicator at valve sites, metering stations, and pump stations,” among other weed control measures. FSEIS 4.5-20 (quote), *see also* FSEIS 4.5-19 (discussing additional herbicide application measures). While the FSEIS briefly contemplates that the use of herbicides near waterbodies “could harm aquatic organisms, including fish,” it concludes that this concern is minimal because “no herbicides would be used within 100 feet of a wetland or waterbody.” FSEIS Appendix Z, p. 38; FSEIS 4.7-15 (same).¹ Yet in the FSEIS’s discussion of wetlands, the FSEIS states that the applicant will not use pesticides or herbicides within 100 feet of any wetland “unless allowed by the appropriate land management, tribal, or state

¹ See also FSEIS Appendix G, TransCanada’s Construction Mitigation and Reclamation Plan (“CMRP”), pp. 7-8 (discussing application of pesticides during construction and operations).

agency.” FSEIS 4.4-18; *see also* FSEIS Appendix Z, p. 23 (same). Under either scenario, however, the use of herbicides for routine weed control presents ecological harms that FWS failed to adequately consider in its Biological Opinion.

24. The Biological Opinion discusses the use of pesticides in the context of the American burying beetle (“ABB”). BiOp. pp. 49, 68-69, Appendix B, p. 4. It acknowledges that “maintenance of vegetation under the power lines [needed for pump stations] may also result in ABB injury or mortality if mowing or use of herbicides or pesticides occurs during times when ABB are active above ground.” BiOp. p. 68. It does not discuss, however, the use of herbicides for weed control at valve sites, metering stations, and pump stations, as contemplated in the FSEIS.

25. The use of herbicides has dangerous environmental impacts that require careful consideration. One of the most commonly used herbicides in the U.S., atrazine, is known to interfere with amphibian, reptile, and fish development, including sexual development. Recent research on glyphosate, the other most commonly used herbicide, also shows that it has endocrine-disrupting effects. This is particularly important because such effects can interfere with the endocrine (or hormone) systems of many species. These disruptions can cause cancerous tumors, birth defects, and other development disorders. They can also influence sex ratios of wild species, diminishing their reproductive potentials. The

Biological Opinion's failure to adequately discuss the use of pesticides and herbicides is therefore potentially detrimental to numerous threatened and endangered species, including those discussed above.

IV. LIST OF EXHIBITS USED TO SUMMARIZE OR SUPPORT OPINIONS FORMED

26. None.

V. OTHER TESTIMONY AS AN EXPERT AT TRIAL OR DEPOSITION DURING THE PREVIOUS FOR YEARS:

27. None.

VI. COMPENSATION TO BE PAID FOR THIS REPORT AND ANY ASSOCIATED TESTIMONY

28. I am providing my services to IEN without charge for my services.

Dated: December 29, 2017


DR. YAN LINHART

EXHIBIT

A

YAN BOHUMIL LINHART

Curriculum Vitae

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El Cerrito CA 94530
(510) 236-2129
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Profile

Professor of Biology, Emeritus
University of Colorado, Boulder

- Former Associate Chair, Department of Ecology and Evolutionary Biology, University of Colorado, Boulder, Colorado
- Former Associate Curator, University of Colorado Museum, University of Colorado, Boulder, Colorado
- Courses taught include: Introductory biology, ecology, genetics and evolution, advanced courses and seminars in ecology, genetics, evolutionary biology, forest ecology, forest restoration, tropical biology, conservation biology, relevance of heredity and evolution to society
- Graduate Students Sponsored include 15 M.A., 15 Ph.D., and 5 Post-Docs
- Born Prague, Czech Republic, U.S. Citizen
- Fluent in Czech, English, French and Spanish

Professional Experience

1971-2009

University of Colorado, Boulder
Boulder, Colorado
Assistant, Associate, then Full Professor of Biology

1998-1999 and 1990-1991

Centre National de la Recherche Scientifique, Montpellier, France
Sabbatical years at Centre d'Ecologie Fonctionnelle et Evolutive

1966-1967

University of California, Berkeley
Berkeley, California
Research Assistant, Botanical Garden

1963-1966

University of California, Berkeley
Berkeley, California
Research geneticist, School of Forestry

1958-1963

New England and Mid-Atlantic
Seasonal work in forest biology

1961

Arctic Research Laboratory / Office of Naval Research
Ice Station ARLIS II in Arctic Ocean
Research Assistant in oceanography

Education

Doctor of Philosophy

University of California, Berkeley
Berkeley, California
1972

Master of Forestry

Yale University
New Haven, Connecticut
1963

Bachelor of Science

Rutgers University
New Brunswick, New Jersey
1961

Secondary Schools in France and Germany

National/International Service

- Member of Review Panels, National Science Foundation, The Smithsonian Institution
- Chair of Peer Review Committee, Departments of Ecology, Biology, Universidad de Chile, Santiago, Chile
- Member of External review and site visit panel of the CEFÉ, Montpellier, France on behalf of the National Center of Scientific Research (C.N.R.S. France)
- Member of Natural Sciences and Engineering Council (NSERC) of Canada External Review Team of University of British Columbia School of Forestry
- Associate Editor, Evolution - journal of the Society for Study of Evolution

Professional Memberships

- The Society for the Study of Evolution, American Society of Naturalists (elected 1981), Botanical Society of America, American Association Advancement Science

Research Interests

- Evolutionary and ecological consequences of interactions between plants and animals including herbivores, pollinators and parasites
- The dynamics of adaptation to heterogeneous environments in plant populations
- Ecology and genetics of restoration and conservation of native plant communities

Research Grants and Awards

- National Science Foundation
- U.S. Department of Agriculture
- U.S. Department of Agriculture, Forest Service
- U.S. National Park Service
- Nature Conservancy
- National Geographic Society
- Colorado Energy Research Institute

Publications

Books

- 1989 *The Evolutionary Ecology of Plants*, J.H. Bock and Y.B. Linhart Eds., Westview Press, Boulder, CO. 600 pp.

Articles

Over 100 papers and book reviews in scientific books and journals, and other contributions to environmental publications. The following list includes all of my publications in the last ten years and selected others:

- 1967 The closed-cone pines of the Northern Channel islands, Proceedings of the Symposium of the Biology of the California Islands (R.N. Philbrick, Editor) 151-178 (Y.B. Linhart, B. Burr, and M.T. Conkle).
- 1973 Ecological and behavioral determinants of pollen migration in hummingbird-pollinated Heliconia, American Naturalist 107:511-523 (Y. B. Linhart).
- 1976 Evolutionary studies of plant populations in vernal pools, Chapter 9, Vernal Pools - Their Ecology and Conservation S. Jain. Ed. Institute of Ecology, Univ. California, Davis. pp. 40-46 (Y. B. Linhart).
- 1979 Relationships between life history characteristics and electrophoretically-detectable genetic variation in plants, Annual Review Ecology and Systematics 10:173-200. (J.L. Hamrick, Y.B. Linhart, and J.B. Mitton).
- 1990 The evolution of bird-dispersed pines, Evolutionary Ecology 4:185-219 (D. Tomback and Y. B. Linhart).
- 1994 Yucca Sex, Nature 370:604 (Y.B. Linhart and R.J. Dodd).
- 1995 Relictual tallgrass prairie in the western Great Plains of North America, Proceedings International Congress of Ecology 105 (Abstract) (J.H. Bock, T. Seastedt, Y.B. Linhart and C.E. Bock).
- 1996 Northern Goshawk and Forest Management in the Southwestern United States Technical Review, 96-2, Monograph of The Wildlife Society (C.E. Braun, J. Enderson, M.R. Fuller, Y.B. Linhart, and C.D. Marti).
- 1996 Evolutionary significance of local genetic differentiation in plants, Annual Review of Ecology and Systematics 27:237-277 (Y.B. Linhart and M.C. Grant).
- 1999 Thyme is of the essence: the maintenance of a complex polymorphism, Evolutionary Ecology Research 1: 151-171 (Y.B. Linhart and J. D. Thompson).
- 2007 Linking parasitic plant-induced host morphology to tritrophic interactions, Ann. Entomol. Soc. Am. 99: 1133-1138 (K.A. Mooney, B.A. Geils, Y.B. Linhart).
- 2007 Ongoing adaptation to Mediterranean climate extremes in a chemically polymorphic plant, Ecological Monographs 77: 421-439 (J.D. Thompson, P. Gauthier, J. Amiot, B.K. Ehlers, C. Collin, J. Fossat, V. Barrios, F. Arnaud-Miramont, K. Keefover-Ring, Y.B. Linhart).

- 2009 Beyond six scents: defining a seventh *Thymus vulgaris* chemotype new to southern France by ethanol extraction, Flavor & Fragrance Journal 24:228-122 (K. Keefover-Ring, J.D. Thompson, Y.B. Linhart).
- 2010 Variable Chemistry and herbivory of ponderosa pine cones, International Journal of Plant Sciences 171:293-302 (K. Keefover-Ring, Y.B. Linhart).
- 2010 The ecology of the phyllosphere: geographic and phylogenetic variability in the distribution of bacteria on tree leaves, Environmental Microbiology 12:2885-2893 (A.J. Redford, R.M. Bowers, R. Knight, Y.B. Linhart, N. Fierer).
- 2010 Language Loss Has No Silver Lining, E-Letter Science 15 September 2010 (Y.B. Linhart).
- 2011 Masting in ponderosa pine: comparisons of pollen and seed over space and time, Oecologia 165: 651-661 (K.A. Mooney, Y.B. Linhart, M.A. Snyder).
- 2011 The good, the bad and the flexible: plant interactions with pollinators and herbivores over space and time are moderated by plant compensatory responses, Annals of Botany 108:749-763 (C.R. Lay, Y.B. Linhart, P.K. Diggle).
- 2013 Variation among Four Populations of *Erysimum capitatum* in Phenotype, Pollination and Herbivory over an Elevational Gradient, The American Midland Naturalist 169: 259-273 (C.R. Lay, Y.B. Linhart, P.K. Diggle).
- 2014 Masting promotes individual- and population-level reproduction by increasing pollination efficiency, Journal of Ecology 95:805-807 (X. Moreira, L. Abdala-Roberts, Y.B. Linhart, K.A. Mooney).
- 2014 Variability in seed cone production and functional response of seed predators to seed cone availability: support for the predator satiation hypothesis, Journal of Ecology 102:576-583 (Y.B. Linhart, X. Moreira, M.A. Snyder, K.A. Mooney).
- 2014 Plant pollination and dispersal in Ecology and the Environment, The Plant Sciences (RK Monson Ed) 8: 89-117 (Y.B. Linhart).
- 2015 Variable phytotoxic effects of *Thymus vulgaris* (Lamiaceae) terpenes on associated species, International Journal of Plant Sciences 176:20–30 (Y.B. Linhart, P. Gauthier, K. Keefover-Ring, J.D. Thompson).
- 2015 Effects of climate on reproductive investment in a masting species: assessment of climatic predictors and underlying mechanisms, Journal of Ecology (X. Moreira, L. Abdala-Roberts, Y.B. Linhart, K.A. Mooney).
- 2015 Seeing Evolution, Boom: A Journal of California 5.3: 56-59 (Y.B. Linhart).

CERTIFICATE OF SERVICE

I hereby certify that on December 29, 2017, a copy of the foregoing
**EXHIBIT 1 TO PLAINTIFFS' DESIGNATION OF EXPERT WITNESS
AND DISCLOSURE OF EXPERT REPORT PER Fed.R.Civ.P. 26(a)(2)(B)**
was electronically served on all counsel of record via the Court's CM/ECF system.

s/ Stephan C. Volker

Attorneys for Plaintiffs
INDIGENOUS ENVIRONMENTAL NETWORK
and NORTH COAST RIVERS ALLIANCE

EXHIBIT

8

Keystone XL Pipeline Project

Plan of Development

Prepared for:

TransCanada Keystone Pipeline, L.P.
700 Louisiana Street
Houston, Texas 77002

Prepared by:

EXP Energy Services Inc.
1800 W. Loop South, Suite 850
Houston, Texas 77027

Document Number:

KXL1399-EXP-EN-PLN-0061

Date Submitted:

January 17, 2020

Real time information communication systems, including backup systems, will provide up-to-date information from the pump stations to the control center, plus the ability to contact field personnel. The OCC will have highly sophisticated pipeline monitoring systems.

9.2.2 Abnormal Operations

USDOT prescribes pipeline design and operational requirements that limit the risk of accidental crude oil release (leaks or spills) from pipelines. Keystone will employ multiple safeguards to prevent a pipeline spill and will prepare an Emergency Response Plan (ERP) based upon the plan currently in review by PHMSA for the Keystone Pipeline Project. The ERP will outline the measures designed to meet federal and state standards and that will be implemented in the event of an accidental release to ensure protection of human health and environmental quality.

Due to these safeguards, the chance of spill occurring is very low, and if a spill occurred, the volume is likely to be very small. Keystone has developed a spill risk assessment to quantify the likelihood of an accidental release, and to better identify potential impacts to surface water and groundwater. In the unlikely event of a release, Keystone will initiate its ERP and emergency response teams will contain and clean up the spill. Based on the measures in the ERP, and on the safeguards in place on the pipeline, no potential impacts to human health and environmental resources discussed in this section are anticipated due to an accidental release.

Keystone will comply with 49 CFR Section 195.402 with respect to the preparation of manuals and procedures for responding to abnormal operations. 49 CFR Section 195.402(a) requires a pipeline operator to prepare and follow a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. 49 CFR Section 195.402(d) (Abnormal Operation) requires the manual to include procedures to provide safety when operating design limits have been exceeded. These include:

- Responding to, investigating, and correcting the cause of:
 - Unintended closure of valves or shutdowns;
 - Increase or decrease in pressure or flow rate outside normal operating limits;
 - Loss of communications;
 - Operation of any safety device; and
 - Any other malfunction of a component, deviation from normal operation, or personnel error which could cause a hazard to persons or property.
- Checking variations from normal operation after abnormal operation has ended at sufficient critical locations in the system to determine continued integrity and safe operation.
- Correcting variations from normal operation of pressure and flow equipment and controls.
- Notifying responsible operator personnel when notice of an abnormal operation is received.
- Periodically reviewing the response of operator personnel to determine the effectiveness of the procedures controlling abnormal operation and taking corrective action where deficiencies are found.

9.2.3 SCADA and Leak Detection

Keystone will utilize a SCADA system to remotely monitor and control the pipeline system. In summary, highlights of Keystone's SCADA system will include:

- Redundancy in the SCADA system and a fully functional backup OCC available for service at all times; and
- Automatic features installed as integral components within the SCADA system to ensure operation within prescribed pressure limits.

Additional automatic features installed at the local pump station level will also be utilized to provide pipeline pressure protection in the event communications with the SCADA host are interrupted.

Keystone will have complimentary leak detection methods and systems available within the OCC, which is manned on a 24 (hours per day) x 7 (days per week) basis. These methods and systems are overlapping in nature and progress in leak detection thresholds. The leak detection methods are as follows:

- Remote monitoring performed by the OCC Operator, which consists primarily of monitoring pressure and flow data received from pump stations and valve sites fed back to the OCC by the Keystone SCADA system. Remote monitoring is typically able to detect leaks down to approximately 25 to 30 percent of pipeline flow rate.
- Software based volume balance systems that monitor receipt and delivery volumes. These systems are typically able to detect leaks down to approximately 5 percent of pipeline flow rate.
- Computational Pipeline Monitoring or model-based leak detection systems that break the pipeline system into smaller segments and monitor each of these segments on a mass balance basis. These systems are typically capable of detecting leaks down to a level approximately 1.5 to 2 percent of pipeline flow rate.
- Computer based, non-real time, accumulated gain/(loss) volume trending to assist in identifying low rate or seepage releases below the 1.5 to 2 percent by volume detection thresholds.
- Direct observation methods, which include aerial patrols, ground patrols, and public and landowner awareness programs that are designed to encourage and facilitate the reporting of suspected leaks and events that may suggest a threat to the integrity of the pipeline.

9.2.4 Emergency Procedures

Keystone is required to prepare a site-specific ERP for the system, which will be submitted to PHMSA prior to operation. Keystone has prepared a comprehensive ERP for the Keystone Pipeline Project which was submitted to PHMSA and approved. A summary of this ERP is provided in Appendix G. Keystone will use the ERP as the basis for preparation of an ERP specific to the Keystone XL Project, incorporating adjustments to reflect Project-specific factors.

Keystone is required to notify immediately the National Response Center (NRC) in the event of a release of crude oil that: 1) violates water quality standards, 2) creates a sheen on water, or 3) causes a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines (40 CFR Part 112). In addition to notifying the NRC, Keystone will make timely notifications to other agencies, including the appropriate local emergency planning committee, sheriff's department, the appropriate state agency, USEPA, and affected landowners.

Under the National Contingency Plan, USEPA is the lead federal response agency for oil spills occurring on land and in inland waters. USEPA will evaluate the size and nature of a spill, its potential hazards, the resources needed to contain and clean it up, and the ability of the responsible party or local authorities to handle the incident. Spills meeting the legally defined criteria (see criteria above per 40 CFR Part 112) must be monitored by USEPA, even though most spills are small and cleaned up by the responsible party. In the unlikely event of a large spill, Keystone will be responsible for recovery and cleanup. The usual role of local emergency responders is to notify community members, direct people away from the hazard area, and address potential impacts to the community, such as temporary road closings.

EXHIBIT

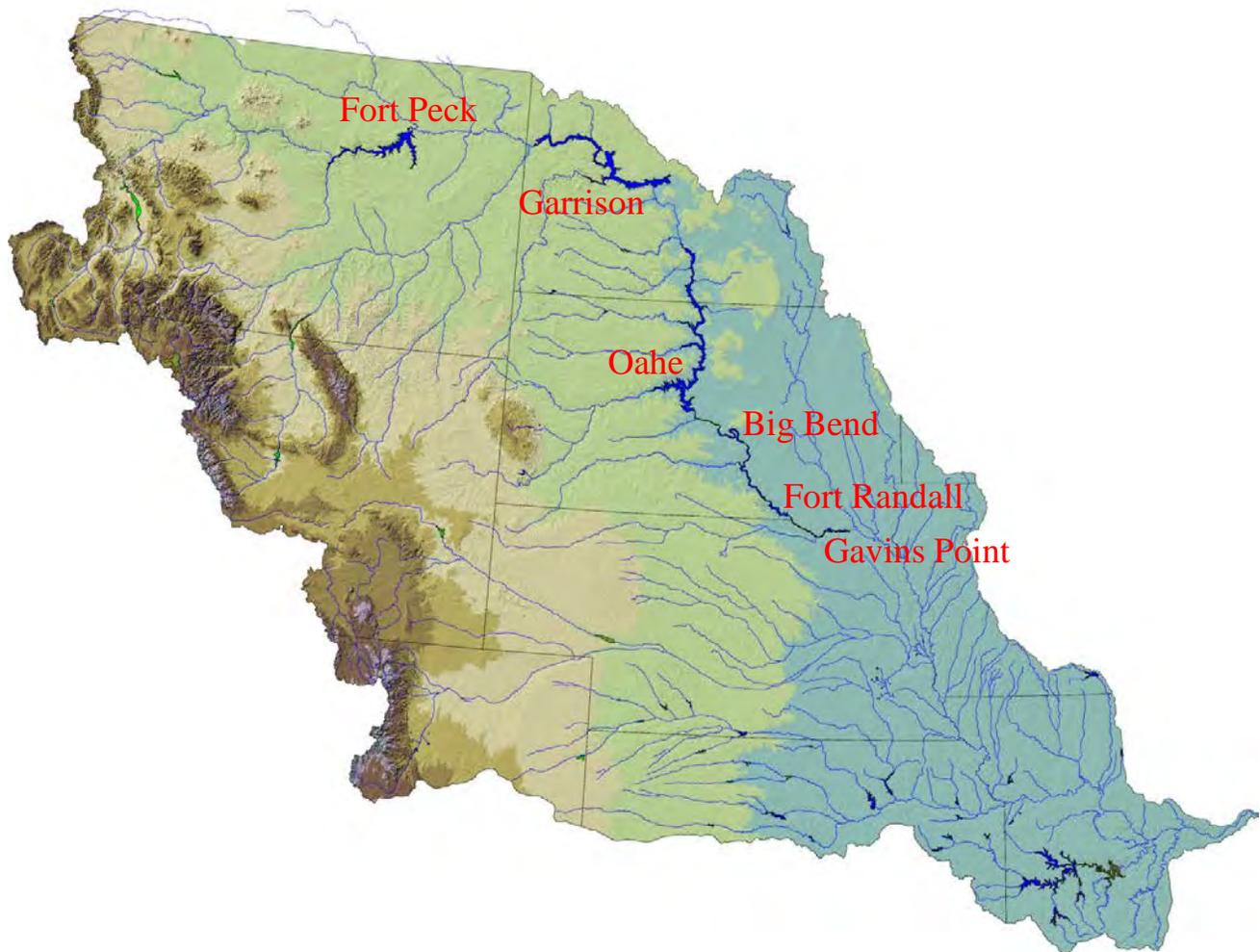
9



**US Army Corps
of Engineers** ®
Northwestern Division



Missouri River Mainstem Reservoir System Water Control Manual Fort Peck Dam – Fort Peck Lake



Missouri River Basin Water Management Division
U.S. Army Corps of Engineers
Northwestern Division – Missouri River Basin
Omaha, Nebraska

December 2018

**Missouri River Basin
Fort Peck Dam – Fort Peck Lake
Water Control Manual**

III - Basin Description and Characteristics

3-01. General Characteristics. The portion of the Missouri River basin discussed in this WCM is primarily the drainage basin above Fort Peck. There is some discussion regarding the Milk River basin, since the Milk River enters the Missouri River about ten miles downstream of Fort Peck. There is also some discussion regarding the incremental drainage area between Fort Peck and the mouth of the Yellowstone River. The Yellowstone River and Milk River basins are major contributors of inflow to the Garrison reservoir and thus are described in detail in the Garrison WCM. The Missouri River drainage area above the mouth of the Yellowstone River totals 92,520 square miles of which 82,750 square miles lie within the United States and 9,770 square miles lie within Canada. The western boundary is fanned by the Continental Divide; the southern and eastern boundaries are formed by the northerly divide of the Yellowstone River basin; and the northern boundary by the Hudson Bay divide in Canada. Over half of the state of Montana and a very small portion of the states of Wyoming and North Dakota lie within this area. An area of 57,500 square miles, extending from Fort Peck Dam west to the Continental Divide, is controlled by Fort Peck. The Fort Peck drainage is bounded on the north by the Milk River and on the south by the Yellowstone River. Plates III-1 and III-2 are maps of the entire Missouri River basin and the drainage area above Fort Peck Dam, respectively.

3-02. Topography. The terrain of the upper Missouri River basin ranges from mountainous in the upper reaches on the eastern slope of the Rocky Mountains to the relatively flat or rolling Great Plains, which commence as broad Piedmont slopes and extend across the eastern two-thirds of the State of Montana. The Great Plains are broken by isolated areas of mountainous uplift such as the Bears Paw, Little Rocky, Highwood, Judith and Big Snowy Mountains. The relative levelness of the plains is further modified by streams flowing through broad valleys paralleled by terraces and high bluffs. The area to the south of the Missouri River ranges from local badlands to moderately sloping land. Elevations range from the 1847-foot streambed elevation of the Missouri River near the mouth of the Yellowstone River to mountain peaks of over 10,000 feet in the western part of the basin. Mountain drainage areas above elevation 6,000 feet in the Missouri River basin above Fort Peck total approximately 13,200 square miles.

3-02.1. Geology. The Missouri River headwaters are in an area underlain by Miocene rocks. Beneath the Miocene rocks, and exposed at higher elevations in the adjacent mountains, are rocks of various Paleozoic systems. Downstream at a point southeast of Helena, the Missouri River enters a broad area of pre-Cambrian granites and other igneous rocks. The valley has cut into these rocks to the bend of the river near Craig, MT in Lewis and Clark County. From this point eastward to the Fort Peck reservoir the Missouri River flows in a valley cut in Cretaceous rocks. These Cretaceous rocks are represented by the Colorado shale, Eagle, Claggett, Judith River and Bearpaw formations and consist of marine deposits of shale and sandstones, and some lignite and coal. Tertiary intrusions of igneous dikes and sills occur in the general area south of the Bears Paw Mountains. The Bears Paw Mountains lie approximately 20 to 25 miles north of the Missouri River valley and were formed during the Tertiary period. Deposits of Pleistocene

glacial drift cover most of the upland plains area, with the exception of the area south of the Bears Paw Mountains and adjacent Little Rockies. These mountains formed a barrier which blocked the advancing ice sheets, diverting the flow of ice to the east and west sides of the mountains. Prior to glaciation in this area, the Missouri River flowed in a general northeasterly direction from Fort Benton, MT around the north side of the Bears Paw Mountains and east in the valley now occupied by the Milk River. This pre-glacial drainage of the Missouri River was blocked by the advancing ice sheet, ultimately diverting the river in an easterly direction south of the Bears Paw Mountains to its present course.

3-02.2. Soils. Due to variance of precipitation, temperature, vegetation and topography, the major soil groups change with decreasing elevation from the Podzol, Brown Podzolic and Gray Wooded soils developed under forest cover, to the Chernozem, Chestnut and Brown soils developed under grasses in the lower valleys. In the mountainous regions of the western and southwestern portions of the basin, the soil cover consists mainly of partially decomposed rock which may be residual at the site of decomposition, may be slowly moving down the slope under the influence of erosion and gravity, or may have accumulated in the valley bottoms. Many of the mountain soils are thin and poorly developed since the soil material often is eroded from the slopes and deposited in the valleys. In most of the eastern portion of the basin the soil cover has matured under the climatic regime of cold winters, warm summers and low precipitation, and vegetation consisting of grasses. Low topographic relief reduces the possibility of soil movement. This relative stability of the soil has permitted accumulation of humus from the natural grass cover of the plains, being quite similar over large areas regardless of the kind of rock from which they have developed. These soils have dark surface layers and are underlain by deposits of lime. Extensive areas of alluvial soils occur along the Missouri River and its tributaries in the upper Missouri River basin. Soils in the Milk River basin have been derived from alluvial deposits, from glacial drift and from disintegration of geological formations. Most of the arable soils of the upper Missouri River basin are inherently fertile and are suitable for continued profitable cultivation when supplied with adequate and properly distributed moisture. Soils in the stream valleys and bottoms and on the first terraces or benches are, in general, the most productive. Most of these soils are of medium texture and have good natural drainage. Areas of the Missouri River are in glacial tills, while south and east of the river many of the soils have their origin in shales and sandstones.

3-03. Land Use. Natural vegetative cover includes the dense growths of coniferous trees on the high mountain slopes of western and southwestern Montana, the thin stands and isolated patches of trees along the streams in eastern Montana, and the grazing land in the mountain and plains areas. The margin of the forests lies above elevation 6,000 feet. Natural vegetation in the low areas and prairies consists principally of grass and sagebrush except for the thin stands of timber along the streams. Irrigation is practiced where water supplies can be easily obtained from the lowest altitude to the high mountain valleys. Irrigated lands are present along the Missouri River and its other principal tributaries throughout the basin. Dryland farming is practiced in the prairies in eastern Montana. Refer to Plate III-3 for a graphical representation of land use in the Fort Peck drainage area.

3-03.1. The upper Missouri River basin is sparsely populated. The majority of the urban and rural population is located in areas bordering the major streams. The larger cities include Helena and Great Falls on the Missouri River, Bozeman on the Gallatin River and Havre on the Milk River. The upland areas and mountain regions of the basin are sparsely populated with most of the population living in small towns and villages. Agriculture is the principal industry of the basin and the majority of the population is supported directly, or indirectly, by farming or ranching. Other industries important to the basin include oil and gas production and refining, railroad and highway transportation, mining and manufacturing.

3-04. Drainage Pattern. The Missouri River is formed by the confluence of the Gallatin, Madison, and Jefferson Rivers near the town of Three Forks in southwestern Montana. Above Three Forks, the Gallatin, Madison and Jefferson Rivers spread in a fan-like manner to their sources in the principal and secondary ranges of the Rocky Mountains. From Three Forks, the Missouri River flows northerly to the vicinity of the town of Wolf Creek and then northeasterly through the city of Great Falls, MT to the town of Virgelle, MT. From Virgelle, the Missouri River flows in an easterly direction through Fort Peck Reservoir and Dam to its confluence with the Yellowstone River near Williston, ND. Most of the tributaries originate in the mountain areas. Principal tributaries above Fort Peck are shown on Plate III-2 and details are listed in Table III-1. Minor tributaries include the Dearborn River, Arrow Creek, and Belt Creek above Fort Peck, the Little Porcupine Creek and Wolf Creek between Fort Peck and the mouth of the Yellowstone River, and numerous smaller streams.

**Table III-1
Principal Missouri River Tributaries above the Mouth of the Yellowstone River**

Stream	Bank of Missouri River	1960 Missouri River Mileage at Mouth	Drainage Area (sq. miles)	Total Fall (feet)	Length (miles)	Average Slope (feet/mile)
Jefferson River	--	2316.40	9,710	4,400	245	18.0
Madison River	--	2316.40	2,570	4,400	164	27.0
Gallatin River	--	2315.14	1,820	4,800	100	48.0
Smith River	Right	2146.40	2,020	4,200	126	33.3
Sun River	Left	2120.79	2,000	3,900	123	31.7
Marias River	Left	2051.18	9,180 ⁽¹⁾	4,150	261	15.9
Teton River	--	(2)	1,960	4,650	204	22.8
Judith River	Right	1984.25	2,780	4,600	130	35.4
Musselshell River	Right	1867.34	9,570	5,250	281	18.7
Milk River ⁽³⁾	Left	1761.50	23,159	4,780	705	6.8
Redwater Creek ⁽³⁾	Right	1681.31	2,140	740	115	6.4
Poplar River ⁽³⁾	Left	1878.56	3,340	940	126	7.5
Big Muddy Creek ⁽³⁾	Left	1630.36	2,590	860	106	8.1
⁽¹⁾ Includes drainage area of the Teton River.						
⁽²⁾ Teton River is a major tributary to the Marias River.						
⁽³⁾ Enter below Fort Peck.						

3-04.1. The Milk River, with a drainage area of about 23,200 square miles, is the only major tributary that materially affects the flow of the Missouri River between Fort Peck and the mouth of the Yellowstone River. The headwaters of the Milk River rise in Glacier County, Montana on the eastern slope of the Rocky Mountains at an elevation of about 7,000 feet. The Milk River enters the Missouri River about 10 miles below Fort Peck Dam. Numerous small lakes, both natural and artificial, which tend to decrease the runoff from storms, are found in the basin.

3-05. Stream Slopes. The total fall of the Missouri River from its headwaters at the confluence of the Jefferson, Madison and Gallatin Rivers to Fort Peck Dam is approximately 2,000 feet and averages 3.7 feet per mile. Slopes range from 4.8 feet per mile for the reach from Three Forks (head of the river) to Cascade, MT, 0.5 foot per mile for the reach from Cascade to above the falls at Great Falls, 40 feet per mile from above the falls through five reservoirs to below the falls at Morony Dam, 5.7 feet per mile from Morony Dam to Fort Benton, to 2.2 feet per mile from Fort Benton to the headwaters of the Fort Peck reservoir. The total fall of the Missouri River between Fort Peck Dam and the mouth of the Yellowstone River is approximately 183 feet and averages 0.9 foot per mile. The length of the Milk River from the confluence of the North Fork and South Fork and its mouth is approximately 625 miles, and it has an average slope of about 2.6 feet per mile. The North Fork and South Fork of the Milk River have an average slope of about 21 feet per mile and 26 feet per mile, respectively. The total fall and average slope of the principal tributaries of the Missouri River in the Fort Peck drainage basin are shown in Table III-1. Profiles of the Missouri River and its principal tributaries in the upper Missouri River basin are included in the previous Fort Peck WCM and were not updated or included in this WCM.

3-06. Climate. The climate of the upper Missouri River drainage basin varies from semi-arid in the eastern portion and the lower elevations in the central portion to sub-humid in the mountainous areas along the Continental Divide. The climate of the upper basin is influenced by the barrier effect of the mountain range in the west and southwest, the differences in elevations, the interior location on the North American continent, the latitude, and the movement of air masses and storms. These factors result in large variations in annual and daily temperatures and relatively low amounts of precipitation within the upper basin.

3-06.1. Annual Precipitation. Principal moisture-bearing air masses approach the upper Missouri River drainage basin from the Pacific Coast; however, a large portion of their moisture is lost as precipitation in crossing the more western mountain ranges of the continent. As the air masses cross the main range of the Northern Rockies, it results in further uplift of the air masses and precipitation over the western part of Montana. These losses, together with the warming and drying of the air during its descent over the eastern slope of the mountains, largely account for the small amount of precipitation in the lower elevation areas of the upper basin. In the mountainous regions of the basin the amount of precipitation tends to increase with elevation. Average annual precipitation varies widely throughout the upper basin, from less than 12 inches in northeastern Montana and other areas of lower elevations to over 30 inches along the Continental Divide. The average precipitation over the entire drainage area above Fort Peck is about 14 inches. Total average annual precipitation for the Missouri River basin is shown on Plate III-4. Monthly precipitation patterns are presented in the Master Manual (Plates III-4 through III-15).

3-06.2. Seasonal Precipitation. In the drainage area above Fort Peck approximately 70 percent of the yearly total precipitation occurs during the months of April through September. Most spring and summer rainfall occurs in the form of showers or thundershowers; however, steady rains may occasionally occur. Excessive rainfall is unusual. May and June are normally the wettest months of the year. Winter precipitation generally is very light and almost invariably falls as snow. Measurable precipitation normally occurs on about 90 days per year over the drainage area above Fort Peck.

3-06.3. Snow. The snow season in the upper basin generally extends from late October through April; however, snowfall may be expected during any month of the year in the higher elevations of the mountainous regions of the upper basin. The average annual snowfall over the upper basin varies from 20 inches in the plains area of eastern Montana to an excess of 100 inches at some high elevation stations. Nearly all stations have recorded heavy snowstorms with a foot or more of snowfall in one day. Blizzard conditions occur less frequently in the western sheltered valleys than over the exposed plains to the east. With the exception of the eastern portion of the drainage area, snow cover over the plains area and lower valleys is rarely continuous through the winter due to drifting caused by high winds and melting caused by the warming effect of downslope "Chinook" winds. Mean annual snowfall and maximum annual snowfall for the Missouri River basin are shown on Plates III-5 and III-6, respectively.

3-06.4. Temperature. Extreme seasonal temperatures are experienced in the upper basin with long, cold winters and relatively short, hot summers. Maximum temperatures in excess of 100 degrees Fahrenheit (°F) have been reported at most of the meteorological stations in the drainage area above Fort Peck while winter temperatures as low as -20°F are quite common. The warmest months of the year are July and August with average temperatures generally in the upper 60s (°F). The coldest month in the year is January with the average temperature usually in the upper teens (°F). The mountains give the western portion of the upper basin some protection from cold waves which sweep out of the interior of Canada on an average of six to twelve times a winter resulting in snow and periods of subzero temperatures. A few of the cold waves, at times, cover the entire upper basin. Often, the cold waves are modified by the downslope Chinook winds resulting in the adiabatic heating of the east flow of air as it descends to lower elevations in crossing the mountains. This results in an abrupt ending of the intense cold followed by extended periods of mild weather. The so-called "Chinook Belt" extends from the Browning-Shelby area to the Yellowstone River Valley above Billings, MT. The transition from winter to summer is usually fairly mild; however, cold weather may extend into May. During the summer the days are normally warm with cool nights and low humidity. The autumns are normally mild with occasional short periods of cold temperatures. Average annual minimum temperatures and average annual maximum temperatures for the Missouri River basin are shown on Plates III-7 and III-8, respectively. Temperature extremes are shown in the Master Manual on Plates III-22 and III-23.

3-06.5. Evaporation. The Fort Peck reservoir is located in a region characterized by moderate-to-strong winds, low humidity, light precipitation and hot summers. For these reasons substantial evaporation occurs from the Fort Peck reservoir, particularly during the summer months. Low temperatures and higher humidity during the cold winter months, along with ice cover on the reservoirs, result in greatly reduced evaporation during this season.

3-06.5.1. Annual evaporation from the surface of the Fort Peck reservoir is normally slightly more than 3 feet (38.5 inches per the MRD-RCC Technical Report JE-73, *Missouri River Mainstem System Reservoir Evaporation Estimates*). This evaporation loss equates to approximately 666,000 acre-feet (AF) of volume, depending on reservoir elevation (see Plates III-9 through III-12). Due to seasonal precipitation patterns, seasonal patterns of gross evaporation depths and the lag in normal reservoir surface temperatures from corresponding air temperatures, essentially all of the annual net evaporation from the Fort Peck reservoir can be expected to occur during the 6-month period from July through December.

3-06.6. Frost Penetration. Frost penetration in the upper Missouri River basin normally begins in November with the incidence of below-freezing mean temperature. The ground remains frozen until March or April. Depth of maximum frost penetration varies from 6 to 8 feet throughout most of the drainage basin above the mouth of the Yellowstone River except in the extreme northwest portion near the Canadian border where depths of 10 feet have been experienced. The major factors which influence the depths of the frost layer are snow cover, vegetation and temperature.

3-06.7. Storm Potentialities. Major storms throughout the basin result almost exclusively from conditions accompanying frontal systems. Winter storms in the upper part of the basin often result in sufficient accumulation of snow to cause the greatest flows of the year at the time the accumulation of snow melts and appears as streamflow. Since frontal passages are more numerous in May and June, major storms occur more frequently in the spring and early summer than in late summer. A sequence of minor storms that exceed infiltration capacity in the basin may also result in severe flooding due to the additional moisture from the later storms and contribute much larger volumes to the streamflow than if the soil was relatively dry prior to the later storms.

3-07. Streamflow Records. Records of runoff at streamgaging stations on the Missouri River and its tributaries in the drainage basin above Fort Peck are recent in origin with the exception of a few stations. The longest continuous period of record in the basin is at Fort Benton where reliable records date back to October 1890. A few of the tributary stations have records starting around 1890 but there are long periods of time when no records are available. The streamgaging stations that are pertinent to the regulation of Fort Peck are Ulm, Virgelle and Landusky on the Missouri River above the reservoir and Wolf Point and Culbertson on the Missouri River below the dam; Saco and Nashua on the Milk River below the dam; and Roundup and Mosby on the Musselshell River above the reservoir. Daily discharges at these locations are published in appropriate U.S. Geological Survey (USGS) streamflow records. As discussed in the Master Manual, planning of the System made it desirable to extend Missouri River streamflow records to the extent practicable. Daily records are available for the majority of streamgaging stations for the six System dams since their respective dates of closure, and daily flow data is available for the majority of streamgaging stations since 1930. Prior to 1930, there is a general lack of daily records in the basin. Representative daily data was constructed to cover the period from 1898 to 1929 because of the significance and statistical importance of the drought of the 1930s in System regulation. Inasmuch as water use for all purposes has expanded significantly since settlement of the region began, it is necessary to adjust System incremental inflow records to a common level of water resource development in order that flow data are directly comparable from year to year. The total flows originating above Fort Peck have been adjusted to the 1949

level of water resource development, with such adjustment being a continuing process as further data are accumulated. While any development level would have been satisfactory, the 1949 level, prior to recent accelerated resource development, was selected. As part of the 2004/2006 Master Manual revision, a continuous record of daily data was developed for the entire Missouri River basin for the time period of 1898-1997. A detailed explanation of the daily flow record and the modeling efforts is found in Section 6-04.1.6 of the 2004/2006 Master Manual. As part of ongoing studies, this continuous record of daily data is expanded as additional years become available. More information on this expanded dataset is found in Section 6-13 of the Master Manual.

3-08. Runoff Characteristics. The mountainous area in the western portion of the basin will normally contribute the greatest share of the total water year runoff into Fort Peck with the largest volume occurring during the "late spring" or "June rise" period. The plains area of the basin is occasionally a major source of runoff with large contributions occurring during the "early spring" or "March rise" period. High intensity rainstorms throughout the basin during the spring and summer months often cause localized high runoff volumes of short duration. Average annual runoff for the Missouri River and its tributaries above the mouth of the Yellowstone River are shown in Table III-2.

3-08.1. Seasonal Runoff Pattern. Since very little mountainous area drains into the Milk River, runoff appearing as streamflow in its lower reaches results largely from the melt of the winter accumulation of plains snowpack and rains during the spring and early summer period. Runoff from the Missouri River drainage basin above Fort Peck follows a characteristic seasonal hydrologic pattern:

1. Winter is characterized by frozen streams, progressive accumulation of snow in the mountain areas, and intermittent snowfall and thaws in the plains area. The season usually ends with a "spotty" snowpack of relatively low water content and a considerable amount of water in ice storage in the stream channels. Runoff during this period, which usually extends from late November into March, is very low.
2. In the plains area, early spring is marked by a rapid melting of plains snow and ice on frozen ground, usually in March or April, as temperatures rise rapidly, accompanied by very little rainfall. This causes a characteristic early spring ice break-up and increases in tributary streamflow. Ice jams are frequently experienced on tributary streams during this period. The rapid release of water from melting snow and ice jams results in a flashy "March" rise in flow. Annual maximum peak stages and flows usually occur at this time along tributary streams. Snowmelt in the mountains also usually begins in mid-April but contributes little to runoff until late spring.
3. Late spring, consisting generally of the months of May, June and early July, is characterized by the melting of snow in the mountains and sometimes accompanied by severe local rainstorms and occasional extensive general rains. The peak runoff from these conditions usually occurs in late May, June or the early part of July. This results in a characteristic "June rise" over an extended period. The largest volume of runoff into Fort Peck occurs during this period. A short interlude of moderately low discharges usually is experienced between the early spring and late spring rises.
4. Summer and autumn are generally characterized by a lack of general rainfall and frequent, widely scattered local rainstorms, and occasional severe storms. Flow in the

rivers usually decreases rapidly from the June flows, and thereafter decreases generally, with infrequent interruptions, to the low flows which prevail in winter.

3-08.2. Total unregulated Missouri River runoff originating above Fort Peck usually follows a definite and characteristic annual pattern. Plate III-13 lists the Missouri River basin monthly runoff above Fort Peck for the period from 1898 to 2014. Total monthly runoff above Fort Peck (maximum, minimum and average) for each month is shown on Plate III-14.

3-08.3. The MRBWM Technical Report *Hydrologic Statistics on Inflows*, July 2015, details the development of inflow volume probability relationships for various durations for both regulated and unregulated flows into Fort Peck. Volume probabilities are discussed in detail in Section 6-15 of this WCM. See Plates VI-19 through VI-24 of this WCM for regulated and incremental inflow volume probability relationships for various durations.

3-09. Effects on Basin-Wide Floods. Regulation provided by Fort Peck, augmented by upstream tributary reservoir storage, has greatly reduced but not eliminated flooding along the portion of the Missouri River extending from Fort Peck Dam to the mouth of the Yellowstone River. Many instances of above-bankfull flows were experienced through this reach prior to construction of the System projects and would be continuing if the projects were not in operation. All but one flood experienced in this portion of the Missouri River have occurred in the March-July season with snowmelt as an important flood component. The one exception occurred in September 1923 when a large rainstorm over portions of southern Montana and northern Wyoming resulted in an October flood on the Missouri River. Basin-wide floods are described in Appendix A of the Master Manual.

3-10. Effects of Fort Peck on Flood Inflows. Studies conducted by the MRBWM office indicate that operation of Fort Peck in conjunction with other upstream tributary projects would greatly reduce, but not eliminate, flood damages in the reach extending from Fort Peck to the mouth of the Yellowstone River if any past floods of record were to recur. Further discussion of regulation effects on flood inflows is detailed in Appendix A of this WCM.

3-11. Water Travel Time to the Fort Peck Reservoir. Travel time for the Missouri River and its tributaries in the drainage basin above Fort Peck is shown on Plate III-15. The travel time shown on Plate III-15 indicates average travel time of moderate rises at or near bankfull levels. See Plate IV-3 of the Master Manual for travel times for the entire Missouri River basin.

3-12. Water Quality. The Omaha District Water Control and Water Quality Section is responsible for the water quality monitoring of the System projects and Missouri River, including the Fort Peck reservoir and the Missouri River downstream of Fort Peck. The Omaha District conducts long-term fixed-station ambient water quality monitoring at the System reservoirs and on the lower Missouri River. Water quality conditions of the water discharged through each of the six System dams is continuously monitored. Water quality stations and sampling is detailed further in Appendix C of this WCM and Section 5-11 and Appendix C of the Master Manual. Current and detailed water quality monitoring information is available in the water quality reports on the Omaha District website.

Table III-2
Missouri River Basin – Normal Annual Runoff
above Yellowstone River

Contributing Area	Drainage Area (sq mi)	Average Annual Runoff ¹	
		1000 AF	Inches
Jefferson River			
Twin Bridges	7,616	1,298	3.2
Madison River			
McAllister	2,150	1,262	11.0
Gallatin River			
Logan	1,789	759	8.0
Missouri River			
Toston	14,641	3,652	4.7
Ulm	20,605	4,443	4.0
Sun River			
Vaughn	1,774	486	5.1
Missouri River			
Great Falls	23,881	5,286	4.2
Marias River			
Shelby	2,716	646	4.5
Missouri River			
Virgelle	34,000	5,942	3.3
Judith River			
Winifred	2,727	376	2.6
Missouri River			
Landusky	40,649	6,444	3.0
Musselshell River			
Mosby	7,784	198	0.5
Milk River			
Nashua	22,332	480	0.4
Poplar River			
Poplar	3,140	119	0.5
Missouri River ²			
Above Fort Peck Dam	57,500	7,231	2.36

¹Based on available record at each location.
²Missouri River runoff at the 1949 depletion level of water resource development.

3-13. Sediment. The sediment contributing to the delta formations within the Fort Peck reservoir are derived from two general sources: 1) the alluvial material forming the banks and bed of the Missouri River and its tributaries within their entrenched valleys, and 2) sheet erosion

of the weathered surface of the uplands terrain. In general, the sediment flow is limited to the drainage area downstream from Cascade, MT since several small powerplant reservoirs located upstream of Cascade entrap most of the headwater contribution. In the vicinity of Virgelle, where the Missouri River assumes the traits of an alluvial stream, channel meanderings develop as bed shifting, sandbar formations and bank erosion become more pronounced. Upstream from this alluvial transition point, the streambed and banks are essentially stable due to the abundance of rock and gravel. The channel erosion below Virgelle can be severe during periods of high flows and particularly where the channel has cut into the Bearpaw shale formation. Sheet erosion of the weathered uplands surface is accomplished by runoff from either rainstorms or snowmelt. Although the amount of precipitation occurring over this plains area is relatively low, the gross erosion potential is increased by wind erosion during dry periods, which causes surface soils to accumulate in drainage courses, or coulees, where it is available for transport by surface runoff into tributary streams. The Bearpaw shale formation is particularly susceptible to surface erosion. Sediment carried in suspension at the Powerplant Ferry sampling station above Fort Peck generally consists of 35 percent sand, 25 percent silt and 40 percent clay. Prior to the closure of Fort Peck, it is estimated that the Missouri River transported an average of 15 to 20 million tons of sediment past the damsite each year. See Section 4-11 of this WCM for additional information on aggradation. Sediment rangelines for the Fort Peck reservoir are shown in Plates III-16 and III-17.

3-13.1. Downstream from Fort Peck, the bed of the Missouri River is composed essentially of medium-to-fine sand with occasional segments of gravel and cobbles and outcrops of clay and shale. The channel width varies between 800 and 1,200 feet depending on sandbar or island configurations. The channel bank heights are up to 15 feet high. The bank materials consist predominately of a mixture of fine sand and silts interspersed with lenses or pockets of dense, resistant clay formations. The Omaha District monitors degradation within the Missouri River downstream of Fort Peck through periodic surveys and analysis. The most recent summary of this effort is reported in the Omaha District report *Missouri River, Fort Peck Project Downstream Channel and Sediment Trends Study, M.R.B. Sediment Memoranda 28*, April 2013. Sediment rangelines for the Missouri River downstream of Fort Peck are shown in Plate III-18. See Section 4-12 of this WCM for additional information on degradation.

3-14. Missouri River Channel below Fort Peck Dam. In the reach between Fort Peck and the mouth of the Yellowstone River, the Missouri River has the characteristics of a typical, alluvial stream flowing in a meandering pattern within a valley varying from one to three miles in width. The alluvial nature of the river results in caving banks and shifting sandbars becoming more pronounced in this reach. The maximum flow that can be conveyed without damage will vary and is dependent on channel characteristics, the degree of encroachment on the floodplain and on local improvements, such as levees and channel modifications. Conveyance capacities will vary from season to season with a decrease in capacity during the winter and early spring when an ice cover is formed. See Section 3-15 of this WCM for a detailed discussion on the effect of ice.

3-14.1. Damages begin with open water flows of approximately 35,000 cfs in the reach from Fort Peck to the mouth of the Yellowstone River. In the upper portion of this reach (dam to Wolf Point), damages are relatively minor when flows are less than 50,000 cfs. In the lower portion of this reach (Wolf Point to mouth of Yellowstone River), damages are relatively minor

when flows are less than 50,000 cfs. For both the upper and lower portions of this reach, the damages are limited largely to pasture and low-lying areas.

3-15. River Ice. From late November to late March the upper Missouri River and its tributaries are fully, or at least partially, ice covered. Ice thickness on streams in the basin will range up to 2 to 3 feet with the greatest thickness of ice on the slower flowing streams. The MRBWM office keeps records of the Fort Peck reservoir ice cover. The Fort Peck reservoir ice cover has formed as early as November 29 (1955) with ice break-up occurring as late as May 9 (1950). The reservoir ice cover will normally lag that on the streams by about one month. It should also be noted that the reservoir did not completely freeze over in the winters of 1986-87 and 1991-92.

3-15.1. Effect on Streamflow. During the freeze-up of the Missouri River and its tributaries above Fort Peck, a very noticeable drop in reservoir inflow occurs due to a large volume of water going into ice storage. There is a corresponding marked increase in reservoir inflow during the ice break-up in the spring.

3-15.2. Effects on Channel Capacities. Formation of ice cover greatly decreases the channel capacities. This reduction varies considerably from location to location and season to season. Observation of flows and stages in the reach between Fort Peck and the mouth of the Yellowstone River indicates that, with minor tributary inflows, Fort Peck releases of 10,000 cfs or less at the time an ice cover initially forms, and ranging up to 15,000 cfs after the downstream ice cover has stabilized, are unlikely to result in damages in this reach.

3-15.3. Ice Blocks and Jams. The break-up of the ice cover often causes ice jams, which have a marked effect on streamflow and stages during such periods. Downstream flow and accompanying stages may be reduced at the beginning of the ice jam while stages just upstream may rise at restricted points and cause some overbank flooding. The volume of ice in any particular reach of the river which may contribute to jamming is a function of the thickness of the ice, the width of the river and the length of the reach. With low stages, the river width, and consequently the ice volume within the reach, is reduced from that of higher stages. The Fort Peck reservoir traps the flowing ice from the upstream portion of the river and thereby reduces the probability of severe ice jams in the reach of the Missouri River from Fort Peck to the mouth of the Yellowstone River.

EXHIBIT
10

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
GREAT FALLS DIVISION

INDIGENOUS ENVIRONMENTAL
NETWORK and NORTH COAST RIVERS
ALLIANCE,

Plaintiffs,

vs.

PRESIDENT DONALD J. TRUMP,
UNITED STATES DEPARTMENT OF
STATE; MICHAEL R. POMPEO, in his
official capacity as U.S. Secretary of State;
UNITED STATES ARMY CORPS OF
ENGINEERS; LT. GENERAL TODD T.
SEMONITE, Commanding General and
Chief of Engineers; UNITED STATES FISH
AND WILDLIFE SERVICE, a federal
agency; GREG SHEEHAN, in his official
capacity as Acting Director of the U.S. Fish

CV 19-28-GF-BMM

**DECLARATION OF KANDI
WHITE IN SUPPORT OF
PLAINTIFFS' MOTION FOR
PRELIMINARY
INJUNCTION**

**Hearing:
Time:**

Judge: Hon. Brian M. Morris

and Wildlife Service; UNITED STATES
BUREAU OF LAND MANAGEMENT, and
DAVID BERNHARDT, in his official
capacity as Acting U.S. Secretary of the
Interior,

Defendants,

TRANSCANADA KEYSTONE PIPELINE,
LP, a Delaware limited partnership, and TC
ENERGY CORPORATION, a Canadian
Public Company,

Defendant-Intervenors.

I, Kandi White, hereby declare:

1. I am the Director of the Indigenous Environmental Network's ("IEN's") Program on Native Energy and Climate Change. I am a Native American of Mandan, Hidatsa and Arikara heritage. I was born on July 4, 1979 in Hazen, North Dakota and grew up in an area known today as the Fort Berthold Reservation. I obtained my undergraduate degree from the University of North Dakota in Natural Resource and Park Management in 2001 and after working for both the State and National Park Service for four years, I earned my Masters Degree in Environmental Management, through the Earth Systems Science and Policy Program, from the University of North Dakota in 2006.

2. I began working for IEN as its Tribal Campus Climate Challenge ("TCCC") Organizer in February 2007. Under my direction, over thirty Tribal

colleges have been engaged in the TCCC, and many have worked on projects to reduce climate change ranging from light bulb swaps and community tree plantings to small-scale community solar panel installations and community gardens. The goals of our programs have been to introduce and support initiatives within Tribal colleges for students to pursue renewable energy alternatives such as solar and wind power, reduce their carbon footprint and global warming pollution, connect students to environmental justice and climate justice issues in their community, promote collaboration between students and communities, and to accomplish all this in line with Indigenous traditional knowledge and belief systems.

3. My expanding work to tackle Global Climate Change has included efforts to expand international awareness of the problem. To this end, I began participating in the United Nations Framework Convention on Climate Change (UNFCCC) Conference of the Parties (COP) in December of 2009 in Copenhagen. While there I spoke out against tar sands development and requested that the United States sign the United Nations Declaration on the Rights of Indigenous Peoples. I also attended the World Peoples Conference on Climate Change and the Rights of Mother Earth in Cochabamba, Bolivia, in April of 2010. I attended the UNFCCC COP16 in Cancun, Mexico in December of 2010; the UNFCCC COP17 in Durban, South Africa; the UNFCCC COP21 in Paris, France and most

recently the UNFCCC COP23 in Bonn, Germany. At these gatherings I spoke out against carbon trading schemes that commodified resources considered sacred within Indigenous cultures.

4. I have continued to educate and advocate both locally, in the Northern Great Plains, and on national and international levels, to raise public awareness about the need to improve sustainability and reduce climate change. I currently serve as IEN's Lead Organizer on its Extreme Energy and Just Transition Campaign, which focuses on creating public awareness about the environmentally and socially devastating effects of hydraulic fracturing on Tribal lands as well as ways to move away from our reliance on fossil fuels while still having economic opportunities in our communities. I have testified before the United States Congress on the issue of Climate Change, and its links to the health, identity and well-being of Indigenous Peoples on Tribal lands.

5. As a Native American who has experienced firsthand the devastating impacts of oil pipeline spills, and as an IEN member and organizer who has spoken with hundreds of other Native Americans who would be harmed should the Keystone XL Pipeline be constructed and operate, I have many deep concerns about this pipeline and its impacts on Native American communities. I grew up in North Dakota, which has a long, tragic history of oil pipeline spills. The original

Keystone Pipeline, for example, had twelve spills in its first year of operation, two of which were in North Dakota.

6. According to news accounts, the largest spill from the Keystone Pipeline discharged between 17,000 and 22,000 gallons of crude oil in May, 2011. That spill was discovered by a North Dakota rancher, Bob Banderet, on May 7, 2011, when he saw oil gushing from the Keystone Pipeline's Ludden pumping station near his land. He reportedly called the emergency phone number that TransCanada Corporation (now TC Energy) had provided him as a volunteer firefighter to alert TransCanada's emergency response dispatcher to the spill. Yet subsequently TransCanada asked the Pipeline and Hazardous Materials Safety Administration to amend its shutdown order to state that TransCanada's internal sensors – rather than Mr. Banderet – had first discovered the leak. TransCanada subsequently referred to this spill as proof that “the system worked as it was designed to do.” The indisputable fact is that the system failed miserably which is why the Keystone 1 pipeline suffered more spills than any other first year pipeline in U.S. history.

7. The Keystone XL Pipeline Final Environmental Impact Statement (“FEIS”) concedes that oil pipeline spills will occur. Whether the spill originates with a malfunctioning valve in a pumping station as occurred with the May, 2011

spill mentioned above, or other cause such as pipeline corrosion due to electrical currents that may travel along steel pipelines such as the KXL Pipeline, the fact remains that it is only a matter of time before an oil pipeline leaks oil. If it is a slow leak underground, it may never be discovered. If the leak occurs in a river crossing during the winter, when it is covered by ice, it may not be discovered for days or weeks. Even after discovery, it is difficult to locate the source of oil pipeline leaks because the pipes are buried underground or under bodies of water.

8. For these reasons, the Department of State stated in its FSEIS for the KXL Pipeline that oil leaks would average approximately 34,000 gallons per year. The reality is that although leakage from oil pipelines is inevitable, no one can forecast with any precision the location, duration and quantity of these foreseeable oil spills.

9. When an oil pipeline leaks into a river, it causes severe, long term damage to the ecosystem. This is particularly true for dilbit, the toxic mixture of diluent (a petroleum solvent) and the heavy tar sands crude that the KXL Pipeline would transport from Alberta. When dilbit spills, the aromatic fractions contained within the diluent quickly evaporate, forming a toxic gas that requires evacuation of humans from the affected area. After the diluent evaporates, the heavy tar sands crude oil is left behind. Because it is much heavier than water, it sinks to

the bottom of riverbeds, where it becomes lodged in the substrate and may remain for decades. As long as it remains in the watercourse, it leaches hydrocarbons which harm the ecosystem and degrade water quality.

10. Contamination of a river in this way is particularly painful for me and my people. As Mandan, Hidatsa, Arikara people, we always lived along waterways and farmed along the fertile floodplains. Consequently, it is very important to us that we remain close to and make frequent use of our rivers. Since my family and I moved to Joliet, Montana five years ago, we have been frequent kayakers on both the Yellowstone and the Missouri Rivers – both of which the pipeline would cross. We love to hike and camp along or near these rivers because, as we think of it, being on or near the water is within our “blood memory.” My husband and I have raised our daughter of six years to be comfortable on the water, and she has spent many a happy hour tucked into her life vest and riding on our family kayak and will soon be joined by her baby brother who we were blessed to welcome into our family just 4 months ago.

11. Our deep relationship with waterways also includes the fish that swim in them, the winged creatures that fly over them, and the four-legged animals that rely on these waters for their survival. I can’t even begin to explain in this declaration how important it is to me and my family to protect the water and its

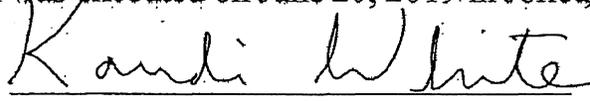
quality not only for my family, but for all future generations of my people, and for the other life forms that swim in, fly over, and float on these waters. For this reason, it pains me deeply to learn of contamination of the rivers we use by pollutants. I have witnessed fish caught in the Missouri River with deformities and cancers. For example, during my cousins' memorial fishing tournament on Lake Sakakawea (a man-made reservoir on the Missouri River), we saw deformed fish being pulled out of the water, including a Northern Pike that I photographed.

12. The deep relationship my people have with water extends to many of our cultural and religious practices. For example, in our culture we do not allow the hospital to keep the placenta and dispose of it as hazardous waste. Instead, we lovingly remove the placenta and bury it respectfully. If it is a girl, the woman buries it near the water. If it is a boy, the man takes it to a sacred hill where a fire is lit and it is buried there. I buried my baby girl's placenta along the Yellowstone River with prayers for her health and for the health of the water. I have mourned the loss of innocence when the Yellowstone River has experienced significant oil spills, as occurred in Laurel, Montana in 2011 and in Glendive, Montana in 2015.

13. For each of these reasons and many others that emanate from our deepest-held belief systems as Native Americans, oil spills from the Keystone XL Pipeline into waters such as the Missouri and Yellowstone Rivers would grieve

Pipeline into waters such as the Missouri and Yellowstone Rivers would grieve me, my family, and my people, deeply. For these reasons we have opposed the Keystone XL Pipeline since its inception, and urge this Court to prevent its construction and overturn its reapproval.

I declare under penalty of perjury that the foregoing facts are true and correct of my personal knowledge, that I am competent to and if called would so testify, and that this declaration was executed on June 20, 2019 in Joliet, Montana.


KANDI WHITE

EXHIBIT

11

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PRESIDENT DONALD J. TRUMP,
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ENGINEERS; LT. GENERAL TODD T.
SEMONITE, Commanding General and
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CV 19-28-GF-BMM

**DECLARATION OF BILL
WHITEHEAD IN SUPPORT
OF PLAINTIFFS' MOTION
FOR PRELIMINARY
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**Hearing:
Time:**

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and Wildlife Service; UNITED STATES
BUREAU OF LAND MANAGEMENT, and
DAVID BERNHARDT, in his official
capacity as Acting U.S. Secretary of the
Interior,
Defendants,
TRANSCANADA KEYSTONE PIPELINE,
LP, a Delaware limited partnership, and TC
ENERGY CORPORATION, a Canadian
Public Company,
Defendant-Intervenors.

I, Bill Whitehead, declare as follows:

I am a member of the Board of Directors of plaintiff North Coast Rivers Alliance and have personal knowledge of the following facts.

1. I am a Native American, an enrolled member of the Assiniboine & Sioux Nations, and born in Poplar, Montana, on the Fort Peck Indian Reservation, on June 10, 1939. I have resided on the Reservation, on the Missouri River, all my life.

2. For fifty years, I have been active in advancing the interests of Native Americans on the Fort Peck Indian Reservation. I currently serve as Chairman of the Board of Directors of the Assiniboine & Sioux Rural Water Supply System, on whose Board I have served since 2007. I am also currently Chairman of the Board Board of the Native American Development Corporation of Billings, Montana, and

have been a member of that Board since 1999. I have served two terms on the Fort Peck Tribal Council, am a former Chairman of the Wolf Point Community Organization, and a former Board Member of the Fort Peck Community College. I have also served as a State Legislator in the Montana House of Representatives. I am a college graduate with a B.A from the University of Northeastern Illinois, and a U.S. Army Veteran.

3. I have been an advisor to the North Coast Rivers Alliance since May 2017, and I joined their Board of Directors on September 1, 2017.

4. I have worked for fifteen years to provide clean potable water to the Fort Peck Indian Reservation and surrounding rural communities, to remedy contamination of their ground water supplies due to irresponsible oil and gas development permitted by the United States government. Two decades ago, the Assiniboine & Sioux Nations established the Assiniboine & Sioux Rural Water Commission to construct the Wambdi Wahachanka “Eagle Shield” Water Treatment Plan and manage its operation. Upon completion, at an estimated cost of over \$300,000,000, this modern water treatment plant and vast pipeline delivery system will provide clean water to over 30,000 people, including residents, ranchers, and farmers on the Fort Peck Indian Reservation in Montana’s four northeastern counties (Roosevelt, Valley, Daniels, and Sheridan) to the Canadian

border. The project is approximately 80 percent completed. The intake for this water system is located on the Missouri River (in the town of Wolf Point, on the Fort Peck Indian Reservation) about 58 river miles downstream from the Fort Peck Reservoir, and 57 miles downstream from the proposed crossing of the Missouri River by the Keystone XL Pipeline.

5. I am familiar with the proposed Keystone XL Pipeline's route through ranch land north of the Milk River (a major tributary of the Missouri River), across the Milk River via a proposed underground pipeline, across extremely fertile farmland located in the Missouri River and Milk River alluvial deltas between those two rivers, and then across the Missouri River via a second proposed underground pipeline. From there it would pass south and east through eastern Montana through extensive ranch and farmlands and across many other tributaries of the Missouri River, including the Yellowstone River, before crossing Montana's eastern border and entering South Dakota.

6. The proposed route of the Keystone XL Pipeline poses a direct threat to the source of water for the Fort Peck Indian Reservation. The Keystone XL Pipeline would cross under the Milk River and the Missouri River just 10 and 14 miles upstream of our Wyota and Frazer irrigation intakes on the Missouri River, which supply the Fort Peck Reservation's extensive irrigation system, providing

water to about 19,000 acres of highly productive farmland. Downstream of the Wyota and Frazer irrigation intakes is the intake for the Wambdi Wahachanka “Eagle Shield” Water Treatment Plant that pumps water from the Missouri River, for potable use, to the inhabitants of the Fort Peck Reservation as well as other communities within Montana’s four northeastern counties.

7. I am familiar with the Wambdi Wahachanka “Eagle Shield” Water Treatment Plant’s vulnerability to contamination of the Missouri River upstream of this water treatment plant’s intake point. The proposed Keystone XL Pipeline poses an unacceptable risk of contamination of our Fort Peck Reservation water supply for at least five reasons. First, our Water Treatment Plant is not designed nor equipped to remove hydrocarbon contaminants such as benzene, ethylbenzene and p-xylene that are present in crude oil and the diluent that is used to facilitate its passage through pipelines. Were there to be a tar sands crude oil leak contaminating the Missouri River, our water treatment plant would have to close, resulting in the loss of the sole water supply for over 30,000 residents of the Fort Peck Reservation and surrounding communities within Valley, Daniels, Sheridan, and Roosevelt counties, including four hospitals and thirteen public schools.

8. Second, the proposed crossing of the Keystone XL Pipeline under the Missouri River is at a location on the river which is subject to extreme hydrologic

pressure and movement for several reasons. It is situated in the sediment delta that has formed where the Milk River and the Missouri River meet. The soils of this delta have a high clay component, which means that they expand and shrink greatly depending on their moisture content, and are easily eroded by water movement. The course of the Milk River as it passes through this delta varies widely over time, as indicated by its extremely meandering path through the delta with many oxbows. Roads maintained by local farmers as well as by the Fort Peck Reservation are subject to extensive erosion due to these frequent meanders of the Milk and Missouri Rivers through the highly erosive clay soil. Consequently, soil erosion and movement of the riverbanks of both the Milk River and the Missouri River make for a highly unstable substrate for the proposed Keystone XL Pipeline.

9. The third reason that the Keystone XL Pipeline poses an unacceptable risk to our water supply is that its crossing of the Missouri is located just a few hundred yards downstream from the Fort Peck Reservoir Spillway. This spillway provides emergency relief from high water conditions in the reservoir. The Fort Peck Reservoir is the world's largest earthen-filled dam. It stores approximately 19,000,000 acre-feet of water (i.e., more than four times the size of Shasta Reservoir, California's largest) and thus is one of the largest reservoirs in the

world. During high water conditions, when water must be released down the emergency spillway into the Missouri River (immediately upstream of the confluence with the Milk River), the tremendous hydraulic force of the released water can cause extensive erosion of the Missouri River's riverbed and river banks. Thus, the proposed placement of the Keystone XL Pipeline at this location would subject the pipeline itself to highly erosive forces of the water released from the Fort Peck Spillway during high water conditions, as occurred during May 2018.

10. The fourth reason the Keystone XL Pipeline poses an unacceptable risk of contamination to Fort Peck Reservation's water supply is that the Missouri River is subject to freezing during the winter. When it is frozen solid on the surface, it would be virtually impossible to access and repair any breach in an oil pipeline passing underneath the river. It would also be very difficult to locate the specific point at which the pipeline might be breached. The presence of thick ice on this river course also poses hazards during the season of spring breakup, when ice forms dams that can impede the flow of water, resulting in unstable surface conditions on the ice and the potential for the sudden release of waters temporarily dammed behind the ice. The unpredictable winter conditions on the Missouri River can also cause violent erosion of the riverbed and river banks, and thus pose

additional risks for the potential breach of, and contamination from, any underground oil pipeline located here.

11. The fifth reason our Water Commission opposes the Keystone XL Pipeline is that the release of tar sands crude oil from the Keystone XL Pipeline would pose particular harm to the Missouri River and surrounding communities. Because tar sands crude is so viscous, it requires thinning with a toxic solvent known as diluent to allow its transport through a pipeline. The resulting mixture is called dilbit. When dilbit escapes from a pipeline, the solvent quickly forms a gas that evaporates in waves of toxic air. Such a release would necessitate evacuation of both the area of the spill and all downstream communities such as Wolf Point and Poplar on the Fort Peck Reservation. The release of the lighter fractions as gas would leave behind the heavy, sticky tar sands crude, which then sinks to the bottom instead of floating like a lighter conventional oil. Tar sands crude is exceptionally difficult to clean up, and could remain in the riverbed and river banks of the Missouri River for decades. Tar sands crude oil leaks in other rivers, such as Michigan's Kalamazoo River, have required many years to clean up, and in some cases, the contamination remains indefinitely.

12. For each of these reasons, on October 2, 2017, the Water Commission for the Assiniboine & Sioux Rural Water Supply System (of the Assiniboine &

Sioux Tribes of the Fort Peck Indian Reservation) voted unanimously to oppose the Keystone XL Pipeline and to support the lawsuits filed against it. A true copy of our Water Commission's Resolution opposing the Keystone XL Pipeline is attached as Exhibit 1 to this Declaration.

13. In summary, the proposed Keystone XL Pipeline's construction and operation poses a direct threat to the water supply of the Assiniboine & Sioux Nations and to more than 30,000 residents of Montana's four northeastern counties. Our communities live close to the land and our lives are woven tightly with the Earth's water, air, land, and animals as part our identity. As a member of the Board of Directors of North Coast Rivers Alliance, I join with our membership in adamantly opposing construction and operation of the Keystone XL Pipeline.

I declare under penalty of perjury that the foregoing facts are true and correct of my personal knowledge, that I am competent to and if sworn would so testify, and that this declaration was executed in Poplar, Montana, on June ~~14~~ 2019.


BILL WHITEHEAD

EXHIBIT 1

**RESOLUTION OF THE WATER COMMISSION
FOR THE ASSINIBOINE & SIOUX RURAL WATER SUPPLY SYSTEM
OF THE ASSINIBOINE & SIOUX TRIBES OF THE FORT PECK INDIAN RESERVATION:**

WHEREAS, the proposed Keystone XL Pipeline crosses (1) the Milk River 1.6 miles west of Nashua and (2) the Missouri River 0.3 miles west of the mouth of the Milk River; and

WHEREAS, these pipeline crossings are only 0.3 miles upstream of the Fort Peck Reservation, 10 miles upstream of the Wyota irrigation intake, and 14 miles upstream of the Fraser irrigation intake which together irrigate approximately 19,000 acres of farm and ranch land; and

WHEREAS, these pipeline crossings are 82.7 and 57.4 miles upstream of the intake of the Assiniboine and Sioux Rural Water Supply System (ASWRSS) which serves 30,000 people and irrigates 19,000 acres of farm and ranch land; and

WHEREAS, a spill at or near either river crossing would contaminate the alluvial groundwater and the surface waters with toxic chemicals for many decades; and

WHEREAS, the contaminated water from a spill would reach the intake for the ASWRSS within only 20 to 40 hours, and the ASWRSS water treatment plant is not equipped to remove hydrocarbon contaminants such as benzene, ethylbenzene, and p-xylene; and

WHEREAS, the Assiniboine and Sioux Tribes corresponded with the U.S. Department of State and the President of the United States in 2011, 2013, and 2015 expressing concern that the Keystone XL Pipeline posed a grave threat to our water supply and the health and wellbeing of our citizens, but the U.S. Department of State approved the Keystone XL Pipeline anyway, without addressing our concerns; and

WHEREAS, the Indigenous Environmental Network and the North Coast Rivers Alliance and the Northern Plains Resource Council joined by other organizations have filed lawsuits in federal district court in Great Falls to overturn the Department of State's approval of the Keystone XL Pipeline;

THEREFORE, BE IT RESOLVED that the Water Commission of the Assiniboine and Sioux Tribes hereby expresses its opposition to the Keystone XL Pipeline and its support for the lawsuits filed by the Indigenous Environmental Network and North Coast Rivers Alliance and the Northern Plains Resource Council to set aside the Department of State's approval of the Keystone XL Pipeline.

Moved: A.T. ("Rusty") Stafne

Seconded: Rick Kirn

Approved this second day of October, 2017 by a vote of 4 ayes, Bill Whitehead, A.T. Stafne, Rick Kirn, Peter Dupree, and no nays. One absent: Robert McAnally

Attest:



~~Secretary~~ of the Water Commission

CHAIRMAN

EXHIBIT
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UNITED STATES ARMY CORPS OF
ENGINEERS; LT. GENERAL TODD T.
SEMONITE, Commanding General and
Chief of Engineers; UNITED STATES FISH
AND WILDLIFE SERVICE, a federal
agency; GREG SHEEHAN, in his official
capacity as Acting Director of the U.S. Fish

) CV 19-28-GF-BMM

) **DECLARATION OF**
) **ANGELINE CHEEK IN**
) **SUPPORT OF PLAINTIFFS'**
) **MOTION FOR**
) **PRELIMINARY**
) **INJUNCTION**

) **Hearing:**
) **Time:**

) **Judge: Hon. Brian M. Morris**

and Wildlife Service; UNITED STATES
BUREAU OF LAND MANAGEMENT, and
DAVID BERNHARDT, in his official
capacity as Acting U.S. Secretary of the
Interior,

Defendants,

TRANSCANADA KEYSTONE PIPELINE,
LP, a Delaware limited partnership, and TC
ENERGY CORPORATION, a Canadian
Public Company,

Defendant-Intervenors.

I, Angeline Cheek, hereby declare:

1. I am a member and supporter of the Indigenous Environmental Network (“IEN”) and make this declaration in support of its Motion for Preliminary Injunction.

2. I am an enrolled member of the Fort Peck Assiniboine and Sioux Tribes of the Fort Peck Reservation in northeastern Montana, and reside in Brockton, Montana. I was born on October 11, 1988 in Poplar. I have resided on the Fort Peck Reservation all my life, excepting family visits in South Dakota and college studies in Billings. I have gained a deep understanding of the challenges faced by our young people growing up on the Reservation by working as a Youth Case Worker for our Juvenile Detention Center and for the Fort Peck Tribes’ Education Department, and through community outreach activities.

3. I prepared this declaration to explain why IEN strenuously objects to TC Energy's proposed construction of up to nine man-camps along its proposed route of the Keystone XL Pipeline – four each in Montana and South Dakota, and potentially one in Nebraska. At least two of these man-camps would be located near Indian reservations – one in Valley County, Montana about two miles west of the Fort Peck Reservation where I and Bill Whitehead (a Board Member of co-plaintiff North Coast Rivers Alliance) live, and one in Meade County, South Dakota, about two miles west of the Cheyenne River Indian Reservation where Joye Braun and other IEN members live. Each man-camp would occupy between 50 and 100 acres and house about 600 beds and 300 recreational vehicle spots. Each would also include a convenience store, laundry facilities, kitchen and dining facilities, and provide other services.

4. I have witnessed firsthand the harm that oil and gas man-camps have brought to our communities across the Fort Peck Reservation. I have also studied the social impacts of oil and gas development of the Bakken Shale Formation in North Dakota and Montana. I attach as exhibits two studies prepared by the faculty of the University of North Dakota (“UND”) and funded by the National Institute of Justice that document many of the social impacts that I have personally observed of oil and gas development, including operation of man-camps, within

the Bakken region of North Dakota and Montana. I have experienced these impacts in my daily life, and studied them both in the field and through review of the relevant literature over the past decade.

5. The conclusions of the UND studies are echoed throughout a broad literature that includes Canada's ground-breaking 1200-page study released on May 27, 2019 by the Government of Canada. That report is based on a three-year, multi-provincial assessment that included 24 public hearings and 2,386 individual testimonies. It found that the influx of transient workers – commonly housed in “man camps” – hired by resource development industries such as oil and gas in remote and rural areas resulted in higher rates of sexual assault, sexually-transmitted infections and drug and alcohol abuse, particularly “against Indigenous women and girls.” *Reclaiming Power and Place: The Final Report of the National Inquiry into Missing and Murdered Indigenous Women and Girls* at pp. 584-586. It cited governmental reports concluding that “[i]ncreased crime levels, including drug- and alcohol-related offenses, sexual offenses, and domestic and ‘gang’ violence have been linked to ‘boomtown’ and other resource development contexts.” *Id.* at 586. That comprehensive study echoes earlier reports, such as the Native Women's Association of Canada's (“NWAC”) 2010 report that

identified 582 missing and murdered Indigenous women over the previous four decades.

6. Oil and gas development within the Bakken petroleum patch began over one decade ago and accelerated rapidly between 2010 and 2013, until a drop in petroleum prices slowed the pace of development and growth in the number of oil industry workers in the area.

7. Two major Native American communities were impacted by oil development in the Bakken region: the Three Affiliated Tribes of the Fort Berthold Indian Reservation, also known as the Mandan, Hidatsa, and Arikara (MHA) Nation, in western North Dakota, and the Assiniboine and Sioux Tribes of the Fort Peck Reservation in northeastern Montana, where I live. The MHA Nation resides in Dunn, McKenzie, McLean, Mercer, Ward and Mountrail counties of North Dakota. The Fort Peck Reservation occupies Roosevelt, Valley, Sheridan and Daniels counties of Montana.

8. The oil and gas industry has utilized man-camps to house the thousands of almost exclusively male oil and gas industry workers that it employs in rural areas of the Bakken region. Introducing these large numbers of highly paid, transient male workers into this rural area with a primarily Indigenous population has had two types of adverse social impacts – direct and indirect. The

direct effects include violence against Native American women and children, including murders, abductions, rape and other forms of physical violence, exposure to drugs including methamphetamines and heroin, and sex trafficking. The indirect effects include displacement of local residents from housing due to doubling and tripling of rental costs, inflation in other necessities of life including food, clothing and services, the breakdown of public safety and family and community support networks, and the overall degradation in quality of life due to exposure to alcohol and drug abuse and resulting addiction, and increased domestic and sexual violence.

9. These impacts, which I discuss below, have taken place within a backdrop of two centuries of social, political, economic and cultural dislocation of and discrimination against Indigenous communities throughout the Northern Great Plains. Both the MHA Nation and the Fort Peck Tribes have suffered grievously due to injustices perpetrated by the United States government against Indigenous communities. From the perspective of the MHA Nation, an enrolled member put it this way: “Our tribe has been much mistreated in dealing with the federal government starting in 1851 when we signed [the Fort Laramie] treaty and retained 12.6 million acres. But since that time, through various Congressional Acts and executive orders, we own less than one-half of a [million] acres.” *The Impact of*

the Growing Oil Industry on Domestic Violence, Dating Violence, Sexual Assault, and Stalking in North Dakota and Montana: Findings from the Mandan, Hidatsa, and Arikara Nation – the Three Affiliated Tribes of the Fort Berthold Indian Reservation, prepared by University of North Dakota faculty members Thomasine Heitkamp, Liz Legerski, and Twyla Baker-Demaray, October 3, 2016 (National Institute of Justice, Office of Justice Programs, U.S. Dept of Justice, Contract No. 2013-ZD-CX-0072 (“UND-MHA Study”) (attached as Exhibit 1), p. 5.

10. Construction of the Garrison Dam by the United States Army Corps of Engineers in the late 1940’s flooded 152,568 acres of river bottom land within the MHA Nation – the most fertile farmland and over one-fifth of the Reservation’s remaining land base – and resulted in the displacement and relocation of 80 percent of the tribal membership.

11. On the Fort Peck Reservation, oil and gas development permitted by the United States government several decades ago resulted in an “oil boom” for Murphy Oil Company, which profited handsomely, but caused the contamination of the Reservation’s primary aquifer and source of drinking water north of Poplar (the Reservation’s governing center) due to widespread leakage from oil and gas wells and pipelines. As a consequence, many Native Americans living north of Poplar have cancer or other diseases attributed to contamination of their water

supply, and suffer continuing pollution of their surface water resources, soils and vegetation in the area.

12. Development of the Bakken oil and gas fields and construction of associated man-camps to accommodate the huge influx of transient, largely male oil field and pipeline workers initially centered around Williston, North Dakota. Williston is approximately one hour by car east of the Fort Peck Reservation. As the Bakken oil patch development expanded, it reached into eastern Montana south of the Missouri River. The surge of oil field and pipeline workers resulted in much higher crime rates, including murders, abductions, rapes and other forms of sexual violence, drug and alcohol abuse, addiction and sex trafficking.

13. One of the first tragic crimes occurred in Sidney, Montana, approximately one hour's drive south from the Fort Peck Reservation. Two oil workers abducted a Sidney, Montana teacher while she was going on her daily morning jog. Later, the two oil workers admitted to killing the teacher and showed law enforcement where they had buried her body.

14. The surge in violence against Native Americans, particularly women and children, then moved north into the Fort Peck Reservation, resulting in widespread criminal activity. For example, in Wolf Point, our Reservation's largest town, two juvenile females barely escaped an attempt to abduct them by

non-Native men chasing after them and attempting to put them in their vehicle. Although law enforcement was contacted immediately, they never located the car nor the perpetrators. At the same time, during my work at the schools across our Reservation, I observed many cars licensed in North Dakota or other outside states driving by the schools and in adjacent communities, trying to pick up students. These incidents became so widespread that our Fort Peck tribal courts added a human trafficking code to our Fort Peck Tribes' Comprehensive Code of Justice.

15. At the same time, our Reservation experienced a tremendous increase in sexually-transmitted diseases that had largely never existed in our community before. Incidents of drug and alcohol abuse and addiction also rapidly increased. Our Reservation had two tragic stories of toddlers going missing and one dying because of the methamphetamine problem that erupted on our Reservation shortly after the Bakken field development brought out-of-state oil workers to our borders.

16. Native American communities within the MHA Nation experienced similar incidents of violence against Native American women and children, prompting the University of North Dakota to form an interdisciplinary team of faculty to study the problem in January 2014. That study was conducted over a three-year period, ending on December 31, 2016. Its purpose was to determine if communities in the Bakken region are experiencing an increase in interpersonal

violence, and specifically, the impact of the growing oil industry on domestic violence, dating violence, sexual assault and stalking in North Dakota and Montana, with a particular emphasis on impacts on the Indigenous communities within the Fort Berthold Indian Reservation and the Fort Peck Indian Reservation. Its findings illuminate both the direct and indirect social impacts of oil industry development in the area, and the depth of the social dislocation that results from those impacts, as I discuss below.

17. The quantitative data from the UND-MHA Study show an irrefutable cause-and-effect relationship between the rapid growth in the oil industry in North Dakota and sharply increased rates of violence against women. In the words of the study's authors, the "[s]tatistical data" can be "powerful" in "demonstrating the effects of oil development on crime at MHA Nation." UND-MHA Study at p. 3. The "[d]ata on the number of new domestic violence and sexual assault victims provided from the North Dakota Council on Abused Women's Services ("NDCAWS") as shown in Table 1 of the UND-MHA Study show that prior to development of the Bakken Shale Formation, there was "a general decrease in new domestic violence victims from 2001 to 2006." UND-MHA Study at p. 3. However, after discovery of the Bakken field and the arrival of thousands of oil industry workers who built oil wells and pipelines to develop the field, there was a

rapid “increase in the number of new domestic violence and primary sexual assault victims from 2010 to 2013, peaking in 2012.” *Id.* at pp. 3-4.

18. In particular, the average annual number of new domestic violence victims increased from 76 in 2010 to 178 in 2012 – more than doubling. *Id.* at p. 4, Table 1. The number of new primary sexual assault victims increased even more rapidly, from zero victims just after the turn of the century to 3 victims in 2010, 9 in 2011, 25 in 2012 and 18 in 2013. *Id.* These dramatic increases in domestic violence and sexual assaults probably understate the severity of the increase, since “Native Americans . . . live in an honor and shame culture . . . not like many other cultures in the rest of the Western European style morality.” *Id.* at p. 5. When “somebody beats up somebody, or somebody molests somebody,” members of the Indigenous Community typically do not want to report it because “it’s a matter of personal anxiety and family honor.” *Id.* at p. 5.

19. Drug and alcohol abuse were directly linked to both the rapid growth of the oil industry and increased domestic violence and sexual assaults. “Participants in this study described the dramatic increase in use of methamphetamine (meth) as one of the most significant oil problems.” *Id.* at p. 8. As one interviewee put it, “[a] lot of meth started rolling in, and then, now heroin, too. So, there’s meth and heroin here like there never used to be.” *Id.* Drug and

alcohol abuse affects not only abusers, but all family members who are exposed to the abuse. As another interviewee explained,

“[e]veryone gets hurt in the family. It’s not just the victim and the abuser. It’s the whole family. Brothers, sisters, moms, uncles, aunts, and everybody is involved and the children are involved too. And, to me, they get the worst part of it because they see it. They see the domestic violence in their families. They see the drugs coming in. They see their parents using drugs.”

Id. at p. 9. And, as drug abuse increased, so did “sexual abuse due to parental drug use.” *Id.* As another interviewee explained, “and do the little kids suffer. We’ve had some horrendous cases of little children being sodomized and being sexually abused.” *Id.* at p. 10.

20. Because oil industry jobs are typically highly compensated, particularly in relation to the poverty-level incomes prevalent within the Native American communities, the sudden availability of excess cash creates an “environment ripe for drug and/or sex trafficking.” *Id.* at p. 11. As one interviewee explained,

“[w]ith the oil business now, there are more drugs, more gangs – gang involvement with the drugs. Like the Mexican cartel is here. You have the

skinheads that are here. We have other gangs, you know, that are here . . . you have guys walking around with that number thirteen on their necks.”

Id. Many participants in the study described how “the influx of organized crime is putting women new to the community, and those residing in the community, at heightened risk.” *Id.* at p. 12. As one interviewee explained, “[t]he gangs are addicting young women to traffic them.” *Id.* Another interviewee acknowledged that “[o]ur [sex] trafficking . . . came right when the oil came.” *Id.*

21. One direct result of the influx of large numbers of transient males unknown to the local law enforcement agencies is that it is virtually impossible to identify and exclude sex offenders and violent offenders until a crime has already been committed. The multi-agency jurisdictional challenges that are presented when man-camps are developed on private property beyond the jurisdiction of tribal law enforcement authorities exacerbate this law enforcement shortfall. As the UND-MHA Study explained,

“when asked if they thought that jurisdictional challenges made it easier for criminals to stay under the radar, one respondent said, ‘Absolutely.

Absolutely. First of all, how long does it take for you to have to even register? You could be a violent offender as well . . . how long is it going to take for them to find that out about you? What if you worked out in a man-

camp? Well, they are not going to know who the hell you are. There's too many people there. And the cops are not going to keep going out every little while and check every single ID, and say, 'before they get their paycheck, I want to know who these people are.'"

Id. at p. 13.

22. As a consequence of the sharp increase in drug and alcohol abuse, sex trafficking, sexual assaults and other violent crimes, the quality of life within the MHA Nation unraveled. As the UND-MHA Study pointed out:

"Lifestyle changes due to increased crime are significant at MHA Nation and throughout the [Bakken] patch. A tribal member stated, 'the increased drugs that have come are making our own people different or violent or robbing people for money.' Violent crimes are a significant concern. 'We never even heard of murders before, not on this Reservation anyway. And now we're seeing murders within our Reservation and the surrounding Reservations. Kidnappings and locking down schools.'"

Id. at p. 17. Many of the Indigenous community's fears regarding escalating crime focused on the nearby man-camps:

"Concerns about 'criminal elements' residing at nearby man camps and the growing presence of drug cartels has increased fear and suspicion of

newcomers ‘There’s just a lot of dangerous people that have come in since the oil and the impact is great. It’s very serious.’”

Id. The community’s heightened fear of crime was greatest for their children:

“Children before [the Bakken oil patch development] could play, they could run on the sidewalk, on the street, in the field. They could and they’d come home tired and hungry and there was someone there to take care of them. But they can’t do that now. They can’t go out. The parents are all afraid. They can’t go alone outside to play Some [interviewees] described incidents where strangers were targeting children specifically, ‘. . . trying to get little high school girls to come to their car.’ Others described how men were trying to pick-up young girls at powwows, where ‘. . . they attract people to their vehicle by offering them gifts.’”

Id. at pp. 17-18.

23. The indirect impacts of oil development and its associated man-camps included dramatic increases in the cost of rental housing and related housing shortages. “One [interviewee] described the significance of the increase in housing prices from just several years ago, ‘An oil company can go rent a house for \$2,000, \$3,000 a month versus what might have been \$800 three, four years ago before the oil boom.’” *Id.* at pp. 18-19. Because high-paid transients were

able to pay far more for housing than local residents, particularly members of the Indigenous community who may be subsisting at poverty-levels, significant housing shortages followed the Bakken patch oil development. *Id.* at p. 19.

24. As a consequence of increased drug and alcohol abuse, sex trafficking, violent crime, and housing shortages, many members of the Indigenous community were forced to leave the Reservation. “In fact, at the time of [the UND-MHA Study] interviews, MHA’s largest population segment was in Bismarck, which is twice the size of the New Town [a city within the Reservation] segment”

Id. at p. 19.

25. The UND researchers came to similar conclusions regarding the adverse impacts of the Bakken oil patch development on the Indigenous communities within the Assiniboine and Sioux Tribes of the Fort Peck Reservation. Executive Summary, *The Impact of the Growing Oil Industry on Domestic Violence, Dating Violence, Sexual Assault, and Stalking in North Dakota and Montana: Findings Specific to the Fort Peck, Assiniboine and Sioux Tribes*, prepared by Liz Legerski and Thomasine Heitkamp, October 28, 2016. (“UND AST Study”). As the UND researchers concluded, “[m]any of the findings from analysis of the Fort Peck data are similar to what was learned from other similarly

situated communities surrounding the epicenter of the Bakken.” UND AST Study at p. 3.

“People noted that Poplar and Wolf Point, communities located along the corridor of US Highway 2, were impacted because of their proximity to Williston – the heart of the Bakken oil boom Many [interviewees] believed the population increase resulted in an increase in crime within the Bakken region generally, and more poignantly, a disproportionate increase in violent crime. An increase in domestic violence and sexual assault cases were also noted, along with concerns about under-reporting. Many participants also noted the increase in severity of crimes and linked these changes to concerns about increased gang activity in the area.”

Id.

26. The impacts of the increased drug abuse and related interpersonal violence associated with oil development are compounded by the Reservation’s lack of adequate funding for social services:

“Another theme consistently identified by [interviewees] from [the Fort Peck] Reservation and throughout the Bakken was the influence of drug abuse on interpersonal violence. . . . One of the striking consequences of increased drug use is exposure for young children, including infants, to

drugs like methamphetamine Participants stated that those who are battling addiction often became violent and unpredictable, not only causing harm for their family members, but also creating greater risk for human service providers and law enforcement. The problem was also complicated at Fort Peck because, like many other communities in the Bakken, access to treatment services to address[] substance abuse disorders was extremely limited.”

Id.

27. Our communities feel particularly vulnerable to the presence of outsiders attempting to abduct our young women for the sex trades in urban areas. As the UND researchers explained, “Examples of attempts to traffic young people to larger cities to engage in sex work were described as particularly troubling concerns for [interviewees] from the Fort Peck, Assiniboine and Sioux Tribes.”

Id. at pp. 3-4. “Many [interviewees] also described concerns about the growth of registered and unregistered sex offenders on their tribal lands and in the region following oil development. Participants also described the difficulties associated with identifying and tracking sex offenders who are highly mobile and unknown to local residents.” *Id.* at p. 4.

28. As a life-long resident of the Fort Peck Reservation, I am familiar with the sharply elevated crime that we have experienced since development of the Bakken oil patch began several years ago. I can attest that my experience within the Indigenous community on the Fort Peck Reservation corresponds to the experiences and concerns reported by the UND AST Study.

29. As I have detailed in my testimony, the construction of man-camps to service the proposed Keystone XL Oil Pipeline would unleash severe social impacts within nearby rural communities, particularly the Indigenous communities of the Fort Peck Reservation and the Cheyenne River Reservation. For these reasons, IEN emphatically opposes construction of the man-camps proposed by TC Energy. Additionally, IEN opposes the Keystone XL Pipeline because it would accelerate the ongoing Climate Crisis, as well as pose unacceptable risks of environmental degradation to the waterways, aquifers and watersheds, and their dependent fish and wildlife, that the Keystone XL Pipeline would endanger.

I declare under penalty of perjury that the foregoing facts are true and correct of my personal knowledge, that I am competent to and if called would so testify, and that this declaration was executed on June 21, 2019 in Poplar, Montana.

Angeline Cheek

ANGELINE CHEEK

EXHIBIT
13

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
GREAT FALLS DIVISION

INDIGENOUS ENVIRONMENTAL)
NETWORK and NORTH COAST RIVERS)
ALLIANCE,)

Plaintiffs,)

vs.)

PRESIDENT DONALD J. TRUMP,)
UNITED STATES DEPARTMENT OF)
STATE; MICHAEL R. POMPEO, in his)
official capacity as U.S. Secretary of State;)
UNITED STATES ARMY CORPS OF)
ENGINEERS; LT. GENERAL TODD T.)
SEMONITE, Commanding General and)
Chief of Engineers; UNITED STATES FISH)
AND WILDLIFE SERVICE, a federal)

CV 19-28-GF-BMM

) **DECLARATION OF JOYE**
) **BRAUN IN SUPPORT OF**
) **PLAINTIFFS' MOTION FOR**
) **PRELIMINARY**
) **INJUNCTION**

) **Hearing:**

) **Time:**

) **Judge: Hon. Brian M. Morris**

agency; GREG SHEEHAN, in his official)
capacity as Acting Director of the U.S. Fish)
and Wildlife Service; UNITED STATES)
BUREAU OF LAND MANAGEMENT, and)
DAVID BERNHARDT, in his official)
capacity as Acting U.S. Secretary of the)
Interior,)
Defendants,)
)
TRANSCANADA KEYSTONE PIPELINE,)
LP, a Delaware limited partnership, and TC)
ENERGY CORPORATION, a Canadian)
Public Company,)
)
Defendant-Intervenors.)
_____)

I, Joye Braun, hereby declare:

1. I am a member of the Indigenous Environmental Network (“IEN”) and make this declaration based on my personal knowledge.

2. I was born on January 20, 1969 in Winnebago, Nebraska. I am a Native American and member of the Cheyenne River Sioux Tribe. I reside with my family on the Cheyenne River Indian Reservation, which is located just east of the proposed route of the Keystone XL Pipeline. The pipeline passes within one mile of the southwest boundary of our Reservation, and crosses the Cheyenne River and many of its tributaries upstream from our Reservation.

3. If the Keystone XL Pipeline should leak into any of these rivers, our people, our water supply, and our health and safety would be immediately impacted. My family and I would be directly harmed, since I frequently harvest

native medicines and berries along the Cheyenne River downstream from where the KXL Pipeline would be constructed. My family and I rely on these foods and medicines for our sustenance and health.

4. When the United States Army Corps of Engineers flooded the Missouri River along our Reservation, it caused flooding of many tributaries of the river which destroyed thousands of acres of native ecosystems that provided food and medicine for our people. Some of these plants are now gone forever. We must hold on to what we have left to preserve our culture and our health.

5. My people have witnessed firsthand the ill effects of oil pipeline development. These pipeline projects house temporary workers in “man-camps” that become sources of drugs including methamphetamine and heroin. We have seen an increase in drug use and alcohol abuse within the Native American communities in the vicinity of these man-camps in North Dakota, South Dakota and Alberta. We have also seen an increase in the number of missing and murdered Native American women in the vicinity of these camps. And, we have experienced slow-to-no emergency service response from police and medical providers to our Native American communities when they are harmed by the dramatically increased incidents of violence against women that are associated with these man-camps.

6. The Keystone XL Pipeline Project includes either eight or nine man-camps – four each within Montana and South Dakota, and potentially a ninth man-camp in Nebraska. According to the Final Supplemental EIS (“FSEIS”) for the Project and correspondence to our counsel from counsel for TC Energy (formerly, TransCanada), TC Energy proposes to build a man-camp in Meade County, South Dakota, approximately 2 miles west of the Cheyenne River Indian Reservation and another man-camp in Tripp County, South Dakota approximately 30 miles east of the Rosebud Indian Reservation. In both cases the reservation communities are the closest towns and thus likely to be used by the oil workers for “entertainment.” Apparently two man-camps are proposed to be built in Valley County, Montana, including one near Nashua that appears to be about two miles west of the Fort Peck Indian Reservation. According to the FSEIS, each would occupy between 50 and 100 acres and house approximately 600 beds and 300 “recreational vehicle spots.” Each man-camp would also include “a convenience store, recreational and fitness facilities, entertainment rooms and facilities, telecommunications media rooms, kitchen/dining facilities, laundry facilities, and security units” as well as a medical infirmary.

7. These man-camps would have substantial adverse impacts on the adjacent Indigenous communities. As explained, my people have observed and

borne firsthand the many harmful social and environmental impacts of oil pipeline man-camps such as those proposed for the Keystone XL Project. These impacts include violence against Native American women in the vicinity of these camps, and increased drug use and alcohol abuse within the nearby Native American communities. TC Energy and its subcontractors would employ thousands of oil pipeline workers to build the Keystone XL Pipeline Project, and most would live in these man-camps. The fact that several of the man-camps would be located near Native American Reservations poses a high likelihood that Indigenous communities would suffer directly from the well-documented health and safety impacts of these man-camps – including substance abuse and violence against Native American women.

8. Our Native American communities are impacted by oil pipeline development in many other ways that may be unseen to others. For example, where the Keystone XL Pipeline is proposed to pass near our Reservation, there are vulnerable unmarked graves of our ancestors and other cultural sites such as the camp of Chief Bigfoot before he led our people south, only to be massacred by the United States Army at Wounded Knee.

9. Every year we hold a horse ride with prayers along this route of sadness and tragedy. For our people, this is a memorial horse ride to build

strength, courage and fortitude among our youth. It is done in quiet, respectful prayer. After the ride is completed, descendants of the survivors of the massacre run back in the freezing cold to my homeland. We fear what will happen to our unmarked graves and other cultural sites if the Keystone XL Pipeline is constructed and man-camps are installed as is now proposed within a few miles of the border of our Reservation.

10. In addition to the man-camps, TC Energy will harm the safety of our Indigenous communities by transporting megaloads of pipeline equipment on our narrow rural roads. The oil pipeline equipment can be very large and puts people at risk on the highways. When TransCanada previously began transporting pipe to locations along its Keystone XL route, its trucks (and those of its contractors) literally pushed other drivers and pedestrians off the road. I was pushed off South Dakota Highway 63 and South Dakota Highway 34 by megaloads in 2012.

11. For all of these reasons, I, my family and my community would be harmed if the Keystone XL Pipeline is built and operated.

I declare under penalty of perjury that the foregoing facts are true and correct of my personal knowledge, that I am competent to and if called would so

testify, and that this declaration was executed in June 24, 2019 in Eagle Butte,
South Dakota.

A handwritten signature in blue ink that reads "Joye Braun". The signature is written in a cursive style with a large initial "J" and a long horizontal stroke at the end.

JOYE BRAUN

EXHIBIT

14

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
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INDIGENOUS ENVIRONMENTAL
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Plaintiffs,

vs.

PRESIDENT DONALD J. TRUMP,
UNITED STATES DEPARTMENT OF
STATE; MICHAEL R. POMPEO, in his
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UNITED STATES ARMY CORPS OF
ENGINEERS; LT. GENERAL TODD T.
SEMONITE, Commanding General and
Chief of Engineers; UNITED STATES FISH
AND WILDLIFE SERVICE, a federal
agency; GREG SHEEHAN, in his official
capacity as Acting Director of the U.S. Fish
and Wildlife Service; UNITED STATES

CV 19-28-GF-BMM

**DECLARATION OF
ELIZABETH LONE EAGLE
IN SUPPORT OF
PLAINTIFFS' MOTION FOR
PRELIMINARY
INJUNCTION**

Hearing:

Time:

Judge: Hon. Brian M. Morris

BUREAU OF LAND MANAGEMENT, and)
DAVID BERNHARDT, in his official)
capacity as Acting U.S. Secretary of the)
Interior,)

Defendants,)

TRANSCANADA KEYSTONE PIPELINE,)
LP, a Delaware limited partnership, and TC)
ENERGY CORPORATION, a Canadian)
Public Company,)

Defendant-Intervenors.)

I, Elizabeth Lone Eagle, hereby declare:

1. I am a member of the Indigenous Environmental Network (“IEN”) and make this declaration based on my personal knowledge.

2. I was born on March 2, 1968 in Cudahy, WI. I am an enrolled member of the Rosebud Sioux Tribe, and have lived within the exterior boundaries of the Cheyenne River Reservation since 2004, and in the community of Bridger since 2006. Bridger is located along the Cheyenne River, where my children and I live off the land by fishing, hunting deer, gathering berries and wild turnips, and other native foods and medicines. We live simply, and according to our Lakota way of life, which emphasizes respect for Mother Earth and other living creatures.

3. My children, grandchildren and other relatives and community members also live quietly this way, respecting Mother Earth in all her manifestations. For us, life begins and ends with water. We are born from and

nourished by water. It is our first medicine. It enables our food to grow, our fish to live, and our game to thrive. Our horses use the river to water, swim, frolic, and to clean themselves.

4. As a parent, it is also my responsibility to add the concerns of my children, to speak on their behalf. My children, Tatanka Itancan (age 17), MerleJohn (age 15), and Zora (age 13) are current and future landowners along, and with tributaries to, both the Cheyenne and White Rivers; as well as groundwater sources adjacent to several aquifers, including the Oglala Aquifer. As such, they have a vested interest in anything and everything that will affect the land and water as it relates to their current landowner responsibilities, and rights as well as those of their descendants.

5. Because they are currently minors, LaVae High Elk Red Horse acts as their conservator for land and water related matters for Cheyenne River, and I act in their interest regarding land and water related matters for Rosebud. They act and make decisions using group consensus and use the collective name Mniwakan Nakicijinpi. In our declarations, LaVae and I include the concerns of Mniwakan Nakicijinpi. Whenever they are able, Mniwakan Nakicijinpi prefers to speak for themselves, both individually and as a group. We support them because they are the first of the Seven Generations we are responsible for and they take their

responsibilities very seriously. Within the Tribal setting their participation and voices are not only allowed, they are encouraged and supported. Unfortunately, in certain non-Tribal legal matters, their voice is silenced to the detriment of the decision-making process. This is why LaVae and I will also represent their interests and concerns.

6. Because we cherish the Earth and its natural bounty; and depend on the great Cheyenne River and its tributaries for our sustenance, the Keystone XL Pipeline would threaten all that we live for and our cultural and religious legacy as we live it every day. The Keystone XL Pipeline would pass less than 100 yards from the southwest boundary of the Cheyenne River reservation and will snake around and affect allotted lands in Tripp County, including my father's, and other family members' lands; and cross all of the rivers, including the Cheyenne and White Rivers and their tributaries, on which we depend for drinking, irrigation, and watering our horses and livestock. Should the KXL Pipeline rupture— as appears to us inevitable and has been predicted by the Final Environmental Impact Statement for the project – and leak into the Cheyenne River, White River or their tributaries, the resulting contamination of our water supply would be devastating to my family, our community, and the entire way of life on which our Tribes depend for survival.

7. The Keystone XL Pipeline also poses potentially severe social impacts to the Reservations. TC Energy (formerly, TransCanada) proposes to construct three 600-bed man-camps in South Dakota; one located near the western boundary of the Cheyenne River reservation, in Meade County, one located south of the Cheyenne River in Haakon County; and one located in Tripp County in even closer proximity to communities and lands of the Rosebud Sioux Tribe. According to the Final Supplemental EIS for the Project, each man-camp would occupy between 50 and 100 acres, and house 600 beds and 300 “recreational vehicle spots.” Each would also include “a convenience store, recreational and fitness facilities, entertainment rooms and facilities, telecommunications media rooms, kitchen/dining facilities, laundry facilities and security units,” along with a medical infirmary. The placement of oil and gas pipeline-related man-camps near Indigenous communities elsewhere in South Dakota and North Dakota has been associated with physical assaults against and murders of Native American women, as well as drug and alcohol abuse within Native American communities. The close proximity of this Project’s man-camps to the Cheyenne River Reservation, the Rosebud Reservation and the Fort Peck Reservation create obvious and direct risks that these impacts will likewise occur within these Native American communities.

8. Because of Bridger's remote location, the dangers posed by the construction and operation of the Keystone XL pipeline, and the close proximity of both the pipeline route and two of the man-camps, we are a high-risk community. There are approximately 25 Tribal member families located in the Bridger area, within the reservation boundary. There are other non-tribal member remote homes located outside the exterior boundary of the Cheyenne River reservation that are also in close proximity to the river, the pipeline route, and the man-camps. The nearest emergency services are approximately 40 miles away. The nearest law enforcement agency is more than 70 miles away. The nearest hospital is 40 miles away but is not a full-service hospital. The nearest full-service hospital is in Rapid City, over 100 miles away. Building the Keystone XL pipeline and its man-camp near our high-risk Bridger Community would expose us to unacceptable risks of physical harm from physical assaults and murders against our women and children, and from exposure to drug and alcohol abuse as well as the life threatening risks due to ruptures, leaks and other potential industrial accidents associated with pipeline construction, maintenance and operation. Due to our remote location, should the pipeline rupture, leak, or there is an industrial accident, we are so far away from emergency services, significant casualties to our community might result.

9. Besides the obvious disaster caused by a mass casualty event, there is historical significance to the threat of a mass death event. Bridger was founded by survivors of the Wounded Knee massacre perpetrated by the U.S. Army. Because Bridger is a descendant community of survivors from that horrendous slaughter, the historical trauma remains prevalent in those who live here. The prospect of another such event, be it from a militarized police presence, some other exterior threat, or an industrial accident, the simple possibility of the Keystone XL pipeline has already significantly increased the stress level and anxiety in the Bridger Community.

10. Our community would also be harmed by the impact of the Keystone XL pipeline on climate change due to the fossil fuel use it would enable and encourage, especially as it relates to this area and future generations. We have a philosophy in the Lakota way of life that teaches us that we are responsible for the survival of the next seven generations. It is a core mandate to our religious beliefs and practices that is known as The Seventh Generation. Construction with heavy equipment as well as long-term maintenance of this project will cause air pollution downwind in our community, as well as pose the risk of contamination of our rivers and groundwater from oil leaks.

11. For example, a pump station for this project is planned to be located south of Bridger along SD State Highway 34 East. The enormous amount of power required for this station alone will exponentially increase the amount of electricity used in the area and will emit enough additional heat, year-round, to have an immediate adverse effect on local resources and wildlife. To cool this and other pump stations, TC Energy wants to pump water from the Cheyenne River. The annual amount of water they want to take from the River to serve this purpose would serve a small city. This does not include the water they wish to appropriate for construction and testing for the pipeline, as well as taking water from other area sources for the man-camps. Once used, the water TC Energy wants to appropriate will not be able to be recycled. All these acts are detrimental to the local environment and have a definite impact on climate change. This will endanger the environment left behind for future generations and is in violation of a core mandate to our religious practices: The Seventh Generation.

12. For each of these reasons, my children and I, our relatives and community members would be directly and severely impacted should the Keystone XL Pipeline be built and allowed to operate.

I declare under penalty of perjury that the foregoing facts are true and correct of my personal knowledge, that I am competent to and if called would so

testify, and that this declaration was executed on June 20, 2019 in Bridger, South
Dakota.



ELIZABETH LONE EAGLE

EXHIBIT
15

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INDIGENOUS
ENVIRONMENTAL
NETWORK and NORTH
COAST RIVERS ALLIANCE

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MONTANA
GREAT FALLS DIVISION

INDIGENOUS ENVIRONMENTAL
NETWORK and NORTH COAST RIVERS
ALLIANCE,

Plaintiffs,

vs.

PRESIDENT DONALD J. TRUMP,
UNITED STATES DEPARTMENT OF
STATE; MICHAEL R. POMPEO, in his
official capacity as U.S. Secretary of State;
UNITED STATES ARMY CORPS OF
ENGINEERS; LT. GENERAL TODD T.
SEMONITE, Commanding General and
Chief of Engineers; UNITED STATES FISH
AND WILDLIFE SERVICE, a federal
agency; GREG SHEEHAN, in his official
capacity as Acting Director of the U.S. Fish

CV 19-28-GF-BMM

**DECLARATION OF LAVAE
HIGH ELK RED HORSE IN
SUPPORT OF PLAINTIFFS'
MOTION FOR
PRELIMINARY
INJUNCTION**

**Hearing:
Time:**

Judge: Hon. Brian M. Morris

and Wildlife Service; UNITED STATES
BUREAU OF LAND MANAGEMENT, and
DAVID BERNHARDT, in his official
capacity as Acting U.S. Secretary of the
Interior,
Defendants,
TRANSCANADA KEYSTONE PIPELINE,
LP, a Delaware limited partnership, and TC
ENERGY CORPORATION, a Canadian
Public Company,
Defendant-Intervenors.

I, LaVae High Elk Red Horse, hereby declare:

1. I am a member of the Indigenous Environmental Network (“IEN”) and make this declaration based on my personal knowledge.
2. I was born on September 29, 1962 in Eagle Butte, South Dakota. I am a member of the Cheyenne River Sioux Tribe, and have lived my entire life within the Cheyenne River Indian Reservation. My husband and I live by the Cheyenne River, where we live off the land by fishing, hunting deer, gathering berries and wild turnips, and other native foods. We live simply, and practice our Lakota religion, which emphasizes respect for Mother Earth and for other living creatures.
3. My children and grandchildren also live quietly this way, respecting Mother Earth in all her manifestations. For us, the web of life starts and ends with

with water, which enables our food to grow, our fish to swim, and our game to thrive. We keep horses that use the river to water and to swim and frolic.

4. Because we cherish the Earth and its natural bounty, and depend on the great Cheyenne River and its tributaries for our sustenance, the Keystone XL Pipeline would threaten all that we live for and our cultural and religious legacy as we live it every day. The Keystone XL Pipeline would pass less than one mile from the southwest boundary of our Reservation, and cross all of the rivers, including the Cheyenne River and its tributaries, on which we depend for drinking, irrigation, and watering our horses and livestock. Should the KXL Pipeline rupture— as appears to us inevitable and has been predicted by the Final Environmental Impact Statement for the project – and leak into the Cheyenne River or its tributaries, the resulting contamination of our water supply would be devastating to our family, our community, and the entire web of life on which our Tribe depends for its survival.

5. The Keystone XL Pipeline also poses potentially severe social impacts to our Reservation. TC Energy (formerly, TransCanada) proposes to construct a 600-bed man-camp about two miles west of our Reservation, in Meade County. According to the Final Supplemental EIS for the Project, each man-camp would occupy between 50 and 100 acres, and house 600 beds and 300

“recreational vehicle spots.” Each would also include “a convenience store, recreational and fitness facilities, entertainment rooms and facilities, telecommunications media rooms, kitchen/dining facilities, laundry facilities and security units,” along with a medical infirmary. The placement of oil and gas pipeline-related man-camps near Indigenous communities elsewhere in South Dakota and North Dakota has been associated with physical assaults against and murders of Native American women, as well as drug and alcohol abuse within Native American communities. The close proximity of this Project’s man-camps to the Cheyenne River Indian Reservation and the Fort Peck Reservation creates an obvious and direct risk that these impacts will likewise occur within these Native American communities.

6. I am the conservator for Mniwakan Nakicijinpi. Together we own land along the Cheyenne River. Our healthful enjoyment of our land would be harmed if the river were contaminated by an oil spill from the Keystone XL Pipeline.

7. For each of these reasons, my family and I would be directly and severely impacted should the Keystone XL Pipeline be built and allowed to operate.

I declare under penalty of perjury that the foregoing facts are true and correct of my personal knowledge, that I am competent to and if called would so testify, and that this declaration was executed on June ^{20th} 2019 in Burdigw South Dakota.

Lavae High Elk Red Horse
LAVAE HIGH ELK RED HORSE