DEQ
Montana Department of Environmental Quality

Clarks Fork Yellowstone Project Plan: Water Quality Monitoring, Assessment, TMDL Development, and Watershed Restoration Planning

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1.0 PROJECT OVERVIEW

Montana Department of Environmental Quality (DEQ) Water Quality Planning Bureau (WQPB) will complete a watershed planning project in the Clarks Fork Yellowstone Watershed. Planning activities will begin in 2022 and will continue for the next few years. This project involves several phases, with cooperative efforts between one or more WQPB sections' staff and strategic transitions from phase to phase. This project plan describes the scope, objectives, approach, expected outcomes, timeline, project team and outreach associated with the WQPB's watershed planning activities in the Clarks Fork Yellowstone watershed.

This project employs a holistic, risk-based watershed approach to watershed planning by WQPB, and water division wide project team integration. Water quality planning is one component of this holistic watershed planning approach. It can, and should be, incorporated into other local or regional planning activities that can include flood risk, water management, weed management, land planning, economic development, wildlife, wetland, and upland assessment considerations.

The Monitoring and Assessment Section (MAS) has supported local groups in the Clarks Fork Yellowstone watershed since 2019 to implement a volunteer monitoring water quality project through the Volunteer Monitoring Lab Analysis Support Program (VMLASP). MAS will lead project management, monitoring, stakeholder coordination, and assessment decisions. The Total Maximum Daily Load (TMDL) Section will lead source assessment, TMDL development activities, and TMDL implementation evaluation once assessments are complete. The Nonpoint Source and Wetlands Section will lead watershed restoration and protection planning support going forward. Throughout the process, support is provided as needed by the Montana Pollutant Discharge Elimination System (MPDES) Permitting Section, Water Quality Standards Section, and other DEQ programs as needed.

This document presents a plan for completing monitoring, risk-based assessment of water quality condition and beneficial use support status, total maximum daily loads (TMDLs), and implementation strategies for watershed restoration and protection planning. It provides DEQ management, the DEQ QA officer, WQPB staff, and watershed stakeholders with an understanding of the basic approach and schedule for completing these watershed planning activities. This plan specifies the project objectives, defines the project scope in terms of the study area boundaries, waterbodies to be addressed, pollutant groups to be considered, and agency resources available for this project as defined by DEQ management. The approaches and specific tasks that will need to be conducted to complete assessments and TMDLs are described briefly. Because each successive task builds upon the results of the previous tasks, it is important to note that the scope of work and schedule commonly evolves over time. Future modifications/updates will be incorporated into Section 9.0 of this document.

1.1 LEGAL BASIS FOR WQPB WATERSHED PLANNING ACTIVITIES

WQPB's Clarks Fork Yellowstone watershed planning activities are driven, in part, by legal and regulatory obligations, several of which are described in this section.

Beneficial Use Classification and Water Quality Standards

Under the Clean Water Act and Montana Water Quality Act, Montana establishes the classification of all state waters in accordance with the present and future beneficial uses supported by each waterbody or waterbody segment and develops water quality standards to protect those uses (MCA 75-5-301).

Water Quality Monitoring and Assessment
DEQ must monitor state waters to assess the quality of those waters (MCA 75-5-702). DEQ must use the monitoring results to identify and revise the list of surface waters that are threatened or impaired (MCA 75-5-702); this is known as the "303(d) list." Impaired waters and their associated impairment causes are identified in DEQ's biennial Water Quality Integrated Report (WQIR); this report, which contains the 303(d) list of impaired waters, is approved by the Environmental Protection Agency (EPA) and submitted to Congress every two years (Clean Water Act, 2002).

In revising the 303(d) list, DEQ must use all currently available data, including information or data obtained from federal, state, and local agencies, private entities, or individuals with an interest in water quality protection; DEQ may modify the list only if there is sufficient credible data to support the modification (MCA 75-5-702).

TMDL Prioritization and Development
DEQ must establish a priority ranking for TMDL development for those waters identified as threatened or impaired (MCA 75-5-702) and must establish a schedule that provides a reasonable timeframe for TMDL development for impaired and threatened waters (MCA 75-5-703). DEQ, in consultation with local conservation districts and watershed advisory groups, must develop total maximum daily loads (TMDLs) for threatened or impaired waters. Each TMDL must be established at a level that will achieve compliance with applicable water quality standards and must include a reasonable margin of safety that considers any lack of knowledge concerning the relationship between the TMDL and water quality standards (75-5-703). In establishing TMDLs, DEQ establishes waste load allocations for point sources and load allocations for nonpoint sources (MCA 75-5-703). A TMDL is a calculation of the maximum amount of a pollutant that a waterbody can receive from all sources and still meet water quality standards.

Nondegradation
In addition, under Montana's nondegradation policy, existing and anticipated beneficial uses and the water quality necessary to protect those uses must be maintained and protected for all state waters, and degradation of high-quality waters is restricted (ARM 17.30.705). Thus, WQPB watershed planning activities strive to emphasize both protecting healthy waters and restoring impaired waters.

Restoration, Protection and TMDL Implementation
According to MCA 75-5-703, DEQ:

- in consultation with local conservation districts and watershed advisory groups, must develop reasonable land, soil, and water conservation practices specifically recognizing established practices and programs for nonpoint sources,
- upon approval of TMDLs developed for threatened or impaired waters, must incorporate the TMDL into its current continuing planning process,
- must assist and inform landowners regarding the application of a voluntary program of reasonable land, soil, and water conservation practices to achieve compliance with water quality standards for nonpoint source activities for waters subject to a TMDL,
- once control measures have been implemented, must develop a monitoring program to assess the waters that are subject to the TMDL to determine whether compliance with water quality standards has been attained,
- for waters that monitoring has demonstrated that the TMDL is not achieving compliance with applicable water quality standards within 5 years after approval of a TMDL, must conduct a

formal evaluation of progress in restoring water quality and the status of reasonable land, soil, and water conservation practice implementation; this is referred to as the TMDL Implementation Evaluation (TIE) process.

Data Management, Quality Assurance and Public Review
DEQ must develop and maintain a data management system that can be used to assess the validity and reliability of the data used in the listing and priority ranking process, and DEQ must make available to the public, upon request, data from its data management system (MCA 75-5-702).

Public Review and Engagement
DEQ must make available for public review the data and information used in making any changes in its list of threatened or impaired water bodies (MCA 75-5-702). DEQ must request participation from representatives from interest groups to serve in an advisory capacity with DEQ and conversation districts (MCA 75-5-704). Furthermore, much of DEQ's watershed planning activities are oriented to supporting voluntary implementation of best management practices and other measures to protect and restore water quality through non-point source management. For these reasons, stakeholder coordination is an important component of this project plan.

1.2 Project Area Description

The Clarks Fork Yellowstone Project Area is contained within Carbon County. Towns in the watershed include Red Lodge, Belfry, Bridger, Fromberg, Edgar, and Joliet. The Clarks Fork Yellowstone project area encompasses the area shown in **Figure 1**. The Clarks Fork Yellowstone TMDL Planning Area (TPA) coincides with the 10070006 fourth-code hydrologic unit code (HUC). The Clarks Fork Yellowstone River re-enters Montana along the Wyoming boarder south of Chance, MT and the watershed is bounded by the Beartooth Mountains and Stillwater watershed to the west, the Ralston Flats to the south, and the Pryor Mountains and Pryor Creek watershed to the east. One reservoir is in the watershed along Red Rock Creek (Cooney Reservoir). The total extent of the watershed is 942,469 acres, or approximately 1,472 square miles.

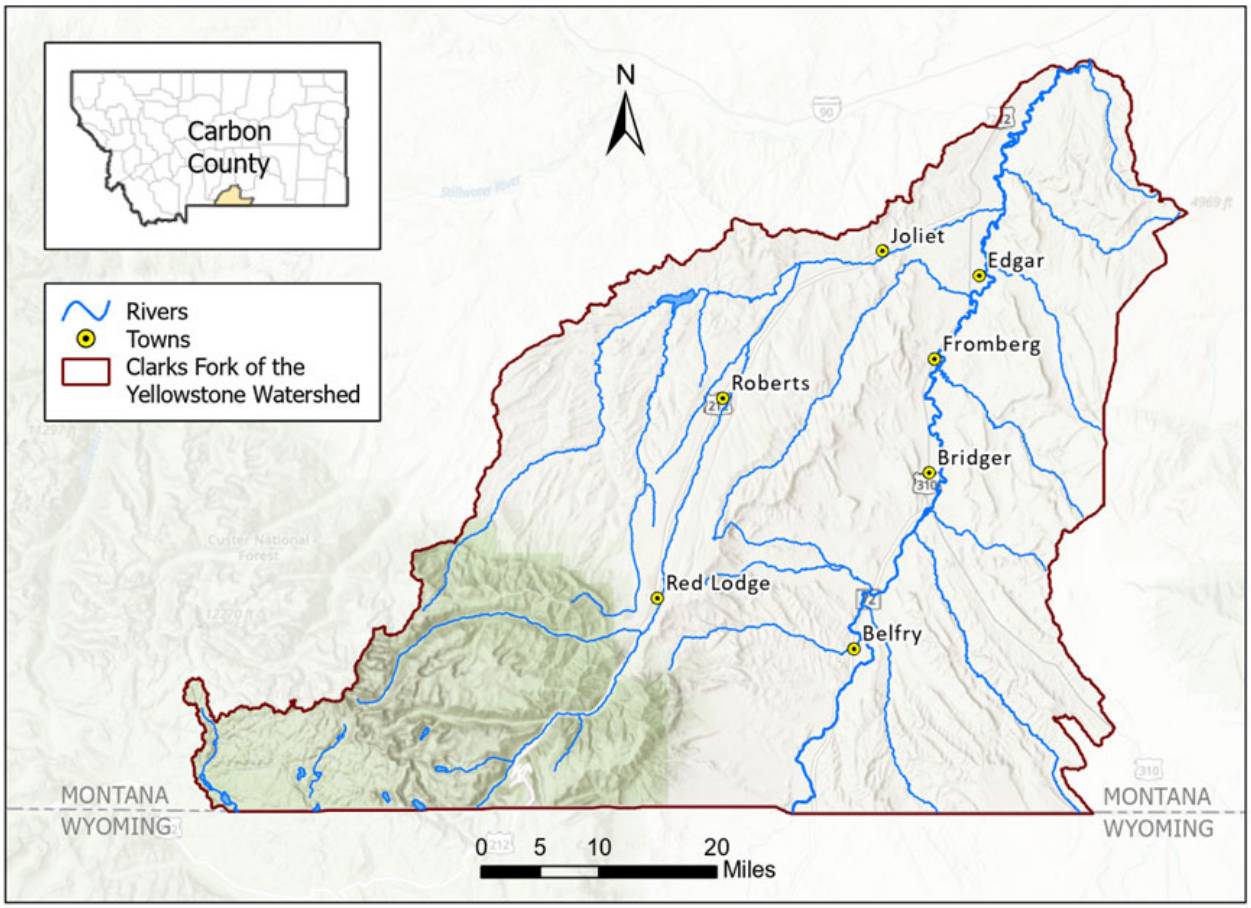

Figure 1. Clarks Fork Yellowstone Project Area

1.3 Project Objectives

WQPB's watershed planning activities in the Clarks Fork Yellowstone watershed have several objectives.

Monitoring

While data collection is not a primary objective, quality information is needed to meet all objectives. In accordance with DEQ's water quality monitoring requirements, WQPB watershed planning activities in the Clarks Fork Yellowstone project area involve substantial water quality data collection efforts to obtain recent, high-quality data with which to assess water quality. Data used for beneficial use assessment are typically incorporated during TMDL load calculations and allocations. Additional monitoring efforts aim to identify and quantify human and natural sources of pollutants in project area waters. Efforts will be made to compile and review existing and readily available water quality data collected by other entities throughout assessment and TMDL activities, including data from other agencies, interest groups and citizen-based monitoring efforts.

Beneficial Use Assessment and Updated 303(d) List of Impairments

DEQ will assess water quality in state waters to 1) update beneficial use support determinations, and 2) to identify threatened or impaired waters to revise the 303(d) list. All water quality impairments identified on the 2020 303(d) lists will be reassessed if possible; additional waterbody-pollutant

combinations may also be assessed. It is expected that waterbody assessment records and the 303(d) list of impaired waters will be updated during DEQ's 2026 Water Quality Integrated Reporting cycle.

Source Assessment and TMDL Development

DEQ may develop TMDLs for all waterbody-pollutant impairment combinations identified during beneficial use support assessment. TMDL development will involve source assessment, waste load allocations for point sources, load allocations for nonpoint sources, and load reductions necessary to achieve water quality standards. TMDL Planners will coordinate with MAS staff sampling for source assessment when possible. TMDL development may include modeling as needed.

TMDL Implementation, Watershed Restoration and Protection Support

DEQ may develop TMDLs for all waterbody-pollutant impairment combinations identified during beneficial use support assessment. TMDL development will involve source assessment, waste load allocations for point sources, load allocations for nonpoint sources, and load reductions necessary to achieve water quality standards. TMDL Planners will coordinate with MAS staff sampling for source assessment when possible. TMDL development may include modeling as needed.

Permitting

WQPB staff will make available any relevant data and information to DEQ's Permitting program to support review and issuance of MPDES Permits via WQPB databases and reporting tools. Where possible, during monitoring design WQPB staff will consider Permitting program's data needs. Once TMDLs are approved, DEQ will incorporate waste load allocations developed for point sources during the TMDL process into appropriate water discharge permits (MCA 75-5-703).

Stakeholder Participation, Public Education and Outreach

This project aims to inform and support water quality improvement activities, including voluntary implementation of land, soil, and water conservation practices that control nonpoint source pollution. These activities are often planned and completed by local and regional stakeholders. Stakeholders may include watershed groups, private landowners, conservation districts and irrigations districts, federal and state agencies, local governments, the regulated community, and private corporations, among others. Stakeholder involvement in DEQ's watershed planning process helps to ensure that DEQ's project outcomes are relevant to local concerns and that water resources of interest to stakeholders have been identified.

1.4 Project Scope & Rationale

Within the limits of available agency resources (labor, time, funds), several considerations are taken into account when defining this project's scope.

1.4.1 Project Area Selection – Why the Clarks Fork Yellowstone?

The following were considered when the Clarks Fork Yellowstone watershed was selected as a basin in which to undertake watershed planning activities, many of which are in accordance with MCA 75-5-703.

- **Time lapse since previous assessments:** The most recent assessments in the Clarks Fork Yellowstone watershed were completed in 2006. In past years, many of the WQPB's watershed planning activities have centered on watersheds throughout western Montana. With the

completion of updated impairment listings, the WQPB can develop appropriate TMDLs based on current conditions.

- **Watershed value and vulnerability:** The Clarks Fork Yellowstone River and surrounding watershed from the Wyoming boarder to its confluence with the Yellowstone River serves as a vital resource for irrigation and recreation to the surrounding communities. Rock Creek, a tributary to the Clarks Fork Yellowstone is important for tourism in the Red Lodge area and residents are concerned about negative changes in water quality due to increased development.
- **Public interest, support, and leadership:** The Clarks Fork Yellowstone watershed has multiple interested stakeholders leading efforts to monitor, protect and restore water resources. In 2019, the Carbon Conservation District (CCD), Natural Resources Conservation Service (NRCS), and Montana Fish, Wildlife, and Parks (FWP) partnered to initiate a local water quality monitoring project along the mainstem of the Clarks Fork Yellowstone River. Starting in 2022, the Clarks Fork Yellowstone Partnership (CFYP) will take over the water quality monitoring project on behalf of the CCD. A watershed group in the Rock Creek drainage is starting a volunteer monitoring project along Rock Creek through the support of Flathead Biological Station. Both groups formed due to a concern with water quality and are working towards water quality improvements.
- **Available restoration technology and resources:** Stakeholders in the Clarks Fork Yellowstone watershed are currently working on individual restoration efforts and working toward improvements from point source dischargers. Individual landowners are working on stream restoration projects on their own property and coordinating with CCD on proper permits. With the production of additional information, technical guidance and reports, DEQ can support Clarks Fork Yellowstone stakeholders in leveraging resources and achieving water quality goals through promoting more nonpoint source restoration funding opportunities. Joliet wastewater treatment plant (WWTP) has work with DEQ on lagoon optimizations and DEQ is able to assist WWTP with optimization options when requested.
- **Availability of assessment and TMDL tools:** DEQ's has focused on developing assessment methods and monitoring protocols over the last decade for a variety of pollutants. These available tools guide DEQ staff in collecting relevant data and making management decisions based on this technical information.

1.4.2 Water Quality Impairment Status

The impairment status of waterbodies in the Clarks Fork Yellowstone watershed is one consideration to defining the scope of the project. Most impairment listings identified on the 303(d) list will be addressed through the monitoring and assessment process, including pollutants and non-pollutants. Following reassessment, all pollutant impairments identified during beneficial use reassessment will be addressed through the TMDL process. Development of TMDLs is required for each waterbody segment impaired by a pollutant, whereas TMDLs are not required for non-pollutant causes of impairments (Clean Water Act Section 303(d)(1)(C)). Non-pollutants will be incorporated into recommendations of conservation practices to manage nonpoint pollution.

DEQ's 2020 Water Quality Integrated Report (2020 WQIR) provides the most recent impairment status of surface waters in the Clarks Fork Yellowstone watershed (DEQ,2021). **Table 1.1** summarizes the number of waterbody-impairments by impairment cause name in the Clarks Fork Yellowstone Watershed as reflected on the 2020 WQIR. **Appendix A** contains a complete list of impaired waterbody

segments in the Clarks Fork Yellowstone Watershed as reflected on the 2020 WQIR, and the specific impairment causes associated with each impaired segment.

Table 1-1. Number of Impairments by Impairment Cause Name in the Clarks Fork Yellowstone Watershed, 2020 Water Quality Integrated Report

Cause Group	Cause Name	# of Impairments
Metals	Arsenic	1
	Iron	3
	Copper	1
	Lead	1
	Mercury	1
Nutrients	Nitrogen (Total)	3
	Nitrate/Nitrite	4
	Ammonia (Total)	1
	Phosphorus (Total)	4
	Chlorophyll-a	4
	Organic Enrichment	1
Oxygen Depletion	Dissolved Oxygen	2
Mineralization	Specific Conductivity	1
	Total Dissolved Solids	1
Toxins	Polycyclic Aromatic Hydrocarbons	1
Sediment & Habitat	Sediment	3
	Sedimentation/Siltation	6
	Turbidity	1
	Alteration in stream-side or littoral vegetative covers	5
	Physical substrate habitat alterations	2
Temperature & Flow	Temperature, water	2
	Flow Regime Modification	7

1.4.3 Watershed Risk Outcome

WQPB will take a phased approach to evaluating watershed risk for the Clarks Fork Yellowstone watershed. Risk assessment will be performed on a watershed scale for each of the most widely attributable pollutant groups in the watershed: nutrients, metals, sediment, and temperature. Pollutant groups may be added due to the risk assessment process.

Due to a delayed start in project planning, a full watershed risk assessment will not be completed at the beginning of the project. Instead, in 2022, a streamlined risk assessment will be completed to inform selection of monitoring sites and water quality monitoring parameters. Prior to the 2023 monitoring season a full watershed risk assessment will be completed and follow DEQ's watershed risk assessment guidance document (Makarowski, 2017). Sites and parameters may be adjusted over time as more information is reviewed for risk.

1.4.4 Stakeholder Priorities and Status of Local Watershed Planning Activities

Throughout the project, DEQ will make reasonable effort to solicit information from stakeholders pertaining to specific water quality issues and waterbodies of interest. When practical, DEQ will incorporate stakeholder input when developing the scope of monitoring and assessment and determining which water resource issues and waterbodies to prioritize in this project. This will help to ensure that DEQ's work products resulting from this project are informative and useful to stakeholders pursuing water quality improvement activities in the project area.

The Clarks Fork Yellowstone watershed is a large source of irrigation water for the agricultural community and supports recreational and aquatic life uses. Several waterbodies have received attention from interested stakeholders. DEQ will assist, where resources allow, with investigating water quality to enhance local understanding of water quality in these waters of particular interest. Furthermore, as resources allow, DEQ will collect information that is helpful and relevant to achieving the goals of on-the-ground restoration and protection projects to further these projects' success. DEQ will coordinate with local stakeholders to identify and acknowledge past, present, or future water resource management activities in the project area. Activities may include water quality restoration projects, best management practices, and watershed planning efforts.

1.4.5 Availability of Assessment Tools and Existing Data

When defining the scope of this project, DEQ will consider the availability of appropriate assessment tools to evaluate data and interpret water quality standards (**Section 3.3.2**). Source assessment methods used to quantify loads from various sources during TMDL development are also well-established (e.g., bank erosion hazard index (BEHI), riparian greenline, roads assessment, and water chemistry loading analysis).

Existing DEQ and volunteer monitoring data is insufficient to fulfill data requirement of DEQ assessment methods and substantial data collection efforts are necessary under the project scope. Long-term discharge data from several United States Geological Survey (USGS) are available for assessments and TMDL development. DEQ will use all readily available, applicable, and quality data (< 10 years) to complete assessments.

1.5 Project Organization, Roles & Responsibilities

Table 1-2 shows key members of the project team associated with WQPB's watershed planning activities in the watershed.

Table 1-2. Water Quality Planning Bureau Red Rock Project Team

Affiliation	Name	Role	Responsibility
Monitoring & Assessment	Abbie Ebert	MAS Project Lead	Project plan & schedule; update bureau management on project status; facilitate project team meetings; MAS file maintenance
		Contract Manager	Manage Memorandums of Agreement with Carbon CD and watershed groups throughout monitoring and assessment phase
		Metals, Nutrients, and *E.coli*, Assessment Project Lead	Risk analysis; sampling design; monitoring lead; data analysis; assessment determinations
	Blake Towarnicki	Temperature, sediment, and habitat assessment project lead	Risk analysis; sampling design; monitoring lead; data analysis; assessment determinations
	Ryan Koehnlein	Monitoring Support	Field assistance and monitoring support
	Temporary Field Staff	Monitoring Support	Field assistance and monitoring support
TMDL	Andy Ulven or other	TMDL Project Lead	Source assessment planning & fieldwork assistance; TMDL development and implementation; evaluation planning
Nonpoint Source	Mark Okey	Nonpoint Source Project Lead	Watershed restoration & protection support; 319 contract management
WQPB	Katie Makarowski	QA Officer	Beneficial use assessment review; data QA/QC oversight, SAP approval

1.6 Project Outcomes & Documentation

Multiple DEQ Water Quality Division sections are involved with this project and will lead various project activities over time. Completed documents or expected outcomes, and the anticipated timing of completion of these work products, are summarized in **Appendix B**.

During each project phase the specific program project lead will provide the primary oversight. The project leads will lead team meetings throughout the project to inform programs of updates and changes. After each phase, the project lead will have a transition meeting with the next section project lead to share watershed information and outcomes.

1.7 Project Timeline

A schedule of project activities and events is included in **Appendix C**.

1.8 Project Funding Strategy

DEQ staff will complete the majority of monitoring for this project using Clean Water Act Funds and matching state funds. Allocation of project funding is directed by DEQ management. A project

prospectus was provided to management during April 2022 which included approximate lab funding needs for 2022. Anticipated chemical and biological lab funding costs for 2023 and 2024 are likely to be 25% higher than 2022. Overall project costs associated with laboratory fees, which do not consider travel, staffing or other contracted efforts are approximately 400K.

2.0 PROJECT CONSIDERATIONS

This section describes several project-specific considerations which provided context and guidance to DEQ staff when performing watershed planning activities and choosing appropriate approaches to assessment, watershed management and outreach.

2.1 WATERBODY TYPE AND CLASSIFICATION

This project will focus primarily on river and stream water quality. The Clarks Fork Yellowstone River is the largest river in the project area and is comprised of two assessment units with the segment break occurring at the Bridger Creek confluence. The Clarks Fork River is a medium-sized river and is non-wadeable in most areas. Most of the other waterbodies within the project scope are primary or secondary tributaries to the Clarks Fork Yellowstone River.

Additional waterbodies, including Coney Reservoir, may be monitored as needed throughout the project for beneficial use assessment or to inform source assessment. Various irrigation ditches may be monitored during source assessment to inform nutrient loading.

Most waterbody segments (assessment units) in the Clarks Fork Yellowstone watershed are classified as B-1. Waters classified as B-1 are to be maintained suitable for:

- drinking, culinary, and food processing purposes, after conventional treatment;
- bathing, swimming, and recreation;
- growth and propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers;
- agricultural water supply; and
- industrial water supply (ARM 17.30.623).

The lower segment (assessment unit) of the Clarks Fork Yellowstone River is classified as B-2. Waters classified as B-2 are to be maintained suitable for:

- drinking, culinary, and food processing purposes, after conventional treatment;
- bathing, swimming, and recreation;
- growth and marginal propagation of salmonid fishes and associated aquatic life, waterfowl and furbearers;
- agricultural water supply; and
- industrial water supply (ARM 17.30.623).

2.2 POTENTIAL RESOURCE CONSIDERATIONS

Each waterbody's resource value was given consideration during the preparation of this project plan. Resource values consider during the streamlined risk evaluation include agricultural, recreational, aquatic life, and point source dischargers. These resource values will be considered during the full

watershed risk analysis. The process determined similar resource values for all waterbodies being evaluated in this project area.

Most of the irrigation water in the Clarks Fork Yellowstone watershed comes from the Clarks Fork River, Rock Creek, and Coney Reservoir, while the rest of irrigation water comes from other tributaries in the watershed. In total, there are over 20 irrigation companies throughout the watershed. Coney Reservoir experiences large amounts of boater recreation throughout the summer months while other waterbodies in the watershed have smaller amounts of recreation via boating, wading, and fishing. The Clarks Fork Yellowstone watershed from Wyoming boarder to the Yellowstone River confluence supports a variety of fish species and aquatic life including, Yellowstone Cutthroat Trout, Brown Trout, Rainbow Trout, Mountain Whitefish, Common Carp, and Spiny Softshell turtle. There are a small amount of point source discharges in the watershed taken into consideration. **Section 2.4** provides further information on the number and types of point source dischargers.

2.3 Project Coordination and Stakeholder Outreach

DEQ will engage with stakeholders representing various interests throughout all phases of this project and will coordinate project activities with stakeholders in a timely and effective manner whenever possible. Approaches to stakeholder coordination and outreach may include:

- solicit data and information relevant to water quality management and incorporate into project where possible
- provide educational and informational opportunities via public presentations, meetings with stakeholders, and written documentation (to share objectives, methods and outcomes of the project)
- coordinate directly with private landowners to request permission to conduct project activities on private lands
- engage with natural resource management agencies during watershed planning activities
- provide opportunities for review of project document drafts, such as the project assessment scope, sampling plans water quality characterization and assessment reports
- summarize and supply data upon request
- supporting volunteer monitoring efforts in the project area that have monitoring objectives that align with DEQ's project objectives
- convey the value of good water quality, and encourage voluntary implementation of land, soil and water conservation practices

DEQ will identify key stakeholders representing various interests in the Clarks Fork Yellowstone River watershed. Stakeholders identified in the Clarks Fork Yellowstone River watershed include:

- Carbon Conservation District
- Clarks Fork Yellowstone Partnership
- Rock Creek Watershed Group
- USDA Natural Resources Conservation Service
- Montana Department of Fish, Wildlife and Parks
- Private landowners

- Carbon County Resource Council
- Irrigation Companies
- Municipalities
- Beartooth Stock Association
- Montana State University Extension Carbon County
- Bureau of Land Management
- United States Forest Service
- Montana Department of Natural Resources Conversation – State Trust Lands
- Montana Department of Agriculture
- County commissioners

Initial stakeholder outreach efforts will be conducted during monitoring and assessment phases of this project to begin building positive relationships and to introduce key stakeholders to the project. A more formal watershed advisory group (WAG) will be created during TMDL development phase of the project in accordance with Montana Water Quality Act requirements (MCA 75-5-703 and -704). In developing the WAG, DEQ requests participation from representatives from various interest groups to serve in an advisory capacity with DEQ. WAG members provide advice and comment during TMDL development but do not have TMDL decision-making authority.

2.4 Permitted Surface and Groundwater Discharges

The point source discharges in the watershed are: Bridger Wastewater Treatment Plant (WWTP), Fromberg Wastewater Treatment Facility (WWTF), Joliet WWTP, Red Lodge WWTF, Bluewater Springs Hatchery, two produce water permits, two stormwater industrial permits, one concentrated animal feeding operation permit, and several stormwater constructions permits.

2.5 Source Inventory and Source Complexity

Aspects that add complexity to this project are examined in this section. Examples for individual pollutants may include diversity and complexity of sources, availability of established methods for quantifying or assessing causes and sources of impairment, data availability, etc.

2.5.1 Nutrients & E. coli

The Clarks Fork drainage has multiple potential sources of nutrients and E. coli ranging from crop farming, grazing, septic systems, and wastewater treatment plants. Irrigated crops including corn, sugar beets, barley, hay, small grains, and alfalfa are grown in the Clarks Fork Yellowstone watershed. There may be fertilizer use on certain irrigated areas. Irrigated crop land occurs less in the Rock Creek Drainage due to residential development, water availability, and soil type. Septic and wastewater influence in the watershed is primarily around towns and areas of development.

2.5.2 Metals

The headwaters of the Clarks Fork Yellowstone River (Cooke City) and Rock Creek have history of mining with around a dozen identified abandoned mines between the two drainages. The Bear Creek drainage has a history of coal mining including the historic Smith Mine that closed in 1953. Based on current metals impairment listings and low amount of mining in the area, DEQ does not expect to find many metals impairments.

2.5.3 Sediment

The predominant land use within the project area consists of agricultural activities (cattle ranching and irrigated crop land). Roads within proximity to streams and bridge crossings may also be a potential source of sediment.

Coney Reservoir on Red Lodge Creek may affect sediment transport in Red Lodge Creek and Rock Creek. The Clarks Fork Yellowstone River may not be easily wadable and the watershed is predominantly located within the Northern Plains Ecoregion, so DEQ's protocols developed for monitoring sediment may not be applicable. DEQ's sediment monitoring and assessment methods for eastern Montana may be reviewed and developed during this project.

2.5.4 Temperature

Current causes of temperature impairment on the Clarks Fork Yellowstone River (AUID MT43D001_011) include impacts from irrigation, crop production, streambank modifications, and habitat modifications. Current causes of temperature impairment on Silvertip Creek include impacts from channelization, grazing, loss of riparian habitat, and impoundments.

2.5.5 Dissolved Oxygen (DO)

Current causes of DO impairment on Silvertip Creek and Cottonwood Creek include impacts from grazing, loss of riparian habitat, impoundments, drought impacts, and natural sources.

3.0 Monitoring and Assessment

3.1 Watershed Risk Assessment

In 2022, a streamlined risk-based assessment will be used to address multiple factors that may adversely affect water quality during the monitoring site and parameter suite selection process. The process accounts for multiple factors during the monitoring site selection process including point sources, topography, current and historic land use practices, and current impairment listings. Monitoring site locations may be revised due to information gained during the first year of monitoring. The monitoring parameter suite will be determined based on current impairment listings in the watershed, agency resource availability, and potential pollutant risk posed by human-activity in the watershed (Makarowski, 2017).

DEQ will complete a watershed risk assessment following the 2022 field season. The WQPB's watershed risk assessment process is described in the "Applying the Watershed Approach and Watershed Risk Assessment to Water Quality Monitoring and Assessment" in **Section 10.0** (Makarowski, 2017). This document describes the risk-based assessment approach that will be used to further define the scope of monitoring and assessment activities in the Clarks Fork Yellowstone Watershed project area.

Risk assessment considerations taken into account when defining project scope include:

- **Extent and severity of human activities likely to affect water quality with respect to a particular pollutant groups** - more likely to monitor and assess a pollutant group when there is compelling evidence of a potential human cause-source linkage, even if impairments associated with that stressor group have not been identified previously,

- **Resource value and stakeholder input** - more likely to expand scope of monitoring and assessment activities on a given waterbody if that water is perceived as having particularly high resource value or is of particular interest to stakeholders,
- **Existing data indicates potential impairment** - more likely to monitor and assess waters that have not been previously identified as impaired but where existing data suggest potential exceedances of water quality standards,
- **Efficient use of monitoring resources** - more likely to collect data for additional stressors when already planning to monitor that waterbody segment for one or more stressors,
- **Potential reference condition** - more likely to monitor and assess waters which may be likely candidates to represent reference condition for one or more stressor groups, especially for narrative standards.

3.1.1 Monitoring and Assessment Scope

Due to the streamlined risk assessment, in 2022 all rivers and streams currently listed as impaired, assessed, or previously monitored will be monitored during the Clarks Fork Yellowstone Project. North Fork Dry Creek and South Fork Dry Creek will be monitored due to being the main tributaries to Dry Creek. **Table 3.1** shows current waterbodies and assessment units that will be monitored in 2022. In 2022, all sites will be monitored for nutrients, metals, common cations and hardness, total dissolved solids (TSS), dissolved organic carbon (DOC), and sediment metals. Clarks Fork Yellowstone River and Rock Creek sites will be the only ones monitored for ultra-low-level mercury (ULL-Hg) in 2022.

Once the full risk assessment process is complete, a final list of streams and the assessment scope will be created. This will summarize the monitoring and assessment scope for the duration of the project**.**

Table 3.1 – Waterbody segments monitored in 2022.

Waterbody Name & Description	AUID	Waterbody Size (miles)	Use Class
Bear Creek, headwaters to mouth (Clarks Fork Yellowstone River)	MT43D002_020	21.1	B-1
Bluewater Creek, headwaters to unnamed tributary at T6N R24E S7	MT43D002_032	12.9	B-1
Bluewater Creek, unnamed tributary at T6N R24E S7 NWNE to mouth (Clarks Fork Yellowstone River)	MT43D002_031	11.4	B-1
Bridger Creek, headwaters to mouth (Clarks Fork Yellowstone River)	MT43D002_170	12.0	B-1
Clarks Fork Yellowstone River, Wyoming border to Bridger Creek	MT43D001_012	26.5	B-1
Clarks Fork Yellowstone River, Bridger Creek to mouth (Yellowstone River)	MT43D001_011	43.3	B-2
Cottonwood Creek, headwaters to mouth (Clarks Fork Yellowstone River)	MT43D002_140	19.5	B-1
Dry Creek, headwaters to mouth (Clarks Fork Yellowstone River)	MT43D002_190	4.3	B-1
Elbow Creek, headwaters to mouth (Clarks Fork Yellowstone River)	MT43D002_010	38.5	B-1
North Fork Dry Creek, headwaters to mouth (Dry Creek)		10.3	B-1

Waterbody Name & Description	AUID	Waterbody Size (miles)	Use Class
Red Lodge Creek, headwaters to Cooney Reservoir	MT43D002_050	17.9	B-1
Red Lodge Creek, Cooney Reservoir to mouth (Rock Creek)	MT43D002_060	12.0	B-1
Rock Creek, Wyoming border to West Fork Rock Creek	MT43D002_132	16.8	B-1
Rock Creek, West Fork Rock Creek to Red Lodge Creek	MT43D002_131	27.4	B-1
Rock Creek, Red Lodge Creek to mouth (Clarks Fork Yellowstone River)	MT43D002_120	16.0	B-1
Silvertip Creek, Wyoming border to mouth (Clarks Fork Yellowstone River)	MT43D002_100	21.7	B-1
South Fork Bridger Creek, headwaters to mouth (Bridger Creek)	MT43D002_180	9.3	B-1
South Fork Dry Creek, headwaters to mouth (Dry Creek)		14.3	B-1
Spring Creek, headwaters to mouth (Clarks Fork Yellowstone	MT43D002_040	13.3	B-1
West Red Lodge Creek, Absaroka-Beartooth Wilderness boundary to mouth (Red Lodge Creek)	MT43D002_080	14.3	B-1
Willow Creek, headwaters to mouth (Cooney Reservoir)	MT43D002_070	36.4	B-1

3.2 MONITORING

3.2.1 Status

Monitoring for assessment of nutrients and metals will begin in 2022 and continue through 2024. Monitoring for *E. coli* assessment will begin in 2023. Monitoring for sediment, temperature, and DO will begin in 2023 and may continue through 2024.

3.2.2 Monitoring Documentation

This project will follow the WQPB Quality Assurance Project Plan (QAPP) (DEQ, 2022). The QAPP describes quality system and quality assurance (QA) elements that apply to data collection efforts, ensures data quality objectives are met, and that data collected is applicable for multiple uses.

WQPB monitoring staff develop Sampling and Analysis Plans (SAPs) for all monitoring activities associated with Clarks Fork Yellowstone watershed planning activities. SAPs include monitoring objectives, field procedures, sample handling, analytical methods, quality assurance and quality control requirements, data analysis, record keeping and reporting requirements, schedule, and project team and responsibilities. Required signatures and approvals will be acquired prior to monitoring.

3.2.3 Field Procedures

All monitoring conducted by WQPB staff will use DEQ-approved field procedures which are contained in the following documents:

- Field Data Collection Activities Standard Operating Procedure (2020, WQDWQPBFM-01)
- Sample Collection for Chemistry Analysis: Water, Sediment, and Biological Tissue Standard Operating Procedure (2019, WQDWQPBFM-02)

- Aquatic Invasive Species Decontamination Standard Operating Procedure (2020, WQDWQPBFM-05)
- Total Discharge Standard Operating Procedure (2020, WQDWQPBFM-03)
- Sample Collection, Handling, and Analysis of Escherichia coli Standard Operating Procedure (2019, WQDWQPBM-014)
- Fieldwork Communication and Emergency Response System Standard Operating Procedure (2021, WQDMASFM-02)
- Instantaneous Water Quality Field Meter Standard Operating Procedure (2020, WQDWQPBFM-06)
- Field Methodology for The Assessment of TMDL Sediment and Habitat Impairments (Bank Erosion Hazard Index and Riparian Greenline (2014, WQPBW MSSOP-05)

3.3 Beneficial Use Status and Water Quality Condition Assessment

3.3.1 Status

Data quality assessment, data analysis, and beneficial use assessment has not started for waters included in the Clarks Fork Yellowstone project scope. Final beneficial use/impairment determinations for all pollutant groups are expected in 2025. It is expected that assessment tasks will be completed in time for DEQ's 2026 WQIR.

3.3.2 Assessment Approach per Pollutant Group

For each waterbody identified in **Table 3.1**, DEQ will use DEQ-approved assessment methods to assess stressor-specific impairments and beneficial use support. These assessment methods reference the water quality standards, beneficial use linkages, required parameters, data quality and quality requirements and decision-making considerations for each stressor group. DEQ assessment methods are contained in several documents and developed assessment methods are listed.

- Beneficial Use Assessment Method for Montana's Surface Waters (2020, WQPBWQM-001)
- *Escherichia coli (E. coli)* Assessment Method for State Surface Waters (2020, WQDWQPBWQA-01)
- The Montana Department of Environmental Quality Metals Assessment Method (2012, WQPBMASTR-03)
- Assessment Methodology for Determining Wadeable Stream Impairment Due to Excess Nitrogen and Phosphorus Levels (2016, WQPBMASTR-01)

3.3.3 Assessment Documentation

WQPB Monitoring and Assessment staff will compile data and information associated with assessment determinations used for stressor-specific impairments and beneficial use support and records will be stored in project files following WQPB's Monitoring and Assessment Documentation process.

Monitoring and Assessment (MAS) staff will update assessment records for individual assessment units (waterbodies or waterbody segments) in WARD to reflect data, citations, approach, and assessment decisions. An updated list of impaired waters will be developed for the watershed and MAS staff will update the 303(d) list of impaired water for the 2026 WQIR.

A watershed condition report will be prepared to summarize DEQ's water quality assessment process and findings at the watershed and sub-basin scale.

4.0 TMDL DEVELOPMENT STRATEGY

TMDL staff generally develop a TMDL for each pollutant cause of impairment, which is included in water quality improvement plan document. Each TMDL includes the following components (described in greater detail by pollutant in subsections 4.1-4.3):

1. **TMDL targets:** Defining measurable target values to help evaluate the waterbody's condition in relation to the applicable water quality standards
2. **TMDL expression:** Defining how the TMDL will be expressed based on the pollutant loading rate that will achieve the water quality standard
3. **Source assessment:** quantifying the magnitude of pollutant contribution from their sources
4. **TMDL allocations:** defining the TMDL load will be allocated among major point and nonpoint sources or source categories including natural background

TMDL staff will collaborate with the MAS on SAP development, field work planning, sampling, and (in some cases) analysis. TMDL staff will work closely with MAS on planning and performing data collection for source assessment purposes and to ensure a smooth transition between beneficial use assessment and TMDL development, which can sometimes overlap (like in the case of temperature).

In addition to the four major components described above, the water quality improvement plan document will contain a general watershed description, stream specific summaries that provide implementation strategies for voluntary nonpoint sources of pollution, and monitoring recommendations.

Montana's TMDL development process provides opportunity for stakeholder review of draft TMDL document sections, often via the Watershed Advisory Group. Prior to EPA submittal, the document will undergo a public review period where stakeholders can provide additional comments.

4.1 NUTRIENT TMDL DEVELOPMENT STRATEGIES

Nutrient standards will be based on the narrative nutrient water quality standards and ecoregional ranges for each assessment unit-pollutant combination. A majority of the Clarks Fork Yellowstone River watershed is part of the Northern Plains Ecoregion. At present, DEQ is in the process of adopting new nutrient standards and any TMDLs developed for nutrient impairments will reflect these new rules.

Nutrient TMDLs will be established for the summer algal growing season for the ecoregion corresponding to each assessment unit-pollutant combination and will be expressed as a standard TMDL equation of flow times concentration, which is applicable for all flow conditions. Example TMDLs will be provided using nutrient targets (as described above) and typical stream flows. Stream flow data will be collected in conjunction with nutrient sampling.

Source assessment will rely on existing and newer data collected as part of the beneficial use assessment. Data analysis will include data collected where sources have the potential to contribute nutrients to impaired streams. Source assessment work may include additional field visits but will mostly use a GIS exercise to examine land uses in the respective sub-watersheds to identify point and nonpoint

sources of impairments. Examples of this include examination of grazing pressure and timber harvest activity.

For nutrients, simple composite Load Allocations (LAs) will likely be used to develop TMDLs where they are needed. Nutrient composite LAs include all potential source categories. Waste Load Allocations (WLAs) for nutrients will be developed for each point source within the watershed based on their relative contributions and the overall load reduction needed.

4.2 METALS TMDL DEVELOPMENT STRATEGY

For metals, the existing numeric standards defined within DEQ-7 will be applied as targets. These targets apply all year, during both high and low flow periods. Beneficial use assessment monitoring is designed to evaluate both high and low flow conditions and will be compared with the existing numeric standards.

The TMDL will be applied as a function of flow to address potential high and low flow metals impairment problems. Metals monitoring results will help determine if there will be a high or low flow focus for one or more metals TMDLs.

The metals source assessment will be performed by analyzing the monitoring results and using GIS to determine the surrounding land use(s) that could be contributing metals to the stream and quantify loading.

Where metals TMDL development is pursued, the allocation strategy would generally follow a similar outline as for nutrients, with additional consideration of potential industrial and historical mining contributions throughout the watershed. WLAs would be developed for permitted point sources where needed.

4.3 SEDIMENT TMDL DEVELOPMENT STRATEGY

Target development may include data from unimpaired reaches collected as part of sediment field work in the TPA, from reference data collected by the standards team in other watersheds, from PIBO data for non-valley sites, or from targets that have been developed from a similar watershed.

TMDLs will be expressed as the sum of streambank loading, loading from road networks, and upland loading (if upland land uses appear to be significantly contributing sediment in a sub-watershed).

The sediment source assessment will be determined by analyzing results from the beneficial use sediment assessment work and estimating contributions from the surrounding land use(s) that are potentially contributing sediment to the stream through:

1. Bank erosion analysis
    a. Bank erosion monitoring will may be conducted in the 2023 – 2024 field seasons. Bank erosion will be measured on banks with an obvious sediment contribution, using Rosgen BEHI methods. Near bank stress will also be determined in the field. Bank sediment loads will be derived via modeling. Bank loads for different reach categories and their associated influencing factors will be applied to all reaches on the selected streams,

based on the information from the stratification process and sediment and habitat field study.

2. Roads analysis
    a. Road networks will be reviewed using GIS and stratified by land ownership, road type, and sub-watershed. The results of the WEPP:Roads model will serve as the basis for sediment load quantification and extrapolation from road sources, as well as potential sediment reduction scenarios. Data for the WEPP: Roads model will be estimated from previous work on roads from similar watersheds or if deemed necessary, collected in the field in 2024. If collected in the field, TMDL staff will write a Roads Sampling SOP and SAP. The SAP will identify a number of road crossings and parallel road segments to be investigated, and the data collection necessary WEPP:Roads model inputs.
3. Upland erosion inputs analysis
    a. Upland source loads will only be estimated if upland sources appear to have a significant contribution of sediment making it to the stream and will be quantified at the sub-watershed scale using GIS and the Universal Soil Loss Equation (USLE). Sediment loads per sub-watershed of interest will be separated by land use category, and sediment load reduction scenarios will be based on adjustments to vegetative cover, land use type, or riparian buffer.

Allocations will be made to streambanks, road networks, and upland erosion (if there are significant contributions) for individual sub-watersheds.

The linkage between habitat alterations and sediment will also be evaluated, as river habitat can be one of the primary indicators of healthy sediment transport and storage conditions; two key factors for evaluating sediment impairment.

4.4 Temperature Development Strategies

Target development may rely on solar pathfinder and/or shade modeling for those waterbodies identified as being impaired for temperature. TMDL staff may work with Standards & Modeling staff to determine if there are sufficient resources to run a QUAL2K model, in which case naturally occurring temperatures would be estimated using indicator parameters including riparian shade, channel geometry and improved streamflow conditions.

The allowed temperature will be calculated using Montana's B-1 and B-2 classification standards and using a modeled, measured, or estimated naturally occurring instantaneous temperature depending on the stream and the type of data that was collected.

The temperature source assessment will be performed by analyzing QUAL2K results and shade modeling results, using GIS to determine the surrounding land use(s) that could be potentially detrimental to riparian shade.

Allocations will be based upon the model output for the Clarks Fork Yellowstone River and simple source-based shade allocations will be used to develop TMDLs for smaller streams.

5.0 QUALITY ASSURANCE/QUALITY CONTROL

This section describes quality assurance (QA) and quality control (QC) measures and reporting applied during this project. The primary focus of data quality analysis is to ensure data has sufficient quality to minimize errors in decision making.

QA/QC methods are consistent with those defined in the WQPB Quality Assurance Project Plan (QAPP) (DEQ, 2022). All SAPs describe their data quality objectives and data quality indicators and include measures for assessing them. All SAPs are approved and tracked by the WQPB Quality Assurance Program.

All field data collection is conducted according to DEQ-approved field procedures, and all field staff receives training in these procedures prior to collecting data. Field instruments and equipment are maintained and calibrated prior to use, and during use as needed; maintenance and calibration logs are kept. All completed field forms are reviewed for accuracy and completeness and are processed and stored according to WQPB's data flow process. Any contractors (e.g., collecting, analyzing, modeling or reporting on) data for this project must adhere to quality assurance and quality control (QC) measures identified under the WQPB QAPP(DEQ, 2022).

Laboratory analysis for chemistry samples (i.e., nutrients and metals) is completed by State-approved labs adhering to DEQ reporting requirements for analytical data. Laboratory data is stored within DEQ's MT-eWQX Enterprise (EQuIS) database and loaded weekly into EPA's National STORET data system. Other data, including physical data, photos and field observations are stored on DEQ's internal network or other tools developed by DEQ (e.g., Sediment/Habitat tool).

Data quality objectives specific to nutrient, metals, sediment, and temperature pollutant groups are included in each pollutant assessment method. *E. coli* data quality objectives (specifically temporal requirements and analytical methods) are specified in the water quality standards applicable to B-1 waters (ARM 17.30.620, 17.30.623). DEQ Project Managers review all stream stratification results, field and laboratory data (including secondary data not collected by DEQ), QA/QC reports, data quality summaries, and final reports for quality and usability of data, accuracy, and completeness.

6.0 DATA AND INFORMATION MANAGEMENT

The WQPB Data Manager will lead data management for this project, including database management for laboratory results (electronic data deliverables), field form production and records management for monitoring data and quality control reports, and Water Quality Integrated Reporting.

Project Managers will maintain project files on DEQ's shared network to store data and information relevant to project outcomes (e.g., assessment decisions, TMDLs, contract deliverables).

For each assessment unit addressed under this project, WQPB's Water Quality Assessment, Reporting and Documentation System (WARD) will be used to document, report on and track monitoring data, analyses, assessment decisions and impairment status, TMDL documentation, and future actions. This system links DEQ's Water Quality Planning Bureau Library to track resources and citations associated with particular assessment units and assessment decisions. This system will be used to produce 305(b)

and 303(d) reports for the Water Quality Integrated Report and will be used to track TMDL development and implementation priorities for waters in the Clarks Fork Yellowstone project area.

All reports prepared for this project will adhere to Water Quality Planning Bureau Document Production and Publication Guidance (WQPB, 2013).

8.0 REFERENCES

Clean Water Act. 2002. 33 U.S.C. 1251 et seq. EPA Website. Report Federal Water Pollution Control Act [As Amended Through P.L. 107-303, November 27, 2002].

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APPENDIX A –IMPAIRED WATERBODY SEGMENTS IN THE CLARKS FORK YELLOWSTONE WATERSHED, 2020 WATER QUALITY INTEGRATED REPORT

			Metals					Nutrients						Oxygen Depletion	Mineralization		Toxins	Sediment & Habitat					Temperature & Flow	
Assessment Unit ID	**Waterbody Name & Description**	**Waterbody Size (miles unless otherwise noted)**	Arsenic	Iron	Copper	Lead	Mercury	Nitrogen (Total)	Nitrate/Nitrite	Ammonia (Total)	Phosphorus (Total	Chlorophyll-a	Organic Enrichment	Dissolved Oxygen	Specific Conductivity	Total Dissolved Solids	Polycyclic Aromatic Hydrocarbons	Sediment	Sedimentation/Siltation	Turbidity	Alteration in stream-side or littoral vegetative covers	Physical substrate habitat alterations	Temperature, water	Flow Regime Modification
MT43D002_020	Bear Creek, headwaters to mouth (Clarks Fork Yellowstone River)	21.1		x					x		x	x							x		x			x
MT43D002_031	Bluewater Creek, unnamed tributary at T6N R24E S7 NWNE to mouth (Clarks Fork Yellowstone River)	11.4							x		x	x							x					
MT43D001_011	Clarks Fork Yellowstone River, Bridger Creek to mouth (Yellowstone River)	43.3		x	x	x	x	x	x	x	x	x						x				x	x	x
MT43D002_140	Cottonwood Creek, headwaters to mouth (Clarks Fork Yellowstone River)	19.5												x				x			x			
MT43D002_010	Elbow Creek, headwaters to mouth (Clarks Fork Yellowstone River)	38.5						x	x			x							x		x			

MT43D002_050	Red Lodge Creek, headwaters to Cooney Reservoir	17.9																			x			
MT43D002_060	Red Lodge Creek, Cooney Reservoir to mouth (Rock Creek)	12.0											x									x		x
MT43D002_131	Rock Creek, West Fork Rock Creek to Red Lodge Creek	27.4																						x
MT43D002_120	Rock Creek, Red Lodge Creek to mouth (Clarks Fork Yellowstone River)	16.0																						x
MT43D002_100	Silvertip Creek, Wyoming border to mouth (Clarks Fork Yellowstone River)	21.7						x			x			x	x	x	x	x		x	x		x	x
MT43D002_180	South Fork Bridger Creek, headwaters to mouth (Bridger Creek)	9.3	x	x															x					
MT43D002_080	West Red Lodge Creek, Absaroka-Beartooth Wilderness boundary to mouth (Red Lodge Creek)	14.3																	x					
MT43D002_070	Willow Creek, headwaters to mouth (Cooney Reservoir)	36.4																	x					x
		Total	**1**	**3**	**1**	**1**	**1**	**3**	**4**	**1**	**4**	**4**	**1**	**2**	**1**	**1**	**1**	**3**	**6**	**1**	**5**	**2**	**2**	**7**

APPENDIX B – DEQ WQPB'S CLARKS FORK YELLOWSTONE WATERSHED PROJECT OUTCOMES AND DOCUMENTATION

Year	Title	Author(s)	Document ID	Associated Documents
Project Plans				
2022	Clarks Fork Yellowstone Watershed: Water Quality Project Plan	Abbie Ebert	TBD	-
Sampling and Analysis Plans (SAPs)				
2022	Clarks Fork Yellowstone – 2022 Sampling and Analysis Plan	Abbie Ebert	TBD	
Assessment Documentation				
2025, anticipated	Assessment data, data analysis & decision tables/files	MAS staff (assessors)	-	Minimum Requirements for Assessment and Monitoring Documentation
2025, anticipated	Updated water quality assessment findings and beneficial use support determinations in individual waterbody assessment record files	MAS staff (assessors)	-	-
2026, anticipated	Water quality condition report	MAS staff (assessors)	-	-
April, 2026, anticipated	Updated 303(d) list of impairments in Water Quality Integrated Report	MAS staff	TBD	-
TMDL Documentation				
2024-2025, anticipated	Source assessment and modeling reports	TMDL staff	-	-
2027, anticipated	Final TMDL Document	TMDL staff	-	-
2022	WAG/TAG Contact List	MAS and TMDL Staff	-	-
Contracts				
2022	2022 Clarks Fork Yellowstone Partnership MOA	Abbie Ebert	TBD	-

Year	Title	Author(s)	Document ID	Associated Documents
2022	2022 Carbon Conservation District MOA	Abbie Ebert	TBD	-
Nonpoint Source and Wetlands Section				
TBD	TMDL Implementation evaluations (TIEs)	Nonpoint Source Staff	-	-
TBD	WRP support	Nonpoint Source Staff	-	-
TBD	319 project proposal feedback	Nonpoint Source Staff	-	-

APPENDIX C – PROJECT SCHEDULE

See Abbie Ebert for an electronic version of the schedule – this is a working document.