

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
WATER PROTECTION BUREAU**

Environmental Assessment

**Name of Project:** Abbey Main House

**Location of Project:** Shelter Island on Flathead Lake at T25N, R20W, Section 28

**City/Town:** near Rollins

**County:** Lake

**Description of Project:** This is a reissuance of an MPDES permit MT0030651 for the Abbey Main House on Shelter Island which discharges non-contact cooling water from a heat exchange system to Flathead Lake. The only pollutant added or removed from the use of Flathead Lake water is temperature. The parameter pH is expected to vary slightly with effluent temperature. No treatment is provided.

**Agency Action and Applicable Regulations:** The proposed action of the Department is to reissue the MPDES permit for another five-year cycle.

Applicable rules and statute:

ARM Title 17, Chapter 30, Sub-chapter 2 - Water Quality Permit Application and Annual Fees.

ARM Title 17, Chapter 30, Sub-chapter 5 - Mixing Zones in Surface and Ground Water.

ARM Title 17, Chapter 30, Sub-chapter 6 - Surface Water Quality Standards.

ARM Title 17, Chapter 30, Sub-chapter 7 - Nondegradation of Water Quality.

ARM Title 17, Chapter 30, Sub-chapter 12 and 13 - Montana Pollutant Discharge Elimination System Standards.

Montana Water Quality Act, MCA 75-5-101 et. seq.

**Summary of Issues:** This is a discharge of non-contact cooling water to Flathead Lake at a depth of about 53 feet. The only pollutant added or removed to the water is temperature. The effluent limits of the 2012-issued permit on temperature and pH have been applied to the renewed permit. The effects of the discharge have been modeled and the water quality of the receiving water will be unaffected beyond the 46-foot radius mixing zone allowed.

**Affected Environment & Impacts of the Proposed Project:**

*Y = Impacts may occur (explain under Potential Impacts). Include frequency, duration (long or short term), magnitude, and context for any significant impacts identified. Reference other permit analyses when appropriate (ex: statement of basis). Address significant impacts related to substantive issues and concerns. Identify reasonable feasible mitigation measures (before and after) where significant impacts cannot be avoided and note any irreversible or irretrievable impacts. Include background information on affected environment if necessary to discussion.*

*N = Not present or No Impact will likely occur. Use negative declarations where appropriate (wetlands, T&E, Cultural Resources).*

<b>IMPACTS ON THE PHYSICAL ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
1. <b>GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:</b> Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	[N] No construction involved.
2. <b>WATER QUALITY, QUANTITY AND DISTRIBUTION:</b> Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	[N] Lake water is withdrawn and passed through heat pumps/exchangers then returned to the lake at a higher temperature during cooling months and a cooler temperature during heating months. Modeling of the discharge shows compliance with temperature change water quality standards within the 46-foot radius mixing zone. Effluent limits will protect water quality of the receiving water.
3. <b>AIR QUALITY:</b> Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N]
4. <b>VEGETATION COVER, QUANTITY AND QUALITY:</b> Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[N]
5. <b>TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:</b> Is there substantial use of the area by important wildlife, birds or fish?	[N] Aquatic life not expected to be impacted.
6. <b>UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:</b> Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	[N]
7. <b>SAGE GROUSE EXECUTIVE ORDER:</b> Is the project proposed in core, general or connectivity sage grouse habitat, as designated by the Sage Grouse Habitat Conservation Program (Program) at: <a href="http://dnrc.mt.gov/divisions/cadd/sage-grouse">http://dnrc.mt.gov/divisions/cadd/sage-grouse</a> ? If yes, did the applicant attach documentation from the Program showing compliance with Executive Order 12-2015 and the Program's recommendations? If so, attach the documentation to the EA and address the Program's recommendations in the permit. If project is in core, general or connectivity habitat and the applicant did not document consultation with the Program, refer the applicant to the Sage Grouse Habitat Conservation Program.	[N] The Department has verified the facility is not within core, connectivity or general sage grouse habitat as identified on the DNRC habitat map for the State of Montana.
8. <b>HISTORICAL AND ARCHAEOLOGICAL SITES:</b> Are any historical, archaeological or paleontological resources present?	[N]
9. <b>AESTHETICS:</b> Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	[N]
10. <b>DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:</b> Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded powerline or other energy source be needed?	[N]
11. <b>IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:</b> Are there other activities nearby that will affect the project?	[N]

<b>IMPACTS ON THE HUMAN ENVIRONMENT</b>	
<b>RESOURCE</b>	<b>[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES</b>
12. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[N]
13. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[N]
14. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N]
15. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N]
16. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N]
17. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[N]
18. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N]
19. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N]
20. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N]
21. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N]
22. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[N]
23(a). PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[N]
23(b). PRIVATE PROPERTY IMPACTS: Is the agency proposing to deny the application or condition the approval in a way that restricts the use of the regulated person's private property? If not, no further analysis is required.	[N]

**IMPACTS ON THE HUMAN ENVIRONMENT**

RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>23(c). PRIVATE PROPERTY IMPACTS: If the answer to 21(b) is affirmative, does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives. The agency must disclose the potential costs of identified restrictions.</p>	<p>[ ]</p>

- 24. Description of and Impacts of other Alternatives Considered: None
- 25. Summary of Magnitude and Significance of Potential Impact: None
- 26. Cumulative Effects: None
- 27. Preferred Action Alternative and Rationale: The preferred action is to reissue the MPDES permit. This action is preferred because the permit program provides the regulatory mechanism for protecting water quality by enforcing the terms of the MPDES permit.

**Recommendation for Further Environmental Analysis:**

EIS                       More Detailed EA            No Further Analysis

**Rationale for Recommendation:**

- 28. Public Involvement: A 30-day public comment period will be held.
- 29. Persons and agencies consulted in the preparation of this analysis: None

**EA Checklist Prepared By:** James F. Brown

**Date:** May 23, 2018

**Approved by:**

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Jon Kenning, Chief  
Water Protection Bureau

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Date