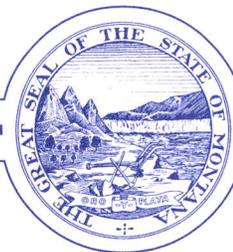


DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION



BRIAN SCHWEITZER
GOVERNOR

DIRECTOR'S OFFICE (406) 444-2074
TELEFAX NUMBER (406) 444-2684

STATE OF MONTANA

WATER RESOURCES DIVISION (406) 444-6601
TELEFAX NUMBERS (406) 444-0533 / (406) 444-5918
<http://www.dnrc.mt.gov>

1424 9TH AVENUE
PO BOX 201601
HELENA, MONTANA 59620-1601

COVER LETTER

April 22nd 2008

TO: Governor's Office, Bruce Nelson, Rm. 204, State Capitol, P.O. Box 200801, Helena, MT 59620-0801
Environmental Quality Council, Capitol Building, Room 106, P.O. Box 201704, Helena, MT 59620
Dept. of Environmental Quality, Metcalf Building, P.O. Box 200901, Helena, MT 59620-0901
Director's Office
Dept. of Natural Resources and Conservation, US F&G Bldg. 1625 11th Ave. Helena, MT 59620
Director's Office
Information Services Section
Water Resources Division, 1424 9th Ave., P.O. Box 201601, Helena, MT 59620-1601
Scott Compton, Bozeman Regional Office, 151 Evergreen Dr. Suite C, Bozeman, MT 59715
Montana Fish, Wildlife & Parks, 1420 E. 6th Ave. Helena, MT 59620
Director's Office
Fisheries Division
Regional Supervisor, MT Dept. of Fish, Wildlife & Parks, Region 3, 1400 S. 19th Bozeman, MT 59718
Bruce Rich, Regional Fisheries Manager, MT Dept. of Fish, Wildlife & Parks, Region 3 Office
Mike Vaughn, District Fisheries Biologist, MT. Dept. of Fish, Wildlife & Parks, Region 3 Office
MT State Library, 1515 E. Sixth Ave., P.O. Box 201800, Helena, MT 59620
Debra Arkell, City of Bozeman Director of Public Works, 411 E. Main St. PO Box 1230, Bozeman, MT 59771
Gallatin County Commissioners, 311 W. Main St. Room 301, Bozeman, MT 59715-4576
Glen Kraft, Middle Creek Water Users Association, 7035 South 19th Bozeman, MT 59718
Montana Audubon Council, P.O. Box 595, Helena, MT 59624
Montana Environmental Information Center, POB 1184, Helena, MT 59624
Wildlife Federation, P.O. Box 1175, Helena, MT 59624
Trout Unlimited, P.O. Box 7186, Missoula, MT 59807
U.S. Army Corps of Engineers, 10 West 15th St., Suite 2200, Helena, MT 59626
U.S. Fish and Wildlife Service, MT Field Office, 100 N. Park, Suite 320, Helena, MT 59601
District Ranger, U.S. Forest Service, Bozeman Ranger Dist. 3710 Fallon St., Suite C, Bozeman, MT 59718

Ladies and Gentlemen:

The enclosed Environmental Assessment (EA) has been prepared for the Middle Creek Dam Automated Instrumentation Installation Project and is submitted for your consideration. Please feel free to contact me at (406) 444-6622 should you have any questions or comments about the project. Comments will be accepted until 5:00 p.m., Thursday, May 22nd 2008. Comments can also be mailed to the Montana Department of Natural Resources and Conservation, State Water Projects Bureau, 1424 9th Ave., P.O. Box 201601, Helena, MT 59620-1601, attention James P. Domino. The draft EA can be viewed on the DNRC website at www.dnrc.mt.gov. Copies of the EA are also available upon request. Thank you for your interest.

Sincerely,

Handwritten signature of James P. Domino in blue ink.

James P. Domino
Environmental Specialist
State Water Projects Bureau

RECEIVED

APR 23 2008

LEGISLATIVE ENVIRONMENTAL
POLICY OFFICE

STATE WATER PROJECTS
BUREAU
(406) 444-6646

WATER MANAGEMENT
BUREAU
(406) 444-6637

WATER OPERATIONS
BUREAU
(406) 444-0860

WATER RIGHTS
BUREAU
(406) 444-6610

Draft
Montana Environmental Policy Act
Environmental Assessment



Photograph of Project Location

Middle Creek Dam Automated
Instrumentation Installation Project

April 2008



Table of Contents

Page 2	Part I. Proposed Action Description Type of Proposed State Action Agency Authority
Page 3	Project Name Project Sponsor Construction Timeline Project Location
Page 4	Project Map Project Size
Page 5	Agencies with Overlapping or Additional Jurisdiction Permits Needed Project Funding
Page 6	Narrative Summary
Page 7	Project Photographs
Page 9	Part II. Environmental Review No Action Alternative
Page 10	Proposed Action / Preferred Alternative Evaluation and Listing of Mitigation Part III. Public Participation
Page 11	Part IV. EA Preparation
Page 12	Part V. Environmental Review Checklist A. Physical Environment – Land Resources
Page 13	Air
Page 14	Water
Page 15	Vegetation
Page 16	Fish / Wildlife
Page 17	B. Human Environment – Noise / Electrical Effects
Page 18	Land Use
Page 19	Risk / Health Hazards
Page 20	Community Impact
Page 21	Public Services / Taxes / Utilities
Page 22	Aesthetics / Recreation
Page 23	Cultural / Historical Resources
Page 24	C. Significance Criteria Part VI. Narrative Evaluation and Comment
Page 25	References
Page 26	Appendix A - HKM Design Alternatives Executive Summary and Design Drawings

Middle Creek Dam Automated Instrumentation Installation Project

Draft Environmental Assessment and MEPA Checklist

PART I. PROPOSED ACTION DESCRIPTION

1. Type of proposed state action:

The installation of automated instrumentation at Middle Creek Dam that will allow for the enhanced monitoring of reservoir water levels, outflows from the dam, and seepage. Improved monitoring of these conditions these will enhance the early detection of potentially unsafe conditions and reduce the response time needed to correct problems.

2. Agency authority for the proposed action:

The Montana Legislature enacted statute 85-1- 101(1) through (6) MCA, which states: "It is hereby declared as follows:

(1) The general welfare of the people of Montana, in view of the state's population growth and expanding economy, requires that water resources of the state be put to optimum beneficial use and not wasted.

(2) The public policy of the state is to promote the conservation, development, and beneficial use of the state's water resources to secure maximum economic and social prosperity for its citizens.

(3) The state, in the exercise of its sovereign power, acting through the department of natural resources and conservation, shall coordinate the development and use of the water resources of the state so as to effect full utilization, conservation, and protection of its water resources.

(4) The development and utilization of water resources and the efficient, economic distribution thereof are vital to the people in order to protect existing uses and to assure adequate future supplies for domestic, industrial, agricultural, and other beneficial uses.

(5) The water resources of the state must be protected and conserved to assure adequate supplies for public recreational purposes and for the conservation of wildlife and aquatic life.

(6) The public interest requires the construction, operation, and maintenance of a system of works for the conservation, development, storage, distribution, and utilization of water, which construction, operation, and maintenance is a single object and is in all respects for the welfare and benefit of the people of the state.

Name of project: Middle Creek Dam Automated Instrumentation Installation Project.

3. Name, address phone number of project sponsor :

State Water Projects Bureau, MT. Dept. of Natural Resources & Conservation, 1424 9th Ave., P.O. Box 201601, Helena, MT 59620-1601 (406) 444-6646

4. Construction Timeline:

Estimated Commencement Date: September 10, 2008

Estimated Completion Date: October 31, 2008

Current Status of Project Design (% complete) 50%

5. Location affected by proposed action (county, range and township):

The dam and reservoir is located in Gallatin County, Township 4S, Range 6E, in the southwest quarter of section 15, approximately 15 miles south of Bozeman. The land where the dam and reservoir are located is located within the Gallatin National Forest (Figure 1)

6. Project size -- estimate the number of acres that would be directly affected that are currently:

	<u>Acres</u>		<u>Acres</u>
(a) Developed:		(d) Floodplain	0
Residential	0		
Industrial	0	(e) Productive:	
(b) Open Space/Woodlands/Recreation	0	Irrigated cropland	0
		Dry cropland	0
(c) Wetlands/Riparian Areas	0	Forestry	0
		Rangeland	0
		Other	
		(dam embankment 2.17 acres	
		and road across dam	
		crest)	

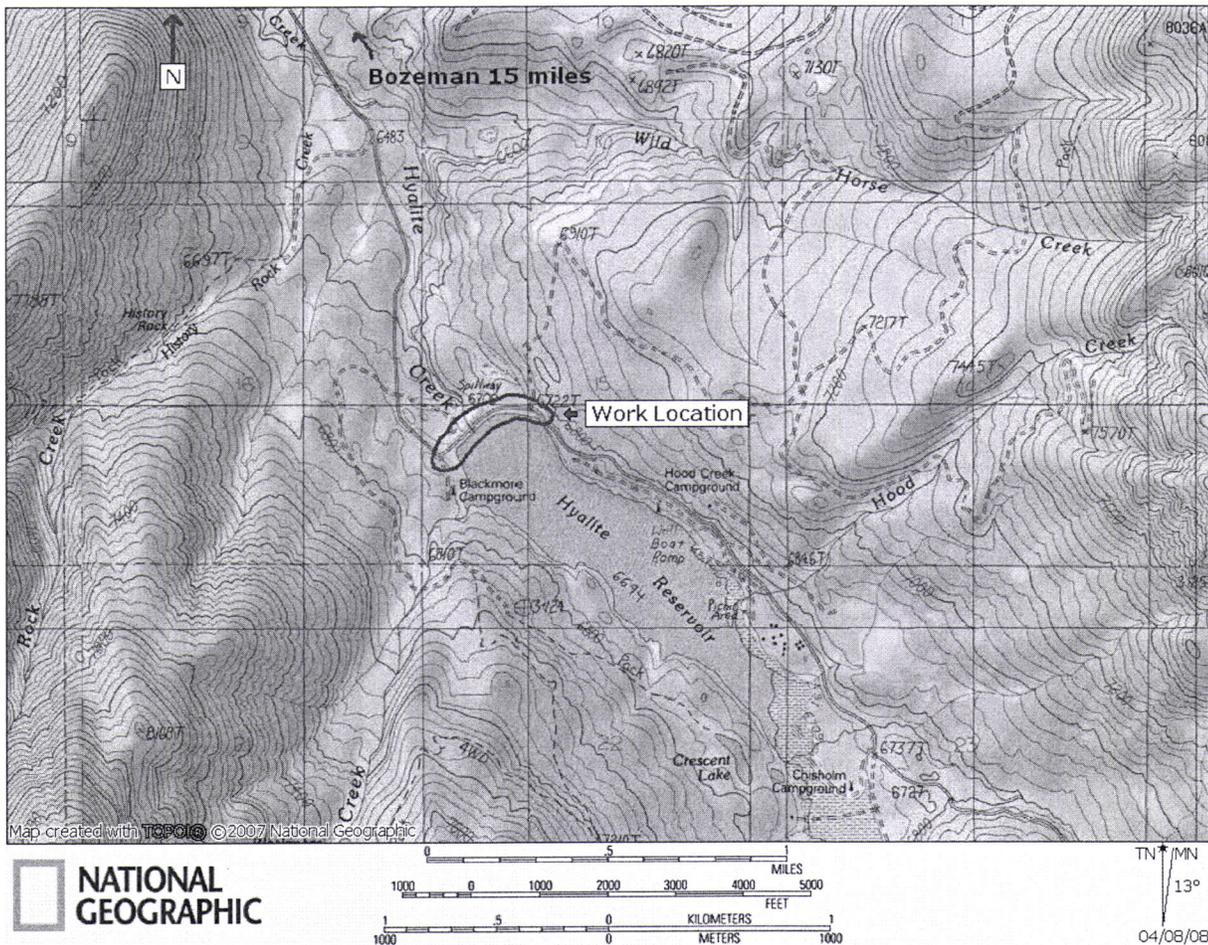


Figure 1. Local area map of Middle Creek Project

7. Listing of any other Local, State or Federal agency that has overlapping or additional jurisdiction.

(a) Permits: All permits will be obtained prior to applicable project construction.

The following permits would be needed:

<u>Agency Name</u>	<u>Permit</u>	<u>Status</u>
MT DEQ	Short-Term Exemption from Surface Water Quality (318 Authorization)	Pending
Corps of Engineers	Federal Clean Water Act (404 Permit)	Pending
MT Historic Preservation Office	Cultural Clearance	Pending

(b) Funding:

Funding Source	Amount			
	Grant (\$)	Loan (\$)	Other (\$)	Total (\$)
A. Renewable Resource Program	76,000			76,000
B. DNRC In-kind Contribution	32,525			32,525

Estimated Total Project Cost \$108,525

(c) Other Overlapping or Additional Jurisdictional Responsibilities:

<u>Agency Name</u>	<u>Type of Responsibility</u>
State Historic Preservation Office	Cultural Resource Protection
US Forest Service	Landowner

8. Narrative summary of the proposed action or project including the benefits and purpose of the proposed action:

Middle Creek Dam and Reservoir (Hyalite Lake) are located approximately 15 miles S of Bozeman, at 6,700 feet elevation in the Gallatin Mountain Range (T4S, R6E, portions of sections 15, 22 and 23). The reservoir encompasses approximately 212 surface acres. The project provides water to irrigators in the Gallatin Valley and serves as a Bozeman municipal water storage site. The reservoir and surrounding U.S. Forest Service (USFS) lands experience moderate to heavy recreational use. The dam is owned by the Montana Department of Natural Resources and Conservation (DNRC). Daily operations and maintenance at the dam is performed by the Middle Creek Water Users Association. The dam is operated and maintained under a USFS Special Use Permit. Middle Creek Dam is classified as "high hazard", which means that a loss of life could occur should the dam fail. The classification is not an indication of the structural condition of the dam. A major rehabilitation of the dam was completed in 1992.

The Montana Dam Safety Act requires inspections and monitoring of all high hazards dams as a condition of the dam's operating permit. DNRC's current monitoring program at Middle Creek dam includes monthly monitoring of the reservoir pool level, embankment instrumentation (includes vibrating wire transducers and standpipe piezometers), and drain flows during the irrigation season. There are also two slope inclinometers on the downstream side of the dam. In addition there is an annual dam safety inspection of the entire project that involves inspection of the outlet works, spillway and embankment. The dam operator also visits the dam several times per week during the irrigation season to make adjustments to the outlet discharge. With the increase in rural development in Montana, there has been an increase in the number of homes, subdivisions and small ranches located downstream of Middle Creek Dam. The current monitoring program is fairly comprehensive; however it may not be adequate to identify a rapidly developing problem at the dam. Supplementing the current comprehensive monitoring system will facilitate problem identification within a much shorter timeframe than currently possible with the existing equipment.

The proposed action will greatly enhance monitoring capabilities. The installation of automated monitoring equipment and instrumentation will allow for more accurate monitoring of reservoir water levels, outflows, seepage, and drain flows. More frequent measurements would permit the water users to better manage reservoir operations. The automated instrumentation would also allow DNRC to more effectively identify and respond to potential problems.

Helping to maintain a major water storage project that is important to the area's economy, providing enhanced protection to a critical municipal drinking water source, allowing for the continued use of reservoir water for irrigation and stock purposes, and helping to protect fisheries, wildlife habitat, and recreational use are other benefits.

Equipment used to install the monitoring equipment would include a portable trench machine, backhoe, dumptruck, auger, generator, and various drills, saws and hand tools. Approximately 2.17 acres in the vicinity of the dam would be disturbed in the installation process. Short-term, temporary impacts to recreational use are anticipated

as a result of the construction and need to temporarily close the road across the dam to traffic. The project is not anticipated to cause any significant or long-term, permanent adverse impacts to the environment. The design plans are provided in Appendix A.

The Montana Department of Environmental Quality, Montana Department of Fish, Wildlife and Parks, U.S. Army Corps of Engineers and U.S. Forest Service, Bozeman Ranger District have been contacted concerning potential impacts to water and fisheries resources, permitting requirements and recreational use. The City of Bozeman was also informed of the project.

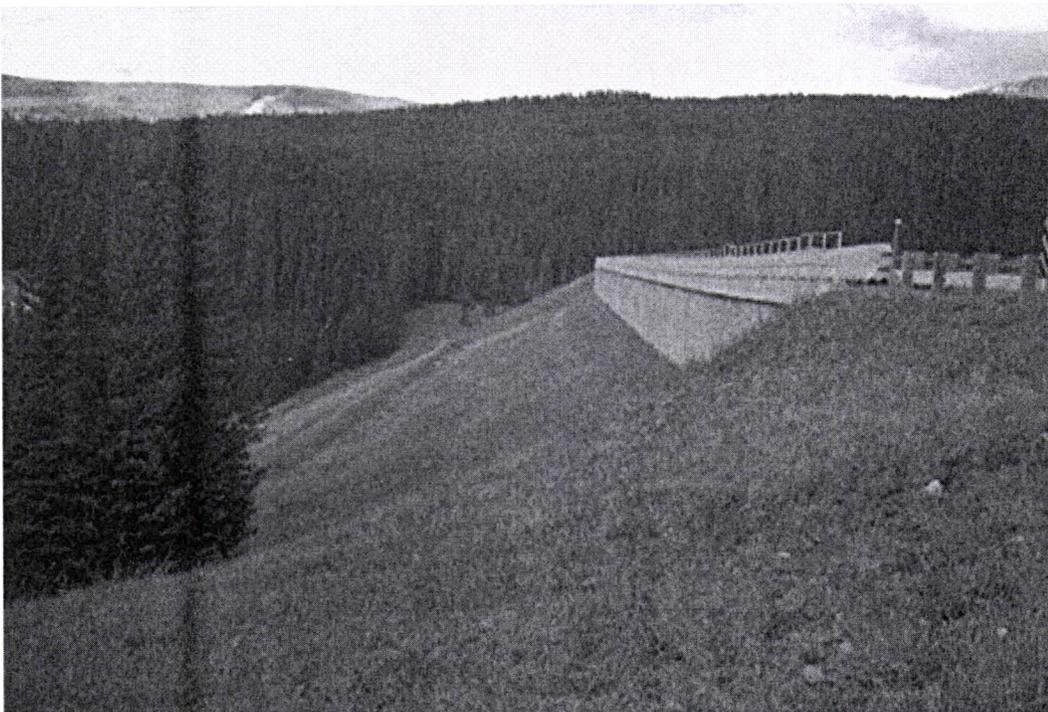
Project Photographs:



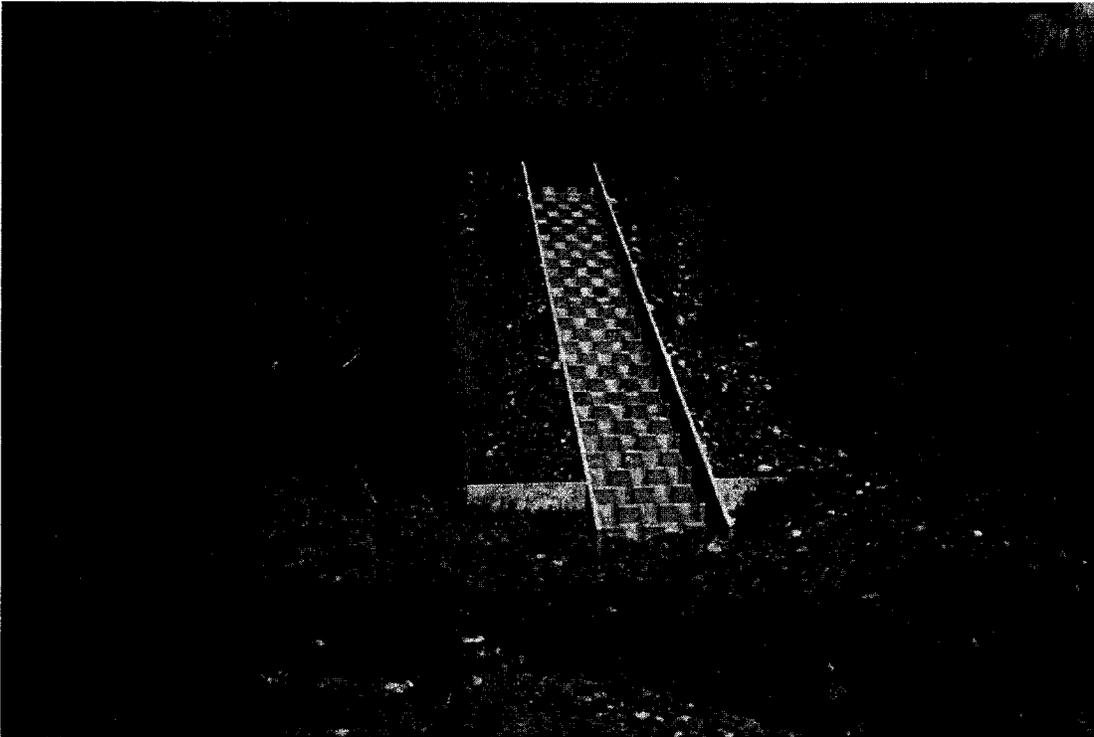
upstream face of dam



outlet



Downstream face of dam



baffle principle spillway

PART II. ENVIRONMENTAL REVIEW

- 1. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:**

Alternative A: No Action

This would not allow for any enhanced monitoring at the dam, thus increasing the chances that an unsafe condition could develop unnoticed. Conditions such as excessive seepage can affect the structure's integrity and increase the risk to the public and property downstream. This risk would increase overtime. In addition, the supply of irrigation and municipal drinking water could be negatively affected, resulting in potentially severe hardship to the area's economy and vital public services. Recreational use would be negatively affected and fisheries and wildlife resources associated with the reservoir could be harmed should the safe operation of the dam be compromised.

Alternative B: Proposed Action / Preferred Alternative

The automated monitoring improvements will enhance dam safety and longevity and promote effective water conservation for irrigation needs. Protecting the area's agricultural based economy, providing irrigation and stock water, protecting fisheries resources, wildlife habitat, drinking water, and recreational use would be achieved under this alternative. Site plans are provided in Appendix A.

2. Evaluation, listing of mitigation, stipulation, or other control measures enforceable by the agency or other government agency:

Other than the requirements associated with the permits mentioned in Section 7(a) on page 5 of this report, there are no formal stipulations of mitigation or other controls associated with the proposed action. This action does not involve any permanent or long-term permits or granting of a license on which stipulations would be placed.

PART III. PUBLIC PARTICIPATION

1. Describe the level of public involvement for this project if any, and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

The public will be notified by way of a public notice on the DNRC web page at www.dnrc.mt.gov. Individual notices will be sent to the State Water Projects Bureau standard EA distribution list (as presented on the cover page of this EA) and to those that have requested a copy.

Duration of comment period:

A 30-day comment period is proposed. This level of public involvement is appropriate for the scale and scope of the proposed action. Opening and closing dates for comments are provided on the EA Cover Letter and Distribution List.

PART IV. EA PREPARATION

- 1. Based on the significance criteria evaluated in this EA, is an EIS required? If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action.**

Based on an evaluation of the primary, secondary, and cumulative impacts to the physical and human environment under the Montana Environmental Protection Act (MEPA), this environmental review found no significant impacts from the proposed action. In determining the significance of the impacts, the DNRC assessed the severity, duration, geographic extent, and frequency of the impact, the probability that the impact would occur or reasonable assurance that the impact would not occur, growth-inducing or growth inhibiting aspects of the impact, the importance to the state and to society of the environmental resource or value affected, and precedent that would be set as a result of the proposed action that would commit the DNRC to future actions; and potential conflicts with local, state or federal laws. Therefore, an EA is the appropriate level of review and an EIS is not required.

- 2. Name, title, address and phone number of the person(s) responsible for preparing the EA:**

James P. Domino
Environmental Science Specialist
State Water Projects Bureau
Montana Department of Natural Resources and Conservation
1424 9th Avenue, P.O. Box 201601
Helena, MT 59620-1601
(406) 444-6622
E-mail jdomino@mt.gov

- 3. List of agencies consulted during preparation of the EA:**

Montana Department of Fish, Wildlife & Parks
Montana Department of Environmental Quality
U.S. Army Corps of Engineers
U.S. Forest Service

PART V. ENVIRONMENTAL REVIEW CHECKLIST

4. Evaluation of the impacts of the Proposed Action including secondary and cumulative impacts on the Physical and Human Environment.

A. PHYSICAL ENVIRONMENT

1. <u>LAND RESOURCES</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Soil instability or changes in geologic substructure?		X				
b. Disruption, displacement, erosion, compaction, moisture loss, or over-covering of soil, which would reduce productivity or fertility?			X			1b.
c. **Destruction, covering or modification of any unique geologic or physical features?		X				
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			X			1d.
e. Exposure of people or property to earthquakes, landslides, ground failure, or other natural hazard?		X				
f. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources:

1 b & d.) Site disturbance would occur on the upstream and downstream sides of the dam, and along the dam crest during installation of the monitoring instruments. Some soil compaction may occur due to equipment operation. The installation process will involve cutting a trench with a trenching machine across the dam crest to install plastic conduit for the instrumentation wiring. The trench across the dam crest and road would be several inches wide, 12 inches deep by approximately 25 feet long. The trench would be filled and the asphalt replaced upon project completion. Additional trenching totaling approximately 2000 feet would take place both the upstream and downstream face of the dam. The monitoring instrumentation would be placed in a location on the upstream (reservoir) side of the dam below the normal full-pool elevation (see site plan in Appendix A). Installation in this location will involve minor excavating, moving and/or replacing the existing rock riprap, and the placement of fill on the upstream face of the dam below the normal pool elevation. Approximately 500 sq-feet of surface area would be disturbed below the reservoir water line from the excavation and replacement of riprap.

An additional 800 feet of trenching may also occur on the east side of the dam if funding permits for monitoring equipment placement in the upper baffle spillway. This additional trench would cross an existing gravel access road (see site plan in Appendix A).

Effects would be non-significant and minor in the short and long-term because of the small scale and scope of the disturbance, all work being performed when the site is dry (above the water level) and reclamation of areas disturbed during construction.

2. AIR Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Emission of air pollutants or deterioration of ambient air quality? (Also see 13 (c).)			X			2a.
b. Creation of objectionable odors?		X				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or regionally?		X				
d. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Air Resources (attach additional pages of narrative if needed):

2a. Minor and temporary emissions would be created by equipment during the installation process. The effect would be temporary, minor, non-significant and end with the completion of the project.

3. WATER Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated*	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. *Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			X			3a.
b. Changes in drainage patterns or the rate and amount of surface runoff?		X				
c. Alteration of the course or magnitude of floodwater or other flows?		X				
d. Changes in the amount of surface water in any water body or creation of a new water body?		X				
e. Exposure of people or property to water related hazards such as flooding?		X				
f. Changes in the quality of groundwater?		X				
g. Changes in the quantity of groundwater?		X				
h. Increase in risk of contamination of surface or groundwater?			X			3h.
i. Effects on any existing water right or reservation?		X				
j. Effects on other water users as a result of any alteration in surface or groundwater quality?		X				
k. Effects on other users as a result of any alteration in surface or groundwater quantity?		X				
l. Effects on any wetlands?		X				
M. other?		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Water Resources:

3a. The proposed action could potentially cause a slight increase in turbidity, but the increase would be very minor, temporary and non-significant. The risk is greatly reduced by completing all of the work on the upstream (reservoir) side of the dam when the work site is dry (above the water level). It is not anticipated that significant amounts of sediments would enter the reservoir or Middle Creek.

3h. The risk of water contamination exists due to equipment operation in the area around the dam. This impact is minor, temporary, non-significant and would end with the completion of the project. The risk would be mitigated by insuring that all equipment is properly maintained with no fluid or fuel leaks.

All these effects would be short-term and end with the completion of the project. No long-term significant impacts are anticipated to water quality as a result of the proposed action.

4. VEGETATION Will the proposed action result in?	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?		X				
b. Alteration of a plant community?			X			4b.
c. Adverse effects on any unique, rare, threatened, or endangered species?		X				4c.
d. Reduction in acreage or productivity of any agricultural land?		X				
e. Establishment or spread of noxious weeds?			X			4e.
f. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Vegetation (attach additional pages of narrative if needed):4a.

4b. Some vegetation (grasses and small shrubs) would be disturbed from the excavation and construction. The impacts would be non-significant and minor and are negligible due to the reclamation and reseeding of the disturbed area.

4c. A Natural Heritage file search indicated that small, isolated populations of *Sidalcea oregano* (Oregon Checker-mallow), a vascular plant species of special concern is found upstream of the reservoir. *Sidalcea oregano* is not known to exist in the vicinity of the dam. There are no documented observations of any other threatened or endangered plants, or plant species of special concern in the vicinity of the project.

It is not anticipated that the proposed action would affect *Sidalcea oregano*, or any other plant species of special concern. According to the NHP maps the nearest population of *Sidalcea oregano* is located a considerable distance upstream of the reservoir.

4e. An increase in noxious weeds may occur due to soil disturbance and equipment operation. Effects are negligible in the long-term because of reclamation and weed control implementation.

** 5. FISH/WILDLIFE	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Will the proposed action result in:	Unknown *	None	Minor *		
a. Deterioration of critical fish or wildlife habitat?		X				
b. Changes in the diversity or abundance of game animals or bird species?		X				
c. Changes in the diversity or abundance of non-game species?		X				
d. Introduction of new species into an area?		X				
e. Creation of a barrier to the migration or movement of animals?		X				
f. Adverse effects on any unique, rare, threatened, or endangered species?		X				5f.
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?			X			5g.
h. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary effects on Fish and Wildlife (attach additional pages of narrative if needed):

5f.) A Natural Heritage file search indicated that westslope cutthroat trout (species of special concern) are found in several small tributaries of Middle Creek downstream of the dam. The lynx is also listed as threatened in the western third of Montana (including the project area). No other wildlife or fish species of special concern is known to exist in the vicinity of the project.

It is not anticipated that the proposed action would have any negative impacts to any listed wildlife or fisheries species of special concern.

5g.) Local wildlife within the immediate vicinity of the project location (e.g. mule deer, moose, black bear, mountain lion, raptors, waterfowl, song birds) would experience a temporary increase in stress due to the construction activity. The wildlife would most likely avoid the immediate work site during construction. This impact would be minor, non-significant and end upon project completion.

An active bald eagle nest has been identified upstream of the reservoir in the vicinity of the Window Rock Cabin, approximately 2 miles south of the dam. No impacts to the Bald Eagles are anticipated from the project.

Any potential impacts to fish and wildlife resources will be temporary, minor, short-term and end upon completion of the project.

B. HUMAN ENVIRONMENT

6. NOISE/ELECTRICAL EFFECTS Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Increases in existing noise levels?			X			6a.
b. Exposure of people to serve or nuisance noise levels?		X				
c. Creation of electrostatic or electromagnetic effects that could be detrimental to human health or property?		X				
d. Interference with radio or television reception and operation?		X				
e. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Noise/Electrical Effects (attach additional pages of narrative if needed):

6a. There will be a temporary increase in noise levels during construction. This would end after completion of the construction activity. There are no residences adjacent to the site that would be disturbed by the activity.

7. <u>LAND USE</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?		X				
b. Conflict with a designated natural area or area of unusual scientific or educational importance?		X				
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		X				
d. Adverse effects on or relocation of residences?		X				
e. Increase regulatory restrictions on private property?		X				
f. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Use (attach additional pages of narrative if needed):

8. <u>RISK/HEALTH HAZARDS</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Risk of an explosion or release of hazardous substances (including, but not limited to oil, pesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?		X				
b. Affect an existing emergency response or emergency evacuation plan, or create a need for a new plan?			X			
c. Creation of any human health hazard or potential hazard?		X				
d. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Risk/Health Hazards (attach additional pages of narrative if needed):

8b. Emergency egress and ingress will be provided when the public access road over the dam is temporarily closed due to the construction. It is not anticipated that the project will significantly affect emergency response or affect or create the need for any new emergency evacuation plan. The impact will be temporary, short-term, minor, non-significant and end with the completion of the project,

9. <u>COMMUNITY IMPACT</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		X				
b. Alteration of the social structure of a community?		X				
c. Alteration of the level or distribution of employment or community or personal income?		X				
d. Changes in industrial or commercial activity?		X				
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		X				
f. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Community Impact (attach additional pages of narrative if needed):

10. <u>PUBLIC SERVICES/TAXES/UTILITIES</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in any of the following areas: fire or police protection, schools, parks/recreational facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental services? If any, specify:		X				10a.
b. Will the proposed action have an effect upon the local or state tax base and revenues?		X				
c. Will the proposed action result in a need for new facilities or substantial alterations of any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?		X				
d. Will the proposed action result in increased use of any energy source?		X				
e. Define projected revenue sources						10e.
f. Define projected maintenance costs.						10f.
g. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Public Services/Taxes/Utilities (attach additional pages of narrative if needed):

10a. The proposed action would not have an effect upon or result in a need for new or altered governmental services.

10e. The DNRC will provide funding for the project. Funding sources are identified on page 5, Section 7 (b).

10f. All maintenance costs associated with the Project will be the responsibility of the DNRC State Water Projects Bureau.

** 11. <u>AESTHETICS/RECREATION</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?			X			11a.
b. Alteration of the aesthetic character of a community or neighborhood?		X				
c. Alteration of the quality or quantity of recreational/tourism opportunities and settings?			X			11c.
d. Will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted?		X				
e. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Aesthetics/Recreation (attach additional pages of narrative if needed):

11 a & c. Construction will temporarily affect the aesthetics of the work site in the short-term. Some day users, campers, picnickers, hunters and anglers may be impacted. The area receives moderate to heavy angling and recreational use. The quality of the recreational opportunities and setting may be temporarily impacted. The road over the dam will have to be temporarily closed for a period of one to two days to allow for the trenching and placement of the instrumentation wire conduit.

A permanent chain-link security fence is also proposed around the instrumentation site to protect the equipment from disturbance and vandalism (see Appendix A for location).

The timing (mid-week, after Labor Day holiday and main use season) and relatively short duration of the anticipated road closure period (approximately 1 to 2 days) will serve to reduce the magnitude of any adverse, non-significant impacts to aesthetics, recreational use and access. It is anticipated that the effects will be minor and non-significant in the long-term.

12. <u>CULTURAL/HISTORICAL RESOURCES</u> Will the proposed action result in:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. **Destruction or alteration of any site, structure or object of prehistoric historic, or paleontological importance?		X				12a.
b. Physical change that would affect unique cultural values?		X				12b
c. Effects on existing religious or sacred uses of a site or area?		X				12c.
d. Will the project affect historic or cultural resources?		X				12d.
e. Other:		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Cultural/Historical Resources (attach additional pages of narrative if needed):

12a-d. The proposed project will not result in the destruction, disturbance or alteration of any known site, structure, or object of prehistoric, cultural, religious, sacred, historic or paleontological importance.

SIGNIFICANCE CRITERIA

13. <u>SUMMARY EVALUATION OF SIGNIFICANCE</u> Will the proposed action, considered as a whole:	IMPACT *				Can Impact Be Mitigated *	Comment Index
	Unknown *	None	Minor *	Potentially Significant		
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on two or more separate resources that create a significant effect when considered together or in total.)		X				13a.
b. Involve potential risks or adverse effects, which are uncertain but extremely hazardous if they were to occur?		X				
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		X				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		X				
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		X				
f. Is the project expected to have organized opposition or generate substantial public controversy?		X				

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Significance Criteria (attach additional pages of narrative if needed):

13a. This EA found no significant impacts to the human or physical environment from the proposed action.

PART VI. NARRATIVE EVALUATION AND COMMENT

This EA did not reveal any significant negative impacts to the physical and human environment stemming from the proposed action. No threatened or endangered species would be significantly affected, and no unique or sensitive physical, cultural or historic features would be disturbed. The impacts associated with the actual construction will be short-term, minor and end with the completion of the project. Impacts associated with potentially small increases in the sediment loads, weed proliferation, fish and wildlife stress, aesthetics, recreational use and access, emergency response and the quality of the recreational experience will be mitigated by reclamation, weed control efforts, project timing (mid-week, after the main use season) and making allowances for emergency egress and ingress during construction. The proposed project will not affect public safety or the beneficial uses of reservoir water.

The no action alternative would result in inadequate monitoring capabilities at a designated high-hazard dam, and could potentially result in unnecessary delays in identifying and addressing the development of unsafe structural conditions. This could result in potentially serious, increasing risks to public health and safety, downstream property, and reservoir beneficial uses.

References:

Consultation with the U.S. Army Corps of Engineers, Helena MT. Regulatory Office, April 2008

Consultation with the MT Department of Environmental Quality, Water Protection Bureau, Helena, MT. April 2008

Consultation with the MT State Historic Preservation Office, Helena, MT. January 2008

Consultation with Nancy Halstrom, U.S. Forest Service, Bozeman Ranger District, Bozeman MT. April 2008.

Species of Special Concern File Search, Montana Natural Heritage Program, Helena, MT. August 2006.

Middle Creek Dam Manual for Operation and Maintenance, DNRC State Water Projects Bureau, 1424 9th Avenue, P.O. Box 201601, Helena, MT 59620, Originally Published 1992, revised January 2008.

A Guide to the Montana Environmental Policy Act, John Munding and Todd Everts, 1998. Revised by Larry Mitchell, 2004 and Todd Everts, 2006. Published by the Legislative Environmental Policy Office, Environmental Quality Council.

Climax Vegetation of Montana Based on Soils and Climate, U.S. Dept. of Agriculture, Soil Conservation Service, Bozeman, MT. September 1976

Appendix A – Site Plan

