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PROGRAMMATIC ENVIRONMENTAL ASSSESSMENT

Division/Bureau: Montana Department of Environmental Quality (DEQ); Permitting and Compliance Division; Water Protection Bureau; Water Quality Discharge Permit Section; 318 Program.

Project Description and Agency Action: This Programmatic Environmental Assessment (EA) is intended to satisfy requirements of the Montana Environmental Policy Act (MEPA) for certain construction activities that occur in state waters and that may generate non-point source turbidity that exceeds the numeric water quality standard for turbidity. These activities are regulated under section 75-5-318, MCA, of the Montana Water Quality Act. Authorizations issued under this statute do not relieve applicants of the responsibility to obtain other applicable permits.

Background and Purpose: Under § 75-5-318, MCA, of the Montana Water Quality Act, DEQ and Montana Fish, Wildlife and Parks (FWP) can authorize short-term narrative water quality standards for total suspended sediment and turbidity resulting from stream-related construction activities or stream enhancement projects ("318 Authorization"). The narrative standard for total suspended sediment may be used to replace the numeric standard for turbidity, if there is no reasonable means of achieving the numeric standard.

DEQ can issue a 318 Authorization upon receipt of an "Application for Short-Term Water Quality Standard for Turbidity Related to Construction Activity." FWP can issue a 318 Authorization as part of normal permitting under the Natural Streambed and Land Preservation Act of 1975 (§ 75-7-101 *et seq.*, MCA ("310 permits") and the Stream Protection Act (§ 87-5-501 *et seq.*, MCA ("124 permits"). FWP has expressed a willingness to do this, provided that DEQ completes a programmatic EA and provides a list of Best Management Practices (BMP's) that meet DEQ requirements.

The process described above would allow 318 Authorizations to be issued concurrently with 310 and 124 permits and would eliminate the need for some applicants to apply directly to DEQ. For these applicants, permitting time would be shortened and the need to pay DEQ's permitting fee would be eliminated.

A 318 Authorization issued under this Programmatic EA may undergo additional environmental review either as part of (1) the MEPA process required for state government permitting or (2) the environmental checklist completed during the 310 permitting process.

The Montana Water Quality Act prohibits pollution of surface water and groundwater and requires permits for discharges that contain pollutants. Section § 75-5-605, MCA, prohibits pollution of state waters, placement of wastes in a location where they will cause pollution of state waters, or discharge of sewage, industrial waste, or other wastes into any state waters without a current permit from DEQ.

"State waters" include bodies of water, irrigation systems, and drainage systems, either surface or underground (§ 75-5-103(29), MCA). The 318 Authorization provides coverage for construction activity in surface waters. Periodic flows in ephemeral drainage channels and intermittent flowing or standing surface water are also state waters. The definition of state waters excludes non-discharging waste containment or treatment ponds and irrigation systems that do not return flow to state waters.

Construction activities can introduce pollutants (primarily turbidity and sediment) into state waters by causing disturbances of the stream bottom or stream banks. Turbidity and sediment discharges into state waters as a result of construction activities are often sporadic and of short duration. Studies show that these certain types of discharges can impact the aquatic environment (Tsui and McCart 1981; Schubert et al. 1985; Anderson et al. 1998). For example, after the installation of a gas pipeline across a small mountain stream in Canada, there was a 74% reduction in aquatic macroinvertebrate abundance (Tsui and McCart 1981). Similarly, abundance of silver shiners (*Notropis photogenis*) in downstream seine hauls dropped by 95% following pipeline construction on the Little Miami River (Schubert et al. 1985), while brook trout (*Salvelinus fontinalis*) abundance declined 70% in a 500 m reach downstream of where a gas pipeline had been installed the week before (Anderson et al. 1998). Nevertheless, impacts on aquatic life have been shown to be short-term, and major recovery of the affected communities has been demonstrated in follow-up sampling, usually within a year (Schubert et al. 1985; Anderson et al. 1998). Adherence to specific construction standards required as terms of the 318 Authorization should ensure that any impacts are temporary and minor. It should also be noted that these previously cited studies involved construction techniques in flowing water where little if any BMPs were utilized to minimize turbidity and sediment. 318 Authorization turbidity/sediment monitoring requirements, for in-stream projects in the Clark Fork River (Yellowstone Pipeline crossing 2000 and 2005) and an in-stream bank stabilization project in the Boulder River south of Big Timber (2001), documented that the use of BMPs, such as reducing overall equipment time in flowing water or diverting flowing water around the work site, can reduce turbidity/sediment impacts by several magnitudes.

The main purpose of the 318 Authorization process is to prevent significant or lasting effects of turbidity on aquatic environments. The applicant must develop construction plans that will minimize the magnitude of any change in water quality due to sedimentation or turbidity and the length of time during which the change would occur. The applicant must describe the construction activity, site characteristics, potential sources of turbidity or sediment, and best management practices that would be employed to minimize turbidity and sediment to the extent practicable. The applicant must also describe alternatives that might be available to minimize or eliminate sedimentation and turbidity.

Types and Sizes of Projects Covered by this EA: In deciding which types of projects to cover under this Programmatic EA, DEQ sought comment from FWP, the Montana Department of Natural Resources and Conservation (DNRC), and the Conservation Districts. Most size and volume limitations and water body designations were selected for consistency with U. S. Army Corps of Engineers regulations and DEQ working agreements with the Corps for DEQ's 401 Water Quality Certification Program. Under section 401 of the federal Clean Water Act, DEQ

has authority to review activities permitted by the Corps and determine if these activities meet Montana water quality standards. The following list of activities, if judged by the local FWP Fishery Biologist to have only temporary and minor impacts to aquatic life, may be eligible for a 318 Authorization. However, the biologist would have the option of requiring any applicant to apply directly to DEQ if not certain that the narrative standard would be protective of the environment. Similarly, the biologist would have the discretion to apply the narrative standard to any project for which these conditions would provide adequate protection.

1. Bank Stabilization using Rootwads, Riprap, Bendway Weirs, Barbs, or Bioengineered Bank Treatments. May apply to projects 500 feet in length or less on the Yellowstone, Missouri, Kootenai, Clark Fork, Flathead, Clarks Fork of the Yellowstone, and Bitterroot rivers; for all other waterways, 300 feet in length or less.

2. Stream Crossings. May apply to fords, bridges with piers, culverts 25 feet or shorter, and livestock water gaps.

3. Irrigation Diversions. May apply to cleaning or dredging required to maintain irrigation pumps (25 cubic yards or less), or placement of temporary diversions of gravel (25 cubic yards or less), hay bales, visqueen, concrete blocks, or similar structures in the channel.

4. Utility Crossings. May apply to vibratory plows or open trenches constructed in the dry (pumping, fluming around the trench, or dry from intermittent flow); fewer than 12 crossings per county.

5. Core Drilling. May apply to any core-drilling project.

6. Beaver Dam Removal. May apply to projects where mechanical or hand removal is employed – not explosives.

7. Dredging. May apply to projects where 25 cubic yards of material or less is dredged.

8. Channel Construction and other Projects where Habitat Improvement is the Primary Objective. May apply to work completed in the dry or in channel work that is minor in nature.

Description and Analysis of Alternatives:

No Action Alternative.

Under the no action alternative DEQ would continue to be the only entity issuing 318 Authorizations. For many years this has been an effective but time consuming permitting process.

Preferred Alternative

The process noted in this EA is the preferred alternative. FWP personnel issuing the certain 318 Authorizations would streamline the process and reduce the regulatory burden on the regulated community.

In conclusion, no reasonable alternatives are available other than the preferred alternative.

AFFECTED ENVIRONMENT AND IMPACTS OF THE PROPOSED PROJECT:

The following symbols are used in the table below:

Key to Rank	
NA	*Not applicable*
N	*No effects*
B	*Potentially beneficial effects*
C	*Potentially minor adverse effects*
M	*Corrective action required*
P	*Additional permits will be required*

NOTE: The table below discusses potential effects from stream projects covered under the umbrella of this programmatic EA.

Rank	Consideration	Remarks
	PHYSICAL AND BIOLOGICAL ENVIRONMENT	
B, C	1. SOIL SUITABILITY, TOPOGRAPHIC AND/OR GEOLOGIC CONSTRAINTS (soil moisture, unstable soils or geologic conditions, steep slopes, erosion potential, subsidence potential, seismic activity)	318 issuance under this programmatic EA would have little effects in this category because it pertains to projects in state waters. However, many of the projects permitted under the 318 have a land surface component that requires BMPs to reduce surface erosion. Implementation of BMPs will reduce the potential for soil erosion caused by storm water runoff from construction sites. BMPs will also help preserve natural topographic features such as slopes. As discussed under category 3, implementation of BMPs could have a minor effect on soil moisture content at the construction activity site by modifying drainage and subsurface infiltration of precipitation and snowmelt.
C	2. AIR QUALITY (effects to or from project, dust, odors, emissions)	318 issuance under this programmatic EA would have little effects in this category because it pertains to projects in state waters. However, many of the projects permitted under the 318 have a land surface component. In addition to minor emissions related to emissions from construction equipment, there may be minor adverse impacts to air quality due to dust created during BMP construction activities. There may be additional minor adverse effects if lands adjacent to the construction site are used to implement BMPs. However, these impacts would be slight and limited to the period of construction.
B, C	3. GROUNDWATER RESOURCES & AQUIFERS (quality/nondegradation, quantity/reliability, distribution, uses/rights, number of aquifers, mixing zones)	318 issuance under this programmatic EA may have some beneficial effects on ground water quality. BMPs implemented to protect surface waters could prevent or minimize pollutants (sediment/turbidity) entry into state waters. These practices will prevent spreading of pollutants, which may reduce infiltration of pollutants to ground water.
B, C	4. SURFACE WATER RESOURCES (quality/nondegradation, quantity/reliability, distribution, uses/rights, storm water controls, source of community supply, community treatment, mixing zones)	Implementation of BMPs and adherence to the conditions of the 318 will reduce the potential for pollutants from construction to enter state waters. There will short-duration minor impacts to state waters. These impacts would be slight and would be limited to the period of construction.

B, C	5. VEGETATION AND WILDLIFE SPECIES AND HABITATS, INCLUDING FISHERIES AND AQUATIC RESOURCES (threatened, endangered, sensitive species, prime habitat, population stability, potential for human wildlife conflicts, effectiveness of post-disturbance plans)	Implementation of BMPs and adherence to conditions of the 318 will reduce the potential for pollutants in state waters. However, short-duration adverse impacts are anticipated to aquatic species and habitat during construction phases in state waters.
B, C	6. UNIQUE, ENDANGERED, FRAGILE, OR LIMITED ENVIRONMENTAL RESOURCES (biologic, topographic, wetlands (within one mile), floodplains (within one mile), scenic rivers, natural resource areas, etc.)	318 issuance under this programmatic EA would have beneficial effects on the aquatic resource. Implementation of BMPs and adherence to conditions of the 318 will reduce the potential for pollutants from construction sites to enter state waters. There may be minor adverse scenic impacts caused by construction of BMPs and the actual project. However, these impacts would be slight and would be limited to the period of construction.
B, C	7. LAND USE (waste disposal, agricultural lands [grazing, cropland, forest lands, prime farmland], recreational lands [waterways, parks, playgrounds, open space, federal lands), access, commercial and industrial facilities [production & activity, growth or decline], growth, land-use change, development activity)	318 issuance under this programmatic EA would have beneficial effects on the resources identified in this category. Implementation of BMPs and adherence to conditions of the 318 will reduce the potential for pollutants to enter state waters. There may be minor adverse effects on land use if lands adjacent to the construction site are used to implement BMPs and within the waterway construction is occurring in. However, these impacts would be slight and would be limited to the period of construction.
C	8. HISTORICAL, CULTURAL, & ARCHEOLOGICAL (sites, facilities, uniqueness, diversity)	318 issuance under this programmatic EA could have minor adverse effects on the resources identified in this category if lands adjacent to the construction site are used to implement BMPs or access roads are built. This occurs infrequently, and in such cases the amount of land disturbed would be small. The majority of the type of projects covered by this EA are in the actual waterway, where, in most cases historic hydraulic action has removed all artifacts.
B, C	9. AESTHETICS (visual quality, nuisances, odors, noise)	318 issuance under this programmatic EA will have beneficial effects on surface water aesthetics in the vicinity of the construction site. Implementation BMPs and adherence to the conditions of the 318 will reduce the potential for pollutants from impacting surface waters. Compliance with the 318 should reduce negative impacts to the appearance of surface water in the vicinity, and should reduce negative taste and odor effects by minimizing releases of pollutants. There may be minor adverse effects on visual aesthetics from construction of BMP structures and the actual in-stream work. However, BMPs typically are placed in areas where construction disturbance has already occurred, so the impacts from BMP construction would not be significant in comparison with the impacts from the construction activity itself. There may be minor adverse effects if lands adjacent to the construction site are used to implement BMPs. These impacts would be slight and would be limited to the period of construction.
B, C	10. DEMANDS ON OR CHANGES IN ENVIRONMENTAL RESOURCES INCLUDING LAND, WATER, AIR, OR ENERGY USE (need for new or upgraded energy sources, potential for recycling, etc.) {See (4), (5), and (8).}	318 issuance under this programmatic EA may have beneficial effects on the resources identified in this category. The 318 application requires an operator to characterize potential sources of pollution at the construction activity site, and evaluate and implement measures to reduce these potential sources. This could potentially include waste reuse, reduction, recycling, and/or treatment. Potentially minor adverse effects could occur through temporary interference with a higher use of land while BMPs are in place and the actual in-stream construction activity.

Rank	Consideration	Remarks
	IMPACTS ON THE HUMAN POPULATION	
N	11. CHANGES IN DEMOGRAPHIC CHARACTERISTICS (population quantity, distribution and density, rate of change)	NA
N	12. GENERAL HOUSING CONDITIONS (quality, quantity and affordability)	NA
N	13. POTENTIAL FOR DISPLACEMENT OR RELOCATION OF BUSINESS OR RESIDENTS	NA
B	14. PUBLIC HEALTH AND SAFETY (medical services and facilities, police, fire protection and hazards [see (2)], emergency medical services [see (8), LAND USE for waste disposal])	318 issuance under this programmatic EA may have a beneficial effect on public health, based on the beneficial effects to resources such as surface water, discussed above. DEQ does not anticipate any effects on public safety. However, there is the potential for some injury if the public enters the construction area, either on land or by floating in the waterway where the construction is occurring.
B	15. LOCAL EMPLOYMENT AND INCOME PATTERNS (quantity and distribution of employment, economic impact)	318 issuance under this programmatic EA may have beneficial effects on employment. The development and implementation of the BMPs will require facility personnel, consultants, and various local services resulting in a probable minor increase in local employment and the economy.
B	16. LOCAL AND STATE TAX BASE AND REVENUES	318 issuance under this programmatic EA may have a beneficial effect on tax revenues due to the need for personnel described in the preceding category.
N	17. EFFECTS ON SOCIAL STRUCTURES AND MORES (social conventions/standards of social conduct), DEMANDS ON SOCIAL SERVICES (law enforcement, educational facilities [libraries, schools, colleges, universities], welfare, etc.)	NA
C	18. TRANSPORTATION NETWORK (condition and use of roads, traffic flow conflicts, rail, airport compatibility, etc.)	318 issuance under this programmatic EA would have little effect on the transportation network. Construction of BMPs could result in brief disruptions of traffic flow.
N	19. CONSISTENCY WITH LOCAL ORDINANCES, RESOLUTIONS, OR PLANS (conformance with local comprehensive plans, zoning or capital improvement plans)	Based upon previous Department experience, 318 issuance under this programmatic EA will have little or no effect on the subjects described in this category. 318 issuance is coordinated with local 310, 124, and 404 permit issuance, thus guaranteeing consistency.
C, B	20. REGULATORY RESTRICTIONS ON PRIVATE PROPERTY RIGHTS (*Are we regulating pursuant to a police power? Does the Agency action restrict the use of the property beyond the minimum necessary to achieve compliance with the Act? What are the costs of such additional restrictions resulting from proposed permit conditions? Are there other, less restrictive ways of achieving the same goal?*	Adherence with the conditions of 318 and BMP implementation may impose additional costs on operators. However, the 318 does not require the use of pollution controls beyond those necessary to achieve compliance with the Montana Water Quality Act. The 318 also allow operators some flexibility in determining what are the best methods to meet the goal of minimizing pollution. FWP's local involvement will streamline the 318 process and be less burdensome for operators.

Summary of Potential Effects:

The effect of the issuing 318s under this programmatic EA will be to streamline the current process by FW&P's participation in issuing 318 authorizations. Through the development and implementation of BMPs and adherence with the conditions of the 318, water quality, aquatic resources, soils, and vegetation will be protected during the construction projects authorized by the agencies.

Any potential adverse effects associated with the issuance of the 318 should be minimal and temporary. These effects would be caused by the construction of BMPs outside of the area already disturbed by the underlying construction activity and the actual in-stream work. The area affected by BMP construction and the in-stream work would be small, and the effects limited to the duration of the construction. In most cases, BMPs are constructed in already disturbed areas in order to minimize the erosion from those areas and to stabilize them in a general sense.

Cumulative Effects:

The issuance of 318s under this programmatic EA should have little to no cumulative effects, beneficial or adverse. Construction projects covered under the 318 are typically not concentrated in any one area, but are spread throughout the state.

Other groups or governmental agencies contacted or which may have overlapping jurisdiction:

The Environmental Protection Agency also regulates, under a federal General Permit, certain construction activities that are located on Indian Reservation lands. Various other federal, state, and local permits, ordinances, orders, judgments, or decrees may also pertain to the construction activities covered under this 318.

Individuals or groups contributing to this Programmatic Review:

State of Montana, DEQ Permitting & Compliance Division, Water Protection Bureau, Water Quality Discharge Permits Section, 318 Program, Jeff Ryan, Coordinator/Bonnie Lovelace, Bureau Chief; Mike Suplee, DEQ Planning Bureau, Standards Section; Greg Hallsten, DEQ MEPA Section; FWP, Habitat Protection Bureau, Glenn Phillips, Bureau Chief; Laurie Zeller, Montana Department of Natural Resources and Conservation (DNRC), Conservation Districts Bureau; Laverne Ivie, Yellowstone Conservation District

Recommendation for Further Environmental Analysis:

__ Prepare an Environmental Impact Statement
__ Prepare a detailed Environmental Assessment
X No further analysis for issuance of 318s

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Date: March 27, 2006

Approved by:

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(Print name and title)

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(Signature)

March 27, 2006
(Date)

References

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