

STORM WATER POLLUTION PREVENTION PLAN

**STORM WATER POLLUTION PREVENTION PLAN
FOR DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES
IN
GRAND TETON NATIONAL PARK, WY
FOR PROJECTS**

**WY PRA-GRTE 13(4)
NORTH PARK ROAD (Phase 2)
NORTH PARK ROAD (Moran Shoulder Widening)**

**WY PRA-GRTE 11(4)
TETON PARK ROAD (Spalding Bay – Jackson Lk Jct)
EASTSIDE HIGHWAY (Buffalo Fork Riprap)
&
WY PRA-GRTE 112(1)
SIGNAL MTN. MARINA ROAD**

**for
State of Wyoming
Department of Environmental Quality
Water Quality Division**

Pollution Prevention Team

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Pollution Plan Maintenance Team:	FHWA Project Engineer (To be announced) Contractor's Superintendent (of the awarded company)
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Project Description

WY PRA-GRTE 13(4), North Park Road, Phase 2
Grand Teton National Park (GRTE) of the National Parks Service (NPS), in cooperation with Western Federal Lands Highway Division (WFLHD) of the Federal Highway Administration (FHWA), plans to reconstruct and widen about 10.473 kilometers (6.508 miles) of the North Park Road. The project is located between Lizard Creek Campground and Snake River Pit Road (27-857 and 38-330). The location is shown on the vicinity maps contained in Appendix A.

The road will be widened to 9.8 meters (32.2 feet) from its existing width of 7.4 meters (24 feet). The existing asphalt pavement will be removed and reused as select topping in the new pavement structure. Excavation and embankment work will be performed to construct the new roadway. Poor subgrade areas will be corrected by sub excavation and placement of free draining material with underdrains and outlet pipes. Some existing turnouts will

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be obliterated and revegetated. One new turnout will be added to enhance the visitor experience to the park. Most existing culverts will be replaced or extended to meet the hydraulic needs. One box culvert will also be extended. Topsoil will be stripped from the existing slopes prior to disturbance and replaced on constructed slopes. Slopes will be seeded with seed species native to the area for revegetation.

The US Army Corps of Engineers authorized the excavation and fill of wetlands under Nationwide Permit 14 on December 22, 2005. This authorization is valid until March 18, 2007. If work is commenced or is under contract to commence prior to March 18, 2007, the authorization will remain in effect for one additional year.

WY PRA-GRTE 13(4), North Park Road, Moran Shoulder Widening and Resurfacing

GRTE, in cooperation with WFLHD, plans to widen and pave North Park Road in an area just north of the Moran Entrance Station (0+490 to 0+610). The location is shown on the vicinity maps contained in Appendix A. Topsoil will be stripped from the existing slopes prior to disturbance and replaced on constructed slopes. Slopes will be seeded with seed species native to the area for revegetation. In addition, over a small portion of the North Park Road just south of the Moran Entrance Station (stations 000+245 to 000+375), pavement will be removed, and subgrade will be shaped and resurfaced. There will be no impacts to wetlands as a result of this work on the North Park Road.

WY PRA-GRTE 11(4), Teton Park Road, Spaulding Bay to Jackson Lake Junction

GRTE, in cooperation with WFLHD, plans to resurface 13.744 kilometers (8.541 miles) of Teton Park Road from Spaulding Bay to the Jackson Lake Junction (10+000 to 23+744). The location is shown on the vicinity maps contained in Appendix A. The existing road will be resurfaced with asphalt pavement. Two (2) included miles will incorporate pavement milling and recycling operations. Some existing turnouts, parking areas, and road approaches will also be resurfaced. Additionally an area with poor subgrade will be corrected by subexcavation and placement of free draining material and structural geogrid reinforcement. There will be no impacts to wetlands as a result of work on Teton Park Road.

WY PRA-GRTE 11(4), Eastside Highway, Buffalo Fork Riprap

GRTE in cooperation with WFLHD plans to install riprap revetment on the west side of the Eastside Highway, just south of the Buffalo Fork River Bridge (40+775 to 41+085). The location is shown on the vicinity maps contained in Appendix A. Topsoil will be stripped from the existing slopes prior to disturbance and replaced on constructed slopes. Slopes will be seeded with seed species native to the area for revegetation.

The US Army Corps of Engineers authorized the excavation and fill of wetlands under Nationwide Permit 14 on December 22, 2005. This authorization is valid until March 18, 2007. If work is commenced or is under contract to commence prior to March 18, 2007, the authorization will remain in effect for one additional year.

WY PRA-GRTE 112(1), Signal Mountain Marina Road

GRTE, in cooperation with WFLHD, plans to resurface 0.869 kilometers (0.540 miles) of Signal Mountain Marina Road from Teton Park Road to the Marina access parking area (2+000 to 2+869). The existing road will be resurfaced with asphalt pavement. There will be no impacts to wetlands as a result of work on Signal Mountain Marina Road.

Spread Creek Pit and Snake River Pit have been designated as sites for general staging, stockpiling, crushing, and asphalt production. Spread Creek Pit is designated as an "Optional use Government provided material source" for these projects. Authorization to use Spread Creek Pit as a material source has been granted under an "Authorization To Discharge Storm Water Associated with Mineral Mining Activities (except fuels) Under the National Pollution Discharge Elimination System", authorization number WYR32-0259. This authorization was issued on November 15, 2002, and is valid through March 31, 2007. Spread Creek Pit is located within the boundaries of the Bridger-Teton National Forest (BTNF) adjacent to the GRTE boundary. The remainder of the project is located within GRTE. The location is shown on the vicinity maps contained in Appendix A.

Other activities include the wasting of excess and unsuitable material at Snake River Pit. Authorization of these activities has been sought under the "Permit to Construct Small Wastewater Facility" (Chapter 3), the General Permit for Temporary Discharge (Chapter 2), and through the Wyoming Department of Environmental Quality 1 and Quality Division. These authorizations are not required for this project. Plan sheets that provide details of the

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erosion control measures planned for the Snake River Pit are included in Appendix C, Plan Sheet F.12. Additional plan sheets providing information on the operation and reclamation of both sites, are contained in Appendix C, sheets I.1 through I.6.

1. Sequence of Major Activities

The typical sequences of major soil-disturbing activities for this project are as follows:

- Clearing
- Grubbing
- Topsoil removing/stockpiling
- Culvert installation/extensions
- Milling existing asphalt
- Subexcavation of existing roadway
- Excavation/embankment construction (including wall construction)
- Final grading and paving
- Borrow and Aggregate production (Spread Creek Pit)

2. Total Area of Disturbance

The total area of construction zone is 39.9 hectares (98.5 acres). This total includes 26.7 hectares (66.0 acres) of earth disturbance and 13.2 hectares (32.5 acres) of overlay paving. An additional 4.4 hectares (10.9 acres) of disturbance will take place at the Snake River Pit due to material processing, stockpiling and batch plant and general staging.

Terrain and Vegetation

The terrain of this site is gently rolling, with varying degrees of permeability, and vegetative cover is dominated by Lodgepole pine forests with grass meadows.

3. Site Map

Vicinity maps are contained in Appendix A. Erosion Control plans are contained in Appendix C.

4. Receiving Waters

Waters that may receive runoff from this site include Jackson Lake, Lizard Creek, Spread Creek, Snake River, Dime Creek, Nickel Creek, Quarter Creek and small, unnamed drainages and wetlands. Settling ponds have been designed to accommodate expected capacity from wash operations, plus the precipitation level of a 25-year/24-hour storm event, while still maintaining 0.6 meters (24") of freeboard. Overflow ditches will divert excess water into the extraction area, where it will be allowed to percolate, or a reserve overflow pond will be constructed.

5. Wetland Areas

Approximately 0.36 hectares (0.90 acres) of wetland area will be impacted by this project. Of this total, 0.04 hectares (0.10 acres) will be temporary impacts due to the riprap revetment planned for installation on Eastside Highway, 0.05 hectares (0.12 acres) will be temporary impacts due to construction activity on North Park Road and the remaining 0.27 hectares (0.68 acres) will be permanent impacts due to shoulder widening and other construction activity on North Park Road.

NPS will mitigate wetland impacts at a rate of greater than 3.5:1 at the Snake River Pit.

Controls

The Erosion Control plans and details contained in Appendix C show the intended location of the following planned elements.

The above-referenced sections are contained in Appendix D, along with Special Contract Requirements (SCR's) for this project that are applicable to these sections.

Maintenance

The Contractor will be responsible for the maintenance and cleanup of erosion control measures as outlined in the FP-96 and SCR's, specifically Sections 105, 107, and 157.

Inspection

The pollution control measures will be inspected by the Contractor as described in the FP-96 specification 157.12, under the guidance of the Project Engineer and/or his/her representative. Records of inspections shall be maintained for three years.

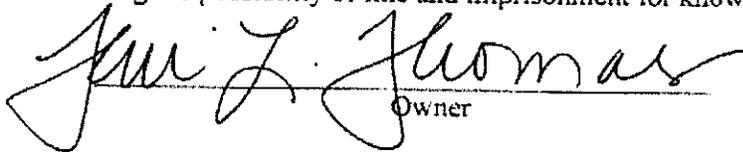
If differing site conditions or contract modifications necessitate changes to the planned erosion control measures, the SWPPP will be updated to reflect the changes.

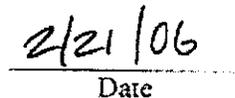
Training

Annually, WFLHD Project Engineers and Inspectors receive training on designing, installing, maintaining and inspection of pollution control measures.

OWNER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.


Owner


Date

**STORM WATER POLLUTION PREVENTION PLAN
FOR DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES
IN
GRAND TETON NATIONAL PARK, WY
FOR
North Park Road, Snake River Bridge**

**for
State of Wyoming
Department of Environmental Quality
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Pollution Prevention Team

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Project Description

The Western Federal Lands Highway Division (WFLHD) of the Federal Highway Administration (FHWA), in partnership with the Grand Teton National Park of the National Park Service (NPS), is planning the repair of the Snake River Bridge at Flagg Ranch, within the Grand Teton National Park (GRTE). This bridge is located near Milepost 24.5 on US Highway 89/287, also known as the North Park Road, Route 13.

WFLHD proposes the following actions for the bridge over the Snake River: replacement of the bridge deck, girders, and rail, repair of abutments and piers, and scour protection of footings and abutments. The parking area adjacent to the Snake River Bridge will be used for staging and stockpiling of materials. The closed Snake River campground adjacent to the bridge will be used as a contractor camp. Existing pavement surface in the campground will be removed and recycled and the area reseeded as part of an ongoing rehabilitation effort by GRTE.

Additional ancillary sites that will be used for staging, wasting, stockpiling, and material sources include the Spread Creek Pit and Snake River Pit. Authorization to use these sites for general staging, stockpiling, crushing, and asphalt production was received under the "Authorization to Discharge Stormwater Associated with Large Construction Activities under the National Pollutant Discharge Elimination System," authorization number WYR103025. This authorization was effective February 28, 2006, and is valid through March 15, 2011. Authorization to use Spread Creek Pit as a material source has been granted under an "Authorization To Discharge Storm Water Associated with Mineral Mining Activities (except fuels) Under the National Pollution Discharge Elimination System," authorization number WYR32-0259. This authorization was issued on November 15, 2002, and is valid through August 31, 2007. Snake River Pit will also be used for the wasting of excess and unsuitable material. Authorization of these activities has been granted under the "Authorization to Discharge Stormwater Associated with Large Construction Activities under the National Pollutant Discharge Elimination System," authorization number WYR101540. This authorization was effective March 5, 2003, and is valid through March 15, 2011.

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North Park Road (Snake River Bridge), & Grand Teton Park Pathways (Phase I)

1. Sequence of Major Activities

The typical sequences of major soil-disturbing activities for this project are as follows:

- Borrow and Aggregate Production (Spread Creek Pit)
- Pier rehabilitation (concrete repair and subsurface pressure grouting)
- Bridge installation (abutment alteration, girders, deck, and rail)
- Final grading and paving
- Staging area rehabilitation (soil de-compaction and minor grading)

2. Total Area of Disturbance

The total area of construction zone is 1 hectare (2.5 acres), including the staging area and contractor camp. This total includes 0.3 hectare (0.8 acre) of earth disturbance directly associated with bridge and road reconstruction, and includes asphalt removal at the contractor camp.

Terrain and Vegetation

The terrain of this site is gently rolling, and the valley floor is comprised of loose rocky soil through which water percolates easily. Vegetative cover is primarily dominated by big leaf sagebrush.

3. Site Map

Vicinity maps are contained in Appendix A. Erosion Control plans are contained in Appendix C.

4. Receiving Waters

Waters that may receive runoff from this site include the Snake River and small, unnamed drainages and wetlands.

5. Wetland Areas

Approximately 0.054 acre of waters of the U.S. will be temporarily impacted. No permanent wetland impacts will occur.

Controls

The Erosion Control plans and details contained in Appendix C show the intended location of the following planned elements.

1. Erosion and Sediment Controls:

Measures of controlling soil erosion and increased sediment due to construction activities include the following:

- Placing silt fence or sediment wattles along the edges of wetlands adjacent to the construction limits.
- Placing silt fence or sediment wattles along ditch lines near culvert inlets and at selected culvert outlets.
- Temporary stockpiled topsoil in the Spread Creek Pit will be seeded with seed species native to the area.
- Seeded areas in the Spread Creek and Snake River Pits will be mulched.

Stabilization measures include the following:

- Conserving existing topsoil from disturbed areas for later placement on finished slopes. Conserved topsoil will be replaced onto completed slopes within the same construction season.
- All slopes receiving topsoil will be seeded with seed species native to the area.
- Seeded areas will be mulched.

Storm Water Pollution Prevention Plan

Project: WY PRA-GRTE 13(4), 13(8), & WY PLD-GRTE 710(1), North Park Road (Phase II), North Park Road (Snake River Bridge), & Grand Teton Park Pathways (Phase I)

2. **Storm Water Management:**

The following measures will be implemented to control storm water through the project after completion:

- Any Culvert and drain pipe outlets will receive riprap energy dissipaters where high erosion potential exists.
- Underdrains will be installed at specific sites to reduce ditch erosion and undermining of the roadway.

3. **Other Controls:**

Additional measures to be taken are addressed in the following sections of the *Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, Federal Highway Administration, 1996* (FP-03):

- Material Source Operations: *Section 105, Control of Material*
- General Erosion Control: *Section 157 – Soil Erosion Control*
- Dust Control: *Section 158 – Watering for Dust Control*
- Waste Disposal, Chemical and Fuel Storage, and Pollutants: *Section 107 – Legal Relations and Responsibility to the Public.*
 - Materials that may be stored onsite, and which are subject to the controls specified in the above contract requirements, include the following:
 - Concrete
 - Petroleum based products (diesel, gasoline, asphalt cement and emulsified asphalt)
 - Solvents
 - Paints
 - Fertilizers
 - Fuel
 - Lumber
 - Road aggregate
 - Metal and PVC pipes
 - Culverts
 - Geotextiles
 - Steel guard rail
 - Contractors are required to submit a Hazardous Spill Plan including details for prevention, containment and cleanup.

The above-referenced sections are contained in Appendix D, along with Special Contract Requirements (SCR's) for this project that are applicable to these sections.

Maintenance

The Contractor will be responsible for the maintenance and cleanup of erosion control measures as outlined in the FP-03 and SCR's, specifically Sections 105, 107, and 157.

Inspection

The pollution control measures will be inspected by the Contractor as described in the FP-03 specification 157.12, under the guidance of the Project Engineer and/or his/her representative. Records of inspections shall be maintained for three years.

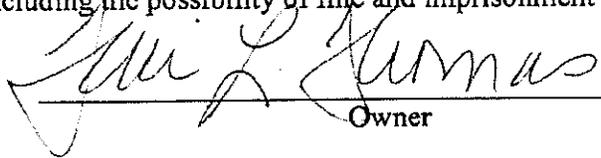
If differing site conditions or contract modifications necessitate changes to the planned erosion control measures, the SWPPP will be updated to reflect the changes.

Training

Annually, WFLHD Project Engineers and Inspectors receive training on designing, installing, maintaining and inspection of pollution control measures.

OWNER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Owner

11/7/07
Date

**STORM WATER POLLUTION PREVENTION PLAN
FOR DISCHARGES ASSOCIATED WITH CONSTRUCTION ACTIVITIES
IN
GRAND TETON NATIONAL PARK, WY
FOR
Grand Teton Park Pathways, Phase I

for
State of Wyoming
Department of Environmental Quality
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Project Description

The Western Federal Lands Highway Division (WFLHD) of the Federal Highway Administration (FHWA), in partnership with the Grand Teton National Park (GRTE) of the National Park Service (NPS), is planning the construction of multi-use pathways to accommodate cyclist and pedestrian traffic. The purpose of the proposed action is to provide safe facilities for cyclists and pedestrians to improve recreational opportunities for park visitors while reducing some safety risks, especially those associated between motorists and non-motorists.

WFLHD proposes construction of approximately 8 miles of multi-use pathway, 3 meter paved width with 0.6 meter wide aggregate-topsoil shoulders, adjacent to Teton Park Road (TPR). The pathways will generally be located approximately 50 feet from TPR, but in some areas it will deviate up to about 150 feet from the main road. The construction will begin at the Dornan's (a private in-holding) property boundary and terminating at the South Jenny Lake parking area. This action also includes completion of an additional pathway spur connecting the main pathway at Moose to the new Moose Visitor Center parking area. Existing developed sites (turnouts, parking areas, picnic areas, administrative sites) adjacent to Teton Park Road will be used for staging and stockpiling of materials and restored and possibly reconfigured after use.

Spread Creek Pit and Snake River Pit have been designated as sites for general staging, stockpiling, crushing, and asphalt production for this project, as well as for projects that will be occurring concurrently. Authorization to use these sites was obtained under an "Authorization to Discharge Stormwater Associated with Large Construction Activities under the National Pollutant Discharge Elimination System," authorization number WYR103025. This authorization was effective February 28, 2006, and is valid through March 15, 2011.

Spread Creek Pit is also designated as an "Optional use Government provided material source" for these projects. Authorization to use Spread Creek Pit as a material source has been granted under an "Authorization To Discharge Storm Water Associated with Mineral Mining Activities (except fuels) under the National Pollution Discharge

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Project: WY PRA-GRTE 13(4), 13(8), & WY PLD-GRTE 710(1), North Park Road (Phase II), North Park Road (Snake River Bridge), & Grand Teton Park Pathways (Phase I)

Elimination System,” authorization number WYR32-0259. This authorization was issued on November 15, 2002, and is valid through August 31, 2007. Snake River Pit will also be used for the wasting of excess and unsuitable material. Authorization of these activities has been granted under the “Authorization to Discharge Stormwater Associated with Large Construction Activities under the National Pollutant Discharge Elimination System,” authorization number WYR101540. This authorization was effective March 5, 2003, and is valid through March 15, 2011.

1. **Sequence of Major Activities**

The typical sequences of major soil-disturbing activities for this project are as follows:

- Borrow and Aggregate production (Spread Creek Pit, optional use)
- Clearing
- Grubbing
- Topsoil removing/stockpiling
- Culvert installation/extensions
- Subexcavation
- Excavation/embankment construction
- Bridge installation
- Final grading and paving

2. **Total Area of Disturbance**

For permitting purposes the total area of construction zone is 8.5 hectares (21 acres). This total includes 7.7 hectares (19 acres) of earth disturbance associated with pathway construction.

Terrain and Vegetation

The terrain of this site is gently rolling, and the valley floor is comprised of loose rocky soil through which water percolates easily. Vegetative cover is primarily dominated by big leaf sagebrush.

3. **Site Map**

Vicinity maps are contained in Appendix A. Erosion Control plans are contained in Appendix C.

4. **Receiving Waters**

Waters that may receive runoff from this site include Snake River, Cottonwood Creek, Taggart Creek, Beaver Creek and small, unnamed drainages and wetlands.

5. **Wetland Areas**

At Cottonwood Creek, approximately 0.03 acre of wetlands will be permanently impacted and approximately 0.01 acre of waters of the U.S. will be temporarily impacted.

Controls

The Erosion Control plans and details contained in Appendix C show the intended location of the following planned elements.

1. **Erosion and Sediment Controls:**

Measures of controlling soil erosion and increased sediment due to construction activities include the following:

- Placing silt fence or sediment wattles along the edges of wetlands adjacent to the construction limits.
- Placing silt fence or sediment wattles along ditch lines near culvert inlets and at selected culvert outlets.
- BMPs, such as turbidity curtains, will be implemented during in-water work.
- Temporary stockpiled topsoil in the Spread Creek Pit will be seeded with seed species native to the area.

Storm Water Pollution Prevention Plan

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- Seeded areas in the Spread Creek and Snake River Pits will be mulched.

Stabilization measures include the following:

- Conserving existing topsoil from disturbed areas for later placement on finished slopes. Conserved topsoil will be replaced onto completed slopes within the same construction season.
- All slopes receiving topsoil will be seeded with seed species native to the area.
- Seeded areas will be mulched.

2. Storm Water Management:

The following measures will be implemented to control storm water through the project after completion:

- Culvert outlets will receive riprap energy dissipaters where high erosion potential exists.
- Rock lined ditch will be constructed at specific sites to reduce ditch erosion due to steep grades.
- Underdrains will be installed at specific sites to reduce ditch erosion and undermining of the roadway.
- Where existing rock lined ditches with underdrains will be covered by the new roadway, the ditches and underdrains will be left in place to allow drainage to prevent undermining of the roadway.

3. Other Controls:

Additional measures to be taken are addressed in the following sections of the *Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects, Federal Highway Administration, 2003* (FP-03):

- Material Source Operations: *Section 105, Control of Material*
- General Erosion Control: *Section 157 – Soil Erosion Control*
- Dust Control: *Section 158 – Watering for Dust Control*
- Waste Disposal, Chemical and Fuel Storage, and Pollutants: *Section 107 – Legal Relations and Responsibility to the Public.*
 - Materials that may be stored onsite, and which are subject to the controls specified in the above contract requirements, include the following:
 - Concrete
 - Petroleum based products (diesel, gasoline, asphalt cement and emulsified asphalt)
 - Solvents
 - Paints
 - Fertilizers
 - Fuel
 - Lumber
 - Road aggregate
 - Metal, PVC, and concrete pipes and culverts
 - Geotextiles
 - Steel guard rail
 - Contractors are required to submit a Hazardous Spill Plan including details for prevention, containment and cleanup.

The above-referenced sections are contained in Appendix D, along with Special Contract Requirements (SCRs) for this project that are applicable to these sections.

Maintenance

The Contractor will be responsible for the maintenance and cleanup of erosion control measures as outlined in the FP-03 and SCRs, specifically Sections 105, 107, and 157.

Inspection

The pollution control measures will be inspected by the Contractor as described in the FP-03 specification 157.12, under the guidance of the Project Engineer and/or his/her representative. Records of inspections shall be maintained for three years. If differing site conditions or contract modifications necessitate changes to the planned erosion control measures, the SWPPP will be updated to reflect the changes.

Storm Water Pollution Prevention Plan

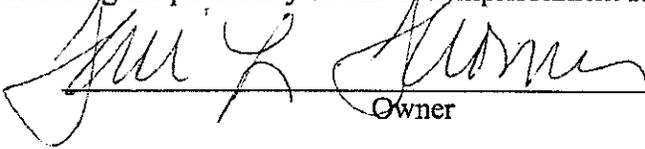
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Training

Annually, WFLHD Project Engineers and Inspectors receive training on designing, installing, maintaining and inspection of pollution control measures.

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Owner



Date

**STORMWATER POLLUTION PREVENTION PLAN
FOR DISCHARGES
ASSOCIATED WITH MINERAL MINING ACTIVITIES
IN
BRIDGER-TETON NATIONAL FOREST
FOR
SPREAD CREEK MATERIALS SOURCE**

**for
State of Wyoming
Department of Environmental Quality
Water Quality Division**

Pollution Prevention Team

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Description of Potential Pollutant Sources

There are no potential sources that will add significant amounts of pollutants to storm water discharges. No storm sewers are located in the area. The material source is a gravel/cobble/clay deposit. Material will be approximately 30 feet below natural ground surface (see Section 1I of the plan sheets). Basic activities will consist of excavating, crushing, washing and stockpiling of aggregates. Portions or all of the material will be loaded and hauled for use on road projects in Grand Teton National Park. Any desired remaining material may be stockpiled on site for future use. Unsuitable earthen material (waste) from the project site and gravel production operations will be used in the reclamation process.

Storm Water Pollution Prevention Plan
Project: WY PRA-GRTE 13(4), 13(8), & WY PLD-GRTE 710(1), North Park Road (Phase II),
North Park Road (Snake River Bridge), & Grand Teton Park Pathways (Phase I)

3. Site Map

See sheet 1A.4 and Section 1I of the plan sheets.

Location of certain activities, such as the fueling stations, equipment storage, and equipment maintenance will be restricted to the boundaries shown on the mapping and within the limitations as prescribed under the Special Contract Requirements of Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects (FP-03), Section 105. CONTROL OF MATERIALS (Subsection 105.04 Storing and Handling Material), Section 107.--LEGAL RELATIONS AND RESPONSIBILITY TO THE PUBLIC (Subsection 107.10 Environmental Protection), Federal Acquisition Regulations Clause 52.223-3 CLEAN AIR AND WATER and 52.236-10 OPERATIONS AND STORAGE AREAS. The exact location of these sites will be determined by the Contractor.

4. Drainage

It is not expected that a flow of storm water will occur due to the excavation area being below the natural ground surface. In addition, an elevated undisturbed berm will be left in place to serve as a buffer between Spread Creek and the materials source. There are no areas with significant potential for erosion. For aggregate washing operations, additional measures have been added to settling ponds' free board requirements and surface flow berms to account for any storm events.

5. Exposed Materials Inventory

Major material to be handled at the site will be a deposit of gravel and cobble. Excavated materials will be crushed and stockpiled at locations within the source area. Storm runoff from precipitation will be confined to the excavated area, acting as a detention pond. There are no other materials that will be exposed to precipitation.

6. Spills and Leaks

There is no record of previous significant spills and leaks of toxic or hazardous pollutants that have occurred. cursory observations of the area revealed no such evidence of pollution.

7. Sampling Data

There is no recorded discharge sampling data for this site.

8. Risk Identification and Summary of Potential Pollutant Sources

It is anticipated there will be no significant potential pollutant sources on this project. Minor potential source would be the petroleum base fuels for the equipment. Contract requirements for control of potential pollutants are as listed in the specifications identified in item #3 above.

9. **Measures and Controls**

- a) Good Housekeeping- The area will be kept clean.
- b) Preventive Maintenance- With no significant potential of pollution from the excavation and crushing activities, emphasis will be placed on containment of petroleum products. This will be the contractor's responsibility, and will be enforced by the project engineer. All potential pollutant sources will be inspected daily; if a leak or spill is detected, the source will be repaired.
- c) Spill Prevention and Response Procedures- The contractor is required to submit a Spill Prevention, Control, and Countermeasure plan according to Section 107.10 (c).

Equipment shall be maintained and kept free of major leaks that would introduce petroleum products into the soils. Fuel tanks shall be designed and constructed for the storage of fuels. Earthen dikes or other suitable barriers shall be built to surround fuel tanks to prevent petroleum products from entering the waters of the U.S. Fuel pumps will be attended during dispensing and loading of tanks. Unattended pumps shall be locked. Storage of equipment will be contained to locations determined by the Contractor prior to construction, stating what actions will be taken in case of a spill, in accordance with applicable regulations. This plan will also incorporate preventive measures to be implemented for preventing spills.
- d) Inspections- Daily inspections will be made on all equipment. Maintenance needs will be performed according to item 9(b) above.
- e) Employee Training- This will be a part of the contractor's Spill Prevention, Control, and Countermeasure plan.
- f) Record Keeping & Internal Reporting Procedures-. This will be a part of the contractor's Hazardous Spill Plan, according to applicable regulations.
- g) Non-Storm Water Discharges- In the event of a spill or discharge, the discharge will be tested or evaluated for the presence of non-storm water discharges in accordance with applicable regulations.
- h) Sediment and Erosion Control- There is no known high potential for significant soil erosion at the site. Best management practices will be performed in accordance with Section 157.—EROSION CONTROL of Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects.
- i) Management of Runoff- See item 9(h) above.

10. **Comprehensive Site Compliance Evaluation**

The contractor's Spill Prevention, Control, and Countermeasure plan shall require an annual site inspection and a signed report to be kept available at the site during use.

SNAKE RIVER PIT

STORMWATER POLLUTION PREVENTION PLAN

SECTION 1 SITE DESCRIPTION

1.1 INTRODUCTION

This Storm Water Pollution Prevention Plan (SWPPP) has been prepared to obtain coverage under the NPDES general construction storm water permit for the reclamation of Snake River Gravel Mine Site. The site is located within the John D. Rockefeller, Jr., Memorial Parkway approximately 0.85 miles southwest of the Flagg Ranch in the SE1/4 of Section 29, Township 48 North, Range 115 West, Sixth Principal Meridian (See Figure No. 1). The site is identified as the State of Wyoming's Department of Environmental Quality, Abandoned Mine Land Division, Project 17F-8.

This document is arranged into the following sections:

- Section 1 – Description of site and planned reclamation activities.
- Section 2 – Description of runoff controls.
- Section 3 – Maintenance details.

1.2 CONSTRUCTION ACTIVITIES

The major goal of the project is to bring the Snake River Gravel Mine Site into compliance with the Clean Water Act by restoring the four (4) existing pits and mitigating for the losses of approximately 1.1 acres of wetland channels and approximately 4.6 acres of pond habitat.

The major components of construction work for AML Project 17F-8 will include the following:

- A. Removal and stockpiling of available topsoil and subsoil for final cover material.
- B. Excavation, hauling, placement, and grading of the site to the elevations and grades as shown on the construction drawings. The elevations and grades will be constructed in a geomorphically stable manner and site drainage will adequately remove water runoff from the project site.
- C. Special handling of submerged aquatic soils including excavation, stockpiling and placement of said soils to designated areas as directed by the Engineer.
- D. Special handling of unsuitable material including excavation, placement and encapsulation within the designated disposal area as directed by the Engineer.
- E. Constructing and improving drainage channels and performing site grading in accordance with the drawings and these specifications.
- F. Revegetation and establishment of indigenous plant communities along and within the newly constructed wetlands and uplands.

1.3 CONSTRUCTION SEQUENCE

The general sequence of major construction activities for the Snake River Gravel Mine Site is detailed below:

- A. Whereas present, all available topsoil at the designated excavation and embankment areas to be regraded will be stripped prior to and during construction activities and stockpiled in designated location(s) in a manner to mitigate wind and water erosion.
- B. Salvage all available submerged aquatic soils from the pond areas designated to be backfilled.
- C. Remove and place contaminated materials from the surface of the existing topsoil/coversoil stockpiles to those portions of the pond areas designated to be backfilled.
- D. Excavate, haul and place any unsuitable materials and debris that may be present on the surface to the designated disposal area.
- E. Excavate, haul and place unclassified soils to the lines and grades as shown on the drawings or as directed by the Engineer. Regrade all disturbed areas.
- F. Direct haul and place topsoil/coversoil materials from the existing on-site stockpiles to the regraded areas to create the desired aquatic and vegetation environments. When removal of the existing topsoil/coversoil material stockpiles is necessary to allow access to other categories of material and direct hauling and placement is not possible, the Engineer will direct salvage of these materials by stockpiling in a temporary location.
- G. Install all erosion control measures.
- H. Revegetation and establishment of indigenous plant communities along and within the newly constructed wetlands and uplands. Final activities will include ripping, disking, and hand planting of indigenous herbaceous and willow plant communities.

1.4 DISTURBANCE AREAS

The Snake River Gravel Mine Site is approximately 68 acres and the total estimated acreage to be disturbed during construction activities, including the designated staging and unsuitable material disposal areas, is approximately 70.5 acres. All of the disturbed acres will be graded and revegetated with the exception of the designated future National Park Service (NPS) staging and material placement areas (approximately 15.5 acres). These areas will be retained by the NPS to facilitate future road construction projects.

1.5 ESTIMATED SCS RUNOFF CURVE NUMBERS

An estimate of the SCS Runoff Curve Numbers for each stage of construction activity is summarized in the following table. Sedimentation after construction will be negligible.

CONSTRUCTION PERIOD	DESCRIPTION OF AREA	SCS RUNOFF CURVE NUMBER
EXISTING SITE CONDITIONS	GRADED (No Vegetation)	86
CONSTRUCTION COMPLETED	RECLAIMED AREAS	86
THREE (3) YEARS AFTER COMPLETION	RECLAIMED AREAS	61

1.6 SITE MAPS

The Site Grading Plan (Figure No. 2) for the Snake River Gravel Mine Site indicates the existing and proposed conditions and identifies the anticipated area of disturbance. Figure No. 3 provides a conceptual overview of the aquatic and vegetative environments following completion of grading and planting activities. The Construction Manager will require the placement of erosion control or stabilization measures as deemed necessary. All drainages at the site are ephemeral.

Surface drainage will flow into an existing ephemeral ditch located to the south and southwest of the site. The ditch is a southwesterly trending tributary that flows into the Snake River. Erosion and sediment control measures that will be used on the site are detailed in Figure No. 4.

1.7 RECEIVING WATERS

Potential receiving waters for the site are several unnamed ephemeral draws located northeast of the site. Surface drainage from the site flows to the southwest and eventually into the existing unnamed ephemeral ditch as noted above.

SECTION 2 CONTROLS

Practices utilized to control erosion, sedimentation and manage storm water runoff during and after construction activities are described in the following sections.

2.1 FABRIC SEDIMENT FENCE

Sediment fence will be placed perpendicular to the direction of runoff within existing drainage structures or natural drainage ways so that any sedimentation originating from the project site will be intercepted and reduced within the drainage pathways. The fencing will be left in-place for later removal by AML or their designee. Sediment fence installation details are depicted on Figure No. 4.

2.2 STRAW BALE CHECKS

Straw bale checks will consist of native hay and shall be staked in groups of five in drainages downgradient of construction activities to intercept and reduce offsite sediment transportation. The bales shall be left in-place following completion of construction. Bale check installation details are shown on Figure No. 5.

2.3 GRADING RESTORATION

The final graded site will restore approximately 8.8 acres of uplands, 11.8 acres of willow-dominated wetlands, 22.3 acres of herbaceous wet meadows, 3.5 acres of aquatic, emergent wetlands, and 9.0 acres of open water habitat.

The slopes will be constructed in a stable manner, provide site drainage, and will blend with the adjacent topography. Topsoil will be placed only in the willow-dominated and upland areas. The Construction Manager will direct final grading and placement of topsoils.

2.4 REVEGETATION

Following grading and placement of topsoil, revegetation activities will be conducted in the following manner.

PART 1: Herbaceous Wetland Plant Seed Collection, Storage, and Propagation

The work shall include seed collection on the Snake River floodplain in John D. Rockefeller, Jr. Memorial Parkway or Grand Teton National Park within 15 km of the Snake River Gravel Pit Site. Seed collection will be performed during the summer/fall of 2002. Seeds will be stored at the grower's facility in controlled conditions. All seed collections will be carefully labeled as to species and collection site. Seeds will be treated as necessary to ensure germination in the winter of 2003. Only seeds collected in the specified area will be grown for this project. No substitutions are allowed. Seedlings will be grown in sterilized topsoil so that no unintentional plant introductions occur.

PART 2: Numbers and Species of Herbaceous Wetland Plants

<u>Common Name</u>	<u>Species</u>	<u>Numbers</u>
Spikerush	<i>Eleocharis palustris</i>	34,500
Blister Sedge	<i>Carex vesicaria</i>	34,500
Beaked Sedge	<i>Carex utriculata</i>	132,500
Water Sedge	<i>Carex aquatilis</i>	150,000
Bluejoint Grass	<i>Calamagrostis canadensis</i>	<u>106,000</u>
	Total	457,500

PART 3: Planting

Plants shall be planted in the appropriate zones as identified on Sheet No. 14 of the project design plans. An additional 3 acres of isolated willow areas are to be created within the Upper Sedge zone. Each individual plant shall be installed into a hole equal to the size of the container. The hole shall be formed using a crowbar or similar tool. The container shall then be removed from the plant, the plant placed in the hole and soil packed firmly around the roots. Planting of beaked sedge, water sedge and bluejoint grass shall begin on 1 June 2003 and shall be completed within 1 week. Planting of spikerush and blister sedge shall begin on 15 June 2003 and be completed within 1 week.

Willow cuttings will be of live stems (live buds present) and will be collected in early May 2003. Cuttings will be 24 inches in length. No portion of the cutting will be less than 3/8 inch diameter. Plants will be planted within 24-48 hours of collection. A hole will be opened with a bar to a depth of 18 inches and the willow cutting placed 18 inches into the hole with the bottom end down. Once the cutting is installed the area around the cutting must be tamped so that the soil is in contact with the cutting throughout its length and no air pockets exist. Willows will be planted only into the willow planting zone and within the additional 3 acres of willow habitat to be created within the upper sedge zone. A total of 35,000 willows will be planted.

2.5 STAGING AREAS

Fuel storage and staging areas will be managed in such a manner that no off-site drainage will be allowed to enter or exit the area. Surface runoff originating from the staging area will be contained within the area. All products shall be stored in the staging area in such a manner to conform to all County, State, and Federal regulations. Areas containing petroleum products including fuel storage tanks or trucks shall be bermed and lined with a minimum 20 mil High Density Polyethylene (HDPE) geomembrane (or equivalent) to contain spills and allow complete clean up.

2.6 OTHER CONTROLS

1. No materials including, but not limited to solid waste, debris, or petroleum products, will be placed in or situated such that they may enter the adjacent unnamed ephemeral drainages, any stream, tributary or other drainage channels. Contaminated or dangerous materials encountered during construction activities will be disposed of off-site in accordance with EPA and state health requirements.
2. Dust control measures via watering will be performed in all phases of construction work including, but not limited to, the haul roads, excavation areas, and soil placement/backfill areas.

Storm Water Pollution Prevention Plan

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3. Sanitation facilities will be provided and maintained in a neat and sanitary condition. Such accommodations will comply with the requirements and regulations of the General Safety and Health Regulations of Wyoming Occupational Health and Safety Commission and State and local Boards of Health as enforced by the County Health Officer. The facilities will not be allowed to be a public nuisance.
4. Any liquid materials or solid materials related to construction activities and/or equipment will be properly contained and confined to the staging area. Refueling and maintenance of construction equipment will be performed only within the staging area.
5. Pollutant sources other than previously described construction activities are not anticipated, as no asphalt or concrete plants will be associated with this project.
6. Mud and/or sediment originating from the project sites that are dispersed or placed on any roads will be removed as directed by the Project Engineer in accordance with Wyoming Department of Transportation and Grand Teton National Park rules and regulations.

SECTION 3 MAINTENANCE/INSPECTIONS/TRAINING

3.1 MAINTENANCE

The project control and protective features, as described in the Storm Water Pollution Prevention Plan, will be maintained so that each feature is adequately functioning and operating properly. Maintenance activities will include, but will not be limited to the following:

1. Material removed from the fabric sediment fence and bale check areas will be placed such that it will not directly re-enter the existing drainage structure or natural drainage way or cause sedimentation problems off-site. If the removed sediment material can not be incorporated into backfill areas, it will be placed in a location where proper stabilization (revegetation) of the area can be performed, as directed by the Construction Manager.
2. A maintenance checklist is provided to ensure that corrective measures are followed in repairing damaged erosion control and/or storm water containment features. This checklist can be used in conjunction with the inspection tasks described below.

3.2 INSPECTIONS

Qualified personnel, such as the Construction Manager, Project Officer, etc. shall inspect the following:

1. Disturbed areas of the construction site that are not to final stabilization, as described in the Storm Water Pollution Prevention Plan.
2. Structural control measures such as fabric sediment fence and straw bale checks.
3. Locations where vehicles enter or exit the project site.

These inspections will be performed once every seven (7) days and within twenty-four (24) hours of any precipitation or snow melt event. Inspections may be more frequent as deemed necessary by the Construction Manager.

Following each inspection, a written report certified in accordance with Department of Environmental Quality regulations will be prepared and signed by the Construction Manager. The inspection reports will detail the relevant repair activities and will include the maintenance checklist. The checklist will assist the inspector in determining the cause and potential corrective measure(s) for damaged control features.

3.3 TRAINING

Designated personnel, at the direction of the Construction Manager, will be instructed as to the inspection of the erosion, sedimentation, and storm water management controls that are related to each site. Instruction will include the review of the following documents:

1. The Construction Drawings.
2. The Contract Documents and Specifications, particularly Sections I, J, K, and L.
3. The Storm Water Pollution Prevention Plan.

4. By reference herein, the Construction Plans, Contract Documents, and Specifications are made a part of the Storm Water Pollution Prevention Plan.

Training will be initiated prior to construction commencement and continued training will be achieved through scheduled inspections and relevant reporting.