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Reclamation and Development Grants Program

Department of Natural Resources and Conservation

Conservation and Resource Development Division

Volume 5

Reclamation and Development Grants Program

Project Evaluations and Funding Recommendations
For the 2025 Biennium

and

2013 Through 2021 Biennia Status Report

Prepared by the

Montana
Department of Natural Resources
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TABLE OF CONTENTS

LIST OF ABBREVIATIONS

CARDD..... Conservation and Resource Development Division
CD ..... Conservation District
CECRA..... Comprehensive Environmental Cleanup and Responsibility Act of 1989, also known as State Superfund Program
DEQ..... Montana Department of Environmental Quality
DNRC ..... Montana Department of Natural Resources and Conservation
EPA ..... U.S. Environmental Protection Agency
HB ..... House Bill
MCA ..... *Montana Code Annotated*
MEPA ..... Montana Environmental Policy Act
MRH ..... Milwaukee Roundhouse Facility
MT ..... Montana
RDG/RDGP ..... Reclamation and Development Grants Program
RIGWA ..... Resource Indemnity Groundwater Assessment Tax
RIT..... Resource Indemnity Trust
RRGL ..... Renewable Resource Grant and Loan Program
SSRA..... State Special Revenue Account
StAGE ..... Stream and Gage Explorer
SWPB..... State Water Projects Bureau
US ..... United States of America
VCRA ..... Voluntary Cleanup and Redevelopment Act
WMB..... Water Management Bureau

PROJECTS SUBMITTED FOR FUNDING IN THE 2025 BIENNIUM

The following is a list of projects submitted for funding in the 2025 biennium. For easy reference, the list is alphabetized by the names of the project sponsors. However, in Chapter II the project assessments and recommendations are presented in the order of their ranking by the Montana Department of Natural Resources and Conservation (DNRC) and the Governor.

APPLICANT NAME – Project Title **Page**

CHAPTER I
Program Description and Procedures

The Reclamation and Development Grants Program (RDGP) is a state-funded grant program designed to fund projects that *"indemnify the people of the state for the effects of mineral development on public resources and that meet other crucial state needs serving the public interest and the total environment of the citizens of Montana"* (90-2-1102, MCA). The program, established by the 1987 Montana Legislature, is administered by the Montana Department of Natural Resources and Conservation (DNRC).

The RDGP Act (90-2-1112, MCA) requires that the Governor submit, by the first day of each regular session of the Legislature, a list of all grant proposals received along with his or her recommended priorities for funding (Table 1). Administrative rules (ARM 36.19.304) further provide that the DNRC must furnish to the Legislature a status report on previously funded projects (Chapter III). This document fulfills the requirements of those directives.

Funding Authority
RDGP grants are funded by revenue generated from resource extraction taxes. Portions of the following sources of revenue are deposited in the natural resource projects state special revenue account (SSRA): the resource indemnity groundwater assessment tax (RIGWA), the oil and gas production tax, and interest earnings from the resource indemnity trust fund (RIT). Funds from the natural resource projects SSRA are shared by DNRC's two natural resource grant programs: the RDGP and the Renewable Resource Grant and Loan Program (RRGL).

The 2021 Legislature approved funding for 17 projects through 3 bills. House Bill (HB) 7 appropriated $3,702,833 for 8 projects through the natural resource SSRA. HB 14 authorized $2,099,322 for 7 additional projects funded through a transfer from the general fund to the natural resource projects SSRA. HB 632 authorized $429,000 of federal funding through the American Rescue Plan Act for one project. Chapter III provides a status update on these projects.

The 2021 Legislature approved authorization of $800,000 in project planning grant funding. Chapter IV describes DNRC's role in the administration of planning grants and list the 18 planning grants that were approved for funding since the last publication of the Governor's Executive Budget, updated as of October 2022.

Project Solicitation
In February 2022, DNRC notified all Montana communities, counties, the university system, conservation districts (CDs), state agencies, state legislators, and others who might benefit by program participation that the grant application for 2022 was available electronically. The application deadline was May 16, 2022. DNRC received 11 applications for RDGP funding totaling over $3.9 million. These projects are listed alphabetically by applicant on page iii. A map of the proposed projects is included at the end of this chapter. Project assessments and recommendations are presented in Chapter II.

Project Eligibility
The following excerpt from the RDGP Act establishes project eligibility criteria:

1. To be eligible for funding under the RDGP, the proposed project must provide benefits in one or more of the following categories:
   a. Reclamation of land, water, or other resources adversely affected by mineral development;
   b. Mitigation of damage to public resources caused by mineral development;
   c. Research, demonstration, or technical assistance to promote the wise use of Montana minerals, including efforts to make processing more environmentally compatible;
   d. Investigation and remediation of sites where hazardous wastes or regulated substances threaten public health or the environment; and,
   e. Research to assess existing or potential environmental damage resulting from mineral development.

2. If a crucial state need exists to protect Montana's environment, the DNRC may evaluate, and the Governor may recommend that the Legislature approve funding for projects in addition to those described above.

Applicant Eligibility
Any department, agency, board, commission, or other division of state government or any city, county, or other political subdivision or tribal government within the state may apply for a grant from the RDGP.

Funding Limits
No grant may exceed $500,000, and there is no minimum funding limit. An applicant proposing more than one project may submit a separate application for each. Match funding is not required but may raise the rank of the project.

Application Review and Ranking Procedures
Grant applications are evaluated for the technical and financial feasibility of proposed projects, provision of public benefits, need and urgency, and impacts on the environment. Reviewers include DNRC staff members within DNRC's Conservation and Resource Development Division (CARDD); contracted engineering and consulting firms; and federal, state, and university personnel with expertise in specific project areas. For each application, project reviewers submit a descriptive project assessment incorporating their concerns, ideas, and comments.

More funds are requested than are available. Therefore, the department ranks feasible projects so that it can recommend funding priorities and funding levels to the Governor and the Legislature. Evaluation criteria established by the 1987 Legislature include, but are not limited to:

1. The degree to which the project will provide benefits in its eligibility category or categories;
2. The degree to which the project will provide public benefits;
3. The degree to which the project will promote, enhance, or advance the policies and purposes of the RDGP;
4. The degree to which the project will provide for the conservation of natural resources;
5. The degree of need and urgency for the project;
6. The extent to which the project sponsor or local entity is contributing to the costs of the project or is generating additional non-state funds;
7. The degree to which jobs are created for persons who need job training, receive public assistance, or are chronically unemployed; and
8. Any other criteria DNRC considers necessary to carry out the policies and purposes of the RDGP.

Grant applications are scored and ranked based on the degree to which they meet evaluation criteria listed above. DNRC is statutorily required to give priority to abandoned mine reclamation projects in the amount of $800,000 (90-2-1113 [3] MCA). These projects may not include personnel costs or operating expenses.

Recommendations
After ranking the projects and recommending funding, DNRC presents recommendations to the Governor for final ranking of the proposed projects (Table 1), along with funding recommendations.

An appropriations bill listing the Governor's recommendations regarding all projects in Table 1 will be introduced to the 2023 Legislature. By appropriation or other means, the Legislature may approve grants for those projects it finds consistent with the policies and purposes of the RDGP.

The appropriations bill will also contain a request for RDGP planning grant funds. These funds, to be administered by DNRC, can be accessed by local governments statewide to assist in planning and developing local natural resource projects within their jurisdictions.

Table 1. Ranking and Funding Recommendations for RDGP Applications Received May 2022

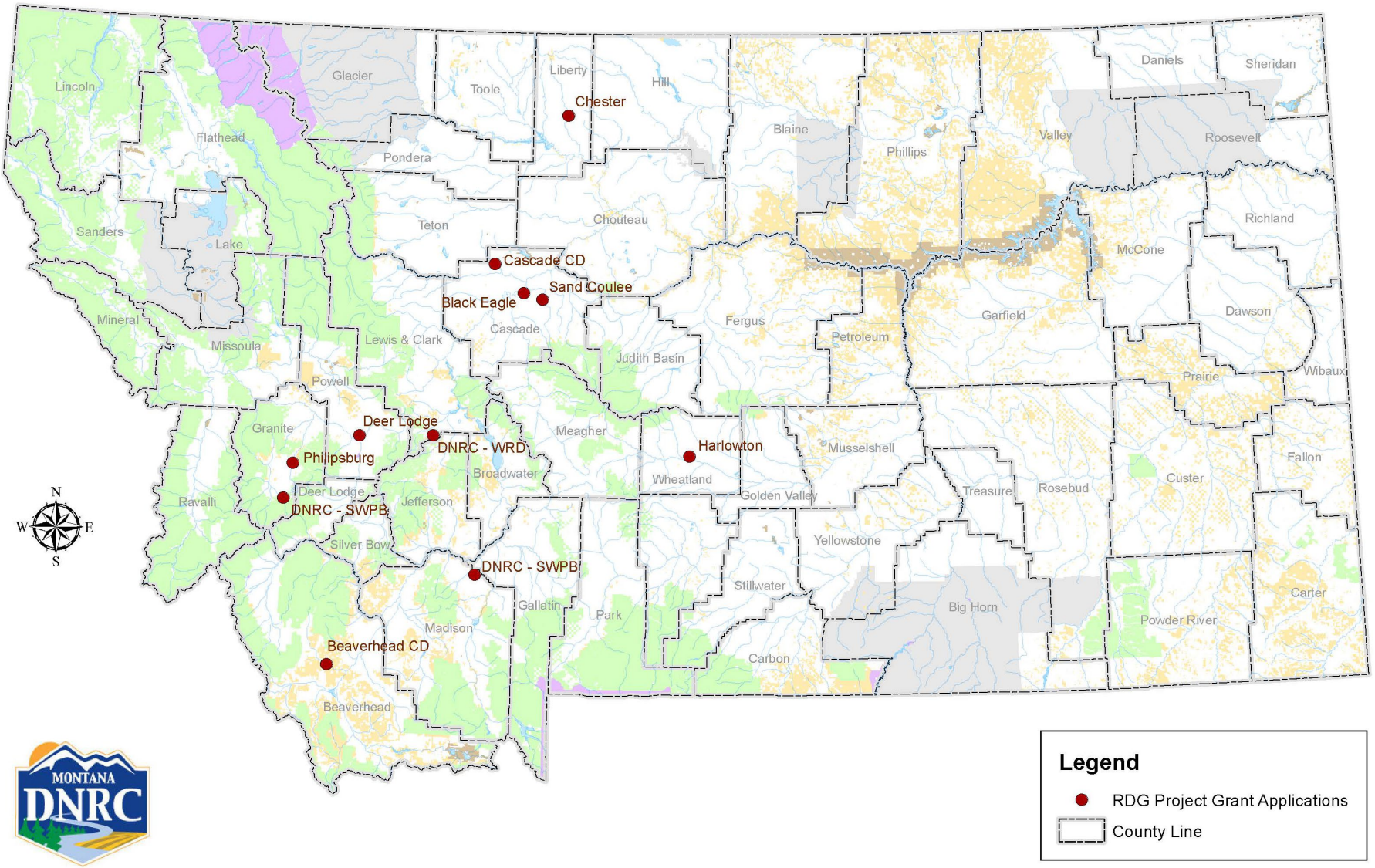
Rank	Applicant	Project Name	Amount Requested	Amount Recommend	Cumulative Amount
1	*Beaverhead Conservation District*	*Grasshopper Creek Mine Tailings Stream Bank Stabilization*	$419,180	$419,180	$419,180
2	Montana Department of Natural Resources and Conservation	Willow Creek Dam Rehabilitation Project	$500,000	$500,000	$919,180
3	Montana Department of Natural Resources and Conservation	East Fork of Rock Creek Dam Rehabilitation	$500,000	$500,000	$1,419,180
4	Chester, Town of	Chester Motors Petroleum Cleanup	$300,000	$300,000	$1,719,180
5	Black Eagle-Cascade County Water and Sewer District	Black Eagle Sewer System Improvements 2023	$125,000	$125,000	$1,844,180
6	*Harlowton, City of*	*Asbestos Removal, Cleanup, and Restoration of Contaminated Soils at Harlowton Roundhouse*	$500,000	$500,000	$2,344,180
7	*Deer Lodge, City of*	*Milwaukee Roundhouse Site Passenger Refueling Area Remediation*	$342,500	$342,500	$2,686,680
8	Philipsburg, Town of	Philipsburg Wastewater Project	$316,667	$316,667	$3,003,347
9	Cascade Conservation District	Muddy Creek Restoration and Resilience Project	$500,000	$500,000	$3,503,347
10	Montana Department of Natural Resources and Conservation	Expansion of Water Resources Division Hydrology Data Portal	$150,000	$150,000	$3,653,347
The projects below are not recommended for funding.					
*	*Sand Coulee Water District*	*Sand Coulee Wastewater Improvements*	$300,000	$0	$3,653,347
		Cumulative Total	**$3,953,347**	**$3,653,347**	**$3,653,347**

Note: The project ranked 1 is ranked based on a statutory requirement, “the department shall give priority to grant requests not to exceed a total of $800,000 for the biennium for abandoned mine reclamation projects” (90-2-1113 [3] MCA). No other projects submitted met this statutory priority.

Italics indicates the project received a RDGP planning grant for the proposed project.

*Not recommended for funding.

Map 1. 2025 Biennium Reclamation Development Project Grant Applications



CHAPTER II
Project Evaluations and Recommendations for the 2023 Biennium

This chapter combines summary evaluations of 11 projects submitted for funding consideration. The cumulative requested amount for the projects is $3,953,347. The 10 projects recommended for funding are presented in the order of their ranking in Part 1 of this chapter. Part 2 of this chapter contains other projects that were submitted for funding consideration.

To find any particular evaluation quickly, refer to the alphabetical listing of projects by the name of the applicant on page iii.

For projects recommended for Reclamation and Development Grant Program (RDGP) funding, “Total Project Cost” is the sum of “Other Funding Sources” plus the “Amount Requested.”

Part 1. Projects Recommended for Funding

Project No. 1

Applicant Name	Beaverhead Conservation District	
Project Name	Grasshopper Creek Mine Tailings Stream Bank Stabilization	
Amount Requested	$ 419,180	
Other Funding Sources	$ 5,000	Montana Department of Environmental Quality
	$ 5,000	Montana Fish, Wildlife and Parks Future Fisheries
Total Project Cost	$ 429,180	
Amount Recommended	$ 419,180	

Project Summary
Beaverhead Conservation District project will protect Grasshopper Creek from contaminated soil from historic placer mining at the Gold Leaf Mill and reduce erosion and sediment loading. Mill tailings, high in metals, were deposited adjacent to Grasshopper Creek from the historic Gold Leaf Mill. Grasshopper Creek is eroding the tailings dam. increasing the potential of a dam breach, which would carry tailings downstream impacting Grasshopper Creek and the Beaverhead River. The project will stabilize the channel and restore eroding streambanks by armoring, reconstructing, and revegetating the channel.

Project History
The proposed project is located approximately 0.5 miles downstream of Bannack State Park and National Historic Landmark. Gold was discovered at the mouth of Grasshopper creek in 1862 leading to the creation of the town of Bannack. Extensive placer deposits were found, and Grasshopper Creek experienced extensive placer and dredge mining operations. Gold-bearing deposits were also discovered in the uplands around Bannack and along Grasshopper Creek. Finely ground, mineralized mill tailings were deposited within the placered and dredged floodplain in Grasshopper Creek in the late 1800's and early 1900's and occupy 7.5 acres that was formerly part of the Grasshopper Creek meander belt. The tailings contain high levels of arsenic, cadmium, copper, and zinc with a high potential to have elemental mercury from the first phase of ore associated with milling. The tailings pond is located approximately 12 miles upstream from where Grasshopper Creek enters the Beaverhead River. The Beaverhead River is a natural resource for Beaverhead County Montana and renowned as a blue-ribbon trout fishery. In the 1970s, a riprap berm was constructed along the edge of the tailings pond to prevent erosion and release of tailings material into Grasshopper Creek. The Montana Department of Environmental Quality (DEQ) identified sediment in Grasshopper Creek, a tributary of the Beaverhead River, as impairing aquatic life. Primary sediment inputs along Grasshopper Creek identified during a 2019 assessment included upland ephemeral tributary channels, runoff from mine sites adjacent to the creek, and streambank erosion. The assessment also revealed that the rip-rap berm constructed in the 1970s had breached in multiple places, allowing contaminated tailings and sediment into Grasshopper Creek.

Proposed Solution
Project Goals and Objectives
The goals of this project are to: 1) improve water quality in Grasshopper Creek and 2) raise awareness of reclamation efforts associated with historic mining. The objectives of this project are to: 1) repair the breached tailings berm along the creek; 2) improve vegetation to minimize erosion of the berm; 3) control run-on flow from above the tailings to prevent tailings from eroding into the stream; 4) armor and restore eroding streambanks; and 5) install interpretive signs for Bannack State Park visitors.

Tasks or Activities
Task 1: Lidar Mapping and Final Design
Obtain topographic information to assist in engineering design; coordinate with stakeholders on final plans, obtain necessary permits, and update the hydrologic analysis; complete the final design; prepare plan and bid documents; solicit bids for construction; and supervise work, project management, and reporting.

Task 2: Construction - Stream Bank Stabilization and Revegetation
Contractors will provide labor, material, and equipment to quarry, sort, haul, deliver, and place riprap at the site. Contractors will revegetate any disturbed areas and streambanks along Grasshopper Creek under the direction of project management personnel, using native grass seed mixes, container plants and woody species where appropriate.

Task 3: Interpretive Sign
In collaboration with the Bannock State Park, Beaverhead Conservation District will install an interpretive sign near hiking trails located east of the site to tell the story of past mining in the area and how the tailings were placed there.

Monitoring plan
Construction progress will be monitored by the engineer. The Montana Fish, Wildlife and Parks fisheries biologist and Bannack State Park personnel will be monitoring the contractor to ensure that no disturbance is made that harms any of the historic features or fisheries. The work will be constrained to a designated area approved by the Park. A post-project monitoring plan was not clearly specified in the application.

Public Benefits Assessment
The project will help preserve the history of Bannack State Park and improve water quality and fisheries by repairing eroding streambanks and reducing the amount of tailings sediment released to Grasshopper Creek and the Beaverhead River. A potential breach of the tailings dam would adversely affect both the environment and public health. Repairing and armoring the tailings pond berm and restoring stream banks will decrease the volume of sediment entering Grasshopper Creek and improve water quality, terrestrial and aquatic habitat, and the local ranching and fishing industries that rely on water quality.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Lidar Mapping and Final Design	$45,000	$10,000	**$55,000**
Task 2: Stream Bank Stabilization and Revegetation	$341,200	$0	**$341,200**
Task 3: Interpretive Sign	$10,000	$0	**$10,000**
Administration	$22,980	$0	**$22,980**
Total	**$419,180**	**$10,000**	**$429,180**

The project budget is adequately supported. Post construction monitoring and maintenance inspection costs are also not included in the budget. Task 3 is not an eligible activity.

Funding Recommendation
DNRC recommends grant funding of $419,180 upon DNRC approval of the project scope of work, administration, budget, and funding package. DNRC recommends eliminating the interpretative sign in task 3 and adding $10,000 as a contingency in the budget.

Project No. 2

Applicant Name	Montana Department of Natural Resources and Conservation - State Water Projects Bureau	
Project Name	Willow Creek Dam Rehabilitation Project	
Amount Requested	$ 500,000	
Other Funding Sources	$ 11,702,500	DNRC State Water Projects Bureau
	$ 500,000	Bureau of Reclamation
	$ 100,000	Federal Emergency Management Agency
Total Project Cost	$ 12,802,500	
Amount Recommended	$ 500,000	

Project Summary
The Willow Creek Dam is classified as a high hazard dam by the Montana Dam Safety Program with a total impoundment capacity of 18,000-acre feet of water. The Army Corps of Engineers National Dam Inventory condition assessment lists the dam as poor condition due to spillway deficiencies. The poor condition of the dam necessitated reduced storage capacity to minimize depth of flow over the spillway. A storm event in excess of the 100-year event would likely cause considerable damage or failure of the spillway. Catastrophic failure of the spillway and dam breach would inundate a large area downstream, primarily affecting the communities of Willow Creek, Three Forks, and Clarkson. A dam breach would be a significant threat to public health and safety and cause significant damage to roads, bridges, railroads, utilities, and other infrastructure. Rehabilitation of the dam has been identified as a crucial state need due to safety concerns to downstream residents and environmental impacts resulting from a dam breach, and loss of water storage that affect drought resiliency. Dam rehabilitation protects the environment downstream and benefits multiple natural resources affected by drought conditions by increasing water storage and distribution infrastructure, maximizing water storage for irrigators and recreationalists, and extending the useful life of the dam for another 80 years.

Project History
Since construction in 1938, multiple investigations, inspections, repairs, and studies have been completed on the Willow Creek Dam. In 2018, a maximum reservoir operating level elevation was established four feet below the spillway crest elevation reducing the impoundment capacity to 14,813-acre feet of water to mitigate the poor conditions of the spillway structure. Procurement of a consultant to perform the Feasibility Study has been initiated.

Proposed Solution
Project Goals and Objectives
The goal of the project is to increase safety downstream of the dam and drought resiliency in the region by rehabilitating the dam and spillway. Rehabilitation would extend the life of the dam by another 80 years.

Tasks or Activities
The application lists the following tasks for the project. The DNRC State Water Projects Bureau (SWPB) has completed and is in the process of completing several rehabilitations similar in scope to the Willow Creek Dam Rehabilitation Project and has a well-established set of tasks to be performed. Tasks include:

Task 1: Feasibility Study
The feasibility study is a means by which all past information from a project is analyzed, potential failure modes are assessed, solutions are developed, and alternatives are presented. The final product is a report that summarizes the information reviewed, methods used for data collection, analysis performed, and summary of findings. the feasibility study will define what needs to be designed, permitted, and constructed.

Task 2: Final Design and Permitting
The final design and permitting task uses the findings of the feasibility study to develop an engineered design based on the preferred alternative. The final design is then used to obtain applicable permits and to

procure construction services. The subtasks include 1) review preferred alternatives from the feasibility study, 2) conduct field studies, 3) prepare final design, 4) acquire required permits, and 5) provide construction management services.

Task 3: Construction
A contractor would be hired, using State of Montana procurement procedures, to complete construction of the project. The feasibility study for the project has not yet been completed so the final scope of construction activities is not known at this time.

Monitoring Plan
The DNRC SWPB monitors the dam monthly during most of the year and daily or weekly during the spring or during significant runoff events with a prescribed procedure. An annual inspection is completed and documented for all structures. Every five years an engineering inspection of the dam is completed and submitted to the Montana Dam Safety Program. Following dam rehabilitation structures will be closely monitored.

Public Benefits Assessment
Rehabilitation of the dam conserves natural resources through protecting water storage; improving and preparing for drought resiliency; protecting aquatic resources; and reducing the chances of environmental damage to soils, streambanks, sedimentation, aquatic habitat, floodplains, and cropland from a dam breach. The project protects public health, safety, and welfare and prevents property damage by reducing the chances of failure of the spillway and catastrophic failure of the dam that would affect the communities, homes, businesses, and public downstream. The project benefits Montanans directly through increased safety of those living downstream, flood control, increased ability to access irrigation water for crops, increased stream flows during late summer, and enhances recreational access.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Feasibility Study	$300,000	$575,000	**$875,000**
Task 2: Final Design and Permitting	$200,000	$1,575,000	**$1,775,000**
Task 3: Construction	$0	$7,100,000	**$7,100,000**
Contingency	$0	$2,902,500	**$2,902,500**
Administration	$0	$150,000	**$150,000**
Total	**$500,000**	**$12,302,500**	**$12,802,500**

The budget appeared to be reasonable, clear, and complete. Dam rehabilitations are large multiyear projects. Costs used in the cost analysis are generalized and may not reflect final project costs. The majority of the project is funded through State budget allocation of which $875,000 is committed. DNRC SWPB has yet to apply for federal match funding.

Funding Recommendation
DNRC recommends grant funding of $500,000 upon DNRC approval of the project scope of work, administration, budget, and funding package.

Project No. 3

Applicant Name	Montana Department of Natural Resources and Conservation - State Water Projects Bureau	
Project Name	East Fork of Rock Creek Dam Rehabilitation	
Amount Requested	$ 500,000	
Other Funding Source	$ 2,000,000	Flint Creek Water Users Association Loan
	$ 500,000	2024 RDG Grant Application
	$ 8,496,100	State Special Revenue
	$ 1,298,265	DNRC State Water Projects Bureau Account
	$ 400,000	DNRC State Water Projects Bureau In-Kind
Total Project Cost	$ 13,194,365	
Amount Recommended	$ 500,000	

Project Summary

The project goal is to extend the safe operation of the East Fork of Rock Creek Dam. East Fork reservoir water is transferred into the Flint Creek drainage to sustain streamflow and recharge groundwater aquifers through irrigation return flows. The concrete spillway is deteriorating. Flood mapping shows 1,300 people are at risk from a dam failure and up to 125 lives could be lost. This project has a regional impact by supporting the Flint Creek agricultural economy, protecting citizens and the environment along Rock Creek and the Clark Fork from a dam breach flood, and providing the last sanctuary in the Upper Clark Fork for bull trout to avoid competition from non-native species. Dam rehabilitation work will consist of spillway replacement, constructing downstream toe berms to control seepage, extending the outlet conduit, and refurbishing outlet control gates.

Project History

The East Fork Reservoir, constructed in 1938, stores water for irrigators in Flint Creek Valley. The DNRC State Water Projects Bureau (SWPB) owns the dam and markets water to 37 farms for use on up to 25,200 acres. The reservoir also provides important habitat for threatened bull trout, and outdoor recreation in the Beaverhead-Deerlodge National Forest. In 1996, a sinkhole developed on the downstream dam face when a corrugated metal drainpipe failed and began discharging embankment material. The reservoir was drained, and emergency repairs were executed. However, the repairs did not address all the dam's vulnerabilities. Foundation seepage and high pressure at the downstream toe have been issues since original construction. The 1930s spillway design is undersized for design standard floods and the 84-year-old concrete needs replaced. Similarly, the aging control valves in the outlet conduit need refurbishment to extend their useful life. The dam's vulnerabilities were identified in a Potential Failure Modes Analysis as part of the rehabilitation Feasibility Study completed in 2020.

Proposed Solution

Project Goals and Objectives

The project goal is to extend the useful life of East Fork of Rock Creek Dam and maintain the natural resource and economic benefits of the reservoir. Three objectives of the rehabilitation will accomplish the project goal: 1) replace the deteriorated concrete spillway and increase the capacity to accommodate inflow design floods; 2) eliminate seepage on the downstream embankment toe by placing fill and installing relief wells; and 3) refurbish the control valves inside the discharge conduit to extend their safe, reliable operation. Other rehabilitation items include: new spillway bridge; extension of the outlet conduit; new gatehouse; and riprap repairs on the upstream face of the dam.

Tasks or Activities

Task 1: Environmental Consultation and Permitting

This task includes an Endangered Species Act Consultation and applying for and acquiring necessary permits.

Task 2: Final Design
Complete final design for the spillway repairs.

Task 3: Spillway Replacement
The spillway will be completely replaced to meet current standards.

Task 4: Seepage Mitigation
Mitigation of seepage through the dam requires placing fill at the downstream toe, extending the outlet conduit, and drilling relief wells.

Task 5: Outlet Works
Outlet works rehabilitation will consist of refurbishing two valves in place to avoid potential damage by removing, refurbishing, and replacing.

Task 6: Instrumentation
A new instrumentation system will be installed to monitor the performance of the new spillway and seepage control features.

Task 7: Spillway Bridge
The spillway bridge will be a free span design to cross the spillway without using piers, which will improve the safety and performance of the new spillway during large floods.

Task 8: Riprap
This task includes upstream embankment riprap repairs.

Monitoring plan
Project outcomes are monitored through construction management. Rehabilitation tasks will be clearly defined in the construction contract. Construction progress will be monitored by the design engineer and contract management staff from DNRC SWPB. Construction will include weekly progress meetings and reports will be included with periodic pay requests. Construction closeout will include a thorough site visit for substantial completion followed by a list of items for the contractor to complete before final closeout.

The DNRC SWPB monitors the dam monthly during most of the year and daily or weekly during the spring or during significant runoff events with a prescribed procedure. An annual inspection is completed and documented for all structures. Every five years an engineering inspection of the dam is completed and submitted to the Montana Dam Safety Program. Following dam rehabilitation structures will be closely monitored.

Public Benefits Assessment
Rehabilitation of East Fork Dam will maintain safe operation and storage and will eliminate a public safety threat for downstream residents. A dam failure could result in a loss of life and would have significant impacts on the downstream stream channel and riparian areas. Reservoir water recharges local groundwater sources in early summer from irrigation return flows. The reservoir sustains streamflow through late summer when Flint Creek would otherwise be dry. When irrigation stops in the fall, return flows stored as groundwater sustain late season flows in Flint Creek. The dam supports bull trout and a westslope cutthroat trout fishery. Rehabilitation of the dam would preserve the fishery and continue to provide recreation benefits.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Environmental Consultation and Permitting	$0	$98,265	**$98,265**
Task 2: Design Engineering	$0	$1,200,000	**$1,200.000**
Task 3: Spillway Replacement	$500,000	$5,328,400	**$5,828,400**
Task 4: Seepage Mitigation	$0	$2,361,800	**$2,361,800**
Task 5: Outlet Works	$0	$1,210,700	**$1,210,700**
Task 6: Instrumentation	$0	$285,100	**$285,100**
Task 7: Spillway Bridge	$0	$1,425,000	**$1,425,000**
Task 8: Riprap Repairs	$0	$385,100	**$385,100**
Administration	$0	$400,000	**$400,000**
Total	**$500,000**	**$12,694,365**	**$13,194,365**

Dam rehabilitations are large multiyear projects. Costs used in the cost analysis are generalized and may not reflect final project costs. The project cost is significant; however, it is financially feasible with a large match from the applicant and good details on construction costs. Provisions are provided for grant administration and reporting.

Funding Recommendation

DNRC recommends grant funding of $500,000 upon DNRC approval of the project scope of work, administration, budget, and funding package.

Project No. 4

Applicant Name	Chester, Town of		
Project Name	Chester Motors Cleanup Project		
Amount Requested	$	300,000	
Other Funding Sources	$	1,300	Town of Chester
	$	99,997	Bear Paw Development
	$	22,264	Property Owner
Total Project Cost	$	423,561	
Amount Recommended	$	300,000	

Project Summary
Petroleum releases from underground storage tanks at Chester Motors contaminated soil and groundwater. Currently, groundwater at the site exceeds benzene screening levels by 2,500 times. This project includes excavation, removal and treatment of contaminated soils and injection of an in situ chemical oxidant to treat contaminated groundwater. The project will result in soil and groundwater restoration that will eliminate potential health threats and promote property development.

Project History
Chester Motors operated as an automobile dealership/fueling and repair station from 1939 until 1998. Since 1998, the property has been used for dry storage and as a bulk fertilizer retail facility. Petroleum contaminated soil and groundwater was discovered during closure of the underground storage tanks in 1998. Environmental investigations completed between 1998 and 2021 identified approximately 800 cubic yards of contaminated soil. Groundwater contamination is present across the entire site.

Proposed Solution
Project Goals and Objectives
The goals of this project are to remove contaminated soils, remediate groundwater; and achieve DEQ compliance of the petroleum release at the site.

The project objectives are to complete delineation of the extent of contamination; excavate and remove petroleum contaminated soil; conduct a pilot test and inject a chemical oxidant in the groundwater to accelerate groundwater remediation; and conduct post-remediation groundwater monitoring.

Tasks or Activities
Task 1: Cleanup Planning
Planning activities include preparation of a work plan for excavation, oxidant injection, and groundwater monitoring to be submitted to Montana Department of Environmental Quality for approval; and test pitting to define the extent of contamination; and finalize the cleanup design and bid package

Task 2: Soil Excavation and Hauling
Approximately 1,500 cubic yards of soil will be excavated, of which approximately 800 cubic yards is expected to be contaminated. Contaminated soil will be hauled off-site for treatment at a one-time landfarm. Clean overburden will be stockpiled during excavation and then used for backfill. Confirmation soil samples will be collected from the excavation floor and sidewalls to document post excavation conditions.

Task 3: In Situ Injection
A chemical oxidant will be injected into temporary borings at depths of approximately 4-15 feet below ground surface. Two injection events are anticipated, approximately one year apart.

Task 4: Groundwater Compliance Monitoring
Three monitoring wells that will be destroyed during excavation activities will be replaced. An initial groundwater monitoring event of eight site monitoring wells will be completed following well installation.

Eight monitoring wells will be sampled twice per year over a three-year period followed by two years of compliance in both high and low groundwater (spring and fall) conditions.

Task 5: Reporting and Permitting
This task will include landfarm permitting and sampling; reporting; and project management. Prior to excavation, a permit will be acquired for the landfarm site. Sampling of the landfarm soils will occur annually until treatment goals are met. Reports will be prepared for the Soil Excavation, in situ chemical oxidant operations, and ground water monitoring.

Task 6: Project Management
Monthly updates on the project status will be provided to the Town of Chester.

Monitoring Plan
Soil and groundwater confirmation sampling will occur to document post-cleanup conditions and be used to petition for compliance with Montana DEQ Risk-Based Corrective Action Guidance for Petroleum Releases.

Other
Much of the property is covered by a building making it difficult to evaluate extent and magnitude of contamination as well as the potential effectiveness of the proposed approach. The project does not address the potential for vapor intrusion. Evaluation of petroleum vapor intrusion should occur after the remedial excavations to ensure public health and safety of the site.

Public Benefits Assessment
The project repairs damage from petroleum hydrocarbon releases to soil and groundwater incurred during operations of an automobile dealership/fueling and repair station. The project permanently removes contaminants from soil and groundwater resulting in protection of public health, safety, and welfare. Excavated soil will be treated in a landfarm, after which it can be returned to beneficial use. The local community will benefit from development of the current property.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Cleanup Planning	$2,750	$27,765	**$30,515**
Task 2: Soil Excavation and Hauling	$123,082	$20,240	**$143,322**
Task 3: In Situ Injection	$96,545	$0	**$96,545**
Task 4: Groundwater Compliance Monitoring	$20,211	$53,610	**$73,821**
Task 5: Reporting and Permitting	$8,740	$8,440	**$17,180**
Task 6: Project Management	$21,400	$0	**$21,400**
Contingency 10%	$27,272	$11,006	**$38,278**
Administration	$0	$2,500	**$2,500**
Total	**$300,000**	**$123,561**	**$423,561**

The project budget provides sufficient detail and appears reasonable.

Funding Recommendation
DNRC recommends grant funding of $300,000 upon DNRC approval of the project scope of work, administration, budget, and funding package.

Project No. 5

Applicant Name	Black Eagle-Cascade County Water and Sewer District	
Project Name	Black Eagle Sewer System Improvements 2023	
Amount Requested	$ 125,000	
Other Funding Sources	$ 414,000	Montana Coal Endowment Program
	$ 500,000	Cascade County American Rescue Plan Act Funding
	$ 290,620	Black Eagle-Cascade County Water and Sewer District
Total Project Cost	$ 1,329,620	
Amount Recommended	$ 125,000	

Project Summary

The Black Eagle-Cascade County Water and Sewer District (District) is proposing to improve its existing aged sanitary sewer collection system. The aging system, previously owned by the Anaconda Copper Mining Company (ACM), has deteriorating lines that leak sewer into groundwater adjacent to the Missouri River and cause sewer backups into homes and businesses. Leaking sewer has the potential to contaminate the Missouri River and impact the residents, farmland, and aquatic life downstream. The project consists of installing 4,480 feet of new 8-inch sanitary sewer main, 22 – 48-inch concrete manholes, and 3,850 feet of sanitary sewer service reconnection. The completed project will minimize sewer backups into homes and businesses and allow access for system maintenance.

Project History

The District is located in the unincorporated community of Black Eagle just northeast of Great Falls in Cascade County. The community of Black Eagle has a historic past that is entwined with the former ACM smelter. The ACM originally owned the water and sewer infrastructure in Black Eagle before the company closed in 1980. The water and sewer infrastructure were then turned over to Black Eagle and the District was formed. The adjacent 427-acre Anaconda Copper Mining Company Smelter site was listed on the Superfund National Priority List in 2011. The wastewater system is not included in the Record of Decision. The district has spent the last 40 years trying to upgrade the distribution and collection system that dates back to the 1920's. Many of the sewer system components that have not been previously reconstructed are from 56 to 90 years old and well past their design life. Many service locations are unknown and need to be identified. The remaining problem areas for the district are areas of private, illegal sewer main extensions and long multiple user services lines that were installed prior to the district formation in 1982. The project includes installing new collection mains and services while abandoning illegal main extension and multi-user services formerly installed to support mineral development by ACM.

Proposed Solution

Project Goals and Objectives

The project goals are to update the sanitary sewer system and protect groundwater and surface water in the Missouri. The project objectives are to minimize sewer backups into homes and businesses, abandon illegal main extensions and multiuser services. and allow the district access for maintenance to the system.

Tasks or Activities

Task 1: Engineering

Engineering services including preliminary design, design criteria, drawings, implementing the design, project manual, bid documents, general provisions. It will also include the final design, report, drawings, and submittals. The engineer will include bid documents, address bidders' questions, preparing addendums, bid opening, bid tabulation, bid evaluation, bid award, coordination the award with the funding agencies, preparing the executed documents, notice of award and notice to proceed. This will also include the post construction, final inspection, punch list resolution, as-built drawings and two-year warrantee inspection.

Task 2: Construction

The project consists of installing 4,480 feet of new 8-inch sanitary sewer main, 22 48-inch concrete manholes, 3,850 feet of sanitary sewer service reconnection by open excavation methods.

Monitoring Plan
No monitoring plan was identified in the application.

Public Benefits Assessment
Black Eagle sits directly on a hill above the Missouri River. Leakage from sewer mains can flow into groundwater and underground springs which flow into the Missouri River. The district wants to eliminate the public health risk posed by sewage backups into homes and businesses in Black Eagle, and to prevent potential contamination of groundwater and surface water from leaking sewer lines. This project will replace deteriorating lines, prevent sewer backups, and eliminate multiple user services and illegal sewer main extensions. It is estimated that the lifetime of the engineered sewer updates will be approximately 50 years. This project will benefit the health of the residents and workers in Black Eagle along with the groundwater and the Missouri. There is strong community support for the grant applications and the project.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Engineering	$0	$198,990	**$198,990**
Task 2: Construction	$125,000	$779,500	**$904,500**
Contingency	$0	$135,680	**$135,680**
Administration	$0	$90,450	**$90,450**
Total	**$125,000**	**$1,204,620**	**$1,329,620**

The project appears to be financially feasible. Provisions are provided for grant administration and reporting.

Funding Recommendation
DNRC recommends grant funding of $125,000 upon DNRC approval of the project scope of work, administration, budget, and funding package.

Project No. 6

Applicant Name	Harlowton, City of	
Project Name	Asbestos Removal, Cleanup, and Restoration of Contaminated Soils at the Harlowton Roundhouse, Phase 5	
Amount Requested	$ 500,000	
Other Funding Sources	$ 30,332	DEQ 128(a) Brownfields Grant
	$ 1,215	City of Harlowton
Total Project Cost	$ 531,547	
Amount Recommended	$ 500,000	

Project Summary
The City of Harlowton will address the remaining asbestos and petroleum-impacted soils at the bankrupt Chicago Milwaukee St. Paul Railroad's Harlowton Roundhouse Facility (Facility) in the fifth phase of this project. This phase will remove asbestos contaminated soil found within the historic railyard dump, address remaining petroleum contaminated soils through injection of a chemical oxidant beneath historic rail towers, and prepare the Facility for the wetland restoration and nature trail construction. This project will improve soil and water quality, facilitate restoration of a historical wetland, and mitigate flood impacts along the Musselshell River.

Project History
The Harlowton Roundhouse sits adjacent to the Musselshell River and is located near surface water sources that flow directly to the Musselshell River. The Facility operated as a railroad repair and refueling operation from 1900 to 1979. Overfills and leaking fuel lines at the Facility contaminated soil and groundwater over approximately five acres of the railyard. Since 2016, over 19,000 cubic yards of petroleum and asbestos contaminated soil has been landfarmed or removed from the Facility. Additionally, two rail cars used as oil-water separators and three corroded underground storage tanks have been removed. This phase will address the remaining contamination.

Proposed Solution
Project Goals and Objectives
The goal of the project is to restore soil, groundwater, adjacent wetlands, a tributary of the Musselshell River, and aquatic and terrestrial habitat.

The project objectives are to 1) address impacts to soils and groundwater at the site through the in-situ treatment of petroleum contamination beneath the historic rail towers and the excavation of asbestos from within the former railyard dump; 2) remove asbestos and physical hazards; and prepare the site for revegetation so that the historical wetland can be restored; and 3) document all actions in a DEQ Voluntary Cleanup Plan.

Tasks or Activities
Task 1: Preliminary Coordination and Progress Reporting
Activities include coordination between the City of Harlowton, DEQ and DNRC. This task includes grant administration, quarterly and status report preparation, permit applications, and health and safety plans preparation. This task also includes grant administration and quarterly reporting to DNRC.

Task 2: Project Design, Bid and Procurement
The scope of work will include a detailed plan for chemical oxidant injection, excavation of asbestos debris, removal of physical hazards, and preparation for revegetation. A bid and specification package and deliverable will be developed for the injection of the in situ chemical oxidant, the excavation and disposal of the railyard dump, and re-grading of the site. Subcontracted services will be procured.

Task 3: Excavation and Disposal of Asbestos Contaminated Soils
This task will include the excavation of asbestos debris in soil at the former railyard dump. The waste will be hauled to a licensed landfill for disposal.

Task 4: Chemical Oxidant Injection
Chemical oxidants will be injected into temporary borings beneath historically significant rail facility structures to reduce petroleum contamination below DEQ cleanup levels.

Task 5: Final Remedial Activities
Confirmation samples will be collected to confirm that petroleum contamination in soil and groundwater has been reduced to below DEQ cleanup levels. All remaining physical hazards, such as buried underground storage tanks and dry wells/culverts, will be removed. The site will be regraded and prepped for revegetation.

Task 6: Voluntary Cleanup Plan
A Voluntary Cleanup Plan, including the Environmental Assessment and Remediation Proposal, will be prepared describing the results of all previous investigations, interim actions, and confirmation sampling.

Monitoring Plan
Soil, groundwater, and surface water confirmation sampling will occur once all remedial actions have been completed. This sampling will measure the effectiveness of remedial actions regarding cleanup levels.

Public Benefits Assessment
This project repairs damage from historic petroleum releases to soil and groundwater that occurred during operation of the facility and removes asbestos contamination that was placed in the railyard dump. Contamination at the site directly impacts the soil, groundwater, and surface water resources along the Musselshell River. The cleanup of contamination and restoration of affected surface soils, subsurface soils, groundwater and neighboring surface water bodies and wetlands will ensure that impacts are greatly reduced. The subsequent restoration of the historic wetland will also assist with the treatment of any residual contaminant source that may remain post excavation. The project results in conservation of soil, water, vegetation, and fish and wildlife and protection of public health, safety, and welfare.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Preliminary Coordination and Progress Reporting	$10,305	$0	**$10,305**
Task 2: Project Design, Bid, and Procurement	$29,436	$0	**$29,436**
Task 3: Excavation and Disposal of Asbestos Contaminated Soil	$255,897	$0	**$255,897**
Task 4: Chemical Oxidant Injection	$171,400	$0	**$171,400**
Task 5: Final Remedial Activities	$10,895	$0	**$10,895**
Task 6: Voluntary Cleanup Plan	$22,067	$0	**$22,067**
Administration	$0	$31,547	**$31,547**
Total	**$500,000**	**$31,547**	**$531,547**

The project budget is adequate and comparable to prior phases. Estimated costs appear reasonable for these tasks. Funding for Task 4 was included in the previous grant award but removed due to project cost inflation and discovery of additional contamination.

Funding Recommendation
DNRC recommends grant funding of $500,000 upon DNRC approval of the project scope of work, administration, budget, and funding package.

Project No. 7

Applicant Name	Deer Lodge, City of	
Project Name	Milwaukee Roundhouse Passenger Refueling Area VCRA Program Remediation, Phase 3	
Amount Requested	$ 342,500	
Other Funding Source	$ 5,346	City of Deer Lodge
Total Project Cost	$ 347,846	
Amount Recommended	$ 342,500	

Project Summary

Historic railroad operations at the former Milwaukee Roundhouse Facility (MRH) in Deer Lodge, Montana released diesel and other contaminants impacting soil, groundwater, surface water, and aquatic habitat. This project continues ongoing efforts by the City of Deer Lodge to remediate the soil and groundwater contamination at the former MRH Facility Passenger Refueling Area. The proposed project will remove approximately 500 cubic yards of metals contaminated soil; update groundwater contaminant concentration data; and perform additional detailed site characterization and cleanup confirmation sampling. Removal of metals-contaminated soils will repair, reclaim, and mitigate damage to soil and groundwater resources along the Clark Fork River. Additionally, the proposed cleanup will allow the City to redevelop the Passenger Refueling Area into a park allowing for recreational opportunities.

Project History

The Passenger Refueling Area is located on the western edge of the City of Deer Lodge in Powell County. The Facility is described as two distinct subareas and is part of a larger cleanup site divided into the Milwaukee Roundhouse Area owned by Powell County and the Passenger Refueling Area owned by the City of Deer Lodge. This project focuses on the Passenger Refueling Area portion of the Facility. The former site operator, the Chicago, Milwaukee, St. Paul, and Pacific Railroad Company went bankrupt in 1980. Passenger Refueling Area contamination sources included locomotive refueling, leaks from above ground storage tanks, and piping and offloading of diesel fuel that contaminated soil at the Passenger Refueling Area with metals and organic fuel contaminants.

The site was listed as a high priority Comprehensive Environmental Cleanup and Responsibility Act (CECRA) site in 1987. Since that time there has been a patchwork of investigations and remediation activities on the site. The City of Deer Lodge is following the DEQ Voluntary Cleanup and Redevelopment Act (VCRA) process for the remaining actions and to achieve delisting from the CECRA list.

Proposed Solution

Project Goals and Objectives

The goal for the City of Deer Lodge is to delist the CECRA Facility and redevelop the property for recreational use. The project objectives are to remove and dispose of approximately 500 cubic yards of contaminated soil, update groundwater contaminant concentration data, and perform additional detailed site characterization and cleanup confirmation sampling.

Tasks or Activities

Task 1: Characterization of Soils

Soil characterization includes a re-evaluation of existing soils data, detailed composite sampling, data analysis and review with DEQ, and development of plans and contract documents.

Task 2: Surface and Subsurface Soil Removal

This task includes preparation of bid documents, advertisement, and notice of award; soil removal construction activity; and development of a construction completion report.

Task 3: Update Petroleum Hydrocarbon Groundwater Characterization
Groundwater characterization will include an inventory of the existing well network, well abandonments of damaged and unserviceable wells, monitoring well resurvey, two rounds of groundwater monitoring, reporting of results to DEQ, and preparation of a Voluntary Cleanup Plan remediation proposal for groundwater.

Task 4: Project Management
The consultant will complete project management activities that will include communication with DEQ throughout the project, managing subcontractors and providing status updates to the City of Deer Lodge.

Monitoring Plan
Confirmation samples will be collected from the sides and bottom of the excavation to ensure that contamination is reduced to acceptable concentrations. DEQ will review and approve the sampling methods and number of confirmation samples. Additionally, groundwater will be sampled semi-annually during seasonally low and high groundwater to determine the extent and magnitude of petroleum contamination.

Public Benefits Assessment
Soil, sediment, surface water, and groundwater at the facility are impacted by historical railroad operations. Petroleum hydrocarbons and metals occur at concentrations that exceed human health and environmental standards. The planned remediation activities will restore those natural resources and allow broad use of the area. The proposed project will directly benefit the surface water resources, aquatic life and habitat, and wildlife. The permanent removal of metal-contaminated soils eliminates risk to ecological and human receptors and allow the City to move forward with development of the facility as an open-space park.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Characterization of Soils	$21,210	$0	**$21,210**
Task 2: Surface and Subsurface Soil Removal	$168,722	$0	**$168,722**
Task 3: Update Petroleum Hydrocarbon Groundwater Characterization	$133,608	$0	**$133,608**
Task 4: Project Management	$18,960	$0	**$18,960**
Administration	$0	$5,346	**$5,346**
Total	**$342,500**	**$5,346**	**$347,846**

The project budget is adequate, and estimated costs are in line with expectations for projects of this type.

Funding Recommendation
DNRC recommends grant funding of $342,500 upon DNRC approval of the project scope of work, administration, budget, and funding package.

Project No. 8

Applicant Name	Philipsburg, Town of	
Project Name	Wastewater System	
Amount Requested	$ 316,667	
Other Funding Source	$ 950,000	Water Resources Development Act
Total Project Cost	$ 1,266,667	
Amount Recommended	$ 316,667	

Project Summary

The wastewater collection and treatment system in the Town of Philipsburg cannot effectively treat the wastewater and is under Administrative Order to bring the system into compliance. Untreated wastewater is discharged to an adjacent ditch which flows into Flint Creek, a productive trout fishery with populations of endangered bull trout. The proposed project includes reconfiguration of existing lagoons and construction of a 2-celled aerated lagoon system with an aerated rock filter and UV disinfection. The engineered system will bring the system into compliance, protect Flint Creek, provide a higher level of wastewater treatment, and facilitate the community growth. The RDG funding will serve as a required match to Water Resource Development Act funding.

Project History

The facultative lagoons were constructed in 1961 and no longer have sufficient capacity to treat the Town's wastewater flow. Higher influent flow rates reduce lagoon holding time, which decreases treatment effectiveness. Treated wastewater is discharged to a ditch which flows into Flint Creek. Due to diminished treatment capacity, the Town has experienced several Montana Pollutant Discharge Elimination System Permit violations enforced by the Montana Department of Environmental Quality (DEQ). The Town's facilities are currently not in compliance with the requirements of this permit and are under an Administrative Order of Consent issued by DEQ to bring the facilities into compliance. This project represents Phase 3 of the redesign and reconstruction of the wastewater treatment facility.

Proposed Solution

Project Goals and Objectives

The primary project goal of the project is to improve water quality in Flint Creek by decreasing contaminants discharged from the lagoons. This will be accomplished through construction of treatment improvements.

Tasks or Activities

Task 1: Final Design and Contract Specifications

Tasks include preparation of plans and specifications, project bidding and construction award. A geotechnical evaluation of the project will be completed to facilitate preliminary design. The final design will be submitted for DEQ review and approval prior to bidding.

Task 2: Construction

A new aerated lagoon treatment system will be constructed adjacent to the existing lagoons on lands owned by the Town. The existing Cell 1 will be used as the secondary cell within the system, allowing the Town extra storage and recycle capability for stringent nutrient limits during the summer months. The final treatment cell will be completed with a rock filter and aeration. Detailed construction tasks include a) lagoon piping and liner installation; b) backfill and grade control; c) system operations and data electronics; d) excavation; e) lagoon installation; f) equipment installation and storage systems

Task 3: Construction Management and Post Construction Closeout

Construction management and oversight will occur throughout the project. Task includes development of a construction completion report

Monitoring Plan

Effluent wastewater quality will be monitored throughout construction and following completion of the project, which the Town is required to submit for the existing permit. Groundwater levels will be monitored with piezometers throughout design and construction. Construction will be monitored by the Town's consulting engineer. The Town will maintain the wastewater system once constructed.

Public Benefits Assessment

The project will improve the effectiveness of the wastewater treatment system in the Town of Philipsburg and allow the discharge to meet permit limits. Flint Creek water quality will be improved, and the project will enhance aquatic and terrestrial habitat in Flint Creek, support increased public use, and improve public safety and welfare.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Final Design and Contract Specifications	$0	$25,000	**$25,000**
Task 2: Construction	$316,667	$850,000	**$1,166,667**
Task 3: Construction Management and Post Construction Closeout	$0	$50,000	**$50,000**
Administration	$0	$25,000	**$25,000**
Total	**$316,667**	**$950,000**	**$1,266,667**

The budget appears reasonable and complete for a project of this size and complexity. The RDG grant would provide the final funding needed to complete a wastewater system upgrade for the Town of Philipsburg.

Funding Recommendation

DNRC recommends grant funding of $316,667 upon DNRC approval of the project scope of work, administration, budget, and funding package.

Project No. 9

Applicant Name	Cascade Conservation District	
Project Name	Muddy Creek Restoration and Resilience Project	
Amount Requested	$ 500,000	
Other Funding Sources	$ 1,751,116	Bureau of Reclamation
	$ 4,700	Montana Trout Unlimited
	$ 2,000	Missouri River Flyfishers
	$ 125,891	Greenfield Irrigation District
	$ 34,600	Cascade Conservation District
	$ 70,284	Montana Fish, Wildlife, and Parks Future Fisheries
Total Project Cost	$ 2,488,591	
Amount Recommended	$ 500,000	

Project Summary
Muddy Creek is a 44-mile tributary to the Sun River west of Great Falls, Montana. Muddy Creek's natural flow regime has been modified by irrigation, resulting in flow fluctuation and unnaturally high stream flows. Muddy Creek is currently disconnected from its floodplain due to significant downcutting. This project will employ two strategies to restore Muddy Creek: 1) improving irrigation infrastructure to reduce erosion and sedimentation, and 2) stream restoration on lower Muddy Creek to address erosion damage. The project aims to improve water quality and restore natural function and habitat of approximately 3 miles of highly degraded stream channel.

Project History
The Sun River Diversion Dam was built in 1916, diverting flows via Pishkun Canal to irrigate the Fairfield bench. The irrigation infrastructure replaced dryland farming. Irrigation return flows have caused unnaturally high flows in Muddy Creek for over 100 years. These high, fluctuating flows stress stream banks causing erosion that contributes approximately 15,600 tons of sediment to the Sun River annually. Past projects to address flow fluctuation and erosion have been completed by the Muddy Creek Task Force (now Sun River Watershed Group) and Greenfields Irrigation District.

Proposed Solution
Project Goals and Objectives
The goals of the project are to conserve and recover irrigation water and to improve water quality by reducing erosion in Muddy Creek. The project objectives are to:

1. Improve irrigation infrastructure by converting an existing impoundment into a re-regulating reservoir, enlarging the impoundment footprint, and construct a containment berm around the impoundment to raise the maximum level by five feet. This will allow for better management of irrigation water and reduce loss of water to Muddy Creek.
2. Restore Muddy Creek by installing constructed riffle grade controls, reshaping and stabilizing eroding banks, and installing riparian vegetation along 3 miles of Muddy Creek. This will reactivate a functional floodplain, reduce erosion and sedimentation, and improve instream and riparian habitat for fish and wildlife.

Tasks or Activities
The project is divided into two phases 1) irrigation infrastructure and 2) stream restoration. RDG funding is requested only for the stream restoration phase. The project tasks include:

Task 1: Phase 1 Irrigation Construction
Construct berm and enlarge reregulation pond. This includes clearing and grubbing, removal of materials, import and fill aggregates, pond excavation, compact fill and aggregates, road surfacing, slope armoring, cleanup, and seeding.

Stream restoration tasks include:

Task 2: Monitoring
The task includes working with DEQ to select a site-specific monitoring technique for stream restoration. This will include sediment monitoring and photo points. Monitoring will begin before construction to capture "baseline" conditions and continue monitoring beyond project completion.

Task 3: Engineering
This task includes final design, permitting, bidding, and construction oversight services.

Task 4: Construction
This phase includes stream bank restoration and revegetation activities.

Monitoring plan
Performance of this project will be evaluated through water quality, stream flow monitoring, and photo records. Monitoring will begin before construction to capture "baseline" conditions and continue beyond project completion.

Public Benefits Assessment
The project will conserve irrigation water, reduce erosion of agricultural lands along Muddy Creek, and reduce sediment delivery to the Sun River. It will also improve reliability of flows for irrigators while helping to maintain summer flows in the Sun River, which is chronically dewatered. The project will directly benefit local Montana irrigators, fish and wildlife habitat, and local water quality. More significantly, the project will benefit water quality in the Sun and Missouri rivers, fish and wildlife resources in downstream water bodies, and sedimentation of downstream reservoirs.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Phase 1 Irrigation Construction	$0	$458,981	**$458,981**
Stream Restoration			
Task 2: Monitoring	$0	$10,236	**$10,236**
Task 3: Engineering	$0	$270,063	**$270,063**
Task 4: Construction	$476,400	$1,193,543	**$1,669,943**
Project Management	$3,600	$55,768	**$59,368**
Administration	$20,000	$0	**$20,000**
Total	**$500,000**	**$1,988,591**	**$2,488,591**

The project budget is reasonable, and costs seem accurate for the scope of the project.

DNRC Concerns
The proposed re-regulation reservoir will reduce the magnitude of flows in Muddy Creek and thereby influence the design of the proposed stream restoration. Consequently, the design for stream restoration should take into account the resulting flows from the re-regulating reservoir construction to ensure compatibility between the two aspects of the project and achievement of the natural resource benefits.

Funding Recommendation
DNRC recommends grant funding of $500,000 upon DNRC approval of the project scope of work, administration, budget, and funding package. Funding for the stream restoration components of the project is contingent upon completion of the phase 1 irrigation construction and incorporation into the design for stream restoration.

Project No. 10

Applicant Name	Montana Department of Natural Resources and Conservation - Water Management Bureau	
Project Name	Expansion of Water Resources Division Hydrology Data Portal	
Amount Requested	$ 150,000	
Other Funding Source	$ 97,970	DNRC Water Management Bureau
Total Project Cost	$ 247,970	
Amount Recommended	$ 150,000	

Project Summary

DNRC Water Management Bureau (WMB) is proposing an overhaul of the Stream and Gage Explorer (StAGE) data portal to increase public access and awareness of water resources information produced by WMB and its stakeholders. The objective is to build upon the software already implemented in StAGE to generate a more expansive database that will include forecast information on streamflow, water supply, and water use in gaged and ungaged basins; observations of groundwater and reservoir levels; field validated map data describing water distribution networks; and WMB's expanding network of real-time and conventional streamflow measurement stations. This project implements a recommendation of the Montana State Water Plan to improve dissemination of water information to improve water management across the State.

Project History

Currently, data on Montana's rivers, streams, and lakes are currently collected by a medley of federal, state, academic, and local entities, but this information is not centralized. The 2015 State Water Plan recommended that improvements to Water Information were critical to effective water management, stating: "Water resource issues are multi-faceted and often highly localized. Understanding and resolving them requires ready access to up-to-date information. Multiple local, state and federal agencies generate and use water information in carrying out their responsibilities related to the protection or allocation of Montana's water resources. Better integration of this information will support planning, policy development and decision making at local, state and federal levels. Integration of information will also support planning and decision making by individual water users. Better access to hydrologic and climatic information at the appropriate geographic scale will result in more accurate assessments of water availability." (Montana State Water Plan, 2015; pg. 6) Since 2015, WMB has been engaged in improving processes related to water information collection and distribution, including collecting real-time flow data and increasing access to that data through the StAGE data portal. This proposed expansion of the data portal would incorporate the available water data within the state to a centralized database.

Proposed Solution

Project Goals and Objectives

The goal of this project is to increase public access to and awareness of water resource information by expanding DNRC WMB's existing StAGE application to incorporate hydrology studies, modeling, and water information produced by the WMB or its collaborators. This will provide water management tools for resource managers across the state. The goal will be achieved by the following objectives 1) complete back-end development of servers, file structure, and data workflows; 2) select development team and design new or alter existing web pages; and 3) test and de-bug existing issues before launching the final web portal.

Tasks or Activities

Task 1: Project Planning and Procurement

This task will include setting up the server for datasets and models, packaging models and data on the new server, merging data from the new server to the StAGE server, soliciting bids for web development services, selecting a web development contractor, and forming an internal design and testing team.

Task 2: Design Streamflow Forecast Webpage
Streamflow and water supply forecasting will have its own webpage on the new StAGE app. WMB will determine which data are presented and how they are presented in this task.

Task 3: Design Model Output Webpage
Operational models in use in Montana by WMB will be represented spatially to allow users to see where there is an active model. A separate page will allow the user to interact with the model domain and products/results from these models.

Task 4: Design Basin Study Webpage
Hydrologic studies completed by WMB or it's collaborators will be represented spatially allowing the user to select areas where a study was completed.

Task 5: Update Existing Webpages
StAGE has specific aesthetics for graphs, display, and maps. If any of the aesthetics are different among the new web pages, the existing StAGE visualizations will be updated to maintain a consistent look and feel across the entire platform.

Task 6: Platform Launch
This ask includes finalizing the webpages, testing, debugging, and launching the platform.

Monitoring Plan
Monitoring of the web developer's progress will occur through regular meetings with the internal design team and testing sessions using the existing StAGE "test environment," where changes can be viewed prior to launch.

Public Benefits Assessment
The project has the potential to conserve natural resources; protect public health, safety, and welfare; and benefit Montanans by providing a vast centralized water resources database which would provide resource managers across the state with the information necessary to effectively manage water resources. Public and natural resource benefits of the projects rely on the use of the site by resource managers. Outreach for the project was not adequately addressed in the application, but the applicant demonstrated increasing use of the current site.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Project Planning and Procurement	$0	$864	$864
Task 2: Design Streamflow Forecast Webpage	$300,000	$20,000	$50,000
Task 3: Design Model Output Webpage	$30,000	$20,000	$50,000
Task 4: Design Basin Study Webpage	$30,000	$20,000	$50,000
Task 5: Update Exiting Webpages	$15,000	$5,000	$20,000
Task 6: Platform Launch	$45,000	$25,790	$70,790
Project Management	$0	$2,016	$2,016
Administration	$0	$4,300	$4,300
Total	**$150,000**	**$97,970**	**$247,970**

The budget is detailed at the task level, but the costs appear low compared to similar projects.

Funding Recommendation
DNRC recommends grant funding of $150,000 upon DNRC approval of the project scope of work, administration, budget, and funding package.

Part 2. Other Projects Submitted for Funding Consideration

Applicant Name Sand Coulee Water District
Project Name Sand Coulee Wastewater Improvements

Amount Requested	$ 300,000	
Other Funding Source	$ 2,762,439	Montana DEQ Abandoned Mine Lands Program
Total Project Cost	$ 3,062,439	
Amount Recommended	$ 0	

Project Summary
The Town of Sand Coulee does not have a municipal wastewater system, rather residents of Town are on private on-site septic systems. Rising groundwater levels over the past several years has resulted in failed septic systems and drainfields, as well as surface seepage to shallow groundwater. The district plans to install a municipal wastewater system in two phases. The goal of the project is to mitigate fecal contamination of ground and surface waters, and to eliminate health and safety issues associated with failing on-site septic systems due to rising groundwater levels.

Project History
The Sand Coulee area has a long history of studies that document the mining impacts (acid mine waste drainage) and reclamation projects to mitigate environmental damage. In 2018, the Sand Coulee Water District conducted a groundwater study within the community to evaluate whether previous mine adit sealing may be contributing to the apparent elevated groundwater levels and caused the flooding/failure of private drain fields. The study concluded that the groundwater table in the area has risen by as much as 9 feet since 2010. In addition, because the heavy metal constituents in the groundwater found in the 2018 study were similar to those found in an earlier study of the mine waters, it was concluded that the rise in the water table may be related to the sealing of area mine adits. Recent studies indicate 1) bacteriological (fecal) contamination of area groundwater due to intermixing of septic tank effluent in areas where the water table has risen to drain field elevations, 2) bacteriological (fecal) contamination of surface water in areas where underground mixing has occurred and the water table has risen to the surface, and 3) flooding/failure of private septic systems because of the rising water table.

Proposed Solution
Project Goals and Objectives
The primary goal is to implement a permanent wastewater solution for the community of Sand Coulee. A municipal wastewater system will eliminate bacteriological (fecal) contamination of ground and surface water.

Tasks or Activities
The proposed project includes two phases. Phase 1 of the project includes installation and construction of 4 Grinder Pump and Force Main, Submersible Duplex Lift Station, 2 Cell Treatment System, and Spray Irrigation Disposal System. Phase 2 of the project includes installation and construction of 12,500 LF of 8" PVC gravity main, 38 Sewer Manholes, 9,450 LF of 4" service line, and 93 Service Line Connections at Main. Tasks for Phase 2 include:

Task 1: Preliminary Design
The activity includes data collection, topographic surveying and preliminary plan layout for the preferred alternative.

Task 2: Final Engineering Design
This item has been budgeted to cover the costs of the engineering consultant to prepare draft and final bid documents. Tasks include preparation of plans and specifications, project bidding and construction award.

Task 3: Construction Inspection
This activity will support construction inspection, construction management, review of shop drawings, processing contractor pay requests, final inspection, and project closeout.

Task 4: Construction
Costs associated with installation of a new public sewer collection, treatment, and spray irrigation system are included in this task.

Monitoring Plan
The applicant has identified sufficient staff to manage the project, and it will be designed by an engineer with typical construction oversight and quality assurance measures taken. The applicant will maintain the wastewater system once constructed.

Public Benefits Assessment
This project focuses on the community public health benefits of construction of a municipal wastewater treatment system and elimination of the use of septic systems in the shallow groundwater regime. Construction of a wastewater system will eliminate bacteriological (fecal) contamination of area groundwater and surface water and remove a public health and safety concern.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Preliminary Design	$50,000	$30,017	**$80,017**
Task 2: Final Engineering Design	$50,000	$215,489	**$265,489**
Task 3: Construction Inspection	$50,000	$228,209	**$278,209**
Task 4: Construction	$150,000	$1,959,630	**$2,109,630**
Contingency	$0	$210,963	**$210,963**
Administration	$0	$118,131	**$118,131**
Total	**$300,000**	**$2,762,439**	**$3,062,439**

The project budget provides sufficient detail, but the financial feasibility of the project hinges on match funding that has not been secured.

DNRC Concerns
The applicant has applied for funding from the Renewable Resource Grant Program (RRGL) for the project. House bills 6 and 7 prohibit funding of a project by both the RRGL and RDG programs in the same biennium.

The soils and groundwater in the Town of Sand Coulee have been significantly altered by historical mining in the area resulting in an area of high acidity. The project design must address how the wastewater system will be built in an area with this geology.

Funding Recommendation
DNRC does not recommend funding of the project under the RDGP as proposed. DNRC recommends that the applicant seek an adequate funding package for the wastewater system and address the acidic groundwater and soils in the design of the wastewater collection and treatment system.

CHAPTER III
Status Report of Active 2013–2021 Projects

This chapter briefly summarizes the status (as of October 30, 2022) of active projects and projects completed this biennium. Projects are grouped according to the year in which they received legislative approval; within each grouping, projects are presented in the order of their relative funding priority.

Projects Approved by the 2021 Legislature – House Bill 632

1. Philipsburg, Town of – Wastewater Treatment System Improvements, Metals Contaminated Sludge Removal and Disposal

Wastewater lagoons in the Town of Philipsburg have been impacted by contamination from abandoned historic mines in the area. Removal of the sludge and disposal in a licensed repository improve water quality in Flint Creek. Sludge removal occurred in September 2021, with hauling occurring in fall 2022. The project is expected to be completed in 2022.

Projects Approved by the 2021 Legislature – House Bill 7

2. Mineral County Conservation District –Flat Creek Dispersed Tailings Removal and Restoration

The project will reclaim and restore 1.6 miles of Flat Creek by removing approximately 19,000 cubic yards of tailings from the streambank and floodplain and disposing of them in the existing Wood Gulch repository. This project was contracted in fall 2022 and will continue construction through October 2023.

3. Missoula County – Ninemile Creek Placer Mine Reclamation, Phase 6

The Ninemile Creek Placer Mine Reclamation project will restore stream and floodplain functions to a 3,700-foot-long reach (Reach 5) of Ninemile Creek, a tributary to the Clark Fork River near Huson, Montana. The project was contracted in fall 2022 and is expected to complete construction by the end of 2023.

4. Harlowton, City of – Contaminated Soils and Free Product Removal at the Harlowton Roundhouse in Harlowton, MT, Phase 4

This phase of the project will remove additional contaminated soil and allow restoration of the historical wetlands located in the contaminated railyard. This phase of the project is not yet contracted.

5. Mineral County – Interim Remedial Action at Milwaukee Road - Haugan State Superfund Facility

The Milwaukee Road – Haugan State Superfund project will remove fuel oil waste and contaminated soil present at the Facility and backfill the area with clean fill. Construction is anticipated during the summer 2023.

6. Powell County – Milwaukee Roundhouse Area Remediation, Phase 2

This project phase will remove and securely dispose of at least 2,800 cubic yards of metals contaminated soil from the Milwaukee Roundhouse facility. This project is not yet contracted.

7. Montana Tech – Montana Bureau of Mines and Geology – Modernization of Montana's Regional Seismic Network

The Montana Bureau of Mines and Geology will modernize and upgrade 10 analog stations to improve coverage of Montana’s seismically active regions, ensure the reliability of the network, and the capacity to sustain and efficiently operate the seismic network. The project was contracted in fall 2022. Equipment is expected to be installed by summer 2023.

8. Montana Department of Environmental Quality – Landusky Swift Gulch High Flow Treatment System and Stream Rehabilitation

The project will install an acid mine drainage treatment system and improve stream and floodplain functions to 3,000 feet of Swift Gulch, a tributary of Little Peoples Creek, near Hays, Montana. This project is not yet contracted.

9. Lewis and Clark County – Grizzly Gulch Reclamation Project
The project will reclaim Grizzly Creek to a functional stream and floodplain, improve water quality by eliminating erosion, increase water quantity by reducing evaporative losses in existing impoundments, and improve public safety and access. This project is not yet contracted.

Projects Approved by the 2021 Legislature – House Bill 14

10. Lewistown, City of – Central Post and Treating Company CECRA Facility: Phase 1, Capping and Site Reclamation
This project will construct a protective soil cap to cover approximately 4.4 acres of contaminated soils to eliminate current and future impacts to local and regional natural resources. Construction is expected to be completed in 2022.

11. Sunburst, Town of – Suta South Clean Up Project
This project will determine the extent and severity of the soil contamination at the Suta South site, and permanently remove petroleum contaminants in the soil and groundwater at the site. This project is expected to be completed in 2023.

12. Butte-Silver Bow Government – Butte Mining District: Reclamation and Protection Project, Phase V
The Butte-Silver Bow project will remediate portions of the Anselmo and Steward Mine yards to eliminate stormwater and erosion caused by degradation of historic utility infrastructure and restore mine yard buildings and structures to interpret the history of mineral development in Butte. This project is not yet contracted.

13. Ruby Valley Conservation District – Granite Creek Reclamation Realignment Project
This project includes construction of a new bridge, realignment of approximately 1,660 feet of Granite Creek to accommodate the new bridge alignment, and construction of a new fish barrier. This project is underway with stream realignment expected to be completed by fall 2023.

14. Deer Lodge Valley Conservation District – Upper French Gulch Fish Passage and Restoration Project
This project will restore fish passage to the upper reaches of French Gulch by constructing a step-pool channel and improve water quality by stabilizing two eroding banks using bioengineering techniques. Construction was completed in fall 2022.

15. Fort Peck Assiniboine and Sioux Tribes – Orphaned Oil Well Abandonment and Reclamation
Applicant withdrew the application in January 2021.

16. Ryegate, Town of – Former Ryegate Conoco Groundwater Remediation
This project will install horizontal injection wells to remediate contaminated soil and groundwater at the site. Injection wells have been installed and treatment is expected to continue through 2024.

Projects Approved by the 2019 Legislature – House Bill 7

2. Richland Conservation District – Mitigating Impacts to the Fox Hills/Hell Creek Aquifer, Richland County
This project will reduce the volume of water wasted by free-flowing Fox Hills/Hell Creek wells in Richland County. Monitoring and assessment of the wells began in summer 2022. This project will continue through 2023.

3. Musselshell County – Bair-Collins Mine (Meathouse Road) Reclamation and Musselshell River Restoration
The Bair-Collins Mine Reclamation and Musselshell River Restoration project will reclaim an abandoned coal mine; reduce impacts from flood events on the Musselshell River adjacent to Roundup, Montana; improve the fishery; and create recreational access to the river. Construction on the project was completed in fall 2021.

4. Missoula County Community and Planning Services – Ninemile Creek Mine Reclamation
The goal of the Ninemile Creek Reclamation project is to reclaim mining impacts, improve water quality, and reconnect previously damaged tributaries. This project was completed in fall 2022.

5. Harlowton, City of – Removal of Contaminated Soils and Free Product at the Harlowton Roundhouse in Harlowton, MT, Phase 3
This project will clean up diesel contaminated soils and groundwater at the Harlowton Roundhouse Facility, improve water quality, restore a historic wetland, and mitigate flooding along the Musselshell River in Harlowton, Montana. Removal of contaminated soils began in 2021. The project is expected to close at the end of 2022.

6. Granite Conservation District – Silver King Mine Reclamation
The Silver King Mine Reclamation project will remove waste rock from the Silver King Mine and regrade and reconstruct the site and reestablish the original Sluice Gulch channel. This project was completed in spring 2022.

7. Powell County – Milwaukee Roundhouse Area Remediation
The Milwaukee Roundhouse Facility in Deer Lodge, Montana released diesel and other contaminants, impacting soil, groundwater, surface water, and aquatic habitat. This project will remove contaminated soil from the site to mitigate damage to soil and groundwater resources at the facility. The remediation proposal is being finalized, and the project is expected to go to construction in 2023.

8. Montana Department of Environmental Quality – Upper Blackfoot Mining Complex Wetland Contamination Removal
This project was withdrawn by the applicant.

<u>Projects Approved by the 2019 Legislature – House Bill 652</u>
9. Deer Lodge, City of – Milwaukee Roundhouse CECRA Site Passenger Refueling Area VCRA Program Remediation
Removal of contaminated soils at this site will repair damage to soils and groundwater resources from historic railroad operations. Work began on this project in fall 2019 and is expected to close by the end of 2022.

10. Ryegate, Town of – Former Ryegate Conoco Groundwater Remediation
Releases of petroleum products from the gas station's underground storage tank systems have contaminated soil and groundwater at the site. Additional sampling at the site in 2019 and 2020 refined the scope of work to the project, resulting in a new RDG project grant awarded in 2021. This project is expected to be completed in 2022.

11. Montana Department of Environmental Quality – Cottonwood #2 Acid Mine Drainage Diversion Project
This project will construct a new collection system to contain acid mine drainage that seeps to the ground surface in multiple locations in the town of Stockett, Montana. This project is expected to be completed by the end of 2022.

12. Montana Department of Environmental Quality – Basin Creek Mine - Phase 2 Site Stability Project
Oversized mine haul roads remaining at the Basin Creek Mine are responsible for sediment that migrates off-site and into the headwaters of Basin Creek. This project will reduce the size of the haul roads and reduce the sediment load to surface waters emanating from the former mine. This project was completed in 2021.

13. Montana Department of Environmental Quality – Upper Blackfoot Mining Complex Water Treatment Plant Bridge and Infrastructure Protection
This project is to replace a culvert at the water treatment plant at the Upper Blackfoot Mining Complex with a bridge. Installation of the bridge was completed in 2021.

Projects Approved by the 2017 Legislature

1. Granite Conservation District – Flint Creek Watershed Metals Remediation – Fred Burr Creek, Rumsey Mill Tailings
The Flint Creek Metals Remediation Project will assess and remove mercury contamination from the Rumsey Mill in the Fred Burr Creek watershed. The applicant was unable to move forward with the project without additional planning activities and withdrew the project. This grant was closed in winter 2020.

2. Montana DEQ – Tramway Creek Mine Reclamation Project
The Tramway Creek Mine Reclamation Project will remove contaminated tailings along Tramway Creek. This project was completed in 2022.

3. Harlowton, City of – Removal of Contaminated Soils and Free Product at the Harlowton Roundhouse in Harlowton, MT
This project will remove diesel contaminated soils in the floodplain of the Musselshell River. Removal of soils began in fall 2019. Construction is expected to continue through 2022.

4. Lewistown, City of – Cleanup of the Central Post and Treating Company in Lewistown, MT
This project will remove contaminated soils from the Central Post and Treating Company. Soil removal began in summer 2018. The project was delayed due to the discovery of additional contamination and the need for additional planning. The project is expected to resume work in 2023 and be completed by 2024.

6. Confederated Salish and Kootenai Tribes – Revais Creek Mine Tailings Reclamation
The goal of this project is to remove contaminated tailings near Revais Creek. Work on the project began in spring of 2020 but was delayed due to COVID-19. The applicant is considering design changes and consulting with DNRC.

7. Missoula County Community and Planning Services – Ninemile Creek Housem Placer Mine Reclamation
The goal of this project is to reclaim and restore placer impacted Ninemile Creek. Construction was completed in 2021.

Projects Approved by the 2015 Legislature

1. Montana DEQ – Belt Water Treatment Project
Several historic coal mines are found in the area have been discharging AMD (Acid Mine Drainage) for nearly 100 years to Belt Creek as well as contaminating much of the groundwater in the area. This project completed construction of the foundation for a water treatment plant in 2022.

7. Montana DEQ – Sand Coulee Acid Mine Drainage Source Control
This project will investigate mine adit flows and install vertical and horizontal wells to intercept acid mine drainage. Investigations to characterize mine adit flows, local hydrogeological conditions, and identify recommended interception well locations have been completed. The project is anticipated to be completed at the end of 2022.

Active Projects Approved by the 2013 Legislature
11. Ryegate, Town of – Former Ryegate Conoco Groundwater Remediation
A dissolved phase hydrocarbon plume with concentrations of petroleum hydrocarbons exceeding water quality standards extends about 150 ft. from the abandoned Ryegate Conoco gas station beneath and south of Highway 12. Ryegate has installed fluid injection wells, a remedial system, and monitored the groundwater. The project was completed in fall 2022.

CHAPTER IV
Reclamation and Development Grants Program—Project Planning Grants

Program Information

RDGP planning grants are intended to assist local governments with the planning and design of technically feasible natural resource projects eligible for funding consideration under the RDGP. DNRC accepts applications for planning grants in cycles throughout the biennium. Staff review and rank the applications using a methodology patterned after and conducted similar to the RDGP project grant program. The maximum amount for a planning grant is $50,000. Funding for the planning grant projects has proven invaluable for applicants in preparing and submitting a high quality and competitive project grant application.

The 2019 Legislature authorized $900,000 for RDGP project planning grants. DNRC awarded grant funds throughout the biennium for full appropriation available for planning grants. Table 2 shows planning grants awarded since the last publication of the Governor's Budget including funds appropriated in the 2019 Legislature. The 2021 Legislature authorized $800,000 for RDGP project planning grants. Table 2 lists the planning grants awarded with funds appropriated in the 2021 Legislature.

Funding for the 2023 Biennium	
Total Available 2023 Biennium	$ 800,000.00
Grants Awarded as of October 2022	$ 213,585.00
Amount Remaining 2023 Biennium	$ 586,415.00

Table 2. Project Planning Grants Awarded (as of October 30, 2022)

Project Sponsor	Project Title	Awarded Amount
2021 Biennium Planning Grant Funds Awarded After October 30, 2020		
Beaverhead Conservation District	Grasshopper Creek – Priscilla/Gold Leaf Reclamation Planning	$5,000
Beaverhead Conservation District	Grasshopper Creek – Priscilla/Gold Leaf Remedial Investigation and Feasibility Study	$45,000
Beaverhead Conservation District	Elkhorn Mine and Mill Bioabsorbent Filtration of Acid Mine Drainage	$49,964
Missoula County	Grant Writing for US EPA Brownfields Community-Wide Assessment	$6,000
Ruby Valley Conservation District	Granite Creek Realignment Project Design	$40,000
Montana Department of Environmental Quality	Roundup Reach of the Musselshell River Planning Grant	$15,000
Powell County	Tramway Creek Mining Complex 2022	$50,000
Montana Department of Environmental Quality	Investigation of the City of Laurel Historic Dump near the Yellowstone River	$50,000
Lincoln County	Asa Wood Underground Storage Tank Soil Assessment	$25,715
Montana Department of Environmental Quality	Design of a floodplain restoration, flood mitigation, and recreational plan to mitigate erosion, improve riparian habitat and increase floodplain access for the Roundup Reach of the Musselshell River	$30,000
Montana Department of Environmental Quality	Glassco Lumber Wood Treatment Trench Investigation	$50,000
Carbon County	Clarks Fork Yellowstone Partnership, Carbon County Channel Migration Zone Mapping and Stream Channel Stability Assessment	$48,155
Petroleum County Conservation District	Musselshell River Floodplain Encroachment Inventory and Assessment	$42,328
	TOTAL	**$457,162**
2023 Biennium Planning Grant Funds Awarded Before October 30, 2022		
Montana State University	Evaluation of microbially generated minerals to mitigate acid mine drainage in the Great Falls-Lewistown coal field	$33,585
Green Mountain Conservation District	Vermilion River Restoration and Project Effectiveness Monitoring	$50,000
Beaverhead Conservation District	Elkhorn Mine and Mill 30% Remedy and Biofiltration Design	$50,000
Montana Technological University	Slash Pile Biochar Technology Device Development	$50,000
Montana DNRC- Trust Land Management Division	Glacier Gold Limited Phase II ESA	$30,000
	TOTAL	**$213,585**

Note: CECRA = Comprehensive Environmental Cleanup and Responsibility Act, also known as the State Superfund Program; EPA = Environmental Protection Agency

2023

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