GOVERNOR
STEVE BULLOCK

STATE OF MONTANA

Governor's Executive Budget
Fiscal Years 2020 - 2021

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 2021 Biennium

and

2005 Through 2017 Biennia Status Report

Prepared by the

Montana
Department of Natural Resources
and Conservation

Conservation and Resource Development Division
Resource Development Bureau

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VOLUME 5

January 2019

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LIST OF TABLES AND MAP

LIST OF ABBREVIATIONS

AIS..... Aquatic Invasive Species
AMD ..... Acid Mine Drainage
AML ..... Abandoned Mine Land
ARCO ..... Atlantic Richfield Company
BCM ..... Basin Creek Mine
BLM ..... Bureau of Land Management, U.S. Department of the Interior
BMP..... Best Management Practices
CARDD..... Conservation and Resource Development Division
CD ..... Conservation District
CECRA ..... Comprehensive Environmental Cleanup and Responsibility Act of 1989
CERCLA..... Comprehensive Environmental Response Compensation and Liability Act
cy..... Cubic Yards
DEQ..... Montana Department of Environmental Quality
DEQ-AML ..... Montana Department of Environmental Quality–Abandoned Mine Lands Program
DNRC ..... Montana Department of Natural Resources and Conservation
EA..... Environmental Assessment
EE/CA..... Engineering Evaluation/Cost Analysis
EPA ..... U.S. Environmental Protection Agency
EQIP..... Environmental Quality Incentives Program
FEMA ..... Federal Emergency Management Agency
ft ..... Feet
FHHC ..... Fox Hills/Hell Creek Aquifer
FWP ..... Montana Fish, Wildlife and Parks
HB ..... House Bill
MBMG ..... Montana Bureau of Mines and Geology
MCA ..... *Montana Code Annotated*
MT ..... Montana
NRCS ..... Natural Resources Conservation Service
PER ..... Preliminary Engineering Report
RBSL ..... Risk Based Screening Levels
RDG/RDGP ..... Reclamation and Development Grants Program
RIT..... Resource Indemnity Trust
RP ..... Remediation Proposal
RRGL ..... Renewable Resource Grant and Loan Program
SSU ..... State Superfund Unit
SSRA..... State Special Revenue Account
TU..... Trout Unlimited
UBMC..... Upper Blackfoot Mining Complex
USFS..... U.S. Forest Service
VCRA ..... Voluntary Cleanup and Redevelopment Act
WTP ..... Water Treatment Plant

PROJECTS SUBMITTED FOR FUNDING IN THE 2021 BIENNIUM

Following is a list of projects submitted for funding in the 2021 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

Program Information

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).

In February 2018, 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 2018 was available electronically. Application materials were also printed for distribution. The application deadline was May 15, 2018. DNRC received 13 applications for RDGP funding totaling over $5.2 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 on page 5.

Since 1986, previous Legislatures have authorized about $67 million for 293 projects. RDGP grants are funded by revenue generated from resource extraction taxes. Portions of the following sources of revenue are deposited in the natural resources 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 resources SSRA are shared by DNRC's two natural resource grant programs: the RDGP and the Renewable Resource Grant and Loan Program (RRGL).

The 2017 Legislature approved authorization of $800,000 in project planning grant funding. Chapter IV describes DNRC's role in the administration of planning grants and lists the 20 projects that were approved for funding as of October 2018.

The 2017 Legislature authorized $500,000 in aquatic invasive species (AIS) control funding. Chapter V describes DNRC's role in the administration of AIS control and lists the 20 control projects that were approved for funding as of October 2018.

The 2015 Legislature authorized $214,000 for the Montana Salinity Control Association. Chapter VI describes DNRC's role in the administration of funds for this program and describes how these funds are being utilized.

The RDGP Act 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 (Tables 1 and 2). Administrative rules 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.

Project Eligibility

The following excerpt from the RDGP Act (90-2-1112, MCA) establishes project eligibility criteria:

1. Except as provided under subsection (2), 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 in subsection (1).

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.

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 submitted 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 were scored and ranked based on the degree to which they met 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 presented recommendations to the Governor for final ranking of the proposed projects (Table 1), along with funding recommendations. Projects that were funded by the 2017 Legislature but that lost funding after the 2017 Special Session are listed in Table 2. Table 2 projects were resubmitted for consideration by the 2019 Legislature.

An appropriations bill listing the Governor's recommendations regarding all projects in Tables 1 and 2 will be introduced to the 2019 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 and aquatic invasive species grants. 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 and to address the threats of aquatic invasive species.

Table 1. Ranking and Funding Recommendations for RDGP Applications Received May 2018

Rank	Applicant	Project Name	Amount Requested	Amount Recommended	Cumulative Amount
Applications Received May 2018					
1	*Musselshell County*	*Bair-Collins Mine (Meathouse Road) Reclamation and Musselshell River Restoration*	$500,000	$500,000	$500,000
2	Missoula County Community and Planning Services	Ninemile Creek Mine Reclamation	$437,000	$437,000	$937,000
3	*Harlowton, City of*	*Removal of Contaminated Soils and Free Product at the Harlowton Roundhouse in Harlowton, MT, Phase 3*	$500,000	$500,000	$1,437,000
4	*Granite Conservation District*	*Silver King Mine Reclamation*	$285,000	$285,000	$1,722,000
5	*Powell County*	*Milwaukee Roundhouse Area Remediation*	$500,000	$500,000	$2,222,000
7	Montana Department of Environmental Quality	Upper Blackfoot Mining Complex Wetland Contamination Removal	$500,000	$500,000	$2,722,000
8	*Montana Department of Environmental Quality*	*Cottonwood #2 Acid Mine Drainage Diversion Project*	$300,000	$300,000	$3,022,000
10	*Deer Lodge, City of*	*Milwaukee Roundhouse CECRA Site Passenger Refueling Area VCRA Program Remediation*	$297,000	$297,000	$3,319,000
11	Montana Department of Environmental Quality	Basin Creek Mine - Phase 2 Site Stability Project	$500,000	$300,000	$3,619,000
12	*Ryegate, Town of*	*Former Ryegate Conoco Groundwater Remediation*	$185,254	$50,000	$3,669,000
13	Montana Department of Environmental Quality	Upper Blackfoot Mining Complex Water Treatment Plant Bridge and Infrastructure Protection	$300,000	$300,000	$3,969,000
Totals			**$4,304,254**	**$3,969,000**	**$3,969,000**

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

Note: The projects ranked 1 and 2 are 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).

In April 2017, the Legislature appropriated $4,079,129 to fund 10 RDGP project grants. After the November 2017 Special Legislative Session, $2.05 million was transferred from the Project State Special Revenue Account to the General Fund, effectively defunding three RDGP projects and 7.5 Renewable Resource

Grant and Loan projects. DNRC notified the applicants of the unfunded projects that funds would not be available for their projects, but that they could request reconsideration by the 2019 Legislature without preparing a new application. Two of the three RDGP projects submitted a request for reconsideration. The third RDGP project did not reapply.

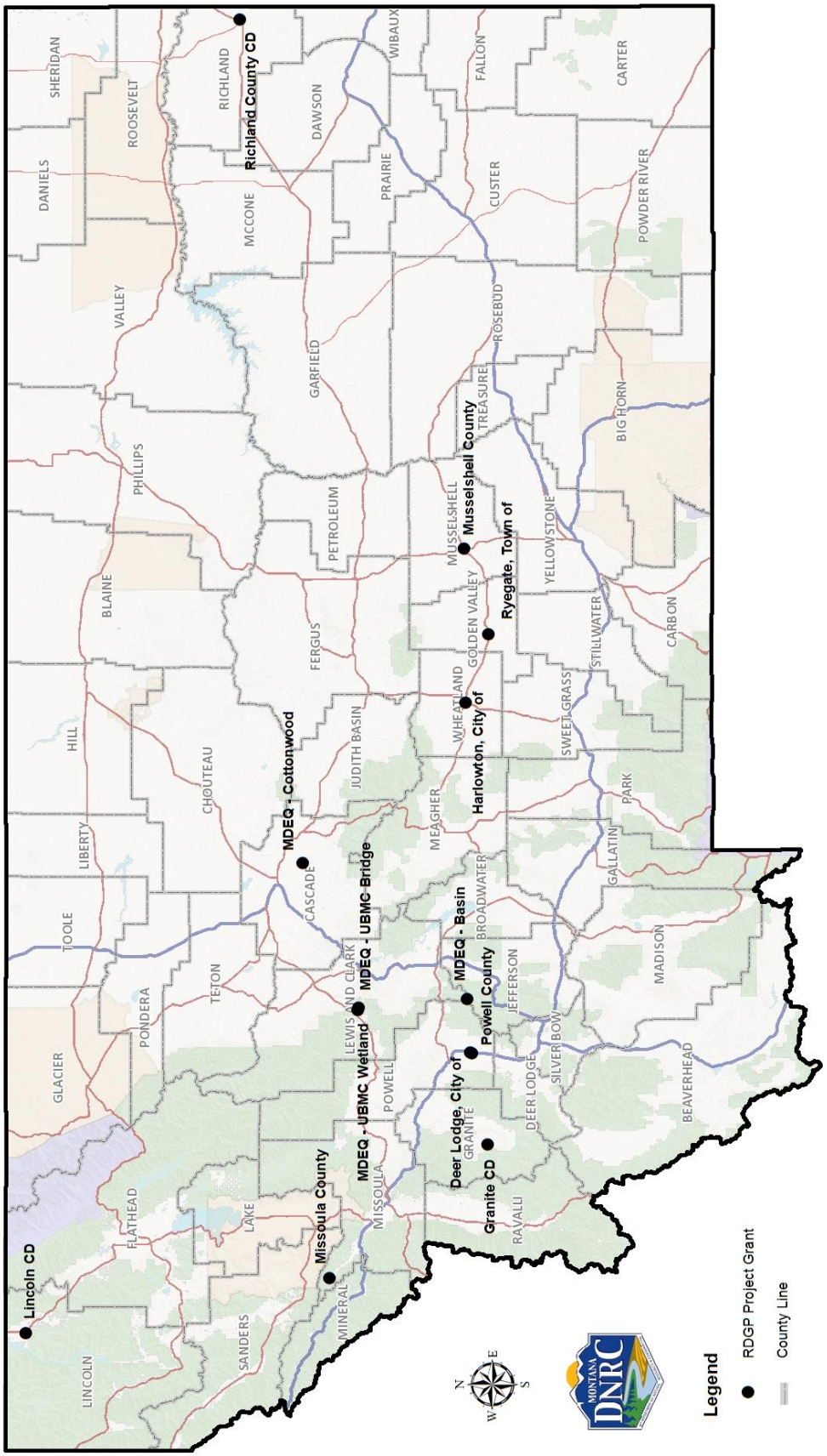
Table 2 lists the two projects offered to the legislature for reconsideration. These projects show the rank they received when compared to the list of projects in table 1.

Table 2. Ranking and Funding Recommendations for 2017 Unfunded Projects

Rank	Applicant	Project Name	Amount Requested	Amount Recommended	Cumulative Amount
Projects unfunded in 2017 Special Session, Requesting Reconsideration May 2018					
6	*Lincoln Conservation District*	***Reconsideration:*** *Tobacco River Restoration Project - Engineering and Implementation*	$451,193	$451,193	$451,193
9	Richland County Conservation District	**Reconsideration:** Mitigating Impacts to the Fox Hills/Hell Creek Aquifer, Richland County	$493,585	$493,585	$944,778
Totals			$944,778	$944,778	$944,778

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

2021 Biennium RDGP Project Grant Applications



CHAPTER II
Project Evaluations and Recommendations for the 2019 Biennium

This chapter combines summary evaluations of 13 projects submitted for funding consideration. The 13 projects recommended for funding are presented in the order of their ranking. The cumulative requested amount for the projects is $5,249,032.

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.”

Projects Recommended for Funding

Project No. 1

Applicant Name	Musselshell County	
Project Name	Bair-Collins Mine (Meathouse Road) Reclamation and Musselshell River Restoration	
Amount Requested	$ 500,000	
Other Funding Sources	$ 60,000	EPA Brownfields Grant
	$1,294,003	DEQ Abandoned Mine Lands Grant
	$ 58,644	Montana Fish, Wildlife, and Parks
	$ 999,654	Federal Emergency Management Agency
Total Project Cost	$2,912,301	
Amount Recommended	$ 500,000	

Project Summary
The proposed project will reclaim an abandoned coal mine, reduce impact from flood events on the Musselshell River adjacent to Roundup, Montana, improve the fishery, and create recreational access to the river. Impacts from historical coal mining, railroad development, and channel stabilization have contributed to degradation of this reach of the river. Restoration of the river floodplain will reduce impact from flooding events, improve water quality, reestablish aquatic habitat, and improve terrestrial habitat.

Project History
Development of railroads in the 19th Century and the concurrent development of agriculture and coal mining resulted in extensive alterations to the Musselshell River. These modifications prevent parts of the river from reaching its floodplain and contributed to catastrophic flooding. The 2011 flood changed the structure of the river and resulted in approximately $3.4 million in property damage in the City of Roundup.

The Bair-Collins site is in the floodplain between the City of Roundup and the Musselshell River. In 1931, the mine entry for the Bair-Collins Mine (formerly called the Davis Mine) was relocated on the floodplain north of the river, requiring construction of a levee to protect mining structures. The levee restricts the river at this location, causing ice jams and flooding. This project is part of a multi-agency regional effort led by the Montana Department of Environmental Quality (DEQ) Abandoned Mine Lands (AML) Program to reclaim several abandoned coal mines.

Proposed Solution
Goals and Objectives
The goals of the project include: purchasing the property and removing site structures; complete mine reclamation; complete river restoration to mitigate flooding; improving the fishery; and increasing recreational access. The supporting objectives are reclaiming the abandoned Bair-Collins coal mine; improving the connectivity of the Musselshell River with its floodplain; reducing impacts from flooding on the City of Roundup; and increasing recreational access to the river corridor.

To achieve these goals, Musselshell County is proposing to use DNRC RDGP funds, while leveraging funding from Federal Emergency Management Agency (FEMA), DEQ AML, Montana Fish Wildlife and Parks (FWP), and United States Environmental Protection Agency (EPA) Brownfields Program to complete site assessment, restoration design, and construction. This project will remove existing structures and the berm, excavate and dispose of waste coal, restore the floodplain, improve fisheries, and construct a community pond. Additionally, the floodplain will be restored to more natural conditions through the removal of the berm and other structures on the site. Following removal of the structures, cover material will be removed or staged on site and waste coal will be excavated and disposed off-site. Once the site has been prepared, additional regrading includes a community pond that will allow public

access to the pond and riparian area adjacent to the river. The expansion of the floodplain in this area will improve aquatic habitat in this reach of the river.

Tasks or Activities

Task 1: Site and Building Assessments

This task includes completion of a draft site design based on data collected, an engineer's cost estimate, and subsequent bid documents. Additional site assessment will be completed using EPA Brownfields Funds. This phase of the assessment focuses on the buildings on the site, including a residence, the former lumber mill and bentonite bagging facilities, the butcher shop, and other out buildings. The assessment includes determining the presence of mold and asbestos.

Task 2: Appraisals, Buying, and Demolition of Site Structures

Using funds provided by FEMA, Musselshell County will appraise all the properties, purchase the properties and structures, remove utilities, and demolish the structures.

Task 3: Berm Removal, Floodplain Expansion, and Mine Reclamation

This task includes permitting, construction, traffic control, storm water control, clearing and grubbing vegetation, excavation and disposal of waste material, reshaping the floodplain, and revegetation. RDGP funds will be combined with other funding to complete these tasks.

Task 3A: Restoration of the Central Portion of the Site

Restoration of the area within the central portion of the site will include removal and disposal of coal waste at each disturbed area. Waste coal will be disposed of offsite. Disturbed areas will be revegetated.

Task 3B: Berm Removal and Floodplain Restoration

This task includes removal of the berm and disposal offsite, stream bank stabilization using engineering techniques and vegetation, and floodplain construction.

Task 3C: Permitting

A joint application form will be completed for various permits including the Montana Stream Protection Act (SPA 124 Permit); Federal Clean Water Act (404 Permit), and Short-Term Water Quality Standard for Turbidity (318 Authorization). In addition, if the County decides to recover sand and gravel from the site, they will acquire an open cut permit.

Task 4: Future Fisheries and Community Pond

This task includes development of future fisheries through the restoration of the floodplain to benefit riparian and aquatic habitat in the area. A community pond is also planned for the site, which will improve public access to the river and provide a recreational area for the community.

Task 5: Engineering and Construction Oversight

Engineering design and construction oversight will be needed for a minimum of two construction seasons.

Monitoring Plan

DEQ will monitor the site for the first five years after project completion. Long-term monitoring and maintenance of the site will be completed by Musselshell County. Monitoring by DEQ will include turbidity, vegetation, weed spraying, and streambank stability. Any maintenance needed during the first five years will be addressed by DEQ. Long-term monitoring and maintenance by the County will include weed spraying and maintenance of structures associated with the community pond.

Public Benefits Assessment

The proposed project will reclaim the abandoned Bair-Collins coal mine, remove an artificial berm, and restore a reach of the Musselshell River impacted by mining and agricultural practice, allowing the Musselshell River to access its historic floodplain and reduce the potential for flood damage in Roundup, Montana. The project will restore natural flow patterns in this reach of the river, improve fish habitat, and restore riparian wetlands.

The site is privately owned, but FEMA has provided funds to the County to purchase this property. Upon taking ownership, the County will remove the structures, waste coal, and berm, and restore the floodplain and the fishery. Public access to the river via trails will extend from the city park east of the site westward to the planned FWP public access fishing site on Riverside Road, 1.5 miles west of the Meathouse Road site.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Building Assessment	$0	$60,000	**$60,000**
Task 2: Appraisals, Purchase, Demolition of Structures	$0	$999,654	**$999,654**
Task 3: Berm Removal, Floodplain Expansion, and Mine Reclamation	$495,260	$795,760	**$1,291,020**
Task 4: Future Fisheries/ Community Pond	$0	$58,644	**$58,644**
Task 5: Engineering Design and Oversight / Personnel Costs	$0	$355,010	**$355,010**
Administration	$4,740	$14,213	**$18,953**
Contingency	$0	$129,020	**$129,020**
Total	**$500,000**	**$2,412,301**	**$2,912,301**

The project appears to be well budgeted for the presented level of design, and the estimated costs are in line with expectations for projects of this type. The expected match of funds from the DEQ AML, FWP, EPA Brownfields, and FEMA have been committed. This project appears to have solid financial support.

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. 2

Applicant Name	Missoula County	
Project Name	Ninemile Creek Mine Reclamation	
Amount Requested	$ 437,000	
Other Funding Sources	$ 150,000	US Forest Service
	$ 30,000	US Forest Service (in kind)
	$ 30,000	Trout Unlimited
	$ 30,000	Trout Unlimited (in kind)
	$ 16,000	Missoula County
	$ 20,000	Landowners
	$ 300,000	EPA 319 Grant
	$ 40,000	Montana Fish, Wildlife, and Parks
Total Project Cost	$1,053,000	
Amount Recommended	$ 437,000	

Project Summary
This project is part of a cooperative effort by Trout Unlimited, the Lolo National Forest, Montana DEQ, and Missoula County to clean up abandoned mine sites in the Ninemile Creek watershed. The project will restore stream and floodplain functions to 4,500 feet of Ninemile Creek, a tributary to the Clark Fork River, near Huson, Montana. The primary goals of the project are to reclaim mining impacts, improve water quality, and reconnect previously damaged tributaries. Extensive placer piles will be regraded and used to fill settling ponds to create a more uniform floodplain surface. The floodplain will be shaped to incorporate microtopography and woody debris, then revegetated with native plants. The stream channel will be reconstructed through the reclaimed floodplain and will include diverse habitat for fish and wildlife.

Project History
Ninemile Creek was placer mined with dragline dredges, hydraulic mining, and sluicing from the 1800s through the late 1940s. Mining activity significantly altered the landscape, leaving behind large piles of placer mine tailings up to 40 feet tall and obliterating the stream channel and floodplain. Large settling ponds dot the landscape and riparian vegetation is insufficient to maintain bank stability, provide shade, or filter out sediments and other pollutants from the stream. Six mine sites on tributaries to Ninemile Creek have already been reclaimed, which were funded in part by RDGP grants, and a 3,600-foot section of Ninemile Creek will be reclaimed in the summer of 2019. This project will build on previous reclamation work by connecting restored sections of Ninemile Creek and adjacent tributaries.

Proposed Solution
Goals and Objectives
Project goals and objectives are as follows:

Goal 1 – Improve water quality and reclaim mining impacts on Ninemile Creek
- Objective 1 – Remove and regrade mining spoils and settling ponds in the Ninemile Creek floodplain throughout Reach 4 and portions of Reach 5.
- Objective 2 – Establish naturally functioning and appropriate channel type, including stream planform, dimensions, gradient, bedform, and floodplain conditions.
- Objective 3 – Create conditions that sustain diverse and robust vegetation and wetlands; improve stability; and improve fish and wildlife habitat.

Goal 2 – Reconnect previously damaged tributaries along Ninemile Creek
- Objective 4 – Reconnect Twin Creek to Ninemile Creek by regrading mine waste piles and establishing naturally functioning stream and floodplain connections at the confluence area.
- Objective 5 – Reconnect Soldier Creek to Ninemile Creek by regrading mine waste piles and establishing naturally functioning stream and floodplain connections at the confluence area.

Tasks or Activities:
Task 1: Finalize engineering drawings and design specifications.

Task 2: Prepare contracts and interagency/landowner agreements to authorize reclamation activities and prepare relevant permits.

Task 3: Complete construction GPS base establishment, staking, and survey.

Task 4: Site preparation – Improve road and haul routes to facilitate equipment mobilization. Construct clearwater diversions for stream channel and best management practices (BMPs).

Task 5: Excavate, load, haul, and place placer/dredge mine tailings in adjacent dredge cuts. Finish rough grading of floodplain. Salvage native vegetation and stockpile on site before haul activities.

Task 6: Rough grading and shaping of stream channel alignment. Enhance existing historic floodplain and low terrace microtopography.

Task 7: Construct 4,500 linear feet of graded channel and constructed riffle using on-site screened alluvium.

Task 8: Construct large woody debris jams, and/or log and rock steps, incorporating imported 18”-24” boulders and on-site screened alluvium.

Task 9: Construct 3,000 linear feet of vegetated wood and brush fascine along riffle margins.

Task 10: Revegetation of streambanks using clump and sod transplants. Spread native grass and wetland seed on disturbed areas where appropriate.

Task 11: Revegetation of floodplain using nursery stock and transplants.

Task 12: Site cleanup and demobilization. Straw and mulch disturbed areas and remove BMPs where appropriate.

Task 13: Regrade mine waste piles and reconnect Twin Creek and Soldier Creek to the newly established Ninemile Creek channel.

Monitoring
The following parameters will be monitored to evaluate project success:

Parameter	Frequency	Timeframe	Term
Bank Erosion	Bi-annual	Summer	4 years
Fish Populations	Bi-annual	Summer	4 years
Temperature	Annual	Summer and Fall	4 years
Vegetation	Annual	Summer	4 years

Public Benefits Assessment
The project will repair a significant amount of damage to Ninemile Creek and its floodplain caused by historic placer mining. Restoration is not comprehensive due to cost but is sufficient to restore stream and floodplain function. When completed, the project will improve water quality, water quantity, fish habitat, floodplain function, and wildlife habitat. Public health will also benefit by improved water quality, and safety will be benefited by elimination of potentially dangerous, tall eroding slopes. The number of resources affected are multiple and benefits to Ninemile Creek will be substantial.

Economic benefits will accrue to the local community through commerce associated with project implementation and benefits to natural resources. Most if not all of the work will be completed by Montanans who already hold jobs, and benefits are likely to be limited to Missoula County.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Tasks 1 and 2: Final design, permitting	$0	$42,500	**$42,500**
Task 3: Construction survey, oversight	$50,000	$55,000	**$105,000**
Task 4: Mobilization	$25,500	$33,000	**$58,500**
Task 5: Mine pile removal, floodplain grading	$225,000	$152,000	**$377,000**
Task 6: Channel earthwork	$15,850	$52,500	**$68,350**
Task 7-9, and 13: Stream structure and bank installation	$25,000	$213,500	**$238,500**
Task 10-11: Revegetation	$5,223	$37,600	**$42,823**
Task 12: Site cleanup, demobilization	$29,700	$4,400	**$34,100**
Administration	$21,000	$25,500	**$46,500**
10% Contingency	$39,727	$0	**$39,727**
Total	**$437,000**	**$616,000**	**$1,053,000**

The estimated budget is comparable to similar projects in other watersheds. Funding for the project has been pledged from numerous sources, most of which are clearly identified and secured. About a third of funding will be sought from several state and non-state sources that are not yet secured.

Funding Recommendation

DNRC recommends grant funding of $437,000 upon DNRC approval of the project scope of work, administration, budget, and funding package.

Project No. 3

Applicant Name	Harlowton, City of	
Project Name	Removal of Contaminated Soils and Free Product at the Harlowton Roundhouse in Harlowton, MT, Phase 3	
Amount Requested	$ 500,000	
Other Funding Sources	$ 170,000	Snowy Mountain Development Corporation
	$ 63,000	City of Harlowton
	$ 28,245	Montana Department of Environmental Quality
	$ 12,500	Montana Fish, Wildlife, and Parks
	$ 125,000	DNRC Renewable Resource Grant
Total Project Cost	$ 898,745	
Amount Recommended	$ 500,000	

Project Summary
The City is proposing to use this DNRC RDGP grant to clean up the remaining petroleum impacted soils and free product from the Harlowton Roundhouse Facility. This project is for the third and final phase of cleanup efforts and includes restoration of a historical wetland at this property. The historical roundhouse and refueling facility is listed on Montana's Comprehensive Environmental Cleanup and Responsibility Act (CECRA) Priority List. This project will clean up diesel contaminated soils and groundwater, improve water quality, restore a historic wetland, and mitigate flooding along the Musselshell River.

Project History
The Harlowton Roundhouse CECRA Facility (Facility) operated as a railroad engine repair and fueling facility from 1900 to 1979. Diesel released during these operations resulted in soil and groundwater contamination over approximately 14 acres of the 25-acre site. Between April of 2015 and February 2018, Montana Department of Environmental Quality (DEQ) conducted a series of investigations that helped determine the nature and extent of petroleum and metals contamination at the Facility. In 2016, DEQ obligated Orphan Share Account funds for the first phase of cleanup that created a temporary local 15-acre permitted landfarm and excavated two separate source areas within the Facility. The largest pocket of contamination (up to 2 feet of floating diesel on the groundwater) is centrally located around the former refueling operations and will be excavated as part of Phase 2 in 2018 using a 2016 DNRC RDGP grant. This third and final phase of remediation will permanently remove both the free product and subsurface soil contamination (approximately 10,000 cubic yards) at the Facility.

Proposed Solution
Goals and Objectives
The objectives of the project are:

1. Excavate and haul to the permitted landfarm all remaining soils exceeding risk-based screening levels. Relocate historically significant rail facility structures and remove all remaining historic railroad debris.
2. Install and monitor six groundwater monitoring wells to monitor the effects of the source zone removal across the Facility.
3. Submit an interim-action construction completion report for the review and approval of DEQ.
4. Design, construct, and restore the historic wetland into a regional nature trail/wetland wildlife viewing park.

Tasks or Activities
Task 1: Preliminary activities include coordination between the City, DEQ, and DNRC; application for appropriate permits; and the creation of a Health and Safety Plan.

Task 2: Relocation of existing historic rail towers.

Task 3: Development of a scope of work and bid specifications. The scope of work will include the plan for the excavation and treatment of petroleum contaminated soils, backfilling where necessary, and the collection of all confirmation samples. The bid specifications will be for the excavation and hauling of contaminated soils to the landfarm.

Task 4: Award excavation bid and implement the scope of work. This will include the awarding of the excavation contract and the excavation and treatment of petroleum contaminated soils, backfilling where necessary, and the collection of all confirmation samples.

Task 5: Installation and monitoring of six groundwater monitoring wells to monitor the effects of the reclamation activities across the Facility.

Task 6: Final wetland restoration design and submittal of all appropriate permitting applications.

Task 7: Final grading of the site, placement of topsoil, and seeding of the site with native seed. Containerized plant material will be purchased and installed to enhance and facilitate the establishment of the wetland, and woody riparian habitats envisioned for the site.

Task 8: The submittal of an interim-action construction completion report and wetland restoration report (including as-builts) for the review and approval of DEQ.

Task 9: The construction of park infrastructure will occur as funding becomes available. Key elements of the park infrastructure include the Americans with Disabilities Act compliant trails system, boardwalks that cross the oxbow wetland area, informational kiosks, and viewing areas that overlook two of the open water features.

Monitoring plan
One round of both high and low groundwater monitoring will be collected post excavation to determine the effectiveness of the soil removal on facility groundwater.

Public Benefits Assessment
This project permanently removes contaminants from the floodplain of the Musselshell River resulting in conservation of soil, water, vegetation, and fish/wildlife resources and protection of public health, safety, and welfare. The project will remediate soils and groundwater under DEQ oversight which will help restore the environment and create conditions that will improve vegetation, wildlife, groundwater, nearby streams, and fisheries. Restoration of the project area to a wetland will improve flood retention and reduce sediment delivery down river.

This project will create short-term jobs both for engineering consultants, technicians and site construction operators, and laborers. The economic benefits include short term remediation jobs and associated support from local businesses.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Preliminary Activities	$8,870	$0	**$8,870**
Task 2: Relocation of Towers	$25,000	$0	**$25,000**
Task 3: Development of Scope of Work	$8,400	$0	**$8,400**
Task 4: Excavate Soil	$269,130	$170,000	**$439,130**
Task 5: Install Wells	$13,000	$0	**$13,000**
Task 6: Wetland Design	$0	$15,000	**$15,000**
Task 7: Construct Wetlands	$170,000	$134,000	**$304,000**
Task 8: Reporting	$5,600	$0	**$5,600**
Task 9: Part Infrastructure	$0	$51,000	**$51,000**
Administration	$0	$28,245	**$28,245**
Total	**$500,000**	**$398,245**	**$898,245**

The budget is clear and complete, and amounts appear reasonable.

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	Granite Conservation District	
Project Name	Silver King Mine Reclamation Project	
Amount Requested	$ 285,000	
Other Funding Sources	$ 525,000	Bureau of Land Management
	$ 12,000	Trout Unlimited
	$ 1,000	Applicant
Total Project Cost	$ 823,000	
Amount Recommended	$ 285,000	

Project Summary
Mining activities at the Silver King Mine created waste rock containing elevated concentrations of metals resulting in unsafe recreational exposures and impaired surface-water quality. Contaminated materials and physical hazards on the site include waste rock dumps, stockpiles, and open and collapsed adits. The Silver King Mine Reclamation Project will remove waste rock from the Silver King Mine and place it in an on-site repository. The project will also regrade and reconstruct the site and reestablish the original Sluice Gulch channel. The mine reclamation goals are to protect human health and improve water quality, soil quality, vegetation, and land use in Sluice Gulch and Rock Creek.

Project History
The Silver King Mine is located approximately 3.5 miles south of Bohrensen Bridge along Rock Creek Road in Granite County, Montana. The mine site is in the Sluice Gulch Creek drainage, a tributary of Rock Creek. The site encompasses approximately 16 acres of public and private land. The Silver King Mine was initially investigated as part of the 1993 Montana Department of Environmental Quality (DEQ) Mine Waste Cleanup Bureau inventory of abandoned mines. Subsequent investigations have shown that concentrations of antimony, arsenic, cadmium, copper, iron, lead, mercury, and silver are significantly elevated in the waste rock on site, and that arsenic concentrations in soil are more than 350 times higher at this site than considered safe for recreational exposure and activities. Additionally, physical hazards have been identified, and erosion and migration of contaminated sediments into Sluice Gulch and ultimately Rock Creek affect water quality. As a result, the Montana DEQ prioritized short list of abandoned mine land (AML) sites currently ranks the Silver King Mine 32 out of 129 sites in the state.

Proposed Solution
Project Goals and Objectives
Goal 1: Improve water quality in Sluice Gulch and Rock Creek
- Objective 1: Remove and safely contain approximately 9,000 cubic yards of mine waste from the Silver King Mine and Sluice Gulch
- Objective 2: Reduce risk quotient for human health and ecological receptors through achievement of proposed cleanup levels

Goal 2: Improve soil quality, land use, and vegetation on Sluice Gulch and Rock Creek
- Objective 3: Regrade, amend, and revegetate 12 acres of reclaimed areas of the Silver King Mine
- Objective 4: Reconstruct and revegetate 1000 feet of Sluice Gulch

Tasks or Activities
Task 1: Silver King Mine Reclamation and Repository Construction
Prior to initiation of reclamation activities, access road and repository and borrow area roads will be improved and cattle guards will be replaced. Additionally, temporary bridges will be emplaced to allow construction equipment access over Rock Creek.

Material from the general borrow area will be used as structural fill material throughout the site to promote positive drainage and as backfill in the former Sluice Gulch Creek channel prior to placement of amended

cover soil. Material from the general borrow area will also be used to construct the temporary access roads for the borrow and repository areas and for improvement and maintenance of haul roads.

Approximately 12 inches of topsoil will be salvaged, and 10,000 cubic yards of cover soil will be excavated from within the repository area footprint. Topsoil and cover soil will be retained to cap the repository and reclaim disturbed areas.

Approximately 9,000 cubic yards of waste rock will be removed from the mine area and placed into the repository. All mine-excavated areas (approximately 12 acres) and the borrow area will be backfilled with amended cover soil. The cover soil will be fertilized and seeded.

A 3-foot-thick soil cap (approximately 5,800 cubic yards) will be placed over the compacted waste rock materials in the repository. The upper 1 foot of cover soil cap will be amended with organic matter and will be fertilized and seeded.

A 300-linear-foot storm water channel will be constructed along the east perimeter of the repository to prevent sheet erosion of the repository cap. Amended cover soil will be placed in the storm-water channel, and the soil will be fertilized and seeded.

Straw hydromulch will be applied to all disturbed areas (approximately 12 acres) including the waste rock material excavation sites, borrow area, former Sluice Gulch Creek channel, and all other disturbed areas (including staging areas, temporary haul roads, temporary access roads, etc.). The disturbed areas will be fertilized and seeded prior to applying the straw hydromulch.

Approximately 1,000 feet of wildlife-friendly fence will be installed around the perimeter of the repository area to protect new vegetation from livestock grazing.

Task 2: Sluice Creek Reconstruction
Approximately 100 feet of stream channel at the upstream tie-in point and 100 feet of stream channel at the downstream tie-in point will be excavated and reconstructed to reconnect to the existing Sluice Gulch channel. Approximately 800 feet of stream channel will be reshaped. Streambank reconstruction will restore the natural form and function of Sluice Gulch according to reference conditions upstream. Work will occur immediately following the removal of waste rock.

Revegetation of disturbed areas and streambanks along Sluice Gulch will be completed using grass seed mixes, shrub transplants, and conifers and woody species where appropriate. Work will occur following stream excavation (in the fall or early spring to optimize planting success). A total of 2,200 feet of wildlife-friendly fencing will be installed around the new Sluice Gulch channel to protect new vegetation from livestock grazing.

Monitoring Plan
Monitoring of the mine site removal areas and repository will be conducted for three years following the construction of the project. The monitoring program involves yearly site inspections and monitoring of slope stabilization, stream channel and streambank stability, and post reclamation water quality. Maintenance activities to improve site revegetation and/or safety will be performed on an as-needed basis.

Public Benefits Assessment
The project will improve water quality through metals loading reduction, and soil quality through surface water controls and mine waste removal. Removal of mine waste and subsequent revegetation will lead to improvements in floodplain and riparian area function, groundwater storage, and grazing opportunities. The project will also conserve an isolated population of genetically pure westslope cutthroat in Sluice Gulch. Other benefits of the project include the mitigation of safety hazards such as open adits and mine entrances and removal of contaminated materials. Increased recreational use of the area will provide economic benefits from fishing and hunting.

The Silver King Mine Reclamation Project is based upon accepted and proven reclamation methods, including mine waste removal, runoff control, soil capping, stream reconstruction, and revegetation. These techniques have proven successful at numerous past projects for significantly reducing or eliminating human health risks and/or environmental damages resulting from contaminated mine wastes.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Mine Reclamation	$255,000	$494,500	**$749,500**
Task 2: Sluice Creek Reconstruction	$15,000	$5,500	**$20,500**
Administration	$15,000	$38,000	**$53,000**
Total	**$285,000**	**$538,000**	**$823,000**

The proposed budget presented in the application is clearly presented at the subtask level. The budget appears reasonable based on clearly identified construction practices. One area of budgetary concern is the cost to install temporary bridges. Costs presented in the application may not fully cover actual costs; however, the project has been designed with flexibility to account for instances of limited cost overruns.

Funding Recommendation

DNRC recommends grant funding of $285,000 upon DNRC approval of the project scope of work, administration, budget, and funding package.

Project No. 5

Applicant Name	Powell County	
Project Name	Milwaukee Roundhouse Area Remediation	
Amount Requested	$ 500,000	
Other Funding Source	$ 4,664	Powell County
Total Project Cost	$ 504,664	
Amount Recommended	$ 500,000	

Project Summary
Historical railroad operations at the former Milwaukee Roundhouse Facility (Facility) in Deer Lodge, Montana, released diesel and other contaminants, impacting soil, groundwater, surface water, and aquatic habitat. Investigation and incremental cleanup activities have occurred at the Milwaukee Roundhouse Facility since 2005. This project includes both preparation of a remediation proposal and subsequent soil removal in the eight acres of the Facility where contamination is still present. Due to the size of the project and funding limitations, remediation will not be completed with this grant. Removal of metal-contaminated soil will repair, reclaim, and mitigate damage to soil and groundwater resources at the Facility.

Project History
The Milwaukee Roundhouse Facility was operated by the Chicago, Milwaukee, St. Paul and Pacific Railroad from 1908 to 1980 for railroad locomotive repairs. The Facility, divided by the Clark Fork River, has multiple owners – the largest of which are Powell County and the City of Deer Lodge. The Powell County site contains the historical roundhouse where repair operations resulted in widespread metal and petroleum contamination to soil and groundwater. This project will focus on the Middle Milwaukee Roundhouse Area. The site has been vacant and unusable since the Milwaukee Railroad declared bankruptcy in 1980. The Milwaukee Roundhouse Facility was listed as a high-priority Comprehensive Environmental Cleanup and Responsibility Act (CECRA) Facility in 1987 and still retains that ranking. Since 2005, the Milwaukee Roundhouse Facility has been incrementally investigated and partially remediated using county, Montana Department of Environmental Quality (DEQ), RDGP, and federal funds. Historical cleanup activities have been conducted through various regulatory actions, including U.S. Environmental Protection Agency (EPA) emergency actions and DEQ interim actions. Powell County is following the DEQ Voluntary Cleanup and Redevelopment Act (VCRA) process for the remaining actions and to achieve delisting. Approximately 38,000 cubic yards of metals and petroleum-contaminated soil remain at the Facility.

Proposed Solution
Goals and Objectives
The objectives of this project are to develop a (1) Remediation Proposal that will be approved by DEQ and (2) continue with contaminated soil removal.

Tasks and Activities
Task 1: Develop Remediation Proposal
The County will work with their professional consultants and the DEQ to develop a remediation proposal in accordance with DEQ's VCRA guidelines.

Task 2: Final Engineering
This task includes hiring an engineering firm to complete the design, bidding package, specifications, construction administration, and construction oversight.

Task 3: Bidding and Contracting Phase
The bidding and contracting phase includes advertising for, obtaining competitive bids from, and selection of a contractor.

Task 4: Construction Phase
Construction activities will include erosion control using best management practices; soil excavation, disposal, and confirmation sampling; backfill of excavated areas; and revegetation.

Task 5: Construction Completion Report
Powell County will prepare a completion report to document remediation activities and confirmation sampling. This report will be submitted to DEQ and DNRC.

Task 6: Operations and Maintenance
Any required interim operations and maintenance will be determined as part of the Remediation Proposal and will likely include weed control and seeding.

Task 7: Administration
Administration activities will include bookkeeping, reporting, and other support staff services.

Monitoring
Confirmation soil samples will be collected as the excavation proceeds to verify that the removal is complete. Backfill material will be characterized to confirm it does not contain contaminants at concentrations exceeding site cleanup levels.

Public Benefits Assessment
This project repairs damage from metals and petroleum hydrocarbon releases to soil and groundwater incurred during operation of the Milwaukee Roundhouse in Deer Lodge, Montana. The Facility is adjacent to residential properties and downtown Deer Lodge. While the site is fenced, it has not stopped trespassing. Contaminated surface soil poses a health threat to those accessing the property, creating a liability for the county. The project will place contaminated soil in a secure landfill, thereby eliminating exposure pathways for health and environmental threats. This is a reliable technology that will permanently restore natural resources. Removal of contaminated soil will directly benefit soil, groundwater, and surface water resources. The project will indirectly benefit aquatic and terrestrial wildlife that rely on those ground and surface water resources. The local community will benefit through construction jobs, as well as local sourcing for top soil and fill materials.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1 and 2: Develop Remediation Proposal and Final Engineering	$50,000	$0	**$50,000**
Task 3 and 4: Bidding, Contracting and Construction	$407,000	$0	**$407,000**
Task 6: Operations and Maintenance	$29,000	$0	**$29,000**
Task 7: Administration and Construction Completion Report	$14,000	$4,664	**$18,664**
Total	**$500,000**	**$4,664**	**$504,664**

The proposed budget presented in the application was presented at the subtask level, but some tasks were lumped together in the budget. The budget is reasonable and clear. The applicant is requesting the maximum RDGP grant amount to complete as much cleanup as possible during this grant cycle.

Funding Recommendation
DNRC recommends grant funding of $500,000 upon DNRC approval of the project scope of work, administration, budget, and funding package. If Powell County secures funding for Task 1: Remediation Proposal, funding from that task should be moved into another task above to further cleanup of the site.

Project No. 6
This project was funded by the 2017 Legislature but lost funding after the 2017 Special Session.

Applicant Name	Lincoln Conservation District	
Project Name	Tobacco River Restoration Project – Engineering and Implementation	
Amount Requested	$ 451,193	
Other Funding Sources	$ 288,996	EPA 319 Grant
	$ 192,664	Landowner In-Kind
Total Project Cost	$ 932,853	
Amount Recommended	$ 451,193	

Project Summary
The proposed project would repair impacts related to instream gravel mining on a one-half-mile-long stretch of the Tobacco River. Restoration of the stream will reduce sediment input into the Tobacco River and improve water quality, aquatic habitat, and terrestrial habitat. It will also protect Endangered Species Act listed bull trout and Montana Species of Concern westslope cutthroat trout. The original application was submitted in 2016 and ranked number eight. Funding was withdrawn during the November 2017 Special Legislative Session.

Project History
The Tobacco River in and near the project reach has been subject to impacts from instream gravel mining, agriculture, logging, and other anthropogenic activities. Channelization, bank degradation, an incised floodplain, and other alterations to the stream have resulted in eroding banks and stream sedimentation. In 2014, the Lincoln Conservation District (CD) was awarded a $50,000 RDGP planning grant to complete a preliminary design. In early 2016, Lincoln CD was awarded an Environmental Protection Agency (EPA) Section 319 grant to complete design and implementation of approximately one half (0.5 miles) of the project. Work completed to date under the EPA Section 319 grant includes 1) completion of engineer and final design plan set; 2) development of bid package; 3) regulatory permitting and approvals; 4) acquisition of construction materials; and 5) completion of monitoring report, quality assurance project plan, and sampling and analysis plan. Phase 1 is currently under construction to restore a half mile using EPA Section 319 funds. This application seeks funding to complete the design and implement the restoration of the remaining half mile.

Proposed Solution
Goals and Objectives
The project has three primary goals:

1. Reduce water pollution resulting from past gravel-mining operations, overgrazing, and riparian clearing that altered streambank and floodplain conditions by constructing appropriate channel and floodplain dimensions. Eroding stream banks will be addressed with bioengineered treatments.
2. Improve aquatic, riparian, and terrestrial resources by establishing an ecologically complex, vegetated floodplain and channel migration zone capable of supporting natural channel and floodplain processes.
3. Create complex aquatic habitat components to support life history stages of Endangered Species Act listed bull trout and Montana Species of Concern westslope cutthroat trout, by constructing riffle-pool sequences that support desired hydraulic and aquatic habitat conditions including depth, velocity, cover, and substrate.

The preferred alternative will use natural channel design and restoration techniques to reconstruct approximately 3,000 feet of stream channel, to create or restore 2.25 acres of floodplain and riparian zone wetlands, and to restore approximately 3,300 feet of highly eroding stream banks. The proposed plan will correct the chronic impacts resulting from historic development practices by returning the stream and adjacent floodplain to their pre-impact, natural condition.

Tasks or Activities

Task 1: Finalize Engineering Design, Bid Package, and Prepare and Submit Regulatory Permits
This task is to finalize the project design, obtain all necessary permits, and advertise for and select a contractor to perform the work.

Task 2: Materials Acquisition, Staging, and Construction Staking
This task will identify approved sources for the soil, alluvium, large woody vegetation, and other materials necessary to construct the project, and to stakeout the final grading plan using survey-grade GPS equipment.

Task 3: Construction Implementation
Construction activities will occur midsummer to limit instream work to the period outside of bull trout migration and spawning.

Task 4: As-Built Survey and Effectiveness Monitoring
The applicant's contractor will document project performance against the goals and objectives by assessing instream sediment reduction and revegetation success.

Monitoring Plan

The project monitoring plan will be developed as part of the final design task, with input from DNRC, DEQ, and project stakeholders. The plan is expected to specify performance monitoring of two functional components: 1) reduction in streambank erosion and sediment loading to the Tobacco River; and 2) revegetation success. Sedimentation will be estimated pre- and post-project using the Bank Assessment for Non-Point Source Consequences of Sediment streambank sediment production model, while stream geomorphology will be measured with six cross sections, one longitudinal profile of the entire project reach, and two Wolman pebble counts. Revegetation success will be monitored with greenline transects along the streambank, riparian vegetation transects across the floodplain, and assessments of containerized planting survival.

Public Benefits Assessment

The proposed project would repair a one-half-mile reach of the Tobacco River from impacts related to instream gravel mining, historic logging, agriculture, and other development related activities. The Tobacco River is listed under the State and Federal Total Maximum Daily Load program as impaired for sediment and siltation, is an important component of the recovery of Federally Listed Threatened and Endangered Species (bull trout, westslope cutthroat trout), and the project reach is an important recreational and economic asset to Eureka, Montana. The proposed project would improve all these conditions and benefit water quality and aquatic and terrestrial wildlife habitat.

Downstream water users and recreationists will directly benefit from increased water quality, improved wildlife habitat, improved stream geomorphology, and improved aesthetics of the river and riparian corridor. Indirect benefits would accrue to the region in the form of improved economic base, improved recreational opportunities, improved water quality in the Tobacco River watershed, and improved recovery of threatened and endangered species. The project will also reduce stream erosion within the project reach.

Although most of the damage occurred some time ago and is not worsening, chronic impairments continue and are not likely to stop soon. Additionally, the proposed project is the second half of a larger project that is currently being implemented. If this project does not take place, impairment of Tobacco River water quality, function, and aesthetics, and to critical habitat for endangered species on this stretch will continue. Benefits from this project are expected to be certain and long term.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Final design/permitting	$0	$51,000	**$51,000**
Task 2: Materials and staking	$121,027	$192,664	**$313,691**
Task 3: Construction	$305,166	$206,246	**$511,412**
Task 4: Monitoring	$7,500	$7,500	**$15,000**
Administration	$17,500	$24,250	**$41,750**
Total	**$451,193**	**$481,660**	**$932,853**

The project budget is adequate, and estimated costs are in line with expectations for projects of this type. Matching funds are committed, putting this project on solid financial footing. When comparing the original 2016 application and the 2018 re-application, there is a cost increase of approximately $56,057. The 2018 re-application for this project includes construction along an additional segment of the Tobacco River and adjustments for inflation.

Funding Recommendation

DNRC recommends grant funding of $451,193 upon DNRC approval of the project scope of work, administration, budget, and funding package.

Project No. 7

Applicant Name	Montana Department of Environmental Quality	
Project Name	Upper Blackfoot Mining Complex Wetland Contamination Removal	
Amount Requested	$ 500,000	
Other Funding Source	$1,525,000	UBMC Settlement
	$ 20,269	US Forest Service
	$ 12,000	Montana Fish, Wildlife, and Parks
	$1,716,000	Trout Unlimited Partnering
Total Project Cost	$3,773,269	
Amount Recommended	$ 500,000	

Project Summary
The Upper Blackfoot Mining Complex (UBMC) is located in the headwaters of the Blackfoot River. The proposed project will remove approximately 50,000 cubic yards of mine waste from a riparian wetland complex that includes rare and sensitive fen wetlands. Tailings will be hauled to a nearby repository as a permanent solution to restore natural connectivity within the wetland and the Blackfoot River headwaters. The upper Blackfoot River and adjacent wetlands impacted by the removal project will be restored and the area will be allowed to recover from the historic mining and remediation impacts.

Project History
During World War II, Beartrap Creek was diverted, and its valley filled with mill tailings from the Mike Horse, a lead and zinc mine. Heavy runoff in 1975 breached the tailings impoundment dam and tailings were released down valley, depositing along the floodplain. An extensive floodplain wetland complex exists approximately two miles downstream of the impoundment. Mining exploration drill roads that were constructed across the wetland complex in the 1960s slowed the 1975 floodwater and caused tailings to be deposited in the wetlands. The area upstream of the drill roads remains highly impacted, supporting no macroinvertebrates and limiting fish migration, while downstream of the roads, the impacts are beginning to naturally attenuate. Contamination levels within the wetland are documented to be hazardous to human health.

In 2008 and 2009 a settlement was reached with the responsible parties for the removal of an estimated 500,000 cubic yards of waste. Tailings within the wetland complex, the uplands, and on non–Forest Service lands within the floodplain were not addressed within the settlement. There is an estimated 1,000,000 cubic yards to remove within the UBMC. The settlement is expected to cover costs associated with most of the removals on both Forest and non-Forest lands; but is not enough to cover removals in the wetland complex.

Proposed Solution
Objectives
Objective 1: Reduce the volume of contaminants and risk of their release.

Objective 2: Restore migration of fish from below the impacted wetland into the headwaters streams. Fish currently exist below the impacted wetlands and in isolated populations in Anaconda, Shave, and Pass Creeks; no fish are found to migrate successfully into the UBMC from these populations.

Objective 3: Restore the natural topography of the wetland to reduce risk of contaminating the sensitive, low-disturbance-regime wetlands, and allow high-disturbance-regimes to function naturally without risk of contaminant release.

Tasks and Activities
Project tasks include:

1. Finalize and advertise bid package
2. Mobilization
3. Dewater removal area within wetlands
4. Construct wetland protections

5. Remove waste and haul to repository
6. Validate removal
7. Place and compact waste in repository
8. Construct stream channel/wetland features
9. Revegetation
10. Remove dewatering, site cleanup, and demobilization
11. Operations and maintenance, monitoring of fish, sediment, and water

Monitoring

The project will be monitored to document effectiveness. Sediment will be monitored for human health and environmental risk and compared to site-specific cleanup levels. Water quality will be monitored and compared to DEQ-7 standards. For fisheries connectivity, Montana FWP will monitor fish populations and compare them to historical data for the site. For protection of fens and unique wetland habitats, pre- and post-removal surfaces will be compared.

Other

DNRC is concerned about impacting existing wetlands while dewatering the site and the feasibility of fully returning soils and groundwater hydrology to pre-remediation conditions to restore wetlands disturbed by tailings removal. These are not reflective of deficiencies in the design, rather, they are associated with the complexity and fragility of the fen wetlands that have developed at the site over thousands of years.

Public Benefits Assessment

The benefits of removal of contaminants are certain and long-term and will improve natural resources, including wetlands, riverine habitat, water quality, soils, fish, and a variety of wildlife species. Remediation will be avoided at most of the rare, fragile wetlands present at the site in order to conserve them. Action will be focused on less fragile wetlands. Protecting the rare/fragile wetlands is reasonable, but it will leave some contamination in place that could potentially continue to cause harm until attenuated naturally over time. However, the project will allow native fish and aquatic organisms to once again occupy the remediated area and will also greatly reduce floodplain contamination that is a threat to public health, safety, and welfare. There is some urgency to doing the project now to address human health hazards and to save considerable cost by utilizing an existing repository that is scheduled to be closed soon. Direct benefits to Montanans will result from cleaning up significant contamination at the headwaters of one of Montana's premier rivers. This will benefit not only the local community, but those who use the Blackfoot River downstream. The project will increase demand for services in Lincoln, Montana, and provide jobs.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Engineering Design	$0	$50,000	**$50,000**
Task 2: Construction Services	$500,000	$1,716,000	**$2,216,000**
Task 3: Engineering Oversight	$0	$500,000	**$500,000**
Task 4: Monitoring	$0	$762,000	**$762,000**
Task 5: Forest Service Oversight	$0	$20,269	**$20,269**
Administration	$0	$225,000	**$225,000**
Total	**$500,000**	**$3,273,269**	**$3,773,269**

The project budget submitted by the applicant lacked sufficient detail (quantities, unit prices) to evaluate how costs were derived. In addition, the budget lacked a contingency, which would be advisable for a project of this scale and the uncertainties that may be encountered during remediation. A more detailed budget approved by DNRC must be provided if this project is funded.

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. 8

Applicant Name	Montana Department of Environmental Quality	
Project Name	Cottonwood #2 Acid Mine Drainage Diversion Project	
Amount Requested	$ 300,000	
Other Funding Source	$ 172,994	DEQ Abandoned Mine Lands Grant
Total Project Cost	$ 472,994	
Amount Recommended	$ 300,000	

Project Summary

The Cottonwood #2 Mine, located in the town of Stockett, produced coal from 1897 until 1908. Water percolating through the mine reacts with pyrite in the coal and generates acid mine drainage (AMD) that seeps to the ground surface in multiple locations. Natural resources damaged by the seepage include soil and vegetation. AMD impacts such as seeps of discolored acidic water, sterilized soil, and dying vegetation are migrating downslope toward homes and utilities in the area. An AMD collection system constructed in 1986 to protect downslope infrastructure has since become clogged with iron precipitate and has ceased to function. This project includes constructing a new collection system that is less susceptible to damage from iron precipitation and rehabilitating damaged soil so that it can support revegetation. The AMD will be conveyed to off-site collection ponds that will facilitate cost-effective removal of accumulated sludge. The primary natural resource benefit is rehabilitation and revegetation of soils damaged by AMD. The project will also protect down-gradient groundwater resources from continued AMD impacts.

Project History

AMD problems started before the Cottonwood #2 Mine was closed with seepage from mine portals and at the base of the coal seam. The flow continued unabated until the Montana Department of Environmental Quality (DEQ) Abandoned Mine Lands Program (AML) constructed the existing collection system and closed the open mine portals. The existing system was designed to capture AMD seepage from the portals and base of the coal seam and direct it into a drainage ditch in Stockett. Subsequent clogging of the collection system has resulted in uncontrolled AMD seeps that are killing vegetation and creating a wide and growing strip of sterilized soil.

Proposed Solution

Goals and Objectives

The primary project goal is to protect property and the environment in Stockett from continued encroachment of the AMD. A secondary goal is to revegetate AMD-impacted soil to prevent erosion and enhance wildlife habitat.

The primary objectives are to construct a new AMD collection system and direct the flow to a settling pond where iron and aluminum precipitates can accumulate and be efficiently managed. Secondary objectives involve amending and reseeding the AMD-impacted soil.

Tasks and Activities

The project will construct a new collection system that will be located higher on the hillside, just beneath the base of the coal seam. AMD will be collected in subsurface drains and conveyed to a ditch where it will gravity flow to a settling basin on the side of Stockett Road. The settling basin will allow iron and aluminum precipitates and sediment to settle out and prevent those solids from plugging roadside ditches. The settling basin will simplify removal of accumulated sludge and debris as compared to the existing system. Outflow from the basin will discharge to a storm water ditch adjacent to Stockett Road. This alternative is less expensive to construct than rebuilding the existing failed system. AMD-impacted soil will be sampled and analyzed for revegetation parameters. The soil will be amended, topsoil will be added, and the areas seeded with a grass/shrub mix and fertilized.

Project tasks include:

1. Mobilization
2. Exploratory excavation
3. Excavate new ditch and compact berm
4. Place drain rock along ditch
5. Install adit interception trench and drains
6. Lateral drain piping and fittings
7. Remove existing collection system
8. Regrade and reconstruct discharge gully
9. Construct settling basin
10. Regrade site
11. Sample and amend contaminated soil, add top soil, seed, and fertilize
12. Demobilization
13. Monitoring and weed spraying
14. Contingency
15. Engineering oversite
16. AML administration

Monitoring

DEQ will monitor the site not less than annually for three years after construction. Monitoring will include observations regarding functioning of the capture system, sediment pond condition, revegetation establishment, and inspections for new or uncontrolled seeps. Following the first three years of monitoring, the AML program will work with Cascade County on a plan to address ongoing ditch maintenance.

Public Benefits Assessment

This project mitigates damage from AMD seeping from an abandoned coal mine. After more than thirty years of operation, the existing collection system has failed and AMD seeping from the mine is migrating downslope towards residences. AMD sterilizes the soil, kills plant life, reduces wildlife habitat, and leads to erosion. Sediment washing downslope from the site is clogging roadside ditches.

The new collection system, which will be constructed at the base of the coal seam, will capture AMD at its source, allowing for rehabilitation and revegetation of impacted soil. The project will restore wildlife habitat and grazing land. AMD is currently migrating downslope toward nearby homes. If AMD is allowed to reach those residences, the soil around the homes will be sterilized. If AMD comes into contact with a water supply well, it can compromise the casing and contaminate the well. The AML Program has been maintaining the existing capture system over the last thirty years; however, maintenance is no longer effective, and a new system is needed. Impacts from AMD are spreading, and additional delay will exacerbate the situation by causing more erosion issues and sterilized soil.

The local community will benefit through short-term construction jobs, as well as local sourcing for topsoil and fill materials. The reduced sedimentation to roadside ditches will allow Cascade County to focus resources on other needs.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Collection System Install	$289,385	$38,589	**$327,974**
Task 2: Soil Rehabilitation	$10,615	$80,885	**$91,500**
Task 3: Monitoring	$0	$5,000	**$5,000**
Administration	$0	$48,520	**$48,520**
Total	**$300,000**	**$172,994**	**$472,994**

The proposed budget presented in the application is clearly presented at the subtask level. The budget is based on technical plans developed through site visits, current site conditions, and current equipment and manpower costs. The technical design and construction bid document will be prepared using DNRC RDGP planning grant funds and are not included above. The AML Program will provide a project manager to conduct field inspections and manage communication between stakeholders. Construction work will be funded using a combination of DNRC grant funds and AML funding.

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. 9
This project was funded by the 2017 Legislature but lost funding after the 2017 Special Session.

Applicant Name	Richland County Conservation District	
Project Name	Mitigating Impacts to the Fox Hills / Hell Creek Aquifer	
Amount Requested	$ 493,585	
Other Funding Source	$ 500,000	Natural Resource Conservation Service
Total Project Cost	$ 993,585	
Amount Recommended	$ 493,585	

Project Summary
The Richland County Conservation District (CD), in partnership with the Montana Bureau of Mines and Geology (MBMG) propose to conduct well remediation activities to mitigate declining water levels and pressure heads in the Fox Hills - Hell Creek Aquifer (FHHC). Currently, unrestricted discharge from flowing wells causes substantial waste of the groundwater resource. Remediation activities such as installing flow-regulating devices will reduce the waste and may slow the rate of water level decline, therefore conserving the FHHC aquifer resource. The original application was submitted in 2016 and ranked number nine. Funding was withdrawn during the November 2017 Special Legislative Session.

Project History
The FHHC aquifer underlies the eastern one-third of Montana and is listed as an aquifer of concern in the 2015 Montana State Water Plan. Water demand in the 1970s and 1980s increased development of the FHHC aquifer. Industrial wells were installed to support the oil industry and exempt wells were installed for various uses including stock water with the benefit being the production rates of the initially flowing wells. In comparison to pressure measurements at the time of well construction, an MBMG study of the FHHC wells in 1995 indicated significant reduction in pressure. Subsequent monitoring during 2010 to 2015 shows continued decline in pressure and indicate a transition from flowing to non-flowing conditions at several wells.

Proposed Solution
Goals and Objectives
The goal of this project is to reduce the volume of water wasted by free flowing FHHC wells in Richland County. The project will evaluate the condition of 50 targeted wells to determine appropriate remedial actions in cooperation with the well owner. Current static water levels will be measured in the initial evaluation and aquifer response will be monitored following actions to assess the effectiveness of the project. These project actions aim to mitigate the current water level decline in the FHHC aquifer and restore pressure heads for area wells.

Tasks or Activities
Task 1: Evaluate the Well Condition of Identified Wells
MBMG will evaluate each well casing and plumbing system for leaks visually, and with a downhole camera when necessary, and will measure the current pressure or static water level. Richland CD and MBMG will schedule an in-person or phone meeting with the well owner to discuss the well evaluation and remediation options. MBMG will write a well assessment report to United States Department of Agriculture Natural Resources Conservation Service (NRCS) specifications and send a report of findings to the Richland County CD following the completion of each well evaluation.

Task 2: Coordinate for Wellhead Repairs and Modifications
Richland County CD, MBMG, NRCS and the well owner will select a well remediation plan and estimate costs.

Task 3: Repair and Modify Wellheads and Monitor Aquifer Response
Richland County CD and NRCS will hire a consultant to install well pit, valve systems, heated structures, PVC liners, and packers as needed. Water pressures will be monitored to evaluate effectiveness. Several wells will be repaired each year.

Task 4: Final Reporting
Richland County CD and MBMG will compile the results of remediation efforts and aquifer monitoring and prepare a final report to submit to funding agencies.

Monitoring plan
MBMG will install approximately 10 wells with pressure transducers to monitor aquifer pressure. This includes documenting the static water level and current well pressure during the initial evaluation of each target well and following completion of repairs or modifications to the wells. Water-level data will be compiled and stored in the MBMG Ground Water Information Center database for public access.

Other
NRCS hopes to fund 75 percent of repair costs with Environmental Quality Incentives Program (EQIP) funds. If EQIP funds become available, well owners will have the option to work with NRCS using EQIP funds to remediate their well, or they can enter into an agreement with the Richland County CD to do the necessary repairs using funds from this grant.

Public Benefits Assessment
Reducing water losses from flowing aquifer wells will likely mitigate declining trends in groundwater levels. This conservation measure, in conjunction will other conservation efforts, may increase the lifetime of existing wells and preserve the groundwater resource. This initiative is in line with the 2015 Montana State Water Plan, which recommends water conservation incentives and measures.

This project also has the potential to improve long-term surface-water quality and mitigate erosion impacts by reducing water overflows at the well head. Wasted water from these wells that flow over land contributes to erosion and increased salinity to soil and receiving waters. Direct, long-term benefits to Montanans include the maintenance of a reliable water source for well owners in the FHHC aquifer. Furthermore, this aquifer is a municipal water source for the communities of Richey, Lambert, and Circle. Residents of these communities could directly benefit from this project if the water levels rebound significantly enough to make an impact.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Salary and Wages (MBMG)	$104,720	$0	$104,720
Fringe Benefits (MBMG)	$49,015	$0	$49,015
Contract Services (Task 3 Well Repair)	$255,000	$500,000	$755,000
Supplies	$1,500	$0	$1,500
Travel	$30,150	$0	$30,150
Rent	$5,000	$0	$5,000
Equipment	$4,200	$0	$4,200
Administrative (Richland County CD)	$44,000	$0	$44,000
Total	**$493,585**	**$500,000**	**$993,585**

The application did not break down costs for each of the described tasks. The total project cost is estimated based on an average cost of approximately $21,000 per well with work being conducted on an estimated 50 wells. The MBMG will evaluate the wells, coordinate well repairs, and provide individual well reports and a final project report. The budget amounts appear reasonable although the goal of remediating 50 wells may be high. Budget changes from the 2016 application reflect a change in the number of hours for MBMG staff related to Task 1 (well assessment).

Funding Recommendation

DNRC recommends grant funding of $493,585 upon DNRC approval of the project scope of work, administration, budget, and funding package. Wells without water rights should be excluded from the project. Additionally, as the greatest good for the aquifer can be met through utilization of NRCS matching funds, DNRC recommends that only wells that qualify for NRCS matching funds be included in the project.

Project No. 10

Applicant Name	Deer Lodge, City of	
Project Name	Milwaukee Roundhouse CECRA Site Passenger Refueling Area VCRA Program Remediation	
Amount Requested	$ 297,000	
Other Funding Source	$ 15,346	City of Deer Lodge
Total Project Cost	$ 312,346	
Amount Recommended	$ 297,000	

Project Summary

Historic railroad activities at the Milwaukee Roundhouse Facility – Passenger Refueling Area in Deer Lodge (Facility) resulted in contaminated soils and a dissolved petroleum product plume in the shallow aquifer. This project proposes to remove remaining contaminated soil at the site and assess groundwater contamination. Removal of contaminated soils and remediation of groundwater at this site will repair, reclaim, and mitigate environmental damage to soil and groundwater resources from historic railroad operations.

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. Although the majority of contamination appears to be associated with historic railroad operations, there are also current activities (City equipment maintenance and railroad operations) and materials at the Passenger Refueling Area that have the potential to contribute to contamination in soils and/or groundwater.

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.

Proposed Solution

Goals and Objectives

The project objectives are to 1) update the soils and groundwater characterization of the Passenger Refueling Area from the 2015-2016 soil removal activity so 2) remaining contaminated soils can be removed and groundwater remediated.

Tasks and Activities

Task 0: Finalize the remediation proposal for contaminated soils

In order to finalize the remediation proposal, DEQ requires additional reports and project elements. This task will result in an approved remediation proposal.

Task 1: Re-evaluate the existing surface soil data and leaching-to-groundwater soil data.

A 95 percent upper confidence limit estimate will be calculated for grid areas that still exceed risk-based screening levels in the Passenger Refueling Area**.** Results from these calculations will be reviewed and a DEQ risk assessor will be consulted to determine additional actions warranted on the site for soil removal actions.

Task 2: Perform surface soil removal actions in selected areas based on grids that exceed cleanup levels.

This task includes preparation of plans and contract documents for soil removal, permit preparation and submittal, permit approval, bidding and awarding, construction, confirmation sampling, backfill and site restoration, waste management, and the construction completion report.

Task 3: Petroleum Hydrocarbon characterization and remediation of soil and groundwater
This task includes characterizing remaining petroleum hydrocarbon concentrations in groundwater and developing a future remediation proposal for groundwater through installation of up to six monitoring wells and groundwater sampling.

Task 4: Development of institutional controls and deed restrictions as necessary as the project works towards closure.

Monitoring plan
The grant application includes funding for monitoring wells. A detailed monitoring plan was not included in the application but will be developed as part of the remediation proposal for DEQ.

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. Remediation will also reduce continuing impacts to nearby surface water resources via overland flow of contaminated soil during run-off events and from discharge of contaminated groundwater.

Soil contaminants are restricting the ability of the City to move forward with development of the facility as an open-space park. Completion of this project will be a positive step in converting the facility from a liability to a community asset. The project will create short-term engineering and construction jobs.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Project Management	$4,150	$0	**$4,150**
Task 0: Finalize Remediation Proposal for Contaminated Soils	$32,122	$0	**$32,122**
Task 1: Develop 95% Upper Confidence Limit Estimate	$11,740	$0	**$11,740**
Task 2: Soil Removal	$191,688	$0	**$191,688**
Task 3: Groundwater Characterization	$56,300	$0	**$56,300**
Task 4: Develop Institutional Controls	$1,000	$10,000	**$11,000**
Administration	$0	$5,346	**$5,346**
Total	**$297,000**	**$15,346**	**$312,346**

This project is a reasonable continuation of ongoing remediation of a CECRA site. While removal has been selected as the soil remediation technology, the volume of soil to be removed and areas for removal have not yet been determined. Additionally, the applicant seems unclear if soil removal will be necessary after completion of Task 1. For this reason, it is not possible to determine if the requested budget will be adequate to fully remediate contaminated soil at the facility.

Funding Recommendation
DNRC recommends grant funding of $297,000 upon DNRC approval of the project scope of work, administration, budget, and funding package. Because it is unclear how much work is needed at the site and the costs for those activities, DNRC recommends only contracting Tasks 0 and 1 until the applicant can show a need for additional funds.

Project No. 11

Applicant Name	Montana Department of Environmental Quality	
Project Name	Basin Creek Mine - Phase 2 Site Stability Project	
Amount Requested	$ 500,000	
Other Funding Source	$ 11,459	Montana DEQ
Total Project Cost	$ 511,459	
Amount Recommended	$ 300,000	

Project Summary
Oversized (65-foot wide) mine haul roads remaining at the Basin Creek Mine (BCM) are responsible for sediment that migrates off-site and into the headwaters of Basin Creek. The BCM – Phase 2 Site Stability Project will address the remaining (5,000 plus feet) of oversized sections of road by reducing road width and installing runoff control that will reduce production and off-site migration of sediment. In addition, an unnecessary sediment pond will be removed. This project will provide a long-term benefit by reducing sediment loading to surface waters emanating from the former mine which form the headwaters of Basin Creek.

Project History
The BCM is an inactive open-pit, heap leach gold mine located 17 miles southwest of Helena, Montana. The remaining pit (Luttrell Repository) is used by the EPA as a mine waste repository. BCM was owned by Pegasus Mining Company before its bankruptcy in 1998. Between 1998 and March 2003, a trustee conducted reclamation activities. At the site, two cyanide heap leach pads were developed that are now closed. Three pits were opened, two are reclaimed. After 2011, reclamation was curtailed due to lack of funding. In 2014, DEQ received a RDGP grant to reduce the width of 4,138 linear feet of primary haul road and obliterate an additional 1,500 linear feet of secondary haul road.

Proposed Solution
Goals and Objectives
The proposed project goal is to reclaim and stabilize former haul roads of excessive width (65 feet) that are eroding. This action would mitigate damage to the environment caused by the eroding material entering the naturally existing surface-water drainage. The mine reclamation plan specified in the original operating permit stated that the long-term objective for mine reclamation was to establish an environment that is compatible with existing land uses for this area. The BCM – Phase 2 Site Stability Project would address that objective.

Tasks and Activities
The project scope of work was not divided into tasks, nor was it described in any detail. DEQ will execute a task order under an existing State contract with a qualified environmental consulting/engineering firm to develop site-specific bid specifications and assist the DEQ with the construction oversight and project management. Upon soliciting for bids, the DEQ will award a contract for mine road reduction/steep-slope stabilization and removal of an obsolete sediment detention pond.

Monitoring Plan
Using remaining reclamation bond monies, DEQ project staff will continue to monitor the site at a minimum of three times a year when accessible (spring, summer, and fall) for evidence of erosion as well as vegetation establishment. Visual and field observations will be documented. DEQ will perform needed repairs and control weeds.

Public Benefits Assessment
The BCM – Phase 2 Site Stability Project will reduce oversized mine roads to make them more suitable for present day uses (site maintenance and monitoring, and Luttrell Repository access for nearby EPA-led remedial activities). Reducing the roads and stabilizing the steep slopes associated with the roads will reduce road and slope erosion below the mine site. Erosion from the oversized roads at the mine causes

sedimentation in the Basin Creek watershed. In addition, reclamation of the obsolete sedimentation pond will prevent it from eroding into the headwaters of Basin Creek.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Task 1: Design/Oversight/Tech Support/Project Reporting	$80,000	$0	**$80,000**
Task 2: Construction Services	$420,000	$0	**$420,000**
Administration	$0	$11,459	**$11,459**
Total	**$500,000**	**$11,459**	**$511,459**

As details of project tasks and associated budgets are not presented in the application, and no Engineering Evaluation/Cost Analysis or design has been completed, it is not possible to fully review the requested budget. Approximately 16 percent of the full project budget is allocated to design/construction oversight/technical support/project reporting, which falls within the range of typical engineering fees on projects of this type. The budget lacks sufficient information to determine if the cost of construction is accurate and feasible.

DNRC Concerns

Although the project will likely have some benefits to natural resources, the application contains minimal information about the current impacts to natural resources, nor is there a discussion about the benefits gained from a previously funded project to reduce haul roads at the site. Additionally, the budget is insufficient and provides no justification for the costs derived.

Funding Recommendation

Because the project does not adequately address impacts to natural resources or financial need, DNRC recommends reduced grant funding of $300,000 upon DNRC approval of the project scope of work, administration, budget, and funding package.

Project No. 12

Applicant Name	Ryegate, Town of	
Project Name	Former Ryegate Conoco Groundwater Remediation	
Amount Requested	$ 185,253	
Other Funding Source	$ 2,597	Town of Ryegate
Total Project Cost	$ 187,850	
Amount Recommended	$ 50,000	

Project Summary
The abandoned Ryegate Conoco gas station is located on Highway 12 and Kemp Street in Ryegate, Montana. Releases of petroleum products from the gas station's underground storage tank systems have contaminated soil and groundwater at the site. A dissolved phase hydrocarbon plume with concentrations of petroleum hydrocarbons exceeding water quality standards extends approximately 150 feet from the site beneath and south of Highway 12. Residential water supply wells, the Ryegate town well intake, and the Musselshell River are located down-grade of the leading edge of the hydrocarbon plume. The goal of the project is to remediate contaminated groundwater.

Project History
Three underground storage tank systems were installed in two separate areas since the facility began operation in the 1930s. Historical underground storage tank systems were removed during the installation of replacement systems, and all remaining underground storage tank components were removed in May 1993. Petroleum hydrocarbon contamination was first discovered near the southern boundary of the site in 1992 during a Montana Department of Transportation right-of-way investigation on US Highway 12. The Town of Ryegate was awarded a grant from the Department of Natural Resources and Conservation (DNRC) Reclamation and Development Grant Program (RDGP) in 2008 to remove accessible petroleum soil, install groundwater wells for potential future remedial measures, perform petroleum recovery, and further delineate the hydrocarbon plume. The work was conducted from September 2009 to July 2011. In 2013, the Town of Ryegate was awarded another RDGP project grant from the DNRC to install and operate a hydrogen peroxide remedial injection system, perform annual groundwater monitoring through 2017, decommission the remedial system, and abandon the wells once the groundwater was remediated. This application is to continue running the current remedial system.

Proposed Solution
Goals and Objectives
The goals of the project are to remediate contaminated groundwater and rehabilitate the property so that it can be developed and returned to the city/county tax rolls. Continued augmentation of dissolved oxygen levels in groundwater to accelerate biodegradation of the dissolved phase hydrocarbon plume is the primary method for achieving these goals. This project will maintain the operation of a previously installed remedial system, construct two new injection wells, and inject hydrogen peroxide, to act as an oxygen source for degradation of petroleum contaminants, into the aquifer over a period of two and a half years. The project will also add three new monitoring wells to monitor the efficiency of the system.

Tasks or Activities
The major tasks associated with this project are:

Task 1: Installation of additional monitoring and injection wells
Three additional monitoring wells and two new injection wells will be installed to better address data gaps in the existing well network.

Task 2: Maintenance and operation of the remedial system

The remedial system is expected to consume 12, 55-gallon drums of hydrogen peroxide solution per year. System monitoring occurs during replacement of the hydrogen peroxide drum. Nutrients, nitrogen and phosphorus, are added to the injection fluids as necessary during the drum change outs.

Task 3: Groundwater monitoring
Groundwater monitoring will be conducted semiannually from 2019 through 2022 to monitor the effectiveness of the injection system and monitor the concentrations of contaminants in groundwater.

Task 4: Remedial system decommissioning and monitoring well abandonment
Should contaminant concentrations in groundwater be reduced to below risk-based screening levels within the project time frame, the remedial system will be dismantled, and the monitoring and injection wells will be abandoned.

Task 5: Reporting
Annual groundwater monitoring reports detailing groundwater monitoring activities and analytical results of the scheduled sampling events will be prepared. The reports will be submitted to the DNRC, DEQ, and the Town of Ryegate and its representatives. The reports will include a narrative of the completed activities, site maps, laboratory analytical data summarized in tabular form, and laboratory analytical reports.

Monitoring Plan
Groundwater samples will be collected semiannually from 2019 through 2022 to monitor the effectiveness of the injection system and monitor the concentrations of contaminants in groundwater. Monitoring will include field measurement of static water levels, dissolved oxygen, pH, specific conductivity, temperature, and oxidation-reduction potential in the wells prior to the collection of groundwater samples.

Public Benefits Assessment
The project will remove hydrocarbon compounds that have the potential to threaten the health and safety of residents and patrons of local homes and businesses in the form of vapor intrusion and water source contamination if the hydrocarbon plume migrates. The project will reduce the potential for migration of the plume towards downgradient water supply wells and reduce the possibility that those wells would be affected.

Direct benefits include protection of groundwater and the nearby Musselshell River. The project may indirectly benefit residents near the project area through preservation of property values as well as reduced exposure to contaminants.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Administrative Costs	$940	$2,597	$3,537
Task 1: Installation of additional monitoring and injection wells	$36,154	$0	$36,154
Task 2: Maintenance and operation of the remedial system	$35,960	$0	$35,960
Task 3: Groundwater Monitoring	$39,282	$0	$39,282
Task 4: Remedial System Decommissioning and Monitoring Well Abandonment	$40,800	$0	$40,800
Task 5: Reporting	$32,117	$0	$32,117
Total	**$185,253**	**$2,597**	**$187,850**

The budget was clear and reasonable.

DNRC Concerns
Technical reviewers noted that the current system has not shown the ability to remediate groundwater even five feet from injection wells. Although the project proposes to install two additional injection wells to

address this issue, the reasoning for the proposed well locations is not clear. Locating the wells in the previous excavation area, where the current injection wells are located, may not increase contaminant removal. Additionally, the plume appears to be stable, so the risk to the Musselshell River and water intake is minimal. It may be possible for the applicant to meet their goals by exploring other avenues, such as a petroleum mixing zone closure.

Funding Recommendation

Because the proposed remediation plan has not been successful at this site, DNRC recommends reduced grant funding of $50,000 upon DNRC approval of the project scope of work, administration, budget, and funding package for additional monitoring wells to evaluate the performance of the existing system or to explore other avenues for site closure.

Project No. 13

Applicant Name	Montana Department of Environmental Quality	
Project Name	Upper Blackfoot Mining Complex Water Treatment Plant Bridge and Infrastructure Protection	
Amount Requested	$ 300,000	
Other Funding Source	$ 198,993	UBMC Settlement Funds
	$ 155,000	DEQ Bridge Transfer
	$ 25,000	Streamside Tailings Operable Unit
Total Project Cost	$ 678,993	
Amount Recommended	$ 300,000	

Project Summary
The Montana Department of Environmental Quality (DEQ) requests grant funding for a bridge to access the water treatment plant (WTP) at the Upper Blackfoot Mining Complex (UBMC). The UBMC is located in the headwaters of the Blackfoot River. Currently, culverts allow access to the WTP. The proposed bridge will provide adequate freeboard at the WTP to allow passage of the Blackfoot River's 100-year flood, accounting for ice and log jams, and improve fish passage.

Project History
Mining in the UBMC began in the late 1800s with the bulk of the mining impacts occurring during World War II in the 1940s. The water treatment plant and access to it was constructed to treat metals contaminated water. Because the maintenance access road to the treatment plant crosses the Blackfoot River, a culvert was installed at the crossing. The DEQ believes the culvert is undersized and wishes to replace it with a bridge that will withstand the flow of a 100-year flood and improve fish passage for cutthroat trout.

Proposed Solution
Goals and Objectives
The goals of the proposed project are to protect the WTP infrastructure, provide year-round access to the WTP, and restore connectivity for fishery. The objective of this project is to replace an under-sized culvert with a bridge over the Blackfoot River that can pass the 100-year flood.

Tasks or Activities
The following activities are associated with the proposed project:

1. Finalize Bid Package – The bid items for this project have been drafted and reviewed, including drawings and specifications. They will be compiled into a stand-alone bid package.
2. Advertise Bid Package – The bid package will be advertised for at least three weeks, scheduled to allow construction to begin after spring runoff.
3. Mobilization – Bonding and insurance, submittals, and vehicle/equipment inspections are required within mobilization. Site offices, garbage and sanitation facilities, and necessary site security are put in place. Equipment is moved to the site.
4. Water Diversion/Remove Culverts – Water is already diverted in a 42" pipe. Contractor will need to move that pipe as needed to accommodate the work. The groundwater may also need to be pumped;
5. Install Pilings – Engineer will mark and oversee drill locations as pilings are installed;
6. Install Block/Backing – Existing materials on site will be installed to reduce erosion and direct flows appropriately;
7. Install Riprap/Channel Material – Rock will be installed to reduce downcutting;
8. Install Channel – Build channel;
9. Remove Water Surface Diversions – Water will flow into new creek channel;
10. Move Bridge from Silver Bow Creek to UBMC – Bridge will be dismantled and moved under this contract.
11. Install Bridge Deck and Rails – Bridge will be completed; and

12. Demobilize – All equipment and construction-related facilities will be removed from the site.

Monitoring Plan
DEQ will conduct oversight during installation. Bridge inspections will be conducted every 10 years, contracted to a qualified bridge inspector by the WTP, or as necessary.

Public Benefits Assessment
This project provides access to the WTP during flooding and improves fish passage. Project benefits include short-term jobs; improved protection of the water treatment plant infrastructure; potential protection of surface waters; and facilitating cutthroat trout seasonal migrations.

Financial Assessment

Budget Item	RDGP Grant	Match	Total
Administrative Costs	$0	$21,000	**$21,000**
Activity Costs	$300,000	$357,993	**$657,993**
Total	**$300,000**	**$378,993**	**$678,993**

The applicant did not provide enough information to evaluate the budget. The RDGP grant would be used for bridge installation and engineer oversight costs. The matching funds would be used for all DEQ costs associated with bid package development, advertisement, and DEQ oversight and reporting to DNRC. Once installation is complete, bridge maintenance would become the responsibility of the WTP personnel.

DNRC Concerns
The information provided from the applicant was not sufficient to determine if the bridge was necessary or adequate to provide the protection of the water treatment plant. Additionally, technical reviewers felt that the goals of the project could be met at a significantly lower cost by using a shorter concrete bridge or a wide multi-plate arch structure.

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

CHAPTER III
Status Report of Active 2005–2017 Projects

This chapter briefly summarizes the status (as of October 30, 2018) 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 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. Sampling has been completed on the site and reclamation is scheduled to begin summer 2019.

2. Montana DEQ – Tramway Creek Mine Reclamation Project
The Tramway abandoned mine reclamation project is a partnership between the Montana DEQ, the USFS, and Trout Unlimited. To date the Engineering Evaluation / Cost Analysis has been completed as well as a cultural resource evaluation of potential reclamation sites. Reclamation at the site is anticipated to begin in summer 2019.

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 is scheduled to begin fall 2018 and be completed by fall 2019.

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. This project is scheduled to be complete fall 2019.

5. East Helena Public Schools – Dartman Field Reclamation Project
Deep tilling of the Dartman Field site will reduce concentrations of contaminants on the site to allow construction of school facilities. Tilling on the site began in summer 2018. This project is expected to be complete fall 2019.

6. Confederated Salish and Kootenai Tribes – Revais Creek Mine Tailings Reclamation
The goal of this project is to remove contaminated tailings near Revais Creek. Due to slow rates of revenue to the Natural Resource Projects Account, this project has not been contracted. We expect funds will be available in early 2019.

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. Due to slow rates of revenue to the Natural Resource Projects Account, this project has not been contracted. We expect funds will be available in early 2019.

Projects Approved by the 2015 Legislature

1. Montana DEQ – Belt Water Treatment Project
This grant is under contract and the project is proceeding with water treatability testing and engineering design in order to bid the construction of the water treatment plant in 2019. The primary issues in the design are treatment conditions which achieve Montana water quality standards and the disposal of sludge generated by the treatment process.

2. Montana DEQ – Black Pine Mine/South Fork Lower Willow Creek Fluvially Deposited Mill Tailings
DNRC grant funds for this project are for contracted construction services to remove mill tailings on private lands downstream from Trust designated property. This project is complete and closed December 2017.

3. Missoula County – Martina Creek and Ninemile Creek Reclamation
Roughly 100,000 cubic yards of placer mine piles have been removed, 3,300 feet of Ninemile Creek channel was constructed, and 800 feet of Martina Creek was reconstructed. This project is complete and closed December 2017.

4. Deer Lodge Valley Conservation District – French Gulch Placer Mining Restoration
Funds for this project were used to remove placer piles and restore three miles of French Gulch. This project is complete and closed December 2017.

6. Montana DEQ – Basin Creek Mine – Site Stability Project
Montana DEQ coordinated with U.S. Environmental Protection Agency (EPA), EPA consultants, and Montana DEQ consultants to plan and coordinate project construction activities to reduce or remove mine roads. The project closed December 2016.

7. Montana DEQ – Sand Coulee Acid Mine Drainage Source Control
Investigations to characterize mine adit flows, local hydrogeological conditions, and identify recommended interception well locations have been completed. Montana DEQ is currently conducting well permitting consultations and soliciting information from drilling companies to identify well design considerations and constraints. Interception well drilling is expected to occur during fall of 2018 or the spring of 2019.

8. Deer Lodge Valley Conservation District – Moose-French Placer Mining Restoration
The goal of this project was to restore stream and floodplain function to 0.5 miles of Moose Creek. This project is complete and closed December 2017.

9. Montana DEQ – Mitigation of Threat to Harlowton Public Drinking Water Supply
The goals of this project were to reduce environmental impacts by recovering additional free product, reevaluate the effectiveness of the pilot test, verify that an existing supply was not adversely impacted by contaminants, and evaluate the potential for vapor intrusion into structures. This project is complete and closed May 2018.

10. Madison County – North Willow Creek Reclamation
This project received partial funding from the 2015 Legislature. The primary goal of this project is to reclaim one abandoned mine in the Pony and Cataract Creek drainages within the North Willow Creek watershed. Cleanup efforts began in fall 2018. The project is expected to be completed by fall 2019.

Active Projects Approved by the 2013 Legislature

2. Montana DEQ – AML Bureau / South Fork Lower Willow Creek – Black Pine Mine Reclamation
Funds from this grant were used to remove contaminated materials on USFS and private lands downstream from mine property and reclaim these areas. The project is complete and closed December 2017.

3. Philipsburg, Town of – Tailings Contaminated Sludge Disposal from Decommissioned Wastewater Lagoons
The applicant intended to use this RDGP grant to dispose of sewage sludge contaminated with toxic levels of metals at a DEQ-approved mine waste repository. The project was delayed for several years. After the Black Pine Mine repository was closed and reclaimed, the applicant no longer had a viable disposal site and reverted the grant in July 2017.

4. Montana DEQ – Leaking Underground Storage Tank - Brownfields / Harlowton Petroleum Product Delineation and Mitigation
Petroleum has contaminated groundwater beneath a large part of Harlowton and threatens the town's public water supply well. Work accomplished through this grant includes: delineation of the extent of the free product plume; identification of additional sources of petroleum, mitigation of threats to the Thompson supply well, and determination of the vapor intrusion risks to reduce environmental impact associated with the petroleum release. The project is complete and closed October 2016.

8. Malta, City of – Former Malta Airport Facility – Herbicide/Pesticide Cleanup
The City of Malta removed herbicide and pesticide contamination from spilled agricultural chemicals in surface soil at the former Malta Airport. An estimated 2,000 cubic yards of contaminated soil was excavated, removed, and disposed at a licensed landfill in fall 2016. This project is complete and closed summer 2017.

10. Butte-Silver Bow Consolidated City – County Government Planning Department – Butte Mining District: Reclamation and Protection Project Phase 4 – Orphan Girl
The rebuild of the Orphan Girl decline tunnel has been designed and the surface runoff drainage system has been installed. Exterior repairs to the mine yard building are 90% complete. Final construction and project reporting will be completed in 2019.

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 is in the process of monitoring the groundwater. The system has not been able to complete cleanup and the Town of Ryegate is seeking additional funds to continue work.

12. Cascade County Commission – County Shops Continued Remediation of Wood Treatment Preservatives
Cascade County sold the county shops site to a private individual in June 2014 after the RDGP grant funds were awarded. The new owner is not willing to work with Montana DEQ on the voluntary clean-up process, which is a condition of the grant. As such, the county reverted the funds in June 2016.

13. Butte – Silver Bow Local Government Planning Department – Irrigation Project for Butte Acidic Mine Waters
This RDGP grant enabled Butte–Silver Bow to acquire the equipment needed to repair and upgrade the mine water treatment system. This included increased pumping capacity and automated data monitoring. The system began operation in summer 2014. The project is complete and closed December 2016.

14. Custer County Conservation District – Addressing Cumulative Effects on the Yellowstone River through Best Management Practices (BMP) Development and Implementation
The Yellowstone River CD Council prepared a cumulative effects study on the Yellowstone River that included developing locally-driven BMPs for activities on the river. The council has completed the study and is working to implement the BMPs. This project is expected to be complete December 2017.

15. Ruby Valley Conservation District – Upper Missouri Headwaters River/Flood Hazard Map Development
The main output of this project is channel migration maps for a large area in the upper Missouri Headwaters. Ruby Valley CD procured a contractor that has completed channel migration zone mapping for the Beaverhead, East Gallatin, Jefferson, Madison, Ruby, and Big Hole rivers. This project started in spring 2015 and completed March 2018.

Active Projects Approved by the 2011 Legislature

22. Crow Tribe / Little Bighorn River Restoration

Phase 1 of this project, which entailed site survey and investigation, is complete. The Tribe received approval from FEMA for Phase 2 in February 2017 and is working on gathering the appropriate permits. Construction is expected to take place in 2018.

Active Projects Approved by the 2009 Legislature

1. Montana Board of Oil and Gas Conservation – 2009 Northern District Orphaned Well Plug and Abandonment, and Site Restoration
Fifteen wells were plugged and properly abandoned. The project closed October 2016.

Active Projects approved by the 2005 Legislature

8. Butte-Silver Bow Local Government – Belmont Shaft Failure and Subsidence Mitigation
This project reclaimed many mine shaft failures in Butte. Butte-Silver Bow will use remaining funds to continue to inventory shafts, mitigate subsidence, and reclaim shafts. This project closed in December 2017.

CHAPTER IV
Reclamation and Development Grants Program—Project Planning Grants

Program Information

The 2017 Legislature authorized $800,000 for RDGP project planning grants. These 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. Planning grant funds must be used primarily for contracted consulting or engineering services.

Planning grant applications were accepted in September 2017, January 2018, and June 2018. DNRC plans to conduct another grant cycle in early 2019. As of October 30, 2018, planning grant funding was used to assist 20 projects across Montana (Table 3). Review and ranking methodology was patterned after and was conducted similar to the RDGP projects grant program. The maximum amount for a planning grant is $50,000. Of the 20 planning grants, 6 planning projects resulted in an application for a RDGP project grant by the May 15, 2018 deadline. Some of the projects are still in planning stages and do not expect to submit applications for RDGP project grants until the 2020 cycle. Projects submitted by applicants that received a planning grant tended to rank higher relative to those that did not seek a planning grant.

Funding for the planning grant projects has proven invaluable for applicants in preparing and submitting a high quality and competitive project grant application.

Total Available 2019 Biennium	$ 800,000.00
Grants Awarded as of October 2018	$ 634,713.76
Amount Remaining 2019 Biennium	$ 165,286.24

Table 3. Project Planning Grants Awarded During the 2019 Biennium (as of October 30, 2018)

Project Sponsor	Project Title	Awarded Amount
Missoula, City of	EPA Assessment Grant Application Assistance	$6,000.00
Granite CD	Silver King Mine Reclamation	$25,750.00
Deer Lodge, City of	Milwaukee Roundhouse CECRA Facility Environmental Assessment – Passenger Refueling Area Portion	$12,900.00
Montana Bureau of Mines and Geology at Montana Tech	Developing a Groundwater Monitoring Plan Around Extractive Energy Activities	$45,248.00
Red Lodge, City of	Planning for Coal Repository and Historic City Dump in Red Lodge, MT	$40,684.91
Powell County	Milwaukee Roundhouse CECRA Facility Environmental Assessment – Milwaukee Roundhouse Area Portion	$12,912.00
Harlowton, City of	North Side of the Harlowton Milwaukee Roundhouse CECRA Facility	$49,999.28
Roosevelt County	DNRC Planning to Support Grant Writing for Brownfields Redevelopment Program	$5,000.00
Musselshell County	Davis Abandoned Coal Mine Site Assessment and Problem Analysis	$35,221.00
Deer Lodge, City of	City of Deer Lodge Water Supply	$16,925.00
Cascade County	Cottonwood #2 Mine Acid Mine Drainage Collection System	$40,036.00
Ruby Valley CD	Granite Creek Channel Restoration - Alder Gulch Creek Tailings Removal Survey and Design	$40,000.00
Lewis and Clark County Water Quality Protection District	Grizzly Gulch Placer Mine Reclamation	$50,000.00
Harlowton, City of	Investigation of Remaining Potential Contaminant Sources at the Harlowton Milwaukee Roundhouse CECRA Facility	$50,000.00
Malta, City of	Former Malta Airport - Voluntary Brownfields Cleanup	$28,424.00
Powell County	American Gulch Mine Reclamation Planning	$29,463.00
DNRC Water Resources Division - Water Rights Bureau	Pilot Study to Evaluate Statewide Application of a Groundwater Evaluation Tool	$49,939.00
Beaverhead County CD	Grasshopper Creek - Investigating Legacy Impacts of Mining	$45,000.00
Fort Peck Assiniboine and Sioux Tribes	Fort Peck Tribes – Pre-Reclamation Assessment of Orphaned Wells	$47,174.00
Deer Lodge Valley CD	Third Party Program Audit	$4,037.57
	TOTAL	**$634,713.76**

Note: CD = Conservation District; CECRA = State Superfund Program; EPA = Environmental Protection Agency; MT = Montana; DNRC = Department of Natural Resources and Conservation

CHAPTER V
Reclamation and Development Grants Program
Aquatic Invasive Species Grants

Program Information
The 2017 Legislature authorized $500,000 for grants to control of aquatic invasive species (AIS). DNRC conducted grant cycles in July 2017 and March 2018 and plans to conduct another grant cycle in December 2018 for the remaining funds.

Projects were ranked based on the demonstration of a critical and urgent need to protect Montana's environment from severe and unacceptable damage to natural resources from aquatic invasive species. Public benefit from implementation of the projects is increased control of aquatic invasive species. Projects were also ranked based on their demonstrated coordination with other projects, state control efforts, and comprehensive invasive species plans. Activities included: 1) on-the-ground treatment; 2) aquatic invasive species surveys; 3) environmental monitoring; 4) preparation of action plans; and 5) treatment demonstration.

As of October 30, 2018, DNRC has awarded funding for 20 projects for aquatic invasive species survey and control, as well as providing contracted technical support for local efforts (Table 4).

Total Available 2019 Biennium	$ 500,000
Grants Awarded as of October 2018	$ 325,420
Amount Remaining 2019 Biennium	$ 174,580

Table 4. Aquatic Invasive Species Grants and Contracts Awarded During the 2019 Biennium (as of October 30, 2018)

Sponsor	Project Title	Awarded Amount
Salish Kootenai College	Sequential Dry Ground/Foliar Herbicide Applications for the Suppression of Flowering Rush	$15,000
Whitefish County Water District	Whitefish Lake Mussel Response Initiative – Watercraft Inspection	$15,000
Petroleum County CD	Central and Eastern Montana Mussel Response – Education and Outreach	$14,055
Garfield CD	CD and Watershed Support for Invasive Species	$26,600
Missoula County Weed District	Save Montana's Waters Media Project and Inspect Before Launch	$20,800
Sanders County	Invasive Mussel Management for Sanders County	$15,000
Glacier County CD	AIS Prevention and Education and Outreach Planning in Glacier, Toole, Liberty Counties	$5,000
Flathead Basin Commission	Prevention Outreach and Training on Zebra/Quagga Mussels	$5,000
Lincoln County Weed District	Lincoln County Monitoring	$15,000
Broadwater County CD	Broadwater CD Mussel Response Project	$14,960
MT Natural Heritage Program	AIS Data Management for Prevention and Early Detection	$64,173
Missoula County Weed District	Blackfoot, Clearwater, Swan AIS Cooperative Program	$13,833
Rosebud CD	Central and Eastern Montana Mussel Response	$15,000
University of Montana	Technical Advisory Group Petition Development to Import the Flowering Rush Weevil - Year 2	$15,000
Flathead Lake Biological Station, University of Montana	AIS Teaching Trunks	$10,999
UM Flathead Lake Biological Station	Flathead Lake Biological Station Invasive Mussel Sampling Training	$15,000
Upper Columbia Conservation Commission	Raising AIS Awareness in the Upper Columbia Basin	$15,000
Missoula County Weed District	Blackfoot, Clearwater, Swan AIS Cooperative Program - Education and Outreach	$8,000
Missoula County Weed District	Blackfoot, Clearwater, Swan AIS Cooperative Program - Monitoring	$12,000
Marion Elementary School District	Lake Education and Awareness Program	$10,000
	TOTAL	**$325,420**

Note: CD = Conservation District; AIS = aquatic invasive species

CHAPTER VI
Reclamation and Development Grants Program
Montana Salinity Control Association

The 2015 Legislature authorized $214,000 to assist the Montana Salinity Control Association with one-time-only funding to upgrade aging vehicles and outdated office and field equipment and for staff salary to manage the project. Montana Salinity Control Association refurbished its drill rig in June 2016, expending $115,000. The remaining $99,000 is allocated to: 1) replace and/or repair field vehicle; 2) replace and/or upgrade existing field and office equipment; and 3) staff salaries. The project is expected to be complete by December 2019.

2019

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