

Governors Water Strategy

Initiatives 9 and 10 Summary Report

1.0 Summary and Background

Wyoming Governor Matt Mead's 2015 Water Strategy (Strategy) seeks to "protect, plan for, and utilize water for the highest benefits of all its citizens." The Strategy includes ten initiatives described under the themes of Management, Development, Conservation, and Protection. Initiative 9, "River Restoration" and Initiative 10, "Collaborative Fish Passage Restoration" are water and watershed protection initiatives that work toward making Wyoming's waterways healthy and functioning. This is a vital aspect of the Strategy because "for the families that recreate in the water, the fisheries that populate rivers and streams, and the crops and livestock that depend on them, it is essential that Wyoming's waterways are healthy and functioning" (Wyoming Water Strategy, page 32).

Initiative 9, river restoration, recognizes that communities see significant long-term economic returns as a direct result of restoration work. This initiative involves developing strategies, financial tools, and technical expertise to further stream restoration efforts throughout Wyoming.

Initiative 10, collaborative fish passage, recognizes opportunities to benefit both water users and fisheries when replacing infrastructure. This initiative involves developing strategies, financial tools, and technical expertise to further fish passage throughout Wyoming while still meeting water user's needs.

An ad hoc team of state agency representatives assembled in 2015 to define and execute outcomes under both initiatives. Agencies included: Wyoming Governors Office (WGO), Wyoming Water Development Office (WWDO), Wyoming Game and Fish Department (WGFD), Wyoming Department of Agriculture (WDA), Wyoming Wildlife and Natural Resource Trust Fund (WWNRT), Wyoming Department of Environmental Quality (WDEQ), and the Wyoming Department of Transportation (WYDOT). Representatives met quarterly between fall 2015 and spring 2017. One of the first topics discussed was group membership and meeting schedule. It was decided that the group should consist solely of state agency representatives because the scope of the Strategy entails providing state government services. Broadening the group in the future would be welcomed if the mission expanded to collaborative engagement on additional tasks.

This document summarizes the activities and products of the ad hoc group assembled to implement Strategy Initiatives 9 and 10. A series of products were developed and are available [here](#). An ESRI [story map](#) provides examples of stream restoration projects and collaborations. Several workshops and outreach efforts occurred and more are planned. Ongoing river restoration and fish passage roles and activities of agency representatives are herein described, including how the agencies will continue to work together efficiently to serve citizens and conserve natural resources. It is recommended the group continue meeting once annually to

Governors Water Strategy Initiatives 9 and 10 Summary Report

share information and progress on projects, identify opportunities for additional collaboration, and pursue adaptive management of stream restoration topics.

Governors Water Strategy

Initiatives 9 and 10 Summary Report

2.0 Development of Milestones

Early discussions focused on defining outcomes and milestones to measure progress (Appendices A and B). Milestones evolved as the group explored ways to provide citizens information and opportunities related to stream restoration and fish passage within current budgetary capacity. Products produced are discussed in Section 3. Additional ideas explored but not pursued to completion are summarized below:

- **Engineer position:** One of the largest obstacles to completing fish passage and river restoration projects is engineering capacity to develop, review and stamp designs. Fish passage and river restoration are complex fields requiring rigorous knowledge and application of hydraulic, civil, and mechanical and river design engineering principles. Among the state agencies, it was acknowledged that having a position devoted to fish passage and stream restoration would facilitate progress.

None of the state agencies currently have such a position specializing in river restoration or fish passage. The closest models are provided by the Natural Resource Conservation Service (NRCS) and United States Fish and Wildlife Service (USFWS). The NRCS has a statewide engineer position with expertise in river restoration and fish passage. The NRCS is well known to have a back log of projects and sometimes exhibits long turn-around periods for engineering services. The USFWS Fish Passage program has a passage engineer specialist in Region 6 that is likewise spread thin.

A FY17-18 budget was developed for an engineer position. The budget totaled \$443,000 for the biennium and included a vehicle and specialized survey equipment for starting up a new position. The WGFD developed the budget estimates but a state agency location for the position was not defined. Ultimately, the budget was not carried forward into the Governor's recommended budget for legislative consideration.

- **Ad hoc Advisory Group:** The group discussed continuing to serve a role in the future as a resource for municipalities and others with river restoration or fish passage issues or questions. Some suggested that communities such as Casper, Lander, and Saratoga might need a coordinated group as a sounding board for questions and issues. Casper certainly appeared to need guidance as it worked with consultants and contractors to develop and implement stream restoration. However, it was ultimately acknowledged that such a formalized and ongoing group is probably unnecessary at this time. Guidance can be provided by expert resource professionals within each of the state agencies, along with additional input from conservation groups like Trout Unlimited (TU) and federal partner agencies. In addition, products described below in Section 3 should also be helpful.

Governors Water Strategy Initiatives 9 and 10 Summary Report

- Memorandum of Understanding (MOU) among the agencies: An early milestone was suggested to memorialize the cooperation and roles of the various agencies in meeting river restoration and fish passage outcomes. On further consideration, it was concluded that such a document was extraneous to real outcomes described in Section 3. Furthermore, the ad hoc state agency group by its very nature represents and displays the spirit of cooperation desired to efficiently provide public and natural resources services. The ad hoc group could be called back into service at any time to address future stream restoration and fish passage needs.

3.0 Stream Restoration Milestones, Products and Services

A summary of progress for each river restoration milestone (Appendix A) is provided below:

- ***Conduct an analysis of existing restoration activities and needs in Wyoming that identifies agency roles, partners, and opportunities***

Stream restoration work across Wyoming has increased in recent years in response to increased technical savvy among resource professionals, increased funding availability through sources like the Wyoming Wildlife Natural Resource Trust, and increased leadership and energy from conservation groups most notably Trout Unlimited Western Water Watch. A recent compilation identified seventy stream restoration projects occurring over a two year period in Wyoming (River Restoration: Who, Why and What; presented at Wyoming Water Association, October 27, 2016). Despite this activity, there is a great amount of potential for additional work.

To portray ongoing work and opportunities for future work, river restoration hotspots were identified (Appendix C). Work in these places will benefit fisheries and wildlife resources, in addition to other values. They were identified largely based on WGFD Strategic Habitat Plan enhancement priority areas and State Wildlife Action Plan conservation areas. They were also identified with Wyoming communities in mind – the majority of larger Wyoming communities have a stream flowing through them that could benefit from restoration. And Wyoming citizens are interested in healthy flowing rivers through their communities with fisheries, greenways, clean water, and opportunities to connect with nature. The hotspots recognize the ongoing and increasing interest in communities including Buffalo, Casper, Cheyenne, Cody, Green River, Jackson, Saratoga, and Sheridan (Appendix C).

Issues common to many of these streams, stream corridors, and watersheds include: lack of beaver, trampled stream banks, excessive stream bank erosion, channel degradations, channel instability, over-widened channels, sedimentation, reduced floodplain

Governors Water Strategy Initiatives 9 and 10 Summary Report

connectivity, low riparian woody plant regeneration, loss of age-class diversity in cottonwoods, conifer encroachment, low stream flow, dewatering, loss of instream habitat, and invasive plant species.

Stream restoration activities and partnerships were further developed by the ad hoc group via a facebook page, web page and an ESRI [story map](#). The river restoration and fish passage [web page](#) was developed to feature all the maps and resources summarized within this report. The ESRI [story map](#) exhibits examples of projects completed in 2015 and 2016. It includes geo-referenced photos and text describing stream restoration and fish passage project goals and results. The text recognizes partner and agency roles and it is intended that the story map will be maintained into the future with annual submissions by all partner agencies.

- ***Provide recommendations for how agencies and partners can work together to achieve stream restoration***

Wyoming state agencies and partners are currently working together and achieving stream restoration. Forty-nine projects featured via [story map](#) provide evidence of work accomplished in 2015 and 2016. A recommendation for the future is that the ad hoc group member agencies continue to meet once annually to share information and progress on river restoration projects and identify opportunities for additional collaboration. In addition, each agency can play a role in future and ongoing stream restoration efforts by taking the following actions:

WDA:

- 1) Connect agricultural producers and landowners with resources, information, and specialists in other agencies,
- 2) Foster site-based field training and tours to explore restoration strategies,
- 3) Contribute story map project items as opportunities arise.

WDEQ:

- 1) Provide information upon request or during targeted outreach efforts about non point 319 program and funding,
- 2) Administer water quality regulatory programs under its purview (i.e. turbidity waivers, 401 certification, 303 d) while sharing information with other partner agencies,
- 3) Connect landowners, municipalities, conservation organizations and members of the public interested in stream restoration with resources and specialists in other agencies,
- 4) Continue annual coordination meetings with WGFD and the US Army Corp of Engineers (USACE) to share information about stream restoration permitting,

Governors Water Strategy Initiatives 9 and 10 Summary Report

- 5) Annually contribute project photos and text for story map,
- 6) Maintain story map featuring projects involving partner agencies and other collaborators, and
- 7) Share responsibility with WGFD for convening an annual coordination meeting of the stream restoration and fish passage ad hoc state agency group.

WYDOT:

- 1) Continue to review proposals submitted by sponsoring agencies for stream restoration and fish passage projects, and their impacts to highways and bridges;
- 2) Maintain awareness of state agency contacts and activities relating to fish passage and stream restoration;
- 3) Provide additional training to WYDOT professionals on the design and construction of fish passage and stream restoration projects;
- 4) Annually contribute project photos and text for story map.

WGFD:

- 1) Provide technical support to partners via regional aquatic habitat biologists (AHABs) located in Cody, Green River, Jackson, Lander, Laramie, Pinedale and Sheridan,
- 2) Provide technical lead services via AHABs as project coordinators implementing high quality, multiple-benefit watershed scale stream restoration projects while collaborating with partners connect landowners, municipalities, conservation organizations and members of the public interested in stream restoration with resources and specialists in other agencies,
- 3) Continue annual coordination meetings with WDEQ and USACE to share information about stream restoration permitting,
- 4) Continue quarterly coordination meetings with WWDO and the State Engineers Office to share information on a broad range of water related topics including stream restoration,
- 5) Annually contribute project photos and text for story map,
- 6) Share responsibility with WDEQ for convening an annual coordination meeting of the stream restoration and fish passage ad hoc state agency group,
- 7) Continue sending an agency representative to WVNRT board meetings to represent WGFD projects and share and receive information about stream restoration, and
- 8) Maintain stream restoration web page, adding contributions from partner agencies as needed.

WGO:

- 1) Maintain awareness of state agency contacts and activities relating to stream restoration by reviewing story map and web page and attending annual coordination meeting of the ad hoc group and,

Governors Water Strategy Initiatives 9 and 10 Summary Report

2) Connect interested citizens and representatives from municipalities, industry, conservation and other sectors with agency representatives as needed.

WWDO:

1) Continue gathering information during watershed studies pertaining to the condition of stream channels and water resources and remain open to considering alternative or additional metrics, especially requiring contractors to report the condition of stream reaches,

2) Continue quarterly coordination meetings with WGFD and the State Engineers Office to share information on a broad range of water related topics including stream restoration,

3) Contribute story map project items as opportunities arise.

WWNRT:

1) As a major funding source, continue to foster high quality stream restoration projects by encouraging a big picture, watershed scale perspective and touring each project proposal,

2) Connect project proponents with resources and specialists in other agencies and conservation groups and make them aware of stream restoration funding sources and permitting requirement documents on the stream restoration website, and

3) Annually contribute project photos and text for story map.

- ***Establish an agency working group among WGFD, WWDO, WWNRT, WDEQ, WYDOT and Department of Agriculture to document how the agencies cooperate on stream restoration***

As described in Section 1.0, this working group was established and met multiple times in 2015-2017. Ongoing cooperation on stream restoration work is inherent as the agencies implement the actions described in the previous milestone.

It is recommended the ad hoc group continue to meet once annually to share information and progress on river restoration projects and identify opportunities for additional collaboration.

- ***Develop a strategy and recommendations to provide short-term and long-term statewide assistance to municipalities and others considering stream restoration via a technical expert position (Restoration and Fish Passage Engineer) and/or project review team***

As discussed under Section 2.0, the State's present and near future fiscal situation makes pursuit of a stream restoration and fish passage engineer position impossible.

Governors Water Strategy Initiatives 9 and 10 Summary Report

Furthermore, the project review team idea, as a role of the ad hoc group, was deemed unnecessary. Rather, project proponents and interested parties should seek professional guidance from individual agency experts in WGFD, WWNRT, WDEQ and from Trout Unlimited Wyoming Water Watch.

Project proponents should be encouraged to use natural channel design principles, pursue function-based objectives that at a minimum provide for riparian function, floodplain connectivity, maintain erosion at natural levels, and encourage diverse channel features. Furthermore, project proponents seeking guidance or advice should be pointed to the resources available on the [web page](#), and the [story map](#) project examples. Project proponents should be encouraged to seek outside review of preliminary designs and to share project results via story map.

- ***Provide outreach and education about stream restoration principles and benefits to agency staff, agricultural producers, and other interested parties***

Two workshops and a presentation occurred to provide education and outreach:

- 1) Stream Restoration 101 - Provided September 2016 to Wyoming Association of Rural Water Systems in Cheyenne, conducted by Christina Barrineau (WGFD) and Jeff Streeter (TU).
- 2) Wyoming Water Association Annual Meeting – Stream restoration workshop provided October 2017 to agency professionals and water resource specialists. This full day workshop and tour provided technical information about stream restoration and an example via the North Platte River Casper project.
- 3) An additional presentation was made by the WGFD representative to the Water Forum, a monthly meeting of water resource professionals in Cheyenne. This presentation highlighted stream restoration principles and Strategy products and activities.

Workshop ideas for the future include additional workshops in association with annual Wyoming Water Association and Wyoming Association of Rural Water Systems meetings. Another idea is to develop specific regional workshops working directly with agricultural interests. For example, a workshop might include hands-on work on a landowner's eroding bank.

Outreach and education was furthered through development of the [web page](#) and [story map](#). Finally, a Strategy facebook page was developed and populated with several photos with text featuring river restoration projects. Unfortunately, the facebook page proved difficult to keep up with current staffing levels.

Governors Water Strategy Initiatives 9 and 10 Summary Report

- ***Develop quality assurance guidelines with basic checklists and standards for conducting stream restoration work***

The ad hoc group discussed several alternatives for providing guidelines and checklists. An early draft document was developed with check lists for multiple phases of a stream restoration project. This approach was not further pursued because it seemed to provide a mix of general and very technical information and the audience was not clear. To target a mid-level audience with some desire to pursue a stream restoration effort but lacking detailed technical knowledge, a three-page document was produced (Appendix D). This document is entitled “Steps in Completing a River Restoration” and is shared via the website. It may also be developed into a brochure in the future.

The group also produced a document entitled “State and Federal Agency Resources for Stream Restoration” (Appendix E). This document lists permitting authorities and their contact information.

- ***Develop a guide on how to obtain funding for Wyoming stream restoration projects***

A comprehensive list of funding sources and contact information was developed (Appendix F) as a resource for river restoration and fish passage project proponents. Depending on specific project circumstances, a variety of funding sources may be appropriate. For most efforts, a handful of funding sources should always be considered. These primary funding sources for river restoration work in Wyoming are:

- Wyoming Wildlife Natural Resource Trust
- Wyoming Game and Fish Trust Fund
- Wyoming DEQ Section 319

Funders in Appendix F are organized by the type of organization or group applying for the funding. Funders are also organized by where the funding can be applied. Categories include: 1. Public Funding for Private Landowners, Municipalities, Government Agencies, Non-Governmental Organizations, 2. Nonprofit Funding for Private Landowners, Municipalities, and Agencies, 3. Public Funding for Municipalities and Agencies Only, 4. Public Funding for Private Landowners Only, 5. Private funding, and 6. Regional funding.

- ***Explore opportunities to encourage post-construction monitoring, maintenance, and adaptive management of completed restoration projects***

Governors Water Strategy Initiatives 9 and 10 Summary Report

This milestone received the least attention by the group and much work remains to be done. The group tacitly recognized that high quality and cost effective work is more likely if fish passage and stream restoration practitioners are encouraged to meet minimum maintenance and monitoring thresholds. Discussions did not delve into defining those thresholds but it was noted that WDEQ has the most stringent monitoring requirements and could naturally drive such efforts to standardize or at least offer a consistent message.

A stream restoration quantification tool (QT) is under development by an interagency review team (IRT) charged with advising the USACE on wetland and stream mitigation banking. The QT is expected to be developed in 2017 and includes functional metrics for defining the amount of lift or credit associated with stream restoration. The approach offers very specific and quantitative success criteria for any stream restoration effort and makes monitoring needs obvious. The WGFD is considering adopting the QT as a way to determine the relative benefit of stream restoration proposals and to set these efforts up for appropriate monitoring. If the ad hoc initiative 9 and 10 team continues to meet once annually as recommend above, an important topic is considering this tool (or other approaches) for wider adoption.

Governors Water Strategy Initiatives 9 and 10 Summary Report

4.0 Fish Passage Milestones, Products and Services

A summary for fish passage milestones is provided below:

- ***Establish an agency work group among WGFD, Department of Agriculture, DEQ, WWNRT, Department of Transportation and WWDO to facilitate fish passage***

As described in Section 1.0, this working group was established and met multiple times in 2015-2017. Ongoing cooperation on fish passage work is inherent as the agencies implement the actions described in the milestones.

It is recommended the ad hoc group continue to meet once annually to share information and progress on fish passage projects and identify opportunities for additional collaboration.

In addition to the ad hoc agency group, an informal group of fish passage practitioners has been meeting twice per year for the last six years to discuss projects, issues, funding, and tour projects.

- ***Conduct an analysis of existing fish passage activities and needs in Wyoming that identifies agency roles, partners, and opportunities. Identify opportunities to promote benefits to other natural resources (e.g., water quality) where appropriate. Identify completed fish passage projects that could be used for public education/outreach purposes.***

Efforts have ramped up in the last 8-10 years to improve the ability of fish to move upstream and downstream throughout drainage networks. This increased emphasis has coincided with increased funding availability from sources like the WWNRT (funding allocations began in 2006), the development of a fish passage program in the USFWS, and the development of a fish passage program at WGFD in 2009. Furthermore, establishment of Trout Unlimited Western Water Project in 1998 brought project management capacity and energy. These programs were developed with an increased appreciation of the importance of fish passage for thriving fish populations and an eye toward creating win-win solutions for water users replacing aging infrastructure. Concrete water diversion structures established in the early 1900's are reaching the end of their service and the timing is good to replace that infrastructure in a fish friendly manner.

The ad hoc group developed fish passage focus basins where work would benefit willing water users and would be especially beneficial for native fish species conservation, wild

Governors Water Strategy Initiatives 9 and 10 Summary Report

fisheries, and reconnecting waterways (Appendix G). While improved fish passage is considered beneficial nearly anywhere it occurs, those places highlighted in Appendix G can be considered higher need areas.

Over the last decade, scores of projects have been completed by a broad range of collaborators. Summaries and highlights from some of these projects are available in WGFD annual strategic habitat plan reports while information about others is available through WWNRT, Trout Unlimited, and WDEQ. Most of the projects have concentrated on reconnecting streams to provide access to spawning tributaries, overwintering areas, juvenile rearing, and other key habitat features as fish grow from an egg to reproducing adults. Project examples include replacement of annual push-up dams with permanent rock structures at diversions that provide upstream passage, yet maintain delivery of water for irrigation. Fish ladders and bypass channels have been constructed to provide fish a way to navigate upstream past dams. Culverts have been replaced and improved to provide passage at road crossings while some locations have had fish screens installed at irrigation diversions to prevent fish from being lost to the ditch.

A [Story Map](#) has been developed with a tab featuring fish passage projects. Currently, the page has twenty-two projects from across the state and involving a range of collaborators and project leads. This link will be maintained by WDEQ and agencies and partner organizations will annually provide new project photos and summary information. Additional resources are available at on the [web page](#). Finally, a Strategy facebook page was developed featuring both stream restoration and fish passage projects.

To provide education and outreach about opportunities for water users to rehabilitate aging infrastructure in a fish friendly manner, the ad hoc group discussed organizing fish passage workshops. As a result, a fish passage update was provided at the fall 2016 Association of Conservation Districts annual meeting. In addition, the WGRD fish passage coordinator will be providing a presentation in fall 2017 or early 2018 to the Water Forum, an informal monthly meeting of water resource interests in Cheyenne.

Despite the activity over the last decade, much remains to be done. A fish passage database developed by WGFD includes over 1000 barriers to fish movement and many more undoubtedly exist. By working together and in concert with other partners, many more projects can be completed in the coming years. Agency roles in facilitating passage in the future are outlined below:

Governors Water Strategy Initiatives 9 and 10 Summary Report

WDA:

- 1) Connect landowners and agricultural producers with resources, information, and specialists in other agencies,
- 2) Foster site-based field training and tours to explore fish passage solutions,
- 3) Contribute story map project items as opportunities develop,
- 4) Encourage affiliated groups (e.g. conservation district staff and members) and individuals to attend biannual fish passage interest group meetings.

WDEQ:

- 1) Provide information upon request or during targeted outreach efforts about non point 319 program and funding,
- 2) Administer water quality regulatory programs under its purview (i.e. turbidity waivers, 401 certification, 303 d) while sharing information with other partner agencies,
- 3) Connect landowners, municipalities, conservation organizations and members of the public interested in fish passage with resources and specialists in other agencies,
- 4) Continue annual coordination meetings with WGFD and USACE to share information about permitting,
- 5) Annually contribute project photos and text for story map,
- 6) Maintain story map featuring projects involving partner agencies and other collaborators,
- 7) Share responsibility with WGFD for convening an annual coordination meeting of the stream restoration and fish passage ad hoc state agency group and,
- 8) Consider attending and encourage affiliated groups and individuals to attend biannual fish passage interest group meetings.

WYDOT:

- 1) Continue to work with state agencies and US Forest Service to identify and facilitate the design and construction of fish passages;
- 2) Continue to review proposals submitted by sponsoring agencies for stream restoration and fish passage projects, and their impacts to highways and bridges;
- 3) Maintain awareness of state agency contacts and activities relating to fish passage and stream restoration;
- 4) Provide additional training to WYDOT professionals on the design and construction of fish passage and stream restoration projects;
- 5) Annually contribute project photos and text for story map.

WGFD:

- 1) Provide technical support to partners via the fish passage coordinator (located in the Lander regional office) and fish passage biologist (located in the Cody regional office),

Governors Water Strategy Initiatives 9 and 10 Summary Report

- 2) Lead high quality fish passage projects while collaborating with partners,
- 3) Connect landowners, municipalities, conservation organizations and members of the public interested in fish passage with resources and specialists in other agencies,
- 4) Continue attending and leading biannual fish passage meetings and tours,
- 5) Continue quarterly coordination meetings with WWDO and the State Engineers Office to share information on a broad range of water related topics including fish passage,
- 6) Annually contribute project photos and text for story map,
- 7) Share responsibility with WDEQ for convening an annual coordination meeting of the stream restoration and fish passage ad hoc state agency group,
- 8) Continue sending an agency representative to WWNRT board meetings to represent WGFD projects and share and receive information about fish passage,
- 9) Maintain stream restoration and fish passage project web page, adding contributions from partner agencies as needed,
- 10) Continue developing and populating a fish passage database and share with state and federal agencies and other partners, and
- 11) Develop a brochure for landowner and water users highlighting cost share opportunities to renovate infrastructure while benefitting fish passage.

WGO:

- 1) Maintain awareness of state agency contacts and activities relating to fish passage by reviewing story map and web page and attending annual coordination meeting of the ad hoc group and,
- 2) Connect interested citizens and representatives from municipalities, industry, conservation and other sectors with agency representatives as needed.

WWDO:

- 1) During watershed studies, require contractors to inventory barriers using WGFD provided data forms,
- 2) Provide proposed water development projects to WGFD for review relative to fish passage issues and opportunities,
- 3) Continue quarterly coordination meetings with WGFD and the State Engineers Office to share information on a broad range of water related topics including stream restoration,
- 4) Contribute story map project items as opportunities arise.

Note, WWDO has already begun implementing numbers 1 and 2 as a result of this initiative.

Governors Water Strategy Initiatives 9 and 10 Summary Report

WWNRT:

- 1) Continue to foster high quality fish passage projects by encouraging a big picture, watershed scale perspective and touring each project proposal,
- 2) Connect project proponents with resources and specialists in other agencies and conservation groups and make them aware of fish passage funding sources and permitting requirement documents on the stream restoration website, and
- 3) Annually contribute project photos and text for story map.

- ***Develop a guide on how to obtain funding for fish passage projects***

A comprehensive list of funding sources and contact information was developed (Appendix F) as a resource for river restoration and fish passage project proponents. Depending on specific project circumstances, a variety of funding sources may be appropriate. For most efforts, a handful of funding sources should always be considered. These primary funding sources for fish passage work in Wyoming are:

- Wyoming Wildlife Natural Resource Trust
- Wyoming Water Development Office: Small project or large project funding
- Wyoming Game and Fish Department: Fish Passage Grant
- USFWS Fish Passage and National Fish Habitat Initiative Funding

- ***Identify opportunities for consideration of options for allowing a portion of costs for traditional WWDO water development activities to go toward fishways and other structural modifications to enhance passage.***

The WWDO has committed to ensuring that new water development proposals consider fish passage needs in their design. In fact, WWDO has begun requesting WGFD review of proposals that appear to have potential for affecting passage. New water developments with features that facilitate fish passage can be funded through traditional means and following existing legislatively established guidelines.

- ***Identify opportunities for consideration of options for expanding the criteria for which groups or agents can apply for WWDO and WWNRT funds to facilitate fish passage.***

The ad hoc group recognizes that WWNRT currently has ample flexibility to fund quality projects that facilitate fish passage and they have an established history of so doing. This milestone was generated under the notion that a fairly restricted group of entities are eligible to apply for WWDO funds. Eligible project sponsors must be an entity of local

Governors Water Strategy Initiatives 9 and 10 Summary Report

government with taxing and/or assessment authority. Private corporations and individuals are not eligible for assistance.

- *Develop a recommendation for a full-time permanent Stream Restoration and Fish Passage Engineer position to assist water users with voluntary and incentive-based fish-friendly irrigation infrastructure upgrades maintaining the landowner/water user as the decision maker.*

As discussed in Section 2, a budget for a full time engineer position was developed but not included in the Governors budget due to the extremely tight fiscal situation.

9-River Restoration

Within the last 50 years, knowledge from engineering, meteorology, geology and hydrology have matured to create an understanding of river processes, as well as practices that can be employed to manage rivers for greater utility and benefit. Restoration is the art and science of analyzing the current status of a river or stream and determining which practices, either engineering or management driven, can be employed to maximize the river system's capacity for desired uses. For example, the North Platte River is one of the most important and utilized rivers in the state. Restoration efforts are currently ongoing in areas like Casper, Saratoga, and Douglas. These initiatives are improving water quality, improving recreational opportunities for fishing and boating, creating channel stability that protects irrigation and transportation infrastructure, and aesthetically improving the river banks, surroundings and entire communities.

Communities see significant long-term economic returns as a direct result of restoration work. This initiative is to develop strategies, financial tools, technical expertise, and collaborative agreements that further stream restoration efforts throughout Wyoming.

Outcomes: Recommendations and a strategy to enhance existing, and foster additional, effective stream restoration efforts throughout Wyoming.

Lead Agencies: Wyoming Game and Fish Department and Wyoming Water Development Office

Cooperating Agencies: Wyoming Department of Agriculture, Wyoming Wildlife and Natural Resource Trust Fund, Wyoming Department of Environmental Quality, Wyoming Department of Transportation

Milestones:

1. Conduct an analysis of existing restoration activities and needs in Wyoming that identifies agency roles, partners, and opportunities (June 2016).
2. Provide recommendations for how agencies and partners can work together to achieve stream restoration (June 2016).
3. Establish an agency working group among WGFD, WWDO, WWNRT, WDEQ, WYDOT and Department of Agriculture to document how the agencies cooperate on stream restoration (June 2016).
4. Develop a strategy and recommendations to provide short-term and long-term statewide assistance to municipalities and others considering stream restoration via a technical expert position (Restoration and Fish Passage Engineer) and/or project review team (July 2016).
5. Provide outreach and education about stream restoration principles and benefits to agency staff, agricultural producers, and other interested parties (September 2017).
6. Develop quality assurance guidelines with basic checklists and standards for conducting stream restoration work (September 2016).
7. Develop a guide on how to obtain funding for Wyoming stream restoration projects (June 2016).
8. Explore opportunities to encourage post-construction monitoring, maintenance, and adaptive management of completed restoration projects (September 2016).

Budget Considerations: Much of the work to achieve the milestones will be absorbed under existing

Appendix A. Governors Water Strategy Initiative 9 River Restoration outcome and milestones as developed in 2015.

funding since it overlaps with current WGFD priorities and responsibilities. For example, milestones 1-3 and 6-7 will entail approximately 1 existing WGFD FTE for a 4-month period. The outcome from milestone number 4 may require funding with the dedication of one new full-time permanent staff member in the range of \$75-\$115,000 per year including benefits. Milestone 5 could be completed via a third party contractor for \$40,000-\$80,000 over a two-year implementation period.

Outreach/Communications Plan:

- 4 communication efforts will be associated with achievement of the milestones. All agencies will be available to talk about their role in achieving this initiative throughout the process. The Wyoming Association of Municipalities, Wyoming County Commission Association and the Wyoming Association of Conservation Districts will be notified on this effort so coordination with them can occur.
- Agencies will discuss with partners the milestone concept of hiring a technical lead. This will help determine level of support for the position, and help identify funding opportunities.
- As tangible recommendations are produced (after milestones 1 and 2) an outreach effort will occur with a media release, interviews and communicating to interested groups.
- Recommendations for municipalities will occur in an outreach effort, specifically engaging municipalities and local government leaders.
- A tour of the North Platte in Casper, following construction will be developed to illustrate what restoration can do for communities.
- A video will be created and put online promoting the information shared in outreach and education efforts.
- A brochure and an online version of that material with information will be developed for ongoing outreach efforts.

10-Collaborative Fish Passage Restoration

Wyoming irrigation infrastructure is aging. Repairs and replacement create natural opportunities for improvement. A key improvement is creating or restoring fish passages and protections. Water and wildlife are both commodities that fall under the purview of the state. Projects should consider both assets. The state has expertise in areas of wildlife management and water development, as well as funding mechanisms to support maintenance and improvements for each.

This initiative will result in collaborative agreements among state agencies to ensure fish friendly structures are addressed when updating water infrastructure, and that funding is appropriately available to share in the costs of improvements for fisheries when undertaken in conjunction with traditional water development work on a project.

Outcomes: Increased capacity and flexibility for water users in replacing infrastructure with fish-friendly alternatives while still meeting water users' needs.

Lead Agencies: Wyoming Game and Fish Department and Wyoming Water Development Office

Cooperating Agencies: Wyoming Department of Agriculture, Wyoming Wildlife and Natural Resource Trust Fund, Wyoming Department of Environmental Quality, Department of Transportation

Milestones:

1. Establish an agency work group among WGFD, Department of Agriculture, DEQ, WWNRT, Department of Transportation and WWDO to facilitate fish passage (June 2016).
2. Conduct an analysis of existing fish passage activities and needs in Wyoming that identifies agency roles, partners, and opportunities. Identify opportunities to promote benefits to other natural resources (e.g., water quality) where appropriate. Identify completed fish passage projects that could be used for public education/outreach purposes (September 2016).
3. Develop a guide on how to obtain funding for fish passage projects (June 2016)
4. Identify opportunities for consideration of options for allowing a portion of costs for traditional WWDO water development activities to go toward fishways and other structural modifications to enhance passage (June 2016).
5. Identify opportunities for consideration of options for expanding the criteria for which groups or agents can apply for WWDO and WWNRT funds to facilitate fish passage (June 2016).
6. Develop a recommendation for a full-time permanent Stream Restoration and Fish Passage Engineer position to assist water users with voluntary and incentive-based fish-friendly irrigation infrastructure upgrades maintaining the landowner/water user as the decision maker (December 2015).

Budget Considerations: Some of the effort to achieve the milestones can be completed under existing WGFD Fish Passage program funding. For example, "Increased Capacity" milestones entail developing strategies, MOUs and recommendations and these can be completed with approximately 1 existing WGFD FTE for 3 months and 3 additional FTE's in the other agencies for 0.5 month each. Should certain recommendations be developed, such as those involving funding under milestones 3-5, increased future funding may be called for.

Appendix B. Governors Water Strategy Initiative 10 Fish Passage outcome and milestones as developed in 2015.

Outreach/ Communications Plan:

All agencies involved should be available to talk about their role in achieving this initiative throughout the process and provide updates on the status or refer to the appropriate partner agencies.

Increased capacity outcome:

Plan for a first outreach effort after completion of milestones 1-2. This should be a notification to the public, media and stakeholders that reminds them about this initiative and shows them that work is underway. This outreach effort should also notify targeted groups about the potential benefit that they might realize. Showcasing examples of successful fish passage projects in the state could help with this effort by highlighting the benefits of those projects. Reaching out to the agriculture community through ag publications and broadcast outlets is necessary. Discussing this work in meetings or to gatherings of those from agriculture will add to the outreach work. WGFD and WWDO should seek opportunities to speak to ag groups after these milestones are reached.

A second outreach effort could be planned following completion of milestones 3-6. Putting out information about cost options and criteria should be done during this time period. This gives outreach efforts a place to direct interested parties.

River restoration “hot spot” watersheds for fisheries and wildlife benefits are identified on the accompanying map and list. These watersheds have streams where the main river channel could benefit from active restoration to achieve functions like floodplain: channel connectivity, vigorous native riparian vegetation, lateral channel stability, and channel complexity. These watersheds contain streams where restoration work may be in full swing, is proposed, or was recently completed. Work in all of these places will benefit fisheries and wildlife resources, in addition to other values. They were identified largely based on Strategic Habitat Plan enhancement priority areas and State Wildlife Action Plan conservation areas. They were also identified with Wyoming communities in mind – the majority of larger Wyoming communities have a stream flowing through them that could benefit from restoration.

Issues common to many of these streams, stream corridors, and watersheds: lack of beaver, trampled stream banks, excessive stream bank erosion, channel degradations, channel instability, over-widened channels, sedimentation, reduced floodplain connectivity, low riparian woody plant regeneration, loss of age-class diversity in cottonwoods, conifer encroachment, low stream flow, dewatering, loss of instream habitat, and invasive plant species.

Question and Answers:

Q: Does this list indicate where funding should be directed?

A: No, not directly. This list simply recognizes current and potential future stream restoration hotspots based on potential for fisheries and wildlife benefits and opportunity to provide benefits where Wyoming people live and recreate. Since this list was largely derived from sources that drive funding decisions (i.e. Strategic Habitat Plan and State Wildlife Action Plan), these watersheds are already places that rise to the top for funding projects.

Q: What do you mean by “active” stream restoration?

A: Active stream restoration refers to intensive work in and around the channel and floodplain to manipulate channel dimensions and stream banks. It often involves using structural materials like boulders, logs and landscape fabric to create and maintain features. It usually involves heavy equipment to move materials and re-shape banks and dig habitat features like pools and riffles. In contrast, many streams in Wyoming can be restored naturally (but slowly) by simply adjusting the management regime of the adjacent riparian and uplands. This “passive” restoration approach can be preferred in places with fairly natural sediment and flow characteristics and where landowners are willing and able to adjust grazing schedules.

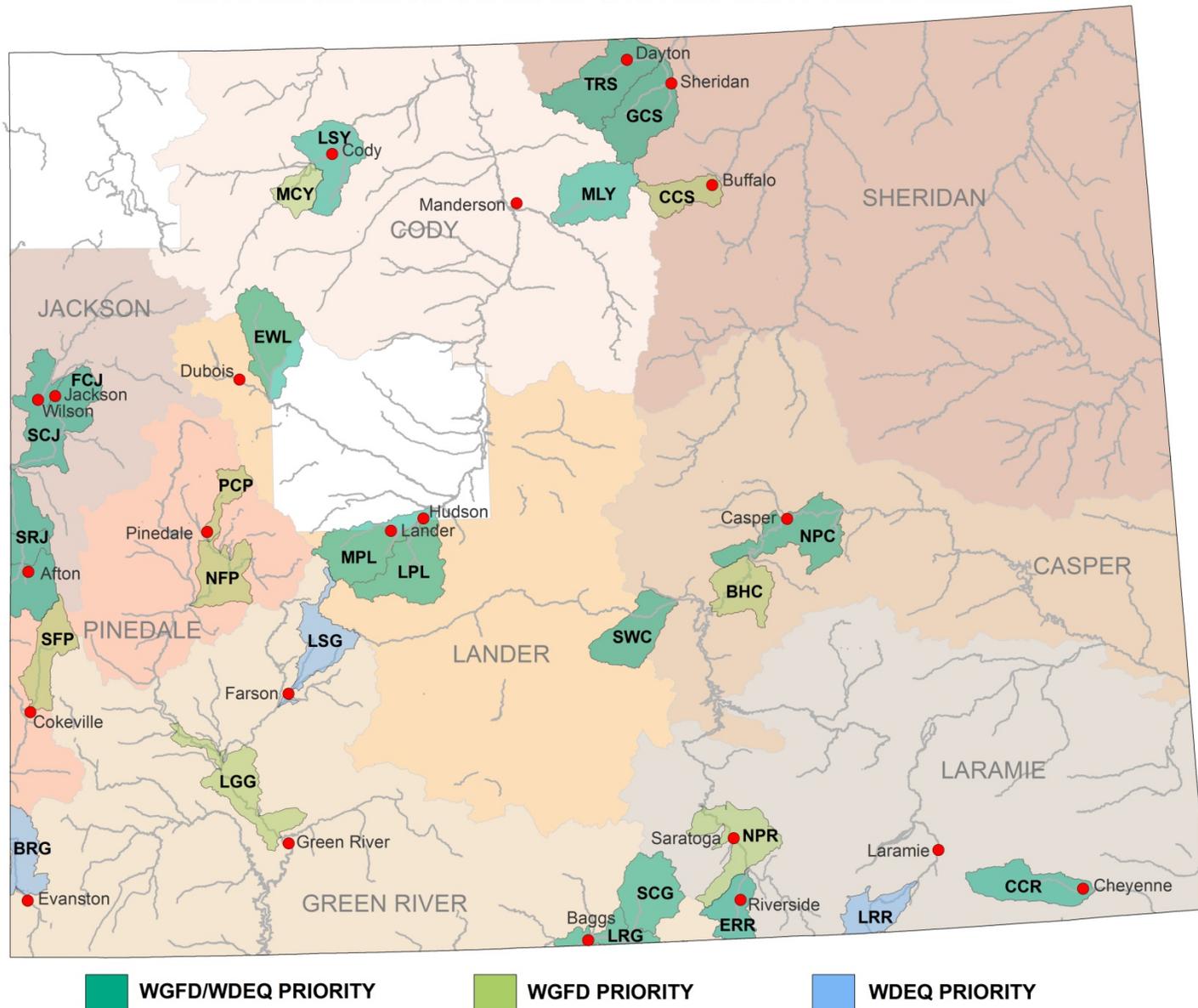
Q: What can I do to become involved in stream restoration or at least learn more?

A: Contact your local Conservation District, Wyoming Game and Fish Aquatic Habitat Biologist, or Trout Unlimited Wyoming Water Project Coordinator. Individuals from these entities are generally aware of opportunities and activities in your area. Also, links to further information will be published on the Water Strategy Facebook page.

Appendix C. Governors Water Strategy Initiative 9 River Restoration Hotspots.

Key	Region	10 digit HUC	Watershed or stream name	Community	Projects, comments or reasons for selection
NPC	CR	1018000703	North Platte Casper	Casper	Multi phase 14 mile restoration ongoing through Casper
BHC		1018000701	Bates Hole / Bolton Creek	NA	Beaver restoration in Bolton Creek. Sediment reduction for N. Platte
SWC		1018000609	Sweetwater River	NA	Dumbell Ranch Mitigation Bank
LSY	CY	1008001401	Lower Shoshone River	Cody	Shoshone R. project proposed downstream from Belfry Bridge
MLY		1008000806	Medicine Lodge Creek	NA	Proposed project on G&F WHMA
MCY		1008001303	Marquette Creek	NA	YSC core population. Passive restoration may be an option.
LGG	GR	1404010301	Lower Green River	Green River	Russian olive removal & replacement in community of Green River
SCG		1405000304	Savery Ck blw High Savery Res.	NA	Channel wide & shallow, eroding banks
LRG		1405000302	Little Snake River	Baggs	Extensive stream restoration ongoing
BRG		1601010103	Bear River	Evanston	DEQ water quality, Woodruff narrows upstream to Sulphur Creek
LSG		1404010402	Little Sandy River	Farson	DEQ water quality, 17.7 mi down to Sublette/Sweetwater County line
FCJ	JN	1704010302	Flat Creek	Jackson	Multi-phase project ongoing through NWR; possible work further ds
SRJ		17040105	Salt River HUC-8	Afton	Much potential for private land projects & benefits
SCJ		1704010301	Spring Creeks	Wilson	Benefits spawning cutthroat and Snake River fishery
MPL	LR	1008000302	Middle Fork Popo Agie River	Lander	Ongoing work through Lander with potential upstream & downstream
EWL		1008000104	East Fork Wind River	NA	YSC stronghold, includes Bear Creek and East Fork Wind River
LPL		1008000301	Little Popo Agie River	Hudson	NRCS working with landowners; benefits sauger habitat
ERR	LE	1018000205	Encampment River	Riverside	Multiple phases ongoing and future work; large public benefit
NPR		1018000206	North Platte Saratoga	Saratoga	Community looking for long-term solutions; flood concerns
CCR		1019000901	Crow Creek	Cheyenne	Community has TMDL concerns; potential for fishery benefits
LRR		1018001002	Laramie River	Laramie	DEQ water quality; upstream of Woods Landing
NFP	PE	1404010203	New Fork River	NA	Gas Wells project on BLM proposed; efforts ongoing on private
SFP		1601010202	Smiths Fork River	Cokeville	Riparian restoration work has been proposed
PCP		1404010202	Pine Creek	Pinedale	Plans developed, further action depends on interest/support/funding
TRS	SN	1009010101	Tongue River	Dayton	An assessment has been completed and is a basis for projects
GCS		1009010102	Goose Creek	Sheridan	COE Flood mitigation project ongoing
CCS		1009020601	Clear Creek	Buffalo	Buffalo greenbelt; Big Bull Reservoir alternatives under consideration

STREAM RESTORATION HOTSPOTS AND WGFD FISH REGIONS



Restoring Rivers: Steps in the Right Direction

This guide was assembled as a product of the Wyoming Water Strategy Stream Restoration and Fish Passage ad hoc working group. The intent is to provide simple advice for interest groups, Trout Unlimited Chapters, community groups and others interested in improving rivers. River “restoration” is defined by the ad hoc group as restoration of at least one of several functions performed by streams including diverse and appropriate bed features, diverse and appropriate vegetation along the banks, minimal bank erosion, floodplains that regularly see water from overbank flooding, water quality, fish communities, and other functions. This definition does not require a return to some historic condition nor does it require that ALL functions exist to achieve restoration. River restoration is an incredibly complex topic with many facets and it intersects many aspects of interest to Wyoming citizens. The ad hoc group’s intent is to provide this guide as a starting point for those dipping their toes in river restoration waters.*

What’s the problem?

Some river issue has come to your attention. Maybe your property is at risk due to an eroding bank, flooding, or the stream flows to a trickle in the summer. Perhaps you wonder if something could be done to support more fish, ducks, or the river would look nicer if more trees grew along the banks; or a pathway along the river seems like a good idea. Then again a concern could be that there is a lot of junk and debris in the river, or there is a diversion that seems to be blocking fish and is due for an upgrade. Whatever your situation is, every worthwhile river project starts with a problem begging for a solution.

Partner up!

Your first step is to get folks together and ask “who else should be here?” Effort expended to get all the right players together will pay off later. It may take a lot of effort and several meeting attempts and creative scheduling to get people together but this step is vital. Try hard and don’t give up. Examples of groups or representatives that may be considered include:

- Your neighbors and all those that will be affected by the stream improvements.
- Conservation District and the Natural Resources Conservation Service (NRCS)
- Forest Service or BLM if they manage land nearby along with irrigation district members or grazing district representatives.
- Conservation organizations like the local Trout Unlimited chapter or the Wyoming Water Project, The Nature Conservancy, Isaac Walton, and other sportsmen groups, such as Ducks Unlimited or Rocky Mountain Elk Foundation
- Wyoming Game and Fish Department (WGFD) aquatic habitat biologist
- City government and/or county government representatives

Who does what?

Decide on a meeting facilitator and someone to record notes and ideas. A facilitator is someone who keeps the meeting moving and makes sure everyone gets a fair chance to contribute to the

conversation. This is a very important role and if no one steps up, find some seed money to hire a facilitator. Trained facilitators can be also found at various agencies like the WGFD or at the University of Wyoming.

There are other roles to take on: who keeps everyone on task? Who or which entity can best handle all or most of the funding and accounting? Who will contract or conduct design? Construction? Monitoring? Outreach? Who brings the meeting snacks and beverages? Talking about these roles will help your meetings flow smoothly.

Identify the problem(s)

Ok, so there is at least one river problem that, initially, has brought people together. Now it is time to see what other ideas people have for the river. At this stage, just focus on the discussions; have everyone talk and lay out their observations and ideas that may need to be addressed.

Try to avoid talking about solutions yet. For now, let the ideas flow without any edits. This stage of project development is just as important as getting the right people. Spend a LOT of time on this!

Look at the big picture

Think big. This means looking beyond the immediate stream reach and thinking about the watershed up and downstream. What is occurring that might be affecting the river? What can we do not only this year or next year, but over the next ten or more years, to have a positive effect. All successful projects must start with a digestible bite. But now is the time, early on, to think about how your local effort could link up more broadly in space and time with other projects or phases to ultimately have a substantial and positive impact. Maybe a watershed plan could be devised. Maybe there already is such a plan – the Wyoming Water Development Commission has watershed plans that contain a wealth of information. Funding sources like Wyoming Wildlife and Natural Resources Trust Fund will demand that project proponents think about the big picture.

Take a tour

Nothing stimulates positive group dynamics and idea generation like a walk along the river. People will spot additional issues and come up with more ideas as they stroll along the banks of the river.

Identify initial constraints

There are many potential constraints or sideboards that limit what actions can be taken in a stream restoration project. For example: floodways must meet FEMA (Federal Emergency Management Agency) specifications. Roads and bridges often cannot be moved. There could be homes in the floodplain and right up against the stream bank that must be protected. Power lines or pipes that cannot be disturbed might cross the river. Perhaps a landowner wants no part of

this river nonsense. Or maybe the river is very limited in water supply and does not appear likely to have more. What if there is a big slug of sediment in the river upstream that will cause major havoc if it is sent downstream.

It is very useful to understand all the potential constraints that must be worked around. But be careful here – some obstacles that appear to be constraints may end up being doable.

Assemble technical help

River restoration technical specialists include consultants, WGFD aquatic habitat biologists and NRCS engineers. Restoration practitioners are trained in natural channel design principles. Look for someone who is experienced and has training in stream restoration techniques and principles. Training through Wildland Hydrology is the most recognized among stream restoration practitioners; although not the only source for training. You will also want someone who has completed similar work in a similar place.

Gather funding

River work is expensive! Money can be saved by finding close sources of rock and wood. But cash will be needed and can be gathered from a variety of sources. Check out this list of funding sources:

https://wgfd.wyo.gov/WGFD/media/content/PDF/Habitat/Aquatic%20Habitat/Funding_Sources.pdf

Conduct assessments and baseline monitoring

Your technical help will need to conduct a thorough assessment of the existing channel conditions. This will include a survey down the river, a longitudinal profile, where they measure all the stream features, pools, riffles, glides, and runs. The survey will take measurements of other features like meander bends, belt width (width of the stream from one meander bend to the other), pool to pool spacing, etc. Survey work will also measure cross sections, eroding banks, bankfull (the term “bankfull” refers to the stage of the river where it is high enough to just begin to flow out of its banks), and floodplain elevations. A complete assessment will include pebble count measurements and riparian vegetation measurements. Typically, bankfull flow and other hydrologic analyses will be conducted. This assessment will yield numeric values for how the river is out of whack and will allow the development of specific objectives and a specific design.

Get a design

Using the assessment data and problems identified in the initial discussions, the technical specialists need to work together with the project partners to formulate objectives and plans that satisfy the majority of the identified needs. Alternatives are developed and compared for how well they balance risk, reward, and cost. All designs should be evaluated for how well they address your needs and take care of “The Big Four.” The Big Four are four parameters that are especially important in healthy streams: lateral stability (no eroding banks), floodplain connectivity (water can flow out of the main channel during high flow events), channel diversity

(pools and riffles occur in the right sequence and size), and riparian vegetation (self sustaining, natural and diverse vegetation lining the banks and floodplain).

Get the permits

River work bumps up against several permitting requirements (see https://wgfd.wyo.gov/WGFD/media/content/PDF/Habitat/Aquatic%20Habitat/RegulatoryResources_DraftFinal.pdf) It is smart to contact permit authorities early on to understand what information and permits will be needed. Most likely you will need permits from the Army Corps of Engineers (404 permit) and the Wyoming Department of Environmental Quality (401 certification). There could be timing restrictions to protect spawning fish as identified by the Wyoming Game and Fish Department.

Maintain momentum

Schedule regular meetings. Circulate updates. Maintain contact. Devise interim activities like river cleanups, riparian plantings, fishing, boating, and other activities that get participants outside and working and playing together.

Get'er done

Now it is time to fire up the big equipment. After all the planning, fund raising, endless meetings, permitting, agreements, and untold other obstacles...it's finally time to get in the water and watch all of your efforts come to fruition. This stage is fun but short lived. Most river construction windows in Wyoming are in late summer and through fall and early winter. Plan for at least a couple weeks of activity. Finding skilled river contractors takes some care: be sure to find someone with experience working in rivers because it takes specialized equipment and approaches! You don't want someone new to the game learning on your project. While experienced contractors may appear to be very expensive, they may end up saving you money because they work efficiently and get it done right the first time.

Follow up

Plan for maintenance and monitoring early on to ensure the project is effective for the long haul. Hopefully, some funding has been set aside to pay for monitoring or one of the partner groups is committed to doing monitoring as their contribution. Monitoring is all about determining whether objectives have been met. Monitoring data, ideally, might be collected annually for several years following high flow events; however, costs and time constraints may dictate the monitoring schedule. Monitoring usually consists of longitudinal profiles, cross-sections, pebble counts, vegetation counts, photographs, and a report detailing the findings from all the data.

Gather to talk about what worked and what did not. Share the knowledge! If structures failed, fix them. Use insights and knowledge gained to improve work at the next site.

Follow these steps and you can restore a river and make a difference!

=====

*People are naturally concerned about flooding and its risk to life and property. Unfortunately today many properties and structures have been constructed in floodplains and are at risk from periodic floods. Stream restoration work may do little to alleviate flooding risk. In fact, if no people or structures are at risk, restoration practitioners usually try to let a river flow out onto its floodplain because this natural pattern is the best way to deal with all the energy and water. Sometimes the best a river restoration project can do is to decrease flood stage a few inches.

Appendix E. State and Federal Agency Resources for Stream Restoration

Permit/ Regulation/ Recommended Activity	Description	Agency	Contact and Website
WYPDES Storm Water Permits	Some activities require WYPDES permits for storm water discharge, including runoff from large and small construction sites.	Wyoming Department of Environmental Quality, Water Quality Division, WYPDES Program	307-777-7570 http://deq.wyoming.gov/wqd/storm-water-permitting/
WYPDES General Permit for Temporary Discharges Involving Construction Practices	This general permit for temporary discharge will cover activities associated with Construction Activities such as Construction Dewatering; Disinfection of Potable Water Lines; and/or Hydrostatic Testing of Pipes, Tanks, or Other Similar Vessels.	Wyoming Department of Environmental Quality, Water Quality Division, WYPDES Program	307-777-7090 http://deq.wyoming.gov/wqd/permitting/resources/general-permits-and-notices-of-intent/
Temporary Turbidity Waivers	Waiver to authorize temporary increases in turbidity for certain short-term, construction-related activities. Projects working in live waters and activities that may cause an excursion above allowable turbidity levels may qualify for a turbidity waiver.	Wyoming Department of Environmental Quality, Water Quality Division, Watershed Protection Program	307-777-6372 http://deq.wyoming.gov/wqd/cwa-section-401-turbidity-wetland/resources/turbidity/
Clean Water Act Section 404 permits	Any person, firm, or agency (including Federal, state, and local government agencies) planning to work in navigable waters of the United States, or discharge dredged or fill material in waters of the United States, including wetlands, must first obtain a permit from the Corps of Engineers.	United States Army Corps Engineers (USACE), Wyoming Regulatory Office	307-777-772-2300 http://www.nwo.usace.army.mil/Missions/RegulatoryProgram/Wyoming.aspx
Clean Water Act Section 401 Certifications	The WDEQ Water Quality Division reviews and issues water quality certifications under Section 401 of the Clean Water Act. Section 401 water quality certification is required for any federal license or permit which may result in a fill or discharge into waters of the United States (see Section 404 permits).	Wyoming Department of Environmental Quality, Water Quality Division, Watershed Protection Program	307-777-6701 http://deq.wyoming.gov/wqd/401-certification/
Wyoming Game and Fish Department Letter of Concurrence	The USACE encourages early coordination with the Wyoming Game and Fish Department to satisfy general and regional conditions of Section 404 permits (see Section 404 permits).	Wyoming Game and Fish Department	307-684-5607 or 307-777-4558

Appendix E. State and Federal Agency Resources for Stream Restoration

Permit/Regulation/Recommended Activity	Description	Agency	Contact and Website
Surface Water Rights Permits	Permits for any request for putting surface waters of the state to a beneficial use: includes transporting water through ditch or pipelines, storage in reservoirs, storage in smaller reservoir facilities for stockwater or wildlife purposes, and enlargements to existing ditch or storage facilities, and for instream flow purposes.	Wyoming State Engineer's Office	307-777-6475 https://sites.google.com/a/wyo.gov/seo/surface-water
Ground Water Rights Permits	A permit is required from the State Engineer's Office prior to the drilling of all water wells; ground water rights are issued for the same beneficial uses as for surface water rights.	Wyoming State Engineer's Office	307-777-6163 https://sites.google.com/a/wyo.gov/seo/ground-water
Pesticide Certification	Training, licensing, certification, and/or inspection of pesticide users, dealers, commercial applicators, and public agencies using restricted use pesticides.	Wyoming Department of Agriculture	307-777-6585 http://wyagric.state.wy.us/divisions/ts/sections-a-programs/148
Open Burn and Smoke Management	Vegetative and non-vegetative burns may require a permit and/or registration with the WDEQ Air Quality Division.	Wyoming Department of Environmental Quality, Air Quality Division	307-777-7391 http://deq.wyoming.gov/aqd/smoke-management-and-open-burning/
Private Fish Plant Application	Permits are required prior to stocking private ponds with fish. A landowner pond must be designated as such under Chapter 53 regulation and may be stocked following Chapter 49 regulation.	Wyoming Game and Fish Department, Fish Division	307-777-4559 https://wgfd.wyo.gov/Fishing-and-Boating/Private-Fish-Stocking
Aquatic Invasive Species (AIS) Resources	Actions required to prevent the spread of Aquatic Invasive Species in Wyoming. Chapter 63 regulation for AIS.	Wyoming Game and Fish Department	307-777-4559 https://wgfd.wyo.gov/Fishing-and-Boating/Aquatic-Invasive-Species-Prevention/AIS-Resources
U.S. Fish and Wildlife Service Threatened and Endangered Species Section 7 Consultation	The Endangered Species Act (ESA) directs all Federal agencies to work to conserve endangered and threatened species and to use their authorities to further the purposes of the Act. Section 7 of the Act, called "Interagency Cooperation," is the mechanism by which Federal agencies ensure the actions they take,	U.S. Fish and Wildlife Service—Wyoming Ecological Services, Mountain Prairie Region	307-772-2374 http://www.fws.gov/wyominges/index.php

Appendix E. State and Federal Agency Resources for Stream Restoration

Permit/ Regulation/ Recommended Activity	Description	Agency	Contact and Website
	including those they fund or authorize, do not jeopardize listed species.		
Wyoming State Historic Preservation Office Section 106 Review and Consultation	Any project taking place on federal lands, utilizing federal funds or requiring federal permitting must be preceded by a cultural resource inventory and project review in compliance with Section 106 of the National Historic Preservation Act of 1966 (as amended), as well as the Wyoming Antiquities Act of 1935, the Wyoming Environmental Quality Act of 1973 and other federal and state statutes.	Wyoming State Historic Preservation Office	307-777-7697 http://wyoshpo.state.wy.us/Section106/Index.aspx
Federal Emergency Management Agency (FEMA) Restrictions	Development proposals in flood prone areas may be subject to FEMA rules and regulations.	Federal Emergency Management Agency (FEMA)	Local floodplain administrator

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
1. Public Funding for Private Landowners, Municipalities, Government Agencies, Non-Governmental Organizations					
Wyoming Wildlife and Natural Resource Trust Fund	<ul style="list-style-type: none"> Enhance and conserve wildlife habitat and natural resource values throughout the state 9 member WWNRT board reviews projects and does an on-site tour of every proposal 	<ul style="list-style-type: none"> Any project designed to improve wildlife habitat or natural resource values Individuals are not eligible Will not fund salaries, acquisition of real property, or purchase of water rights 	<ul style="list-style-type: none"> Applications due March 1 and September 1 Decisions in June and December Standard contract is three years 	<p>http://wwnrt.wyo.gov/</p> <p>Grants Manager (307)777-8024</p>	<ul style="list-style-type: none"> Projects >\$200,000 must be submitted by September 1 and are subject to legislative approval in the following March legislative session Can apply for early (design), middle and late funding
Wyoming Game and Fish Department; Trust Fund	<ul style="list-style-type: none"> Habitat proposals scored as outlined in Department Strategic Habitat Plan Trust fund dollars can be granted to various entities, contracted through WGFD or used for materials Work on private land requires an additional cooperative agreement with landowner specifying goals, terms 	<ul style="list-style-type: none"> Any project designed to improve wildlife habitat or natural resource values Projects require a WGFD biologist representative Grants and contracts with all legal entities including private landowners 	<ul style="list-style-type: none"> Applications due to WGFD representative by December 1 Initial screening by WGFD staff in January Preliminary Commission approval in March Final approval and \$\$ available in early July Contracts and grant agreements can be developed early, between March and July, for work performed after early July Grant agreements are 	<p>WGFD Strategic Habitat Plan: https://wgfd.wyo.gov/WGFD/media/content/PDF/Habitat/Strategic%20Habitat%20Plan/SHP2015_Final.pdf</p> <p>Contact Information: https://wgfd.wyo.gov/About-Us/Offices-and-Facilities</p> <p>Cheyenne: Aquatic Habitat Program Manager or Terrestrial</p>	<ul style="list-style-type: none"> Funding can be any amount though most are \$10,000 - \$30,000 per project Reimbursement grant, meaning that funds can be issued to the recipient only after proof of expenditure on eligible costs identified to deliver the approved product Invoices are due to WGFD representative by June 10 Requires high level of coordination with WGFD

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
	and conditions of the project		generally done for 2-year periods	Habitat Program Manager Regional Office Aquatic or Terrestrial Habitat Biologist	representative
Wyoming Game and Fish Department; Fish Passage	<ul style="list-style-type: none"> Any project designed to improve fish migration or reduce entrainment 	<ul style="list-style-type: none"> Projects require a WGFD biologist representative 	<ul style="list-style-type: none"> Applications due to WGFD representative by December 1 Initial screening by WGFD staff in January Preliminary Commission approval in March Final approval and \$\$ available in early July Contracts and grant agreements can be drafted early, between March and July, but become valid in early July Grant agreements are generally for 2-year periods 	https://wgfd.wyo.gov/WGFD/media/content/PDF/Habitat/Strategic%20Habitat%20Plan/SHP2015_Final.pdf Fish Passage Coordinator (307)332-7723	<ul style="list-style-type: none"> Funding can be any amount though most are \$5,000 - \$30,000 per project Reimbursement grant, meaning that funds can be issued to the recipient only after proof of expenditure on eligible costs identified to deliver the approved product Invoices are due to WGFD representative by June 10 Requires high level of coordination with WGFD representative
Wyoming Department of Environmental Quality; Nonpoint Source Program, Clean Water Act Section 319 Grants	<ul style="list-style-type: none"> Projects that prevent or reduce nonpoint source pollution to surface and ground water High priority projects: watershed restoration for impaired waterbodies Medium priority projects: watershed protection for unimpaired 	<ul style="list-style-type: none"> Requires 40% non-federal match (cash or in-kind) Available annually through competitive proposal process Reimbursement grants Broad eligibility 	<ul style="list-style-type: none"> Request for Proposals issued annually, mid-June Draft proposals due early August for optional but recommended pre-review) Final proposals due mid-September Funding recommendations made by Nonpoint Source Task Force (citizens board) 	http://deq.wyoming.gov/wqd/non-point-source/resources/grant-resources/ Nonpoint Source Program Coordinator (307)777-6080	<ul style="list-style-type: none"> Current cap of \$400,000 for maximum amount one project can request Stream restoration projects eligible; must be water quality benefit Funds can be used for stream restoration planning/design For implementation

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
	<p>waterbodies</p> <ul style="list-style-type: none"> • Low priority projects: all other project types (e.g, Education, Planning, Groundwater) • Focus on realizing and documenting measurable improvement in water quality 	<ul style="list-style-type: none"> • Requires contacting the WDEQ Nonpoint Source Program prior to submitting proposal 	<p>late October to early November</p> <ul style="list-style-type: none"> • If recommended for funding, funds typically become available spring of the following year • Look back for the non-federal match is 60-days from the date the agreement is signed • Maximum project length 4 yr 		<p>projects, watershed planning requirements may apply</p> <ul style="list-style-type: none"> • Monitoring for project effectiveness is strongly encouraged or may be required
<p>Wyoming Governor’s Big Game License Coalition</p>	<ul style="list-style-type: none"> • Fund worthy wildlife and habitat improvement projects that produce an immediate impact and preserve and perpetuate our resources for the enjoyment of future generations 	<ul style="list-style-type: none"> • Priority is given to those with matching funds, established partnerships, multi-species benefits, management relevance, highest wildlife impact, appropriate budgets, landscape scale, and with a lasting legacy of benefits. 	<ul style="list-style-type: none"> • Application due February 1 • Applications accepted out of cycle (~July) for any funds that remain unspent after the May grant awards have been distributed. • Out of cycle funding requests are dependent on funding availability and not part of the annual grant making process. • \$\$ available ~ July 	<p>www.wyomingwildlife-foundation.org.</p> <p>Project Coordinator (307) 432-9453</p>	<ul style="list-style-type: none"> • Projects generally range between \$5,000 and \$20,000 • Proposals should address on-the-ground add-on projects, not traditional M&O funding needs, including salaries.
<p>U.S. Fish and Wildlife Service: National Fish Habitat Partnerships</p>	<ul style="list-style-type: none"> • NFHP funds are delivered through Fish Habitat Partnerships • Fish Habitat Partnerships in Wyoming include the 	<ul style="list-style-type: none"> • Projects must protect, restore, or enhance fish and aquatic habitats or otherwise directly 	<ul style="list-style-type: none"> • Applications are accepted on a rolling basis • \$\$ allocated by USFWS Director among partnerships in October with final project 	<p>http://www.fws.gov</p> <p>Contact Lander FWCO (307)332-2159</p>	<ul style="list-style-type: none"> • Individual awards will range from approximately \$1,000 to \$300,000 • All or a portion of project funds may be transferred to

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
(NFHP)	<p>Western Native Trout Initiative (WNTI; see below), Desert Fish and the Great Plains Fish Habitat Partnerships</p> <ul style="list-style-type: none"> • Submit project proposal through Lander Fish and Wildlife Conservation Office 	<p>support habitat-related priorities</p> <ul style="list-style-type: none"> • Every project must be identified in the Fisheries Operational Needs System (FONS). 	<p>selections in February - March</p>	<p>Or Contact Region 6 Coordinator (303)236-0486</p>	<p>partner organizations if the Service lacks the capability to implement a project</p>
Western Native Trout Initiative (WNTI)	<ul style="list-style-type: none"> • WNTI is supported by several different entities and partners, the bulk of project funding is made available to grantees annually through the NFHP (see above) and the U.S. Fish and Wildlife Service 	<ul style="list-style-type: none"> • Projects must address native cutthroat trout; Bonneville, Colorado, and Yellowstone. • For on-the-ground habitat conservation projects and related design and monitoring activities • Minimum 1:1 match, which may include cash, time, materials, or other services. 	<ul style="list-style-type: none"> • Submission prior to October • If approved, funding available in April • Small grants available for \$3,000 max with applications due in June. 	<p>http://www.westernnative trout.org/contact-information-western-native-trout-initiative</p> <p>Project Coordinator (303)236-4402</p>	<ul style="list-style-type: none"> • Typical funding per project is in the range of \$10,000-\$50,000 • WNTI prefers to be the final funding needed to complete a project (last funding in). • Small grant funding is a good source for public outreach and communications efforts
Great Plains Fish Habitat Partnership	<ul style="list-style-type: none"> • Conservation of native aquatic species, many of which are of commercial 	<ul style="list-style-type: none"> • Missouri River watershed 	<ul style="list-style-type: none"> • Submission prior to October • If approved funding available in April 	<p>www.prairiefish.org</p>	<ul style="list-style-type: none"> • Typical funding per project is in the range of \$10,000-\$50,000

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
	<p>or recreational economic interest, such as sauger, sunfishes, catfishes, buffaloes, and paddlefish</p> <ul style="list-style-type: none"> State Wildlife Action Plans identify almost 90 fish species as being of greatest conservation need, of special concern, or listed 				
Desert Fish Habitat Partnership	<ul style="list-style-type: none"> Conservation of desert fish 	<ul style="list-style-type: none"> Upper Colorado Basin and Range (Snake and Salt River) 	<ul style="list-style-type: none"> Applications are accepted on a rolling basis 	<p>www.desertfhp.org/ DFHP Coordinator Phone: 928-338-4288</p>	<ul style="list-style-type: none"> Typical funding per project is in the range of \$10,000-\$50,000
U.S. Fish and Wildlife: National Fish Passage Program (NFPP)	<ul style="list-style-type: none"> A fish passage project is any activity that improves the ability of fish or other aquatic species to move by reconnecting habitat that has been fragmented by barriers. NFPP funding cannot be used for mitigation projects or for those required by other regulation. 	<ul style="list-style-type: none"> Project proposals submitted through U.S. Fish & Wildlife Service Lander FWCO. Note that fish passage projects are not eligible for funding if they are eligible for any Federal or State compensatory mitigation or if fish passage is a 	<ul style="list-style-type: none"> Applications are accepted on a rolling basis. Funding typically available in the spring. 	<p>Contact Lander FWCO (307)332-2159 Or Contact Region 6 Coordinator (303)236-0486</p> <p>http://www.fws.gov/fisheries/whatwedo/nfpp/nfpp.html</p>	<ul style="list-style-type: none"> Proposals will be reviewed by the Fish and Wildlife Service and the following criteria will be used in this process to compare projects and make funding decisions

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
		condition provided by existing Federal or State regulatory programs			
Natural Resource Conservation Service; Regional Conservation Partnership Program	<ul style="list-style-type: none"> Promotes coordination between NRCS and its partners to deliver conservation assistance to producers and landowners 	<ul style="list-style-type: none"> Agricultural or silvicultural producer associations, farmer cooperatives or other groups of producers, state or local governments, American Indian tribes, municipal water treatment entities, water and irrigation districts, conservation-driven nongovernmental organizations and institutions of higher education. 	<ul style="list-style-type: none"> Full proposal due early November Partnership agreements may be for a period of up to five years. NRCS may extend an agreement one time for an additional 12 months if needed to meet the objectives of the program. 	http://www.nrcs.usda.gov/wps/portal/nrcs/main/national/programs/farmland/rcpp/ State Resource Conservationist (307) 233-6768	
Federal Emergency Management Agency (FEMA): Hazard Mitigation Assistance	<ul style="list-style-type: none"> Provides HMA funds for flood reduction and mitigation activities associated with FSR 	<ul style="list-style-type: none"> Municipalities and urban areas that have experienced a declared major flood disaster 	<ul style="list-style-type: none"> Ongoing after September 30, 2015 Application must be submitted after state/federal declaration of a major flood disaster 	http://www.fema.gov/media-library-data/1449244103602-4d8ca503b6f2c7fc343904ce97a0e6aa/FSR_FactSheet_Sep2015_Dec508.pdf	

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
(HMA) - Floodplain and Stream Restoration (FSR)				FEMA-HMA-Grants_Policy@fema.dhs.gov	
Federal Emergency Management Agency (FEMA): Pre-Disaster Mitigation Grant Program (PDM)	<ul style="list-style-type: none"> • Implementing a sustained pre-disaster natural hazard mitigation program. • To reduce overall risk to the population and structures from future hazard events, while also reducing reliance on Federal funding in future disasters 	<ul style="list-style-type: none"> • States, U.S. Territories, Federally-recognized tribes, and local communities are the subapplicants 	<ul style="list-style-type: none"> • Applications are accepted on a rolling basis 	https://www.fema.gov/pre-disaster-mitigation-grant-program	FEMA Region 8 Office Grants Director (303-235-4800)
2. Nonprofit Funding for Private Landowners, Municipalities, and Agencies					
Trout Unlimited – Local Chapters	<ul style="list-style-type: none"> • Protect critical habitat, to reconnect degraded waterways, and restore populations to coldwater fisheries 	<ul style="list-style-type: none"> • Work with local chapters • Coldwater fisheries 	<ul style="list-style-type: none"> • Applications are accepted on a rolling basis. 	http://www.tu.org/connect/chapter-search	for grant and contact information
Trout Unlimited – Wyoming Water Project	<ul style="list-style-type: none"> • Partners with ranchers and farmers on pragmatic on-the- 	<ul style="list-style-type: none"> • Coldwater fisheries 	<ul style="list-style-type: none"> • Applications are accepted on a rolling basis. 	http://www.tu.org/tu-programs/western-water	

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
	ground restoration projects that show that working landscapes and fish can coexist			Director (307) 332- 7700 x14	
Trout Unlimited; Embrace a Stream	<ul style="list-style-type: none"> Needs of native and wild trout following TU's Protect, Reconnect, Restore, and Sustain conservation model 	<ul style="list-style-type: none"> TU awards funds to locals TU chapters and councils 	<ul style="list-style-type: none"> Mid October chapter needs to contact EAS Committee Mid November draft applications Mid December Final app. Due Mid February grant selection \$\$ available in April 	http://www.tu.org/conservation/watershed-restoration-home-rivers-initiative/embrace-a-stream Membership Engagement Manager (541)729-5830	<ul style="list-style-type: none"> Evaluated based on the following criteria: Conservation Impact, Strengthening TU Impact, Public Education and Outreach, and Technical Merit
Rocky Mountain Elk Foundation	<ul style="list-style-type: none"> Helps fund and conduct a variety of projects to improve essential forage, water, cover and space components of wildlife habitat, and supports research and management 	<ul style="list-style-type: none"> Efforts to help maintain productive elk habitat 	<ul style="list-style-type: none"> Application due early January 	http://www.rmef.org/NewsandMedia/PressRoom/AboutRMEF/People/FieldStaffVolunteerChairs.aspx for contact information Lands Program Manager (307) 760-5447	
Muley Fanatics Foundation (MFF) - Local Chapters	<ul style="list-style-type: none"> Aims to ensure the conservation of mule deer and their habitat and to provide supporting services to further the sport of 	<ul style="list-style-type: none"> Work with local chapters Efforts to maintain and enhance for mule deer populations and 	<ul style="list-style-type: none"> Applications are accepted on a rolling basis. 	http://www.muleyfanatic.com/home/event MFF Office (307)875-3133	

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
	<p>hunting and sound wildlife management</p>	<p>habitat</p> <ul style="list-style-type: none"> • Allocations include but are not limited to: science based research, fencing projects, highway overpasses, invasive weed control, riparian development, predator control, youth education, forage treatments, prescribed burns and conservation easements 		<p>Chapters Southeast 10 Country Flaming Gorge Casper Kemmerer Southwest Upper Green</p>	
<p>Muley Fanatics Foundation (MFF)</p>	<ul style="list-style-type: none"> • Aims to ensure the conservation of mule deer and their habitat and to provide supporting services to further the sport of hunting and sound wildlife management 	<ul style="list-style-type: none"> • Efforts to maintain and enhance for mule deer populations and habitat • Allocations include but are not limited to: science based research, fencing projects, highway overpasses, invasive weed control, riparian development, 	<ul style="list-style-type: none"> • Applications are accepted on a rolling basis. 	<p>http://www.muleyfanatic.com/</p> <p>MFF Office (307)875-3133</p>	

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
		<ul style="list-style-type: none"> predator control, youth education, forage treatments, prescribed burns and conservation easements 			
Ducks Unlimited	<ul style="list-style-type: none"> Conserves, restores, and manages wetlands and associated habitats for North America's waterfowl 	<ul style="list-style-type: none"> Heartland Heritage and Habitat Initiative and Peaks to Prairies includes Wyoming and focuses on major staging areas for waterfowl during both spring and fall migrations 	<ul style="list-style-type: none"> Applications are accepted on a rolling basis. 	<p>Heartland Heritage and Habitat Initiative http://www.ducks.org/conservation/conservation-initiatives/heartland-heritage-and-habitat-initiative</p> <p>Peaks-to-Prairies Initiative http://www.ducks.org/conservation/conservation-initiatives/peaks-to-prairies-initiative</p> <p>Staff (701)355-3500</p>	
Mule Deer Foundation	<ul style="list-style-type: none"> Ensure the conservation of mule deer, black-tailed deer and their habitat. 	<ul style="list-style-type: none"> On-the-ground work for mule deer, black-tailed deer and other wildlife No salaries, no monitoring, etc, 	<ul style="list-style-type: none"> Applications are accepted on a rolling basis. 	https://muledeer.org/propose-a-project-guidelines/	<ul style="list-style-type: none"> Minimum of 50% match for projects

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
Pheasants Forever	<ul style="list-style-type: none"> • Conservation of pheasants, quail and other wildlife through habitat improvements, public awareness, education and land management policies and programs 	<ul style="list-style-type: none"> • Benefit pheasant and quail • Need to work with a local chapter 	<ul style="list-style-type: none"> • Applications are accepted on a rolling basis. 	https://www.pheasantsforever.org/Participate/Find-a-Chapter.aspx Contact Local Chapters	
The Nature Conservancy; Headwaters	<ul style="list-style-type: none"> • Lending collaborative, research-driven voice to the conversation about the future of Wyoming's freshwater 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Applications are accepted on a rolling basis. 	http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/wyoming/contact/index.htm Conservation Project Coordinator (307) 335-2120	
Wyoming Wetlands Society	<ul style="list-style-type: none"> • Objectives are to aid in the restoration of the Rocky Mountain Population of trumpeter swans and to protect, preserve, restore and enhance the wetlands they depend on 	<ul style="list-style-type: none"> • Efforts to help maintain and enhance productive trumpeter swan habitat 	<ul style="list-style-type: none"> • Applications are accepted on a rolling basis. 	http://wyomingwetlandsociety.org/index.php Program Director (307)203-2209	
Water for Wildlife	<ul style="list-style-type: none"> • Providing permanent supplemental water sources to specific areas • Works to preserve the diversity and health of 	<ul style="list-style-type: none"> • Projects require a WGFD, BLM, or other state or federal biologist representative 	<ul style="list-style-type: none"> • Applications are accepted on a rolling basis. 	http://waterforwildlife.com/Default.html Executive Director (307)332-8190	

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
	these important wild species and habitats				
National Wild Turkey Federation (NWTFF) Foundation	<ul style="list-style-type: none"> Enhancing wild turkey populations but also in the continuation of hunting and quality wildlife habitat for countless species Improve the health of a variety of critical habitats, including forests and riparian areas, as well as provide more winter food availability for wildlife. 	<ul style="list-style-type: none"> Projects require a WGFD biologist representative Federal, state and local entities, conservation organizations, colleges/universities and private landowners that are currently working through an existing conservation program 	<ul style="list-style-type: none"> Applications are accepted in early June 	http://www.nwtf.org/about/state/wyoming Director of Field Operations (208) 469-0001	
Wyoming Fly Casters	<ul style="list-style-type: none"> Promote and enhance the sport of fly fishing and the conservation of fish and their habitats 	<ul style="list-style-type: none"> Preferred projects include WGFD biologist participation 	<ul style="list-style-type: none"> Applications are accepted in early May 	(307)234-2594	
3. Public Funding for Municipalities and Agencies Only					
U.S. Fish and Wildlife: Wildlife and Sport Fish Restoration	<ul style="list-style-type: none"> Program administers the following grants: Wildlife Restoration Grant Program, Sport Fish Restoration Grant 	<ul style="list-style-type: none"> WGFD eligible Projects require a WGFD biologist representative 	<ul style="list-style-type: none"> Initial proposals to WGFD by first of May Fish Division review in September HTAG review in November 	http://www.fws.gov Contact Lander FWCO (307)332-2159	

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
<p>Program (WSFR)</p>	<p>Program, Boating Infrastructure Grant Program, State Wildlife Grant Program, Tribal Wildlife Grant Program, and Tribal Landowner Incentive Grant Program.</p> <ul style="list-style-type: none"> ● Conserve, protect, and enhance fish, wildlife, their habitats, and the hunting, sport fishing and recreational boating opportunities they provide 		<ul style="list-style-type: none"> ● \$\$ available in July 	<p>Or Contact Region 6 Coordinator (303)236-0486</p>	
<p>U.S. Fish and Wildlife: Conservation Planning and Assistance Program.</p>	<ul style="list-style-type: none"> ● Infrastructure development projects to protect the environment and preserve our Nation's biological, terrestrial and aquatic natural resources ● Conserve, restore or enhance fish and wildlife while at the same time accomplishing the objectives of proposed development 	<ul style="list-style-type: none"> ● Federal agencies eligible ● Provides grants to state fish and wildlife agencies to fund projects that bring together USFWS, state agencies and private organizations and individuals 	<ul style="list-style-type: none"> ● Initial proposals to WGFD by first of May ● Fish Division review in September ● HTAG review in November ● \$\$ available in July 	<p>http://www.fws.gov Contact Lander FWCO (307)332-2159</p> <p>Or Contact Region 6 Coordinator (303)236-0486</p>	<ul style="list-style-type: none"> ● Projects include identification of significant problems that can adversely affect fish and wildlife and their habitats, actions to conserve species and their habitats, actions that will provide opportunities for the public to use and enjoy fish and wildlife through non-consumptive activities, monitoring of species and identification of significant habitats

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
<p>U.S. Fish and Wildlife: Cooperative Endangered Species Conservation Fund/ Section 6 Grants</p>	<ul style="list-style-type: none"> Grants to States and Territories to participate in a wide array of voluntary conservation projects for candidate, proposed, and listed species 	<ul style="list-style-type: none"> Habitat conservation actions on non-federal lands States must contribute a minimum non-federal match of 25% of the estimated program costs of approved projects, or 10% when two or more States or implement a joint project. 	<ul style="list-style-type: none"> Initial proposals to WGFD by first of May Fish Division review in September HTAG review in November \$\$ available in July 	<p>http://www.fws.gov Contact Lander FWCO (307)332-2159 Or Contact Region 6 Coordinator (303)236-0486</p>	
<p>U.S. Fish and Wildlife: North American Wetlands Conservation Act (NAWCA) Grant Program</p>	<ul style="list-style-type: none"> Promotes long term conservation of wetlands ecosystems and the waterfowl, migratory birds, fish and wildlife that depend upon such habitat Conservation actions supported are acquisition, enhancement and restoration of wetlands and wetlands associated habitat 	<ul style="list-style-type: none"> Public or private, profit or nonprofit entities or individuals establishing public/private sector partnerships are eligible Cost share partners must at least match grant funds with non-federal monies The minimum match requirement is 1:1 	<ul style="list-style-type: none"> Standard Grant: February 26, 2016 or July 14, 2016 Small Grant Deadline: November 3, 2016 Duke Energy Settlement Fund has been deposited to fund projects exclusively in Wyoming Duke Energy Settlement Fund can be funded with less than the normal 2:1 or 3:1 match needed for a standard grant application to be competitive. 	<p>http://www.fws.gov Contact Lander FWCO (307)332-2159 Or Contact Region 6 Coordinator (303)236-0486</p>	<ul style="list-style-type: none"> Standard Grant (\$1 million limit) Small Grant (up to \$75,000) Duke Energy Settlement Fund is different from year-to-year (\$355,000 total available)

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
<p>U.S. Fish and Wildlife: National Wildlife Refuge Challenge Cost Share Program.</p>	<ul style="list-style-type: none"> • Program enables the FWS to manage cooperatively its natural and cultural resources and fulfill stewardship responsibilities to fish and wildlife management • Encourages refuge managers to form partnerships and leverage allocated funds to complete the projects 	<ul style="list-style-type: none"> • Projects must occur on a refuge or directly benefit a refuge • State/local governments, private individuals/ organizations, business enterprises, and philanthropic and charitable groups 	<ul style="list-style-type: none"> • Applications are accepted on a rolling basis. 	<p>http://www.fws.gov Contact local refuge manager</p>	<ul style="list-style-type: none"> • Appropriated funds may be used to pay for no more than 50% of the cost of a project • The other 50% has to be non-federal sources • Cooperative agreements are signed with the cost-share partners.
<p>Wyoming Water Development: Small Water Project</p>	<ul style="list-style-type: none"> • Participate with land management agencies and sponsoring entities in providing incentives for improving watershed condition and function 	<ul style="list-style-type: none"> • Include the construction or rehabilitation of small reservoirs, wells, pipelines and conveyance facilities, springs, solar platforms, irrigation works, windmills and wetland developments. 	<ul style="list-style-type: none"> • Application due January 1 • Reviewed in March • \$\$ available in July 	<p>http://wwdc.state.wy.us/small_water_projects/small_water_projects.html</p> <p>Project Manager (307)777-7626</p>	<ul style="list-style-type: none"> • “Shovel ready” considered a priority • Up to \$35,000 for total project cost of \$100,000 • Activities should improve watershed condition and function and provide benefit to wildlife, livestock and the environment
<p>WY Federal Lands Access Program- (FLAP) DOT</p>	<ul style="list-style-type: none"> • For transportation planning, rehabilitation, reconstruction of federal lands access facilities located on or adjacent 	<ul style="list-style-type: none"> • State and local governments • High-use recreation sites or federal economic 	<ul style="list-style-type: none"> • Call for proposals opens in mid February • Application packets due mid May • Short list notified in April 	<p>http://flh.fhwa.dot.gov/programs/flap/wy/</p> <p>Lead FLAP Transportation</p>	<ul style="list-style-type: none"> • Plan projects in 5-7 year windows and approve that group of projects at the same time • If short-listed, the Applicant

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
	<p>to, or that provide access to federal land, and -provisions for pedestrians and bicycles</p> <ul style="list-style-type: none"> • Projects may include engineering, rehabilitation, restoration, construction, reconstruction, transportation planning, and research of the eligible transportation facility 	<p>generators</p> <ul style="list-style-type: none"> • Minimum local match requirement is 9.51% • Project applications must be supported by the 	<ul style="list-style-type: none"> • Scoping May-June • Funded awarded in July of the next year 	<p>Planner 720-963-3605</p>	<p>will enter into a Reimbursable Agreement for the not-to-exceed amount of \$10,000 within 45 days of notification of selection for CFLHD to complete project scoping efforts to develop an accurate scope, schedule, and budget.</p> <ul style="list-style-type: none"> • Memorandum of Agreement defining that scope as well as roles and responsibilities to be executed within 60 days from approval of funding
<p>Western Native Trout Initiative; Small Grants Program</p>	<ul style="list-style-type: none"> • Small project funding program specifically supports collaborative approaches and partnerships involved in local efforts or community-based programs that provide for habitat, educational or public recreational angling programs that contribute to the Initiative's efforts to conserve western native 	<ul style="list-style-type: none"> • Projects must be eligible for NFHP funding (see above) • Only projects that address native cutthroat trout; Bonneville, Colorado, and Yellowstone 	<ul style="list-style-type: none"> • Application due mid-June 	<p>http://www.westernnativetrout.org/western-native-trout-initiative-small-grants-program</p> <p>Project Coordinator (303)236-4402</p>	<ul style="list-style-type: none"> • Individual projects can be funded at a maximum of \$3,000.

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
	trout				
National Fish and Wildlife Foundation; Five Star and Urban Water Restoration	<ul style="list-style-type: none"> Wetland, river or coastal habitat restoration and/or targeted green infrastructure creation Integrated Education, outreach and training into the restoration 	<ul style="list-style-type: none"> Community partners united to achieve ecological and educational outcomes 	<ul style="list-style-type: none"> Webinars in November RFP due in early November Project metrics due in mid-December Final applications during the following first week in February \$\$ available in ~ July 	http://www.nfwf.org/financestar/Pages/home.aspx Coordinator, Community-Based Conservation (202)595-2434	<ul style="list-style-type: none"> Measurable ecological, educational and community benefits.
National Fish and Wildlife Foundation; Bring Back the Natives/More Fish	<ul style="list-style-type: none"> Invests in conservation activities that restore, protect, and enhance native populations of sensitive or listed fish species across the United States, especially in areas on or adjacent to federal agency lands Proposals related to species with a NFWF business plan or a well-developed, comprehensive conservation strategy will be most competitive, including Yellowstone, Colorado and Westslope Cutthroat trout 	<ul style="list-style-type: none"> Priority activities: restoring connectivity, restoring riparian in-stream habitat & water quality, inv. spp mgmt, innovation research Non fed match at least 1:1 (cash or in-kind) 	<ul style="list-style-type: none"> RFP due first week in August Final application due in Sept. Award announced in December \$\$ available in ~ July 	http://www.nfwf.org/bn/Pages/home.aspx Coordinator, Program Administration (202)595-2474	<ul style="list-style-type: none"> Grants from \$25, 000-100,000 Program emphasizes coordination between private landowners and federal agencies, tribes, corporations, and states to improve the ecosystem functions and health of watersheds. Describe the native fish species at risk or potentially at risk, a description of its historic and current range, and its importance as part of the greater aquatic ecosystem, as well as the factors that have caused a decline in the species population(s) Due to the effort and time

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
					spent to apply and documenting the use of NFWF, best to utilize for project needing >\$50,000
National Fish and Wildlife Foundation; ConocoPhillips SPIRIT of Conservation and Innovation Program	<ul style="list-style-type: none"> • Conservation of critical habitats as well as the development and adoption of innovative conservation approaches that address water and biodiversity issues • Focused on high-priority North American migratory species, in areas where ConocoPhillips has an operating presence 	<ul style="list-style-type: none"> • Funded projects should be completed within two years following finalization of a grant agreement. • All grant awards require a minimum 1:1 match of cash or contributed goods and services, of which at least 50% should be from non-Federal sources. 	<ul style="list-style-type: none"> • RFP due in mid August • Award announced mid-November • \$\$ available in January of following year 	http://www.nfwf.org/spirit/Pages/home.aspx Assistant Director (612)564-7285	<ul style="list-style-type: none"> • Stimulating and leveraging the development and adoption of innovative conservation technologies and techniques in areas where ConocoPhillips has an operating presence. • Grant awards will range from \$50,000 to \$350,000. Past grants have typically ranged from \$50,000 to \$150,000.
Wyoming Dept of Environmental Quality; Nonpoint Source Program, Clean Water Act Section 205(j) Grants	<ul style="list-style-type: none"> • Water quality management planning and assessment projects • Planning and assessment projects on impaired waterbodies are prioritized 	<ul style="list-style-type: none"> • Requires 25% non-federal match (cash or in-kind) • Available annually through competitive proposal process • Reimbursement grants • Cities, towns, counties, and 	<ul style="list-style-type: none"> • Request for Proposals issued annually, mid-June • Draft proposals due early August for optional but recommended pre-review) • Final proposals due mid-September • Funding recommendations made by Nonpoint Source Task Force (citizens board) late October to early 	http://deq.wyoming.gov/wqd/non-point-source/resources/grant-resources/ Nonpoint Source Program Coordinator (307)777-6080	<ul style="list-style-type: none"> • \$40,000 available annually • Stream restoration planning/design projects eligible.

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
		<p>conservation districts eligible</p> <ul style="list-style-type: none"> Requires contacting the WDEQ Nonpoint Source Program prior to submitting 	<p>November</p> <ul style="list-style-type: none"> If recommended for funding, funds typically become available spring of the following year Look back for the non-federal match is 60-days from the date the agreement is signed Maximum project length 2 years 		
Wyoming Dept of Environmental Quality, Brownsfield Assistance	<ul style="list-style-type: none"> Many communities in Wyoming have properties that are abandoned or underutilized because of known or suspected environmental contamination. These properties, known as “brownfields,” may require cleanup before they are safe for reuse or redevelopment. 	<ul style="list-style-type: none"> Must meet the definitions of a “brownfield site” as defined by EPA Properties impacted by hazardous substances, pollutants, or contaminants; impacted by controlled substances (e.g., methamphetamine); and petroleum or petroleum products 	<ul style="list-style-type: none"> Various deadlines 	<p>http://deq.wyoming.gov/shwd/brownfields-assistance/resources/application-form/</p> <p>Solid & Hazardous Waste Division (307)777-7752</p>	<ul style="list-style-type: none"> Can provide technical assistance to brownfield sites and financial assistance based on eligibility requirements. Applications capped at \$400,000
U.S. Environmental Protection Agency; Brownsfields	<ul style="list-style-type: none"> Properties that are abandoned or underutilized because of known or suspected environmental 	<ul style="list-style-type: none"> For states, communities, and other stakeholders in economic redevelopment to 	<ul style="list-style-type: none"> Assessment Grants guidelines out in Oct. Applications due December 	<p>http://www.epa.gov/brownfields/</p>	<ul style="list-style-type: none"> Assessment and clean up grants can ask up to \$200,000

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
Program	contamination.	work together to prevent, assess, safely clean up, and sustainably reuse brownfields.			
Wyoming Business Council— Business Ready Community Program- Community Enhancement	<ul style="list-style-type: none"> Provides financing (some grant, or loan) for publicly owned infrastructure that serves the needs of businesses and promotes economic development within Wyoming communities. 	<ul style="list-style-type: none"> Only cities, towns, joint powers boards eligible 	<ul style="list-style-type: none"> Application accepted quarterly (June 1, Sept. 1 Dec. 1, March1) 	<p>http://www.wyomingbusiness.org/program/business-ready-community-program/1246</p> <p>Business Ready Communities and Community Facilities Program Manager (307)777-2818</p>	<ul style="list-style-type: none"> Connecting the project to local businesses (e.g., stream restoration making rafting trips safer, increased fishing guide business, etc...) Maximum award \$500,000, 50% match required (1/2 must be cash) Award up to 3 years in length
Wyoming Department of Environmental Quality; Clean Water State Revolving Funds	<ul style="list-style-type: none"> Loans to public entities for water pollution control projects, including projects that reduce nonpoint source pollution. Loan terms are up to 20 years, with interest rate at 2.5% and a 0.5% loan origination fee. Some loans may be at even lower interest rates and/or include 	<ul style="list-style-type: none"> State agencies, counties municipalities, joint powers boards, and other entities constituting a political subdivision under the laws of the state (e.g., various types of special districts) 	<ul style="list-style-type: none"> Complete and submit 3 copies of the CWSRF loan application forms to the Office of State Lands and Investments. Suggested to begin the process at least 6-12 months prior to bidding a project. The State Loan and Investment Board has final loan approval authority; it considers loans at its regular meetings held every two months. 	<p>http://deq.wyoming.gov/wqd/state-revolving-loan-fund/resources/2-clean-water-state-revolving-fund/</p> <p>WDEQ State Revolving Fund Program (307)777-6371</p>	<ul style="list-style-type: none"> A certain amount of funds each year must be used for Green Project Reserve (GPR)--projects which address green infrastructure, water or energy efficiency improvements, or other environmentally innovative activities; GPR loans will have an interest rate of 0% and may be eligible for principal forgiveness

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
	forgiveness of a portion of the principal		<ul style="list-style-type: none"> Potential projects must be included on the state CWSRF Intended Use Plan (updated annually, usually late winter/early spring) 		
4. Public Funding for Private Landowners Only					
U.S. Fish and Wildlife; Partners for Fish & Wildlife Program	<ul style="list-style-type: none"> A broad-based partnership of Wyoming landowners, local communities, conservation districts, sportsman groups, non-governmental organizations, federal and state agencies, and others, whose mission is to address landowner and landscape conservation needs Voluntary program that provides habitat restoration, technical, & financial assistance 	<ul style="list-style-type: none"> Coordinate with Private Land Biologists Private or tribal land 	<ul style="list-style-type: none"> Application accepted on a rolling basis 	http://www.fws.gov/mountain-prairie/refuges/wyomingpaw.php State Coordinator (307) 332-8719	<ul style="list-style-type: none"> Typical funding \$1-\$25,000 Technical assistance
Natural Resource Conservation Service; EQIP. WHIP, Etc.	<ul style="list-style-type: none"> Provides financial and technical assistance to agricultural producers to plan and implement conservation practices that improve soil, water, 	<ul style="list-style-type: none"> Be agricultural producer Control or own eligible land. Comply with adjusted gross 	<ul style="list-style-type: none"> Application due by mid March but check with local NRCS field office 	http://www.nrcs.usda.gov/wps/portal/nrcs/main/wy/programs/financial/eqip/ Local NRCS field	<ul style="list-style-type: none"> Payments are made on completed practices or activities identified in an EQIP contract that meet NRCS standards. Payment rates are set each

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
	<p>plant, animal, air and related natural resources on agricultural land and non-industrial private forestland</p>	<p>income (AGI) for less than \$900,000.</p> <ul style="list-style-type: none"> • Be in compliance with the highly erodible land and wetland conservation requirements. • Develop an NRCS EQIP or WHIP plan of operations that addresses at least one natural resource concern 		<p>office</p>	<p>fiscal year and are attached to the EQIP contract when it is approved.</p> <ul style="list-style-type: none"> • Payment rates for each conservation practice can be found at each NRCS State Programs website.
<p>Wyoming Dept of Environmental Quality; Voluntary Remediation Program (VRP)</p>	<ul style="list-style-type: none"> • VRP allows owner or prospective owner to voluntarily investigate possible contamination and clean it up if necessary. 	<ul style="list-style-type: none"> • Must meet the definitions of a “brownfield site” as defined by EPA • Properties impacted by hazardous substances, pollutants, or contaminants; impacted by controlled substances 	<ul style="list-style-type: none"> • Various deadlines 	<p>http://deq.wyoming.gov/shwd/voluntary-remediation-program/</p> <p>Solid & Hazardous Waste Division (307)777-7752</p>	<ul style="list-style-type: none"> • If suspect any contamination, participate early in process. • Can provide technical assistance to brownfield sites and financial assistance based on eligibility requirements.
<p>5. Private Funding</p>					
<p>Patagonia World Trout®</p>	<ul style="list-style-type: none"> • Funds restoration and protection of wild, self- 	<ul style="list-style-type: none"> • Non-profits only 	<ul style="list-style-type: none"> • No application deadline • \$\$ available for 1 year 	<p>http://www.patagonia.com/us/patagonia.go?</p>	<ul style="list-style-type: none"> • Restores native river, coastal, and salt water

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
Initiative	sustainable trout and other fish species within their native range <ul style="list-style-type: none"> • Most grants are in the range of \$3,000 to \$15,000. 			assetid=32942	habitats <ul style="list-style-type: none"> • Ensures dedicated in-stream flows that mimic natural stream flows • Provides unassisted fish passage (without human intervention) to and from historically accessible habitat; we give priority to long term, low maintenance, and natural channel solutions • Fosters sustainable harvest techniques and eliminates irresponsible aquaculture, and pollution
6. Regional Funding					
U.S. Army Corps. Of Engineers (Corps.); Section 1135 Project Modifications for Improvement of the Environment	<ul style="list-style-type: none"> • Restore significant ecosystem function, structure, and dynamic processes that have been degraded by Corps projects 	<ul style="list-style-type: none"> • Restore areas where a Corps. project caused degradation • Upper Snake River • Sheridan 	<ul style="list-style-type: none"> • Various deadlines 	http://www.nww.usace.army.mil/Library/ReviewPlans.aspx Project Manager (208)345-2064 http://www.nwo.usace.army.mil/Missions/CivilWorks/Planning/PlanningProjects/SheridanWY.aspx	<ul style="list-style-type: none"> •

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
				Project Manager (402)995-2417	
U.S. Environmental Protection Services; Urban Stormwater Grants	<ul style="list-style-type: none"> ● Goal is to fund research, investigations, experiments, training, surveys, studies, and demonstrations that will advance the restoration of urban waters by improving water quality through activities that also support community revitalization 	<ul style="list-style-type: none"> ● Casper/ Natrona County ● Public funding for nonprofit 	<ul style="list-style-type: none"> ● RFP has full proposals due mid November ● Notification end of March ● Begin work early August. ● EPA to hosts webinar about program ● Grant provided every other year ● Expect next application round fall of 2017 ● Grant periods 1-2 years, typically 	http://www2.epa.gov/urbanwaters/urban-waters-small-grants	<ul style="list-style-type: none"> ● Minimum non fed match for \$4,000 (cash or in-kind) ● Grants of \$40,000 to \$60,000
Snake River Fund	<ul style="list-style-type: none"> ● Promote stewardship and recreational access to the Snake River watershed in Wyoming, with an emphasis on partnerships, education, and public outreach 	<ul style="list-style-type: none"> ● Teton ● North Lincoln County 	<ul style="list-style-type: none"> ● Applications are accepted on a rolling basis. 	http://www.snakeriverfund.org/ Program Director (307)734-6773	
Teton Conservation District; Technical Assistance Cost Share	<ul style="list-style-type: none"> ● Natural resource project grant funding applications may be submitted for one or more of the following categories: Agriculture, Mapping Resources & Geographic Information 	<ul style="list-style-type: none"> ● Teton County ● Requires a 50% match from the applicant, which may include direct dollars and/or in-kind ● Requires a 	<ul style="list-style-type: none"> ● Application due early December ● \$\$ available in January 	http://tetonconservation.org/programs/technical-assistance-tac-cost-share-grants.php Water Resource Specialist (307)733-2110	

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
	Systems (GIS), Restoration & Sustainability, Teton County Planning & Development Regulations, Water Resources and Wildlife.	preliminary contact with TCD staff prior to submission			
Wyoming Landscape Conservation Initiative	<ul style="list-style-type: none"> • Long-term, science based effort to assess and enhance aquatic and terrestrial habitats at a landscape scale in southwest Wyoming, while facilitating responsible development through local collaboration and partnerships • Projects are on-the-ground activities intended to improve terrestrial and aquatic habitats and terrain 	<ul style="list-style-type: none"> • Local Project Development Teams (LPDTs) identify issues that are important to the local landscape and cooperatively create projects • Projects must be presented at LPDTs meetings 	<ul style="list-style-type: none"> • Carbon, Lincoln/Uinta, Sublette, Sweetwater Counties Meetings are held in November 	https://www.wlci.gov/ Coordinator (307) 352-0313	<ul style="list-style-type: none"> •
US Forest Service Resource Advisory Committee (RAC)	<ul style="list-style-type: none"> • Funds are made available through Title II of the Secure Rural Schools and Community Self Determination Act. Projects must be located on National Forest 	<ul style="list-style-type: none"> • Projects that meet the following criteria: provide benefits to forest health, fish, wildlife, soils, watersheds, and 	<ul style="list-style-type: none"> • RAC is notified on the \$\$ available in February • Each National Forest RAC has own submission dates in the spring (March-April) • Each National Forest RAC has final project 	http://cloudapps-usda.gov.force.com/FSSRS/CreateNewprojectpage Contact Local National Forest Office	<ul style="list-style-type: none"> • Funding amount are different for each national forest • Each National Forest (eg. Bridger/ Teton, Shoshone, Big Horn) has its own RAC

Appendix F. Wyoming Water Strategy: River Restoration & Fish Passage Funding Sources and Contacts

Funding Entity	Key Points	Eligibility	Funding Cycle /Important Date	Website / Contact Info.	Additional Details
	<p>System Lands in Park or on adjacent lands if the project will benefit the national forest.</p> <ul style="list-style-type: none"> • Project work may be completed by Forest Service personnel, through partnership agreements, or by open-bid contracting 	<p>other natural resources; maintain roads, trails, and other infrastructure; or control noxious weeds</p> <ul style="list-style-type: none"> • 	<p>recommendations at the end of September</p> <ul style="list-style-type: none"> • \$\$ available the following field season (ex. \$\$ approved in September 2016 will be available spring/summer 2017) 		

Fish passage focus watersheds for fisheries and wildlife benefits are identified on the accompanying map and list. These watersheds were identified largely based on concerns listed in the Strategic Habitat Plan and State Wildlife Action Plan as well as areas that contain multiple irrigation diversions and stream crossings that can impact movements of fish and their populations. Native species conservation, wild fisheries, and potential river miles to reconnect were also important drivers in the selection of these watersheds.

Passage issues common to many of these streams include: habitat fragmentation, undersized culverts, perched culverts, loss of fish to irrigation diversions, dams, dewatering, annual maintenance for water users, dilapidated irrigation infrastructure, and flawed diversion locations.

Q: Why is passage important for fish?

A: Barriers to movement can reduce populations, segregate fish communities, reduce genetic diversity, and block access to important habitat. Many species in Wyoming will travel long distances to reach various habitats such as spawning and overwintering habitat. An excellent example is the native sauger, which has been documented to move as far as 235 miles to spawn in streams where movement barriers do not exist. Improving passage to reconnect streams will increase available habitat for all fish in Wyoming to meet their various life history needs.

Q: What kinds of projects have been completed to improve fish passage in these areas?

A: Most of the projects have concentrated on reconnecting streams to provide access to spawning tributaries, overwintering areas, juvenile rearing, and other key habitat features as fish grow from an egg to reproducing adults. Project examples include replacement of annual push-up dams with permanent rock structures at diversions that provide upstream passage, yet maintain delivery of water for irrigation. Fish ladders and bypass channels have been constructed to provide fish a way to navigate upstream past dams. Culverts have been replaced and improved to provide passage at road crossings while some locations have had fish screens installed at irrigation diversions to prevent fish from being lost to the ditch.

Q: Why are the fish passage watersheds different than the stream restoration hotspots?

A: Though some watersheds overlap, fish passage watersheds differ because of various fishery concerns such as maintaining native and sensitive species, key wild fisheries, and focuses on heavily fragmented streams due to diversions and road crossings. We are also trying to build upon passage work already completed to completely reconnect entire watersheds.

Appendix G. Governors Water Strategy Initiative 10 Fish Passage Focus Watersheds

Key	Region	HUC	Priority HUC name	Projects, comments or reasons for selection
CR1	CR	1018000709	North Platte - Sand Creek	Morton Diversion, sauger restoration potential
CR2		1018000804	North Platte - Glendo Res.	Orin Weir, sauger restoration potential
CY1	CY	10080009	Greybull River	YSC habitat, WWDC projects, many projects completed
CY2		10080013	South Fork Shoshone River	YSC habitat, potential for WWDC projects on large irrigation diversions
CY3		1008000806	Paint Rock Creek	YSC habitat, projects on Med Lodge, WWDC projects
GR1	GR	1405000403	Lower Muddy Creek	3 species conservation, CRC habitat
GR2		16010101	Upper Bear River	BRC & LSC habitat, 3 species conservation, numerous diversions
JN1	JN	1704010203	Lower Gros Ventre River	SGCN species and SRC habitat, location of most irrigation near Jackson
JN2		17040105	Salt River	SGCN species and SRC habitat
JN3		1704010303	Upper Hoback River	SGCN species and SRC habitat
LE1	LE	1018000205	Encampment River	Wild trout sport fishery, abundant restoration work
LE2		1018000202-4	Upper North Platte	High profile wild trout sport fishery, BNT spawning
LE3		1018001106, 11018001107	North Laramie River	SGCN species, key hornyhead chub habitat
LR1	LR	1008000104	East Fork Wind River	YSC habitat, majority is WGF & Federal owned
LR2		1008000302	Popo Agie River	Wild trout sport fishery, sauger habitat, numerous diversions
LR3		1008000101	Wind River - Warm Springs	YSC in some tributaries, SGCN species
PE1	PE	14040101	Upper Green River	CRC habitat, numerous diversions
PE2		16010102	Central Bear River	BRC habitat, numerous diversions
SN1	SN	10090206	Clear Creek	SGCN species, sauger, prairie fish assemblage; BNT fishery above Buffalo
SN2		1009010101	Tongue River - Fool Ck.	YSC habitat, sauger & SGCN species
SN3		1009010102	Goose Creek	Sauger & SGCN species; seasonal flow limitations

