

REQUEST FOR COUNCIL ACTION

Subject:

30% design for the "Big Bend" Habitat Restoration Area

Summary:

Approve an Agreement with River Restoration.Org for the 30% design of the "Big Bend" Habitat Area in an amount not to exceed \$188,224.64.

Fiscal Impact:

Funding for this project is being provided from grants received from the Utah Division of Wildlife Resources, Utah Department of Water Quality and the U.S. Fish & Wildlife Foundation.

Recommendation:

Staff recommends approval of this Agreement with River Restoration. Org for the 30% design of the "Big Bend" Habitat Area in an amount not to exceed \$188,224.64.

Motion

"I move to adopt Resolution No. 14-204 authorizing the Mayor to execute an agreement with River Restoration.Org for 30% design of the "Big Bend" Habitat Area in an amount not to exceed \$188,224.64.

Prepared by:



Charles Tarver
CDBG/Grants Manager

Reviewed as to Legal Sufficiency:



Jeffrey Robinson
City Attorney

Reviewed by:



Tom Burdett
Director, Community Development

Approved by:



Bryce Haderlie
Interim City Manager

Narrative:

The City has recently constructed the missing section of the Jordan River Trail between 8300 S and 9000 S to provide a continuous trail between the North and South boundary of the City. Along this section of trail, there exists a 70 acre parcel of land owned by the City of West Jordan and the Utah Reclamation Mitigation & Conservation Commission that was purchased for habitat restoration as part of the Sharon Steel Settlement in the 1990's. During the late 1990's and early 2000's, the U.S. Corp of Engineers and the City of West Jordan developed habitat restoration plans for this area but was never able to secure funding for the project. During FY 2013, the Corp of Engineers officially dropped out of this project due to lack of any foreseeable funding for the project from their agency. This has allowed the City of West Jordan to move forward with the project over the last two years and secure funding for the redesign of this area.

Through the National Park Service Rivers, Trails and Conservation Assistance Program, the City was able to develop a preliminary concept plan for this area. With this plan in hand, the City secured funding from the Utah Division of Wildlife Resources (\$100,000), Utah Division of Water Quality (\$75,000) and the U.S. fish & Wildlife Foundation (\$50,000) for the 30% redesign of this area. The City of West Jordan issued a Request for Proposals for the 30% update and redesign of this area and four responses were received from qualified engineering and design firms. A review committee of funding partners and City of West Jordan Departments reviewed each proposal and heard presentations from each of the 4 firms. Upon completion of the presentations, each committee member rated and scored the proposals. A breakdown of the scoring follows:

**Big Bend Habitat Committee Review & Scoring
October 28, 2014**

Committee Member	Bowen Collins	Logan Simpson	River Restoration	Stantec
Chris Cline, U.S. Fish & Wildlife	75	86	93	87
Richard Mingo, Utah Mitigation Commission	71	76	79	80
Maureen Wilson, Utah Mitigation Commission	77	80	92	84
Brain Clegg, City of West Jordan	68	78	80	70
Hillary Ariens, Utah Division of Water Quality	92	92	89	87
Tonya Kieffer, Utah Division of Wildlife Resources	70	100	90	80
Chuck Tarver, City of West Jordan	85	88	83	90
Total Score	538	600	606	578

Non-Voting members on the committee included Marcy DeMillion, National Park Service and Paul Wellington, City of West Jordan.

Based upon the quality of the presentations and scoring, the Committee felt that River Restoration.org was the best qualified for providing the requested services.

Upon award of the contract for services, the selected contractor will provide 3 concept plans with construction cost estimates to the City Council during February 2015 for their selection of the plan they want to be developed to the 30% design level. Once the selected plan is designed into 2-3 construction phases, the City will be able to continue our fund raising efforts to construct this habitat area. The City of West Jordan currently has approximately \$760,000 available from the Sharon Steel Settlement to utilize as matching funds. The anticipated construction timeframe for this project would be between 5-10 years.

THE CITY OF WEST JORDAN, UTAH

A Municipal Corporation

RESOLUTION NO. 14-204

**A RESOLUTION AUTHORIZING THE MAYOR TO EXECUTE AN AGREEMENT
BETWEEN THE CITY OF WEST JORDAN AND RIVER RESTORATION.ORG**

Whereas, the City of West Jordan has received four (4) proposals for the 30% design of the "Big Bend" Habitat Area and has determined that the proposal from River Restorations.org in the amount of \$188,224.64 meets and fulfills the RFP requirements best; and

Whereas, the City Council desires to award the contract to River Restoration.org which award shall not be binding upon the City of West Jordan unless and until the contract is fully executed by the parties; and

Whereas, River Restoration has agreed to provide all services requested in the RFP and their proposal as detailed and attached hereto as Exhibit A.

NOW, THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF WEST JORDAN, UTAH, THAT:

Section 1. After approval as to legal form, the Mayor is hereby authorized and directed to execute a contract between the City of West Jordan and River Restoration.org for and amount not to exceed \$188,224.64.

Section 2. This resolution shall take effect immediately.

Adopted by the City Council of West Jordan, Utah, this 19th day of November, 2014.

CITY OF WEST JORDAN

ATTEST:

By: _____
Kim V. Rolfe, Mayor

MELANIE S. BRIGGS, MMC
City Clerk/Recorder

Voting by the City Council

"AYE"

"NAY"

Jeff Haaga

Judy Hansen

Chris McConnehey

Chad Nichols

Ben Southworth

Justin D. Stoker

Mayor Kim V. Rolfe

**REQUEST FOR PROPOSALS:
IMPLEMENTABLE, PHASED PROJECT DESIGN (30% Design)
For
“BIG BEND” HABITAT RESTORATION
WEST JORDAN, UTAH**

General Description of Project

The City of West Jordan requests design proposals from Professional Consulting Engineering Design, Habitat Restoration and Landscape Design firms (Consultant) to provide a site design and phased “design-build” construction plan for a mixed recreational use/migratory bird habitat restoration project on a 70-acre site (the “Big Bend” site) located on the Jordan River in West Jordan, Utah (Figure 1, Figure 2). This request envisions an approximately “30% Design” that is feasible and implementable in phases, such that the design for each phase can be advertised to qualified contractors as “design-build” proposal requests. Hydrologic restoration of the Jordan River and its floodplain on the project site, and design continuity between urban recreational use (Jordan River Trail and prospective urban fishery) and wildlife (primarily avian) habitat restoration and management are key components of the project. The site is located on the west side of the Jordan River between (approximately) 8500 South Street to 8800 South Street in West Jordan, Utah.

BACKGROUND

The Big Bend project is a collaborative restoration/recreation project in the City of West Jordan (City) that aims to combine outdoor recreational opportunities for City residents and visitors with a restored wildlife area that provides habitat for Neotropical migratory songbirds. A major component of the project is the improvement and restoration of the reach of the Jordan River that runs through the project area. Partners and collaborators on the Big Bend include the City, the Utah Reclamation Mitigation and Conservation Commission, the U.S. Fish & Wildlife Service, the Utah Departments of Natural Resources and Environmental Quality, Jordan River Commission, Salt Lake County, and other public and private entities. The Big Bend site is adjacent to a recently completed segment of the Jordan River Trail and 8600 South neighborhood connector trail. The site will also soon connect to a mass transit hub located a short distance to the north at the 7800 South Gardner Village TRAX Station. The City desires to provide the Big Bend site with features that will allow people to “connect with nature” such as boardwalks, viewing and interpretive stations. A community fishery operated by the Utah Division of Wildlife Resources will also be included in the complex.

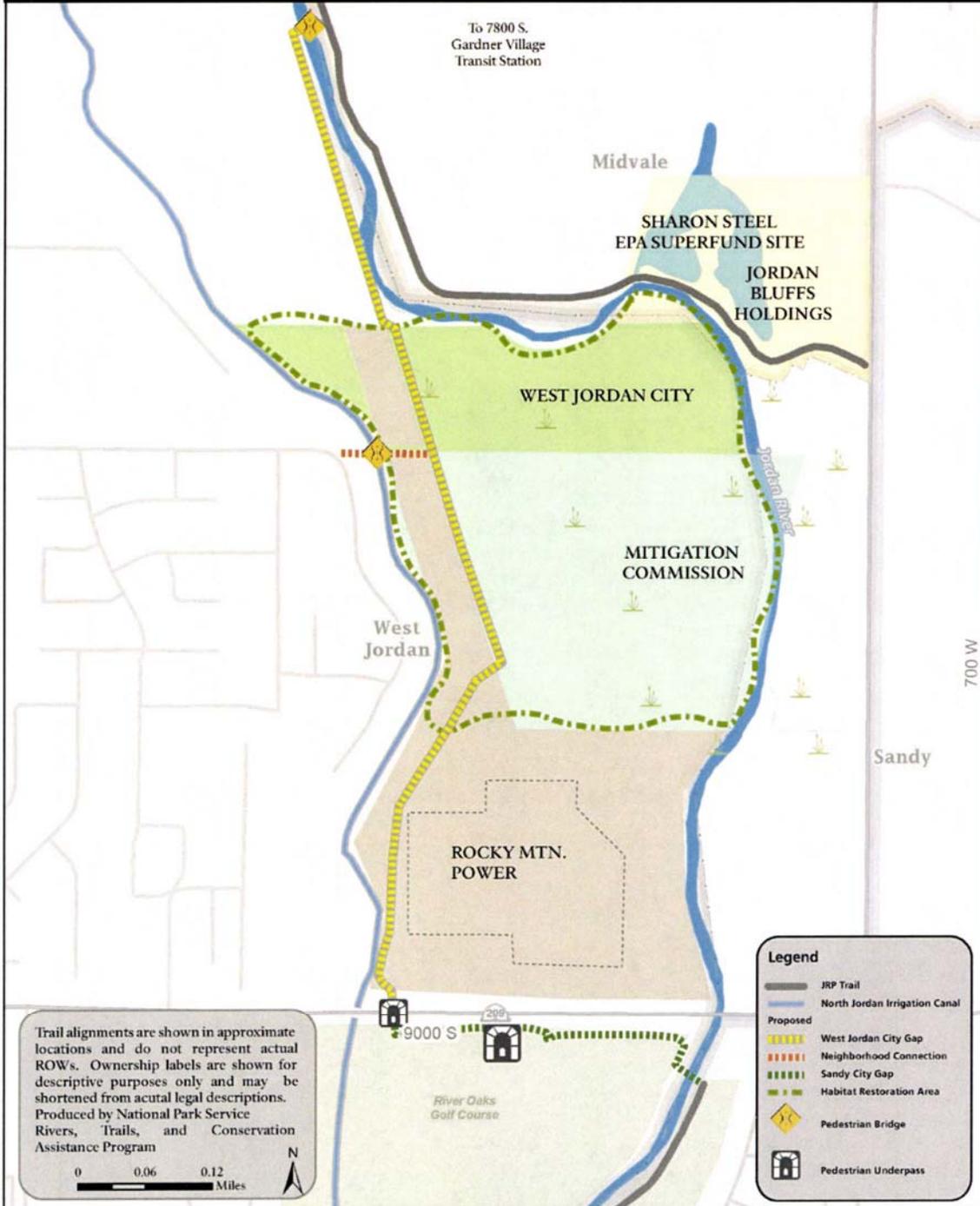
PROJECT DESCRIPTION

The Big Bend site is approximately 70 acres, on undeveloped floodplain that was formerly used as pasture land. It is bounded on the north and east by the “Big Bend” reach of the Jordan River, and is bounded to the west by the Jordan River Trail. A large electrical sub-station is located to the south of the property. Currently, the river channel is deeply entrenched on the east and north boundaries of the

property, with vertical, eroding river banks that are contributing to water quality problems (primarily sediment and organic matter) in the Jordan River. Due to this down-cutting, the floodplain has become

FIGURE 1
Big Bend Restoration Area Site Map

West Jordan: Jordan River Proposed "Big Bend" Restoration Area



elevated with respect to the river. Vegetation on the site is dominated by Russian olive and grasses on the southern portion, while the northern portion has a high percentage of cover by weedy herbaceous species. There is a stand of mature, high-value cottonwood trees on the southeastern portion of the site that the City would like to retain and incorporate into the project design if possible. The City is requesting proposals for realistic, implementable design plans for hydrologic river restoration, avian (and other wildlife) habitat restoration and recreational enhancement of the 70 acre site.

The City envisions a plan that is at the “30 % design level,” which is both financially and physically feasible, and that provides enough information that the project can be constructed as a succession of “design-build” phases. We anticipate that a successful proposal will require professional expertise in the in the areas of hydrology, geomorphology, bio-engineering, engineering, habitat restoration and landscape architecture as well as environmental permitting and project management. Acceptable designs will present a phased construction approach that can be implemented as monies become available. Each phase must end at a self-sustaining endpoint but will be tied together and function as a whole if/when all phases are constructed.

PROJECT GOALS & OBJECTIVES

The goals of the Big Bend Restoration Project are to:

1. Restore and improve the site’s dynamic riverine geomorphology and floodplain hydrology to improve water quality and to sustainably support riparian and wetland habitats over a range of climatic conditions, including anticipated changes in condition associated with climate change (drought resistance, flood attenuation);
2. Provide a large (approximately 70-75% of the total project area), continuous “habitat sanctuary” area composed of aquatic, riparian, wetland, and upland habitats focused on the nesting, foraging and resting needs of neotropical songbirds as identified in the Sharon Steel Restoration Plan (USFWS 1995); and
3. Provide for recreational use of the site that is integrated with the existing Jordan River Trail (located along the western boundary of the site) and that connects trail users with the natural areas on the site through features such as viewing platforms, boardwalks and interpretive stations.
4. Provide an “urban fishery” feature that will be operated by the City and the Utah Division of Wildlife Resources (UDWR). It is envisioned that this feature will be integrated (transitional) between the recreational use and wildlife sanctuary areas, and will include an appropriately sized pond (balancing anticipated use and maintenance needs within the overall site use plan (5-8 acres). The urban fishery must meet the design and operational expectations of UDWR. In addition, creation of in-stream habitat that would support increased fishing opportunities in the river should be considered.

Anticipated objectives to achieve these goals include:

- River restoration: The City seeks a design for restoration of the approximately one mile of Jordan River channel that runs through the Site, with the objective of improving the river’s connection to the floodplain so it can support riparian and wetland vegetation planted in the migratory bird sanctuary and/or other locations on site; and decreasing the amount of erosion and mass-wasting that is degrading water quality through the reach. At least two but preferably three preliminary

(“conceptual”) but technically feasible (e.g., appropriate for the site’s hydrology and other environmental conditions) design alternatives with cost estimates (e.g., 20% design) shall be developed for consideration by the City and the project team. The chosen alternative would then be developed into the final (30%) design. Design options that have been discussed by stakeholders include 1) the construction of a new, meandering channel for the river through the project area, with the new channel serving as a base-flow channel, and the existing channel maintained to carry seasonal and storm water high-flows; and 2) excavation (“layback”) and restoration of the west side of the existing river channel, and the construction of “tributary” channels fed by the North Jordan Canal which runs near the western boundary of the site. Two of the most significant feasibility issues for the project are associated with this goal. First, it is anticipated that some excavation of the existing floodplain will be needed to bring it down to an elevation that will allow for a functional hydrologic connection between the river and planted habitat areas with both options, but with more excavation needed for the first option. Additional design alternatives are being sought in this RFP.

- Migratory bird habitat: The design should incorporate a large (approximately 30-50% of the total area), continuous habitat area focused on the nesting, foraging and resting needs of neotropical songbirds as identified in the Sharon Steel Restoration Plan (USFWS 1995), as well as other wildlife. The design should be integrated with the hydrologic design, and consist of a mix of riparian forest, floodplain and wetland areas to create a diverse, multi-story habitat composed of native plant species. The design plan should also include the removal of existing invasive/non-native vegetation, and should retain high-value tree species (e.g., mature cottonwoods on the southeastern portion of the Site).
- Community fishery: The design must include a “community fishery” component that is consistent with anticipated level of use and maintenance needs for this feature, and that is visually integrated with the overall Site. The fishery will be stocked and maintained by the Utah Division of Wildlife Resources and must be designed according to their requirements and specifications (see guidance included with supplemental information). The fishery component will be contiguous with, and accessed by the Jordan River Trail, and will consist of an appropriately sized pond (5-8 acres) with a second site in the river, if feasible, built to the design expectations of the Utah Division of Wildlife Resources. This feature must be placed in a location where necessary amenities (e.g., Americans with Disabilities Act (ADA) access, access to sanitation for restrooms and fish cleaning stations, trash cans) can be placed to support the use and management of the fishery.
- Recreational and Interpretive features: The design must include recreational features and other human use elements that connect the Big Bend area to the Jordan River Trail, provide recreational opportunities, and facilitate appreciation and understanding of the Site’s natural features. These may include approximately ½ mile of trail and other components to “connect people with nature” and allow for increased opportunities for non-contact (non-disturbing) bird and wildlife viewing (e.g., elevated boardwalks in wetland areas, viewing platforms, interpretive stations and other amenities or design features). The design should also be considerate of aesthetics (e.g., view sheds, sightlines), natural and cultural history interpretive opportunities, and overall presentation of the Site. These components should meet applicable codes and design standards, including Americans with Disabilities Act (ADA).

- Feasibility and sustainability: Overall, the project team seeks proposals that are feasible to construct (i.e., phased to accommodate rounds of partial funding), and that are sustainable to manage into the future. Hydrologic restoration must lead to increased stability of the Jordan River throughout the design flow range of the channel. Given factors associated with both climate change and urbanization of the surrounding area, the design range must include both low-flow (drought) and high-flow (500-year storm) scenarios. When mature, the migratory bird habitat area, as well as the overall site, should require a minimum of maintenance (e.g., replanting, weed control beyond ongoing “spot-control” levels). Lighting and other architectural design components should emphasize energy efficiency, and where applicable, recycled or locally sourced materials.
- Site specific data: If necessary to inform site design and not available from previous studies or other documents, proposals may include collection of site-specific data such as groundwater elevations and subsurface soil profiles across the site, which may help guide the design and placement of hydrologic and habitat features (see Scope of Work for further details on possible data needs).
- Permits: The design plan should identify all permits, rights or other permissions needed to implement the project. The City will be responsible for applying for and obtaining these.
- Phased design plan and cost estimates: The design plan should be phased to the extent possible in order to allow the project to be constructed as monies become available. The plan should include both an overall cost estimate, as well as cost estimates for each phase.

SITE ISSUES

There are several overall issues at the site that need to be addressed, and which may have a bearing on the feasibility of various design options. The primary issue for which the City is seeking a solution is the hydrologic condition of the Jordan River on the eastern boundary of the Big Bend site. The river channel is currently down-cut approximately 6-10 feet relative to the floodplain elevation due to erosion and past dredging for flood control. Original restoration design plans (City of West Jordan, 1997) called for the excavation of “bank laybacks” on the western bank of the river through the site; however, the amount of material involved prompted the development of an alternative proposal in 1999 to realign the river through the middle of the site. Evaluations by the U.S. Army Corps of Engineers (2003) and the Utah Reclamation, Mitigation and Conservation Commission (Allred, 2013) estimate that up to 400,000 cubic yards of material (a conservatively estimated maximum over the entire 70-acre project area) would need to be excavated in order to bring the floodplain elevation down to the point that habitat plantings would be in contact with the river’s water table and therefore sustainable without irrigation. Thus the costs and materials handling issues associated with transport of fill off-site are a major feasibility issue. Characterization of floodplain soils and groundwater elevations is needed in order to better estimate the location and amount of material that would need to be moved in order to construct a functional site system, and innovative solutions to disposal or placement of excavated materials are sought to reduce the costs associated with off-site transport. A second issue relates to permitting if the Jordan River is to be re-located on the project site. The bed of the Jordan River is under the jurisdiction of the Utah State Division of Forestry, Fire & Sovereign lands (DFFSL), and while they have indicated that they are conceptually in support of this alternative, there is substantial permitting uncertainty because this will be the first time this kind of permitting has been attempted for a river under DFFSL’s jurisdiction. Therefore,

consultant experience in similarly regulated situations, or alternative solutions are being sought to address this issue.

Other site constraints include the presence of an electrical substation to the south; power transmission lines to the west; a sewer line crossing the Jordan River immediately upstream of the site; and grade controls and the need to return all flows in the river to the existing channel at the downstream (northern) end of the Site. All trails and recreational amenities will need to conform to all existing zoning and construction standards, including the Americans with Disabilities Act (ADA). Additionally, the urban fishery component will need to be approved by the Utah Division of Wildlife Resources.

SCOPE OF WORK

1) Information Collection and Assessment, Identification of Data Gaps and needed surveys:

- Engineering/Hydrology/Biology

- Compile and evaluate all existing information and assessments of hydrologic and geomorphic processes, soils, wetlands, riparian vegetation (including invasive species) and wildlife habitat. Available information may include the following: historic maps, aerial photographs, site photographs, stream gauge and water quality data, stream channel and fisheries surveys and vegetation surveys, remote sensing data (e.g., LIDAR), historic channel morphology and sediment transport data and models, water availability (existing water rights), etc. Additional site-specific information may include topographic surveys of the river channel and floodplain, groundwater elevations and subsurface stratigraphy, locations of existing infrastructure, utilities, property boundaries and easements, etc. See “*List of References and Previous Studies*” at the end of this RFP for a partial list of relevant documents that can be provided electronically by the City.
- Characterize site soils and groundwater elevations sufficient for hydrologic design and engineering, and to determine locations and quantities of needed excavation
- If needed, conduct a groundwater monitoring study to evaluate site conditions, including seasonal and temporal variability (e.g., maximum and minimum flow conditions)
- Characterize flow volume, timing and management of Jordan River flows at the site sufficient to provide input to hydrologic models (see Task 2, below)

-Landscape Architecture and Design

- Analyze the landscape, climate, sun angles, views, trail connections and other elements that will affect the design of the landscape, restoration features and viewing structure(s)
- Review and summarize relevant zoning ordinances, building codes, and other requirements that may affect the design and placement of built features such as boardwalks, viewing structures (including topographic features such as viewing hills)

-Legal/Planning

- Property survey (boundaries and ownership) of entire site (70 acres)
- Review and summarize relevant regulations and environmental and construction permitting requirements for the project

- Review and summarize relevant water rights and determine sufficiency of existing rights to support the project. If needed develop and complete a water rights assessment and acquisition plan.

2) Hydrologic Assessment and Modeling, Construction Feasibility Planning

- Determine groundwater gradient and flow direction, including seasonal variation sufficient to describe the hydraulic conditions of the river, floodplain and adjacent soils
- Evaluate existing irrigation intake structures to ensure that they are incorporated in the design so as to ensure that , existing water rights are maintained on the project area
- Develop a hydrologic design plan for the community fishery component consistent with UDWR guidance and requirements that considers and manages potential interactions between the fishery and groundwater and surface water at the Site.
- Determine volume of fill to be removed from the site, and develop a re-use and (if needed) off-site transport plan.
- Assess project impacts on water quality in the Jordan River, addressing the findings described in the July 27, 2012 Draft Jordan River TMDL Water Quality Study.

3) Preliminary Design Alternatives:

- At least two, preferably three preliminary functional design alternatives and cost estimates at the “20% Design” level shall be developed for the site, which shall maximize wildlife and avian habitat value in the “wildlife sanctuary” portion of the site (including riverine and riparian areas) in accordance with the goals and objectives identified in the Sharon Steel Restoration Plan (USFWS, 1995), to afford the greatest benefit to water quality and quantity (including during both flood and drought conditions), and the most sustainability in terms of need for and cost of ongoing maintenance.
- The preliminary design alternatives shall consist of a set of plan view maps and typical details that spatially relate existing features (Jordan River Trail, North Jordan Canal, etc.) to proposed channel alignments/modifications, wetlands, riparian areas, community fishery pond(s), wildlife viewing structure(s) and other features (e.g., raised boardwalks). Recreational use features and other amenities shall be connected by the Jordan River Trail and/or additional trails or pathways, and shall be concentrated and separated from the core wildlife habitat area to reduce public disturbance of this area.
- A landscape architect and possibly an architect shall work closely with the biologic/hydrologic/engineering team to maximize the aesthetic, wildlife educational and recreational values of the restoration project. The landscape and architectural design shall be unique to the Project area and carefully planned to connect the community to the Jordan River and adjacent wildlife areas, and to connect the area to the Jordan River Trail. A conceptual design for at least one wildlife viewing structure shall be prepared including the site plan, floor plan, exterior building elevations and cross-sections. All structures shall provide ADA access and seating, shall be constructed of reclaimed or recycled materials (if feasible on a cost basis), and shall be designed to minimize maintenance of the structure. If an architect is used they will be preferably LEED certified but not required.

- The West Jordan City Council will select a preferred alternative that will then be further developed to the final “30% Design” level (see Item 6, below) for plans, specifications, cost estimates and permit applications.

4) Permitting:

- Once the preferred alternative is selected, the consultant shall coordinate with the City and with state, federal and local regulatory authorities for all local, state and federal permits required for the restoration project.
- Necessary documentation and reports shall be prepared to comply with regulatory requirements, including Clean Water Act Section 404/401 stream alteration permits, State change of point of diversion permits, storm water pollution prevention plans, etc.

5) Meetings and Public Scoping:

- Up to 2 public meetings and 4 project steering committee meetings will be held.
- Up to 2 meetings will be held with Utah DWR staff to develop design parameters for the fishing pond.
- At least one meeting will be held with the URMCC to coordinate on the preparation of a NEPA analysis (Environmental Assessment) for the Site.

6) Final Design Plan and Specifications

- A Conceptual Design (30% Design) Report shall be prepared that shall include final drawing plans, cross-sections and technical specifications for construction of all project components in accordance with West Jordan City Standards.
- Working from a “design- build” approach, a Phased Design Construction Plan shall be prepared that shall describe each phase of construction, including time of construction, time needed for construction, construction components, needed permits and/or pre-conditions, and any measures needed (if necessary) to ensure site and project stability between phases. An overall budget estimate shall be provided , as well as budget estimates for each identified phase of the project,
- The consultant shall prepare a final opinion of probable construction costs and timeline, and develop a bid tab.

OTHER:

- Design work will be coordinated with the cities of West Jordan, Midvale, and Sandy, Salt Lake County, Salt Lake County Flood Control, Utah Department of Wildlife Resources, Utah Division of Parks & Recreation, Utah Department of Water Quality, Utah Division of Sovereign Lands, U.S. Fish and Wildlife Service, and the URMCC.
- The consultant shall provide regular (monthly at a minimum) project management and progress coordination briefings with West Jordan and Partners.

SCHEDULE:

Following award of the contract, the City will schedule a kick-off meeting with the selected contractor and other project stakeholders within 2 weeks of contract signing. Interim meetings with the selected contractor and project stakeholders will be scheduled during that meeting or on

an as-needed basis. The City desires to receive feasible design alternatives and construction plans, including construction cost estimates for the City Council's review at their meeting on **Wednesday, November 5, 2014**. One concept will be selected at the City Council meeting. Presentation of the final design will be to the City Council at their meeting Strategic Plan workshop on **January 21, 2015** and final approval at the **January 29, 2015** City Council meeting.

APPROVALS:

The design plans, data, models, and other work-product generated for this project will be owned and funded by the City. Thus the City will be the primary approval agency. The City will be responsible for acquiring approvals and permits from other involved agencies as necessary.

PROPOSAL FORMAT:

The proposals should contain the following information in the general order listed, and should not exceed twenty (20) pages in length:

1. Introductory letter (does not count toward 20 page total).
2. A description of the project team and qualifications of the firm to complete this project.
3. Identification of the team leader and the qualifications of the team leader with respect to project management
4. Identify the availability of the project personnel by showing the percent of time the team members are allocated to work on this project. Identify key personnel critical to the project's completion and their qualifications in completing similar projects.
5. A detailed scope of work prepared by the consultant including a summary of the deliverables to be provided to the City.
6. A proposed schedule to complete the scope of work.
7. A summary spreadsheet, to be included in the proposal separately from a sealed fee proposal (see Item 8, below), of the amount of time in hours estimated to be spent on each task identified in the scope of work and the classification of personnel to be used. The spreadsheet shall show the hours to be spent on each task and the classification of personnel to be assigned to do each task. Identify any special services to be provided by resources outside of the firm.
8. Information about other work performed by the consultant on projects similar too this project, and at least three references from other clients with whom the consultant has performed similar services.
9. In a *separate sealed envelope*, provide a single copy of the proposed project fee to complete the project with subtotals by task as identified in the scope of work. Also, included the hourly rates charged for individuals on the project team and a summary of all the additional reimbursable expenses considered necessary to complete the scope of work. Include the fees of any outside firm that will be providing needed services.
10. A City conflict of interest form must be filled out and returned with the proposal (does not count toward the 20 page total).
11. Include example executive summaries from at least one similar project completed by the consultant. (These summaries may be included in an appendix and will not count toward the 20 page total).

ENGINEERING CONSULTANT QUALIFICATIONS

Engineering consultants that will be given consideration must meet the following conditions:

1. Submit a complete proposal including all items requested
2. Demonstrate experience with design-build approach, hydrologic (river) restoration, bioengineering methods, wildlife habitat and/or natural open-space design and restoration, recreational facility planning (including landscape architecture and possibly architecture), and preparation of project plans of comparable size and scope.
3. Use of qualified personnel on the project team, including the use of personnel with appropriate training and credentials (e.g., Professional Engineer, Professional Geologist, Professional Wildlife Biologist and/or Wetland Scientist, Professional Landscape Architect and possibly Architect) where needed.

SUBMITTAL REQUIREMENT

Five (5) copies of the technical proposal and one (1) copy of the sealed fee proposal shall be submitted to the City by 4:00 PM, Thursday, September 18, 2014.

Submittal shall be made to the City of West Jordan Recorders Office, Attention Melanie Briggs, City Clerk Office, 8000 South Redwood Road, West Jordan, UT 84088

Questions pertaining to this request for proposals should be directed to Chuck Tarver via email at charlest@wjordan.com by COB Monday, September 15, 2014. A final list of all questions received will be available by COB Tuesday, September 16, 2014. A selection committee appointed by City Administration shall review and rate the submittal material and make recommendations to the City Council for approval.

PROTECTED INFORMATION

The Government Records Access and Management Act (GRAMA) Utah Code Ann., Subsection 63G-2-305, provides that trade secrets, commercial information or non-individual financial information may be protected by submitting a Claim of Business Confidentiality.

To protect information under a Claim of Business Confidentiality, the bidder must:

1. Provide a written Claim of Business Confidentiality at the time the information (proposal) is provided to West Jordan; and,
2. Include a concise statement of reasons supporting the claim of business confidentiality (Subsection 63G-2-309(1));
3. Submit an electronic "redacted" (excluding protected information) copy of your proposal response. Copy must clearly be marked "Redacted Version."

A Claim of Business Confidentiality may be appropriate for information such as client lists and non-public financial statements. Pricing and service elements may not be protected. An entire proposal may not be protected under a Claim of Business Confidentiality. The claim of business confidentiality must be submitted with your proposal on the form which may be accessed at:

<http://www.purchasing.utah.gov/contract/documents/confidentialityclaimform.doc>

To ensure the information is protected, the bidder must clearly identify in the Executive Summary and in the body of the proposal any specific information for which a bidder claims business confidentiality protection as "PROTECTED".

All materials submitted become the property of West Jordan, Utah. Materials may be evaluated by anyone designated by West Jordan as part of the proposal evaluation committee. Informative Materials submitted may be returned only at West Jordan's option.

SELECTION OF CONSULTANT

The successful consultant will be selected in accordance with the City procurement policy.

Selection criteria to be used by the selection team include the following:

1. Appropriate level of training, experience and expertise of key project personnel.
2. Ability to perform the work with respect to availability of key personnel, present workload and available equipment, resources and facilities
3. Quality and completeness of the detailed written work plan.
4. Past performance on similar projects for other agencies or organizations.
5. Project schedule.
6. Local office, local firm presence and availability of project personnel for meeting and communicating with City personnel.
7. Previous work that reflects special expertise or background knowledge necessary and available for the proposed project.
8. The quality of example reports from previous projects, and feedback from referenced clients and others.
9. The professional fee proposal.
10. For the top firms selected for further evaluation, an oral presentation.

The evaluation process will be based solely on these factors. No other factors or criteria will be used in the evaluation. The evaluation process will include a numeric-scoring sheet as follows:

1. Experience, qualifications, availability, references, location.	20%
2. Demonstrated understanding of the project	5%
3. Quality and feasibility of proposed Scope of Work to deliver the desired end product	20%
• Hydrological Design	
• Habitat Restoration Design	
• Landscape/Human Use Design	
• Feasibility/implementability	
4. Proposed schedule to complete the project	15%
5. Related project experience and example reports	20%
6. Cost proposal	<u>20%</u>
	100%

LIST OF REFERENCES AND PREVIOUS STUDIES

(These will be provided electronically to RFP respondents)

- Sharon Steel Restoration Plan (USFWS, 1995)
- U.S. Army Corps of Engineers Draft Environmental Analysis, CWA Section 206 Aquatic Ecosystem Restoration Detailed Project Report (USACOE, 2003)
 - Include 2001 HEC-RAS Model & Data
- Tyler Allred Document Review Report (Review of USACOE, 2003), Feb 2013
- West Jordan City Trail Action Plan: A Plan to Complete the West Jordan-Sandy City Gap in the Jordan River Parkway (NPS-RTCA, 2012)
- UDWR Urban Fishery Design input

CITY OF WEST JORDAN
Request for Proposals:
Implementable, Phased Project Design (30%) for
“Big Bend” Habitat Restoration



SUBMITTED BY:



RIVER
RESTORATION.ORG

“We must begin thinking like a river if we are to leave a legacy of beauty and life for future generations” ~David Brower





October 2, 2014

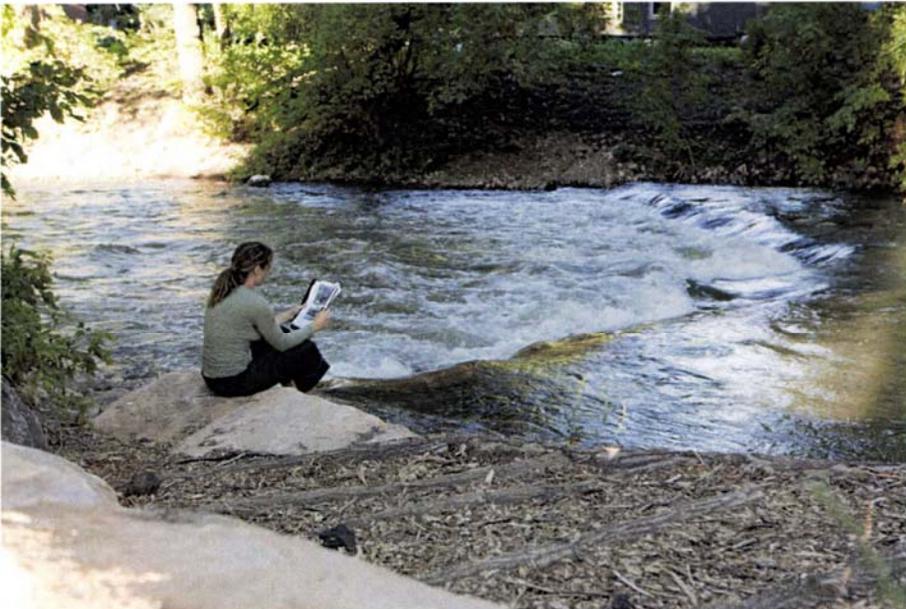
City of West Jordan
8000 S. Redwood Rd.,
West Jordan, Utah 84088

RE: Letter of Interest to Perform Consulting Services

Dear Steering Committee,

West Jordan City's strategic planning along the Jordan River corridor has been integral for connecting the community to the vast opportunities that abound in these natural areas. The Big Bend project is an exciting opportunity to create a legacy for generations of people and natural habitats for fish and migratory birds. Our Team of scientists and engineers has the technical capacity and the proven experience to quickly implement a natural areas treasure that integrates the human element. We have already conducted background studies and studied site conditions to bring expertise and efficiency to this project. Most importantly, we bring enthusiasm in our work because we are passionate stewards of the river environment. Our passion for being on the river, and appreciation of the natural environment, gives us intimate knowledge in enhancing recreation, and balancing those experiences with spaces for wildlife habitat.

RiverRestoration, Biowest, Allred Restoration, Intermountain Aquatics, and Peter+Newell Architects have formed a team to bring expertise in engineering, landscape architecture, geomorphology, hydrology, wildlife biology, architecture, project management and construction.



We have experience working together and our skill sets are complimentary and cohesive for restoration projects. Several rivers and natural areas throughout Utah have seen tremendous benefits from our Team's capacity to bring habitat restoration and urban community



PO Box 248, Carbondale, Colorado 81623. (970) 947-9568

interaction to the corridor. We are experienced in the design and build process. We strive for an aesthetic quality that functions naturally with unique urban spaces and iconic centerpieces. We design low-maintenance projects and support food sources and hiding spaces for a diversity of wildlife species.

We have the knowledge and available resources to meet the aggressive timeline associated with the Big Bend Project. We are familiar with the group of stakeholders and the project's multiple objectives. We will design solutions to meet stakeholder concerns, site constraints, and develop a feasible and phased approach for successful implementation. We are familiar with environmental permitting, and landscape design criteria to meet city, state and federal regulatory requirements.

Thank you for this unique opportunity to bring our passion to West Jordan City. We look forward to developing a shared vision for connecting your community to the Jordan River and transforming the Big Bend's degraded history into high quality refuge for people, fish and migratory birds.



Sincerely,

Jason Carey, PE,
Principal River Engineer

PROJECT TEAM AND QUALIFICATIONS

Our team has the experience, availability, and technical capacity to design and quickly implement a legacy project for the community, that maximizes restoration potential for the Big Bend Restoration (Project). We have office locations within the greater Salt Lake area and our team will be available and dedicated to the Project.

RiverRestoration



At RiverRestoration we are making rivers into better places. We have the insight to enhance the social, economic, and environmental values flowing in the river every day. Since our inception in 2004, we have been dedicated to science and engineering of river systems. We provide creative engineering, planning and technical support to improve ecological quality as well as outdoor recreation. We work with local governments, nonprofit organizations, natural

resource managers, and private developers. Our success has been in aligning diverse interests to create a holistic approach for restoration, conservation and enhancement of river systems. We are trained and practiced in sediment transport modeling, fluvial geomorphology, watershed science, landscape design, and open channel hydraulics. We combine these scientific skills with innovation and cutting edge design. Our success is measured not only on the large volume of projects the firm has seen through construction, but also in the function of those projects through floods and droughts. We have two office locations; Carbondale, Colorado and Ogden, Utah. Our Ogden office will be managing the Big Bend project with daily support from the Colorado office.

BIO-WEST, Inc.



Established in 1976, BIO-WEST is a full service environmental consulting firm that inventories, models, evaluates, and restores natural resource systems throughout the western United States. They are a regional leader in environmental consulting and problem solving with a widely acknowledged reputation for providing objective, credible services and superior products to a variety of agencies, organizations, and industries. To date, BIO-WEST has successfully completed more than 1,500 projects in the areas of water resources, river and floodplain monitoring and restoration, environmental compliance, vegetation, fisheries and wildlife biology, environmental planning, and landscape architecture.



In-house resources at BIO-WEST include professionals in fluvial geomorphology, hydrology, wetland ecology and permitting, landscape architecture and planning, fisheries biology, wildlife biology, hydraulic modeling, sediment transport, river restoration, hydrogeology, water quality, watershed sciences, and environmental permitting and compliance. With a staff of over 45 professionals, BIO-WEST provides expertise in all phases of environmental consulting and preparing and producing restoration designs, construction plans, and environmental documents. BIO-WEST retains the respect of federal and state resource agency professionals. It is extremely important for employees at BIO-WEST to maintain good working relationships with other agencies, in addition to our clients. They have a reputation for outstanding work, especially associated with ecosystem restoration in Utah.



Allred Restoration

For more than 15 years Allred Restoration has been conducting groundbreaking ecosystem restoration projects. By focusing on natural process and function, Allred provides true ecosystem restoration that creates quality habitat for the suite of animals and plants that inhabit important river and wetland ecosystems. Provided services include hydrologic, hydraulic, sediment transport, and geomorphic analyses, as well as channel and floodplain design and construction oversight. Allred Restoration can review complex biological data and integrate biological conclusions into ecologically and geomorphically integrated designs and ensure that all aspects of the design were properly incorporated on the ground by overseeing construction. Allred Restoration has completed design and construction oversight of river restoration projects with overall budgets in excess of \$45 million and direct restoration construction costs over \$12.5 million, spanning up to eight years of construction, and dealing with a diverse array of stakeholder issues.



Intermountain Aquatics



Intermountain Aquatics, Inc. (IMA) is an environmental consulting firm dedicated to integrating client goals with their knowledge of ecology to complete projects that preserve, maintain, restore or enhance western landscapes. They offer comprehensive environmental services to private, commercial and government entities. IMA's success is based on practical experience in planning, data



collection & analysis, report writing, permitting, design, construction and monitoring. In the past 15 years, IMA has grown to a staff of 14 individuals with expertise in wetlands, fisheries, wildlife, landscape planning, habitat restoration, water resource engineering, watershed assessment, water quality monitoring, native plant re-vegetation and integrated weed management.

Peters+Newell

Peters+Newell, P.C., Architects is a Salt Lake City based architectural practice that currently consists of two licensed architects. Peters+Newell has provided architectural services for a variety of projects including park/recreational developments; small to medium-sized commercial and mixed-use buildings; educational and religious facilities; and custom homes. They have extensive experience in



predesign services such as historical renovation, programming, feasibility studies, space planning, and as-built drawings. They have a special emphasis on sustainable materials, environmentally sensitive design, and energy efficient systems. Sustainable design principles frame the core of their practice and they apply green building concepts to all of their projects.

Team Technical Capacity Summary

- River Engineering
- Hydraulic Modeling (1D and 2D),
- Floodplain Analysis and Mapping,
- Sediment Transport Modeling,
- Geomorphology,
- Landscape Architecture,
- Architecture,
- Bank Stabilization,
- Fish Passage Improvements,
- Natural Channel Design,
- Urban River Interaction (river parks, trails, green spaces, recreation, and aquatic and riparian enhancements),
- Urban Fishery
- Aquatic Habitat Enhancements,
- Terrestrial Habitat Restoration,
- Wetland Restoration,
- River Recreation Enhancements,
- River Diversion Improvements,
- Regulatory Permitting,
- Evaluation of Water Quality, Non-point Source, and Total Maximum Daily Load,
- River and Riparian Habitat Monitoring,
- Grant Writing and Technical Support for Fund Raising

KEY PROJECT PERSONNEL

Project lead: Crystal Young – Project Manager, Hydrologist, RiverRestoration

Allocation: 14% Task 1, 40% Task 2, 24% Task 3, 26% Task 4, 19% Task 5, 20% Task 6



Mrs. Young has eleven years of experience in hydrology, fluvial geomorphology, construction management and landscape ecology. She has managed both large and small scale projects in settings that have ranged from sensitive environments to urban riverfronts. Crystal is detail oriented, and yet sees the big picture clearly. She has lead projects from concept development all the way to building stakeholder support, hydrologic modeling, plan development, permitting, construction supervision, and vegetation planting. Crystal managed the Ogden River Restoration Project and was on-site daily to provide design and build clarifications. In addition to design and implementation of restoration projects, Crystal has prepared watershed assessments, river corridor master plans, sediment transport analysis, TMDL reports, and designed and implemented physical habitat monitoring programs. Her technical insight and welcoming communication skills build coalitions of project proponents, natural resource agencies, landowners, and local, state, and federal governments. Her completion of work on time, on budget, and with high technical and aesthetic quality has been appreciated by past clients.

Consultant Team:Key Personnel

Jason Carey, PE – Principal River Engineer, River Restoration

Allocation: 2% Task 2 and 1% of Task 6

Mr. Carey has more than 16 years of experience in river planning and design. He is a leading innovator in the river engineering field, continually developing new solutions and higher function for rivers. His insightful approach is based on natural channel processes. Mr. Carey's experience encompasses river restoration design, river recreation enhancement, and fish passage. Mr. Carey is also providing expert witness testimony for in-channel water rights in Colorado. He has an MS with an emphasis in water resources engineering from the University of Utah. Mr. Carey is currently registered as a Professional Engineer in 11 states including Colorado, Utah, New Mexico, Michigan, Iowa and California. He is vice president of the River



Management Society Southwest Chapter and a graduate of the Colorado Foundation for Water Education Water Leaders program.

Ryan McGrath, PE – River Engineer, River Restoration

Allocation: 8% Task 1, 7% Task 2, 3% Task 3, 2% Task 5, 4% Task 6

Mr. McGrath has 17 years of professional consulting experience in water resources engineering and surveying. His water resources engineering experience includes storm water and floodplain management, river restoration, and building complex hydrologic and hydraulic models. Mr. McGrath's surveying experience includes hydrographic and river surveying, topographic surveying, and GPS for surveying and mapping (GIS) technologies. He has worked at the university level to instruct courses in water resources engineering and surveying. Mr. McGrath received his MS in water resources engineering from the University of Colorado and has been involved in water engineering projects in most of the western United States.



Scott Prins, EI – River Engineer, River Restoration

Allocation: 40% Task 2, 12% Task 3, 10% Task 6

Mr. Prins is an expert at multidimensional hydrodynamic modeling of complex natural channels with extensive experience in adaptive hydraulics, SRH-2D, and HEC- RAS. Mr. Prins effectively applies his hydraulic modeling and AutoCAD Civil3D expertise to stream restoration and river mechanics design. He obtained a BS in engineering from Calvin College in Michigan, and MS in engineering in stream restoration and river mechanics from Colorado State University.

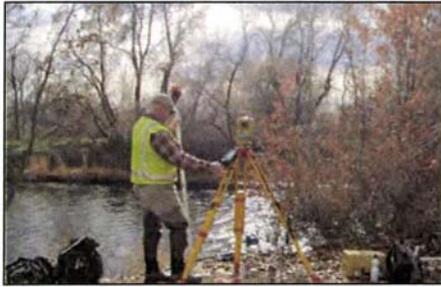
Hattie Johnson, LAIT – Landscape Architect, River Restoration

Allocation: 7% Task 3, 8% Task 6

Ms. Johnson is inspired by the goals of realizing the social, economic, and environmental values of our river systems. She received a Green Associate designation from the LEED Green Building Council. At RiverRestoration her responsibilities include landscape architecture, conceptual design and artistic rendering. She spent a good deal of time on rivers, which has cultivated a deep intuition for water and its intricate systems.

Quinn Donnelly, PE – River Engineer, River Restoration

Allocation: 8% Task 1, 7% Task 2, 2% Task 3, 3% Task 5, 4% Task 6



Mr. Donnelly is a water resources engineer with 8 years of experience working on a broad range of water resource projects. His experience includes stream channel and bank rehabilitation, watershed hydrology, and fish passage. Mr. Donnelly has a BS in civil engineering from the University of Virginia, an MS in civil engineering with a water resources emphasis from the University of Washington, and a professional certification in River Restoration from Portland State University.

Tyler Allred, Project Manager/Geomorphologist, Allred Restoration

Allocation: 4% Task 1, 6% Task 2, 10% Task 3, 15% Task 4, 5% Task 5, and 6% Task 6Mr.

Allred is the owner and President of Allred Restoration, Inc., a Utah Corporation. He has a BS in watershed science with a watershed management emphasis and an MS in watershed science with a fluvial geomorphology emphasis, both from Utah State University. He has also completed PhD coursework at the University of Colorado. Mr. Allred has planned, designed and overseen construction on many of the premier ecosystem restoration projects in the western United States.

Mr. Allred has taught river restoration and sediment transport courses at Utah State University for 10 years, instructing a variety of professionals and students in a design philosophy that emphasizes the restoration of natural processes and self-sustaining ecosystems. Mr. Allred has extensive experience in all aspects of aquatic ecosystem restoration and has worked closely with agency personnel at nearly all levels of government, from local to federal. Mr. Allred is an experienced hydrologist who has developed groundbreaking methods for assessing instream flow requirements in rivers and streams, is an experienced hydraulic modeler and skilled in both the measurement and computation of sediment transport in rivers and streams. Mr. Allred has completed large restoration projects in a wide variety of physical settings and is currently overseeing Reclamation crews working on a large design and build of a 5,000-acre wetland restoration known as the Lower Duchesne River Wetland Mitigation Project.



Eric McCulley, Senior Scientist, Watershed Ecologist

Allocation: 13% Task 1, 4% Task 3, 5% Task 4, 11% Task 5, 1% Task 6

M.S. Watershed Science (expected 2014), Utah State University
B.S. Geology, James Madison University Eric has been planning, implementing, and following up on numerous ecological restoration and wetland mitigation projects along the Jordan River for more than 10 years. His experience along the river ranges from assessment of ecological integrity of wetlands to migratory bird inventory to implementation of the most significant restoration along the river, the Legacy Nature



Preserve. He has provided guidance to decision makers and their staff on optimizing use of project funds for maximum ecological and societal benefit. He is also very familiar with the Big Bend site, having recently completed pilot plantings under the USEPA 5-Star Restoration grant currently managed by the Jordan River Commission (JRC). Eric is also leading a community effort on the lower Jordan River that is bringing schools, agencies and individuals together to improve the conditions along this degraded reach of river. He also recently led a Streambank Bioengineering Workshop with the JRC in March.

Kenton A. Peters, JR., A.I.A., LEED-AP, Partner & Principal Architect, Peters+Newell

Kenton is on the team for future phase involving bird viewing structure and available for consult. Kenton Peters is the senior partner in Peters+Newell Architects. Kenton is a recognized leader in environmental architecture having designed sustainable buildings throughout the state of Utah and the western U.S. These projects integrate many elements of sustainable design including alternative materials (straw bale, rammed earth, concrete composites, recycled products, sustainable woods), passive and active solar concepts and technologies, daylighting, high levels of energy efficiency, natural ventilation methods, earth sheltered design, low and non-toxic building materials, overall ideas of resource efficiency and sensitive siting of buildings in pristine landscapes.

Darren Olsen – Lead Hydrologist, BIO-WEST

Allocation: 2% Task 1, 2% Task 3, 2% Task 6

Mr. Olsen is BIO-WEST's Watershed Sciences Section manager and oversees all of the corporation's hydrology, geomorphology, and watershed sciences projects. He is a principal of the company and a member of BIO-WEST's senior management team. Mr. Olsen has a BS in resource conservation and an MS in forestry from the University of Montana, has completed coursework for a PhD at Utah State University, and has 23 years of professional experience conducting studies related to stream and watershed restoration. Mr. Olsen's training and experience in fluvial geomorphology, stream hydrology, and riparian ecology give him a unique understanding of channel processes, riparian vegetation communities, and the changes that result from hydrologic and/or channel alterations. Many of his restoration projects have focused on recovery of an endangered species, reestablishment of a functioning riparian ecosystem, or the provision of mitigation credits for unavoidable environmental impacts. Mr. Olsen is currently managing the Provo River Delta Restoration/EIS Project and the Lower Duchesne River Wetland Mitigation Project.



Bob Thomas, PWS – Wetland Scientist, BIO-WEST

Allocation: 18% Task 1, 1% Task 3, 7% Task 4, 1% Task 6

With more than 14 years of natural resource and environmental consulting experience within state, federal and private business sector, Mr. Thomas specializes in wetland and stream ecology. His background includes delineating wetlands, coordinating wetland and environmental



permitting pursuant to Section 404 of the Clean Water Act, designing and implementing wetland mitigation measures, and assessing potential species occurrence. Mr. Thomas is also knowledgeable about wildlife and fisheries biology and management, and has worked extensively with riparian- and wetland-vegetation planting, threatened and endangered species. He

is a professional wetland scientist (PWS #1924) certified by the Society of Wetland Scientists and holds a BS in aquaculture, fisheries, and wildlife biology from Clemson University.

Christopher Sands, ASLA, AICP – Senior Landscape Architect/Environmental Planner, BIO-WEST

Allocation: 8% Task 1, 10% Task 3, 15% Task 4, 43% Task 5, and 14% Task 6

Mr. Sands is a principal, project manager, senior planner and landscape architect, environmental analyst, and recreation/visual resource management specialist for BIO-WEST. His studies emphasize natural resource management, resource management planning, recreation planning, and land use planning throughout western North America. Mr. Sands possesses 25 years of professional experience. Mr. Sands creates landscape designs that



allow for restoration of a site's natural features, such as restoring stream alignments, reestablishing floodplain connections, and enhancing wetlands. He holds an MLA in landscape architecture and environmental planning from Utah State University and a BLA in landscape architecture from the University of Georgia. He is a licensed landscape architect (Utah no. 288588) and certified planner (no. 126168).

Wes Thompson, Professional Geologist, BIO-WEST

Allocation: 14% Task 1, 40% Task 2, 24% Task 3, 26% Task 4, 19% Task 5, and 20% Task 6

With 26 years of professional experience, Mr. Thompson is the BIO-WEST Geology, Hydrogeology, and Remediation Section manager and a principal of the company. He is a registered professional geologist in Utah (5540557-2250) and Wyoming (PG-2931) and a Utah-certified environmental consultant (CC-0070). Mr. Thompson's responsibilities include project management, hydrogeologic investigation, erosion-control planning, and storm water management. Mr. Thompson holds an AAS in geology and a BS in composite sciences with an emphasis in geology.

Sandy Davenport – Landscape Architect and CAD Specialist, BIO-WEST



Allocation: 9% Task 1, 20% Task 3, 11% Task 4, 11% Task 5, and 25% Task 6

With more than 20 years of professional experience, Ms. Davenport’s skills include site planning, planting design, irrigation design, grading plans, recreational planning and management, cartography, and construction documents. Ms. Davenport received a BLA in landscape architecture and planning from Utah State University and completed coursework for an MLA in landscape architecture and environmental planning. She is a professional, licensed landscape architect (6677105-5301).



Glen Busch – GIS Analyst and Planner, BIO-WEST

Allocation: 1% Task 1, 1% Task 3, 2% Task 4, 2% Task 5

Mr. Busch has more than 13 years of experience in GIS analysis, modeling, data management, and environmental planning. His work experience includes managing and manipulating spatial and tabular data to meet client standards and specifications. Mr. Busch holds an MS in bioregional planning and a BS in forest management from Utah State University.

Mike Sipos, Senior Wildlife Biologist, BIO-WEST

Allocation: 3% Task 1, 1% Task 3, 5% Task 4, 1% Task 6



With more than 19 years of experience conducting biological investigations, Mr. Sipos specializes in wildlife experiment design, analysis, modeling, habitat assessments, and wildlife and vegetation surveys. He has conducted numerous studies of avian and herptile communities throughout the southwestern United States. Mr. Sipos possesses thorough knowledge of the NEPA process, having contributed to numerous biological assessments, biological evaluations, categorical exclusions, Environmental Assessments, and Environmental Impact Statements. Mr. Sipos holds an MS and a BS in wildlife science from New Mexico State University.

Mary A. Cheney, Wildlife Biologist, BIO-WEST

Allocation: 7% Task 1, 1% Task 3, 3% Task 4, 1% Task 6

Ms. Cheney is an adept researcher, report writer, and statistical analyst. Her field experience includes completing bird counts; monitoring bird nests; mist netting and banding birds, including passerines and raptors; collecting noise-level data; identifying and mapping vegetation; and inventorying special status species. Ms. Cheney has participated on a number of NEPA studies and resource management plans. Ms. Cheney received a BS in environmental studies from Utah State University.

Aaron Crookston, Planner and GIS Specialist, BIO-WEST

Allocation: 1% Task 1, 1% Task 3, 2% Task 4, 1% Task 5, 1% Task 6

With 7 years of professional experience, Mr. Crookston is a proficient AutoCAD user and certified ArcGIS technician. He is experienced in site planning, planting design, grading design, and construction documents. Mr. Crookston has served as field crew for restoration studies and produced and implemented revegetation plans, assisted with trail and parking layout and plant propagation projects. He holds a BLA degree in landscape architecture from Utah State University.

Dustin Lofthouse, Hydrogeologist, BIO-WEST

Allocation: 5% Task 2

Mr. Lofthouse is a hydrogeologist specializing in site investigation and remediation. He is a Utah-certified groundwater and soil sampler (GS-1497), Utah-licensed commercial pesticide applicator (4001-13730), and Utah-certified UST remover (TR-0411). Mr. Lofthouse’s education includes geochemistry, mineralogy, geomorphology, sedimentology and stratigraphy, structural geology, surveying, groundwater geology, and geology field methods. Mr. Lofthouse has a BS in geology from Utah State University.



Project Approach

Our project approach is to maximize the habitat and recreation values of the Big Bend site as quickly and efficiently as possible. Our track record shows that we can get major projects quickly implemented. The combined experience of our team in completing projects in the ground is unparalleled. Our approach is not another study for the shelf. Our approach is to efficiently use and collect data and reports to make informed decisions and reduce risk for the timely implementation of the project.

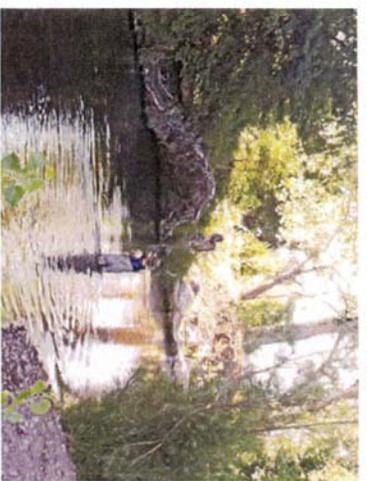
The Big Bend project can have state-wide significance in preserving and enhancing open space for migratory birds. By appropriately developing a keystone recreation area for anglers, bird watchers, trail users, education, and river interaction, the City of West Jordan can transform this site into a community treasure.

We envision landscaping natural barriers to delineate the migratory bird wildlife areas and the recreational trail system. We envision focal areas to concentrate recreational use and facilitate educational opportunities. We envision the North Jordan Canal enhanced with natural water features that functions with existing water rights and connects to the urban fishery and other natural features. We envision a river recreation interface that connects the community to the shores of the Jordan River. We envision an enhanced urban fishery that provides both pond and river fishing opportunities. We envision an organic and natural product that has architectural elements to enhance aesthetics. We envision a design that minimizes long-term maintenance efforts for the riparian and wildlife areas, and recreational trail and interpretive areas.



'Big Bend' Habitat Restoration Concept

West Jordan, Utah



WORK PLAN

Task 1 Information collection, assessments and surveying:

Substantial investigation has already occurred at the Big Bend site with studies of the existing and historical conditions at the site. These studies focus on vegetation community, aquatic species, avian species, soil types, cultural resources, river alignment, and sediment, hydrographic, and topographic surveys.



Information that we have reviewed includes, but is not limited to:

- West Jordan Utah Aquatic Ecosystem Section 206 Draft Detailed Report and Environmental Assessment; USACOE Nov. 2003
- Two-Dimensional Streamflow Simulations of the Jordan River, Midvale and West Jordan, Utah; USGS SIR 2011-5043
- Sharon Steel Restoration Plan and Concept Documents; USFWS 1995,1997
- Groundwater Modeling reports for Salt Lake Basin and Sharon Steel Site
- FEMA HEC-RAS model
- FIS Study for West Jordan City and FIRM map
- Utah GIS Aerial Photography
- Tracy Aviary Bird Survey, 2013-2014
- Big Bend Fact Sheet, RTCA 2014
- Big Bend Restoration Design Urban Fishery Considerations; USFWS Notes, 2014
- Jordan River TMDL
- Zoning Ordinances and Building Codes (relevant to boardwalks, viewing structures, hillocks, and other features).



Our design team will perform a site investigation and survey to further our intimate knowledge of the site that translates directly into efficient design. Our investigation will fill data gaps and include topographic and hydrographic survey, utility and boundary locations, geomorphic and hydraulic conditions, on-site materials, and identification of the physical constraints at the site. Our investigation will verify existing vegetation and wetland delineation

surveys. The existing conditions of the project area, as detailed by the design team, will be developed into AutoCAD and ArcGIS compatible formats.

Task 1 Deliverables:

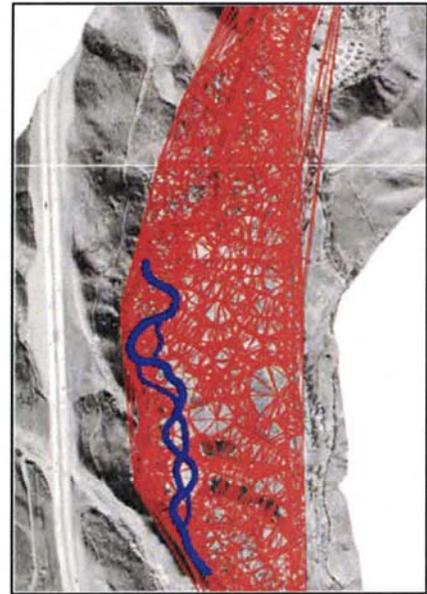
- Technical Memorandum to summarize our site investigation and identify opportunities and constraints for concept alternative development.
- Topographic map of project area with 1 foot contours, provided in AutoCAD (.dwg) and Adobe (.pdf) formats.

Task 2 Hydrologic Assessment and Modeling, Construction Feasibility Planning



We will augment the existing FEMA HEC-RAS model with an existing conditions model to evaluate site specific hydraulic parameters (ie. bank and channel shear stress, velocity, hydraulic head, and

water surface elevations). This model will provide a base to evaluate water surface elevations and hydrologic connectivity for wetlands, DWR pond, maintain irrigation uses, and evaluate sediment transport conditions and flood event scenarios.



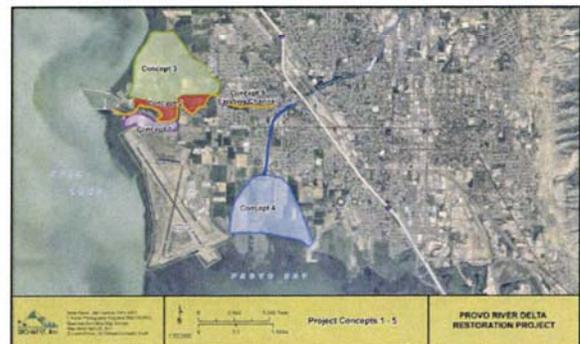
Existing irrigation uses and water rights available for the project shall be evaluated. The design shall ensure that these water rights are maintained with proposed project modifications. We will evaluate a hydrologic design plan for the community fishery component consistent with UDWR guidance. We will assess project impacts on water quality in the Jordan River, addressing the findings described in the July 27, 2012 Draft Jordan River TMDL Water Quality Study.

Task 2 Deliverables:

- Technical Memorandum to summarize our hydrologic and hydraulic investigation and identify opportunities and constraints for each of the Concept Alternatives in Adobe (.pdf) format.

Task 3 Preliminary Design Alternatives

Our design team’s principle objective will be to maximize both the aesthetic and wildlife values within a sustainable restoration project. The landscape and architectural design shall be unique to the Project area and carefully planned to connect the community to the Jordan River and adjacent



wildlife areas. The design shall concentrate amenities to reduce public disturbances into wildlife areas. The design shall focus on meeting the goals and objectives outlined in the Sharon Steel Restoration Plan, maximize the wildlife potential while providing for sustained wetland and river function. Bonneville cutthroat trout are found in Jordan River, we will design for physical habitat to benefit native fish, gravel-spawning beds, riparian cover, and bank stability. Cultural resources, including the Jordan Canal will be protected in place.

Task 3 Deliverables:

- Technical Memorandum to summarize each of the Concept Alternatives and Cost Estimates in Adobe (.pdf) format.
- Three Preliminary Design Drawings (20%) showing Planview maps, typical cross sections, and details in Adobe (.pdf) format.

Task 4 Permitting

We will efficiently coordinate with state, federal, and local regulatory authorities to prepare plans in accordance with all permits required for the restoration project. We will disclose discharge of materials below the ordinary high water line, identify care of water and best management practices, and all other requirements for a 404/401 joint stream alteration permit.

We will provide cut and fill quantities, SWPPP, and BMP and Care of Water diversion details to accompany the plans. Provide documentation for FEMA compliance and coordinate with URMCC and DWR and assist with necessary permit documentation to support biological science components.

Task 4 Deliverables:

- Technical memorandum report, and design drawings and details to support permit application in adobe (.pdf) format.

Task 5 Meetings, Project Coordination and Presentations

Team will prepare monthly update reports, conduct two meetings with DWR staff, attend two public meetings, attend one kick-off steering committee meeting and two other steering committee meetings to present Concept Alternatives, and 30% Design.

Team will also attend the steering committee kick-off meeting, and comment on meeting notes. Attend URMCC meeting to coordinate NEPA and prepare a brief memo to summarize meeting.



Task 5 Deliverables:

-Monthly update memorandum

Task 6 30% Design Plans and Specifications

Our team will prepare 30% design and build drawing plans and technical specifications. The 30% documents may include plan views, profiles, details, erosion control plan, and technical specifications for landscape and restoration. Based on 30% design we will prepare an opinion of probable construction costs and timeline.



The format of the 30% drawings will be in a “phased” approach. Included in the design approach will be costs considerations as well as phasing for time sensitive components. The goal will be to ensure the stability of the site between phases.

The 30% design plans and specifications will include the following features:

- grading plans for wetlands, shore lay-backs, terracing, hillocks/berms, and site earthwork
- landscape plan for the DWR fishing pond, recreational use areas, wildlife areas, diversion improvements, trail connections, recreational and urban interface components, and ADA access locations.
- planting plan to maximize invasive species control, support planting success, and to minimize future maintenance.

Task 6 Deliverables:

- 30% Design Alternative including phased approach.
- 30% Design Drawings and Specifications

Cost for Design Services

RiverRestoration							
1-Oct-14	Task1	Task2	Task3	Task4	Task 5	Task 6	Total Hours
	Site Invest.	H&H	Prelim.Design	Permit	Meetings	(30%) Design	
POSITION	hours	hours	hours	hours	hours	hours	
Principal Engineer		8				8	16
Engineer P.E.		32	24		8	40	104
Senior Landscape Architect	16		24	16	64	60	180
Senior Geomorphologist	8	12	24	16	8	24	92
Senior Hydrologist	4		4			8	16
Engineer Field/MS		120	40			60	220
Project Manager/Watershed Scientist	40	120	80	40	40	120	440
Wildlife Biologist	8		4	8		8	28
Senior Scientist	40		12	8	24	8	92
Wetland Scientist	56		4	12		8	80
GIS Analyst	8		8	8	8	8	40
Landscape Architect	24		56	16	24	120	240
Landscape Designer			40			80	120
CADD specialist	8		24	4	4	80	120
Wildlife Technician	36		4	8		12	60
Clerical	4		4	4	8	4	24
Hydrographic Survey Crew/Equipment	24						24
TOTAL HOURS	276	292	352	140	188	648	1896

Big Bend Restoration Schedule

1-Oct-14	RiverRestoration City Council Award	22-Oct-14
Task 1	Site Investigation	Oct. 22-Nov. 14th, 2014
Task 2	H & H study	Nov. 17th-January 16th, 2014
Task 3	Preliminary Design	Nov. 17th-January 30th, 2014
Task 4	Permitting	March-May, 2105
Task 5	Meetings	
	Kickoff Meeting	November, 2014
	UDWR Meeting	November, 2014
	Stakeholder Meeting	January, 2014
	Council Presentation	February 11th, 2015
	Stakeholder Meeting	March, 2015
	UDWR Meeting	March, 2015
	Council Presentation	June, 2015
Task 6	30% Design	March-June, 2015

Selected Project Experience and References

Reference	Contact Information	Page
Paul Burnett, Trout Unlimited	5279 South 150 East Ogden, UT 84405 (801)781.7180 pburnett@tu.org	A1-A2
Randy Waterman, Project Coordinator	24414 Hwy 13 Elkader, IA 52043 (536)245.1442 rwaterman@cjmoyna.com	A3
Frank Hammond, Ogden City Engineering	2549 Washington Blvd, Ste. 760 Ogden, UT 84401 (801)629.8992	A4
Clint Ormond, Project Manager	(435)230.0745 oci.clint@gmail.com	A5
Jocelyn Mills, AICP Senior Planner Frisco, CO	P.O. Box 4100 Frisco, CO 80443 (970)668.5276	A6
King Lloyd, Asst. City Engineer	101 W. 8th Street Glenwood Springs, CO 81601 (970)945.5375	A7
Gregg Barrie, Landscape Architect	1309 Elkhorn Dr. Vail, CO 81657 (970)479.2158	A8



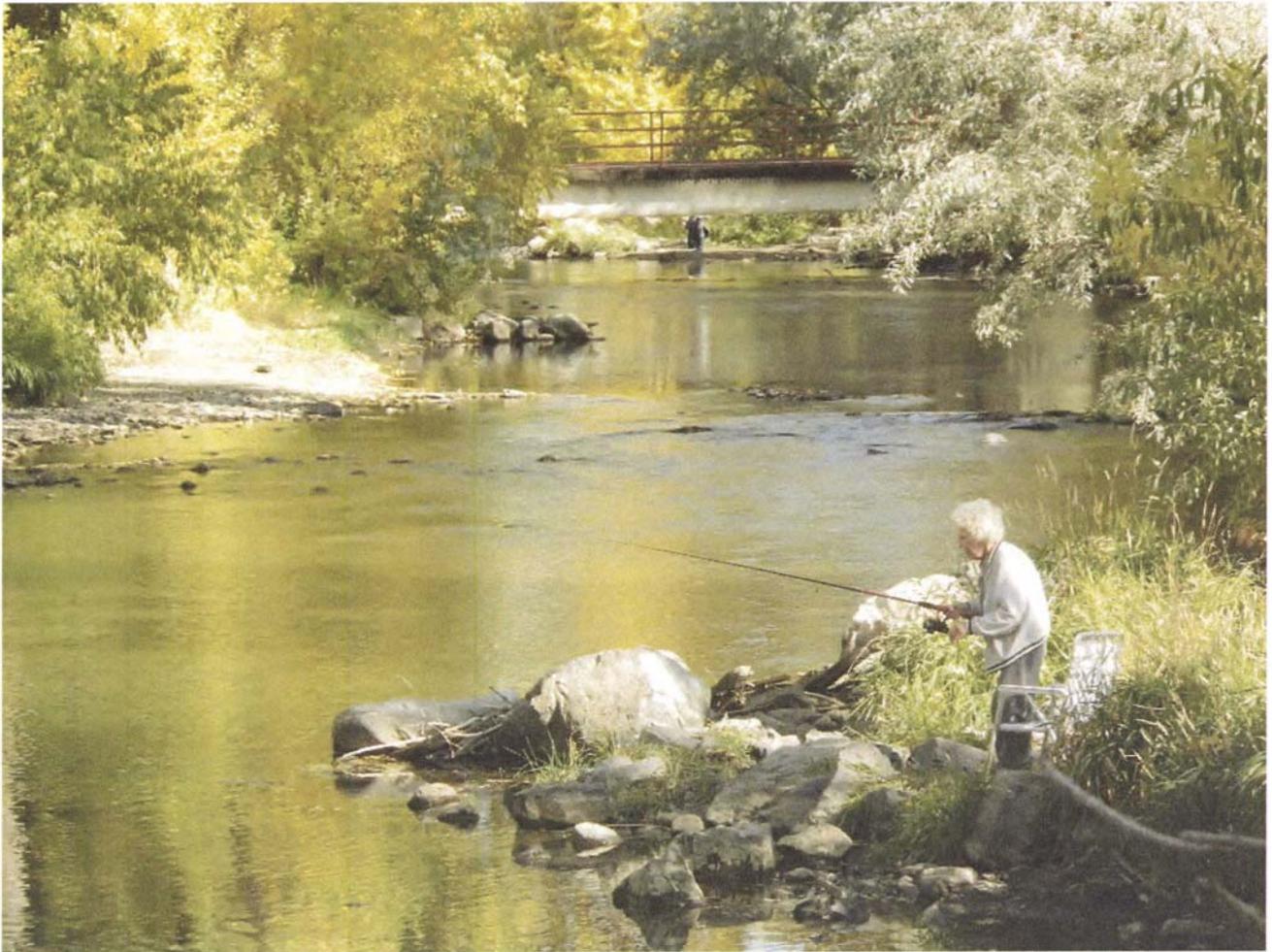
RELEVANT PROJECTS

Project Name/ Location	River Restoration	Landscape Architecture	Urban Interface	Pedestrian Trails	Bird Refuge/ Flyway	Natural Areas	Overlooks/ Educational Signs	Fish Habitat Enhancement	Irrigation Diversification	Flood Assessment	Wetland Restoration	Construction/ Design & Build
Ogden River Restoration	X	X	X	X	X	X	X	X	X	X	X	X
Helper River Restoration, UT	X	X	X	X	X	X	X	X	X	X	X	X
Elakder Riverfront Development, IA	X	X	X	X	X	X	X	X	X	X	X	X
Weber Diversion Vertical Slot Fishway, UT								X	X			X
Gordon Creek Fish Pass, UT	X		X		X	X	X		X	X	X	X
Riverdale Flood Damage Repair, UT		X	X	X	X	X	X		X		X	X
Canon City Whitewater Kayak and Recreation Park, CO	X	X	X	X		X	X		X		X	X
Black Gore Creek Capital Projects, CO	X	X	X	X	X		X		X		X	X
Grand Rapids River Restoration, MI	X	X	X	X		X	X		X			X
Eagle River Recreation Enhancement Plan, CO	X	X	X	X		X	X	X				
Yampa River Ditch Consolidation, CO	X			X	X	X	X	X		X		
Pinnacles National Monument												
Revegetation, UT					X							X
East Canyon Creek-Swaner Nature Preserve, UT	X										X	X
J Lazy H Ranch, ID				X						X	X	X
Redwood Natural Area, UT	X			X	X	X	X	X		X	X	X
Jordan River Parkway, UT		X	X	X						X	X	X
Parleys Historic Nature Park, UT	X	X	X	X	X	X				X	X	X
Provo River Restoration, UT	X			X	X	X	X			X	X	X
Lower Duchesne River Wetland Mitigation Project, UT	X			X	X	X	X			X	X	X



CITY OF WEST JORDAN
Request for Proposals:
Implementable, Phased Project Design (30%) for
“Big Bend” Habitat Restoration

APPENDIX



SUBMITTED BY:





Paul Burnett
Director /Weber River Home Rivers Initiative

5279 South 150 East
Odgen, UT 84405
801-781-7180
e-mail: pburnett@tu.org

18 September 2014

To whom it may concern:

On behalf of Trout Unlimited, I write in support of RiverRestoration as a design contractor for the Big Bend Restoration project on the Jordan River. I have worked directly with RiverRestoration on a number of restoration projects throughout the Weber River Basin, including:

- Ogden River Restoration
- Gordon Creek Fish Passage
- Thurston Ranch Restoration (Weber River)
- Lower Weber Diversion, High Flow Fish passage

Throughout all of those projects, RiverRestoration staff have provided unparalleled expertise on river processes and have a thorough understanding of rivers and design. They have provided thoughtful and unique design elements, including those on the Ogden River, and Gordon Creek. They have provided professional consultation, always responding to emails and phone calls. They have also provided knowledgeable construction oversight during project execution with an understanding of project costs and sequencing. All project deadlines have been met, and project communication and consultation has been excellent. Most importantly, RiverRestoration brings a strong river ethic to their restoration designs, which is above and beyond that of a standard civil engineering consultant firm.

Examples of unique design elements in their projects have included:

- Stormwater Finishing areas on the Ogden River, which have provided important off-channel habitat for fish and wildlife in the urban setting of the Ogden River, while cleaning stormwater runoff before it enters the river.
- Elevated invert for the high flow fish passage project at the Lower Weber River Diversion, providing a unique low-maintenance fish passage solution.
- Project design elements on the Ogden River, which provided a diversity of design elements, for users representing broad interests, including angling, water recreation,

and hiking. These elements included hardened access points, a wave pool, pathway setbacks.

- A sleeved waterline under the Gordon Creek fish passage restoration project provides a way to replace the waterline in the event of failure without needing to excavate the stream and impact the project.

I believe RiverRestoration will provide excellent consultation and design for the Big Bend restoration project. Please feel free to contact me at the phone number above with any questions.

Kind regards,

A handwritten signature in black ink, appearing to read "Paul Burnett", with a long horizontal flourish extending to the right.

Paul Burnett
Trout Unlimited



24412 Hwy 13
Elkader, Iowa 52043
PH: (563) 245-1442
FAX: (563) 245-1443

Moving the Earth Today for a Better Tomorrow

To whom it may concern:

My name is Randy Waterman and I have been asked for a letter of recommendation for RiverRestoration.org. I have worked for C. J. Moyna and Sons, Inc. for the past 5 years. I am currently a part time Project Coordinator after retirement from the Ia. Depart. of Transportation after 40+ years in Highway and Bridge Construction Inspection. C. J. Moyna and Sons, Inc. is an Earth Moving / Rock Quarrying General Contractor from Northeast Iowa.

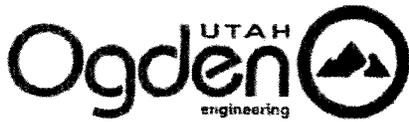
Jason Carey and his firm RiverRestoration were the project engineers for the Elkader Small Dam Modification project on the Turkey River for the City of Elkader, Iowa. C. J. Moyna and Sons, Inc. was the General Contractor for this project.

The project was innovative and complicated. The plans were clear and accurate, which was of great help since this was are first project of this type and with Jason being on site during the critical stages of the project was very helpful. Jason communicated well with the suppliers, equipment operators, construction managers and quickly solved problems and answered questions with reasonable and straight forward logic. The project was constructed in a timely manner, within budget and without design induced delays. I would recommend RiverRestoration for your river design projects and we would look forward to constructing more of their projects.

Sincerely,

A handwritten signature in cursive script that reads "Randy Waterman".

Randy Waterman
Project Coordinator
rwaterman@cjmoyna.com
Cell (563)880-2951



Department of Public Services
Division of Engineering
Justin Anderson P.E.
City Engineer

RiverRestoration.org
P.O Box 2123
Glenwood Springs Co. 81602

July, 5, 2012

Attention: Jason Carey P.E.

Ogden River Restoration Project

This letter is to commend RiverRestoration.org Staff for their work on the Ogden River restoration Project.

The Ogden River Restoration Project is a multifaceted, 5.8 Million Dollar, project that implements river restoration measures to improve stream health functions in a 1.1 mile stretch of the Ogden River. The Project Purpose is to construct in-stream habitat features and restore riparian, aquatic, geomorphic, and channel functions along a blighted section of the Ogden River thereby improving river health. This is accomplished by enhancing the riparian corridor, modifying the channel, creating interior floodplains, stabilizing banks, installing stormwater finishing areas, creating wetlands, removing extensive concrete and litter and installing concentrated recreation pathways.

As Project Manager for Ogden City on the project, I have found the design work exemplary, the assistance of Staff "on site" in the construction phase, working with the Contractor and myself, very knowledgeable, they have been receptive and responsive to suggestions on design changes and enhancements, and very professional in the coordination efforts in working with the agencies and private sector in securing the full funding of the project.

Ogden City has been fortunate to be able to secure full funding of the project and RiverRestoration.org has played a large part in that effort by presenting the project and it's benefits to individuals and Organizations.

Based on the work on the Ogden River Project, I would recommend them highly on other similar projects.

A handwritten signature in black ink that reads "Frank J. Hammond". The signature is fluid and cursive, with a large loop at the end.

Frank J. Hammond, Principal Engineer

Ogden City Engineering

801-629-8992

Fax 801-629-8994

ORMOND CONSTRUCTION INC.

Willard, Utah

To whom it may concern.

My name is Clint Ormond and I have been asked for a letter of recommendation for River Restoration .Org. I have worked for Ormond Construction for the last twenty years. I am currently a project manager and production coordinator. Ormond Construction is a general contractor in northern Utah that specializes in earthwork, pipe line work, and grade work. I have been working on the Ogden River Restoration Project with River Restoration.Org's Jason Carey and Crystal Young for over two years, since January 2009. The project involves removing litter, debris, concrete, and overfill from the banks of the Ogden River, replacing the concrete with boulders and/or restoring slopes that can be protected with native riparian vegetation, adding riparian storm water return areas, and building trails and paths to facilitate public access to the river for recreation.

The thing that stands out most in my mind about the people at River Restoration and their designs for me is that the designs are balanced. Many engineers try to make rivers into concrete or boulder lined canals. River restorations design uses hard boulder work where necessary but also uses soft landscape whenever possible to provide erosion protection. By using gentle sloping banks with vegetation instead of steep hard banks the design allows for a much more aesthetically pleasing and useful area, but also dissipates energy along the banks. Crystal and Jason continue to impress me with their knowledge concerning the hydraulic forces at work in the river, but even more with their knowledge concerning the ecosystem that relies on the river. They approach each individual section with an approach that stabilizes the banks while still providing an environment for plants and habitat for the animals along the river. Their designs are well thought out without being excessively complicated. Both Crystal and Jason would take the time to explain to our personnel why the work needed to be done in a specific way, helping them understand the function of the features. The fact that they would talk to our crews instead of talking down to them helped with morale, improved the crew's sense of pride in their work, and ultimately improved the overall quality of the project. They aren't afraid to get wet or dirty, I have seen both of them put on chest waders and wade into waist deep freezing waters in the middle of winter to help verify grades or ensure that in channel features are constructed solidly enough to withstand high velocities they will be exposed to. Jason and Crystal were open to suggestions and would modify the design facilitate construction whenever needed and were always available to provide clarification or more detailed drawing whenever we needed them.

The restoration work was tested beyond design capacities in the spring of 2010 with river flows that exceeded the 100 flood levels by more than 10% for more than a month straight. Even though the vegetation hadn't time to establish the specified temporary measures and channel/ bank design withstood the flood level flows with a very minimal damage, most of which was due to large trees that were blown down in very high winds in the same spring. The city storm water personal noticed that the new channel handled the very high flows much better than the old one did, the areas that used to be a concern with flows toping the banks were now safely below the top of bank by a comfortable margin. The Ogden river corridor used to be an eyesore but now it is becoming a popular place for outdoor photography.

I am proud to have been a part of the Ogden River Restoration project and look forward to working with Jason, Crystal, and the rest of River Restoration.Org's people again. If I can be of further assistance feel free to call or Email me.

Sincerely,

Clint Ormond

Email oci.clint@gmail.

Cell (435)230-0745

Fax (435)363-0321

TOWN of FRISCO

P.O. Box 4100 • Frisco, Colorado 80443

August 19, 2010

To Whom it May Concern:

On behalf of the Town of Frisco, I am pleased to recommend River Restoration Frisco hired Jason Carey and River Restoration to design and oversee implementation of the Town's river enhancement and whitewater park project on Ten Mile Creek.

The project was complex. Ownership of the land surrounding the creek included the State of Colorado, the Town of Frisco and a private residential condominium complex. In the design phase, approvals from the state and the condo owners were necessary and River Restoration was able to assist Town staff in getting to common ground. They also helped the Town to navigate through all of the complexities to gain approvals from the Colorado Division of Wildlife, the Colorado Department of Transportation and the Army Corps of Engineers. During the course of construction of the project when an unforeseen event occurred, which could have ended the project, Jason and his team's professionalism and quick resolution ensured the river enhancements and whitewater park were successfully completed.

The key to the success of the project was River Restoration's whole system approach. Their expertise and knowledge of rivers, kayak parks, restoration, understanding of the required Army Corps of Engineers permitting process, and partnering with an excellent and skilled company for construction of the park itself enabled the project to succeed even though it had a couple of unforeseen events occur during the process. Throughout the entire process, River Restoration maintained a good working relationship and clear communication with all parties involved.

The Town is very pleased with Frisco's whitewater park. It is a very popular river kayaking wave for residents and visitors. The project area along Ten Mile Creek also now is a well used and easily accessed fishing spot. The Town of Frisco highly recommends River Restoration to any potential client.

Sincerely,



Jocelyn Mills, AICP
Senior Planner



February 8, 2011

Jason Carey
River Restoration
PO Box 2123
Glenwood Springs, Co. 81602

Ref: Bridge Pier Stabilization

Dear Mr. Carey;

This letter is a follow up to the recently completed bridge pier stabilization project. This project was done in cooperation with the Army Corp of Engineers as a Section 14 , shoreline protection project. The supporting bridge piers over the years had experienced some river channel scour, which would eventually lead to the possible failure of the structure without some attention to it.

The Army Corp developed the plan to investigate the extent of the scour and to abate any future problems that might arise from high flows in the Roaring Fork River. It was the City's responsibility to permit the project, presumably because it is our bridge. The 404 permitting was handled by another office of the Army Corp and because the Roaring Fork River is a Gold Metal Water Fisheries, there were some very restrictive conditions put on the project regarding the dewatering of the work area. The contractor for the Army Corp mobilized and was beginning the project only to learn that the 404 permit and their approach to being compliant with it was not going to be appropriate for this project and work was suspended.

Upon meeting with the contractor and discussing their proposed approach and regroup to the problem, I suggested they contact you for advice. I'm certain that only through your efforts and experience the project was put back on track with a dewatering plan that was approved by all the State and Federal agencies. The Colorado Division of Wildlife stipulated a very narrow window for allowing disturbance to a river channel during the low flow periods, which is what was needed for this project to be accomplished in a reasonable fashion. Through your meetings and negotiations they agreed to open the window wider to facilitate the time frame needed for this project.

Feel free to use me as a reference should you need any in the future and thank you for your assistance with this project.

Respectfully submitted,

King Lloyd, Asst City Engineer

ENGINEERING DEPARTMENT

101 WEST 8TH STREET, GLENWOOD SPRINGS, CO 81601

(970) 384-6435 (970) 945-8582 FAX WWW.CI.GLENWOOD-SPRINGS.CO.US



1309 Elkhorn Drive
Vail, Colorado 81657
970-479-2158
Fax: 970-479-2166
www.vailgov.com

Department of Public Works & Transportation

September 1, 2010

To Whom It May Concern;

Over the past four years, I have had several opportunities to work with Jason Carey and his staff at RiverRestoration.org. On each project, I have been impressed with their friendly and professional attitude, their enthusiasm towards the project and, most importantly, the level at which they work to address project goals.

Jason's understanding of the hydraulic and ecological processes in river systems helps to provide solutions to both the obvious and underlying aspects of any project need. An example of this is in a recent stream bank stabilization project. The obvious solution to the eroded bank was to armor the bank and reestablish the vegetation. However, Jason's recommendation to add in-stream boulder weirs will provide for the long-term protection of the stream bank while at the same improving the aquatic habitat in our Gold Medal trout stream.

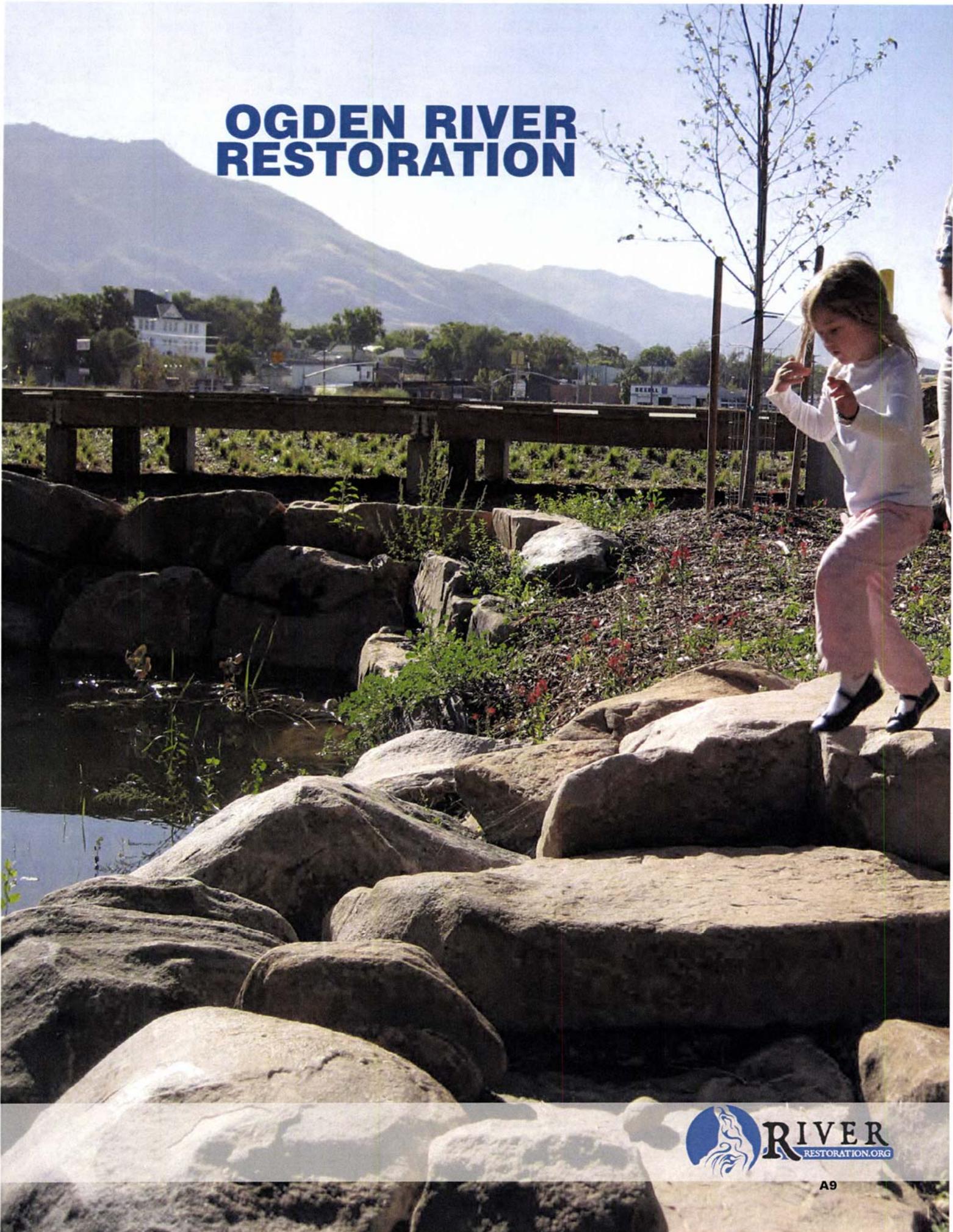
While working on Vail's Whitewater Park Enhancement project, RiverRestoration.org coordinated the use of progressive technology to design the world's first adjustable whitewater feature in a natural stream. The project has gone on to receive industry wide interest and has become the centerpiece of the Teva Mountain Games, an annual event that draws over 40,000 people to Vail during a three-day period in June.

Based on my experiences, I would recommend the services of RiverRestoration.org.

Sincerely,

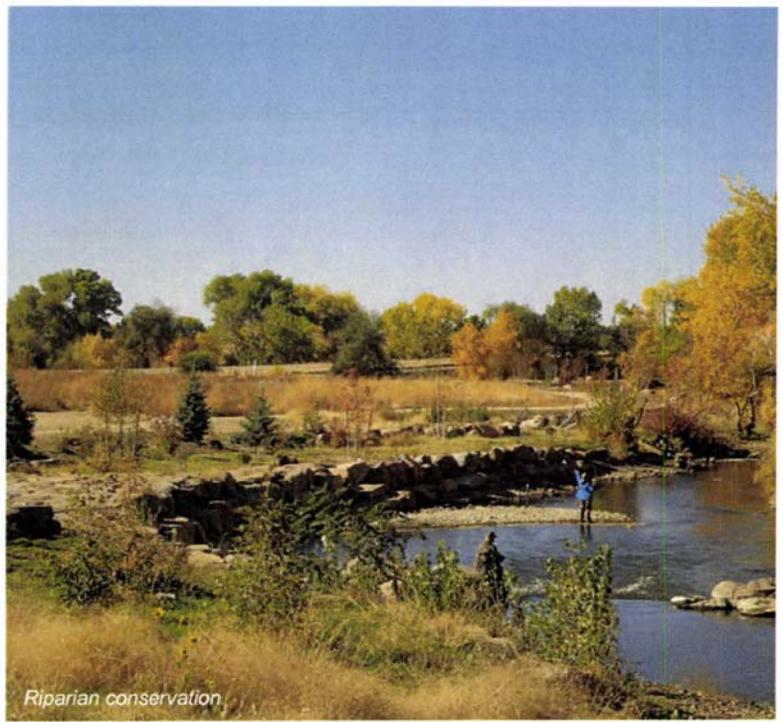
Gregg Barrie
Landscape Architect, Town of Vail

OGDEN RIVER RESTORATION





Boardwalk over a stormwater return wetland



Riparian conservation

Location: Ogden River | Ogden, Utah
Project Duration: 2007-2013
Project Budget: \$4M Construction | \$700K Project Development
Change Orders: Unit price bid
Contact: Justin Anderson, Ogden City Engineer | 801.629.8982
Client: City of Ogden



New recreational path

Quick Facts:

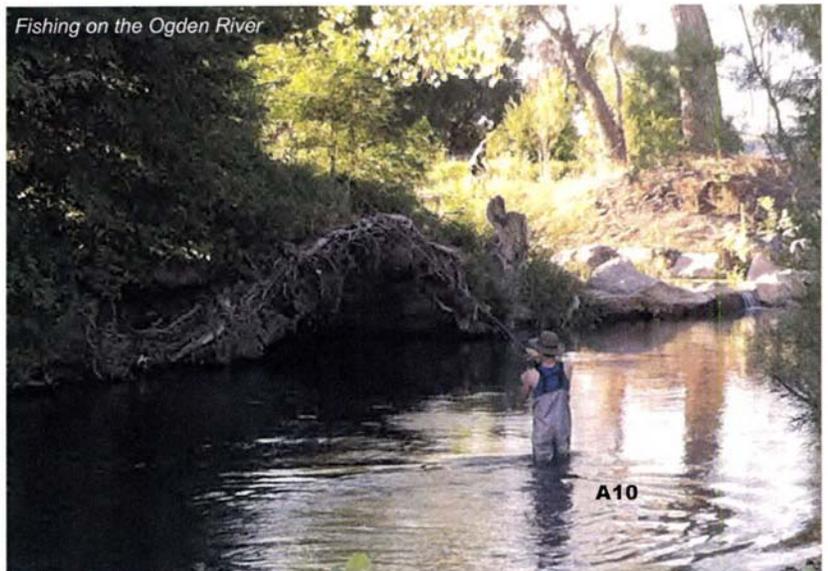
- Ogden River Restoration included design and build approach.
- Design drawings, construction details, specifications, and permits were developed within 9 months.
- Construction began on the first phase of the project with \$1M
- Project was completed, without interruptions, within two years for a total project cost of \$6M
- Assistance provided with fund raising and stakeholder coordination.
- Completion of a CLOMR/LOMR

Awards:

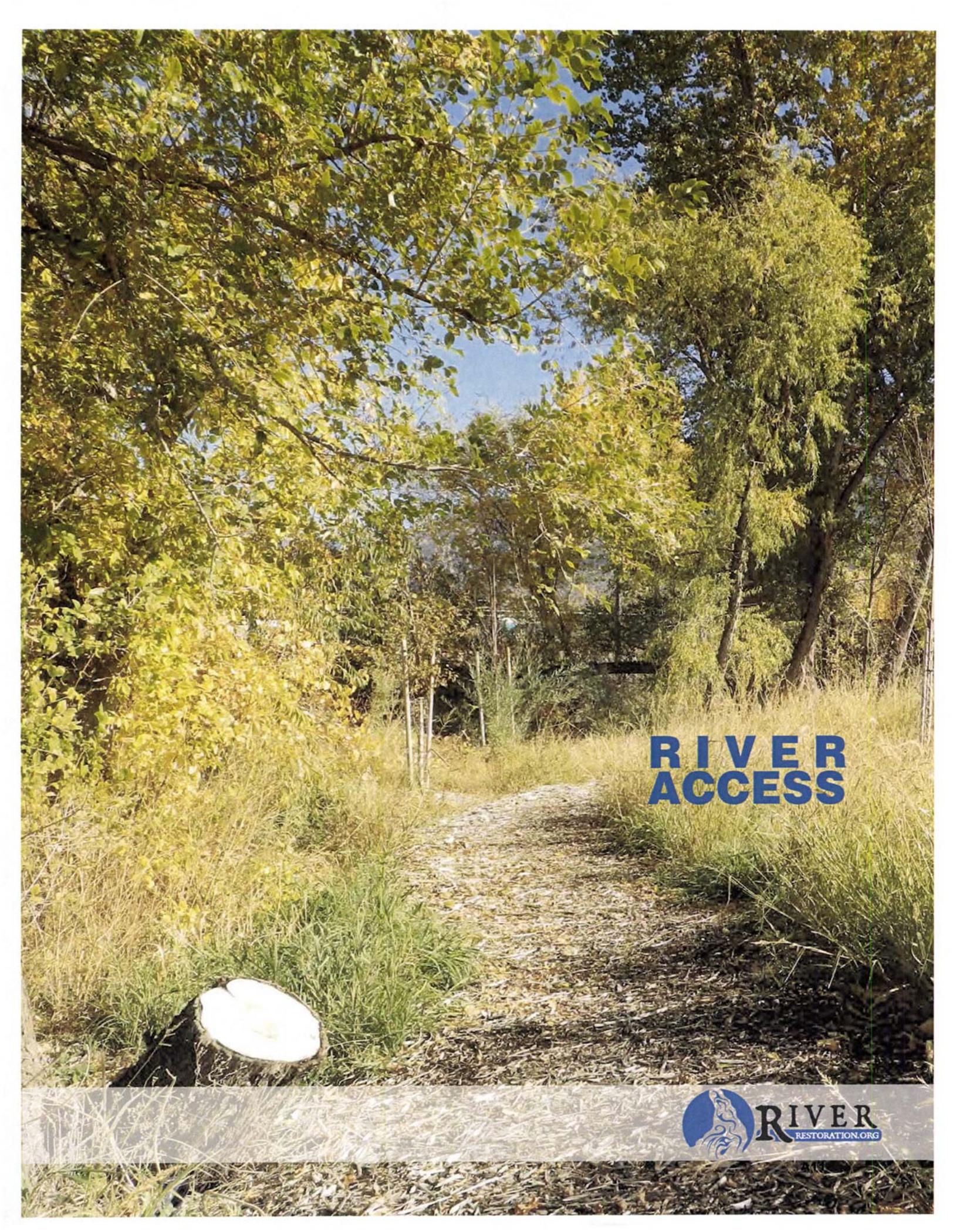
- Utah's 46th Blue Ribbon fishery
- American Fisheries Society Utah Chapter Conservationist of the Year Award to Ogden City 2011
- Utah DEQ Water Quality Board Sudweeks Award 2012
- Migratory Bird City

Project Highlights:

- Wetland Stormwater Return areas
- 1.1 miles of urban trail and 20 concentrated access points
- River recreation enhancements
- Delineated Riparian easement with native plantings, invasive species removal
- Irrigation Diversion Improvements
- New USGS gage station
- Water Quality benefits
- Overlooks and educational opportunities



Fishing on the Ogden River



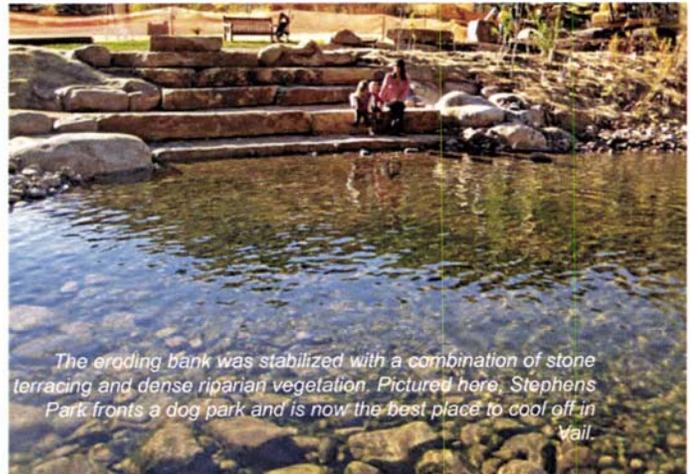
**RIVER
ACCESS**

RiverRestoration designs unique river access, overlooks and passive river enjoyment features for all of our successful projects. Our river access enhancements include boardwalks and soft paths, river viewing overlooks and riverside beaches, stone steps and accessible wading ramps. River access improvements are central themes to any river enhancement project. Our site specific design process identifies opportunities based on community input, feasibility and river channel dynamics. Access to urban waterways creates commercial, educational and recreational benefits.



Ogden River accessible ramp

Accessible wading ramps designed by RiverRestoration for multiple projects provide access for bicycles, strollers and wheelchairs. Excessively steep banks in many urban corridors, limit access to the newly constructed river enhancements. RiverRestoration works closely with Clients to design ADA sloped ramps to the river's edge. Our platforms and ramps provide passive enjoyment opportunities where users, including those with disabilities, can interact with the natural river environment.

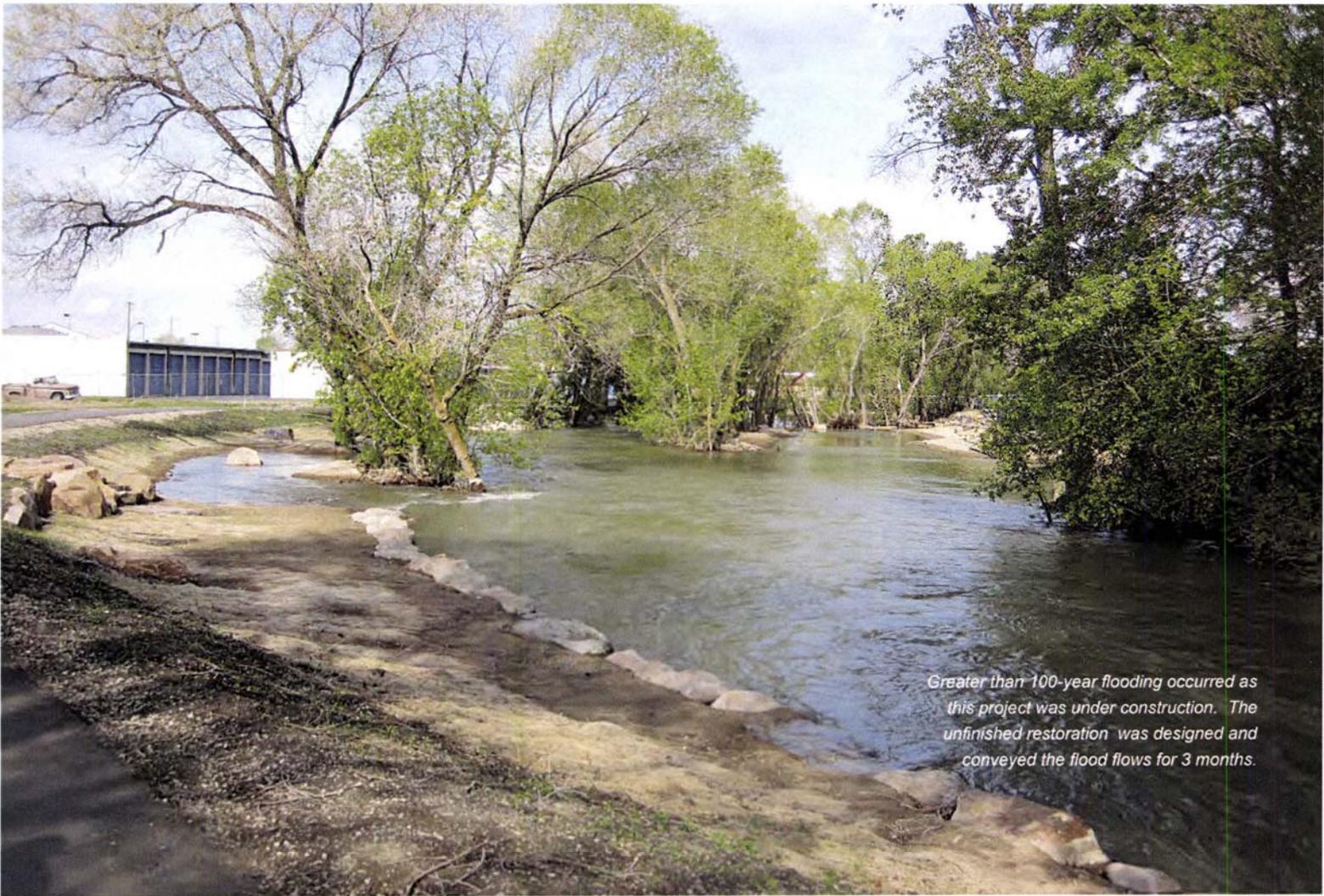


The eroding bank was stabilized with a combination of stone terracing and dense riparian vegetation. Pictured here, Stephens Park fronts a dog park and is now the best place to cool off in Vail.

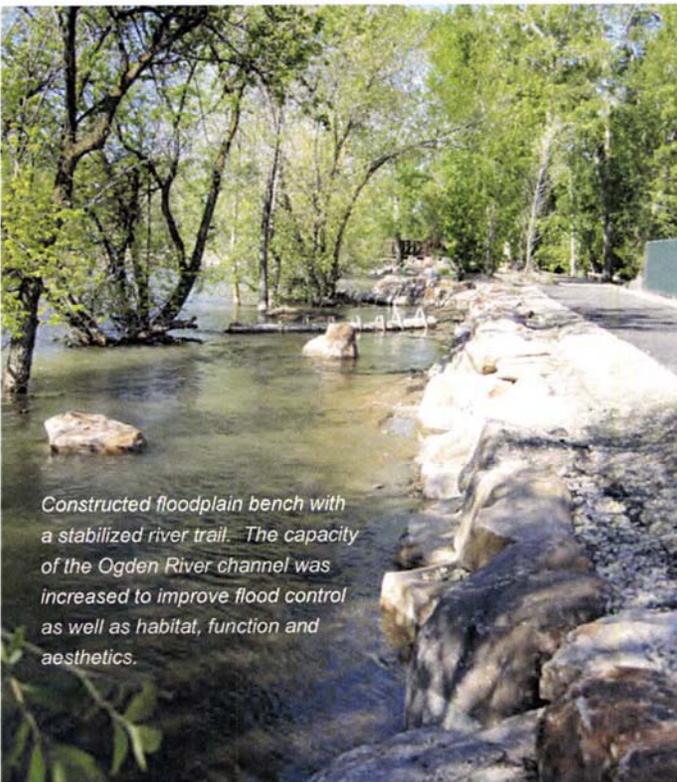
RiverRestoration designs replenishing beaches that provide passive river enjoyment and safe wading areas for family friendly recreation. At low flows these features serve as sandy play areas, at high flows the sand is cleaned and replenished by natural river processes.



A rapidly eroding bank in Cañon City's Centennial Park is now stabilized with a slabstone bank and safe wading in sandy deposits. Completed in 2012, the project was designed to sustain flows of 22,500 cfs (637 cms) through a highly urbanized area. The general community now has a beach to enjoy and a stewardship for the river is regenerated in Cañon City.



Greater than 100-year flooding occurred as this project was under construction. The unfinished restoration was designed and conveyed the flood flows for 3 months.



Constructed floodplain bench with a stabilized river trail. The capacity of the Ogden River channel was increased to improve flood control as well as habitat, function and aesthetics.

FLOODPLAIN RECONNECTION

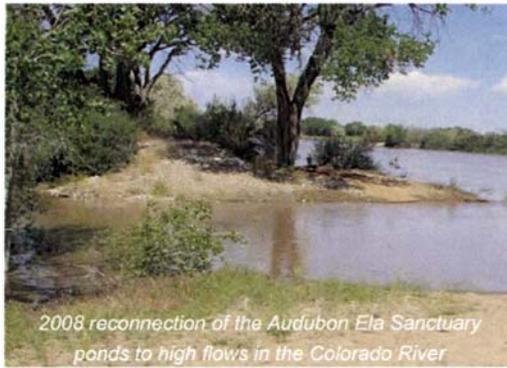
RiverRestoration regularly evaluates flood conveyance, channel stability, floodplain connection and fluvial geomorphic processes. Our design solutions are always site specific. Our projects range from gravel pit captures to channel restoration and everything in between. Our investigations into flow modelling, sediment transport, and riparian assessments leads to cost effective and appropriate designs for each one of our floodplain reconnection projects. Many of our projects have increased flood conveyance and we often remap Flood Insurance accordingly.

Many rivers, especially in urban areas have been separated from their floodplains with levees, dams, and floodwalls to protect development in flood prone areas. Experiencing major flood management problems, many municipalities are working to reconnect these floodplains to take the pressure off of these levees and allow the river to handle its seasonal variety naturally.





Designed in 2004 the reconnection channels of Bonanza Bridge bottomland on the Green River.



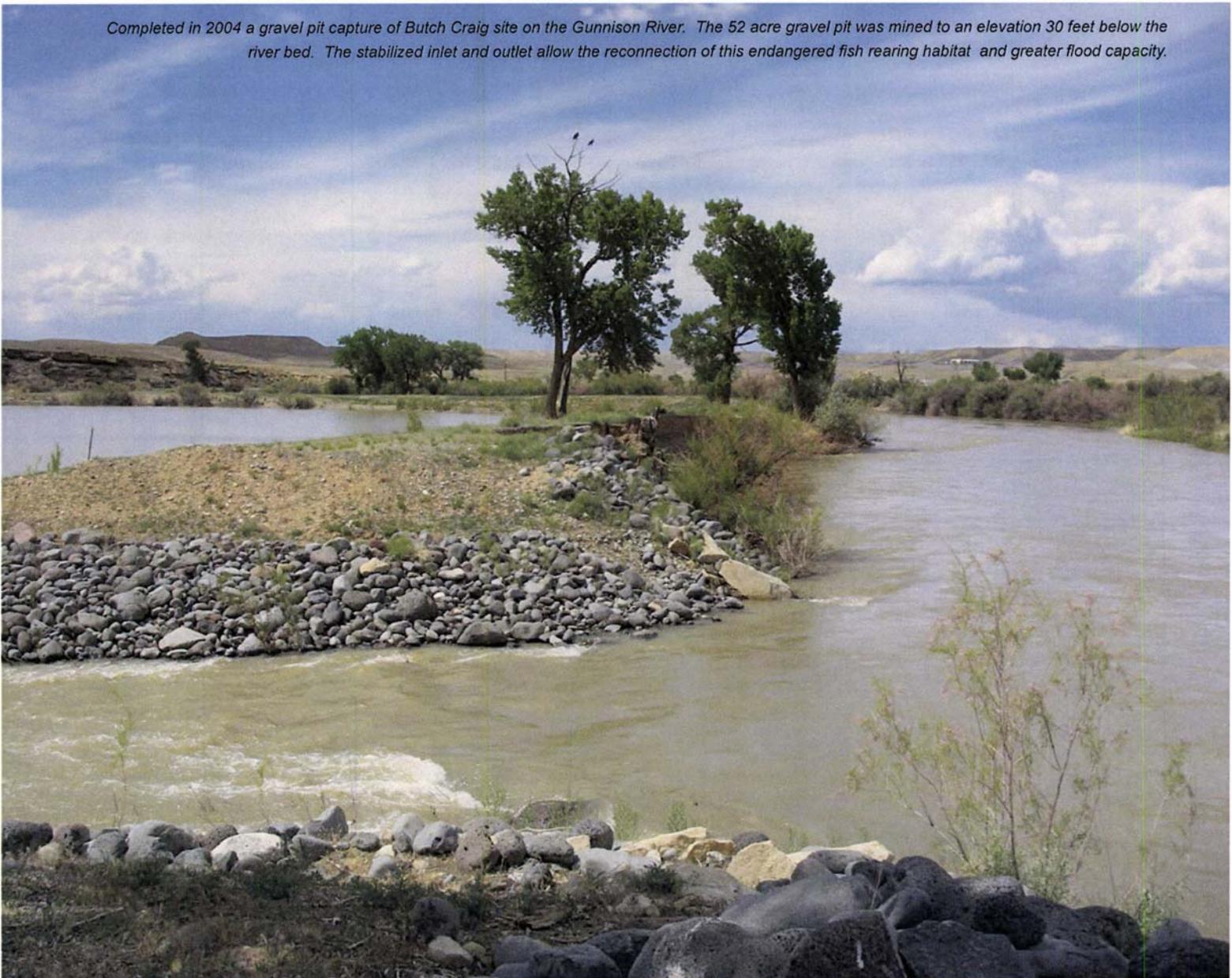
2008 reconnection of the Audubon Ela Sanctuary ponds to high flows in the Colorado River



Flood channel reconnection on the Colorado River at HotSpot complex

At RiverRestoration we are making rivers into better places. We have the insight to enhance the social, economic and environmental values flowing in the river every day. We are true to the river in all that we do. Connecting rivers back to their floodplains creates benefits across the board from water quality and greenspace recreation, agriculture and ecosystem improvements.

Completed in 2004 a gravel pit capture of Butch Craig site on the Gunnison River. The 52 acre gravel pit was mined to an elevation 30 feet below the river bed. The stabilized inlet and outlet allow the reconnection of this endangered fish rearing habitat and greater flood capacity.

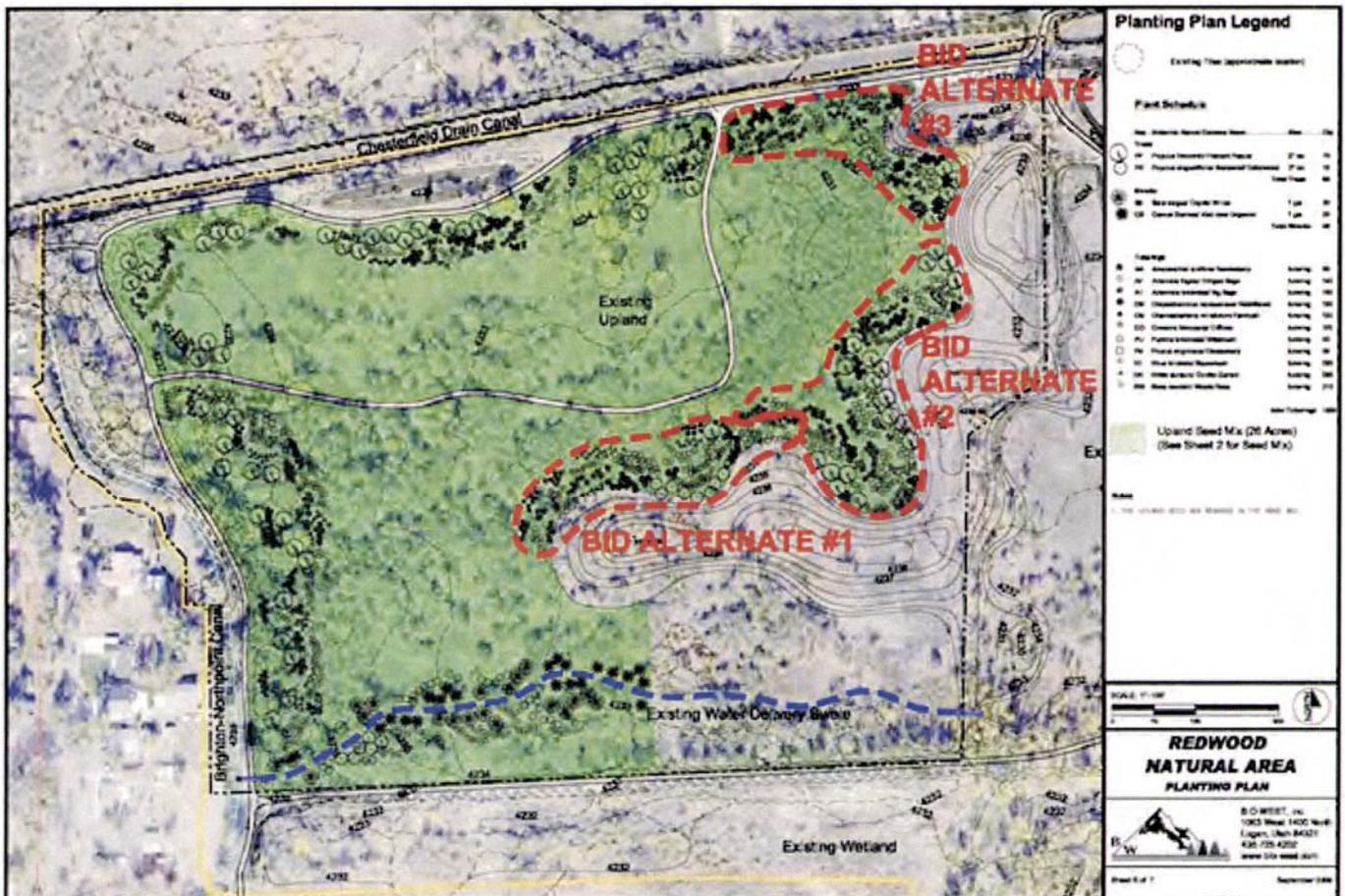


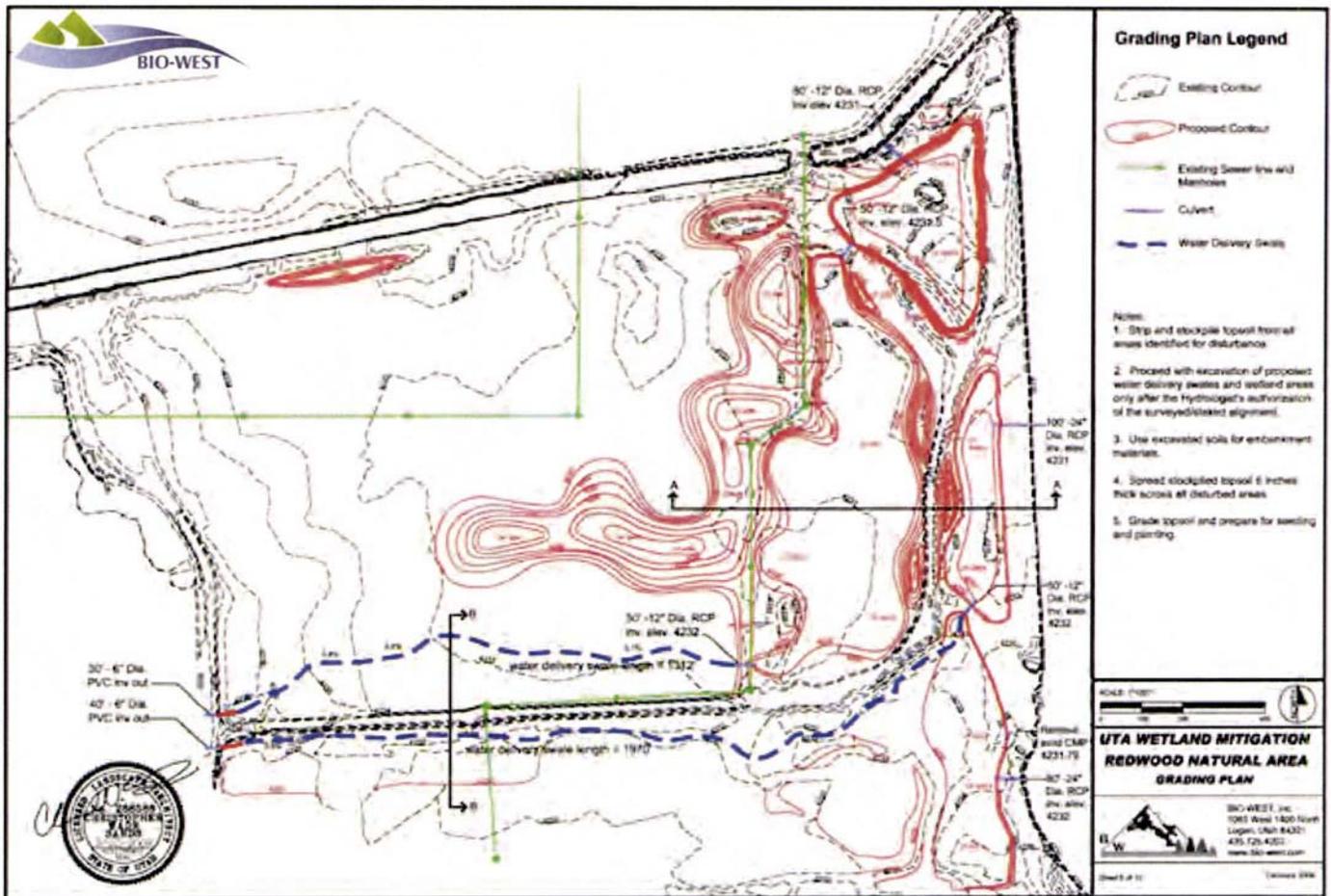


REDWOOD NATURAL AREA RESTORATION DESIGN, ENVIRONMENTAL PERMITTING, INVASIVE SPECIES CONTROL, AND UTAH TRANSIT AUTHORITY WETLAND MITIGATION

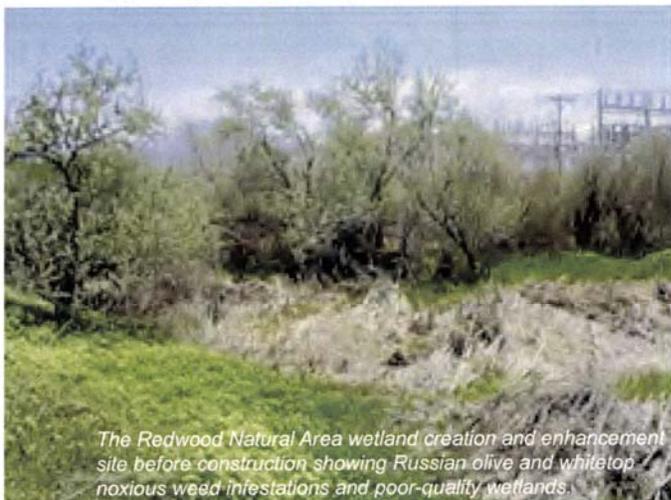
BIO-WEST was contracted by Salt Lake County to prepare a master plan identifying (1) areas along the Jordan River that would benefit from invasive species removal and (2) one or two sites for plant removal and revegetation. Based on the master plan, BIO-WEST prepared detailed construction documents for the chosen sites, assisted Salt Lake County with obtaining permits, and provided construction administration services. Two sites were selected for restoration, the 80-acre Redwood Natural Area and the 10.5-acre Riverbend Natural Area. Restoration involved planting over 350 trees and 3,650 shrubs, as well as restoring over 45 acres of upland habitat, creating over 14 acres of wetland habitat, and enhancing over 7 acres of existing wetlands.

BIO-WEST staff conducted site inventory and analysis, including topographical survey and noxious weed mapping; developed design concepts and established project goals and objectives; prepared detailed construction documents, including 30%, 90%, and 100% review plans, details, specifications, and estimates; facilitated contractor bidding including a pre-bid conference and contract-award services; and monitored construction, including scheduling meetings, evaluating work, reviewing materials, interpreting documents, inspecting sites, reporting weekly, and preparing as-built drawings.





BIO-WEST was subsequently contracted to assist the Utah Transit Authority with a 20-acre wetland mitigation design and habitat restoration project at the Redwood Natural Area adjacent to the Jordan River, which included securing a USACE Wetlands Permit; a State of Utah Stream Alteration Permit; a State of Utah Division of Forestry, Fire, and State Lands Easement Permit for sovereign lands encroachments; and a Salt Lake County Flood Control Permit. This phase featured re-creating a hydrologic interface between the site and the Jordan River; addressing such issues as river channel morphology, sediment transport, and water delivery; and creating riparian-wetland habitats that mimic natural floodplain conditions. All excavated materials from floodplain areas for riparian-wetland creation (46,000 cubic yards) were re-used on site to create natural appearing berms and upland habitats.



The Redwood Natural Area wetland creation and enhancement site before construction showing Russian olive and whitetop noxious weed infestations and poor-quality wetlands.



After construction, there is a well-established mosaic of wetland and riparian habitats along the Jordan River.

Since completion of construction in 2009, BIO-WEST has been providing weed-control services for the Redwood Natural Area, which covers 35 acres of wetlands and uplands near the Jordan River. Species of concern include common reed, thistle species, saltcedar, Russian olive, and whitetop. In addition, BIO-WEST staff created and facilitated a training session for county maintenance staff regarding invasive species removal techniques and is conducting four annual site treatments with county staff. The site is now being used for a variety of recreational activities and as an educational field site. Under contract with Salt Lake County. 2007–2013.



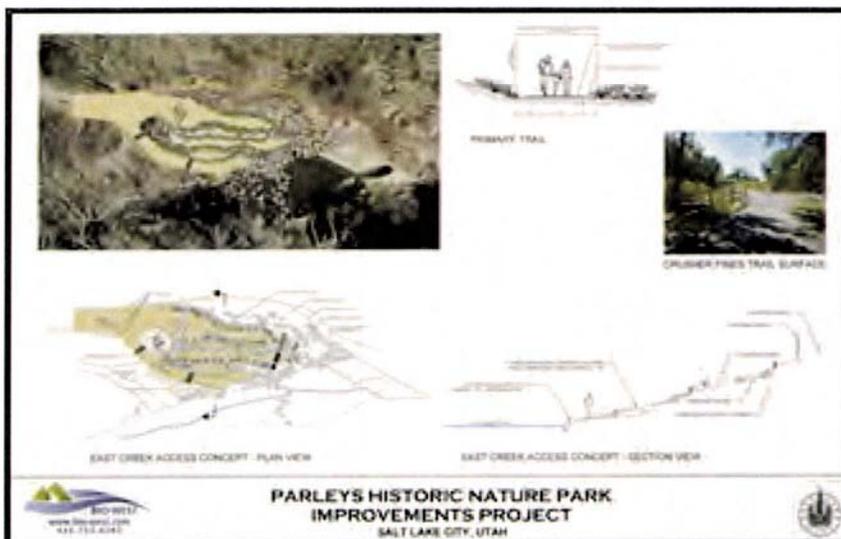
Jordan River Parkway Trail in Salt Lake County

JORDAN RIVER PARKWAY TRAIL

BIO-WEST conducted environmental clearances and prepared construction documents for a section of the Jordan River Parkway Trail in Salt Lake County. The project involved 3,000 feet of trail from the Jordan Narrows Trailhead to about 16500 South Street. Environmental clearance issues included wetlands, threatened, endangered, and sensitive species, and cultural resources. The paved portion of the trail is a 10-foot-wide asphalt surface for pedestrians and cyclists; the unpaved portion is a 5-foot-wide, wood-chip surface for equestrians. Agency coordination included Bluffdale City, Utah State Parks and Recreation, USACE, and the Utah Lake Distribution Canal Company. BIO-WEST also oversaw project construction and performed construction administration services. Under contract with Salt Lake County Parks and Recreation Division. 2010–2011.



Parleys Historic Nature Park and Wasatch Hollow Preserve Riparian Restoration and Site Design



BIO-WEST was hired to prepare detailed designs and provide landscape architectural services for two important urban open spaces, the 63-acre Parleys Historic Nature Park and the 10-acre Wasatch Hollow Preserve. Both efforts include designing and developing user amenities at four access locations, reestablishing the riparian floodplain and hydrologic functions of their respective creeks (Parleys and Emigration), developing appropriate access to riparian and wetland areas via a bridge and elevated boardwalk system, removing and controlling invasive species, incorporating open space signage, and eliminating unauthorized footpaths.

The Parleys Historic Nature Park also includes designing and developing user amenities at two stream access locations for dogs and incorporating a dog agility area, while Wasatch Hollow Preserve efforts will reconnect a historic spring to Emigration Creek, create wetlands, and incorporate substantial elements from the Wasatch Hollow Open Space Comprehensive Restoration, Use, and Management Plan, which BIO-WEST prepared previously. A series of four community meetings were held for each open space to identify project purposes and visioning, review conceptual design alternatives, review draft design drawings, and review final design drawings. BIO-WEST is also responsible for development of 40%, 70%, and 100% design construction drawings. Under contract with Salt Lake City Parks and Public Lands and Engineering Divisions. 2014–present.

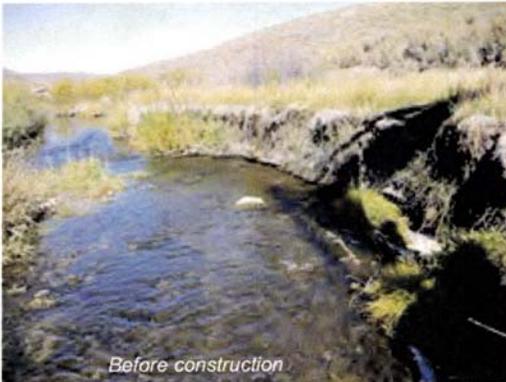




Pinnacles National Monument Revegetation

LOCATION: Soledad, CA
 DATES OF PERFORMANCE: 2010 - 2012
 AWARD AMOUNT: \$86,459.87
 REFERENCE: Sarah Wynn, Revegetation Technical Specialist, National Park Service - Denver Service Center, (303) 969-2292, sarrah_wynn@nps.gov
 SCOPE OF WORK: Native seed collection, Plant propagation, Plant installation, Temporary irrigation Design and Installation. IMA was contracted by NPS to perform revegetation tasks in disturbed areas associated with new park facilities construction and reclamation. The scope of services completed by IMA included: 1) on site collection of native seed, 2) plant propagation in a local native plant nursery, 3) plant installation, and 4) design and Installation of a temporary above ground irrigation system.

East Canyon Creek – Swaner Nature Preserve



LOCATION: Park City, Utah
 DATES OF PERFORMANCE: 2013 - ongoing
 AWARD AMOUNT: \$275,494
 REFERENCE: Brian Nicholson, SWCA Inc., (801) 322-4307
 SCOPE OF WORK: Construction Management, Erosion Control Installation, Planting, Broadcast Seeding, Plant Propagation (Wetland Sod), Browse Protection, Irrigation

In 2013, IMA was sub-contracted by SWCA Inc. to install approximately 2,000 linear feet of streambank soil bioengineering treatments using coir fabric and willow facines along East Canyon Creek in Park City, Utah. In addition to the bioengineering installation, we used Utah Conservation Corps crews to install 1,500 five-gallon containerized cottonwoods, willows and shrubs, most of which were grown by our sister company North Fork Native Plants. Wetland plant plugs and wetland sod will also be used on the project to improve the diversity of the riparian and streamside vegetation. The project is being completed to improve stream shading and streambank stability in response to an EPA Total Maximum Daily Load (TMDL) study for the creek and a reservoir lower in the watershed. The scope of services provided by IMA also included pre-treatment of planting sites with established invasive plants, extensive herbivory protection and two years of maintenance to ensure success of plantings.





J Lazy H Ranch

LOCATION: Teton Valley, ID

DATES OF PERFORMANCE: 2007-2010

AWARD AMOUNT: \$750,000

REFERENCE: Jeff Russell, Project Lead, (208) 456-5020, jr@clarincompany.com

SCOPE OF WORK: Native Plant Surveys, Revegetation Consulting & Design, Seed Collection, Plant Propagation, Drill Seeding, Weed Control, Wildlife Management, Baseline & On-going Monitoring. Services completed by IMA included: 1) native seed/propagule collection for 10 woody plant species; 2) establishment of an on-site native plant production facility that produced several thousand native shrubs; 3) site preparation and drill seeding over 1000 acres of sage steppe habitat; 4) weed mapping, monitoring and management on 5500 acres; 5) design, construction and revegetation plan for a 16 acre emergent marsh; 6) wildlife monitoring and management (songbird, big game, raptor and sharp-tail grouse monitoring, construction and maintenance of bird boxes and a peregrine hawk tower); 7) planting of several thousand woody shrubs as part of an aspen/riparian restoration project; and 8) hydrologic modeling and monitoring of the Milk Creek watershed.



2013 LOWER DUCHESNE RIVER WETLAND MITIGATION PROJECT

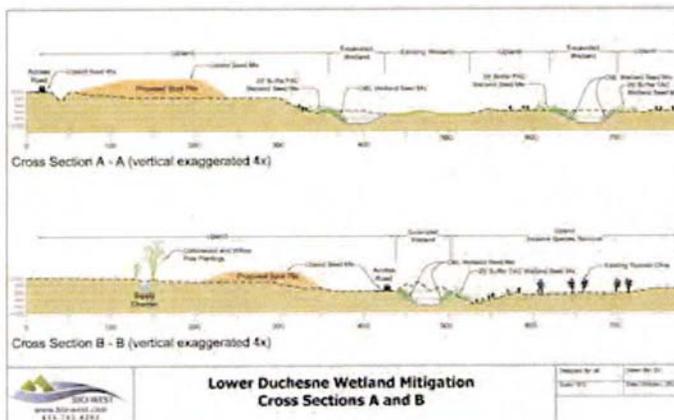
Allred Restoration was originally contracted by the federal government to provide design services for the Lower Duchesne Wetland Mitigation Project and completed a design/build level of design for the Uresk, Riverdell, and Ted's Flat Units. Allred Restoration subcontracted with BIO-WEST and Wise Earth Concepts for the 2013 project area, which involved a portion of the Riverdell Unit.

Allred Restoration, Wise Earth Concepts, and BIO-WEST worked cooperatively to ensure that the construction oversight, wetland permitting, and revegetation efforts were planned and completed, using methods that help to ensure successful establishment and maintenance of native wetland, riparian and upland vegetation communities. BIO-WEST and Wise Earth Concepts worked cooperatively to make sure revegetation concepts that were described in the revegetation plan were incorporated in 404 permit applications.



The work effort in 2013 included the following:

- USACE permitting of all construction activities proposed for the Riverdell Unit.
- Revegetation planning and implementation monitoring for the 2013 project area. Excavation of approximately 100,000 cubic yards of material from new wetland areas.
- Excavation of over 7,000 feet of new channels.
- Four months of wetland construction oversight, with Reclamation crews acting as heavy equipment operators
- Test filling of ponds in the Mathisen area following construction.
- Coordination and direction of seeding operations for all disturbed areas, in cooperation with the Utah Division of Wildlife Resources.
- Coordination and direction of plant installation according to the revegetation plan.
- Coordination and direction of straw mulch application according to the revegetation plan.
- Coordination of water deliveries.
- Coordination with Ute Tribe personnel.
- Coordination of irrigation facilities maintenance and repair, in cooperation with the BIA.
- Providing status updates.
- Providing interim construction reporting, and
- Providing many other duties, as required.



Name, address, and telephone number of client:
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PROVO RIVER RESTORATION PROJECT



The PRRP consisted of ecosystem design and construction oversight of 13 miles of new Provo River channel within a federally purchased corridor. The Provo River was channelized in the 1950s by Reclamation. The PRRP restored the straightened river channel to a meandering channel by mimicking historic conditions, reconnecting the river to existing remnants of historic secondary channels, and constructing small side channels to recreate aquatic features. The project provides a protected 800–2,200-foot-wide corridor the length of the middle Provo River for angler access and wildlife habitat.



This project involved complex hydrologic analyses to determine the new hydrologic regime that exists in the river and relate that to likely resulting changes in geomorphology. This project included extensive use of HEC-RAS for design of the channel and floodplain features and to address sediment-transport issues. It also involved sediment budgeting and balancing the transport from section to section.

The PRRP has been the focus of considerable praise from a wide variety of interests, and the project now stands as a model for restoration projects in the western United States. It has been a great success from both a biological and physical standpoint. To date, its successes include the following; (1) creation of a wide variety of hydraulic and terrestrial habitats that are being used by the flora and fauna of the area, (2) substantial increases to fish populations, both in the main channel and in surrounding aquatic features, (3) dramatic increases in revegetation from natural processes, and (4) record numbers of the Columbia spotted frog, a species of special concern in this ecosystem. The project has also been successful in working with private landowners and local government entities to address their concerns, and many people who had been opposed to the project during the planning phases are now supporters of the project and its primary goals.



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