
Meeting Date: December 2, 2015
Staff Contact: Rick Billings, Environmental Scientist

TITLE: C-15-31 - Approving Agreement with SWCA, Inc. for San Juan Chama Drinking Water Project Environmental Mitigation Monitoring

ACTION: Recommend Approval

SUMMARY:

To maintain compliance of the SJCDWP with the Endangered Species Act, NEPA and other federal requirements, another 5 years of mitigation monitoring is required. The contract will consist of fish, fish egg, and habitat restoration projects monitoring for this period. This contract is for Year 1 under GSA Contract # GS-10F-0209L, with the Albuquerque office of SWCA. The Authority currently uses SWCA for this monitoring.

Specifically, the work requires environmental consulting services, Geographic Information Systems (GIS) services, and ancillary supplies and services related to those two items. Annual reports for the fish monitoring and egg monitoring are provided to the United States Fish and Wildlife Service, and reports on the habitat restoration projects are provided to the Bureau of Reclamation and the Fish and Wildlife Service.

FISCAL IMPACT:

The money for this agreement is from the SJC Drinking Water Project Mitigation Funds. The agreement is for \$153,530 and was appropriated in the FY16 Budget.

**AGREEMENT
BETWEEN THE
ALBUQUERQUE BERNALILLO COUNTY WATER UTILITY AUTHORITY
AND
SWCA, INCORPORATED**

THIS AGREEMENT is made and entered into on the date of the last signature entered below by and between the Albuquerque Bernalillo County Water Utility Authority, a New Mexico political subdivision, P.O. Box 568, Albuquerque, New Mexico 87103-0568 (hereinafter referred to as the "Water Authority") and SWCA, Incorporated, an Arizona corporation located at 5647 Jefferson St. NE, Albuquerque, NM 87109 (hereinafter referred to as the "Contractor").

RECITALS

WHEREAS, the Water Authority requires environmental mitigation monitoring services in support of the Water Authority's environmental commitments for the San Juan Chama Drinking Water Project; and

WHEREAS, the Contractor currently provides said services in accordance with GSA Contract No. GS-10F-0209L, which is attached hereto as Exhibit A and incorporated herein as part of this Agreement; and

WHEREAS, the Water Authority desires to engage the Contractor to render certain environmental consulting services in connection therewith; and

WHEREAS, the Contractor is able to provide such services at a cost and in a timeframe in accordance with Water Authority goals and objectives.

NOW THEREFORE, in consideration of the premises and mutual obligations herein, the parties hereto do mutually agree as follows:

1. **Scope of Services:** The Contractor shall perform the following services (hereinafter referred to as the "Services") in a satisfactory and proper manner, as determined by the Water Authority:

Conduct the San Juan Chama Drinking Water Project Environmental Mitigation Monitoring – Year 1 services in accordance with the Scope of Work, which is attached hereto as Exhibit B and incorporated herein as part of this Agreement.

2. **Time of Performance:** Services of the Contractor shall commence on upon execution of this Agreement and shall be undertaken and completed in such sequence as to assure their expeditious completion in light of the purposes of this Agreement; provided, however, that in any event, all of the Services required hereunder shall be completed by November 30, 2016. This Agreement may be extended upon written agreement of the parties.

3. **Compensation and Method of Payment:**

- A. **Compensation.** For performing the Services specified in Section 1 hereof, the Water Authority agrees to pay the Contractor up to the amount of **One Hundred Fifty-Three Thousand Five Hundred Thirty and 00/100 Dollars (\$153,530.00)**, which amount includes any applicable gross receipts taxes and which amount shall constitute full and complete compensation for the Contractor's Services under this

Agreement, including all expenditures made and expenses incurred by the Contractor in performing such Services.

B. **Method of Payment.** Payment for Services shall be made in accordance with the Cost Proposal, which is attached as part of Exhibit B, and incorporated as part of this Agreement, which rates include any applicable gross receipts taxes. Payments shall be made to the Contractor monthly for Services provided during the previous month. Payments shall be made upon receipt by the Water Authority of properly documented requisitions for payment as determined by the budgetary and fiscal guidelines of the Water Authority and on the condition that the Contractor has accomplished the Services to the satisfaction of the Water Authority.

C. **Appropriations.** Notwithstanding any other provisions in this Agreement, the terms of this Agreement are contingent upon the Water Authority Board making the appropriations necessary for the performance of this Agreement. If sufficient appropriations and authorization are not made by the Water Authority Board, this Agreement may be terminated at the end of the Water Authority's then current fiscal year upon written notice given by the Water Authority to the Contractor. Such event shall not constitute an event of default. All payment obligations of the Water Authority and all of its interest in this Agreement will cease upon the date of termination. The Water Authority's decision as to whether sufficient appropriations are available shall be accepted by the Contractor and shall be final.

4. **Independent Contractor:** Neither the Contractor nor its employees are considered to be employees of the Water Authority for any purpose whatsoever. The Contractor is considered as an independent contractor at all times in the performance of the Services described in Section 1. The Contractor further agrees that neither it nor its employees are entitled to any benefits from the Water Authority under the provisions of the Workers' Compensation Act of the State of New Mexico, or to any of the benefits granted to employees of the Water Authority under the provisions of the Merit System Ordinance as now enacted or hereafter amended.

5. **Personnel:**

A. The Contractor represents that it has, or will secure at its own expense, all personnel required in performing all of the Services required under this Agreement. Such personnel shall not be employees of or have any contractual relationship with the Water Authority.

B. All the Services required hereunder will be performed by the Contractor or under its supervision and all personnel engaged in the work shall be fully qualified and shall be authorized or permitted under state and local law to perform such Services.

C. None of the work or Services covered by this Agreement shall be subcontracted without the prior written approval of the Water Authority. Any work or Services subcontracted hereunder shall be specified by written contract or Agreement and shall be subject to each provision of the Agreement.

6. **Indemnity:** The Contractor agrees to defend, indemnify and hold harmless the Water Authority and its officials, agents and employees from and against any and all claims, actions, suits or proceeding of any kind brought against said parties for or on account of any matter arising out of or resulting from the Contractor's negligence during the

performance of the Services under this Agreement. The indemnity required hereunder shall not be limited by reason of the specification of any particular insurance coverage in this Agreement.

7. **Insurance:** The Contractor shall procure and maintain at its expense until final payment by the Water Authority for services covered by this Agreement, insurance in the kinds and amounts hereinafter provided with insurance companies authorized to do business in the State of New Mexico, covering all operations under this Agreement, whether performed by it or its agents. Before commencing the Services and on the renewal of all coverages, the Contractor shall furnish the Water Authority a certificate or certificates in form satisfactory to the Water Authority showing that it has complied with this Section. The Contractor shall provide thirty (30) days written notice to the Risk Manager, Albuquerque Bernalillo County Water Utility Authority, P.O. Box 568, Albuquerque, New Mexico 87103-0568, before a policy is canceled, materially changed, or not renewed. Various types of required insurance may be written in one or more policies. With respect to all coverages required other than workers' compensation, the Water Authority shall be named an additional insured. All coverages afforded shall be primary with respect to operations provided. Kinds and amounts of insurance required are as follows:

- A. **Commercial General Liability Insurance.** A commercial general liability insurance policy with combined limits of liability for bodily injury or property damage as follows:

\$1,000,000	Per Occurrence
\$1,000,000	Policy Aggregate
\$1,000,000	Products Liability/Completed Operations
\$1,000,000	Personal and Advertising Injury
\$ 50,000	Fire - Legal
\$ 5,000	Medical Payments

Said policy of insurance must include coverage for all operations performed for the Water Authority by the Contractor and contractual liability coverage shall specifically insure the hold harmless provisions of this Agreement.

- B. **Automobile Liability Insurance.** An automobile liability insurance policy with liability limits in amounts not less than \$1,000,000 combined single limit of liability for bodily injury, including death, and property damage in any one occurrence. Said policy of insurance must include coverage for the use of all owned, non-owned, hired automobiles, vehicles and other equipment, both on and off work.
- C. **Workers' Compensation Insurance.** Workers' compensation insurance for its employees in accordance with the provisions of the Workers' Compensation Act of the State of New Mexico.
- D. **Increased Limits.** If, during the term of this Agreement, the Water Authority requires the Contractor to increase maximum limits of any insurance required herein, an appropriate adjustment in the Contractor's compensation will be made.
8. **Discrimination Prohibited:** In performing the Services required hereunder, the Contractor shall not discriminate against any person on the basis of race, color, religion, gender, sexual preference, sexual orientation, national origin or ancestry, age, physical

handicap, or disability as defined in the Americans With Disabilities Act of 1990, as now enacted or hereafter amended.

9. **ADA Compliance:** In performing the Services required hereunder, the Contractor agrees to meet all the requirements of the Americans With Disabilities Act of 1990, and all applicable rules and regulations (the "ADA"), which are imposed directly on the Contractor or which would be imposed on the Water Authority as a public entity. The Contractor agrees to be responsible for knowing all applicable requirements of the ADA and to defend, indemnify and hold harmless the Water Authority, its officials, agents and employees from and against any and all claims, actions, suits or proceedings of any kind brought against said parties as a result of any acts or omissions of the Contractor or its agents in violation of the ADA.
10. **Reports and Information:** At such times and in such forms as the Water Authority may require, there shall be furnished to the Water Authority such statements, records, reports, data and information, as the Water Authority may request pertaining to matters covered by this Agreement. Unless authorized by the Water Authority, the Contractor will not release any information concerning the work product including any reports or other documents prepared pursuant to this Agreement until the final product is submitted to the Water Authority.
11. **Establishment and Maintenance of Records:** Records shall be maintained by the Contractor in accordance with applicable law and requirements prescribed by the Water Authority with respect to all matters covered by this Agreement. Except as otherwise authorized by the Water Authority, such records shall be maintained for a period of three (3) years after receipt of final payment under this Agreement.
12. **Audits and Inspections:** At any time during normal business hours and as often as the Water Authority may deem necessary, there shall be made available to the Water Authority for examination all of the Contractor's records with respect to all matters covered by this Agreement. The Contractor shall permit the Water Authority to audit, examine, and make excerpts or transcripts from such records, and to make audits of all contracts, invoices, materials, payrolls, records of personnel, conditions of employment, and other data relating to all matters covered by this Agreement.
13. **Conflict of Interest; Governmental Conduct Act:** The Contractor warrants that it presently has no interest and shall not acquire any interest, direct or indirect, which would conflict in any manner or degree with the performance or services required under this Agreement. The Contractor certifies that the requirements of the Governmental Conduct Act, Sections 10-16-1 through 10-16-18, NMSA 1978, regarding contracting with a current or former "public officer or employee" have been followed.
14. **Publication, Reproduction and Use of Material:** No material produced in whole or in part under this Agreement shall be subject to copyright in the United States or in any other country. The Water Authority shall have unrestricted authority to publish, disclose, distribute and otherwise use, in whole or in part, any reports, data or other materials prepared under this Agreement.
15. **Compliance with Laws:** In performing the Services required herein, the Contractor shall comply with all applicable laws, ordinances, and codes of the Federal, State and local governments.

16. **Changes:** The Water Authority may, from time to time, request changes in the Services to be performed hereunder. Such changes, including any increase or decrease in the amount of the Contractor's compensation, which are mutually agreed upon by and between the Water Authority and the Contractor, shall be incorporated in written amendments to this Agreement.
17. **Assignability:** The Contractor shall not assign any interest in this Agreement and shall not transfer any interest in this Agreement (whether by assignment or novation), without the prior written consent of the Water Authority therein.
18. **Termination for Cause:** If, through any cause, the Contractor shall fail to fulfill in a timely and proper manner its obligations under this Agreement or if the Contractor shall violate any of the covenants, agreements, or stipulations of this Agreement, the Water Authority shall thereupon have the right to terminate this Agreement by giving written notice to the Contractor of such termination and specifying the effective date thereof at least five (5) days before the effective date of such termination. In such event, all finished or unfinished documents, data, maps, studies, surveys, drawings, models, photographs, and reports prepared by the Contractor under this Agreement shall, at the option of the Water Authority, become its property. The Contractor shall be entitled to receive just and equitable compensation for any work satisfactorily completed hereunder.

Notwithstanding the above, the Contractor shall not be relieved of liability to the Water Authority for damages sustained by the Water Authority by virtue of any breach of this Agreement by the Contractor, and the Water Authority may withhold any payments to the Contractor for the purposes of set-off until such time as the exact amount of damages due the Water Authority from the Contractor is determined.
19. **Termination for Convenience of Water Authority:** The Water Authority may terminate this Agreement at any time without cause and for the convenience of the Water Authority by giving at least ten (10) days' notice in writing to the Contractor. If the Contractor is terminated by the Water Authority as provided herein, the Contractor will be paid an amount which bears the same ratio to the total compensation as the Services actually performed bear to the total Services of the Contractor covered by this Agreement, less payments of compensation previously made. If this Agreement is terminated due to the fault of the Contractor, the preceding Section hereof relative to termination shall apply.
20. **Construction and Severability:** If any part of this Agreement is held to be invalid or unenforceable, such holding will not affect the validity or enforceability of any other part of this Agreement so long as the remainder of the Agreement is reasonably capable of completion.
21. **Enforcement:** The Contractor agrees to pay to the Water Authority all costs and expenses including reasonable attorney's fees incurred by the Water Authority in exercising any of its rights or remedies in connection with the enforcement of this Agreement.
22. **Entire Agreement:** This Agreement contains the entire agreement of the parties and supersedes any and all other agreements or understandings, oral or written, whether previous to the execution hereof or contemporaneous herewith.

23. **Applicable Law:** This Agreement shall be governed by the construed and enforced in accordance with the laws of the State of New Mexico, and the rules and regulations of the Albuquerque Bernalillo County Water Utility Authority.
24. **Approval Required:** This Agreement shall not become effective or binding until approved by the Water Authority's Executive Director.

IN WITNESS WHEREOF, the Water Authority and the Contractor have executed this Agreement on the date of the last signature entered below.

**ALBUQUERQUE BERNALILLO COUNTY
WATER UTILITY AUTHORITY**

**CONTRACTOR:
SWCA, INCORPORATED**

Approved By:

Mark S. Sanchez, Executive Director

Date: _____

John M. Stomp III, P.E.
Chief Operating Officer

Date: _____

Reviewed by:

Charles W. Kolberg, General Counsel

Date: _____

By: _____

Print: _____

Title: _____

Date: _____

State Taxation and Revenue Department
Taxpayer Identification No.: 02-151423-00-2

Federal Taxpayer Identification No.
86-048317

EXHIBIT A
GSA Contract Number: GS-10F-0209L



**GENERAL SERVICES ADMINISTRATION
FEDERAL ACQUISITION SERVICE
AUTHORIZED FEDERAL SUPPLY SCHEDULE PRICE LIST**

Schedule for Environmental Services

Federal Supply Group: 899

Business Size: Other Than Small Business



ENVIRONMENTAL CONSULTANTS

Sound Science. Creative Solutions.®

Contractor:

SWCA, Incorporated
3033 N Central Avenue Suite 145
Phoenix, AZ 85012-2808
Phone: (602) 274-3831
FAX: (602) 274-3958
www.swca.com

Contract Number: GS-10F-0209L

Contract Period: March 19, 2011 – March 18, 2016

Contract Administrator:

Denis Henry

Email: dhenry@swca.com

On-line access to contract ordering information, terms and conditions, up-to-date pricing, and the option to create an electronic delivery order are available through GSA Advantage!®, a menu-driven database system. The INTERNET address GSA Advantage!™ is: <http://www.GSAAdvantage.gov>.

For more information on ordering from Federal Supply Schedules click on the FSS Schedules button at <http://www.gsa.gov/schedules-ordering>

CUSTOMER INFORMATION:

1a. Table of Awarded Special Item Number(s):

SIN	Recovery	SIN Description
899-1	899-1RC	Environmental Consulting Services
899-7	899-7RC	Geographic Information Systems (GIS) Services
899-10	899-10RC	Ancillary Supplies and/or Services

- 1b. Identification of the lowest priced model number and lowest unit price for that model for each special item number awarded in the contract. Not Applicable.**
- 1c. If the Contractor is proposing hourly rates a description of all corresponding commercial job titles, experience, functional responsibility and education for those types of employees or subcontractors who will perform services shall be provided. See page 15**
- 2. Maximum Order: \$1,000,000.00**
- 3. Minimum Order: \$100.00**
- 4. Geographic Coverage (delivery Area): Domestic only**
- 5. Point(s) of production (city, county, and state or foreign country): Same as company address**
- 6. Discount from list prices or statement of net price: Government net prices (discounts already deducted). See Final Pricing, starting on page 15.**
- 7. Quantity discounts: None Offered**
- 8. Prompt payment terms: Net 30 days**
- 9a. Notification that Government purchase cards are accepted up to the micro-purchase threshold: Yes**
- 9b. Notification whether Government purchase cards are accepted or not accepted above the micro-purchase threshold: will accept over \$3,000**
- 10. Foreign items (list items by country of origin): None**
- 11a. Time of Delivery (Contractor insert number of days): Specified on the Task Order**
- 11b. Expedited Delivery. The Contractor will insert the sentence "Items available for expedited delivery are noted in this price list." under this heading. The Contractor may use a symbol of its choosing to highlight items in its price list that have expedited delivery: Contact Contractor**
- 11c. Overnight and 2-day delivery. The Contractor will indicate whether overnight and 2-day delivery are available. Also, the Contractor will indicate that the schedule customer may contact the Contractor for rates for overnight and 2-day delivery: Contact Contractor**
- 11d. Urgent Requirements. The Contractor will note in its price list the "Urgent Requirements" clause of its contract and advise agencies that they can also contact the Contractor's representative to effect a faster delivery: Contact Contractor**

12. **F.O.B Points(s):** Destination
- 13a. **Ordering Address(es):** Same as Contractor
- 13b. **Ordering procedures:** For supplies and services, the ordering procedures, information on Blanket Purchase Agreements (BPA's), and a sample BPA can be found at the GSA/FSS Schedule homepage (fss.gsa.gov/schedules).
14. **Payment address(es):** Same as company address
15. **Warranty provision.:** Contractor's standard commercial warranty.
16. **Export Packing Charges (if applicable):** N/A
17. **Terms and conditions of Government purchase card acceptance (any thresholds above the micro-purchase level):** Contact Contractor
18. **Terms and conditions of rental, maintenance, and repair (if applicable):** N/A
19. **Terms and conditions of installation (if applicable):** N/A
20. **Terms and conditions of repair parts indicating date of parts price lists and any discounts from list prices (if applicable):** N/A
- 20a. **Terms and conditions for any other services (if applicable):** N/A
21. **List of service and distribution points (if applicable):** N/A
22. **List of participating dealers (if applicable):** N/A
23. **Preventive maintenance (if applicable):** N/A
- 24a. **Environmental attributes, e.g., recycled content, energy efficiency, and/or reduced pollutants:** N/A
- 24b. **If applicable, indicate that Section 508 compliance information is available on Electronic and Information Technology (EIT) supplies and services and show where full details can be found (e.g. contactor's website or other location.) The EIT standards can be found at:** www.Section508.gov/.
25. **Data Universal Numbering System (DUNS) number:** 119149730
26. **Notification regarding registration in Central Contractor Registration (CCR) database:** Registered

Awarded Labor Category Descriptions

Count	GSA Labor Category	Job Description	Education / Experience
1	Administrative I	Aids executives and other staff by coordinating office services, such as personnel, records control, and special projects.	High school diploma or GED.
2	Administrative III	Aids executives and other staff by coordinating office services, such as personnel, records control, and special projects.	High school diploma or GED with three years experience.
3	Administrative IV	Aids executives and other staff by coordinating office services, such as personnel, records control, and special projects.	High school diploma or GED with five years experience or Bachelor's degree and one year of experience.
4	Cultural Resources Specialist I	Under direct supervision of Crew Chief, and general supervision of Field Supervisor or Project Manager, performs unskilled and semi-skilled aspects of field archaeology including, survey, excavation, data recovery, monitoring, and testing. Assistance with field survey, excavation, data recovery, monitoring, or testing procedures; including walking survey area with other crew members searching for historic or prehistoric artifacts, hand digging and excavating, placing artifacts into marked bags for later analysis, and associated tasks.	High school diploma or GED and one year of experience or Bachelor's degree.
5	Cultural Resources Specialist II	Under general supervision of Field Supervisor or Project Manager, performs skilled field tasks including, survey, excavation, data recovery, monitoring, and testing, while working with crew members. Participates in data analysis, and assists in writing project reports. Conduct surveys and locates sites using topographic maps, compass, and aerial photographs. Completes or assigns completion of site forms and Archaeological Reconnaissance Reports (AARFs) and maps. Performs site file searches using museum, university, and federal and state records. May contribute to report writing and production, under supervision of Project Manager.	High school diploma or GED and five years experience or Bachelor's degree and two years experience or Master's degree in a related field.

Count	GSA Labor Category	Job Description	Education / Experience
6	Cultural Resources Specialist III	Under general supervision of Project Manager, leads and performs all aspects of field archaeology including, survey, excavation, data recovery, monitoring, and testing. Insures that the field crew conducts field research properly. Participates in data analysis, and assists in writing project reports. Assists with scheduling of personnel, vehicles, and other resources. Conduct surveys and locates sites using topographic maps, compass, and aerial photographs. Completes or assigns completion of site forms and Archaeological Reconnaissance Reports (AARFs) and maps. Performs site file searches using museum, university, and federal and state records. May contribute to report writing and production, under supervision of Project Manager.	High school diploma or GED and ten years experience or Bachelor's degree in related field and five years experience or Master's degree in a related field and three years experience or Doctorate degree in related field and one year of experience.
7	Cultural Resources Specialist V	Under general supervision of the Program Director, manages all aspects of small archaeology projects and tasks including, supervision of personnel and physical resources, budgeting, preparation of proposals and reports, monitoring field procedures, and performance of field procedures. Supervises and performs all aspects of field research, data analysis, and writing of project reports. Schedules personnel, vehicles, and other resources, and maintains budget requirements. Instructs field personnel on methods of inventory, and provides verbal and written instructions for specific tasks. Instruct employees in special tasks and job techniques. Follows procedures and budgetary restraints outlined in proposals to conclude projects on budget and on time. Conducts field procedures, including surveys, monitoring, mapping, photographing, and data recovery activities. Performs site file searches using museum, university, and federal and state records. Produces or contributes to reports, proposals, and other documents.	Bachelor's degree in a related field and seven years experience or Master's degree in a related field and five years experience or Doctorate degree in related field and three years experience.

Count	GSA Labor Category	Job Description	Education / Experience
8	Cultural Resources Specialist VII	Under general supervision of the Project Director, manages all aspects of small and large archaeology projects and tasks including, supervision of personnel and physical resources, budgeting, preparation of proposals and reports, monitoring field procedures, and performance of field procedures. Supervises and performs all aspects of field research, data analysis, and writing of project reports. Schedules personnel, vehicles, and other resources, and maintains budget requirements. Instructs field personnel on methods of inventory, and provides verbal and written instructions for specific tasks. Instruct employees in special tasks and job techniques. Follows procedures and budgetary restraints outlined in proposals to conclude projects on budget and on time. Conducts field procedures, including surveys, monitoring, photographing, and data recovery activities. Performs site file searches using museum, university, and federal and state records. Produces or contributes to reports, proposals, and other documents.	Bachelor's degree in a related field and ten years experience or Master's degree in a related field and seven years experience or Doctorate degree in related field and five years experience.
9	Cultural Resource Tech I	Under direct supervision of Crew Chief, and general supervision of Field Supervisor or Project Manager, assists in the preparation of field activities, collection of field samples, and maintenance of various equipments.	High school diploma or GED and one year of experience or degree in a related field and no experience.
10	Environmental Resources Specialist I	Under direct Supervision of Environmental Specialist III and general supervision of Project Manager. Performs unskilled and semi-skilled aspects of field biology and natural resource management including field data collection, library research, and miscellaneous project-related tasks. Assists in conducting surveys and collection of field data concerning endangered species and other plant and animal life, as well as data collection for land use projects. Records data on field site forms or other forms. Assists with organizing field data, and enters information into database for later interpretation. Uses topographic maps, aerial photographs, and other maps and tools to determine exact locations of project areas, habitat types, and associated landforms. Assists with mapping of project areas. Monitors project areas during construction or other activities that could be destructive to habitat or potentially hazardous to endangered or threatened species.	High school diploma or GED and one year of experience or Bachelor's degree in a related field.

Count	GSA Labor Category	Job Description	Education / Experience
11	Environmental Resources Specialist II	Under direct supervision of Environmental Specialist III and under general supervision of Project Manager. Performs semi-skilled aspects of field biology and natural resource management including field data collection, library research, and miscellaneous project-related tasks. Works more independently than ES I: may perform some fieldwork alone when necessary on data collection or monitoring projects. Conducts surveys and collection of field data concerning endangered species and other plant and animal life, as well as data collection for land use projects. Records data on field site forms or other forms. Organizes field data, and enters information into database for later interpretation. Uses topographic maps, aerial photographs, and other maps and tools to determine exact locations of project areas, habitat types, and associated landforms. Maps project areas. Conducts interviews to gather information about public opinion for proposed projects. Monitors project areas during construction or other activities that could be destructive to habitat or potentially hazardous to endangered or threatened species.	High school diploma or GED and five years experience or Bachelor's degree in a related field and two years experience or Master's degree in a related field.
12	Environmental Resources Specialist III	Under general supervision of Project Manager, performs skilled aspects of field biology and natural resource management including field data collection, library research, report writing, and instructing and leading other field personnel. Conducts surveys and collection of field data concerning endangered species and other plant and animal life, as well as data collection for land use projects. Leads and instructs other field personnel in correct procedures for data collection. Under direction of Project Manager, schedules personnel, vehicles, and other resources. Determines work areas on a daily basis, and assures that work is completed in a timely manner. Records data on field site forms or other forms or instructs others in proper recording techniques. Organizes field data and interprets data once they have been entered into a database. Uses topographic maps, aerial photographs, and other maps and tools to determine exact locations of project areas, habitat types, and associated landforms. Monitors project areas during construction or other activities that could be destructive to habitat or potentially hazardous to endangered or threatened	High school diploma or GED and ten years experience or Bachelor's degree in a related field and five years experience or Master's degree in a related field and three years experience or Doctorate degree in related field and one year of experience.

Count	GSA Labor Category	Job Description	Education / Experience
		species, or instruct others in correct procedures.	
13	Environmental Resources Specialist V	Under general supervision of the Program Director, supervises and manages all aspects of small projects and tasks, including field data collection, surveys, and monitoring projects, and other aspects of biology/land use projects, particularly small projects. Supervises all aspects of field research, data analysis and interpretation, and writing of project reports. Schedules personnel, vehicles, and other equipment and resources, and maintains budget requirements. Instructs and oversees personnel in methods of data collection, and provides verbal and written instructions for specific tasks. Follows procedures and budgetary restraints outlined in proposals to conclude projects on budget and on time. Conducts field procedures, including surveys, monitoring, mapping, photographing, and data recovery. Under supervision of ES V or Program Director, contributes to proposals, research designs, and reports. Produces and contributes to reports, proposals, and other technical documents.	Bachelor's degree in a related field and seven years experience or Master's degree in a related field and five years experience or Doctorate degree in related field and three years experience.

Count	GSA Labor Category	Job Description	Education / Experience
14	Environmental Resources Specialist VII	Under the general supervision of the Program Director, supervises and manages field data collection, surveys, and monitoring projects, and other aspects of biology/land use projects, particularly larger projects demanding more management and/or field time. Supervises all aspects of field research, data analysis and interpretation, and writing of project reports. Schedules personnel, vehicles, and other equipment and resources, and maintains budget requirements. Instructs and oversees personnel in methods of data collection, and provides verbal and written instructions for specific tasks. Follows procedures and budgetary restraints outlined in proposals to conclude projects on budget and on time. Produces proposals, reports, and other technical documents. Conducts field procedures, including surveys, monitoring, mapping, photographing, and data recovery.	Bachelor's degree in a related field and ten years experience or Master's degree in a related field and seven years experience or Doctorate degree in related field and five years experience.
15	Environmental Resources Tech I	Under direct supervision of the Environmental Specialist III and general supervision of Project Manager. Assists in the preparation of field activities, collection of field samples, and maintenance of various equipments.	High school diploma or GED and one year of experience or degree in a related field and no experience.
16	GIS/CADD Specialist I	Digital production of maps and other graphics using GIS related software including Arc/Info, AutoCAD, AutoCAD, ArcGIS, and familiarity with other graphics software including ArcView, Adobe, Illustrator, and Photoshop.	High school diploma or GED and three years experience or Bachelor's degree in a related field and one year of experience.
17	GIS/CADD Specialist II	Under direct supervision from the GIS/CADD III, creates spatial data from field survey results, producing project report maps using the appropriate software (AutoCAD, ArcGIS and others). Collaborates with the project manager and field crews with any special data needs at the project level.	Bachelor's degree in a related field and two years experience.
18	GIS/CADD Specialist III	Digital production of maps and other graphics using GIS related software including Arc/Info, AutoCAD, AutoCAD, ArcGIS, and familiarity with other graphics software including ArcView, Adobe, Illustrator, and Photoshop.	Bachelor's degree in a related field and four years experience.
19	GIS/CADD Specialist V	Digital production of maps and other graphics using GIS related software including Arc/Info, AutoCAD, AutoCAD, ArcGIS, and familiarity with other graphics software including ArcView, Adobe, Illustrator, and Photoshop.	Bachelor's degree in a related field and seven years experience.

Count	GSA Labor Category	Job Description	Education / Experience
20	Technical Writer Specialist II	Writing and editing technical documents and marketing materials for consistency, clarity, and technical accuracy. Determine what portions of reports should be revised, rewritten, omitted, or added to reports.	One year of experience in editing reports or publications.
21	Technical Writer Specialist III	Writing and editing technical documents and marketing materials for consistency, clarity, and technical accuracy. Determine what portions of reports should be revised, rewritten, omitted, or added to reports.	Bachelor's degree in a related field and five years experience or Master's degree in a related field and one year of experience.
22	Technical Writer Specialist IV	Under the supervision of managing editor or PM, edits reports and other deliverables for conformance with house style and to enhance quality. Reviews content for internal consistency and correctness. Provides author guidance for report standards and editorial quality. Takes complex writing and editing assignments as needed for operations and marketing services. Determines the level of service needed, provides input regarding content needs and format, and confirms adherence to schedule and quality content. Coordinates author schedules and manages files and folders to maintain version control.	Bachelor's degree in a related field and seven years experience or Master's degree in a related field and five years experience.
23	Technical Writer Specialist V	Writing and editing technical documents and marketing materials for consistency, clarity, and technical accuracy. Determine what portions of reports should be revised, rewritten, omitted, or added to reports.	Bachelor's degree in a related field and ten years experience or Master's degree in a related field and seven years experience.
24	Subject Matter Expert VIII	A senior professional who acts as an advisor in complex and critical efforts. The individual provides subject matter expertise in specific technical, professional or policy areas of the project. Responsibilities include: identifying issues; conducting expert analysis and assessment of these issues; and providing expert advice to project leaders. May act independently, support, lead, or manage complex and critical projects. Generally the Subject Matter Expert I has attained significant recognition as an authoritative source of expertise within a specific business or scientific area.	Bachelor's degree in a related field and 12 years experience or Master's degree in a related field and ten years experience or Doctorate degree in related field and seven years experience.

Count	GSA Labor Category	Job Description	Education / Experience
25	Subject Matter Expert X	A senior professional who possesses in-depth, demonstrated, and recognized expertise in a highly specialized field. The individual possess unique credentials that are not readily available nationally, and supports complex and critical efforts by providing unique subject matter expertise in specific technical, professional or policy areas. The position requires the ability to identify underlying scientific, technical, programmatic, operational, and policy issues, and to provide expert analysis and recommended courses of action for major projects. Responsibilities relate to research, technology assessment, concept formulation, development or production, and include advising senior level/executive level personnel on high level, highly complex topics, within a specific sphere of expertise; conducting expert analysis and providing assessment and recommended courses of action and management of projects.	Bachelor's degree in a related field and 15 years experience or Master's degree in a related field and 12 years experience or Doctorate degree in related field and nine years experience.
26	Subject Matter Expert	A senior professional possessing unique credentials in a field that are not readily accessible either nationally or worldwide. The individual acts as an advisor and provides support to complex and critical efforts that require scarce and highly specific investigative or leadership capability. The position requires the ability to identify underlying scientific, technical, programmatic, operational, and policy issues, and to provide expert analysis, assessment, and recommended courses of action for major projects. Responsibilities relate to research, technology assessment, concept formulation, development or production, and include advising senior level/executive level personnel on high level, highly complex topics.	Bachelor's degree in a related field and 20 years experience or Master's degree in a related field and 15 years experience or Doctorate degree in related field and 12 years experience.
27	Planner Specialist II	Assist the project manager or deputy project manager with assembling and editing CEQA and NEPA document, prepared for land use and infrastructure projects. Prepare various sections of CEQA and NEPA documents, including alternatives, land use impacts, and socioeconomic impacts.	Bachelor's degree in a related field and 4 years experience or Master's degree in a related field and two years experience.

Count	GSA Labor Category	Job Description	Education / Experience
28	Planner Specialist IV	Assist the project manager or deputy project manager with assembling and editing CEQA and NEPA documents, prepared for land use and infrastructure projects. Supports multidisciplinary teams of SWCA staff and subconsultants to ensure CEQA and NEPA project quality, schedule, and budget objectives. Contributes in the writing of CEQA and NEPA documents, including preparation of various generalist sections such as alternatives, land use impacts, and socioeconomic impacts, and review/edit other sections prepared by resource specialists. Helps prepare and attends client and public presentations of CEQA and NEPA documents.	Master's degree in a related field and five years experience.
29	Planner Specialist VI	Serve as deputy project manager for CEQA and NEPA documents, prepared for land use and infrastructure projects. Manage multidisciplinary teams of SWCA staff and subconsultants. Act as a client liaison. Ensure CEQA and NEPA project quality, schedule, and budget objectives. Write and manage the preparation of CEQA and NEPA documents, including preparation of various generalist sections such as alternatives, land use impacts, and socioeconomic impacts, and review/edit other sections prepared by resource specialists. Make client and public presentations of CEQA and NEPA documents.	Master's degree in a related field and seven years experience.
30	Paleontologist Specialist I	Assist in performing paleontologic monitoring of project sites, fossil collection and salvage, with an emphasis on thorough, accurate and efficient collection of paleontologic, lithologic and stratigraphic data. Assist with fossil surveys and large excavations, laboratory preparation, curation and analysis as needed. Record data on appropriate field site forms or other forms as needed. Use topographic maps, aerial photographs, GPS units as well as other maps and tools during fieldwork. Locate existing reports and conduct data and literature reviews.	High school diploma or GED and one year of experience or Bachelor's degree in a related field.
31	Paleontologist Specialist II	Under the supervision of Field Supervisor or Project Manager. Perform paleontologic monitoring of project sites, fossil collection and salvage, with an emphasis on thorough, accurate and efficient collection of paleontologic, lithologic and stratigraphic data. Assist with fossil surveys and large excavations, laboratory preparation, curation and analysis as needed.	High school diploma or GED and five years experience or Bachelor's degree in a related field and two years experience or Master's degree in related field.

Count	GSA Labor Category	Job Description	Education / Experience
32	Paleontologist Specialist IV	Under the supervision of the Field Supervisor or Project Manager, manages aspects of small paleontology projects and tasks including, supervision of personnel and physical resources, preparation of proposals and reports, monitoring field procedures, and performance of field procedures. Supervises and performs aspects of field research, data analysis, and assist in writing of project reports. Instructs field personnel on methods of collection, and provides verbal and written instructions for specific tasks. Follows procedures and budgetary restraints outlined in proposals to conclude projects on budget and on time. Perform paleontologic monitoring of project sites, fossil collection and salvage, with an emphasis on thorough, accurate and efficient collection of paleontologic, lithologic and stratigraphic data. Produces or contributes to reports, proposals, and other documents.	High school diploma or GED and ten years experience or Bachelor's degree in a related field and five years experience or Master's degree in related field and three years experience or Doctorate degree in related field and one year of experience.
33	Paleontologist Specialist VI	Under general supervision of the Project Director, manages all aspects of small paleontology projects and tasks including, supervision of personnel and physical resources, budgeting, preparation of proposals and reports, monitoring field procedures, and performance of field procedures. Supervises and performs all aspects of field research, data analysis, and writing of project reports. Schedules personnel, vehicles, and other resources, and maintains budget requirements. Instructs field personnel on methods of collection, and provides verbal and written instructions for specific tasks. Instruct employees in special tasks and job techniques. Follows procedures and budgetary restraints outlined in proposals to conclude projects on budget and on time. Perform paleontologic monitoring of project sites, fossil collection and salvage, with an emphasis on thorough, accurate and efficient collection of paleontologic, lithologic and stratigraphic data. Produces or contributes to reports, proposals, and other documents.	Bachelor's degree in a related field and seven years experience or Master's degree in related field and five years experience or Doctorate degree in related field and three years experience.

Count	GSA Labor Category	Job Description	Education / Experience
34	Project Manager III	Manage all aspects of small projects and tasks including conducting fieldwork, supervision of personnel and physical resources. Manage project budgets, prepare proposals, reports, and other technical documents, monitor field procedures and contribute to research designs. Oversee and perform all aspects of field research, data collection, inventory, and analysis. Schedule personnel, vehicles, and other resources. Establish project procedures and budgetary restraints, and follow those outlined by other staff, to assure that projects are concluded within budget and on time. Manage the financial performance of individual projects and effectively coordinate with clients. Supervise, direct, and instruct field personnel.	Bachelor's degree in a related field and seven years experience or Master's degree in related field and five years experience.
35	Project Manager V	Manage all aspects of projects and tasks including conducting fieldwork, supervision of personnel and physical resources. Manage project budgets, prepare proposals, reports, and other technical documents, monitor field procedures and contribute to research designs. Oversee and perform all aspects of field research, data collection, inventory, and analysis. Schedule personnel, vehicles, and other resources. Establish project procedures and budgetary restraints, and follow those outlined by other staff, to assure that projects are concluded within budget and on time. Manage the financial performance of individual projects and effectively coordinate with clients. Supervise, direct, and instruct field personnel.	Project management experience and a Bachelor's degree in a related field and ten years of field experience or project management experience and a Master's degree in related field and seven years experience.
36	Project Manager VII	Manage all aspects of projects and tasks including conducting fieldwork, supervision of personnel and physical resources. Manage project budgets, prepare proposals, reports, and other technical documents, monitor field procedures and contribute to research designs. Oversee and perform all aspects of field research, data collection, inventory, and analysis. Schedule personnel, vehicles, and other resources. Establish project procedures and budgetary restraints, and follow those outlined by other staff, to assure that projects are concluded within budget and on time. Manage the financial performance of individual projects and effectively coordinate with clients. Supervise, direct, and instruct field personnel.	Project management experience and a Bachelor's degree in a related field and 15 years of field experience or project management experience and a Master's degree in related field and ten years experience.

SINs, including RC	Labor Category	Awarded Rate
899-1 899-7	Administrative I**	\$35.37
899-1 899-7	Administrative III**	\$51.39
899-1 899-7	Administrative IV**	\$58.44
899-1 899-7	Cultural Resources Specialist I**	\$51.62
899-1 899-7	Cultural Resources Specialist II**	\$63.80
899-1 899-7	Cultural Resources Specialist III**	\$75.12
899-1 899-7	Cultural Resources Specialist V	\$94.13
899-1 899-7	Cultural Resources Specialist VII	\$118.92
899-1 899-7	Cultural Resources Tech I**	\$37.28
899-1 899-7	Environmental Resources Specialist I**	\$55.31
899-1 899-7	Environmental Resources Specialist II**	\$66.50
899-1 899-7	Environmental Resources Specialist III**	\$75.26
899-1 899-7	Environmental Resources Specialist V	\$92.24
899-1 899-7	Environmental Resources Specialist VII	\$109.25
899-1 899-7	Environmental Resources Tech 1**	\$37.28
899-1 899-7	GIS/CADD Specialist I**	\$55.31
899-1 899-7	GIS/CADD Specialist II**	\$64.38
899-1 899-7	GIS/CADD Specialist III**	\$75.26
899-1 899-7	GIS/CADD Specialist V	\$98.67
899-1 899-7	Technical Writer Specialist II**	\$61.10
899-1 899-7	Technical Writer Specialist III**	\$75.82
899-1 899-7	Technical Writer Specialist IV	\$89.67
899-1 899-7	Technical Writer Specialist V	\$100.13

SINs, including RC	Labor Category	Awarded Rate
899-1 899-7	Subject Matter Expert VIII	\$121.91
899-1 899-7	Subject Matter Expert X	\$149.12
899-1 899-7	Subject Matter Expert	\$181.36
899-1 899-7	Planner Specialist II**	\$62.48
899-1 899-7	Planner Specialist IV*	\$89.67
899-1 899-7	Planner Specialist VI	\$96.76
899-1 899-7	Paleontologist Specialist I**	\$58.44
899-1 899-7	Paleontologist Specialist II**	\$68.51
899-1 899-7	Paleontologist Specialist IV	\$75.26
899-1 899-7	Paleontologist Specialist VI	\$110.83
899-1 899-7	Project Manager III	\$79.60
899-1 899-7	Project Manager V	\$99.75
899-1 899-7	Project Manager VII	\$119.90

SINs, Including RC	Support Product (ODC's)	Unit of Issue	Awarded Rate
899-10	ATV	Per Day	\$50.38
899-10	ATV Trailer	Per Day	\$90.68
899-10	Avian Song Meter	Per Day	\$10.08
899-10	Bat Monitoring - Anabat	Per Day	\$60.45
899-10	Boat - Aluminum	Per Day	\$50.38
899-10	Camera - Digital	Per Day	\$30.23
899-10	Camera - Underwater	Per Day	\$151.13
899-10	Cell Booster	Per Day	\$10.08
899-10	Computer - Laptop	Per Day	\$30.23
899-10	Copies - B&W	Per Copy	\$0.10
899-10	Copies - Color	Per Copy	\$1.01
899-10	Field Supplies	Per Day	\$10.08
899-10	Flow Meter	Per Day	\$70.53
899-10	GPS - GIS Grade	Per Day	\$35.26
899-10	GPS - Handheld	Per Day	\$50.38
899-10	H2S Monitor	Per Day	\$15.11
899-10	Jet Boat	Per Day	\$453.40
899-10	Lazer Level	Per Day	\$20.15
899-10	LCD Projector	Per Day	\$50.38
899-10	Phone - Satellite	Per Day	\$25.19

SINs, Including RC	Support Product (ODC's)	Unit of Issue	Awarded Rate
899-10	Plotter	Per Sq Ft	\$4.03
899-10	Printer/Scanner	Per Day	\$10.08
899-10	Tortoise Box	Per Day	\$5.04
899-10	Total station	Per Day	\$100.76
899-10	Trimble	Per Day	\$70.53
899-10	Water PH Meter	Per Day	\$75.57
899-10	Water Turbidity Meter	Per Day	\$25.19

Service Contract Act (SCA) Matrix

SCA Eligible Contract Labor Category	SCA Equivalent Title	SCA Equivalent Code	WD Number
GIS/CADD Specialist I	Drafter II	30062	WD 05-2047
GIS/CADD Specialist II	Drafter II	30062	WD 05-2047
GIS/CADD Specialist III	Cartographic Technician	30030	WD 05-2047
Administrative I	General Clerk I	01111	WD 05-2047
Administrative III	General Clerk II	01112	WD 05-2047
Administrative IV	General Clerk III	01113	WD 05-2047
Cultural Resource Tech I	Laborer	23470	WD 05-2047
Cultural Resources Specialist I	Archaeological Tech II	30022	WD 05-2047
Cultural Resources Specialist II	Archaeological Tech II	30022	WD 05-2047
Cultural Resources Specialist III	Archaeological Tech III	30023	WD 05-2047
Environmental Resources Tech I	Laborer	23470	WD 05-2047
Environmental Resources Specialist I	Archaeological Tech II	30022	WD 05-2047
Environmental Resources Specialist II	Archaeological Tech II	30022	WD 05-2047
Environmental Resources Specialist III	Archaeological Tech III	30023	WD 05-2047
Planner Specialist II	Archaeological Tech II	30022	WD 05-2047
Paleontologist Specialist I	Archaeological Tech II	30022	WD 05-2047
Paleontologist Specialist II	Archaeological Tech II	30022	WD 05-2047
Technical Writer Specialist II	Word Processor II	01612	WD 05-2047

SCA Eligible Contract Labor Category	SCA Equivalent Title	SCA Equivalent Code	WD Number
Technical Writer Specialist III	Word Processor III	01613	WD 05-2047

The Service Contract Act (SCA) is applicable to this contract and it includes SCA applicable labor categories. The prices for the indicated (**) SCA labor categories are based on the U.S. Department of Labor Wage Determination Number identified in the SCA matrix. The prices awarded are in line with the geographic scope of the contract (i.e. nationwide).



Project Name: SWCA Environmental Mitigation
Project ID: 117000010
Contract Year: 11/20/2016
Project End Date: 11/20/2016

Contract A-E and for actual resources and no outside of the project area for

Proposed:

Item	Quantity	Unit	Price	Total
1. Labor	1	Hour	12.00	12.00
2. Material	1	Yard	1.00	1.00
3. Equipment	1	Hour	10.00	10.00
4. Fuel	1	Gallon	2.00	2.00
5. Transport	1	Hour	10.00	10.00
6. Maintenance	1	Hour	10.00	10.00
7. Safety	1	Hour	10.00	10.00
8. Training	1	Hour	10.00	10.00
9. Supervision	1	Hour	10.00	10.00
10. Insurance	1	Hour	10.00	10.00
11. Bonding	1	Hour	10.00	10.00
12. Permits	1	Hour	10.00	10.00
13. Testing	1	Hour	10.00	10.00
14. Monitoring	1	Hour	10.00	10.00
15. Reporting	1	Hour	10.00	10.00
16. Communication	1	Hour	10.00	10.00
17. Public Relations	1	Hour	10.00	10.00
18. Community Outreach	1	Hour	10.00	10.00
19. Stakeholder Engagement	1	Hour	10.00	10.00
20. Environmental Assessment	1	Hour	10.00	10.00
21. Impact Analysis	1	Hour	10.00	10.00
22. Mitigation Planning	1	Hour	10.00	10.00
23. Implementation	1	Hour	10.00	10.00
24. Monitoring and Evaluation	1	Hour	10.00	10.00
25. Reporting and Documentation	1	Hour	10.00	10.00
26. Project Management	1	Hour	10.00	10.00
27. Quality Assurance	1	Hour	10.00	10.00
28. Safety Management	1	Hour	10.00	10.00
29. Environmental Management	1	Hour	10.00	10.00
30. Social Management	1	Hour	10.00	10.00
31. Financial Management	1	Hour	10.00	10.00
32. Human Resources Management	1	Hour	10.00	10.00
33. Information Management	1	Hour	10.00	10.00
34. Legal Management	1	Hour	10.00	10.00
35. Procurement Management	1	Hour	10.00	10.00
36. Risk Management	1	Hour	10.00	10.00
37. Compliance Management	1	Hour	10.00	10.00
38. Contract Management	1	Hour	10.00	10.00
39. Change Management	1	Hour	10.00	10.00
40. Project Closure	1	Hour	10.00	10.00
41. Post-Project Evaluation	1	Hour	10.00	10.00
42. Archiving	1	Hour	10.00	10.00
43. Final Reporting	1	Hour	10.00	10.00
44. Project Handover	1	Hour	10.00	10.00
45. Project Completion	1	Hour	10.00	10.00
46. Project Evaluation	1	Hour	10.00	10.00
47. Project Review	1	Hour	10.00	10.00
48. Project Feedback	1	Hour	10.00	10.00
49. Project Lessons Learned	1	Hour	10.00	10.00
50. Project Archiving	1	Hour	10.00	10.00
51. Project Documentation	1	Hour	10.00	10.00
52. Project Reporting	1	Hour	10.00	10.00
53. Project Communication	1	Hour	10.00	10.00
54. Project Stakeholder Engagement	1	Hour	10.00	10.00
55. Project Environmental Management	1	Hour	10.00	10.00
56. Project Social Management	1	Hour	10.00	10.00
57. Project Financial Management	1	Hour	10.00	10.00
58. Project Human Resources Management	1	Hour	10.00	10.00
59. Project Information Management	1	Hour	10.00	10.00
60. Project Legal Management	1	Hour	10.00	10.00
61. Project Procurement Management	1	Hour	10.00	10.00
62. Project Risk Management	1	Hour	10.00	10.00
63. Project Compliance Management	1	Hour	10.00	10.00
64. Project Contract Management	1	Hour	10.00	10.00
65. Project Change Management	1	Hour	10.00	10.00
66. Project Closure	1	Hour	10.00	10.00
67. Project Post-Project Evaluation	1	Hour	10.00	10.00
68. Project Archiving	1	Hour	10.00	10.00
69. Project Documentation	1	Hour	10.00	10.00
70. Project Reporting	1	Hour	10.00	10.00
71. Project Communication	1	Hour	10.00	10.00
72. Project Stakeholder Engagement	1	Hour	10.00	10.00
73. Project Environmental Management	1	Hour	10.00	10.00
74. Project Social Management	1	Hour	10.00	10.00
75. Project Financial Management	1	Hour	10.00	10.00
76. Project Human Resources Management	1	Hour	10.00	10.00
77. Project Information Management	1	Hour	10.00	10.00
78. Project Legal Management	1	Hour	10.00	10.00
79. Project Procurement Management	1	Hour	10.00	10.00
80. Project Risk Management	1	Hour	10.00	10.00
81. Project Compliance Management	1	Hour	10.00	10.00
82. Project Contract Management	1	Hour	10.00	10.00
83. Project Change Management	1	Hour	10.00	10.00
84. Project Closure	1	Hour	10.00	10.00
85. Project Post-Project Evaluation	1	Hour	10.00	10.00
86. Project Archiving	1	Hour	10.00	10.00
87. Project Documentation	1	Hour	10.00	10.00
88. Project Reporting	1	Hour	10.00	10.00
89. Project Communication	1	Hour	10.00	10.00
90. Project Stakeholder Engagement	1	Hour	10.00	10.00
91. Project Environmental Management	1	Hour	10.00	10.00
92. Project Social Management	1	Hour	10.00	10.00
93. Project Financial Management	1	Hour	10.00	10.00
94. Project Human Resources Management	1	Hour	10.00	10.00
95. Project Information Management	1	Hour	10.00	10.00
96. Project Legal Management	1	Hour	10.00	10.00
97. Project Procurement Management	1	Hour	10.00	10.00
98. Project Risk Management	1	Hour	10.00	10.00
99. Project Compliance Management	1	Hour	10.00	10.00
100. Project Contract Management	1	Hour	10.00	10.00
101. Project Change Management	1	Hour	10.00	10.00
102. Project Closure	1	Hour	10.00	10.00
103. Project Post-Project Evaluation	1	Hour	10.00	10.00
104. Project Archiving	1	Hour	10.00	10.00
105. Project Documentation	1	Hour	10.00	10.00
106. Project Reporting	1	Hour	10.00	10.00
107. Project Communication	1	Hour	10.00	10.00
108. Project Stakeholder Engagement	1	Hour	10.00	10.00
109. Project Environmental Management	1	Hour	10.00	10.00
110. Project Social Management	1	Hour	10.00	10.00
111. Project Financial Management	1	Hour	10.00	10.00
112. Project Human Resources Management	1	Hour	10.00	10.00
113. Project Information Management	1	Hour	10.00	10.00
114. Project Legal Management	1	Hour	10.00	10.00
115. Project Procurement Management	1	Hour	10.00	10.00
116. Project Risk Management	1	Hour	10.00	10.00
117. Project Compliance Management	1	Hour	10.00	10.00
118. Project Contract Management	1	Hour	10.00	10.00
119. Project Change Management	1	Hour	10.00	10.00
120. Project Closure	1	Hour	10.00	10.00
121. Project Post-Project Evaluation	1	Hour	10.00	10.00
122. Project Archiving	1	Hour	10.00	10.00
123. Project Documentation	1	Hour	10.00	10.00
124. Project Reporting	1	Hour	10.00	10.00
125. Project Communication	1	Hour	10.00	10.00
126. Project Stakeholder Engagement	1	Hour	10.00	10.00
127. Project Environmental Management	1	Hour	10.00	10.00
128. Project Social Management	1	Hour	10.00	10.00
129. Project Financial Management	1	Hour	10.00	10.00
130. Project Human Resources Management	1	Hour	10.00	10.00
131. Project Information Management	1	Hour	10.00	10.00
132. Project Legal Management	1	Hour	10.00	10.00
133. Project Procurement Management	1	Hour	10.00	10.00
134. Project Risk Management	1	Hour	10.00	10.00
135. Project Compliance Management	1	Hour	10.00	10.00
136. Project Contract Management	1	Hour	10.00	10.00
137. Project Change Management	1	Hour	10.00	10.00
138. Project Closure	1	Hour	10.00	10.00
139. Project Post-Project Evaluation	1	Hour	10.00	10.00
140. Project Archiving	1	Hour	10.00	10.00
141. Project Documentation	1	Hour	10.00	10.00
142. Project Reporting	1	Hour	10.00	10.00
143. Project Communication	1	Hour	10.00	10.00
144. Project Stakeholder Engagement	1	Hour	10.00	10.00
145. Project Environmental Management	1	Hour	10.00	10.00
146. Project Social Management	1	Hour	10.00	10.00
147. Project Financial Management	1	Hour	10.00	10.00
148. Project Human Resources Management	1	Hour	10.00	10.00
149. Project Information Management	1	Hour	10.00	10.00
150. Project Legal Management	1	Hour	10.00	10.00
151. Project Procurement Management	1	Hour	10.00	10.00
152. Project Risk Management	1	Hour	10.00	10.00
153. Project Compliance Management	1	Hour	10.00	10.00
154. Project Contract Management	1	Hour	10.00	10.00
155. Project Change Management	1	Hour	10.00	10.00
156. Project Closure	1	Hour	10.00	10.00
157. Project Post-Project Evaluation	1	Hour	10.00	10.00
158. Project Archiving	1	Hour	10.00	10.00
159. Project Documentation	1	Hour	10.00	10.00
160. Project Reporting	1	Hour	10.00	10.00
161. Project Communication	1	Hour	10.00	10.00
162. Project Stakeholder Engagement	1	Hour	10.00	10.00
163. Project Environmental Management	1	Hour	10.00	10.00
164. Project Social Management	1	Hour	10.00	10.00
165. Project Financial Management	1	Hour	10.00	10.00
166. Project Human Resources Management	1	Hour	10.00	10.00
167. Project Information Management	1	Hour	10.00	10.00
168. Project Legal Management	1	Hour	10.00	10.00
169. Project Procurement Management	1	Hour	10.00	10.00
170. Project Risk Management	1	Hour	10.00	10.00
171. Project Compliance Management	1	Hour	10.00	10.00
172. Project Contract Management	1	Hour	10.00	10.00
173. Project Change Management	1	Hour	10.00	10.00
174. Project Closure	1	Hour	10.00	10.00
175. Project Post-Project Evaluation	1	Hour	10.00	10.00
176. Project Archiving	1	Hour	10.00	10.00
177. Project Documentation	1	Hour	10.00	10.00
178. Project Reporting	1	Hour	10.00	10.00
179. Project Communication	1	Hour	10.00	10.00
180. Project Stakeholder Engagement	1	Hour	10.00	10.00
181. Project Environmental Management	1	Hour	10.00	10.00
182. Project Social Management	1	Hour	10.00	10.00
183. Project Financial Management	1	Hour	10.00	10.00
184. Project Human Resources Management	1	Hour	10.00	10.00
185. Project Information Management	1	Hour	10.00	10.00
186. Project Legal Management	1	Hour	10.00	10.00
187. Project Procurement Management	1	Hour	10.00	10.00
188. Project Risk Management	1	Hour	10.00	10.00
189. Project Compliance Management	1	Hour	10.00	10.00
190. Project Contract Management	1	Hour	10.00	10.00
191. Project Change Management	1	Hour	10.00	10.00
192. Project Closure	1	Hour	10.00	10.00
193. Project Post-Project Evaluation	1	Hour	10.00	10.00
194. Project Archiving	1	Hour	10.00	10.00
195. Project Documentation	1	Hour	10.00	10.00
196. Project Reporting	1	Hour	10.00	10.00
197. Project Communication	1	Hour	10.00	10.00
198. Project Stakeholder Engagement	1	Hour	10.00	10.00
199. Project Environmental Management	1	Hour	10.00	10.00
200. Project Social Management	1	Hour	10.00	10.00
201. Project Financial Management	1	Hour	10.00	10.00
202. Project Human Resources Management	1	Hour	10.00	10.00
203. Project Information Management	1	Hour	10.00	10.00
204. Project Legal Management	1	Hour	10.00	10.00
205. Project Procurement Management	1	Hour	10.00	10.00
206. Project Risk Management	1	Hour	10.00	10.00
207. Project Compliance Management	1	Hour	10.00	10.00
208. Project Contract Management	1	Hour	10.00	10.00
209. Project Change Management	1	Hour	10.00	10.00
210. Project Closure	1	Hour	10.00	10.00
211. Project Post-Project Evaluation	1	Hour	10.00	10.00
212. Project Archiving	1	Hour	10.00	10.00
213. Project Documentation	1	Hour	10.00	10.00
214. Project Reporting	1	Hour	10.00	10.00
215. Project Communication	1	Hour	10.00	10.00
216. Project Stakeholder Engagement	1	Hour	10.00	10.00
217. Project Environmental Management	1	Hour	10.00	10.00
218. Project Social Management	1	Hour	10.00	10.00
219. Project Financial Management	1	Hour	10.00	10.00
220. Project Human Resources Management	1	Hour	10.00	10.00
221. Project Information Management	1	Hour	10.00	10.00
222. Project Legal Management	1	Hour	10.00	10.00
223. Project Procurement Management	1	Hour	10.00	10.00
224. Project Risk Management	1	Hour	10.00	10.00
225. Project Compliance Management	1	Hour	10.00	10.00
226. Project Contract Management	1	Hour	10.00	10.00
227. Project Change Management	1	Hour	10.00	10.00
228. Project Closure	1	Hour	10.00	10.00
229. Project Post-Project Evaluation	1	Hour	10.00	10.00
230. Project Archiving	1	Hour	10.00	10.00
231. Project Documentation	1	Hour	10.00	10.00
232. Project Reporting	1	Hour	10.00	10.00
233. Project Communication	1	Hour	10.00	10.00
234. Project Stakeholder Engagement	1	Hour	10.00	10.00
235. Project Environmental Management	1	Hour	10.00	10.00
236. Project Social Management	1	Hour	10.00	10.00
237. Project Financial Management	1	Hour	10.00	10.00
238. Project Human Resources Management	1	Hour	10.00	10.00
239. Project Information Management	1	Hour	10.00	10.00
240. Project Legal Management	1	Hour	10.00	10.00
241. Project Procurement Management	1	Hour	10.00	10.00
242. Project Risk Management	1	Hour	10.00	10.00
243. Project Compliance Management	1	Hour	10.00	10.00
244. Project Contract Management	1	Hour	10.00	10.00
245. Project Change Management	1	Hour	10.00	10.00
246. Project Closure	1	Hour	10.00	10.00
247. Project Post-Project Evaluation	1	Hour	10.00	10.00
248. Project Archiving	1	Hour	10.00	10.00
249. Project Documentation	1	Hour	10.00	10.00
250. Project Reporting	1	Hour	10.00	10.00
251. Project Communication	1	Hour	10.00	10.00
252. Project Stakeholder Engagement	1	Hour	10.00	10.00
253. Project Environmental Management	1	Hour	10.00	10.00
254. Project Social Management	1	Hour	10.00	10.00
255. Project Financial Management	1	Hour	10.00	10.00
256. Project Human Resources Management	1	Hour	10.0	

EXHIBIT B
SCOPE OF WORK and COST PROPOSAL

SCOPE OF WORK

MONITORING FOR DRIFTING FISH EGGS

Monitoring for drifting fish eggs will be conducted in the Rio Grande just upstream of the Paseo del Norte diversion dam or in the sluice channel, as directed in the Biological Opinion, using sampling protocol developed by the USFWS. Moore egg collectors (MECs) will be employed to sample eggs. Silvery minnow eggs will be identified in the field and then released downstream of the diversion dam. Eggs of this species are distinguished as clear, semi-buoyant, non-adhesive spheres; water-hardened eggs are 2.9 to 3.7 mm (mean 3.2 mm) in diameter (Figure 1).

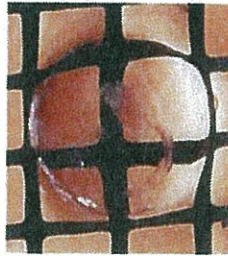


Figure 1. Silvery minnow egg with developing larvae (photo by Michael Hatch).

Sampling for eggs will be conducted with three MEC for two hours each day over 31 days during May (or to be adjusted as needed to provide monitoring during peak run-off to the extent practicable). Monitoring for drifting silvery minnow eggs will be conducted at a consistent time each day during the monitoring period. Number of silvery minnow eggs, velocity of water flowing through the MEC, and the sample duration (minutes) will be recorded for each sample. The number of eggs collected will be standardized by the volume of water filtered, expressed in units of hundreds of cubic meters, i.e., 100 m³.

All silvery minnow eggs collected will be released downstream of the Alameda diversion dam or transported to a propagation facility as directed by the USFWS. Eggs will be collected in accordance with the methods and schedule described in the Minimization Measures of the Operation Effects section of the Biological Opinion (USFWS 2004). Coordination with City of Albuquerque and USFWS will be conducted as necessary.

FISHWAY MONITORING

Sampling in the fishway was not conducted in 2014 because conditions (depth and velocity) encountered on numerous survey dates were not conducive to effectively or safely sample the structure. It is known that silvery minnow are present within the fishway structure (SWCA 2013) and can successfully use the structure for passage around the Water Authorities Diversion (Archdeacon et al. 2012). To complement previously conducted fishway monitoring and to assess the Middle Rio Grande fish community within the vicinity of the diversion structure, the Water Authority proposes that Fisheries monitoring in the main channel of the MRG upstream and downstream of the diversion dam be conducted on quarterly basis (Figure 1). Sampling is proposed to be conducted once a quarter from the area upstream of the diversion dam to Alameda Bridge and from the diversion dam downstream as delineated in Figure 1.



Seine samples will be collected by rapidly drawing a small beach seines (3.1 × 1.8 m [10 × 6 feet] with mesh approximately 3 mm [$\frac{1}{8}$ inch]) in a downstream direction up to a larger over-sized bag seine (6.0 × 1.5 m with mesh approximately 3 mm). Upon reaching the bag seine, both nets will be tilted upwards to capture fish. The bag seine is anticipated to catch large fish species that normally occur as juveniles in fish community monitoring. A total of 20 seine samples will be collected per survey, 10 from the upstream location and 10 from the downstream location.

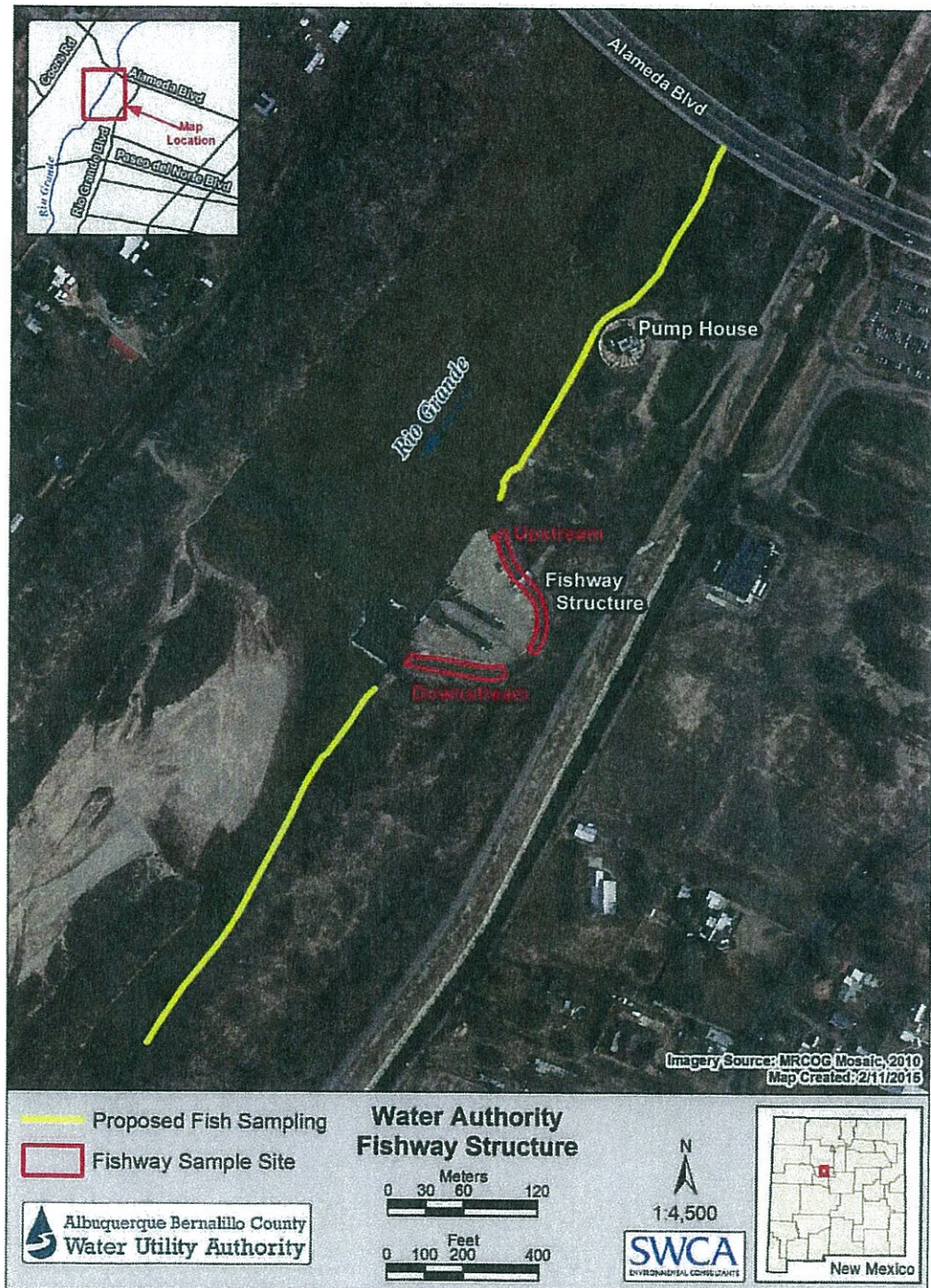


Figure 2. Water Authority Fishway Structure. The yellow line indicates the proposed areas of main channel monitoring upstream and downstream of the diversion dam.

For each sample, all fish will be identified to species and counted. Standard length (mm), and wet weight (+/- 0.10g) will be collected from captured silvery minnow. After processing, fish will be released to the mesohabitat where they

were captured. All collected fish will be identified in the field using taxonomic keys provided in Sublette et al. (1990); phylogenetic classification will follow Nelson et al. (2004). Head-mounted jeweler's magnifiers will be used to aid in fish species identification where necessary. Any incidental silvery minnow mortalities caused by sampling will be preserved for museum collection.

Water depth and water velocity will be measured using a Marsh-McBirney Flo-Mate portable velocity meter (Hach Company, Frederick, Maryland) and top-setting wading rod from each sampled mesohabitat. The dominant particle size of the substrate (e.g., sand, small gravel, cobble, etc.) will be recorded, as well as presence and type of structure (e.g., woody debris, vegetation, boulders, etc.). Water quality measurements, including turbidity (Formazin turbidity units [FTU]), pH, salinity (parts per thousand [ppt]), water temperature (degrees Celsius), dissolved oxygen (DO) by percentage, DO (mg/L) and specific conductivity microsiemens [μ S]) will be taken using an YSI 556 water quality meter from each survey site. Lastly, the area and location of each sampled mesohabitat will be recorded with a Trimble GeoXH handheld GPS unit (Trimble Navigation Limited, Sunnyvale, California) with sub-foot accuracy.

HABITAT RESTORATION FLOODPLAIN/ENTRAPMENT MONITORING

If sufficient inundation occurs, a maximum of three fyke net samples will be collected from habitat restoration sites constructed during spring and fall 2014 and spring 2015. A maximum of five floodplain surveys will be conducted between the May 1 and June 15 depending on the extent and magnitude of the spring flood pulse.

Fyke net samples will be collected with D-frame double-wing fyke nets (2.1 m length \times 1.0 m width \times 0.60 m height [6.9 \times 3.3 \times 2.0 feet]; wings 0.6 m height \times 4.6 m length [2.0 \times 15.1 feet]; 3.1-mm delta mesh, 5-cm-diameter [2-inch-diameter] throat) attached to t-posts. The fyke nets will be soaked for 4 hours but not more than 6 hours to avoid the potential for silvery minnow mortality. Depth (feet) and velocity (ft/s) at the mouth of the fyke net will be recorded for each sample. For each sample, all fish will be identified to species and counted. When practical, standard length (mm) will be recorded for all collected fish. After processing, fish will be released back to the area where they were captured.

Entrapment monitoring will occur when spring runoff begins to taper off. Inundated areas that are isolated from flowing water will be sampled with a small beach seines (3.1 \times 1.8 m [10 \times 6 feet] with mesh approximately 3 mm [$1\frac{1}{8}$ inch]) to determine if silvery minnow are present. If silvery minnow are present then efforts will be made to collect the fish that are present and return them to flowing water. If an area is not yet completely isolated from flowing water but is determined by field staff that isolation is imminent, then the area may be sampled with a small beach seine to determine if silvery minnow are present. If silvery minnow are present before isolation occurs then the site will be revisited daily until isolation occurs. After isolation occurs the area will be sampled as outlined above until it is determined that silvery minnow presence is unlikely.

HABITAT RESTORATION MAIN CHANNEL MONITORING

Fisheries monitoring in the main channel of the MRG will be conducted quarterly to document fisheries composition in the main channel adjacent to habitat restoration sites. A single survey will be conducted once quarterly in the main channel adjacent to habitat restoration sites constructed in 2014 and 2015.

Seine samples will be collected by rapidly drawing a small beach seines (3.1 \times 1.8 m [10 \times 6 feet] with mesh approximately 3 mm [$1\frac{1}{8}$ inch]) in a downstream direction up to a larger over-sized bag seine (6.0 \times 1.5 m with mesh approximately 3 mm). Upon reaching the bag seine, both nets will be tilted upwards to capture fish. The bag seine is anticipated to catch large fish species that normally occur as juveniles in fish community monitoring. A total of 10 seine samples will be collected from each site during each survey. A maximum of 20 seine hauls will be collected during each of the quarterly surveys with no more than 80 seine hauls collected over the entire proposed monitoring schedule.

For each sample, all fish will be identified to species and counted. Standard length (mm), and wet weight (+/- 0.10g) will be collected from captured silvery minnow. After processing, fish will be released to the mesohabitat where they were captured. All collected fish will be identified in the field using taxonomic keys provided in Sublette et al. (1990); phylogenetic classification will follow Nelson et al. (2004). Head-mounted jeweler's magnifiers will be used to aid in fish species identification where necessary. Any incidental silvery minnow mortalities caused by sampling will be preserved for museum collection.

Water depth and water velocity will be measured using a Marsh-McBirney Flo-Mate portable velocity meter (Hach Company, Frederick, Maryland) and top-setting wading rod from each sampled mesohabitat. The dominant particle size of the substrate (e.g., sand, small gravel, cobble, etc.) will be recorded, as well as presence and type of structure (e.g., woody debris, vegetation, boulders, etc.). Water quality measurements, including turbidity (Formazin turbidity units [FTU]), pH, salinity (parts per thousand [ppt]), water temperature (degrees Celsius), dissolved oxygen (DO) by percentage, DO (mg/L) and specific conductivity microsiemens [μ S]) will be taken using an YSI 556 water quality meter from each survey site. Lastly, the area and location of each sampled mesohabitat will be recorded with a Trimble GeoXH handheld GPS unit (**Trimble Navigation Limited**, Sunnyvale, California) with sub-foot accuracy.

WATER QUALITY MONITORING

Temperature, turbidity, conductivity, salinity, pH, and dissolved oxygen will be recorded for each fish sampling event. Temperature and general weather conditions, e.g., clear, partly cloudy, or overcast, and precipitation. Global positioning system (GPS) coordinates will be taken from the areas where water quality measurements are taken.

DATA RECORDING IN THE FIELD AND DATA MANAGEMENT

A list of equipment and contacts are provided in Appendices A and B, respectively. A relational database (Microsoft Access) and a spreadsheet database (Microsoft Excel) will be developed for the storage, analysis, and retrieval of fish and environmental data. The relational database will be developed to accommodate data entry, data storage, and data retrieval needs, along with provisions for elementary data analysis, including runtime user options to tailor queries for specific needs. Provisions will enable the export of data in a variety of formats to interact with other applications apart from a strict database environment (e.g., statistical analysis software). The relational database will incorporate a hierarchical structure that allows aggregations of data over multiple scales of time and space and ordering by phylogenetic and ecologic divisions.

FIELD SAFETY PLAN

A Job Hazards Analysis plan depicting potential hazards that may be encountered while in the field will be reviewed and signed by each employee at the beginning of each workweek and initialed at the start of each work day. The field supervisor will hold an internal field safety kickoff meeting at the start of the project. A second safety meeting will be conducted in the field. Additional field safety meetings will be conducted as necessary with such meetings to be determined by the project manager and field supervisor. All SWCA employees need to review the Job Hazards Analysis plan, make any necessary inquiries to the field supervisor and/or project manager, and sign the form acknowledging that they have reviewed and understand the document.

PHOTOPOINT/INUNDATION MONITORING OF RESTORED FEATURE

Repeat photopoint monitoring will be conducted at photopoint locations established during construction. Photos are taken in the four cardinal locations to capture changes in vegetation and condition of the restored features. A photo log will

be completed to provide documentation. Two series of photos will be taken, one during the spring runoff and another in late summer.

During spring runoff, SWCA's technicians will document the extent of inundation in the restored features. Documentation will include photos and providing GPS coordinates of the maximum inundation level.

GEOMORPHIC (FLOODPLAIN DTM)

Topographic data will be collected of the habitat restoration features to document changes in the geomorphology of the features. Topo maps will be created to illustrate changes within the features. Geomorphic monitoring will be completed in summer following spring run-off during low flow conditions. Geomorphic monitoring will be conducted only if the features are inundated during the spring runoff.

SOUTHWESTERN WILLOW FLYCATCHER HABITAT MONITORING

PURPOSE

This qualitative vegetation monitoring protocol is based on modified Hink and Ohmart (Hink and Ohmart 1984, Callahan and White 2004) methods. This approach provides spatial data for vegetation structural types and dominant species composition that are mapped and presented as polygons of vegetation types within restoration area sites. The modified Hink and Ohmart monitoring data may be used to qualitatively assess vegetation change over time based on changes in categorical structural class types at given locations, or quantitatively by comparing actual vegetation type polygon composition and sizes over time. Hink and Ohmart vegetation structural categories also provide information on wildlife habitat, and change in habitat over time. The US Fish & Wildlife Service developed additional Resource Categories based also on habitat plant composition and structure. Hink and Ohmart types may be cross-referenced with those to provide additional information for wildlife habitats. Data produced from this mapping are not intended for statistical tests of change, but rather for qualitative assessment of change based on categorical change at set sampling points or limited sets of polygon area data. This qualitative vegetation monitoring is considered low-intensity because of the minimal time and effort involved relative to quantitative BBIRD methods. Low intensity Hink and Ohmart vegetation structure classification mapping may be conducted in addition to, or as an alternative to BBIRD and BEMP protocols.

SAMPLING DESIGN

Existing habitat restoration sites or other polygons will be completely mapped for vegetation structural types using modified Hink and Ohmart methods. No sampling plots will be established as with quantitative vegetation monitoring. A specific set of site polygons for vegetation mapping will be determined in the planning stage for monitoring, and polygons will be identified and located GIS. GPS coordinates for polygons will be provided to field crews to help locate and map vegetation across the site polygons.

MEASUREMENTS AND DATA COLLECTION

Hink and Ohmart structural vegetation class vegetation polygons will be drawn directly on to GIS created hard-copy site polygon maps. For very large vegetation polygons, additional GPS waypoint mapping may be required to accurately locate vegetation structural type boundaries within a site polygon. Hand-drawn vegetation polygon maps and GPS coordinates will be taken back to the office and vegetation structural type polygon areas will be calculated by GIS procedures. Repeat photo-points will be located within, or showing from a horizontal view, of each vegetation structure type polygon within each site polygon.

INSTALLING SAMPLING LOCATIONS

Restoration project site polygon maps will be produced in GIS prior to field work. Field personnel will not install plots, but will map Hink and Ohmart structural vegetation type polygons on to GIS produced hard-copy site polygon maps.

SCHEDULE

Hink and Ohmart vegetation characterization focuses on the woody plant species; trees and shrubs, not the understory herbaceous vegetation; grasses, forbs, rushes, etc. This extensive vegetation structural type monitoring will include a flycatcher suitable habitat assessment component, which also will note soil moisture or standing water conditions during the flycatcher breeding season (May–July). For this reason, and the fact that woody vegetation structural types do not change very much through a single summer growing season, the extensive vegetation structural classification monitoring will be conducted near the end of the Rio Grande spring runoff period each year (June–July).

VEGETATION MONITORING

PURPOSE

These quantitative vegetation monitoring protocols are based on the Breeding Biology Research and Monitoring Database (BBIRD)(Martin et al. 1997) protocols, modified for Middle Rio Grande southwestern willow flycatcher habitat characterization (Moore 2007), and Bosque Ecosystem Monitoring Program (2007) (BEMP) protocols, here modified to incorporate some BBIRD protocols. These quantitative vegetation protocols will provide vegetation structure data to characterize the habitat of a given location. Each protocol has been modified slightly to provide vegetation monitoring data appropriate for Middle Rio Grande riparian habitat restoration projects. Quantitative vegetation measurements will provide data that may be used for statistical tests of differences in vegetation growth form (e.g., grasses, forbs, shrubs) composition and foliage canopy structure between locations, or from the same locations over time. This quantitative vegetation monitoring is considered high-intensity because of the time and effort involved relative to Hink & Ohmart mapping. Low intensity Hink and Ohmart vegetation structure classification mapping may be conducted in addition to, or as an alternative to BBIRD and BEMP protocols. BBIRD plots are relatively large and will be used in polygons large enough to contain them, BEMP plots are smaller and will be used in smaller polygons as an alternative to the larger BBIRD plots. Each project monitoring plan will specify whether BBIRD or BEMP protocols are to be employed. Both protocols are described below. See Elzinga et al. (2001) for details about vegetation measurement protocols.

SAMPLING DESIGN

A specific number of vegetation sampling plots will be determined in the planning stage for monitoring, and plots will be randomly located within polygons in GIS, and GPS coordinates will be provided to field crews to locate and install the plots. Methods include establishing circular BBIRD tree-scale vegetation within polygons of interest, or alternatively, smaller BEMP plots. The tree-scale BBIRD plots will also include smaller shrub-scale rectangular subplots to measure herbaceous vegetation. BEMP plots are simple 10 m by 30 m rectangles, oriented in a linear fashion parallel to the most elongate borders of each polygon and generally parallel to the Rio Grande. Each plot will be given a code name consisting of 1) the project name, 2) the polygon name, and 3) a number for the replicate plots 1-n. The plot code name will be placed on an aluminum tag, attached to a rebar at the center point of each plot.

MEASUREMENTS AND DATA COLLECTION

High intensity vegetation data will be recorded onto field data forms using data sheet formats modified from those provided by the BBIRD or BEMP protocols. Once plots are installed, vegetation measurements will be taken at repeat intervals, generally once each year.

INSTALLING SAMPLING LOCATIONS

The center points of each circular BBIRD design tree-scale sampling plot, or rectangular BEMP plot will be determined in GIS prior to field work. Coordinates will be loaded on to a GPS unit to locate plot center points in the field. The type (BBIRD or BEMP) and the number of plots per site polygon will depend on the size of each polygon. Each plot outer boundary should be at least 20 meters apart. Each plot center will be permanently marked with rebar and labeled. BEMP plots are simple 5 m by 30 m rectangles, oriented in a linear fashion parallel to the most elongate borders of each polygon. A minimum 20 m buffer area should be maintained between the outside borders of each plot and the polygon boundary.

SCHEDULE

Quantitative vegetation measurements will be taken in the late summer at the end of the growing season (September, October), when the foliage canopy of most plant species has reached maximum extent for the annual growing season. Repeat measurement will be taken every year, or repeated in several year increments, depending upon the restoration project.

COST PROPOSAL

The cost for completing the above referenced services, on a Time and Material Not to Exceed basis is \$153,530, including New Mexico Gross Receipts Tax. The cost is based on SWCA's current GSA Contract # GS-10F-0209L. The costs are summarized in the following table.

Task Name	Labor Hours	Labor Dollars	Expense Dollars	Sub Dollars	Total Budget \$	Total Tax \$	Total Budget \$ with Taxes
Task 01: Egg Monitoring	306	\$ 25,396	\$ 2,360	\$ -	\$ 27,756	\$ 1,993	\$ 29,749
Task 02: Fishway Monitoring	304	\$ 23,056	\$ 1,845	\$ -	\$ 24,901	\$ 1,788	\$ 26,689
Task 03: Floodplain/Entrapmen	244	\$ 19,269	\$ 1,200	\$ -	\$ 20,469	\$ 1,471	\$ 21,940
Task 04: HR Main Channel Mo	304	\$ 23,056	\$ 1,695	\$ -	\$ 24,751	\$ 1,779	\$ 26,530
Task 05: Photo Point/Inundatio	60	\$ 4,432	\$ 417	\$ -	\$ 4,849	\$ 349	\$ 5,198
Task 06: Geomorphic (Floodpl	56	\$ 3,955	\$ 904	\$ 11,250	\$ 16,109	\$ 1,158	\$ 17,267
Task 07: Flycatcher (H&O)	156	\$ 10,968	\$ 690	\$ -	\$ 11,658	\$ 838	\$ 12,496
Task 08: Vegetation Monitoring	174	\$ 12,056	\$ 690	\$ -	\$ 12,746	\$ 916	\$ 13,662
	1,604	\$ 122,187	\$ 9,802	\$ 11,250	\$ 143,239	\$ 10,291	\$ 153,530