

PART A. Cover Sheet

A1. Proposal Title: Meridian Farms Water Company Fish Screen Project – Construction Phase 1

A2. Lead Applicant or Organization:

Contact Name: Daniel Ruiz, General Manager
Meridian Farms Water Co., Inc.
Address: 1138 4th Street
Meridian, CA 95957
Phone Number: (530) 696-2456
Fax Number: (530) 696-2551
E-mail: dannyruiz@succeed.net

A3. Project Manager or Principal Investigator

Contact Name: Daniel Ruiz, General Manager
Meridian Farms Water Co., Inc.
Address: 1138 4th Street
Meridian, CA 95957
Phone Number: (530) 696-2456
Fax Number: (530) 696-2551
E-mail: dannyruiz@succeed.net

A4. Cost of Project: The total Project cost for the Meridian Farms Water company Fish Screen Project Phase 1 (including all of the studies, design, environmental documentation, permitting fees, environmental mitigation, legal, easements, construction and professional services during construction and performance testing) is estimated to be \$5,000,000.

The Phase 1 Project will be funded on a 50/50 cost share of federal funds (Reclamation) and a combination of State funds (CALFED ERP). The funding commitment for Phase 1 consists of the following:

Federal

\$2,500,000 from Reclamation in Fiscal Year (FY) 2007.

State

\$2,500,000 from the State share of CALFED ERP for construction in FY 2007/2008 (The purpose of this proposal)

The total **State** funding request in this proposal for construction related tasks is \$2,500,000.

The funding commitment through the completion of the final design phase consisted of the following:

State: \$750,000 under ERP-02-P15,
Federal: \$300,000 under Grant 02FG200115

Local: It is estimated that approximately \$53,000 of in-kind administrative and management services, and easements will be provided by MFWC through 2008

A5. Cost Share Partners:*

Contact Name: Debbie Lindsay
Agency/Organization Affiliation: U.S. Bureau of Reclamation (Reclamation)
Address: 2800 Cottage Way, Sacramento, CA 95825
Phone Number: (916) 978-5205
Fax Number:
E-mail: DLINDSAY@mp.usbr.gov
Type of Cost Share: \$2,500,000

Contact Name: Daniel Ruiz
Agency/Organization Affiliation: Meridian Farms Water Company
Address: 1128 4th St., Meridian, CA 95957
Phone No.: (530)696-2456
Fax No.: (530)696-2551
E-mail: dannyruiz@succeed.net
Type of Cost Share: In-kind services with estimated value of \$43,000; cash of approximately \$10,000

A6. List of Subcontractors:*

Contact Name: Janet Atkinson, P.E., Project Manager
Agency/Organization Affiliation: MWH Americas, Inc.
Address: 3321 Power Inn Road, Suite 300, Sacramento, CA 95826
Phone Number: (916) 418-8231
Fax Number: (916) 924-9102
E-mail: Janet.L.Atkinson@mwhglobal.com

General Contractor Contact information is unknown until construction contract is awarded.

A7. Other Cooperators:*

N/A

A8. Project Topic Area*

Primary: Fish Screens
Secondary: N/A

A9. Project Type*

Primary: Full-scale implementation
Secondary: N/A

PART B. Executive Summary

B1. Proposal Title: Meridian Farms Water Company Fish Screen Project – Phase 1

B2. Project Description:

The purpose of this project is to protect juvenile and migrating fish, such as chinook salmon, steelhead trout, and Sacramento splittail. The Meridian Farms Water Company (MFWC) provides irrigation water to three distinct service areas encompassing 9,150 total acres, with an estimated annual water delivery of 35,000 acre-feet (Figure 1). The water service is provided by surface water diversions from the Sacramento River, drain water reuse, and groundwater pumping. MFWC diverts water from the Sacramento River under the provisions of a License for Diversion and Use of Water with a priority date of September 10, 1918. The Sacramento River diversions are located at Meridian, Drexler, and Grimes. These diversions presently utilize an unscreened intake, and may have entrained Chinook salmon, steelhead trout, and other anadromous fish species that pass by the intake.

The Meridian Diversion consists of four pumps (30, 60, 100 and 150 horsepower) with a combined pumping capacity of 100 cfs. The Drexler Diversion consists of two pumps (30 and 75 horsepower) with a combined total pumping capacity of 35 cfs. The Grimes Diversion consists of two pumps (50 horsepower each) with a combined total pumping capacity of 30 cfs. A feasibility study to investigate fish screen facility alternatives was completed in March 2002. The feasibility study evaluated alternatives for improvements and consolidation of the three MFWC diversion facilities to provide positive barrier fish screening at each pump intake for anadromous fish. The alternative selected by MFWC board of directors consists of two new diversions/pumping plants, the consolidation of the existing and Meridian and Drexler Diversions and system improvements needed to effect the consolidation (Figure 2). The selected alternative consists of the following main components:

Meridian Diversion/Pumping Plant: A 135 cubic feet per second (cfs) diversion with fish screen and pumping plant located adjacent to the existing Meridian Diversion.

Main Canal Improvements: Increase the capacity of approximately 15,000 lineal feet of the Main Canal to convey flows to the Drexler Service area needed due to the consolidation of the Meridian and Drexler Diversions.

Drexler Pipeline/Relift Pump Station: Approximately 6,500 lineal feet of 36-inch diameter pipeline and a relift pumping plant located at the end of the Main Canal Improvements. The Drexler Pipeline will deliver flows to the Drexler Service area.

New Grimes Diversion/Pumping Plant: A 30 cfs diversion with fish screen and pumping plant located north of the existing Grimes Diversion.

Grimes Pipeline/Canal: Approximately 4,500 lineal feet of 36-inch diameter pipeline and modifications to the existing canal that will deliver irrigation flows from the New Grimes Diversion to the Grimes service area.

Design and environmental documentation work was conducted during 2004 to 2007 for the Fish Screen Project. Predesign for the project was completed in 2004 and Final Design was completed in 2007.

The project is listed as a priority in the CALFED Ecosystem Restoration Program Draft Stage 1 Implementation Plan (August 2001). The total estimated cost for the project was estimated to be \$21.8 million and the fish screen project was divided into two project phases. The Phase 1 project is the subject of this proposal and is described below. The Phase 2 project involves all remaining components.

Phase 1 Project: The Phase 1 project consists of the following components: the New Grimes Diversion/Pumping Plant, the Grimes Pipeline/Canal, and constructing up to 6,500 lineal feet of the Drexler Pipeline. The existing Grimes Diversion will be abandoned.

The preliminary cost estimate for construction of the Phase 1 Project is approximately \$5 million. MFWC is applying to ERP in this proposal for construction funding for Phase 1 in the amount of \$2,500,000. This construction funding request along with the already committed \$750,000 will be the cost share funding to the U.S. Bureau of Reclamation's share of \$2,800,000. The total estimated Phase 1 project cost including all of the studies, design, environmental documentation, permitting, construction, and performance testing is \$6,050,000. This estimated cost includes the design and environmental documentation for the entire project.

PART C. Work Plan

C1. Project Background and Information:

The purpose of this project is to protect juvenile and migrating fish, such as chinook salmon, steelhead trout, and Sacramento splittail. The MFWC provides irrigation water to three distinct service areas encompassing 9,150 total acres, with an estimated annual water delivery of 35,000 acre-feet (Figure 1). The water service is provided by surface water diversions from the Sacramento River, drain water reuse, and groundwater pumping. MFWC diverts water from the Sacramento River under the provisions of a License for Diversion and Use of Water with a priority date of September 10, 1918. The Sacramento River diversions are located at Meridian, Drexler, and Grimes. These diversions presently utilize an unscreened intake, and may have entrained Chinook salmon, steelhead trout, and other anadromous fish species that pass by the intake.

The Meridian Diversion consists of four pumps (30, 60, 100 and 150 horsepower) with a combined pumping capacity of 100 cfs. The Drexler Diversion consists of two pumps (30 and 75 horsepower) with a combined total pumping capacity of 35 cfs. The Grimes Diversion consists of two pumps (50 horsepower each) with a combined total pumping capacity of 30 cfs. A feasibility study to investigate fish screen facility alternatives was completed in March 2002. The feasibility study evaluated alternatives for improvements and consolidation of the three MFWC diversion facilities to provide positive barrier fish screening at each pump intake for anadromous fish. The alternative selected by MFWC board of directors from the feasibility study included two new diversions/pumping plants, the consolidation of the existing and Meridian and Drexler Diversions and system improvements needed to effect the consolidation (Figure 2). The project was divided into Phase 1 and 2. Phase 1 and 2 consist of the following main components:

PHASE 1

- **Grimes Diversion/Pumping Plant:** A 30 cfs diversion with fish screen and pumping plant located north of the existing Grimes Diversion. The existing Grimes Diversion will be abandoned.
- **Grimes Pipeline/Canal:** The Grimes Pipeline /Canal is approximately 650 lineal feet of 36-inch diameter pipeline, approximately 3,800 lineal feet of modifying existing earthen canal embankment, and associated work.
- **Drexler Pipeline:** Approximately 2,000 lineal feet and up to 6,500 lineal feet of 36-inch diameter pipeline, length to be dependant upon available funds. Implementation of the pipeline will provide MFWC with flexibility to provide water to the Drexler service area in the event that the existing Drexler Diversion becomes more silted in and subsequently, inoperable..

Phase 1 is to be constructed first and is the subject of this application.

PHASE 2

- **Drexler Pipeline/Relift Pump Station:** Up to approximately 4,500 feet of 36-inch diameter pipeline (dependant on the length of pipe constructed in Phase 1) and a relift pumping plant located at the endpoint of the Main Canal improvements. The Drexler Pipeline will deliver irrigation flows to the Drexler service area.
- **Meridian Diversion:** A 135 cubic feet per second (cfs) diversion with fish screen and pumping plant located adjacent to the existing Meridian Diversion.
- **Main Canal Improvements:** Increase the capacity of approximately 15,000 lineal feet of the existing Main Canal to convey 135 cfs to the Drexler service area.

C2. Project Goals and Objectives: The primary objective of this project is to provide a positive means of preventing entrainment of migrating at-risk native fish species by the intake facilities. The proposed fish screens will allow migrating Chinook salmon, as well as other fish species to pass by the intakes without risk of entrainment. The proposed fish screens will provide protection of water rights so that diversions may continue even if the listed species are present in the vicinity of the diversion.

C3. Approach/Methodology: Design of the Project facilities is 100% complete and has received review and approval by the Anadromous Fish Screen Program Technical Team (AFSPTT).

The following permits will be obtained:

1. U.S. Army Corps of Engineers, Section 404.
2. California Central Valley Regional Water Quality Control Board, Section 401 Water Quality Certification (or waiver of certification) of Compliance with State Water Quality Standards.
3. California Department of Fish and Game; Section 1603 Stream Bed Alteration Agreement.
4. California State Reclamation Board Permit
5. National Environmental Policy Act (NEPA) Environmental Documentation from Reclamation (Finding of No Significant Impact)
6. California Environmental Quality Act (CEQA) certification from CDFG.

The foregoing design work, and the environmental work under NEPA and CEQA was funded under contracts with CALFED ERP and Reclamation.

C4. Tasks and Deliverables: The following tasks describe the work to be performed under this proposal for construction of the Project.

Task 1: Project Management. (Reclamation Funds) This task will span all the elements of Tasks 2 through 7. This task will involve the day-to-day administrative, technical, and financial management of project activities, including maintaining clear and continuous communication with all team members and stakeholders discuss scope and budget status, and other issues.

Task 2: Pre-Bidding Services. (Reclamation Funds) This task consists of preparing legal descriptions for the entire project, submittal of permit applications and preparation of bidding documents for the New Grimes Diversion, Grimes Pipeline/Canal, and Phase 1 Drexler Pipeline.

It is estimated that eight legal descriptions and exhibit plats will be prepared. This task also includes obtaining title reports for the affected parcels. Permit applications, which were completed for the entire project during the design phase of the work, will be revised and submitted for approval to the permitting agencies. The following permits will be included: State Reclamation Board Permit, California Department of Fish & Game 1600 Streambed Alteration Agreement, United States Army Corps of Engineers Section 404 Permit, and Regional Water Quality Control Board Section 401 Permit. This task also includes segregating the New Grimes Diversion/Pumping Plant and Pipeline/Canal and the Phase 1 Drexler Pipeline from the overall project, and producing a stand alone document that covers just these elements of the Fish Screen Project.

Task 3: Bid and Award Services. (Reclamation Funds) This task covers the services provided during the bid and award phase of the project. A pre-bid conference and site tour will be conducted to introduce the project to potential bidders. Consultation/interpretation of Contract Documents will be provided in response to Bidders questions during the bid period. Contract addenda will be prepared and transmitted to the Bidders. Bids will be evaluated for completeness and responsiveness and checked for bonds and insurance. A recommendation for award of the work will be prepared. MFWC will award a construction contract to the selected contractor. Conformed documents that incorporate changes made during the bidding phase will be prepared and issued to the contractor for construction.

Task 4: Construction. (CALFED ERP and Reclamation Funds)The construction task includes construction of all aspects of the New Grimes Diversion/Pumping Plant, Grimes Pipeline /Canal, and Phase 1 Drexler Pipeline. The following items will be included in the construction task:

- Mobilization and Demobilization
- General Civil/Sitework
- Retractable Fish Screen With Brush Cleaning System
- Two Slant Pumps with Conduit/Piling Support System
- Steel Access/Equipment Platform
- Piping, Valves, Flow Meter and Associated Appurtenances at Pumping Plant
- Instrumentation and Electrical Controls
- Approximately 6,500 Linear Feet of 36-inch Diameter Pipelines
- Approximately 3,800 Linear Feet of Modifying Existing Grimes Canal
- Abandon Existing Diversion
- Concrete Turnout Structure with Slide Gates and Access Platform

Task 5: Construction Management. (Reclamation Funds) This task consists of providing construction management, services: construction administration, part time on-site inspection,

submittal review, and design clarifications, periodic site visits and meetings, material testing services (soils compaction, concrete strength).

This task also includes conducting a Pre-construction avian survey for Swainson's hawk, burrowing owl, cackling goose, bank swallow, and other avian species covered under the Migratory Bird Treaty Act. Biological monitoring during construction is included. Lastly, record drawings will be prepared based upon contractor-provided redline markups reflecting any changes made during construction of the work.

Task 6: Operation and Maintenance Manual. (Reclamation Funds) This task consists of preparing an Operation and Maintenance Manual for the New grimes Diversion/Pumping Plant. A preliminary outline for the contents of the Operation and Maintenance Manual is listed below:

Diversion /Pump Station Overview
Design Intent
System/Equipment Interactions
Control System, Strategy and Modes
Alarm and Shutdown Conditions
Standard Operating Procedures
Standard Maintenance Procedures
Troubleshooting Guide

Task 7: Hydraulic Evaluation. (Reclamation Funds) This task consists of performing a hydraulic evaluation of the fish screens. It is anticipated that underwater diving to measure the approach and sweeping velocities at the screens will be performed by the resource agency. A draft technical memorandum describing the results of the hydraulic evaluation will be prepared, review comments obtained, and finalized based upon comments received.

C5. Subcontractors:

Meridian Farms Water Company, General Manager Daniel Ruiz will be the Project Manager for MFWC. MFWC has been working with the CDFG, NOAA Fisheries, USFWS and Reclamation during the past 5 years from the feasibility level through the final design and environmental permitting of the fish screen project. He will be assisted by a team of professionals including Neil Schild and Janet Atkinson with MWH Americas, Inc. who will provide technical assistance and oversee the bid services and project management for the project. Following are brief biographical sketches of the principal participants.

Neil Schild, Principal-In-Charge

Mr. Schild has over 47 years experience in the planning, design and operation of major water resources facilities, including water supply and flood control, fish protection and passage, environmental restoration and management of water and land resources. He has worked with federal, state, local and private agencies throughout the Central Valley. During his 30 years with the U.S. Bureau of Reclamation, Mr. Schild attained the position of Deputy Regional Director for the Mid-Pacific Region. He was responsible for budgets and operating expenditures for the Central Valley Project water and power facilities.

Janet Atkinson, Project Manager

Ms. Atkinson has over 27 years of experience in planning and designing water resources and general civil engineering projects, with a special emphasis on the design of water treatment and conveyance facilities. Ms. Atkinson is currently the lead principal engineer for water transmission and distribution infrastructure in MWH's Sacramento office. Her multifaceted design experience includes leading multidiscipline teams for water treatment plants, pipelines, pumping facilities, utilities re-location, and transportation facilities.

C6. Work Schedule

An approximate schedule listing anticipated major milestone dates is listed below:

Obtain Permits: December 2007 to April 2008
Complete Environmental documentation: March 2008
Bidding/Award: February to March 2008
Construction: April 2008 to January 2009
Performance Evaluation: January 2009
Project Online: April 2009

C7. Special Equipment and Supplies Required: All equipment and supplies necessary for the construction of the project will be obtained by MFWC and or the general contractor as provided in the construction documents.

C8. Project Impacts (beneficial or adverse): The design of the facility consists of a retractable cylindrical fish screen with brush cleaning system and two slant pumps. These facilities will provide a positive barrier against fish entrapment and it is estimated that they will reduce the incidence of fish mortality for this diversion by 95 percent from the unscreened condition. The MFWC's total diversion capacity on the Sacramento River is 165 cfs. The Phase 1 fish screen project constitutes a 30 cfs capacity, for an estimated 18 percent reduction in the overall entrainment loss due to the unscreened intakes. The conclusion of the Phase 2 project will effect a consolidation of three diversions into two, and with the fish screen addition will result in the biological benefit of reducing the mortality of both migratory and resident fish species inhabiting the Sacramento River.

C9. Stakeholders and Interested Parties:

Meridian Farms Water Company
NOAA – Fisheries
California Department of Fish and Game
U.S. Bureau of Reclamation
California Department of Water Resources
U.S. Fish and Wildlife Service

C10. Consistency with CALFED ERP Goals:*

1). Identify Project Applicability to Eco-Elements

() See Attachment 1 for Instructions.*

Primary: Water Diversions

Secondary: N/A

2). Identify Project Applicability to ERP Goals and Objectives: The proposed project is applicable to ERP goal 1: “Endangered and Other At-risk Species”. Objective 1 is met by the implementation of the proposed combined pumping plant and fish screen.

3). Identify Project Applicability to Environmental Water Quality Constituents:

Primary: N/A

Secondary: N/A

4) Identify Project Applicability to CALFED ERP Stage 1 Milestones. The proposed project is applicable to CALFED ERP Milestone 72 that would install positive barrier fish screens on all diversions greater than 250 cfs in all EMZs and 25% of all smaller unscreened diversions in the Sacramento River Basin. Among those diversions to be screened are the DWR Pumping Plants and 50% of small diversion located on east side of Sutter Bypass, the Bella Vista diversion in the upper Sacramento River near Redding, East West Diversion Weir, Weir 5, Weir 3, Guisti Weir and Weir 1 in the Sutter Bypass, White Mallard Dam, Morton Weir, Drivers Cut Outfall and Colusa Shooting/Tarke Weir Outfall and associated diversion screens in the Butte Sink.

C11. Related Projects*

1). If this project is related to another restoration project, identify other projects by number and program (e.g. CALFED, CVPIA), and if CALFED, identify that relationship by category:

- Continued Project/Phased Project: Project No. ERP-02-P15, Meridian Farms Water Company, Fish Screen Project – Construction of New Grimes Diversion, Grimes Pipeline/Canal, and Phase 1 Drexler Pipeline.
- CVPIA Cooperative Agreement 07FC200128, Fish Screen Project – Construction of New Grimes diversion, Grimes Pipeline/Canal, and Phase 1 Drexler Pipeline.

PART D. Budget Summary

D1. Budget

This funding proposal requests CALFED ERP to fund a portion of the Task 4 Construction only. The remaining tasks will be funded by Reclamation. The budget estimate is for \$5 million.

Meridian Farms Water Company Fish Screen Project - Construction Phase 1

Budget

<u>Item</u>	<u>Description</u>	<u>Estimate</u>
Task 1	Project Management	\$35,400
Task 2	Pre-Bidding Services	\$300,000
Task 3	Bid and Award Services	\$29,600
Task 4	Construction	\$4,261,800
	New Grimes Diversion	\$1,652,000
	Grimes Pipeline	\$406,000
	Grimes Canal Modifications	\$271,000
	Grimes Diversion Abandonment	\$56,000
	Drexler Pipeline	\$1,856,800
Task 5	Construction Management	\$356,500
Task 6	O & M Manuals	\$20,400
Task 7	Hydraulic Evaluation	\$16,300
	Total	\$5,000,000

PART E. Project Location Information

E1. Project Location: The New Grimes Diversion is located at Sacramento River mile 127.0 south of Meridian, in Sutter County.

E2. County or Counties Project is Located In: Sutter County

E3. ERP Eco-Region, Eco-Zone, and Eco-Unit Project is Located In:*

ERP Eco-Region: Sacramento Valley

Eco-Zone: Sacramento River

Eco-Unit Project is located In: 3.4 Colusa to Verona

E4. Project Centroid:

Latitude/Longitude Coordinates: 38.867/-121.754

E5. Project Map:

See attached

E6. Digital Geographic File:*

See attached

E7. Congressional District: CD 03

PART F. Environmental Information

F1. CEQA/NEPA Compliance

1). Will this project require compliance with CEQA, NEPA, both, or neither:*

Both

2). Is your project covered by either a Statutory or Categorical Exemption under CEQA or a Categorical Exclusion under NEPA:*No

3). If your project requires additional CEQA/NEPA analysis, please indicate which type of documents will be prepared:

- Initial Study/ Mitigated Negative Declaration
- Environmental Assessment/FONSI

4). If the project will require CEQA and/or NEPA compliance, identify the lead agency(ies).

- CEQA Lead Agency: California Department of Fish and Game
- NEPA Lead Agency: U.S. Bureau of Reclamation

5). If your project is not covered under items 2 or 3, and you checked no to question 1, please explain why compliance is not required for the actions in this proposal:

6). If the CEQA/NEPA process is not complete, please describe the estimated timelines for the process and the expected date of completion:

The NEPA process should be completed in March 2008 with Reclamation issuing a FONSI. The CEQA process should be completed by March 2008.

7). If the CEQA/NEPA document has been completed, what is the name of the document and provide State Clearinghouse number:

F2. Environmental Permitting and Approvals

Please indicate what permits or other approvals may be required for the activities contained in your proposal and which have already been obtained. Please indicate all that 1) are needed, and 2) if needed, have been obtained:

1). Local Permits and Approvals (N/A)

2) State Permits and Approvals:

- Scientific collecting permit
- CESA compliance: 2080.1; Consistency determination Required
- 1601: Lake or Streambed Alteration Permit Required – In process

- CWA 401 certification Required – In process
- Reclamation Board approval Required – In process
- State Water Resources Board - Petition for change in Diversion location Required – In process
- Other

3) Federal Permits and Approvals:

- ESA compliance Section 7 consultation Required – In process
- CWA 404 Required – In process
- Other

PART G. Land Use Questionnaire

G1. Land Use Changes

1). Do the actions in the proposal involve physical changes in the land use, or potential future changes in land use (Yes/No): No

- If yes, describe what actions will occur on the land involved in the proposal.
- If no, explain what type of actions are involved in the proposal (i.e., research only, planning only).

2). How many acres of land will be subject to a land use change under the proposal: None

3). Is the land subject to a land use change in the proposal currently under a Williamson Act contract (Yes/No): No

4). For all lands subject to a land use change under the proposal, describe what entity or organization will manage the property and provide operations and maintenance services. N/A

5). Does the applicant propose any modifications to the water right or change in the delivery of the water (Yes/No): Yes

- If yes, please describe the modifications or changes:

The project changes the location of the Grimes Diversion, the new location is north of the existing diversion.

G2. Current Land Use and Zoning

1). What is the current land use of the area subject to a land use change under the proposal: N/A

2). What is the current zoning and general plan designation(s) for the property: AG

3). How is the land categorized on the Important Farmland Series (IFL) maps (published by the California Department of Conservation): Primary Farmland

G3. Land Acquisition

1). Will the applicant acquire any land under the proposal, either in fee or through a conservation easement (Yes/No): Yes

- If yes, describe the number of acres that will be acquired and whether the acquisition will be of fee title or a conservation easement: Easement
- Total number of acres to be acquired under proposal: 8.7 acres
- Number of acres to be acquired in fee: None
- Number of acres to be subject to conservation easement: None

2). For land acquisitions (fee title or easements), will existing water rights be acquired (Yes/No):
No

G4. Land Access

1). Will the applicant require access across public or private property that the applicant does not own to accomplish the activities in the proposal (Yes/No): No

- If yes, attach written permission for access from the relevant property owner(s).

PART H. Qualifications

H1. Qualifications

Janet Atkinson, Project Manager

Ms. Atkinson has over 27 years of experience in planning and designing water resources and general civil engineering projects, with a special emphasis on the design of water treatment and conveyance facilities. Ms. Atkinson is currently the lead principal engineer for water transmission and distribution infrastructure in MWH's Sacramento office. Her multifaceted design experience includes water treatment plants, pipelines, pumping facilities, utilities relocation, and transportation facilities.