

Alder Creek Watershed Project Project Assessment and Evaluation Plan

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Prepared for:
The City of Folsom
and
California Department of Water Resources
Implementing agency for the CALFED Bay-Delta Watershed Program

Watershed Program Grant Agreement No. 4600004717

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1. PROJECT SUMMARY

A. INTRODUCTION

This Project Assessment and Evaluation Plan (PAEP) describes the goals and desired outcomes of the Alder Creek Watershed Planning project (project) and identifies the key issues that the project is designed to address. As described in the Guidance for Preparing Project Assessment and Evaluation Plans 2007-2008 (State Water Resources Control Board, 2008), the goals of the PAEP are as follows:

- ▶ To provide a framework for assessment and evaluation of project performance.
- ▶ To identify measures that can be used to monitor progress towards achieving project goals.
- ▶ Provide a tool for grant recipients and grant managers to monitor and measure project progress and guide final project performance reporting that will fulfill grant agreement requirements.
- ▶ To provide information to help improve current and future projects.
- ▶ To maximize the value of public expenditures to achieve environmental results.

The project team (the City of Folsom and their consultants) will be responsible for implementing this PAEP and reporting results to the California Department of Water Resources (DWR) as described below. This PAEP was prepared following the Guidance for Preparing Project Assessment and Evaluation Plans 2007-2008, and following review of numerous other PAEPs prepared for similar watershed projects.

B. FUNDING PROGRAM

The project is funded by a CALFED grant (CALFED Watershed Program, Proposition 50, 2005 Grant Solicitation Program, project #994818BRO) administered by the DWR. The project is being implemented in accordance with the CALFED Watershed Program Plan, with its myriad goals and principles, which is incorporated by reference into the grant agreement. Since the grant was awarded in 2006, the original CALFED Watershed Program organization has transitioned into the Statewide California Watershed Program to promote and conduct effective stewardship of natural resources in a watershed context. The Program retains many of the important elements that made the CALFED Watershed Program successful, including public involvement and transparency. The goals of the previous CALFED Watershed Program Plan are still reflected in the project and this PAEP.

C. PROJECT DESCRIPTION

The project entails using an interest-based stakeholder-driven approach to conduct a watershed assessment and prepare a watershed management plan (WMP) for the 11-square mile Alder Creek Watershed in Sacramento County. Specifically, the WMP will:

1. describe the existing and preferred future conditions of the watershed;
2. describe the manner in which proposed restoration and/or management measures will be implemented;
3. summarize how the effectiveness of the proposed practices and/or measures will be determined; and
4. determine ecological and community benefits of implementing the project(s).

D. PROBLEM STATEMENT

The problem statement for this project can be summed up by discussing four main issues:

- ▶ ***Need for Data.*** Over the past few years many natural resources in the undeveloped portion of the watershed were mapped by proponents of development in the area, and much of this data was made available to the project team. However, these resources were collected on a site specific basis primarily to determine potential regulatory impacts resulting from proposed development and to design storm water systems. An overall cumulative assessment of watershed health, resources, and services has not occurred. Therefore, additional watershed information, such as water quality, hydrologic, geomorphic, and ecological data, is very important in establishing baseline conditions for the creek and watershed. Portions of the watershed remain somewhat unaltered, yet encroaching development and other pollution sources should be studied and managed. Pollution sources in the watershed include urban development, livestock grazing, and mine tailings. Land use alterations in the watershed, such as habitat loss, also result in physical and water quality changes to the creek.
- ▶ ***Re-establishment of a Stakeholder Group.*** In 2002 – 2003 a stakeholders group (Alder Creek Coalition) was initiated that was comprised of some downstream landowners and representatives from various organizations. The group, however, lost momentum after pursuing an USACE grant and eventually stopped meeting. As part of this project, a larger, more diverse watershed stakeholder group is being formed to facilitate a more comprehensive review of watershed issues and solutions.
- ▶ ***An Opportunity to Engage the Community in Meaningful Watershed Projects.*** Outreach to the City, community groups (e.g., Boy Scouts) and local schools (e.g., Folsom High School and Folsom Lake College) will offer opportunities to engage these stakeholders in watershed stewardship, monitoring, and/or restoration activities.

► *A Unique Chance to Guide the Future of the Watershed and Minimize Impacts from Future Development.*

Despite a history of mining, agricultural practices, and urban development, Alder Creek with its surrounding blue oak woodlands remains an important resource in the region, providing habitat for several threatened and special-status species of plants and wildlife. Only about one-quarter of the watershed is developed today, but plans are underway to convert a large portion of the watershed to urban land uses in the future. By taking a comprehensive look at the watershed, there is an unique opportunity to help develop a more sustainable vision which would serve to protect and improve water quality, protect other natural resources, and provide open space amenities to the surrounding areas. Additionally, this exercise would provide an opportunity to identify and implement restoration and recreation projects. There are no restoration activities currently underway within the watershed.

E. PLANNING AND ASSESSMENT WORK COMPLETED PREVIOUSLY IN THE WATERSHED

To date, assessment work completed in the watershed has been in support of individual private development projects with limited efforts to study the Alder Creek Watershed in its entirety. Assessments in support of various development projects include hydrologic/hydraulic assessments, biological resource assessments, Phase 1 environmental assessments, cultural resource surveys, and wetland delineations. The California Department of Fish and Game (Ode et al. 2005) performed a physical survey and benthic macroinvertebrate collection for Alder Creek at Folsom Blvd and identified the site as one of 21 potential “reference condition” sites for bioassessment studies conducted in the Central Valley. The U.S. Geological Survey (USGS) has conducted surveys on mercury pollution throughout the watershed, and some of this information has been provided to the watershed team. However, this survey data is unpublished so the details of the survey results are not yet available. A fish advisory for mercury was issued in response to these surveys.

Restoration planning has been limited in the watershed. The Alder Creek Coalition developed a restoration plan for Alder Pond; however, funds were not allocated and the group disintegrated shortly after.

F. PROJECT ELEMENTS

The project consists of four main elements:

1. establish a watershed stakeholder group;
2. define interests and develop goals and a common vision for the Alder Creek watershed among all the stakeholders using an interest-based process;

3. conduct a watershed assessment of the creek and watershed resources to build on the biological resource and hydrologic/hydraulic assessments already completed by some stakeholders; and
4. prepare a WMP that will compile and assess all of the data collected from the watershed, determine the current condition of the watershed, discuss specific sources and/or causes of degradation, provide development recommendations to minimize potential development impacts, identify areas for restoration actions, and identify implementation strategies.

G. CATEGORY OF PROJECT TASKS

To accomplish the main elements of the project, tasks identified in the grant agreement have been categorized into categories (Table 1) consistent with the PAEP Guidelines. These categories are:

- ▶ Education, Outreach, and Capacity-building (Outreach)
- ▶ Research, Planning, Monitoring, and Assessment (Research)
- ▶ Habitat Restoration (Restoration)
- ▶ Pollutant Load Reduction (Pollution)
- ▶ Water Conservation, Reliability Enhancement, and Recycling (Conservation)
- ▶ Flood Attenuation and Flood Protection (Flooding)

Completion and performance (in terms of level of effort) of these tasks will be tracked through the monthly progress reports and invoices submitted to DWR.

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Table 1.
Description of Project Tasks Sub-Tasks and Task Categories

Task	Sub-Task	Description	Categories					
			Outreach	Research	Restoration	Pollution	Conservation	Flooding
Task 1: Project Administration	1-1. City of Folsom Grant Administration	Execute agreement with DWR; prepare RFP and select consultant; supervise consultant work; process/pay consultant invoices; prepare/submit monthly invoices to DWR.						
	1-2. Consultant Team Management	Costs for Consultant Project Manager to coordinate staff/team, supervise tasks, ensure quality work products, etc.						
Task 2: Environmental Permits		Apply for/Obtain Categorical Exemption; Obtain/annually renew CDFG Environmental Data Collection Permit		X				
Task 3: Monitoring Plan/QAPP	3-1. Monitoring Plan	Prepare draft and final Monitoring Plan		X				
	3-2. QAPP	Prepare draft/final Quality Assurance Project Plan		X				
Task 4: Evaluation Plan		Prepare plan for assessing/evaluating the project (PAEP).	X					
Task 5: Stakeholder Process	5-1. General Outreach	Outreach to watershed stakeholders (residents, businesses, schools). Publish project update fact sheets on the City/County web sites over course of project. Coordinate with UCC to organize Creek Week clean-up and work with local schools to engage teachers/students in assessment work.	X					
	5-2. Facilitate Interest-Based Planning Process	Assist with development of mission/vision, goal-setting, etc. Facilitate Stakeholder Advisory Team meetings (incl. agendas/minutes). Assume 10 meetings total.	X					
Task 6: Watershed Assessment	6-1. California Watershed Assessment Manual	Coordination with CWAM team related to best use of the Calif. WS Assessment Manual (CWAM) on this project	X	X				

Table 1.
Description of Project Tasks Sub-Tasks and Task Categories

Task	Sub-Task	Description	Categories					
			Outreach	Research	Restoration	Pollution	Conservation	Flooding
	6-2. Stakeholder Coordination (Meetings, Field Trips)	Participate in 5 meetings to ensure that stakeholders' interests are reflected in WS assessment and mgmt plan. Field trips to different watershed reaches for stakeholders to understand watershed characteristics and start "visioning" of preferred future for watershed post-development	X	X				
	6-3. Establish goals/objectives	Refine goals/objectives based on field trips and other information	X	X				
	6-4. ID Problems/ Opportunities	Collect data from interviews, etc. Use conceptual model to identify and relate problems, constraints and opportunities	X	X				
	6-5. Gather/Review Existing Data	Collect, compile and analyze existing field data, reports by GenCorp, aerials, maps, etc. ID data gaps		X				
	6-6. WS Assessment Plan	Document what assessment parameters will be used to characterize conditions in the watershed. Integrate Stakeholder interests, etc.	X	X				
	6-7. Collect New Data	Collect, compile and analyze new field data: hydrologic, water quality, BMI, habitat assessments (Spring/Fall); geomorphic (spring)		X				
	6-8. Hydrologic Modeling	Use modeling to assess existing conditions and to evaluate hydrologic changes due to projected changes in land use		X				
	6-9. Evaluate potential new development impacts	Evaluate potential impacts from new development, including impacts to hydrologic regime, hydrogeomorphic, vegetation, water quality, etc.		X	X	X	X	X
	6-10. WS Assessment Findings	Summarize findings from all WS assessment work		X				

Table 1.
Description of Project Tasks Sub-Tasks and Task Categories

Task	Sub-Task	Description	Categories					
			Outreach	Research	Restoration	Pollution	Conservation	Flooding
Task 7: Watershed Mgmt Plan	7-1. ID Actions	Identify full range of potential actions/projects/strategies	X	X	X	X	X	X
	7-2. Alternatives Analyses	Conduct alternative analyses using screening criteria (chosen by Stakeholder Adv. Team) to narrow list of options	X					
	7-3. Ranked list of actions	Refine list of projects/strategies and rank			X	X	X	X
	7-4. Costs and Schedule	Develop projected relative costs, identify potential source(s) of funding/stakeholder implementation responsibilities and determine scheduling for each recommended project	X		X	X	X	X
	7-5. Recommended Actions	Describe recommended actions, along with costs, schedule, etc. in a tech memo for review by Stakeholder Adv. Team	X		X	X	X	X
	7-6. Outside Technical Review	Review by outside technical experts	X	X				
	7-7. Final Recommended Actions	Revise Tech memo to address stakeholder advisory team and technical advisor comments	X	X				
	7-8. WS Mgmt Plan	Prepare draft and final WMP. Include tech memos developed in previous tasks and summarize stakeholder process/outcomes.	X	X	X	X	X	X
	7-9. Public Agency Presentations	Make presentations at Folsom City Council, County Board of Supervisor and up to 2 other stakeholder Board/executive meetings to help ensure adoption and implementation of recommended actions	X					

Table 1.
Description of Project Tasks Sub-Tasks and Task Categories

Task	Sub-Task	Description	Categories					
			Outreach	Research	Restoration	Pollution	Conservation	Flooding
Task 8: Reporting	Monthly Reports (assume 30)	Monthly status reports are required in DWR-specified format; see #10 in DWR grant agreement (30-month project period for this RFP: Jan 2007-June 2009)						
	Semi-Annual:	None anticipated						
	Annual:	Two annual reports and associated informal presentations to the State DWR if requested.						
	Special:	None anticipated						
	Final Report	Final report summarizing all accomplishments and work products for the entire project. Follow format specified by DWR, if any. Participate in informal presentation to State DWR (if requested).						
Administration:	See Tasks 1, 8	See Tasks 1, 8						
CEQA and Permitting:	CEQA	Categorical exemption - see Task 2						
	Permits	CDFG Environ. Data Collection Permit - see Task 2						

2. PROJECT GOALS AND DESIRED OUTCOMES

The goals of the Alder Creek Watershed project are as follows:

1. Conduct a watershed assessment to evaluate the environmental conditions, identify problems and sources, and recommend prioritized projects to address problems.
2. Prepare a WMP that is practical and achievable, recommending a prioritized list of projects to be implemented by the stakeholders over the next ten years.
3. While the watershed assessment is being conducted and the WMP developed, encourage meaningful collaborative opportunities for the residents, schools, and public agencies to engage in the practice of watershed protection and creek stewardship.

The desired ecological and community outcomes of the proposed project, as outlined in the project grant proposal, are as follows:

1. Improved communication and collaboration between stakeholders.
2. A common vision and achievable goals for long-term protection of the Alder Creek Watershed.
3. A WMP that becomes a “blueprint” for creek protection that is supported, endorsed, and “owned” by all stakeholders.
4. Data that characterizes existing conditions of the creek system that is compiled and presented in a user-friendly format for reference by all stakeholders and other interested parties.
5. A WMP that balances diverse interests and objectives (e.g., water quality, habitat, flood control/drainage, recreation, education, and interpretation) and that can serve as a model by other watershed programs.
6. Recommended policies, programs, and projects that will contribute to improved water quality delivered to the American River, an important drinking water, fisheries, and recreational resource for the region.
7. Recommended policies, programs and projects that will offer protection for sensitive species and habitat types.
8. A protected, healthy creek and riparian corridor with recreational, educational, and interpretive opportunities for existing and future community residents and local schools.

3. PROJECT MONITORING AND EVALUATION

A. METHODS FOR ASSESSING RESULTS AND EVALUATING EFFECTIVENESS

Table 2 shows the performance measures that will be used to ensure continued progress towards meeting the desired outcomes of this project. These performance measures will be reviewed by the project team two times during the life of the project to evaluate the progress and effectiveness of the approaches described herein towards meeting project goals. If evaluations show that the project would benefit by modifications, such modifications will be summarized in Table 3-1 below and implemented accordingly. The results of each review will be recorded and provided to DWR with monthly reports. In addition, a third evaluation will occur at the end of the life of the project to determine what approaches were successful, and where improvements could have been made (see Table 3-2). This final (post-project) evaluation will be provided to DWR to inform future watershed planning efforts (see Table 3-3).

Table 2.
Proposed Activities and Performance Measures for the Alder Creek Watershed Project

Desired Project Outcome	Baseline Measurements and Information	Output Indicators	Outcome Indicators	Measurement Tools and Methods	Targets
1. Improve communication and collaboration between watershed stakeholders.	In the past, lack of meaningful dialogue, goals, and objectives for watershed.	Creation of a diverse and motivated stakeholders group. Formal meetings, site visits, and workshops.	Establishment of a watershed group with regular meetings and consistent attendance.	Review of attendance at stakeholder meetings and stakeholder input on project deliverables.	Development of a WMP with stakeholders' support. Implementable goals and objectives.
2. A common vision and goals for the long-term protection of the Alder Creek Watershed.	Disparate or unknown visions for future of watershed.	Formal meetings and discussions including all stakeholders.	See above.	See above.	See above.
3. A WMP that is supported and endorsed by all stakeholders and balances diverse interests and objectives	No existing WMP. A lack of collaboration among stakeholders. No common vision for creek protection.	Workshops specifically to collaborate on the WMP.	Develop recommendations that guide actions in the watershed.	See above.	Creation of a WMP that guides the future of the watershed
4. Compilation of data that characterizes existing conditions in the creek and watershed.	Piecemeal and unknown data	Synthesis of existing information. Collection of new data.	Creation of a baseline conditions report for the creek.	Review of reference list compilation for completeness; review of all data in comparison with similar documents created for other watersheds.	Existing conditions report for Alder Creek Watershed.
5. Recommended policies, programs and projects that will contribute to improved water quality delivered to the Lake Natoma and American River.	Unpublished USGS assessment of Hg pollution in watershed	Comprehensive watershed assessment including in-stream, riparian, and upland habitat areas.	Written documentation of assessments.	Team review of written assessment for important water quality constituents and geographic areas of the watershed; compare to existing reports prepared for other watersheds.	Formal WMP.
6. Recommended policies, programs and projects that will offer protection for sensitive species and	No work has been done to assess the health of such resources as a whole (watershed scale) nor to	Comprehensive watershed assessment including in-stream, riparian, and upland habitat areas.	Written documentation of assessments.	Team review of written assessment for important species and habitats in the watershed; compare to	Formal WMP.

Table 2.
Proposed Activities and Performance Measures for the Alder Creek Watershed Project

Desired Project Outcome	Baseline Measurements and Information	Output Indicators	Outcome Indicators	Measurement Tools and Methods	Targets
habitat communities.	protect them in this watershed.			policies, programs and projects outlined and/or implemented for other watersheds.	
7. A protected, healthy creek and riparian corridor with recreational, educational, and interpretive opportunities for existing and future community residents and local schools.	A partially degraded creek and riparian corridor; no active educational/recreational programs or opportunities.	Continued stream health monitoring and involvement in the watershed by local stakeholders.	Improved stream health conditions.	Defined stream health standards (CDFG Aquatic Bioassessment Laboratory); analysis of amount/quality of educational/recreational opportunities	Improvement in water quality; educational and recreational opportunities.

**Table 3-1.
Evaluation of Performance Measures for the Alder Creek Watershed Project**

Desired Project Results	Evaluation #1 Results	Project Modifications Made
1. Improve communication and collaboration between watershed stakeholders.		
2. A common vision and goals for the long-term protection of the Alder Creek Watershed.		
3. A balanced WMP that is supported and endorsed by all stakeholders.		
4. Compilation of data that characterizes existing conditions in the creek and watershed.		
5. Recommended policies, programs and projects that will contribute to improved water quality delivered to the Lake Natoma and American River.		
6. Recommended policies, programs and projects that will offer protection for sensitive species and habitat communities.		

**Table 3-1.
Evaluation of Performance Measures for the Alder Creek Watershed Project**

Desired Project Results	Evaluation #1 Results	Project Modifications Made
7. A protected, healthy creek and riparian corridor with recreational, educational and interpretive opportunities for existing and future community residents and local schools.		

**Table 3-2.
Evaluation of Performance Measures for the Alder Creek Watershed Project**

Desired Project Results	Evaluation #2	Project Modifications Made
1. Improve communication and collaboration between watershed stakeholders.		
2. A common vision and goals for the long-term protection of the Alder Creek Watershed.		
3. A WMP that is supported and endorsed by all stakeholders.		
4. Compilation of data that characterizes existing conditions in the creek and watershed.		
5. Recommended policies, programs and projects that will contribute to improved water quality		

**Table 3-2.
Evaluation of Performance Measures for the Alder Creek Watershed Project**

Desired Project Results	Evaluation #2	Project Modifications Made
delivered to the Lake Natoma and American River.		
6. Recommended policies, programs and projects that will offer protection for sensitive species and habitat communities.		
7. A protected, healthy creek and riparian corridor with recreational, educational and interpretive opportunities for existing and future community residents and local schools.		

**Table 3-3.
Evaluation of Performance Measures for the Alder Creek Watershed Project**

Desired Project Results	Post-project Evaluation	Recommendations for Future Watershed Projects
1. Improve communication and collaboration between watershed stakeholders.		
2. A common vision and goals for the long-term protection of the Alder Creek Watershed.		
3. A WMP that is supported and endorsed by all		

Table 3-3.
Evaluation of Performance Measures for the Alder Creek Watershed Project

Desired Project Results	Post-project Evaluation	Recommendations for Future Watershed Projects
stakeholders.		
4. Compilation of data that characterizes existing conditions in the creek and watershed.		
5. Recommended policies, programs and projects that will contribute to improved water quality delivered to the Lake Natoma and American River.		
6. Recommended policies, programs and projects that will offer protection for sensitive species and habitat communities.		
7. A protected, healthy creek and riparian corridor with recreational, educational and interpretive opportunities for existing and future community residents and local schools.		

4. REFERENCES

Ode, P., Pickard, D., Slusark, J. and A. Rehn. 2005. *Adaptation of a reference site selection methodology to creeks and sloughs of California's Sacramento Valley and alternative strategies for developing a regional bioassessment framework*. Prepared for Central Valley Regional Water Quality Control Board, Sacramento, CA. Prepared by Aquatic Bioassessment Laboratory, California Department of Fish and Game.

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