

Chapter 6

Project Evaluation Framework

This chapter presents a project evaluation framework to be used in the Watershed Plan for prioritizing grant funding for watershed projects. This framework emphasizes prioritization of watershed activities that fulfill the multiple objectives of the Watershed Plan. The evaluation framework organizes criteria related to physical processes, watershed benefits, and planning considerations. It builds on the scientific analysis presented in Chapter 4, *Watershed Context*, to provide a decision-making basis for the Conservancy and other decision-making entities.

6.1 Purpose and Application

This project evaluation framework was developed to organize, evaluate, and prioritize Bay Area watershed projects for potential support by the Conservancy and other grant-making agencies. In this framework, habitat conservation and restoration projects are assessed on their capacity to improve their host watershed conditions, as well as, contribute to net watershed improvements for the Bay region.

This evaluation framework was designed to assist the Conservancy and other decision-makers in evaluating funding priorities and to specifically identify multiple benefit watershed projects (those projects that seek to fulfill diverse watershed objectives through integrated design and planning). Although single objective projects can be very effective and are often necessary to address specific site problems; this framework is designed to highlight projects that provide a broad array of benefits towards watershed health.

A secondary application of this framework is to evaluate projects for their suitability for inclusion in the Bay Area IRWMP (developed under Proposition 50, Chapter 8 guidelines).

The framework can also be used by a project applicant to evaluate, in advance of submitting their proposal, whether their project: (1) meets the identified regional watershed objectives; (2) considers upstream and downstream consequences of project implementation; and (3) considers how the project might integrate with other local projects (such as capital or maintenance projects) to provide an even greater watershed benefit. In this manner, the Conservancy enables project

applicants to submit proposals that have the best opportunity to rank high in the evaluation process.

In addition to physical and ecological parameters that help assess the merits of a project, or how a project might integrate with other activities, the evaluation framework also includes planning considerations to assess such topics as: the project's readiness for implementation, CEQA compliance, landowner support, environmental equity, and on-site best management practices (BMPs).

6.2 Watershed Plan Project Inventory

The Watershed Plan project inventory is a regional database of planned and proposed watershed management, habitat protection, and restoration projects within the Bay Area. The inventory provides project proponents and administrators with an informative summary of: project description, lead agency and contacts, location (watershed, county, and city), project type, habitat type, project scale, and tier. This important project information enables cross-regional project querying.

The Watershed Plan's project inventory builds on other regional databases, but is different as well. For example, the Watershed Plan inventory includes information from the Natural Resources Projects Inventory (NRPI), San Francisco Bay Joint Venture (SFBJV), and Wetlands Tracker databases. However, the Watershed Plan inventory only includes the planned and proposed projects still in search of funding. Past or completed projects are not included because the primary purpose of the Watershed Plan inventory is evaluation for future project support.

While the inventory is a compilation of regional watershed projects, the evaluation framework provides a method to evaluate, compare, and prioritize the projects for funding support.

Appendix Y contains the current inventory of watershed projects that were available at the time that this Watershed Plan was published.

A test application of the evaluation framework was developed to provide an illustration of the framework's applicability in highlighting multiple benefit projects. **Appendix X** includes a test application of the project evaluation framework on select projects in the Alameda Creek watershed.

6.3 Project Evaluation Framework

This section explains the working structure of the project evaluation framework and how to use it. The framework is comprised of three descriptive worksheets. In general, the first worksheet (Worksheet 6-1) contains basic project information that is currently listed in the Watershed Plan project inventory. The second worksheet (Worksheet 6-2) involves a series of questions that compare the project's outcome to the stated goals/objectives of the Watershed Plan (Chapter 2, *Plan Goals and Objectives*). The third worksheet (Worksheet 6-3) evaluates projects according to a list of planning considerations. Taken together, these worksheets provide a method to identify, evaluate, and compare project information, project benefits, and project readiness.

The process for applying this evaluation framework is twofold: (1) the Conservancy or decision-making entity undertakes evaluation of the proposed project using the three worksheets; and (2) project scores are compiled and the projects are ranked. This ranking of projects then assists the decision-makers in prioritizing watershed activities for project support.

For this Watershed Plan, only those projects identified as Tier 1 projects in the inventory were steered through the evaluation framework. Tier 1 projects are those projects that are 'ready-to-proceed'; they have a fully developed work plan, schedule, and budget; they have a committed lead agency; and they have certified CEQA documentation and/or permits, if applicable. This tiering of watershed projects was necessary to determine those projects eligible and ready to submit grant applications upon Plan publication.

Project Scoring

The various evaluation criteria in Worksheet 6-2 were developed collaboratively with participating watershed stakeholders. Because of the diversity of viewpoints held by stakeholders in the Bay Area, all criteria were weighted equally. Evaluation criteria in Worksheet 6-3 – namely key issues and project partnerships – are intended to highlight projects that also emphasize local watershed concerns.

Scoring is guided by a project's stated purpose and description, and professional judgment about a project's certainty of meeting the Watershed Plan objectives. A score of 1 indicates very low certainty that the project will accomplish the Watershed Plan objective, while a score of 5 indicates very high certainty that it will accomplish the objective. This continuum is provided to allow some flexibility in evaluation. To maintain consistency among evaluation scoring, the same person or group of people will review and evaluate all projects during a single funding/evaluation cycle.

Worksheet 6-1. Project Information

Worksheet 6-1 presents the basic information recorded for each proposed project in the Watershed Plan project inventory. General project details—including project description, lead agency and contacts, location (watershed, county, and city), project type, habitat type, project scale, and tier—are listed in Worksheet 6-1. The information contained in Worksheet 6-1 is generally for project description only; no points are awarded in the scoring system for this worksheet.

Worksheet 6-2. Watershed Benefits

Worksheet 6-2 contains the metrics used to evaluate whether proposed projects meet the watershed objectives established in Chapter 2, *Plan Goals and Objectives*. Metrics incorporated into this worksheet are measurable outcomes and/or qualitative judgments based on professional experience and review of the watershed information in Chapter 5, *Watershed Characterizations*. The metrics primarily consist of a series of questions developed to guide the decision-maker in determining whether the project contributes to the identified watershed objective.

Once a project has been confirmed as a Tier 1 project in the inventory (and Worksheet 6-1), it is ready to be evaluated using the framework. If the project description is brief, project reviewers will request a more detailed project description and/or workplan from the project applicant. Using this information, the decision-maker evaluates the project based on professional judgment and watershed assessment information provided in Chapter 5, *Watershed Characterizations*.

The purpose of this worksheet is not intended to determine quantitative responses to each evaluation metric, but rather to consider the project's likelihood of meeting the Watershed Plan objectives. Through completing this worksheet exercise and by using a basic understanding of the proposed projects, environmental planners and resource managers are able to score project outcomes on a scale of 1 (low/few) - 5 (high/many).

Projects evaluated in Worksheet 6-2 can score a maximum total of 105 points for achievement of all 21 regional watershed objectives identified in this Watershed Plan.

Worksheet 6-3. Planning Considerations

Worksheet 6-3 explores the social and institutional considerations for the proposed project. This section also evaluates whether the project has considered downstream impacts of project actions and/or potential synergies with other projects within the watershed. Worksheet 6-3 further builds upon Worksheets 6-

1 and 6-2 in assisting the Conservancy in understanding the watershed suitability, multiple benefits, and other overall implications of the proposed project.

In Worksheet 6-3, projects can score a maximum total of 55 points for planning considerations. Projects are scored according to the project's consideration of the identified planning or implementation topic on a scale of 1 (low/few) - 5 (high/many). Collaboration with the project applicant is expected in order to obtain all relevant project information.

Relation to Bay Area IRWMP

The Bay Area IRWMP will include a synthesis of the project evaluation criteria from all four functional area documents. Tier 1 watershed projects which receive high scoring under the Watershed Plan's project evaluation framework will be forwarded on to the IRWMP for consideration for Proposition 50, Chapter 8 funding. However, the Bay Area IRWMP will have its own framework for reviewing and assessing the integration of projects from across the four different functional areas.

Worksheet 6-1. Project Information

This worksheet includes information from the Bay Area Watershed Plan project inventory. Project proponents are invited to provide additional / updated information, as available.

Information Type	Project Information	<i>Information from the project inventory.</i>
Project title	What is the project title?	
Project purpose / description	What is the purpose / description of the project? (Attach additional pages as necessary)	
Project contacts	Who is the lead agency for the project? Who is the primary contact? Who are other project participants?	
Project source	Was the project listed in a planning document or database? Identified in a management plan?	
Name of water body	What water body does the project address?	
Bay Area watershed	Which Bay Area watershed(s) is the project located in? Tidal wetlands of the SF Bay?	
County	What Bay Area county(s) is the project located in?	
Urbanized Area	Is the project within an urbanized area? (Yes/No)	
City	What Bay Area city(s) is the project located in? (If applicable)	
Flood management component	Does the project include a flood management component? (Yes/No)	

Information Type	Project Information	<i>Information from the project inventory.</i>
Project type (See Chapter 3, <i>Planning Framework and Approach</i>)	What project type(s) are being proposed? <ul style="list-style-type: none"> ▪ Conservation Planning. ▪ Acquisition. ▪ Capital Project. ▪ Operations and Maintenance. ▪ Education, Outreach and Stewardship. ▪ Assessment and Monitoring. ▪ Policy. 	
Project size	What is the total project acreage? Linear feet of stream channel and/or shoreline?	
Habitat type (See Chapter 4, <i>Bay Area Watershed Context</i>)	What habitat type(s) does the project address? What is the existing and planned acreage for each habitat type? <ul style="list-style-type: none"> ▪ Rivers and streams (Riverine). ▪ Lakes and reservoirs (Lacustrine). ▪ Freshwater wetlands (Palustrine). ▪ Tidal wetlands. ▪ Valley foothill riparian. ▪ Montane riparian. ▪ Other/Uplands (describe). 	
Project scale	What scale(s) does the project address? <ul style="list-style-type: none"> ▪ Site ▪ Reach ▪ Watershed ▪ Sub-region ▪ Region 	
Tier	What tier does the project fall under? <ul style="list-style-type: none"> ▪ Tier 1. Ready-to-proceed projects. Has fully developed work plan, schedule, and budget. Has committed lead agency. Has certified CEQA documentation and/or permits, if applicable. ▪ Tier 2. All projects in planning, scoping, and design phases. 	

Worksheet 6-2. Watershed Benefits

The watershed objectives listed below were developed by the Watershed Plan Development Committee (WPDC) to guide preparation of the Bay Area Watershed Plan. Please remember that the term “project” is broadly defined to include: conservation planning; acquisition; capital projects; operations and maintenance; education, outreach and stewardship; assessment and monitoring; and/or policy development. Please also note that the bulleted lists of evaluation metrics are not comprehensive; they simply provide a list of possible ways that a project can achieve the stated objective.

Each project will be considered in the degree to which (if at all) it meets the stated objective. On the scale of 1 – 5, 1 is very low/few, 2 is low/few, 3 is moderate, 4 is high/many, 5 is very high/many. Additional space under the ranking has been provided for notes indicating project applicability.

Watershed Objectives	Evaluation Metrics	Project Applicability					N/A	
		1	2	3	4	5		
Goal: Provide, protect, and enhance watershed habitat for plants and wildlife.								
A	Acquire, protect and/or restore wetlands, streams, and riparian areas.	Does the project acquire, protect, and/or restore wetlands, streams, and/or riparian areas?	1	2	3	4	5	N/A
		<ul style="list-style-type: none"> ▪ Net gain in wetlands, aquatic, and/or riparian habitat from existing conditions? ▪ Net gain in wetlands, aquatic, and/or riparian function? ▪ Identify acquisition areas and/or conservation strategies? ▪ Develop policy that ensures permanent protection of wetlands and/or streams? 						
B	Enhance wildlife populations and biodiversity (species richness).	Does the project enhance wildlife populations and biodiversity?	1	2	3	4	5	N/A
		<ul style="list-style-type: none"> ▪ Net gain in diversity of habitats, including transition zones between habitats? ▪ Increase contiguous tracts of suitable wildlife habitat or core habitat (for site-appropriate species)? ▪ Identify habitat needs necessary to increase wildlife populations and biodiversity in local watersheds? ▪ Promote community understanding and stewardship for biodiversity? 						
C	Provide lifecycle support (shelter, reproduction, feeding).	Does the project include habitat designed for lifecycle support (for site-appropriate species)?	1	2	3	4	5	N/A
		<ul style="list-style-type: none"> ▪ Net gains in nest, burrow, or redd construction areas? ▪ Provide shelter for all life stages young (for site-appropriate species)? ▪ Provide or protect adequate food sources for various life stages? ▪ Identify habitat needs necessary to support lifecycle for native species? 						

Watershed Objectives	Evaluation Metrics	<i>Project Applicability</i>					N/A	
		1	2	3	4	5		
		low/few	>	moderate	>	high/many		
D	Protect and recover fisheries (natural habitat and harvesting).	Does the project protect or recover native fisheries?	1	2	3	4	5	N/A
		<ul style="list-style-type: none"> ▪ Increase geomorphic or habitat features (e.g., pool-riffle sequences)? ▪ Plan, assess, or physically remove fish passage barriers? ▪ Increase quantity and/or quality of gravel substrate in the watershed? ▪ Improve access to spawning gravels (not embedded)? 						
E	Preserve open space and wildlands.	Does the project preserve open space and wildlands?	1	2	3	4	5	N/A
		<ul style="list-style-type: none"> ▪ Net gain in open space permanently protected? ▪ Identify conservation areas, partnerships, and/or funding mechanisms? ▪ Establish partnerships with land trust or other organization? 						
F	Protect wildlife movement/wildlife corridors.	Does the project protect wildlife movement and/or wildlife corridors?	1	2	3	4	5	N/A
		<ul style="list-style-type: none"> ▪ Net gain in connections and/or adjacency to off-site habitat areas? ▪ Protect width of riparian corridor adequate for successful wildlife movement? ▪ Resolve habitat fragmentation due to roads or other disturbances through habitat areas? ▪ Assess limiting factors for wildlife migration? ▪ Develop policy that protects connectivity of important habitat areas in watershed? 						
G	Manage pests and invasive species.	Does the project manage pests and/or invasive species?	1	2	3	4	5	N/A
		<ul style="list-style-type: none"> ▪ Net removal of invasive plant species coverage (as proportion of site)? ▪ Remove invasive species to improve stream flow and conveyance? ▪ Plan for long-term maintenance or control of invasive species? ▪ Educate the community on invasive species issues? 						
H	Recover at-risk native and special status species.	Does the project recover at-risk native and/or special status species?	1	2	3	4	5	N/A
		<ul style="list-style-type: none"> ▪ Net gain in habitat suitable for native or special-status species? ▪ Net gain in lands restored with native plant species (as proportion of site)? ▪ Connection/adjacency to off-site areas with known populations of (or the potential to support) at-risk native or special-status species? 						

Watershed Objectives	Evaluation Metrics	<i>Project Applicability</i>					N/A
		1	2	3	4	5	
	<ul style="list-style-type: none"> ▪ Assess or monitor native and/or special status species populations? 						
I	<p>Improve structural complexity (riparian and channel).</p> <p>Does the project improve structural complexity of aquatic, wetlands, and/or riparian habitat?</p> <ul style="list-style-type: none"> ▪ Net expansion of the riparian zone (from stream centerline)? ▪ Improve vertical structure of riparian habitat (e.g., ground, shrub, mid-canopy & canopy)? ▪ Plan, design, or construction using natural stream channel form? ▪ Increase plant differentiation on bank slopes? ▪ Develop policy that promotes structural complexity for habitat benefits? 	1	2	3	4	5	N/A
Goal: Protect and improve hydrologic function and water quality of all water bodies.							
J	<p>Control erosion and manage sedimentation.</p> <p>Does the project control erosion and/or manage sedimentation?</p> <ul style="list-style-type: none"> ▪ Plan, design, or construction using geomorphic approach suitable for the project site? ▪ Identify and/or implement measures for stabilizing stream channel (areas undergoing incision and deposition)? ▪ Identify and/or implement measures for stabilizing storm drain outlets? 	1	2	3	4	5	N/A
K	<p>Improve filtration of point and non-point source pollutants.</p> <p>Does the project improve filtration of point and non-point source pollutants?</p> <ul style="list-style-type: none"> ▪ Plan, design, or construction to reduce, store, or settle sediment? ▪ Plan, design, or construction to increase filtration of nutrients and/or pollutants? ▪ Use of created, expanded, or restored wetlands or aquatic plants to improve water quality? ▪ Assess or monitor water quality in the watershed? ▪ Educate the community on water quality and non-point source issues? 	1	2	3	4	5	N/A
L	<p>Maintain or improve in-stream flow conditions.</p> <p>Does the project maintain or improve in-stream flow conditions?</p> <ul style="list-style-type: none"> ▪ Consider downstream impacts to suitable habitat for fish and wildlife resources? ▪ Identify minimum flows necessary to sustain native species? ▪ Develop policy or partnerships to ensure adequate flows for habitat needs? 	1	2	3	4	5	N/A
M	<p>Improve flow conveyance and</p> <p>Does the project maintain or improve flow conveyance and storage?</p>	1	2	3	4	5	N/A

Watershed Objectives	Evaluation Metrics	<i>Project Applicability</i>					N/A
		1	2	3	4	5	
storage.	<ul style="list-style-type: none"> ▪ Use of natural channel form and structure to restore or retrofit channel? ▪ Plan, design, or construction of flow retention or storage area? ▪ Prevent or reduce hydromodification due to land use changes? ▪ Assess alternative methods or strategies for flow management for habitat? 						
N Improve floodplain connectivity.	<p>Does the project maintain or improve floodplain connectivity?</p> <ul style="list-style-type: none"> ▪ Acquire, protect, or expand an active floodplain? ▪ Improve connectivity between stream and floodplain (no levees or channels)? ▪ Promote long term protection and stewardship of existing floodplain? 	1	2	3	4	5	N/A
O Provide for groundwater recharge.	<p>Does the project provide for groundwater recharge (at appropriate sites)?</p> <ul style="list-style-type: none"> ▪ Plan, design, or construction of percolation pond that overlaps with local groundwater basin? ▪ Assess or protect permeability of soils on project site? ▪ Identify and/or implement measures for proposed recharge of groundwater basin? 	1	2	3	4	5	N/A
P Increase opportunities for recycled water use.	<p>Does the project increase opportunities for use of recycled water?</p> <ul style="list-style-type: none"> ▪ Use of recycled water supplies to increase extent of wetlands, aquatic, and/or riparian habitat? ▪ Identify or assess potential use of recycled water supplies to meet habitat needs? 	1	2	3	4	5	N/A
Q Maintain health of upland vegetation, to reduce runoff quantity and improve runoff quality.	<p>Does the project maintain or improve the health of upland vegetation?</p> <ul style="list-style-type: none"> ▪ Increase or protect vegetation/ planting of native species in adjacent uplands? ▪ Use of swales or retention areas in adjacent uplands? ▪ Educate the community on importance of healthy upland vegetation? 	1	2	3	4	5	N/A
Goal: Improve the region's quality of life through restoration and enhancement of local watersheds.							
R Provide trails and recreation opportunities (water contact).	<p>Does the project provide trails and/or recreation opportunities?</p> <ul style="list-style-type: none"> ▪ Plan, design or construction of trails, access points, or parks? ▪ Avoid sensitive areas in planning for trails and recreation? 	1	2	3	4	5	N/A

Watershed Objectives	Evaluation Metrics	<i>Project Applicability</i>					
		1	2	3	4	5	
	<ul style="list-style-type: none"> ▪ Provide potential for water contact recreation to local community? ▪ Develop policy or partnerships for provision of recreation facilities. 						
S Protect cultural resources.	<p>Does the project protect cultural resources within the watershed?</p> <ul style="list-style-type: none"> ▪ Protect cultural resources (Native American, Spanish, Mexican, Early California history) on site? ▪ Identify cultural resources for future acquisition and/or conservation? ▪ Propose development of interpretive materials? 	1	2	3	4	5	N/A
T Increase community outreach and education for watershed health.	<p>Does the project increase community outreach and education for watershed health?</p> <ul style="list-style-type: none"> ▪ Outreach programming during project design, planning, and/or policy development? ▪ Demonstration programming during project construction? ▪ Coordination with environmental education groups? 	1	2	3	4	5	N/A
U Increase social investment and stewardship.	<p>Does the project increase social investment and stewardship in local watersheds?</p> <ul style="list-style-type: none"> ▪ Coordinate with active watershed groups? ▪ Provide on-going community outreach and/or media programming? ▪ Provide opportunities for on-going volunteerism? 	1	2	3	4	5	N/A
Summary of Project Applicability re: Watershed Benefits							/ 105

Worksheet 6-3. Planning Considerations

Each project will be scored in the degree to which (if at all) it considers the planning or implementation topic stated. On the scale of 1 – 5, 1 is very low/few, 2 is low/few, 3 is moderate, 4 is high/many, 5 is very high/many.

Planning Considerations	Evaluation Metrics	Project Applicability					
		1	2	3	4	5	
		low/few >			moderate > high/many		
Schedule	Is the project ready for implementation (or its next phase)?			No		Yes	
Landowner support	Does the landowner or infrastructure owner support the project?			No		Yes	
Cost feasibility	Is it economically feasible to implement the project?			No		Yes	
Community support	Is there local support for the project? ▪ Partnerships with the surrounding community?	1	2	3	4	5	N/A
Sustainability	Will the project utilize natural on-site processes to sustain itself without maintenance? ▪ Not require significant maintenance and/or intervention to be successful?	1	2	3	4	5	N/A
Funding	Does the project have necessary funding (other than requested grant amount)? ▪ Identified additional and/or matching sources that may be available (local, state, federal)?	1	2	3	4	5	N/A
Environmental equity	Have potential downstream impacts been considered? ▪ Were adjacent and downstream communities contacted during project design?	1	2	3	4	5	N/A
Key issues (See Chapter 5, <i>Watershed Characterizations</i>)	Does the project contribute to net watershed improvement by addressing the key issues identified for the watershed? ▪ Project methods respond directly to key issues identified at reach and watershed scale?	1	2	3	4	5	N/A <i>Multiply x2 in scoring.</i>
Project synergies	Does the project contribute to net watershed improvement by building on other projects within the watershed? ▪ Collaboration with other project sponsors/contacts has been established?	1	2	3	4	5	N/A <i>Multiply x2 in scoring.</i>
On-site Best Management Practices (BMPs)	Does the project incorporate on-site BMPs (per RWQCB NPDES program) for protection of water runoff quality?	1	2	3	4	5	N/A

Summary of Project Applicability re: Planning Considerations

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Worksheet 6-5. Project Evaluation Summary

This worksheet comprises a summary of the Project Evaluation Framework. Each worksheet will be totaled and projects compared across project type and/or geographic area.

Evaluation Criteria	Subtotal
Project Information	N / A
Watershed Benefits	/ 105
Planning Considerations	/ 45
Summary Evaluation of Watershed Project	/ 150