COASTAL CONSERVANCY

Staff Recommendation
May 29, 2014

Lower Mattole Salmon Habitat Enhancement Project

Project No.14-016-01
Project Manager: Su Corbaley

RECOMMENDED ACTION: Consideration and possible authorization to disburse up to $200,000 to the Mattole Salmon Group for planning and habitat restoration activities in the Mattole estuary, including final design and permitting for off-channel slough restoration, and installing large wood structures and planting riparian vegetation in the lower estuary for the purpose of improving salmonid habitat.

LOCATION: Petrolia, Southern Humboldt County

PROGRAM CATEGORY: Resource Enhancement

EXHIBITS

Exhibit 1: Project Location and Site Map

Exhibit 2: Slough Enhancement Planning Focus Area

Exhibit 3: Implementation General Site Selection

Exhibit 4: Letters of Support

RESOLUTION AND FINDINGS:

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31251- 31270 of the Public Resources Code:

"The State Coastal Conservancy hereby authorizes the disbursement of an amount not to exceed two hundred thousand dollars ($200,000) to the Mattole Salmon Group ("MSG"), a nonprofit organization, to implement planning and restoration activities to improve anadromous salmonid habitat in the Mattole estuary, including preparing planning and design documents for restoring slough function, constructing fish habitat improvement and stream bank stabilization structures, and planting native riparian vegetation. This authorization is subject to the following conditions:

1. Prior to the disbursement of any Conservancy funds, the MSG shall submit for review and approval by the Executive Officer a work program, schedule, budget, and the names of any contractors to be used for the activities under this authorization; and shall provide evidence that all permits necessary to this project have been issued.

2. Conservancy funding shall be acknowledged in signage or other documentation appropriate to the project, as approved by the Executive Officer of the Conservancy.
3. With respect to work funded by the Conservancy and constituting an improvement or development, an agreement or agreements to protect the public interest shall be entered into between the Mattole Salmon Group and the U.S. Department of the Interior, Bureau of Land Management and recorded in Humboldt County, consistent with Public Resources Code Section 31116(c)."

Staff further recommends that the Conservancy adopt the following findings:

"Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed authorization is consistent with the purposes and objectives of Chapter 6 of Division 21 of the Public Resources Code, regarding enhancement of coastal resources.
2. The proposed project is consistent with the current Project Selection Criteria and Guidelines.
3. The area proposed for resource enhancement is identified in the Humboldt County Local Coastal Plan, South Cost Area Plan as requiring public action to resolve resource protection problems.
4. The Mattole Salmon Group is a private nonprofit organization existing under Section 501(c)(3) of the U.S. Internal Revenue Code, and whose purposes are consistent with Division 21 of the California Public Resources Code."

PROJECT SUMMARY:

Staff recommends the Conservancy authorize the disbursement of up to $200,000 to the Mattole Salmon Group ("MSG") to implement resource enhancement measures and planning activities in the Mattole River estuary. The project aims to address historic degradation of coho and Chinook salmon and steelhead trout habitat in the estuary by increasing the availability of deep and cool pools and slack water slough channels, stabilizing stream bank and sandbar soils, and increasing cover and habitat diversity throughout the estuary.

This work is being coordinated by a technical advisory team comprising MSG, the Mattole Restoration Council ("MRC"), California Department of Fish and Wildlife ("DFW"), the California Department of Water Resources ("DWR"), The Nature Conservancy ("TNC"), U.S. Department of Interior, Bureau of Land Management ("BLM"), National Marine Fisheries Service ("NOAA-NMFS"), and the U.S. Fish and Wildlife Service ("USFWS"). Americorp Watershed Stewards sponsored by the California Conservation Corps will be engaged for several tasks in this project. BLM owns the land on which the work would occur.

The Mattole River watershed is located in coastal Humboldt and Mendocino counties and supports three independent populations of federally-listed threatened salmonids: California Coastal (CC) Chinook salmon ("Chinook"), Southern Oregon Northern California Coast (SONCC) coho salmon ("coho"), and Northern California (NC) steelhead ("steelhead"). SONCC coho salmon are also listed at the state level. According to the DFW's North Coast Watershed Assessment Plan (NCWAP, 2003) for the Mattole River, in 1960 USFWS estimated populations for the three species at 2,000, 5,000, and 12,000, respectively. Surveys in recent

years document significant declines in Chinook and coho, with live adult Chinook populations ranging from 75 to 150 and live adult coho in the teens. Distribution of coho and Chinook is also significantly reduced from estimated historic ranges, which for coho included the entire main stem and 33 tributaries, and for Chinook included the main stem and 27 tributaries. In 2011, coho were found only in the very upper extent of the main stem and 3 tributaries and recent data suggests Chinook are becoming increasingly restricted to select areas of the middle main stem and a few tributaries.

The 250-acre estuary at the mouth of the Mattole River has long been a focus of watershed restoration. As flows decline in late spring, a sandbar closes off surface flow from the river to the Pacific Ocean, forming a lagoon, which persists until flows increase in the fall. Prior to major land disturbances, the Mattole estuary/lagoon was notable for its deep, thermally-stratified pools and numerous functioning north and south bank slough channels that flushed sediments from the river and received marine water. These areas nourished and provided a stable habitat for a variety of avian, terrestrial, and aquatic species, including salmon and steelhead.

Land-use impacts from logging and road construction, however, followed by an extreme 1964 flood, dramatically altered the estuary. The estuary filled in with large volumes of sediment from upslope and upstream sources, destroying pristine habitats. The Mattole estuary now provides poor habitat for salmonids; it is a mostly homogenous zone characterized by warm water during the summer, little habitat cover and riparian vegetation, a lack of slackwater and off-channel habitat, low levels of in stream wood, and overall low habitat complexity. All juvenile Chinook, coho, and steelhead use the estuary for at least a brief time prior to ocean entry to undergo physiological adaptations to salt water and imprint on their natal stream. While always a key habitat element providing wintering and summertime habitat for young salmonids, the estuary now seems vital for survival of the Mattole salmonids populations as their watershed-wide historic ranges have diminished.

Enhancement of off-channel habitat including restoring historic channel-slough connections and increasing edge habitat and riparian complexity in the estuary will remove a major detrimental bottle-neck for the Mattole salmonids. Whether the coho, Chinook, or steelhead use these newly connected off-channel habitats for a few hours, a few days, or a few weeks, it is well documented that the availability of these types of habitats in other nearby coastal watersheds, leads to improved survival and increased size before smolting.

While the need for creating more juvenile coho habitat is immediate, there is also a need to begin to restore estuarine function now for all threatened salmonid species, so that suitable year-round rearing habitat can be naturally created and sustained. Restoring the natural estuarine processes and increasing channel complexity will provide a greater buffer for salmonid response to potentially negative effects of climate change and irregular weather patterns, such as drought and flooding. The recent drought further emphasized that in years with low flows spawner and rearing access can be limited to the lower river. Thus, efforts to add complexity and restore habitat in these areas are critical to salmonid survival.

The project proposed for Conservancy funding comprises three elements including a) planning and design for restoring slough function, b) constructing fish habitat improvement and stream bank stabilization structures, and c) planting native riparian vegetation/reforestation of coastal

terraces. Conservancy funding would leverage nearly $550,000 in federal DFW Fish Restoration Grants program funds for which MSG has recently applied.

a) Mattole Estuary Slough Restoration Plan and Designs

MSG will develop a planning document ("plan") for phased restoration of the Mattole River estuary and complete final (100%) engineering plans and specifications for the selected first implementation phase, restoration of the south slough. The south slough focus area consists of the existing floodplain and associated channels located on the south side of the Mattole River estuary, extending upriver from Camp Creek at the BLM camp ground to Lower Bear Creek (Exhibit 2). The proposed project element is consistent with recommendations set forth in the Mattole Watershed Assessment Report (NCWAP 2003), and goals included in BLM's Mattole Estuary Restoration Plan 2012-2017, and the SONCC Recovery Plan, "to develop a plan to restore the estuary including restoration of the south slough and potentially removing excess sediment".

The plan will focus on recommendations for hydrologic reconnection of historical slough channels, side channels, alcoves, and tributary streams to the Mattole River estuary. The restoration efforts are intended to work with, and expand upon, recently completed restoration activities in the estuary, and recommended in earlier studies including *Elements of Recovery*, *Dynamics of Recovery*, and a study of lower Bear Creek and its floodplain. Characterization of the project area will rely on new site investigations to be conducted as part of this project, and will incorporate substantial data from studies and conceptual restoration designs previously conducted in the Mattole River estuary.

MSG expects to complete the plan and permitting for the south slough implementation by the end of 2016.

b) Fish habitat improvement and stream bank stabilization structures

MSG will place very large wood (24-inch diameter at breast height (dbh) and 100 whole trees with root wads and crowns) in the estuary and lower river in order to provide immediate suitable winter rearing habitat, adult holding habitat and refuge for coho, Chinook and stealhead. Large wood structures will be placed at key sites to promote stable island formation, multiple channel formation (anabranching), and scour, and by treating eroding terrace margins, with extensive plantings of cottonwood, willow, and other native species on established islands and along edges of stream channels at large wood placement sites.

General site selection has already been determined by the advisory team (Exhibit 3). Individual feature locations can include large single tree placement, apex jams, and complex habitat structures (aka engineered log jams). Due to fluctuating hydrologic and topographic conditions, final locations will be selected in June prior to installation. All final site locations will be recorded with GPS, assigned a specific station number in sequential order from river mile 0, and mapped. Every tree will be pit tagged to track structure movement. Specific access to site locations will also be determined during June, and will be chosen to minimize water crossings or the need for flow diversions.

This task will involve the removal of 100 trees as part of ongoing prairie restoration projects on nearby private property and placement of these 100 whole trees and wood in the Mattole estuary. Trees and wood will come from private properties with active forest management plans within a few miles of the project area, on nearby Prosper Ridge or Moore Hill. These trees are part of an encroaching Douglas fir forest that has invaded native prairies for the past 60 years since fire suppression came into favor. The tree removal is part of a native prairie restoration effort being implemented by the private landowners, BLM, and the local Fire Safe Council that will allow the local landowners to initiate burning practices in efforts to bring back native perennial grasses. Once the trees are removed, they will be staged in preparation for transport. A large helicopter (potentially Chinook Helicopter with a larger payload) will be used to transport the trees and place them at the final selected sites within the project area. Construction activities such trenching and anchoring where needed, will take place in the channel bed and along the banks. Staging areas for equipment and materials will be located on previously disturbed areas near each site. Any perennial vegetation removed for temporary access routes will be replanted. All disturbed areas will be mulched with native straw following construction. MSG has obtained a 1600 permit from DFW for this work.

In addition to installation of the structures, the effort by MSG involves pre-project planning, design, and post-project assessment and monitoring. Design and planning/permitting is completed, and post-project monitoring will be covered by partners and volunteers. Conservancy funding would be used only for estuary installation and construction.

c) Native Riparian Vegetation Planting

MSG, working with MRC, will plant 15,000 rooted (containerized) long-lived riparian tree species, and install trenched willow baffles from 6,000 large willow cuttings. The project will increase riparian forest habitat throughout a general project area of approximately 30 acres of stable floodplain terraces and increase riparian edge willow habitat throughout another approximately 30 acres of intermediate elevation islands (lower than bank full) and sand bars.

A total of 12,000 riparian trees and 3,000 riparian shrubs will be installed at two floodplain sites (GOULD01, BLM01 on Exhibit 3). Plants will be installed by hand using a planting shovel or hoedad, depending on plant size, and spacing will be appropriate to species. Mulching, hand watering from a temporary installed well and irrigation system, and shade installed where possible, will establish the plants. Cattle exclusion fencing where needed, will be installed to protect the plants from grazing.

All container plants will be grown from seed collected in the lower Mattole River at sites with similar characteristics to planting sites. Containerized plants will be propagated the summer before planting; planting is expected to occur in 2015 and/or 2016. Planting locations will be chosen based on distribution of species on reference sites and all planting sites will be located within 150 feet of the main stem of the Mattole River. Tree species that will be installed include California black cottonwood, big-leaf maple (Acer macrophyllum), California bay laurel (Umbellularia californica), California buckeye (Aesculus californica), Oregon ash (Fraxinus latifolia), and Douglas-fir. In order to increase shrub diversity and wildlife forage, shrub species will also be installed and include black-capped raspberry (Rubus leucodermis), thimbleberry

(Rubus parviflorus), ocean spray (Holodiscus discolor), redflowering currant (Ribes sanguinum) and toyon (Heteromeles arbutifolia).

Trenched willow baffle installation will take place at various islands and bar in the lower Mattole River and estuary during the summer 2015 and/or 2016. These islands are partially vegetated with non-native annual grasses and forbs with some native shrubs and generally lack longer-lived shrub and tree species such as willow and California black cottonwood. Willow baffle will be installed along approximately 6,000 linear feet, of intermediate elevation islands and bar apices. Trenching and planting will not occur in the wetted channel. Thus activities will not result in erosion or sediment delivery to adjacent waterways.

Large willow cuttings ranging in size from 15 to 25 feet long and 1 to 4 inch diameter will be harvested from local populations of Pacific willow (Salix lucida), arroyo willow (Salix lasiolepis), and red willow (Salix laevigata) and transported to project sites and directly planted into excavated trenches on 1 foot centers. When available, large cuttings and whole trees of California black cottonwood will be placed in trenches with willow. Disturbed areas will be restored by broadcast seeding with a riparian seed mix.

The planting sites will be maintained for the length of the Conservancy-MSG grant agreement.

The Mattole Salmon Group is a nonprofit organization existing under U.S. Internal Revenue Code section 501(c)(3), working for more than 30 years toward the recovery of salmonids population in the Mattole River. MSG is a member of the collaborative Mattole River and Range Partnership, an alliance of local nonprofit organizations working together to carry out enhancement activities in the Mattole watershed. MSG has a good working relationship with BLM, having carried out projects on BLM property, including but not limited to installing large wood, planting native vegetation, removing invasive vegetation, conducting education and outreach programs, and conducting fish monitoring and summertime fish rescues.

Site Description: The Mattole River is listed under Section 303(d) of the federal Clean Water Act by the U.S. Environmental Protection Agency as an impaired water system due to excessive sediment and high temperatures. As a result of that listing, the California State Water Resources Control Board established Total Maximum Daily Load ("TMDL") limits to reduce sediment and temperature in the Mattole River and improve the quality of the water that discharges to the sea. This area of the Pacific Ocean (Cape Mendocino) is recognized for its important coastal resources; the state has designated the area both an Area of Special Biological Significance and a Critical Coastal Area, while the federal government has designated the area a Marine Protected Area. These designations require that special attention and care must be taken to protect the coastal resources. DFW has listed the Mattole River as a habitat recovery unit in its Coho Salmon Recover Strategy (CA DFW, 2004) and an area necessary for maintaining critical habitat for coho salmon.

The proposed project area is the lower 4 miles of the Mattole River, focused on the 250-acre estuary (Exhibit 1). The property is owned by BLM and is mostly undeveloped, with a small environmental campsite nearby, and few homes within sight. The small town of Petrolia is located approximately 3 miles upriver from the project area. There are no roads through or across the estuary; Lighthouse Road, out of Petrolia, traverses its southern edge before turning south toward Prosper Ridge.

The estuary is the area through which *all* salmonids must pass on their way to or from the ocean. As discussed earlier, due to past land use and other events, the once dynamic and complex estuary is choked and shallow, heavily denuded of significant vegetation, and is lacking in habitat diversity to provide salmonids with adequate temperature, depth, cover and summer and winter refuge for many young salmonids survive to maturity.

While much work to reduce sediment load and change land use practices has been completed upstream, and watershed healing has begun, the estuary remains impacted. Restoring function, now, will benefit from achievements elsewhere in the watershed and will serve to improve conditions for the survival and increase of salmonids populations.

Project History: The Mattole River watershed has long been a place where residents have taken a hands-on approach to conservation. In the late 1970s local citizens began a long-term project to revive the Mattole River's declining salmon runs - initially working to directly address the decline through the use of small-scale fish propagation facilities called "hatch boxes." This early work led residents to undertake efforts to reduce stream sedimentation, protect old-growth forest, and educate neighbors about land management practices, and plant trees to improve riparian habitats.

In order to address upslope conditions that impact the health and condition of the estuary, the Conservancy has contributed to several projects throughout the watershed including acquisitions, planning and restoration. Acquisitions include: the 1997 acquisition by the BLM of the old-growth Mill Creek Forest, protecting Mill Creek, the only Coho stream in the lower watershed; the 2003 acquisition by the North Coast Regional Land Trust of 319 acres of recovering commercial timberland in the Mattole headwaters, connecting with adjacent California Department of Parks and Recreation lands; and the 2008 acquisition of a conservation easement on the 1200-acre Valley View Ranch in Petrolia.

Conservancy involvement in planning and restoration began with a study of the Mattole estuary, *The Dynamics of Recovery* (Mattole Restoration Council, 1995), which determined the estuary had been significantly modified by sediment input. That report stated that restoration of historical estuary function would require controlling sediment inputs to the lower river. This led to the Mattole Restoration Council's Good Roads, Clear Creeks Program, which is a long-term comprehensive program to reduce erosion and sedimentation through the removal or improvement of existing road systems, and treatment of other erosion sources such as landslides, throughout the watershed.

In 2003, the Conservancy funded the development of a watershed management plan that comprehensively outlined needs and objectives, and developed specific programs and projects, for restoring the health of the watershed and the functionality of the estuary and thus the fish populations. The Conservancy's funding was in response to the publication in 2002 of the Mattole North Coast Watershed Assessment Program (NCWAP) Synthesis Report, prepared by DFW, which presented probable causes for, and also recommended correction to, the declining fish population.

The NCWAP was the impetus for the Mattole River Enhancement Activities that have been funded by the Conservancy in recent years. In 2003 and 2004, the Conservancy authorized a total of $750,000 for Phase I of the Mattole River Enhancement Activities project. The bulk of the work during Phase I, completed in 2003, involved development of the watershed

management plan, (incorporating NCWAP recommendations); erosion and sediment monitoring following road and habitat improvements; expanded community outreach and education for water conservation; coordination of technical committees to advise the planning efforts; fish population and trend monitoring; conservation easement planning; and local capacity building.

In 2005, the Conservancy authorized $433,000 to implement Phase II of the project. The bulk of the Phase II funding was used to complete the Upper Mattole River Watershed Rehabilitation Project, a road restoration project in the Mattole headwaters. Over 300 sites on public, industrial and private lands were treated resulting in stabilization of approximately 69,000 cubic yards of sediment, stream bank stabilization at 48 sites, 90,000 trees planted to enhance riparian conditions, 12 in-stream salmon enhancement structures, creek clean-up at 2 sites, and post-project maintenance. Other Phase II efforts included conducting preliminary environmental review for the Mattole River Watershed Management Plan (funded under Phase I), water conservation outreach to identify conservation opportunities, road sediment-load inventories, invasive plant removal and management, and fisheries monitoring for spawning and juvenile populations. Phase II work was completed in 2007.

In 2010, the Conservancy authorized $600,000 to implement Phase III of the Mattole River Watershed Enhancement Program. Work completed included riparian reforestation in the lower watershed, invasive plant eradication, and the stabilization of approximately 75,000 cubic yards of sediment. Riparian reforestation included planting 7,000 conifer seedlings, 6,000 hardwood seedlings, 3,000 brush plugs, and 5,000 perennial bunchgrass plugs, distribution of native grass, brush and tree seeds and seed balls and installation of live willow fencing along banks. Invasive plant removal work expanded on earlier Conservancy-funded projects and included hand removal of Japanese knotweed at seven sites.

In 2012, the Conservancy authorized $273,141 to Trout Unlimited to implement water conservation projects to restore flow to the upper 10.3 miles of the Mattole River Headwaters to benefit coho and steelhead trout in the summer and fall by constructing off-stream water storage tanks (50,000 gallons and 75,000 gallons) at two selected high volume use locations – an elementary school and a multi-business complex. The landowners agree to store water in the tanks during high flow winter/spring months for use as their exclusive water source during the critical dry months in fall when river flows drop creating a risk to fish survivorship. The project is expected to add, or "return to the river," a minimum of 1,000 gallons per day, which studies have shown would be adequate to benefit fish.

PROJECT FINANCING

Coastal Conservancy	$200,000
California Department of Fish and Wildlife (federal funding; pending)	$537,805
NFWF	$29,167
Landowner Trees	$110,000
Columbia Helicopters	$19,950
Project Total	**$896,922**

In addition to the above cash contributions of cash, in-kind services and technical support are provided by: BLM ($5,712), USFWS ($3,357), and MRC ($100,014).

Conservancy funding is expected to come from the FY 08/09 appropriation (re-appropriated in 2011) to the Conservancy from the Safe Drinking Water, Water Quality and Supply, Flood Control, River and Coastal Protection Bond Act of 2006 (Proposition 84). The project is appropriate for funding under this source as these funds are available for the acquisition, enhancement, restoration, protection and development of coastal resources in accordance with the Conservancy's enabling legislation. Consistency with the Conservancy's statutory authority is discussed below in the "Consistency with Conservancy's Enabling Legislation" section. As discussed below, the project is consistent with Chapter 6 of Division 21.

Under Proposition 84, projects that restore natural resources are to be given priority if they meet one or more of the criteria specified in Public Resources Code §75071. The proposed restoration project satisfies the following specified criteria: (a) Landscape/Habitat Linkages – the project will help sustain a complex riparian system which supports several threatened and endangered species as detailed in the project description, above; (b) Watershed Protection – the project will contribute to long-term protection of and improvement to the water and biological quality of Humboldt Bay; and (e) Non-State Matching Funds – as discussed, MSG has secured significant non-State matching funds.

Consistent with Proposition 84 requirements, the grantee will conduct monitoring of the project after implementation. Though the monitoring will be conducted with non-Conservancy funds, a copy of monitoring report(s) will be provided to the Conservancy, thus ensuring successful implementation of the project objectives (See Public Resources Code § 75005(n)).

CONSISTENCY WITH CONSERVANCY'S ENABLING LEGISLATION:

The proposed project is consistent with the Humboldt County Local Coastal Plan, South Coast Area Plan as described in the Consistency with Local Coastal Program Policies below.

The proposed project would be undertaken pursuant to Chapter 6 of the Conservancy's enabling legislation, Public Resource Code Sections 31251-31270, and Section 31111, as follows:

Under § 31251, the Conservancy may award grants to nonprofit organizations to enhance coastal resources that have suffered loss of natural and scenic values. The proposed project will provide restoration design for hydraulic connectivity to historic slough channels and enhance instream and riparian habitat that were degraded by sedimentation from past land use practices and catastrophic natural events.

Consistent with § 31252, the proposed project is consistent with the County of Humboldt's Local Coastal Plan, South Coast Area Plan, as described in the "Consistency with Local Coastal Program Policies" section below.

Under § 31253, the Conservancy may provide up to the total cost of any resource enhancement project. Consistent with that section, the amount of funding recommended for the proposed project is based on the total amount of funding available for coastal resource enhancement projects, the fiscal resources of the applicant and its project partners, the urgency of the

restoration relative to other eligible coastal resource enhancement projects and other factors discussed in the Project Selection Criteria and Guidelines section, below.

Under § 31111, the Conservancy may award grants to nonprofit organizations to undertake plans and feasibility studies; the proposed project will result in a planning document for phased restoration of the Mattole River estuary, and complete final engineering plans and specifications for estuary south slough area.

CONSISTENCY WITH CONSERVANCY'S 2013 STRATEGIC PLAN GOAL(S) & OBJECTIVE(S):

The Conservancy's 2013 Strategic Plan includes as a major 5-year effort for the north coast to focus fishery restoration efforts on the restoration of basic river processes such as barrier removal, floodplain connectivity and function, water supply, and water quality.

Consistent with **Goal 5 Objective A** of the Conservancy's 2013 Strategic Plan, the proposed planning project will develop a plan to reestablish and improve fish rearing habitat in the estuary slough.

Consistent with **Goal 5 Objective B** of the Conservancy's 2013 Strategic Plan, the proposed implementation projects will restore and enhance coastal habitats, including the mainstem estuary and intertidal areas of the estuary and associated coastal terraces.

Consistent with **Goal 5 Objective C** of the Conservancy's 2013 Strategic Plan, the proposed planning project will develop a plan to preserve and enhance coastal floodplains within the estuary slough.

Consistent with **Goal 5 Objective D** of the Conservancy's 2013 Strategic Plan, the proposed implementation projects will enhance coastal floodplains.

Consistent with **Goal 5 Objective E** of the Conservancy's 2013 Strategic Plan, the proposed implementation projects will improve fish habitat by providing in stream habitat and favorable water temperatures.

CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on November 10, 2011, in the following respects:

Required Criteria

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Support of the public:** The proposed project is supported by DFW, USFWS, BLM, and NOAA Fisheries, as evidenced by their technical collaboration and contributions to the project development. Further, state and local representatives support the project (Exhibit 4).

4. **Location:** The proposed project would be located within the coastal zone of Humboldt County.
5. **Need:** Conservancy funds are critical for implementation of this project. Without SCC funds these projects will not happen as they complete the non-federal match required for the DFW funding. Momentum has been building for this project and completion of the estuary slough plans and designs, and creation of estuarine habitat will enhance salmonid habitat.
6. **Greater-than-local interest:** The restored stream and slough habitats will provide needed rearing grounds for coho and Chinook salmon and steelhead. Salmon is an anchor commercial, and recreational, industry for the state of California. There is a long history of people coming from far and wide to fish the Mattole, which experienced historic fish runs in the thousands. With the decline in those numbers, there has been a significant economic impact to the commercial and sport fishing industry. Restoring habitat in the Mattole will increase salmon populations, preserve the natural resources that draw people to visit this region of the state, and benefit the overall economic condition of the state of California. Thus, efforts to restore and increase salmonid habitat have statewide significance.
7. **Sea level rise vulnerability:** The project sites are located at current sea level and thus could be impacted by anticipated sea level rise for the years 2050 through 2100. However, the project is designed to stabilize an existing flood plain through riparian planting and the installation of in stream habitat structures, and provide for future floodplain/slough reconnection to *allow* for tidal flow, thus improving salmonid use of the estuary by flooding more terrain and increasing off-channel habitat. Additionally, a rise of sea level may increase the tidal prism and related action of tides to flush accumulated fine sediments out of slough channels. The riparian planting at this site will utilize local willow cuttings and locally harvested tree seed stock that have the capacity to survive in partially saline waters. Through bank stabilization and riparian enhancement, this project will reduce the risk of catastrophic flooding associated with sea level rise in the areas adjacent to the Mattole estuary.

Additional Criteria

8. **Urgency:** Like all salmonid populations statewide, the populations of the Mattole River are in dire need of protection and the efforts must be continued in order to restore and protect the salmonid habitat found in the Mattole and its coastal resources.

10. **Leverage:** See the "Project Financing" section above.

13. **Readiness:** Restoration activities within the overall project area have been underway for many years; MSG is positioned to undertake the activities immediately, upon approval and commitment of leveraged funds, anticipated for late 2014. MSG anticipates completing the work by mid 2017.

14. **Realization of prior Conservancy goals:** This project will further the Conservancy's goals established under the watershed enhancement program to improve overall watershed health to increase viable habitat and increase salmonid populations.

15. **Return to Conservancy:** See the "Project Financing" section above.

16. **Cooperation:** As discussed in the "Project Financing" section above, there are many organizations and agencies participating in the project to address the restoration needs in the watershed.
17. **Vulnerability from climate change impacts other than sea level rise:** It is widely expected that climate change will bring an increase in storm intensity and flooding. An increase in overall temperature is expected to further stress many of the aquatic ecosystems in the Mattole watershed. Through streambank stabilization, riparian habitat restoration, and increasing available floodplain functionality, the watercourses will develop denser canopy and deeper pools to help counteract the effects of a warmer climate. Native drought-tolerant plants will be used on the revegetation projects.
18. **Minimization of greenhouse gas emissions:** The project is designed to minimize fuel usage and emissions generated by restoration activities involving heavy equipment, by using local contractors with local equipment to minimize transportation, using local materials to reduce transportation costs, by limiting idling times during construction, and by enhancing carbon storage.

    Trees removed from upslope prairies will be placed in the river and this wet condition will increase carbon storage. Prairie areas where tree removal will occur will be restored and reseeded with native perennial grasses that will increase carbon storage.

    Riparian trees planted will increase carbon storage and ultimately, implementation of the estuary sough planning and designs will lead to increased carbon storage from riparian plantings and protection.

    Significant fuels will be used to fly the whole trees to their placement locations, but this will be offset by eliminating all trucking of trees or logs. If whole trees could not be delivered, the trees would necessarily have to be cut for transport by truck, multiplying the trips many fold.

    Additionally, by using large whole trees this project will eliminate the need for extensive drilling and cable and rebar to secure the large wood, avoiding the need for additional heavy equipment at the installation site.

CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:

The Humboldt County Local Coastal Plan, South Coast Area Plan (LCP) discusses land use for this region of Humboldt County. Sections of the LCP relevant to this project are identified below.

Section 3.41.A.1.g of the LCP identifies as environmentally sensitive areas critical habitats for rare or endangered species on state or federal lists. The listed species Chinook, coho and steelhead trout inhabit and spawn in the Mattole River.

Section 3.41.E.2 of the LCP identifies the Mattole River as a significant coastal stream, and incorporates by reference Section 30231 of the Coastal Act, regarding maintaining the biological productivity and the quality of coastal streams. Implementing this project will enable MSG to restore significant habitat for Chinook and coho and steelhead salmon.

COMPLIANCE WITH CEQA:

Staff has determined that the proposed actions are exempt from the California Environmental Quality Act (CEQA) under Title 14 of the California Code of Regulations, sections 15262, 15304, 15306, and 15333.

The proposed authorization would improve the health and function of the Mattole estuary to benefit its coastal resources by creating habitat critical to threatened and endangered salmonid species. The proposed Conservancy project will include planning and design for future implementation, installation of in-stream structures, and riparian reforestation. Specifically, the proposed project will:

- Help to restore aquatic functions by planning for future slough channel restoration that would create and maintain tidal exchange between the ocean and the estuary.
- Restore habitat and improving existing habitat values, thereby benefiting species listed as threatened or endangered under the federal and state Endangered Species Acts.
- Increase acreage of tidal habitats with beneficial effects on associated species.
- Improve functions and values of existing tidal habitats with beneficial effects on associated species.
- Enhance functions and values of coastal terraces with beneficial impacts on associated species.
- Enhance riparian woodland habitats.

The preparation of plans and designs for slough restoration is statutorily exempt under section 15262, which exempts feasibility or planning studies for possible future actions that have not been approved or funded. It is also categorically exempt under section 15306, which applies to data-collection and resource-evaluation activities.

The installation of fish-habitat improvement and stream bank stabilization structures is categorically exempt under section 15333, which exempts habitat-restoration projects not exceeding five acres in size, to assure the maintenance, restoration, enhancement, or protection of habitat for fish, plants, or wildlife. Cumulatively the structures will occupy approximately four acres, and placement of the structures will improve habitat. These activities meet the additional conditions of this exemption in that there would be no significant adverse impact on endangered, rare or threatened species or their habitat pursuant to section 15065 (mandatory findings of significance); there are no hazardous materials at or around the site; and the project will not result in significant impacts when viewed in connection with the effects of past, present, or probable future projects.

Section 15304 exempts minor alterations in the condition of land, water, and vegetation, including minor trenching and backfilling where the surface is restored. As described above, this project includes digging holes to plant native riparian vegetation, and trenching for willow planting that will be backfilled with the soils removed.

Staff will file a Notice of Exemption upon approval.