



NORTH COAST INTEGRATED REGIONAL WATER MANAGEMENT PLAN

**Implementation Grant Proposal
Proposition 84, Round 2**

**ATTACHMENT 9:
Program Preferences**

**Integrated Regional Water Management Program
Applicant: Humboldt County**

Attachment 9. Program Preferences

Introduction

The North Coast Integrated Regional Water Management Plan (NCIRWMP) Proposition 84, Round 2 Implementation Proposal (Proposal) and its thirteen high priority projects comprise a geographically diverse and well integrated implementation program with multiple water supply, water quality, habitat restoration, environmental justice and socio-economic benefits. The projects are located in nearly all of the Watershed Management Areas (WMAs) in the North Coast region and address Program Preferences stipulated by PRC §75026 (b) and CWC §10544 (*Table 9.1 NCIRWMP Program Preferences*). The projects also address high priorities of the Department of Water Resources, State Water Board, North Coast Regional Water Quality Control Board, California Department of Public Health, and the California Department of Fish and Wildlife for individual WMAs as well as for the entire North Coast Hydrologic Region. Priorities of many federal agencies – including EPA, NOAA Fisheries, US Fish and Wildlife Service and NRCS are also addressed. These include priorities related to TMDL and NPS program implementation and high priority restoration activities focused on endangered salmonids, as well as projects related to water supply reliability, public health, reduction in conflict between water users, biological diversity and the promotion of environmental justice for disadvantaged communities (DACs) throughout the region. Finally, a number of the projects address priorities related to climate change mitigation and adaptation, including objectives outlined by the above agencies as well as the California State Coastal Conservancy, the Air Resources Board, and the California Energy Commission.

| Table 9.1 NCIRWMP Program Preferences |
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| 1. Include regional projects or programs (CWC §10544) |
| 2. Effectively integrate water management programs and projects within a hydrologic region identified in the California Water Plan; the Regional Water Quality Control Board (RWQCB) region or subdivision; or other region or sub-region specifically identified by DWR |
| 3. Effectively resolve significant water-related conflicts within or between regions |
| 4. Address critical water supply or water quality needs of DACs within the region |
| 5. Effectively integrate water management with land use planning |
| 6. For eligible SWFM funding, projects which: a) are not receiving State funding for flood control or flood prevention projects pursuant to PRC §5096.824 or §75034 or b) provide multiple benefits, including, but not limited to, water quality improvements, ecosystem benefits, reduction of instream erosion and sedimentation, and groundwater recharge. |
| 7. Address Statewide priorities |

1. Inclusion of Regional Projects or Programs

Description

In a region of the size and diversity of the North Coast – an area not strongly connected via built infrastructure as is true in other parts of California – the nature of regional projects is unique. All of the proposed projects represented in this proposal are regionally important and have regional impacts, yet are executed at the scale of a watershed or a local community (*Table 9.2, NCIRWMP Program Preferences by Project*). The suite of proposed projects is part of the ongoing regional planning and implementation program comprising the NCIRWMP. Although covering a large geographic region, the proposed projects collectively operate in an integrated fashion to address regional impacts to salmonid populations, watershed and ecosystem function, water supply, water quality and climate change. These impacts often develop in a site-specific, decentralized manner (such as sedimentation, salmonid population declines and GHG emissions). Although the effects are cumulative at the regional scale and have regional impacts, the solutions to these impacts cannot be effectively addressed by one large regional project. Further, the social structures, organizations and relationships that make these projects viable cannot be centralized into one regional mega-project. Instead, the NCIRWM process provides

a flexible framework for identifying and selecting projects that implement the local solutions that best address regional issues of concern while meeting statewide priorities and program preferences. The NCIRWMP framework is supported by stable and long term planning and contracting infrastructure that supports the efficient and successful implementation of these projects by knowledgeable and experienced local agencies and groups.

This set of proposed projects contains two projects that span multiple WMAs, thus adding to the intra-regional texture of this application. The California Land Stewardship Institute’s (CLSI’s) Fish Friendly Farming project (#316) will be implemented in the North Coast Rivers and Russian/Bodega WMAs; it develops and implements site-specific BMPs on agricultural properties to contribute towards TMDL attainment as well as enhancing supply reliability for agricultural, environmental, and other beneficial uses and buffering water supply from the uncertainties associated with climate change. The MCRCD is conducting riparian habitat restoration and enhancement projects (#320) in both the North Coast and Russian/Bodega WMAs. The RCD chose multiple locations in its jurisdiction in part to spread their outreach: “as a demonstration opportunity, and through media outlets, tours and the internet, the Project (sic) supports intra-regional cooperation and information sharing.” Additionally, its stream corridor restoration projects implement strategies prioritized in regional and area plans such as the Russian River Integrated Coastal Watershed Management Plan and the Navarro River Watershed Restoration Plan.

| Project Name | Inclusion of regional projects or programs | Effectively integrate water management programs & projects | Resolve Significant Water-Related Conflicts within Region | Address critical water supply or quality needs of DACs | Effectively integrate water management with land use planning | Address Statewide priorities |
|--|---|---|--|---|--|-------------------------------------|
| 101 - Big Rock CSD Stabilize Water Storage Tank | • | | | • | • | • |
| 320 - Mendocino RCD, Working Landscapes Riparian Enhancement Project | • | • | | | • | • |
| 522 - Gualala River Sediment Reduction Program: Lower Rockpile Creek Planning Watershed | • | | | | • | • |
| 421 - Siskiyou County Septage Pond Closure | • | | • | • | • | • |
| 739 - Karuk Tribe, Lower Mid-Klamath Habitat Protection-Road Decommissioning Implementation Project | • | • | • | | • | • |
| 740 - Yurok Tribe, Restoration of Lower Klamath River Habitats | • | • | • | | | • |
| 635 - Salyer Mutual Water Company, Distribution System and Hydrants | • | | | • | | • |
| 636 - Trinity County RCD, West Weaver Creek - Channel and Floodplain Rehabilitation | • | • | | | | • |
| 206 - Humboldt Municipal Water District, Ranney Collectors 1 & 1A Lateral Replacement | • | • | | • | | • |
| 215 - Westhaven CSD Water Tank | • | | | • | | • |
| 316 - CLSI, Fish Friendly Farming & Ranching Environmental Certification in the Russian, Navarro, & Gualala River Watersheds | • | • | • | | • | • |
| 317 - CLSI, Russian River Watershed Agricultural Water Conservation & Water Supply Reliability Program | • | • | • | | • | • |
| 523 - Gold Ridge RCD Coastal Watersheds Enhancement Project | • | • | | | • | • |

Certainty: The nature of the NCIRWMP planning process – including its science-based adaptive management approach, its elected governance and technical review process and its reliance on broad stakeholder outreach and inclusion – ensures that high quality, relevant regional projects and programs will be included. The NCIRWMP staff, Technical Peer Review Committee (TPRC) and Policy Review Panel (PRP) perform extensive research regarding agency, stakeholder, ecosystem and community needs and priorities in the region. This information has been derived from exhaustive review of general plans, watershed plans, technical assessments, academic papers, agency policy documents and interviews with agency, NGO, RCD, tribal staff, elected officials and stakeholders. The NCIRWMP staff, TPRC and PRP then review and discuss these data and use them to support the development of regional program and project priorities. Only projects and programs determined to be of regional significance are prioritized by the PRP.

Magnitude and Breadth: Implementation of the proposed projects will have regional breadth and ever-increasing magnitude as the NCIRWMP continues to implement local projects that contribute towards attainment of regional priorities and benefits. The specific projects in this proposal provide: drinking and agricultural water supply reliability, attainment of water quality standards towards TMDL targets, salmonid habitat and riparian enhancement and restoration, agricultural sustainability, and climate change adaptability. These projects will act synergistically with each other and with past and future NCIRWMP projects to span the entire region and have lasting, positive effects on its ecological and human communities.

2. Effectively Integrate Water Management Programs and Projects within a Hydrologic Region Identified in the California Water Plan

Description

As with the above Program Preference, this NCIRWMP Proposal meets this Program Preference on two levels – both individual projects and the Proposal as a whole effectively integrate water management programs or projects within the North Coast Hydrologic region, which is recognized in the California Water Plan.

Several of the proposed projects integrate water management programs and projects. Humboldt Bay Municipal Water District’s Ranney Collectors project (#206) integrates HBMWD’s water collection with reservoir releases on Ruth Lake, increasing water supply reliability while improving water quality in the Mad River. With improved production capacity, additional flow can be released from Ruth Lake, maintaining flows to over 60 miles of the Mad River. This project is also expected to have positive impacts to groundwater management by spreading aquifer recharge over a larger area and enhance flexibility with water management and delivery systems – especially during dry periods and in the face of uncertain weather patterns resulting from climate change. Gold Ridge RCD’s Coastal Watersheds Enhancement Project (#523) integrates agricultural water management strategies with TMDL and salmonid recovery goals, implementing projects that will immediately provide salmonid habitat improvement in key coastal stream reaches while also preparing communities for less predictable precipitation events due to climate change. CLSI’s Russian River Watershed Agricultural Water Conservation and Supply Reliability Program (#317) integrates recycled water, water storage, and wastewater disposal into a suite of projects that sustain local agriculture while addressing needs of the City of Ukiah’s Wastewater Treatment Plant. This project will eliminate the need to expand the City of Ukiah Wastewater Treatment Plant by diverting recycled water for agricultural purposes, which enhances climate change adaptability and provides more flexible water management options.

In addition to the individual projects described above, this NCIRWMP proposal effectively integrates the thirteen prioritized projects. Though geographically separate, these projects collectively operate in an integrated way to address cumulative impacts to salmonid populations, water supply reliability, water quality and environmental justice. These impacts often develop in a decentralized fashion (i.e., sediment originates in many places in these large watersheds and

from a diversity of land uses) and so cannot effectively be addressed by one centralized project. Further, the social structures, organizations, and relationships that make these projects viable cannot be centralized into one mega-project. Instead, the NCIRWM process provides a flexible framework for identifying and selecting those projects that best meet Program Preferences and Stateside Priorities, and then provides the infrastructure for supporting the efficient and successful implementation of these projects by knowledgeable and experienced local agencies and groups.

Certainty: Upon implementation, it is certain that the individual projects described above and the suite of projects put forth in the application will effectively integrate water management programs and projects in a region approved by the SWRCB and DWR. The following include reasons the NCIRWM Proposal is certain to achieve effective integration:

1. Project proponents and the leadership for the NCIRWMP have long-term relationships with the diversity of relevant stakeholders who are critical to the planning, funding, implementation and success of the high priority projects in this Proposal. These include state and federal agencies such as the DWR, SWRCB, CDFW, California Coastal Conservancy, NOAA Fisheries, Natural Resources Conservation Service, EPA, and others. Additional stakeholder partners include landowners, elected officials, and citizen groups. This network of long-term collaborative relationships is critical to effective project implementation.
2. The NCIRWM Proposal and process relies on the best available science to plan and prioritize projects. The NCIRWM Phase III Plan will identify all of the relevant watershed plans, technical documents and agency guidance for the Region. Project proponents have developed substantial libraries of technical and scientific data in support of project planning and design and have been working collaboratively with agency scientists from DWR, SWRCB, CDFW, and NOAA Fisheries. Scientific and technical background that supports the Proposal and project rationale is included in Attachment 3, Work Plan and Attachment 7, Technical Justification of Projects. Finally, the NCIRWMP Technical Peer Review Committee (TPRC) is comprised of scientists with a long history of research, planning and implementation experience in the North Coast. This committee evaluates the degree to which projects address Program Preferences and the likelihood that they will provide the intended results. The TPRC recommends priority projects to the Policy Review Panel based on technical and scientific merit and makes suggested revisions to enhance the project's responsiveness to statewide preferences and priorities. The regional and project-specific emphasis on scientifically and technically sound planning and implementation creates certainty that the NCIRWMP will successfully address water supply and quality impairments and impacts to sensitive habitats.
3. Although the relationships, decision-making structures and science-based plans are in place, funding is a major obstacle to attainment of statewide goals and priorities. The North Coast is ready and is in a very good position to deliver high quality implementation projects that address Program Preferences, yet lacks the ratepayer base or other financial options to fund these projects from within the region. State grant funds would **remove the uncertainty** of project implementation in this disadvantaged region.

Magnitude and Breadth: The implementation of this suite of proposed projects will have region-wide and long-lasting beneficial effects for the North Coast region. This large magnitude and expansive breadth results from the following:

1. This NCIRWMP Proposal addresses all of the program preferences in an integrated fashion – including water supply reliability, eliminating or reducing pollution to sensitive and impaired habitats, attainment of water quality standards, and safe drinking water for disadvantaged communities. The NCIRWMP Proposal achieves this by fully integrating the goals and objectives of key state agencies, including the SWRCB's TMDL and NPS programs, elements of DWR's California Water Plan including the repair of failing water infrastructure, and CDFW's Coho Recovery Strategy.

2. Water quality and water supply in the North Coast hydrologic region impacts the local population as well as residents from throughout California and the nation. The North Coast is an increasingly popular tourist destination, with millions of visitors per year engaging in water and natural resource related recreation. When disadvantaged communities such as Hiouchi, Westhaven / Moonstone, and Salyer cannot repair or upgrade their water infrastructure due to lack of funding, the resultant water supply reliability and water quality impacts threaten the health of not only the local population, but also a large number of visitors from outside the region. Additionally, potential impacts to the local economy are substantial – in terms of loss of visitors and impacts to the emerging tourism industry.
3. The three species of salmonids that inhabit the North Coast hydrologic region (steelhead trout, coho and Chinook salmon) are federally listed under Endangered Species Act (ESA) and are the targets of California Department of Fish and Wildlife species recovery plans, as well as substantial State funding and resources. Because these fish are anadromous – spending a substantial part of their lives in the ocean – the status of their populations has far reaching impacts throughout the region, the state and the world. Restoration of viable populations of salmonids to the North Coast region – through a collective program of sediment reduction, passage barrier removal, in-stream flow augmentation, habitat improvement, and NPS/TMDL implementation – will have significant positive impacts on ecosystem health and biodiversity, local, regional and state economies, cultural uses for tribal groups and reduction in conflict related to in-stream flows and watershed land use.

3. Effectively Resolve Significant Water-Related Conflicts Within or Between Regions

Description

The nature of the NCIRWMP planning and implementation process – representing over seven years of active collaboration and dialogue among seven socio-politically diverse north coast counties, multiple tribal governments and numerous stakeholders – ensures that water related conflicts within the region are addressed proactively and through methods that involve joint planning and problem solving as opposed to litigation. Recently, in recognition of the diversity of viewpoints comprising the Policy Review Panel (PRP), the group has formed an Ad Hoc committee to investigate mechanisms by which one party can “opt out” of a decision made by the group if they have a strong objection to that decision or the underlying reasoning on which it is based. This will keep the group moving forward cohesively while allowing for entities within the region to maintain their autonomy and local character. This type of “opt out” would only be considered after all other methods of coming to a unanimous decision have been attempted. In this way, the NCIRWMP will move forward to advance the North Coast’s common interests while allowing for and respecting each stakeholder group’s unique perspective.

Many of the projects in this proposal proactively respond to identified problems that, if unchecked, would likely develop into conflicts within the region, while others directly address ongoing conflict. For example, the CLSI Recycled Water Supply project (#317) focuses on alleviating the tension in an ongoing conflict about agricultural frost protection in the Russian River watershed. The project includes the integration of an existing multidisciplinary science panel into Russian River water management in an effort to solve these issues using an unbiased scientific approach. The CLSI Fish Friendly Farming project (#316) also reduces conflict by implementing projects that reduce agricultural water use and increase water availability for environmental beneficial uses, such as salmonid habitat. Siskiyou County’s Septage Pond project (#421), which is operating under a pending Cease and Desist Order from the SWRCB, is likely to face legal action from Klamath River Keeper if the project is not implemented (KRR, 2009). Not only are such lawsuits divisive, but they also utilize time and resources better spent improving built and natural environments and social capacity. Finally, two habitat protection projects (#739, 740) that seek to improve salmonid habitat will also ease a decades-old conflict between Tribes and other resource users in the Klamath River HU by helping to restore salmonid populations and traditional cultural fishing opportunities to both the Yurok and Karuk Tribes.

Certainty: Upon implementation, it is certain that the individual projects described above and the suite of projects put forth in the application will effectively resolve significant water-related conflicts within the region. These projects are addressing the root of the conflicts in a collaborative, multi-purpose way that has proven effective in other North Coast watersheds in the recent past. The Proposal as a whole will continue the conflict resolution strategy epitomized by the NCIRWMP since its inception – the desire and ability to find common ground, move forward on items to which all agree, and agreeing to disagree on items where viewpoints are highly divergent. This has allowed the NCIRWMP to expand the focus of the group to include the entirety of natural resource and social capacity issues facing the North Coast. For example, at the same time that NCIRWMP members disagree about the extent or cause of climate change, they focused on the benefits of regional energy independence, and successfully developed a program to promote alternative energy technology development throughout the region. This type of positive, high quality planning and a commitment to regional collaboration and communication has resulted in the avoidance and resolution of many water related conflicts in the region and is expected to continue doing to into the future.

Magnitude and Breadth: The implementation of the suite of proposed projects will have region-wide and long-lasting beneficial effects for the North Coast region with respect to water-related conflicts. By continuing to expand its areas of emphasis and address issues relevant to communities within the North Coast – even when the issues are difficult - the NCIRWMP will continue to develop and refine synergistic relationships that focus on finding common ground to meet social and environmental challenges, reducing conflict and improving quality of life throughout the region. Additionally, by widening its scope and pursuing sources of funding other than Prop 50 & Prop 84 monies, such as grant funding through the California Energy Commission, the NCIRWMP gains greater visibility, financial stability, and credibility amongst the diverse communities that comprise our region.

4. Address Critical Water Supply or Water Quality Needs of Disadvantaged Communities within the Region

Description

As part of the NCIRWMP long-term planning and science-based project evaluation and prioritization process, the NCIRWMP prioritizes projects that address public health issues in disadvantaged communities, which have increased in the North Coast since the 2000 census. By population, the North Coast contains 46% DACs and 22% Severely DACs and by geography, 90% of the region contains DACs with 57% of the region severely disadvantaged. While nearly all of the prioritized projects benefit disadvantaged or severely disadvantaged communities, five address serious issues related to water supply and water quality in disadvantaged communities (*Table 9.2, NCIRWMP Program Preferences by Project*). Because healthy watersheds provide the basis for safe drinking water quality for much of the North Coast Region (while at the same time maintaining other critical beneficial uses of water such as salmonid population viability), the NCIRWMP places an emphasis on the integration between watershed-based and jurisdictionally based planning and project implementation. These projects address both water quality and water supply. The implementation of these projects is based on sound technical and scientific data; feasibility has been evaluated and for most, preliminary or final plans are in place. The projects will contribute towards resolving issues related to water supply and water quality issues in the disadvantaged communities of Eureka, Arcata, Blue Lake, Fieldbrook, Bayside, Cutten, Myrtle town, Manila, Freshwater, Bayview, Samoa, Humboldt Hill, Hiouchi, Westhaven, Salyer, and Montague.

The Salyer Mutual Water Company (SMWC) project (#635, State Revolving Fund (SRF) Rank B) will respond to drinking water supply issues that have been ongoing for over a decade; since 1998, the CDPH has imposed a standing boil order advisory because the unfiltered source water does not meet SDWA requirements. Additionally, the amount of water storage available is insufficient for fire protection despite Salyer being at high risk for wildland fires. In Westhaven (#215, SRF Rank E), the water system relies on a single concrete storage tank with a roof that is in an advanced state of rot due to dampness. A CDPH inspection in 2005 listed the condition of the roof as a “system or operational defect and/or potential health hazard.” This project will replace the failing tank and ensure an adequate, reliable, and sanitary drinking water supply for the community. In Siskiyou County (#101, SRF Rank E), a septage receiving pond near the

Montague airport is not under permit from the North Coast Regional Water Quality Control Board and the county has been advised by the Board to “take immediate steps to cease accepting septage waste” at the facility (NCRWQCB 2008). This project will allow Siskiyou County to implement a RWQCB-approved closure plan to gain compliance and protect groundwater and nearby surface waters. Additionally the County will avoid issuance of a Cease and Desist order, costly fines, and possible litigation, which has been threatened by a local environmental group. The Humboldt Bay Municipal Water District (HBMWD) supplies drinking water to about 2/3rd of Humboldt County’s population; aging infrastructure has resulted in the collapse and degradation of the laterals, which are projected into the aquifer for water withdrawals. This has resulted in reduced capacity and increased energy costs. HBMWD’s (#206) project is the second phase of a larger project to replace the laterals in all four concrete caisson collectors, increasing water supply reliability and decreasing energy costs for Disadvantaged Communities in the area. Big Rock CSD’s project (#101) will stabilize the system’s 100,000 gallon water storage tank and foundation before the fill under the tank fails, causing a massive landslide that would take out the CSD’s water system as well as homes, portions of Highway 99, and eventually reach the Smith River. The tank is at the end of its useful life and is in need of replacement; addressing this need before pad failure will avert probable human injury, loss of life, infrastructure destruction, reduced firefighting capacity, closure of a vital evacuation route, potential degradation of the Smith River, and damage to utility lines feeding two of five townships in the county.

Certainty: The NCIRWMP framework and process has built-in mechanisms to ensure that safe drinking water projects from disadvantaged communities are identified, planned and implemented, including outreach and technical assistance support, workshops to educate about state, local and federal funding opportunities, a website to disseminate large amounts of complex information to a diverse and dispersed regional population, technical and engineering support to project proponents from disadvantaged communities, one-on-one assistance with applications, and the formation of NCIRWMP Water and Wastewater Service Provider Outreach and Support Program. The NCIRWMP process ensures that all stakeholders are invited to attend meetings and are included as collaborators, and that additional resources are provided to enable them to access funding and technical expertise. It is the intent of the NCIRWMP that this broad support for disadvantaged communities will act as a catalyst for expansion of safe drinking water supplies in the region. Lack of funding is the most significant obstacle to implementing safe drinking water projects, and the major factor creating uncertainty in addressing this Program Preference.

Magnitude and Breadth: In this NCIRWMP Proposal, water supply reliability and drinking water quality is fully integrated with other preferences related to water quality standards (TMDL and NPS implementation), conservation and enhancement of sensitive habitat areas (high priority salmonid recovery actions supported by CDFW and NOAA Fisheries) and environmental justice (providing clean drinking water in disadvantaged communities). As outlined in Program Preference 2, this program preference – both as a stand-alone issue and integrated with the other program preferences – has far reaching impacts in the region and the state. Implementation of these critical public health projects in disadvantaged communities has the added benefit of positively impacting the local economy – thereby increasing the likelihood of ongoing system improvements that are less reliant on government funding.

4. Effectively Integrate Water Management with Land Use Planning

Description

Projects within this Proposal effectively integrate water management and land use planning in a variety of ways – some explicit and some in a less direct fashion. For example, the Gold Ridge RCD’s project (#523) builds on over a decade of watershed planning that incorporates agricultural land use planning on an individual property basis with water management goals including increasing spring and summer flows, improving water quality, and increasing water supply reliability. CSLI’s projects (#316 & #317), and MCRCD’s project (#320) also integrate land use planning on private lands with local water management. These projects support multiple Sonoma County general plan objectives as well as objectives of the NCRWQCB. All projects implement local and regional land use planning priorities, whether these

project elements are related to local general plan or regional planning objectives for watershed protection and enhancement, fisheries restoration, clean reliable drinking water supplies, or climate change mitigation and adaptation. The NCIRWMP planning process has already developed model general plan language for Humboldt and Siskiyou counties that integrates water management and land use planning, and can be adopted for use by other counties. The projects in the NCIRWMP are well aligned with the priorities outlined in SB 375, which links land use planning with various elements that are critical to sustainable communities.

Certainty: Because the NCIRWMP leadership and planning process to date has prioritized the integration of water management and land use planning, the projects that are included in this proposal reflect this objective and the planning and implementation process is certain to continue to reflect this integration.

Magnitude and Breadth: Because the NCIRWMP has pioneered the integration of water management and land use planning via the development of model general plan templates, and because the NCIRWMP Policy Review Panel has prioritized this integration and uses it as a screen for selecting projects, there is a very high likelihood that this integrated approach will have broad applicability and impact throughout the region and beyond.

5. Address Statewide Priorities

Each prioritized project contained in this Proposal addresses multiple Statewide Priorities (*Table 9.3, NCIRWMP, Statewide Priorities by Project*). Each category of Statewide Priorities is met by numerous projects within this Proposal; these are briefly described below.

Drought Preparedness

Several projects meet this Priority through promotion of water conservation, improvement of agricultural irrigation efficiencies, and long-term water use reduction. The Big Rock CSD (#101) project acts proactively to replace an aging water supply tank and prevent a catastrophic landslide. The MCRCD project (#320) will achieve long-term water use reduction through the removal of the invasive *Arundo*, which utilizes much more water than native vegetation. Through the replacement of aging infrastructure, the HBMWD project (#206), , increases water supply reliability – and thus drought preparedness – by increasing HBMWD’s conjunctive water management options. CLSI’s Fish Friendly Farming and Ranching project (#316) increases drought preparedness through implementation of water conservation BMPs on agricultural lands. CLSI and GRRCD’s projects (#317 and #523) create offstream storage where winter withdrawals will be collected to use during dry spring and summer months and providing more instream flow to support environmental beneficial uses as well as drought preparedness.

Efficient Use and Reuse of Water

The CLSI and GRRCD projects (#316 & #523) will implement irrigation efficiency improvements, install water catchment tanks, and promote water conservation efficiency measures in agricultural water use. The CLSI Agricultural Water Conservation Program (#317) will reuse municipal treated wastewater for agricultural frost control and irrigation.

Climate Change Response Actions

Many of the projects put forth in this Proposal implement Climate Change Response Actions through Adaptation, GHG Reduction, sequestration (afforestation via habitat restoration) and Energy Consumption Reduction actions. This is achieved through projects that implement water efficiency measures, incorporate water management system modifications (installation of rainwater catchment tanks), and re-establish riparian function and enhance upper watershed plant communities through riparian and wetland restoration, and removal of invasive plant species. The HBMWD project (#206) will result in GHG Reduction through reduced energy consumption. GRRCD and CLSI’s agricultural water efficiency projects (#523 and #316) reduce energy consumption through implementation of measures to reduce water consumption. Additionally, several projects directly improve water system energy efficiency. Many projects that have climate change mitigation benefits also have climate change adaptation benefits – an example being

habitat restoration/sustainable forest management making stream systems and associated plant and animal communities more resilient, while also helping human communities to adapt by protecting water supplies and attenuating the expected volatility of flood regimes.

Expand Environmental Stewardship

Ten projects in this Proposal explicitly act to expand environmental stewardship; most projects take actions that sustain water and flood management ecosystems and result in watershed improvement, floodplain improvement, and improvements to instream function. Projects that remove invasive plants and/or plant native riparian plants improve watershed, instream, and floodplain function through nutrient sequestration, provision of woody debris and nutrients, and provision of recharge areas. The sediment reduction projects provide environmental benefits through improved water quality and salmonid habitat, and slope stabilization efforts. The MRCD project (#320) is removing a barrier to fish passage and providing about 0.4 miles of upstream spawning and rearing habitat to steelhead trout after barrier removal and riparian restoration. The Big Rock CSD project (#101) is proactively providing environmental stewardship by preventing a catastrophic landslide that would destroy homes, a section of highway, and utility poles, ultimately ending at the Smith River. The GRRCD and MCRCD projects (#523 and #320) have a strong public outreach component and the Yurok and Karuk Tribes' projects (#740 and #739) and the Trinity County RCD project (#636) have a proven commitment to involve community members in appropriate roles, thus increasing both the magnitude and breadth of those projects' environmental stewardship impacts.

Practice Integrated Flood Management

A number of the riparian restoration projects (#316, #320, #523, #636, #740) facilitate surface water recharge through restoration and enhancement of natural environmental features including riparian restoration and channel stabilization. Additionally, the TCRCO project (#636) will improve water quality, salmonid habitat, and increase inundation frequency to adjacent floodplains, allowing for deposition of fine sediments. Finally, projects and create more sustainable water management systems and enhance floodplain ecosystems.

Protect Surface and Groundwater Quality

Eleven of the projects, through previously mentioned environmental and other benefits, such as riparian revegetation, instream restoration, slope stabilization, and sediment reduction, act to protect and restore surface water quality. The Big Rock CSD project (#101) prevents surface water contamination through proactive water supply tank replacement. The Siskiyou County project (#101) protects groundwater quality through closure of a septage pond constructed prior to today's protective standards and the HBMWD project (#206) protects groundwater quality by increasing the area from which groundwater is extracted, thus reducing localized impacts to recharge areas. Further, the HBMWD will develop an extraction pumping schedule to minimize impacts to the recharge area while maximizing production.

Improve Tribal Water and Natural Resources

The North Coast's population is approximately 5% Native American as compared to 1.9% statewide (Census 2010 factfinder). Two of the projects put forth in this Proposal benefit tribal lands, restore or enhance the cultural value of wild lands, or provide water quality or supply benefits to Native American communities. Both Tribal projects submitted were selected for inclusion in this Proposal. Both project proponents are Native American Tribal Groups, representing the Yurok and Karuk tribes. With the recent inclusion of three tribal members on the Policy Review Panel and Technical Peer Review Committee, the NCIWMP planning process now has a governance structure that more comprehensively considers tribal water and natural resources issues in its planning and implementation priorities and that more accurately reflects the socio-historical demographics of the region.

Ensure Equitable Distribution of Benefits

Nine of the proposed projects are entirely and four are partially located within DACs. These projects were designed to meet the water supply and quality needs of the Disadvantaged Communities that they serve – from ensuring a reliable

water supply (e.g. Big Rock CSD (#101), SMWC (#635), CLSI (#317)) to improving impaired waterways (Yurok Tribe (#740), GRWC (#522), GRRCD (#523)) and aging drinking water supply infrastructure (e.g. HMBWD (#206), West Haven CSD (#215)). Two of the projects (Siskiyou County, # 421 and Big Rock CSD, #101) respond to Cease and Desist Orders issued by the NCRWQCB with fines and other penalties in store if projects are not implemented. Collectively, these projects ensure equitable distribution of benefits through the development of multi-benefit projects that have considered affected DACs and vulnerable populations, address safe drinking water and wastewater treatment needs of DACs, and address critical water quality needs of California Native American Tribes. Please see Attachment 12, Disadvantaged Community Assistance for more information about how projects in this Proposal will benefit DACs.

Certainty: The suite of projects put forth in this application are highly certain to meet the Statewide Priorities identified in *Table 9.3, NCIWMP, Statewide Priorities by Project* due to the existing long-term collaborative relationships and NCIWMP reliance on sound scientific data as explained in Section 2, above. Projects and programs in the North Coast are very strongly aligned with the above listed priorities, and ongoing iterative planning for the implementation of projects that address these priorities has been underway for nearly a decade.

Magnitude and Breadth: The overall magnitude and breadth of the projects’ ability to meet Statewide Priorities is substantial, as these projects were selected based on the TPRC and PRP’s rigorous evaluation of those projects most likely to achieve the statewide priorities listed above. Because of their ability to serve as examples of multiple-objective integrated projects that address pressing environmental concerns, the impacts of these projects will be far-reaching and felt throughout the North Coast region as described in Section 2, above.

| Prioritized Projects | Drought Preparedness | Efficient Water Use | Climate Change Response | Environmental Stewardship | Integrated Flood Management | Protect Surface & Ground Water Quality | Improve Tribal Water/ Natural Resources | Equitable Benefit Distribution | DAC Status: e:entire; p:partial |
|--|----------------------|---------------------|-------------------------|---------------------------|-----------------------------|--|---|--------------------------------|---------------------------------|
| 101 - Big Rock CSD Stabilize Water Storage Tank | • | | • | • | | • | | • | e |
| 320 - Mendocino RCD, Working Landscapes Riparian Enhancement | • | • | • | • | • | • | | • | p |
| 522 - Gualala River Sediment Reduction Program: Lower Rockpile Creek Planning Watershed | | | | • | | • | | | p |
| 421 - Siskiyou County Septage Pond Closure | | | | | | • | | • | e |
| 739 - Karuk Tribe, Lower Mid-Klamath Habitat Protection-Road Decommissioning Implementation Project | | | | • | | • | • | • | e |
| 740 - Yurok Tribe, Restoration of Lower Klamath River Habitats | | | • | • | • | • | • | • | e |
| 635 - Salyer Mutual Water Company, Distribution System & Hydrants | | | | | | | | • | e |
| 636 - Trinity County RCD, West Weaver Creek - Channel and Floodplain Rehabilitation | | | • | • | • | • | | • | e |
| 206 - Humboldt Municipal Water District, Ranney Collectors 1 & 1A Lateral Replacement | • | | • | • | | • | | • | e |
| 215 - Westhaven CSD Water Tank | | | | | | | | • | e |
| 316 - CLSI, Fish Friendly Farming & Ranching Environmental Certification in the Russian, Navarro, & Gualala River Watersheds | • | • | • | • | • | • | | • | p |
| 317 - CLSI, Russian River Watershed Agricultural Water Conservation & Water Supply Reliability Program | • | • | • | • | | • | | • | e |
| 523 - Gold Ridge RCD Coastal Watersheds Enhancement Project | • | • | • | • | • | • | | • | p |