NORTH COAST RESOURCE PARTNERSHIP

Disadvantaged Community & Tribal Water & Wastewater Service Providers Needs Assessment Summary

September 2020

Submitted to:
California Department of Water Resources
Submitted by:
North Coast Resource Partnership

A special acknowledgement to our state funding partner:

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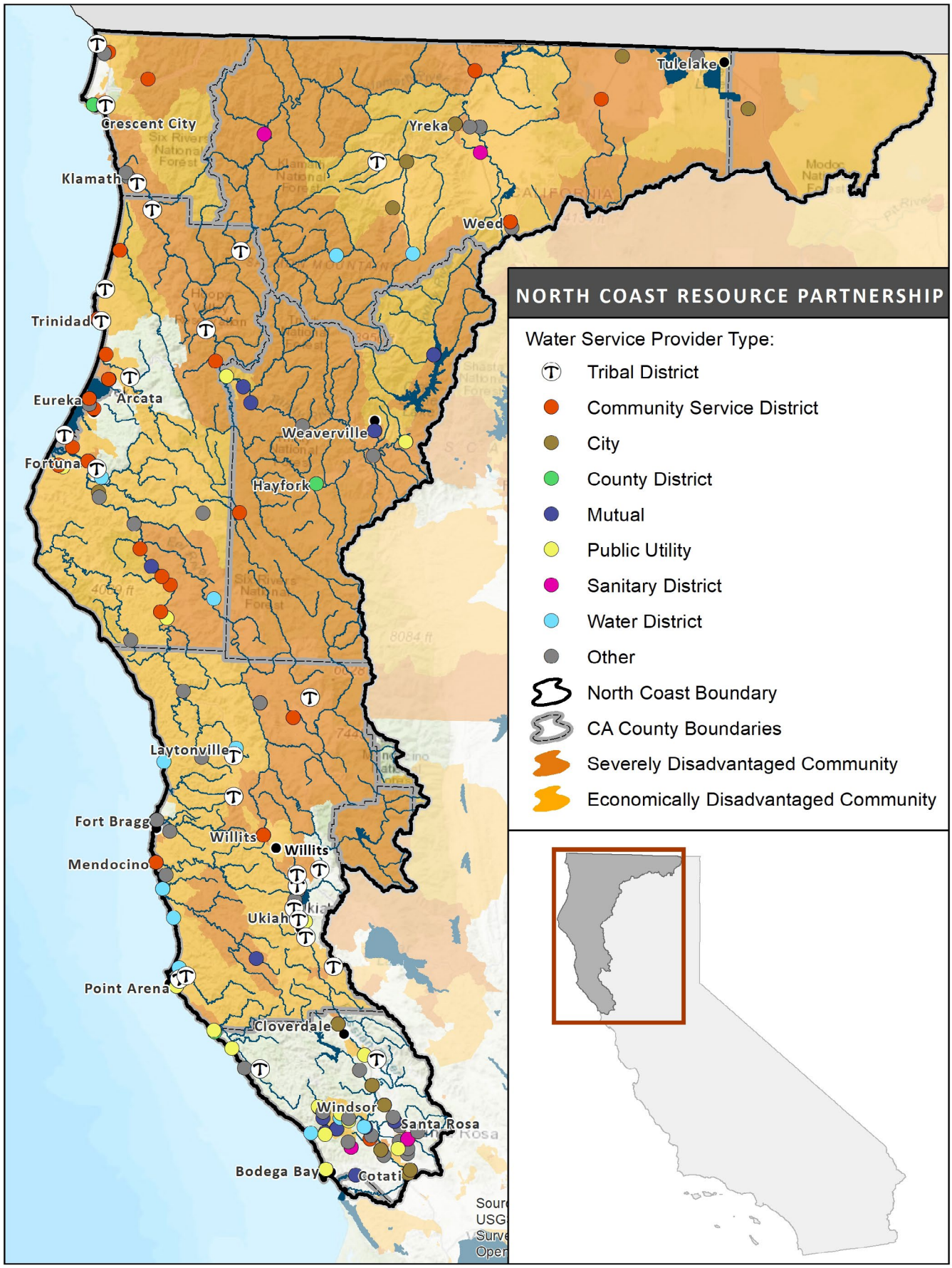

Tulelake
Crescent City
Yreka
Klamath
Weed
Trinidad
Eureka
Arcata
Weaverville
Fortuna
Hayfork
Laytonville
Fort Bragg
Willits
Willits
Mendocino
Ukiah
Point Arena
Cloverdale
Windsor
Santa Rosa
Bodega Bay
Cotati
NORTH COAST RESOURCE PARTNERSHIP
Water Service Provider Type:
Tribal District
Community Service District
City
County District
Mutual
Public Utility
Sanitary District
Water District
Other
North Coast Boundary
CA County Boundaries
Severely Disadvantaged Community
Economically Disadvantaged Community

INTRODUCTION

The North Coast Resource Partnership (NCRP) was awarded funding from the Department of Water Resources (DWR) Integrated Regional Water Management (IRWM) Program through Proposition 1 to implement the Disadvantaged Community and Tribal Involvement Program (DACTI). Part of this funding was used to survey water suppliers and wastewater treatment operators in economically disadvantaged communities (DACs) and to survey Tribes, in an effort to identify needs associated with the capacity and quality of service of small water supply and wastewater services providers in the North Coast region. The goals of the survey were to engage small water and wastewater providers in economically disadvantaged and underrepresented communities in the regional water management planning process and facilitate/ increase their participation in IRWM implementation project funding opportunities such as the 2019 Proposition 1 funding round. Surveys were circulated to all public water systems serving economically disadvantaged communities in the North Coast region including Tribes, cities, special districts, and privately-owned water suppliers. The approach to surveying North Coast Tribes was tailored to address the specific needs and culture of Tribal communities. A special effort was made to obtain responses from the small systems and Tribes that did not participate in the *2014 NCRP System Needs Survey.*

Concurrent with the survey efforts, in-depth interviews were conducted with Tribes and in specific watersheds to drill down and investigate the on-the-ground experience of individuals in and out of the water industry. Key experts from within the following groups were sought for their professional experience as well as their connection to economically disadvantaged communities and Tribes: Tribal leadership, administration, water providers, water-based recreation organizations, municipal departments, environmental departments, ecological nonprofits, family resource centers, senior centers, and emergency services.

SURVEY & INTERVIEW TOPICS

The surveys and interviews were intended to provide useful information for continued successful regional water management planning. Major issues that affect local systems and needs were identified related to training, technical support, capacity-building, regulations, aging or failing infrastructure, the need for trained and certified staff, financing, planned projects, and level of familiarity with the NCRP. The following is a list of the general topics included in the survey and interview:

- General System Information
- Funding and Financing Information
- Technical Assistance and Training Needs
- System Needs
- Regulatory Issues
- Climate Issues
- Flood issues
- Forest Health
- Community Issues
- Perceived Water Quality
- Fire Suppression Water Supply
- Familiarity with the NCRP

1. DISADVANTAGED NON-TRIBAL WATER & WASTEWATER SERVICE PROVIDERS

1.1 IDENTIFICATION OF COMMUNITY WATER/ WASTEWATER SYSTEMS

Water and wastewater services within the North Coast are delivered by a wide variety of service providers ranging from publicly owned entities (e.g., cities, special districts, and public utilities) to private entities (homeowners' associations, mobile home park owners, and individuals or businesses). This survey effort included system operators that provide service to disadvantaged communities, which includes local agencies (cities and special districts), public utilities, mutual water associations (e.g., homeowners' and neighborhood associations) and individuals or companies doing business (typically an individual or family that owns a small water company or mobile home park). See Appendix A, Types of Water Suppliers & Wastewater Treatment Providers & Applicable Regulations for descriptions of non-Tribal water and wastewater system types found in the region and basic regulations governing them. Effort was made to reach all providers serving economically disadvantaged communities in the region, with particular effort placed on outreach and securing survey responses from systems that did not participate in the 2014 water and wastewater provider survey.

TYPES OF PROVIDERS CONTACTED

PUBLIC ENTITIES
- Cities
- Special Districts
  - » Independent Districts
    - Community Service Districts
    - County Water Districts
    - Municipal Utility/ Water Districts
    - Public Utility Districts
  - » Dependent Districts
    - County Service Areas
    - County Waterworks Districts
    - Sanitation Districts

PRIVATE ENTITIES
- Homeowners' Associations
- Mutual water associations/ companies
- Investor-owned utilities
- Private businesses

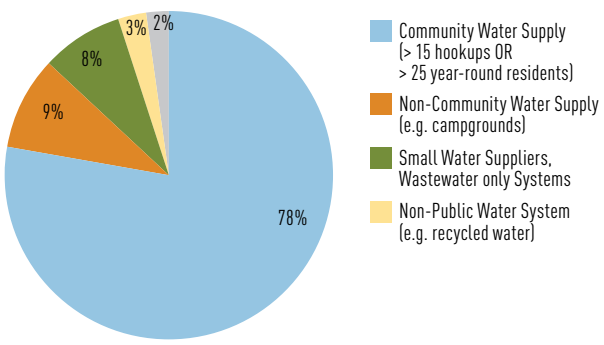
Locating water and wastewater systems serving North Coast communities is a challenging endeavor; some systems might serve only a handful of houses in a neighborhood, others could be a business identified as a "trailer park," others might be small systems run only by all-volunteer boards of directors, which may change as often as annually. A trailer park could serve local, year-round residences or provide temporary lodgings for out of town visitors — its clients determine whether it is a "community" system in the North Coast region (*Appendix A. Types of Water Suppliers & Wastewater Treatment Providers & Applicable Regulations*). Each community has stitched together its own unique strategy for water and wastewater supply, and these strategies are undergoing constant refinement. For example, some trailer parks and local community water systems have consolidated with larger systems to secure a reliable source of good quality water. Such changes can be difficult to track down, making maintaining an accurate list of water and wastewater providers in the region an ongoing task.

The 2014 list of 336 water and wastewater systems in the North Coast was used as a starting point to identify water and wastewater systems in the region. The State Drinking Water Information System (SDWIS) and county planning documents were searched to make sure the list was comprehensive before narrowing the list to focus on economically disadvantaged communities. In April 2020, the North Coast water supply and wastewater treatment system contained 308 non-Tribal water and wastewater systems. The list contained businesses such as campgrounds and systems that serve advantaged communities. The following analyses were conducted to winnow the list to only systems serving disadvantaged communities.

Determining Community Systems

Of the 308 systems, 241 (78%), are federally and state categorized public community water systems, defined as public agencies that serve at least 15 service connections used by year-round residents or regularly serve 25 year-round residents (*Appendix A. Types of Water Suppliers & Wastewater Treatment Providers & Applicable Regulations*). When the list of categorized public community water systems is adjusted to include systems that treat wastewater only and "state small water systems" (those serving 14 or less service connections or 24 or less year-round residents), the list includes 263 water supply and wastewater treatment systems that serve North Coast communities (*Chart 1*).

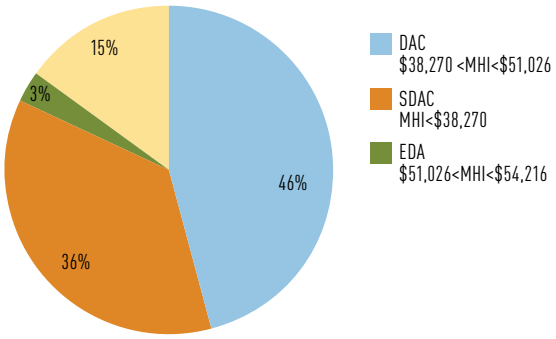
Chart 1. System Classification



Determining Systems that Operate in Disadvantaged Communities

An analysis of median household income (MHI) of the North Coast communities in which the water providers and wastewater treatment systems operate shows that slightly under half (46%, 141) of the systems are in communities considered disadvantaged ($38,271 < MHI > $51,026), about 36% (112) of the systems operate in communities considered severely disadvantaged (MHI < $38,270), and nine (3%) are located in communities that are considered economically distressed ($51,026 < MHI > $54,216). In total, 262 (85%) of the systems operate in communities that are economically disadvantaged/ distressed (*Chart 2*).[1] The list includes hotels, schools, and campgrounds as well as systems that serve communities.

Chart 2. Community Economics



Refining List to only those that Serve Disadvantaged Communities

The "community" systems analysis results were combined with results of the disadvantaged community analysis to provide the most recent snapshot of disadvantaged community systems in April 2020 (*Figure 1*). This list contains 238 water and wastewater treatment systems serving disadvantaged residential communities; nearly all were contacted during the 2017–19 survey effort (*Appendix B. 2020 Community Water and Wastewater Service Providers serving North Coast Disadvantaged Communities*).

Figure 1. Identifying North Coast Water and Wastewater Systems serving Disadvatanged Communities

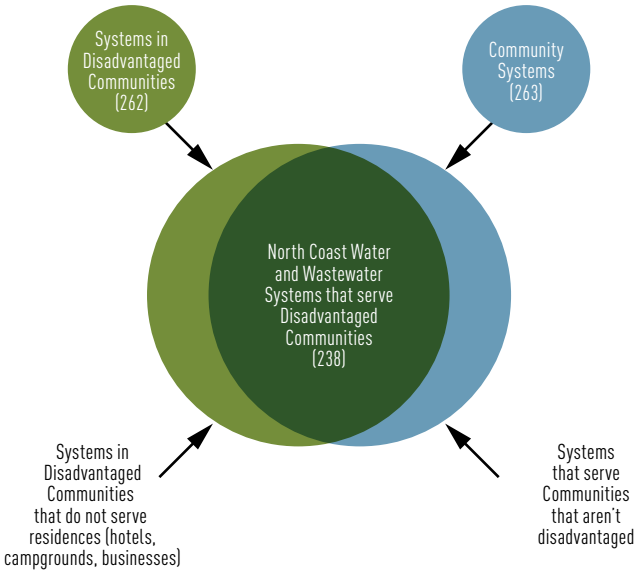


TABLE 1. 2020 NORTH COAST REGION WATER/WASTEWATER SYSTEMS THAT SERVE DISADVANTAGED COMMUNITIES — SYSTEM TYPES BY COUNTY

County	Water Only	Wastewater Only	Both	Total by County
Del Norte	10	2	4	**16**
Humboldt	27	4	18	**49**
Mendocino	32	12	5	**49**
Modoc	0	0	1	**1**
Siskiyou	17	1	9	**27**
Sonoma	67	7	4	**78**
Trinity	15	1	2	**18**
Total System Types	**168**	**27**	**43**	**238**

In order to obtain the most complete picture of the systems, existing information from the SDWIS and 2014 and 2017–19 survey responses were supplemented with research. County general plans, Local Area Formation Commissions (LAFCO) Sphere of Influence and Municipal Service Review documents, American Community Survey data, and system websites, news articles, and other sources were searched for relevant data, which was then added to the analysis. The associated database, a description of the analysis methods and metadata can be found here. The following analyses are based on information gathered about these 238 systems (*Table 1*).

Disadvantaged Community Status

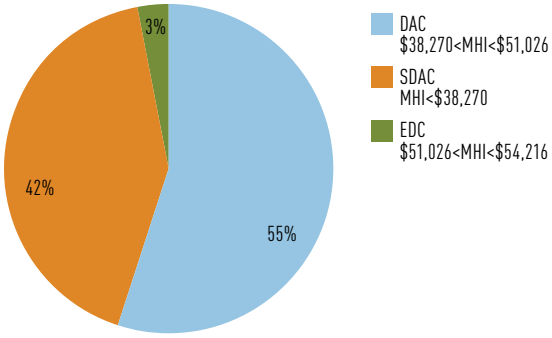
Of the 238 water and wastewater providers that are classified as "community systems" and located in communities considered "disadvantaged," slightly over half (130) have an MHI between $38,270 and $51,026. Over 40% (101) are in communities are

1 Disadvantaged Communities Definitions:

- *Disadvantaged Community (DAC): Census track, block or place with an annual median household income (MHI) that is less than 80% of the statewide MHI*
- *Severely Disadvantaged Community (SDAC): Census track, block, place w/annual MHI <60% of state MHI*
- *Economically Distressed Area: a rural county or municipality w/ population of < 20,000 with an annual MHI <85% of statewide MHI, & one of following:*
  - » *Financial hardship*
  - » *Unemployment rate 2% higher than the statewide average*
  - » *Low population density*

classified as "severely disadvantaged," with MHI less than $38,270. Only a handful (7) of communities is considered to be "economically distressed," having MHI between $51,026 (the cutoff for being a "disadvantaged" community) and $54,216 (*Chart 3*).

Chart 3. North Coast Water & Wastewater System Disadvantaged Community Severity



Affordability

Affordability of water and wastewater services is of extreme importance in the North Coast given the economically disadvantaged condition of many of the communities. To assess affordability, we used the EPA Affordability Criteria Threshold [2]and the Residential Indicator Assessment.[3] The EPA Affordability Criteria Threshold sets thresholds for water and wastewater bills at 2.5% and 2.0% of a community's MHI. If average bills exceed either threshold or if the bill is combined, 4.5% of MHI, the community is considered to experience a "large economic impact." The Residential Indicator Assessment considers only wastewater bills and contains three categories: low financial impact (average costs per household less than 1% of MHI), mid-range financial impact (average costs per household between 1% and 2% of MHI) and high financial impact (average cost per household greater than 2% of MHI). Both of these metrics have come under scrutiny in recent years for their ability to accurately identify communities struggling with the cost of water and wastewater services; this is discussed below.

Average monthly bills were challenging to track down if a system representative did not respond to the survey or the survey question about monthly charges. For those who did answer, the responses were categorized and the average of that category was used, unless the respondent provided a more accurate estimate in the comments for the billing question. Through research, several more systems were added, but the analysis at the time of this report only includes 91 of the 238 community water and wastewater systems that serve economically disadvantaged communities. Of those 91 systems, 17 systems (19%) exceed the EPA threshold for water bills while 6 (7%) exceed the threshold for wastewater and another 6 exceed the threshold for combined bills. A list of the systems that exceed the EPA's current Affordability Criteria Thresholds is provided in Table 2. Using the Residential Indicator, it was found that 6 systems impose "high financial impact" and 3 impose "mid-range" financial impact on the communities they serve. Combined with the disadvantaged status, these indicators highlight 20 systems located in severely disadvantaged communities in which average monthly bills potentially pose a hardship (*Table 2).*

TABLE 2. NORTH COAST WATER & WASTEWATER SYSTEMS AFFORDABILITY

Systems Exceeding EPA Affordability Threshold (* indicates RI > 2%; high financial impact of average wastewater bill)	Disadvantaged Status
Big Rock CSD	Severely disadvantaged
Calpella County Water District	Severely disadvantaged
Caspar South Service Company	Disadvantaged
Ferndale — Del Oro Water Company *	Disadvantaged
Fieldbrook Glendale CSD *	Severely disadvantaged
Fort Bragg, City of	Severely disadvantaged
Hills Ranch Mutual Water Company	Disadvantaged
Hopland Public Utility District	Severely disadvantaged
Huckleberry Mutual Water Company	Severely disadvantaged
Jed Smith Homeowners Association	Severely disadvantaged
Lake Shastina CSD	Severely disadvantaged
Laytonville County Water District	Severely disadvantaged
Lewiston Community Services District *	Severely disadvantaged
Myers Flat MWS Inc.	Severely disadvantaged
Palomino Estates MWC	Severely disadvantaged
Pine Mountain Mutual	Severely disadvantaged
Russian River County Sanitation District *	Disadvantaged
Sawyers Bar County Water District	Severely disadvantaged
Seafair Road and Water Company	Economically distressed
Shasta View Heights Owners Association	Severely disadvantaged
Sonoma County CSA 41 — Salmon Creek *	Disadvantaged
Trinity Knolls Mutual Water Company	Severely disadvantaged
Tulelake, City of *	Severely disadvantaged
Ukiah, City of	Severely disadvantaged
Weed, City of	Severely disadvantaged
Willow County Water District	Severely disadvantaged
Yulupa Mutual Water Company	Disadvantaged

There are multiple limitations to this analysis, including the lack of data for all systems, and the age of some of the data, which came from reports published as long ago as 2014. Additionally, MHI is not considered an

2 Stratus Consulting. 2013. Affordability Assessment Tool for Federal Water Mandates. Prepared for US Conference of Mayors, American Water Works Association, and Water Environment Federation.

3 Raucher et al. 2019. Developing a New Framework for Household Affordability and Financial Capability Assessment in the Water Sector.

accurate measure of impacts across diverse populations and the Residential Indicator does not fully capture the entirety of non-discretionary household expenses, including rent, which is an important factor in much of the North Coast, which has a high cost of living and extremely high housing costs. To address these limitations, future NCRP surveys should request billing cost estimates, not provide ranges, and should also incorporate other expenses, including average rental costs in survey questions or research endeavors.

Drought Risk

A recent report by the California Department of Water Resources (DWR) identified small water suppliers and rural communities that may be at risk of drought and water shortage vulnerabilities. A risk methodology was developed using indicators to estimate risk with respect to three key components: 1) the exposure of suppliers and communities to hazardous conditions and events, 2) the physical and social vulnerability of suppliers and communities to the exposure, and 3) recent history of shortage and drought impacts.[4]

The DWR did not define thresholds at which certain water suppliers or communities would be considered "at risk" while others were not. Instead, the agency recognizes that all California communities face at least some risk of drought and ranked the relative risk faced by all small suppliers and communities, choosing to highlight those that ranked in the top 10th percentile of risk scores. Of 717 North Coast systems included in the DWR risk analysis, 88 systems were in the top 10th percentile of risk scores, but just thirteen community water systems were identified (Table 3); the remaining 75 systems serve campgrounds, schools, businesses, and other facilities open to the general public.

TABLE 3. DWR DROUGHT & WATER SHORTAGE RISK TOP 10TH PERCENTILE

System Name (* indicates system also exceeds EPA Affordability Threshold)	Relative Risk	County
Big Rock CSD *	96.14	Del Norte
Alderpoint County Water	92.22	Humboldt
Benbow WC	94.18	Humboldt
Orleans CSD	95.64	Humboldt
Creekside Cabins & RV Resort	94.42	Mendocino
Point Cabrillo Highlands	92.51	Mendocino
Wildwood Campground	93.28	Mendocino
Callahan Water District	91.05	Siskiyou
Cove Mobile Villa	92.26	Siskiyou
Shastina Mobile Estates	94.13	Siskiyou
Huckleberry Mutual Water Company *	97.5	Sonoma

4 California DWR, Water Use Efficiency Branch. 2020. Draft Report Pursuant to Section 10609.42 of the CWC.

TABLE 3. DWR DROUGHT & WATER SHORTAGE RISK TOP 10TH PERCENTILE

System Name (* indicates system also exceeds EPA Affordability Threshold)	Relative Risk	County
Sonoma County Mutual Water Company	95.42	Sonoma
Seymour's Mutual Water System	96.99	Trinity

The report not only identifies relative risk of drought, it also provides recommendations to alleviate drought concerns. These recommendations include the need for water shortage contingency plans for small water suppliers serving between 1,000 to 2,999 service connections , the need for emergency response plans for systems serving between 15 and 2,999 service connections, and the need for county general plans to include integrated water shortage contingency planning that includes smaller systems (less than 15 connections). The report also calls for updated county general plan requirements that include drought resilience and water shortage contingency policies and an increase in funding for infrastructure improvements and technical planning assistance.

TABLE 4. NORTH COAST SYSTEMS WITH EXCEEDANCES OF ARSENIC IN GROUNDWATER
***Exceeds EPA Affordability Criteria**

Systems	Disadvantaged/ Severely Disadvantaged
Laytonville County Water District *	Sd
Mount Weske Estates Mutual Water Company	D
Palomino Estates M.W.C.	Sd
Shamrock Mobile Home Park	D
Western Mobile Home Park	Sd
Windsor, Town Of	D

Contaminants

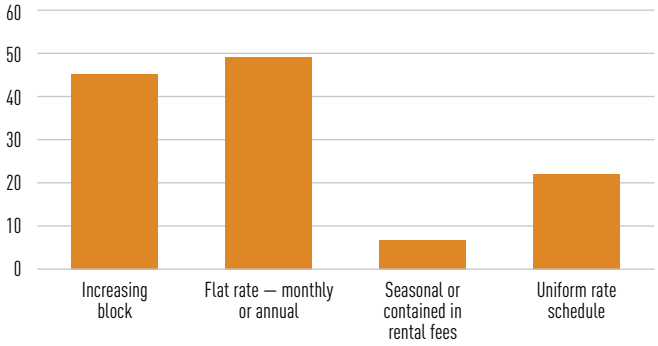
Assembly Bill 1249 went into effect January 1, 2015. It requires IRWM regions with areas of arsenic, perchlorate, nitrate, or hexavalent chromium contamination to include a description of the location and extent of contamination, and impacts to communities within the region caused by the contamination. It further requires a description of existing efforts being undertaken to address the impacts and any additional efforts needed. AB 1249 is addressed in greater detail in the North Coast Resource Partnership Plan Volume 4 (2019) here we provide a list of systems (Table 4) that rely on groundwater identified as above the Maximum Contaminant Level (MCL) for arsenic, which is the only contaminant of the four that currently is known to occur in significant levels in North Coast community groundwater supplies. Additional water sampling is needed regionally.

System Rate Structure

When considering drought resiliency, the DWR drought risk report recommends the use of meters

to allow for more equitable drought charges based on volumetric use. However, many systems in the North Coast are unmetered, which may disincentivize household level conservation during water shortages. The NCRP 2018/19 survey did not directly address metering; however, rate structure responses can provide a proxy for understanding the ability of North Coast water and wastewater suppliers to provide incentives for home-based conservation measures.

Chart 4. Rate Structure



Currently, the majority of systems (49) charge a flat rate either annually or monthly. Slightly fewer (45) use an increasing block schedule, indicating metering is occurring (*Chart 4)*. Increasing block schedules impose charges based on levels of water use, with each tier more costly. Uniform rate schedules also charge based on usage, but there is no cost increase as usage increases, providing little incentive to conserve (see above). The systems using flat rate and seasonal charges may lack metering and thus be appropriate recipients for drought resiliency funding opportunities.

Average Monthly Bill

Most water and / or sewer bills (82%) in the North Coast are less than one hundred dollars per month, with only about 18% greater than $100 (*Chart 5)*.

EXPLANATION OF RATE STRUCTURE TERMS (from *Setting Small Drinking Water System Rates for a Sustainable Future*, U.S. Environmental Protection Agency, January 2006)

Increasing Block (Graduated) Rate Schedule. Rate structure under which the price of water per unit (block) increases as the amount used increases. Blocks are set according to consumption, encouraging conservation.

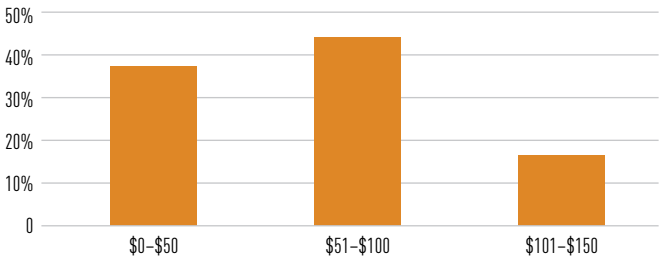
Monthly/ Annual Flat Rate. Rate structure under which all customers pay a set fee (monthly, quarterly, etc.) for water service that is not tied to the amount of water used.

Seasonal Rate Schedule. A rate that varies depending on the time of the year. Seasonal rates can be used in conjunction with any rate structure, including flat rates and uniform, decreasing, or increasing block rates.

Uniform Rate Schedule. A rate structure under which customers pay a single charge per unit of water. For example, customers may pay $2 per thousand gallons. The cost per thousand gallons remains constant even if usage changes. A uniform rate may be combined with a fixed fee so customers would pay a fixed monthly fee plus a charge per unit of water purchased

Less than 5% of North Coast systems in this sample generate average monthly bills greater than $150.

Chart 5. System Average Monthly Bills



System Sizes

The distribution of water supply, wastewater treatment and systems that provide both services visually tells the story of the North Coast Region. There are many small water suppliers — over 80% of systems serve 250 or less hookups (*Chart 6*). Conversely, over 60% of wastewater treatment systems serve more than 251 connections (*Chart 7*), which is reflective of the fact that in many rural communities, onsite wastewater treatment systems, such as septic tanks, are the norm. When viewing systems that provide both water supply and wastewater services, there is a somewhat more even distribution that peaks for systems that serve between 101 and 250 and 251–500 service connections (each represent about a quarter of the systems) and then dropping slightly — to around 13–15% for each of the larger service connection categories. Only 10% of these systems have less than 101 connections (*Chart 8*).

Chart 6. Water Supply Systems Size Distribution

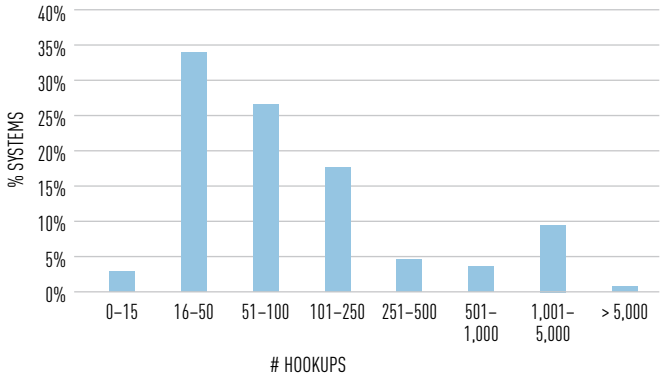


Chart 7. Wastewater Treatment System Size Distribution

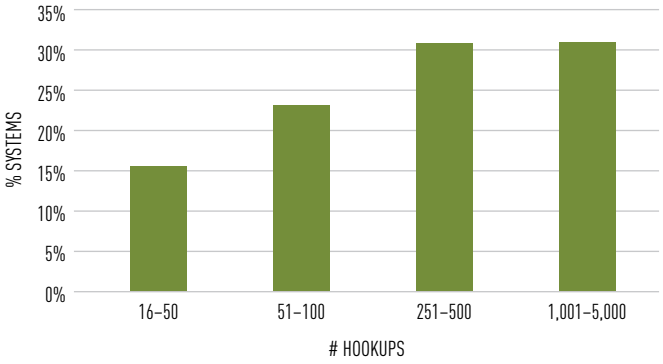
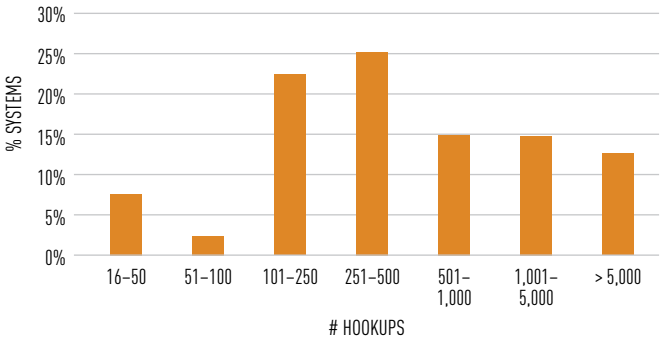


Chart 8. Size Distribution of Systems that Provide Both Waste and Wastewater Services



System Status

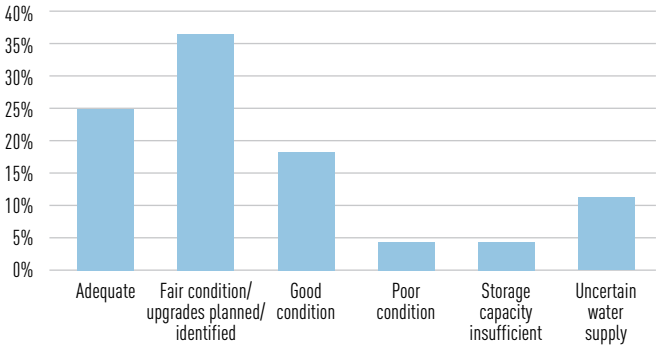
To evaluate system status, survey responses, information from county planning documents, and system websites were used to categorize each system for which information could be obtained into the following categories for water systems and wastewater systems:

- Adequate
- Fair condition/ Upgrades planned/ identified
- Good condition
- Poor condition
- Storage capacity insufficient (*water systems only*)
- Uncertain water supply
- Regulatory issues — septic (*wastewater systems only*)
- Storage capacity insufficient

Systems that provide both water supply and wastewater treatment services were evaluated based upon available information. If information regarding both was available, the system was evaluated twice — once as a water supplier and once as a wastewater treatment system. If information was only available about one service, the system was only evaluated for the service for which information was available.

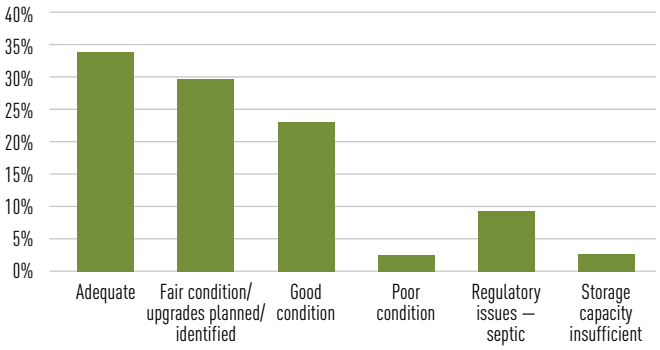
About 40% of the water supply systems are in adequate or good condition with another 35% identified as in fair condition, often with upgrades either planned or identified (*Chart 9*). A little over 15% of systems have explicitly stated uncertainty over water supply or lack sufficient storage capacity while just under 5% are considered in poor condition.

Chart 9. Water Supply System Status



Nearly 60% of the wastewater systems are in good or adequate condition with only one identified as in poor condition. Several systems, including an incipient community services district, are experiencing regulatory issues related to widespread use of septic systems in the community. Only one system is identified as having insufficient storage (*Chart 10*).

Chart 10. Wastewater Treatment Supplier



North Coast Resource Partnership Participation

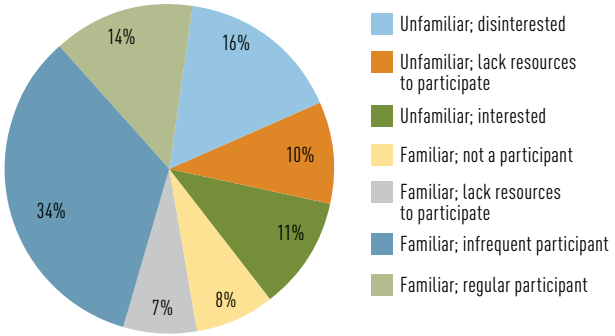
To determine familiarity with and participation in the NCRP, survey responses and meeting attendance records and grant application records were used. When a survey respondent indicated unfamiliarity with the NCRP, but records indicated that system representatives had interacted with NCRP opportunities or events in some way, the system was categorized as being familiar with the NCRP, but an infrequent participant. Equity is of vital concern for the NCRP and within the North Coast region, so when a respondent indicated

that they lacked resources to participate, it was noted, whether they were interested in participating or not.

Nearly half of the 133 systems for which data exists are familiar with the NCRP and participate either frequently or infrequently. Another 7% are familiar with the group, but lack resources to participate, while about 8% are familiar with the group, but choose not to participate. Only 37% are unfamiliar with the NCRP with a little over a third of those not interested in participation. About 17% of respondents indicated a lack of resources to participate; future outreach and assistance efforts may want to focus on expanding capacity for participation in such systems. Several respondents were previously completely unaware of the NCRP.

When considering only survey responses, a little more than 14% of survey respondents consider themselves to be regular participants with the NCRP, while slightly more found the time commitment too high and lack staff to perform grant administration even if they were to receive financial assistance through the program. Another 15% stated that they lack the in-house skill to develop or submit grant applications (*Chart 11; Appendix C. Respondent Comments Grouped by Subject*). Of the 56 systems that have applied for funding through the NCRP, slightly over half were selected by the NCRP Technical Peer Review Committee to receive IRWM funding.

Chart 11. System Participation with NCRP



1.2 SURVEY & INTERVIEW EFFORT

Using the 2014 survey list as a starting point, about 225 service providers to economically disadvantaged communities (67% of the 336 systems on the 2014 list) were identified and contacted in late 2017. During this outreach effort, some systems were removed from the list due to having gone out of business (trailer parks), consolidation with larger systems, or incorrect addresses (some of the systems initially contacted did not serve disadvantaged communities; two were not located within the North Coast Region). The list was winnowed to 208 systems; one mobile home park was removed after the October 2017 Tubbs fire in Santa Rosa (Sonoma County) destroyed it and the owners publicly stated they were not going to rebuild, dropping the final outreach list to 207. Two systems found through an associated outreach effort in late 2018 boosted the final (2019) systems count for this outreach effort to 209 water supply and wastewater treatment systems. Although effort was made to identify all "community water systems" (those providing water to at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents, see *Appendix A. Types of Water Suppliers & Wastewater Treatment Providers & Applicable Regulations*) and wastewater providers serving economically disadvantaged communities, it is apparent that this effort missed several systems; the 2020 (non-Tribal) disadvantaged systems count is 238 of 308 total (non-Tribal) systems (*Chart 2*).

A concentrated effort was made to secure a survey response from all 207 known providers serving economically disadvantaged communities in the North Coast region. Survey data were gathered beginning in November 2017 using the on-line tool Survey Monkey, emailed PDFs, and phone interviews. Initial introductory emails were sent prior to November apprising contacts from the 2014 survey of the upcoming survey effort and verifying contact information. Information about how to access the survey was distributed via email, with telephone calls to contact those who didn't respond to email outreach or who did not have email addresses. Follow up emails and phone calls were initiated about 3–4 weeks after the survey mailing to encourage participation. A few systems were contacted through the U.S. Postal Service. A copy of the survey can be found in Appendix D. Water Supply & Wastewater Needs Assessment Survey & Interview Questions.

Concurrent with the survey efforts, Greenway Partners and Wanderhill Consulting conducted in-depth interviews in the Humboldt Bay, North Coast Rivers, and Trinity River WMAs to drill down and investigate the on-the-ground experience of individuals in and out of the water industry (*see Appendix D. Water Supply & Wastewater Needs Assessment Survey & Interview Questions*). Interviews were conducted through a multi-pronged engagement plan to make the process simple for the key experts. Prospective interviewees were initially engaged through an introductory email with a follow-up phone call to evaluate interest and schedule an interview. After the phone or in-person interview, follow-up was conducted via online engagement and print materials.

Many water systems are small and governed by volunteer boards whose membership and leadership periodically changes. Tracking down current board members who felt that they were in a position to speak knowledgeably about their water system was challenging. Several representatives took the invitation

to the board for consideration and didn't respond further. Additionally, many individuals associated with small systems were tracked down on their personal email accounts and home phone numbers. In one case on a telephone call, introductory information was met with deep distrust and a hang up. This instance is indicative of the mistrust or suspicion with which some in the region view efforts to obtain information about a highly valued and highly regulated resource. Future efforts should consider including trusted local representatives to initiate contact and/ or introduce survey personnel to achieve greater participation.

1.3 SURVEY RESPONSE RATE

By April 19, 2019, 127 survey responses representing 115 systems had been submitted from a variety of service provider types, representing a 55% response rate. Humboldt County had the greatest number of survey responses, but Del Norte County, at 75%, had the highest response rate (*Charts 12 and 13*). Humboldt County was next highest, with a 72% response rate and Trinity County was at 61%. Sonoma County trailed Humboldt and Mendocino County in response numbers and all other counties' response rates, with only 42% of Sonoma systems participating. This may have been due to recovery efforts associated with the Tubbs Fire, which occurred in October, 2017 about six weeks prior to survey dissemination, and impacted many Sonoma County water systems and residents. However, the 2014 Sonoma County response rate was only 17% and Mendocino County's 2014 response rate was only slightly greater than 1 in 4 systems.

Chart 12. Survey Response Rates by County

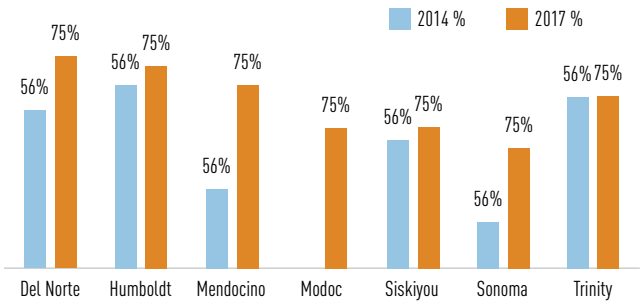
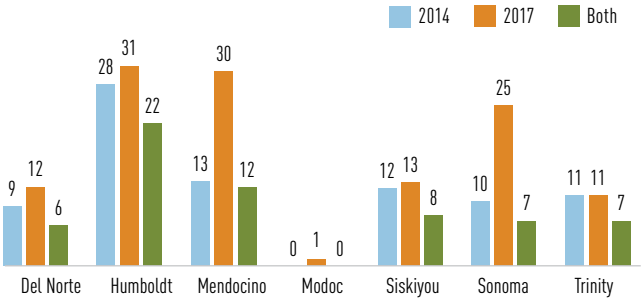
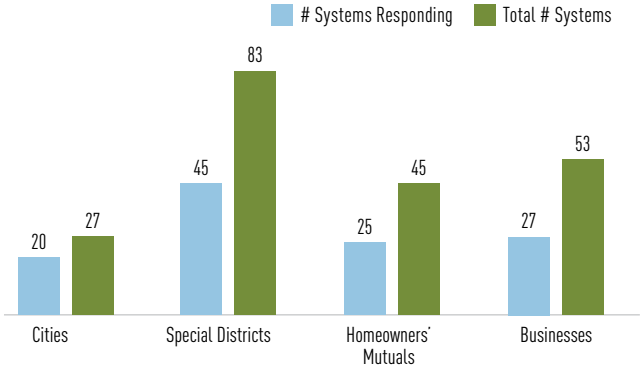


Chart 13. Number of Systems Responding by County



Systems associated with city government had the highest response rate, with nearly 75% of cities participating in the survey (*Chart 14*). Special districts, homeowners' and mutual associations, and businesses all had nearly the same response rate — about one in two participated in the survey.

Chart 14. Survey Responses by Type of System



Of those who chose not to respond to the survey, a few explained why. A representative of a system who had previous experience with a similar regional process and was not impressed expressed dissatisfaction with the NCRP for not mobilizing around the cannabis cultivation issue; they indicated that participation was unlikely. Another system representative requested their name be removed from the mailing list and it was; phone calls and subsequent emails to the organization's general email (trying to obtain the correct contact person) resulted in hang ups and non-responses. A different system representative sent a lengthy email declining to participate in the survey and asking to be removed from the mailing list; some reasons for the refusal included no need for assistance, grievances with state regulations, and a mistrust of any organization offering assistance. Another two systems are in the process of consolidation and felt that no assistance was needed and that their responses wouldn't be of use, while another system manager said that they were caught up in the fire recovery process and wouldn't have

time to take the survey. A different system declined to complete the survey because none of the staff with the technical expertise was willing to participate. These explanations of non-responses are significant in that at least some of the other non-responders likely felt the same, but did not take the time to articulate their reasoning. Further analysis of non-respondents is provided in Appendix E. Non-respondent Statistics.

1.4 SURVEY & INTERVIEW RESULTS

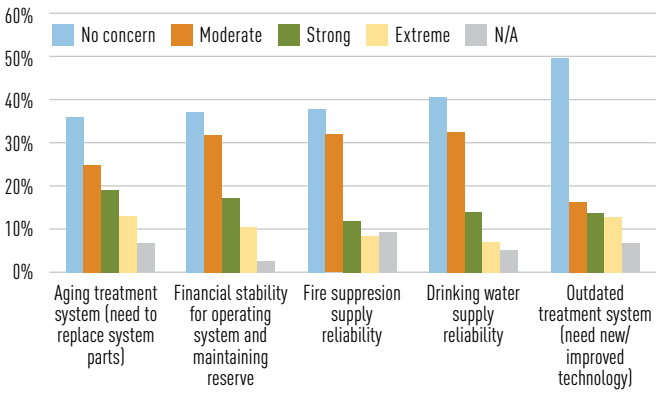
The survey was developed to provide as much flexibility as possible for operators to convey information about their systems in order to provide the most comprehensive "snapshot" of each system. In some cases, this did not lend itself well to data analysis. For instance, many questions allowed operators to provide multiple answers as well as include comments. In addition, many survey respondents did not answer all questions. As a result, it is difficult to analyze all responses using simple percentages.

The interview results are even less quantitative and are often anecdotal or location-specific. Other responses, such as concern for poverty and homelessness or lack of qualified work force are issues applicable to both large and small communities throughout the state. The following sections provide an analysis of survey and interview responses.

Topics of Concern

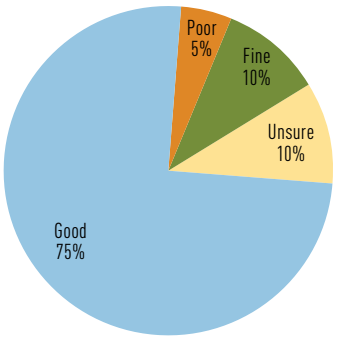
One hundred sixteen answered this question; it was skipped by eleven. The top five topics of concern were: an aging treatment system; financial stability; fire suppression supply reliability; drinking water supply reliability; and the need for new and improved technology (*Chart 15*). Of those feeling extreme concern, the aging systems and outdated treatment systems and financial stability were the primary concerns. Comments from survey respondents were wide ranging, however, there were a few commonalities (*Appendix C, Respondent Comments Grouped by Subject)*. Most communities with concerns about aging systems that need replacement also indicated a need for assistance obtaining funding for the needed replacements. Many of the systems mentioned the need for new water mains, transmission lines, backflow valves and tanks. Needs for new technology include water meters and computer systems and associated technology. Financial stability was of concern mostly with respect to funding needed to implement repairs and upgrades. Other concerns included having a small customer base and not being able to raise rates enough to cover capital improvements or even emergencies. One respondent pointed out that systems that are in violation with water quality regulations often receive state funding to correct the violations, but that its system, which is not in violation, cannot secure state assistance.

Chart 15. Top Five Topics of Concern



Although many regions across California report concerns about water quality, interview respondents in the Humboldt Bay Watershed Management Area reported high confidence in the quality of water available for use (*Chart 16*). Several even noted that they actively encourage visitors from other areas to drink water from the tap. In contrast to the confidence in water quality, many have concerns about water infrastructure, specifically as it relates to wastewater. Water providers shared both specific challenges faced and upgrade projects in process. Additionally, numerous Key Experts whose expertise lay outside of technical water issues noted awareness of areas with failing infrastructure and/or replacement projects.

Chart 16. Perceived Drinking Water Quality — Humboldt Bay WMA



Top water priorities shared by interviewees include water quality and supply, environment and habitat, rainwater catchment and conservation, and keeping existing water rights (*Chart 17*). The number one barrier for respondents is limited financial resources, although respondents note the following also negatively impact project viability: staff resources, willingness to collaborate amongst agencies, permitting, and public perception of project need. Secondary topics of concern in the survey were

the need for trained personnel and sufficient quality and quantity of staff, meeting regulatory challenges, raw water quality, and water pressure issues (*Chart 18*). Some of the smaller systems indicated a need for the availability of 3rd party operators to fill in temporarily when there is a staffing need. Others indicated that finding and retaining qualified people in a rural area can be difficult. A couple of homeowner associations mentioned that all personnel are volunteers and that the number of water users willing to volunteer is not adequate. With respect to regulatory challenges, several respondents expressed frustration with state testing requirements and the associated costs. Specific contaminants of concern include E-coli, hexavalent chromium, iron, manganese, sulfur, calcium and chlorine disinfection by-products. A couple of respondents would like to be kept informed of current and proposed regulations along with desiring "knowledge of other small private systems and their treatment systems and how they meet current and proposed regulations (*Appendix C, Respondent Comments Grouped by Subject*)."

Chart 17. Interviewee Top Water Priorities

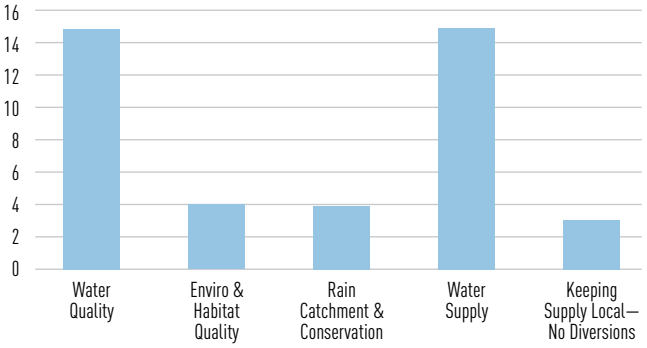
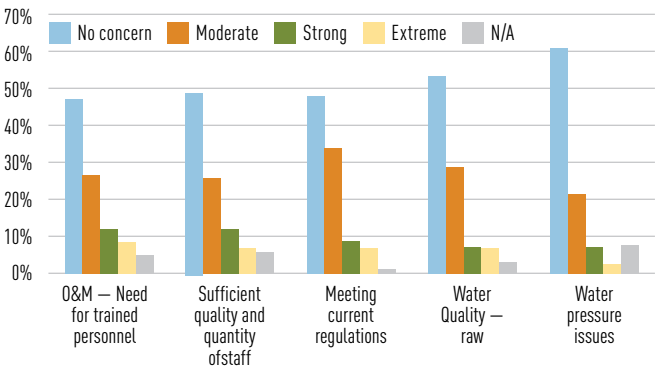


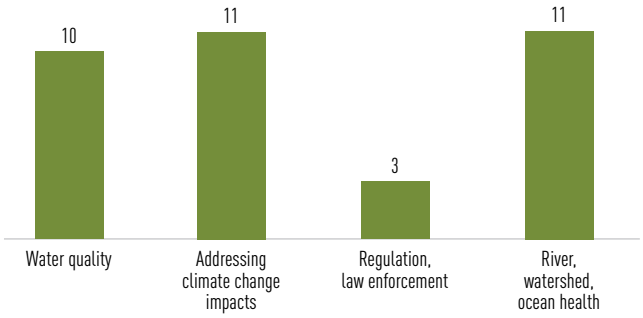
Chart 18. Secondary Topics of Concern



Respondents with concerns about water supply stated that reliability is an issue and additional water storage is being sought. One mentioned that water conservation "throws a wrench in things" because "it cuts down on revenues and complying with drought regulations." Concerns with fire were varied; some were associated with water quality after a wildfire, while others were more concerned with fire suppression and loss of power during a fire event. A few systems have recurring problems with insufficient water pressure.

Key experts in the Trinity, North Coast Rivers, and Humboldt Bay WMAs provided a wide range of top environmental priorities (*Chart 19*) including water quality, addressing climate change impacts, assistance with regulation and greater law enforcement with respect to cannabis grows, and environmental health. Almost a quarter of the interviewees felt their forested lands were in good health, with 38% rating their forest as average and another 38% rating it poor.

Chart 19. Interviewee Top Environmental Priorities



Many interviewees commented that their forest needs prescribed burns, undergrowth clearing, or other management measures to improve. There is a consensus that forest health in the Trinity River WMA is "poor", "good", or "fine" (*Chart 20*). Most respondents referenced the need to thin the forests due to "increased density", "fuel loading", and being "overgrown". Whether in answer to this question or at another point in the interview, all Trinity River WMA respondents discussed the increase of catastrophic wildfires, and most made the connection between wildfire and the buildup of forest fuels. One interviewee said the repeat high severity fires are causing rapid conversion of forests from mixed conifer to early seral stands of shrub and hardwoods, resulting in displacement of species and negative impacts to water quality/quantity (*Chart 21*). Respondents noted a number of impacts to forest health: high temperature droughts, increasing temperatures, insects, disease, clearing for cannabis cultivation, legacy impacts from mining and logging that contribute to erosion, expansion of the WUI area, and fire suppression (*Chart 22*). Interviewees also discussed the legacy impacts of logging, including sedimentation from old roads and overgrown forests (*Chart 21*). Another interviewee described forest health in Trinity as poor but resilient due to complex biogeography and high biological diversity.

Chart 20. Perceived Health of Local Forest

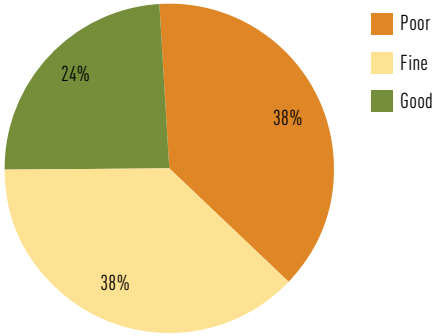


Chart 21. Greatest Impacts to Forests

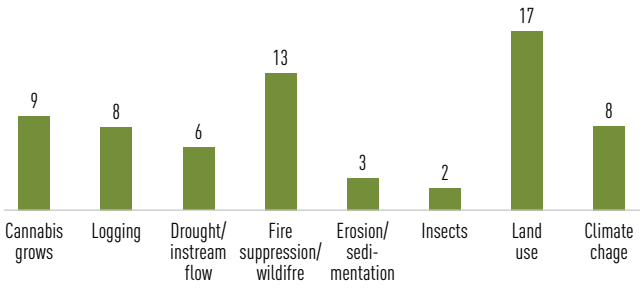
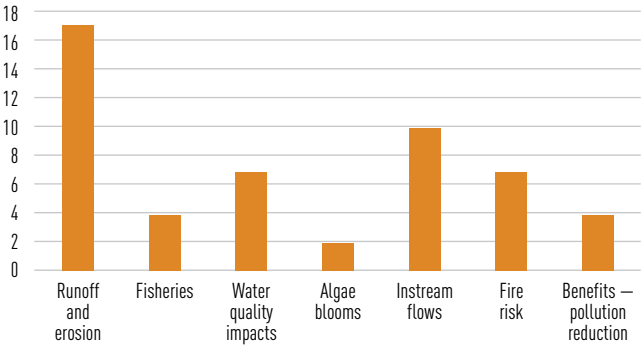


Chart 22. Impact of Forest Health on Local Watersheds

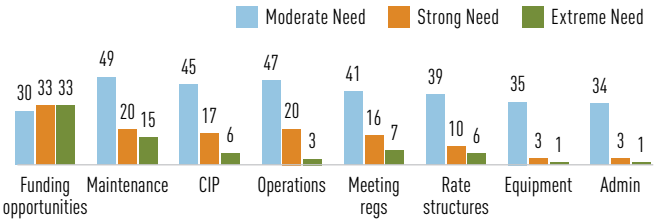


Many of the interviewees detailed the complex relationship between forest and watershed dynamics when asked about the impacts of forest health on local watersheds. In summary, dense and overgrown forests are consuming vast amounts of water. When large-scale wildfires kill large swaths of trees, loss of water to evapotranspiration decreases, increasing water yields. Many noted that high severity wildfires have harmful impacts such as increased sedimentation and the potential to create hydrophobic soil. One interviewee discussed the lack of healthy riparian vegetation along the Trinity River. In the North Coast Rivers and Humboldt Bay WMAs, many respondents linked forest health with watershed sedimentation, a result of road networks and wildfires. Some interviewees identified cannabis cultivation as a pollution source and supply stressor (*Charts 21, 22*).

Level of Need for Technical Assistance and Trainings

One hundred twenty-one respondents answered this question; it was skipped by six. The greatest need was for assistance with funding opportunities such as grants and loans, with 28% of respondents indicating extreme need, another 28% indicating strong need, and 25% indicating moderate need (*Chart 23a*). Approximately 17% of respondents indicated strong need for maintenance and repair and operations technical assistance. About 40% of respondents expressed moderate need for assistance with maintenance and repair, operations, and capital improvement planning, while about a third of respondents indicated moderate need for assistance with meeting regulations and rate structures. The greatest need for technical assistance was for obtaining funding and conducting maintenance and repair. Other needs expressed by respondents included assistance with design, system upgrades, and rate setting (*Appendix F, Technical Assistance & Trainings In-depth Responses*).

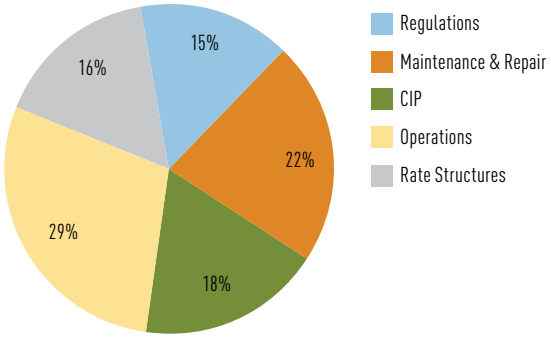
Chart 23a. Level of Need for Technical Assistance



Respondents were asked to provide written detail for those topics on which they indicated "strong" or "extreme" need so the NCRP can adjust future opportunities, trainings, and workshops to meet stated needs. Seventy-five respondents gave more detailed feedback; first among these was the desire for funding assistance. While some respondents pointed out specific needs related to grants, such as "identifying and pursuing grant opportunities," or "assistance with identifying federal funding opportunities," most simply stated a need for help obtaining grant funds and often what is needed: "a new water tank and water main," and "aging infrastructure will need updating," or "need a generator and installation for the water treatment for power outages (see *Appendix F, Technical Assistance & Trainings In-depth Responses*)."

Other requested topics were regulations, Capital Improvement Planning (CIP), operations, rate structures, and maintenance and repair (*Chart 23b*). Suggested training topics within these categories include: meeting regulatory requirements, repair/replace/permitting in coastal zone, design of infrastructure improvements, CIP planning and development, alternative energy systems, optimization of aeration and sludge removal, local rate studies, and stakeholder engagement.

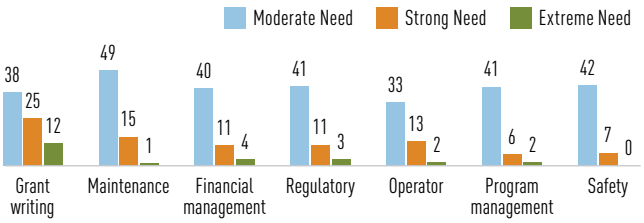
Chart 23b. Other Requested Topics for Technical Assistance



Trainings

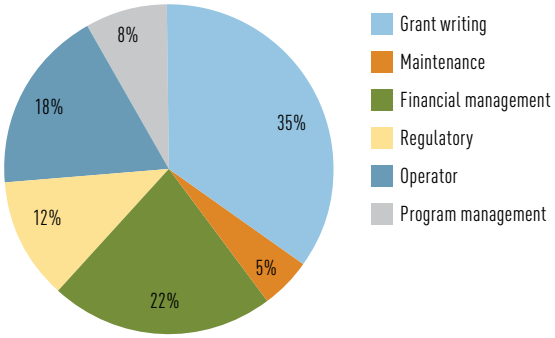
About a third of the 120 respondents indicated need for each type of training, with grant writing and maintenance training most desired (*Chart 24a*). Many respondents provided comments to this question (*Appendix F, Technical Assistance & Trainings In-depth Responses)*. There are varied needs, but commonalities exist. Several expressed interest in rate setting, finding grants and receiving assistance with grant development. Others expressed interest in continuing education courses on technical subjects such as chemical constituents, rebuilding chemical feed pumps, cathodic protection, small water system engineering and many other subjects. Program management, financial management, capital improvement planning, and increasing volunteer participation (mutual) were also requested by multiple respondents. When respondents were further asked about other resources that would be helpful, they indicated a fairly strong need for asset management materials and templates (10) and budget and rate setting assistance (8). Additional needs were general management, billing templates, and finding/retaining general administrators to maintain institutional history.

Chart 24a. Level of Need for Trainings



Those who indicated strong or extreme need were asked to provide comments; 53 respondents did so (*Chart 24b*). Of these, grant writing and financial management training/ assistance were most often requested. Specific requests include: types of grants available, eligibility, application procedures, award/ scoring process, walking people through the grant requirements — both technical and non-technical, and a variety of financial topics, such as budgeting and rate setting and resource acquisition and planning. Other suggested topics include: local distribution and treatment operator certification classes, licensing certificates, and cross training techniques (*Appendix F, Technical Assistance & Trainings In-depth Responses)*.

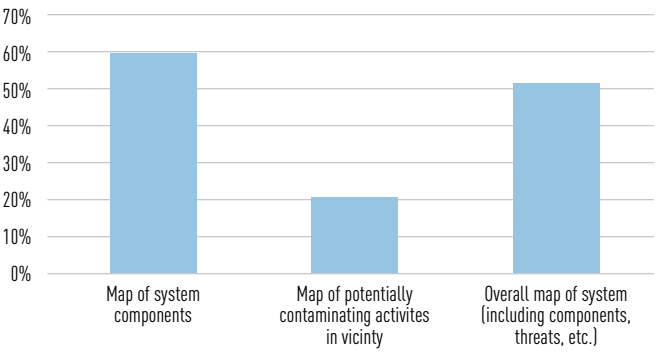
Chart 24b. Other Requested Training Topics



Mapping

About 70% of 119 respondents indicated their system components are not accurately mapped using GPS. Of these respondents, about 60% would like a map of system components while about half would like an overall map that shows components, threats, and other salient features (*Chart 25*). A couple of respondents indicated that they are attending mapping workshops to develop their own maps; others stated that the small size of their system makes mapping unnecessary. Other respondents pointed out that accurate mapping would improve disaster planning and responses to main line breaks, while another would like to obtain possible connections points to a nearby city's main line. Still other respondents indicated that they are working with sketches and schematics or maps developed decades ago (*Appendix C. Respondent Comments Grouped by Subject).*

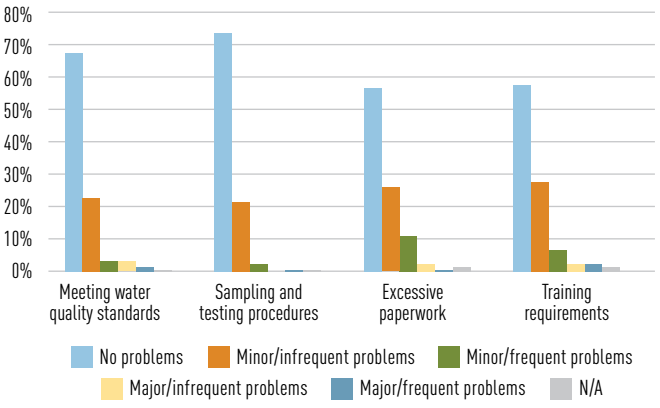
Chart 25. Mapping Needs



Regulatory Constraints

Most of the 114 respondents to this question indicated that they had no problems or minor/ infrequent problems with any regulatory constraints (*Chart 26*). Comments associated with regulatory constraints are discussed above (*Topics of Concern*) and available in (*Appendix C. Respondent Comments Grouped by Subject).*

Chart 26. Regulatory Constraints



Emergency Response and Capital Improvement Planning

Most of the water and wastewater systems in the North Coast have an Emergency Response Plan, with only about 25% of respondents (n= 28/112) saying that they don't have one or are unsure whether they have one or not. About half of the respondents indicated that their system has a capital improvement plan (n = 51/111), with nearly half indicating they don't (n = 51/111), while about 10% (n = 9/111) were not sure whether their system had a capital improvement plan or not. This uncertainty may be due to technical people with no managerial/ administrative knowledge participating in the survey for many of the smaller systems. The lack of Capital Improvement Plans may also be a reason for the fairly strong desire among respondents for financial management training, with over 40% indicating a strong or moderate need for such trainings.

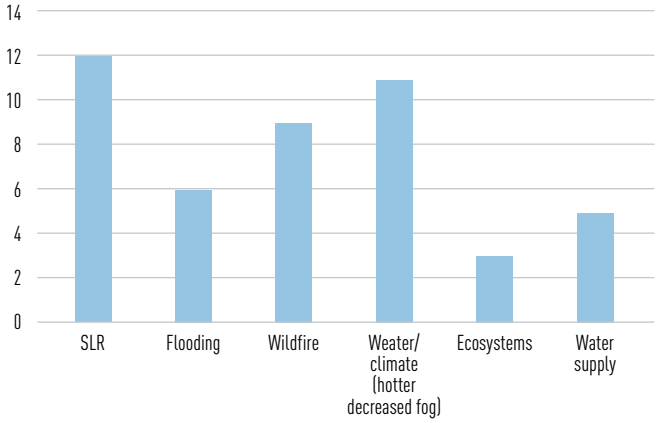
Resource Sharing

About 35% of 109 respondents indicated that sharing resources with neighboring or nearby systems would help address needs for specialized tools, equipment, qualified operators, or system management. Slightly more indicated that this would not be useful, while about 20% weren't sure. Many of the systems indicated that they currently share resources or technical staff with other facilities. For example, one water treatment operator serves many small coastal systems. Others assist or receive assistance from a neighboring system. Of those who do not think sharing resources would be beneficial, several commented that they are too far away from other systems for it to be practicable (*Appendix C. Respondent Comments Grouped by Subject*). In response to the query about resources to share, over half of the 103 respondents replied that they do not have specialized tools, equipment, or other resources to share through partnerships. About one quarter of respondents indicated that they do have resources to share, while another 20% were uncertain. The list of items that respondents indicated they are willing to share with other systems is impressive: qualified operators, backhoe and other tools, CCTV for sewer/ pipe videoing, fleet equipment, operators, generators, system repair tools, storage tanks, vactor trucks, water level indicator tools, waterline leak detection and waterline location equipment, and technical expertise were some of the items offered for sharing. Some respondents indicated that they already assist smaller entities or have service contracts or MOUs for sharing specialized equipment (*Appendix C. Respondent Comments Grouped by Subject).* These responses indicate that there is a need in the North Coast for sharing equipment, tools, operators, and technical expertise, and that there are many individuals and agencies willing to do so. The NCRP, through its website, conferences, workshops, and other mechanisms, is uniquely positioned to facilitate the expansion of existing efforts.

Climate Change

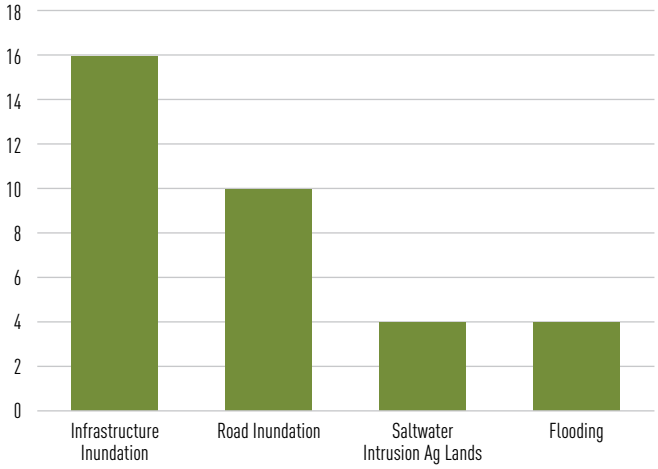
The interviews included questions about community climate change preparedness and resiliency. In inland Trinity WMA, vulnerabilities of concern were associated with reduced snowpack and increased water scarcity, catastrophic wildfires, increased severity of droughts and flooding, loss of plant and animal species, and threats to vulnerable human populations. Coastal North Coast Rivers and Humboldt Bay WMAs, however, focused mostly on water scarcity, sea level rise (SLR), and flooding due to intense storm events (*Chart 27*). Respondents also mentioned wildfire, tsunamis, earthquakes, climate migrants, species shifts, and ocean acidification.

Chart 27. Community Vulnerability to Climate Change



Many interviewees feel vulnerable to sea level rise, particularly those in Mendocino and Humboldt counties and named a variety of possible impacts: coastal bluff erosion, inundation of private wells and ag lands, infrastructure damage (especially roadways), salt water intrusion (*Chart 28*). Most respondents noted a future negative impact from seal level rise, particularly in low-lying areas. Respondents in Humboldt Bay predicted those most affected would be agriculture (especially livestock) and waterfront commercial and industrial enterprises.

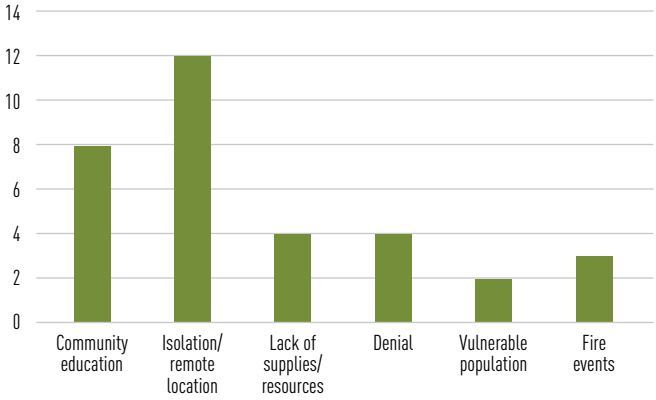
Chart 28. Expected Sea Level Rise and Seawater Intrusion Impacts



Other Community Challenges

Other challenges faced by interviewees' communities were many and varied. Many interviewees reiterated financial need, while over half indicated a need for job training and employment. Industry and economy were also topics of concern, with the cannabis industry presenting a concern to some respondents, and an opportunity to others. When asked what gaps exist for their communities with respect to disaster preparedness, some common themes emerged (*Chart 29*). The most common had come up elsewhere in the interviews — North Coast communities are very remote, and if they lose roads during an emergency event, it will be very difficult to provide adequate relief services, from first response to backup electricity generation. Some interviewees felt that better communication to the public and between agencies would be beneficial to public awareness and event preparedness. There is a lack of redundancy of services — for example, internet providers that can effectively cut communication off for many who rely on cell phones for communication. Several respondents noted that risks are known, but preparedness is not a high priority for many residents. One respondent noted that many live alone, which could present a danger in the face of a natural disaster. Another reported wanting to know who should be checked up on in a neighborhood during or after a natural disaster. In Trinity County, every interviewee spoke about wildfire. According to one respondent, communities in Trinity cannot afford to deal with the impacts of fire so those impacts become deferred maintenance; there is a need to change emergency management systems so they're no longer relying on declared disasters to perform maintenance.

Chart 29. Gaps in Natural Disaster Preparedness



Final Survey Comments

The final comments (27) provide during the survey, touched on many subjects (*Appendix C. Respondent Comments Grouped by Subject*). Some respondents reiterated their disadvantaged status, others stated partnerships with other systems. Several others requested any assistance, advice, or information that might help them. A couple people stated that a focus on smaller, rural systems is vital to helping them while others reiterated their need for technical assistance with grant writing and administrative trainings. Some others thanked the NCRP for reaching out and for classes conducted in the region. Verbatim responses to key survey questions are provided in Appendix G, Responses to Key Survey & Interview Questions.

Survey Respondents by County

Del Norte:

Big Rock CSD
Butte Court Mobile Home Park
City of Crescent City
Del Norte County CSA
Gasquet CSD
Hunter Valley CSD
Jedsmith Homeowners Association
Las Palmas Mobile Home Park
Pine Grove Trailer Park
Redwood Park CSD
Reservation Ranch
West Park Properties

Humboldt:

Beach Creek Mobile Home Park
Big Lagoon CSD
Big Lagoon Park Water Co.
Briceland CSD
City of Arcata
City of Blue Lake
City of Eureka
City of Fortuna
City of Rio Dell
Fieldbrook Glendale CSD
Humboldt CSD
Humboldt County RCD
Humboldt County RID # 1, Shelter Cove POTW
Jacoby Creek CSD
Loleta CSD
Manila CSD
McKinleyville CSD
Midway RV Park
Miranda CSD
Myers Flat MWS, Inc.
Orleans CSD
Orleans MWC
Palomino Estates MWC
Redcrest Water Works
Seawood Estates Mutual Water
Westhaven CSD
Weott CSD
Willow Creek CSD

Mendocino:

Albion Mutual Water Co
Calpella CWD
Caspar South Service Co
City of Fort Bragg
City of Ukiah
City of Willits
Covelo CSD
Fort Bragg Municipal Improvement District
Hills Ranch MWC
Holly Ranch Village
Hopland PUD
Laytonville CWD
Meadow Estates Mutual
Mendocino City C.S.D.
North Gualala Water Company
Pine Mountain Mutual Water Company
Point Cabrillo Highlands
Point of View MWC
Redwood Valley CSD
River Estates MWC
Round Valley County Water District
Seafair Road and Water Company
Shorelands Road & Water Company
Surfwood MWC
Willow CWD
Woods, The
Woodside RV Park & Campground

Modoc:

State Line RV Park

Siskiyou:

Cal Ore Trail Mobile Estates
Callahan Water District
City of Dorris
City of Tulelake
City of Weed
City of Yreka
Grenada SD
Lake Shastina CSD
Montair Subdivision Homeowners Association
Sawyers Bar County Water District
Shasta View Heights Owners Association
County Service Area #5/ Carrick
Tennant CSD

Sonoma:

Geyserville Sanitation Zone
Huckleberry MWC
Cazadero Water Company, Inc.
City of Cloverdale
City of Cotati
City of Healdsburg
City of Rohnert Park
City of Sebastopol
City of Santa Rosa
Mobile Home Estates
Mountain View Mobile Estates, LLC
Redwood Heights Water Association
Russian River CSD
Six Acres Water Company
Sonoma County MWC
Sonoma County Water Agency
South Cloverdale Water Company
Sunset Park Community
Sweetwater Springs CWD — Guerneville
Sweetwater Springs CWD — Monte Rio
West Water Company
Yulupa MWC

Trinity:

Burnt Ranch Estates M.W.C.
Covington Mill MWC — Division B
Indian Creek Trailer Park
Lewiston CSD
Lewiston Park MWC
Rush Creek MWS
Seymour's MWS
Treasure Creek Woods MWAC
Trinity County WW District #1
Trinity Knolls MWC
Weaverville CSD

Key Expert Interviewees

INTERVIEWEE NAME	ORGANIZATION	POSITION
Trinity River Watershed Management Area		
Kevin Held	Trinity River Restoration Program	Project Manager
Donna Rupp	Trinity County RCD	Project Coordinator
Nick Goulette	The Watershed Center	Executive Director
Wes Scribner	Weaverville Community Services District	General Manager
Mark Lancaster; Sandra Perez	Five Counties Salmonid Conservation Program	Program Director; Program Manager
North Coast Rivers Watershed Management Area		
Anna Halligan	Trout Unlimited	North Coast Coho Project Director
Patty Madigan	Mendocino RCD	Project Manager
Laurel Marcus	CA Land Stewardship Institute	Executive Director
Heidi Kunstal, Rosanna Bower	Del Norte County	Director of Community Development Department; Assistant County Engineer
Doug Kern	Mendocino Land Trust	Director of Conservation
Kathleen Morgan	Gualala River Watershed Council	Executive Director
April Newlander; Tasha McKee	Sanctuary Forest	Executive Director; Water Program Director
Nacole Sutterfield; Jon Olson	City of Crescent City	Engineering Project Manager/Public Works; Public Works Director
Humboldt Bay Watershed Management Area		
Mark Weller & Heidi Benzonelli	Westside Community Improvement Association	Dep. Director and President
Hillarie Beyer	McKinleyville Family Resource Center	Executive Director
Brian Olson	Eureka Community Resource Center	Resource Coordinator
Joyce Hayes	Humboldt Senior Resource	Executive Director
Esther Hutton	Manila Community Resource Center	Executive Director
Jennifer Kalt	Humboldt Baykeeper	Executive Director
Susan Seaman	Arcata Economic Development Corporation	Program Director
Amanda Mager	City of Blue Lake	City Manager
Justin McDonald	Arcata Fire District	Fire Chief
Greg Orsini	McKinleyville Community Services District	General Manager
Valen Castellano	Big Lagoon CSD	Board Member
Melissa Kraemer	CA Coastal Commission	Supervising Analyst
Becky Price Hall	City of Trinidad	Grant and Project Coordinator
Chris Drop	Manila CSD	General Manager
Aldaron Laird	Trinity Associates	Owner
Larry Glass	North Coast Environmental Center	Executive Director
John Friedenbach	Humboldt Bay Municipal Water District	Manager
Sean Robertson	Humboldt Bay Fire District	Fire Chief
Andrew Slack	Save the Redwoods League	Forest Fellow
Larry Oetker	Humboldt Bay Harbor, Recreation and Conservation District	Executive Director

1.5 SURVEY-DERIVED TECHNICAL ASSISTANCE

Based on the water and wastewater treatment needs survey, NCRP technical staff compiled a list of water and wastewater system providers in the North Coast region in need of technical assistance. The data from the NCRP Needs Assessment was compiled into a database for analysis, screening and prioritization using the evaluation criteria outlined in the NCRP Technical Assistance Selection Process approved by the NCRP Policy Review Panel in January 2018. (*Appendix H. NCRP Technical Assistance Selection Process and Appendix I. NCRP Technical Assistance Rankings*). Technical Assistance for North Coast Tribes was selected through a subsequent process led by the North Coast Tribal Representatives and the Tribal Engagement Coordinator, CIEA.

The NCRP Technical Assistance Selection Process evaluation criteria included economic status (only systems in or serving areas considered disadvantaged by the state were considered), Drinking Water State Revolving Fund criteria for public health need, Clean Water State Revolving Fund criteria for public health and water quality, implementation readiness, and sustainability criteria, including infill development, existence of capital and asset management plans, climate change planning, protection of environmental or agricultural resources, and presence of project in one or more regional environmental management plans. DWR IRWM Program Statewide Goals were also factored into the prioritization process, including drought readiness, ecosystem protection and restoration, expansion of water storage capacity, improvement of groundwater management and increased flood protection.

The resulting list of water and wastewater systems in the region was reviewed with the NCRWQCB and Division of Drinking Water District Offices 01, 03 and 18 to ensure that systems were good candidates for assistance based on state experience and knowledge. When the preliminary ranking was developed and DWR and NCRWQCB had added their input, additional adjustments were made based on system responsiveness to outreach, whether systems were currently receiving

planning or construction funds from other sources, whether systems had previously received NCRP assistance, and whether projects were consolidations, which increase regional self-reliance. Once the final adjusted points were developed, each project was ranked based on their score within each NCRP member county.

The top candidates included the first and second ranked system from each County followed by a few of the remaining overall highest scoring systems. These were provided to the NCRP Proposition 1 DACTI Ad Hoc Committee for review and input. The ad hoc committee met on December 5, 2018 and approved the following list of 21 disadvantaged community entities to receive engineering technical assistance, (*see Table 5, NCRP Disadvantaged Community Technical Assistance Recipients, 2019*). To date, of the 21 projects offered technical assistance, 14 were ready to make use of the offered services and 9 entities submitted project proposals for consideration during the NCRP Proposition 1 IRWM Project solicitation. Seven of the nine proposed projects were selected by the NCRP Technical Peer Review Committee and approved by the Policy Review Panel as Priority Projects selected for inclusion in the regional NCRP 2019 Proposition 1 IRWM Grant, which was awarded funding by the DWR IRWM program in April 2020. Table 5 lists the Round 1 systems by ranking that were offered technical assistance; whether the recipient was interested in the assistance or under contract; and brief notes about the known status of the project as of spring 2020.

TABLE 5. NCRP DISADVANTAGED COMMUNITY TECHNICAL ASSISTANCE RECIPIENTS 2019

System Name	Tech Assist Contracted	Assistance Desired	Notes as of May 2020
JEDSMITH HOMEOWNERS ASSN.	Yes	Yes	Water System Analysis report completed, October 2019. Check in during Round 2.
JOURNEY'S END MOBILE HOME PARK	No	Possibly	In conceptual design stage & already working with site engineer. As of February 2020, site was formally closed as a MHP with approval several months away for rental apartments with about 532 units, about 30% of which will be reserved for low-income seniors.
BRICELAND COMMUNITY SERVICE DISTRICT	Yes	Yes	Drinking Water System Evaluation Technical Memorandum developed, May 2019. NCRP 2019 application submitted; selected as NCRP Priority Project; approved for Round 1 Proposition 1 IRWM Funding.
WILLITS, CITY OF (WATER)	Yes	Yes	Improving Willits Water Supply Reliability and Drought Resiliency with Groundwater and Conjunctive Use Technical Memorandum developed, May 2019. NCRP 2019 application submitted; selected as NCRP Priority Project; approved for Round 1 Proposition 1 IRWM Funding.
SALYER HEIGHTS W.S., INC	No	Unlikely	Has applied for a planning grant to address all system issues. No sense of urgency to utilize this technical assistance opportunity.
TREASURE CREEK WOODS MWC	Yes	Yes	Treasure Creek Woods Mutual Water Company, Storage and Distribution System Improvements Project Technical Memorandum developed, June 2019. NCRP 2019 application submitted; not selected. Check in during Round 2.
SHASTA VIEW HEIGHTS OWNERS ASSOCIATION	Yes	Yes	Shasta View Heights Water System Improvement Project Technical Memorandum developed, August 2019. Check in during Round 2.
NEWELL COUNTY WATER DISTRICT	Yes	Yes	Water Systems Improvements Project Technical Memorandum developed, June 2019. NCRP 2019 application submitted; selected as NCRP Priority Project; approved for Round 1 Proposition 1 IRWM Funding.
SONOMA COUNTY MUTUAL WATER CO	Yes	Yes	Contracted scope for Water Treatment Plant Site Survey to be completed for Round 2.
ALDERPOINT COUNTY WATER	Yes	Yes	Technical assistance begun: Review System Plans, Site Visit, and Data Collection; will follow up with them during Round 2
REDWOOD VALLEY COUNTY WATER DISTRICT	No	Possibly	Check to see if they have permanent manager by Round 2 and are better positioned for technical assistance.
GASQUET COMMUNITY SERVICE DISTRICT	Yes	Yes	Gasquet Water System Analysis Report developed, March 2020. Check in during Round 2.
CITY OF DORRIS	Yes	Yes	Groundwater Well House Design preliminary technical assistance provided. NCRP 2019 application submitted; not selected for funding. Check in during Round 2.
CITY OF BLUE LAKE	No	Possibly	Not ready in 2019. Check in during Round 2.
LAKE SHASTINA	No	Possibly	Not ready in 2019. Check in during Round 2.

TABLE 5. NCRP DISADVANTAGED COMMUNITY TECHNICAL ASSISTANCE RECIPIENTS 2019

System Name	Tech Assist Contracted	Assistance Desired	Notes as of May 2020
DEL NORTE COUNTY CSA	No	Possibly	Some technical assistance provided. NCRP 2019 application submitted. NCRP 2019 application submitted; selected as NCRP Priority Project; approved for Round 1 Proposition 1 IRWM Funding. GHD to follow up to see if an equivalent stormwater resource plan can be developed as technical assistance.
COVELO COMMUNITY SERVICE DISTRICT	Yes	Yes	Covelo CSD Wastewater System Evaluation Technical Memorandum developed, May 2019. NCRP 2019 application submitted; selected as NCRP Priority Project; approved for Round 1 Proposition 1 IRWM Funding.
HOPLAND PUBLIC UTILITY DISTRICT	Yes	Yes	Community wide survey of the Hopland Wastewater Collection System; Mapping and Data development, May 2019. Check in during Round 2.
WEAVERVILLE SANITARY DISTRICT	Yes	Yes	Weaverville Sanitary District — Sewer Improvements Project Technical Memorandum developed, April 2019. NCRP 2019 application submitted; selected as NCRP Priority Project; approved for Round 1 Proposition 1 IRWM Funding.
NEWELL COUNTY WATER DISTRICT	Yes	Yes	Newell County Water District Water Systems Improvements Project Technical Memorandum developed, June 2019. NCRP 2019 application submitted; selected as NCRP Priority Project; approved for Round 1 Proposition 1 IRWM Funding.
VALLEY FORD WATER ASSOCIATION	Yes	Yes	Valley Ford Water Association Water Project | Biological Assessment, September 2019. Check in during Round 2.
CLOVERDALE	No	Possibly	Not ready in 2019. Check in during Round 2.

The Needs Assessment identified a number of disadvantaged communities and project needs. The process described above led to the first phase of disadvantaged community technical assistance in the North Coast for Proposition 1 IRWM funding. A contract was developed with GHD to act as the technical assistance coordinator in a team of North Coast engineering firms including GHD, LACO and PACE. This team provided a wide range of technical and engineering tasks to support disadvantaged community project development. The needs assessment identified communities in need and problems, but few system operators had projects in mind to solve the issue. In most cases, engineers needed to identify reasonable projects that could be funded. Some of the solutions are Band-Aids, but the only real alternative to rebuilding the whole system, which is often infeasible due to capital constraints (Newell is a great example — as an historic site of internment camps). Also, most of the systems identified did not have staff and resources to develop the application materials for funding through the IRWM. These are projects that would not have been brought forward without DACTI technical assistance. Some of these projects will need engineering and administrative technical assistance throughout the life of their project.

Each of the fourteen systems receiving technical assistance is briefly described in Appendix J. Survey-Derived Technical Assistance with respect to the need for and type of assistance provided. For each system, an engineering report was developed to document the process.

1.6 NEXT STEPS

Based on the summary and analysis provided above, the following priority needs have been identified:

- Trainings and assistance with identifying funding opportunities and preparing grant applications;
- Assistance with securing funding for design and implementation of replacing or upgrading aging infrastructure;
- Trainings, resource development and technical assistance with general water and wastewater system infrastructure operations, maintenance and repair;
- Assistance and support for emergency services interdepartmental communications with intent to evaluate development of inter-agency and inter-departmental communications models for climate adaptation, mitigation, and other planning subjects of universal concern;
- Support to remain informed about and comply with state drinking water standards;
- Support to develop and maintain maps of water and wastewater systems;
- Trainings, especially for smaller systems, with respect to financial stability, and;
- Community Networking: to inform small systems of existing resources

In response to identified needs, the NCRP will provide tools, resources and technical assistance to North Coast disadvantaged communities to support and develop

local and regional projects that promote integrated and multi-benefit outcomes in the North Coast region.

Small Community Toolbox

Improvements will be made to the Small Community Toolbox to provide resources and references that allow small communities to approach the management and improvement of infrastructure in a systematic fashion, as well as to assist in the project development process.

Workshops and Trainings

Online videos and in-person workshops will train interested parties on how to use the Small Community Toolbox including strategies for addressing permitting and environmental compliance challenges. Grant writing workshops will be made available during the Round 2 Proposition 1 IRWM Project Solicitation.

Proposition 1 IRWM Funding Application Support

A team of regional experts will provide project proponents application development support during the Round 2 Proposition 1 IRWM Project Solicitation in the form of eligibility, application material review, cost estimating, project scalability, CEQA compliance, and project benefits.

Technical Assistance

A team of engineers and regional experts will provide one-on-one technical assistance to communities identified in the Needs Assessment survey to develop multi-benefit projects to improve water reliability, water quality, and resilience to climate change. Types of technical assistance may include site assessment, system mapping, project cost estimates, project benefits quantification and preliminary project design/reports.

Resource Development

The NCRP develops resources on an on-going basis to promote shared learning and local expertise and makes these available via the NCRP website. Resources include listings of calendar events & funding opportunities, catalogs of regional planning documents, down-loadable GIS data, guidelines to best management practices & master planning, policy templates, regional assessments and strategy documents.

2. TRIBAL WATER & WASTEWATER SERVICE PROVIDERS

2.1 IDENTIFICATION OF COMMUNITY WATER/WASTEWATER SYSTEMS

North Coast Tribes are separate and independent sovereign nations within the territorial boundaries of the United States (US). The sovereignty of Tribes has been acknowledged in the US Constitution. This sovereignty is inherent and flows from the pre-constitutional and extra-constitutional governance of each Tribe. Early federal policy and US Supreme Court case law recognizes that Tribes retain the inherent right to govern within political boundaries (Worcester v. Georgia, 1832) and that power to interact with Tribes is vested in the federal government (Cherokee Nation v. Georgia, 1831). This established governmental structure recognizes the sovereign and political independence of Tribal nations and its members. This right is also recognized by the State of California. Pursuant to the Executive Order N-15-19, the State "recognizes and reaffirms the inherent right of these Tribes to exercise sovereign authority of their members and territory."

The North Coast Region is the ancestral territory of North Coast Tribes. The majority of the North Coast Tribes have an intrinsic responsibility for managing their ancestral territories, whether they currently have the capacity to do so or not. Therefore, the jurisdiction of North Coast Tribes goes beyond the gathering, fishing, and hunting rights which each individual Tribal member retains. Each of the North Coast Tribes exerts their jurisdictional authority according to their traditional policies, laws, mandates and capacity.

The Tribal Engagement Coordinator of the North Coast Resource Partnership (NCRP) maintains a contact list of 32 North Coast Tribes, which includes from four to fifteen contacts for each Tribe, depending on the size and complexity of their various departments and staff. The following is the list of North Coast Tribes divided by North, Central, and Southern Regions.

North Region:

Karuk Tribe
Tolowa Dee-ni' Nation
Elk Valley Rancheria
Resighini Rancheria
Yurok Tribe
Pit River Tribe
Shasta Nation
Shasta Indian Nation

IRWMP SWRCP REGION 1 RESERVATIONS AND ABORIGINAL TERRITORIES

Central Region:

Cahto Indian Tribe of the Laytonville Rancheria
Bear River Tribe of Rohnerville Rancheria
Big Lagoon Rancheria
Blue Lake Rancheria
Hoopa Valley Tribe
Nor Rel Muk
Round Valley Reservation
Sherwood Valley Band of Pomo
Table Bluff Rancheria (Wiyot)
Trinidad Rancheria

South Region:

Cloverdale Rancheria
Coyote Valley Rancheria
Dry Creek Rancheria
Graton Rancheria
Guidiville Rancheria
Hopland Rancheria
Lytton Rancheria
Manchester/Point Arena Rancheria
Mishewal Wappo Tribe of Alexander Valley

Pinoleville Pomo Nation
Potter Valley Tribe
Redwood Valley Rancheria
Stewarts Point Rancheria (Kashia)
Yokayo Tribe

Tribes in the North Coast possess varying levels of the capacity needed to manage their own water and wastewater systems. This is due in large part to a long-standing and extreme lack of funding. For several decades, Tribes have had to rely on limited staff and resources to manage Tribal public water and wastewater facilities. Many Tribal water and wastewater systems have fallen into disrepair or were created with substandard materials. Tribes have a wide range of systems, which are operated using a wide variety of methods; either by their own staff or through services provided by an outside provider. Staff, resources, and services have been inconsistent for many North Coast Tribes. Each Tribe has a unique need and therefore the solutions to provide safe, consistent, and reliable services look different for each community. For example, some Tribes are interested in tying in with larger regional systems. However, because housing and infrastructure are not located near other providers, services cannot be bundled, and their members are reliant on the Tribe to provide service even if resources are currently limited. For others, joining a wider system may result in reduced reliability or prohibitive cost per unit. Oversight of services varies widely as well; some Tribes rely on a separate Tribal Utility Board for oversight and others are governed directly by their Tribal Council.

Before distributing the Tribal Needs Assessment survey, an effort was made to reach all Tribes in the region, with particular focus placed on outreach and securing survey responses from Tribes that did not participate in the previous NCRP 2014 Water and Wastewater Provider Survey. At the beginning of the Needs Assessment process, this contact list was updated and each Tribe was contacted and provided with information about the survey opportunity. In order to gather Tribal needs assessment surveys from those most knowledgeable about the current status and challenges for North Coast Tribes, the outreach effort was inclusive of Tribal Council members; administration offices; water system operators and maintenance providers; natural resource or environmental department directors and staff; historic preservation officers; and/or any additional staff familiar with water-related issues.

Follow-up site visit at the Yurok Weitchpec Public Water System. *Richard Myers II, Environmental Specialist with Yurok Tribal Environmental Program, Suzanne Fluharty, PhD, Division Manager Community and Ecosystems, Yurok Tribe Environmental Program, Javier Silva, NCRP Tribal Technical Assistance*

Although they have historical ties, during outreach effort, some Tribal systems were removed from the list of Tribes targeted to complete the needs assessment because they are not physically located within the North Coast funding area. The list of Tribes with systems eligible for onsite Disadvantaged Communities and Tribal Involvement (DACTI) project support or to apply for Integrated Regional Water Management (IRWM) project funding was pared down to 30 Tribes. All Tribes are eligible to participate in training, but for those Tribes that were removed from the list, their water systems are not eligible to receive technical assistance as they are considered outside the North Coast funding territory.

Most communities of the North Coast are within disadvantaged or severely disadvantaged areas and would be eligible under the income requirements for Proposition 1 bond funded programs. The US census however, has historically underrepresented Native Americans and cannot be relied upon to provide accurate data for all California Tribes. Census data can be augmented to better reflect the income of Tribal members using information already identified to determine HUD eligibility, low income student meal programs, and other low-income family programs. When these outside methods are found to be insufficient, some Tribes have initiated their own internal income surveys to update existing data. To confirm accuracy, it is best for each Tribe to confirm what census, survey, or report is most reflective of their membership.

Tribes rely on federal partners for many services because of treaties and agreements between Tribes, the federal government, or with federal agencies. Each Tribe in the North Coast has been marginalized politically and economically; which has carried over to the services available to them for well over 100 years. Therefore, all Tribes within the North Coast funding area are recognized by the NCRP DACTI program as 'underrepresented.' For this reason, the NCRP Tribal Representatives agreed that every Tribe located within the funding region or with historical territory in the region, that is willing to participate in the DACTI program, should be eligible to receive some measure of support.

At the time of this report, approximately two-thirds of the 30 targeted North Coast Tribes have completed the survey. NCRP Tribal program staff is conducting follow-up calls to confirm the best way to address their identified needs through the IRWM DACTI program, the IRWM implementation Prop.1 grant program, or through other funding options. A copy of the Tribal survey and follow-up interview questions can be found in the Tribal Water Supply & Wastewater Needs Assessment Survey & Interview Questions (*Appendix K*).

2.2 SURVEY & INTERVIEW EFFORT

A concentrated effort was made to secure a survey response from each Tribe in the North Coast region. Survey data was gathered beginning in November 2018 using the online tool Survey Monkey, through emailed PDF forms, and also through phone interviews. Initial introductory emails were sent prior to November to inform the Tribes that completed a survey in 2014 of the upcoming survey effort and to verify contact information for the individuals most likely able to answer the survey accurately. Information about how to access the survey was distributed via email, with telephone calls to contact those who did not respond to email outreach, or who did not have email addresses. NCRP Tribal Representatives were included in outreach efforts to initiate contact and/or introduce survey/interview personnel, to provide information about the NCRP DACTI program and achieve greater participation. Follow-up emails and phone calls were initiated to each North Coast Tribe between 3–4 months after the survey was mailed to encourage participation and to gather more specific details about which representatives were in the best position to complete the different sections of their Tribe's survey fields.

The process to identify which Tribes would benefit from an infusion of technical assistance included gathering and reviewing qualitative and quantitative data. The following are sources of data used to identify technical assistance targets for North Coast Tribes:

- 2014 NCRP Water and Wastewater Survey needs assessment
- 2017 NCRP Water and Wastewater Survey needs assessment
- Indian Health Service (IHS) Sanitation Deficiency System (SDS) List
- Existing State Water Resource Control Board (SWRCB) technical assistance providers to identify gaps in current assistance
- Systems impacted by wildfires
- SWRCB Division of Drinking Water Violation Notices (2012–2017)
- North Coast Region Water Quality Control Board (RWQCB) Violation Notices (2012–2017)
- United States Environmental Protection Agency (USEPA) Region Office of Drinking Water

To identify Tribal systems in need of technical assistance, the survey results gathered by the NCRP in 2014 and 2017 were compared with the SDS List maintained by IHS. Then Tribal systems were reviewed that had received violation notices from the USEPA Office of Drinking Water for federally-regulated systems, or the SWRCB for state-regulated systems; these were identified as potential technical assistance recipients. North Coast Tribes themselves or NCRP Tribal Technical Assistance Consultants followed up, as necessary, with the USEPA, IHS, and SWRCB staff to determine the status of violations and if there were other systems, not previously identified, in need of assistance.

The NCRP Tribal Representatives developed a process for providing technical assistance and selecting which Tribes and Tribal needs were prioritized to receive Technical Assistance. Once the needs assessment and review of supplemental information was gathered, Tribal engagement staff and/or Technical Consultants contacted each Tribe to confirm the findings in the report and to discuss all issue areas identified as an Extreme, Strong, and Moderate Concern. Items that were identified as of moderate concern by the respondent were discussed with each Tribe to ensure the concern level of the Tribe and to assist in aligning the identified needs with the priorities of each Tribe. Site visits by the Tribal Technical Assistance Consultants and/or Tribal staff are being completed where needed. Workplans are being developed in coordination with each Tribe and compared with services provided through the DACTI program; to meet a technical assistance need or to leverage other support. Additional details on this process can be found in L. NCRP Round 1 Tribal Technical Assistance Selection Process. For a list of interview and follow-up questions please see Appendix K. Tribal Water Supply & Wastewater Needs Assessment Survey & Interview Questions. Together these documents outline the process being used to determine which Tribes and Tribal needs will receive assistance.

2.3 SURVEY RESPONSE RATE

As of May 2020, twenty-two (22) Tribal survey responses have been submitted, representing a 72% response rate. Five (5) responses were from the North Region, eight (8) from the Central Region, and nine (9) responses were submitted from the South Region. Many of the Tribes are remote, small, and governed by Tribal Councils and staff leadership that periodically change. Tracking down current leadership or water management staff who felt

that they were in a position to speak knowledgeably about their water system was challenging.

During the 2014 NCRP survey, six (6) Tribes responded, however most Tribal respondents had skipped a majority of the questions. That effort was cut short because of the severe drought and need to transfer staff time to prepare for the drought round of funding offered by the IRWM program. To receive more information this time, it was important to tie the needs assessments to technical assistance in a more meaningful and reciprocal manner. The DACTI program funding allowed for the provision of technical support, therefore a request for information had more meaning as they could see a tangible outcome, and roughly 3/4 of all Tribes in the North Coast were able to take the time to respond to the 2019 survey. Of those Tribes that did not respond, project staff discovered that, for the most part, they either had new staff who did not yet have enough information about the system to respond, or more often, that they were struggling to just provide basic services with limited resources. In both cases, they simply did not have the capacity to respond and project staff made themselves available to discuss pressing needs as each Tribe was able.

When requesting Tribes to complete the Tribal Needs Assessments, it was important to include information regarding to whom the results would be reported. This was to assure Tribes their responses would be kept confidential and that results would be shared only in aggregate. This provided incentive for Tribes to respond honestly and openly, without fear of being stigmatized or targeted by the public or by government agencies.

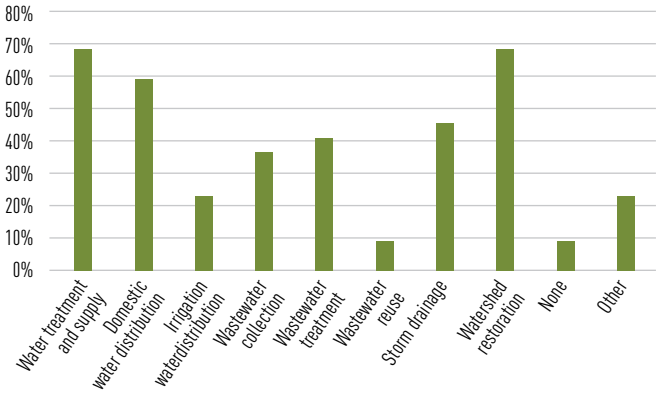
Due to the complexity of some systems, it was challenging to evaluate these by Tribe. For example, there are several Tribes in the North Coast running multiple systems, with one operator providing service to all systems, and in some cases the system is receiving no support at all. One Tribe has six drinking water systems. In other cases, the Tribe is considered a consecutive system; a public water system that has no water production or source facilities of its own and obtains all of its water from another water system. This kind of system offers its own challenges and complexities.

Wastewater for many Tribes is either handled by a community collection system or individual on-site septic systems. For a majority of the Tribes, these different systems can occur within the same community and are usually the responsibility of a certified water operator. Another Tribe has three separate communities, approximately 8 miles apart, with one certified water operator to maintain two public water systems and one community wastewater collection system.

2.4 SURVEY RESULTS

The survey was developed to provide as much flexibility as possible for respondents to convey detailed information about their systems, resulting in the most comprehensive "snapshot" of each system. In some cases, this did not lend itself well to data analysis. For instance, many questions allowed operators to provide multiple answers. In addition, many survey respondents did not answer all questions or responded in part. Through interviews, we realized they had opted to not answer when a question was not fully applicable. As a result, it is difficult to analyze all responses using simple percentages. Respondents who utilized the option to provide detailed comments did help to provide answers or to clarify responses. Tribal staff continue to follow-up with each responding Tribe individually to capture what the survey could not, and to ask additional interview questions. Of the charts produced based on responses to the survey, the following is the summary of the types of services provided to Tribal communities (*Chart 30*):

Chart 30. Type of Services Provided

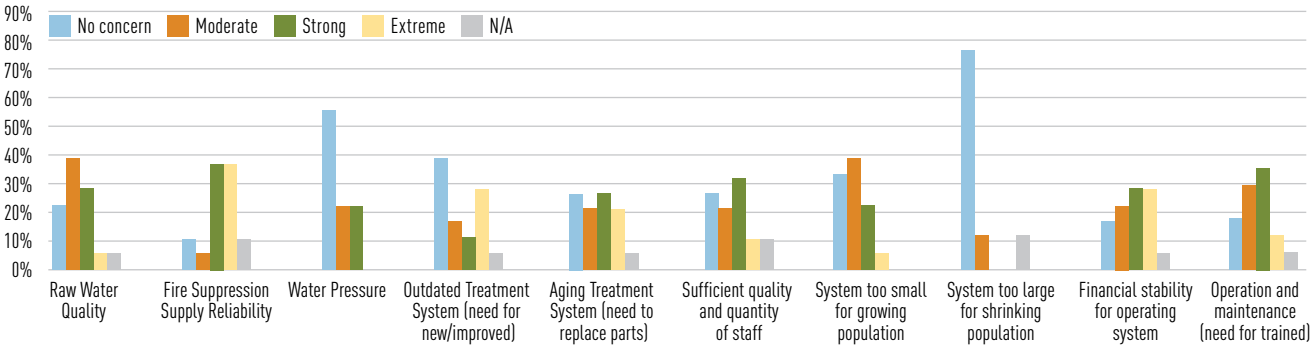


A brief analysis of the results of each set of questions is provided below.

Topics of Concern

Nineteen (19) Tribal respondents answered this question, while six (6) skipped it entirely. The top five topics of concern were: an aging treatment system; financial stability; fire suppression supply reliability; drinking water supply reliability; and sufficient quality and quantity of staff (*Chart 31*). Of those feeling extreme concern, the primary concerns were: aging systems, outdated treatment systems, and fire suppression supply reliability. Although comments from survey respondents were wide ranging, there are however, a few commonalities (*see Appendix L. Tribal Survey Comments Grouped by Subject*). Tribes cited watershed restoration as a priority including assessment of needs, design and implementation. Another commented that both quality and quantity of water supply is of concern. Also, aging systems that need replacement were identified as a concern, coupled with

Chart 31. Topics of Concern



the associated need for assistance to obtain funding for the needed replacements. Many of the Tribal respondents also mentioned the need for new water mains, transmission lines, and back-flow valves and tanks. Many respondents with concern about the condition of their systems stated that funding assistance is a major issue.

While it is anticipated that most systems impacted by wildfire will receive state and federal assistance to repair damages, it was identified that there are still impacted systems that remain vulnerable in some Tribal communities. Outreach to these communities is continuing, in order to determine whether their stated impacts from wildfire will need or are eligible for technical assistance provided by the NCRP DACTI program.

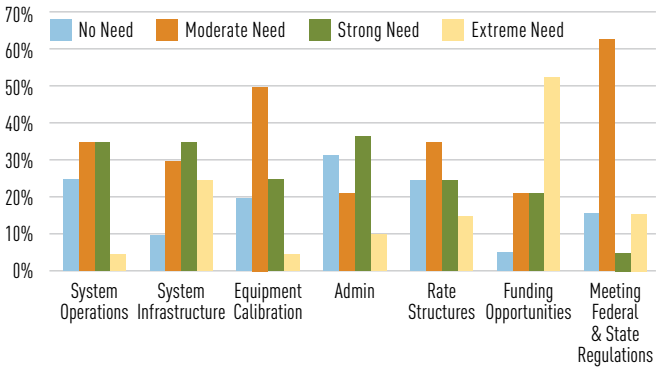
Secondary topics of concern were; the need for trained operation and maintenance personnel, raw water quality, that the system is too small for growing population, and that there are water pressure issues. Most of the systems indicated a need for certified operators. Others indicated that finding and retaining qualified people in a rural area can be difficult. Concerns with fire were varied; some were associated with water quality after a wildfire, while others were more concerned with fire suppression and loss of power for their water system during a fire event. A few systems have recurring problems with insufficient water pressure and/or the size of fittings.

Level of Need for Technical Assistance

All respondents but five answered this question. The greatest need was for assistance with funding opportunities such as grants and loans, with 52% of respondents indicating extreme need (*Chart 32*). About 37% of respondents expressed strong need for assistance with administration along with 35% for system operations. Other strong concerns were for equipment calibration and rate structures. Moderate needs were meeting federal and state regulations, equipment calibration, administration, and funding opportunities.

The greatest need for technical assistance was for obtaining funding and conducting maintenance and repair. Other needs expressed by respondents included assistance with design, system upgrades, and rate setting (*Appendix L. Tribal Survey Comments Grouped by Subject*).

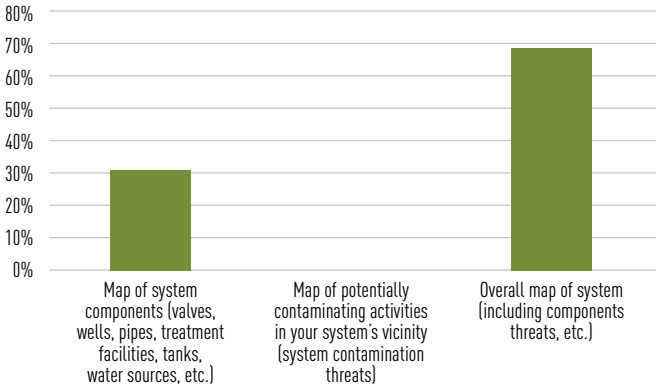
Chart 32. Technical Assistance Needs



Mapping

About 65% of the 20 respondents stated that their system components are not accurately mapped using GPS. Of these respondents, about 68% would like an overall map that shows components and threats while about 31% would like a map of system components (*Chart 33*). A couple of Tribal respondents commented that they are working with sketches and schematics or maps developed decades ago and would like assistance with training and developing GPS mapping programs (*Appendix L. Tribal Survey Comments Grouped by Subject*).

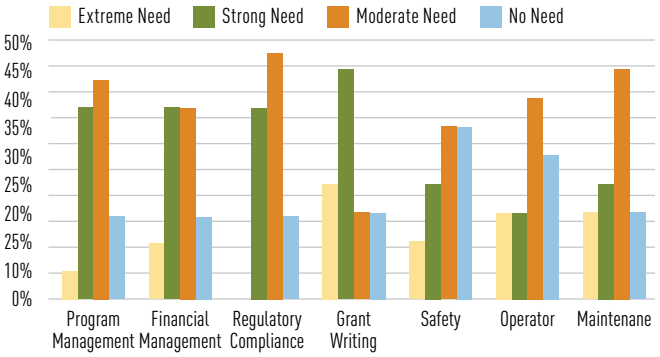
Chart 33. Mapping Needs



Training

Many respondents provided comments to this question (*Appendix L. Tribal Survey Comments Grouped by Subject*). About 19 respondents indicated need for each type of training, with grant writing, operator and maintenance training most desired (*Chart 34*). Program management, financial management and capital improvement planning were also requested by multiple respondents.

Chart 34. Training Needs



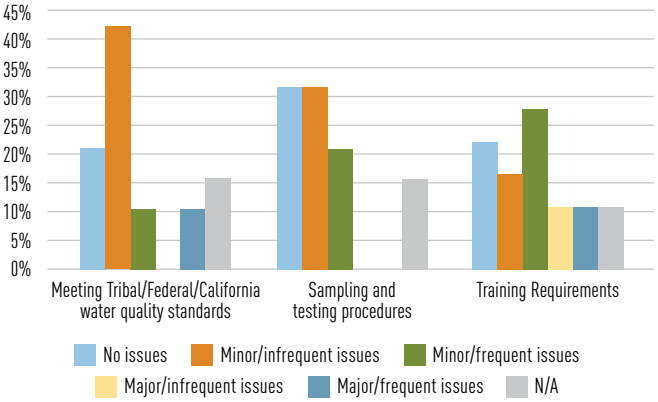
The following were specific comments regarding the types of training that would be most useful:

- "Again, the need is for funding. If there is no one to train, training is not very helpful."
- "Watershed restoration—will need assistance in the near future"
- "Need funding for capital improvements. Training for Utility District and Tribal Council board members on the inherent challenges to operating and maintaining a small utility. Always need help/ Tech Assistance securing grant funding for capital improvements."
- "Training of the operators onsite would be a big help. Financial management of both facilities is a must."
- "Opportunities for consistent and updated training courses provided locally [or within 200 miles] would greatly benefit … Water Operator and coordinating staff to build Tribal Capacity."
- "Grant writing for watershed restoration. Training for maintenance personnel in safety, operations, maintenance of individual wells/ treatment systems, septic tanks."
- "The most helpful "training" we receive is from Rural Community Assistance Corporation (RCAC) and is one-on-one, on-site. IE: This is what needs to be done and this is how you do it."

Regulatory Constraints

Most of the respondents to this question indicated that they had no problems or minor/ infrequent problems with regulatory constraints, with the exception of Sampling and Testing Procedures. *(Chart 35)* Comments associated with regulatory constraints are available in (*Appendix L. Tribal Survey Comments Grouped by Subject*). Most Tribal-operated systems on Tribal land are regulated by the Federal government.

Chart 35. Regulatory Constraints



Number of Hookups

Over 43% of the Tribal respondents have between 16 and 50 hookups; indicating that most of the Tribal communities in the North Coast are operating or receiving services as part of a small water system (*Chart 36*). Of respondents who identified that they provide wastewater treatment, over 70% of these have 50 or less hookups (*Chart 37*).

Chart 36. Drinking Water Connections

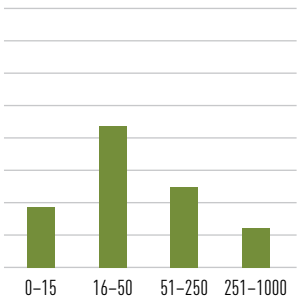
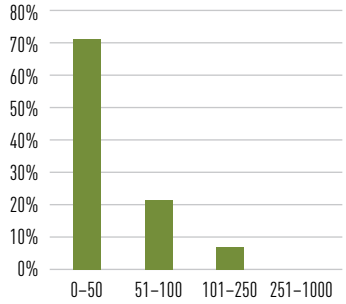


Chart 37. Wastewater Connections



Rate Structure and Average Monthly Bill

Most Tribal respondents indicated that water rate costs are normally subsidized by the Tribe or other federal funding sources (*Chart 38*). Respondents indicated that they purchase water from another water provider and allow them to charge their Tribal members, and others with overage fees built into their rate structure[5] (see comments, *Appendix L. Tribal Survey Comments Grouped by Subject*).

Most of the respondents did not bill for water, so the question was not applicable. (*Chart 39*).

5 For an explanation of rate structure terms, please see page 8.

Chart 38. Rate Structure

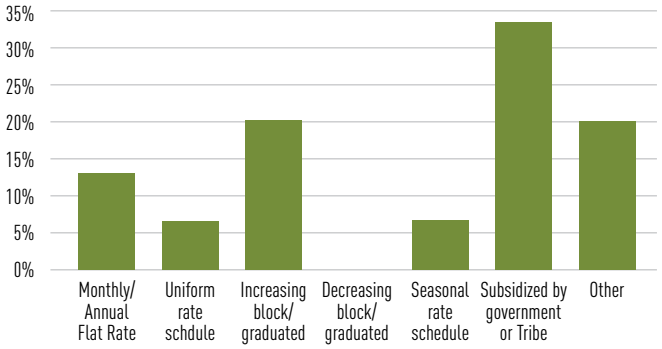
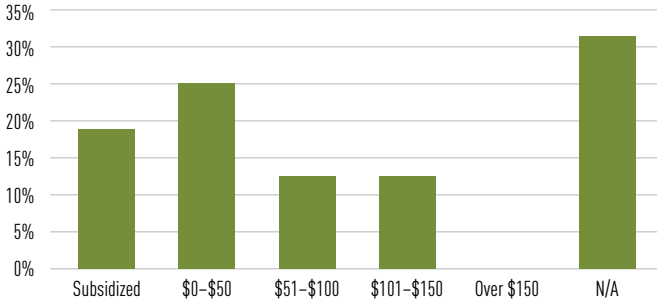


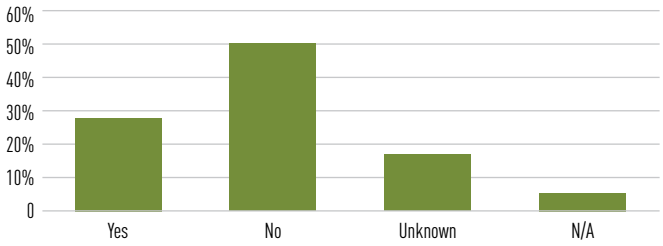
Chart 39. Average Monthly Bill



Emergency Response and Capital Improvement Planning

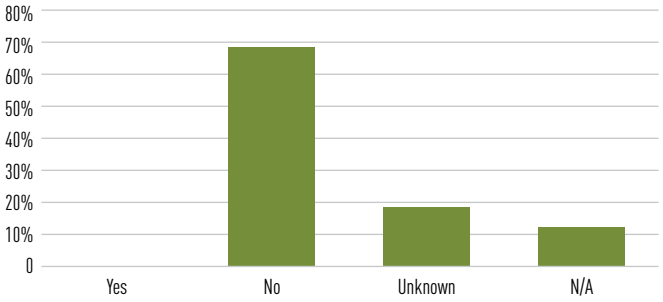
Respondents indicated they did have an Emergency Response Plan (ERP) and an almost equal number of respondents did not. Only about 16% of respondents said that they were unsure whether they have one or not (*Chart 40*). This revealed an opportunity for municipalities or Tribes to either develop an ERP, or if it is already in existence to provide these plans. Our recommendation to Tribes receiving services from outside providers, that they contact their municipality to obtain a copy of such a plan. This is a clear opportunity for increased communication about existing, or upcoming ERP development with Tribal leadership, staff, and Tribal members.

Chart 40. Emergency Response Plan



A majority of the respondents indicated that their system does not have a Capital Improvement Plan (CIP); while about 18% were not sure whether their system had a capital improvement plan or not (*Chart 41*). This uncertainty may be due to who took the survey. For many of the smaller systems, those with technical skills may not have the managerial/administrative knowledge.

Chart 41. Capital Improvement Plan



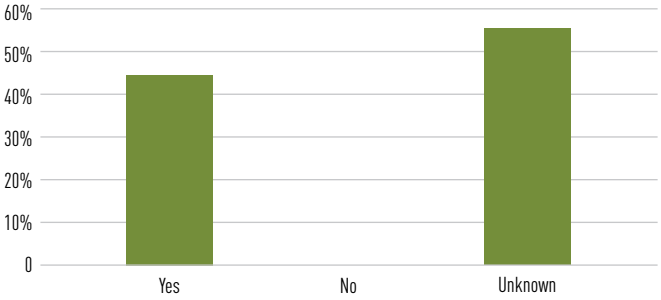
Contaminants

Following national trends, landfills and toxicant producing industries are often located on or near Tribal lands. This is consistent in the North Coast as well. In Laytonville, the Cahto Tribe cannot use their groundwater because of contamination from chromium and high salinity from the adjacent landfill. Other toxins such as acetone and also appear sporadically in the Tribe's water supply consistent from releases from the landfill. In Willits, the REMCO Hydraulics Chromium Plant operated from 1945–1995 and cleanup is still underway in several hot spot areas in the city. Resulting toxicants have also impacted Tribal lands of the Sherwood Valley Band of Pomo Indians.

Resource Sharing

Nearly 45% of respondents indicated that sharing resources with neighboring or nearby systems would help address needs for specialized tools, equipment, qualified operators, or system management. Another 50% weren't sure (*Chart 42*). Some of the systems indicated that they currently share resources or technical staff with other facilities. For example, one water treatment operator serves many small systems. Others assist or receive assistance from a neighboring system. Of those who do not think sharing resources would be beneficial, several commented that they are too far away from other systems for it to be possible (*Appendix L. Tribal Survey Comments Grouped by Subject*). In response to the query about resources to share, one respondent replied that they do have specialized tools, equipment, or other resources to share through partnerships. It is interesting to note that no respondent said they were not interested in sharing such resources, which provides Tribes with a clear opportunity to continue to or to develop mechanisms to do this.

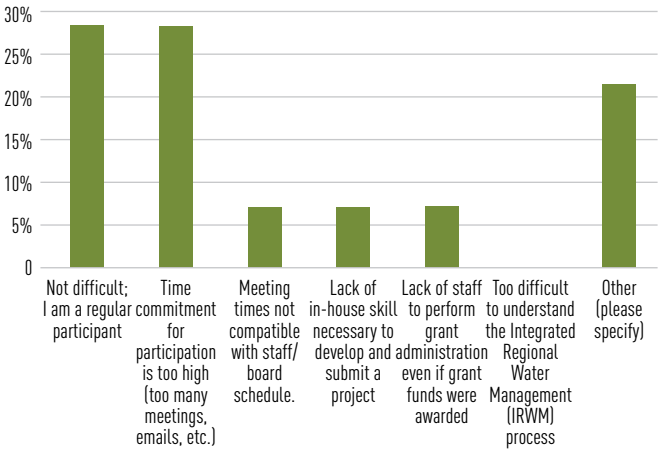
Chart 42. Resource Sharing



Participation in NCRP

About 40% of respondents are regular participants in the NCRP, while the rest found the time commitment too high or that they lack the in-house skill necessary to develop and manage grants. (*Chart 43; Appendix L. Tribal Survey Comments Grouped by Subject*). Tribal engagement staff is working to provide support for Tribal participation by addressing these barriers to participation. In particular, the Tribal DACTI program is dedicating staff and resources for small underrepresented Tribes in 2019 through 2020.

Chart 43. Barriers to Participation in North Coast Resource Partnership



Final Survey Comments

Two respondents provided final comments. One was a suggestion to provide a transcript after completion of the survey, and the other reported that their local school district is in dire need of assistance and NCRP Tribal engagement staff will provide this support as part of the DACTI program.

Survey Respondents by Region

North:

Karuk Tribe
Elk Valley Tribe
Resighini Rancheria
Tolowa Dee-ni' Nation
Yurok Tribe

Central:

Cahto Tribe
Bear River Band of Rohnerville Indians
Blue Lake Rancheria
Hoopa Tribe
Sherwood Valley Band of Pomo
Table Bluff Rancheria (Wiyot)

South:

Dry Creek Rancheria
Guidiville Rancheria
Kashia Tribe
Manchester-Point Arena Tribe
Potter Valley Tribe
Pinoleville Pomo Nation
Redwood Valley Rancheria
Yokayo Tribe

Responses to Key Survey and Interview Questions

QUESTION 37: DOES YOUR SYSTEM HAVE PAID STAFF? CHECK ALL OF THE FOLLOWING THAT APPLY	
No water operator	5
Level 1 (T1/ D1)	7
Level 2 (T2/ D2)	5
Level 3 (T3/ D3)	4
Water operator without certification	4
Consultant	4
Administrative	4
Management	3
Other, please specify	4
No answer	6

As mentioned earlier, Tribes have unique issues with capital costs and usually don't have a dedicated funding source for operation and maintenance. Tribes have had to compete for well-qualified personnel with other agencies, mostly losing out to higher paying salaries. Respondents who chose "other" stated that they use Indian Health Service or an outside contractor.

QUESTION 6: WHAT SERVICES DO YOU PROVIDE? CHOOSE ALL THAT APPLY.	
Water treatment and supply	15
Domestic water distribution	13
Irrigation water distribution	5
Wastewater collection	8
Wastewater treatment	9
Wastewater reuse	2
Storm drainage	10
Watershed restoration	15
Other	5
No answer	3

Those who chose "other" added the following categories: assessment of water, wastewater, irrigation systems,

grant writing for watershed restoration, public health testing of traditional resources, and wetland studies.

QUESTION 65: ARE YOUR CURRENT RATES SUFFICIENT FOR BUILDING CAPITAL IMPROVEMENT FUNDS AND COVERING OPERATING AND MAINTENANCE COSTS	
Yes	0
No	11
Don't know	1
No answer	9

A majority of the respondents indicated this was an area in which they wanted some technical support.

QUESTION 66: IF YOU ANSWERED NO TO THE PREVIOUS QUESTION, DO YOU HAVE THE MEANS TO DETERMINE ADEQUATE RATES FOR MAINTAINING AND IMPROVING YOUR SYSTEM?	
N/A	4
Yes	3
No	3
Don't know	4
No answer	9

As discussed above, many respondents indicated a need for technical assistance or requested training opportunities focused on capital improvement planning and rate setting.

QUESTION 71: IS YOUR AGENCY CURRENTLY WORKING WITH OUTSIDE AGENCIES ON IMPROVEMENT PLANS OR PROJECTS?	
State Water Resources Control Board/ North Coast Regional Water Quality Control Board	6
Rural Community Assistance Corporation (RCAC)	9
California Department of Water Resources	1
Local County	2
Bureau of Indian Affairs	4
US Environmental Protection Agency	9
Bureau of Reclamation	2
Other	14

Of those who chose other, Indian Health Service (IHS), California Department of Fish and Wildlife (CDFW), California Indian Environmental Alliance (CIEA), US Bureau of Reclamation (BOR), and US Department of Agriculture (USDA) were identified. The IHS maintains an annual sanitation deficiency list that identifies priority projects for the Tribes who respond to their survey. The list identified drinking water, waste water, and solid waste projects prioritized by human health impacts.

2.5 NEXT STEPS

The Tribal needs assessment process is ongoing and next steps include the following:

- Identified needs are being compared with the assistance that can be provided by the DACTI program; i.e. services to meet technical assistance needs or to leverage other support.
- Informed by what was learned from the outreach and survey process, NCRP Tribal Technical Assistance Consultants and/or Tribal staff are in the process of conducting site visits in order to complete technical assistance workplans in coordination with each Tribe.
  - » The NCRP Tribal Representatives will review Tribal staff recommendations for the contents of the technical assistance workplans.
  - » Each recipient Tribe will also approve their workplan before services are provided.
- Each Tribe who completed a needs assessment survey will have an opportunity to discuss their assessment and recommendations in order to confirm their receipt of technical assistance or capacity-building support through the DACTI Program.
- Where applicable, assistance will be provided to prepare Tribes to submit a Proposition 1 Round 2 Implementation project proposal or to prepare an application through another funding mechanism.
- Assistance will be bundled where possible to reduce the cost of the service and multiple Tribes from the North Coast will be invited to training and workshops to reduce the cost of instruction.

The process for selecting which Tribes will receive assistance was developed by the NCRP Tribal Representatives. Appendix M. Round 1 Tribal Technical Assistance Selection Process and Appendix N. Tribal Pilot Project Selection Process outline the process used to prioritize which Tribes are to receive assistance. The Technical Assistance plan will be revised in July, 2020 for the Tribal Representatives to review what we intend to offer Tribes given the available budget, and then each Tribe will approve the assistance we are offering to provide. Recipient Tribes will participate in review of contractor proposals received after the contractors are out to bid, and then approve them before and the contractor(s) are hired.

Appendix A. Types of Water Suppliers & Wastewater Treatment Providers & Applicable Regulations

Provider Types

Cities: Cities in California commonly provide a range of services to their residents, including water and wastewater service. The Government Code gives cities the authority to secure various rights and property suitable and proper to supply water for the use of the city and its inhabitants (Government Code 38730), as well as to construct, establish, and maintain drains and sewers (Government Code 38900). City water and wastewater systems are regulated by the state and rates and charges are established by the city council pursuant to state law.

Special Districts: Special districts are local agencies that are established pursuant to state law to provide one or more services within their boundaries. District governing boards are often independently elected by the registered voters within the district (some are elected by property owners and are considered landowner-voter districts). Community Services Districts (CSDs — authorized by Section 61000 of the Government Code) are the most common example of an independent special district that provides water or wastewater services in the North Coast region. CSDs can also provide a wide range of other services such as fire protection, parks and recreation, and street lighting.

There are many other types of independent special districts that are allowed to provide water and wastewater services in California, including County Water Districts (Water Code Section 30000, the reference to "County" in the name does not indicate that this district type is related to a county board of supervisors), Sanitation Districts (Health and Safety Code Section 2400), Public Utility Districts (Public Utilities Code 15501), and Municipal Utility Districts (Public Utilities Code 11501). Like cities, special districts that provide water and wastewater systems are regulated by the State and rates and charges are established by the governing board of the district pursuant to state law.

Some special districts are considered "dependent" districts and are governed by either a city council, or, more typically, a county board of supervisors. Examples of dependent districts that provide water and wastewater service include County Service Areas (CSAs — Government Code Section 25210), or County Waterworks Districts (Water Code Section 55000) which are governed by a county board of supervisors. Sonoma County utilizes CSAs to provide water service in the western part of that county through CSA 41 (Fitch Mountain, Freestone, Jenner, and Salmon Creek).

Mutual Water Associations/Companies: A mutual water association or company is a private (usually non-profit) association created for the purpose of providing water to its shareholders or members. Companies organized for mutual purposes are generally not subject to regulation by the California Public Utilities Commission (CPUC) unless the company delivers water for profit to persons other than shareholders. Mutual water association/companies are often formed as part of a land subdivision to provide for the maintenance and operation of the water system serving the area, and shares in the corporation are conveyed as part of each deed.

In California, there is no specific statute under which mutual water associations or companies ("Mutuals") are formed or governed. Mutuals are most commonly formed as general corporations (Corporations Code Section 100) or as non-profit mutual benefit corporations (Corporations Code Section 7110), although other structures are sometimes used for tax or other reasons. Like cities and special districts that provide water and wastewater systems, Mutuals are typically regulated by the State. However, there are Mutuals that serve less than 15 service connections and are regulated by the County. Unlike cities and special districts, service charges for Mutuals are not established through a public process governed by the state constitution, laws, and legal precedent. Mutuals are required to operate "at cost" (which distinguishes them from regulated public utilities that can earn a return on investment). The cost of operations is typically distributed to users according to ownership shares in the system.

Public Utilities: A water company regulated by the CPUC is commonly referred to as an investor-owned utility (which can include utilities owned by one or more people). Public water system standards apply to investor-owned utilities that serve over 25 people for more than 60 days per year. In order to set rates or charges, investor-owned utilities petition the CPUC to seek a water rate increase to recover the full cost of the improvements plus a set rate of return on investment.

Other: In addition to the common water system organizational types described above, there are water systems operated by private companies including restaurants, hotels, retail, commercial, and industrial facilities as well as recreation vehicle parks and

private campgrounds, camps, and retreats operated by organizations. "Other" systems, primarily water systems, may supply water to very small communities and not be officially organized as a legal entity at all.

System Regulations

The U.S. EPA categorizes water systems that serve greater than 10,000 people as "large" and less than 3,300 people as "small." Approximately 60 percent of the population of the Region resides within cities, 80 percent of whom live in cities with population greater than 10,000. Another approximately 20 percent of the Region lives within the boundaries of a special district that provides water service. Therefore, approximately 80 percent of the Region receives water service from a city or special district and 50 percent of the Region receives water from a city water system that serves 10,000 people or more.

Public Water Systems. The administration of the Drinking Water Program was transferred to the State Water Resources Control Board Division of Drinking Water from the California Department of Public Health (CDPH) in July 2014. This transfer sought to align the state's drinking water and water quality programs in an integrated organizational structure to effectively protect both water quality and public health as it relates to water quality while meeting current needs and future demands for water supply. Source capacity, storage capacity, and distribution system standards are contained in the California Waterworks Standards, outlined in the California Code of Regulations (CCR), Title 22, Chapters 15 and 16, and administered by the Drinking Water Program.

Small public water systems are typically established in areas where there are no municipal water systems and where the density of development necessitates common source and infrastructure. The 2017–19 needs survey focused on community water and wastewater systems. The State's Drinking Water Information System (SDWIS) definition of a community water system is:

- Community Water System (C) is a public water system that serves at least 15 service connections used by yearlong residents or regularly serves at least 25 yearlong residents. This category includes municipal water systems and mutual water associations.

Other types of water systems include:

- Non-Transient, Non-Community Water System (NTNC) is a public water system that is not a community system and that regularly serves at least the same 25 persons over six months of the year. Such systems are typically associated with schools, restaurants, or other businesses.
- Transient, Non-Community Water System (TNC) is a public water system that is not a community water system and does not regularly serve at least 25 of the same persons over six months per year. Transient systems include hotels, resorts, and campgrounds.

State Small Water Systems. Many counties regulate smaller water systems, which are defined as "State Small Water Systems". A State Small Water System is defined as a system that provides piped water to the public for human consumption and serves at least five, but not more than 14, service connections and does not regularly serve drinking water to more than an average of 25 individuals daily for more than 60 days out of the year. State small water systems are also subject to California Waterworks Standards; this survey included all of the State Small Water Systems that staff could identify in the North Coast.

Wastewater Systems. In almost all instances across the North Coast Region, wastewater collection and treatment systems are owned and operated by local agencies — either cities or special districts. There are some instances where wastewater systems were installed to serve a "company town" containing a lumber or paper mill and the wastewater system is owned and operated by the company. Over time, ownership of the utilities serving company towns has transitioned from private to public ownership as property changes hands.

Wastewater systems, often referred to as publicly owned treatment works (POTWs) must be operated to meet the requirements of the Federal Clean Water Act and the Porter-Cologne Water Quality Control Act (California Water Code, Division 7). Treatment and discharge requirements are contained in the National Pollutant Discharge Elimination System (NPDES) developed by the U.S. EPA and enforced in the North Coast Region by the North Coast Regional Water Quality Control Board (RWQCB). The RWQCB has adopted the North Coast Basin Plan, which provides specific guidance on how federal and state laws are applied in the region. The goal of the Basin Plan is to provide a definitive program of actions designed to preserve and enhance water quality and to protect beneficial uses of water in the North Coast Region. The initial plan was adopted in 1971 and has been amended numerous times as part of the triennial reviews; the most recent triennial review occurred in 2018.

All dischargers with average daily flows greater than 1,500 gallons per day must obtain a permit from the RWQCB. If the discharge is to a body of water, like a river, lake or ocean, then the permit falls under the NPDES. If the discharge is solely to land, then Waste Discharge Requirements (WDRs) are issued. Unlike NPDES, which do not expire, WDRs are effective for five years, after which time they must be renewed.

Due to staffing constraints and other issues, a permit renewal may be delayed and the existing permit will remain in effect until a new permit is adopted. The permit renewal process can take a year or more.

The type of wastewater treatment plant or process, and the volume of wastewater treated determine the minimum Grade level of certified operators required. There are five Classes of wastewater treatment plants and five equivalent Grades of wastewater treatment plant operator certification. For instance, a wastewater treatment plant with a Classification of "I" requires a Grade "I" operator and contains a "primary" treatment system (which removes some portion of the suspended solids and organic matter in a wastewater through sedimentation) and uses a conventional treatment pond and treats less than one million gallons per day. As biofiltration (filters using biomass or living material to capture and degrade wastewater) is used, treatment ponds are modified, or mechanical batch filtration is added, the Class of the treatment plant increases, as does the Grade of operator required (Table A1).

The survey included all wastewater systems identified in the North Coast Region.

TABLE A.1 WASTEWATER TREATMENT PLANT CLASSIFICATION

Class	Wastewater Treatment Process	Design Flow (millions of gallons)
I	Primary treatment	1.0
	Conventional treatment ponds	All
II	Primary treatment	1.0 to 5.0
	Biofiltration	1.0 or less
	Modified treatment ponds	All
III	Primary treatment	5.0 to 20.0
	Biofiltration	1.0 to 10.0
	Activated sludge	5.0 or less
	Sequencing batch reactor	1.0 or less
	Tertiary treatment	1.0 or less
IV	Primary treatment	Greater than 20.0
	Biofiltration	10.0 to 30.0
	Activated sludge	5.0 to 20.0
	Sequencing batch reactor	1.0 to 10.0
	Tertiary treatment	1.0 to 10.0
V	Biofiltration	Greater than 30.0
	Activated sludge	Greater than 20.0
	Sequencing batch reactor	Greater than 10.0
	Tertiary treatment	Greater than 10.0

Note: The Chief Wastewater Treatment Plant Operator must have a Certificate showing a Grade Level equivalent to the Wastewater Treatment Plant Class in order to operate the plant.

Appendix B. 2020 Community Water and Wastewater Service Providers Serving North Coast Disadvantaged Communities

DEL NORTE COUNTY

Bertsch Oceanview C.S.D.
Big Rock C.S.D.
Butte Mobile Home Park
Church Tree C.S.D.
Crescent City, City Of
Del Norte County Community Service Area
Gasquet C.S.D.
Hunter Valley C.S.D.
Hussey Ranch Corporation C.S.D.
Jed Smith Homeowners Assn.
Klamath C.S.D. (Del Norte Community Development)
Pine Grove Mobile Home Park
Redwood Park C.S.D.
Reservation Ranch
Smith River C.S.D.
West Park Properties

HUMBOLDT COUNTY

Alderpoint County Water
Beach Creek MH Park
Benbow W.C.
Big Lagoon CSD
Big Lagoon Park Water Co.
Blue Lake, City Of
Briceland C.S.D.
City of Arcata
City of Ferndale
City of Fortuna
City of Fortuna WWTP
Eureka, City Of
Eureka, City Of, Elk River WWTP
Ferndale — Del Oro Water Co.
Fieldbrook Glendale C.S.D.
Garberville Sanitary District
Green Diamond Resource Company — Korbel
Humboldt Bay MWD
Humboldt C.S.D.
Humboldt County Rid #1, Shelter Cove POTW
Jacoby Creek CSD — combined with City Of Arcata
Loleta C.S.D.
Manila Community Services Dist.
Mckinleyville C.S.D.
Mill Creek M.W.C.
Miranda C.S.D.
Moonstone Heights MWA
Myers Flat M.W.S. Inc.
Orick C.S.D.
Orleans C.S.D.
Orleans Mutual Water Co.
Palmer Creek CSD
Palomino Estates M.W.C.
Patrick Creek Community Service District
Phillipsville C.S.D.
Redcrest Water Works
Redway C.S.D.
Resort Improvement Dist. #1
Rio Dell, City Of
Riverbend Mobile Home Park
Riverside CSD
Scotia CSD
Seawood Estates Mutual Water
Trinidad Extended Stay
Trinidad, City Of
Waddington W.W.
Weott C.S.D.
Westhaven C.S.D.
Willow Creek C.S.D.

MENDOCINO COUNTY

(Russian) River Estates Mutual Water Company
Albion Mutual Water Company
Anderson Valley Community Services District
Big River Vista Mutual Water Company
Branscomb Mutual Water Company
Brooktrails Township CSD
Calpella County Water District
Caspar South Service Company
Caspar South Water District
Covelo C.S.D.
Covelo Mobile Home Park
Creekside Cabins & RV Resort

Dolphin Isle Marina
Dos Rios Mutual Water Company
Elk County Water District
Fort Bragg City WWTP
Fort Bragg Municipal Imp District
Fort Bragg, City Of
Gualala Community Services District
Hills Ranch Mutual Water Company
Holly Ranch Village
Hopland Public Utility District
Irish Beach Water District
Laytonville County Water District
Little Lake Mobile Home Park
Meadow Estates Mutual
Mendocino City C.S.D.
Mendocino County Water Works District No. Ii
Millview County Water District
North Gualala Water Company
Noyo Harbor District
Pacific Reefs Water District
Pine Mountain Mutual Water Co.
Point Arena Water Works
Point Arena WWTP
Ridgewood Water System
Seafair Road and Water Company
Shorelands Road & Water Company
Surfwood Mutual Water Corporation
Ukiah City WWTP
Ukiah Valley Sanitation District
Ukiah, City Of
Upper Russian River Water Agency
Wildwood Campground
Willits City WWTP
Willits, City of
Willow County Water District
Woods, The (Mendocino)
Woodside RV Park & Campground

MODOC COUNTY

Newell County Water District

MENDOCINO COUNTY

Cal Ore Mobile Estates
Callahan Water District
City of Etna
Copco Lake MWC
Cove Mobile Villa
Dorris, City of
Fort Jones, Town of
Grenada Sanitary District
Happy Camp C.S.D.
Happy Camp S.D.
Hornbrook C.S.D.
Juniper Creek Estates
Lake Shastina C.S.D
Macdoel Waterworks
Mccloud C.S.D.
Montague Water Conservation District
Montague, City of
Oak Valley Acres P.O.A.
Sawyers Bar County Water District
Shasta View Heights Owners Association
Shastina Mobile Estates
Siskiyou Co. Rolling Hills MWC
Siskiyou Co. Service Area #5/Carrick
Tennant C.S.D.
Tulelake, City of
Weed, City of
Yreka, City of

SONOMA COUNTY

Armstrong Valley-Cal Water Service (PUC)
Austin Creek Mutual (Springhill)
Brand Water Company
Branger Mutual Water Company, Inc.
California American Geyserville Water Works (PUC)
California-American Water Larkfield (PUC)
Canon Manor Water System
Cazadero Water Company, Inc.
City of Cotati
City of Santa Rosa
Delores Lane Water System
East Austin Creek Mutual Water Company
El Crystal Mobile Home Park
El Portal Mobile Estates
End-O-Valley Mutual Water Company
Forestville Water District
Geyserville Sanitation Zone
Gill Creek Mutual Water Company
Heights Mutual Water Company
Hilton Mutual Water Company
Holland Heights Mutual Water Company

Huckleberry Mutual Water Company
Madrone Mutual Water Company
Magic Mountain Mutual Water Company
Mark West Acres MWC
Mark West Mutual Water Co.
Melita Heights Mutual Water Company
Michele Mutual Water Company
Mobile Home Estates
Mount Weske Estates Mutual Water Company
Mountain View Mobile Estates, LLC
Noel Heights-Cal Water Service (PUC)
North Star Mobile Home Park
Odd Fellows Recreation Club
Palomino Lakes Mutual Water Co.
Park Royal Mutual Water
Plaza Mobile Home Park
Rains Creek Water District
Randal's Ranchette Mutual Water Co.
Redwood Heights Water Association
Riebli Mutual Water Company
Rincon Valley Mobile Estates
Rolling Oaks Road Association
Roseland Mobile Home Park
Russian River County Sanitation District
Santa Rosa Mobile Estates
Sereno Del Mar Water Co.
Shadow Mountain MHP
Shamrock Mobile Home Park
Six Acres Water Company
Sonoma County CSA 41-Fitch Mountain
Sonoma County CSA 41-Freestone
Sonoma County CSA 41-Jenner
Sonoma County CSA 41-Salmon Creek
Sonoma County Mutual Water Company
Sonoma County Water Agency
Sonoma Mountain County Water District
South Cloverdale Water Company
South Park County Sanitation District
Summit View Ranch Mutual Water Co.
Sunrise Mountain Mutual Water Company
Sunset Park Community
Sweetwater Springs CWD — Guerneville
Sweetwater Springs CWD — Monte Rio
Terrace View Water System
Timber Cove County Water District
Valley Ford Water Association
Wayside Gardens Mobile Home Park
Wendell Water Company (PUC)
West Water Company (PUC)
Western Mobile Home Park
Willowside Mutual Water Company
Wilshire Heights Mutual Water Company
Windsor, Town of
Yulupa Mutual Water Company
Athena Terrace Mutual Water Company
Bennett Ridge Mutual Water Company
Brookwood Mobile Home Park

TRINITY COUNTY

Bucktail Mutual Water Company
Bud Fine MWC
Burnt Ranch Estates Mutual Water Co.
Covington Mill MWC-Division B
Indian Creek Trailer Park
Lewiston Community Services District
Pine Cove RV Park
Rush Creek Mutual Water System
Salyer Heights W.S., Inc
Salyer Mutual WC (Formerly Riverview Ac)
Seymour's Mutual Water System
Treasure Creek Woods MWC
Trinity Center M.W.C.
Trinity Co. W.W. District #1
Trinity Knolls Mutual Water Company
Trinity Village Mutual Water Co.
Weaverville C.S.D.
Weaverville S.D.

Appendix C. Respondent Comments Grouped by Subject

INFRASTRUCTURE — AGING

- Aging infrastructure at our Sewer Plant
- Aging system, former owners used agricultural tubing, last year, about 100 feet replaced with PVC.
- Currently operating with HomeSpring filter system. HomeSpring no longer manufactures replacement parts so eventually filters will have to be replaced.
- Distribution system — extreme concern
- Funding for aging water lines in the city that need replaced.
- Funding for replacement of aging distribution system
- Infrastructure replacement (aging pipes) is our biggest need and focus of the capital improvement program.
- Main concerns are with the physical stuff — new pipes in the ground and water meters,
- Maintenance and repair — extreme need due to necessary improvements to bring the system up to current codes and standards to accommodate the rebuilding efforts after and since Redwood Complex Fire.
- Old system has started showing signs of wear.
- Old system, not sure how long it can last. Have had to replace some of the valve sect.
- Our distribution system is outdated and several areas of the system are undersized and in need of immediate repair;
- Our main in the street is old red brick pipe that has gone beyond its shelf-life and all supply lines from street to homes is old black plastic pipe that is brittle, cracking, and failing.
- Our main treatment plant is in need of significant updating. We have a couple of pressure reducing Valves feeding pressure zones in need of replacement
- Our system is 25 years old, with some parts estimated at being almost 100 years old. Some of our fire hydrants are tied into our potable water system and need to be separated. They are also not spread throughout the town. Our ordinances have not been updated since 1992 and do not reflect current practices, although we are starting to update them. Our distribution system is a mixed bag of poly pipe and metal pipe. We often have to ration water during the late summer when our spring flow diminishes. We do not have a secondary source of water if something happened to the spring.
- Our system is 50 years old. Our wells are shallow (20 and 27 feet deep). Our pipes are asbestos. We have no storage. The state is pushing us to improve our system.
- Pipe replacement and infrastructure — funding opportunities
- Pumphouse system just completely rebuilt, but location of water lines and water lines need replacement
- Replace water storage equipment i.e. water tank.
- Replacement piping and valve additions
- System in good shape, doesn't require much but needs new tank.
- System infrastructure maintenance and repair: the current transmission and distribution systems are old and in the case of the transmission system was patch-worked together using myriad materials such that it consists of numerous pipe sizes and materials. Additionally, the source water diversions are in need of improvements to screen and reduce the amount of NOM that end up in the transmission system as well as our pressure filters at the water treatment plant. The distribution system has less variety of pipe sizes and materials, but still has some variation. More importantly with regard to the distribution system, some (many?) of the valves need to be replaced since they do not fully function as they should (this is especially frustrating with regards to valves intended to function as isolation valves that do not seat correctly and therefore do not completely stop water flow.
- System was built in 1979; aeration/sludge handling
- The district is approaching, sometime in the next few years, the need to replace our ocean outfall system. It is estimated that replacement construction will cost in excess of $2,000,000. We will need to explore grant funding opportunities and rate structure changes in order to accomplish this needed upgrade to our waste disposal system.
- The existing infrastructure for the transmission system is quite old. Most of it is the original system put in when the district was formed in the 1960's. The piping consists of several materials and sizes. The Distribution System, while newer, has sections that are old and showing signs of beginning to fail or are failing, requiring (some) extensive repairs.

The treatment plant, though functioning is not functioning at full capacity and extra maintenance is therefore required, as is excessive backwashes which in turn puts greater demand on treated water for those backwashes. Automation, remote log-in/ monitoring capabilities, either fresh filter media or new approach to filtration could be useful.

- The system is currently replacing its 100,000-gallon Redwood water storage tank with a 200,000-gallon bolted steel tank via a FEMA grant, State DWR IRWMP grant (Proposition 84, Round 2), and a pending State DWSRF grant in the total amount of $3.2 million. Increased water storage is required to adequately serve a redevelopment project that merges a National Park with a State Park (both of which were annexed into the system's jurisdiction in 2010). In addition, the south face of Hiouchi Mountain is threatening to slide through about one-third of Hiouchi, given at least a Magnitude 5.5 earthquake, and public safety/health are of great concern. The aforementioned tank replacement project is therefore also designed to stabilize the mountain. Construction begins in April of 2018. On December 15, 2017, FEMA Region IX approved Hiouchi's Hazard Mitigation Plan that articulates a number of potential disasters, including the impending Cascadia Event. This planning project was successfully undertaken via FEMA grant DR-4240.
- The system is old and needs a new water tank and water main
- The water distribution system is need of replacement.
- Transit pipe is aging 50 + years old and we are replacing in areas with lots of trees
- Treatment facility upgrades are needed are an ongoing concern.
- Water piping is over 50 years old and some sections still in gray pipe. All home sites need back flow devices added.
- Water treatment plant is aging needs to be updated. Building that the treatment plant is in needs to be updated as well.
- We are going to need a new storage tank in the near future (about 40,000–50,000 gallons), and we will need a low interest loan or a grant.
- We have an aging water distribution infrastructure that could us some updating.
- We need a complete maintenance and calibration of the treatment plant.
- We need financial help for replacing old pipe and in purchasing and installing backflow valves.

INFRASTRUCTURE — TECHNOLOGY

- At some point we will need to add meters to our system.
- None of the homes have water meters.
- State Department of Health Services would like to see 30 psi throughout the system. Houses close to water tank do not have that and have separate pressure systems at each house. Regulations are constantly changing and sometimes it is hard to keep up. Have good relationship with State Regulators.
- We are concerned that our New Water treatment Facility is already obsolete. We have been advised to install what we have by the state only to be told immediately after that it is no longer being manufactured and parts will become impossible to get in the near future.
- We are in need of currently technology and a backup computer system if the primary fails
- We need a generator and installation for the water treatment for power outages.
- We need a new computer program system with current electronics. Currently running on non-supported windows XP.

Funding Needs

- 1. Funding for infrastructure improvements. 2. Funding for upgrading system to provide increased fire protection.
- A grant and low interest loan to rebuild our system and/or relocate it where suitable area exists for storage.
- Aging and failing infrastructure. The system is over 70 years old and needs a minimum of new piping throughout.
- Aging infrastructure
- Aging infrastructure can't be replaced without financial resources.
- Aging water treatment system and pipes and sewer lift stations are starting to fail with secondary pumps
- Although we have been saving in reserve money for failed equipment, we have nowhere near the amount we need to replace our tank and pump house. We need a combination of grant money, low interest loans and money from our reserve.
- Always looking for grants — have about $10,000,000 on Prop 1 stuff going on right now. Unfunded = water supply study, pipeline assessment, distribution system upgrades

- Assistance with identifying federal funding opportunities
- Capital improvements, infrastructure, emergency funds, replacing filter media, upgrading treatment facilities, upgrading catchment/collection/diversion sites from source water. Equipment necessary for proper O&M of sewer collection system. There may be more, but that's what I can come up with at the moment.
- Current infrastructure needs
- Currently we are working on some planning grants for the water and sewer systems. We will need funding based on those grants when complete.
- Due to current infrastructure needs, we are always in need of grants, loans, etc.
- Failing infrastructure replacement
- Financial assistance for engineering, purchase, and installation of new system
- Financial assistance is needed to finance repairs to the equipment shed and to replace a number of meter stops and meters.
- For pipe replacement when that comes up
- Funding capital improvement plan
- Funding capital projects like additional water storage tanks, WWTP capital replacements/improvements.
- Funding for consolidation or funding for filtration of existing and new wells (propose one new well)
- Funding for replacement of aging distribution system
- Funding is the primary concern related to extreme concerns with O&M staff being difficult to attract due to cost of living in the area.
- Funding support is what we need for our CIP.
- Funding to provide additional storage for shareholders.
- Funding.
- Funds for operator training and certification, funds for distribution upgrading, road repair and upkeep
- GRANT FUNDING
- Grant funding for new chlorinating system along with new monitoring tech. Budgeting for capital outlay and rate structure to maintain system.
- Grant funds. We're currently in a planning mode for (2) Prop 1 projects
- Grant money
- Grants
- Grants — they tend to do bonds over loans, have done bond restructuring, may not need additional assistance with that, but certainly grants.
- Grants for fire suppression in out buildings.
- Grants for Infrastructure Needs (Replacing Distribution Lines)
- Grants for infrastructure repairs and improvements
- Grants for more water storage
- Grants for myriad projects.
- Grants for pipe replacement and backflow valves would be helpful. We currently have no long term debt.
- Grants for water tank replacement and/or an additional pump site
- Grants only for current infrastructure needs.
- Grants, loans, assistance to assure financial checks and balances.
- Grants/Funding. We need to keep our Treatment facility up to date with equipment we can depend on.
- Honestly, I am not sure what resources would be most helpful. I hate to say it, but I am not even sure what sort of resources or assistance to ask for to help sometimes. The need for more capital and/or liquid assets with which to address problems and attract qualified hires perhaps?
- In general. We need a generator and installation for the water treatment for power outages. We need a new computer program system with current electronics. Currently running on non-supported windows xp. We need a complete maintenance and calibration of the treatment plant.
- In process of wastewater planning of new WWTP w/ winter NPDES and summer WDR.
- In the process of procuring grants, for engineering and technical assistance and help with rate/structure studies.
- Infrastructure improvements
- Infrastructure needs
- Infrastructure rebuild.
- Infrastructure repair and replacement; treatment plant modernization
- Infrastructure upgrade and replacement.
- Infrastructure.

- It is always important to look for grants to offset capital expenses and to reevaluate current debt service.
- Last grant we obtained was through Homeland Security/ County Emergency Management for a 20 kW generator in 2013 that efficiently provides system wide emergency power in case of short and prolonged power outages.
- We and our sister system have been very proactive in securing IRWM, DWSRF, CWSRF, and Proposition 1 funding for capital improvements. Still need to replace water distribution system.
- Matching grants for acquiring and installing an emergency communications system that includes a multifrequency repeater radio
- Maybe — we need a new 150K gallon water tank; approximate cost is $200,000
- Moderate repairs of collection system needed
- More financial opportunities for Disadvantaged communities.
- Need funding for water meters and elevated storage tank
- Need funding to complete requirements for implementation of SWRCB CWSRF & DWSRF capital improvement projects.
- Need funding to replace whole system at same time instead of piecemeal.
- Need to fund changes demanded by waterboard staff such as filtration and Registered Civil Engineer fees, well changes and well expert costs.
- Only if treat Hexavalent Chromium or consolidate into Crescent City in the future.
- Our biggest need right now, by far is funding/ financial
- Our immediate concern is to obtain funding to replace water storage equipment i.e. water tank.
- Our water treatment plant is over 50 years old and in need of renovations, upgrades, and improvements
- Planning and project-based grant funding would help.
- We need matching grants for infrastructure improvements. We are handicapped with an Insufficient revenue stream.
- Possible grant money to replace HomeSpring filter system.
- Providing an adequate capital reserve to replace critical infrastructure IF and WHEN needed (i.e. our 30,000 gallon storage tank is most critical and largest capital needed; we can handle pump and treatment replacements routinely unless "catastrophic" event wiped out our treatment, control, pressure tank building)
- Replacement storage tank.
- The district is approaching, sometime in the next few years, the need to replace our ocean outfall system. It is estimated that replacement construction will cost in excess of $2,000,000. We will need to explore grant funding opportunities and rate structure changes in order to accomplish this needed upgrade to our waste disposal system.
- The water distribution system is need of replacement. Funding sources are needed for this work.
- These needs are dependent upon the area.
- Treatment plant reconstruction
- Upgrade present system to meet regulations and be in compliance with regulations.
- We are a severely disadvantaged community. We have received several grants including two IRWM grants and one DWSRF grant. We are now looking for funding to replace our water distribution system (installed by the Bureau of Reclamation in 1958).
- We are always looking for money upgrade our systems
- We are currently doing a bond for $1.8 million for next year's CIP, but we will need help beyond that.
- We are going to need a new storage tank in the near future (about 40,000–50,000 gallons), and we will need a low interest loan or a grant.
- We are in the process of attaining a grant for sewer system replacement
- We are most interested in grants for our rate payers. Reservoir planning & construction, source exploration (well drilling) and infrastructure (fire flow upgrades, generators and generator sheds).
- We are not in need yet only because of an unusual influx of cash from a new hookup. If the current trend keeps going, we will need financial help soon. Also, our system is over 50 years old and will need major work soon.
- We could always use more money to upgrade systems but currently the systems are working within "current regulations". We have technical expertise to deal with issues as they arise but always looking to keep systems current.
- We have a long list of water and wastewater infrastructure that is in our CIP and beyond.

- We have a Prop 1 Planning Grant in effect and the Construction Grant in progress to upgrade our infrastructure.
- We may need a small loan for our wastewater project.
- We need financial help for replacing old pipe and in purchasing and installing backflow valves.
- We need funding for sewer lift station and well house upgrades.
- WE NEED MORE FUNDING FOR REQUIRED REGULATIONS AND TESTING.
- We will take all of the help we can get!
- With a small customer base, and an aging infrastructure we need to secure grants. It seems that Districts that are in violation receive funding to correct the violations, but a District like ours, that is not in violation, cannot secure the State money needed to put in new pipes, etc. This is NOT a technical assistant need. This is a $$$$ need.

Financial stability

- Available money tends to be the leading issue hindering our ability to deal with the issues.
- Capital improvement plan — it has recently come to my attention that the district does not have a functioning capital improvement plan. Given the age of the system and some of the other issues I am aware of, a capital improvement plan seems to be of great importance if the district is to maintain and improve system performance. I have zero experience in creating CIPs yet I need to be integral in one's creation. Help would be extremely appreciated.
- Financial stability for small systems into the future
- Financial stability is a burden for disadvantaged communities
- Financial Stability: Like many of the small districts, this system is not rolling in money and doesn't have the ability to be able to address all the issues that arise in the course of operations. We can't afford to purchase every tool that would be beneficial and helpful to operators. The district would not be able to afford to cover a major disaster or failure of part of the system let alone all of the system-certainly not out of pocket anyway.
- Majority of revenues derived from cannabis production, an industry in the initial stages of regulated legalization.
- Our rate base is finite and cannot support substantial infrastructure improvements
- To replace aging infrastructure, rate increases would have to be far more than community can pay. Community already pays some of the highest rates in California.
- We need to determine the most reasonable amount to keep in our CIP.
- With a small customer base, and an aging infrastructure we need to secure grants. It seems that Districts that are in violation receive funding to correct the violations, but a District like ours, that is not in violation, cannot secure the State money needed to put in new pipes, etc. This is NOT a technical assistant need. This is a $$$$ need.
- With only 19 households contributing and changing regs. and in need of infrastructure improvements, our needs far exceed our assets with all of our homes on fixed incomes.

Regulatory

- Areas of strong and extreme concern are related to failure to meet disinfection by-product standards.
- Collaboration with nearby systems on possible treatment for Hexavalent Chromium as well as possible system consolidation with Crescent City.
- Completely unequal application of regulations. Our City was forced by state to upgrade plant, build new disposal system and now orders about I&I issues. Millions of dollars of ratepayer money — we have the highest rates in the region. There are no municipal users of water downstream of us, yet there is a major industrial and residential polluter upstream of us and State is anemic and ineffective with them. This has been going on for decades. Another similar jurisdiction in the region on another watershed is allowed to percolate industrial and residential wastewater above the largest municipal water intakes in the region. Regulators on the verge of retirement seem to put off the big problems and focus on easy targets and organizations who want to comply, like my organization.
- Contaminant monitoring
- Customer base is too small for the wastewater treatment system to operate and maintain in accordance with regulatory requirements.
- It seems to me that the county and state are requiring more and more testing.
- It's difficult to comply with statewide blanket regulations/ standards

- Knowledge of other small private systems and their treatment systems and how they meet current and proposed regulations would be beneficial.
- Our wastewater plant struggles to meet current WQ regulations for some constituents.
- Printed copies of new regulations would be helpful. We try to keep up.
- Regulations and financial stability are always a concern but we are not looking for outside support.
- Regulations are always increasing and the testing is a major cost for us.
- Regulatory "guidance" re: CIP
- Science and technology allow for greater levels of testing — sophistication of tech is increasing regulatory burden on operator
- Support in understanding need for new regs of State Water Resources Control Board.
- We are concerned that our New Water treatment Facility is already obsolete. We have been advised to install what we have by the state only to be told immediately after that it is no longer being manufactured and parts will become impossible to get in the near future.
- We need more funding for required regulations and testing.
- We need to know the current CA State requirements and if we are meeting these.

Staffing

- A list of service providers for third party operation of the parks' water systems would be helpful. Onsite staff works at the moment, but there is always concern that onsite staff will quit and the park will be left without a reliable onsite operator.
- Access to certified operators if the need arises
- Access to resumes and salary requirements for trained operators who are seeking employment and promotional opportunities.
- For the people who are a part of the system to become active and volunteer time to be a part of the water district. Most here want good clean water at a low rate — "I'll call you if I don't have water but don't bother me and I thank you for working for free and keeping the rates low."
- In small rural water systems like ours, it is always a challenge to find qualified people to manage such systems. We currently have good people in all the necessary positions to operate our system, but over time, the need for qualified operators can become a problem.
- Keeping trained staff is always difficult.
- Local participation.
- Need for trained operators in our rural area. Need for law change regarding eligible experience hours for operator certification qualifications.
- Number of qualified staff to perform required system maintenance.
- Operations and Maintenance: the system has only one full-time operator. There are two part time positions that are filled essentially to assist that employee. Of the two, only one really has the knowledge and skill set to be of all that much help. Trying to hire and retain qualified operators (and/or maintenance crew) given the limited hours and wages that can be offered is difficult to put it mildly. Having additional, qualified staff to help with some of the projects, repairs, replacement of components, would be seriously helpful and appreciated by our sole operator.
- Staffing a small system like ours at the appropriate water and wastewater certification levels is always a concern.
- Succession Planning
- The system is struggling to meet required system maintenance needs due to staffing levels.
- There is only one person doing maintenance.
- We are a small (37 hookups) water system, with mostly retired residents and only 14 year-round connections. It is very hard to get anyone onboard to help with the water system.
- We don't often have Treatment Plant Operator Jobs available, but when we do, we don't always get high quality applicants.
- We have a part time operator and no back up
- We have no staff, only volunteers!

Water Quality

- Arsenic was a problem with prior source, but since the new WTP was constructed, it's not a problem.
- Chromium 6
- Chromium6 exceedance.
- City has to treat for smell problem
- Coliform and e coli according to the LT2 sampling. Some possible pesticides from marijuana

growers up stream. We do not detect any of these after water is through the treatment plant.

- Excessive storage, some customer complaints about water quality
- High rainfall turbidity
- Individual property owners receive their water from privately owned wells. The district has responsibility to monitor and control the amount of water extracted by each property owner.
- Intermittent E-coli and coliform positive testing results
- Iron and manganese.
- Iron bacteria cause aesthetic water quality issues when our groundwater well is in operation. System performs frequent flushing to alleviate color & staining issues.
- Manganese and Iron removal is part of our treatment process. Recently we had to negotiate treatment and operational processes with the Division of Drinking Water regarding a well field that becomes inundated when the Russian River floods.
- Occasional issues with non-maintained leach fields in sources watersheds
- Occasional turbidity at times of high rainfall
- Only low pH which we use NaOH treatment for
- PCE contamination
- Strong sulfur odor
- Surface water has very high levels of dissolved organic carbon during rainy weather, and we are on the north coast, hence the DBP issues.
- Treated water quality — problems with keeping a neutral pH — tends to go basic; standby well with not-great water quality
- Turbidity, especially seasonally, is a frustrating issue at times but that is about it and that is not unusual around here.
- Water board staff thinks the water is corrosive but that is questionable.
- We have had issues in the past with Disinfection Byproducts, and we have just recently been questioned about the presence of pesticides and fertilizers in the water due to Cannibals grows.
- We use surface water/shallow wells so sometimes we have biological contamination
- Well water high in calcium
- Wells — people complain about the taste, but not much you can do.
- With water supply wells, there is a taste and odor issue with sulfur and manganese — about 5–10% of water use — during April–October when there's high demand. Water from wholesale supplier — no issues primary or secondary. Well issues only secondary.

Water Supply

- Drought effects the quantity of water available some years
- Deeper Wells
- Expanding water storage to meet current peak use and fire suppression needs in the coastal zone, adjacent to Caltrans, poor access to current storage.
- Funding to provide additional storage for shareholders.
- Have 300,000 gallons of storage with 100,000 gallons of use per month which leaves them with 200,000 extra gallons per month-ish. Was built for use with fire department, is tied in with whole system has to be kept fresh — need to put bigger line up one road, working on that.
- Increased water supply
- Increased water supply is an ongoing concern.
- Inspector came out and decided functioning system needs to increase capacity–state. The current capacity is 6500 gallons — wants to double it.
- Potter Valley project is being relicensed, which will affect water flows through the Russian River, which may impact system.
- Reliability of Russian River flows as the populations of Sonoma and Mendocino Counties increase
- State imposed moratorium on new water connections due to lack of adequate water supply
- Too large storage tanks for size of community
- Water conservation throws a wrench in things — it cuts down on revenues and complying with drought regulations
- Water supply during drought is a strong concern and rationing has been implemented

Fire Issues

- A large forest fire in the water shed of source could led to serious water quality issues.
- Fire suppression — doing water modeling and studies

- Funding to fire sprinkler out buildings.
- Strong concern about fire suppression in pockets where there's low density residential. Longer term — concern about financial stability due to fire recovery
- With recent fires, we lost power for over a week once and for 3 days next. PG&E should have prioritized us as there were power supply corridors that were not burned so we could have water for fire suppression and drinking.

Water Pressure

- Had water pressure issues, had old pressure tank, just finished replacing it last week, so will see with feedback if pressure has improved.
- Water pressure — most of system is downhill from tanks, but two areas are above tanks, and when fire trucks are taking water, one road loses water pressure; system has too much capacity and population is stable
- Water pressure can be very low or even not existent.
- We have a couple of pressure reducing valves feeding pressure zones in need of replacement and we also have some areas of our system with very low pressure and require customers to boost pressure to their homes
- We have a single source for water supply and about 1/8 of our system has lower pressure than we would like.

Technical Assistance

- A review of our pumping system at the creek infiltration galleries and preliminary design for upgrades if necessary.
- Calibration of equipment
- Capital improvement plan — it has recently come to my attention that the district does not have a functioning capital improvement plan. Given the age of the system and some of the other issues I am aware of, a capital improvement plan seems to be of great importance if the district is to maintain and improve system performance. I have zero experience in creating CIPs yet I need to be integral in one's creation. Help would be extremely appreciated.
- Expert technical assistance with meeting regulatory constraints (we have already worked on the issue quite a bit)
- Grant writing
- Guidance with administration, operation, and maintenance of the facilities is always an ongoing need
- Having someone to help with Grant writing for improvements to our aging system would be nice
- Help in getting financial resources for much needed infrastructure update
- I believe that assistance from experts may be helpful in identifying the means to raise capital in order to be able to operate with the ability to purchase tools, upgrade equipment, pay for further training of staff etc, etc, etc. — if indeed there is a way to achieve this.
- Infrastructure mapping and assessment Robust GIS survey and model of all infrastructure
- Planning/design/engineering to replace our aging pipes and to aid in development of a secondary water source.
- Rate setting is an issue.
- System would benefit from technical assistance relating to alternative energy systems; capital improvement planning, infrastructure assessment and grant/loan resource acquisition
- Want rate setting

System Mapping

- Could follow up here in a few months — but mapping is pretty comprehensive
- GPS locations of most components complete. Still need unifying software to pull the data together as well as integration to customer account software.
- Have schematics, not GPS — the property is 42 acres
- Have wastewater collection map. Need comprehensive water line map. Have 1976 set of maps and more recent improvement maps.
- In process of doing the work, and will develop over time as components are replaced and accurately mapped
- No assistance — our system is mapped with CAD and works just fine
- Not as worried about contaminants with this system
- Not needed at this time
- Not unless it's a state requirement
- Old system, need help with GPS mapping
- Our individual meters are tracked by GPS however I do not know if we have mapping for our entire system.

- Our system is quite small serving only 17 domiciles. We do not need a GPS to find the well and tank.
- Possible connection points to City Water Mains.
- RCAC prepared a GPS map for us but it is not quite accurate and could use more detail. I am planning to attend the Google Earth mapping workshop offered on Nov 29th by RCAC.
- Specific details of mapped items (pipe sizes, valve types, dates installed, etc.)
- The system is in need of system wide mapping utilizing GIS technology. We have started the process of mapping improvements but lack the resources to complete a system wide assessment. The data derived from a system wide GIS map will be invaluable for long term planning for capital improvements, staffing and disaster planning and response. This is a critical need.
- The system and all of its components is fully mapped using Google Earth. Need assistance in identifying location of existing and closed wells in the area that impact our water supply.
- The system is contained within a GIS but all features may not have been GPS'd
- To my knowledge, there has been no GIS mapping done for the district. I am, however, signed up for a workshop through RWCA in June that is focusing on GIS mapping.
- Unknown how this would apply.
- Unknown whether system is mapped using GPS
- Very small private system. No need for mapping
- We are working on inputting our system to GIS to provide additional detail at locations. This will provide a quicker response to main line breaks.
- We currently have only a sketch of our facilities locations (not to scale).
- We have an online automated map. It needs truthing and detailing so that what's in the map is accurate and complete.
- We have an overall map of facilities but we have not added details based on operating experience such as precise locations of all valving.
- We have to map all our pipes and valves, identifying any lead valves etc. this has to be done next year. We don't have the money it will take to do this.

Training

- Applying for grants and grant writing expertise
- Budgeting, rate setting structure, licensing certificates and safety training are all needed in our organization.
- Capital improvement plan — it has recently come to my attention that the district does not have a functioning capital improvement plan. Given the age of the system and some of the other issues I am aware of, a capital improvement plan seems to be of great importance if the district is to maintain and improve system performance. I have zero experience in creating CIPs yet I need to be integral in one's creation. Help would be extremely appreciated.
- Capital improvement planning — strong need due to lack of water supply and a service connection moratorium prevents the adequate collection of capital improvement reserves to support changing capital improvement needs.
- Capitol reserve
- Community street lighting standards and regulations.
- Consolidation with neighboring system (five respondents)
- Contact hours for our operators
- Do not know how to apply for grants. Need professional maintenance periodically on treatment plant
- Due to many upgrades we have determined our need for program management training as necessary for cross training. Regulatory training for water and wastewater is always necessary due to the changing regulatory landscape. Accessing grants without have to utilize outside consultants is important and we have little expertise. Operator training in our area is minimal.
- Federal funded project management
- Financial management and planning for the future are major concern for small systems.
- Financial management for mutual companies
- Funding opportunities — extreme need due to lack of available revenues to support necessary infrastructure maintenance, repair and capital improvements.
- In the process of procuring grants, for engineering, technical assistance and rate structure study.
- Grant monies
- Grant writing — that's something our operator doesn't want to do, so if we could help, he'd be very supportive.

- Grant writing is critical, and sometimes, especially for state funding, the grant requirements can be daunting and overwhelming (all the requirements, both technical and non-technical)
- I am one of five board members and do not represent some of the other board members' opinions
- If the state keeps hammering us with expensive testing, we will go broke
- If we were to obtain any future Grants for improvement, we would need assistance with this. Last time our District Engineer Helped with this issue and it was truly a blessing.
- In need of a new rate structure. Also dealing with issues of ADU construction and loss of the ability to collect capacity charges.
- Keeping abreast of new regulatory requirements. Ability to successfully apply for available grant funding opportunities for Capital Improvement Plan implementation.
- Local participation and financial support
- Looking at ways to optimize aeration and sludge removal/management
- Maintenance and repair — extreme need due to necessary improvements to bring the system up to current codes and standards to accommodate the rebuilding efforts after and since Redwood Complex Fire.
- Maintenance and upkeep have been the areas that tend to lack funding and planning to complete existing needs within our system.
- More training for current personnel and a focus in the schools to inform students that this profession exists and fulfilling the basic educational needs for people interested in this career would be advantageous.
- Need a grant to fund repairs to main distribution
- Need a new policy manual for CSD to administer the water and wastewater facilities.
- Need for legal guidance and audits
- Need to be made aware of funding opportunities for private water systems that will help in meeting the ongoing federal and state regulations/testing
- Need to continue to develop the technical documents to describe City maintained systems and develop grant applications
- Need to develop an incremental CIP to address distribution and treatment needs; limited CIP funding and small rate base; meeting DDW requirements
- One of our major problems is that most people don't care enough to get involved, and the ones who do have to go to work. This is a volunteer position. I see seminars all the time scheduled by the state in Sacramento and elsewhere.
- Operations (improved water conservation strategy, rate structure changes, water rights changes, alternative energy options, etc.) — strong need due to lack of reliable water rights and inability to build capital reserves for improved or increased infrastructure.
- Operator Certification training in our area
- Outside funding will be needed to meet future needs.
- Planning for major increase in maintenance expenses.
- Problem with existing trainings is that they are geared to municipalities.
- Program management — water consultant available to answer questions, do surveys, maintenance director T1 certified, needs trainings for him, get them accomplished through RCAC, rate setting when meters installed.
- Qualified rate study and rate setting professionals.
- Rate setting is an issue.
- Rate structure for maintenance and repair
- Rate structures — strong need due to lack of adequate rate studies throughout the area's water districts.
- Rate study to restructure overall rates and fees of five districts consolidating into one
- Repair/Replace/Permitting in the coastal zone. Planning and Design considerations. BMPs.
- Resource acquisition and planning through grants and loan programs; local training for operator certifications and trainings on regular maintenance skill building
- Sebastopol will be seeking a RFP for a Water and Wastewater rate study within the next fiscal budget. Local Distribution and Treatment certification classes would be helpful with operator training.
- Small water system engineering, testing strategies, maintenance planning and operations
- Software and training for financial management and for tracking accounts receivable and accounts payable
- Specialized trainings like cathodic protection, water audits. operator trainings certification review.

- Specific grant and funding opportunities for water storage projects, alternative energy and property procurement for wastewater reclamation.
- Support in updating our local limits and sewer use ordinance to support our pretreatment program as it relates to new cannabis laws
- System could use technical assistance in completing its TMF, particularly identifying existing and closed wells located in the area where we source our water. Assistance is also needed in updating our Wellhead Protection Program
- System would benefit from technical assistance relating to alternative energy systems; capital improvement planning, infrastructure assessment and grant/loan resource acquisition
- Technical info on treatment methods for hexavalent chromium
- The district is under a service contract with another water district and is not currently responsible for training staff. If this changes in the future, there will be a need.
- The local board members have no particular expertise in technical or financial matters. Here we could use help and advice.
- The system has an "on call" relationship with consultants for assistance pursuant to engineering services, hazard mitigation planning, grant writing, and maintenance. The system relies upon matching grants to pay for GHD's help.
- There is a lack of training opportunities locally.
- Training — have comprehensive Emergency Preparedness Plan, would like training more specific just to water system.
- Training always needed for new staff who is replacing more experienced staff in a variety of areas. Safety training topics often needed to stay current and keep new staff trained.
- Training would be useful that addresses the types of grants that are available, eligibility, application procedures, and how grants are awarded (i.e. how grants are scored).
- We could benefit from Grant Writing training to put us in a better position to be awarded money when the opportunities are presented.
- We could use assistance in writing a grant for a new storage tank. We currently have two tanks: one is steel, which was installed when our new treatment plant was built, and one with a vinyl liner that is well over twenty years old.
- We don't have grant writers available or knowledge of how to write a grant.
- We have an extreme need for training in compliance with the wide variety of one size fits all unnecessary regulations imposed by the State. We also have an extreme need for elected officials to be trained to ask those agencies that actually operate water and wastewater systems what those agencies need to do their job better rather than relying on input from their campaign donors and faux science to craft unnecessary regulations and expand state bureaucracies that cost local agencies time and resources to comply for no customer benefit.
- We have an obsolete water treatment system that we had been told to install by the state with a grant, only to be told immediately after installation that the system is now obsolete and no longer made by the manufacturer
- We have been under a noncompliance order for 5 years. We need a new well, filtration, and supply tanks to meet 4 log requirements.
- We have farmed out grant writing, operator and most maintenance (replied "no need" for any trainings)
- We have no one in our assoc. who wants to be an operator. We need to contact and contract with another outside operator. We need assistance with pipe and valve replacement.
- We have no one with experience in grant writing. We need help if we ever expect to improve our system.
- We have no staff to pursue or apply for grants or low interest financing
- We need funding for maintenance and improvements to our aging system;
- We need help designing and implementing infrastructure improvements
- We need help finding and applying for financial help
- We need help in finding grant opportunities for our rate payers and help in applying for them as we are an investor owned water company
- We need to get trained in cross-connection control. We also need to get training in turbidity and how to test for it
- We need to get trained in cross-connection control. We also need to get training in turbidity and how to test for it.
- We use volunteer Board Members to oversee our system. We have a continuing need for training

in board responsibilities, basic water system operation and general regulatory compliance.

- Would be great to have more operator classes on the coast; class on rebuilding chemical feed pumps; class on chemical constituents, properties, need for testing and sources of contamination — what produces each type of contaminant?
- Would like meter installation for at least knowledge purposes
- Writing Grants to receive money for replacing equipment.

Additional Resources (list included: budget, rate setting, recordkeeping, or asset management templates; legal or technical reference materials, etc.)

- All ideas and examples are welcome
- All of the above as long as it's in an Excel spreadsheet and not a canned program like Quickbooks. We want to be able to make modifications as needed.
- All of the above, especially budgeting, rate setting, recordkeeping.
- All of the above.
- Always interested in asset management
- Any and all templates are appreciated to improve what we currently have.
- Asset management materials
- Asset management templates
- Asset management templates
- Asset management templates
- Asset Management templates could be helpful. We have begun discussions about implementing better Asset Management tracking.
- Asset management templates, financial resources
- Budget and rate setting
- Budget and rate setting are a focal point right now. Due to rising costs our system is due for a rate increase.
- Capital Improvement Planning and Assessment
- Class in excel
- Finding long time administrators. The current board is good for about two more years. No one else in the community seems to want to take it on.
- I am sure that there are. I imagine that there are likely resources that I am not even aware of that would be helpful. I strive to always learn and grow as an operator. To think that at some point I have no need to continue to learn or grow seems conceited and foolish.
- I don't think we know how to set up asset management for the system.
- I think we are good in these areas but maybe I'm optimistically biased.
- I'm not sure. In some ways, I think our system is not aware of bigger and/or better possibilities.
- Most likely yes, unsure of specific needs
- Not at this time, but will likely change as we move to updating system
- Online access to all suggested topics would be helpful.
- Ordinarily we cannot afford an audit or legal advice.
- Our water and waste water systems are funded by annual dues. There are no meters so no rate setting or record keeping.
- Potentially, we have many asset management tools and different departments and communication between those different tools is problematic.
- Rate setting
- Rate setting and prop 218 would be extremely helpful along with recording keeping to make sure maintenance and safety are documented.
- Rate setting for members who exceed the monthly allocation of 7500gal per household
- Rate setting resources. Asset management templates (CIP in particular) would be useful.
- Rates and Budget are set by a volunteer Board, input on new industry standards and administrative approaches will be helpful. However, our greatest need is to improve our distribution system.
- Reference materials such as a billing template would be of help.
- Reports to water boards and CPUC
- Templates always appreciated
- Water and wastewater rate study.
- We are trying to locate 6 copies of The Water Board Bible. Worksheets for budget and rate setting would be VERY helpful.
- We could benefit from asset management software/training

- We have an accurate GIS system but training with regard to asset management and developing an asset management program would be useful.
- We have one office employee and one manager — it isn't enough to manage everything.
- Yes & No. We currently use a Management Company to bill, record keep etc. We are in the process of interviewing new Management Companies, and I wonder if we would not be better off to handle all this with the proper training in house among the 18 property owners.
- Yes, per previous comments. General training in operating all aspects of a community water system is needed, and we do take advantage of training opportunities.

Rate Structure

- Annual assessments set by Board one year in advance; special assessments on top IF needed (Only one in past 18 years); Misc. income from excessive water use penalties (5 cents per gallon for every gallon over avg. 200 gpd based on monthly meter readings; no exceptions)
- Annual fee
- Annual flat rate with additional charge for exceeding preset amount of usage
- CPUC authorized rate structure based on expected expenses and revenues. Useage based with two tiers and fixed charges in combination.
- CPUC regulated
- Don't charge for water, have sewage fee for each home, standard monthly fee.
- Each home owner pays a baseline fee of $300.00 a month. Then there is a 4 tier rate schedule for water use over the baseline amount of gallons per month.
- Equivalent single-family dwelling (ESD)
- Flat Rate + Variable Usage Rate
- Flat rate based on meter size with variable usage rates
- Flat rate with "per unit" water usage charge and water conservation rate increases determined by water conservation stage.
- For residential, there is a sewer base (amount of water in winter), Tier 2 is over and above that. For irrigation, Tier 1 is amount of water needed for landscape considering area and evapotranspiration, 125% of that rate is 2nd tier Flat rate for industry
- Free water
- In addition, we charge by usage as a percentage of the volume costs.
- Determining the rate is one thing. Collecting it is another. I suppose we are no different than any other community in that we have both wealthy and poor.
- Included in rent
- Included in rent, water is not charged a separate rate, but rents increase as water production costs increase.
- Metered, based on City rates
- Monthly metered water and sewer rates.
- No water charge; supply included with space rental for mobile homes.
- Overage charge if people go over 7,500 gallons per month, otherwise flat rate
- Per month of usage
- Sewer is flat rate. Water is flat rate plus $/cf
- Some metered and some flat
- There is a base charge and a volume charge, monthly.
- There is a monthly base rate that comes with a given volume of water that is included with the base rate. If usage exceeds this volume there is a standard charge for each volume of overage (or excessive use) unit. The overage unit is 150 cubic feet. So, for each 150 ft^3 feet of water beyond the base rate allotment, a standard charge per unit is added to the monthly base rate. Hopefully that made sense.
- Tiered for water use
- Trailer park residents are not metered... water use included in space rental.
- Uniform rate and then volume charges
- Use based, billed monthly
- Water and Sewer are included as part of the Monthly Rental rate Per Space. There is currently no breakdown for what portion of the Monthly rate is for those utilities.
- Water: monthly fee + uniform volume rate wastewater: annual fee based on use type
- We do bimonthly billing for water use charges and a base (flat) charge. We also have an annual assessment on the County tax bill. The current rates are not adequate but we have a plan to make them adequate; it may not be sufficient though. We monitor results annually.

- We do not have rates. This is a small, private system serving owner and employees.

NCRP Comments

- City has limited staff; we did submit one project but at the time it was not funded.
- Concerns/challenges with sustainability/state continuing funding of IRWM programs; our wastewater projects do not have collaborations with other entities and are not attractive projects for the IRWM Program. The wastewater projects we submitted did not get funded.
- DON'T KNOW ABOUT NCRP
- Everyone is independent and autonomous anyway — north of Village of Mendocino, and only one other person on that aquifer. Their well hasn't run out of water — seem to be autonomous currently.
- Fill me in and we will see how involved we want to be.
- Great program that has already funded improvements in this community.
- Hire outside to help with projects
- It appears that we are not a sufficiently disadvantaged community to get your limited funding from past experience.
- I am a member of the TPRC
- I am a new general manager. I am still learning about the NCRP.
- I am not sure what is involved in participating with NCRP. We are open to the idea of participation.
- I am only minimally familiar with NCRP; I have looked at website
- I confess complete ignorance of the requirements for participation or of the resources offered by the organization. That would by far be the largest barrier to being able (or interested) to participate. If I don't know then I don't know and if I don't know then I can't participate.
- I do not know much about your org.
- I have no good excuses for not participating. My initial reluctance was (and is) based on a belief that it's a pay to play organization and that our concerns were not high on the list of priorities of the organization. That is, we would pay money to participate but not get any returns, in terms of grants for our projects.
- I have not personally participated but I believe our Agency does I am new to the Agency and not sure of our commitment to the IRWM process.
- I know that not too long ago the general manager for the district procured grant funding through the NCRP but personally, I know very little about the organization and/ or the resources that they offer.
- I'm aware of NCRP but not familiar.
- Information regarding what role NCRP plays in assisting water companies in securing TA and financial assistance.
- Involved off and on, no regular participation.
- Just haven't taken the opportunity to learn the organization and their resources available. Busy with competing work demands.
- Lack of knowledge of details re: activities doesn't permit my answering accurately/intelligently
- Need to learn more about and see what kind of resource it might be.
- No idea what it is
- Not able to travel distances usually required to attend meetings.
- Not currently involved with NCRP
- Not familiar with the group.
- Not really interested, because we have such a small part time staff, don't really have time for meetings etc.
- Not really sure
- Not sure what it entails. Time is precious.
- Our District has a contract with an engineering firm who suggests projects that may qualify for state/federal funding.
- Our remote location is also a problem for regular meetings/events
- Please provide general information about NCRP
- Projects performed on an as needed basis. Have not had issues integrating our needs into the planning, grant, and construction process.
- Since I am not sure what it is, I am unable to articulate barriers.
- Some of our board members are not interested in state grant funding (sad but true). Some of us are interested.
- The biggest challenge we face is having man hrs. to put into grant writing etc. with everyone working full-time jobs and not all owners live here
- The City participates via the local Watershed Association

- Travel distance to meetings would be biggest challenge because of time constraints. Participation would depend on what is offered and whether it is worth the travel time.
- Water operator resides in SF Bay Area.
- We are not familiar with NCRP and its resources
- We are unfamiliar with NCRP
- We are very remote and traveling for meetings, etc is highly time consuming.
- We can try
- We do not know much about NCRP.
- We have participated in one or two workshops but do not receive much updated information.

Sharing Resources — Need

- City does not have any nearby systems as we are only water/sewer district in Valley except an irrigation district. As far as I know they do not sell potable water.
- Coastal systems are sharing treatment operator and her resources (tools): waterline leak detection and waterline location
- Collaborate regarding methods of HC treatment and/or city consolidation.
- Consultant works for several systems in the area — don't know of any nearby, there are just scattered residences and the county airport — not close to schools, not sure how this would apply.
- Cooperative effort to obtain approved drinking water locally.
- Currently share operators with Palmer Creek CSD, Hydesville CSD, Scotia CSD. Contract with Fortuna wastewater for lab services.
- Dichlorination equipment for hydrant testing, mobile generator of sufficient size to run well pump.
- Depending: pending local real estate developments may open up some opportunities for economies of scale.
- Distance precludes this possibility
- Emergency repairs
- How do you "share resources" under 218? Nice idea but leads to more administrative overhead. Neighboring entities either want nothing to do with your organization or they constantly need your help.
- System is not located locally or in close proximity to any other water systems
- I think that we would be open to participating in some aspects. Note that we now, in essence, "share" our operating staff since same Certified operators work for/manage over 20 other small systems on the coast.
- It would help to have someone local to check on the system
- It's always helpful to share recourses during equipment failures.
- Knowing the needs and resources of nearby systems would be helpful.
- This system already relies upon another system to provide proper level of water certification to operate WTP. Both rely upon a consultant to provide proper level of wastewater certification.
- May be a good question for operators.
- Maybe
- Most of the small local drinking water providers use the same operator. We have an operator that only runs our system so we have fast response to issues.
- Neighboring system has no contamination in water source. We are under their sphere of influence.
- Our current operator is employed full time by a nearby municipality. We could benefit from sharing specialized equipment.
- Possibly — Director of Public Works is working on emergency response where they can share operators or equipment with nearby communities that would want to join their network
- Possibly — we have contracts in place for qualified operators, tools, equipment and system management
- Possibly needed when wastewater is built
- Pretty sure they are in the same boat we are in.
- We have an existing network. One of three pledges that must be taken by prospective members is that of mutual assistance.
- Share operator, who has 22 water systems; waterline leak detection and waterline location
- Sharing trained personnel is desirable.
- Specifically, regional biosolid management makes sense.
- Technical support.
- The City uses CaWARN system to share equipment and technicians during emergencies. A similar system for non-emergency assistance would be helpful.

- There is a plan to extend a water main on Hwy 299 from Douglas City. Water would be provided by local supplier. Having access to that would solve the majority of our problems. I hear it is in the works but when??? If and when it does happen, we would need assistance with retrofitting our distribution system.
- They do
- We already do — contract with another system
- We already share with Garberville and other surrounding Districts.
- We are doing that now and things are beginning to get worse.
- We are in the process of consolidation to form one utility district. I feel all the small systems in our rural county should be consolidated or have a JPA agreement to share costs such as operators, insurance, provide better salaries and benefits to employees and other cost savings.
- We do share resources with our neighbors and we are open to further extending the network
- We have a MOU for sharing specialized equipment with neighboring agencies.
- We have an informal mutual aid agreement with the city, but it is very minimal. We are Also a member of CAL WARN.
- We have considered selling to a PUC
- We have contacted our nearest neighboring system and they are not interested in joining together.
- We have formed a JPA to share resources like these among ourselves.
- WE SHARE THE SAME OPERATOR/SYSTEM MANAGEMENT WITH another system. NOT SURE WHAT OTHER OPTIONS WOULD BE AVAILABLE.
- When I was Water Master for our System, I investigated the possibility of creating partnerships with all of the small rural systems in our area, but found that due to discrepancies in the type of water retrieval, distribution, and treatment, this was not feasible for our area.
- Yes, for sharing specialized equipment & tools and emergency operations.
- Yes, for emergency situations or specialized system needs.

Resources to Share

- A qualified operator if assistance is needed for a short-term project, or repairs, or for brainstorming/ consulting to address issues, concerns, or problems.
- A question for the water operators in a few months.
- Admin, Billing, Pumper truck.
- Backhoe and other tools
- CCTV for sewer videoing and a Vac Con
- City has fleet equipment, operators, generators and other tools they would be willing to share.
- Distribution system repair tools and equipment, small generator, chlorine
- Emergency repairs
- Every entity has something they can share. Do we have the time and resources to develop an agreement that covers all aspects of sharing?
- Maybe some knowledge or experience. No tools or equipment.
- Storage tanks
- The majority of times we have problems, the tool most used is a shovel and a digging bar.
- Vac trucks, line cameras, sludge composting mixer.
- Vactor Truck
- Various water distribution management tools, equipment, leak detection, and certified advisory services.
- Water and wastewater operators, existing ordinances, limited specialized equipment
- Water level indicator tool
- Waterline leak detection and waterline location
- We already do this through service contracts
- We do minor part sharing with a local MWC, but nothing formal
- We do share with local small special districts but because of our isolation and limited specialty equipment we do not share out of the county.
- We have a MOU for sharing specialized equipment with neighboring agencies.
- We have existing agreements with other Agency's for mutual aid.
- We have resources and emergency access to fresh water during times of disaster and are willing to

consider providing water for transport out of the district's jurisdiction on a case by case basis.

- We have technical expertise in many areas that could possibly be of use to other Water Systems in the area.
- We might have equipment that could be shared. For example, we have a leak correlator that is underutilized. The problem with that would be loaning out our trained operators.
- We routinely share equipment and personnel with other smaller communities. Typically for limited periods of time or in urgency situations.

Other comments

- All operations are performed through a service contract with another system.
- We are considered a disadvantaged water system. This survey was completed by our Board of Directors with assistance from its Water Master.
- Any advice and help would be very appreciated
- Any assistance or information would be greatly appreciated.
- Bottom line is he's a sole proprietor, doesn't make much money off of it, but would like funding to redo it. Been toying with an idea of creating a big pond — another well put in to fill it, possible use for fire suppression.
- We are both registered engineers with a lot of experience dealing with State and Federal Agencies. We are also very familiar with the local water and wastewater systems. We are continually looking for money to keep rates down but do not need technical assistance.
- Field operative to meet with and advise us.
- Focus on smaller systems is key to helping this entity.
- I don't know about your organization (I've been in the volunteer water management job 6 months). We are not a disadvantaged provider, but can always use training for new personnel.
- In the past, projects for wastewater treatment systems have not ranked high enough to receive IRWM funding, even though they are serving DACs. Wastewater treatment projects don't include a broad array of partners and the projects are not particularly compelling in a competitive environment.
- More available outside operators who could lend their coverage to us little guys!
- More information to rural towns
- Need help searching for funding for system upgrades to become "compliant"
- Need to know if this portion of our community has disadvantaged income level.
- No other ideas.
- Provide technical assistance for grant funding.
- Really could benefit from administrative training of mid-level staff.
- Remain compliant with all federal, state, and county regulations and ensure that you have at least three years of competent audits if you hope to receive grants for your projects.
- Small projects in small districts are very capital intensive due to full scale regulatory planning and bid processes. Permitting and funding processes are insensitive to seasonal nature of bidding and construction.
- State imposed moratorium on new water connections due to lack of adequate water supply
- Thank you.
- Thanks for reaching out. We are a relatively small water district but not so small that we qualify for grants. We have needs but not extreme needs or emergency situations that require immediate help or someone stepping in to take over our problems.
- We always operate in the best interests of low-income residents, try to keep costs down, open to resources and programs that would improve quality of life and water resources for residents.
- We have appreciated the classes in Fortuna which both Board members and Staff have been able to attend.
- Whatever help or direction you can give us will be greatly appreciated.

Appendix D.
Water Supply & Wastewater Needs Assessment Survey & Interview Questions

NORTH COAST RESOURCE PARTNERSHIP

North Coast Water Supply and Wastewater Treatment Assessment 2017

Agency Information

1. Organization Name:

2. Your Name:

3. Your position within the organization:

4. Mailing address:

5. Email address (please answer "none" if you don't use email):

6. What type of organization do you represent? Please choose all applicable

☐Local government ☐Wastewater treatment

☐Special district ☐Tribal government

☐Water supply ☐Other, please state:

7. What services do you provide? Please choose all that apply.

☐Water treatment and supply ☐Wastewater reuse

☐Domestic water distribution ☐Storm drainage

☐Irrigation water distribution ☐Watershed restoration

☐Wastewater collection ☐Other, please state:

☐Wastewater treatment

8. What community or communities do you serve? Please provide the physical location.

Technical Assistance and Training Needs

9. Please provide your agency's *level of need* for the following types of **technical assistance:**

	No need	*Moderate need*	*Strong need*	*Extreme need*
System operations	○	○	○	○
System infrastructure	○	○	○	○
Equipment calibration	○	○	○	○
Administration	○	○	○	○
Rate structures	○	○	○	○
Funding opportunities	○	○	○	○
Meeting federal and state regulations	○	○	○	○

For each topic that you indicated a "strong" or "extreme" need, please indicate the range of technical assistance needs, and provide as much detail as possible so that we can adjust future opportunities, trainings and workshops accordingly.

10. Please provide your agency's *level of need* for the following types of **trainings:**

	No need	*Moderate need*	*Strong need*	*Extreme need*
Program management	○	○	○	○
Financial management	○	○	○	○
Regulatory compliance/ reporting	○	○	○	○
Grant writing	○	○	○	○
Safety	○	○	○	○
Operator	○	○	○	○
Maintenance	○	○	○	○
Other, please state below:	○	○	○	○

For each topic that you indicated a "strong" or "extreme" need, please indicate the range of training needs, and provide as much detail as possible so that we can adjust future opportunities, trainings and workshops accordingly.

11. Are your system components **accurately mapped using GPS**?

☐Yes

☐No

12. If you answered no to the preceding question, **what types of assistance would be useful** to meet your mapping needs?

☐Map of system components (valves, wells, pipes, treatment facilities, tanks, water sources, etc.)

☐Map of potentially contaminating activities in your system's vicinity (system contamination threats)

☐Overall map of system (including components, threats, etc.)

☐Other, please state and briefly describe:

13. Are there **additional resources** (such as budget, rate setting, recordkeeping, or asset management templates; legal or technical reference materials; etc.) that would be useful for your system/ staff

☐Yes, please describe:

☐No

Challenges

14. Please indicate the **level of concern for your system** on the following topics

	No concern	*Moderate concern*	*Strong concern*	*Extreme concern*	*Not applicable*
Raw water quality	○	○	○	○	○
Drinking water supply reliability	○	○	○	○	○
Fire suppression supply reliability	○	○	○	○	○
Water pressure	○	○	○	○	○
Outdated treatment system (need for new/improved technology	○	○	○	○	○
Aging treatment system (need to replace parts)	○	○	○	○	○
Sufficient quality and quantity of staff	○	○	○	○	○
System too small for growing population	○	○	○	○	○
System too large for shrinking population	○	○	○	○	○
Financial stability for operating system and maintaining reserve	○	○	○	○	○
Operation and maintenance – need for trained personnel	○	○	○	○	○
Other, please state below:	○	○	○	○	○

15. Please indicate what resources or support would be most helpful in dealing with each issue that you ranked “moderate concern” or “extreme concern:”

Regulatory Concerns

16. Are there any regulations (federal, state or local) with which your system is out of compliance?

☐ Yes, please describe:

☐ No

☐ Unknown

17. Please indicate how well your agency is able to meet the following regulatory constraints.

	No issues	Minor/ infrequent issues	Minor/ frequent issues	Major/ infrequent issues	Major/ frequent issues	Not applicable
Meeting CA/ federal water quality standards	○	○	○	○	○	○
Sampling and testing procedures	○	○	○	○	○	○
Required paperwork and reporting	○	○	○	○	○	○
Training requirements	○	○	○	○	○	○
Any others, please describe below	○	○	○	○	○	○

18. Please **indicate what resources or support would be most helpful** in dealing with each issue that you ranked "Major/ infrequent" or "Major/frequent:"

19. Please provide more **detail regarding any regulatory challenges** your agency is currently experiencing:

Agency Capacity

20. **Does your system have paid staff**? Choose all applicable

☐ No water operator

☐ Level 1

☐ Level2

☐ Level 3

☐ Water operator without "official" certification

☐ Consultant

☐ Administrative

☐ Management

☐ Other, please state:

21. Who interprets your water quality results? Choose all applicable

☐ No one
☐ Water operator
☐ Other staff/ board member
☐ Outside consultant
☐ Local/ state government staff
☐ Other, please state:

22. Does your agency perform **arsenic removal** as part of the treatment process?

☐ Yes, please describe the treatment process:
☐ No
☐ Don't know

23. Is there anything other than arsenic that is **unusual or problematic about your water source**(s)? If yes, please briefly describe.

☐ Yes, please briefly describe:
☐ No
☐ Don't know

24. Wastewater treatment only: Approximately **how many hook-ups do you have**?

☐ 0-50
☐ 51-100
☐ 101-250
☐ 251-1,000
☐ 1,001-5,000
☐ 5,001-10,000
☐ Over 10,000 (please estimate below)
Comments:

25. Water suppliers only: Approximately **how many hook-ups do you have**?

☐ 0 – 15
☐ 16 – 50
☐ 51 – 250
☐ 251 – 1,000
☐ 1001 – 5000
☐ 5001 – 15,000
☐ Over 15,000 (please estimate below)
Comments:

26. Does your system maintain a current **Emergency Response Plan**?

☐ Yes, please provide date:
☐ No
☐ Don't know

Financing

27. Are your **current rates sufficient** for building capital improvement funds and covering operating and maintenance costs?

☐ Yes
☐ No
☐ Don't know

28. If you answered no to the previous question, **do you have the means to determine adequate rates** for maintaining and improving your system?

☐ Yes
☐ No
☐ Don't know

29. What is your **current rate structure**?

☐ Monthly/ annual flat rate
☐ Uniform rate schedule
☐ Increasing block/graduated schedule
☐ Decreasing block/graduated schedule
☐ Seasonal rate schedule
☐ Subsidized by government or Tribe
☐ Other, please describe:

30. What is your **approximate monthly average residential water and /or wastewater customer bill**? If you offer both water and wastewater services and the average bill varies by service, please provide information about this in the comment field.

☐ Subsidized (please describe in comments)
☐ $0-$50
☐ $51-$100
☐ $100-$150
☐ Over $150
Comments:

31. **Is your agency in need of financial assistance** such as grants, low interest loans, or loan restructuring? (Please use comment field to what your funding needs relate to. For example, current infrastructure needs, regulatory issues, cost of living, etc.)

☐ Yes
☐ No
Comments:

32. Does your system have a **Capital Improvement Plan** (IP)?

☐ Yes, please provide date of most current CIP:
☐ No
☐ Don't know
Comments:

Partnerships

33. Is your agency **currently working with outside agencies** on improvement plans or projects? If so, please choose the agency from the list below and briefly describe the project in the comments section.

☐ California Rural Water Association (Cal Rural Water/ CRWA)
☐ Rural Community Assistance Corporation (RCAC)
☐ Redwood Water Resources Network (RWRN)
☐ State Water Resources Control Board (SWRCB)/ North Coast Regional Water Quality Control Board (NCRWQCB)
☐ California Department of Public Health (CDPH)
☐ Environmental Protection Agency (EPA)
☐ Wine Country Water Works
☐ Local County
☐ Other local government
☐ Other (please list below)
Comments:

34. Would partnerships or sharing resources with neighboring or nearby systems help you address your needs for specialized tools, equipment, qualified operators, or system management?

☐ Yes, please describe below.
☐ No
☐ Don't know
Comments:

35. Do you have any **specialized tools, equipment, or other resources that you could share** through partnerships?

☐ Yes, please describe below.
☐ No
☐ Don't know
Comments:

NCRP and North Coast Integrated Regional Water Management Plan

36. Are you familiar with the North Coast Resource Partnership (NCRP)?

☐ Yes, I am familiar with the NCRP and its resources
☐ No, I am not familiar with the NCRP and its resources
☐ I would like additional information about the NCRP and resources (indicate specific requests below)
Comments:

37. Please select all **challenges or barriers to participation in the NCRP** that you or your staff face:

☐ Not difficult; I am a regular participant
☐ Time commitment for participation is too high (too many meetings, emails, etc.)
☐ Meeting times not compatible with staff/ board schedule
☐ Lack of in-house skill necessary to develop and submit a project
☐ Lack of staff to perform grant administration even if grant funds were awarded
☐ Not interested in state grant funding
☐ Not interested in working with the other water-related stakeholders
☐ Too difficult to understand the Integrated Regional Water Management (IRWM) process
☐ Other, please list below

Comments:

38. Is there an additional staff or Board member we should also speak to about your agency and its needs? Ideally, this would be someone in a different role than your own who can offer a different perspective on your system management and operations. If so, please provide contact information below.

Name:

Title/ role:

Phone:

Email:

39. Please add **any other comments or information** that you feel would be helpful to the NCRP to provide assistance to small and disadvantaged water and wastewater providers.

Thank you very much for your participation. We look forward to working with you to improve and protect water quality and water supply for all residents of California's North Coast!

North Coast Resource Partnership Disadvantaged Community Key Expert Interview

Key Expert Details:

Interview date:

Interviewee Name:

Organization/Role:

Organization Details

1. What kind of organization do you represent?

☐ Community Group ☐ Municipal Department

☐ NGO/Non-Profit ☐ Resource Conservation District

☐ Other _____

2. What geographic area do you serve?
3. How many members do you serve?
4. Do you serve Tribal communities?

☐ Yes ☐ No

    1. If yes, which communities do you serve?

5. Are you familiar with the North Coast Resource Partnership (NCRP)?

☐ Yes ☐ No

6. If not, would you like more information about this group and its available resources?

☐ Yes ☐ No

Local Water Issues

1. Do all of the members of your community have access to adequate water?

☐ Yes ☐ No

If no, what neighborhoods or areas lack access?

What factors keep community members from having access to water?

2. Describe the quality of your drinking water?

For more information about the North Coast Resource Partnership please see
http://www.northcoastresourcepartnership.org/

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3. Are there known pollutants?
4. Describe the state of local water infrastructure (wastewater treatment, dams, pump stations, storage, etc.)?
5. Do you know if/how the water fees you pay contribute to infrastructure maintenance?

   ☐Yes ☐No

6. Do any areas of your community flood?

   ☐Yes ☐No

   If so, where? How often? Has the flooding increased over the years? What are the impacts?

7. Are you aware of any projects being implemented to deal with local water issues? Please describe. Who is managing the project(s)?
8. What are your top water priorities? What project(s) would you implement to address it? What are the barriers to addressing your priority issues?

Environmental Issues

1. How would you describe the health of your local forest?
2. What are the greatest impacts to the forests in your region?
3. How is forest health impacting local watersheds?
4. What are the greatest impacts to riparian and wetland habitats in your region?
5. How will your community be impacted by sea level rise and sea water intrusion?
6. What do you know about your community's vulnerability to climate change?
7. Do you know of any projects currently being implemented to deal with environmental issues in your region? Who is managing the project(s)?
8. What are your top environmental priorities? What project would you implement to address it? What are the barriers to addressing your priority issues?

For more information about the North Coast Resource Partnership please see
http://www.northcoastresourcepartnership.org/

North Coast Resource Partnership Disadvantaged Community Key Expert Interview

Other Community Issues

	What are the other challenges that your community is facing?	
	Access to Capital/funding	
	Access to Technology	
	Access to Employment	
	Access to Healthcare	
	Access to Housing	
	Regulatory Constraints	
	Transportation	
	Recreational Opportunities	
	Local Industry	
	Cannabis	
	Planning and Preparedness	
	Wildfire	
	Other	

1. What factors make [*insert from above*] challenging for the community? ?

   Do you have any ideas about how to overcome those challenges?

   Are you aware of any projects or programs currently in place to help?

2. How is cannabis cultivation impacting your community?

3. What is your community's vulnerability to natural disasters, including wildfire?

   What are the gaps to the community's natural disaster preparedness?

For more information about the North Coast Resource Partnership please see
http://www.northcoastresourcepartnership.org/

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4. What other issues are impacting disadvantaged communities?

   What is challenging about this issue?

   Do you have any ideas about how to overcome those challenges?

   Are you aware of any projects currently in place to help?

Closing

1. Are there any other organizations or individuals we should reach out to for an interview?
2. What are the key documents and reports for your region?
3. Would you or members of your community be interested in attending a workshop in the fall to further discuss these topics or the next NCRP quarterly meeting on October 19 to be held in Weaverville?

For more information about the North Coast Resource Partnership please see
http://www.northcoastresourcepartnership.org/

Appendix E. Non-Respondent Statistics

As of April 2019, 91 of the identified water suppliers and wastewater treatment operators (44%) had not responded to the North Coast Economically Disadvantaged Community Water Supply and Wastewater Treatment Facility Water Needs Survey. These entities are distributed throughout the North Coast Region with Sonoma County having the highest percentage (58%) followed by Siskiyou and Modoc (50%) (Chart 1). Del Norte had the lowest nonresponse rate, with only 25% of its twelve facilities choosing not to respond. With only two water/ wastewater treatment providers, Modoc County has a fifty percent response rate; just one of its providers responded (Chart 2).

Chart 1. % Nonrespondents by County

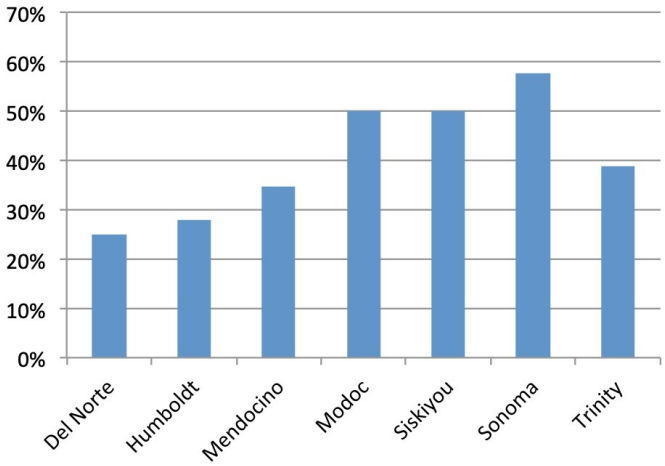
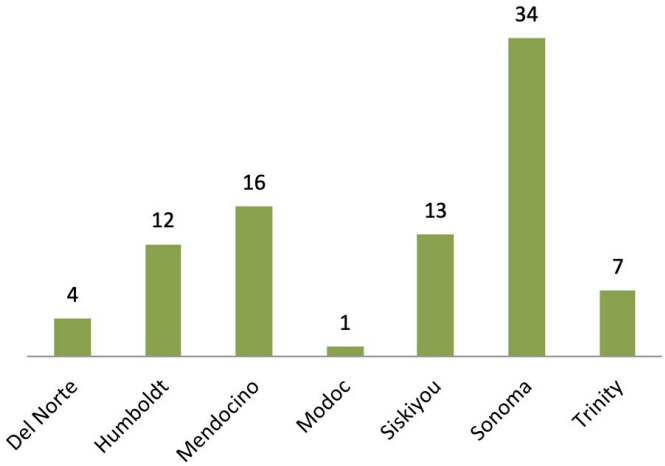


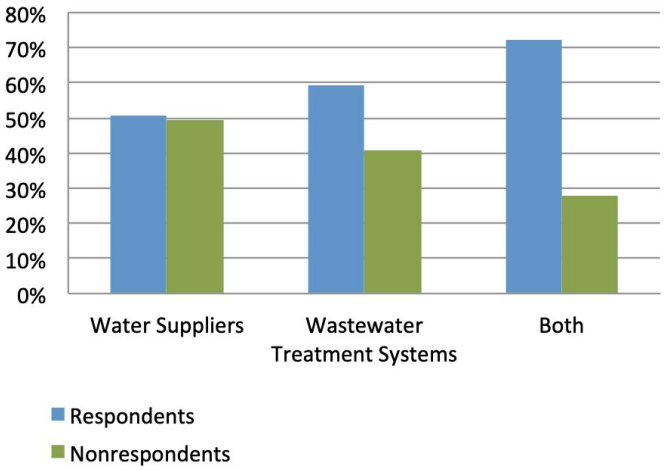
Chart 2. # Nonrespondents by County



With respect to services provided, there are slightly more responders than non-responders for water suppliers and wastewater treatment systems.

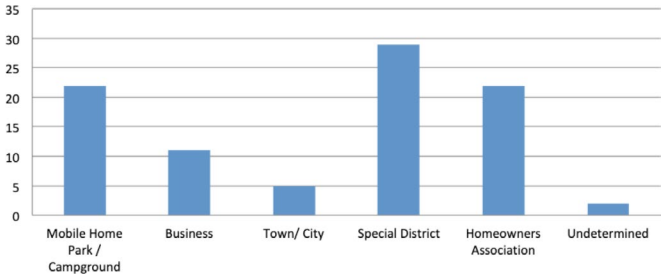
Systems that provide both water and wastewater services had a 72% response rate (Chart 3).

Chart 3. Percentages by Service



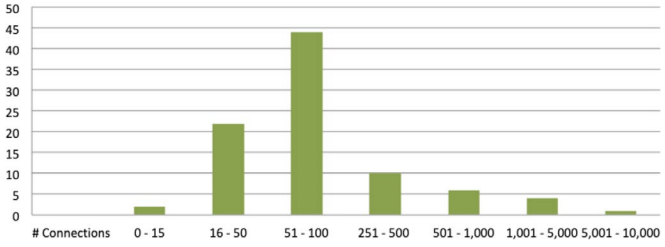
Mobile home parks, Special Districts, and Homeowners Associations each make up about one quarter of the non-respondents (Chart 4). A little over 10% are businesses, some of which have been family- owned water suppliers for generations. Five non-respondents are cities or towns while the type of two of the non-respondents could not be determined with publicly available data.

Chart 4. Nonrespondent Sub-types



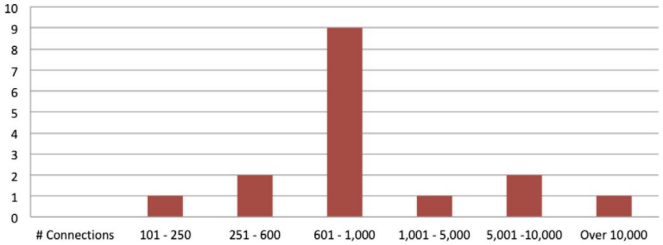
Of the nonresponding water suppliers, about forty-four service between 51 and 100 connections, while about twenty serve between 16–50 connections (Chart 5).

Chart 5. Nonrespondent Water Suppliers - Number of Connections



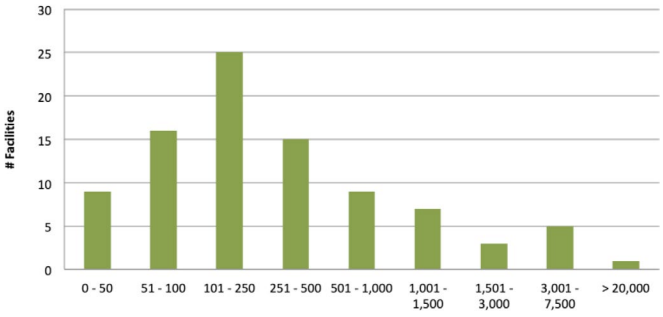
Over half of the non-responding wastewater treatment operators have between 601–1,000 connections, while the others ranged in size from serving between 101–250 connections, to over 10,000 connections (Chart 6).

Chart 6. Wastewater Treatment Facility Sizes - Nonrespondents



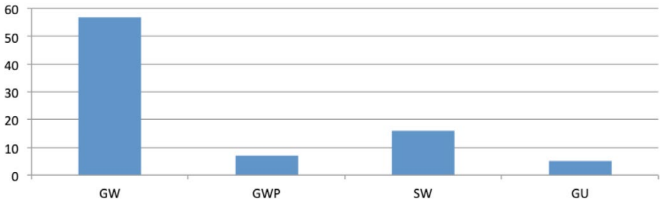
Nearly three-quarters of the communities served by non-respondents have a population less than 1,000, with over a quarter having a population between 101–250 (Chart 7).

Chart 7. Nonrespondent Population Size



Most of the non-respondents rely on groundwater as their primary source, with about 15 using surface water and just a few purchasing groundwater or using groundwater under the influence of surface water (Chart 8).

Chart 8. Nonrespondents - Primary Water Source



2018/19 DISADVANTAGED COMMUNITY WATER NEEDS SURVEY NON-RESPONDENTS

COUNTY	ORGANIZATION	WATER SOURCE	WASTE-WATER	WATER SUPPLY	BOTH
Del Norte	BERTSCH OCEANVIEW CSD	GWP		x	
Del Norte	HRC C.S.D.	GW		x	
Del Norte	KLAMATH C.S.D. (Del Norte Community Development)	GW			x
Del Norte	SMITH RIVER C.S.D.	GW		x	
Humboldt	ALDERPOINT COUNTY WATER	SW		x	
Humboldt	BENBOW W.C. — Del Oro Water Company	SW		x	
Humboldt	FERNDALE — DEL ORO WATER CO.	GW		x	
Humboldt	GARBERVILLE SANITARY DISTRICT	SW			x
Humboldt	MILL CREEK M.W.C.	GW		x	
Humboldt	MOONSTONE HEIGHTS MWA	GW		x	
Humboldt	ORICK C.S.D.	GW		x	
Humboldt	PALMER CREEK CSD	GW			x
Humboldt	PHILLIPSVILLE C.S.D.	SW		x	
Humboldt	REDWAY C.S.D.	SW			x
Humboldt	RIVERBEND MHP	GW		x	
Humboldt	RIVERSIDE CSD	GW		x	
Humboldt	Scotia CSD	SW			x
Humboldt	TRINIDAD, CITY OF	SW		x	
Humboldt	WADDINGTON W.W.	GW		x	
Mendocino	BIG RIVER VISTA MUTUAL WATER COMPANY	GW		x	
Mendocino	BRANSCOMB MWC	SW		x	
Mendocino	BROOKTRAILS TOWNSHIP CSD	SW			x
Mendocino	COVELO MOBILE HOME PARK	GW		x	
Mendocino	CREEKSIDE CABINS & RV RESORT	GW		x	
Mendocino	DOLPHIN ISLE MARINA	GW		x	
Mendocino	ELK COUNTY WATER DISTRICT	GU		x	
Mendocino	IRISH BEACH WATER DISTRICT	SW		x	
Mendocino	LAKE VIEW MUTUAL WATER CO.	GW		x	
Mendocino	LITTLE LAKE MOBILE HOME PARK	GW		x	
Mendocino	MILLVIEW COUNTY WATER DISTRICT	SW		x	
Mendocino	POINT ARENA WATER WORKS	GW		x	
Mendocino	POINT ARENA WWTP		x		
Mendocino	RIDGEWOOD WATER SYSTEM	GU		x	
Mendocino	UKIAH VALLEY SD		x		
Mendocino	WESTPORT COUNTY WATER DISTRICT	SW			x

COUNTY	ORGANIZATION	WATER SOURCE	WASTE-WATER	WATER SUPPLY	BOTH
Mendocino	WILDWOOD CAMPGROUND	GW		x	
Modoc	NEWELL COUNTY WATER DISTRICT	GW		x	
Siskiyou	CITY OF ETNA	SW			x
Siskiyou	COPCO LAKE MWC	GWP		x	
Siskiyou	COVE MOBILE VILLA	GW		x	
Siskiyou	FORT JONES, CITY OF	GW			x
Siskiyou	HAPPY CAMP C.S.D.	SW		x	
Siskiyou	HAPPY CAMP S.D.		x		
Siskiyou	HORNBROOK C.S.D.	GW			x
Siskiyou	JUNIPER CREEK ESTATES	GW		x	
Siskiyou	MACDOEL WATERWORKS	GW		x	
Siskiyou	MONTAGUE, CITY OF	SW			
Siskiyou	OAK VALLEY ACRES P.O.A.	GW		x	
Siskiyou	SHADOW MOUNTAIN MHP	GW		x	
Siskiyou	SISKIYOU CO. ROLLING HILLS MWC	GW		x	
Sonoma	ARMSTRONG VALLEY-CAL WATER SERVICE (PUC)	GW		x	
Sonoma	HAWKINS WATER CO-CAL WATER SERVICE (PUC)	GW		x	
Sonoma	NOEL HEIGHTS-CAL WATER SERVICE (PUC)	GU		x	
Sonoma	RANCHO DEL PARADISO-CAL WATER SVC (PUC)	GWP		x	
Sonoma	AUSTIN CREEK MUTUAL (Springhill)	GU		x	
Sonoma	BELMONT TERRACE MUTUAL WATER COMPANY	GW		x	
Sonoma	BLUE SPRUCE MOBILE HOME PARK	GW		x	
Sonoma	BODEGA WATER COMPANY	GU		x	
Sonoma	CALIFORNIA-AMERICAN GEYSERVILLE (PUC)	GW			
Sonoma	CALIFORNIA-AMERICAN WATER LARKFIELD (PUC)	GW		x	
Sonoma	DELORES LANE WATER SYSTEM	GW		x	
Sonoma	EL CRYSTAL MOBILE HOME PARK	GW		x	
Sonoma	EL PORTAL MOBILE ESTATES	GW		x	
Sonoma	GRATON CSD		x		
Sonoma	HEIGHTS MUTUAL WATER COMPANY	GW		x	
Sonoma	MAGIC MOUNTAIN MUTUAL WATER COMPANY	GW		x	
Sonoma	MICHELE MUTUAL WATER COMPANY	GW		x	
Sonoma	NORTH STAR MOBILE HOME PARK	GW		x	
Sonoma	PINE HILL TERRACE MOBILE HOME PARK	GW		x	
Sonoma	PLAZA MOBILE HOME PARK	GW		x	
Sonoma	RAINS CREEK WATER DISTRICT	GW		x	
Sonoma	RINCON VALLEY MOBILE ESTATES	GW		x	
Sonoma	ROSELAND MOBILE HOME PARK	GW		x	
Sonoma	RUSSIAN RIVER MUTUAL WATER CO.	GW		x	
Sonoma	SANTA ROSA MOBILE ESTATES	GW		x	
Sonoma	SHAMROCK MOBILE HOME PARK	GW			
Sonoma	SONOMA COUNTY CSA 41-SALMON CREEK	SW		x	
Sonoma	SOUTH PARK COUNTY SANITATION DISTRICT		x		
Sonoma	VALLEY FORD WATER ASSOCIATION	GW		x	
Sonoma	WAYSIDE GARDENS MOBILE HOME PARK	GW		x	
Sonoma	WESTERN MOBILE HOME PARK	GW		x	
Sonoma	WILLOWSIDE MUTUAL WATER COMPANY	GW		x	
Sonoma	WINDSOR, TOWN OF	GW			x
Trinity	BUCKTAIL MUTUAL WATER COMPANY	GW		x	
Trinity	PINE COVE RV PARK	GW		x	
Trinity	SALYER HEIGHTS W.S., INC	SW		x	
Trinity	SALYER MUTUAL WC (Formerly Riverview AC)	SW		x	
Trinity	TRINITY CENTER M.W.C.	SW		x	
Trinity	TRINITY VILLAGE MUTUAL WATER CO.	SW		x	
Trinity	WEAVERVILLE S.D.		x		

Water Source Key: GW: ground water; GWP: purchased groundwater; GU: groundwater under direct influence of surface water; SW: surface water

Appendix F. Technical Assistance & Trainings In-depth Responses

Technical Assistance

Respondents who indicated an "extreme" or "strong" need for technical assistance in a given subject were asked to explain their response. Categorized responses are provided in their entirety below.

Funding

- We need help writing the scope of work for a feasibility study, figuring the budget for the study, and finding a grant funding source.
- Five Creeks in the Round Valley Watershed (to the Eel River) require restoration projects
- Just need to know what opportunities there are for grants. We are aware of most loan opportunities but are always looking for grants.
- We have no staff to pursue or apply for grants or low interest financing.
- Extreme need due to lack of available revenues to support necessary infrastructure maintenance, repair and capital improvements.
- Primarily with identifying and pursuing grant opportunities.
- Always looking for grant opportunities for this disadvantaged community system
- Finding grant opportunities and learning how to better fund wastewater and water infrastructure repairs/upgrades.
- Help applying for grants.
- need a new water tank and water main
- aging infrastructure will need updating
- aging system, former owners used agricultural tubing, last year, about 100 feet replaced with pvc. mostly need funding to replace water lines, can't afford to do it all at once and funding for meters and an extra storage tank
- In general. We need a generator and installation for the water treatment for power outages. We need a new computer program system with current electronics. Currently running on non-supported windows xp. We need a complete maintenance and calibration of the treatment plant.
- Tech Assistance for grants on the extreme need for water/sewer and capital improvements.
- The district is approaching, sometime in the next few years, the need to replace our ocean outfall system. It is estimated that replacement construction will cost in excess of $2,000,000. We will need to explore grant funding opportunities and rate structure changes in order to accomplish this needed upgrade to our waste disposal system.
- GCSD is in the process of procuring grants, for engineering and technical assistance
- Assistance with identifying federal funding opportunities
- Grant Monies
- Grant writing assistance
- system in good shape, doesn't require much but needs new tank.
- There is nothing left of the water system. Given it will require a complete rebuild, it would seem this constitutes a "strong" need.
- Funding is the biggest need. The entire system is very old and prone to leaks, failure, substandard pressure.
- Currently do not have water meters. Existing elevated redwood storage tank has failed and been removed. We are currently using inadequate 2–5K poly tanks until we can get funding
- We know we need to upgrade our system and need to find funding sources. Most likely need to find grants as it is a small water company
- With a small customer base, and an aging infrastructure we need to secure grants. It seems that Districts that are in violation receive funding to correct the violations, but a District like ours, that is not in violation, cannot secure the State money needed to put in new pipes, etc. This is NOT a technical assistant need. This is a $$$$ need.
- Our water system is 30 years old and many items need replacing. The most expensive being our water tank and pump house need to be replaced ($350K–$400K) We have been putting money in reserve for several years however we don't have anything close to the funds needed. The 18 property owners need help by grant, low interest rate loans etc.
- need funding for improvements
- Since we are a disadvantaged community, rate structures are not adequate to cover capital needs. Funding opportunities are

required to address system infrastructure operations, maintenance and repair.

- Need funding to complete requirements for implementation of SWRCB CWSRF & DWSRF capital improvement projects.
- grant/loan resource acquisition
- We need help in finding grant opportunities for our rate payers and help in applying for them as we are an investor owned water company
- Grant funding
- Specific grant and funding opportunities for water storage projects, alternative energy and property procurement for wastewater reclamation.
- identification of available funding programs and assistance with funding process
- Help with finding money that is available for upgrades and repairs.
- Need to be made aware of funding opportunities for private water systems that will help in meeting the ongoing federal and state regulations/testing.
- AMWC is interested in learning about grant funding, particularly for what purposes grants are available, how to apply, how grants are scored. etc.
- 50+ year old distribution network for 128 residences; out of date water treatment plant;
- Need to fund changes demanded by waterboard staff such as filtration and Registered Civil Engineer fees, well changes and well expert costs.
- The water distribution system is need of replacement. Funding sources are needed for this work.
- Consolidation with neighboring water system to provide non-contaminated "ground" water. Need help funding consolidation.
- Applying for funding opportunities requires a great amount of administrative staff time — if the District is not going to pay someone to complete the grant applications. There are only two full-time administrative staff positions, one of whom can work on grant applications while taking care of the normal day-to-day functions. So, grant applications are a cumbersome, yet necessary process
- our system is 25 years old, with some parts estimated at being almost 100 years old. Some of our fire hydrants are tied into our potable water system and need to be separated. They are also not spread throughout the town. Our ordinances have not been updated since 1992 and do not reflect current practices, although we are starting to update them. Our distribution system is a mixed bag of poly pipe and metal pipe. We often have to ration water during the late summer when our spring flow diminishes. We do not have a secondary source of water if something happened to the spring. Trout Unlimited has applied for a planning grant for us, but the outcome is not certain.
- we need financial help for replacing old pipe and in purchasing and installing backflow valves.
- The District's ocean outfall is at the end of its useful life. MCCSD is looking for grant opportunities to help fund the replacement of this critical component in the District's infrastructure.
- Funding is key to us improving our system.
- We need to update, refurbish, modernize and automate our water system.
- develop grant applications.
- We have an aging water distribution infrastructure that could us some updating.

Regulatory

- We need to be current on new regulations so we can comply with them and learn to set up both annual and CIP budgets.
- meeting regulatory requirements is always a strong need)
- Continuing need for training in general regulatory compliance
- Support in updating our local limits and sewer use ordinance to support our pretreatment program as it relates to new cannabis laws.
- meeting DDW requirements
- Our wastewater plant struggles to meet current WQ regulations for some constituents.
- Repair/Replace/Permitting in the coastal zone.

System infrastructure — Maintenance & Repair

- Old infrastructure is showing signs of not keeping up with ongoing needs.
- System infrastructure maintenance and repair: the current transmission and distribution systems are old and in the case of the transmission system was patch-worked together using myriad materials such that it consists of numerous pipe sizes and materials. Additionally, the source water diversions are in need of improvements to screen and reduce the amount of NOM that end up in the transmission

system as well as our pressure filters at the water treatment plant. The distribution system has less variety of pipe sizes and materials, but still has some variation. More importantly with regard to the distribution system, some (many?) of the valves need to be replaced since they do not fully function as they should (this is especially frustrating with regards to valves intended to function as isolation valves that do not seat correctly and therefore do not completely stop water flow.

- Extreme Need due to necessary improvements to bring the system up to current codes and standards to accommodate the rebuilding efforts after and since Redwood Complex Fire.
- Our main in the street is old red brick pipe that has gone beyond its shelf-life and all supply lines from street to homes is old black plastic pipe that is brittle, cracking, and failing. None of the homes have water meters.
- aging system, former owners used agricultural tubing, last year, about 100 feet replaced with PVC. mostly need funding to replace water lines, can't afford to do it all at once and funding for meters and an extra storage tank
- Infrastructure mapping and assessment Robust GIS survey and model of all infrastructure
- We need help designing and implementing infrastructure improvements. We have a very old system and don't have the resources to do needed replacement. We need financial help.
- Infrastructure assessment
- Design for the interconnection and water meters
- At some point we will need to add meters to our system.

CIP

- We need to figure out low income-based charges and long-term CIP so we can stay within state and federal regulations and conserve water.
- Capital improvement plan — it has recently come to my attention that the district does not have a functioning capital improvement plan. Given the age of the system and some of the other issues I am aware of, a capital improvement plan seems to be of great importance if the district is to maintain and improve system performance. I have zero experience in creating CIPs yet I need to be integral in one's creation. Help would be extremely appreciated.
- Strong need due to lack of water supply and a service connection moratorium prevents the adequate collection of capital improvement reserves to support changing capital improvement needs.
- Software and training for financial management and for tracking accounts receivable and accounts payable
- CIP development and planning
- low interest financing options for implementation of Capital Improvement Plan.
- need to develop an incremental CIP to address distribution and treatment needs; limited CIP funding and small rate base;

System infrastructure — Operations

- The City of Sebastopol Public Works Department is struggling to meet he required system maintenance needs due to staffing levels.
- (improved water conservation strategy, rate structure changes, water rights changes, alternative energy options, etc.) Strong need due to lack of reliable water rights and inability to build capital reserves for improved or increased infrastructure.
- Small water system engineering, testing strategies, maintenance planning and operations.
- Training and certifications for our water/sewer personnel
- Guidance with administration, operation, and maintenance of the facilities is always an ongoing need.
- Alternative energy systems
- Solar systems (small sanitation zone)
- Ways to optimize aeration and sludge removal/ management
- Continuing need for training in basic water system operation
- AMWC could use technical assistance in completing its TMF, particularly identifying existing and closed wells located in the area where we source our water. Assistance is also needed in updating our Wellhead Protection Program.
- We need to get trained in cross-connection control and in turbidity and how to test for it.
- Planning and Design considerations. BMPs.
- Need to continue to develop the technical documents to describe City maintained systems

Rate structures

- Strong need due to lack of adequate rate studies throughout the area's water districts.
- need to increase rates
- Full process on getting our rate structure set for current and future needs without going thru Prop 218 each time.
- There is currently no rate structure in place each member pays a yearly fee.
- In need of a new rate structure. Also dealing with issues of ADU construction and loss of the ability to collect capacity charges.
- The Special District recently received a technical assistance grant from the SWRCB to utilize RCAC experts for its rate structure development.
- Rate study to restructure overall rates and fees of five districts consolidating into one.

No staff

- One of our major problems is that most people don't care enough to get involved, and the ones who do have to go to work. This is a volunteer position. I see seminars all the time scheduled by the state in Sacramento and elsewhere.
- Continuing need for training in board responsibilities

Trainings

Respondents who indicated an "extreme" or "strong" need for trainings and workshops in a given subject were asked to explain their response. Categorized responses are provided in their entirety below.

Grant writing

- We could benefit from Grant Writing training to put us in a better position to be awarded money when the opportunities are presented.
- need a grant to fund repairs to main distribution
- Do not know how to apply for grants
- GCSD is in the process of procuring grants, for engineering, technical assistance and rate structure study.
- If we were to obtain any future Grants for improvement, we would need assistance with this. Last time our District Engineer Helped with this issue and it was truly a blessing.
- Grant monies
- Ability to apply for available grant funding opportunities for Capital Improvement Plan implementation.
- Accessing grants without have to utilize outside consultants is important and we have little expertise.
- Training would be useful that addresses the types of grants that are available, eligibility, application procedures, and how grants are awarded (i.e. how grants are scored).
- Applying for grants and grant writing expertise
- Grant writing is critical, and sometimes, especially for state funding, the grant requirements can be daunting and overwhelming (all the requirements, both technical and non-technical)
- We don't have grant writers available or knowledge of how to write a grant.
- We could use assistance in writing a grant for a new storage tank. We currently have two tanks: one steel which was installed when our new treatment plant was built, and one with a vinyl liner that is well over twenty years old.
- We have no one with experience in grant writing. We need help if we ever expect to improve our system.

Financial

- learn to set up both annual and CIP budgets.
- Sebastopol will be seeking a RFP for a Water and Wastewater rate study within the next fiscal budget
- Financial management and planning for the future are major concern for small systems.
- Budgeting, rate setting structure,
- Planning for major increase in maintenance expenses.
- outside funding will be needed to meet future needs.
- We need help finding and applying for financial help
- Resource acquisition and planning through grants and loan programs
- The local board members have no particular expertise in technical or financial matters

Regulatory

- We need to be current on new regulations so we can comply with them

- We have been under a noncompliance order for 5 years. We need a new well, filtration, and supply tanks to meet 4 log requirements.
- Keeping abreast of new regulatory requirements
- Regulatory training for water and wastewater is always necessary due to the changing regulatory landscape.
- We have an extreme need for training in compliance with the wide variety of one size fits all unnecessary regulations imposed by the State.

Operator

- Local Distribution and Treatment certification classes would be helpful with operator training
- Need professional maintenance periodically on treatment plant
- licensing certificates and safety training are all needed in our organization
- Need a new policy manual for CSD to administer the water and wastewater facilities.
- local training for operator certifications and trainings on regular maintenance skill building
- We need assistance with pipe and valve replacement.
- Training always needed for new staff who are replacing more experienced staff in a variety of areas. Safety training topics often needed to stay current and keep new staff trained.

Program Management

- Federal funded project management
- planning to complete existing needs within our system.
- Due to many upgrades we have determined our need for program management training as necessary for cross training.

Maintenance

- Maintenance and upkeep have been the areas that tend to lack funding
- We need funding for maintenance and improvements to our aging system

Appendix G. Responses to Key Survey & Interview Questions

RESPONSES TO KEY SURVEY QUESTIONS

QUESTION 22: DOES YOUR SYSTEM HAVE PAID STAFF? CHECK ALL OF THE FOLLOWING THAT APPLY	
No water operator	6
Level 1 (T1/ D1)	42
Level 2 (T2/ D2)	50
Level 3 (T3/ D3)	28
Water operator without certification	7
Consultant	22
Administrative	44
Management	47
Other, please specify	41

Many of the respondents who chose "other" stated that they use contractors. For the smallest districts and mutual water associations, it is common for Board Members or shareholders to have a significant role in operating the system.

QUESTION 7: WHAT SERVICES DO YOU PROVIDE? CHOOSE ALL THAT APPLY.	
Water treatment and supply	98
Domestic water distribution	92
Irrigation water distribution	17
Wastewater collection	49
Wastewater treatment	41
Wastewater reuse	16
Storm drainage	24
Watershed restoration	7
Other	8

Those who chose "other" added the following categories: local Hazard Mitigation Planning, fire hydrant maintenance, Capital Improvement Programs, consulting for other Special Districts, electric power, fire/rescue services, parks and recreation, airport, street lights, groundwater management, and water conservation.

QUESTION 30: ARE YOUR CURRENT RATES SUFFICIENT FOR BUILDING CAPITAL IMPROVEMENT FUNDS AND COVERING OPERATING AND MAINTENANCE COSTS	
Yes	54
No	46
Don't know	10

QUESTION 31: IF YOU ANSWERED NO TO THE PREVIOUS QUESTION, DO YOU HAVE THE MEANS TO DETERMINE ADEQUATE RATES FOR MAINTAINING AND IMPROVING YOUR SYSTEM?	
N/A	19
Yes	29
No	16
Don't know	12

As discussed above, many respondents indicated a need for technical assistance or requested training opportunities focused on capital improvement planning and rate setting.

QUESTION 36: IS YOUR AGENCY CURRENTLY WORKING WITH OUTSIDE AGENCIES ON IMPROVEMENT PLANS OR PROJECTS?	
State Water Resources Control Board/ NCRWQCB	36
Rural Community Assistance Corporation (RCAC)	13
California Rural Water Association	11
California Department of Public Health	8
Local County	9
Other local government	7
Redwood Water Resources Network	1
US EPA	1
Wine County Water Works	1
Other	54

Of those who chose other, several identified the California Department of Water Resources IRWM grants, Cal EPA, California Department of Housing and Community Development, private consultants, USDA, and Trout Unlimited.

RESPONSES TO KEY INTERVIEW QUESTIONS

Describe the state of local water infrastructure (wastewater treatment, dams, pump stations, storage, etc.)?

Humboldt Bay Watershed Management Area (WMA): many interviewees are aware that infrastructure is "old," "outdated," or "aging." Eureka was named by 2 participants as a specific location of concern. McKinleyville, as a region being developed more recently, was noted as an area with strong infrastructure; 2 respondents noted the work of McKinleyville Community Services District in response to other questions. The specific type of infrastructure concern most noted was wastewater treatment (8).

North Coast Rivers WMA: Many people are served off of private wells or via surface water diversions, and those systems are not well monitored. The City of Fort Bragg's water system is in need of retrofitting and expansion, Mattole lacks municipal water, Crescent City's wastewater treatment plant, collections systems, and

main water source are in need of maintenance. Gualala's wastewater treatment plant is in good condition.

Trinity River WMA: Interviewees cited various needs for improvement throughout Trinity. One of the three water treatment facilities, and 20% of the water distribution pipeline, are in need of repair. Community Service Districts (CSD) serve half the population of Trinity, and the other half on private systems are not well monitored. Water quality would improve if the sewage system was expanded to include those creekside neighborhoods on septic.

Are you aware of any particularly effective and/ or innovative projects being implemented to deal with local water issues? Please describe the projects and who is managing them.

Humboldt Bay WMA:

- Bacteria Testing — Humboldt County Environmental Health
- Big Lagoon Watershed Acquisition — Big Lagoon CSD
- Big Lagoon Well Acquisition — Bid Lagoon CSD
- Blue Lake CIP Update — City of Blue Lake
- DWR Flood Planning — Arcata Fire District
- Elk River Restoration — RCAA Natural Resources division
- Humboldt Sewer Extension Assessment (Fairhaven — Samoa) — County of Humboldt
- Jacoby Creek Wetland Restoration — City of Arcata?
- Janes Creek Flooding Mitigation — City of Arcata? (2)
- Luffenholtz Creek Capacity Assessment — City of Trinidad
- Martin Slough Flood/SLR Mitigation — City of Eureka (2)
- McKinleyville Infrastructure Expansion — Chris Drop
- Powers Creek Restoration — Trees Foundation
- Reconnect for long-term water supply — Humboldt Bay Watershed Management District
- Samoa Wastewater Treatment Plant — DANCO (private company) (2)
- Sea Level Rise Plan — City of Arcata
- Septic/Stormwater Management — City of Trinidad (3)

North Coast Rivers WMA:

- Storage and forbearance projects in Mattole, Navarro, and possibly Outlet Creek near Willits
- Sanctuary Forest is planning for the development of Mattole's emergency water storage for use by the community and during fire.
- Sanctuary Forest is restoring natural groundwater levels and flows by adding log weirs to streams.
- Salmon Restoration Federation conducting stream restoration in the South Fork Eel.
- Recycling Ukiah's wastewater for use as irrigation water.
- Joint project between Trout Unlimited, The Nature Conservancy, and Mendocino RCD to enhance flow on the Navarro River.
- Joint project between CA Land Stewardship Institute and NRCS to develop off-stream ponds to reduce number of stream diversions.

Trinity River WMA:

- Watershed Center's subsidized and voluntary water conservation and storage program in Browns Creek watershed (modeled after Mattole program).
- Trinity RCD is working with Weaverville CSD to improve the diversions on West Weaver Creek to conserve more water.
- 5Cs has partnered with Trinity County on storm water collection and water quality in Weaverville — a small project that could be the stepping stone for Weaverville to start addressing these issues and demonstrating their effectiveness to landowners and politicians.
- Yreka Creek storm water retention floodway restoration project.

What are the greatest impacts to forests in your region?

Humboldt WMA: Respondents largely noted logging's legacy and illegal cannabis grows — particularly water diversion, clearcutting, and grading. Some respondents also noted the impact of forest fires, both a perceived lack of prevention and impacts of suppression efforts.

North Coast Rivers WMA: Respondents noted a variety of impacts to forest health: fire suppression, high severity fires, lack of staffing and resources for proper management, and new road building in remote areas for agricultural purposes. The majority of the interviewees discussed the legacy impacts of logging, including sedimentation from old roads and overgrown forests.

Trinity WMA: Respondents noted a number of impacts to forest health: high temperature droughts, increasing temperatures, insects, disease, clearing for cannabis cultivation, legacy impacts from mining and logging that contribute to erosion, expansion of the WUI area, and fire suppression. All but one listed fire (large-scale high severity wildfires).

What are the barriers to addressing priority environmental issues?

North Coast Rivers WMA:

- Lack of sustained, programmatic funding as opposed to project-specific funding
- Permitting barriers
- Landowner consent/stakeholder consensus
- Educating the public as to the need

Trinity River WMA:

- Lack of funding
- Lack of monitoring
- Public's fear of government and regulations
- Political and social unrest
- People's aversion to change
- Science skeptics
- Existence of mining tailings
- Outdated forest plans for federal lands that don't include more recent science on fire ecology and management
- Insufficient federal funding and framework for managing illegal cannabis cultivation

How is cannabis cultivation impacting your community?

Humboldt Bay WMA: Respondents seem split on the impacts of cannabis cultivation in the community. For example, many point to the years of illegal cultivation and the cannabis industry's lack of participation tax payment, etc. Conversely, many point out that there has been an economic downturn following legalization due to the high cost of permitting and regulatory compliance. Still other respondents suggest that money from illegal cultivation has increasingly taken money out of the region.

Negative Impact Notes: Cannabis cultivation impacts families and neighborhoods by maintaining a culture of secrecy and exposing children and families to raids (legal and criminal) or limiting the perceived ability to reach out for law enforcement help (domestic violence, etc.); the boom and bust cycle of timber and fishing is being repeated with cannabis (currently in a bust); regulated more than any other agriculture (such as wine); regulatory and enforcement appear mismatched (limited enforcement); no financial assistance to comply with regulations, risking a return to the black market; "mom and pops" shutting down as large operations enter the market; grow houses raise housing costs

Negative Water Impact Notes: environmental damage from grows; watershed impacts; small land conversion efforts combine to create larger impacts; limited enforcement of the regulations designed to keep waterways safe; illicit materials end up at the wastewater treatment plant.

Positive Impact Notes: props up other industries (cannabis, restaurants); when enforced, regulation is good for waterways; a reduction in home grows and home hash labs past 2–4 years, making emergency response safer for emergency personnel; new industry could help diversify economy; was a major cash inflow; many applications in the works, so many going legal while fees benefit municipalities; communities who exclude all ag (Big Lagoon) have not seen a change; some more distant communities (Manila) have seen a decrease in supporting activities (trimming) as the need to seek areas with limited law enforcement has also decreased.

North Coast Rivers WMA: Answers ranged depending on location. Some discussed the impact of illegal water diversions by unpermitted growers, contamination, sensitive habitat degradation, illegal dumping, hostile environment, etc. Others spoke to the boost the industry previously provided the economy, now shifting due to legalization. Many recognize that the industry is in transition and are waiting to see who and how it shakes out.

Trinity River WMA: Across the board, interviewees spoke to the negative impacts of cannabis in Trinity County, particularly the untold effects of illicit grows on federal land. According to one respondent, there are an estimated 4000 grows throughout the county, and only 500 permits. Impacts mentioned include: dewatering streams, harmful chemical fertilizers and pesticides in the waterways, forest clearing and land grading, discarded trash in natural areas, and heightened social unrest.

Information for this section and interview information throughout this report was obtained in part from:

- Greenway. 2018. Key Expert Interview Preliminary Review of Responses. 17 pages.
- Wanderhill Consulting. 2019. North Coast Resource Partnership Pilot Interviews: Synthesis of Responses in the Trinity River & North Coast Rivers Watershed Management Areas. 14 pages.

Appendix H. NCRP Technical Assistance Selection Process

NORTH COAST RESOURCE PARTNERSHIP ROUND 1 TECHNICAL ASSISTANCE SELECTION PROCESS

GHD | 718 Third Street Eureka California
NCRP Proposition 1 Ad Hoc Committee
NCRP Tribal Proposition 1 Ad Hoc Committee

January 2018

Table of Contents

1. INTRODUCTION

The North Coast Resource Partnership (NCRP) was awarded a grant from the Department of Water Resources, Proposition 1 Integrated Regional Water Management Grant Program to support North Coast Tribes and economically disadvantaged communities (DAC) throughout the *North Coast Region through the NCRP Outreach & Involvement: Tribal Engagement & Economic Opportunity for Disadvantaged Communities (DACTI) Program*. The contract agreement was finalized in April 2017 between the Department of Water Resources and Humboldt County, the NCRP Contract Administrator. The agreement terminates in April 2020.

In 2016, the NCRP Proposition 1 Ad Hoc Committee was formed to direct staff in development of the NCRP Proposition 1 IRWM Disadvantaged Community Outreach and Involvement program per the IRWM Guidelines. The NCRP Tribal Proposition 1 Ad Hoc Committee was formed in April 2017 to direct California Indian Environmental Alliance (CIEA) staff in development of Tribal elements of the NCRP Proposition 1 IRWM Disadvantaged Community Outreach and Involvement program per the agreement between CIEA and Humboldt County.

West Coast Watershed (WCW) and the NCRP Tribal Coordinator, CIEA under contract with Humboldt County will act as the hubs for all needs assessment outreach and technical assistance work. WCW will work with disadvantaged communities in the North Coast but will not focus on Tribal communities specifically.

Technical Assistance for North Coast Tribes will be selected through a subsequent process led by the North Coast Tribal Representatives and the Tribal Engagement Coordinator, CIEA. Tribal projects will be forwarded to the NCRP Tribal Representatives Proposition 1 Ad Hoc Sub-committee for a separate selection process. The Tribal NCRP Round 1 Technical Assistance Selection Process document is located in Appendix B of this document. For more information about Tribal selection please contact the Tribal Engagement Coordinator.

This document outlines the process for selection of entities to receive technical assistance in one of several rounds of technical assistance to be provided by the NCRP.

1.1 Goals and Objectives

The goals and objectives of this effort support the overall goals and objectives of the NCRP listed below. In particular, the technical assistance included in this project will focus on Goal 2: Economic Vitality and Goal 4: Beneficial Uses of Water.

Goal 1: Intraregional Cooperation & Adaptive Management

Objective 1 — Respect local autonomy and local knowledge in Plan and project development and implementation

Objective 2 — Provide an ongoing framework for inclusive, efficient intraregional cooperation and effective, accountable NCIRWMP project implementation

Objective 3 — Integrate Traditional Ecological Knowledge in collaboration with Tribes to incorporate these practices into North Coast Projects and Plans

Goal 2: Economic Vitality

Objective 4 — Ensure that economically disadvantaged communities are supported and that project implementation enhances the economic vitality of disadvantaged communities by improving built and natural infrastructure systems and promoting adequate housing

Objective 5 — Conserve and improve the economic benefits of North Coast Region working landscapes and natural areas

Goal 3: Ecosystem Conservation and Enhancement

Objective 6 — Conserve, enhance, and restore watersheds and aquatic ecosystems, including functions, habitats, and elements that support biological diversity

Objective 7 — Enhance salmonid populations by conserving, enhancing, and restoring required habitats and watershed processes

Goal 4: Beneficial Uses of Water

Objective 8 — Ensure water supply reliability and quality for municipal, domestic, agricultural, Tribal, cultural, and recreational uses while minimizing impacts to sensitive resources

Objective 9 — Improve drinking water quality and water related infrastructure to protect public health, with a focus on economically disadvantaged communities

Objective 10 — Protect groundwater resources from over-drafting and contamination

Goal 5: Climate Adaptation & Energy Independence

Objective 11 — Address climate change effects, impacts, vulnerabilities, and strategies for local and regional sectors to improve air and water quality and promote public health

Objective 12 — Promote local energy independence, water/ energy use efficiency, GHG emission reduction, and jobs creation

Goal 6: Public Safety

Objective 13 — Improve flood protection and reduce flood risk in support of public safety

1.2 Technical Assistance Funding Targets

The NCRP anticipates more than one round of technical assistance to be provided as part of the overall DACTI program. The first allocation of technical assistance will focus primarily on water and wastewater providers based on the NCRP Needs Assessments conducted in 2014 and 2017 as data is available.

The NCRP is developing a separate strategy to outreach to economically disadvantaged communities, Tribes, and other organizations responsible for watershed management, stormwater, and other ecosystem functions. If a project of this type is identified during this first technical assistance round, it may be included, but these types of projects are not the focus of this first allocation of technical assistance.

1.3 General Priorities for Technical Assistance

The first allocation of technical assistance will be focused on entities with a project that are nearly ready to apply for the first round of NCRP IRWMP Proposition 1 Implementation funding, anticipated in spring of 2018. In these cases, technical assistance will support application development and or minor project development assistance. Additionally, this process will identify communities that may not be ready to apply for implementation funding in 2018, but need technical assistance to develop a project for the second round of DWR IRWMP funding anticipated in 2020. This process will also identify communities that need assistance with capacity building including technical training, financial management, capital improvement planning, and other non-project technical assistance.

1.4 Funding Available

A specific funding amount from the overall DACTI program was not set for this first round of technical assistance. Funding will be made available based on relevant need and timing constraints related to the NCRP IRWMP Proposition 1 Implementation Round 1 funding solicitation. Budget will be saved for future technical assistance efforts and trainings. The typical technical assistance budget for this round is anticipated to be in the range $5,000 to $15,000 per entity.

2. PROCESS FOR IDENTIFICATION OF POTENTIAL ENTITIES TO RECEIVE TECHNICAL ASSISTANCE

The process to identify entities benefiting from an infusion of technical assistance provided by the NCRP is a mixture of qualitative and quantitative data. The sources of data to be used to identify technical assistance targets are presented below. Tribal entities identified as needing assistance through any of the following sources will be integrated into the Tribal process outlined in Appendix B.

- 2014 NCRP Water and Wastewater Survey needs assessment
- 2017 NCRP Water and Wastewater Survey needs assessment
- SWRCB Division of Drinking Water Violation Notices (2012–2017)
- RWQCB Violation Notices (2012–2017)
- Outreach to Regional Board Permitting Agencies
- Outreach to Division of Drinking Water, including water system consolidation staff
- 2014 DAC Model Projects
- Outreach to existing SWRCB technical assistance providers to identify gaps in current assistance
- Outreach to systems impacted by wildfires

- Sanitation Deficiency Systems List from Indian Health Service (IHS) for Tribes
- United States Environmental Protection Agency (USEPA) Violation Notices, Needs Assessments, TA providers

The 2014 and 2017 Needs Assessment survey will be used first to identify those systems that may need technical assistance based on survey responses. Next, systems with violation notices from the SWRCB Division of Drinking Water or the North Coast Regional Water Quality Control Board (NCRWQCB), or USEPA (for federally-regulated systems), will be identified as potential recipients. The project team will follow up as necessary with the SWRCB Division of Drinking Water, NCRWQCB and USEPA staff to determine the status of violations and if there are any other systems not identified that may need assistance.

Pending the timing of the DWR IRWMP Proposition 1 Implementation funding solicitation, data from the 2017 NCRP Needs Assessment collected through January [or February] 2018 will be used to determine the first allocation of technical assistance. Those systems that are not able to complete the Needs Assessment by the end of January [or February] will be considered for assistance in the next round of technical assistance allocation.

In addition, project staff will follow up with those entities who received technical assistance for development of model projects as part of the 2014 NCRP Water & Wastewater Service Provider Outreach & Support Program, who meet the threshold criteria described below to determine if assistance is still necessary, especially with application preparation for identified implementation projects.

The SWRCB has their own technical assistance program to assist entities on multiple systems and project related topics. Currently, approximately 40 entities are receiving assistance in the North Coast Region. Technical Assistance is being provided primarily by the Rural Community Assistance Corporation (RCAC) and California Rural Water Association (CRWA). The Project Team will follow up with RCAC and CRWA to determine if there are technical assistance gaps that additional NCRP technical assistance could fill to support project implementation.

Lastly, while it is anticipated that most systems impacted by wildfire will receive state and federal assistance to repair damages, these systems were identified as possibly vulnerable in some disadvantaged communities. Outreach to these systems will be made to determine whether impacts by wildfire have contributed to meeting the threshold criteria described below and the need for technical assistance.

3. PROCESS FOR RANKING AND SELECTION OF ENTITIES TO RECEIVE TECHNICAL ASSISTANCE

Once potential targets for technical assistance are identified, the project team will apply the technical assistance selection criteria presented below to rank the needs and develop a list of potential technical assistance recipients. Outreach to the top ranked entities will be completed to ensure assistance is still needed. A ranked list of recommended technical assistance projects will be developed for review and approval by the NCRP Proposition 1 Ad Hoc Committee for disadvantaged communities. Tribal technical assistance projects will be forwarded to the NCRP Tribal Representatives Proposition 1 Ad Hoc Sub-committee for a separate selection process (see Appendix B). The Ad Hoc committees and/or the support team may outreach directly to potential entities during the review process to request additional information as needed.

3.1 Guidelines for Technical Assistance Scoring and Selection

3.1.1 Threshold and General Evaluation Criteria

This section presents threshold criteria that will be used for the selection technical assistance.

Eligible Technical Assistance Recipients

Eligible technical assistance recipients include the following:

- Publicly-owned community water and wastewater systems (i.e.., counties, cities and districts)
- Privately-owned non-profit community water and wastewater systems (i.e.., non-profit mutual water companies)
- Non-profit or publicly-owned non-community water and wastewater systems (i.e.., public school districts)
- Tribal-owned water and wastewater systems

Economically Disadvantaged and Distressed Communities

Technical assistance is targeted at assisting economically disadvantaged communities (DAC) as well as economically distressed areas (EDA) as described below.

- Economically Disadvantaged Community (DAC): A community with an annual median household income (MHI) that is less than 80% of the statewide annual median household income.
- Severely Economically Disadvantaged Community (SDAC): A community with an annual household income that is less than 60% of the statewide MHI.

- Economically Distressed Area: A community with a population of 20,000 persons or less, a rural county, or a reasonably isolated and divisible segment of a larger area where the segment of the population is 20,000 persons or less, with an MHI that is less than 85 percent of the statewide median household income, and with one or more of the following conditions: (1) Financial hardship; (2) Unemployment rate at least 2 percent higher than the statewide average; (3) Low population density.

Technical Assistance will be provided exclusively to DACs, SDAC, EDAs with some preference give to SDACs. Tribal communities will be provided Technical Assistance through a separate process. The Department of Water Resources (DWR) website mapping tool for DAC and EDA will be the basis for this determination. The DWR web mapping is based on US Census American Community Survey (ACS) 5-Year Data: 2010–2014, which reflects a statewide Median Household Income of $61,489 and hence calculated DAC and SDAC thresholds of $49,191 and $36,893, respectively and a threshold of $52,266 for EDAs.

Regional Representation

While not a threshold criterion, the NCRP's Proposition 1 Ad Hoc and Tribal Ad Hoc Committees will make every effort to ensure geographic representation by providing technical assistance to communities from each of the seven counties and Tribal districts.

Meaningful Outcomes

While also not a threshold requirement, the project team will evaluate if the available budget for technical assistance will result in a meaningful outcome for the service provider.

3.1.2 Technical Assistance Selection Criteria

Generally, the technical assistance needs will be evaluated in accordance with the criteria outlined in the table below. Future allocations of technical assistance and future versions of the selection criteria will include items specific to watershed and ecosystem projects. The sources of data that will be used for ranking of technical assistance needs include the following:

- 2014 NCRP Water and Wastewater Survey Needs Assessment
- 2017 NCRP Water and Wastewater Survey Needs Assessment
- DWSRF Policy prioritization categories based on health risk
- CWSRF Policy prioritization categories based on public health, water quality, and sustainability
- NCRP Policies & Guidelines
- DWR IRWM Program Guidelines
- Tribal specific criteria

Appendix A

Technical Assistance Ranking Criteria

EVALUATION CRITERIA	SCORING DESCRIPTION	POINTS
Threshold Criteria: Is the community a DAC, SDAC or EDA	Yes/no (If no, not eligible for technical assistance)	N/A
Threshold Criteria: Is the community an eligible recipient as defined above?	Yes/no (If no, not eligible for technical assistance)	N/A
Drinking Water State Revolving Fund Criteria for Public Health Need	• Category A — Immediate Health Risk (10 points) • Category B — Untreated or At-Risk Sources (9 points) • Category C — Compliance or Shortage Problems (7 points) • Category D — Inadequate Reliability (5 points) • Category E — Secondary Risks (3 points) • Category F — Other Projects (1 points)	0–10
Clean Water State Revolving Fund Criteria for Public Health/ Water Quality	• Class A — Public Health Problems (10 points) • Class B — Pollution of Impaired Water Bodies (8 points) • Class C — Compliance with requirements or Water Recycling Projects (5 points) • Class D — Projects Serving as Preventative Measures (3 points) • Class E — Other Projects (1 point)	0–10
Implementation Readiness	• Community with project ready for implementation funding needing application assistance for NCRP IRWMP Prop 1 Round 1 Implementation Funding (6 points) • Community in needed of planning/ design assistance to be prepared for NCRP IRWMP Prop 1 Round 2 Implementation Funding (4 points) • Community in need of technical, managerial or financial assistance to improve capacity to develop and implement projects (2 points)	0–6 points

EVALUATION CRITERIA	SCORING DESCRIPTION	POINTS
Sustainability	• The project supports infill development or results in the reuse or redevelopment of land in an area presently served by transit, streets, water, sewer, and other essential services. (3 points) • The applicant maintains a capital improvement plan, an asset management plan, or has performed a full-cost pricing analysis, or the project incorporates climate change adaptation.(3 points) • The project protects environmental or agricultural resources such as farm, range and forest lands; wetlands and wildlife habitats; recreational lands such as parks, trails, and greenbelts; or landscapes with locally unique features or areas identified by the state as deserving special protection. (3 points) • The project is cited in one or more regional environmental management plans. (3 points) • The project incorporates wastewater or storm water/urban runoff recycling, water conservation, energy conservation, low impact development, or reduced use of other vital resources (3 points) • The project uses low-impact treatment for lower lifecycle operating costs through reduced energy, chemical, or other inputs. (3 points)	0–10 points Can incorporate multiple benefits up to a maximum score of 10 points
DWR IRWM Program Statewide Goals	• Make Conservation a California Way of Life (1 point) • Increase Regional Self-Reliance and Integrated Water Management Across All Levels of Government (1 point) • Protect and Restore Important Ecosystems (1 point) • Manage and Prepare for Dry Periods (1 point) • Expand Water Storage Capacity and Improve Groundwater Management Increase Flood Protection (1 point)	0–5 points

NCRP TECHNICAL ASSISTANCE SCORING CRITERIA DEFINITIONS

State Water Resources Control Board — Drinking Water State Revolving Fund Policy Priority System

To the maximum extent practicable, priority will be given to projects which: 1) address the most serious risk to human health, 2) are necessary to ensure compliance with the requirements of the Safe Drinking Water Act, and 3) assist systems most in need on a per household basis. Projects are ranked by the categories established below to achieve these objectives. These criteria are taken directly from the "Policy for implementing the Drinking Water State Revolving Fund" prepared by the State Water Resources Control Board, effective January 1, 2015.

CATEGORIES

Category A — Immediate Health Risk

- Documented waterborne disease outbreaks attributable to the water system.
- Water systems under a court order to correct SDWA violations or to correct water outage problems.
- Total coliform Maximum Contaminant Level (MCL) violations attributable to active sources contaminated with coliform bacteria (fecal, E. coli, or total coliform).
- Severe domestic water supply outage(s) posing an imminent threat to public health and safety.
- The distribution of water containing nitrates/nitrites or perchlorate in excess of the Maximum Contaminant Level (MCL).

Category B — Untreated or At-Risk Sources

- Surface water or GWUDI sources that are untreated, not filtered, or have other filtration treatment deficiencies that violate federal or state regulations.
- Non-GWUDI groundwater sources that are contaminated with fecal coliform or E. coli and are inadequately treated.
- Uncovered distribution reservoirs.

Category C — Compliance or Shortage Problems

- Water quantity problems caused by source capacity, or water delivery capability that is insufficient to meet existing demand.
- The distribution of water containing chemical or radiological contamination in violation of a state or federal primary drinking water standard (other than nitrate/nitrite or perchlorate).
- Total Coliform Rule violations for reasons other than source contamination.

Category D — Inadequate Reliability

- Non-metered service connections, or defective water meters.
- CWSs, and PWSs owned by public schools, with a single source and no backup supply.
- Distribution reservoirs with non-rigid covers in active use.
- Disinfection facilities that lack needed reliability features, such as chlorine analyzers or alarms.
- Disinfection deficiencies that violate Waterworks Standards.

Category E — Secondary Risks

- The distribution of water that exceeds secondary drinking water standards.

- The distribution of water in excess of a published chemical notification level.
- The distribution of water which has exceeded a primary drinking water standard in one or more samples, but has not violated a running average standard.
- A standby groundwater source that exceeds a primary drinking water standard.
- Deficiencies that violate Waterworks Standards (other than those already covered above).

Category F — Other Projects

Deficiencies attributable to the water system that address present or prevent future violations of health-based standards (other than those already covered above).

CONSOLIDATION CRITERIA

"Consolidation" means a project that involves the restructuring of two or more public water systems into a single public water system.

State Water Resources Control Board — Clean Water State Revolving Fund Policy Priority System

The State Water Resources Control Board uses a priority class to aid in ranking projects for funding which was incorporated into the NCRP technical assistance selection process. Additionally, sustainability criteria were also taken form the Clean Water State Revolving Funds "Policy for implementing the Clean Water State Revolving Fund" prepared by the State Water Resources Control Board, amended February 1, 2015.

PRIORITY CLASSES

Class A — Public Health Problems

- POTW projects or other projects required to alleviate public health problems where the County Board of Supervisors, City Council, or the County Health Officer has certified that a health problem exists, and where a State or Regional Water Board has (1) adopted a prohibition for elimination of discharges and such prohibition has been approved by the State Water Board, (2) approved a local moratorium prohibiting the construction of new systems, or (3) adopted a cease and desist order; or
- Nonpoint source, storm water drainage pollution, and estuary enhancement projects required to comply with prohibitions, postings, limitations, or warnings that have been imposed by responsible health authorities, and where the State or Regional Water Board has concurred with the findings of the health authority and has established a time schedule for correction or elimination of the threat to public health.

Class B — Pollution of Impaired Water Bodies

- Projects to address impairments of CWA 303(d) listed water bodies.

Class C — Compliance with requirements or Water Recycling Projects

- Projects necessary to comply with WDRs or other regulatory requirements formally imposed by the State Water Board or Regional Water Board, or projects necessary for correction of threatened violations of existing or proposed WDRs; or
- Projects that provide for treatment and delivery of municipal wastewater or groundwater contaminated due to human activity, for uses that will offset or augment state and local water supplies or projects that are necessary to meet state policy regarding recycled water.

Class D — Projects Serving as Preventative Measures Against Additional

- Water Quality Degradation for Impaired or Unimpaired Water Bodies Projects to control discharges to impaired or unimpaired waters, where correction of such discharges may, or may not, be required through formally adopted WDRs. This class includes projects to provide additional wastewater treatment capacity.

Class E — Other Projects

SUSTAINABILITY CRITERIA

A project that supports or incorporates one or more of the following sustainability goals receives one priority point for each area addressed:

- The project supports infill development or results in the reuse or redevelopment of land in an area presently served by transit, streets, water, sewer, and other essential services.
- The applicant maintains a capital improvement plan, an asset management plan, or has performed a full-cost pricing analysis, or the project incorporates climate change adaptation.
- The project protects environmental or agricultural resources such as farm, range and forest lands; wetlands and wildlife habitats; recreational lands such as parks, trails, and greenbelts; or landscapes with locally unique features or areas identified by the state as deserving special protection.
- The project is cited in one or more regional environmental management plans.
- The project incorporates wastewater or storm water/urban runoff recycling, water conservation, energy conservation, low impact development, or reduced use of other vital resources
- The project uses low-impact treatment for lower lifecycle operating costs through reduced energy, chemical, or other inputs.

Department of Water Resources Integrated Water Management State Water Resources Control Board — Clean Water State Revolving Fund Policy Priority System

ACTION	DESCRIPTION	APPLICABILITY
1. Make Conservation a California Way of Life	• Building on current water conservation efforts and promoting the innovation of new systems for increased water conservation. • Expand agricultural and urban water conservation and efficiency to exceed SB-X7-7 targets	Applicable NCRP DAC Projects
2. Increase Regional Self-Reliance and Integrated Water Management Across All Levels of Government	• Ensure water security at the local level, where individual government efforts integrate into one combined regional commitment where the sum becomes greater than any single piece. • Support and expand funding for Integrated Water Management planning and projects • Improve land use and water alignment • Provide assistance to disadvantaged communities • Encourage State focus on projects with multiple benefits • Increase the use of recycled water	Applicable NCRP DAC Projects
3. Achieve the Co-Equal Goals for the Delta	• This action is directed towards State and federal agencies; however, consideration will be afforded to projects that also support achieving the co-equal goals providing a more reliable water supply for California and to protect, restore, and enhance the Delta ecosystem.	Not Applicable
4. Protect and Restore Important Ecosystems	• Continue protecting and restoring the resiliency of our ecosystems to support fish and wildlife populations, improve water quality, and restore natural system functions. • Restore key mountain meadow habitat • Manage headwaters for multiple benefits • Protect key habitat of the Salton Sea through local partnership (NA) • Restore coastal watersheds • Continue restoration efforts in the Lake Tahoe Basin (not applicable) • Continue restoration efforts in the Klamath Basin • Water for wetlands and waterfowl • Eliminate barriers to fish migration • Assess fish passage at large dams • Enhance water flows in stream systems statewide	Applicable NCRP DAC Projects
5. Manage and Prepare for Dry Periods	• Effectively manage water resources through all hydrologic conditions to reduce impacts of shortages and lessen costs of state response actions. Secure more reliable water supplies and consequently improve drought preparedness and make California's water system more resilient. • Revise operations to respond to extreme conditions • Encourage healthy soils	Applicable NCRP DAC Projects
6. Expand Water Storage Capacity and Improve Groundwater Management	• Increase water storage for widespread public and environmental benefits, especially in increasingly dry years and better manage our groundwater to reduce overdraft. • Provide essential data to enable Sustainable Groundwater Management • Support funding partnerships for storage projects • Improve Sustainable Groundwater Management • Support distributed groundwater storage • Increase statewide groundwater recharge • Accelerate clean-up of contaminated groundwater and prevent future contamination	Applicable NCRP DAC Projects
7. Provide Safe Water for	• Provide all Californians the right to safe, clean, affordable and accessible water adequate for human consumption, cooking, & sanitary purposes. • Consolidate water quality programs • Provide funding assistance for vulnerable communities • Manage the supply status of community water systems • Additionally, as required by Water Code §10545, in areas that have nitrate, arsenic, perchlorate, or hexavalent chromium contamination, consideration will be given to grant proposals that included projects that help address the impacts caused by nitrate, arsenic, perchlorate, or hexavalent chromium contamination, including projects that provide safe drinking water to small disadvantaged communities.	Redundant to other criteria — not used for NCRP DAC Projects

ACTION	DESCRIPTION	APPLICABILITY
8. Increase Flood Protection	• Collaboratively plan for integrated flood and water management systems, and implement flood projects that protect public safety, increase water supply reliability, conserve farmlands, and restore ecosystems. • Improve access to emergency funds • Better coordinate flood response operations • Prioritize funding to reduce flood risk and improve flood response • Encourage flood projects that plan for climate change & multiple benefits	Applicable NCRP DAC Projects
9. Increase Operational and Regulatory Efficiency	• This action is directed towards State and federal agencies; however, consideration will be afforded to eligible local or regional projects that also support increased operational of the State Water Project or Central Valley Project.	Not Applicable
10. Identify Sustainable and Integrated Financing Opportunities	• This action is directed towards State agencies and the legislature.	Not Applicable

Appendix I.
NCRP Technical Assistance Rankings

November 2018

To: North Coast Resource Partnership Proposition 1 DACTI Program Ad Hoc Committee Ref. No.: 11146311

From: Rebecca Crow, PE and Hannah Stewart, PE Tel: 707-267-2244

cc: Katherine Gledhill, West Coast Watershed

Subject: Ranked List of Eligible Water and Wastewater Systems for NCRP IRWMP Technical Assistance

Introduction

Over the past several months, GHD has worked with West Coast Watershed to compile a list of water and wastewater system providers in the North Coast region that are in need of technical assistance, and ranked the systems according to level of need for technical assistance. The evaluation criteria for this ranking was as outlined in the North Coast Resource Partnership (NCRP) Technical Assistance Round 1 Selection Process Draft Document, January 2018 and is summarized for reference below. This memo presents a summary of the scoring for technical assistance followed by a summary of the final recommended providers to receive technical assistance under this round of funding provided by the NCRP.

Technical Assistance for North Coast Tribes will be selected through a subsequent process led by the North Coast Tribal Representatives and the Tribal Engagement Coordinator, CIEA.

1. SUMMARY OF TECHNICAL ASSISTANCE RANKING PROCESS

This section is divided into the initial technical assistance evaluation criteria as presented in the January 2018 Draft Selection Process Document and supplemental evaluation criteria that were applied to projects.

1.1. Initial Technical Assistance Evaluation Criteria

The primary technical scoring evaluation criteria and comments on how the criteria were applied during the ranking process is provided in Table 1. The application of evaluation criteria is further described in Section 3. Once the initial evaluation criteria were applied, supplemental criteria for evaluation were added to reflect existing levels of need based on input from regulators, existing funding application in process and executed, and consolidations which are described in Section 4.

Table 1 Technical Assistance Evaluation Scoring Criteria

EVALUATION CRITERIA	SCORING DESCRIPTION	POINTS	CRITERIA SCORING NOTES
Threshold Eligibility Criteria Is the community a DAC, SDAC or EDA	Yes/no (If no, not eligible for technical assistance) DAC = Disadvantaged Community (Median Household Income [MHI] less that 80% of the statewide MHI) SDAC = Severely Disadvantaged Community (MHI less that 60% of the statewide MHI) EDA = Economically Distressed Area (MHaI less than 85% of Statewide MHI in a community of 20,000 or less that also has (1) Financial hardship; (2) Unemployment rate at least 2 percent higher than the statewide average; (3) Low population density)	N/A	Based on the NCRP developed merged GIS layers for DAC, SDAC and EDA. Actual service area polygons were not available for many systems, the system main address was used for this analysis.
Threshold Eligibility Criteria Is the community an eligible recipient as defined in the scoring description?	Yes/no (If no, not eligible for technical assistance) Publicly-owned community water and wastewater systems (i.e.., counties, cities and districts) Privately-owned non-profit community water and wastewater systems (i.e.., non-profit mutual water companies) Non-profit or publicly-owned non-community water and wastewater systems (i.e.., public school districts)	N/A	The differentiation of private non-profit systems from private for profit systems was difficult to make. The notes below describe sources used to make the determination. However in some cases the not for profit status was unknown and will need to be verified.

EVALUATION CRITERIA	SCORING DESCRIPTION	POINTS	CRITERIA SCORING NOTES
Drinking Water State Revolving Fund Criteria for Public Health Need	• Category A — Immediate Health Risk (10 points) • Category B — Untreated or At-Risk Sources (9 points) • Category C — Compliance or Shortage Problems (7 points) • Category D — Inadequate Reliability (5 points) • Category E — Secondary Risks (3 points) • Category F — Other Projects (1 points)	0–10	Scoring was based on State Water Resources Control Board violations list for the last 5 years. Additional scoring details on adjustments are provided below.
Clean Water State Revolving Fund Criteria for Public Health/ Water Quality	• Class A — Public Health Problems (10 points) • Class B — Pollution of Impaired Water Bodies (8 points) • Class C — Compliance with requirements or Water Recycling Projects (5 points) • Class D — Projects Serving as Preventative Measures (3 points) • Class E — Other Projects (1 point)	0–10	Scoring was based on Regional Water Quality Control Board violations list for the last 5 years. Additional scoring details on adjustments are provided below.
Implementation Readiness	1. Community with project ready for implementation funding needing application assistance for NCRP IRWMP Prop 1 Round 1 Implementation Funding (6 points) 2. Community in needed of planning/ design assistance to be prepared for NCRP IRWMP Prop 1 Round 2 Implementation Funding (4 points) 3. Community in need of technical, managerial or financial assistance to improve capacity to develop and implement projects (2 points)	0–6 points	1–3. At a minimum every system that noted they have need in one or more technical assistance category received 2 points.
Sustainability	4. The project supports infill development or results in the reuse or redevelopment of land in an area presently served by transit, streets, water, sewer, and other essential services. (3 points)	0–10 points Can incorporate multiple benefits up to a maximum score of 10 points	No projects ended up receiving points for infill, survey responses were search for potential notes on redevelopment. This could apply to wildfire affected systems, but point were not assigned in this round.
	5. The applicant maintains a capital improvement plan, an asset management plan, or has performed a full-cost pricing analysis, or the project incorporates climate change adaptation.(3 points)		If the system indicated they had a capital improvement plan (CIP) in the survey notes or DDW or RWQCB indicated they had a CIP, the system received these points.
	6. The project protects environmental or agricultural resources such as farm, range and forest lands; wetlands and wildlife habitats; recreational lands such as parks, trails, and greenbelts; or landscapes with locally unique features or areas identified by the state as deserving special protection. (3 points)		No water or wastewater projects ended up receiving points for environmental protection.
	7. The project is cited in one or more regional environmental management plans. (3 points)		No projects ended up receiving points for inclusion in environmental plans, as this was not a direct survey question.
	8. The project incorporates wastewater or storm water/urban runoff recycling, water conservation, energy conservation, low impact development, or reduced use of other vital resources (3 points)		Points were awarded if survey responses included discussion of these categories as a potential project.
	The project uses low-impact treatment for lower lifecycle operating costs through reduced energy, chemical, or other inputs. (3 points)		This criteria was very similar to No. 8 and due to limited information in the survey responses, benefits from this category were considered captured in No. 8 above.

EVALUATION CRITERIA	SCORING DESCRIPTION	POINTS	CRITERIA SCORING NOTES
DWR IRWM Program Statewide Goals	9. Make Conservation a California Way of Life (1 point)	0–5 points	System was given a point if their survey comments mentioned they had leaking pipes, and project included distribution system improvements, if project included metering an unmetered system, or if the project included conservation of drinking water, the system received a point here.
	10. Increase Regional Self-Reliance and Integrated Water Management Across All Levels of Government (1 point)		System was given a point if their survey indicated they were currently relying on other systems or sources for water/ww. Point earned here for consolidation projects as well.
	11. Protect and Restore Important Ecosystems (1 point)		System was given a point if their survey noted that they were interested in addressing inflow and infiltration into the sewer system. No other clear ecosystem benefits were identified and scored.
	12. Manage and Prepare for Dry Periods (1 point)		System was given a point if their survey noted they were trying to implement water conservation techniques or needed additional water storage. Given a point if project is water system consolidation
	13. Expand Water Storage Capacity and Improve Groundwater Management Increase Flood Protection (1 point)		System was given a point if the project included new or expanded storage or if the project could beneficially influence groundwater management.

2. APPLICATION OF INITIAL TECHNICAL ASSISTANCE EVALUATION CRITERIA

Using the above evaluation criteria, GHD took the following steps to compile the proposed technical assistance list based on the following ranking process:

1. Combined the survey results and the system lists from the 2014 and 2018 Needs Assessment Surveys.
2. Added information on North Coast Regional Water Quality Control Board (NCRWQCB) and Division of Drinking Water (DDW) violations systems received between 2013 and 2018.
3. Removed tribal systems, as they are being evaluated under a separate process.
4. Verified that the systems on the list are considered a Disadvantaged Community (DAC), Severely Disadvantaged Community (SDAC) and/or are located within an Economically Distressed Area (EDA). (Those systems that were not a DAC, SDAC or within an EDA were removed from the list for technical assistance.) It is important to note that the methodology for evaluating economic status for this technical assistance process differs from the methodology used by the Department of Water Resources (DWR). The NCRP merged the SDAC, DAC and EDA layers between census designated places, census tracts and census block groups. This results in more entities being included as economically disadvantaged/distressed than directly using the DWR data, which would exclude some census designated places as being disadvantaged/ distressed. The process for evaluating economic status also only used the system primary address for the determination not, the service area, so there may be cases where a portion of the service area is not economically disadvantaged/ distressed. Prior to recommending a provider for technical assistance, the DAC/ EDA status for some providers was checked against the DWR data to verify the community status was at least 50% DAC/EDA.
5. Added a separate entry for systems that provide both water service and wastewater service, so that they could be ranked separately for technical assistance.
6. Assigned points to systems based on standard survey response, using the criteria scoring presented above.
7. Assigned points based on State Water Resources Control Board (SWRCB) Drinking Water violations over the last five years. Violations for improper monitoring which did not result in water quality violations did not receive

points. Point were also adjusted based on input from the DDW if violations had been addressed. If new violations were noted by the Division of Drinking water, they were verified on the Safe Drinking Water Information System Drinking Water Website. If water quality violations were documented points were given to the system.

8. Assigned points based on NCRWQCB violations over the last five years. Several violations did not receive points, as the violation was not related to operation of the wastewater treatment plant or collection system.
9. Reviewed survey comments for information on a potential project ideas for each system and added a potential project column including information for those systems that appeared to have a specific project in mind.
10. Used https://businesssearch.sos.ca.gov/ and removed systems listed as "Domestic Stock", which indicated the system was privately owned.
11. Reviewed the list of wastewater service providers with the North Coast Regional Water Quality Control Board (NCRWQCB). Received verbal comments from NCRWQCB about systems that would be good candidates for technical assistance. A written copy of the NCRWQCB comments was provided back to the NCRWQCB for review and no revisions were requested. In general the NCRWQCB good candidate comments reflected systems with compliance issues that could be helped with the amount of funds the NCRP had available per project and those systems that have not historically asked for assistance, but could use support.
12. Reviewed the list of water service providers with the Division of Drinking Water District Offices 01, 03 and 18. Received comments from Division of Drinking Water Districts. Edits were made to the technical assistance ranking to reflect changes in on-going violation status, consolidation projects, as well as the entities readiness for assistance.

3. SUPPLEMENTAL TECHNICAL ASSISTANCE EVALUATION CRITERIA

Once the preliminary ranking was developed and input received from the NCRWQCB and Division of Drinking Water Districts, additional point adjustments were made as follows:

- Responsiveness: In the experience of the technical review team and regulatory agencies, responsiveness is key to technical assistance being effective and for making progress on addressing system issues. System were given one additional point for responding to the 2014 survey and one point for responding to the 2018 survey.
- Currently receiving funding assistance: Entities that are currently receiving planning or construction funds from DWSRF/CWSRF program, were considered in less need of technical assistance as compliance work was being conducted and an adjustment of minus five points was made.
- Currently in process for funding assistance: Entities that show as in process on a DWSRF/CWSRF Application according to the SWRCB, were considered in process on some technical assistance and adjustment of minus two points was made.
- Entity previously received NCRP funding for a similar project: For example City of Crescent City, City of Eureka previously received proposition 50 wastewater funds from the NCRP and three points were subtracted.
- RWQCB input: Those systems identified by the NCRWQCB as benefiting from Technical Assistance were given an additional five points.
- DDW input: Those systems identified by the DDW as benefiting from Technical Assistance were given an additional five points.
- Consolidation Projects: Project that involves consolidation of two or more systems were given an additional two points. Consolidation project already received points for increasing regional self-reliance and managing and preparing for dry periods. However as consolidation projects were determined to be a key project type that could benefit smaller systems additional points were awarded.

Once the final adjusted points were developed each of the projects was ranked based on their score within each county. Projects that received the same score within the same county were given the same rank. The technical assistance list was then reviewed and the top candidates in each county were selected for potential technical assistance.

4. SUMMARY OF RESULTS

Based on the evaluations presented above, the top candidates including the first and second ranked system from each County followed by a few of the remaining overall highest scoring systems are provided for the evaluated water systems and wastewater systems (**Table 2**). Water providers are evaluated first, followed by wastewater systems. **Attachment A** to this memo presents the full ranking of all water and wastewater systems that were included in the technical assistance evaluation.

This graphic shows all providers and indicates technical assistance need by size of dot, as indication in the legend. **Attachment B** to this memo provides the same information broken out into water and wastewater system, ranked by score within each county. Both **Attachment A** and **Attachment B** exclude those systems that were not considered DAC or EDA and also exclude Tribal Systems which are being evaluated separately.

Table 2 Top Ranked Water Systems for IRWMP Technical Assistance

SYSTEM NAME	COUNTY	SURVEY(S) COMPLETED		COUNTY RANK	TOTAL POINTS	RANKING JUSTIFICATION	POTENTIAL PROJECT
		2014	2018				
Jedsmith Homeowners Assn.	Del Norte	Y	Y	1	25	Identified as a good candidate by District 1. E. coli contaminated well. They are requesting consolidation project.	Consolidation with Hussey Ranch Corporation CSD
Journey's End Mobile Home Park [1]	Sonoma	Y	Y	1	22	Identified as a good candidate by District 18 (assuming they are rebuilding low-income housing).Park uninhabitable and well contaminated after 2017 fire.	Consolidation with City of Santa Rosa
Briceland C.S.D.	Humboldt	N	Y	1	20	Insufficient water storage. Need additional hydrants throughout town. Existing 42,000 gal storage tank with wood roof in need of replacing.	Multiple project opportunities: add water storage; add hydrants; new storage tank
Willits, City Of (Water)	Mendocino	N	Y	1	20	Identified as a good candidate by District 3. Multiple violations for exceedance of disinfection byproduct MCL.	Project to address disinfection byproduct
Salyer Heights W.S., Inc	Trinity	Y	N	1	19	Identified as a good candidate by District 1. Violations for turbidity issues. Need new filters, tanks, distribution system and test well.	Many project opportunities: new filters, tanks, distribution system, test well
Treasure Creek Woods Mwc	Trinity	Y	Y	1	19	Identified as a good candidate by District 1. Needs meters. Needs storage. Test wells do no meet waterworks standards.	Many project opportunities: meter installations, storage tank, test well
Shasta View Heights Owners Association [2]	Siskiyou	Y	Y	1	17	District 1 identified as a good candidate. Consolidation study/ intertie with Yreka. Distribution system main replacement. All homes need backflow prevention devices.	Many project opportunities: consolidation with Yreka, distribution system improvements
Newell County Water District (Water)	Modoc	N	N	1	2	Existing well/pump does not have sufficient capacity for the demand of the distribution system.	Groundwater well improvements
Sonoma County Mutual Water Company	Sonoma	N	Y	2	19	Identified as a good candidate by District 18. System needs full surface water treatment.	Surface water treatment
Alderpoint County Water	Humboldt	Y	N	2	18	Identified as a good candidate by District 1. Needs capacity building, including additional treatment and storage. Asbestos cement piping.	Additional treatment/ storage. Distribution system main replacements
Redwood Valley County Water District	Mendocino	Y	N	2	15	District 3 identified as a good candidate. Many homes within the District were destroyed in the fire, so they have lost customers and therefore revenue.	Evaluation of sustainable path forward for operations with current reduced revenue and demand.
Big Rock C.S.D.	Del Norte	Y	Y	2	14	Aging and outdated treatment and distribution system infrastructure in need of upgrades and replacements	Treatment system upgrades, distribution system replacements.
Gasquet C.S.D.	Del Norte	N	Y	2	14	District 1 identified as a good candidate. Aging treatment and distribution system in need of updates and replacements — 48 year old redwood tank that is leaking	Storage tank replacement
Dorris, City Of (Water)	Siskiyou	Y	Y	2	13	Identified as a good candidate by District 1. Needs funding for meters for commercial service lines.	Installing new meters
Valley Ford Water Association	Sonoma	Y	N	3	18	Identified as a good candidate by District 18. Nitrate and E. coli in water	Biological cultural report for plan to connect to new well.
Yulupa Mutual Water Company	Sonoma	Y	Y	4	17	Inadequate storage due to failure of old tank. System includes unmetered connections	New water meters, possible new water tank
South Cloverdale Water Company	Sonoma	N	Y	4	17	District 18 identified as a good candidate. Unreliable water source — insufficient capacity during drought 2014.	Consolidation study/intertie with City of Cloverdale.

SYSTEM NAME	COUNTY	SURVEY(S) COMPLETED		COUNTY RANK	TOTAL POINTS	RANKING JUSTIFICATION	POTENTIAL PROJECT
		2014	2018				
Indian Creek Trailer Park (Water)	Trinity	Y	Y	3	16	District 1 identified as a good candidate. In need of generator and new infiltration gallery.	Consolidation study/intertie with Weaverville CSD or new infiltration gallery
Magic Mountain Mutual Water Company	Sonoma	N	N	6	15	District 18 identified as a good candidate. E.coli MCL violation. In need of 4-log virus inactivation treatment upgrades	Upgrade treatment to meet 4-log virus inactivation.
Weaverville C.S.D.	Trinity	Y	Y	4	14	District 1 identified as a good candidate. In need of new clarifiers	Treatment plant upgrade — clarifiers
West Water Company (Puc)	Sonoma	Y	Y	7	14	District 18 identified as a good candidate. Need new water tank and water main.	New water tank and water main replacement project

Notes:

Journey's End Mobile Home Park – currently getting help from Burbank Housing and based on conversations with District 18, this project may not be ready to go for this round of funding.

Shasta View Heights Association — should simultaneously consider other potential consolidations with Yreka, including Juniper Creek Estates and Cove Mobile Villas, which were both also identified good candidates by District 1.

Table 2 Top Ranked Wastewater Systems for IRWMP Technical Assistance

SYSTEM NAME	COUNTY	SURVEY(S) COMPLETED		COUNTY RANK	TOTAL POINTS	RANKING JUSTIFICATION	POTENTIAL PROJECT
		2014	2018				
Blue Lake, City Of (Wastewater)	Humboldt	Y	Y	1	12	Identified as a good candidate by NCRWQCB. Interested in alternative energy systems.	Energy efficiency/ alternative energy study/project.
Lake Shastina C.S.D (Wastewater)	Siskiyou	N	Y	1	12	Working on planning grants for upgrades/repairs of sewer system. Need help finding/applying for funding to continue	Sewer system upgrades and repairs.
Del Norte County Community Service Area	Del Norte	Y	N	1	10	Identified as a good candidate by NCRWQCB. They have over 15 old lift stations in need of upgrade or replacement.	Lift station replacement
Covelo C.S.D.	Mendocino	Y	Y	1	4	Moderate repairs of collection system needed.	Collection system repairs.
Hopland Public Utility District (Wastewater)	Mendocino	Y	N	1	4	Under order from CA Regional Water Board to conduct monitoring for their percolation pond. They are currently non-compliant.	Identify locations and implement monitoring wells for their percolation pond.
Mendocino City C.S.D. (Wastewater)	Mendocino	Y	Y	1	4	Ocean outfall needs to be replaced	Ocean outfall replacement.
Ukiah, City Of (Wastewater)	Mendocino	Y	Y	1	4	Not meeting discharge permit requirements	Treatment system upgrades.
Weaverville S.D.	Trinity	Y	N	1	7	Identified as a good candidate by NCRWQCB.	Treatment system/collection system upgrades.
Newell County Water District (Wastewater)	Modoc	N	N	1	5	Identified as a good candidate by NCRWQCB.	Surveys/NCRWQCB provided no indication of specific potential project.

SYSTEM NAME	COUNTY	SURVEY(S) COMPLETED		COUNTY RANK	TOTAL POINTS	RANKING JUSTIFICATION	POTENTIAL PROJECT
		2014	2018				
Montague, City Of (Wastewater)	Siskiyou	Y	N	2	11	Identified as a good candidate by NCRWQCB. Recent lawsuit cleaned out their funds.	Treatment system upgrades.
Redway C.S.D. (Wastewater)	Humboldt	Y	N	2	11	Sewer mains in need of replacement.	Sewer main replacement
Miranda C.S.D. (Wastewater)	Humboldt	Y	Y	2	11	Identified as a good candidate by NCRWQCB.	Piping/infrastructure replacement
Crescent City, City Of (Wastewater)	Del Norte	Y	N	2	8	WWTP has had trouble meeting effluent limits for TSS and TRC. They are in the process of fulfilling a compliance project.	Assistance in meeting compliance project goals. Treatment upgrades.
City Of Rohnert Park (Wastewater)	Sonoma	N	Y	2	6	Lack of DAC WWTPs in Sonoma County	Surveys/NCRWQCB provided no indication of specific potential project.
Cloverdale, City Of (Wastewater)	Sonoma	N	Y	2	6	Lack of DAC WWTPs in Sonoma County	Surveys/NCRWQCB provided no indication of specific potential project.
Lewiston C.S.D. (Wastewater) [1]	Trinity	N	Y	2	5	At the time of the 2018 survey, they were in need of funding to implement SWRCB and CWSRF capital improvement projects.	After receiving $17 million in funding, unclear what projects may be remaining.
Dorris, City Of (Wastewater)	Siskiyou	Y	Y	3	9	Identified as a good candidate by NCRWQCB. Sewer lift stations are failing.	Sewer lift station replacements.
Fieldbrook Glendale C.S.D. (Wastewater)	Humboldt	Y	N	4	9	DAC wastewater service area, with High inflow and infiltration resulting in high treatment costs.	Address Inflow and Infiltration into the Sewer Collection System

Notes:

1. Lewiston Community Services District includes the recently consolidated Lewiston Park Mutual Water Company and Trinity Dam Mobile Home Park. And, although they have recently received significant funding, there were no other wastewater systems within Trinity County that had any points, except for the higher ranking Weaverville Sanitary District.

5. RECOMMENDATIONS

Given the amount of funding available ($5,000 — $15,000 per system), GHD expects that approximately twenty (20) DAC water and wastewater systems in the North Coast region will be able to be helped by this first allocation of technical assistance. To assure the distribution of technical assistance throughout the seven (7) counties within the region and to provide assistance to both water and wastewater systems, GHD recommends that these twenty (20) systems include the two highest-ranking water systems and the single highest-ranking wastewater system for each county. Although it is clear that both water and wastewater systems in the North Coast region are in need of technical assistance, the water systems in the region appear to have a slightly greater need, not only per the evaluation criteria used in the rankings, but also per discussions with the NCRWQCB and DDW Districts 1, 3 and 18. Therefore, GHD recommends this 2/3 water and 1/3 wastewater distribution approach.

Technical Assistance for North Coast Tribes will be selected through a subsequent process led by the North Coast Tribal Representatives and the Tribal Engagement Coordinator, CIEA.

6. NEXT STEPS

- The Ad Hoc Committee reviews the Technical Recommendations and considers approval of the above recommendation, modifications to be made to the list and/or direction for process improvement.
- GHD works with West Coast Watershed (WCW) to implement the technical assistance direction of the Ad Hoc Committee through subcontracts with engineering firms approved by the ad hoc committee in the fall of 2017.
- WCW and GHD will send out an email to the systems that will be offered technical assistance committee through this allocation.
- Within a week of the email, GHD will call each system to discuss and confirm their need for technical assistance. GHD will also gather additional information on the potential project during these calls.

If through these discussions, it is discovered that a system is no longer in need of technical assistance, GHD will call and make the offer of technical assistance to the next highest-ranking system on the list within the same county.

Appendix J. Survey-Derived Technical Assistance

Each of the fourteen systems receiving technical assistance in 2019 through the NCRP DACTI program is briefly described below with respect to the need for and type of assistance provided. For each system, an engineering report was developed to document the process; any of these can be obtained by contacting: kgledhill@westcoastwatershed.com

Jed Smith Homeowners Association, Water System Evaluation

Project Need: This system's groundwater has been determined by DWR to be under the influence of surface water. They currently treat with chlorine and balance pH with caustic. They do not have filtration, which is required for all wells under the influence of surface water; this has resulted in a boil water notice to customers.

Project Objectives: Evaluate alternatives to improve drinking water quality of the Jed Smith Homeowner's Association system and remove necessity for boil water notices.

Activities: Engineering staff (GHD) performed technical assistance to address project objectives including leading a technical review meeting with JSHOA, HRCCSD, GHD, and the SWRCB Division of Drinking Water on treatment needs and consolidation steps and reviewing issues with the current system configuration and contamination issues.

GHD evaluated system data and presented in the final technical report, which evaluates several alternatives for lifting the boil water notice including:

1. Installation and operation of a multi-barrier filtration system
2. Installation and operation of a new well and associated distribution piping
3. Consolidation between JS-HOA and Hussey Ranch Corporation Community Services District (HRC-CSD).

Alternatives were evaluated based on permitting requirements, capital costs, and long-term advantages and disadvantages. The consolidation alternative includes administrative changes and infrastructure improvements to comply with Del Norte Local Agency Formation Commission (LAFCo) Proposed Provision of Water Service (Del Norte LAFCo, 2019).

The preferred alternative is consolidation between JS-HOA and HRC-CSD due to long term benefits accruing to both water supply entities. The consolidation alternative includes an intertie on the north end of the HRC-CSD current boundary to JS-HOA, a new well using existing HRC-CSD distribution piping, and upgrades to JS-HOA water storage to ensure hydraulic compatibility between the two systems. Based on a Class IV cost estimate, the probable cost for consolidation is between $1.13M and $1.59M.

The next steps for pursuing consolidation include a joint board meeting between JS-HOA and HRC-CSD to discuss and resolve administrative requirements and fees, reviewing potential funding sources, conducting a median household income survey, and applying for funding. Funding sources include grant programs from the State Resources Control Board, United States Department of Agriculture, California Infrastructure Bank, and the Department of Water Resources. NCRP staff will check back with this system during the next funding round.

Briceland Community Services District

Project Need: There are several active and potential water loss conditions; inadequate water storage volume; inadequate fire suppression water distribution piping; and several operation and maintenance deficiencies.

Project Objectives: Identify alternative solutions to address need and evaluate each based on their ease of operation, relative cost, permitting and maintenance requirements, and durability/ dependability.

Activities: To address project objectives, NCRP engineering staff (GHD) undertook research and analyses including:

- Evaluate water loss conditions and identify solutions
- Identify solutions to inadequate water storage volume
- Identify solutions to inadequate fire suppression water distribution infrastructure
- Identify and prescribe solutions for O&M deficiencies

The final engineering report provided a list of recommended improvements. The system received assistance with proposal for the 2018/19 North Coast Resource Partnership IRWM project solicitation and project was prioritized and approved for Round 1 Proposition 1 IRWM funding.

The project will improve the water intake, treatment, and fire suppression systems for Briceland and enhance the community's resiliency and autonomy by increasing water conservation and fire-fighting capabilities and reducing annual O&M costs.

City of Willits

Project Need: The City of Willits currently lacks water supply reliability; its primary well is in need of an upgrade and there is no secondary source of water for this community, making it vulnerable to climate uncertainty.

Project Objectives: The objective is to improve water supply reliability for the City of Willits with the upgrade of one well pump and development of a second well. This project seeks to ensure adequate groundwater production to satisfy the City's water demands during peak usage months, if possible. The project has multiple parts:

- Well Upgrade — Move a 30 hp pump and controls from the Elias Replacement Well to the Long 20 Test Well. Determine the best pump to achieve the desired production from the Elias Replacement Well.
- PG&E Service Installation and Upgrade — The City has already submitted an application to PG&E for power to the Long 20 test well. The City needs help with this coordination and the potential upgrade for the Elias Well service. There is some overlap with the first category as they relate to power.
- Long 20 Test Well Tie-in — The test well will have to be connected to the line that currently conveys raw water from the Elias Replacement Well to the Groundwater Treatment Plant.
- Pilot Testing — Describe the pilot tests necessary to determine if the current treatment plant can remove the arsenic from the Long 20 Test Well to an acceptable level. The City's desire is to have ND (not detected) test results on arsenic, if feasible. The plant was designed to remove arsenic and it is understood that the filters at the facility were provide by Groundwater Surplus. There is a final hydrogeologic report for the Long 20 Test Well.

Project Activities: Received NCRP 2018/19 IRWM Project Application Assistance and evaluated the non-SGMA CASGEM groundwater monitoring planning and reporting requirements. The project was approved for Round 1 Prop 1 IRWM funding.

The project will expand groundwater capacity, increasing conjunctive use and system resiliency. This flexibility increases options for managing water quality, aquifers, watersheds, and critical habitats. Secure water also represents an economic justice benefit for a severely disadvantaged community.

Treasure Creek Woods Mutual Water Company (TCW MWC)

Project Need: The existing distribution system is comprised of AC pipe, failing copper services, and thin-walled PVC pipe that has numerous leaks which require complete shutdown and draining of the entire system due to no isolation valves. Leaks often go undetected for long periods until water pools on the surface indicating a significant amount of water loss. Leaks lower available water pressure for consumption and firefighting suppression in a very high fire hazard severity zone frequently threatened by wildfires.

Project Objectives: Investigate options to improve reliability, resiliency and quality of water supply.

Activities: Developed Treasure Creek Woods Mutual Water Company, Storage and Distribution System Improvements Project Technical Memorandum, which was based on the following:

- Evaluated existing wells.
- Determined if significant improvements could be made to existing wells or if a new well should be the goal for Treasure Creek Woods MWC's primary source. Provide recommendation on improvements and conceptual design and cost estimates.
- Evaluated storage needs
- Evaluated water demands to determine recommended potable storage for the system.

Engineering staff also assisted with NCRP 2019 Round 1 Prop 1 IRWM application. The application was not selected for inclusion with prioritized projects; NCRP staff will check in with this system as funding opportunities through NCRP become available.

Shasta View Heights HOA

Project Need: The major deficiencies generally consist of a lack of distribution system and storage tank isolation valves, lack of backflow prevention devices, and the need for groundwater monitoring and inspections. The noted deficiencies are issues that affect the reliability of the system and health and safety of the HOA's customers and the environment.

Project Objectives: Improve reliability, resiliency and safety of water distribution system and supply through the addition of isolation valves and backflow preventers.

Project Activities: Engineering staff (PACE) undertook the following tasks to meet project objectives:

- Determined most beneficial locations for isolation valves and prepared preliminary design for their installation.

- Identified locations where backflow preventers are needed and prepare preliminary design for the installation.
- Investigated possibility of deepening existing wells.

PACE also developed a technical memo that outlined the project needs, project alternatives, immediate needs and discussed the preferred alternative. The system received technical assistance with 2019 IRWM proposal, but the proposal was not selected as a prioritized project. NCRP staff will check in with this system as funding opportunities through NCRP become available.

Newell County Water District (CWD)

Project Need: The CWD has insufficient storage capacity, in part due to inability to use existing 1982 100,000-gallon steel water storage tank, an aging, inefficient, and faulty SCADA control system, and insufficient source capacity during dry months when large agricultural wells are pumped for irrigation.

Project Objectives: Perform necessary investigations of existing infrastructure to recommend next steps.

Project Activities: Developed technical report on above investigations of options to improve reliability and resiliency of water supply through the following activities:

- Investigated existing well #1 and pump; assessed condition.
- Determined pump suitability for existing groundwater well water levels.
- Provided recommendations for project prioritization: improved well #1 SCADA controls and a new well.

Provided NCRP 2018/19 IRWM Project Application Assistance; system was approved for Round 1 Prop 1 IRWM funding.

The funded project will not address all of the system's issues, but instead will install new SCADA controls and a new well, which will help to ensure the system operates more reliably and ensure reliable source capacity for the community. Improvements to the existing tank will be assessed for future construction funding.

Sonoma County Mutual Water Company (SCMWC)

Project Need: The system's water source has been found to be under the influence of surface water; so it is currently out of compliance with drinking water regulations for groundwater under the influence of surface water. CCT is insufficient; the system has no filtration. The system currently serves 17 connections.

Project Objectives: Long-term objectives for SCMWC include storage to be able to adequately meet CCT and service needs. More immediate objectives include turbidity monitoring data to help determine existing water quality design requirements for future upgrades.

Project Activities: NCRP engineering staff (GHD) completed a design level topographic survey of the proposed Water Treatment Plant Site. GHD also set semi-permanent survey control points suitable for future construction layout. NCRP staff will check back with this system when Round 2 funding becomes available.

Alderpoint County Water

Project Need: Water supply infrastructure is inadequate or in disrepair; for example, existing service connections appear to be not much more than a hose clamp on a poly pipe, and all service saddles are rusting away. Parts of the system are leaking and it's difficult to determine where and staff are experiencing issues with PLC programming capacity within the water treatment plant.

Project Objectives: Develop a strategy to improve water use efficiency and water supply reliability through updates to the distribution system. This strategy should at a minimum include the following tasks:

- Replace all existing leaking/rusting service saddles.
- Replace all meters that are past their useful life within the distribution system.
- Install additional isolation valves and flow submeters in strategic locations to help identify leaks and enable isolation of portions of the system during leaks.

Project Activities: LACO obtained system plans dating from 1964 and plans from the upgrades performed in 2009 and has begun the process of writing a thorough description of the system in its current state. This will rely heavily on notes collected during a site visit and additional information to be provided by the system operator. LACO also began collecting ideas and relevant information to prioritize upgrades needed for the system. The project has been put on hold until Round 2 when the NCRP engineering team will begin incorporating the existing information into conceptual plans and work with the system to identify which upgrades will be suitable for the Round 2 IRWM funding cycle.

Gasquet Community Services District, Gasquet Water System Analysis

Project Need: The community is at risk of loss of water supply from seismic activity. The existing 100,000-gallon redwood tank and 200,000-gallon bolted steel tank are not up to current seismic code, and the water distribution system includes an 8-inch DI bridge crossing thought to be seismically vulnerable. The bridge crossing connects the community to the water source, so a major seismic event would leave GCSD without water for the length of time to rebuild the pipeline. Additionally, the North Fork area is not connected to the Gasquet water system; approximately 40 parcels lack water services, including fire suppression. There is no main meter or any fire hydrants in the North Fork area.

Project Objectives: Improve community disaster resiliency by bringing tanks and distribution system into compliance with seismic standards. Improve operation reliability and efficiency and regional water supply safety and reliability.

Activities: Engineering staff (GHD) undertook site evaluations, document reviews and analyses to provide preliminary information for upgrade planning to address the needs and meet objectives stated above. These activities included:

- Evaluated existing 200,000-gallon bolted steel tank for compliance with current seismic code and vulnerability to withstand a moderate earthquake event and remain in operation.
- Evaluated existing 100,000-gallon redwood tank for compliance with current seismic code and vulnerability to withstand a moderate earthquake event and remain in operation.
- Evaluate water tank site needs for additional security features including fencing, lighting, and intrusion alarms.
- Evaluated existing 8" ductile-iron pipeline over Middle Fork Smith River for seismic resilience.
- Evaluated the feasibility of installing a new water tank in a secondary location to increase system reliability.
- Continued to evaluate the feasibility of consolidating North Fork area into the CSD system, including evaluation of demands, capacity of the water plant to meet projected demands, order of magnitude costs for new infrastructure associated with consolidation.
- Discussion with Del Norte LAFCO on consolidation requirements. Developed system demands for main and North Fork system.
- Developed preliminary design information on consolidation of the North Fork residents

NCRP staff will check in with this system for the Round 2 IRWM funding cycle.

City of Dorris

Project Need: The City of Dorris is currently not meeting state regulations to provide a reliable, safe drinking water supply source. The primary and secondary water sources are in need of upgraded infrastructure due to high arsenic levels and sandy water. The primary well is out of compliance and needs a new well house building, a new chlorination system and an emergency generator. The City is also looking to add meters to commercial service lines to incentivize conservation.

Project Objectives: Ensure water supply reliability and water conservation through technical planning support for upgrades to existing system and provide technical support for NCRP IRWMP 2019 application submittal.

Activities: Engineering staff designed improvements to well and housing technical specifications and provided assistance with an application for NCRP IRWM Prop 1, Round 1 funding. This included coordination with the City of Dorris to determine locations and number of commercial meters needed within the City of Dorris' distribution system and preparation of cost estimates, schedules and other items required by NCRP IRWM Prop 1, Round 1 funding application. Phase II of this project/application should include addition of meters on commercial service lines.

The project was not prioritized by the NCRP; NCRP staff will check in with the City of Dorris during the next funding cycle.

Covelo Community Services District

Project Need: Covelo CSD has high nitrogen concentrations in the wastewater effluent.

Project Objectives: Develop range of available options to improve reliability, resiliency and treatment of Covelo's wastewater.

Activities: To achieve objectives, the following activities were undertaken:

- Investigated ways to improve nitrogen removal through the wastewater treatment plant.
- Identified projects that would improve nitrogen removal at Covelo's wastewater treatment plant (WWTP). For the projects identified:
  - » Provided description of improvement

- » Identified improvement to the community made by the project
- » Provided cost estimates

Engineering staff also provided assistance with a proposal for the 2018/19 North Coast Resource Partnership project solicitation and the CSD's project was prioritized and approved for Round 1 Proposition 1 IRWM funding.

The project will reduce inflow and infiltration and improve water treatment capacity and operations as well as achieving carbon-neutral treatment through installation of solar panels.

Hopland Public Utility District (HPUD)

Project Need: The system is non-compliant with DHS regulations, buts lacks resources to begin the planning process. The system also lacks an adequate map of the wastewater collection system.

Project Objectives: Perform a community wide survey of the Hopland Wastewater Collection System and provide maps and files for future project planning and project application documentation.

Activities: Engineering staff (LACO) completed a complete survey of entire HPUD collection system including approximately 14,000 LF of sanitary sewer and one hundred manholes. Survey data collection included GPS-derived geodetic location and elevation on the center of each Sanitary Sewer Manhole Cover, and the invert elevation(s), pipe diameter(s) and flow direction(s) of pipes entering and exiting each Sanitary Sewer Manhole. Survey data was provided in an Excel Spreadsheet format and graphically delineated in an AutoCAD drawing file.

Weaverville Sanitary District (SD)

Project Need: Sewer system failure is leading to regular Sanitary System Overflows (SSOs) for the Weaverville SD.

Project Objectives: Eliminate or reduce SSO pollution events by replacing sewer mains heavily damaged by root intrusion, structural defects, and/or inadequate grade.

Activities: Engineering staff (PACE) evaluated the excessive inflow & infiltration issue and developed a list of possible remedies, providing advantages and disadvantages of each. Engineering staff also provided technical assistance with preparation of the NCRP 2019 IRWM application and Weaverville SD's project was prioritized by the NCRP and awarded IRWM funding in April 2020.

Valley Ford Water Association

Project Need: The community of Valley Ford does not have a reliable water supply; current needs for all public facilities are met with hauled water, an ongoing situation for the past decade. Groundwater is not highest quality; it is high in nitrates and has often had positive test results for coliform. Wells are leased and there is an ongoing disagreement regarding whether the lease terms have been broken. Groundwater supplies in the area are slim and the only identified alternative well with sufficient yield is high in fluoride.

- Site Description: groundwater supply with fluoride removal and disinfection.

Project Objectives: Increased water supply reliability for the Valley Ford community through improvements to the outdated well and treatment infrastructure and installation of a second well. The project design has been ongoing for several years. The Cultural Resource Study and the Biological Assessment need to be updated to make the project "shovel ready."

Activities: To achieve project objectives, the NCRP hired consultants to perform the following services.

- Update to the Cultural Resources Study – Tom Origer & Associates

In order to comply with Section 106 of the National Historic Preservation Act, a Historic Properties Identification Report (HPIR) was produced by a licensed professional who meets the Secretary of Interior's Professional Qualification Standards in Archaeology of Architectural History. The HPIR includes an investigation of all historical or culturally significant properties or structures and a current records search (not older than five years) from the California Historical Resources Information System (CHRIS) extending to one half mile of the Project's area of potential effects (APE). The HPIR includes maps showing all recorded resources and surveys in relation to the APE, records of Native American outreach, and resource records from the CHRIS search and newly identified resources. The preparation of the HPIR was under the direction of GHD.

- Update to the Biological Assessment – GHD

In order to comply with the Section 7(a)(2) of the Endangered Species Act (ESA) federal agencies, in consultation with the U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS), must ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any federally-listed threatened or endangered species, or result in the destruction or adverse modification of designated critical habitat.

GHD addressed the proposed Project in compliance with Section 7(c) of the ESA. This section of the ESA assures that, through consultation (or conferencing for proposed species), federal actions do not jeopardize the continued existence of any threatened, endangered, or candidate species, or result in the destruction or adverse modification of designated critical habitat. The presence of listed species in this area requires production of a Biological Assessment (BA) which evaluates the effects of the proposed Project on these species, to determine the need for consultation and to comply with the ESA.

A detailed study and review of potential federal special-status species within the Project area was conducted through the USFWS' Information, Planning and Consultation (IPAC) system. An evaluation assessing the IPaC special status species' potential likelihood to occur in the Project area was included in tabular format.

Any recent survey data was obtained from the California Natural Diversity Database, California Native Plant Society's Rare Plant Inventory database, California Department of Fish and Wildlife, from any surveys conducted as part of this Project or from reports by other consultants or individuals that may have conducted field surveys in the general vicinity. Life history and historical monitoring information for each species likely to be in the area was collected and reviewed, however protocol-level surveys are not included in this Subtask because presence of species is assumed through the scoping process utilizing the available research, databases and agency-provided information.

GHD examined the existing *Valley Ford Water Association Water Project Biological Assessment, Valley Ford, Sonoma County, California* completed by WRA in May 2017, and existing resource reports and databases for flora and fauna, evaluated potential issues with ESA listed species, and used the preliminary Project design to determine potential for adverse or beneficial effects. GHD's biologists and associates undertook a field assessment of the impact areas:

- To confirm baseline condition
- To determine potential impacts or effects to sensitive species habitats
- To document presence or presumed presence of endangered, threatened or sensitive species
- To examine the Project areas that would be modified, as well as any structures or potential obstructions to aquatic or upland habitats

Using the results of the field assessment, review of the 2017 WRA BA, and the information on presence potential described above, GHD addressed the SWRCB comments listed in the April 22, 2019 and October 30, 2018 emails and prepared an update to the *Valley Ford Water Association Water Project Biological Assessment, Valley Ford, Sonoma County, California*, dated May 1, 2017 by WRA. The update is *an addendum* in an errata format intended to accompany, not replace, the 2017 BA prepared by WRA. NCRP staff will check in with Valley Ford Water Association during the next IRWM funding cycle.

Appendix K. Tribal Water Supply & Wastewater Needs Assessment Survey & Interview Questions

NCRP Tribal Interview Questions

The following are the list of follow-up questions that we have asked of respondents who completed the Tribal NCRP 2018–2019 Needs Assessment:

1. Does the Tribe have any new staff persons to add to our North Coast Resource Partnership contact list/or to interview that may help identify needs?
2. We had first reviewed the Needs Assessments initiated in 2014 and asked those who only partially completed it to instead complete the relevant questions in our new 2018 version of our Needs Assessment. For those who completed a portion or the entire assessment we shared their 2014 responses and asked if they had updates to it.
3. It was important to identify if they provide water to their community or a wider community, if they skipped that question, we asked in interview.
4. We questioned them about their storage tank status, and if they needed to have their tank evaluated in order to prepare for Implementation project submission, or to provide information for other funding options.
5. For those that indicated that they do not have a Source Water Protection Plan(SWPP) we asked if one is in development, and if not, we recommended that they work towards having one in place. If their water source is a city and/or a water district regulated by the state, we asked if those entities had a SWPP, or if they know.
6. We asked if their water source is secure and if they have a secondary source if their source is disrupted? Is the secondary source independent of the first?
7. We asked if their community has had any boil water notices in the last few years? If so, what frequency? When was the last notice?
8. For those that do not have a water conservation plan, we asked are you interested in developing one and do you need support?
9. We asked if they completed an inventory, or did another entity like RCAC complete one?
10. For those that indicated that there were fire suppression and/or supply concerns we asked for more details.
11. Would a water rates setting primer, workshop and/or water board development training be useful? Or is there a support mechanism that can be created for low income communities who cannot pay rates?
12. Would an operations and maintenance manual template be useful?
13. In each case where the respondent stated that training was needed, we further asked if they had a staff person identified to receive that training?
14. Where tools were reported as needed, we clarified which tools were of need. We further asked if they would be interested in a regional tool lending library?
15. What funding opportunities do they take advantage of for drinking water and waste water?
16. Would they be interested in a financial management training course. If yes – on the project, department, or Tribal level? At what level of detail for what quantity of work?
17. Is there a need for Water Operator Training? Do you have funding for this staff, and/or enough work for a full-time water operator and if not would you be interested in sharing one with other Tribes in your region? When repairs are needed who do you call? Which contractors in your area would you recommend?
18. Would you be interested in a source point identification course?
19. What kinds of Technical assistance is particularly needed when they had checked the box of operations, infrastructure, equipment, fundraising, program management, or administration. What is needed when they checked mapping – do they need to have their water and/or wastewater system mapped? Or do they want staff training? A need for regional shared staff?
20. If the septic is backing up, what is the reason? Is it because of high groundwater or their Tribal lands being on a floodplain and without adjacent non flooding lands? Would they be interested in being part of a pilot program?
21. What needs specifically are needed regarding "weather"?
22. When they say "imposed water restrictions during low flows" we reviewed the historical and recent

source(s) they indicated and discussed changes in water availability in quantity and quality.

23. What kinds of information about NCRP would be most useful in addition to the FAQ?
24. We notified them of implementation funding workshops like those completed in February (did you go? If not, why not?) We offered that we have an orientation that can be provided to staff/council where upon we will visit and do funding workshops in coordination with a meeting and/or site visit to review your needs and find out how the program can assist.
25. What specific "Regulatory" support is needed? Is it meeting state and/or federal regulations? Which of them specifically?
26. Do you anticipate growth and a potential increase in use of your current water system?
27. Do you need support with grant writing? IRWM proposal and/or grant writing in general? Do you have a person designated to receive this training?
28. We noted that operations and maintenance (O&M) was a reoccurring need, therefore we asked for more details, i.e.; do they have difficulty keeping their O&M staff? Is this a part-time position? Where do their operators go after working for them, is it lack of hours, low pay, lack of funding in their budget? Do you have a backup operator trained and available should you need them? Do you need training and/or do you need certification update training? Is there an O&M record keeping setup training needed?
29. We asked for details on the barriers that they previously encountered when trying to address their water system, water quality, etc.
30. Have there been any courses or workshops that you attended that you can recommend? What additional courses would you like to be available? Were there courses that you wanted to attend but were only available outside of your region?
31. We reviewed any projects that they have on the Indian Health Services (IHS) Sanitary Deficiency (SDS) list and asked they if they know of the status of their project, for example are any projects on the SDS list in process, or have they identified funding outside of IHS. We met with IHS to find out what barriers or steps are needed in order to have the Tribes' project move to be initiated, or what needs to be completed in order to get their project on that list elevated. We are working to supply any assistance the DACTI program can provide and/or identify other funding sources to address these interim activities.
32. We discussed what major problems were identified in their needs assessment or in conversation that may be pilot or an IRWM implementation project. We asked them to identify their biggest concerns out of what they listed. When necessary, we have or are in the process of scheduling a site visit to include a person who can evaluate the expected and/or known issue(s).
33. What other Tribal or non-Tribal organizations in their region serve their community and do they have water needs? Do they have contact with that organization? We were told that the local Elementary School is in need. We asked for details before calling the school to find out more. We worked to determine if we can assist the school through the DACTI program by submitting an IRWM implementation project or via another funding source.
34. What support do you need in order to submit an IRWM project through the North Coast Resource Partnership?
35. We asked follow-up questions to assess what issues they have with reporting and monitoring requirements to the NCRP. Once the PSP was released, has this issue been resolved?

NORTH COAST RESOURCE PARTNERSHIP

Tribal Water Supply and Wastewater Treatment Assessment 2018

Tribal Information

1. Organization Name: Click here to enter text.
2. Your Name: Click here to enter text.
3. Your position within the organization: Choose Job Title
   Comments: Click here to enter text.
4. Mailing address: Click here to enter text.
5. Email address (please answer "none" if you don't use email): Click here to enter text.
6. What services do you provide? Please choose all that apply.

   ☐Water treatment and supply
   ☐Domestic water distribution
   ☐Irrigation water distribution
   ☐Wastewater collection
   ☐Wastewater treatment
   ☐Wastewater reuse
   ☐Storm drainage
   ☐Watershed restoration
   ☐Other, please state: Click here to enter text.

7. What community or communities do you serve? Please provide the physical location. Click here to enter text.
8. Have you imposed any water use restrictions on your customers for any reason? If Yes, please explain Click here to enter text.
9. Is your system currently under water use restrictions? Click here to enter text.
10. Has the system conducted an asset inventory in which assets were identified, quantified (number of units, linear feet, etc.), and described as to age, condition and replacement cost? Click here to enter text.
11. Does the system have adequate tools to conduct routine and emergency repairs? Click here to enter text.
12. Have you ever had trouble meeting demand during summer months, periods of drought or during peak demand periods? Click here to enter text.
13. Do you treat any of your ground water sources in order to meet a primary or secondary drinking water standard? List any treatments (e.g., iron, manganese, fluoridation). Click here to enter text.
14. Does your treatment facility meet the current requirements for surface water treatment? Click here to enter text.
15. Does your water system have an emergency or supplemental water supply available, such as an inter-tie with a neighboring system, or a second source? If yes, identify the supplemental source. Click here to enter text.
16. Does your system have a source water protection plan or wellhead protection plan? Click here to enter text.

17. Have all deficiencies on your system's last Sanitary Survey been corrected? Click here to enter text.
18. Does your water system have accurate maps or as-built drawings and adequate system documentation of the complete transmission, storage and other distribution components? Click here to enter text.
19. Does your water system have an active cross-connection control program? Click here to enter text.
20. Does your system experience routine failures (e.g., leaks, low pressure, main breaks)? Click here to enter text.
21. Are all users (residential customers, businesses, public facilities etc.) on the water system metered? Click here to enter text.
22. Does your water system have a water meter replacement program in place to keep water meters operating effectively? Click here to enter text.
23. Does your water system have an active plan for flushing water mains and dead-end lines in the distribution system? Click here to enter text.

Technical Assistance and Training Needs

24. Please provide your Tribe's *level of need* for the following types of technical assistance (indicate in Question 25 whether this is for water, wastewater or both):

	No need	*Moderate need*	*Strong need*	*Extreme need*
System operations	☐	☐	☐	☐
System infrastructure	☐	☐	☐	☐
Equipment calibration	☐	☐	☐	☐
Administration	☐	☐	☐	☐
Rate structures	☐	☐	☐	☐
Funding opportunities	☐	☐	☐	☐
Meeting federal and state regulations	☐	☐	☐	☐

25. For each topic that you indicated a "strong" or "extreme" need, please indicate the range of technical assistance needs, and provide as much detail as possible so that we can adjust future opportunities, trainings and workshops accordingly. Click here to enter text.

26. Please provide your Tribe's *level of need* for the following types of trainings (indicate in Question 26 whether this is for water, wastewater or both):

	No need	*Moderate need*	*Strong need*	*Extreme need*
Program management	☐	☐	☐	☐
Financial management	☐	☐	☐	☐
Regulatory compliance/ reporting	☐	☐	☐	☐
Grant writing	☐	☐	☐	☐
Safety	☒	☐	☐	☐
Operator	☐	☐	☐	☐
Maintenance	☐	☐	☐	☐
Other, please state: Click here to enter text.	☐	☐	☐	☐

27. For each topic that you indicated a "strong" or "extreme" need, please indicate the range of training needs, and provide as much detail as possible so that we can adjust future opportunities, trainings and workshops accordingly. Click here to enter text.

28. Are your water and wastewater system components accurately mapped using GPS?

☐Yes

☐No

Comments: Click here to enter text.

29. If you answered no to the preceding question, what types of assistance would be useful to meet your mapping needs?

☐Map of system components (valves, wells, pipes, treatment facilities, tanks, water sources, etc.)

☐Map of potentially contaminating activities in your system's vicinity (system contamination threats)

☐Overall map of system (including components, threats, etc.)

☐Other, please state and briefly describe: Click here to enter text.

30. Are there additional resources (such as budget, rate setting, recordkeeping, or asset management templates; legal or technical reference materials; etc.) that would be useful for your system/ staff

☐Yes (please describe below)

☐No

☐Comments: Click here to enter text.

Challenges

31. Please indicate the level of concern for your system on the following topics

	No concern	*Moderate concern*	*Strong concern*	*Extreme concern*	*Not applicable*
Raw water quality	☐	☐	☐	☐	☐
Drinking water supply reliability	☐	☐	☐	☐	☐
Fire suppression supply reliability	☐	☐	☐	☐	☐
Water pressure	☐	☐	☐	☐	☐
Outdated treatment system (need for new/improved technology	☐	☐	☐	☐	☐
Aging treatment system (need to replace parts)	☐	☐	☐	☐	☐
Sufficient quality and quantity of staff	☐	☐	☐	☐	☐
System too small for growing population	☐	☐	☐	☐	☐
System too large for shrinking population	☐	☐	☐	☐	☐
Financial stability for operating system and maintaining reserve	☐	☐	☐	☐	☐
Operation and maintenance – need for trained personnel	☐	☐	☐	☐	☐
Other, please state: Click here to enter text.	☐	☐	☐	☐	☐

32. Please indicate what resources or support would be most helpful in dealing with each issue that you ranked “moderate concern” or “extreme concern:” Click here to enter text.

Regulatory Concerns

33. Are there any regulations (Tribal, federal, state or local) with which your system is out of compliance?

☐ Yes, please describe in comments

☐ No
☐ Unknown
Comments: Click here to enter text.

34. Please indicate how well your Tribe is able to meet the following regulatory constraints (indicate in the comments whether this is for water, wastewater or both):

	No issues	Minor/ infrequent issues	Minor/ frequent issues	Major/ infrequent issues	Major/ frequent issues	Not applicable
Meeting Tribal/Federal/California water quality standards	☐	☐	☐	☐	☐	☐
Sampling and testing procedures	☐	☐	☐	☐	☐	☐
Required paperwork and reporting	☐	☐	☐	☐	☐	☐
Training requirements	☐	☐	☐	☐	☐	☐
Any others, please describe below	☐	☐	☐	☐	☐	☐

Comments: Click here to enter text.

35. Please indicate what resources or support would be most helpful in dealing with each issue that you ranked "Major/ infrequent" or "Major/frequent:" Click here to enter text.

36. Please provide more detail regarding any regulatory challenges the Tribe is currently experiencing: Click here to enter text.

Tribal Capacity

37. Does your system have paid staff (indicate whether this is for water, wastewater or both)? Choose all applicable

☐ No water operator
☐ Level 1
☐ Level 2
☐ Level 3
☐ Water operator without "official" certification
☐ Consultant
☐ Administrative
☐ Management
☐ Other, please state: Click here to enter text.

38. Who interprets your water quality results? Choose all applicable

☐ No one

☐ Water operator
☐ Other staff/ board member
☐ Outside consultant
☐ Local/ state government staff
☐ Other, please state:
Comments: Click here to enter text.

39. Does the Tribe perform arsenic removal as part of the treatment process?
☐ Yes, please describe the treatment process: Click here to enter text.
☐ No
☐ Don't know

40. Is there anything other than arsenic that is unusual or problematic about your water source(s)? If yes, please briefly describe.
☐ Yes, please briefly describe: Click here to enter text.
☐ No
☐ Don't know

41. Wastewater treatment only: Approximately how many hook-ups do you have?
☐ 0-50
☐ 51-100
☐ 101-250
☐ 251-1,000
☐ 1,001-5,000
☐ 5,001-10,000
☐ Over 10,000 (please estimate below)
Comments: Click here to enter text.

42. Water suppliers only: Approximately how many hook-ups do you have?
☐ 0 – 15
☐ 16 – 50
☐ 51 – 250
☐ 251 – 1,000
☐ 1001 – 5000
☐ 5001 – 15,000
☐ Over 15,000 (please estimate below)
Comments Click here to enter text.

43. Does your system maintain a current Emergency Response Plan?
☐ Yes, please provide date: Click here to enter text.
☐ No
☒ Don't know

44. What type of governance best describes your water system? Click here to enter text.
45. Does the board or council hold regularly scheduled, publicly announced meetings? Click here to enter text.
46. What type of ownership best describes your water system? Click here to enter text.
47. Does your system have organizational charts and job descriptions for all positions (including policy makers, elected officials, employees and volunteer positions) that describe the roles and reporting relationships of key water system personnel? Click here to enter text.

48. Are policy makers and managers (e.g., board or council members, general manager) provided with orientation and systematic training in their duties and responsibilities? Click here to enter text.

49. Does the water system's management periodically assess source and system capacity to meet water demand requirements? Click here to enter text.

50. Does your system have a water conservation plan? Click here to enter text.

51. Does your water system provide systematic training for operators and other employees in order to enable them to maintain their skills? Click here to enter text.

52. Does your system make available to customers its adopted rules and regulations? Click here to enter text.

53. Does your system prepare and distribute the Consumer Confidence Report on time annually? Please explain any omissions. Click here to enter text.

54. Has your system adopted formal policies on:

- **a.** customer deposits and payments;
- **b.** collections;
- **c.** water rates;
- **d.** connection charges;
- **e.** customer complaints;
- **f.** prospective customers with excessive requirements for water main extensions for connecting new customers?

☐ Yes, has policies on all relevant above categories
☐ Not applicable - no customers
☐ Actively working on it, but not complete
☐ Policies are in place but not actively practiced
☐ No
Click here to enter text.

Financing

55. Does the water system have processes, policies, or written procedures for:

a) ☐ restricting the use and expenditure of funds to
b) approved purposes;
c) restricting the transfer of reserves to other accounts;
d) the purchase of goods or services; and
e) internal fiscal controls (e.g., more than one signature on checks, regular reconciliation of bank accounts, division of tasks and responsibilities between two or more people in the finance and accounting function)

☐ Yes, has policies on all relevant above categories
☐ Not applicable - no customers
☐ Actively working on it, but not complete

☐ Policies are in place but not actively practiced

☐ No

Click here to enter text.

56. Does the system's board/council or other owner receive written expense and revenue reports from system bookkeeping personnel at each routinely scheduled meeting? Click here to enter text.

57. Does the system's board/council or other owner review bank deposit statements? Click here to enter text.

58. Are water system financial records and transactions audited regularly or as required by state law by an independent auditor (e.g., CPA or peer group)? Click here to enter text.

59. Does the system's policy making body or other owner prepare and adopt an annual budget? Click here to enter text.

60. If the water system owner operates other utilities or services, does the annual budget separate revenue and expense accounts for each utility/service? Click here to enter text.

61. Does the annual budget include sub-accounts for operating and maintenance expenses, such as salaries, chemicals, repairs, supplies, power, and telephone, by line item? Click here to enter text.

62. Does the Tribe have a separate bank account for the water system? Click here to enter text.

63. Does your system have a multi-year budget projection that addresses future expenses and compensates for inflation? Click here to enter text.

64. Does your water system's current rate structure produce enough income to cover current expenses (operations and maintenance) and all necessary reserves? Click here to enter text.

65. Are your current rates sufficient for building capital improvement funds and covering operating and maintenance costs?

☐ Yes

☐ No

☐ Don't know

66. If you answered no to the previous question, do you have the means to determine adequate rates for maintaining and improving your system?

☐ Yes

☐ No

☐ Don't know

67. What is your current rate structure?

☐ Monthly/ annual flat rate

☐ Uniform rate schedule

☐ Increasing block/graduated schedule

☐ Decreasing block/graduated schedule

☐ Seasonal rate schedule

☐ Subsidized by government or Tribe

☐ Other, please describe: Click here to enter text.

NORTH COAST RESOURCE PARTNERSHIP

Tribal Water Supply and Wastewater Treatment Assessment 2018

68. What is your approximate monthly average residential water and /or wastewater customer bill? If you offer both water and wastewater services and the average bill varies by service, please provide information about this in the comment field.

- ☐ Subsidized (please describe in comments)
- ☐ $0-$50
- ☐ $51-$100
- ☐ $100-$150
- ☐ Over $150

Comments: Click here to enter text.

69. Is the Tribe in need of financial assistance such as grants, low interest loans, or loan restructuring? (Please use comment field to what your funding needs relate to. For example, current infrastructure needs, regulatory issues, cost of living, etc.)

- ☐ Yes
- ☐ No

Comments: Click here to enter text.

70. Does your system have a Capital Improvement Plan (IP)?

- ☐ Yes, please provide date of most current CIP: Click here to enter text.
- ☐ No
- ☐ Don't know

Comments: Click here to enter text.

Partnerships

71. Is the Tribe currently working with outside agencies on improvement plans or projects? If so, please choose the agency from the list below and briefly describe the project in the comments section.

- ☐ California Rural Water Association (Cal Rural Water/ CRWA)
- ☐ Rural Community Assistance Corporation (RCAC)
- ☐ State Water Resources Control Board (SWRCB)/ North Coast Regional Water Quality Control Board (NCRWQCB)
- ☐ California Department of Public Health (CDPH)
- ☐ Environmental Protection Agency (EPA)
- ☐ Indian Health Service (IHS)
- ☐ Local County
- ☐ Other local government
- ☐ Other (please list below)

Comments: Click here to enter text.

72. Would partnerships or sharing resources with neighboring or nearby systems help you address your needs for specialized tools, equipment, qualified operators, or system management?

☐ Yes, please describe below.
☐ No
☐ Don't know
Comments: Click here to enter text.

73. Do you have any specialized tools, equipment, or other resources that you could share through partnerships?

☐ Yes, please describe below.
☐ No
☐ Don't know
Comments: Click here to enter text.

Fire Preparedness

74. Has your community been impacted by recent wildfires?

☐ Yes, please describe below.
☐ No
☐ Don't know
Comments: Click here to enter text.

75. Does your community need fire preparedness assistance?

☐ Yes, please describe below.
☐ No
☐ Don't know
Comments: Click here to enter text.

76. Do you have an adequate supply of water for fire suppression?

☐ Yes, please describe below.
☐ No
☐ Don't know
Comments: Click here to enter text.

77. Would you be interested in funding for fire preparedness projects?

☐ Yes, please describe below.
☐ No
☐ Don't know
Comments: Click here to enter text.

NCRP and North Coast Integrated Regional Water Management Plan

78. Are you familiar with the North Coast Resource Partnership (NCRP)?

☐ Yes, I am familiar with the NCRP and its resources

☐ No, I am not familiar with the NCRP and its resources

☐ I would like additional information about the NCRP and resources (indicate specific requests below)

Comments: Click here to enter text.

79. Please select all challenges or barriers to participation in the NCRP that you or your staff face:

☐ Not difficult; I am a regular participant

☐ Time commitment for participation is too high (too many meetings, emails, etc.)

☐ Meeting times not compatible with staff/ board schedule

☐ Lack of in-house skill necessary to develop and submit a project

☐ Lack of staff to perform grant administration even if grant funds were awarded

☐ Not interested in state grant funding

☐ Not interested in working with the other water-related stakeholders

☐ Too difficult to understand the Integrated Regional Water Management (IRWM) process

☐ Other, please list below

Comments: Click here to enter text.

80. Is there an additional staff or Board member we should also speak to about the Tribe and its needs? Ideally, this would be someone in a different role than your own who can offer a different perspective on your system management and operations. If so, please provide contact information below.

Name: Click here to enter text.

Title/ role: Click here to enter text.

Phone: Click here to enter text.

Email: Click here to enter text.

81. Please add any other comments or information that you feel would be helpful to the NCRP to provide assistance to small and disadvantaged water and wastewater providers. Click here to enter text.

82. Is weather information helpful for the management and operation of your system? If you answer yes, we will contact you in the coming weeks with some questions about the types of weather data, information and technical assistance we may be able to provide.

☐ Yes, contact me about weather information and technical assistance!

☐ No, thank you.

Thank you very much for your participation. We look forward to working with you and the Tribe to improve and protect your water quality!

Appendix L. Tribal Survey Comments Grouped by Subject

Imposed Water Conservation

- Water conservation measures during drought periods. Our drought contingency plan requires conservation measures by regulating base allocations and has tiered water pricing beyond those allocations.
- Water at PPN is provided by Mill Valley Water
- PLEASE DO NOT WASTE WATER DUE TO DROUGHT
- Under California Drought, incidents when Tribal Members over-use water supply and production.
- We have had limits on well capacity due to drought at 2 locations.
- Drought restrictions water usage on # in household—current single cap per household with payment for overages
- Currently the 4 public water systems upriver are on a boil water notice; placing community and Tribal members at risk of associated health impacts for more than 6 months
- During low flow we have imposed alternate days and timing for domestic irrigation.

Current Restrictions

- Seasonal abundance from surface water system – Winter
- Sherwood's "Eastside" parcel has been experiencing mechanical and programming issues. AdEdge, a contracted company who installed the system originally, did not install the system correctly, delivering an unfinished product. The company was contacted in conjunction with IHS to negotiate a business agreement on replacing the system correctly.
- Source system is under a moratorium

Asset Inventory

- RCAC conducted an asset inventory of the Utility District in 2013 as part of IHS Tribal Utility Capacity and Sustainability Initiative
- 35 homes, 4 office building
- Currently tied into a public water system and have yet to determine future water needs
- Yes, but it was conducted in 2012 and it was never completed; RCAC lead the assessment but was not able to complete it.
- Overview in our Environmental Assessment of Tribal Lands; due for updates in the next 2 years.
- Assessment is not complete but primary information is in place.

Tools

- Need funding
- Some but not enough to address current infrastructure demands.
- We contract out for those services.
- Sherwood Valley Rancheria does have access to tools to conduct routine repairs, but doesn't have the tools or equipment for major repairs.
- We do minor repairs, meter replacement, etc. but contract out any major repairs
- For last several years, improper records were kept and currently due to staffing turnover and departure of certified operators, many components of operating a public water system PWS are uncertain.
- Being a small district with limited revenue options, we do not have an extensive inventory of spare parts and specialty tools.

Trouble Meeting Demand

- We came very close this past summer. The creek was the lowest we've seen it.
- In 2015, the community's sole source of domestic water failed due to extreme drought conditions.
- The particular drinking water system on the "Eastside" parcel has one small well pump. Problems of marijuana cultivation and customer over-usage exceeds the wells production rates in the dry season. Recently (2017)
- Water use above capacity of wells
- High demand, aging distribution, and required by-pass flows for fish—which we take very seriously. Not just as a legal obligation, but culturally as well.

Treat Sources for Primary/ Secondary Drinking Standards

- Disinfectant, soda ash (corrosion control)
- Chlorine & fluoride
- Iron and Manganese. Chlorine for disinfection.

- Disinfection
- Sherwood's drinking water system on the "Eastside" parcel treats for: iron, manganese. "Old Sherwood Rancheria" operates on a natural spring and only requires chlorine hand-dosing for treatment.
- 1 property has an ozone treatment unit for manganese & bacteria. Not well maintained.
- Chlorine
- Ash and chlorine

Meet Requirements for Surface Water Treatment

- Does not use surface water
- We have no public water systems; all properties have less than 25 residences.
- Consecutive system. We do not treat on-site.

Emergency Supply

- City of Blue Lake, Humboldt Municipal Water District
- The well for Tish-Non Village is inter-connected to the well on Bear River Dr.
- Ukiah Water District
- Some properties have more than 1 well; they are not necessarily operational
- Water provider district has an inter-tie with other small districts
- Not the surface water systems

Technical Assistance Needs

- Wastewater and public works
- All responses apply to potable water (there is no wastewater system here). Need funding for metering, and other infrastructure improvements
- Aging Infrastructure—The Utility's wastewater lift station has malfunctioned on multiple occasions over multiple years. We are currently working with IHS to prepare a Preliminary Engineering Report so we can solicit grant funding to replace this infrastructure. Administration – Given the current revenue discrepancies, it has been difficult to fill leadership positions with dedicated / qualified persons to direct decision making. Rate Structures – Developing suitable rate structures that support utility administration is unrealistic given the inherent income levels within the Rancheria (disadvantaged community). Funding Opportunities – The Utility District always needs help with identifying and applying for relevant funding opportunities.
- We are in development of a water system and are in need of funding and technical assistance to complete all aspects
- Our rates for water are very low. They need to increase over time. It is trying to get the Tribal membership to buy into the raising the rates. Need more information on different funding sources to make improvements and upgrades to both drinking water and wastewater plants.
- Waste Water treatment system repairs and upgrades to current technology. Need for as built studies to determine drinking water and waste water infrastructure repair requirements
- Sherwood Valley Rancheria is always in need of funding opportunities to better maintain/or expand our drinking water systems. The "Eastside" parcel has both a drinking water system and waste water system. Technical Assistance (TA) would greatly benefit Sherwood on the managerial side.
- Not sure of the training & personnel involved in maintenance of water & wastewater facilities. All Tribal residences are single or multiple family homes; no PWS or community sewage treatment facilities
- The primary need is staffing for operation and maintenance of the waste water treatment system and for repair and maintenance for both systems. Limited users cannot support maintenance of the systems.
- We are trying to provide operator training to our members to give local empowerment of their drinking water back to the community and still meet federal requirements
- Comprehensive survey of existing distribution needs and needed upgrades or replacement (mainlines, valves etc.)
- Funding opportunities to implement planned treatment plant move and upgrades and in the immediate term replacement of aging/leaking redwood tank. Funding to meet state and federal regulations planning, engineering design and environmental documentation (NEPA/CEQA).

Training Needs

- Knowing how to look for and write grants. I don't think you can learn too much about finance, safety, and maintenance.

- Need funding for capital improvements. Training for Utility District and Tribal Council board members on the inherent challenges to operating and maintaining a small utility. Always need help/ Tech Assistance securing grant funding for capital improvements.
- Training of the operators onsite would be a big help. Financial management of both facilities is a must.
- Opportunities for consistent and updated training courses provided locally [or within 200 miles] would greatly benefit Sherwood Valley Rancheria's Water Operator and coordinating staff to build Tribal Capacity.
- In need of grant writing for watershed restoration. Training for maintenance personnel in safety, operations, maintenance of individual wells/treatment systems, septic tanks.
- The most helpful "training" we receive is from RCAC and is one-on-one, on-site, i.e.; "this is what needs to done and this is how you do it."

Mapping Needs

- Also, overall map of system
- Assistance and training on developing our own GIS maps; we have the software in the Tribal Environmental Office

Additional Resources Needed

- Rate setting, manual templates and legal or tech materials
- All of the above.
- Basic templates for rate setting, record-keeping, and overall management tools would be beneficial for consistency and quantitative data.
- Watershed level management options for the drinking water system's source waters. A major problem exists for heavy turbidity and sedimentation during the winter rains and we want to know feasibility of 'check dams' and natural sediment pools to help alleviate the problem before the waters enter the intake pools. Other management options that we have talked about incorporating are cultural burning and replanting riparian areas with native plants.

Issues of Concern

- Locate a stronger water supply
- Need storage for fire suppression, as community grows water needs will also grow and may need additional water source
- Supply — We need a secondary water supply. Fire suppression — Need more raw water storage. Aging Treatment system — The Utility's wastewater lift station continues to malfunction during the winter. Staff — The Utility has struggled to fund and find a suitable back-up operator. System size — The Utility is servicing at maximum capacity with no room (logistically) to expand. Financial stability – Aging infrastructure and frequent extreme weather events have exasperated the Utility's financial stability.
- Training in starting/operating a water system
- Training of the staff that operate both wastewater and drinking water plants. Being able to set the proper water rates.
- Funding sources and grant writing
- Further pressure testing of onsite hydrants
- Tribal parcel is expanding residential capacity because the drinking system was originally scaled for 20 homes. During the dry season the system has problems with well pump recovery, with the pressure differentials it's a moderate concern for Sherwood because another water source needs to be developed. Funding opportunities would help off-set the Tribe's spending.
- Original parcel, we're currently in the planning stage of expanding the drinking system with a <=1,000 ft. well. Training personnel in operation and maintenance would establish a foundation for staff.
- Funding for fire suppression, raw water quality planning & construction of wastewater facilities at recreational facilities (campgrounds)
- Finding funding and actually preparing grant applications.
- We are trying to develop a community and Tribal departmental wide watershed management at the 'creek-level' scale with first priority watersheds those that supply public drinking water systems source water. However, it is expected that this would be an integrated management plan with multiple objectives across ecosystem resources. The first need is to lower turbidity and sedimentation before it enters the drinking water infrastructure at the intake pool and we need engineering/riparian restoration feasibility studies on possibility of installing multiple 'check-dams' to make natural sedimentation and reservoir pools prior to the intakes.

- With limited and aged storage, during fire emergency—demand out paces input. Funding for treatment plant upgrade relocation and install. Replace existing redwood tank in the interim is critical. Did I say "funding"?

Regulatory Compliance

- Operator Certification
- 4 of 6 public water systems on the Reservation are on Boil Water Notices.

Regulatory Resources

- Training opportunities are out of area and overnight. This inhibits Sherwood's staff from participating because of the large traveling distances.
- Training for maintenance personnel, both
- Funding for system upgrades.

Regulatory Challenges

- Sherwood is currently experiencing reprimanding issues with the Sanitary Deficiency Survey (SDS) checklist provided by Federal EPA. The issues with the SDS are costs "fines" and education "know how" to re-mediate it.
- No pressing issues since there are no PWS or central WW systems; but individual systems need better monitoring & maintenance
- Sovereign enforcement on Reservation of environmental ordinances and protecting Tribal water rights of waters entering Reservation — currently from adjacent Cannabis grow operations and failing, private septic systems

Paid Staff

- A company checks & maintains 1 ozone system
- We have certified water operator but don't do any treatment. Waste Water is Orenco system and no operators are available in the local area.
- Work with United Indian Health

Water Quality Interpreter

- Water Quality Specialist
- Our EPA Water Quality Specialist
- Tribal Environmental Office
- Water Resources Coordinator
- Yurok Tribe Environmental Program Staff

Arsenic Testing

- More extensive sampling should be done as environmental sampling indicates that we are in an area with naturally occurring pockets

Water Source Issues

- Supply subject to seasonal flows (surface water)
- barium and enterococci in Ackerman Creek
- Manganese/iron from acidic water; iron slime problems at some locations; occasional coliform hits from surface water
- Variable conductivity between source waters

Water System Governance

- Tribal department
- The operator runs daily operation of the plant. Larger decisions are governed by the Utility District Board.
- Tribal
- County water system
- Tribal
- Tribal Council oversight; Tribal Environmental Office advisory & recommendations
- This is a consecutive system. The Utility Board reviews, monitors and makes decisions and recommendations regarding both water and wastewater.
- State regulated system. Homeowners oversee water costs.
- Tribal
- Tribal Council and Water Resource Manager
- Community Services Board

Consumer Confidence Reports

- Have to fight with the local water provider district to get their reports on time

Policies

- All in place except for "f".

System Board Finance Reporting

- The first board meeting will occur on Jan 25th, 2019

Current Rate Structure

- Currently purchase water through City of Blue Lake, we are metered and charged through them
- Monthly flat rate per household with tiered charges for overages
- As the power bill for the community well and other costs associated with the community water system comes in, the members pay as much as possible. This does not include all members getting service, so it puts the burden onto the members who do pay. They meet monthly to discuss the costs.

Monthly Costs

- $35 wastewater $45 water up to 10,000 gal.
- There are different structures and availability of types of meters across the Reservation — all have a subsidized lower rate for elders, some are flat rate, and some are by usage.

Financial Needs

- We need $ to make system wide improvements to improve service and health and safety.
- Storage for water system
- Current infrastructure needs
- Need assessment of needs, planning for additional wastewater facilities, funding for installation
- Current infrastructure

Agency Assistance

- Indian Health Service
- Other Tribes
- Indian Health Service
- Indian Health Service
- Working under a BOR Water Smart grant for development of a Smart Water Grid
- Indian Health Services is another agency the Tribe works with. They're the engineers that are partaking in an expansion project for one of our drinking water systems.
- We have an environmental GAP grant from USEPA, which funds capacity building in this area. We also have limited funds from BIA Water Resources program for water testing, training, and GIS mapping
- USDA on replacement of storage tank, IHS on system repairs to stop intrusion into WW system and replacement of improperly installed curtain drain. RCAC well sounding, meter replacement and other issues
- Mendocino County, California Indian Environmental Alliance
- United Indian Health

Partnership Needs

- There are other local small systems that have operators and tools that can help during emergencies.
- Tools, equipment, supplies, all the above
- If the local districts would join to form a single district, the moratorium could be lifted. They have been trying but some don't want to join.

Equipment Sharing

- People and some equipment
- GIS software

Wildfires

- Wildfire smoke creating hazardous ambient air conditions
- We have only been impacted by wildfires surrounding our immediate community which has impacted the quality of the air.
- Not directly, but Citizens living closer to the fires have been affected.
- Short term evacuation
- No properties were directly burned from the last 2 wildfires; they came within 100 yards to 1/4 mile from several properties. Only smoke and air quality issues to deal with. Wildfire is definitely a major concern for the future
- We lost three houses on the new reservation and 3 on the old rez in the October 17 [2018] fire. Fire burned across the entire rancheria, so some damage to waste water lids, valves, fencing. No structural damage to the storage tank. Worked with IHS for repair/replacement of well and pump and three septic systems on the old Rancheria. Still working on watershed damage from fire and storms.
- The River Fire started about two miles south of the community. The members had to evacuate for a significant amount of time.
- Local fires have destroyed electrical power poles and disrupted electricity, which has in turn impacted treatment plants, respite centers, and private homes

- Mainly smoke impacts the last two or so years. Lack of fuel treatments and prescribed fire (large scale) impacts all levels of the community.

Fire Preparedness

- Our community is located in a redwood mixed conifer forest that has been mismanaged for a long time. Fire danger is the #1 threat to our community safety.
- Training on how to support Tribal Citizens if in need of assistance
- Getting assistance in Emergency Response Planning and training would greatly benefit Sherwood and its staff.
- The members are concerned with the fire fuels on the property and would like to seek assistance for fuels reduction.
- Funding for fuel treatments and prescribed fire including planning dollars.

Challenges/Barriers to NCRP Participation

- Staff that was our representative recently quit and has not been replaced
- Most of the NCRP grants require excessive reporting, monitoring and follow-up, which can sometimes outweigh the benefits

Additional Comments

- This survey should provide a transcript after completion; this would be valuable for our records and as a deliverable for our GAP grant.
- One of our local school districts (Junction Elementary) is in dire need of assistance.

Appendix M. Round 1 Tribal Technical Assistance Selection Process

ROUND 1 TRIBAL TECHNICAL ASSISTANCE SELECTION PROCESS

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Appendix

1. INTRODUCTION

The North Coast Resource Partnership (NCRP) was awarded a grant from the Department of Water Resources, Proposition 1 Integrated Regional Water Management Grant Program to support Tribes and economically disadvantaged communities (DAC) throughout the North Coast Region through the NCRP Outreach & Involvement: Tribal Engagement & Economic Opportunity for Disadvantaged Communities (DACTI) Program. One component of the program is to provide technical assistance to communities in the region. This document outlines the process for selection of Tribes to receive technical assistance in one of several rounds of technical assistance to be provided by the NCRP. Technical Assistance for Tribes will be led by the Tribal Representatives and the Tribal Engagement Coordinator, California Indian Environmental Alliance (CIEA). Tribal projects will be forwarded to the NCRP Tribal Representatives *adhoc* committee for a separate selection process. For more information about Tribal selection please contact the Tribal Engagement Coordinator.

1.1. Goals and Objectives

The goals and objectives of this effort support the overall goals and objectives of the NCRP listed below.

Goal 1: Intraregional Cooperation & Adaptive Management

- Objective 1 — Respect local autonomy and local knowledge in Plan and project development and implementation
- Objective 2 — Provide an ongoing framework for inclusive, efficient intraregional cooperation and effective, accountable NCIRWMP project implementation
- Objective 3 — Integrate Traditional Ecological Knowledge in collaboration with Tribes to incorporate these practices into North Coast Projects and Plans

Goal 2: Economic Vitality

- Objective 4 — Ensure that economically disadvantaged communities are supported and that project implementation enhances the economic vitality of disadvantaged communities by improving built and natural infrastructure systems and promoting adequate housing
- Objective 5 — Conserve and improve the economic benefits of North Coast Region working landscapes and natural areas

Goal 3: Ecosystem Conservation and Enhancement

- Objective 6 — Conserve, enhance, and restore watersheds and aquatic ecosystems, including functions, habitats, and elements that support biological diversity
- Objective 7 — Enhance salmonid populations by conserving, enhancing, and restoring required habitats and watershed processes

Goal 4: Beneficial Uses of Water

- Objective 8 — Ensure water supply reliability and quality for municipal, domestic, agricultural, Tribal, cultural, and recreational uses while minimizing impacts to sensitive resources
- Objective 9 — Improve drinking water quality and water related infrastructure to protect public health, with a focus on economically disadvantaged communities
- Objective 10 — Protect groundwater resources from over-drafting and contamination

Goal 5: Climate Adaptation & Energy Independence

- Objective 11 — Address climate change effects, impacts, vulnerabilities, and strategies for local and regional sectors to improve air and water quality and promote public health

- Objective 12 — Promote local energy independence, water/ energy use efficiency, GHG emission reduction, and jobs creation

Goal 6: Public Safety

- Objective 13 — Improve flood protection and reduce flood risk in support of public safety

1.2. Technical Assistance Funding Targets

The NCRP anticipates more than one round of technical assistance to be provided as part of the overall DACTI program. The first allocation of technical assistance will focus primarily on water and wastewater providers based on the NCRP Needs Assessments conducted in 2014 and 2017 as data is available.

The NCRP is developing a separate strategy to outreach to economically disadvantaged communities and other organizations responsible for watershed management, storm water, and other ecosystem functions. If a project of this type is identified during this first technical assistance round, it may be included, but these types of projects are not the focus of this first allocation of technical assistance.

1.3. General Priorities for Technical Assistance

The first allocation of technical assistance will be focused on Tribal communities with a project that can be made ready to apply for implementation funding, may need additional capacity building and needing application and/or minor project development assistance to be able to apply for the first round of NCRP IRWMP Proposition 1 Implementation funding, anticipated in fall of 2018. Additionally, this process will identify communities that may not be ready to apply for implementation funding in 2018, but need technical assistance to develop a project and/or capacity for the second round of DWR IRWMP funding anticipated in 2020. Capacity building includes technical training, financial management, capital improvement planning, and other non-project technical assistance.

1.4. Funding Available

A set funding amount from the overall DACTI program was not set for this first round of technical assistance. Funding made available will be based on relevant need and timing constraints related to the NCRP IRWMP Proposition 1 Implementation Round 1 funding solicitation. Budget will be saved for future technical assistance efforts and trainings. The typical technical assistance budget for this round is anticipated to be in the range $5,000 to $15,000 per Tribe.

2. PROCESS FOR IDENTIFICATION OF POTENTIAL ENTITIES TO RECEIVE TECHNICAL ASSISTANCE

The process to identify entities benefiting from an infusion of technical assistance provided by the NCRP is a mixture of qualitative and quantitative data. The sources of data to be used to identify technical assistance targets are presented below.

- Indian Health Service (IHS) Sanitation Deficiency System List (SDS)
- US Environmental Protection Agency Region Office of Drinking Water
- 2014 NCRP Water and Wastewater Survey needs assessment
- 2017 NCRP Water and Wastewater Survey needs assessment
- SWRCB Division of Drinking Water Violation Notices (2012 – 2017)
- RWQCB Violation Notices (2012 – 2017)
- 2014 DAC Model Projects
- Outreach to existing SWRCB technical assistance providers to identify gaps in current assistance
- Outreach to systems impacted by wildfires

The 2014 and 2017 Needs Assessment survey and IHS SDS List will be used first to identify those systems that may need technical assistance based on survey responses. Next systems with violation notices from the USEPA Office of Drinking Water for federally-regulated systems or the SWRCB for state-regulated systems will be identified as potential recipients. The project team will follow up as necessary with the US EPA, IHS and SWRCB staff to determine the status of violations and if there are any other systems not identified that may need assistance.

Pending the timing of the DWR IRWMP Proposition 1 Implementation funding solicitation, data from the 2017 NCRP Needs Assessment collected through January 2018 will be used to determine the first allocation of technical assistance. Those systems that are not able to complete the Needs Assessment by the end of May will be considered for assistance in the next round of technical assistance allocation.

The Project Team will follow up with those Tribes who received technical assistance for development of model projects as part of the 2014 NCRP Water & Wastewater Service Provider Outreach & Support Program, who meet the threshold criteria described below to determine if assistance is still necessary, especially with application preparation for identified implementation projects.

The SWRCB has their own technical assistance program to assist Tribes. Technical Assistance is

being provided primarily by the Rural Community Assistance Corporation (RCAC) and California Rural Water Association (CRWA). The Project Team will follow up with RCAC and CRWA to determine if there are technical assistance gaps that additional NCRP technical assistance could fill to support project implementation.

Lastly, while it is anticipated that most systems impacted by wildfire will receive state and federal assistance to repair damages, these systems were identified as possibly vulnerable in some disadvantaged communities. Outreach to these systems will be made to determine whether impacts by wildfire have contributed to meeting the threshold criteria described below and the need for technical assistance.

3. PROCESS FOR RANKING AND SELECTION OF ENTITIES TO RECEIVE TECHNICAL ASSISTANCE

Once potential Tribes for technical assistance are identified, the project team will apply the technical assistance selection criteria presented below to rank the needs and develop a list of potential technical assistance recipients. Outreach to the top ranked Tribes will be completed to ensure assistance is still needed. A ranked list of recommended assistance projects will be developed for review and approval by the NCRP Tribal Representatives and Tribal Engagement Coordinator, CIEA. The project team may outreach directly to potential Tribes during the review process to request additional information as needed.

3.1 Guidelines for Technical Assistance Scoring and Selection

3.1.1 Threshold and General Evaluation Criteria

This section presents threshold criteria that will be used for the selection technical assistance.

Eligible Technical Assistance Recipients

Eligible technical assistance recipients include the following:

- Tribal-owned water and wastewater systems

Economically Disadvantaged and Distressed Communities

- Technical assistance is targeted at assisting economically disadvantaged communities (DAC) as well as economically distressed areas (EDA) as described below.
- Economically Disadvantaged Community (DAC): A community with an annual median household income (MHI) that is less than 80% of the statewide annual median household income.
- Severely Economically Disadvantaged Community (SDAC): A community with an annual household income that is less than 60% of the statewide MHI.
- Economically Distressed Area: A community with a population of 20,000 persons or less, a rural county, or a reasonably isolated and divisible segment of a larger area where the segment of the population is 20,000 persons or less, with an MHI that is less than 85 percent of the statewide median household income, and with one or more of the following conditions: (1) Financial hardship; (2) Unemployment rate at least 2 percent higher than the statewide average; (3) Low population density.

Technical Assistance will be provided exclusively to DACs, SDAC, and EDAs , with some preference give to SDACs. The Department of Water Resources (DWR) website mapping tool for DAC and EDA will be the basis for this determination. The DWR web mapping is based on US Census American Community Survey (ACS) 5-Year Data: 2010 – 2014, which reflects a statewide Median Household Income of $61,489 and hence calculated DAC and SDAC thresholds of $49,191 and $36,893, respectively and a threshold of $52,266 for EDAs. If a Tribe has income data which they would like to utilize to assist in determining its eligibility as a DAC, SDAC and EDA.

Regional Representation

While not a threshold criteria, every effort will be made to ensure geographic representation by providing technical assistance to communities from each of the three Tribal districts.

3.1.2 Technical Assistance Selection Criteria

Generally, the technical assistance needs will be evaluated in accordance with the criteria outlined in the table below. Future allocations of technical assistance and future versions of the selection criteria will include items specific to watershed and ecosystem projects. The sources of data that will be used for ranking of technical assistance needs include the following:

- US Environmental Protection Agency (EPA)
- Indian Health Service (IHS)
- 2014 NCRP Water and Wastewater Survey Needs Assessment
- 2017 NCRP Water and Wastewater Survey Needs Assessment
- DWSRF Policy prioritization categories based on health risk
- CWSRF Policy prioritization categories based on public health, water quality, and sustainability
- NCRP Policies & Guidelines
- DWR IRWM Program Guidelines

Table 1. Technical Assistance Ranking Criteria

EVALUATION CRITERIA	SCORING DESCRIPTION	POINTS
Threshold Eligibility Criteria: Is the community a DAC, SDAC or EDA	Yes/no (If no, not eligible for technical assistance)	N/A
Threshold Eligibility Criteria: Is the community an eligible recipient as defined above?	Yes/no (If no, not eligible for technical assistance)	N/A
Drinking Water State Revolving Fund Criteria for Public Health Need	• Category A — Immediate Health Risk (10 points) • Category B — Untreated or At-Risk Sources (9 points) • Category C — Compliance or Shortage Problems (7 points) • Category D — Inadequate Reliability (5 points) • Category E — Secondary Risks (3 points) • Category F — Other Projects (1 points)	0–10
Clean Water State Revolving Fund Criteria for Public Health/ Water Quality	• Class A — Public Health Problems (10 points) • Class B — Pollution of Impaired Water Bodies (8 points) • Class C — Compliance with requirements or Water Recycling Projects (5 points) • Class D — Projects Serving as Preventative Measures (3 points) • Class E — Other Projects (1 point)	0–10
Implementation Readiness	• Community with project ready for implementation funding needing application assistance for NCRP IRWMP Prop 1 Round 1 Implementation Funding (6 points) • Community in needed of planning/ design assistance to be prepared for NCRP IRWMP Prop 1 Round 2 Implementation Funding (4 points) • Community in need of technical, managerial or financial assistance to improve capacity to develop and implement projects (2 points)	0–6 points
Sustainability	• The project supports infill development or results in the reuse or redevelopment of land in an area presently served by transit, streets, water, sewer, and other essential services. (3 points) • The applicant maintains a capital improvement plan, an asset management plan, or has performed a full-cost pricing analysis, or the project incorporates climate change adaptation. (3 points) • The project protects environmental or agricultural resources such as farm, range and forest lands; wetlands and wildlife habitats; recreational lands such as parks, trails, and greenbelts; or landscapes with locally unique features or areas identified by the state as deserving special protection. (3 points) • The project is cited in one or more regional environmental management plans. (3 points) • The project incorporates wastewater or storm water/urban runoff recycling, water conservation, energy conservation, low impact development, or reduced use of other vital resources (3 points) • The project uses low-impact treatment for lower lifecycle operating costs through reduced energy, chemical, or other inputs. (3 points)	0–10 points Can incorporate multiple benefits up to a maximum score of 10 points
DWR IRWM Program Statewide Goals	• Make Conservation a California Way of Life (1 point) • Increase Regional Self-Reliance and Integrated Water Management Across All Levels of Government (1 point) • Protect and Restore Important Ecosystems (1 point) • Manage and Prepare for Dry Periods (1 point) • Expand Water Storage Capacity and Improve Groundwater Management Increase Flood Protection (1 point)	0–5 points

Appendix N. Tribal Pilot Project Selection Process

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1. Introduction

The North Coast Resource Partnership (NCRP) was awarded a grant from the Department of Water Resources (DWR), Proposition 1 Integrated Regional Water Management Grant Program (IRWM) to support North Coast Tribes and economically disadvantaged communities (DAC) throughout the North Coast Region through the NCRP Outreach & Involvement: Tribal Engagement & Economic Opportunity for Disadvantaged Communities (DACTI) Program. One component is to select three Tribal pilot projects in each of the regions, north, central and south. This document outlines the process for selection of Tribes to be a pilot project. Pilot projects for North Coast Tribes will be led by the North Coast Tribal Representatives and the Tribal Engagement Coordinator, California Indian Environmental Alliance (CIEA).

1.1 Goals and Objectives

The goals and objectives of this effort support the overall goals and objectives of the NCRP listed below.

Goal 1: Intraregional Cooperation & Adaptive Management

- Objective 1 — Respect local autonomy and local knowledge in Plan and project development and implementation
- Objective 2 — Provide an ongoing framework for inclusive, efficient intraregional cooperation and effective, accountable NCIRWMP project implementation
- Objective 3 — Integrate Traditional Ecological Knowledge in collaboration with Tribes to incorporate these practices into North Coast Projects and Plans

Goal 2: Economic Vitality

- Objective 4 — Ensure that economically disadvantaged communities are supported and that project implementation enhances the economic vitality of disadvantaged communities by improving built and natural infrastructure systems and promoting adequate housing
- Objective 5 — Conserve and improve the economic benefits of North Coast Region working landscapes and natural areas

Goal 3: Ecosystem Conservation and Enhancement

- Objective 6 — Conserve, enhance, and restore watersheds and aquatic ecosystems, including functions, habitats, and elements that support biological diversity
- Objective 7 — Enhance salmonid populations by conserving, enhancing, and restoring required habitats and watershed processes

Goal 4: Beneficial Uses of Water

- Objective 8 — Ensure water supply reliability and quality for municipal, domestic, agricultural, Tribal, cultural, and recreational uses while minimizing impacts to sensitive resources
- Objective 9 — Improve drinking water quality and water related infrastructure to protect public health, with a focus on economically disadvantaged communities
- Objective 10 — Protect groundwater resources from over-drafting and contamination

Goal 5: Climate Adaptation & Energy Independence

- Objective 11 — Address climate change effects, impacts, vulnerabilities, and strategies for local and regional sectors to improve air and water quality and promote public health
- Objective 12 — Promote local energy independence, water/ energy use efficiency, GHG emission reduction, and jobs creation

Goal 6: Public Safety

- Objective 13 — Improve flood protection and reduce flood risk in support of public safety

1.2 General Priorities for Pilot Projects

The Pilot Projects will be focused on Tribal communities with a project that can be made ready to apply for implementation funding, may need additional capacity building and needing application and/or minor project development assistance to be able to apply for the first round of NCRP IRWMP Proposition 1 Implementation funding, anticipated in fall of 2018. Additionally, this process will identify communities that may not be ready to apply for implementation funding in 2018, but need technical assistance to develop a project and/or capacity for the second round of DWR IRWMP funding anticipated in 2020. Capacity building includes technical training, financial management, capital improvement planning, and other non-project technical assistance.

1.3 Funding Available

The pilot project budget for this round is anticipated to be in the range $5,000 to $15,000 per pilot.

2. Process for Identification of Potential Pilot Projects

The process to identify Tribes will include a mixture of qualitative and quantitative data. The sources of data to be used to identify targets are presented below.

- Indian Health Service (IHS) Sanitation Deficiency System List (SDS)
- US Environmental Protection Agency Region Office of Drinking Water
- 2014 NCRP Water and Wastewater Survey needs assessment
- 2017 NCRP Water and Wastewater Survey needs assessment

3. Process for Ranking and Selection of Entities to Receive Technical Assistance

Once Tribes are identified, the Tribal Representatives will apply the selection criteria presented below to rank the pilot project recipients. Outreach to the Tribes will be completed to ensure assistance is still needed. The project team may outreach directly to potential Tribes during the review process to request additional information as needed.

3.1 Guidelines for Pilot Project Scoring and Selection

3.1.1 Threshold and General Evaluation Criteria

This section presents threshold criteria that will be used for the selection of pilot projects.

Eligible Pilot Project Recipients

Eligible pilot project recipients include the following:

- Federally-recognized Tribes
- Un-federally-recognized Tribes
- Tribal Communities
- Tribal Organizations

Economically Disadvantaged and Distressed Communities

Pilot projects are targeted at assisting Tribes who are economically disadvantaged communities (DAC) as well as economically distressed areas (EDA) as described below.

- Economically Disadvantaged Community (DAC): A community with an annual median household income (MHI) that is less than 80% of the statewide annual median household income.
- Severely Economically Disadvantaged Community (SDAC): A community with an annual household income that is less than 60% of the statewide MHI.
- Economically Distressed Area: A community with a population of 20,000 persons or less, a rural county, or a reasonably isolated and divisible segment of a larger area where the segment of the population is 20,000 persons or less, with an MHI that is less than 85 percent of the statewide median household income, and with one or more of the following conditions: (1) Financial hardship; (2) Unemployment rate at least 2 percent higher than the statewide average; (3) Low population density.

Pilot Projects will be provided to Tribes who consider themselves as a DACs, SDAC, and EDAs. The Department of Water Resources (DWR) website mapping tool for DAC and EDA will be the basis for this determination. The DWR web mapping is based on US Census American Community Survey (ACS) 5-Year Data: 2010 – 2014, which reflects a statewide Median Household Income of $61,489 and hence calculated DAC and SDAC thresholds of $49,191 and $36,893, respectively and a threshold of $52,266 for EDAs. A Tribe can provide its own income data

which they would like to utilize to assist in determining its eligibility as a DAC, SDAC and EDA, if necessary.

Regional Representation

Efforts will be made to ensure geographic representation by selecting one pilot from each of the three Tribal districts. Tribal Representatives from each geographic region (north, central, south) will identify a Tribe to be a pilot. Selected Tribes to be pilots will be approved by consensus by all the Tribal Representatives. If at any point a Tribe cannot proceed as a pilot project, the Tribal Representatives will select another Tribe using the same selection process as identified in this document.