

TASK ORDER REQUEST #1

CA 22-J34 Debacker Main Replacement

Background:

The Debacker water pipeline is a variety of materials and diameters, with multiple hot-tapped above-ground water service lines, resulting in inconsistent distribution pressures and flows for community residents. The pipeline is on steep and overgrown terrain and therefore difficult to track leaks when they occur. The system has experienced numerous breaks, averaging 4 to 5 per year.

There are tribal homes at the top of Debacker Road (above the nearby Terwer Tank) that have seasonal springs that dry up. The tribe also requests to connect the Debacker system to the Terwer Community Water System (CWS) once a booster station and tank can be constructed.

The Debacker system serves 17 homes. The Terwer system serves an estimated 100 homes.

Scope of Work:

Engineering services are requested and summarized as follows:

Services as listed below to assist the Yurok Tribe in preparation of installing 5,300 feet of 4-inch HDPE water main, four 4-inch gate valves, one master meter, three flush hydrants, a booster station, 40,000-gallon water storage tank with telemetry, residential connections including 2,300 feet of 1-inch PE water service line, water meters, and backflow prevention. Submit a proposed alignment of a new below-ground 4-inch water main under Highway 169 and Debacker Road. The existing piping will be abandoned in place.

This project follows an accelerated schedule:

Eight (8) months from Notice to Proceed date until Final Deliverables are due.

- A. Civil / Environmental Engineering:
 - 1. Archaeological/Cultural Survey
 - 2. Biological Survey
 - 3. Hydraulic Analysis for Design Proposal
 - 4. CalTrans Encroachment Permit

- B. Computer Aided Drafting:
 - 1. Design Plans for 4-Inch Water Main
 - 2. Design Plans for 40,000-Gallon Water Tank
 - 3. Design Plans for Booster Station
 - 4. Design Plans for Telemetry System

- C. Contract Management: Provide oversight of construction inspection for potholing.

- D. Construction Inspection: Locating under- and above-ground structures.
- E. Surveying: Develop right-of-way documents for the new water main alignment
- F. Process Controls Engineering: Telemetry Design
- G. Geospatial Information Systems (GIS) Data Management:
 - 1. Coordinate with Yurok Tribe for entry of potholing and newly discovered utility GIS data into the Yurok GIS System.

Attachments:

The following Exhibits are attached as resources to complete the Work:

- A – General Vicinity Terwer Community Map
- B – Google Earth Terwer Map
- C – Terwer Water System Map
- D – Debacker Area Parcel Map
- E – Potential Alignment – HWY 169 / Debacker Rd

Site Visit:

If desired, contact Contract Manager to schedule a site visit to assist in assessing current conditions and becoming familiarized with the Scope of Work and Work area.

Schedule:

Deliverables have been planned as the following milestones:

Deliverable 1:

- Consent to Survey signatures
 - Tribe will provide names and contact information.
- Summary of Existing Easements
- Provide survey map in AutoCAD showing
 - Existing features, elevations, parcel lines, etc, and any existing easements
- Land Survey Map Review
 - Discuss findings, new alignments and possible locations for the new Booster station and water storage tank with IHS Project Engineer
 - Checkpoint for Project

Deliverable 2:

- Survey report
- Map of Proposed Easements
- Hydraulic Analysis of Proposed Alignment
 - Provide and review the analysis and required easements with IHS Project Engineer to concur on final alignment and locations of features
- Preliminary GIS Data – Yurok GIS (Potholing, Easements, Utilities)

Deliverable 3:

- Design Plans at 50% for:
 - 4-Inch Water Main

- 40,000 Gallon Water Tank
 - Booster Station
 - Telemetry System
- Specifications at 50% for:
 - 4-Inch Water Main
 - 40,000 Gallon Water Tank
 - Booster Station
 - Telemetry System

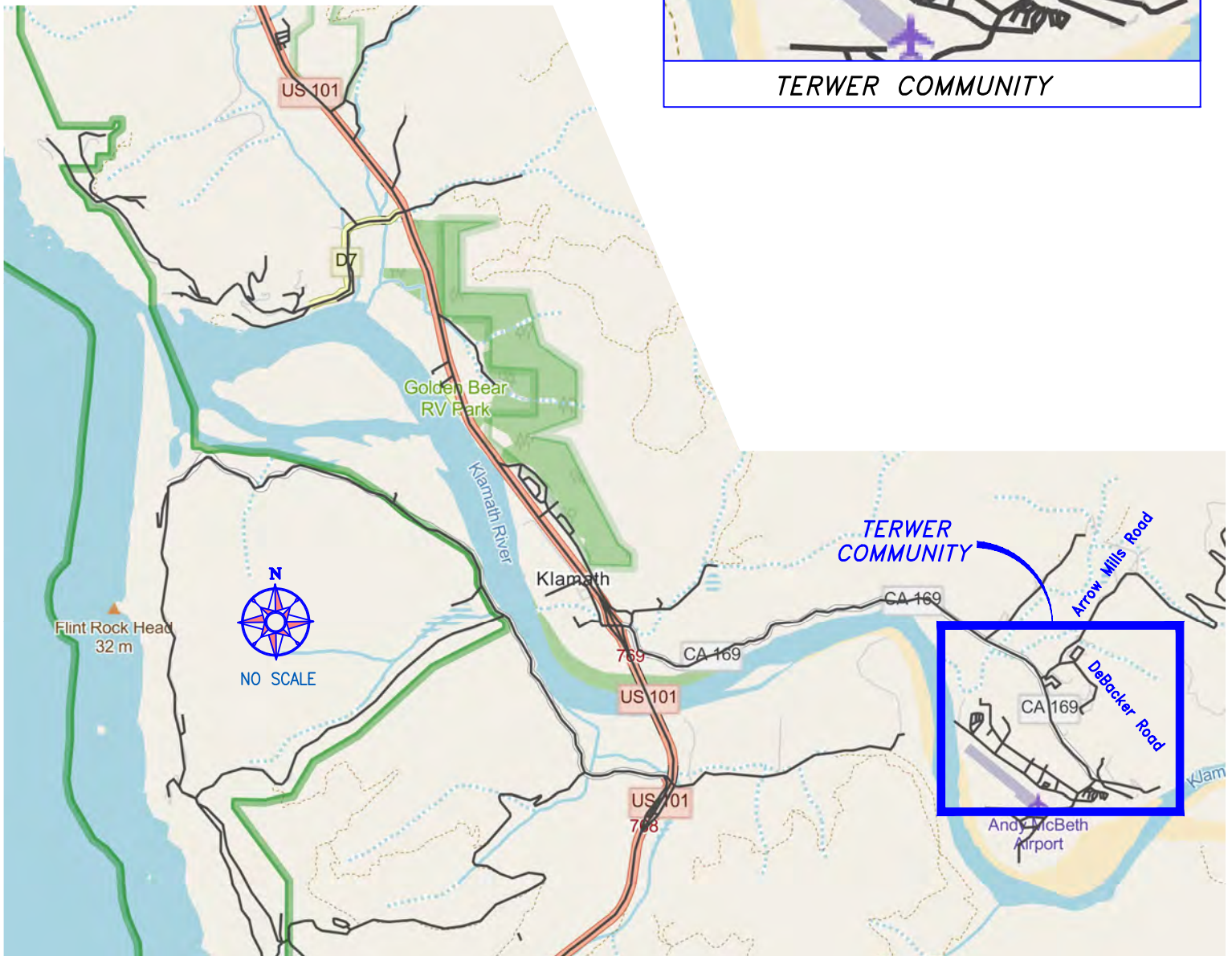
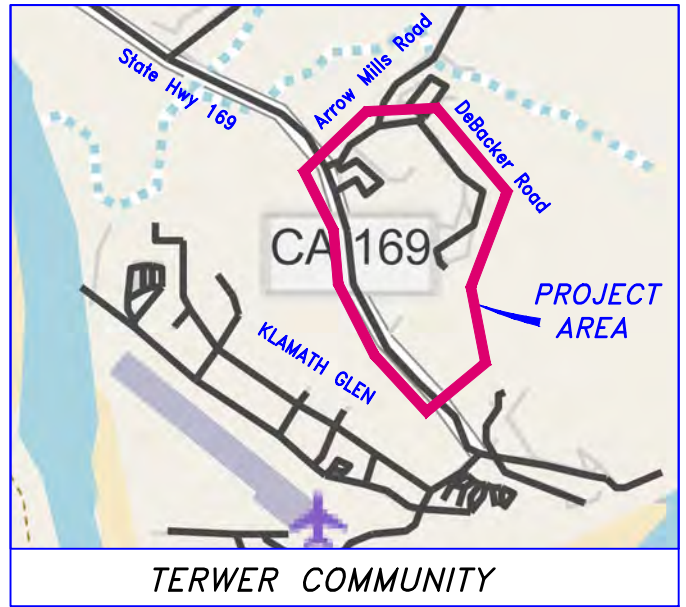
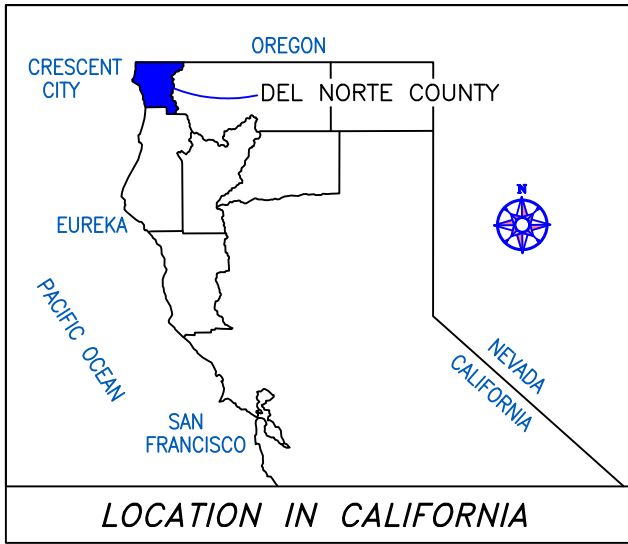
Deliverable 4:

- Design Plans at 100% for:
 - 4-Inch Water Main
 - 40,000 Gallon Water Tank
 - Booster Station
 - Telemetry System
- Specifications at 100% for:
 - 4-Inch Water Main
 - 40,000 Gallon Water Tank
 - Booster Station
 - Telemetry System
- Provide CalTrans Encroachment Permit / County Road Permits
- Submit the Archaeological/Cultural Survey
- Submit the Biological Survey
- Finished GIS Data – Yurok GIS
- Easement Documents

Requested for Task Order:

- **Cost proposal to complete Work at established Contract pricing**
- **Proposed schedule to complete all deliverables requested above**

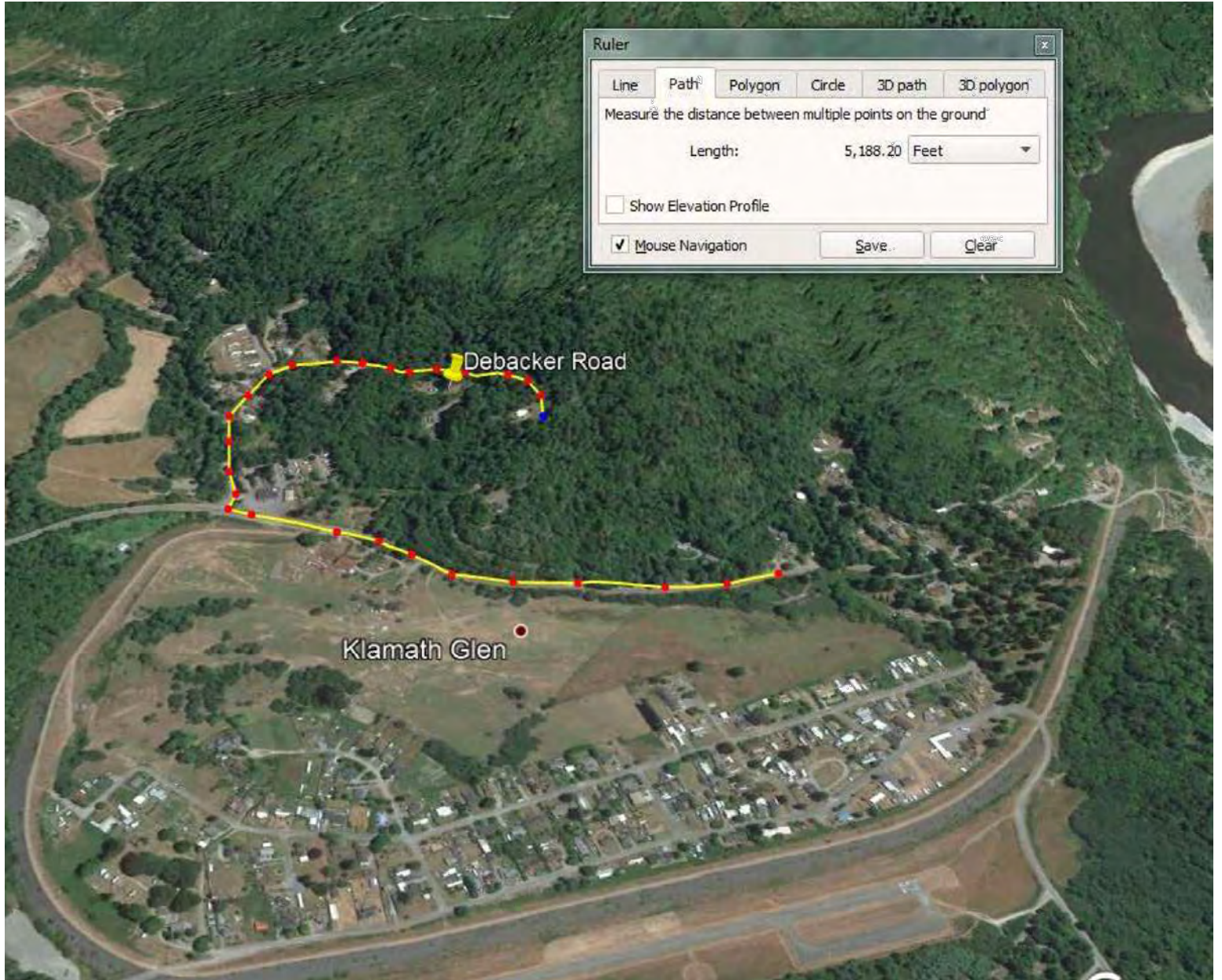
Upon receipt of these items and resolution of any questions or discrepancies, Owner is planning to issue a formal Task Order for this Work. Do NOT begin Work until Task Order is issued.



VICINITY MAP



*TERWER COMMUNITY
GOOGLE EARTH MAP*



PROPOSED WATER MAIN REPLACEMENT

TASK ORDER REQUEST #2

CA 22-J37 Klamath Sewer Main Planning

Background:

Klamath CSD sewer collection system consists of a 52-year-old leaking sewer main that has never been upgraded or repaired. The system is leaking extensively below the paved streets of Klamath. Consequently, the Klamath Sewer Main experiences infiltration and inflow (I&I) exceeding 20% of the existing system design flow. In 2009 IHS funded an Infiltration and Inflow Study on the sewer system that recommended replacement of the collection system. The proposed project would construct a new 10-inch gravity sewer main (approximately 3500 feet) with laterals, manholes, ARVs, and residential service connections.

Scope of Work:

Engineering services are requested and summarized as follows:

Develop a Preliminary Engineering Report for the Klamath Sewer Main Project with 30% Conceptual Design plans. Perform an I&I Study and Sewer Main evaluation for the Yurok Klamath Sewer Main Project. Conduct Archaeological/Cultural and Biological Surveys in the proposed project area. Pothole and locate utilities, coordinating entry of GIS Data into the Yurok GIS Data system.

- A. Civil / Environmental Engineering:
 - 1. Archaeological/Cultural Survey.
 - 2. Biological Survey.
 - 3. Potholing and utility locating to collect GIS data.
 - 4. I&I Study and sewer main evaluation.
 - 5. Preliminary Engineering Report.
 - 6. Conceptual Design Plans, 30%.
- B. Computer Aided Drafting: None
- C. Contract Management: None
- D. Construction Inspection: None
- E. Surveying:
 - 1. Verify land status and easements.
- F. Process Controls Engineering: None
- G. Geospatial Information Systems (GIS) Data Management: Coordination with Yurok Tribe for entry of potholing and utility location GIS data into the Yurok GIS System.

Attachments:

The following Exhibits are attached as resources to complete the Work:

- Vicinity and General Map

Site Visit:

Contact the Contract Manager to schedule a site visit to assess current conditions and become familiarized with the Scope of Work and Work area.

Deliverables:

- Archaeological/Cultural Survey
- Biological Survey
- I&I Report of Findings
- Potholing and utility GIS data
- Preliminary Engineering Report
- Conceptual Design Plans, 30%

Requested for Task Order:

- **Cost proposal to complete Work at established Contract pricing**
- **Proposed schedule to complete all deliverables requested above**

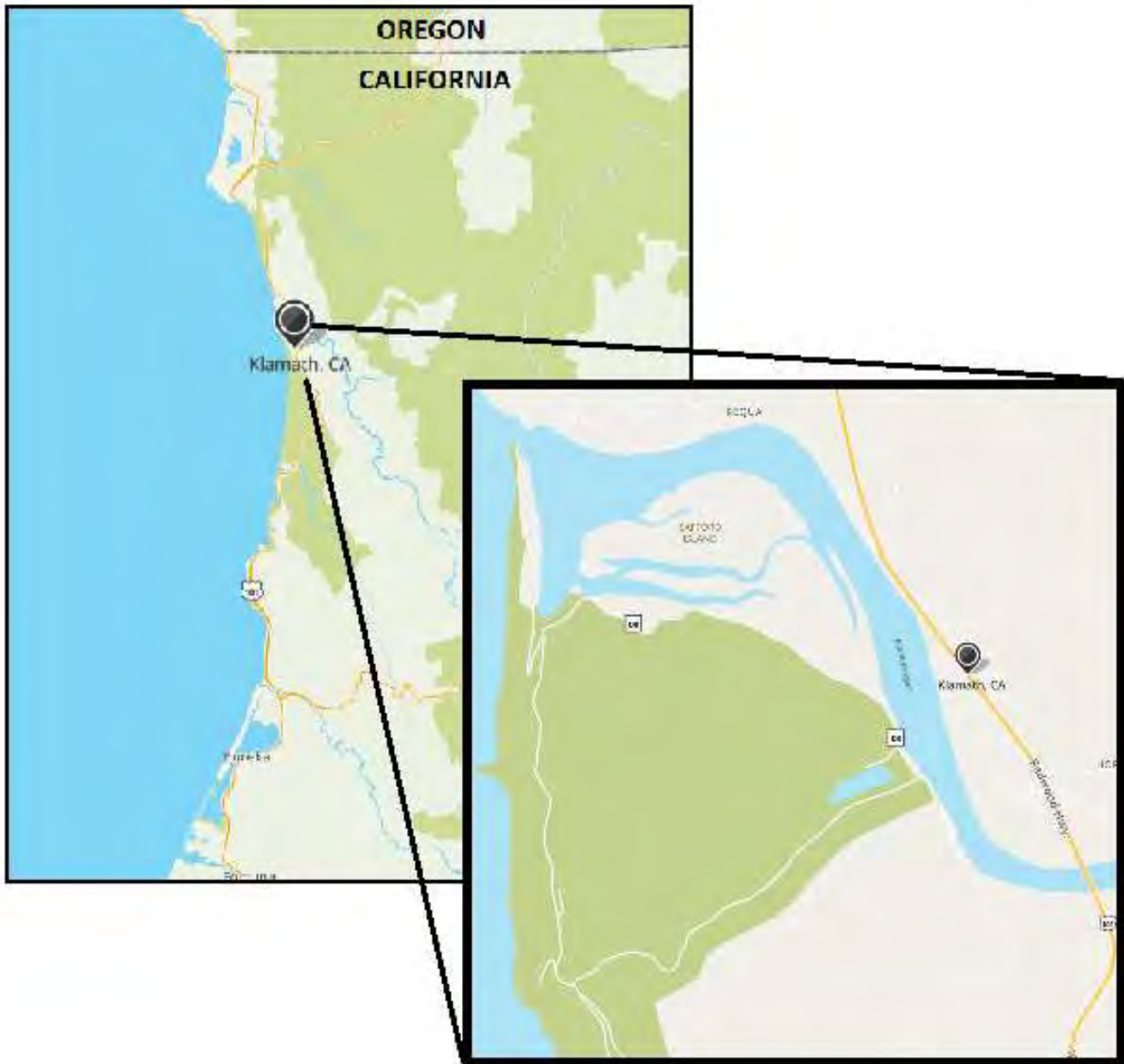
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KLAMATH SEWER MAIN PLANNING 22-J37

EXHIBIT 1

Vicinity and General Map

KLAMATH GENERAL AND VICINITY MAP



TASK ORDER REQUEST #3

CA 22-J38 Terwer Treatment Improvements

Background:

The Yurok Tribe Terwer Community Water System does not have a disinfection system on the groundwater source. The groundwater source is suspected by US Environmental Protection Agency (EPA) to be Ground Water Under Direct Influence of surface water (GWUDI), and needs to be studied to determine if surface water monitoring is warranted. Surface Water Treatment Rules (SWTR) states that surface water systems are required to treat with filtration and disinfection (disinfection only if it meet certain watershed criteria). The proposed project is to install a new Treatment Building, or make renovations to the existing building, to house the treatment equipment (includes plumbing, electrical, fencing, evaporation pond for backwash, etc).

The proposed project installs water treatment and chlorination disinfection system if the GWUDI study indicates it is necessary. If the GWUDI study indicates that a treatment/chlorination system is necessary, then both an Archaeological/Cultural Survey and a Biological Survey will be required. Evaluation of the existing monitoring and treatment equipment is also required.

Scope of Work:

Engineering services are requested and summarized as follows:

A GWUDI Study to determine if surface water monitoring is needed, and if so, conduct Archaeological/Cultural and Biological Surveys in the proposed project area. Evaluate monitoring and treatment system and equipment. Coordinate with the Yurok Tribe to enter of GIS Data of important key features discovered during investigation into the Yurok GIS Data system.

- A. Civil / Environmental Engineering:
 - 1. Archaeology/Cultural Survey
 - 2. Biological Survey
 - 3. GWUDI study
 - 4. Evaluation of monitoring equipment and treatment
 - 5. Preliminary Engineering Report
- B. Computer Aided Drafting: None
- C. Contract Management: None
- D. Construction Inspection:
- E. Surveying: None
- F. Process Controls Engineering: None

- G. Geospatial Information Systems (GIS) Data Management: Coordination with Yurok Tribe for entry of Monitoring and Treatment equipment GIS data into the Yurok GIS System.

Attachments:

The following Exhibits are attached as resources to complete the Work:

- General Vicinity and Wells Map

Site Visit:

If desired, contact Contract Manager to schedule a site visit to assist in assessing current conditions and becoming familiarized with the Scope of Work and Work area.

Deliverables:

- Biological Survey
- Archaeological/Cultural Survey
- GWUDI Study
- Monitoring and Treatment Equipment Evaluation
- GIS Data
- Preliminary Engineering Report

Requested for Task Order:

- **Cost proposal to complete Work at established Contract pricing**
- **Proposed schedule to complete all deliverables requested above**

Upon receipt of these items and resolution of any questions or discrepancies, Owner is planning to issue a formal Task Order for this Work. Do NOT begin Work until Task Order is issued.

TERWER TREATMENT IMPROVEMENTS 22-J38

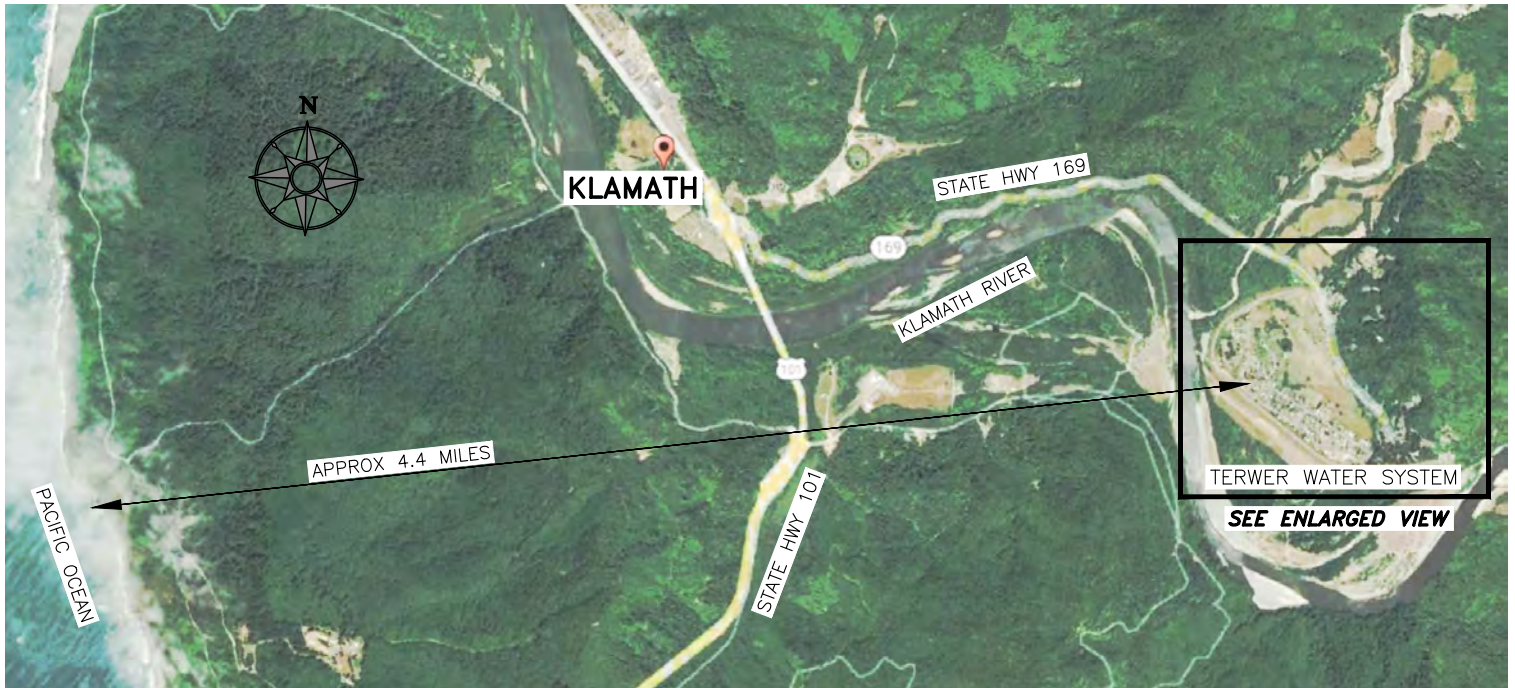
EXHIBIT 1

General Vicinity and Wells Map



TERWER WATER SYSTEM

NOT TO SCALE



VICINITY MAP

NOT TO SCALE

TASK ORDER REQUEST #4

CA 22-J23 Kepel Hydrogeological Study

Background:

The source water for the Kepel-Notchko community water system reduces to approximately 30 gpcd for at least 20 days in late summer as a result of drought conditions. The Kepel-Notchko spring water source also shows unfortunate impacts from illegal upstream diversions. Residents of the Kepel and Notchko villages have no reservoir, well or emergency water supply. The water system serves 18 tribal homes, two tribal Head Start schools and the tribal community center. It is also worth noting that there are other spellings of Kepel: Ke'Pel, Cappel, Ke'pal, etc., which all refer to the same community.

Scope of Work:

Engineering services are requested and summarized as follows:

Perform a Hydrogeological Study to locate possible well sites in the Kepel Community. Gather and analyze test well data. Perform Water Quality testing. Collect test and production wells GIS data and coordinate with Yurok GIS Department for entry into Yurok GIS System.

- A. Civil / Environmental Engineering:
 - 1. Preliminary Evaluation and Research: Study of publicly available geologic and hydrogeologic maps, data, and a preliminary geophysical exploration.
 - 2. Preliminary Site Visit and Geophysical Traverse yielding initial recommendations to Tribe of sites for further study.
 - 3. Exploratory hydrogeologic soundings and measurements
 - 4. Drill test wells; development and ream of 1 well for production.
 - 5. Hydrogeologic Survey Report.
- B. Computer Aided Drafting: None
- C. Contract Management: None
- D. Construction Inspection: Test Well Drilling and Pumping
- E. Surveying: None
- F. Process Controls Engineering: None
- G. Geospatial Information Systems (GIS) Data Management: Collect test and production wells GIS data and coordinate with Yurok GIS Department for entry into Yurok GIS System.

Attachments:

The following Exhibits are attached as resources to complete the Work:

- KePel General Location Map
- KePel Water System Map July 2014

Site Visit:

If desired, contact Contract Manager to schedule a site visit to assist in assessing current conditions and becoming familiarized with the Scope of Work and Work area.

Deliverables:

- Hydrogeologic Survey Report, and one production well.
- GIS Test Well and Production Well Data

Requested for Task Order:

- **Cost proposal to complete Work at established Contract pricing**
- **Proposed schedule to complete all deliverables requested above**

Upon receipt of these items and resolution of any questions or discrepancies, Tribe is planning to issue a formal Task Order for this Work. Do NOT begin Work until Task Order is issued.

KA'PEL WELL 22-J23

EXHIBIT 1

Ka'Pel General Location Map

10. REPORT FIGURES



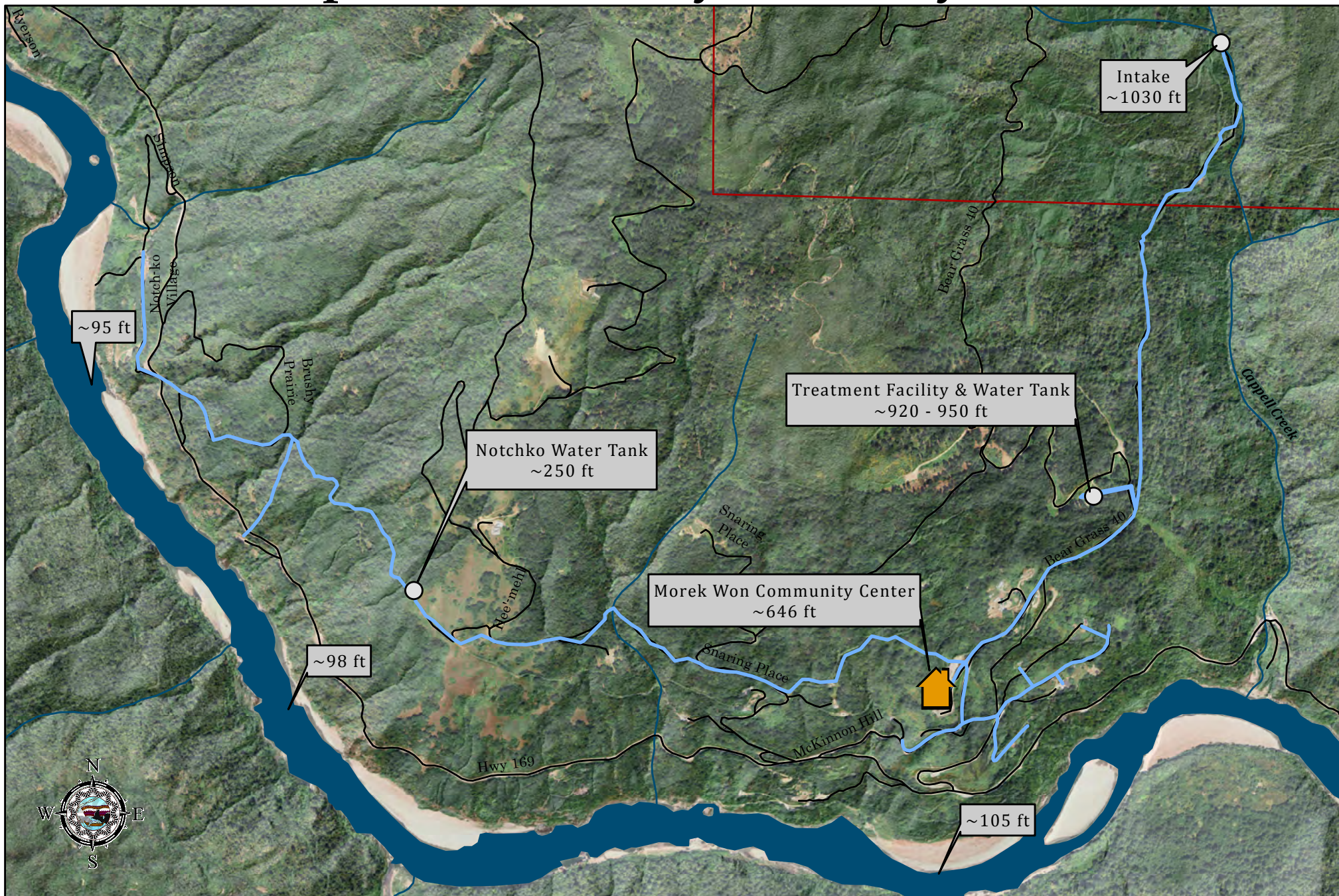
Figure 1: Ke'Pel community in northeastern Humboldt County






KA'PEL WELL 22-J23

EXHIBIT 2

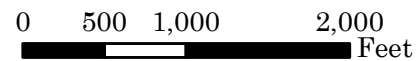
Ka'Pel Water System Map July 2014

Kepel Community Water System



-  Water System Feature
-  Road
-  Community / Tribal Building
-  Stream
-  Yurok Reservation

All lines are for reference only.
Elevations are calculated using a 1 meter DEM.



Prepared By:
Yurok Tribe GIS Program
June 2014