

McKinleyville Community Services District



**Pre-Application Meeting
for the Proposed Ocean Outfall**

November 9, 2010

Presentation Overview

MCSD is initiating the permitting process for construction of an ocean outfall for the MCSD Wastewater Management Facility.

Representatives from the following agencies were invited to attend a pre-application meeting for the proposed project:

- Regional Water Quality Control Board (RWQCB)
- CA Coastal Commission (CCC)
- CA Department of Fish and Game (DFG)
- National Marine Fisheries Service (NMFS)
- US Army Corps of Engineers (ACOE)
- CA State Lands Commission (CSLC)
- County of Humboldt

October 6, 2010 Presentation

On October 6, 2010 the first pre-application meeting was held.

Representatives from the following agencies attended:

- Regional Water Quality Control Board (RWQCB)
- National Marine Fisheries Service (NMFS)
- US Army Corps of Engineers (ACOE)
- County of Humboldt

Other agencies to be contacted regarding the project include:

- US Fish and Wildlife Service (USFWS)
- US Coast Guard
- State Historic Preservation Office (SHPO)
- US Environmental Protection Agency (USEPA)

Objectives

MCSD is working on a 20-year facilities plan for the WWMF that addresses long-term sustainable solutions for wastewater treatment, disposal, and reclamation.

One alternative for effluent disposal is a new ocean outfall.

MCSD needs to further define the permitting and environmental analysis needs for this proposed project.

For this effort we need to answer the following questions:

- What are the challenges going to be?
- Will there be obstacles to permitting this project?
- What are the timelines for the project permits?

Preliminary Summary of Issues

We have developed a preliminary summary of issues that will need to be investigated for the ocean outfall:

- Site characterization
- Construction methods
- Bathymetry
- Subsurface conditions
- Regulatory issues
 - o Mixing zone application
 - o Required effluent quality

Site Characterization

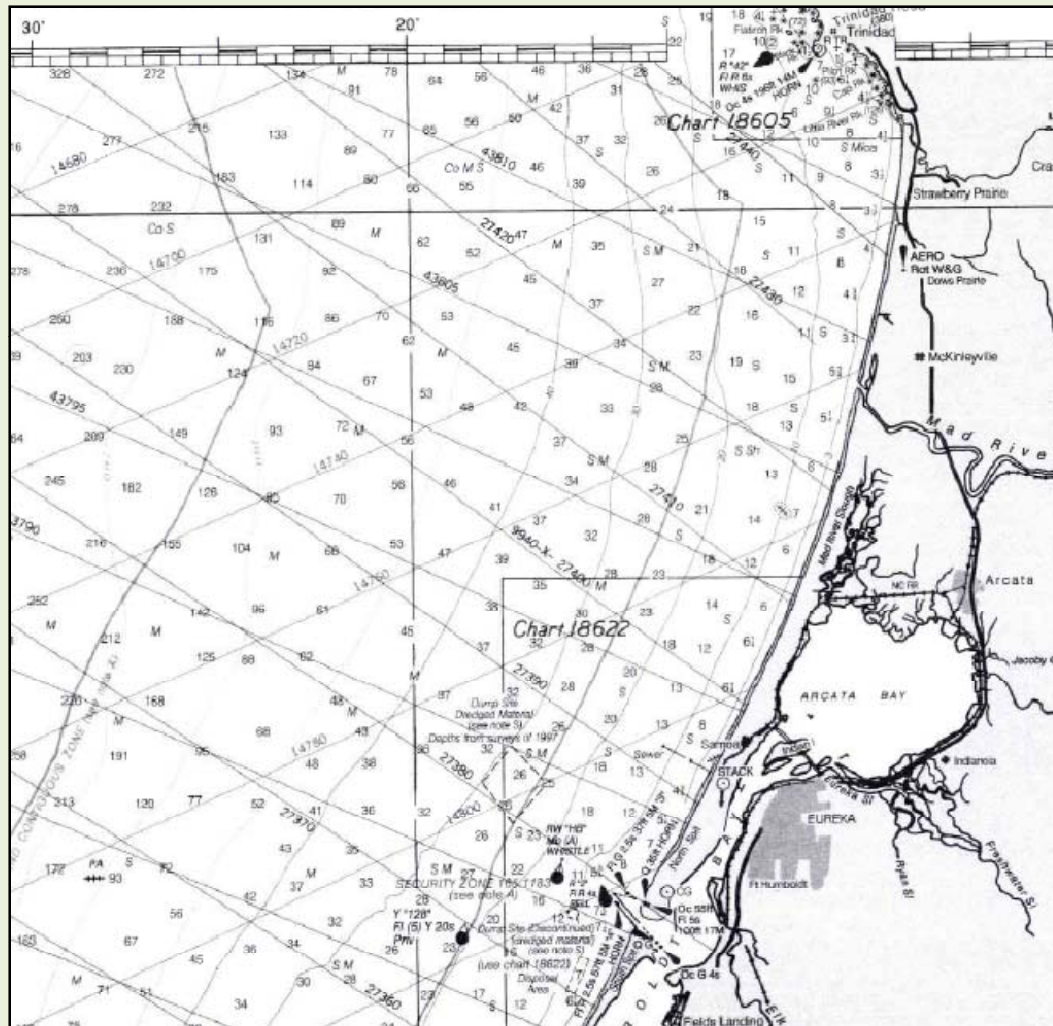
The location of the outfall will depend upon many parameters, including:

- Suitability for Horizontal Directional Drilling (HDD),
- Offshore bathymetry, and
- Subsurface conditions near the outfall diffusers.

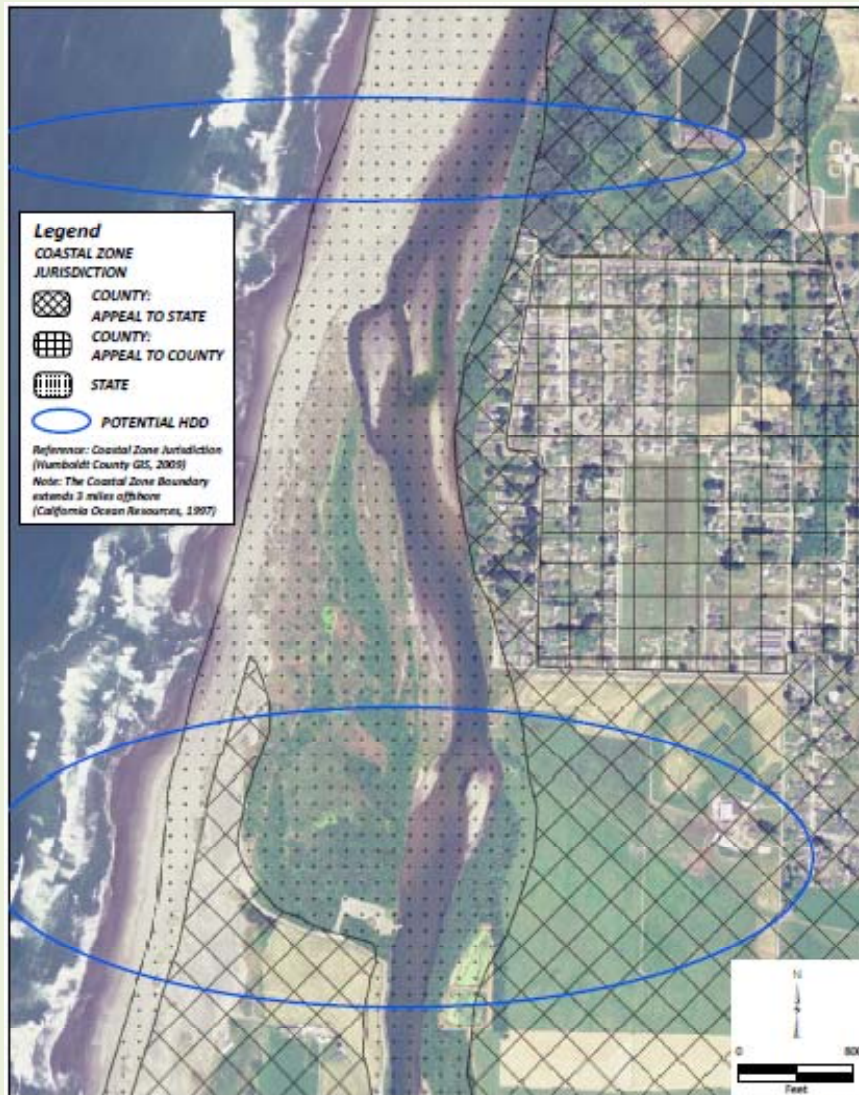
It is assumed that the outfall will be constructed approximately 2,000 feet or more offshore.

This will put it outside of the zone of “immediate contact,” which is defined in the Ocean Plan as the zone bound by the shoreline and a distance of 1,000 feet, or the 30-foot depth contour, whichever is less.

Navigation Chart for McKinleyville Area



Proposed Pipeline Locations



Construction Methods

The outfall will be constructed by HDD. Site-specific investigations to determine suitability will include:

- Preliminary geotechnical investigation
 - Identify soils
 - Determine the influence of soils on drilling
- Access to launch site
- Offshore work platform requirements
- Hydrofracture potential

Bathymetry

Bathymetric mapping and sub-bottom profiling will need to be completed in the offshore region being considered for the outfall.

Selection of the proposed site will take into consideration the following bathymetric features:

- Water depth exceeding 40 feet
- Areas with low relief rock bottom preferred
- Distance from depths subjected to intense wave energies
- Avoiding marine habitat areas and kelp beds
- Bathymetric features that protect from storm surges
- Depth of sand movement in the literal cell
- Outfall distance from closure

Subsurface Conditions

Once a site has been selected, the sea floor will need to be monitored for biological life and currents.

Currents are measured using an Acoustic Doppler Current Profiler (ADCP), which autonomously measures subsurface current velocity and direction.

The ADCP data is used to determine the currents that influence mixing at the location of the outfall and wave energy required to be resisted by the outfall structure.

Biological monitoring is performed using visual observation of recordings made by underwater divers.

Regulatory Issues: Mixing Zone

The EPA defines a mixing zone as an allocated impact zone where water quality standards may be exceeded as long as acutely toxic conditions are prevented and the State's beneficial uses are protected.

Water quality criteria must be met at the edge of the mixing zone. Use of regulatory mixing zones as defined by the EPA is allowed at the discretion of the State.

RWQCB has historically decided whether to allow mixing zones on a case-by-case basis.

Regulatory Issues: Required Effluent Quality

A new National Pollutant Discharge Elimination System (NPDES) Permit will need to be issued for an ocean outfall.

It is assumed that secondary treatment limits for Biological Oxygen Demand (BOD) and Total Suspended Solids (TSS) will be similar to those contained in the current NPDES permit for discharge to the Mad River.

Water quality objectives for protection of marine life are defined in Table B of the California Ocean Plan. Permit requirements for effluent quality to meet these standards will depend in part on whether the RWQCB allows a regulatory mixing zone.

Alternatives to New Ocean Outfall

Before proceeding with the detailed investigations necessary for siting of a new ocean outfall, other outfall alternatives for effluent disposal should also be considered.

Alternatives to construction of a new ocean outfall may include, but are not limited to the following:

1. Use of the existing ocean outfall in Samoa
2. Continued use of the existing Mad River discharge

Next Steps

MCSD will prepare a summary of the anticipated permitting and environmental analysis needs for the proposed project.

The summary will also address potential challenges and obstacles to permitting the project based on information gathered during the pre-application meetings.

MCSD will provide the summary to involved agencies for review and comment.