

City of Arcata Trust Lands Use Plan

INTRODUCTION

In 1989 the State of California granted tide and submerged lands to the City of Arcata to be held by the City in trust for the benefit of all the people of the state for purposes of commerce, navigation, and fisheries, and for other public trust purposes, including, but not limited to preservation of the lands in their natural state for scientific study, open space, wildlife habitat, and recreational and visitor oriented uses. The granted lands include portions of the Arcata Marsh and Wildlife Sanctuary and the City’s integrated wastewater treatment system as well as tidelands in Humboldt Bay.

The legislation requires the City to submit to the State Lands Commission a Trust Lands Use Plan indicating details of intended development, preservation, or other use of the trust lands.

GENERAL DESCRIPTION OF USES PLANNED FOR THE TRUST LANDS

The City of Arcata's trust lands include both upland and underwater lands in the following use categories:

The Arcata Marsh and Wildlife Sanctuary and Integrated Wastewater Treatment Facility – City operations for the Arcata Marsh and Wildlife Sanctuary and integrated wastewater treatment system covers 306 acres. Of that 192.56 are subject to the 1989 legislation. The remainder includes 29.42 acres of upland and created wetlands (Gearheart Marsh, Allen Marsh and associated salt marsh). The remaining 81.82 acres have recently been acquired by the City to expand the Arcata Marsh and Wildlife Sanctuary to the west. The lands covered by the legislation include the following parcels:

Parcel Number	Acreege	Description
503241010	61.49	Klopp Lake, Hauser Marsh, & Mt. Trashmore
503241013	5.51	Butchers Slough portion & areas west of the Corporation Yard boundary
503211005	4.38	Pilot marshes south of Corporation Yard boundary
501043003	5.03	Salt Marsh east of Treatment marshes & oxidation ponds
503241001	26.51	Butchers Slough, Log Pond & Arcata Marsh Interpretive Center
503241016	4.53	Stormwater wetland, and areas just west of South G Street
503241005	0.22	Butchers Slough adjacent to South I Street
503241006	0.04	Butchers Slough adjacent to South I Street
50601104	14.71	Salt Marsh west of I Street
503241015	0.1	Butchers Slough – South G Street
No number	80.29	Oxidation Ponds, Treatment Marshes and

		Aquaculture facility
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Tidelands in Humboldt Bay – This area is comprised of approximately 1285.9 acres. Of that 170.9 is managed as part of the Arcata Marsh and Wildlife Sanctuary and integrated wastewater treatment system. The southeast portion of the tidelands is under the jurisdiction of the U. S Fish and Wildlife Service as part of the Humboldt Bay National Wildlife Refuge.

Use Plan for the Arcata Marsh and Wildlife Sanctuary & Integrated Wastewater Treatment Facility

The Arcata Integrated Wastewater Treatment Facility and Marsh and Wildlife Sanctuary are located between South G and South I Streets in the City of Arcata. Arcata is situated on the north end of Humboldt Bay in Humboldt County. The integrated wastewater wetlands treatment system includes oxidation ponds, treatment marshes and pilot marshes located adjacent to the City’s corporation yard, and enhancement marshes (Allen, Gearheart and Hauser) located at the Arcata Marsh and Wildlife Sanctuary (AMWS). The enhancement marshes are created freshwater wetlands that are an integral part of the treatment system and the Arcata Marsh and Wildlife Sanctuary. These marshes, which are fed with treated wastewater, provide additional treatment, freshwater habitat and opportunities for public education, recreation and scientific study.

City Integrated Wastewater Treatment Facility

The City's Environmental Services Department is responsible for operating Arcata's wastewater treatment facility. The wastewater treatment facility includes primary treatment infrastructure, two methane digesters, covered sludge drying beds, two oxidation ponds, six treatment marshes, and ten pilot marsh cells, a chlorination/dechlorination facility, , and four buildings which house the generators, laboratory and offices necessary for operating the plant. All drainage from the corporation yard is treated at the wastewater treatment facility before being discharged into Humboldt Bay.

The portions of the integrated wastewater treatment facility located on trust lands include Arcata's oxidation ponds, pilot and treatment wetlands, The former wastewater aquaculture facility is located along the western perimeter of Arcata's oxidation ponds. The aquaculture facility when in operation used a mix of disinfected wastewater and seawater to rear a variety of fish species. In the past Coho and Chinook salmon and steelhead were raised to enhance the local commercial and sport fishery as well as contribute to restoring runs in local creeks. More recently the Department of Fish and Game determined that a hatchery was not in the best interest of local natural fisheries and the aquaculture facility was discontinued.

City Use Goals Include:

1) Operate and maintain the Integrated Wastewater Treatment Facility to meet state and federal discharge standards and regulations.

2) Provide general operation and maintenance for the Integrated Wastewater Treatment Facility. Maintenance and upkeep activities at the Integrated Wastewater Treatment Facility include maintaining existing buildings, water conveyance structures and equipment, aerators in the oxidation ponds, electrical and other utility lines, and the dikes that separate the oxidation ponds, and treatment wetlands from each other and the Bay. When needed *hydrocotyle ranunculoides* and *typha latifolia* are removed from the oxidation ponds, the dikes are mowed annually and pilot and treatment marsh vegetation is burned or mechanically removed as needed.

4) Work with HSU to provide opportunities for research and education as it relates to wastewater treatment and reuse. HSU students and faculty undertake a variety of research projects related to wastewater treatment and reuse at the integrated wastewater treatment facility. All research projects must be approved and permitted by the Director of Environmental Services.

Arcata Marsh and Wildlife Sanctuary

The Arcata Marsh and Wildlife Sanctuary's over 300 acres include freshwater wetlands, salt marsh and mudflats associated with Humboldt Bay, a brackish lake, Butcher slough and adjacent uplands. The City's wastewater is treated in and provides the freshwater source for three of the four freshwater marshes. The Sanctuary is a home or temporary refuge for over 250 species of birds. It provides breeding habitat for ducks and other waterfowl and is a feeding area for fish-eating birds such as osprey, herons, grebes, and egrets. It also provides refuge for a wide variety of birds that utilize the marsh during migration. The Arcata Marsh and Wildlife Sanctuary is open to the public for a variety of recreational uses including bird watching, walking, hiking, and boating. Its assets include 4.5 miles of trails, five diverse habitats for wildlife viewing, an interpretive center, a recreational lake for fishing, and a boat launch that is accessible during high tides. Weekly guided tours are offered free of charge by the Redwood Region Audubon Society and the Friends of the Arcata Marsh (FOAM). Additional special events are offered year round by FOAM and the City.

City Use Goals Include:

1) Manage the Arcata Marsh and Wildlife Sanctuary to provide habitat for birds and other species. Species that utilize the variety of habitats at the Sanctuary include shorebirds, waterfowl, wading birds, raptors, gulls and terns, song birds, otters, raccoon, fox, bobcats, voles and other rodents, a variety of reptiles and amphibians, fish and marine invertebrates.

2) Maintain the Sanctuary for both habitat protection and enhancement. Maintenance includes: managing water depth and flow to improve water quality as it moves through the enhancement marshes; removing nonnative flora and fauna to protect native flora and fauna; revegetating with native vegetation to promote a diversity of upland habitats; removing woody

growth from the center of Mt. Trashmore to protect the clay cap that seals the old landfill; removing aquatic vegetation from the marshes to maintain open water habitat; maintaining the integrity of the dikes that separate the marshes from each other; Butchers Slough, and Humboldt Bay; and maintaining the integrity of islands in Klopp Lake and the marshes .

3) Retain existing freshwater, brackish, saltwater and upland habitats. Allen, Gearheart and Hauser Marshes will continue to be managed to provide enhancement for Humboldt Bay by treating and utilizing the City's wastewater to provide fresh water habitat and public recreation. Klopp Lake, the Log Pond, the created salt marsh that resulted when Butchers Slough was realigned, the area east of the corporation Yard where tidal action was restored (17 acres of salt marsh), and the small wetlands north of Klopp Lake (No Name Pond) will continue to be managed for wildlife habitat and public enjoyment. Uplands associated with these areas are also managed for wildlife habitat as well as recreational and educational uses.

4) Enhance freshwater, brackish and saltwater marsh habitat and improve water quality. Examples of improvements include; mowing the trails and railroad tack areas as an alternative to applying herbicides, and operation of a stormwater wetland to treat stormwater runoff from the South G Street area before it enters Butchers Slough, improvements on adjacent non trust lands as part of the McDaniel Slough Restoration project that will restore tidal action to over 200 acres of former tidal lands owned by the City and CDFG. The City makes every attempt to use adaptive management if research or monitoring indicates the need to change management practices to enhance habitat values.

5) Maintain the Sanctuary for public use and enjoyment. Maintenance includes: resurfacing existing trails as needed; routine mowing of trails; maintaining and repairing bird blinds, benches, interpretive signs, picnic tables and toilets; repairing the boat launch and dock, and maintenance associated with the Marsh Interpretive Center.

6) Continue to increase public recreational opportunities. Recreational opportunities for physically challenged individuals have been provided at the Arcata Marsh Interpretive Center and a nearby 700 foot trail. Additional trail upgrades made on existing trails provides hard surfacing better suited to use by physically challenged individuals.

7) Continue to improve upland habitat. The City continues to improve upland habitat by removing nonnative vegetation and replacing it with native species to increase the area's value for wildlife and improve its visual quality.

8) Provide opportunities for education. The City's educational goal for the Sanctuary includes educating as broad a range of people as possible about Arcata's innovative wastewater treatment system, and providing accurate information on the multiple benefits of wetlands, including their significance for treating wastewater and wildlife habitat. The City works with FOAM to provide education to the community, area schools, and tourists. City staff and FOAM volunteers staff the Interpretive Center, provide public and special request tours, and develop interpretive displays, brochures, exhibits, and maps. FOAM is contracted with the City to provide these services free of charge for schools, special interest groups, and the public. The Interpretive

Center is open 9-5 daily. The Arcata Marsh and Wildlife Sanctuary is open from dawn until one hour after sunset for recreation, research and education. Research conducted at the Sanctuary must be permitted by the Director of Environmental Services.

9) Expand educational opportunities. Possible future educational opportunities include: special topic lectures, slide shows, or tours; school use of the Sanctuary and the Interpretive Center as an extension of the classroom, training for teachers; and providing educators with existing educational materials (both AMWS specific and others) that can be used by schools to enhance their marsh visits.

FOAM volunteers and City staff continue to develop interpretive displays for the Arcata Marsh Interpretive Center and Wildlife Sanctuary. The exhibits depict the various elements of Arcata's integrated wastewater treatment system and link it to the water cycle, treatment requirements that result from human uses, the use of wetlands for wastewater treatment and reuse of wastewater to enhance wildlife habitat values, and our changing relationship with water resources around Humboldt Bay. Upgrading existing outdoor interpretive exhibits to provide the public with an interpretation of the marsh system's rich and diverse natural resources and its relationship to Humboldt Bay and our coastal resources.

10) Provide opportunities for research as it relates to wildlife and human use of the Arcata Marsh and Wildlife Sanctuary. Research topics at the marsh vary widely and are undertaken by High school and university students as well as professors. All research projects must be approved and permitted by the Director of Environmental Services.

Use Plan for the Underwater Tidelands

The City leases 174.6 acres of tidelands to North Bay Shellfish for mariculture purposes.

1) Continue mariculture lease for use of tidal and submerged lands for commercial cultivation of oysters and clams consistent with state and federal regulations governing mariculture.

2) Retain the tidelands not currently leased for mariculture as natural habitat.

PROJECTED STATEWIDE BENEFIT

City activities on trust lands are consistent with the purposes set forth in Section 1 of the enabling legislation that states "lands to be held in trust for the benefit of all the people of the state for purposes of commerce, navigation, fisheries and for other public trust purposes including, but not limited to preservation of the lands in their natural state for scientific study, open space, wildlife habitat, and recreational and visitor-oriented uses".

Integrated Wastewater Treatment System and Arcata Marsh and Wildlife Sanctuary

Prior to the establishment of the Arcata Marsh and Wildlife Sanctuary, Arcata's waterfront consisted of an abandoned county landfill, abandoned and vandalized lumber mill buildings and the sewage treatment plant. Due to the blighted nature of the area, the City was growing away from its once historically important waterfront. The development of Arcata's integrated wastewater treatment system and the Arcata Marsh and Wildlife Sanctuary (AMWS) turned this blighted area into one of the most popular and well know parts of the City. Over 4.5 miles of publicly accessible trails wind past several different wetland habitat types located within the 306 acre Sanctuary. Annual visitor estimates to the AMWS exceed 130,000 people per year. The public use and habitat values provided by the Sanctuary are consistent with the trust uses listed above. Opportunities for research and education at the Sanctuary and the Interpretive Center are also consistent with public trust uses.

The City's management of the integrated wastewater treatment system to provide treatment and freshwater for wetland habitat and opportunities for research and education are listed public trust purposes. The oxidation ponds and treatment marshes also provide habitat for wildlife and opportunities for research and education.

Tidelands

The lease of tidelands for mariculture furthers both the commerce and fisheries purposes of the public trust doctrine. The remaining tidelands are maintained in their natural state for scientific study, open space, wildlife habitat, recreation and visitor oriented uses.

METHOD OF FINANCING

Annual Operating Budget

Arcata's budget for maintenance of the Arcata Marsh and Wildlife Sanctuary is included in the wastewater treatment facility's budget. The actual operating costs for the Sanctuary are only a portion of the \$2,326,599 budgeted for 2011-12. Most of the funds are committed to operation and maintenance of the City's integrated wastewater treatment facility. These services are funded by wastewater service charges. The operation and debt service wastewater fund reserves cover capital improvements to the treatment facility. The Year 2011–12 Budget for these activities is attached.

Revenues

Wastewater Treatment Fund

Service fees charged to customers cover the operating and maintenance costs for the integrated wastewater treatment facility and the Arcata Marsh and Wildlife Sanctuary.

Arcata Marsh Interpretive Center

Fees for use of the Arcata Marsh Interpretive Center for non-marsh related events offset building maintenance costs.

Minimum fee up to 3 hours - \$110.00
Half Day Rate - \$160
Full Day Rate \$210
Non-profit agencies are provided a 30% discount
Arcata Based Youth Serving Agency – 50% discount

Revenues from the sale of items at the Interpretive Center Bookstore help to offset building operating costs. The gross profit for these purchases is roughly 50%.

Tidelands

Revenue from the lease is 2.5 % of the net annual profits. Revenues in 2009 were \$469.55 and \$10000 in 2010.

Capital Improvement Costs

City wastewater fund revenues and grant funds are utilized for all the capital improvement projects undertaken at the integrated wastewater treatment facility and at the Arcata Marsh and Wildlife Sanctuary. No capital improvements have been undertaken in the tidelands.

TRUST LANDS USE PLAN IMPLEMENTATION SCHEDULE

Integrated Wastewater Treatment System and Arcata Marsh and Wildlife Sanctuary – 1989 to present

1. Operate and maintain the Integrated Wastewater Treatment Facility to meet state and federal discharge standards and regulations.
2. Provide general operation and maintenance for the Integrated Wastewater Treatment Facility.
3. Work with HSU to provide opportunities for research and education as it relates to wastewater treatment and reuse.
4. Cooperate with the Wildlife Care Center to improve rescue and rehabilitation opportunities for injured or stranded wildlife.
5. Manage the Arcata Marsh and Wildlife Sanctuary to provide wastewater treatment, habitat for birds and other species, public access, and research and education.
6. Maintain the Sanctuary for both habitat protection and enhancement.

7. Retain existing freshwater, brackish, saltwater and upland habitats.

Enhance freshwater, brackish and saltwater marsh habitat and improve water quality.

Maintain the Sanctuary for public use and enjoyment.

8. Continue to increase public recreational opportunities.
9. Continue to improve upland habitat.
10. Expand opportunities for education.
11. Expand educational opportunities
12. Provide opportunities for research as it relates to wildlife and human use of the Arcata Marsh and Wildlife Sanctuary.

Tidelands – 1989-present

1. Continue mariculture lease for use of approximately 174.6 acres of tidal and submerged lands for conducting commercial cultivation of oysters and clams until April 18, 2016.
2. Retain the remaining tideland as natural habitat.
3. Renegotiate a new lease agreement in 2016 consistent with state and federal regulations governing mariculture.

HOW THE TRUSTEE WILL PROTECT AND PRESERVE THE TRUST LANDS AND RESOURCES

The Arcata Marsh and Wildlife Sanctuary trust lands and the tidelands are managed by the Natural Resources Division of Arcata's Environmental Services Department. The Natural Resources Division of the Environmental Services Department is responsible for operating and maintaining all of the City's natural areas. The Friends of Arcata Marsh assists the City with staffing the Arcata Marsh Interpretive Center and by providing tours of the Sanctuary and integrated wastewater treatment facility. The wastewater treatment facility is operated by the Water/Wastewater Division, of the Environmental Services Department.

The Arcata Marsh and Wildlife Sanctuary, the oxidation ponds and the treatment marshes are zoned "Natural Resources Protection". To protect and manage the Sanctuary for its intended purposes, the City has established regulations that govern public use of the Sanctuary. These regulations are attached. The proposed plans for the trust lands are consistent with the Open Space and Conservation Element of the City of Arcata's General Plan 2020 Update and the Coastal Land Use and Development Guide.

ATTACHMENTS

1. Location Maps for Arcata Marsh and Wildlife Sanctuary, Wastewater Treatment Facility and City Tidelands
2. Agreement with Friends of the Arcata Marsh
3. City of Arcata 2011-12 Wastewater Treatment Budget
4. Regulations for Use of the Arcata Marsh and Wildlife Sanctuary
5. Excerpt from Open Space and Conservation Element
6. Arcata Marsh and Wildlife Sanctuary Brochures