

COMMUNITY DEVELOPMENT DEPARTMENT**Kevin R. Hamblin, AICP, Director***Lisa D. Shikany, Environmental Planner*

531 K Street • Eureka, California 95501-1146

Ph (707) 268-5265 • Fax (707) 441-4202 • lshikany@ci.eureka.ca.gov**PROJECT TITLE:** Palco Marsh Enhance Plan – Phase 1A**PROJECT APPLICANT:** City of Eureka**PROJECT LOCATION:** Palco Marsh – bounded by Del Norte Street, Felt Street, Broadway, Vigo Street and Humboldt Bay, APNs 007-031-02, -03, -04; 007-041-03; 007-051-02, -06**ZONING & GENERAL PLAN DESIGNATION:** Zoning – Natural Resources and Coastal Dependent Industrial; G.P – Natural Resources and Coastal Dependent Industrial

PROJECT DESCRIPTION: Palco Marsh Phase 1A Work Plan includes tasks from the Palco Marsh Enhancement Plan that either were not completed as part of the Phase 1 Work Plan, are tasks from the Phase 1 final monitoring report, or are new enhancement tasks. All project components are proposed for the further enhancement of Palco Marsh pursuant to the approved Palco Marsh Enhancement Plan. The project includes the installation of a 48-in culvert to replace an existing 24-in. culvert connecting Palco Marsh with Humboldt Bay; aesthetic modification of the Del Norte Street drainage structure, removal of silt from the structure and replacement and/or removal of existing tide gates; hand digging and cleaning of Palco Marsh channels; dredging of the tidal slough between Palco Marsh and the peninsula west of the marsh; installation of Del Norte and Felt Streets landscaping; installation of interpretive signage; eradication of common reed and other invasive exotics; revegetation of treated common reed areas; and the hydrologic enhancement of Railroad Marsh. The plan also includes monitoring, maintenance and management activities including botanical and hydrologic monitoring; monitoring and treatment of exotics; monitoring and removal of sediment from marsh channels and the tidal channel; repair, maintenance or replacement of existing drainage structures; and monitoring and clean-up of garbage. See the Palco Marsh Phase 1A Work Plan for a detailed project description.

The City of Eureka adopted a 1988 Mitigated Negative Declaration for the Palco Marsh Enhancement Plan (SCH# 88092022) and a subsequent 1991 Mitigated Negative Declaration for revisions to Phase II of the plan (SCH# 91093076). Both documents found that the project would have beneficial and insignificant impacts. The addition of project components (installation of 48-in. culvert and dredging of tidal slough), changes in the approach to exotics removal, and changed environmental circumstances for Phase 1A necessitated additional environmental review.

LEAD AGENCY/CONTACT: City of Eureka, Community Development Department; Lisa D. Shikany, Environmental Planner; 531 K Street, Eureka, CA 95501-1165; phone: (707) 268-5265; fax: (707) 441-4202; e-mail: lshikany@ci.eureka.ca.gov.

SURROUNDING LAND USES AND SETTING: The project area is surrounded by urban land uses on three sides, and Humboldt Bay on the fourth side. It is bounded by industrial and commercial development on the north, Maurer Marsh and Bayshore Mall on the south, industrial and commercial development on the east along Broadway, and by Humboldt Bay on the west with the railroad bisecting the Palco Marsh properties in a north-south direction between the marsh and the bay.

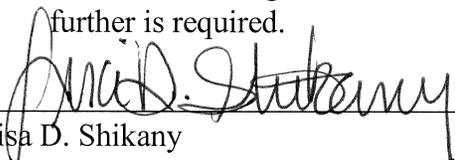
OTHER PUBLIC AGENCIES WHOSE APPROVAL IS, OR MAY BE REQUIRED (e.g. permits, financing approval, or participation agreement.): U.S. Army Corps of Engineers; North Coast Regional Water Quality Control Board; California Coastal Commission; North Coast Railroad Authority; Humboldt Bay Harbor, Recreation and Conservation District; and the State Coastal Conservancy.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED: The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "**Potentially Significant Impact**" as indicated by the checklist on the following pages.

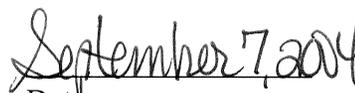
- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Hazards/Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance | |

DETERMINATION: On the basis of this initial evaluation:

- I find that the proposed project **could not** have a significant effect on the environment, and a **NEGATIVE DECLARATION** will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A **MITIGATED NEGATIVE DECLARATION** will be prepared.
- I find that the proposed project **may** have a significant effect on the environment, and an **ENVIRONMENTAL IMPACT REPORT** is required.
- I find that the proposed project **may** have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An **ENVIRONMENTAL IMPACT REPORT** is required, but it must analyze only those effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier **EIR** or **NEGATIVE DECLARATION** pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier **EIR** or **NEGATIVE DECLARATION**, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.



Lisa D. Shikany
Environmental Planner, City of Eureka



Date

Pursuant to CEQA Guidelines Section 15073.5, the changes made to the negative declaration and initial study (originally dated July 30, 2004, posted for public review and circulated through the State Clearinghouse for a 30 day review period, SCH# 2004082028) do not require recirculation of these documents.

CHECKLIST AND EVALUATION OF ENVIRONMENTAL IMPACTS: An explanation for all checklist responses is included, and all answers take into account the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts. The explanation of each issue identifies (a) the significance criteria or threshold, if any, used to evaluate each question; and (b) the mitigation measure identified, if any, to reduce the impact to less than significance. In the checklist below the following definitions are used:

"Potentially Significant Impact" means there is substantial evidence that an effect may be significant.

"Less Than Significant With Mitigation Incorporated" means the incorporation of one or more mitigation measures can reduce the effect from potentially significant to a less than significant level.

"Less Than Significant Impact" means that the effect is less than significant and no mitigation is necessary to reduce the impact to a lesser level.

"No Impact" means that the effect does not apply to the proposed project, or clearly will not impact nor be impacted by the project.

I. AESTHETICS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) <i>Have a substantial adverse effect on a scenic vista?</i>			X	
b) <i>Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?</i>			X	
c) <i>Substantially degrade the existing visual character or quality of the site and its surroundings?</i>			X	
d) <i>Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?</i>				X

DISCUSSION: The measure for determining whether a project will result in aesthetic impacts is a qualitative judgment rather than a set of quantifiable parameters. As such, the opinion of what may be an adverse aesthetic impact can vary from person to person.

The project site is generally considered to be an area that provides scenic vistas of both Palco Marsh and Humboldt Bay. The Palco Marsh Enhancement Plan project was developed with these vistas in mind, and Phase 1A proposes work tasks that will continue to improve scenic vistas in this area. The aesthetic improvements to the Del Norte Street drainage structure, addition of interpretive signage, removal of invasive exotics, proposed landscaping along Del Norte and Felt Streets and improvements to increase tidal flushing will all contribute to improved vistas in this area. Thus, the project will have an overall positive benefit to scenic vistas.

There will be short-term visual impacts to various areas of the marsh as a result of construction. Work plan tasks #1 through #5 (installation of 48-in. culvert; modification of Del Norte Street drainage structure and replacement and removal of tide gates; digging and cleaning of marsh channels; dredging of the tidal slough; and installation of landscaping) will be completed during one construction season. Excavation of Railroad Marsh, installation of the culverts into that marsh and revegetation of treated common reed areas will occur at a later time during a separate construction season. Treatment of invasive exotics will be an ongoing process for at least two years, and will take a day or less for each treatment.

Although the presence of construction equipment in the marsh may be considered to be incompatible with the marsh experience visitors expect, these impacts are short-term and will result in the ultimate and long-term enhancement of the area.

One additional visual impact that was considered is the browning of the invasive exotics that are proposed for treatment with herbicide. This will not be as evident with the common reed since it dies back naturally every fall and remains brown throughout the winter. However, the browning of the pampas grass in particular will be evident approximately two weeks after herbicide application, and will remain for several months for smaller plants and possibly a year or more for very larger plants until the plant completely deteriorates. Some visitors to the marsh may find this effect to be not visually pleasing. Again, this effect will be short term and the end result will be the removal of invasive exotics, which is a benefit to the marsh. In addition, the dead biomass from larger plants can be removed two to three months after herbicide has been applied if it is deemed necessary.

Based on the above discussion, staff finds that the project will not result in adverse aesthetic impacts.

II. AGRICULTURE RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of farmland, to non-agricultural use?				X

DISCUSSION: The project site does not contain prime farmland, unique farmland, or farmland of statewide importance, and is not zoned for agriculture use. Staff therefore finds that the project will not result in adverse impacts to agricultural resources.

III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?		X		
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?		X		
e) Create objectionable odors affecting a substantial number of people?			X	

DISCUSSION: Air quality is a general term used to describe various aspects of the air to which plants and

human populations are exposed on a regular basis. Air quality can be degraded by a variety of contaminants including criteria pollutants that consist of gases or suspended particulate matter (PM-10). Ambient air quality standards and allowable limit levels are set at both the state and federal level; in most cases the standards are similar. The standards are set for air pollutants in outside air and are based on predicated health effects of those pollutants. Humboldt, Del Norte and Trinity Counties are located in the North Coast Air Basin under the regulation of North Coast Unified Air Quality Management District (NCUAQMD). Air quality measurements for Humboldt County are taken in Eureka at 6th & I Streets.

Humboldt County is listed as attainment (i.e., within allowable limits) for the following criteria pollutants: ozone; carbon monoxide; nitrogen dioxide; sulfur dioxide; sulfates; hydrogen sulfide; and vinyl chloride. Humboldt County is listed as non-attainment for the state standard for PM-10 air emissions, which include chemical emissions and other inhalable particulate matter with an aerodynamic diameter of less than 10 microns. Examples include smoke, dust, fly ash, and airborne salts or other particulate matter naturally generated by ocean surf. The major sources of PM-10 pollutants include industrial processes, automobiles, wood smoke from open burning and residential wood heating, dust from paved and unpaved roads, construction, and agricultural practices. Pursuant to data from the California Air Resources Board as presented by the Center for Economic Development, California State University, Chico (2003), Humboldt County has not exceeded the national PM-10 standard since at least 1990.

Despite the state status of non-attainment for PM-10 pollutants, based on the published data it is evident that the implementation and enforcement by the NCUAQMD of the Particulate Matter (PM-10) Attainment Plan and the Air Quality Regulation 1, Chapter IV, that Humboldt County is on the correct path towards attainment. As evidence, in 1990 Humboldt County exceeded the state standard for PM-10 on 30 days, in 1994 on 12 days, in 1999 and 2000 on 6 days each, and in 2001, only on one day.

The proposed project has the potential for release of fugitive dust and particulate matter during the proposed construction process. However, construction emissions will be limited in scope and duration, thus contributing to the minimization of air quality impacts. To further reduce the potential impacts to air quality to a level judged to be below the threshold of significance, a mitigation measure has been included that requires the construction contractor to operate in accordance with Air Quality Regulation 1, Chapter IV, Rules 420 and 430, which will reduce potential fugitive dust emission impacts. Compliance is required by law without the required mitigation, but inclusion of the requirement as a mitigation measure highlights the need for compliance.

The project also has a potential for air quality impacts resulting from the controlled burning of common reed. This type of a burn is subject to Air Quality Regulation 2, Open Burning. A Coordinated Burn Authorization Permit will be required, as well as a Smoke Management Plan because of the urban location of the burn. To insure impacts to air quality are reduced below a threshold of significance, a mitigation measure has been included requiring compliance with Regulation 2. As with Regulation 1, compliance is required without a mitigation measure requiring compliance. The mitigation measure further requires that burning be conducted in a manner that minimizes smoke and related air quality impacts to Broadway and surrounding development.

There are no hospitals, schools or other similar sensitive receptors in the vicinity of the project. Residents and businesses in the area could potentially be impacted by air borne pollutants. However, as discussed above and with the proposed mitigation, the project will not result in such levels or concentrations of pollutants so as to have a significant adverse impact on the surrounding area or substantially increase existing air quality impacts. Therefore, staff finds the project will not result in substantial air quality impacts on or to sensitive receptors.

The NCUAQMD has advised that, generally, an activity that individually complies with the state and local standards for air quality emissions will not result in a cumulatively considerable increase in the countywide PM-

10 air quality violation. Further, the NCUAQMD has advised that smaller construction projects do not generate particulate matter greater than the local and/or state standard. Therefore, staff concludes that with the required compliance with NCUAQMD standards and regulations, the project will not result in adverse air quality impacts, nor result in a cumulatively considerable increase in the PM-10 non-attainment.

The project proposes dredging of the tidal channel westerly of the marsh, as well as the digging of a small section of channel within the marsh. The 1991 initial study for this project indicated organic soils could create objectionable odors during the construction period. Air Quality Management District Regulation 1, Rule 400(a) Public Nuisance prohibits the creation of objectionable odors which could affect a considerable number of persons or the public. It was determined that based on soils information, the presence of organic soils is very limited and would not create objectionable odors, which was indeed the case when Phase 1 was constructed. In addition, although bay mud such as the mud in the tidal channel can be associated with odors, the dredged mud will be on site very short-term. Impacts from objectionable odors are therefore not judged to be significant.

Based on the discussion above the mitigation measure below, staff finds that that the project will not result in adverse air quality impacts.

MITIGATION MEASURE NO. 1. The applicant, at all times, shall comply with Air Quality Regulation 1, Chapter IV to the satisfaction of the NCUAQMD.

Air Quality Regulation 1, Chapter IV, Rule 420 – Particulate Matter: A person shall not discharge particulate matter into the atmosphere from any combustion source in excess of 0.46 grams per standard cubic meter (0.20 grains per standard cubic foot) of exhaust gas, calculated to 12 percent carbon dioxide; or in excess of the limitations of NSPS as applicable.

Air Quality Regulation 1, Chapter IV, Rule 430 – Fugitive Dust Emissions: The handling, transporting, or open storage of materials in such a manner which allows or may allow unnecessary amounts of particulate matter to become airborne, shall not be permitted. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions (only those sections of the law most germane for this project and listed below):

- (1) Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust;**
....
....
....
- (5) the application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts;**
....
- (7) the prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.**

MITIGATION MEASURE NO. 2. The applicant, at all times, shall comply with Air Quality Regulation 2, Open Burning, to the satisfaction of the NCUAQMD. Further, burning shall be conducted in a manner that minimizes smoke and related air quality impacts to Broadway and surrounding development.

IV. BIOLOGICAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?			X	
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?			X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

DISCUSSION: The project area consists of salt marsh, brackish marsh, open mudflats and freshwater marsh/riparian habitats, as well as upland areas. An upland railroad berm traverses the site, and an upland utility road/pathway borders the 39-acre main Palco Marsh. A detailed description of the flora and fauna present at the site is included in the original *Palco Marsh Enhancement Plan*, subsequent monitoring plans, and the *Palco Marsh Phase 1A Biological Impacts Assessment and Mitigation and Monitoring Plan* which is included as an attachment to this initial study. The other referenced documents are available for review in the Community Development Department at Eureka City Hall. The purpose of the proposed project is the further enhancement of the Palco Marsh biological resources in compliance with the direction of the Palco Marsh Enhancement Plan and subsequent monitoring reports, and while there may be the potential for temporary impacts to these resources resulting from construction or maintenance activities, the long-term effects of these activities will be beneficial and will further the goals of the Enhancement Plan.

Sensitive Plant Species

Humboldt Bay owl’s clover and Point Reyes bird’s beak: Baseline botanical surveys of the project area and subsequent monitoring reports indicate that the rare species Point Reyes bird’s beak (*Cordylanthus maritimus* spp. *palustris*) and Humboldt Bay owl’s clover (*Castilleja ambigua* spp. *humboldtiensis*) occur on the peninsula west of the railroad track. Rare plant surveys conducted by Mad River Biologists in 2002 confirmed these occurrences and documented additional occurrences of 244 Point Reyes bird’s beak individuals within a 50 sq. ft. area in the northwestern portion of Palco Marsh.

Work on the Del Norte Street drainage structure and the digging or clearing of channels proposed as part of Phase 1A will not likely impact these species due to their location relative to the proposed work. The project description notes that these plant locations will be confirmed in the field prior to completion of work task #'s 2, 3 and 4, and they shall be avoided to the extent feasible. Future maintenance work also has the potential to impact these plants. If avoidance is not possible in the course of conducting enhancement or maintenance tasks, work will be conducted from September through December (outside the blooming period) in areas where these plants

could be directly impacted. Where direct impacts occur, the top 6-inches of soil will be removed, separately stockpiled and replaced, and original contours restored upon completion of the work in order to preserve the seed bank to facilitate the continued presence of the plants and the restoration of pre-project conditions. Work that will avoid direct impacts to these species is not limited to the above described seasonal construction window. After completion of the Phase 1A work, a five-year monitoring program will occur which will further document future occurrences of rare plants in the marsh area.

Eelgrass: Eelgrass (*Zostera marina*) beds are highly productive ecosystems supporting a broad range of functions such as habitat, food, and shelter for a variety of species, and is thus considered sensitive pursuant to CEQA. A small (roughly 400 sq. ft. in 2003), sparse eelgrass bed occurs in the bay near where the training channel will be excavated at the outfall of the 48-in. culvert. Small, isolated clumps of eelgrass occur sporadically up the tidal channel for approximately 65 yards.

The training channel excavation will stop short of the eelgrass bed. To insure avoidance, a qualified biologist will stake an avoidance area prior to construction. Currently, water from the 24-in. culvert runs out into the channel, hits the debris screen and flows up and around the screen before entering the center of the channel. The flow will change when the debris screen is removed and the training channel constructed. This change in flow may result in indirect changes to the eelgrass bed. However, the area where the flow currently travels may likely become more conducive to the establishment of eelgrass. Rocks that have come loose from the water exchange area at the westerly end of the 24-in. culvert have traveled through the culvert and are embedded in the channel in the area where culvert inflow/outflow currently travels. These rocks will be removed, creating additional eelgrass habitat. It is therefore likely that the bed may remain the same size, but simply reconfigure as a result of the change in flow direction.

Direct impacts to the isolated clumps of eelgrass occurring up the channel could occur during the process of dredging the channel. Because these isolated clumps are so small and are not part of a large functioning bed, the impacts to these individuals are not judged to be significant. However, prior to dredging any clumps that may be impacted will be transplanted to the nearest functioning eel grass bed.

The most important water quality parameter related to eelgrass is turbidity, which over extended periods of time can impact eelgrass because it decreases the amount of light available for photosynthesis. Work within the tidal channel has the potential to generate turbidity from excavation. Disturbance near the eelgrass will be of limited duration, and all work in the channel including the dredging and culvert replacement will occur during very low tides and/or measures to reduce sediment transport will be employed as described in the Hydrology and Water Quality section below. These measures are judged to reduce turbidity impacts to any existing eelgrass below a threshold of significance.

Finally, the potential for an increase in current speeds to affect eelgrass was considered. As presented by MRB, water flow speeds of at least 0.6 knots and no greater than 3.5 knots appear ideal for eelgrass growth. Current velocities in the channel are estimated at between 0.8 and 1.9 knots. Based on the analysis of the changes in outflow velocity expected with the installation of the 48-in. culvert as contained in the Geology and Soils section of this initial study, velocities are expected to remain within a favorable range for eelgrass. Potential impacts to eelgrass in the tidal channel from the proposed project are therefore judged to be below a threshold of significance, particularly in light of the overall beneficial effects of this project.

Sensitive Wildlife Species

Sensitive wildlife species chronicled in the baseline and monitoring reports include the presence of Cooper's hawk, northern harrier and black-capped chickadee. Other sensitive species considered to occur in the vicinity of the project site include sharp-shinned hawk, merlin, long-billed curlew, yellow warbler and yellow-breasted chat.

Of these species, only black-capped chickadee, yellow warbler and yellow-breasted chat are potential breeders in the area. Impacts to these species can be minimized by avoiding impacts to the willow/alder habitat they prefer. The chat is sometimes found in dense blackberry thickets, but is rare in the immediate vicinity of Humboldt Bay. Since project activities do not propose work within willow or alder habitat, and it is unlikely that the chat would be found in berry patches within Palco Marsh, potential impacts to these species resulting from the project are judged to be less than significant.

The final monitoring report indicates that potential habitat exists for the willow flycatcher and northern red-legged frog. The willow flycatcher is an extremely rare breeder in Humboldt County. Its preferred habitat is large stands of dense riparian vegetation. An occasional willow flycatcher migrant would be expected in the relatively small patches of willow habitats at the site, but nesting would be unexpected. No impact to this species is anticipated from construction or maintenance activities.

Northern red-legged frogs are widespread in fresh-water emergent marshes in Humboldt County and probably occur in the vicinity of Palco Marsh. It is possible that red-legged frogs were present at the Palco marsh when it was a fresh-water marsh in the early 1970's, but the incursion of salt water from tidal forces into the marsh would have excluded this species in the interim years from the main marsh, and are not expected in the salt marsh habitats of the project site. Potential impacts to this species from project construction and maintenance activities are judged to be less than significant.

Sensitive Fish Species

The Palco Marsh Enhancement Plan did not address fisheries resources within the marsh, since prior to enhancement activities the marsh did not have the hydrology necessary to support fish. The final monitoring report also does not address fisheries. Sensitive fish species within Humboldt Bay include Chinook salmon, coho salmon, steelhead, coastal cutthroat trout, longfin smelt, eulachon and tidewater goby. Because of the type and quality of the habitat within Palco Marsh, it remains highly unlikely that the marsh would provide suitable habitat for any of these fish species. Stickleback and sculpin would be the most likely fish to be found within Palco Marsh.

Despite the currently inhospitable conditions, NOAA Fisheries notes there may be potential for use of the marsh, tidal slough and eel grass bed by coho and Chinook salmon, and possibly steelhead. Because of the condition of the culverts and the marsh at present, it is not likely these species exist in the marsh at the present time as noted above, although NOAA believes they potentially may exist in the tidal slough just east of the peninsula at present. Planned enhancement activities could make the marsh more suitable for these species in terms of future nursery or rearing habitat, and thus there could be a potential for impacts to these species within the marsh in the future during maintenance activities within the marsh. Potential impacts to listed salmonids and their critical habitat, or to any fish species, could include direct impacts from dredging, and indirect impacts from sediment input and mobilization, removal of eel grass and use of herbicides.

Potential impacts from sediment input or mobilization that could result from project activities have been addressed in the Hydrology and Water Quality section of this initial study. These measures include conducting excavation in the dry, isolating the excavation area from adjacent waters, deploying silt curtains, and other methods as described in the section. Indirect impacts through habitat modification, specifically to eel grass, have been addressed through avoidance measures as well as the relocation of isolated eel grass clumps prior to

dredging of the tidal channel or marsh channels, as discussed in the work plan. Risk of impacts to fish from glyphosate are low when used properly since it is approved for use in aquatic environments, and the surfactant to be used will also be approved for use in an aquatic environment. The qualities that make glyphosate relatively safe for use near fish, and for this project, are discussed in the work plan and in the Hazards section of this initial study. Herbicide will not be applied directly to water, and the area of Palco Marsh where common reed and other exotics exist are not likely to contain salmonids at the present time. Herbicide use will be reduced in the future, when the potential for salmonids to be in the marsh may increase. Direct impacts to fish during dredging operations would be avoided if dredging is conducted when the channel is dry, and the Hydrology and Water Quality section of this initial study identifies this approach as the best option for protecting water quality while dredging this channel. Thus, existing mitigation measures and project design address potential impacts to sensitive fish species, and are judged to reduce

A mitigation measure has been included to protect listed fish species, in the event in-water construction occurs, although as mentioned previously impacts to sensitive species are mitigated below a threshold of significance by avoiding in-water construction. The mitigation measure requires that if in-water construction activities occur where there is a potential for the presence of sensitive fish species as determined by a qualified fisheries biologist, the area shall be cleared of fish and the fish relocated pursuant to Department of Fish and Game and/or NOAA Fisheries guidelines under the direction of a qualified fisheries biologist.

Wetlands

Palco Marsh consists of various types of wetland habitat as discussed at the beginning of this section. All of these habitats are considered to be sensitive under the Coastal Act and the City's General Plan (Local Coastal Program), as well as being Army Corps jurisdictional wetlands, and should be protected against significant impacts from construction, and from future maintenance activities that may be required to support Enhancement Plan goals such as maintaining adequate tidal flushing.

Wetland Fill: The installation of the junction box will result in the loss of approximately 30 square feet of wetland habitat. The area where the junction box will be installed is an open water exchange area between the two 18-in. culverts and the existing 24-in. culvert. The junction box will connect the 18-in culverts to the new 48-in. culverts, and will have a drainage inlet in the top to allow overland flow to continue to enter the culvert system. There are no sensitive species in this area, and no significant impacts to vegetation are expected due to the predominance of invasive exotics such as pampas grass at this location. The wetland habitat in this area is so highly degraded by exotics invasion and the area so nominal in size, that upon completion of the installation of the junction box and removal of exotics in the vicinity during construction, the area will ultimately be left in a better condition than at present. The loss of this small area of wetland is therefore judged to be insignificant, particularly in light of the overall beneficial effects of this project.

Heavy Equipment: Use of heavy equipment staged in the wetlands may be necessary in the future if re-excavation of channels is required to maintain adequate tidal flushing as required by the Enhancement Plan and the final monitoring report, and the channels cannot be accessed from outside the marsh. (Heavy equipment use for Phase 1A is limited to work with equipment staged in uplands, outside wetland areas.) Heavy equipment entry into wetlands has the potential for adverse impacts due to soil compaction and vegetation damage. Therefore, the entry of heavy equipment into the wetlands will be minimized to the extent feasible, and equipment will not be allowed to enter the center of the marsh where there are areas of open water and mudflats that are more susceptible to damage. If the use of heavy equipment cannot be avoided, equipment will be limited to entering only the perimeter of the marsh where the ground is relatively stable. Steps will be taken to minimize

damage to soils and vegetation, including the placement of stabilizing mats and strategic placement of equipment for maximum avoidance of vegetation. Equipment that has wider tracks and thus more evenly distributed weight will help minimize compaction, as will the stabilizing mats.

Equipment also has the potential to facilitate the spread of exotics to areas inside and outside the marsh. Equipment used within wetlands will be washed prior to entering the project site, and if used in an area containing invasive species, will be washed prior to leaving the site to reduce the potential for the spread of these species.

Disposal of Common Reed and dense-flowered cordgrass: Improper disposal of common reed and dense-flowered cordgrass has the potential to spread these invasive exotics to other wetland areas. The project description calls for dredged material from the tidal channel which could contain dense-flowered cordgrass, and spoils from Railroad Marsh which could contain common reed, to be located in an upland spoils site which will not be conducive to the survival of either plant. In addition, excavation of common reed will not occur until a qualified biologist in consultation with the City has determined that excavation, transportation or relocation of material from Railroad Marsh is “safe”, meaning that the likelihood of excavated material containing live rhizomes is very low.

Based on the above discussion and mitigation measures below, staff finds that that the project will not result in significant adverse impacts to biological resources, and will further enhance these resources.

MITIGATION MEASURE NO. 3. Construction activities shall avoid impacts to Humboldt Bay owl’s clover or Point Reyes bird’s beak to the extent feasible. If impacts are unavoidable, work shall be conducted from September through December (outside the blooming period) where these plants could be directly impacted. The top 6-inches of soil will be removed, separately stockpiled and replaced, and original contours restored upon completion of the work.

MITIGATION MEASURE NO. 4. Heavy equipment used within wetlands shall be washed prior to entering the site, and if used in an area contain invasive plant species shall be washed prior to leaving the site to avoid introducing exotic plant material into or outside the marsh area.

MITIGATION MEASURE NO. 5. Heavy equipment staging directly in the marshes within the project area shall be avoided to the extent feasible. Equipment may not enter the center of the 39-acre main Palco Marsh, but may enter the more stable perimeter areas if stabilizing mats are utilized and equipment is strategically placed to minimize vegetation impacts. Pre-project conditions shall be restored in areas where equipment has operated, except in areas where the purpose of the excavation is to alter pre-project conditions (e.g. removal of aggradation within tidal channels).

MITIGATION MEASURE NO. 6. If in-water construction activities will occur where there is a potential for the presence of sensitive fish species as determined by a qualified fisheries biologist, the area shall first be cleared of fish and the fish relocated pursuant to Department of Fish and Game and/or NOAA Fisheries guidelines under the direction of a qualified fisheries biologist.

V. CULTURAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?			X	

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?			X	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?				X
d) Disturb any human remains, including those interred outside of formal cemeteries?			X	

DISCUSSION: This property is not located in an area of known or expected paleontological resources or unique geographic features. A record search by the Native American Heritage Commission was conducted in 1988 for the Palco Marsh Enhancement Plan, and failed to disclose the presence of Native American cultural resources within the project area. The Wiyot Tribe was consulted regarding disturbance of cultural resources in the Phase 1A project vicinity, and had no specific concerns.

The activities proposed for this project are unlikely to uncover cultural resources. Railroad Marsh excavation is only 2.5 feet deep. Channel excavation will be minimal, and will only remove deposited silt. Excavation for culvert replacement will be in previously disturbed areas, much of which is in the railroad berm.

The City and its contractors are subject to State laws relative to the discovery of archaeological sites containing cultural resources and/or human remains (Section 7050.5 of the Health and Safety Code and Sections 5097.94 and 5097.98 of the Public resources code). If undiscovered paleontological, archaeological, historical, ethnic or religious resources are encountered during excavation, grading or general construction activities, State Law requires that all work cease and a qualified cultural resources specialist be contacted to analyze the significance of the find and formulate further mitigation (e.g. project relocation, excavation plan, protective cover). If human remains are encountered, all work must cease and the County Coroner contacted. Although these actions are required pursuant to the stated laws without inclusion of compliance mitigation, requiring compliance via a mitigation measure highlights the need for compliance; thus a mitigation measure has been included. In addition, a mitigation measure has been included requiring a cultural monitor's presence when excavation occurs in native soil. This measure is not required to reduce significant impacts below a threshold of significance, but rather was added as additional protection for potential cultural resources.

Based on the above, staff concludes that the project will not have a substantial impact on cultural resources.

MITIGATION MEASURE NO. 7. If, during construction, subsurface archaeological resources (or materials that may be considered to be archaeological resources) are encountered, City staff shall be notified immediately and all ground-disturbing work in the immediate area shall cease and not resume until a qualified archaeologist has been contacted to evaluate the materials and recommend appropriate action. If buried human remains are discovered, they shall be treated in a manner consistent with Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the California Public Resources Code. The County Coroner shall be contacted to determine whether further investigations are warranted, and the remains will be turned over to the corner, who may contact the Native American Heritage Council and Native American representatives as required or appropriate.

MITIGATION MEASURE NO. 8. When ground-disturbing activities occur that involve excavation of native soils, a cultural monitor shall be present.

VI. GEOLOGY AND SOILS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.			X	
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?				X
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?				X
<p>DISCUSSION: The only new development that could potentially be effected by seismic activity is the new 48-in culvert, which is replacing an existing 24-in. culvert. The North Coast is the location of numerous fault lines and is near the intersection of three tectonic plates. However, based upon a review of the Alquist-Priolo Earthquake Fault Zoning Maps, the proposed project is not in an area where fault rupture is known or expected, and therefore potential impacts resulting from fault rupture are less than significant. All property within the City of Eureka is located in ‘Seismic Zone 4’ as prescribed by the Uniform Building Code. Thus, all new construction must comply with the construction standards for Seismic Zone 4. In addition, the new culvert is designed in compliance with Caltrans standards with regard to structural integrity. Because construction must comply with the Seismic Zone 4 standards of the Uniform Building Code as well as Caltrans standards, and because construction that conforms to the Uniform Building Code and Caltrans standards is presumed to meet safety standards, the potential impacts from seismic ground shaking and seismic ground failure, including liquefaction are considered less than significant.</p>				
<p>The potential for erosion was also determined to be less than significant for this project. The project element that could potentially result in increased erosion effects is the upsizing of the 24-in. culvert to a 48-in. culvert, work plan task #1. The potential for the increased tidal flows into and out of the marsh as a result of the upsizing was analyzed to determine of the increased flows would result in erosion at the outfall. Based on an analysis provided by Spencer Engineering, the firm that designed the culvert installation, the outlet velocity will actually decrease slightly by replacing the 24-in. pipe with a 48-in. pipe. For analysis purposes, Spencer assumed that the water surface level at the upstream end of the 24-in pipe is at an elevation of 5.5 feet, which is the approximate high water level of the marsh. In this case, the existing flow will be about 30 cubic feet per second, the pipe will flow full, and the velocity at the outlet will be about 9.6 feet per second. For the 48-in pipe, Spencer assumed the same inlet water surface elevation. In this case, the flow will be about 85 cubic feet per second, the 48-in pipe will be about 72% full, and the velocity at the outlet will be about 8.8 feet per second. Also, although the 48-in. culvert will increase the flow into and out of the marsh over what is presently occurring, Spencer notes that the</p>				

two existing parallel 18-in. pipes, just upstream of the proposed 48-in. culvert, will likely attenuate any changes in flow and velocity. Therefore, we would not expect to see significant problems with erosion at either end of the culvert system with the increase in culvert size and resulting increase in tidal flows into and out of the marsh. The project does not require additional sewer connections and the project will not have septic tanks or other alternative wastewater disposal systems.

Based on the above discussion, staff finds that the project will not result in substantial adverse impacts relating to geology or soils.

VII. HAZARDS AND HAZARDOUS MATERIALS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				X
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?			X	
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of, or physically interfere with an adopted emergency response plan or emergency evacuation plan?				X
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized area or where residences are intermixed with wildlands?			X	

DISCUSSION: The project involves the use of heavy equipment to perform some of the work plan tasks. The use of heavy equipment poses the potential for a fuel spill, release of oil from an equipment leak, or similar occurrence. A mitigation measure was included in the 1991 mitigated negative declaration (SCH# 91093076) that required regular inspection of construction activities by the City, and required that a spill containment and clean-up plan be filed. That mitigation measure is carried forward and expanded upon in this initial study. In addition, a

Storm Water Pollution and Prevention Plan will be required for this project, which will include BMPs to address potential hazardous releases from equipment.

Use of an aquatically approved glyphosate herbicide licensed in California is proposed to control invasive exotics. Most likely AquaMaster (also marketed under the name Rodeo) will be used, which is approved by the EPA and licensed by California for use in aquatic environments. Information reviewed indicates glyphosate exhibits relatively low toxicity to achlorophyllous (without chlorophyll) organisms including bacteria, fungi, and animals. Glyphosate is non-volatile, and will not vaporize from a treated site and move to a non-target area. Glyphosate becomes immobilized in most soils since it is strongly adsorbed to soil (on the terrace surface, and

also as suspended particles in water), which prevents it from excessive leaching or from being taken-up from the soil or water by non-target plants. It is not expected to bioaccumulate in aquatic food chains, as it is highly water soluble and can be readily broken down by microbes, although strong adsorption to soil can inhibit microbial metabolism and slow degradation. The half-life of glyphosate ranges from several weeks to years, but averages two months in soil. In water, glyphosate is rapidly dissipated through adsorption to suspended and bottom sediments, and has a half-life of a few days to ten weeks. EPA classified glyphosate as a “Group E” carcinogen or a chemical that has not shown evidence of carcinogenicity in humans.

Glyphosate is a non-selective systemic herbicide that kills actively growing plants when applied to green tissue. In order to work, the compound must be translocated throughout the plant body. To facilitate adherence to plant tissue and subsequent absorption and translocation by the plant, AquaMaster must be mixed with water and a nonionic surfactant. The concentration of surfactant is relatively low when mixed according to label instructions, as compared to other glyphosate herbicides such as Roundup. Since it is the surfactant rather than the glyphosate that can potentially harm aquatic organisms, the low concentration of surfactant and the selection of an aquatically appropriate surfactant, makes herbicides such as AquaMaster acceptable for use in aquatic environments.

The specific surfactant to be utilized has not been selected, but will be limited to a nonionic surfactant licensed for use in California in an aquatic environment. The surfactant must be appropriate for use with AquaMaster or similar aquatic glyphosate herbicide, and must not interfere with the efficacy of this systemic herbicide. Surfactants being considered and researched include R-11, Li-700, Agri-Dex and Hasten. (California licensing of Hasten in aquatic environments, potentially under the name Competitor, is pending. It will not be utilized if California aquatic registration is not completed prior to the time the herbicide application is made. Hasten has been successfully utilized for aquatic herbicide applications in Washington, and is currently licensed in California for non-aquatic use.) The issues of suitability, toxicity, and efficacy will be considered when selecting the appropriate licensed surfactant for this application.

Herbicide application will initially be done using direct foliar ground-based application. This application method (as opposed to aerial or individual plant application) is determined to be the most feasible way to apply herbicide to this 1.4 acres of dense stands of common reed while minimizing collateral damage to desirable native plants that may be in the vicinity. Railroad Marsh is virtually surrounded by railroad bed or pathways and very densely populated with common reed, so the potential for damage to desirable native species in this area is minimal. There is a higher potential for collateral damage within Palco Marsh, but the stand in this area is still dense enough that natives have been precluded for the most part and thus collateral damage should be minimal if ground-based application is used.

The first two years of herbicide application will require the greatest extent and amount of herbicide application due to the high number of plants requiring treatment. The extent and amount of herbicide use will decline as control of the target plants is obtained. AquaMaster or similar glyphosate herbicides (such as Rodeo) are not restricted, meaning that a Qualified Applicator Certificate is not required in order to use these herbicides. However, the early and more extensive treatments will be conducted by a licensed applicator who is familiar with this chemical to insure proper handling and application.

Some members of the public may not wish to be exposed to vegetation that has been recently treated with herbicide. Temporary signage will be placed at least one week prior to herbicide treatment stating the City’s intent to apply herbicide. The signs will be placed at visible locations in the vicinity of the treated areas, and will remain in place for at least one week after spraying has occurred. The City will do its best to insure signs remain for the specified period of time, recognizing that signs may very likely be vandalized.

The project involves controlled burning, which poses a potential fire hazard to people and structures. The burn will be conducted by qualified personnel, most likely the Eureka Fire Department, and will not be conducted under weather conditions that could facilitate losing control of the burn. Burning will be conducted during the winter months, when the risks of escapes are relatively low. The area to be burned is not directly adjacent to any structures. Prior to conducting the burn, notices will be posted as discussed in the project description in order to notify potential transient occupants of the common reed areas of the intent to burn the area. An inspection will be conducted the day of the burn to insure there are no occupants in the common reed.

The excavation required through the railroad berm in order to install the 48-in. culvert could potentially expose contaminated soil. Potential hazardous substances that may have been released during historic railroad operations and maintenance include heavy metals and petroleum hydrocarbons according to a letter from the Department of Toxic Substances Control. No contaminated soil was encountered when the inverted siphon was installed during Phase 1, easterly of where the 48-in. culvert will be installed. The presence or absence of contaminated soil within the area to be excavated has not been confirmed, but if it does exist there are standard protocols which must be followed pursuant to State law and under the direction of the Regional Water Quality Control Board and/or, Humboldt County Health Department. Potential impacts related to air quality, transportation and noise from excavation required for remediation activities would be expected to be within limits addressed in these respective sections of this initial study. A mitigation measure has been included that requires the presence or absence of contaminated soils to be determined prior to excavation for installation of the 48-in. culvert, and should contaminated soil be present, further requires the handling of the soil according to State law and best management practices under the direction of Regional Board and/or the County Health Department.

The project will have no impact on the City of Eureka's emergency response or evacuation plans. The proposed project will not affect any emergency response plans. All on-site emergency access and circulation are already developed and function appropriately. The project is located within two miles of the Eureka Municipal Airport. The project area contains no known hazardous waste sites. Previous contaminated soils in the area of the previously proposed freshwater pond have been remediated.

Based on the above discussion and the mitigation measure below, staff concludes that the project will not result in any substantial impacts with regards to hazards and hazardous materials.

MITIGATION MEASURE NO. 9. The City will regularly inspect construction activities to insure equipment is free of leaks and in good working order. A spill containment and clean-up plan shall be prepared by the contractor for the City's review and approval.

MITIGATION MEASURE NO. 10. The presence or absence of contaminated soil within the area to be excavated for installation of the 48-in. culvert shall be determined prior to excavation for installation of the culvert. If contaminated soils are present, the North Coast Regional Water Quality Control Board will be notified, and the City will proceed pursuant to State law and best management practices under the direction of the Regional Board, the County Health Department and/or the Department of Toxic Substances Control.

VIII. HYDROLOGY AND WATER QUALITY. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements?		X		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g. the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				X
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?			X	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?				X
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?		X		
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary of Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures, which would impede or redirect flood flows?			X	
i) Expose people or structures to a significant risk or loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Result in inundation by seiche, tsunami, or mudflow?				X
<p>DISCUSSION: The project has the potential to impact water quality during construction. Dredging of the tidal channel between the railroad and peninsula has the potential for sedimentation impacts to the bay, as does the installation of the 48-in. culvert. Maintenance dredging of the tidal channels within the marsh has the potential for water quality impacts to the bay as a result of sediment mobilization. There is a potential for sediment transport into the wetlands and the bay if excavated materials are stockpiled prior to being transported offsite. There is also a potential for impacts to water quality from the use of cement to construct the headwall in the tidal channel.</p>				
<p><u>Mobilized sediment due to stormwater runoff:</u> Potential impacts from mobilized sediment due to stormwater runoff would result principally from excavated spoils temporarily stockpiled onsite during construction. Impacts from stormwater runoff carrying sediment into the marsh and/or bay can be minimized by the scheduling of the project during the dry summer and fall months. In addition, stockpiled spoils will be surrounded by straw bales, coir rolls or similar materials to trap sediment if rain should occur. In addition to being effective in minimizing sedimentation impacts from drier excavated materials such as those from Railroad Marsh, these methods will be effective in retaining sediment from dredge spoils temporarily stockpiled for purposes of dewatering. All temporary stockpiling will be conducted only in upland areas.</p>				

Mobilized sediment due to excavation in Palco Marsh channels: Excavation of aggraded channels within the marsh, an activity identified in the monitoring plan as potentially necessary for maintaining adequate tidal flushing within the marsh, has the potential to mobilize sediment with resulting impacts to water quality within the bay. To minimize such impacts, excavation activities should be conducted in the dry (i.e. during very low tides) to the extent feasible. Depending on where excavation is to occur within the marsh, one or the other of the two culverts (Del Norte Street culvert or the mid-marsh culvert) could be temporarily blocked during excavation activities to reduce the tidal flows within the marsh, further reducing the potential for sediment to be transported into the bay. If water is present, silt curtains should be deployed on either end of the tidal channel to contain sediment within the excavation area, and should remain in place until sediment has settled to avoid transport of the sediment into the bay. Spoils that will be temporarily stockpiled to dewater shall be placed only in upland areas, and surrounded by straw bales, coir rolls or similar materials to contain sediment during the dewatering process. Siltation basins shall be utilized if temporary dewatering of the work area is required.

Mobilized sediment due to excavation in tidal channel: The same general techniques as described above can be used to minimize impacts to the bay from mobilized sediment during the dredging of the tidal channel between the railroad and the peninsula. However, silt curtains may not be a viable option in this channel, and isolating the channel may prove to be difficult and can be associated with its own impacts. Excavating in the dry is the best option for protecting water quality while dredging this channel.

Installation of 48-in. culvert: Excavation to remove the existing 24-in. culvert and replace it with the 48-in. culvert has the potential to mobilize sediment in the bay. Techniques as described above are also applicable for this work. Construction during low tides will be the ideal time to complete this work task. The use of silt curtains is not particularly appropriate for protection of the outfall, but coffer dams or similar method may be used to isolate the work area if required. The culvert will need to be blocked at times during construction, but will likely not be blocked more than a cumulative total of one week.

Operation of 48-in. culvert: The slight reduction in flow velocity due to the installation of the 48-in. culvert as discussed in Section VI. above could be perceived as potentially resulting in increased sedimentation within the culvert system and at the outfall of the culvert. However, the accompanying increase in the volume of water entering and leaving the marsh due to the upsizing of the culvert should attenuate this potential effect. The culvert is large enough in diameter that should it become filled with sediment, it will be accessible for cleaning.

There should also not be an appreciable accumulation of sediment at the outfall of the new pipe. There is currently a debris screen in place just westerly of the outfall of the existing culvert, which causes the outflow from the culvert to flow up the channel and around the screen before entering the flow of the main channel. Incoming tides must also flow around this screen before entering the culvert. This flow inflow/outflow channel is somewhat scoured. The sediment build-up currently existing at the outfall that will be removed to create the training channel is facilitated by the debris screen, and is also facilitated by the plugged condition of the 24-in. culvert. The new culvert will be installed at the same elevation as the tidal channel, and with the debris screen removed and the increased volume of the tidal exchange, it is expected that the training channel will remain scoured and relatively free of the sediment build-up that occurs at present, despite the slight decrease in velocity.

Cement: The new culvert headwall will be poured in place, thus requiring concrete to be used within the tidal channel. The BMPs that are noted below in the “General” discussion include BMPs that address concrete waste management as well as concrete curing and finishing.

General: A mitigation measure has been included which requires the contractor to implement applicable erosion and sediment control BMPs as required as contained in Section 3 - Stormwater Erosion and Sediment Control

BMPs, and Section 4 - Non-Stormwater Management and Material Management BMPs, of the California Stormwater Quality Association Stormwater Best Management Practice Handbook for Construction dated January 2003 (www.cabmphandbooks.com), or other generally recognized stormwater BMP compilations and also requires the contractor to implement BMP as contained in the Stormwater Pollution Prevention Plan that will be prepared for the project. BMPs contained in the above CSQA Handbook address the following issues that are particularly germane to this project:

Section 3 – Erosion and Sediment Control BMPs

- Temporary sediment control – silt fence, sediment basin, sediment trap, straw bale barrier
- Scheduling
- Preservation of existing vegetation

Section 4 – Non-Stormwater Management/Waste Management and Materials Pollution BMBs

- Vehicle and equipment cleaning, fueling and maintenance
- Spill prevention and control
- Concrete curing, finishing and waste management
- Material and equipment use
- Stockpile management
- Hazardous waste management

Based on the above discussion and the mitigation measures below, staff finds that the project will not result in an adverse impact to hydrology and water quality.

MITIGATION MEASURE NO. 11. The contractor shall implement best management practices (BMPs) as contained in Sections 3 and 4 of the Stormwater Quality Association Stormwater Best Management Practice Handbook for Construction dated January 2003, or other generally recognized stormwater BMP compilations as may be required, and as contained in the Stormwater Pollution Prevention Plan to be prepared and approved by the City for the project.

MITIGATION MEASURE NO. 12. The contractor shall employ techniques to protect water quality when excavating aggraded channels. Techniques may include:

- conducting excavation in the dry (i.e. low tide)
- deploying silt curtains at either end of section to be excavated
- placement of spoils only in upland areas and placing artificial containment such as weed-free straw bales around the spoils
- isolating the excavation area by temporarily blocking culverts, or using coffer dams, sheet piling, or similar device
- utilizing siltation basins should dewatering be required

IX. LAND USE AND PLANNING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X
<p>DISCUSSION: The project will not create any new development that would serve to physically divide the community. The project is within the land use jurisdiction of the City of Eureka, and does not conflict with any City general plan land use policies or zoning ordinances. The City has policies that encourage restoration of aquatic resources, a positive benefit of this project. The project is located within the Coastal Zone and mostly within the Coastal Commission’s permit jurisdiction (a small portion of Railroad Marsh is located within the City’s permit jurisdiction), and is designed to protect and enhance coastal resources. The enhancement of this area was funded by the State Coastal Conservancy and implemented through the Palco Marsh Enhancement Plan. This project carries out the goals and objectives of that plan, as well as work task identified in the plan.</p>				
<p>Based on the above, staff finds that the project will not result in an adverse impact to land use and planning.</p>				

X. MINERAL RESOURCES. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?			X	
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?			X	
<p>DISCUSSION: Any mineral resources used in connection with the proposed project will be associated with construction. Although there are no surface mining operations within the Eureka City limits, the County supports a number of river and quarry mining operations that extract over one million cubic yards of material annually. These mining operations support the construction industry of Northern California. The limited amount of mineral resources needed for the proposed project, if any, are judged to have no substantial adverse impact on the local mineral resources or reserves. Therefore, staff finds that the project will have no adverse impact on mineral resources.</p>				

XI. NOISE. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Expose persons to or generate excessive ground borne vibration or ground borne noise levels?				X
c) Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?				X
d) Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?			X	
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

DISCUSSION: Generally, noise is a level of sound or a particular sound that a specific receiver does not want to hear. Whether a sound is considered a noise depends on the source of the sound, the loudness relative to the background noise, the time of day, the surroundings, and the listener. The difference in people’s reactions to different noises or sounds is explained by the perceived noisiness, or how undesirable the sound is to the people in

the vicinity of the source. An unwanted sound may be extremely irritating although it is not unreasonably loud. The areas most vulnerable to the harmful effects of sound are residential locations, particularly at night.

The City of Eureka’s adopted General Plan specifies standards for non-transportation and transportation noise sources. The goal of the General Plan with regard to noise exposure is to protect Eureka residents from the harmful and annoying effects of exposure to excessive noise. For non-transportation related noise, the maximum allowable noise at the property line of lands designated for noise-sensitive uses cannot exceed 65dB (nighttime) to 70dB (daytime) (see Table 7-1 of the General Plan). The following table provides an example of noise levels of different types of machinery at distances of 50, 100 and 200 feet from the machinery.

Characteristic Noise Levels Resulting From Typical Construction Equipment. (Table 5-1 from Mad River Pipeline EIR, SCH No. 2001012088)

Noise Source/Operation	Noise Level at 50’ (dBA)	Noise Level at 100’ (dBA)	Noise Level at 200’ (dBA)
Pavement Breaker and Compressor	91	85	79
Earth Compactor	88	82	76
Motor Grader	79	73	66
Heavy Truck Decelerating	80	74	68
Heavy Truck Accelerating	87	81	75
Water Truck, Spraying	89	83	76
Roller-Vibrator Compactor	86	80	74
Medium Earth Mover	86	80	74
Backhoe Excavator	86	80	74
Paver	89	83	76

The only noise associated with this project is construction noise, which will be temporary, sporadic and relatively short term during various construction periods throughout the life of the project. The area in which the project is occurring is over 200 feet from any residence, and based on the noise levels of typical construction equipment as noted above, construction noise will not exceed general plan standards for non-transportation noise impacts to any residential use. There are no hospitals, schools or other similar sensitive receptors close enough to be affected by construction noise. People utilizing the marsh or working in businesses near the north end of the marsh may be exposed to construction noise, but the impacts will be temporary. Wildlife in the area could potentially be affected by construction noise, as well. However, the biological assessment prepared by Mad River Biologists for this project notes that noise from construction activity is not likely to adversely affect wildlife species in the marsh due to the prevailing ambient noise in the immediate vicinity of the project site. The short term duration of the noise will also minimize impacts to wildlife.

No ground borne noise such as noise from piling driving will be generated by the project. The project is located within two miles of the Eureka Municipal Airport, but not within the vicinity of a private airstrip. As

term.

Based on the above discussion, staff concludes that the project will not result in adverse noise impacts.

XII. POPULATION AND HOUSING. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Induce substantial population growth in an area, either directly (e.g., by proposing new homes and/or businesses) or indirectly (e.g., through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

DISCUSSION: Eureka was ‘founded’ in 1850 and incorporated in 1856. The 1860 population was approximately 615. By 1920 Eureka had a population of roughly 12,500. According to the City of Eureka’s first General Plan, adopted in 1965, the population of Eureka in 1950 had grown to 23,058 and in 1960 it was 28,137. Based on data

presented by the Center for Economic Development, California State University, Chico, the 1980 population was 24,350 and the population in 2002 was 26,050. This statistical data is provided to illustrate that Eureka’s population over the past half-decade has been relatively constant, regardless of the economic and population trends in the rest of the country. Therefore, it would take a remarkable project to induce ‘substantial’ population growth or decline in Eureka. In addition, the proposed project involves the enhancement of an existing marsh complex. The project will not displace people or housing. No components of the project can be foreseen as inducing any growth either directly or indirectly.

Staff finds that the project will not result in substantial adverse impacts regarding population and housing.

XIII. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Fire protection?			X	
b) Police protection?				X
c) Schools?				X
d) Parks?			X	
e) Other public facilities?				X

DISCUSSION: The project will not require any new or physically altered governmental services and will not facilitate the need for such services on a permanent basis. The project will require the temporary services of the Eureka Fire Department (EFD) if they conduct the controlled burn of the common reed. The services of EFD or other fire protection agencies could be required if another entity conducts the controlled burn and problems arise that require additional assistance. This is unlikely, however, since burning will occur during the winter under controlled conditions. In addition, common reed is a fire hazard once it dies back in the fall. Thus, removing it by a controlled burn eliminates the potential for emergency control if a fire accidentally starts, which would not be unlikely considering the fact that common reed is a favored location for homeless encampments.

There will be an increased maintenance burden on the City’s Parks Department due to the increased level of improvements proposed by the project. It is anticipated that public participation in clean-up days and invasive exotics removal will help address the increased maintenance needs but regardless, this increased maintenance does not cross a threshold of significance.

The proposed project should help reduce the need for police protection in the project area due to the proposed removal of invasive exotics, particularly common reed and pampas grass which provide cover for transient camps and other types of illegal activity including the dumping of garbage. Therefore, staff concludes that the project will not result in substantial adverse impacts to public services, and may reduce the need for some services.

XIV. RECREATION. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?			X	

DISCUSSION: The project will have a long-term positive effect on recreation, with some short-term impacts during construction. The Palco Marsh Enhancement Project is designed not only for the ecological enhancement of this area, but also to facilitate the public use of the marsh. The proposed project will serve to enhance the public enjoyment and safety at the marsh by enhancing the overall health of the marsh, as well as by removing invasive exotics, particularly common reed and pampas grass, which will increase visibility and decrease shelter for homeless encampments and other illegal activity, thereby enhancing public safety.

Short-term impacts to the public’s use of the marsh can be expected during enhancement activities. Potential short-term impacts to the recreational use of the marsh include construction noise and traffic, access restrictions to various areas within the marsh, and changes in visual aspects of the marsh. Since these impacts are short-term, and the marsh complex is large enough that portions of it can still be utilized by the public during construction, these impacts are judged to be less than significant.

Therefore, staff concludes the proposed project will not result in any significant adverse impacts to any recreational facilities.

XV. TRANSPORTATION/TRAFFIC. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Cause an increase in traffic, which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?		X		
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to design features (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X

f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X

DISCUSSION: The project does not involve any new development that would permanently impact the existing transportation system. However, construction activity, particularly spoils hauling activities associated with Railroad Marsh and tidal slough dredging, will result in truck traffic during the construction season that could have short term impacts to traffic operations on Broadway. The excavation of the upper 2.5 feet Railroad Marsh which is approximately 37,000 sq. ft. in size will generate approximately 3,400 cubic feet of material that, using a bulking factor of 15%, would require approximately 400 10-yd. dump truck round-trips traveling to and from an appropriate permitted spoils site. The tidal slough dredging is not expected to generate a significant amount of spoils that will require hauling, but will add at least an additional 30 truck round trips. A mitigation measure has been included requiring the contractor who completes the work to prepare a traffic management plan that demonstrates to the City how impacts to traffic will be minimized. The issues to be addressed in the traffic management plan require the contractor to meet specific standards, which when met will reduce impacts from truck traffic below a threshold of significance. The project will not impact air traffic and will not require or impact alternative transportation.

Based on the above discussion and the mitigation measure below, staff finds that the project will not result in significant adverse impact on transportation or traffic.

MITIGATION MEASURE NO. 13. The City’s selected contractor shall prepare a Traffic Management Plan pursuant to City of Eureka standards to address truck traffic. Traffic control measures consistent with Institute of Transportation Engineers, Caltrans or similar standards shall be implemented during construction. The Traffic Management Plan shall address the following elements, as applicable:

- A. Hours of construction or contractor operation. In critical circulation areas or locations the hours of operation may be scheduled to occur to avoid significant traffic flow restrictions.**
- B. Identification of travel routes that:**
 - 1. Minimize trips through residential areas and in areas containing sensitive receptors to the extent feasible;**
 - 2. Limit truck traffic to streets capable of carrying the truck weight;**
 - 3. Provide for only right turns onto Broadway at unsignaled intersections;**
 - 4. Limit round trips through any one signalized intersection utilized to enter Broadway from the project site to no more than five per hour (i.e. if truck traffic will exceed this number of hourly trips, it should be spread out to more than one intersection);**
- C. Changes in roadway conditions, including avoidance of lane closures during AM and PM peak traffic hours.**
- D. Warning signs, lights, or other traffic control measures required to inform the traveling public of the project.**
- E. Notification of potentially affected residents and businesses of possible access disruptions, at least 24 hours prior to construction activities that would affect such access.**

F. Notification of emergency service providers and school districts of expected construction timing and duration, and of probable travel restrictions within the construction area. Emergency vehicles will be given priority at traffic control stations during construction. Delays for school buses will be minimized to the extent feasible.

XVI. UTILITIES AND SERVICE SYSTEMS. Would the project:	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have insufficient water supplies available to serve the project from existing entitlements and resources (i.e., new or expanded entitlements are needed)?				X
e) Result in a determination by the wastewater treatment provider, which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?				X
g) Violate any federal, state, and local statutes and regulations related to solid waste?				X

DISCUSSION: The project will have no impacts related to the provision of water, wastewater or solid waste. The project does not propose any components that would require additional utilities or service systems. Staff concludes that the project will not result in any adverse impacts to utilities and service systems.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE.	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects).			X	
c) Does the project have environmental effects, which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

DISCUSSION: As discussed herein, the project will have no impact on agricultural resources, land use and planning, population and housing and utilities and service systems. The project as proposed in combination with additional mitigation measures will have a less than significant impacts associated with aesthetics, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, mineral resources, noise, public services, recreation and transportation/traffic. The project will not add to

any cumulatively considerable impacts. The mitigation measures recommended herein will reduce the potential impacts of the project to a level that is considered less than significant.

EARLIER ANALYSES

a) Earlier Analyses Used. The following document(s), available at the Community Development Department, have adequately analyzed one or more effects of the project. Earlier analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration (CEQA Guidelines Section 15063 (c)(3)(D)).

1. City of Eureka General Plan, Environmental Impact Report. State Clearinghouse Number 96072062. Certified February 27, 1997.

b) Impacts Adequately Addressed. The following effects from the above checklist were within the scope of and adequately analyzed in the document(s) listed above, pursuant to applicable legal standards.

N/A

c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Incorporated," the following are mitigation measures that were incorporated or refined from the document(s) described above.

N/A

SOURCE/REFERENCE LIST

The following documents were used in the preparation of this Initial Study. The documents are available for review at the Community Development Department, 3rd floor, City Hall, during regular business hours.

- a) Eureka Municipal Code
- b) Adopted Eureka General Plan and Certified Local Coastal Plan, as applicable
- c) EIR for the Mad River Water Pipeline Rehabilitation Project, SCH No. 2001012088
- d) Palco Marsh Enhancement Plan and subsequent monitoring plans
- e) Palco marsh Phase 1A Biological Impacts Assessment and Mitigation and Monitoring Plan dated February 25, 2004
- f) Palco Marsh project and research files

MITIGATION MONITORING AND REPORTING PROGRAM (MMRP)

AIR QUALITY

MITIGATION MEASURE NO. 1. The applicant, at all times, shall comply with Air Quality Regulation 1, Chapter IV to the satisfaction of the NCUAQMD.

Air Quality Regulation 1, Chapter IV, Rule 420 – Particulate Matter: A person shall not discharge particulate matter into the atmosphere from any combustion source in excess of 0.46 grams per standard cubic meter (0.20 grains per standard cubic foot) of exhaust gas, calculated to 12 percent carbon dioxide; or in excess of the limitations of NSPS as applicable.

Air Quality Regulation 1, Chapter IV, Rule 430 – Fugitive Dust Emissions: The handling, transporting, or open storage of materials in such a manner which allows or may allow unnecessary amounts of particulate matter to become airborne, shall not be permitted. Reasonable precautions shall be taken to prevent particulate matter from becoming airborne, including, but not limited to, the following provisions (only those sections of the law most germane for this project and listed below):

- (1) Covering open bodied trucks when used for transporting materials likely to give rise to airborne dust;**
....
....
....
- (5) the application of asphalt, oil, water or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts;**
....
- (7) the prompt removal of earth or other material from paved streets onto which earth or other material has been transported by trucking or earth moving equipment, erosion by water, or other means.**

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented throughout the duration of the project construction and maintenance. The City Engineering Department shall, on the basis of their observations or complaints to the City regarding excessive construction dust, smoke, or other particulate matter, be empowered to direct the contractor to undertake additional measures in the field if it appears that the contractor does not follow this measure.

MITIGATION MEASURE NO. 2. The applicant, at all times, shall comply with Air Quality Regulation 2, Open Burning, to the satisfaction of the NCUAQMD. Further, burning shall be conducted in a manner that minimizes smoke and related air quality impacts to Broadway and surrounding development.

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented throughout the duration of the project construction and maintenance. The City Engineering Department shall, on the basis of their observations or complaints to the City regarding excessive smoke or other particulate matter, be empowered to direct the contractor to undertake additional measures in the field if it appears that the contractor is not following this measure.

BIOLOGICAL RESOURCES

MITIGATION MEASURE NO. 3. Construction activities shall avoid impacts to Humboldt Bay owl's clover or Point Reyes bird's beak to the extent feasible. If impacts are unavoidable, work shall be conducted from September through December (outside the blooming period) where these plants could be directly impacted. The top 6-inches of soil will be removed, separately stockpiled, and replaced, and original contours restored upon completion of the work.

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented throughout the duration of the project construction and maintenance. The City Engineering Department or the Community Development Department shall conduct field observations during the construction process to assure the appropriate implementation of this measure, and shall be empowered to direct the contractor to temporarily suspend construction activities if evidence is presented to either department that the contractor is not in compliance with this measure, pending the development of specific actions to regain compliance.

MITIGATION MEASURE NO. 4. MITIGATION MEASURE NO. 4. Heavy equipment used within wetlands shall be washed prior to entering the site, and if used in an area contain invasive plant species shall be washed prior to leaving the site to avoid introducing exotic plant material into our outside the marsh area.

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented throughout the duration of the project construction and maintenance. The City Engineering Department or the Community Development Department shall conduct field observations during the construction process to assure the appropriate implementation of this measure, and shall be empowered to direct the contractor to temporarily suspend construction activities if evidence is presented to either department that the contractor is not in compliance with this measure, pending the development of specific actions to regain compliance.

MITIGATION MEASURE NO. 5. Heavy equipment staging directly in the marshes within the project area shall be avoided to the extent feasible. Equipment may not enter the center of the 39-acre Palco Marsh, but may enter the more stable perimeter areas if stabilizing mats are utilized and equipment is strategically placed to minimize vegetation impacts. Pre-project conditions shall be restored in areas where equipment has operated, except in areas where the purpose of the excavation is to alter pre-project conditions (e.g. removal of aggradation within tidal channels).

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented throughout the duration of the project construction and maintenance. The City Engineering Department or the Community Development Department shall conduct field observations during the construction process to assure the appropriate implementation of this measure, and shall be empowered to direct the contractor to temporarily suspend construction activities if evidence is presented to either department that the contractor is not in compliance with this measure, pending the development of specific actions to regain compliance.

MITIGATION MEASURE NO. 6. If in-water construction activities will occur where there is a potential for the presence of sensitive fish species as determined by a qualified fisheries biologist, the area shall first be cleared of fish and the fish relocated pursuant to Department of Fish and Game and/or NOAA Fisheries guidelines under the direction of a qualified fisheries biologist.

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented throughout the duration of the project construction and maintenance. The City Engineering Department or the Community Development Department shall conduct field observations during the construction process to assure the appropriate implementation of this measure, and shall be empowered to direct the contractor to temporarily suspend construction activities if evidence is presented to either department that the contractor is not in compliance with this measure, pending the development of specific actions to regain compliance.

CULTURAL RESOURCES

MITIGATION MEASURE NO. 7. If, during construction, subsurface archaeological resources (or materials that may be considered to be archaeological resources) are encountered, City staff shall be notified immediately and all ground-disturbing work in the immediate area shall cease and not resume until a qualified archaeologist has been contacted to evaluate the materials and recommend appropriate action. If buried human remains are discovered, they shall be treated in a manner consistent with Section 7050.5 of the California Health and Safety Code and Section 5097.98 of the California Public Resources Code. The County Coroner shall be contacted to determine whether further investigations are warranted, and the remains will be turned over to the coroner, who may contact the Native American Heritage Council and Native American representatives as required or appropriate.

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented throughout the duration of the project construction and maintenance. The City Engineering Department or the Community Development Department shall conduct field observations during the construction process to assure the appropriate implementation of this measure, and shall be empowered to direct the contractor to temporarily suspend construction activities if evidence is presented to either department that the contractor is not in compliance with this measure, pending the development of specific actions to regain compliance.

MITIGATION MEASURE NO. 8. When ground-disturbing activities occur that involve excavation of native soils, a cultural monitor shall be present.

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented throughout the duration of the project construction and maintenance. The City Engineering Department or the Community Development Department shall be empowered to direct the contractor to temporarily suspend construction activities if evidence is presented to either department that the contractor is not in compliance with this measure, pending the development of specific actions to regain compliance.

HAZARDS AND HAZARDOUS MATERIALS

MITIGATION MEASURE NO. 9. The City will regularly inspect construction activities to insure equipment is free of leaks and in good working order. A spill containment and clean-up plan shall be prepared by the contractor for the City's review and approval.

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented throughout the duration of the project construction. The City Engineering Department shall review the Spill Containment and Clean-up Plan

prepared by the contractor, and shall conduct field observations during the construction process to assure that the Plan is implemented. The City Engineering Department shall be empowered to direct the contractor to modify implemented spill-prevention and clean-up measures that do not conform to the approved Plan.

MITIGATION MEASURE NO. 10. The presence or absence of contaminated soil within the area to be excavated for installation of the 48-in. culvert shall be determined prior to excavation for installation of the culvert. If contaminated soils are present, the North Coast Regional Water Quality Control Board will be notified, and the City will proceed pursuant to State law and best management practices under the direction of the Regional Board and/or the Humboldt County Health Department.

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented prior to and in conjunction with the installation of the 48-in. culvert. The City Engineering Department shall conduct field observations during the construction process to assure compliance. The City Engineering Department shall be empowered to direct the contractor to temporarily suspend construction activities if evidence is presented that the contractor is not in compliance with this measure, pending the development of specific actions to regain compliance.

HYDROLOGY AND WATER QUALITY

MITIGATION MEASURE NO. 11. The contractor shall implement best management practices (BMPs) as contained in Sections 3 and 4 of the Stormwater Quality Association Stormwater Best Management Practice Handbook for Construction dated January 2003, or other generally recognized stormwater BMP compilations as may be required, and as contained in the Stormwater Pollution Prevention Plan to be prepared and approved by the City for the project.

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented throughout the duration of the project construction and maintenance. The City Engineering Department shall approve the SWPPP, and the City Engineering Department or the Community Development Department shall conduct field observations during the construction process to assure that appropriate BMPs are implemented, and shall be empowered to direct the contractor to temporarily suspend construction activities if evidence is presented to either department that the contractor is not in compliance with this measure, pending the development of specific actions to regain compliance.

MITIGATION MEASURE NO. 12. The contractor shall employ techniques to protect water quality when excavating aggraded channels. Techniques may include:

- **conducting excavation in the dry (i.e. low tide)**
- **deploying silt curtains at either end of section to be excavated**
- **placement of spoils only in upland areas and placing artificial containment such as weed-free straw bales around the spoils**
- **isolating the excavation area by temporarily blocking culverts, or using coffer dams, sheet piling, or similar device**
- **utilizing siltation basins should dewatering be required**

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented throughout the duration of the project construction and maintenance. The City Engineering Department or the Community Development

Department shall conduct field observations during the construction process to assure that techniques for protection of water quality are implemented, and shall be empowered to direct the contractor to temporarily suspend construction activities if evidence is presented to either department that the contractor is not in compliance with this measure, pending the development of specific actions to regain compliance.

TRANSPORTATION/TRAFFIC

MITIGATION MEASURE NO. 13. The City's selected contractor shall prepare a Traffic Management Plan pursuant to City of Eureka standards to address truck traffic. Traffic control measures consistent with Institute of Transportation Engineers, Caltrans or similar standards shall be implemented during construction. The Traffic Management Plan shall address the following elements, as applicable:

- A. Hours of construction or contractor operation. In critical circulation areas or locations the hours of operation may be scheduled to occur to avoid significant traffic flow restrictions.**
- B. Identification of travel routes that:**
 - 1. Minimize trips through residential areas and in areas containing sensitive receptors to the extent feasible;**
 - 2. Limit truck traffic to streets capable of carrying the truck weight;**
 - 3. Provide for only right turns onto Broadway at unsignalized intersections;**
 - 4. Limit round trips through any one signalized intersection utilized to enter or leave Broadway to or from the project site to no more than five per hour (i.e. if truck traffic will exceed this number of hourly trips, it should be spread out to more than one intersection);**
- C. Changes in roadway conditions, including avoidance of lane closures during AM and PM peak traffic hours.**
- D. Warning signs, lights, or other traffic control measures required to inform the traveling public of the project.**
- E. Notification of potentially affected residents and businesses of possible access disruptions, at least 24 hours prior to construction activities that would affect such access.**
- F. Notification of emergency service providers and school districts of expected construction timing and duration, and of probable travel restrictions within the construction area. Emergency vehicles will be given priority at traffic control stations during construction. Delays for school buses will be minimized to the extent feasible.**

Monitoring: This measure shall be made a condition of approval for the project, shall be incorporated into design and contract documents prepared by the City for the project, and shall be implemented throughout the duration of the project construction. The City Engineering Department shall review the Traffic Management Plan prepared by the contractor, and shall conduct field observations during the construction process to assure that the Traffic Control Plan is implemented. The City Engineering Department shall be empowered to direct the contractor to modify implemented traffic control measures that do not conform to the approved Traffic Management Plan.