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F 6b

MEMORANDUM

Date: August 4, 2008

To: Commissioners and Interested Parties

From: Peter Douglas, Executive Director
Robert S. Merrill, District Manager – North Coast District
Melissa B. Kraemer, Coastal Program Analyst – North Coast District

Subject: **Addendum to Commission Meeting for Friday, August 8, 2008**
North Coast District Item F 6b, CDP No. 1-08-011
(City of Arcata Environmental Services Department)

STAFF NOTE

Staff is proposing to make minor changes to the staff recommendation on Coastal Development Permit Amendment Application No. 1-08-011. The City of Arcata proposes to enhance four seasonal freshwater wetland areas between Highway 101 and Samoa Boulevard to provide habitat benefits for waterfowl, shorebirds, and other water-associated wildlife while maintaining agricultural grazing and Aleutian Cackling Goose habitat. Special Condition No. 2 of the staff recommendation requires that the permittee undertake the development pursuant to certain construction responsibilities, including restricting the construction work window to the dry period between June 1 and October 15. The applicant, after reviewing the staff recommendation, requested a change to the condition to allow construction work to continue through November 15 if conditions remain dry, the predicted chance of rain is less than 30 percent, and appropriate BMPs are in place. The onset of autumn rains often does not begin until later in October or November, so staff believes that the requested change is appropriate to allow for the applicant to complete the project all in one season while continuing to protect coastal waters. Therefore, staff is modifying Special Condition No. 2 and the corresponding findings to accommodate the applicant's request.

Finally, the applicant indicates the total size of the four seasonal wetland areas to be enhanced is 9 acres instead of 12.4 acres, as originally indicated to staff and indicated in the staff report. Therefore, staff is revising the report to reflect the correct acreage.

Staff continues to recommend that the Commission approve the amended project with the special conditions included in the staff recommendation of July 25, 2008, as modified by the revisions described below.

I. REVISIONS TO STAFF RECOMMENDATION

The revisions to the staff report dated July 25, 2008, including the modification of special condition language and related findings, are shown below. Text to be deleted is shown in ~~strikethrough~~; text to be added appears in **bold double-underline**.

- *Add the following new text to Special Condition No. 2 on page 7:*

2. Construction Responsibilities

The permittee shall comply with the mitigation measures listed in the Mitigated Negative Declaration completed for the project (SCH No. 2006042056), except as modified herein. Construction-related requirements shall include, but shall not be limited to, the following Best Management Practices:

A. No construction materials, debris, or waste shall be placed or stored where it may be subject to entering coastal waters or wetlands;

B. Any and all debris resulting from construction activities shall be removed from the project site in accordance with Exhibit No. 6;

C. All grading activities shall be conducted during the dry season period of June 1 through ~~October~~ **November** 15; **any grading activity conducted between October 16 and November 15 shall be subject to the following conditions:**

(1) All work shall cease upon the onset of precipitation at the project site and shall not recommence until the predicted chance of rain is less than 30 percent for the Arcata area portion of the Redwood Coast segment of the National Weather Service's forecast for Northwestern California;

(2) The work site(s) shall be winterized between work cessation periods by installing stormwater runoff and erosion control barriers around the perimeter of each construction site to prevent the entrainment of sediment into coastal waters;

(3) Adequate stocks of stormwater runoff and erosion control barrier materials shall be kept onsite and made available for immediate use.

D. Construction activities adjacent to stream channels shall only be performed when soils are sufficiently dry so that sediment is not discharged into streams;

E. If rainfall is forecast during the time construction activities are being performed, any exposed soil areas shall be promptly mulched or covered with plastic sheeting

and secured with sand bagging or other appropriate materials before the onset of precipitation;

F. Any debris discharged into coastal waters shall be recovered immediately and disposed of properly;

G. Any fueling and maintenance of construction equipment shall occur within upland areas outside of environmentally sensitive habitat areas or within designated staging areas. Mechanized heavy equipment and other vehicles used during the construction process shall not be stored or re-fueled within 300 feet of coastal waters; and

H. Fuels, lubricants, and solvents shall not be allowed to enter the coastal waters or wetlands. Hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, and a registered first-response, professional hazardous materials clean-up/remediation service shall be locally available on call. Any accidental spill shall be rapidly contained and cleaned up.

I. The top six to ten inches (6-10") of excavated material within grazed seasonal wetlands (which contains the root masses, rhizomes, seeds, and accumulated organic material of the vegetation that dominates these seasonal wetlands) shall be separately stockpiled by the contractor, and the contractor shall assure that this stockpiled soil material is kept moist and that the material is reintroduced as soon as possible to excavation as the top fill material.

J. Prior to the commencement of construction, the work area shall be delineated, limiting the potential area affected by construction and workers shall be educated about the limitations on construction. All vehicles and equipment shall be restricted to pre-established work areas and established or designated access routes.

- *Add the following new text to the "Feasible Mitigation Measures" section of Finding No. IV-C-2-c on page 23:*

To ensure that adverse impacts to water quality do not occur from construction activities, the Commission attaches Special Condition Nos. 2 and 3. Special Condition No. 2 requires the applicant to undertake the development pursuant to certain construction responsibilities. These include, but are not limited to, the following: (a) no construction materials, debris, or waste are to be placed or stored where they may enter coastal waters, (b) all construction debris is to be removed and disposed of in an approved location (as proposed in Exhibit No. 6), (c) the construction window shall be limited to the dry season (June 1-~~October~~ **November** 15)**, and any grading between October 16 and November 15 shall only be conducted if conditions remain dry, the predicted chance of rain is less then 30 percent, and appropriate BMPs are in place;** (d) construction activities adjacent to stream channels shall only be performed when soils are sufficiently dry so that sediment is not discharged into streams, (e) if rainfall is forecast during the time construction activities are being performed, any exposed soil areas shall be

promptly mulched or covered with plastic sheeting and secured with sand bagging or other appropriate materials before the onset of precipitation, (f) any debris discharged into coastal waters shall be recovered immediately and disposed of properly, (g) any fueling and maintenance of construction equipment shall occur within upland areas outside of environmentally sensitive habitat areas or within designated staging areas, (h) fuels, lubricants, and solvents shall not be allowed to enter the coastal waters or wetlands, hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, and any accidental spill shall be rapidly contained and cleaned up, and other specifications. Special Condition No. 3 similarly requires the applicant to submit, for the Executive Director's review and approval, an erosion and runoff control plan that is to include certain specified water quality best management practices for minimizing impacts to coastal waters.

- *Substitute "9 acres" for "12.4 acres" everywhere in the report where the total size of the four seasonal freshwater wetland areas is indicated. This change should be made to pages 1, 2, 13, 17, and 20.*

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Filed:	May 19, 2008
49th Day:	July 7, 2008
180th Day:	November 15, 2008
Staff:	Melissa B. Kraemer
Staff Report:	July 25, 2008
Hearing Date:	August 8, 2008
Commission Action:	

STAFF REPORT: REGULAR CALENDAR

APPLICATION NO.:	**1-08-011**
APPLICANT:	**City of Arcata – Environmental Services Department**
PROJECT LOCATION:	Arcata, Humboldt County (APNs 501-042-001 and 501-061-023).
PROJECT DESCRIPTION:	Enhancement of four seasonal freshwater wetland areas totaling 12.4 acres to enhance habitat for waterfowl and water-associated wildlife and installation of water-control structures to allow for continued seasonal agricultural grazing in the affected areas.
GENERAL PLAN DESIGNATION:	Agricultural Exclusive (AE) and Natural Resources (NR).
ZONING DESIGNATION:	Agricultural Exclusive (AE) and Natural Resources (NR) with a Wetland and Stream Protection (WSP) Combining Zone Overlay.
OTHER APPROVALS REQUIRED:	California Department of Fish and Game CFGC Sec. 1603 Streambed Alteration Agreement No. R1-08-0094 (issued); North Coast Regional Water Quality Control Board Water Quality Certification (pending); U.S. Army Corps of Engineers CWA Section 404 Permit No. 27434N (pending).

SUBSTANTIVE FILE DOCUMENTS:

Arcata Baylands Enhancement/Restoration Project Mitigated Negative Declaration (State Clearinghouse Number 2006042056);

Coastal Development Permit No. 1-06-036;

City of Arcata certified Local Coastal Program.

SUMMARY OF STAFF RECOMMENDATION

Staff recommends approval with special conditions of the proposed wetland enhancement project.

The City of Arcata proposes to enhance four seasonal freshwater wetland areas totaling 12.4 acres to provide habitat benefits for waterfowl, shorebirds, and other water-associated wildlife while maintaining agricultural and Aleutian Cackling Goose habitat. The project site is located on seasonally grazed seasonal wetlands between Highway 101 and Old Arcata Road. The subject site does not contain prime agricultural soils or livestock and/or crop productivity potential that would otherwise qualify the subject property as prime agricultural land.

The project area is part of the larger Humboldt Bay ecosystem that accommodates fish, waterfowl, wading birds, shorebirds, passerines, raptors, and other water-associated wildlife. Humboldt Bay is second only to San Francisco Bay in the numbers and variety of migratory water-associated birds wintering in the coastal segment of the Pacific Flyway of California. It is one of California's most important stopovers for dozens of species of migrating birds, which use the area for nesting, feeding, and resting. Over 200 species of birds (18 of them State-listed as "endangered" or "species of special concern") have been recorded in and around the project vicinity.

Existing seasonal wetland areas #1 through #4 will be excavated to two feet below existing surface elevations to prolong the period of inundation in each area during the rainy season. Enhancement of seasonal wetland #1 will include contouring a small drainage swale at its base that leads to seasonal wetland #2. Enhancement of seasonal wetland #3 will involve enlarging an area on Fickle Hill Creek that currently ponds with water seasonally. Seasonal wetland #4 will be enhanced to fill with rain water and overflow water from a tributary that drains to South Gannon Slough. Water-control structures (3-ft by 3-ft Twin track weirs with a 24-inch outflow) will be installed at the bases of seasonal wetlands #2, #3, and #4 to insure that the areas dry out annually (each summer) to allow for continued seasonal agricultural grazing.

The areas proposed for seasonal wetland enhancement are inundated with stormwater runoff each winter. The areas have such saturated soils that much of the area is not

available for grazing between five and seven months each year depending on rainfall. In the summer these areas are grazed by cattle and will continue to be grazed after project completion. Staff believes that the proposed project is consistent with Sections 30241 and 30242 of the Coastal Act in that the proposed habitat restoration and enhancement use (1) would not occur on prime agricultural land as defined by the Coastal Act, and (2) would not result in the conversion of grazing lands.

Although much of the agricultural pasturelands in the Humboldt Bay area are diked former tidelands, the four seasonal wetland areas where enhancements are proposed are located either outside of former tidelands (seasonal wetlands #1 and #3) or near the inland margin of former tidelands (seasonal wetlands #2 and #4), and all four are located in or around areas that historically received freshwater inundation from streams. Although the configuration of the freshwater wetland habitat areas to be enhanced at wetland areas #1, #2, and #3 will not match the historic configuration of the lower reach and mouth of Fickle Hill Creek, staff believes that the proposed enhancement of existing freshwater habitat in these areas will help restore freshwater habitat functions and values historically provided by the lower reach of Fickle Hill Creek as it originally existed. Seasonal wetland #4 is located in proximity to North Jacoby Creek. Although it is unclear whether the historic alignment of the creek matches the current alignment of the watercourse, staff believes that the proposed enhancement of this wetland area will serve to restore freshwater habitat functions and values historically provided by the North Jacoby Creek drainage and the seasonal and permanent freshwater wetlands that historically existed on the inland side of the historic tideland boundary in this area.

Although the wetland enhancements proposed at all four wetland areas will not reestablish the same configuration of wetland habitat that historically existed in the area prior to the diking of the former tidelands and alteration of historic creek channels, the proposed wetland enhancements of freshwater wetlands entail actions taken in converted or degraded natural wetlands that will result in the reestablishment of landscape-integrated ecological processes associated with wetland habitats. Therefore, staff believes that the proposed wetland enhancements are consistent with the definition of restoration and constitute filling and dredging for restoration purposes consistent with Section 30233(a)(6).

To ensure that the proposed seasonal wetland enhancements achieve the objectives for which the project is intended (i.e., for the enhancement of habitat for waterfowl and water-associated wildlife), staff recommends Special Condition No. 1. This condition requires the applicant to submit a final monitoring plan for review and approval by the Executive Director, which shall outline a method for measuring and documenting the improvements in habitat value and diversity at the site over the course of five years following project completion and which shall include provisions for remediation to ensure that the goals and objectives of the wetland enhancement project are met.

Staff also recommends Special Condition Nos. 2, 3, 4, and 5 to ensure that the project will not have significant adverse impacts on the water quality of any of the coastal waters

in the project area and will ensure that the project construction will not adversely affect the biological productivity and functional capacity of coastal waters or wetlands consistent with the requirements of Sections 30233, 30230, and 30231 of the Coastal Act. Special Condition No. 2 requires that the permittee undertake the development pursuant to certain construction responsibilities; Special Condition No. 3 requires the applicant to submit, for the Executive Director's review and approval, an erosion and runoff control plan that is to include certain specified water quality best management practices for minimizing impacts to coastal waters; Special Condition No. 4 prohibits the planting of any problematic and/or invasive plant species and the use of certain anticoagulant-based rodenticides; and Special Condition No. 5 requires that the applicant submit, prior to permit issuance for the review and approval of the Executive Director, a final equipment staging and stockpiling plan.

As conditioned, staff believes that there is no less environmentally damaging feasible alternative to the development and that feasible mitigation measures have been provided to minimize adverse environmental effects consistent with Section 30233.

The motion to adopt the staff recommendation of approval with conditions in found on pages 4-5.

STAFF NOTES

1. Jurisdiction and Standard of Review.

The proposed project is located in the Commission's retained jurisdiction. The City of Arcata has a certified LCP, but the site is within an area shown on State Lands Commission maps over which the state retains a public trust interest. Therefore, the standard of review that the Commission must apply to the project is the Chapter 3 policies of the Coastal Act.

STAFF RECOMMENDATION

The staff recommends that the Commission adopt the following resolution:

I. MOTION, STAFF RECOMMENDATION, & RESOLUTION

The staff recommends that the Commission adopt the following resolution:

Motion:

I move that the Commission approve Coastal Development Permit No. 1-08-011 pursuant to the staff recommendation.

Staff Recommendation of Approval:

Staff recommends a **YES** vote. Passage of this motion will result in approval of the permit as conditioned and adoption of the following resolution and findings. The motion passes only by affirmative vote of the majority of the Commissioners present.

Resolution to Approve Permit:

The Commission hereby approves a coastal development permit for the proposed development and adopts the findings set forth below on grounds that the development as conditioned will be in conformity with the policies of Chapter 3 of the Coastal Act. Approval of the permit complies with the California Environmental Quality Act because either 1) feasible mitigation measures and/or alternatives have been incorporated to substantially lessen any significant adverse effects of the development on the environment, or 2) there are no further feasible mitigation measures or alternatives that would substantially lessen any significant adverse impacts of the development on the environment.

II. STANDARD CONDITIONS: See Attachment A.

III. SPECIAL CONDITIONS:

1. Final Restoration Monitoring Program

A. **PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-08-011**, the applicant shall submit for review and approval of the Executive Director, a final detailed restoration monitoring program designed by a qualified wetland biologist for monitoring of the wetland enhancement site. The monitoring program shall at a minimum include the following:

1) Performance standards that will assure achievement of the restoration goals and objectives set forth in Coastal Development Permit Application No. 1-08-011 as summarized in the Findings IV.B, "Project Description," including, but not limited to, (a) habitat enhancement for shorebirds, waterfowl, and other water-associated wildlife, and (b) longer periods of inundation in the wetland areas during the winter months.

2) Provisions for monitoring at least the following attributes: increased usage of the wetland areas by (a) shorebirds (*e.g.*, the Aleutian subspecies of the Marbled Godwit and other shorebirds); (b) both the Canada Goose and

Aleutian Cackling Goose; and (c) other waterfowl and water-associated wildlife.

3) Provisions for submittal within 30 days of completion of the initial enhancement work of (a) "as built" plans demonstrating that the initial enhancement work has been completed in accordance with the approved enhancement program, and (b) an assessment of the initial biological and ecological status of the "as built" enhancements. The assessment shall include an analysis of the attributes that will be monitored pursuant to the program, with a description of the methods for making that evaluation.

4) Provisions to ensure that the enhancement site will be remediated within one year of a determination by the permittee or the Executive Director that monitoring results indicate that the site does not meet the goals, objectives, and performance standards identified in the approved enhancement program and in the approved final monitoring program.

5) Provisions for monitoring and remediation of the enhancement site in accordance with the approved final enhancement program and the approved final monitoring program for a period of five (5) years.

6) Provisions for submission of annual reports of monitoring results to the Executive Director by October 1 each year for the duration of the required monitoring period, beginning the first year after submission of the "as-built" assessment. Each report shall include copies of all previous reports as appendices. Each report shall also include a "Performance Evaluation" section where information and results from the monitoring program are used to evaluate the status of the wetland enhancement project in relation to the performance standards.

7) Provisions for submission of a final monitoring report to the Executive Director at the end of the five-year reporting period. The final report must be prepared in conjunction with a qualified wetlands biologist. The report must evaluate whether the enhancement site conforms with the goals, objectives, and performance standards set forth in the approved final enhancement program. The report must address all of the monitoring data collected over the five-year period.

B. If the final report indicates that the enhancement project has been unsuccessful, in part, or in whole, based on the approved goals and objectives set forth in Coastal Development Permit Application No. 1-08-011 as summarized in Findings IV.B "Project Description," the applicant shall submit a revised or supplemental enhancement program to compensate for those portions of the original program which did not meet the approved goals and objectives set forth in Coastal Development Permit Application No. 1-08-011 as summarized in Finding IV.B "Project Description." The revised enhancement program shall be processed as an

amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

C. The permittee shall monitor and remediate the wetland enhancement site in accordance with the approved monitoring program. Any proposed changes from the approved monitoring program shall be reported to the Executive Director. No changes to the approved monitoring program shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines no amendment is legally required.

2. <u>Construction Responsibilities</u>

The permittee shall comply with the mitigation measures listed in the Mitigated Negative Declaration completed for the project (SCH No. 2006042056), except as modified herein. Construction-related requirements shall include, but shall not be limited to, the following Best Management Practices:

A. No construction materials, debris, or waste shall be placed or stored where it may be subject to entering coastal waters or wetlands;

B. Any and all debris resulting from construction activities shall be removed from the project site in accordance with Exhibit No. 6;

C. All grading activities shall be conducted during the dry season period of June 1 through October 15;

D. Construction activities adjacent to stream channels shall only be performed when soils are sufficiently dry so that sediment is not discharged into streams;

E. If rainfall is forecast during the time construction activities are being performed, any exposed soil areas shall be promptly mulched or covered with plastic sheeting and secured with sand bagging or other appropriate materials before the onset of precipitation;

F. Any debris discharged into coastal waters shall be recovered immediately and disposed of properly;

G. Any fueling and maintenance of construction equipment shall occur within upland areas outside of environmentally sensitive habitat areas or within designated staging areas. Mechanized heavy equipment and other vehicles used during the construction process shall not be stored or re-fueled within 300 feet of coastal waters; and

H. Fuels, lubricants, and solvents shall not be allowed to enter the coastal waters or wetlands. Hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, and a registered first-response, professional hazardous materials clean-up/remediation service shall be

locally available on call. Any accidental spill shall be rapidly contained and cleaned up.

I. The top six to ten inches (6-10") of excavated material within grazed seasonal wetlands (which contains the root masses, rhizomes, seeds, and accumulated organic material of the vegetation that dominates these seasonal wetlands) shall be separately stockpiled by the contractor, and the contractor shall assure that this stockpiled soil material is kept moist and that the material is reintroduced as soon as possible to excavation as the top fill material.

J. Prior to the commencement of construction, the work area shall be delineated, limiting the potential area affected by construction and workers shall be educated about the limitations on construction. All vehicles and equipment shall be restricted to pre-established work areas and established or designated access routes.

3. <u>Erosion & Runoff Control Plan</u>

A. **PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-08-011**, the applicant shall submit, for review and approval of the Executive Director, a plan for erosion and run-off control.

1) The run-off, spill prevention and response plan shall demonstrate the following:

(a) Run-off from the project site shall not increase sedimentation in coastal waters or wetlands;

(b) Run-off from the project site shall not result in pollutants entering coastal waters or wetlands;

(c) Best Management Practices (BMPs) shall be used to prevent the entry of polluted stormwater runoff into coastal waters or adjacent wetlands during construction, including use of relevant best management practices (BMPs) as detailed in the "California Storm Water Best Management (Construction and Industrial/Commercial) Handbooks, developed by Camp, Dresser & McKee, *et al.* for the Storm Water Quality Task Force (i.e., BMP Nos. EC-1– *Scheduling*, EC-2 – *Preservation of Existing Vegetation*, EC-12– *Streambank Stabilization*, SE-1–*Silt Fence* and/or SE-9–*Straw Bale Barrier*, NS-9–*Vehicle and Equipment Fueling*, NS-5–*Clean Water Diversion*, NS-10–*Vehicle and Equipment Maintenance and Repair*; WM-1–*Material Delivery and Storage*, WM-4–*Spill Prevention and Control*; see http://www.cabmphandbooks.com); and

(d) An on-site spill prevention and control response program, consisting of best management practices (BMPs) for the storage of clean-up materials, training, designation of responsible individuals, and reporting protocols to the appropriate public and emergency services agencies in the event of a spill, shall be implemented at the project to capture and clean-up any accidental releases of oil, grease, fuels, lubricants, or other hazardous materials from entering coastal waters or wetlands.

2) The plan shall include, at a minimum, the following components:

(a) A schedule for installation and maintenance of appropriate construction source control best management practices (BMPs) to prevent entry of stormwater run-off into the construction site and the entrainment of excavated materials into run-off leaving the construction site; and

(b) A schedule for installation, use and maintenance of appropriate construction materials handling and storage best management practices (BMPs) to prevent the entry of polluted stormwater run-off from the completed development into coastal waters.

B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

4. <u>Restoration Site Revegetation</u>

The four seasonal wetland enhancement sites shall be revegetated as proposed and shall comply with the following standards and limitations:

A. Only native plant species shall be planted. All proposed plantings shall be obtained from local genetic stocks within Humboldt County. If documentation is provided to the Executive Director that demonstrates that native vegetation from local genetic stock is not available, native vegetation obtained from genetic stock outside of the local area may be used. No plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time by the State of California, shall be employed or allowed to naturalize or persist on the site. No plant species listed as a "noxious weed" by the governments of the State of California or the United States shall be utilized within the property.

B. All planting shall be completed within 60 days after completion of construction.

C. The use of rodenticides containing any anticoagulant compounds, including, but not limited to, Bromadiolone, Brodifacoum or Diphacinone shall not be used.

5. <u>Final Debris Disposal & Equipment Staging and Stockpiling Plans</u>

A. **PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-08-011**, the applicant shall submit, for review and approval of the Executive Director, a final plan detailing the locations of site construction activities, equipment and materials storage and staging areas, and disposal locations.

1) The final debris disposal and equipment staging and stockpiling plan shall demonstrate the following:

(a) No excavated materials to be removed shall be temporarily placed or stored during grading activities where it may be subject to entering wetlands or other coastal waters;

(b) Erosion control techniques shall be implemented around the temporarily stored spoil material;

(c) All of the fill to be removed shall either be: (i) placed and used pursuant to and consistent with a valid coastal development permit, as well as consistent with the terms and conditions of this permit (CDP No. 1-08-011); or (ii) disposed of at an authorized disposal site capable of receiving such fill materials (e.g., CDP 1-03-004, Reclamation District No. 768, Applicant; or CDP No. 1-06-036, City of Arcata, Applicant). Side casting or placement of any such material within Arcata Bay, any slough, waterway, streamcourse, or lake, or any other wetland area, including any grazed seasonal wetlands, except as specified above is prohibited; and;

(c) Excavated materials removal activities shall not occur during the rainy season consistent with Special Condition No. 2.

2) The plan shall include, at a minimum, the following components:

(a) A site plan showing all proposed locations for stockpiling construction materials, debris, or waste during excavated materials removal operations;

(b) If the removed fill material is to be placed and used as part of a development approved by the Commission under a valid coastal development permit, the permittee shall provide: (i) a copy of the approved permit, (ii) written permission from the owner of the

property governed by the approved permit authorizing the fill, and (iii) a written description and site map indicating when and where the materials will be stockpiled for later use in the approved development; and

(c) A schedule for removal of all debris.

B. The permittee shall undertake development in accordance with the approved final plans. Any proposed changes to the approved final plans shall be reported to the Executive Director. No changes to the approved final plans shall occur without a Commission amendment to this coastal development permit unless the Executive Director determines that no amendment is legally required.

6. Protection of Archaeological Resources

A. If an area of historic or prehistoric cultural resources or human remains are discovered during the course of the project, all construction shall cease and shall not recommence except as provided in subsection (B) hereof, and a qualified cultural resource specialist shall analyze the significance of the find.

B. A permittee seeking to recommence construction following discovery of the cultural deposits shall submit an archaeological plan for the review and approval of the Executive Director.

1) If the Executive Director approves the Archaeological Plan and determines that the Archaeological Plan's recommended changes to the proposed development or mitigation measures are *de minimis* in nature and scope, construction may recommence after this determination is made by the Executive Director.

2) If the Executive Director approves the Archaeological Plan but determines that the changes therein are not *de minimis*, construction may not recommence until after an amendment to this permit is approved by the Commission.

7. Regional Water Quality Control Board Approval

PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-08-011, the applicant shall provide to the Executive Director a copy of a permit issued by the North Coast Regional Water Quality Control Board, or evidence that no permit is required. The applicant shall inform the Executive Director of any changes to the project required by the Board. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

8. U.S. Army Corps of Engineers Approval

PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION, the permittee shall provide to the Executive Director a copy of a permit issued by the Army Corps of Engineers, or letter of permission, or evidence that no permit or permission is required. The applicant shall inform the Executive Director of any changes to the project required by the Army Corps of Engineers. Such changes shall not be incorporated into the project until the applicant obtains a Commission amendment to this coastal development permit, unless the Executive Director determines that no amendment is legally required.

9. State Lands Commission Review

PRIOR TO ISSUANCE OF COASTAL DEVELOPMENT PERMIT NO. 1-08-011, the applicant shall provide to the Executive Director a written determination from the State Lands Commission that:

A. No State or public trust lands are involved in the development; or

B. State or public trust lands are involved in the development and all permits required by the State Lands Commission have been obtained; or

C. State or public trust lands may be involved in the development, but pending a final determination an agreement has been made with the State Lands Commission for the approved project as conditioned by the Commission to proceed without prejudice to that determination.

IV. FINDINGS & DECLARATIONS.

The Commission hereby finds and declares as follows:

A. Environmental Setting

The City of Arcata's "Arcata Baylands Project" proposes to protect, restore, and enhance freshwater habitats adjacent to Humboldt Bay. The project area is part of the larger Humboldt Bay ecosystem that accommodates fish, waterfowl, wading birds, shorebirds, passerines, raptors, and other water-associated wildlife. Humboldt Bay is second only to San Francisco Bay in the numbers and variety of migratory water-associated birds wintering in the coastal segment of the Pacific Flyway of California. It is one of California's most important stopovers for dozens of species of migrating birds, which use the area for nesting, feeding, and resting. Over 200 species of birds (18 of them State-listed as "endangered" or "species of special concern") have been recorded in and around the project vicinity.

The proposed project is part of a larger conservation protection and enhancement effort in the Humboldt Bay region and would help establish a connectivity of habitat encompassing over 1,300 acres of locally-, state-, and federally-protected lands adjacent to the northern edge of Humboldt Bay (Arcata Bay). The project lands will be owned and managed by the City in perpetuity for the conservation of coastal wetland habitats and the wildlife resources that depend on them. The project area is adjacent to or near a suite of protected lands including the Humboldt Bay National Wildlife Refuge, the 225-acre Arcata Marsh and Wildlife Sanctuary, the 508-acre California Department of Fish and Game (CDFG) Mad River Slough Wildlife Area, and lands owned and managed for conservation by the Jacoby Creek Land Trust. Additionally, the applicant and the CDFG are currently restoring/enhancing over 200 acres of tidal habitat in the McDaniel Slough area pursuant to Coastal Development Permit No. 1-06-036, which the Commission approved on May 11, 2007. See Exhibit No. 3 for the location of the proposed project in relation to these other protected lands.

The project site is located on seasonally grazed seasonal wetlands between Highway 101 and Old Arcata Road (see Exhibit Nos. 1-3). A portion of the project site (see Exhibit No. 2) historically was part of the extensive tidal marshes of Humboldt Bay, which were diked off and converted for agricultural purposes over a century ago. Vegetation in the area consists of agricultural grasslands comprised of a mix of native and nonnative grasses and forbs. Project area zoning under the certified Arcata Local Coastal Program is both Agriculture Exclusive (AE) and Natural Resources (NR) with a Wetland and Creek Protection Overlay Zone. The site is within the 100-year FEMA floodplain.

The areas proposed for seasonal wetland enhancement are inundated with stormwater runoff each winter. The areas have such saturated soils that much of the area is not available for grazing between five and seven months each year depending on rainfall. In the summer these areas are grazed by cattle and will continue to be grazed after project completion. The soils are classified as Bayside Silty Clay Loam (poorly to imperfectly drained) and are not prime agricultural soils. As discussed below, the project proposes to install water control structures in three of the enhanced wetlands to insure that they dry out and continue to be available for seasonal agricultural grazing.

Due to the disturbed nature of the project site (located on an actively grazed seasonal wetland), no sensitive species or habitats are known or expected to occur within the project area.

B. Project Description

The City of Arcata proposes to enhance four seasonal freshwater wetland areas totaling 12.4 acres to provide habitat benefits for waterfowl, shorebirds, and other water-associated wildlife while maintaining agricultural use and Aleutian Cackling Goose habitat (see Exhibit No. 4). Existing seasonal wetland areas #1 through #4 will be excavated to two feet below existing surface elevations to prolong the period of inundation in each area during the rainy season (see Exhibit No. 5). Enhancement of

seasonal wetland #1 will include contouring a small drainage swale at its base that leads to seasonal wetland #2. Enhancement of seasonal wetland #3 will involve enlarging an area on Fickle Hill Creek that currently ponds with water seasonally. Seasonal wetland #4 will be enhanced to fill with rain water and overflow water from a tributary that drains to South Gannon Slough. Water-control structures (3-ft by 3-ft Twin track weirs with a 24-inch outflow) will be installed at the bases of seasonal wetlands #2, #3, and #4 to insure that the areas dry out annually (each summer) to allow for continued seasonal agricultural grazing.

The proposed project will utilize bulldozers, excavators, loaders, scrapers, and transport vehicles. The sod layer, which provides organic material and an existing seed source, will be scraped and saved to be placed in the enhanced seasonal wetland bottoms after final grading. Existing and proposed topographic contours are shown in Exhibit No. 5. Excavation of the four seasonal wetlands will generate approximately 35,560 cubic yards of fill material. This excess soil debris is proposed to be removed from the project area in 10- and 20-yard dump trucks and used for the following: (1) to build the levees permitted under CDP No. 1-06-036 (McDaniel Slough Wetland Enhancement Project); (2) for repair activities on Reclamation District levees permitted under CDP No. 1-03-004 and CDP Amendment Nos. 1-03-004-A1 and -A2; (3) for use as topsoil for mine reclamation at the City's permitted rock quarry; and/or (4) to provide soils for wetland enhancement/mitigation if permits are obtained for a joint City of Arcata/Caltrans project. See Exhibit No. 6 for proposed fill disposal locations.

The City is proposing that by replacing the sod layer after final grading in each of the seasonal wetlands, bare soils in the project area will revegetate naturally over time. Additionally, the City proposes to seed seasonal wetland bottoms if necessary with a native knotweed (*Polygonum* sp.) to promote the growth of these preferred waterfowl foods.

The City is proposing to implement the following mitigation measures to minimize the project's impacts on coastal resources (see Exhibit No. 4):

1. Construction activities will be limited to the dry season (June 15-October 31);
2. In the event of unseasonable rainfall, construction will not occur during periods when any surface runoff occurs on exposed soils;
3. Bare soil areas will be seeded and mulched with weed-free rice straw for erosion control;
4. No equipment will be operated directly within stream channels of flowing streams;
5. No construction materials, debris, or waste shall be placed or stored where it may be allowed to enter into coastal waters;

6. Sediment controls will be in place for any work that occurs in or near creeks and drainages. If operations are not adequately containing sediment as determined by visual observation, the activity shall cease. Turbid water shall be contained and prevented from being transported by use of silt fences or water diversion structures;
7. Areas subject to disturbance during wetland enhancement activities will be surveyed by a qualified biologist, and any sensitive plant species encountered will be flagged for avoidance before commencement of any construction;
8. City staff will be on site during final grading to assure that the area is recontoured according to approved design specifications;
9. If needed, temporary exclusionary cattle fencing will be installed to protect mulched and revegetated areas;
10. Equipment refueling and maintenance will take place only in designated areas where potential spills of fuel, lubricants, or coolants can be contained and cleaned up without impacts to aquatic habitats; and
11. Due to the potential of discovering unknown cultural resources during construction, a qualified cultural monitor will be on site during excavation activities. If any paleontological, archaeological, historical, or unique ethnic or sacred resources are found during project excavation, activities will be halted and work will not recommence until a qualified archeologist has evaluated the materials and offered recommendations for further action.

C. Restoration of Marine Resources, Protection of Coastal Waters, and Permissible Filling, Dredging, & Diking of Wetlands

1. Applicable Coastal Act Policies and Standards

Coastal Act Section 30230 states as follows:

> *Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.*

Coastal Act Section 30231 states as follows:

> *The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation,*

maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Coastal Act Section 30233 provides as follows, in applicable part:

> *(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following:*
>
> …
>
> *(6) Restoration purposes*
>
> …
>
> (*c*) *In addition to the other provisions of this section, diking, filling, or dredging in existing estuaries and wetlands shall maintain or enhance the functional capacity of the wetland or estuary…*

2. Consistency Analysis

Coastal Act Sections 30230 and 30231 require in part that marine resources and coastal wetlands be maintained and enhanced. These policies also call for restoration of marine resources, coastal waters, streams, wetlands, and estuaries where feasible.

When read together as a suite of policy directives, Sections 30230, 30231, and 30233 set forth a number of different limitations on what types of projects may be allowed in coastal wetlands. For analysis purposes, the limitations applicable to the subject project can be grouped into four general categories or tests. These tests require that projects that entail the dredging, diking, or filling of wetlands demonstrate that:

a. That the purpose of the filling, diking, or dredging is for one of the seven uses allowed under Section 30233;
b. That the project has no feasible less environmentally damaging alternative;
c. That feasible mitigation measures have been provided to minimize adverse environmental effects; and
d. That the biological productivity and functional capacity of the habitat shall be maintained and enhanced where feasible.

Each category is discussed separately below.

a. Permissible Use for Fill

The first test set forth above is that any proposed filling, diking, or dredging in wetlands must be for an allowable purpose as specified under Section 30233 of the Coastal Act.

The relevant category of use listed under Section 30233(a) that relates to the proposed project is subcategory (6), "restoration purposes."

The project proposes to enhance 12.4 acres of existing seasonal freshwater wetlands (grazed seasonal wetlands) to provide habitat benefits for waterfowl, shorebirds, and other water-associated wildlife while maintaining agricultural use and Aleutian Cackling Goose habitat. Neither the Coastal Act nor the Commission's administrative regulations contain a precise definition of "restoration." The dictionary defines "restoration" in terms of actions that result in returning an article "back to a former position or condition," especially to "an unimpaired or improved condition."[1] The particular restorative methods and outcomes vary depending upon the subject being restored. For example, the Society for Ecological Restoration defines "ecological restoration" as "the process of intentionally altering a site to establish a defined indigenous, historical ecosystem. The goal of the process is to emulate the structure, function, diversity, and dynamics of the specified ecosystem."[2] However, within the field of "wetland restoration," the term also applies to actions taken "in a converted or degraded natural wetland that result in the reestablishment of ecological processes, functions, and biotic/abiotic linkages and lead to a persistent, resilient system integrated within its landscape"[3] that may not necessarily result in a return to historic locations or conditions within the subject wetland area.

Implicit in all of these varying definitions and distinctions is the understanding that the restoration entails returning something to a prior state. Wetlands are extremely dynamic systems in which specific physical functions such as nutrient cycles, succession, water levels and flow patterns directly affect biological composition and productivity. Consequently "restoration," as contrasted with "enhancement," encompasses not only reestablishing certain prior conditions but also reestablishing the processes that create those conditions. In addition, most of the varying definitions of restoration imply that the reestablished conditions will persist to some degree, reflecting the homeostatic natural forces that formed and sustained the original conditions before being artificially altered or degraded.

Moreover, finding that proposed diking, filling, and dredging constitutes "restoration purposes" must be based, in part, on evidence that the proposed project will be successful in improving habitat values. Should the project be unsuccessful at increasing and/or enhancing habitat values, or worse, if the proposed diking, filling, and dredging impacts of the project actually result in long term degradation of the habitat, the proposed diking, filling, and dredging would not be for "restoration purposes." These two characteristics are particularly noteworthy to restoration grant program administrators in reviewing funding requests to ensure that the return on the funding investment is maximized and liabilities associated with unwanted side effects of the project are minimized.

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[1] Merriam-Webster's Collegiate Dictionary, Tenth Edition
[2] "Definitions," *Society of Ecological Restoration News*, Society for Ecological Restoration; Fall, 1994
[3] *Position Paper on the Definition of Wetland Restoration*, Society of Wetland Scientists, August 6, 2000

Thus, to ensure that the project achieves its stated habitat enhancement objectives, and therefore be recognized as being for "restoration purposes," the project must demonstrate that: (1) it either entails (a) a return to, or re-establishment of, former habitat conditions, or (b) entails actions taken in a converted or degraded natural wetland that will result in the reestablishment of landscape-integrated ecological processes, and/or abiotic/biotic linkages associated with wetland habitats; and (2) there is a reasonable likelihood that the identified improvements in habitat value and diversity will result; and (3) once re-established, it has been designed to provide the desired habitat characteristics in a self-sustaining, persistent fashion independent of the need for repeated maintenance or manipulation to uphold the habitat function.

As noted above, two of the four wetland areas involved in the project were in areas as least partially subject to the tidal influence of Humboldt Bay historically. Since being reclaimed behind the dikes built along the bay margins, the project areas now function as freshwater seasonal wetlands. The proposed project would involve excavating areas to increase ponding to enhance the freshwater wetland habitat values of the project areas.

According to information from the U.S. Fish and Wildlife Service (FWS), in the Humboldt Bay region it is estimated that between 7,000 and 8,700 acres of salt marsh were present prior to human development. Since the mid-1800's, most of what was likely to have been historic salt marsh has been diked or filled and has been reduced to a total area of around 900 acres, a reduction of at least 87%. The FWS has indicated that restoration of salt marsh habitats around the Bay is a high priority, as salt marsh restoration is important for the protection, enhancement, and restoration of native fish, wildlife, and plant communities, some of which are dependent on salt marsh for their existence. In past permit actions on wetland restoration projects around Humboldt Bay, the Commission has acknowledged that in general, restoring areas that have historically supported tidal salt marsh is preferable when the physical conditions of a site present such an opportunity.

Although much of the agricultural pasturelands in the Humboldt Bay area are diked former tidelands, the four seasonal wetland areas where enhancements are proposed are located either outside of former tidelands (seasonal wetland areas #1 and #3) or near the inland margin of former tidelands (seasonal wetland areas #2 and #4) (see Exhibit No. 2), and all four are located in or around areas that historically received freshwater inundation from streams.

Seasonal wetland areas #1, #2, and #3 are all within, or in very close proximity to, the historic mouth of Fickle Hill Creek, which drains a watershed in the forested hills to the north of the project area. The lower reach of the Fickle Hill Creek channel has been historically altered for flood control purposes. Much of this lower reach now consists of ditches excavated along the north side of Samoa Boulevard and through the diked seasonal wetlands south of Samoa Boulevard following an alignment that is very different from its historic course. Seasonal wetland areas #1, #2, and #3 are designed to expand the freshwater habitat associated Fickle Hill Creek by capturing and holding

stormwater runoff and releasing it, through the proposed water-control structures. Although the configuration of the freshwater wetland habitat areas to be enhanced at wetland areas #1, #2, and #3 will not match the historic configuration of the lower reach and mouth of Fickle Hill Creek, the proposed enhancement of existing freshwater habitat in these areas will help restore freshwater habitat functions and values historically provided by the lower reach of Fickle Hill Creek as it originally existed.

Seasonal wetland area #4 is located within, but very close to the outer boundary of, the historic tideland area. The relatively flat, low-lying area adjacent to and inland of the margin of the historic tideland area was an area that contained seasonal and permanent freshwater wetlands because of high groundwater tables and slow runoff through the gently sloped areas. The site is also located adjacent to an existing freshwater watercourse (sometimes identified as North Jacoby Creek) that drains a watershed in the hills to the east of the project area and drains through the existing diked wetland area to Gannon Slough, which in turn discharges through tide gates into Humboldt Bay. It is unclear whether the historic alignment of the creek matches the current alignment of the watercourse. Excavation within seasonal wetland area #4 to create a ponded area will enhance the freshwater habitat associated with the existing drainage by capturing and holding stormwater runoff for a longer period. This enhancement to the existing seasonal freshwater habitat will serve to restore freshwater habitat functions and values historically provided by the North Jacoby Creek drainage and the seasonal and permanent freshwater wetlands that historically existed on the inland side of the historic tideland boundary in this area.

Although the wetland enhancements proposed at all four wetland areas will not reestablish the same configuration of wetland habitat that historically existed in the area prior to the diking of the former tidelands and alteration of historic creek channels, the proposed wetland enhancements of freshwater wetlands entail actions taken in converted or degraded natural wetlands that will result in the reestablishment of landscape-integrated ecological processes associated with wetland habitats. Therefore, the Commission finds that the proposed wetland enhancements are consistent with the definition of restoration and constitute filling and dredging for restoration purposes consistent with Section 30233(a)(6).

The Commission notes that restoring tidal action to seasonal wetlands #2 and #4, the two wetland areas located within the boundary of former tidelands, would require the flooding of existing infrastructure owned by the Pacific Gas & Electric Company (transmission lines) and the City of Eureka (municipal water pipeline) as well as community ball fields and private properties used for agricultural grazing. Therefore, it is infeasible to restore these areas to their historic tidal habitats.

As discussed above, this finding that the proposed project constitutes “restoration purposes” is based, in part, on the assumption that the proposed project will be successful in increasing freshwater wetland habitat values. Should the project be unsuccessful at increasing wetland habitat values, or worse, if the proposed dredging impacts of the

project actually result in long term degradation of the habitat, the proposed diking, filling, and dredging would not be for "restoration purposes." To ensure that the proposed seasonal wetland enhancements achieve the objectives for which the project is intended (*i.e.*, for the enhancement of habitat for waterfowl and water-associated wildlife), the Commission attaches Special Condition No. 1. Special Condition No. 1 requires the applicant to submit a final monitoring plan for review and approval by the Executive Director prior to the issuance of the coastal development permit. The monitoring plan is required to outline a method for measuring and documenting the improvements in habitat value and diversity at the site over the course of five years following project completion. Furthermore, Special Condition No. 1 requires the monitoring plan to include provisions for remediation to ensure that the goals and objectives of the wetland enhancement project are met.

Therefore, the Commission concludes that the proposed dredging of seasonal wetlands for the enhancement of habitat for waterfowl and water-associated wildlife is permissible under Section 30233(a)(6) for "restoration purposes."

b. Alternatives Analysis

The second test set forth by the Commission's dredging and fill policies is that the proposed dredging or fill project must have no feasible less environmentally damaging alternative. Coastal Act Section 30108 defines "feasible" as follows:

> *"Feasible" means capable of being accomplished in a successful manner within a reasonable time, taking into account economic, environmental, social, and technological factors.*

Alternatives to the proposed project which were examined include (1) the no-project alternative; (2) alternative sites; and (3) alternative methods. As explained below, each of these alternatives analyzed in the alternatives analysis are infeasible and/or do not result in a project that is less environmentally damaging than the proposed project:

(1) No-Project Alternative

The "no project" alternative would maintain the *status quo* of the site and would not enhance and restore 12.4 acres of freshwater wetland habitats as proposed. Existing conditions on the project site consist of marginal agricultural land (seasonal wetlands) used for seasonal cattle grazing. Under the "no project" alternative, the land would continue to be used for seasonal agricultural grazing (as it would under the proposed project), but there would be no improved habitat for waterfowl and other water-associated wildlife (as would occur with the proposed project). Accordingly, taking into consideration the economic, environmental, and social factors, the no project option is not a feasible less environmentally damaging alternative than the proposed project as conditioned.

(2) Alternative Sites

The City explored this alternative in its preparation to acquire the subject property and implement the proposed restoration/enhancement activities in cooperation with the U.S. Fish and Wildlife Service (FWS) and the California Coastal Conservancy using grant funding from the FWS National Coastal Wetlands Grant Program. Restoration and enhancement could occur on other parcels located near the project site if there were willing landowners. However, according to the City, other private property owners are not interested in selling or leasing their properties. At this time, no other feasible sites are available for acquisition or implementing of enhancement and restoration work. During the site evaluation process, the proposed acquisition areas and existing City-owned lands were identified as the only feasible sites for FWS-funded restoration due to ownership and land use constraints. Therefore, implementing the project at an alternative location is not a feasible less environmentally damaging alternative than the proposed project as conditioned.

(3) Alternative Methods

Under the proposed method for increasing water retention in existing seasonal wetlands, heavy equipment will be used to excavate fill and increase topographic diversity. The excavation will increase the water holding capacity of the four proposed seasonal wetland areas and allow them to retain water for extended periods of time during the winter months.

An alternative method for increasing water retention in the wetland areas would be the construction of small levees and placement of water control structures to back-up water. Due to the relatively flat nature of the of topographic in the project area, construction of a levee to back-up water may inundate a significantly larger acreage than is proposed to be inundated. The lack of existing diversity in the topography could flood an entire pasture rather than the specific depression areas intended to function as the enhanced seasonal wetlands.

Heavy equipment is required to complete the majority of the project activities. As work will require the excavation and removal of approximately 35,560 cubic yards of fill material, a feasible alternative to heavy equipment does not exist.

Therefore, implementing the project using alternative methods is not a feasible less environmentally damaging alternative than the proposed project as conditioned.

Conclusion

Therefore, for all of the reasons discussed above, the Commission finds that there is no less environmentally damaging feasible alternative to the development as conditioned, as required by Section 30233(a).

c. Feasible Mitigation Measures

The third test set forth by Section 30233 is whether feasible mitigation measures have been provided to minimize adverse environmental impacts. The amended development would be located within and around coastal waters and wetlands. Depending on the manner in which the proposed project is conducted, the significant adverse impacts of the project may include (1) impacts to fish and wildlife habitat from water pollution in the form of sedimentation or debris entering coastal waters and wetlands; (2) introduction through re-planting of exotic invasive plants species that could compete with native vegetation and negate the habitat improvement they would provide; (3) use of certain rodenticides that could deleteriously bio-accumulate in predator bird species; and (4) impacts to adjacent seasonal wetlands from construction activities. Overall, the project would enhance wetland habitat values and would produce generally only beneficial environmental effects. However, the proposed project has been conditioned to ensure that habitat enhancement results and that potentially significant adverse impacts are minimized. The potential impacts and their mitigation are discussed below in the following sections.

(1) Sedimentation Impacts to Aquatic Habitat & Water Quality

The proposed freshwater wetlands enhancements are being undertaken to benefit waterfowl and other water-associated wildlife. The seasonal wetlands provide habitat to a wide assortment of terrestrial organisms, most notably several environmentally sensitive avian species, including the northern harrier (*Circus cyaneus*), white-tailed kite (*Elanus leucurus*), Great blue heron (*Ardea herodias*), and Snowy egret (*Egretta thula*).

Potential adverse impacts to both existing and to-be-restored/enhanced fish and wildlife habitat related water quality could occur in the form of sedimentation or debris from project dredging (i.e., constructing the four freshwater "ponds"). Additionally, impacts to sensitive fish species, including coho salmon (*Oncorhynchus kisutch*), steelhead (*O. mykiss*), and coastal cutthroat trout (*O. clarki clarki*), could occur during project activities adjacent to Fickle Hill Creek. The project involves enlarging an area of the creek for seasonal wetland #3 that currently ponds with water seasonally, and if not constructed properly, fish stranding could occur within this enhanced wetland/pond feature.

Although the project description states that such impacts would be prevented and minimized by conducting the ground-disturbing work during the dry weather season and through incorporating various other best management practices, the application provides few details as to precisely how this excavation would be performed relative to: (1) the potential for causing stream bank soil materials to enter into the watercourses (Fickle Hill Creek and South Gannon Slough) during project work; and (2) the potential for materials to become entrained into coastal waters during the construction of the freshwater "ponds." The City proposes to mitigate the potential fish stranding impact by, as is required by the DFG Streambed Alternation Agreement issued for the project, constructing rock weirs rather than a weir box at the downstream end of seasonal wetland

#3 to control the water surface elevation of the enhanced wetland where it connects to Fickle Hill Creek.

To ensure that adverse impacts to water quality do not occur from construction activities, the Commission attaches Special Condition Nos. 2 and 3. Special Condition No. 2 requires the applicant to undertake the development pursuant to certain construction responsibilities. These include, but are not limited to, the following: (a) no construction materials, debris, or waste are to be placed or stored where they may enter coastal waters, (b) all construction debris is to be removed and disposed of in an approved location (as proposed in Exhibit No. 6), (c) the construction window shall be limited to the dry season (June 1-October 15), (d) construction activities adjacent to stream channels shall only be performed when soils are sufficiently dry so that sediment is not discharged into streams, (e) if rainfall is forecast during the time construction activities are being performed, any exposed soil areas shall be promptly mulched or covered with plastic sheeting and secured with sand bagging or other appropriate materials before the onset of precipitation, (f) any debris discharged into coastal waters shall be recovered immediately and disposed of properly, (g) any fueling and maintenance of construction equipment shall occur within upland areas outside of environmentally sensitive habitat areas or within designated staging areas, (h) fuels, lubricants, and solvents shall not be allowed to enter the coastal waters or wetlands, hazardous materials management equipment including oil containment booms and absorbent pads shall be available immediately on-hand at the project site, and any accidental spill shall be rapidly contained and cleaned up, and other specifications. Special Condition No. 3 similarly requires the applicant to submit, for the Executive Director's review and approval, an erosion and runoff control plan that is to include certain specified water quality best management practices for minimizing impacts to coastal waters.

(2) Introduction of Exotic Invasive Plants

The use of non-invasive plant species adjacent to environmentally sensitive habitat areas (ESHAs) is critical to protecting such areas from disturbance. If invasive species are planted adjacent to an ESHA they can displace native species and alter the composition, function, and biological productivity of the ESHA.

The City is proposing that by replacing the sod layer after final grading in each of the seasonal wetlands, bare soils in the project area will revegetate naturally over time. Special Condition No. 2 requires that the City, as proposed, stockpile separately the top six to ten inches (6-10") of excavated material within grazed seasonal wetlands (which contains the root masses, rhizomes, seeds, and accumulated organic material of the vegetation that dominates these seasonal wetlands), and reintroduce this sod layer into the enhanced wetland areas as the top fill material as soon as possible following excavation.

Additionally, the City proposes to seed seasonal wetland bottoms if necessary with a native knotweed (*Polygonum* sp.) to promote the growth of these preferred waterfowl foods. However, the proposed project does not further specify the source or composition

of the seed mix nor precludes the planting of other plant species beyond those identified in the permit application.

To assure that no invasive plant species are seeded in the project area, Special Condition No. 4 prohibits the planting of any plant species listed as problematic and/or invasive by the California Native Plant Society, the California Invasive Plant Council, or as may be identified from time to time by the State of California, shall be employed or allowed to naturalize or persist on the site. Furthermore, no plant species listed as a "noxious weed" by the governments of the State of California or the United States are to be utilized in the revegetation portion of the project.

(3) Use of Anticoagulant-based Rodenticides

To help in the establishment of vegetation, rodenticides are sometimes used to prevent rats, moles, voles, and other similar small animals from eating the newly planted saplings. Certain rodenticides, particularly those utilizing blood anticoagulant compounds such as brodifacoum, bromadiolone and diphacinone, have been found to pose significant primary and secondary risks to non-target wildlife present in urban and urban/wildland areas. As the target species are preyed upon by raptors or other environmentally sensitive predators and scavengers, these compounds can bio-accumulate in the animals that have consumed the rodents to concentrations toxic to the ingesting non-target species.

To avoid this potential cumulative impact to environmentally sensitive wildlife species, Special Condition No. 4 contains a prohibition on the use of such anticoagulant-based rodenticides.

(4) Impacts to Adjacent Seasonal Wetlands

The proposed project will be conducted in and around seasonal wetlands. The wetland vegetation on the site is not particularly abundant or diverse in comparison with other wetland habitats around Humboldt Bay because of its current and historic use as pasture for cattle grazing. Nonetheless, the area does provide some wetland habitat including foraging habitat for a diversity of water-associated wildlife including waterfowl, wading birds, and shorebirds. The wetlands also function to provide a certain degree of water quality protection, as they temporarily detain rainwater runoff and allow for the removal of impurities entrained in stormwater flowing over the pasture lands.

Impacts to seasonal wetlands adjacent to the four wetland areas proposed for enhancement could occur during construction activities if specific protocols are not followed. For example, heavy equipment used for proposed wetland enhancement activities could compact the soils of surrounding wetland areas if specific access routes and staging areas are not designated and delineated. The applicant has not indicated the locations of construction access routes, equipment staging areas, or stockpiling sites for spoils material (e.g., the sod layer that is proposed to be temporarily stored and reintroduced into enhanced wetland areas).

Therefore, the Commission attaches Special Condition No. 5. This condition requires that the applicant submit, prior to permit issuance for the review and approval of the Executive Director, a final equipment staging and stockpiling plan, which designates areas for equipment staging and the temporary stockpiling of construction and fill materials. The plan shall demonstrate, among other things, that (a) no excavated materials to be removed shall be temporarily placed or stored during grading activities where it may be subject to entering wetlands or other coastal waters and (b) erosion control techniques shall be implemented around the temporarily stored spoil material. Additionally, Special Condition No. 3, discussed above, requires the applicant to submit, for the Executive Director's review and approval, an erosion and runoff control plan that is to include certain specified water quality best management practices for minimizing impacts to coastal wetlands.

Conclusion

The Commission finds that, as conditioned, feasible mitigation measures have been provided to minimize adverse environmental effects consistent with Section 30233 of the Coastal Act.

d. Maintenance & Enhancement of Biological Productivity & Functional Capacity

The fourth general limitation set by Section 30233 and 30231 is that any proposed dredging or filling in coastal wetlands must maintain and enhance the biological productivity and functional capacity of the habitat, where feasible.

As discussed above, the conditions of the permit will ensure that the project will not have significant adverse impacts on the water quality of any of the coastal waters in the project area and will ensure that the project construction will not adversely affect the biological productivity and functional capacity coastal waters or wetlands. Therefore, the Commission finds that the project, as conditioned, will maintain the biological productivity and functional capacity of the habitat consistent with the requirements of Sections 30233, 30230, and 30231 of the Coastal Act.

D. Conversion of Agricultural Lands

1. Applicable Coastal Act Policies and Standards

Coastal Act Section 30241 states:

> *The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:*

> *(a) By establishing stable boundaries separating urban and rural areas, including, where necessary, clearly defined buffer areas to minimize conflicts between agricultural and urban land uses.*
>
> *(b) By limiting conversions of agricultural lands around the periphery of urban areas to the lands where the viability of existing agricultural use is already severely limited by conflicts with urban uses or where the conversion of the lands would complete a logical and viable neighborhood and contribute to the establishment of a stable limit to urban development.*
>
> *(c) By permitting the conversion of agricultural land surrounded by urban uses where the conversion of the land would be consistent with Section 30250.*[4]
>
> *(d) By developing available lands not suited for agriculture prior to the conversion of agricultural lands.*
>
> *(e) By assuring that public service and facility expansions and nonagricultural development do not impair agricultural viability, either through increased assessment costs or degraded air and water quality.*
>
> *(f) By assuring that all divisions of prime agricultural lands, except those conversions approved pursuant to subdivision (b), and all development adjacent to prime agricultural lands shall not diminish the productivity of such prime agricultural lands.*

Coastal Act Section 30242 states:

> *All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (l) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.*

2. Consistency Analysis

Coastal Act Sections 30240 and 30241 require the protection of prime agricultural lands[5] and sets limits on the conversion of all agricultural lands to non-agricultural uses.

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[4] The portion of referenced Section 30250 applicable to this project type and location [sub-section (a)] requires that, "*New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources.*"

[5] Coastal Act Section defines "prime agricultural land" through incorporation-by-reference of paragraphs (1) through (4) of Section 51201(c) of the California Government Code. Prime agricultural land entails land with any of the follow characteristics: (1) a rating as class I or class II in the Natural Resource Conservation Service land use capability classifications; or (2) a rating 80 through 100 in the Storie Index Rating; or (3) the ability to support livestock used for the production of food and fiber with an annual carrying capacity equivalent to at least one animal unit per acre as defined by the United States Department of Agriculture; or (4) the ability to normally yield in a commercial bearing period on an annual basis not less than two hundred dollars ($200) per acre of unprocessed agricultural plant

The subject property has been continually used for agricultural purposes, primarily animal husbandry uses, since its reclamation from Humboldt Bay in the approximately 1880s. Given the fine sediment size generally associated with fluvially deposited soil materials within bays and estuaries, the low relief of the area, the relatively shallow water table, and the limited amount of tillage and organic material or other soils component amendments made to the site over the last century since their reclamation, these seasonally waterlogged soils and their high bulk density severely limit the types and agricultural activities that may be feasibly undertaken at the site. As a result, the primary use pattern for the site has mainly been low intensity cattle grazing land and dry season fodder production in the form of hay cropping.

Based on information derived from the Natural Resources Conservation Service (NRCS), the soils of the project site are mapped as Occidental, 0-2 percent slopes. This soil series consists of very deep, very poorly drained soils on reclaimed salt marshes and tidal marshes on alluvial plains. It is identified as a hydric soil and is recognized as having several impediments to extensive agricultural uses. As a result the NRCS has assigned Class VII classification to the project site soils as a locale which has "severe limitations that reduce the choice of plants or require special conservation practices, or both." Thus, under the NRCS land capability classification system, the soils at the project site do not meet the first criterion for the definition of prime agricultural soils.

According to information submitted by the City, based on Soils of Western Humboldt County, California (McLaughlin and Harradine 1965), the project site contains Bayside silty clay loam 2 (Ba_2, poorly drained) and 3 (Ba_3, imperfectly drained) soils with 0-3% slopes. The Ba_2 soils have a Storie Index rating of 36, and Ba_3 soils have a Storie Index rating of 49. Thus, the project area does not qualify as prime agricultural land under the second prong of the Coastal Act's definition.

The third potential qualifying definition of prime agricultural land – the ability to support livestock used for the production of food and fiber with an annual carrying capacity equivalent to at least one animal-unit per acre as defined by the United States Department of Agriculture – similarly does not apply to the project site. Based on correspondence from, Gary Markegard, County Farm Advisor for the U.C. Cooperative Extension, the low-lying, poorly drained, saltwater intruded, and flood-prone soils along the northern reclaimed fringes of Humboldt Bay typically require three acres per animal-unit.

Finally, with regard to the site's potential qualification as prime agricultural land based upon its potential for commercial fruit or nut crop production at specified minimal yields, the project area similarly fails to meet the criterion. Due to the maritime-influenced climate of the western Humboldt County, commercial nut production is precluded along

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production of fruit- or nut-bearing trees, vines, bushes or crops which have a nonbearing period of less than five years.

the immediate coastal areas by the significant precipitation and limited number of warm, overcast-free days to allow for full seed maturation. In addition, due to the high bulk density of the soils underlying the project site and the relatively shallow water table, fruit and berry crops suitable for the North Coast's temperate setting are similarly restricted to areas further inland, primarily on uplifted marine terraces and within well developed river floodplain areas with improved drainage and more friable soil characteristics. As a result, fruit and nut production on an economically successful commercial basis is not currently, nor has ever been historically pursued in open coastal environs, such as the project area.

Therefore, based upon the above discussed set of conditions at the project site, the Commission finds that the subject site does not contain prime agricultural soils or livestock and/or crop productivity potential that would otherwise qualify the subject property as prime agricultural land.

The proposed project would not result in a conversion of agricultural land. The areas proposed for seasonal wetland enhancement are inundated with water each winter. The areas have such saturated soils that much of the area is not available for grazing between five and seven months each year depending on rainfall. In the summer, these areas are grazed by cattle and will continue to be grazed after project completion. The project proposes to install water control structures in three of the enhanced wetlands to insure that they dry out and continue to be available for seasonal agricultural grazing. Thus, the proposed project will not result in any loss of animal carrying capacity because all seasonal wetlands will continue to be grazed during the summer months.

Thus, the Commission finds that the proposed habitat restoration and enhancement use (1) would not occur on prime agricultural land as defined by the Coastal Act, and (2) would not result in the conversion of grazing lands. Therefore, the proposed project is consistent with Sections 30241 and 30242 of the Coastal Act.

E. Public Access

1. Applicable Coastal Act Policies and Standards

Coastal Act Sections 30210, 30211, and 30212 require the provision of maximum public access opportunities, with limited exceptions. Coastal Act Section 30210 requires in applicable part that maximum public access and recreational opportunities be provided when consistent with public safety, private property rights, and natural resource protection. Section 30211 requires in applicable part that development not interfere with the public's right of access to the sea where acquired through use (i.e., potential prescriptive rights or rights of implied dedication). Section 30212 requires in applicable part that public access from the nearest public roadway to the shoreline and along the coast be provided in new development projects, except in certain instances, such as when adequate access exists nearby or when the provision of public access would be inconsistent with public safety. In applying Sections 30211 and 30212, the Commission is limited by the need to show that any denial of a permit application based on these

sections or any decision to grant a permit subject to special conditions requiring public access is necessary to avoid or offset a project's adverse impact on existing or potential public access.

2. Consistency Analysis

The project site is located between Highway 101 and Old Arcata Road, inland from the margin of Humboldt Bay. No existing public access to a beach or shoreline is available in the project area, which currently supports and will continue to support seasonal agricultural grazing. The proposed project does not involve any changes or additional restrictions to existing public access that would interfere with or reduce the amount of area public access and recreational opportunities. In fact, public use of the project site for birdwatching from the surrounding public roadways (Highway 101 and Old Arcata Road) may increase, as the proposed enhancements are expected to benefit waterfowl and other water-associated wildlife.

Therefore, the Commission finds that the proposed project would not have an adverse effect on public access and that the project as proposed is consistent with the requirements of Coastal Act Sections 30210, 30211, and 30212.

F. Protection of Archaeological Resources

1. Applicable Coastal Act Policies and Standards

Coastal Act Section 30244 states as follows:

> *Where development would adversely impact archeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.*

2. Consistency Analysis

The diked former tidelands and surrounding areas are located within the ethnographic territory of the Wiyot Indians. Wiyot settlements existed along Humboldt Bay and along the banks of many of the streams and sloughs in this area.

The City requested a cultural resource assessment from the North Coast Information Center for the project area during the land acquisition phase for the subject property. In October 2004 the City received the report, and the City also hired Roscoe and Associates to perform an archaeological evaluation in 2003. In addition, the California Coastal Conservancy issued a letter to the State Historic Preservation Office on June 22, 2006 requesting review and clearance for the project based on past survey work completed in the area. Based on these reports, the proposed project could adversely impact archaeological resources. The City has therefore proposed maintaining a qualified cultural monitor on site during excavation activities. If any paleontological,

archaeological, historical, or unique ethnic or sacred resources are found during project excavation, the City has proposed to halt activities and not recommence work until a qualified archeologist has evaluated the materials and offered recommendations for further action.

To ensure protection of any archaeological or cultural resources that may be discovered at the site during construction of the proposed project, the Commission attaches Special Condition No. 6 that if an area of cultural deposits is discovered during the course of the project, all construction must cease and a qualified cultural resource specialist must analyze the significance of the find. To recommence construction following discovery of cultural deposits, the applicant is required to submit a supplementary archaeological plan for the review and approval of the Executive Director to determine whether the changes are *de minimis* in nature and scope, or whether an amendment to this permit is required.

Therefore, the Commission finds that the proposed project, as conditioned, is consistent with Coastal Act Section 30244, as the development will include mitigation measures to ensure that the development will not adversely impact archaeological resources.

G. Other Agency Approvals

The project requires review and authorization by the U.S. Army Corps of Engineers. Pursuant to the Federal Coastal Zone Management Act, any permit issued by a federal agency for activities that affect the coastal zone must be consistent with the coastal zone management program for that state. Under agreements between the Coastal Commission and the U.S. Army Corps of Engineers, the Corps will not issue a permit until the Coastal Commission approves a federal consistency certification for the project or approves a permit. The project also requires a CWA Section 401 Water Quality Certification from the Regional Water Quality Control Board. To ensure that the project ultimately approved by the Corps and the Board is the same as the project authorized herein, the Commission attaches Special Condition Nos. 7 and 8, which require the City to submit to the Executive Director evidence of these agencies' approvals of the project prior to commencement of construction and prior to permit issuance, respectively. The conditions require that any project changes resulting from these other agency approvals not be incorporated into the project until the applicant obtains any necessary amendments to this coastal development permit.

H. Public Trust Lands

The project site is located in an area subject to the public trust. Therefore, to ensure that the applicant has the necessary authority to undertake all aspects of the project on these public lands, the Commission attaches Special Condition No. 9, which requires that the project be reviewed and where necessary approved by the State Lands Commission prior to the issuance of the coastal development permit.

I. California Environmental Quality Act

The City of Arcata, as the lead agency, adopted a Mitigated Negative Declaration for the Arcata Baylands Enhancement/Restoration Project on June 14, 2006 (SCH No. 2006042056).

Section 13906 of the Commission's administrative regulation requires Coastal Commission approval of coastal development permit applications to be supported by a finding showing the application, as modified by any conditions of approval, is consistent with any applicable requirements of the California Environmental Quality Act (CEQA). Section 21080.5(d)(2)(A) of CEQA prohibits a proposed development from being approved if there are any feasible alternatives or feasible mitigation measures available, which would substantially lessen any significant adverse effect the proposed development may have on the environment.

The Commission incorporates its findings on Coastal Act consistency at this point as if set forth in full. As discussed above, the proposed project has been conditioned to be consistent with the policies of the Coastal Act. The findings address and respond to all public comments regarding potential significant adverse environmental effects of the project that were received prior to preparation of the staff report. As specifically discussed in these above findings, which are hereby incorporated by reference, mitigation measures that will minimize or avoid all significant adverse environmental impacts have been required. As conditioned, there are no other feasible alternatives or feasible mitigation measures available which would substantially lessen any significant adverse impacts which the activity may have on the environment. Therefore, the Commission finds that the proposed project, as conditioned to mitigate the identified impacts, can be found consistent with the requirements of the Coastal Act to conform to CEQA.

V. EXHIBITS:

1. Regional Location Map
2. Project Area in Relation to Former Tidelands Boundary
3. Project Area in Relation to Other Protected Areas
4. Project Description
5. Project Plans
6. Fill Spoils Disposal Areas

APPENDIX A

STANDARD CONDITIONS

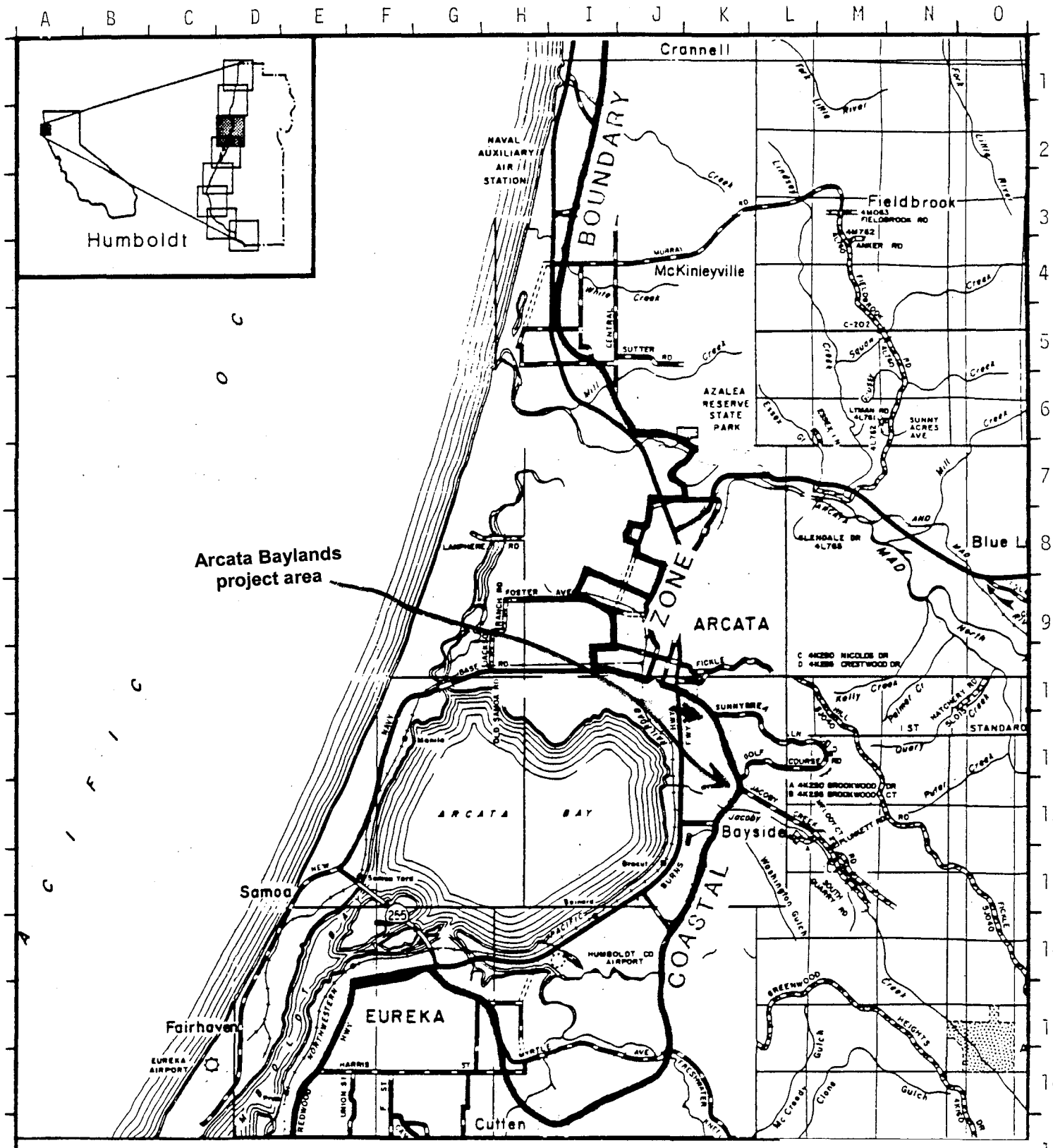
1. Notice of Receipt and Acknowledgement. The permit is not valid and development shall not commence until a copy of the permit, signed by the permittee or authorized agent, acknowledging receipt of the permit and acceptance of the terms and conditions, is returned to the Commission office.

2. Expiration. If development has not commenced, the permit will expire two years from the date on which the Commission voted on the application. Development shall be pursued in a diligent manner and completed in a reasonable amount of time. Application for extension of the permit must be made prior to the expiration date.

3. Interpretation. Any questions of intent of interpretation of any condition will be resolved by the Executive Director of the Commission.

4. Assignment. The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.

5. Terms and Conditions Run with the Land. These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.



California Coastal Commission

LOCATION MAP

1 0 mil

County of Humboldt

EXHIBIT NO. 1

APPLICATION NO. 1-08-011

CITY OF ARCATA

REGIONAL LOCATION MAP

City of Arcata

ARCATA BAYLANDS ENHANCEMENT PROGRAM

Tidelands Boundary Overlay

U.S.G.S 7.5 Minute Topographic Quadrangle: Arcata South
Section 31, 32, & 33 of T.6.N., R.1.E., & Section 4 of T.5.N., R.1.E. of H.B & M

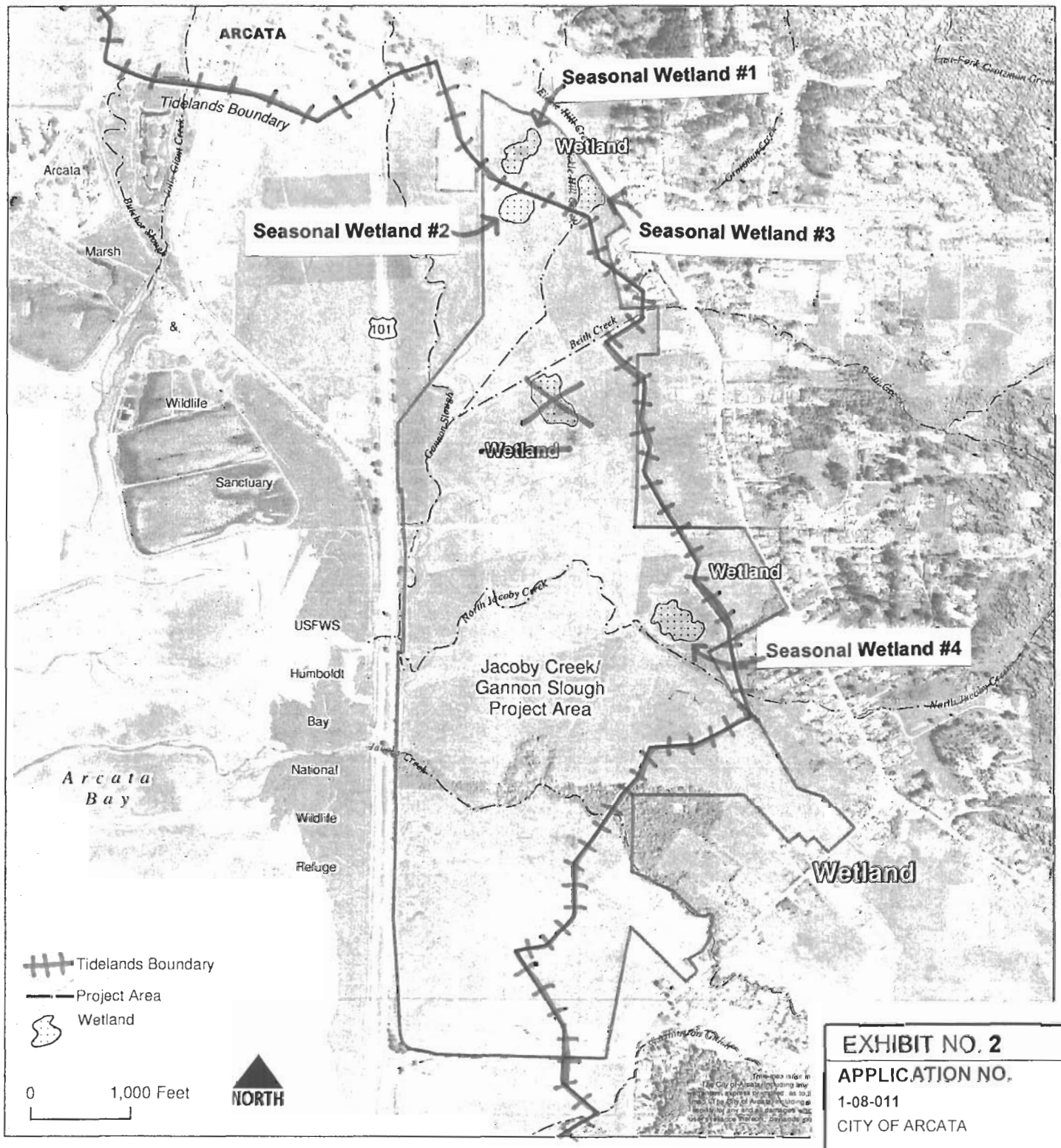


EXHIBIT NO. 2
APPLICATION NO.
1-08-011
CITY OF ARCATA
PROJECT AREA IN RELATION TO FORMER TIDELANDS BOUNDARY

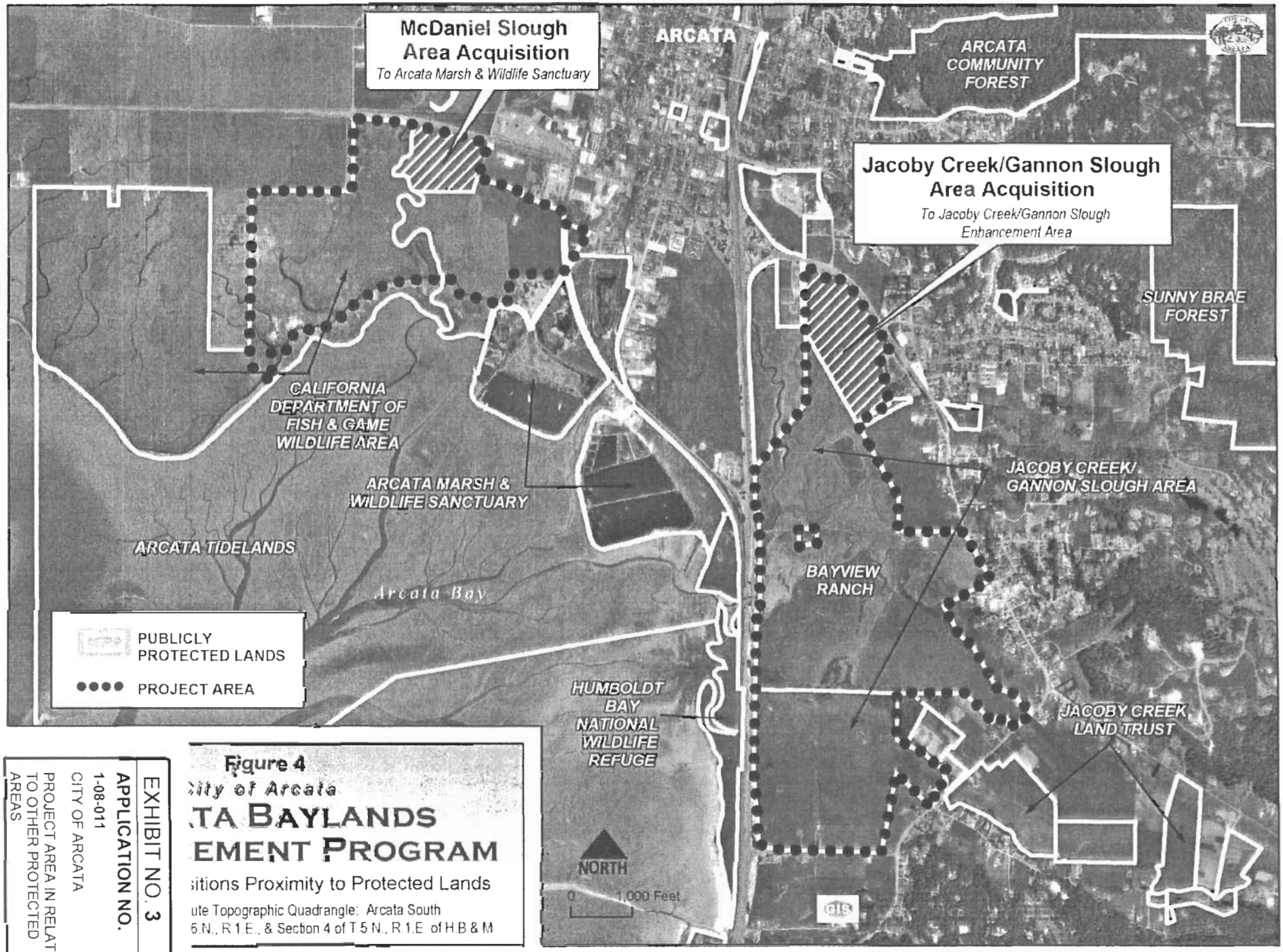


Figure 4
City of Arcata
TA BAYLANDS
EMENT PROGRAM
sitions Proximity to Protected Lands
ute Topographic Quadrangle: Arcata South
5 N., R 1 E., & Section 4 of T 5 N., R 1 E. of H.B & M

EXHIBIT NO. 3
APPLICATION NO.
1-08-011
CITY OF ARCATA
PROJECT AREA IN RELATION TO OTHER PROTECTED AREAS

City of ARCATA

736 F Street Arcata, California 95521

City Council 822-5953 | City Manager 822-5953 | Public Works 822-5957 | Police 822-2428
Community Development 822-5955 | Environmental Services 822-8184 | A&MRTS 822-3775
Finance 822-5951 | Recreation Division 822-7091 | FAX 822-8018

EXHIBIT NO. 4
APPLICATION NO.
1-08-011
CITY OF ARCATA
PROJECT DESCRIPTION
(1 of 9)

DATE: May 19, 2008

PROSPECTIVE PERMITTEE: City of Arcata - Environmental Services Department
736 F Street
Arcata, CA 95521
Attn: Mark Andre – Director of Environmental Services
707-822-8184

PROJECT: Arcata Baylands - Freshwater Seasonal Wetland Enhancement Project

PROJECT SUMMARY: This Project will protect, restore, and enhance seasonal freshwater habitats adjacent to Humboldt Bay. The Project lands are owned and managed by the City of Arcata in perpetuity for the conservation of coastal wetland habitats and the fish and wildlife populations that depend on them. Restoration and enhancement work will include enhancing seasonal freshwater wetlands for waterfowl and other water associated wildlife.

PROJECT LOCATION: The Project area is located in the City of Arcata in Humboldt County - Arcata South T6N, R1E Section 33 of H.B.M. and Section 4 of T5N R1E. See Project Location Map. Assessors parcel numbers and associated acreages are summarized on the attached Arcata Baylands Parcels Map.

PROPERTY OWNER: City of Arcata
736 F Street
Arcata, CA 95521
707-822-8184

ZONING/GENERAL PLAN DESIGNATION: Agriculture Exclusive, Natural Resource, with a Wetland and Stream Protection Combining Zone Overlay

PARCEL NUMBERS: 501-042-001, 501-042-005, 501-061-001, 501-061-023

OVERVIEW: The Arcata Baylands Project Area is part of the larger Humboldt Bay ecosystem that accommodates fish, waterfowl, wading birds, shorebirds, passerines, raptors, and, other water-associated wildlife. Humboldt Bay is second only to San Francisco Bay in the numbers and diversity of migratory water-associated birds wintering in the coastal segment of the Pacific Flyway of California. It is one of California's most important stopovers for migrating birds and a regionally significant stopover site for migrating birds. The coastal wetlands near Humboldt Bay are a critical resource for shorebirds. Humboldt Bay (including the Eel River mouth) is recognized as a site of International Importance for shorebirds by the Western Hemisphere Shorebird Reserve Network (WHSRN) (greater than 100,000 shorebirds/yr or greater than 10% of a flyway population). Over 200 species of birds have been recorded in north Humboldt Bay area *(pers. comm. with Dr. Stan Harris).*

All of the coastal lowlands, including the Humboldt Bay/Eel River area and the Lake Earl/Smith River bottoms are important migration and wintering areas for approximately 2 dozen species of waterfowl and host anywhere

from 25,000 to 100,000 birds on any given day from fall through spring. Among the most evident and numerous species are Tundra Swan, Brant, Aleutian Cackling Goose, American Wigeon, Northern Pintail, Green-winged Teal, Mallard, Northern Shoveler, Canvasback, Redhead, Ruddy Duck, Greater and Lesser Scaup, and Bufflehead. (PCJV 2004). Waterfowl use the area for nesting, feeding and resting. Six species of herons and egrets are common to the project site, including large numbers of Great Blue Herons and Great Egrets. Eighteen State-listed bird species ("endangered" or "species of special concern") are found in or adjacent to this area.

Losses of freshwater wetlands continue to result from draining and filling (often illegally) to reclaim or improve agricultural lands, and for residential, commercial, and industrial purposes. Water quality may also be threatened by failing septic systems. Agricultural, timber, and mining operations, continue to threaten wetland habitats as a result of related draining, point source and non-point source pollution, removal of vegetation, and increased water, and pesticide use. Although most of the area's seasonally wet pasture lands are zoned for agricultural uses under the local coastal plans, some permitted activities (drainage improvement) can be detrimental to wetland habitat. (PCJV 2004)

The State Water Resources Control Board Resolution no. 2008-0026 concerning development of a policy to protect wetland and riparian areas references the loss of over 85 % of historic wetland and riparian acreage in California. The Resolution also states that remaining resources continue to be vulnerable to future impacts from projected population growth, land development, sea level rise, and climate change in California. The value of wetlands and riparian areas has been recognized in California through the enactment of the California Wetlands Conservation Policy that sets a goal to ensure no overall net loss and achieve a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property (Executive Order W-59-93

The Arcata Baylands Project seasonal wetland enhancements are part of a larger conservation protection and enhancement effort in the Humboldt Bay region. The Arcata Baylands Project helps establish a connectivity of habitat encompassing over 1,300 acres of locally-, state- and federally-protected lands adjacent to the northern edge of Humboldt Bay. The sites within the Project Area are directly adjacent to or nearby USFWS Humboldt Bay Wildlife Refuge lands, the 225-acre Arcata Marsh and Wildlife Sanctuary, the 508-acre California Department of Fish and Game Mad River Slough Wildlife Area, and Jacoby Creek Land Trust. This landscape level management approach seeks to provide a diverse complex of habitat types in the North Humboldt Bay area.

The City and CDFG are restoring/enhancing over 200 acres of tidal habitat in the McDaniel Slough area (permitted by the Coastal Commission in 2007). Activities in the McDaniel Slough area are permitted under the CC #1-06-036 and the Corps permit #274340N. Restoration of tidal action has also been provided on the Baylands parcel with the installation of a fish friendly tide gate. Coho have recently been found utilizing habitat in the Gannon Slough/Campbell Creek area of the Arcata Baylands Project. Permanent freshwater habitat is provided at both McDaniel Slough and the Arcata Marsh and Wildlife Sanctuary. Seasonal freshwater wetlands in the Arcata Baylands Project area are another of the habitats that City, state and federal agencies are interested in protecting and enhancing in the north Humboldt Bay area. This permit is for enhancing up to 12 acres of existing seasonal wetlands. Most of the Arcata Baylands Project Area consists of former tidelands that now support grazing and other agricultural uses with residential farmhouses. This area is zoned for agricultural and natural resource uses.

Protection and enhancement of the palustrine wetlands associated with this project will provide direct benefits to many of these bird species. It is believed that nearly all of the more than a million shorebirds migrating along the California coast spend part of their migration foraging for the abundant invertebrates in these wetlands. While most species also occur in other coastal and/or inland wetlands, it appears that the entire population of the Aleutian subspecies of the Marbled Godwit winters primarily in these wetlands. Numbers of shorebirds

utilizing the bay and surrounding seasonally wet palustrine wetlands are higher than those for any other bay or estuary in California, except San Francisco Bay (PCJV 2004).

The proposed freshwater wetland enhancements improve habitat at a Site of International Importance for Shorebirds, as listed by the Western Hemisphere Shorebird Reserve Network benefiting shorebirds using Humboldt Bay and surrounding seasonally-wet pasturelands. The project also supports the Southern Pacific Coast Regional Shorebird Conservation Plan, which calls for maintaining numbers of all migrant and wintering shorebirds at current levels and protecting seasonal wetlands and pastures from development in the Humboldt Bay region. Long and Ralph (2001) found that shorebirds used fields for both foraging and roosting, including some species usually considered to be mudflat specialists. The presence of short vegetation and the presence or absence of standing water were the two most important characteristics influencing increased use of fields by all species.

This project is also consistent with the Pacific Coast Joint Venture – Coastal Northern California Component – Strategic Plan Update – 2004 recommended measures that call for enhancing existing wetland habitats where feasible and appropriate.

METHODS : Four seasonal wetland enhancement areas are proposed. Seasonal wetlands 1 through 4 involve excavating existing winter wet areas to two feet below existing surface elevations to prolong the ponded winter period. Water control structures will be installed to insure that the areas will dry out each summer. Seasonal wetland enhancements for wetlands #1 and #3 are located outside the former tidelands boundary. Seasonal wetland #2 is located on the edge of that boundary. Seasonal wetland # 4 is located at the base of the slope and close to the tidelands boundary.

Enhancement of seasonal wetlands for waterfowl and other water associated wildlife will require use of heavy equipment. Construction equipment could include bulldozers, excavators, loaders, scrapers, and transport vehicles. The sod layer will be scraped and saved to be placed in the seasonal wetland bottoms after final grading. The sod layer will provide organic matter in the seasonal wetland and an existing seed source. Soil removed from the site will be loaded into dump trucks using an excavator or backhoe. Heavy equipment will operate outside of flowing stream channels and open water wetlands. Seasonal wetland #1 will include contouring a small drainage swale at its base that leads to seasonal wetland #2. Seasonal wetland #3 will enlarge an area on Fickle Hill Creek that currently seasonal wetlands water. Seasonal wetland #4 is located on the southeast portion of Parcel 501-042-005 and will fill with rain water and overflow water from a tributary that drains to South Gannon Slough. Water control structures (3 foot by 3 foot Twin track weirs with a 24" outflow) will be placed at the base of seasonal wetlands #2, #3, and #4 to insure that the wetlands will dry out during each dry season to prevent cattail growth and mosquito breeding and allow for summer time grazing use. Location maps, plan views and cross-sections of the seasonal wetlands are attached.

The 12.4-acres of seasonal wetlands excavated in the Jacoby Creek area will generate 35,560 yd ^{3} of fill. Fill removed from the project area will be used to 1) build levees on adjacent permitted lands where a salt marsh restoration project (McDaniel Slough) will be occurring. 2) improve the Reclamation District levees (permitted) and 3) used as topsoil for mine reclamation at the City's permitted rock quarry, 4) used to provide soil for wetland enhancement/mitigation project if permits are obtained for a joint City of Arcata CalTrans project. Fill material will be hauled offsite in 10- and 20-yard dump trucks to approved fill locations. A map of fill sites is attached.

Revegetation of bare soil resulting from excavation work will occur soon after the work is completed by replacing sod back in the excavated areas. If needed, seasonal wetland bottoms will be seeded with native *Polygonum sp.* to promote growth of these preferred waterfowl foods. Sediment controls will be in place for any work that occurs in or near the creeks to insure that the project will not violate any water quality standards or waste discharge requirements.

PREFERRED ALTERNATIVE: Additional tidal or marine habitat enhancement in these areas is not feasible since it would require tidal flooding of existing infrastructure owned by PG &E and the City of Eureka. Current elevations of wetland #2 are 7-8 feet and 5 to 6 feet for wetland #4. Adjacent private properties and portions of the Little League fields are also at elevations less than 8 feet and would experience daily tidal inundation if the City were to attempt to restore tidal action to these areas. Restoring tidal action to these areas would also eliminate the property's viability for agricultural use eliminating grazing habitat for migrating Aleutian cackling geese.

The Aleutian Cackling Goose is a developing conservation problem in the north coast region of California due to the current population increase of the once endangered subspecies. The Washington, Oregon, and California population of Aleutian Cackling Goose was listed as Endangered by the U.S. Fish and Wildlife Service in 1967 (32 FR 4001) (USFWS 2001). A variety of conservation initiatives resulting from the Aleutian Cackling Goose Recovery Program enabled the Aleutian Cackling Goose population to began a remarkable recovery and the subspecies was finally delisted in 2001 (66 FR 15643).

According to the Pacific Coast Joint Venture, both the Crescent City and Humboldt Bay areas of the north coast serve as important spring staging areas for Aleutian Cackling geese preparing for migration to their breeding grounds. Controversy has arisen among community members on the north coast as a result of the late winter/early spring use of agricultural land by flocks of thousands of Cackling geese. Foraging pressure on agricultural lands has intensified in recent years with increased use of the Crescent City and Humboldt Bay areas by both Canada and Cackling Geese (Black et al. 2003 *in* Bachman 2003). Such extensive use of agricultural land by geese has prompted the initiation of a hazing program in the Crescent City area. Presumably as a result of such efforts in Crescent City, researchers have documented a shift in habitat use from the traditional spring staging area for Aleutians in the Crescent City area to the Humboldt Bay area, causing similar issues to arise there (Bachman 2003). Public lands, such as the Arcata Baylands, are critical to helping alleviate pressure on private agricultural lands.

The proposed wetland enhancements provide habitat benefits to waterfowl, shore birds and other water associated wildlife while maintaining agricultural use and Aleutian Cackling Goose habitat. Careful consideration of the benefits and constraints for this property, and its relationship to other public lands in the North Humboldt Bay area, are why the City, in consultation with USFWS and California Department of Fish and Game, designed and selected the above described seasonal wetland enhancements as the preferred alternative.

PROJECT TIMING: The City will prevent negative environmental impacts by undertaking this work in the summer or early fall when Fickle Hill Creek and other drainages are dry and to minimize compaction and reduce damage to vegetation. The work is planned for the dry season when aquatic species are not reproducing so that eggs and larvae will not be present when work is being performed. This timing also minimizes impacts to breeding birds that might be using the area and will occur after the Aleutian Canada geese have left the area. If work in or near wetted creek channels occurs, the City will install silt fences to isolate the work sites from the creek. Construction related impacts of the project include the movement of soil material by heavy equipment and exposing soil to potential rain drop impact and sheet erosion during construction.

SURROUNDING LAND USES AND SETTING: The project area is zoned Agriculture Exclusive (A-E) and Natural Resource (NR) with a Wetland and Creek Protection Overlay Zone. The site is in the 100 year FEMA floodplain. It is located in the coastal zone. It is not located close to fault zones. The surrounding areas are Agricultural Exclusive, Natural Resource, and Public Facility. Site vegetation is comprised of agricultural grasslands.

The Arcata 1985 General Plan land use designation for the project site is Agriculture Exclusive, which also permits the use of the property for wildlife habitat management. The Arcata General Plan 2020 land use designation for the Jacoby Creek/Gannon Slough project site is also Agriculture Exclusive. However, General Plan 2020 is not applicable in the coastal zone as it has not yet been submitted for certification by the California Coastal Commission. The proposed project is entirely within the coastal zone. The proposed uses of the property after acquisition and enhancement/restoration are consistent with the current and anticipated future zoning and, thus, no change of land use designation will be sought.

The areas proposed for freshwater seasonal wetlands enhancement are inundated with water each winter. The areas have such saturated soils that much of the area is not available for grazing between 5 and 7 months each year depending on rainfall. In the summer these areas are grazed and will continue to be grazed after project completion.

Soils of Western Humboldt County, November 1965 classifies agricultural soils in the Jacoby Creek/Gannon Slough area where shallow seasonal wetlands are proposed as Bayside Silty Clay Loam 2 (Ba 2) (poorly drained), and Bayside Silty Clay Loam 3 (Ba3) (imperfectly drained) with Soil Rating Index Numbers of 36 (Ba2) and 49 (Ba3). Soils where shallow seasonal wetlands are proposed are also classified as Man Altered (not rated). The 12 acres of seasonal wetlands will dry out each spring/summer allowing for cattle use during the dry season. Current use of the site is for grazing cattle and that use will continue on these lands.

The NRCS Farmland Mapping and Monitoring Program has not completed mapping Humboldt County. However, a query of the website shows mapping done in the vicinity of the freshwater seasonal wetlands and a classification of 140—Occidental. Composition is 90% Occidental and similar soil. Additional data for the Occidental classification is as follows - 0 to 2 percent slopes, elevation - 0 to 20 feet, mean annual precipitation - 35 to 80 inches, mean annual air temperature - 50 to 56 degrees F, frost-free period - 275 to 330 days. It has a drainage classification of very poorly drained with the capacity of the most limiting layer to transmit water (Ksat) being moderately low to moderately high (0.06 to 0.20 in/hr) and a depth to water table being about 0 to 4 inches. The Land capability classification is 7s for both irrigated and non-irrigated. Class 7 soils have very severe limitations that make them unsuited to cultivation and that restrict their use mainly to grazing, forestland, or wildlife. Subclass s is made up of soils that have soil limitations within the rooting zone, such as shallowness of the rooting zone, stones, low moisture-holding capacity, low fertility that is difficult to correct, and salinity or sodium content. Both the soil classifications and the continued grazing of the areas when they are dry prevent conversion of "Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland)".

The proposed project is not required as mitigation in a CEQA approval process, Timber Harvest Plan process or otherwise required as mitigation for other activities.

ADDITIONAL PERMITS - The City has applied for a permit from the Army Corps of Engineers, California Department of Fish and Game and the Regional Water Quality Control Board. Permits were submitted in February 2008.

SPECIAL AQUATIC SITES - The wetland enhancement work will improve seasonal freshwater wetland habitat values. The project will not result in negative impacts to any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.

LISTED SPECIES – Potential special status plant and animal species in the project area could include:

Species	Resource Agency or NGO Concerned with the Species	Species Status
Western lily (Lilium occidentale)	US Fish and Wildlife Service	Endangered

Tidewater goby (Eucylogobius newberryi)	US Fish and Wildlife Service	Endangered
Western yellow-billed cuckoo (Coccyzus americanus)	US Fish and Wildlife Service	Candidate
Short-tailed albatross (Phoebastris albatrus)	US Fish and Wildlife Service	Endangered
Northern spotted owl (Strix occidentalis caurina)	US Fish and Wildlife Service	Threatened
Marbled murrelet (Brachyramphus marmoratus)	US Fish and Wildlife Service	Threatened
Bald eagle (Haliaeetus leucocephalus)	US Fish and Wildlife Service	Threatened
Southern Oregon/Northern California coho salmon ESU (Oncorhynchus kisutch)	NOAA Fisheries	Threatened
California coastal chinook salmon ESU (O. tshawytscha)	NOAA Fisheries	Threatened
Northern California steelhead ESU (O. mykiss)	NOAA Fisheries	Threatened
Humboldt Bay owl's clover (Castilleja ambigua ssp. humboldtiensis)	California Native Plant Society	List 1B
Point Reyes bird's beak (Cordylanthus maritimus ssp. palustris)	California Native Plant Society	List 1B
Lyngbye's sedge (Carex lyngbyei)	California Native Plant Society	List 2

According to the California Native Plant Society, plants on their 1B list are considered "rare, threatened, or endangered in California and elsewhere" (CNPS, 2004). Plants on List 2 are considered "rare, threatened, or endangered in California, but more common elsewhere."

The project is located on an actively grazed seasonal wetland (cattle pasture) between U.S. Highway 101 and Old Arcata Road. The project area and vicinity lack late seral-stage conifer forest, favored by Marbled murrelet and Northern spotted owl. Since riparian cover is non-existent in pasture areas where wetlands will be constructed there is no suitable habitat for western yellow-billed cuckoo. There are no known foraging or nesting sites of Bald eagles on the project site, due to the absence of appropriate nesting habitat or concentrations of prey species. The area does not contain suitable structure for nesting Peregrines and no known nesting sites exist for Peregrine falcons in this area (5/2/06 communication with Karen Kovacs Supervising Biologist - CDFG). Because the project area lacks suitable habitat for Short-tailed albatross, Marbled murrelet, California brown pelican, Bald eagle, Northern spotted owl, or suitable nesting habitat for Peregrine falcons, these species are not evaluated further. Migrating Aleutian cackling geese will not be impacted as they leave this area by mid to late April and return on their way south in late October. The timing of work during the dry season also minimizes impacts to breeding birds that might be using the area and will occur after the Aleutian Canada geese have left the area.

The project will not impact salt marsh or brackish habitat and therefore will not impact Tidewater goby, Humboldt Bay owl's clover, Point Reyes bird's beak, or Lyngbye's sedge.

Western Lily *(Lilium occidentale)* has never been observed in the project area. As most of the area was historic tidelands there is a low probability that Western lily was ever present in this area. However to avoid and minimize disturbance of special status plant populations, areas subject to disturbance during wetland and riparian enhancement activities will be surveyed and avoided (see Mitigation Measure 1- a and 1- f).

The City will be preventing/mitigating impacts to amphibians, fish, and other aquatic species by working during the dry season when Fickle Hill Creek is dry and other remnant channels are also dry or in a low flow condition. If work in or near creek channels occurs, the City will install silt fences adjacent to the work sites to isolate those areas from the creek.

Short term, temporary adverse effects from construction activities are likely to occur to agricultural wetlands and riparian areas where seasonal wetland construction work will occur. Using access/staging areas by construction equipment (backhoe, excavator, 10 and 20 cubic yard truck, etc) may affect agricultural wetland habitats during summer/fall if these areas are saturated, via ground compaction and/or crushing vegetative cover. Wherever possible, sensitive areas will be avoided by heavy equipment. Any project induced adverse affects will be short-term, and with the proposed Mitigation Measures 1 – a - l less than significant.

Mitigation Measure 1 - Biological Mitigation Measures:

a) Construction activities will only occur between June 15th and October 31st to avoid or minimize adversely affecting animal and plant species of concern and to minimize soil compaction and sediment transport.

b) In the event of unseasonable rainfall, construction will not occur during periods when any surface runoff occurs on exposed soil due to rainfall.

c) The seasonal wetland excavation work will remove vegetation as the area is graded. Once final contouring is completed, the work areas will be seeded and mulched to prevent erosion. All exposed soil that could erode to a channel leading to Campbell, Fickle Hill, Beith or Jacoby Creek or Humboldt Bay will be seeded and mulched with weed-free straw mulch.

d) No equipment will be operated directly within tidal waters or stream channels of flowing streams.

e) No construction materials, debris, or waste, shall be placed or stored where it may be allowed to enter into or be placed where it may be washed by rainfall into waters of the U.S./State.

f) Sediment controls will be in place for any work that occurs in or near creeks and Class III drainages to insure that the project will not violate any water quality standards or waste discharge requirements. If operations are not adequately containing sediment as determined by visual observation, the activity shall cease. Turbid water shall be contained and prevented from being transported by use of silt fences or water diversion structures.

g) Areas subject to disturbance during wetland enhancement activities will be surveyed by a qualified biologist and any endangered plant populations (Western Lily) encountered will be flagged before the commencement of any restoration work. Work crews will be trained to avoid endangered plants.

h) City staff shall be on site during final grading to assure that the area is recontoured as per approved design specifications.

i) Once fill removal is completed all exposed soil will be mulched and seeded with appropriate seed.

j) If needed, temporary exclusionary cattle fencing will be installed to protect mulched and re-vegetated areas.

k) All vehicles and construction equipment shall be parked, and equipment refueling and maintenance shall take place only in designated areas where potential spills of fuel, lubricants, or coolants can be contained and cleaned up without impacts to aquatic habitats.

The project should provide long term benefits for many species as the wetland enhancements are designed to improve habitat for these species. The long-term impacts of the project will improve habitat for aquatic and wetland dependent species by enhancing freshwater wetlands (12.4 acres) to provide inundation periods on the agricultural wetlands.

Timing for Implementation/Compliance: June 1st - October 31, to be extended to November 15 as long as no significant rain (as determined by the California Department of Fish and Game) occurs between October 31 and November 15.
Person/Agency Responsible for Monitoring: City Environmental Services Staff.
Monitoring Frequency: Ongoing during construction
Evidence of Compliance: Site inspections

Historic/Cultural Resources - The City requested a cultural resource assessment from the North Coast Information Center for the Jacoby Creek area during the land acquisition phase for the project under consideration. In October 2004 the City received the report – File # Andre 04-01. In addition the California Coastal Conservancy issued a letter to the State Historic Preservation Office on June 22, 2006 requesting review and clearance for the project based on past survey work completed in the era. Based on this report, the project could impact cultural resources. Due to the potential of discovering unknown cultural resources during construction, a cultural monitor will be on site when excavation work that could impact cultural resources is occurring. A standard mitigation measure/condition of approval has been included in the project requiring work to be halted and measures taken if cultural resources are found during project excavation for seasonal wetland construction. See Mitigation Measure No. 3. Other proposed work, fencing, and revegetation, will not impact an archaeological resource pursuant to §15064.5.

Mitigation Measure No 3 – Cultural Resources:

A qualified monitor will be on-site during excavation activities. Should any paleontological, archaeological, historical or unique ethnic or sacred resources be encountered during construction or grading operations, all ground-disturbing work shall be temporarily halted on site. Work on site shall not be resumed until a qualified archeologist has evaluated the materials and offered recommendations for further action. Prehistoric materials which could be encountered include: obsidian or chert flakes or tools, locally darkened midden, groundstone artifacts, depositions of shell, dietary bone, and human burials. Should human remains be uncovered, State law requires that the County Coroner be contacted immediately. Should the Coroner determine that the remains are likely those of a Native American, the California Native Heritage Commission must be contacted. The Heritage Commission consults with the most likely Native American descendants to determine the appropriate treatment of the remains.

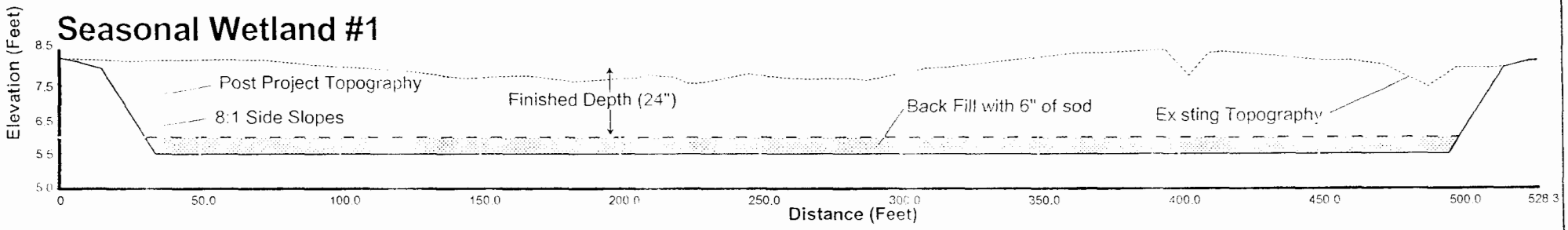
Timing for Implementation/Compliance: Respond if observed by on site monitor. City staff in conjunction with on site monitor to determine where and when work can resume.
Person/Agency Responsible for Monitoring: Contractors, City Environmental Services Staff, Building Official.
Monitoring Frequency: Ongoing during construction
Evidence of Compliance: Site inspections.

References

1) Arcata Land Use and Development Guide
2) Arcata General Plan 2020 and Local Coastal Plan, as applicable
3) Arcata Creeks Management Plan
4) Bachman, D. C. 2003. Aleutian Cackling Goose monitoring program winter-spring 2002-03:progress report for the northcoast of California and southern Oregon. Humboldt Bay. National Wildlife Refuge Complex, unpublished report, 34 pp.
5) California Department of Fish and Game Natural Diversity Data Base- Special Animals - February 2006
6) Colwell, M. A. 1994. Shorebirds of Humboldt Bay, California: abundance estimates and conservation implications. W. Birds 25:137-146.
7) Dahl, A. L., C. H. Stabins, C. E. Grue, and D. A. Manuwal. 1999. Management of migratory and
8) wintering habitat for Aleutian Canada Geese. United States Fish and Wildlife Service, Ecological Services, Anchorage Field Office, Alaska, USA.

9) Harris, Stan, Professor Emeritus - Humboldt State University
10) Kovacs, Karen- California Department of Fish and Game Supervising Biologist
11) Long Linda L. & Ralph, C. John, Dynamics Of Habitat Use By Shorebirds In Estuarine And Agricultural Habitats In Northwestern California, The Wilson Bulletin, Article: Pp. 41–52, Volume 113, Issue 1 (March 2001)
12) McLaughlin, James and Harradine, Frank, November 1965, *Soils of Western Humboldt County California,* University of California, Davis
13) Nature Serve Explorer DataBase – www.natureserve.org/explorer
14) North American Waterfowl Management Plan - Implementation Framework – 2004
15) North American Waterfowl Management Plan - 2004 Strategic Guidance
16) North American Waterfowl Management Plan, 2004 Update.
17) Pacific Coast Joint Venture - Coastal Northern California Components – Strategic Plan Update -2004
18) Page, G. and Shuford, D.. 2000. Southern Pacific Coast Regional Shorebird Plan. Point Reyes Bird Observatory. 62 pp.
19) State Water Resources Control Board Resolution no. 2008-0026
20) United States Fish and Wildlife Service. 2001. Endangered and Threatened wildlife and plants; final rule to remove the Aleutian Canada Goose from the federal list of Endangered and Threatened wildlife. Federal Register 66(54):15643-15656.
21) US Fish and Wildlife Service Threatened and Endangered Species System (TESS) http://ecos.fws.gov/tess_public/TESSSpeciesReport
22) Western Hemisphere Shorebird Reserve Network http://www.whsrn.org/network/site-list.html

Seasonal Wetland #1



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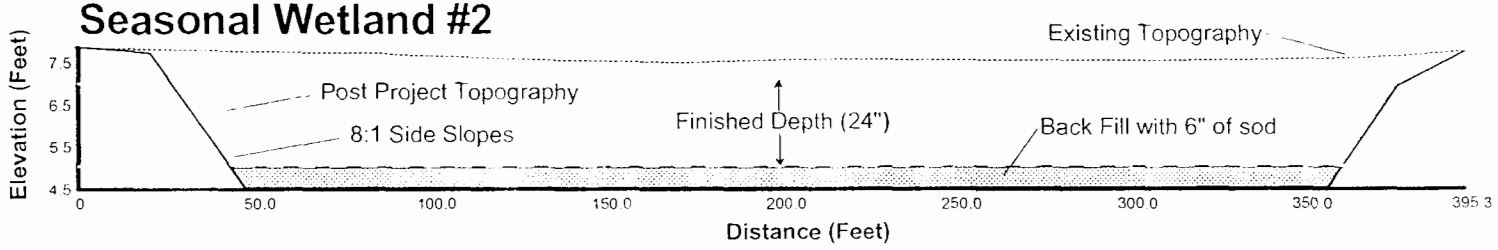
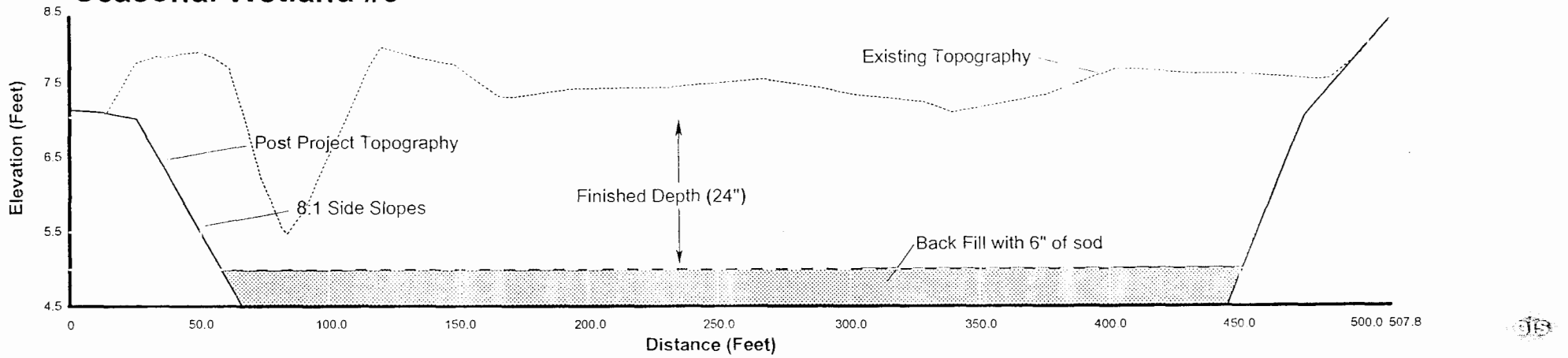


EXHIBIT NO. **5**
APPLICATION NO.
1-08-011
CITY OF ARCATA
PROJECT PLANS (1 of 6)

Seasonal Wetland #3



NO.	REVISION	BY	DATE
	This map is for informational purposes only. The City of Arcata, including any employees and sub-contractors, makes no		
	map. The City of Arcata, including any employees and sub-contractors, disclaims liability for any and all damages which may arise due to errors in the map and its		

CITY OF ARCATA
Environmental Services Department

DESIGNED BY
DRAWN BY
CHECKED BY
EXPIRES

Arcata Baylands Seasonal Wetland Enhancement Project

Seasonal Wetlands #1-3 Cross-Sections

USGS 7.5 Minute Topographic Map: Arcata South Quadrangle
Section 33, T.6.N., R.1.E. of H.B. & M.

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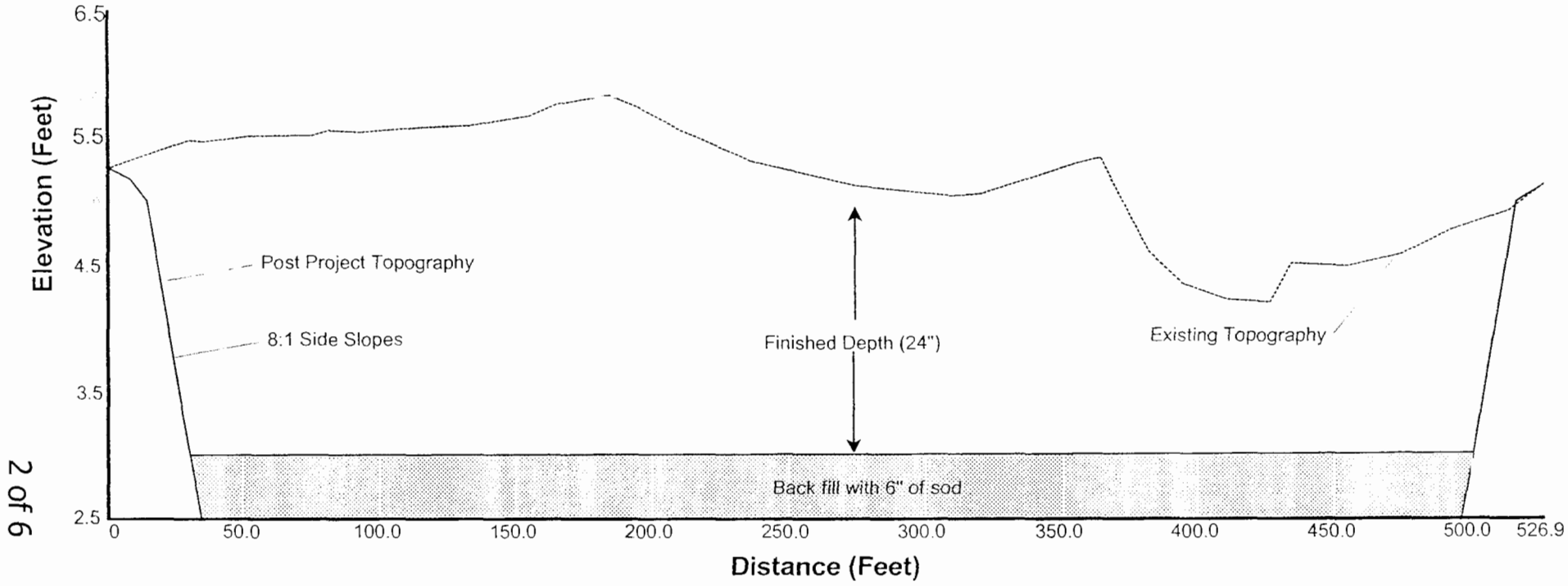
OF 1	



NO.	REVISION	BY	DATE

CITY OF ARCATA
Environmental Services Department

DESIGNED BY: M.M.
DRAWN BY: B.K.
CHECKED BY: M.M.
EXPIRES

Arcata Baylands Seasonal Wetland Enhancement Project

Seasonal Wetland # 4 Cross-Section

USGS 7.5 Minute Topographic Map: Arcata South Quadrangle
Section 4, T.5.N., R.1.E. of H.B. & M.

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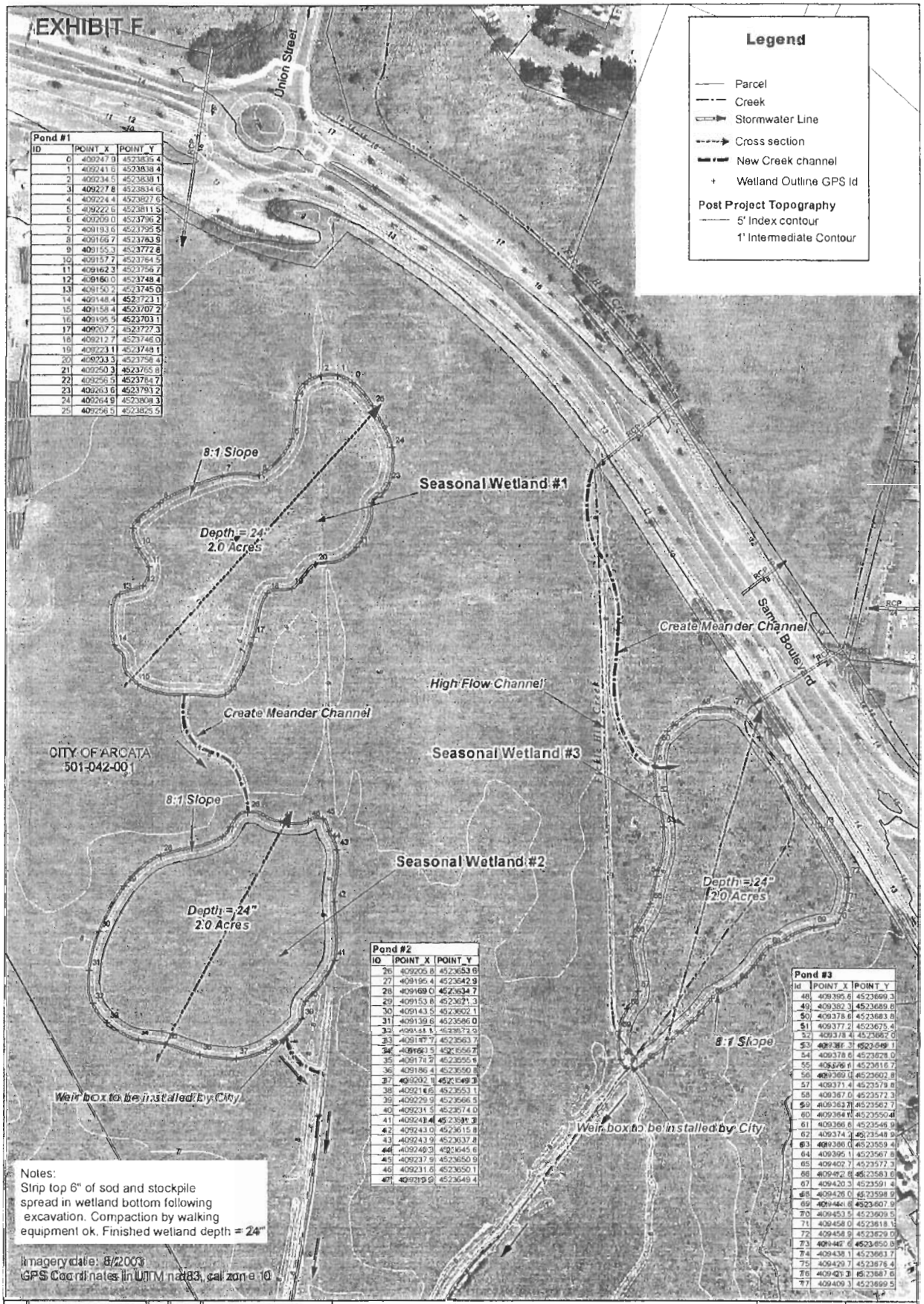
OF	1



NO	REVISION	BY	DATE

DESIGNED BY M.A.
DRAWN BY B.K.
CHECKED BY M.A.

CITY OF ARCATA
Environmental Services

Arcata Baylands Seasonal Wetland Enhancement Project

POST PROJECT TOPOGRAPHY
SEASONAL WETLAND #1-3

USGS 7.5 Minute Topographic Map: Arcata South Quadrangle
Section 33, T.6.N., R.1.E., of H.B. & M.

SHEET 1 of 1 | DATE 1/23/2008

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1 INCH = 125 FEET
125 Feet

NORTH

NO	REVISION	BY	DATE

DESIGNED BY M. A.
DRAWN BY B. K.
CHECKED BY M. A.

CITY OF ARCATA
Environmental Services

Arcata Baylands Seasonal Wetland Enhancement Project
EXISTING TOPOGRAPHY
SEASONAL WETLAND #1-3
USGS 7.5 Minute Topographic Map, Arcata South Quadrangle
Section 33, T.6.N., R.1.E. of H.B. & M.

SHEET 1 of 1 | DATE 1/23/2008
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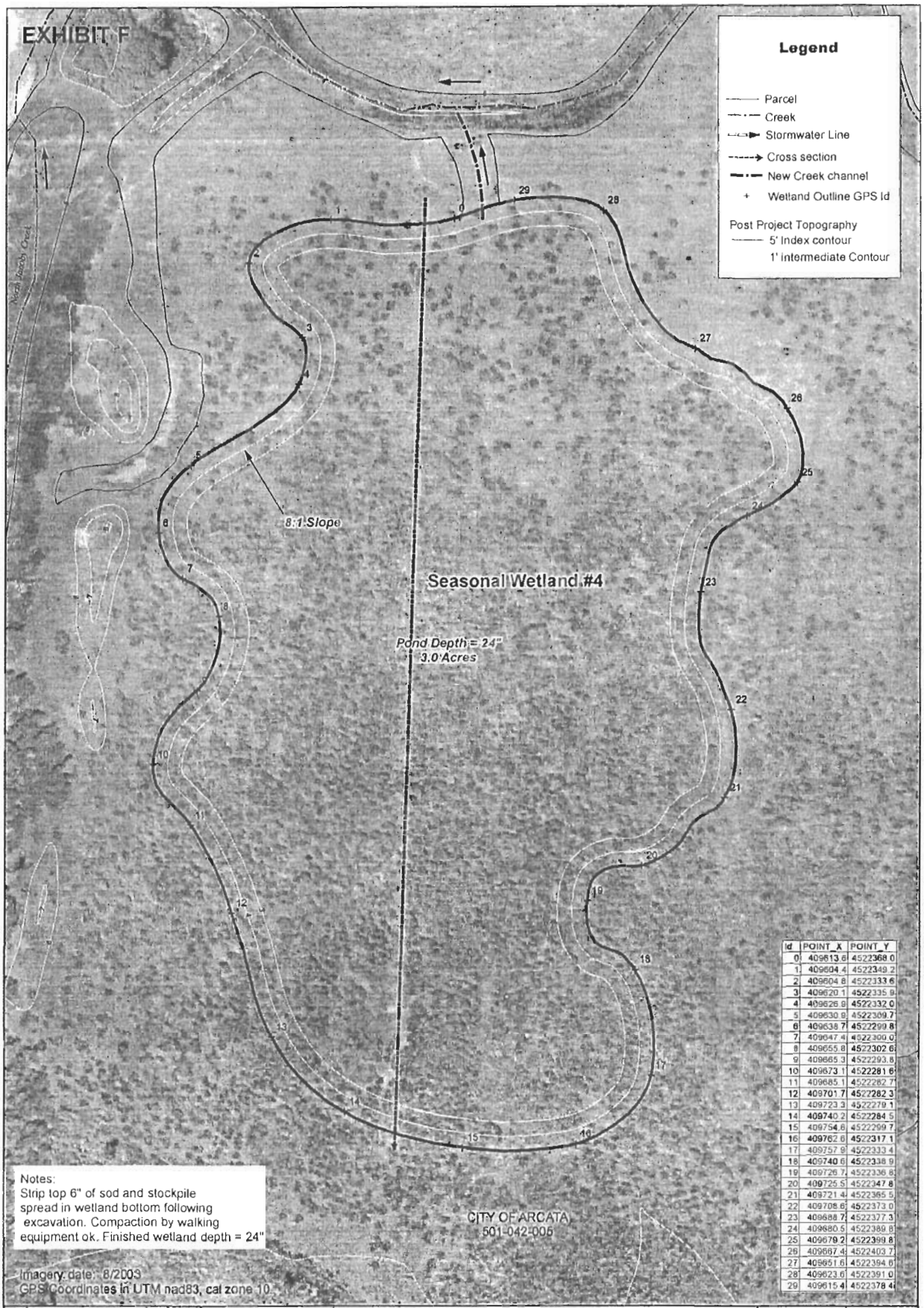

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DESIGNED BY: M. A.
DRAWN BY: B. K.
CHECKED BY: M. A.

CITY OF ARCATA
Environmental Services

Arcata Baylands Seasonal Wetlands Enhancement Project

POST PROJECT TOPOGRAPHY
SEASONAL WETLAND #4

USGS 7.5 Minute Topographic Map: Arcata South Quadrangle
Section 4, T.5 N., R.1 E. of H.B. & M.

SHEET 1 of 1 | DATE 1/23/2008

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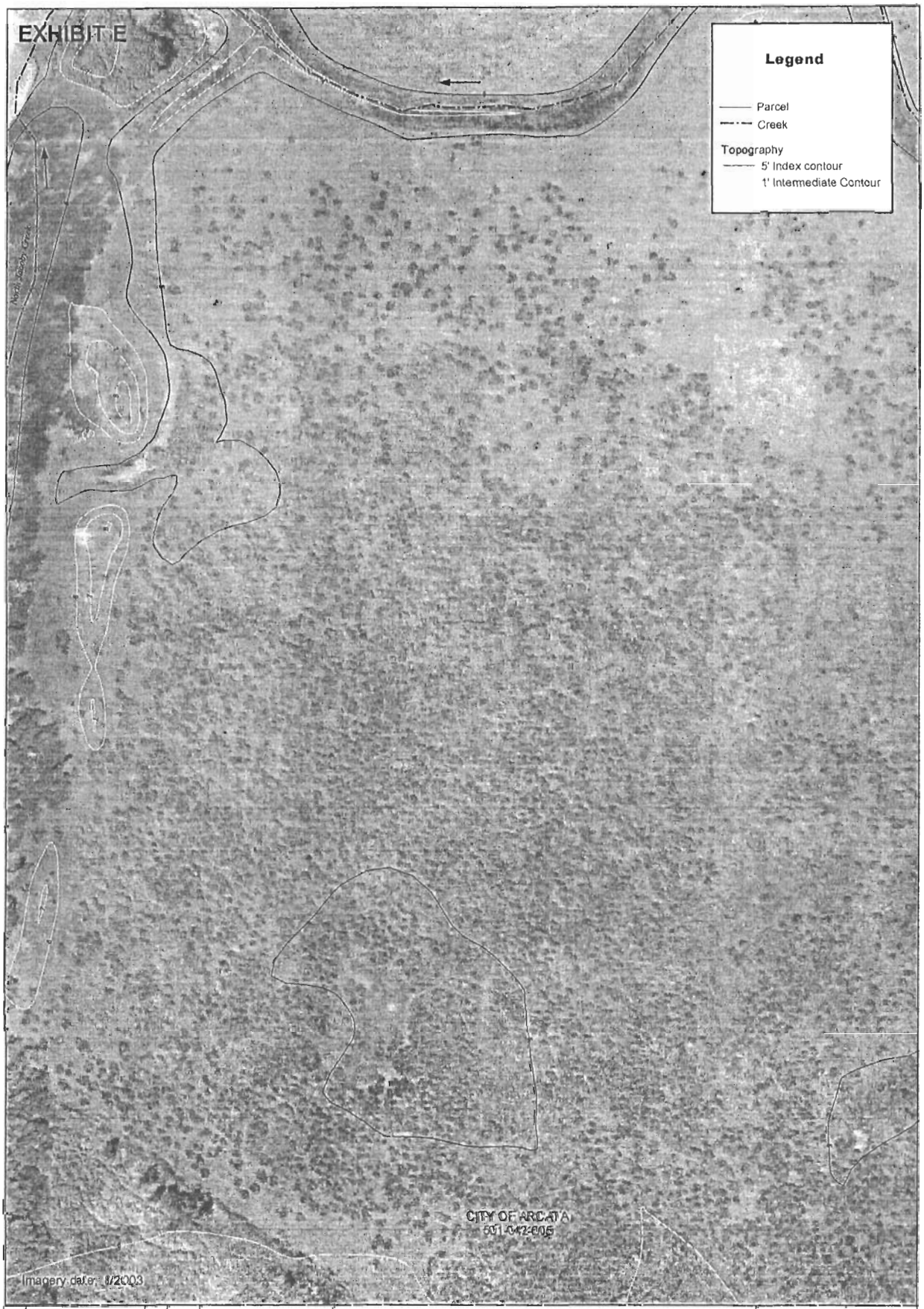

NO	REVISION	BY	DATE

DESIGNED BY M. A.
DRAWN BY B. K.
CHECKED BY M. A.

CITY OF ARCATA
Environmental Services

Arcata Baylands Seasonal Wetland Enhancement Project

EXISTING PROJECT TOPOGRAPHY
SEASONAL WETLAND #4

USGS 7.5 Minute Topographic Map, Arcata South Quadrangle
Section 4, T.5 N., R.1.E., of H.B. & M.

SHEET 1 of 1 | DATE 1/23/2008

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RF 1:600
1 INCH = 50 FEET
50 Feet

NORTH

City of Arcata

ARCATA BAYLANDS ENHANCEMENT PROGRAM

Jacoby Creek/Gannon Slough Area Enhancements

Fill Location Map

U.S.G.S 7.5 Minute Topographic Quadrangle Arcata South
Section 31, 32, & 33 of T.6.N., R.1.E., & Section 4 of T.5.N., R.1.E. of H.B & M

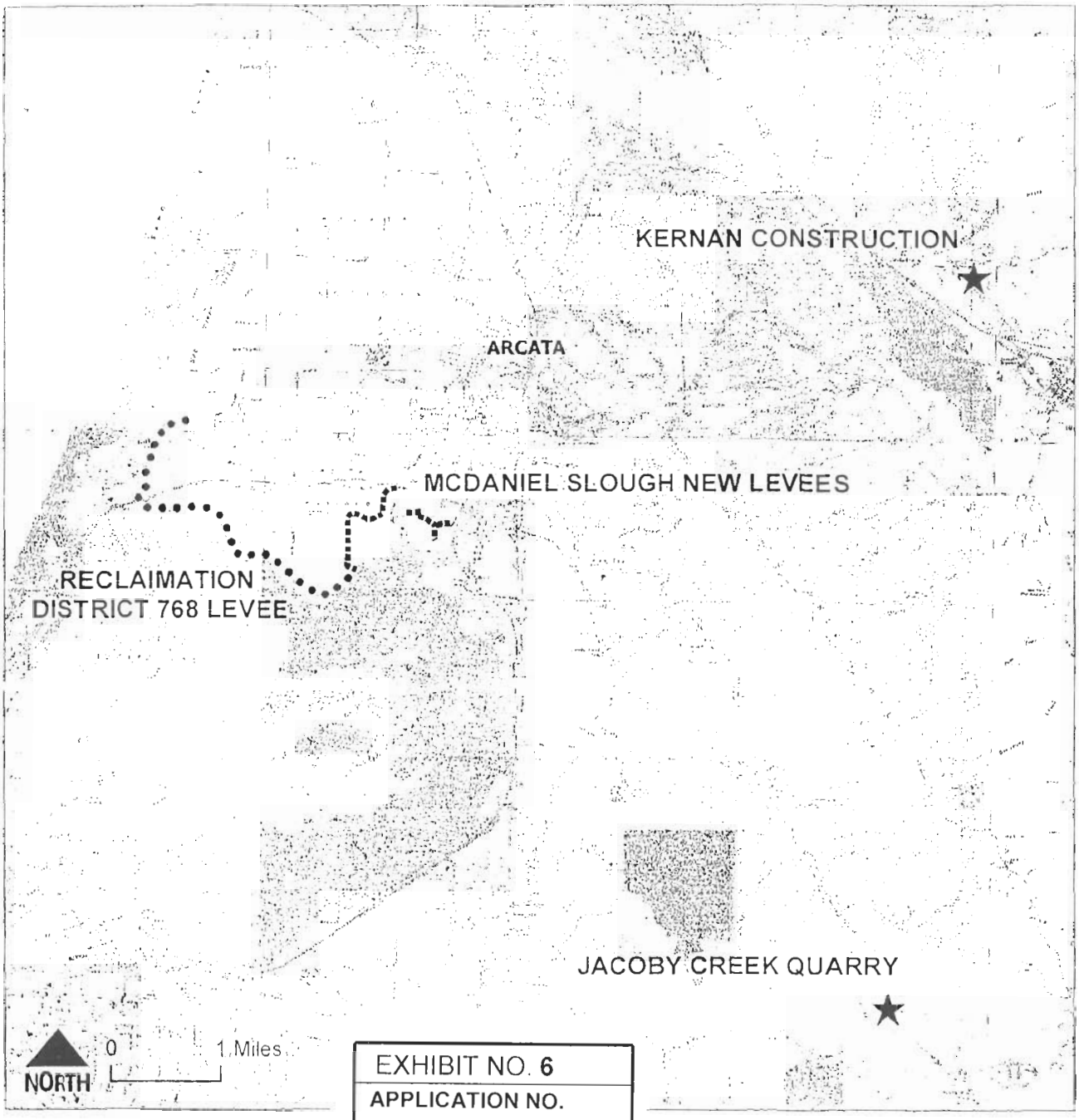

EXHIBIT NO. 6
APPLICATION NO.
1-08-011
CITY OF ARCATA
FILL SPOILS DISPOSAL AREAS