

**BORDER COAST REGIONAL AIRPORT AUTHORITY
 RUNWAY SAFETY AREA MITIGATION PROJECT COMPRISED OF:
 PACIFIC SHORES MITIGATION PROJECT**

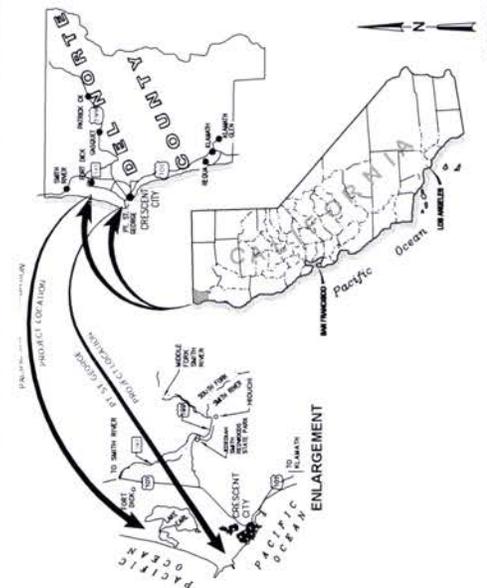
**AND
 POINT SAINT GEORGE WESTERN LILY MANAGEMENT PROJECT**

APRIL 2013
 PROJECT NUMBER: AIP# 3-06-0057-26

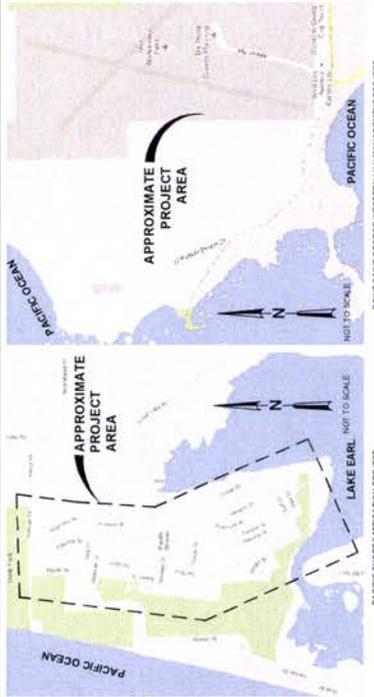


EXHIBIT NO. 11
APPLICATION NO. 1-13-009
 (Border Coast Regional Airport Authority)
 PACIFIC SHORES & POINT ST. GEORGE MITIGATION PLANS (1 of 27)

AREA MAP



LOCATION MAPS



APPROVALS

BORDER COAST REGIONAL AIRPORT AUTHORITY
 JAMES BERNARD, AIRPORT MANAGER

SIGNED _____

ENGINEER: GHD Inc.
 STEVE ALLEN, PE

SIGNED _____

SHEET INDEX

SHEET NO.	GENERAL	DRAWING DESIGNATION	DESCRIPTION
1		G-001	COVER SHEET
2		G-002	GENERAL NOTES, SYMBOLS, ABBREVIATIONS, EROSION, SEDIMENT, POLLUTION AND WASTE CONTROL NOTES
3		C-001	POINT SAINT GEORGE WESTERN LILY MANAGEMENT PROJECT CIVIL PLANS VEGETATION REMOVAL PLANS
4		C-100	KEY, ACCESS AND SURVEY CONTROL PLAN
5		C-101	DEMOLITION AND VEGETATION REMOVAL PLANS
6		C-102	DEMOLITION AND VEGETATION REMOVAL PLANS
7		C-103	DEMOLITION AND VEGETATION REMOVAL PLANS
8		C-104	DEMOLITION AND VEGETATION REMOVAL PLANS
9		C-105	DEMOLITION AND VEGETATION REMOVAL PLANS
10		C-106	DEMOLITION AND VEGETATION REMOVAL PLANS
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12		C-108	DEMOLITION AND VEGETATION REMOVAL PLANS
13		C-109	DEMOLITION AND VEGETATION REMOVAL PLANS
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17		C-113	DEMOLITION AND VEGETATION REMOVAL PLANS
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19		C-115	DEMOLITION AND VEGETATION REMOVAL PLANS
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24		C-120	DEMOLITION AND VEGETATION REMOVAL PLANS
25		C-501	SOIL DETAILS
26		C-502	SOIL DETAILS
27		C-503	SOIL DETAILS

<p>GHD Inc. 174 Third Street, Suite 200, Colton, CA 95307 USA Phone: (916) 261-1100 Fax: (916) 261-1101 Web: www.ghd.com</p>			
Client	JRW/BA/SD	Designer	JRW/BA/SD
Project	Runway Safety Area Mitigation Project	Check	BA
Title	Cover Sheet	Project Director	BA
Contract No.	8410135	Date	04/11/13
Sheet No.	1 of 27	Scale	AS SHOWN
Prepared by: Steve Allen, PE Checked by: [Blank] Drawn by: [Blank]			

SHEET GENERAL NOTES

1. LOCATION OF EXISTING UTILITIES & STRUCTURES ARE SHOWN ON THIS SHEET. CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTH OF ALL UTILITIES. DESIGN CONTRACTOR SHALL NOTIFY THE UTILITY OWNERS 72 HOURS PRIOR TO ANY EXCAVATION AND PROVIDE FOR EXACT LOCATION.
2. CONTRACTOR TO PROTECT ALL (E) FACILITIES NOT CALLED OUT FOR DEMOLITION AND ALL (F) FACILITIES FROM ANY DAMAGE. CONTRACTOR SHALL REPAIR AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNER.
3. DEMOLITION SHALL BE LIMITED TO THE AREA SHOWN.
4. CLEAR AND GRUB ALL VEGETATION, SOIL, TREES AND ROOTBALLS WITHIN THE LIMIT OF DEMOLITION AS REQUIRED PRIOR TO RECEIVING ABBENT.

KEYNOTES

1. PROTECT ALL UTILITIES TO REMAIN
2. APPROXIMATE BOUNDARY OF ROAD TO BE DEMOLISHED DURING/POST TERMINAL PROJECT. METS AND MITIGATION NOT FULFILLED

LEGEND

- CLEAR & GRUB AND REMOVE/RELOCATE AND BRUSH
- REMOVE SPECIFIC VEGETATION
- APPROXIMATE AREA TO BE USED FOR SEA TERRACE MITIGATION, NOT ADOPTIVE



BORDER COAST REGIONAL AIRPORT AUTHORITY
PACIFIC SHORES MITIGATION PROJECT
DEMOLITION, CLEARING & GRUBBING AND
VEGETATION REMOVAL PLANS

Client: JAWUSA
 Designer: JAWUSA
 Project: 3A
 Title: 3A
 Contract No: 8410135

Drawn: JAWUSA
 Design: 3A
 Check: 3A
 Approved: (Signature)
 Date: 08/11/2021
 Scale: AS SHOWN

Approved: (Signature)
 Date: 08/11/2021
 Scale: AS SHOWN



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Rev	Description	By	Check	Date
1	Initial Design	JAWUSA	JAWUSA	08/11/2021
2	50% Submittal	JAWUSA	JAWUSA	08/11/2021

Plot Date: 15 April 2021 1:52 AM
 Plot Path: C:\Users\jawa\OneDrive\Documents\8410135\8410135-01-0000-0000-0000-0000-0000-0000-0000-0000-0000-0000.dwg
 Plot Scale: 1:1
 Plot Orientation: Portrait

Sheet No: 6 of 27
 Date: 08/11/2021



SHEET GENERAL NOTES

1. LOCATION OF EXISTING UTILITIES & STRUCTURES ARE SHOWN ON THIS SHEET. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND COMPLETE AS SHOWN. THE CONTRACTOR SHALL NOTIFY THE OWNER IMMEDIATELY IN WRITING IF ANY DISCREPANCY IS FOUND WITHIN 72 HOURS PRIOR TO ANY EXCAVATION AND PORTABLE TO EXACT LOCATION.
2. CONTRACTOR TO PROTECT ALL (B) FACILITIES NOT CALLED FOR DEMOLITION AND ALL (P) FACILITIES FROM ANY DAMAGE. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNER.
3. DEMOLITION SHALL BE LIMITED TO THE AREA SHOWN.
4. CLEAR AND GRUB ALL VEGETATION, SOIL, TREES AND ROOTS WITHIN THE LIMIT OF DEMOLITION AS REQUIRED PRIOR TO REPAIRING SUPPORT.

KEYNOTES

- 1. PROTECT ALL (B) UTILITIES TO REMAIN

LEGEND

 CLEAR AND GRUB AND REMOVE (B) AND (P)
 REMOVE SPECIFIC VEGETATION

MATCHLINE SEE SHEET C104

MATCHLINE SEE SHEET C105

MATCHLINE SEE SHEET C101

BORDER COAST REGIONAL AIRPORT AUTHORITY
PACIFIC SHORES MITIGATION PROJECT
DEMOLITION, CLEARING & GRUBBING AND
VEGETATION REMOVAL PLANS

Client	JAWASA
Project	JAWASA
Design	JAWASA
Check	JAWASA
Approval	JAWASA
Date	JAWASA
Scale	AS SHOWN

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No.	Revision	Date	By	Checked	Approved	Date



SHEET GENERAL NOTES

1. LOCATION OF EXISTING UTILITIES & STRUCTURES ARE SHOWN ON THIS SHEET. CONTRACTOR SHALL VERIFY EXACT LOCATION AND DEPTH PRIOR TO ANY EXCAVATION AND PORTABLE TOIL 72 HOURS PRIOR TO ANY EXCAVATION AND PORTABLE TOIL EXACT LOCATION.
2. CONTRACTOR TO PROTECT ALL (B) FACILITIES NOT CALLED OUT FOR REMOVAL. CONTRACTOR SHALL NOTIFY THE OWNER OF ANY DAMAGE TO FACILITIES PRIOR TO THE START OF WORK. ANY DAMAGE SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNER.
3. DEMOLITION SHALL BE LIMITED TO THE AREA SHOWN.
4. CLEAN AND GRUB ALL VEGETATION, SOIL, TREES AND ROOTBALLS WITHIN THE LIMIT OF DEMOLITION AS REQUIRED PRIOR TO REMOVAL OF STRUCTURE.

KEYNOTES

1. PROTECT ALL UTILITIES FROM

LEGEND

- CLEAR LOGS AND REMOVED BENCH AND SOIL
- REMOVE SPECIFIC VEGETATION

MATCHLINE SEE SHEET C106

MATCHLINE SEE SHEET C108

MATCHLINE SEE SHEET C103

<p>Review of Documents</p> <p>50% SUBMITTAL FOR REVIEW ONLY</p>		<p>Client: BORDER COAST REGIONAL AIRPORT AUTHORITY</p> <p>Project: PACIFIC SHORES MITIGATION PROJECT</p> <p>Title: DEMOLITION, CLEARING & GRUBBING AND VEGETATION REMOVAL PLANS</p> <p>Contract No: 8410135</p> <p>Sheet No: 9 of 27</p> <p>Drawn: JAMES G. GARDNER</p> <p>Checked: JAMES G. GARDNER</p> <p>Scale: AS SHOWN</p>	<p>Scale: AS SHOWN</p> <p>Drawn: JAMES G. GARDNER</p> <p>Checked: JAMES G. GARDNER</p> <p>Scale: AS SHOWN</p>
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<p>Project: PACIFIC SHORES MITIGATION PROJECT</p> <p>Title: DEMOLITION, CLEARING & GRUBBING AND VEGETATION REMOVAL PLANS</p> <p>Contract No: 8410135</p> <p>Sheet No: 9 of 27</p>		<p>Scale: AS SHOWN</p> <p>Drawn: JAMES G. GARDNER</p> <p>Checked: JAMES G. GARDNER</p> <p>Scale: AS SHOWN</p>	
<p>Project: PACIFIC SHORES MITIGATION PROJECT</p> <p>Title: DEMOLITION, CLEARING & GRUBBING AND VEGETATION REMOVAL PLANS</p> <p>Contract No: 8410135</p> <p>Sheet No: 9 of 27</p>		<p>Scale: AS SHOWN</p> <p>Drawn: JAMES G. GARDNER</p> <p>Checked: JAMES G. GARDNER</p> <p>Scale: AS SHOWN</p>	



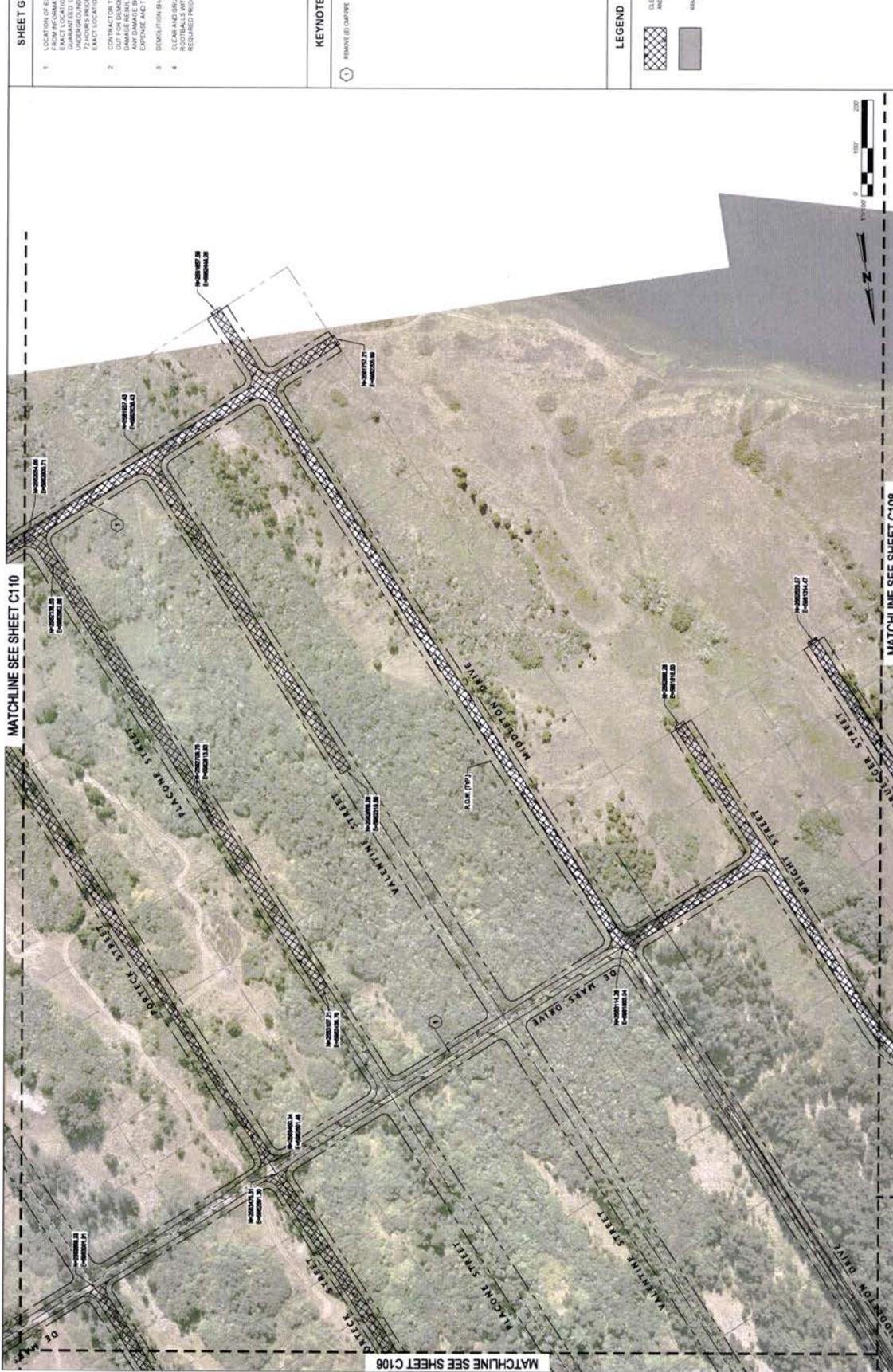
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Project: PACIFIC SHORES MITIGATION PROJECT
Title: DEMOLITION, CLEARING & GRUBBING AND VEGETATION REMOVAL PLANS
Contract No: 8410135
Sheet No: 9 of 27

Project: PACIFIC SHORES MITIGATION PROJECT
Title: DEMOLITION, CLEARING & GRUBBING AND VEGETATION REMOVAL PLANS
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Project: PACIFIC SHORES MITIGATION PROJECT
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Project: PACIFIC SHORES MITIGATION PROJECT
Title: DEMOLITION, CLEARING & GRUBBING AND VEGETATION REMOVAL PLANS
Contract No: 8410135
Sheet No: 9 of 27



MATCHLINE SEE SHEET C110

MATCHLINE SEE SHEET C108

SHEET GENERAL NOTES

1. LOCATION OF EXISTING UTILITIES & STRUCTURES ARE FROM INFORMATION AVAILABLE AT TIME OF DESIGN. CONTRACTOR SHALL VERIFY LOCATION AND DEPTH OF ALL UTILITIES PRIOR TO ANY EXCAVATION AND PROVIDE FOR EXACT LOCATION.
2. CONTRACTOR TO PROTECT ALL (B) FACILITIES NOT CALLED OUT FOR DEMOLITION AND ALL (N) FACILITIES FROM ANY DAMAGE TO THE SATISFACTION OF THE OWNER. ANY DAMAGE SHALL BE REPARATED AT THE CONTRACTOR'S EXPENSE AND TO THE SATISFACTION OF THE OWNER.
3. DEMOLITION SHALL BE LIMITED TO THE AREA SHOWN.
4. CLEAR AND GRUB ALL VEGETATION, SOIL, TREES AND ROOTBALLS WITHIN THE LIMIT OF DEMOLITION AS REQUIRED PRIOR TO REMOVING ASPHALT.

KEYNOTES

- REMOVE (B) DUMP PILE

LEGEND

- ▨ CLEAR & GRUB AND REMOVE (B) ASBESTOS
- REMOVE SPECIFIC VEGETATION



BORDER COAST REGIONAL AIRPORT AUTHORITY
PACIFIC SHORES MITIGATION PROJECT
DEMOLITION, CLEARING & GRUBBING AND
VEGETATION REMOVAL PLANS
 Contract No. 8410135
 Sheet No. C-109

Client	Design	Checked	Approved
BORDER COAST REGIONAL AIRPORT AUTHORITY	JAMES W. JAMES	SA	SA
Project	Checked	Checked	Checked
PACIFIC SHORES MITIGATION PROJECT	SA	SA	SA
File	Checked	Checked	Checked
VEGETATION REMOVAL PLANS	SA	SA	SA
Contract No.	Approved	Checked	Checked
8410135	SA	SA	SA
Sheet No.	Checked	Checked	Checked
C-109	SA	SA	SA

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Rev.	Date	By	Project	Date
1	11/04/2021	JWJ	8410135	11/04/2021

Project: 8410135 - Pacific Shores Mitigation Project
 Drawing: C-109 - Demolition, Clearing & Grubbing and Vegetation Removal Plans
 Date: 11/04/2021 1:43 PM
 Path: C:\Users\james\Documents\8410135\109\109.dwg

Scale: AS SHOWN
 The drawings shall not be used for any other purpose without the written consent of GHD Inc.



SHEET GENERAL NOTES

1. LOCATION OF EXISTING UTILITIES & STRUCTURES ARE SHOWN ON THIS SHEET. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR GUARANTEEING THE LOCATION AND DEPTH OF ALL UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL NOTIFY THE OWNER OF ANY UTILITIES AND STRUCTURES FOUND TO BE IN THE EXACT LOCATION TO ANY EXCAVATION AND POTENTIAL FOR DAMAGE TO THE UTILITIES AND STRUCTURES.
2. CONTRACTOR TO PROTECT ALL (BE) FACILITIES (NOT CALLED OUT FOR DEMOLITION) AND ALL (BE) FACILITIES FROM ANY DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO THE UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ANY DAMAGE TO THE UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ANY DAMAGE TO THE UTILITIES AND STRUCTURES.
3. DEMOLITION SHALL BE LIMITED TO THE AREA SHOWN ON THIS SHEET. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ANY DAMAGE TO THE UTILITIES AND STRUCTURES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION AND REPAIR OF ANY DAMAGE TO THE UTILITIES AND STRUCTURES.
4. CLEAR AND GRUB ALL VEGETATION, TURT, TREES AND ROOTBALLS WITHIN THE LIMIT OF DEMOLITION AS REQUIRED PRIOR TO BEGINNING WORK.

KEYNOTES

LEGEND

- CLEAR & GRUB (AND) REMOVED (BE) AND (BE)
- REMOVE SPECIFIC VEGETATION

MATCHLINE SEE SHEET C107

MATCHLINE SEE SHEET C109

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Review of Documents
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No.	Revisions	Date	By	Checked By	Drawn	Scale	Project	Phase	Sheet
1									

BORDER COAST REGIONAL AIRPORT AUTHORITY
PACIFIC SHORES MITIGATION PROJECT
DEMOLITION, CLEARING & GRUBBING AND
VEGETATION REMOVAL PLANS

Project: JAW0520
 Designer: JAW0520
 Design Check: JAW0520
 Title: JAW0520
 Contract No: 8410135

Scale: A3: 8410135
 Date: 11/17/23

Prepared by: JAW0520
 Checked by: JAW0520
 Drawn by: JAW0520

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REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA
 No. 10207
 JAMES D. JAWORSKI

REVISIONS

DATE

BY

CHECKED BY

DESIGNED BY

SCALE

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DATE

NO.

REVISIONS

SHEET GENERAL NOTES

1. REFLECT AND MAINTAIN ALL REMOVAL HEIGHT PER SPECIFICATIONS

KEYNOTES

- 1. PROTECT ALL BE UTILIZED TO REMAIN
- 2. APPROXIMATE BOUNDARY OF ROADS TO BE REMOVED DURING SUPPORT TERMINAL PROJECT NET AND MITIGATION NOT ACCURATE

LEGEND

- (R) PLANT AND MAINTENANCE
- (R) TYPICAL GRASSLAND/ARBORVITAE
- (R) TYPICAL DUNE RESTORATION
- (R) TYPICAL FENCING
- (R) TYPICAL ROAD MARKING

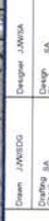
APPROXIMATE BOUNDARY OF ROADS TO BE REMOVED DURING SUPPORT TERMINAL PROJECT NET AND MITIGATION NOT ACCURATE



**BORDER COAST REGIONAL AIRPORT AUTHORITY
PACIFIC SHORES MITIGATION PROJECT
GRADING AND PLANTING PLANS**

Contract No. 8410135
 Date: 10/16/2017
 Drawing No: C-112

Drawn	JANIBOG	Checked	SA
Drafted	SA	Checked	SA
Approved	(Signature)	Checked	SA
Date	10/16/2017	Checked	SA
Scale	AS SHOWN	Checked	SA



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Sheet No.	Revision	Date	By	Checked

10/16/2017 11:11 AM
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10/16/2017 11:11 AM
 11800 West Street, Suite 400, Irvine, CA 92618
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10/16/2017 11:11 AM
 11800 West Street, Suite 400, Irvine, CA 92618
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10/16/2017 11:11 AM
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SHEET GENERAL NOTES
 1. REPAINT AND MATCH-ALL REMOVAL AREAS PER INVESTIGATIONS

KEYNOTES
 1. PROJECT HAS BE EVALUATED TO BE A BARRIAR

LEGEND

- (R) TYPICAL ANDREXION
- (R) TYPICAL GRADING LIMITATION
- (R) TYPICAL DOME BE CONNECTION
- (R) TYPICAL FRODORE
- (R) TYPICAL ROAD BARRIER

MATCHLINE SEE SHEET C111

MATCHLINE SEE SHEET C112

MATCHLINE SEE SHEET C114

MATCHLINE SEE SHEET C115

REVISIONS

No.	Revised	Date	By	Project	Checked
1		10/14/2014	JAW/MS		

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BORDER COAST REGIONAL AIRPORT AUTHORITY
PACIFIC SHORES MITIGATION PROJECT
GRADING AND PLANTING PLANS

Contract No. 8410135
 Sheet C-113 of 27
 Rev:

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 STATE OF WASHINGTON
 License No. 100001

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SHEET GENERAL NOTES
 1. REPLANT AND MATCH ALL REMOVAL, REGRASSER SPECIFICATIONS

KEYNOTES

LEGEND

- (R) PLANT AND MATCH
- (R) TYPICAL GRADING/VEGETATION
- (R) TYPICAL DUNE RECONSTRUCTION
- (R) TYPICAL FOOTING
- (R) TYPICAL ROAD MARKER

BORDER COAST REGIONAL AIRPORT AUTHORITY
PACIFIC SHORES MITIGATION PROJECT
GRADING AND PLANTING PLANS
 Contract No: 8410135
 Drawing No: C-114
 Date: 18-04-2018

Drawn	JYP/REG	Designer	JAV/SA
Checked	SA	Design	SA
Approved	SA	Project	SA
Date	18/04/2018	Date	18/04/2018

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No.	Revisions	Date	By	Checked	Project Manager	Project	Date
1	Issue for Review	18/04/2018	JYP	REG	JYP	REG	18/04/2018

File Path: C:\1148 BorderCoastRegionalAirport\B01135\1148-01\Grading\1148-01-Grading\1148-01-Grading.dwg
 Plot Date: 18/04/2018 10:02:08
 Plotter: HP DesignJet 5000 Series
 Plot Size: 11x17 inches
 Scale: 1:1
 Title: GRADING AND PLANTING PLANS
 Drawing No: C-114
 Contract No: 8410135



SHEET GENERAL NOTES

1. REPEAT AND MATCH ALL REMOVAL AREAS PER SPECIFICATIONS

KEYNOTES

1. PROTECT ALL UTILITIES TO REMAIN

LEGEND

- (IN) PLANT AND MATCH
- (IN) TYPICAL GRADING VARIATION
- (IN) TYPICAL DRAINAGE CONNECTION
- (IN) TYPICAL FLOODING
- (IN) TYPICAL ROAD BORDER

**BORDER COAST REGIONAL AIRPORT AUTHORITY
PACIFIC SHORES MITIGATION PROJECT
GRADING AND PLANTING PLANS**

Client: JAWOBA
Project: SA
Task: SA
Contract No: 8410135
Sheet No: C-115 of 27

Drawn: JAWOBA
Checked: SA
Design: SA
Project Director: SA
Scale: AS SHOWN



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Project: Pacific Shores
Sheet: C-115 of 27
Date: 18 April 2021 4:00 PM
Author: JAWOBA
Checked: SA
Design: SA
Project Director: SA
Scale: AS SHOWN

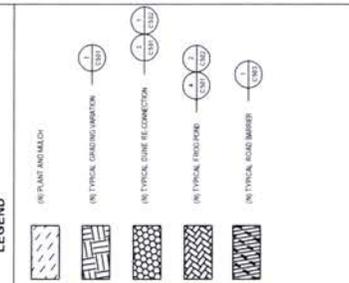


SHEET GENERAL NOTES
 1. REPLANT AND MATCH ALL REMOVAL AREAS PER SPECIFICATIONS

KEYNOTES
 1. INDICATE ALL DELIVERED FORMAN

LEGEND

	(R) PLANT AND MATCH
	(R) TYPICAL GRADING IMBATION
	(R) TYPICAL DUNE RE CONNECTION
	(R) TYPICAL FENCING
	(R) TYPICAL ROAD BORDER



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Project: **BORDER COAST REGIONAL AIRPORT AUTHORITY PACIFIC SHORES MITIGATION PROJECT GRADING AND PLANTING PLANS**

Client: JAWOBA
 Designer: JAWOBA
 Drafting: SA
 Check: SA
 Title: SA
 Scale: AS SHOWN

Contract No: 8410135
 Sheet: **C-116** of 27
 Drawing No: **C-116**

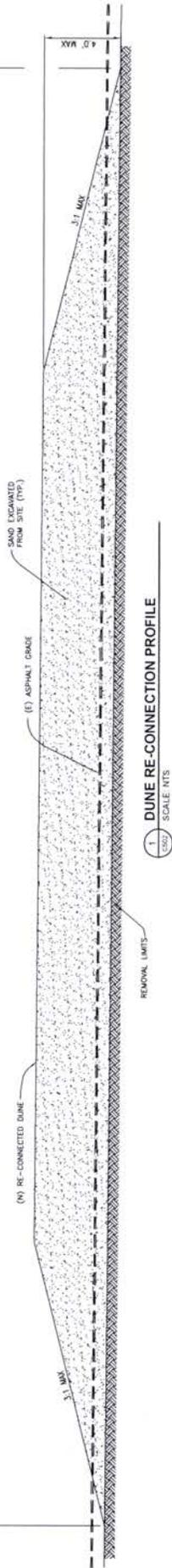
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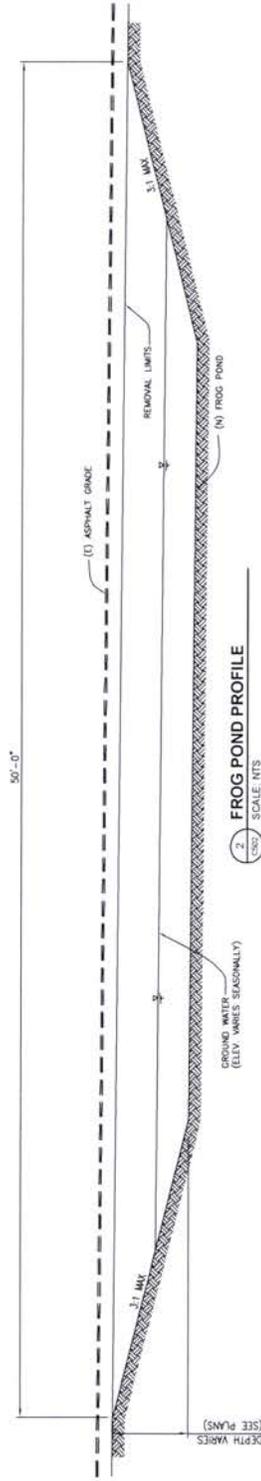
Scale: 1" = 20' (SEE PLAN)

North Arrow

SEE PLANS FOR LENGTH



1 DUNE RE-CONNECTION PROFILE
SCALE: NTS



2 FROG POND PROFILE
SCALE: NTS

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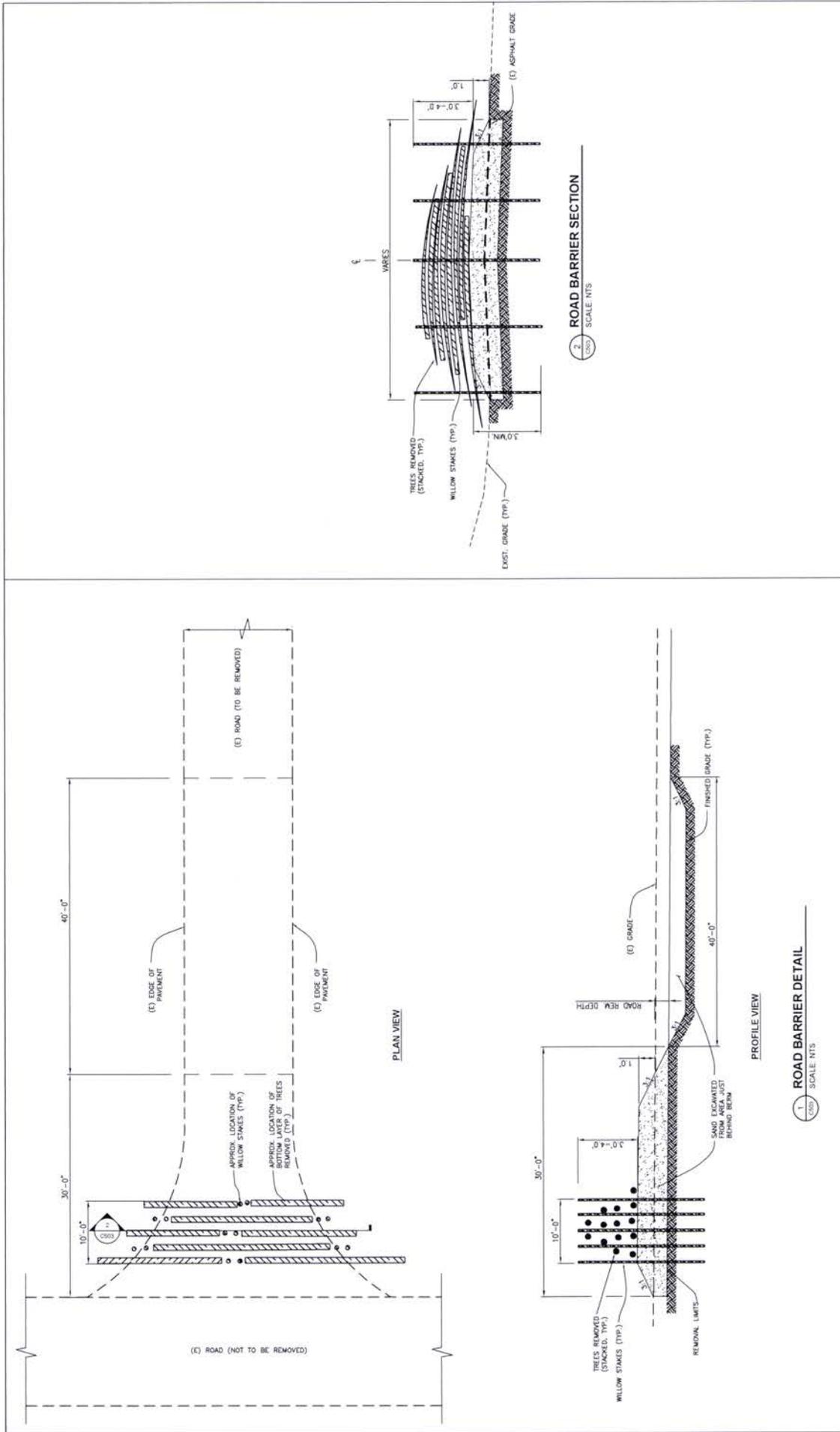


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Project: **PACIFIC SHORES MITIGATION PROJECT**
Title: **DETAILS**
Contract No.: 8410135
April 8 Drawing No: **C-502**
Rev: 27

Rev: 2 Apr 2015 1:57 PM
Project: Pacific Shores Mitigation Project
Sheet: C-502



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Project		Design		Check		Scale	
PACIFIC SHORES MITIGATION PROJECT		SA		SA		AS 5/10/09N	
Details		SA		SA		AS 5/10/09N	
Contract No. 8410135		AS 5/10/09N		AS 5/10/09N		AS 5/10/09N	
Job No. 27		27		27		27	
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Revision	
No.	Description
1	Initial Issue



Memorandum

19 April 2013

To	Jim Bernard - BCRAA		
Copy to	File		
From	Misha Schwarz	Tel	
Subject	Pacific Shores Subdivision Habitat Map: BCRAA Terminal and Runway Safety Area Projects	Job no.	8410135.09

Introduction

A habitat map was prepared for the proposed Pacific Shores Subdivision mitigation area to guide decision making during design of habitat re-establishment and enhancement. The map provides input for the Biological Resources Evaluation (GHD in prep) and the Mitigation and Monitoring Plan (GHD in prep). In addition to the habitat map this report includes representative photographs of habitat types.

The habitat map is based on remote sensing interpretation and focused ground truthing. It is intended as a planning tool and not as a detailed representation of plant communities, which would have required a much greater level of field effort. Portions of the map may be refined in the future, for example when specific parcels have been identified for invasive species management or habitat enhancement. In appropriate circumstances the habitat map may serve as the base layer for much more detailed field habitat mapping of smaller areas at the appropriate time.

Limited habitat mapping is available for the project vicinity. Winzler & Kelly (1994) mapped habitat types within Pacific Shores Subdivision at a time when lake levels were managed at lower elevations. Nyoka (2003) mapped foredune areas near the mouth of Lake Earl, well southwest of the current project area.

Remote Sensing Interpretation

Prior to conducting remote sensing analysis of aerial photography, presumed target vegetation classes were identified (Table 1) based on existing ecological knowledge of the study area and previous habitat mapping efforts (Winzler & Kelly 1994).

The remote sensing mapping analysis began with an unsupervised spectral classification of the 2010 4-band National Agriculture Imaging Program (NAIP) orthoimagery to partition the study area into stratified clusters of presumed vegetation categories. The results were then compared to the target/presumed vegetation categories listed above. In some cases due to the scale of this band mapping effort, some vegetation classes were lumped where they were not distinguishable by remote sensing, and were not identifiable at a Sawyer et al. (2009) Alliance level.

8410135/30/habitat_map_memo_0313

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APPLICATION NO.
1-13-009 (Border Coast
Regional Airport Authority)
PACIFIC SHORES HABITAT
MEMO (1 of 32)

The resulting preliminary vegetation class model and base map were used to conduct informed field confirmation. The initial map included areas of 'noise' and thus the classification could not be directly used as a GIS input to form layers for planning purposes, however planning decisions can be supported by the initial rough unsupervised classification map in the context of ecological knowledge of the site.

Table 1. Presumed Target Vegetation Classes for the Unsupervised Spectral Classification

Bare earth	Deciduous
Brackish marsh	Foredune and dry sedge
Coastal terrace prairie 1	Water
Coastal terrace prairie 2	Wet sedge
Conifer forest	

Field Methods

The unsupervised classification map and one-inch = 200 foot aerial photographs were used as the basis for field visits on October 17 and November 7, 2012; and March 6, 22, and 25, 2013. This field effort was intended to evaluate areas of noise in the remote sensing analysis, and to refine the base map. Sites were initially selected for field visits based on a non-randomized informed approach and with knowledge of potential sensitive species habitats. On later field visits areas of ecological complexity were identified for a more detailed on-the-ground analysis. Habitat types were confirmed with the greatest detail focused within the 50-foot wide Del Norte County-owned road right-of-way; in some cases adjacent half-acre parcels owned by the California Department of Fish and Wildlife (CDFW) were also walked and evaluated, however no attempt was made to access privately owned parcels which comprise almost half the study area. Invasive species occurrences (Scotch broom, *Cytisus scoparius*, and European beach grass, *Ammophila arenaria*) were mapped in detail west of Tell Avenue, with only larger occurrences mapped in the eastern part of the site. Field results were compared to the map and modifications made to the classification scheme as needed.

Results

The habitat map is shown in Figures 3-1 through 3--9. Invasive species are shown in Figures 4-1 through 4-9. While some portions of the map extend beyond the project area boundary (typically, the main portion of the subdivision to the outer edge of parcel limits, and excluding the beach roads), no attempt was made to ground truth beyond these limits.

Mapping based on remote sensing accurately identified areas of conifer forest and deciduous forest and shrubland east of Tell Avenue. Grassland and emergent wetland habitat types in the western and southern parts of the site were more challenging. Two types of coastal terrace prairie shown on the first-run map could not be consistently distinguished in the field and as a result were lumped for the updated map. Emergent wetland areas generally included slough sedge swales as well as lower-growing

sedge/rush areas and the wetter end of the coastal terrace prairie continuum. The habitat map may very roughly correlate with jurisdictional wetland limits, but has not specifically been evaluated for, nor shall it be used for that purpose. The habitat map tends to lump seasonally wet swales and adjacent areas of saturated soil which rarely have surface water while splitting off drier upland grasslands.

Areas of dune mat were relatively uncommon within the project boundary, although this community type is much more prevalent just west of the boundary. Dune mat was mapped inconsistently by the unsupervised classification, and was refined based on field visits.

Invasives also were mapped inconsistently by the unsupervised classification and thus were split off onto a separate series of maps for planning purposes (Figures 4-1 – 4-8). Scotch broom was fairly distinct and was easily recognizable on aerial photographs. Areas of European beach grass were distinguishable from native grasslands primarily by texture, and were mapped based on a combination of remote sensing interpretation and field visits. Because many areas of European beachgrass extend onto private land these could not be closely approached and boundaries away from roadsides should be considered approximate.

The final map included the following classifications:

Bare sand: Generally this includes blowouts or areas of ATV damage. The more open areas of dune mat (less than 50% cover) may be included in this map unit.

Foredune and dune mat: These areas are sparsely vegetated by a variety of dune mat species, or by less dense patches of invasive European beachgrass. They are located mostly in the western and southern parts of the project site.

Coastal terrace prairie: Typically this map unit includes drier examples of the tufted hairgrass series as well as annual grasslands dominated by velvet grass. Some dense stands (> 80% cover) of European beachgrass may be included within this category.

Wet sedge: This map unit includes slough sedge dominated swales which support seasonal standing water as well as lower-growing adjacent areas of mixed slough sedge and rush.

Brackish marsh: This unit is limited to narrow bands or isolated patches along the eastern edge of the site and to a lesser extent on the southern edge, both areas contiguous with Lake Earl. The most conspicuous species are cattail and American bulrush or hardstem bulrush, depending on location. Examples at Lake Earl were described by Eicher and Geldin-Meyers (1988) and Hehnke (1969).

Deciduous: In the western part of the site this unit is made up of relatively low-growing (up to about 15 feet) willow stands, often associated with wet depressions. To the east these stands become larger, taller, and more continuous, and in the eastern part of the site they are sometimes represented by a more diverse deciduous tree and shrub assemblage and include both forest and shrubland growth forms. Coastal scrub characterized by coyote brush occurs within this category as small inclusions on uplands.

Conifer: This map unit includes Sitka spruce and beach pine. In the western part of the site beach pines occur as individual trees or small clusters of trees. Although many of these are of small stature, some are

mature trees with gnarled, windblown growth forms. In parts of the site beach pine saplings grow in linear roadside rows following shallow ditches. To the east and northeast conifer forest is much more extensive and includes much larger trees.

Table 2 below identifies the Alliances (Sawyer et al. 2009) included within each map unit.

Table 2. Map Habitat Classification Units and Associated Vegetation Alliances

Map habitat classification	Sawyer et al (2009) Alliance(s):
Bare sand	n/a
Foredune and dune mat	<i>Abronia latifolia</i> – <i>Ambrosia chamissonis</i> Herbaceous Alliance <i>Ammophila arenaria</i> Semi-Natural Herbaceous Stands
Coastal terrace prairie	<i>Deschampsia caespitosa</i> Herbaceous Alliance (part) <i>Calamagrostis nutkaensis</i> Herbaceous Alliance (part) <i>Festuca rubra</i> Herbaceous Alliance <i>Holcus lanatus</i> - <i>Anthoxanthum odoratum</i> Semi- Natural Herbaceous Stands
Wet sedge	<i>Carex obnupta</i> Herbaceous Alliance <i>Deschampsia caespitosa</i> Herbaceous Alliance (part) <i>Calamagrostis nutkaensis</i> Herbaceous Alliance (part)
Brackish marsh	<i>Schoenoplectus americanus</i> Herbaceous Alliance <i>Schoenoplectus acutus</i> Herbaceous Alliance <i>Typha</i> Herbaceous Alliance
Deciduous shrublands/woodlands	<i>Salix hookeriana</i> Shrubland Alliance
Conifer forest	<i>Pinus contorta</i> ssp. <i>contorta</i> Forest Alliance <i>Picea sitchensis</i> Forest Alliance

Invasive species (primarily Scotch broom and European beachgrass) were mapped separately and are shown in Figures 4-1 through 4-9. These maps are fairly complete in the western part of the site (west of Tell Avenue) but should be considered a partial representation in the remainder of the site where invasives tend to occur as numerous but small and isolated patches.

The present effort assessed conditions based on 2010 aerial photography and 2012-2013 field visits. Evaluating habitat changes over time is beyond the scope of the present effort. A cursory comparison of this map with an older map (Winzler & Kelly 1994) suggests, perhaps not surprisingly, that over that approximately 20-year time period the extent of woody vegetation has increased within the study area.

Literature Cited

Eicher, A. L., and C. Geldin-Meyers. 1988. Vegetation survey of the Lake Earl area, Del Norte County. California Department of Fish and Game, Eureka.

Hehnke, M. 1969. Bay and estuary report: Big Lagoon, Stone Lagoon, Freshwater Lagoon, Lake Earl, Lake Talawa. California Department of Fish and Game, Eureka.

Nyoka, S. 2003. Annual report, Tolowa Dunes mapping project. Tolowa Dunes State Park.

Sawyer, J. O., T. Keeler-Wolf, and J. M. Evans. 2009. A Manual of California Vegetation. Second Edition. California Native Plant Society, Sacramento. xi + 1300p.

Winzler & Kelly. 1994. Draft Environmental Impact Report. Pacific Shores Subdivision habitat map. Plate 3.



Dune mat, with European beachgrass (*Ammophila arenaria*) in background. October 17, 2012.



Dense European beachgrass (*Ammophila arenaria*) on a low dune west of Tell Avenue, with beach pine (*Pinus contorta* ssp. *contorta*) saplings in the background. March 25, 2013.



Coastal terrace prairie dominated by tufted hairgrass (*Deschampsia caespitosa*). October 17, 2012.



Annual grassland (upland) dominated by velvet grass especially in the background; the beginning of a transition to a sedge-rush community is visible in the lower left foreground. March 25, 2013.



Mixed sedge (*Carex obnupta*) and rush (*Juncus* sp.) transition wetland adjacent to a swale. March 25, 2013.



Wet sedge habitat dominated by slough sedge (*Carex obnupta*). Note lower growing sedge/rush transition area at top left at base of dune. October 17, 2012.



Brackish marsh with cattail (*Typha latifolia*). October 17, 2012.



Brackish marsh dominated by cattail (*Typha latifolia*) and bulrush (*Shoenoplectus acutus*) along the Lake Earl shoreline. March 25, 2013.



Deciduous shrublands dominated by Hooker willow (*Salix hookeriana*), with deteriorating road in foreground. October 17, 2012.



Interior of a willow thicket. Note slough sedge in the understory. March 25, 2013.



Conifer forest with beach pine (*Pinus contorta* ssp. *contorta*) and Sitka spruce (*Picea sitchensis*). October 17, 2012.



Conifer forest at the eastern edge of the study area; with brackish marsh in the foreground. Photo taken from the Lake Earl shoreline looking west. March 25, 2013.



Annual grassland, deciduous shrubland, and conifer forest in close proximity. March 25, 2013.



Beach pine saplings forming linear rows along a roadside. March 25, 2013.



The intersection of Ocean and Prigmore, looking north. Note deciduous shrubland (willow) and linear rows of conifers along roadsides. March 25, 2013.



Taken just a few feet from the photo above, this image looking west on Ocean shows coastal terrace prairie, wet sedge, deciduous shrubland, and conifer habitat types all in close proximity. March 25, 2013.



Project Mitigation Area Study Boundary
 Pacific Shores Parcels

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 Feet
 Map Projection: Lambert Conformal Conic
 Horizontal Datum: North American 1983
 Grid: NAD 1983 StatePlane California I FIPS 0401 Feet



Border Coast Regional Airport Authority
 Pacific Shores Mitigation Project

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Habitat Mapping - Project Site
 Pacific Shores Subdivision

Figure 2

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 Data source: Del Norte County GIS: parcel data; TIGER: roads; NAIP aerial, 1m resolution. Created by gldavidson



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Habitat Mapping
 Figure 3-1

Paper Size 11" x 17" (ANSI B)
 Map Projection: Lambert Conformal Conic
 Horizontal Datum: North
 Grid: NAD 1983 StatePlane California 1 FIPS 5001 Feet

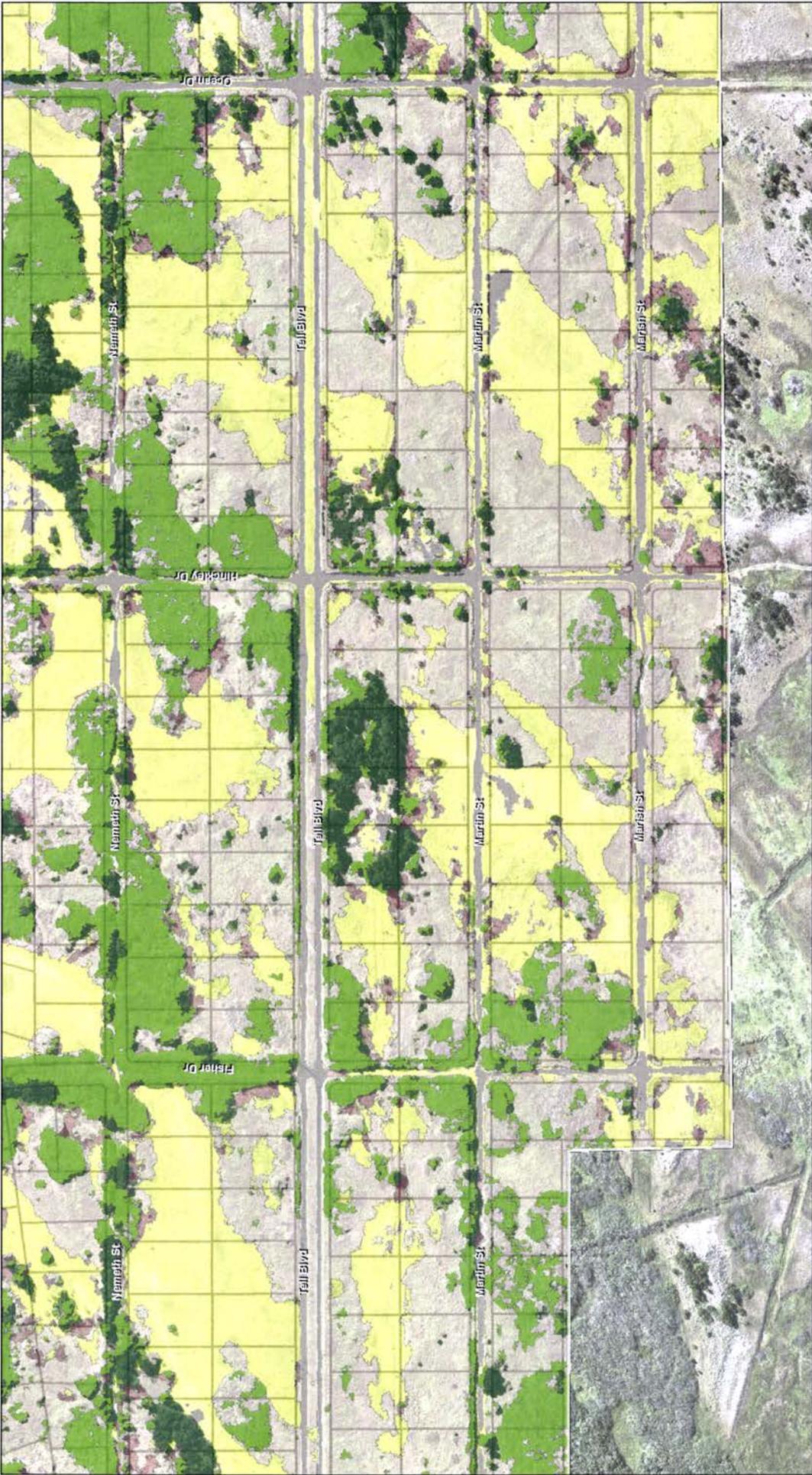


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Vegetation Type
 Bare earth
 Brackish marsh
 Coastal prairie
 Conifer
 Deciduous
 Foredune & dry sedge
 Water
 Wet sedge

Study Area
 Parcel Boundaries

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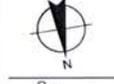
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- Study Area
- Parcel Boundaries
- Foredune & dry sedge
- Water
- Wet sedge
- Coastal prairie
- Conifer
- Deciduous
- Bare earth
- Brackish marsh

Vegetation Type

- Bare earth
- Brackish marsh
- Coastal prairie
- Conifer
- Deciduous
- Wet sedge
- Foredune & dry sedge
- Water



Paper Size 11" x 17" (ANSI B)
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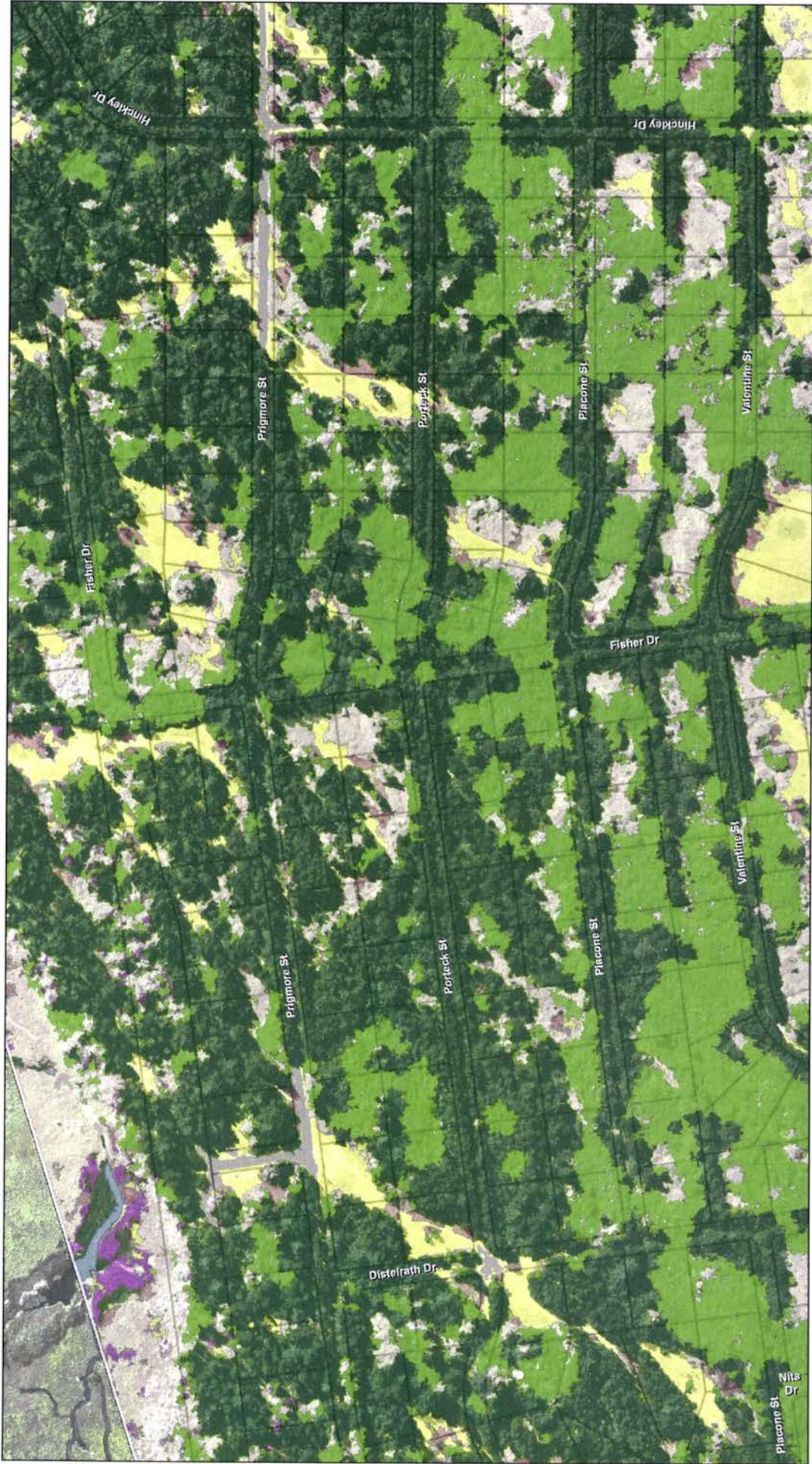
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Habitat Mapping

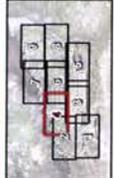
Figure 3-3

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Study Area
 Parcel Boundaries

Foredune & dry sedge
 Water
 Wet sedge

Coastal prairie
 Conifer
 Deciduous

Vegetation Type
 Bare earth
 Brackish marsh

Scale: 0 100 200 300 400 Feet
 Map Projection: Lambert Conformal Conic
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Figure 3-4

Habitat Mapping

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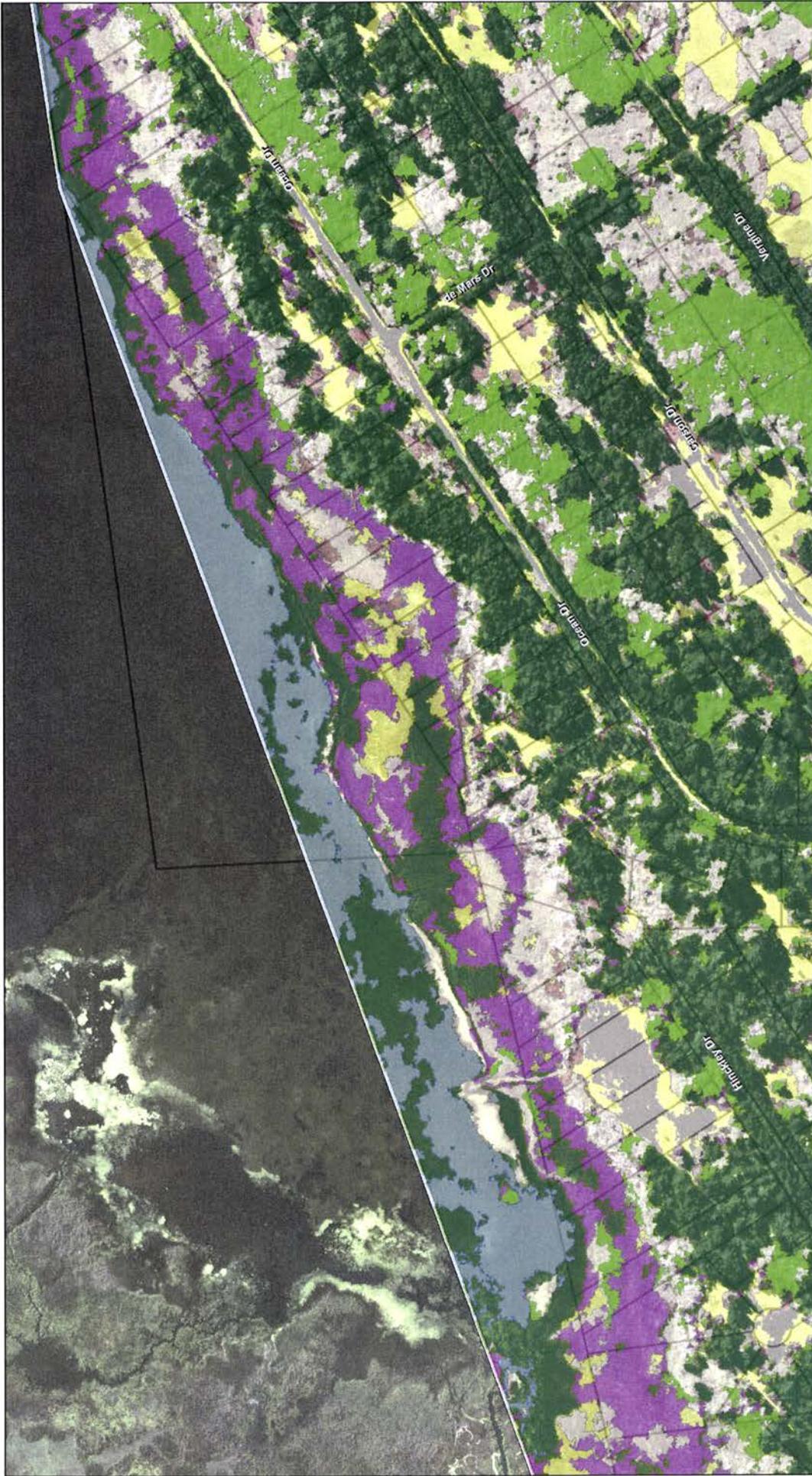
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Habitat Mapping
Figure 3-5

Paper Size 11" x 17" (ANSI B)
 Map Projection: Lambert Conformal Conic
 Horizontal Datum: North American 1983
 Grid: NAD 1983 StatePlane California 1 FIPS 5001 Feet

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0 100 200 300 400 Feet	Parcel Boundaries	Water	Conifer	Brackish marsh	
		Wet sedge	Deciduous		



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Habitat Mapping

Figure 3-7

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 Created by: jgarcia

Paper Size 11" x 17" (ANSI B)

0 100 200 300 400
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Map Projection: Lambert Conformal Conic
 Horizontal Datum: North American 1983
 Grid: NAD 1983 StatePlane California I FIPS 5001 Feet

Vegetation Type

- Coastal prairie
- Bare earth
- Brackish marsh
- Foredune & dry sedge
- Water
- Wet sedge

Study Area

Parcel Boundaries



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Invasives Mapping

Figure 4-1

- Type**
- European Beach Grass (Invasive)
 - Scotch Broom (Invasive)
 - Study Area
 - Parcel Boundaries



Paper Size 11" x 17" (ANSI B)
 0 100 200 300 400
 Feet

Map Projection: Lambert Conformal Conic
 Horizontal Datum: North American 83
 GCS: NAD 1983 StatePlane California FIPS 5001 Feet

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Invasives Mapping



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Figure 4-2

Type

- Study Area
- Parcel Boundaries
- European Beach Grass (Invasive)
- Scotch Broom (Invasive)

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Map Projection: Lambert Conformal Conic
 Grid: NAD 1983 StatePlane California 1 FIPS 5001 Feet

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Invasives Mapping
Figure 4-3

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 Grid: NAD 1983 StatePlane California 1 FIPS 5401 Feet
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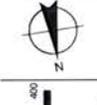
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- Type**
- European Beach Grass (Invasive)
 - Scotch Broom (Invasive)
 - Study Area
 - Parcel Boundaries



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 Map Projection: Lambert Conformal Conic
 GCS: NAD 1983 StatePlane California 1 FIPS 5001 Feet
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Figure 4-4



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Figure 4-5



Paper Size 11" x 17" (ANSI B)
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 Map Projection: Lambert Conformal Conic
 Datum: North American 83
 Code: NAD 83 StatePlane California FIPS 5001 Feet

Type
 European Beach Grass (Invasive)
 Scotch Broom (Invasive)

Study Area
 Parcel Boundaries

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 Grid: NAD 1983 StatePlane California 1 FIPS 5401 Feet
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 whether in contract, tort or otherwise for any errors, omissions, damages or costs (including indirect or consequential damages) which are or may be incurred by any party as a result of the map being electronic, inaccurate or unreliable in any way and for any reason.
 Data Source: Data Collection: Data Set Name: File: Version: Date: Created by: ghd/rosp



- Type**
- European Beach Grass (Invasive)
 - Scotch Broom (Invasive)
 - Study Area
 - Parcel Boundaries



Border Coast Regional Airport Authority
 Pacific Shores Mitigation Project

Job Number | 8410135
 Revision | A
 Date | 01 Apr 2013

Invasives Mapping

718 Third Street Eureka CA 95501 USA T 707 443 8326 F 707 444 8330 E eureka@ghd.com W www.ghd.com

Figure 4-6



Purchase and Sale Agreement (PSA) Status

- PSA Acquired
- PSA Pending
- PSA Pending Completion of Revenue and Taxation Code Division 1, Part 6

Ownership

- State of California
- Remaining Parcels

Paper Size ANSI B
 0 125 250 500 750 1,000
 Feet
 Map Projection: Lambert Conformal Conic
 Horizontal Datum: North American 1983
 Grid: NAD 1983 StatePlane California 1 FIPS 0401 Feet



Border Coast Regional Airport Authority
 Roadway Segment Selection Methodology for Wetland

Pacific Shores Ownership Map

718 Third Street Eureka CA 95501 USA T 707 443 8326 F 7

G:\11984 Border Coast Regional Airport Authority\B\CRAA_019\Map\figure\Misc\Requirements\1_Update\revised_selector\Constraints\130820.mxd
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 Data source: ESRI, Bing Aerial 2011 (1 foot resolution); GHD, Roadway Segments 2012; GHD, Constraints 2012; County of Del Norte, Parcels. Created by emilovs.

EXHIBIT NO. 13
APPLICATION NO. 1-13-009
 (Border Coast Regional Airport Authority)
PACIFIC SHORES OWNERSHIP MAP & LOTS AVAILABLE FOR ACQUISITION (1 of 9)

RSA Mitigation Project - CEC
Pacific Shores Potential Lot Acquisition

PSA Acquired			PSA Pending	PSA Pending Completion of Revenue and Taxation Code Division 1, Part 6	
10702106	10724215	10823019	10826004	10702110	10829218
10702111	10724305	10823118	10711119	10703207	10831204
10703405	10724313	10823119	10813114	10703409	10723312
10704212	10725205	10823124	10725312	10704107	10823020
10704213	10725207	10823125	10822104	10705121	10703309
10705109	10725216	10823128	10711127	10705124	10707109
10706207	10726107	10824105	10807106	10707112	10720110
10707118	10726205	10825009	10814213	10707126	10720111
10707119	10801111	10825012		10708115	10726316
10708111	10801125	10825114		10710112	10822036
10708202	10802104	10825117		10711105	10829217
10708213	10802208	10826008		10712212	
10710120	10802219	10826113		10714119	
10710121	10804109	10828024		10724311	
10710123	10804113	10829102		10802210	
10710216	10804114	10829108		10803124	
10710219	10804216	10829217		10806308	
10710220	10804220	10829306		10807109	
10710221	10805102	10833009		10807207	
10710223	10806206			10808109	
10711106	10806211			10813009	
10711108	10806310			10814214	
10711208	10807113			10815206	
10712123	10807114			10815209	
10712220	10807115			10816125	
10713107	10807205			10822025	
10713202	10807210			10822111	
10714106	10807215			10823020	
10715212	10808118			10825010	
10715213	10808210			10825111	
10715215	10808212			10827008	
10716110	10808213			10827009	
10719306	10809113			10829109	
10720213	10809121				
10721113	10809122				
10722108	10810113				
10722109	10812213				
10722204	10812219				
10722215	10812220				
10722303	10814110				
10723116	10814120				
10723118	10814125				
10723119	10815110				
10723205	10817104				
10723207	10817105				
10723208	10818207				
10723209	10822026				
10723210	10822032				
10723307	10822033				
10724108	10822108				
10724213	10823018				

121 PSAs Acquired
8 PSAs Pending
44 PSAs Pending Completion

Total of 173 Lots

* PSA - Purchase and Sale Agreement

PURCHASE AND SALE AGREEMENT
Del Norte County Regional Airport Projects
Wetland Mitigation at Pacific Shores Subdivision

DEFINED TERMS

Effective Date:	Upon signature by Seller and Purchaser
Purchaser:	Border Coast Regional Airport Authority, a California Joint Powers Authority
Purchaser's Address	150 Dale Rupert Road Crescent City, CA 95531 (707) 464-7288 Fax: (707) 646-1023
Purchaser's Representative:	James Bernard, Airport Director
Seller:	<i>DEL NORTE COUNTY, CA</i>
Seller's Address:	<i>981 H STREET, SUITE 210 CRESCENT CITY CA 95531 707-464-7204</i>
Seller's Representative:	<i>JAY SARINA, CAO</i>
Property:	10826004 Pacific Shores Subdivision, Del Norte County, California
Airport Projects	Runway Safety Area Improvement Project mandated by federal regulation, Public Law 109-115
Purchase Price:	\$5,000.00 per APN
Due Diligence Period:	Effective Date through December 31, 2014, subject to extension
Title Company, Escrow Holder, and Escrow Agent:	Humboldt Land Title Company, 1034 6 th Street, Eureka CA
Closing Date:	On or before June 30, 2015, subject to extension by mutual agreement of parties

The foregoing Defined Terms are incorporated by reference into the following Agreement.

THIS AGREEMENT OF PURCHASE AND SALE (this "Agreement"), dated as of the Effective Date, is made by and between Seller and Purchaser, who for valuable consideration received, agree as follows:

1. **Purchase and Sale of Property:** Seller agrees to sell and Purchaser agrees to purchase on the terms hereafter stated all of Seller's right, title and interest in the Property.
2. **Purchase Price:** On or before the Closing Date, Purchaser shall deposit with Escrow Agent the Purchase Price in cash or in immediately available funds.
3. **Purchaser's Due Diligence Review:**
 - a) During the period commencing on the Effective Date and terminating on December 31, 2014 unless extended as set forth in subsection 3(c) below (collectively, "Due Diligence Period"), Purchaser may undertake at Purchaser's expense an inspection of the Property (collectively referred to herein as "Due Diligence Review"): a review of the physical condition of the Property, including but not limited to, inspection and examination of soils, environmental factors, Hazardous Substances, if any, and archeological information relating to the Property; a review and investigation of the effect of any zoning, maps, permits, reports, engineering data, regulations, ordinances, and laws affecting the Property; a review of the condition of title of the

Property; and, a determination of the suitability of the Property for Purchaser's purposes as mitigation for the Airport Projects.

- b) As part of the Due Diligence Review, Purchaser shall order a preliminary title report of the Property ("Title Report") and shall have the opportunity to review such Title Report during the Due Diligence Period including any extension thereto, together with a copy of each of the documents noted as exceptions in the Title Report.
- c) If Purchaser requires additional time to complete the Due Diligence Review, Purchaser shall have the right, exercisable by delivering written notice to Seller prior to the expiration of the Due Diligence Period, to extend the Due Diligence Period for a reasonable time period as necessary to complete the Due Diligence Review. If extended, the term "Due Diligence Period" as used in this Agreement shall include such extension.
- d) If Purchaser disapproves of the results of the Due Diligence Review, Purchaser may elect in Purchaser's sole discretion, prior to the last day of the Due Diligence Period including any extension thereto, to terminate this Agreement by giving Seller written notification prior to the last day of the Due Diligence Period.

4. Conditions Precedent:

- a) Purchaser's Conditions. Purchaser's obligation to purchase the Property shall be subject to and contingent upon the satisfaction or written waiver, in Purchaser's sole discretion, of the following:
 - 1) Purchaser's completion and approval of the Due Diligence Review of the Property. Seller acknowledges and understands the limited purposes for which Purchaser is interested in purchasing the Property, and understands that Purchaser's determination of whether the Property is suitable for Purchaser's use for mitigation of the Airport Projects is to be made in Purchaser's sole discretion.
 - 2) Purchaser's receipt of all local, state and federal approvals and/or regulatory permits required to complete the Airport Projects, including but not limited to approvals from the U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, and California Coast Commission.
 - 3) Purchaser's review and written approval of the Title Report and all exceptions noted therein, except where expressly waived in writing.
 - 4) Purchaser's receipt of financing for completion of the Airport Projects including but not limited to receipt of sufficient grant funding for completion of Due Diligence Review and acquisition of the Property.
- b) Seller's Conditions. Seller's obligation to sell the Property shall be subject to and contingent upon Purchaser's performance of each and every covenant required to be performed by Purchaser hereunder on or before the Close of Escrow.
- c) Failure or Waiver of Conditions Precedent. In the event any of the conditions set forth above in Section 4(a) are not satisfied or waived in writing prior to the end of the Due Diligence Period, Purchaser may terminate this Agreement, whereby all rights and obligations hereunder of each party shall be at an end. In the event any of the conditions set forth above in Section 4(b) is not satisfied or waived in writing prior to the Close of Escrow, Seller may terminate this Agreement, whereby all rights and obligations hereunder of each party shall be at an end. Purchaser or Seller may elect, at any time or times on or before the date specified for the approval of the condition, to waive in writing the benefit of any of their respective conditions set forth in Section 4(a) or Section 4(b) above, as applicable. Purchaser's and Seller's consent to the Close of Escrow shall waive any remaining unfulfilled conditions (but such waiver shall not be deemed to waive any

subsequently discovered breach of any representation, warranty or covenant made by either party to this Agreement).

5. Closing Conditions:

- a) The willingness of Title Company to issue, upon the sole condition of the payment of its regularly scheduled premium, a CLTA Owner's policy of title insurance, with such endorsements as Purchaser may reasonably require (collectively, the "Title Policy"), insuring Purchaser in the amount of the Purchase Price that fee simple title to the Real Property as vested in Purchaser as of the Close of Escrow, subject only to the standard printed conditions and exceptions and the those permitted exceptions expressly approved by Purchaser; and
- b) In the event that the Closing Condition described above in Sections 5(a) has not been satisfied or waived in writing by Purchaser prior to the Close of Escrow, this Agreement shall terminate upon written notice of termination delivered by Purchaser to Seller, as appropriate, whereupon, this Agreement and all rights and obligations of Purchaser and Seller under this Agreement shall be at an end.

6. Close of Escrow:

Purchaser shall open an escrow (the "Escrow") with Escrow Holder for the purchase and sale contemplated by this Agreement. Purchaser and Seller agree that such escrow shall be closed and the purchase and sale shall be consummated (the "Close of Escrow") on or before the Closing Date. Close of Escrow shall occur in the following manner:

- a) Seller's Deliveries into Escrow. Prior to the Close of Escrow, Seller shall deliver to the Escrow the following (all documents shall be duly executed by Seller and shall be acknowledged where required):
 - 1) a grant deed to the Property (the "Deed");
 - 2) a certificate from Seller certifying that Seller is not a "foreign person" within the meaning of Section 1445(f)(3) of the Internal Revenue Code ("Non-Foreign Certificate");
 - 3) either California Franchise Tax Board Form 593-C or 593-W regarding the withholding of California taxes on the sale of California real estate;
 - 4) Seller's written escrow instructions to close Escrow in accordance with the terms of this Agreement.
- b) Purchaser's Deliveries into Escrow. Prior to the Close of Escrow, Purchaser shall deliver to the Escrow the following:
 - 1) all cash required by the terms of this Agreement to close Escrow, plus or minus closing adjustments and prorations;
 - 2) Purchaser's written instructions to close Escrow in accordance with the terms of this Agreement; and
 - 3) any other documents reasonably necessary to close the transactions contemplated under this Agreement.
- c) Escrow Holder's Duties. On the Close of Escrow, Escrow Holder shall effect the same by:
 - 1) recording all documents as may be necessary to clear title in accordance with the requirements of this Agreement;

- 2) recording the Deed and instructing the county recorder not to affix the amount of any documentary or transfer taxes to the Deed but to attach a separate statement to the Deed after recording;
- 3) paying all closing costs and making all prorations in accordance with the terms of this Agreement and a statement of adjustments and prorations as approved by Purchaser and Seller prior to the Close of Escrow;
- 4) delivering to Purchaser the Title Policy, Escrow Holder's certified closing statement, a certified copy of the Deed, Non-Foreign Certificate, Resident Certificate, and a copy (including a certified copy, where appropriate) of each of the loan documents, if any; and
- 5) delivering to Seller the Purchase Price, plus or minus closing adjustments and prorations, Escrow Holder's certified closing statement, and a certified copy of the Deed.

7. Closing Adjustments and Prorations:

Except as set forth in this Section 7, the adjustments and prorations set forth below shall be made at the Close of Escrow. For the purposes of this Section 7, the term "Proration Date" shall be defined as 11:59 p.m. on the day preceding the Close of Escrow. All prorations shall be made on the basis of the actual number of days of the year and month which have elapsed as of the Proration Date.

- a) Closing Costs, Transfer Fees. Purchaser shall pay all closing costs and transfer fees.
- b) Title Insurance. Purchaser shall pay the cost of title insurance.
- c) Real Estate Taxes. All real estate taxes and assessments and personal property taxes levied or assessed against the Property shall be prorated between Purchaser and Seller as of the Proration Date, according to the current tax year based on the most recent tax bills for the Property, Seller being charged and credited for the same up to the Proration Date. Seller shall pay any assessments which are secured by a lien against the Real Property, provided, however, Seller shall not be obligated to pay assessments which are payable in installments over time. Seller will pay installments of assessments prorated through the Proration Date and Purchaser shall be responsible for payment of all installments thereafter. If at any time after the Proration Date additional or supplemental real estate taxes are assessed against the Property by reason of any event occurring prior to the Proration Date, or there is any rebate of such taxes, Purchaser and Seller shall promptly re-prorate such taxes, and any amounts due from one party to the other shall be paid in cash at that time.
- d) Calculations for Closing. Escrow Holder shall make a preliminary calculation of prorations no later than three (3) days prior to the Proration Date and a final calculation no later than one (1) day prior to the Proration Date. The final calculation shall be executed by each party and may be relied upon by Escrow Holder in completing the closing adjustments and prorations.

8. Covenants, Representations and Warranties:

- a) Seller's Representations, Warranties and Covenants. Seller hereby represents and warrants to Purchaser as of the Effective Date (which representations and warranties shall be deemed remade by Seller as of the Close of Escrow) the following, and such representations, warranties and covenants shall survive the Close of Escrow for a period of six (6) months:
 - 1) Seller has full power and authority to enter into this Agreement and any other documents contemplated by this Agreement and to assume and perform all of Seller's obligations hereunder; the persons executing this Agreement and any other documents contemplated by this Agreement on behalf of Seller have been authorized and empowered to bind Seller thereto; and this Agreement is, and each instrument and document to be executed by Seller

hereunder shall be, a valid, legally binding obligation of Seller enforceable against Seller in accordance with its terms.

- 2) Seller, within 120 days following the Effective Date, shall deliver to Purchaser such documentation as Purchaser may require to evidence the matters set forth in Section 8(a)(i) above, including without limitation as applicable (a) corporate or other resolutions authorizing the transactions contemplated herein, and (b) formation documents, including without limitation, articles of incorporation, by-laws, partnership agreements and operating agreements for limited liability companies.
 - 3) To the best of Seller's knowledge, there are no Hazardous Materials in, on, about, under or affecting the Property. For purposes of this Agreement, the term "Hazardous Materials" shall mean any toxic or hazardous materials or any other substance which constitutes, or is regulated as, a hazardous, extremely hazardous, toxic, extremely toxic or similarly dangerous material, substance or waste under the Comprehensive Environmental Response, Compensation and Liability Act of 1980, as amended, 42 U.S.C.A. §§9601 et seq., the Resource Conservation and Recovery Act of 1976, 42 U.S.C.A. §§6901 et seq., or the California Health & Saf. Code, Division 20.
 - 4) Seller, within 120 days following the Effective Date, shall advise Purchaser in writing whether Seller is a party to pending litigation between some owners of real property in the Pacific Shores subdivision and the state of California Department of Fish and Game, California State Lands Commission, California Wildlife Conservation Board, and California Coastal Commission alleging among other matters, inverse condemnation.
 - 5) There are no suits, proceedings, or actions, including without limitation any condemnation proceedings, pending or threatened against the Property or which would have a material effect on Seller's ownership of the Property.
 - 6) The Property is unimproved and not legally occupied.
 - 7) Except as expressly disclosed in writing by Seller to Purchaser, Seller does not have actual knowledge of any condition of or relating to the Property, including conditions of adjacent or proximate properties and governmental actions which would materially impact Purchaser's use of the Property for the Airport Projects mitigation.
- b) Purchaser's Representations, Warranties and Covenants. Purchaser hereby represents and warrants to Seller as of the Effective Date (which representations and warranties shall be deemed remade by Purchaser as of the Close of Escrow) the following, and such representations, warranties and covenants shall survive the Close of Escrow for a period of six (6) months:
- 1) Purchaser has full power and authority to enter into this Agreement and any other documents contemplated by this Agreement and to assume and perform all of Purchaser's obligations hereunder; the persons executing this Agreement and any other documents contemplated by this Agreement on behalf of Purchaser have been authorized and empowered to bind Purchaser thereto; and this Agreement is, and each instrument and document to be executed by Purchaser hereunder shall be, a valid, legally binding obligation of Purchaser enforceable against Purchaser in accordance with its terms. This representation, warranty and covenant shall be deemed remade by Purchaser as of the Close of Escrow and survive the Close of Escrow for a period of six (6) months.
 - 2) Purchaser is aware of pending litigation between some owners of real property in the Pacific Shores subdivision and the state of California Department of Fish and Game, California State Lands Commission, California Wildlife Conservation Board, and California Coastal Commission alleging among other matters, inverse condemnation. Purchaser makes no claim of legal right to receive damages awarded in said litigation.

10. **Indemnification:** Each party hereto shall defend, indemnify and hold harmless the other party (with counsel reasonably acceptable to such party) from and against any loss, cost, expense, claim, demand, liabilities or damages, including reasonable attorney's fees, resulting from any misrepresentation or breach of warranty or breach of covenant made by such indemnifying party in this Agreement or in any document, certificate, schedule or exhibit given or delivered to the other party pursuant to or in connection with this Agreement, and such indemnification obligations shall survive the Close of Escrow.
11. **Default:** If this transaction should fail to close as provided herein for any reason whatsoever, this Agreement shall terminate, and upon such termination, all obligations and liabilities of Purchaser and Seller under this Agreement shall terminate.
12. **Miscellaneous:**
- a) **Brokerage Commission.** Each party to this Agreement warrants to the other that except as hereinafter provided, no person or entity can properly claim a right to a real estate commission, finder's fee, or other real estate brokerage-type compensation (collectively, "Real Estate Compensation") based upon the acts of that party with respect to the transaction contemplated by this Agreement.
 - b) **Time of Essence.** Time is of the essence of every provision of this Agreement.
 - c) **Notices.** Whenever Escrow Holder or any party hereto shall desire to give or serve upon the other any notice, demand, request or other communication, each such notice, demand, request or other communication shall be in writing and shall be given or served upon the other party with the appropriate copies, and each parties' representatives, by personal service or by certified, registered or Express United States Mail, or Federal Express or other nationally recognized commercial courier, postage prepaid, addressed as set forth above. Any such notice, demand, request or other communication shall be deemed to have been received upon the earlier of personal delivery thereof or attempted personal delivery, as the case may be. Any notice, demand, request or other communication sent by any of the methods set forth above shall, when sent, also be sent by facsimile transmission; provided, however, notice by facsimile transmission shall be in addition to, and not in lieu of, notice by any of the methods set forth above.
 - d) **Successors and Assigns.** This Agreement shall be binding upon the heirs, executors, administrators, successors and assigns of Seller and Purchaser. Purchaser may assign its rights hereunder to any entity.
 - e) **Captions.** Section titles or captions contained herein are inserted as a matter of convenience and for reference, and in no way define, limit, extend or describe the scope of this Agreement.
 - f) **Binding Effect.** Regardless of which party prepared or communicated this Agreement, this Agreement shall be of binding effect between Purchaser and Seller only upon its execution by an authorized representative of each such party.
 - g) **Construction.** The parties acknowledge that each party and its counsel have reviewed and revised this Agreement and that the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of this Agreement or any amendment or exhibits hereto.
 - h) **Counterparts.** This Agreement may be executed in any number of counterparts, each of which when executed and delivered shall be deemed to be an original and all of which counterparts taken together shall constitute but one and the same instrument. Duplicate unexecuted pages of each counterpart may be discarded and the remaining pages assembled as one document. Counterparts bearing a party's signature which are transmitted by facsimile and received by the

other parties hereto shall be deemed executed original counterparts. The party transmitting an executed counterpart via facsimile shall deliver an ink signed counterpart within a reasonable time thereafter.

- i) Further Assurances. Purchaser and Seller shall make, execute, and deliver such documents and undertake such other and further acts as may be reasonably necessary to carry out the intent of the parties hereto.
- j) Governing Law, Venue. This Agreement shall be governed by, and construed in accordance with, the laws of the State of California without regard to the conflicts of law provisions thereof. Venue for any litigation brought pursuant to this agreement shall be the Superior Court of California, Del Norte County, California.
- k) Entire Agreement. This Agreement embodies the entire agreement between Purchaser and Seller in connection with this transaction. This Agreement cannot be modified except in writing signed by all parties.

13. Offer and Acceptance: This Agreement constitutes an offer to purchase the Property on the terms and conditions contained in this Agreement. If Seller fails to execute a copy of this Agreement and return it to Purchaser by August 31, 2013, 5:00 p.m., this Agreement shall be void.

IN WITNESS WHEREOF, Purchaser and Seller have executed and delivered this Agreement as of the date of the last party signing below.

SELLER:

Name:
Title:

Date: _____

Name:
Title:

Date: _____

**PURCHASER:
Border Coast Regional Airport Authority**

Name: James Bernard
Title: Airport Manager

Date: _____



County of Del Norte County
Board of Supervisors
981 "H" Street, Ste. 200
Crescent City, California 95531

Phone: (707) 464-7204

Fax: (707) 464-1165

August 13, 2013

Charles Lester, Executive Director
California Coastal Commission
45 Fremont Street
San Francisco, CA 94105-2219

Re: Support of Waiver of Preliminary Approval for a Local Use Permit

Dear Mr. Lester:

The Border Coast Regional Airport Authority (BCRAA) has filed a Coastal Development Permit application with the California Coastal Commission for the proposed Runway Safety Area (RSA) Project at Jack McNamara Field in Crescent City. A component of the project is to provide mitigation for impacts to wetlands and other areas identified as being Environmentally Sensitive Habitat Area (ESHA). The BCRAA has identified Assessor Parcel Number 110-020-81 as being a primary component in the mitigation plan for its project. The subject parcel has a Zone designation of Planned Community (PC) which requires use permit approval by the local jurisdiction for any development activity.

The County is aware that the Executive Director of the Coastal Commission has the authority under §13053 of Title 14, Division 5.5 California Coastal Commission Administrative Regulations to waive preliminary approvals required by other governmental agencies for good cause. The Board of Supervisors has reviewed a preliminary development plan for the project site that includes adequate area for future residential development and for the implementation of a mitigation plan. Figures 1 and 2 are attached that illustrate the preliminary development plan which includes a 5+ acre area that can be developed with up to 30 multi-family dwelling units and 9 single family residences. Adequate buffers have been shown to demonstrate the mitigation area and the residential development will be compatible.

To further the Border Coast Regional Airport Authority's pending Coastal Development Permit for runway safety improvements, the County of Del Norte supports the Executive Director in granting of a waiver of preliminary approval of a Use Permit for a Planned Community for Assessor Parcel Number 110-020-81. Furthermore, the County request that the staff and Commission consider the County's preliminary development plan when taking final action on the overall mitigation plan for the Coastal Development Permit as it applies to this particular parcel.

If you have any questions regarding this letter please contact Heidi Kunstal in the County's Community Development Department. She may be reached by phone at 707-464-7254 or by e-mail at hkunstal@co.del-norte.ca.us.

Sincerely,

Signature on File

Michael Sullivan
Chair

EXHIBIT NO. 14

APPLICATION NO. 1-13-009
(Border Coast Regional Airport
Authority)

COUNTY WAIVER REQUEST & BAY
MEADOWS CONCEPTUAL
MITIGATION PLAN (1 of 3)

CONCEPT # 2

9 SINGLE FAMILY LOTS

30 MULTI FAMILY UNITS (1 LOT)

39 TOTAL DWELLING UNITS

NEW AREA - 5.25 ACRES 



NORTH

Scale 1" = 200'

Map prepared by Jan Sirchuk JHC inc./ JHP LLC

Date: 8/03/2013

CONCEPT # 2

- 8 SINGLE FAMILY LOTS
- 30 MULTI FAMILY UNITS (1 LOT)
- 38 TOTAL DWELLING UNITS
- 300,000 SQ. FT. AREA - 6.50 ACRES

NORTH
Scale 1" = 200'

Map prepared by Jim Brink, P.E. Inc./ JPB LLC
Date: 8/03/2011

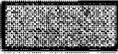
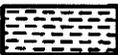
11.89 Agricultural

Harbor Center Tract



PROPOSED ACQUISITION, ACCESS, & ZONING

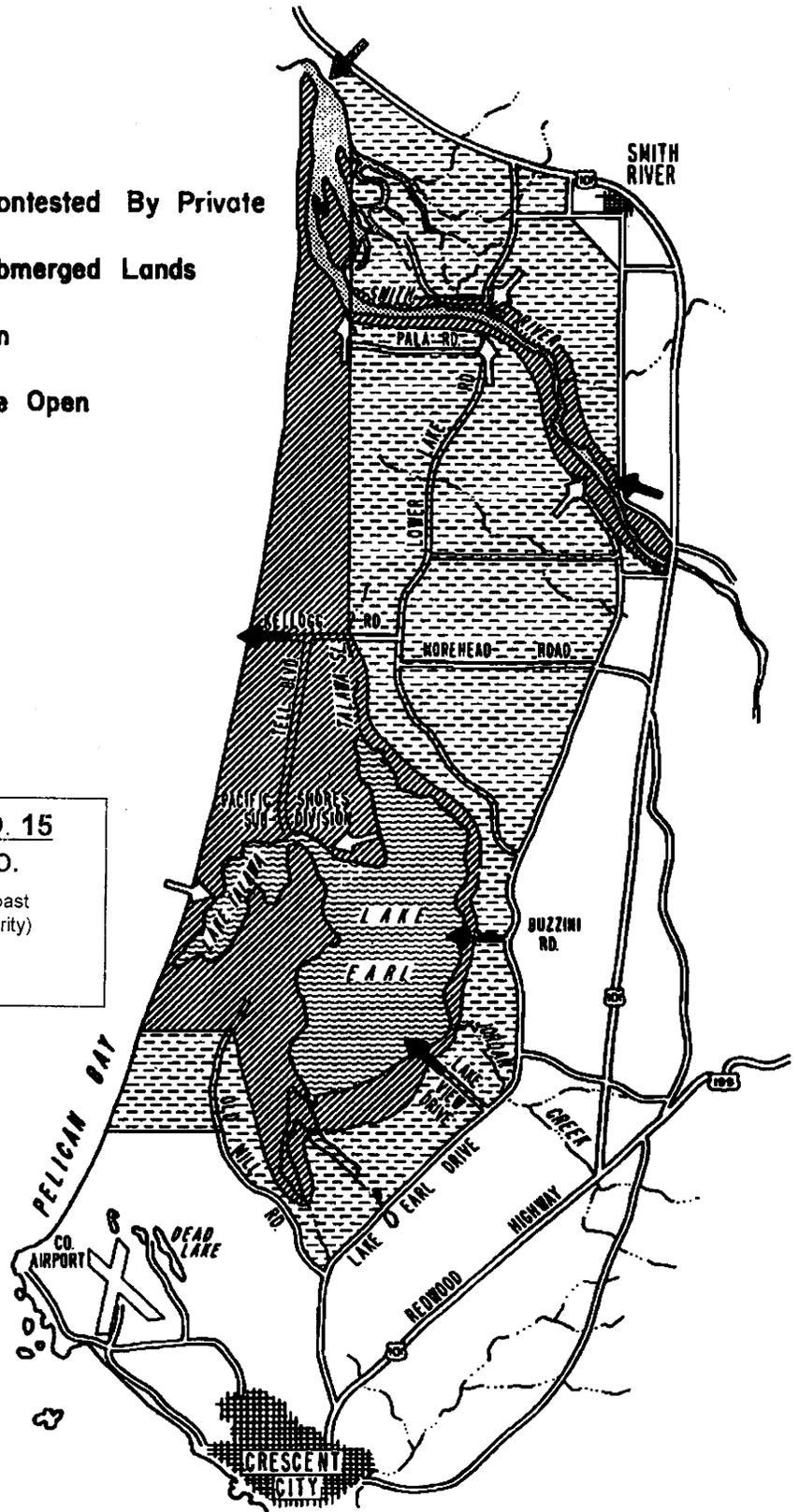
LEGEND

-  State Ownership Contested By Private Party
-  State Tide And Submerged Lands
-  Proposed Acquisition
-  Proposed Agriculture Open Space Zone
-  Existing Access
-  Proposed Access

PACIFIC OCEAN

EXHIBIT NO. 15

APPLICATION NO.
1-13-009 (Border Coast
Regional Airport Authority)
DFG PROPOSED
ACQUISITION MAP



CALIFORNIA COASTAL COMMISSION

NORTH COAST DISTRICT
710 "E" STREET, SUITE 200
EUREKA, CA 95501
(707) 445-7873

**MEMORANDUM****EXHIBIT NO. 16****APPLICATION NO.**

1-13-009 (Border Coast
Regional Airport Authority)

MEMORANDUM FROM
JOHN DIXON, Ph.D. (1 of 15)

FROM: John D. Dixon, Ph.D.
Ecologist

TO: Melissa Kraemer

SUBJECT: Mitigation for habitat impacts at the Border Coast Regional Airport

DATE: August 28, 2013

Documents reviewed:

Border Coast Regional Airport Authority. 2011. Draft Environmental Impact Report, runway safety area improvement project, Jack McNamara Field (CEC), Federal Aviation Administration and County of Del Norte. Volume I. A report dated February 2011.

Border Coast Regional Airport Authority. 2011. Draft Environmental Impact Report, runway safety area improvement project, Jack McNamara Field (CEC), Federal Aviation Administration and County of Del Norte. Volume II: Appendices. A report dated February 2011.

Border Coast Regional Airport Authority. 2011. Environmental Impact Report, runway safety area improvement project, Del Norte Regional County Airport, Jack McNamara Field (CEC), Federal Aviation Administration and County of Del Norte. Comments and Responses. A report dated September 2011.

Bukosky, M and K. Kovacs. 2003. Lake Earl Wildlife Area Final Draft Management Plan. California Department of Fish and Game

California Department of Fish and Game. 2004. Environmental Impact Report, Lake Earl Wildlife Area Management Plan.

Funderburk, S.L. and P.F. Springer. 1989. Wetland bird seasonal abundance and habitat use at Lake Earl and Lake Talawa, California. California Fish and Game 75:85-101.

GHD, Inc. 2013. Biological Assessment. Border Coast Regional Airport Authority, Del Norte County Regional Airport, Jack McNamara Field (CEC), Crescent City, California. A report dated February 2013 prepared for the Federal Aviation Administration

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Scott, C. (GHD, Inc.) 2013. A memorandum dated August 19, 2013 to J. Bernard (BCRAA) concerning "Final special-status plant survey results for Bay Meadows Property, Crescent City, CA"

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The Border Coast Regional Airport is located within the southern edge of a distinctive ecological region between Pyramid Point and Point St. George defined by coastal dunes, the Lake Earl-Lake Tolowa¹ wetland complex, and the Smith River Delta. These features occur within a broad lowland (Figures 1 & 2), alternatively known as the Crescent City platform or Smith River plain, created by a crustal block down-faulted against the "oldland block" to the east (Cooper 1957). For dunes to form there must be a sand source, which here is sediments discharged by the Smith River and, to a much lesser extent, the eroding coastal cliffs north of the Smith River, and a "receptive shore." The "receptive shore" in this case is caused by the northeast-southwest trending shoreline, which intercepts the littoral drift and allows the accumulating sand to be carried inland by the prevailing northwesterly winds. Lake Earl occupies a shallow depression in the down-faulted block and is connected to Lake Tolowa, which is confined within the dune field only by the barrier beach (Figures 1 and 2). Lake Earl and Lake Tolowa are really parts of a single, shallow coastal lagoon (the largest on the west coast) that becomes brackish after the inlet breaches and the lagoon opens to the tides. Breaching occurs naturally when the lagoon exceeds around 12 feet in elevation, but the inlet has been mechanically breached at lower elevations to avoid flooding nearby private property and infrastructure.

The 11 mile-long dune field begins as a narrow spit at the mouth of the Smith River and widens to the south until it reaches its maximum landward extent along the western shores of Lake Earl (Figure 3). Two broad dune peninsulas occur at Lake Earl (Figures

¹ Alternatively spelled "Talawa" in many publications.

2 & 3). The northernmost is bounded on all sides by Lake Earl and the southernmost by Lake Tolowa to the west and Lake Earl to the north and east. Both these features are about 10 feet in elevation and relatively flat, although crossed by a few 15 to 30 foot higher ridges. The northern area has a fringe of trees along Lake Earl but both areas support mostly herbaceous and shrubby vegetation. The water table is close to the surface and lower areas are marshy. South of Lake Earl and inland of the Flandrian² dunes (Figure 3) are dunes of a much earlier cycle of dune development (Cooper 1967). These largely unforested dunes, upon which McNamara Field was constructed, are "perched," that is to say they now occur above coastal cliffs and are cut off from the sand supply (Figure 4). In addition to the coastal lagoon, there are dune slack wetlands dotted throughout the lower dunes that support both herbaceous and shrubby, riparian vegetation such as willows and wax myrtle. There are also several persistent ponds within troughs through the stabilized dunes and scattered seasonal wetlands (e.g., Figure 4). The abundance of wetland features throughout the dunes and surrounding Lake Earl has been documented by the National Wetland Inventory (Figure 5). The boundary of this dune-wetland ecological region (Figure 6) follows the edge of the dunes to Lake Earl, continues around the marshy edge of the lake to the point where the lake begins to curve toward the coast, then jogs inland and follows Lake Earl Drive until it curves to become Northcrest Drive at which point the boundary continues to the coast, including all undeveloped portions of the ancient perched dune upon which McNamara Field was constructed. The boundary follows the dunes and lake edge except where it jogs inland to Lake Earl Drive. The short span from the curve of the lake to its southern tip is not part of the dune complex *per se*, but includes areas of the Tolowa soil complex that is derived from dune sands. The boundary line was drawn on the map (Figure 6) based on the location of dunes mapped by Cooper (1967; Figure 3), the location of Tolowa soils (McLaughlin and Harradine 1966), and the pattern of dunes apparent on aerial photographs.

The dune-wetland complex that defines this ecological region is exceptional in its biological diversity, despite the damage inflicted by the intentional introduction of invasive European beachgrass and other human perturbations. This ecosystem is home to over 250 species of birds, 50 species of mammals, and at least 16 species of reptiles and amphibians. Many of the birds are resident, but the area is especially important for fall and winter migrants, particularly water birds. During the winter migration, tens of thousands of birds may be present around Lake Earl alone (Funderburk and Springer 1989). This dune-wetland complex is also home to at least 15 rare species, including the Oregon silverspot butterfly, western pond turtle, northern red-legged frog, western lily, sand dune phacelia, and Del Norte buckwheat.

McNamara Field includes many of the habitats and species characteristic of the larger ecological region, including sand dunes, which meet the definition of an Environmentally Sensitive Habitat Area (ESHA), and wetlands near or immediately adjacent to runways. These habitats support both rare plants and northern red-legged frogs. Despite attempts to avoid or minimize environmental impacts, the necessary repair and maintenance of the airport facility will result in significant losses of wetland and dune

² The Flandrian is the current interglacial period that began about 12,000 years ago.

habitats and rare plants. Nearly 17 acres of wetlands will be filled or scraped and 4.5 acres of sand dunes will impacted, including about 0.30 acre that supports rare plants.

The proposed mitigation plan for these unavoidable impacts calls for mitigation ratios (mitigation acreage:impacted acreage) of 4:1 for wetland impacts and 3:1 for impacts to dunes, including dune prairie. These mitigation ratios have been accepted by the Commission in previous decisions.

An exception to the 4:1 mitigation ratio for wetland impacts is the proposal to mitigate impacts resulting from scraping and grading at a ratio of 2:1. The rationale underlying this exception is that 1:1 mitigation will take place within the footprint of the disturbance and that the area will be intentionally graded lower than the surrounding land, which will improve hydrology and result in a higher functioning wetland. Based on the likelihood that the restored wetland will have a higher habitat value than the impacted wetland, I recommend that the Commission accept this lower mitigation ratio. However, I also recommend that if the restored habitat is not meeting success criteria, including improved hydrology, after two years that the applicant be required to apply for an amendment that includes additional mitigation at a 4:1 ratio.

As partial mitigation for impacts to dune habitats, the applicant is asking that mitigation credit be given for enhancing habitat adjacent to dune prairie and wetlands that are supporting a small population of the rare western lily. Although the Commission has required substantial restoration for mitigation credit in other cases, in this instance I recommend that some credit be allowed for habitat enhancement. The western lily is a signature species in Del Norte County, but is on the verge of extinction, partly due to habitat loss as a result of colonization by woody species in the absence of grazing. The woody vegetation is characterized as "mixed tree/shrub thicket" and includes some shore pine and sitka spruce, which in a forest setting is considered ESHA. However, until grazing ended in the 1990s, the area in question was coastal dune prairie and is not now an ESHA forest. The applicant proposes to expand existing western lily habitat adjacent to the existing population near the airfield by removing woody vegetation from about 5.2 acres of historical prairie that has become forested. I recommend that the Commission allow 50% credit, or about 2.6 acre of mitigation credit for these enhancement activities because the actions will allow dune prairie to reestablish passively and will enable the spread of the local population of western lily

In general, staff asks applicants to identify mitigation opportunities that are "in-kind" and "on-site." This often is not possible. Although mitigation for habitat losses usually takes the form of restoration of similar habitats, the "on-site" criterion is increasingly difficult to meet. Throughout the state, appropriate mitigation opportunities in the Coastal Zone are becoming difficult to find due to constraints imposed by existing development, private ownership, and agricultural uses. When on-site mitigation is not feasible, staff directs applicants to identify opportunities within the same watershed or ecological region. McNamara Field is just beyond the southern edge of the Lake Earl watershed (Monroe, et al. 1975) and is within the ecological region defined by the dune fields of various ages that reach from the mouth of the Smith River to Point St. George and

extend inland about two miles at its widest point south of Lake Earl (Figure 6). I recommend that mitigation take place within this coastal dune-wetland ecological region. Should this not be possible, mitigation should nevertheless be restricted to within the Coastal Zone on the Smith River plain as described above. Within the eco-region, I specifically recommend that mitigation take place in the northern dune peninsula and the area immediately to the north that includes the Pacific Shores subdivision. Within the greater northern peninsula, there are coastal dunes, dune prairie, estuarine wetlands, freshwater emergent wetlands, forested wetlands, and coastal maritime forest. This large area is particularly valuable because it not only contains much of the habitat diversity associated with the whole eco-region but it is also an integral part of the Lake Earl wetland complex (Figures 5 & 7) and provides critical habitat for the thousands of wading birds and shorebirds that rely on the resources of the Lake Earl Wildlife Area during their annual migration. Thirty species of wading birds and shorebirds, 80 species of song birds, and 20 species of raptors utilize these upland and wetland habitats associated with Lake Earl (Bukosky & Kovacs 2003). There is also important habitat for rare species, including the northern red-legged frog and the federally threatened silverspot butterfly (CDFG 2004, Hetrick 2013). The area has also been degraded by human activities and offers the potential for significant restoration. Regardless of location, in order to mitigate as closely to "in-kind" as possible, I recommend that mitigation for dune impacts be restricted to degraded non-forested dunes and that mitigation for wetland impacts preferentially take place in areas of degraded freshwater emergent wetlands and then in degraded freshwater forested or shrub wetlands if there is insufficient area of the former.

The applicant has proposed wetland creation for unavoidable impacts to wetlands at a 1:1 mitigation ratio. Similarly, they have proposed substantial restoration of severely degraded dune habitats as mitigation for the dune impacts of the project. I recommend that this restoration also be undertaken at a 1:1 ratio (mitigation:impacts). I also recommend that created or restored habitats intended for mitigation be set back from commercial or residential development, other than the roads at Pacific Shores and the infrastructure related to McNamara field. Due to the relatively undisturbed nature of the habitats within the dune-wetland ecological region, I recommend that this set-back be 200 feet where feasible, but no less than 100 feet. The remaining mitigation requirements of 3:1 for wetlands or 2:1 for dunes are intended to compensate for temporal losses and the uncertainty of complete success inherent in all restoration activities. The applicant has proposed that credit for this additional mitigation be given for acquiring and extinguishing the development potential on parcels within the Pacific Shores subdivision, which occupies the northern dune peninsula, the adjacent area to the north, and a strip of shore west of Lake Tolowa (Figure 1). To my knowledge, the Commission has never accepted preservation of habitat as mitigation for losses of wetlands and terrestrial ESHA. However, the situation within the dune-wetland ecological regional around Lake Earl is sufficiently unique to deserve additional analysis. First, there appear to be relatively few feasible opportunities for substantial restoration. Much of the land within the ecological region is in public ownership and not appropriate for mitigation. Other lands are either close to existing development or privately owned without a willing seller. The habitats within the many parcels at Pacific

Shores are ecologically extremely valuable, are a salient element of the dune-wetland ecosystem, and apparently are at some risk of future residential development, which would have catastrophic effects on that ecosystem. Although part of a unique ecoregion that is mostly undeveloped except for a matrix of roads, Pacific Shores is currently a haphazard patchwork of public and private land ownership. The purchase of a large number of those parcels and the extinguishment of their development potential would significantly expand and consolidate protected areas and facilitate a more comprehensive land management strategy.

Due to the limited opportunities for substantial restoration within the ecological region, the extraordinary habitat value of the greater northern dune peninsula, and the unique circumstances of land ownership, I recommend that the Commission allow the remaining mitigation requirements (3:1 for wetlands or 2:1 for dune ESHA), to be met through the purchase and protection in perpetuity of land within Pacific Shores or adjacent parcels, or elsewhere within the historical footprint of Lake Earl within the 12-foot elevation contour (Figure 8), portions of which maybe outside the delineated boundary of the dune-wetland ecological region (Figure 6). Preserving the historical footprint of Lake Earl is important because it currently exists as wetlands and has the potential in the fullness of time to be restored to lagoon habitat. However, in the absence of substantial restoration, I recommend that only partial credit be given for preservation and that the percentage credit³ be proportional to the amount of dune or wetland habitat that exists within a given legal parcel. Since established connections among habitats increase the chance of sustaining maximum ecological functions, the following credit schedule is recommended: 50% credit for parcels with greater than 75% cover of appropriate habitat; 40% credit for parcels with >50% to 75% cover of appropriate habitat; 30% credit for parcels with >25% to 50% cover of appropriate habitat, and 20% credit for parcels with \leq 25% cover of appropriate habitat. In order to receive wetland credit for parcels with < 5% cover of wetlands, the latter must be contiguous with larger wetlands outside the parcel. I recommend that wetland boundaries be determined based on the presence of field indicators of wetland hydrology and a preponderance of wetland indicator species⁴, and that dune habitats be assessed based on the relative ground cover⁵ of native flowering plants.

³ For example, if 50% credit were given, 2 acres of habitat would have to be preserved to achieve a mitigation ratio of 1:1; if 25% credit were given, 4 acres of habitat would have to be preserved to achieve a mitigation ratio of 1:1, etcetera.

⁴ Wetland field indicators are described in the Army Corps of Engineers 1987 Wetland Delineation Manual and in the Regional Supplements to the Manual.

⁵ Absolute cover is based on the proportion of total ground surface covered which includes bare areas; relative cover is based only on the vegetated surface. Relative cover is the appropriate metric for dune habitats that often have significant areas of bare sand.

Figure 1. Northern Del Norte County (from: California Coastal Commission. 2005. Experience the California Coast. A guide to beaches and parks in northern California. Berkeley: University of California Press). The Crescent City “platform” between the mouth of the Smith River to the north and Point St. George to the south is demarcated by the sharply rising elevations to the north and east of the coastal lowlands and contains the Smith River delta, coastal sand dunes, and the Lake Earl-Lake Tolowa wetland complex.

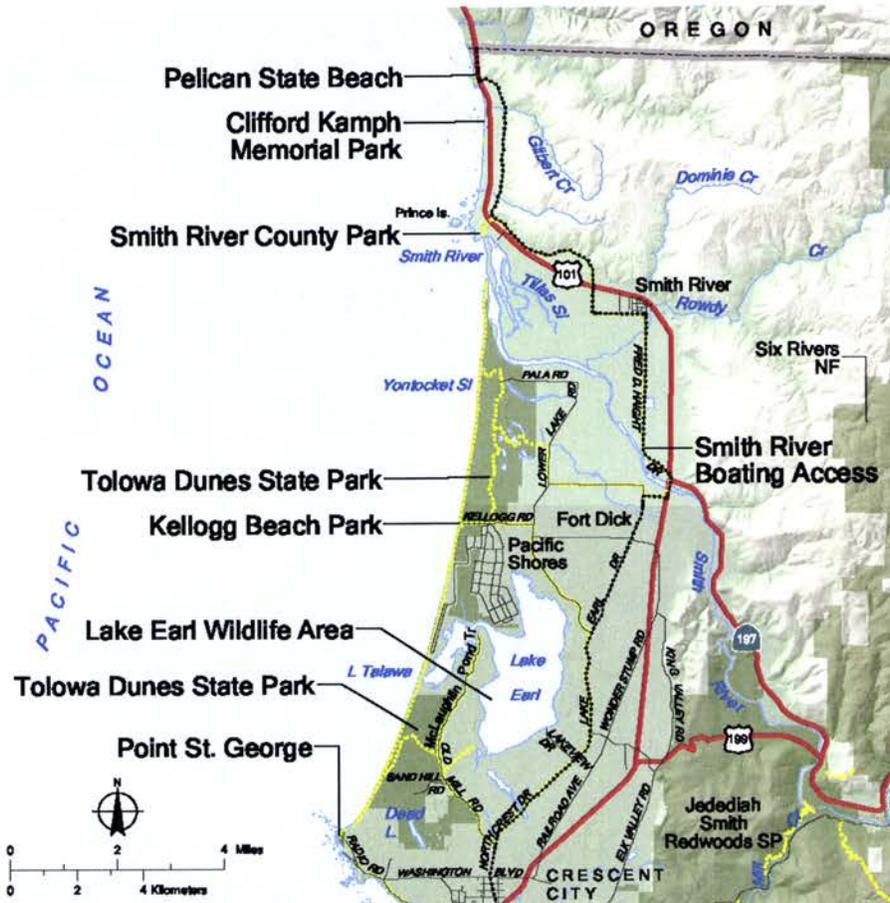


Figure 2. Crescent City platform or lowlands. The “X” formed by the runways for the Border Coast Regional Airport (Jack McNamara Field) is apparent in the lower left near Point St. George. The grid of rectangular agricultural fields marks the Smith River floodplain. Lake Earl and the more seaward Lake Tolowa are about in the center of the photograph.

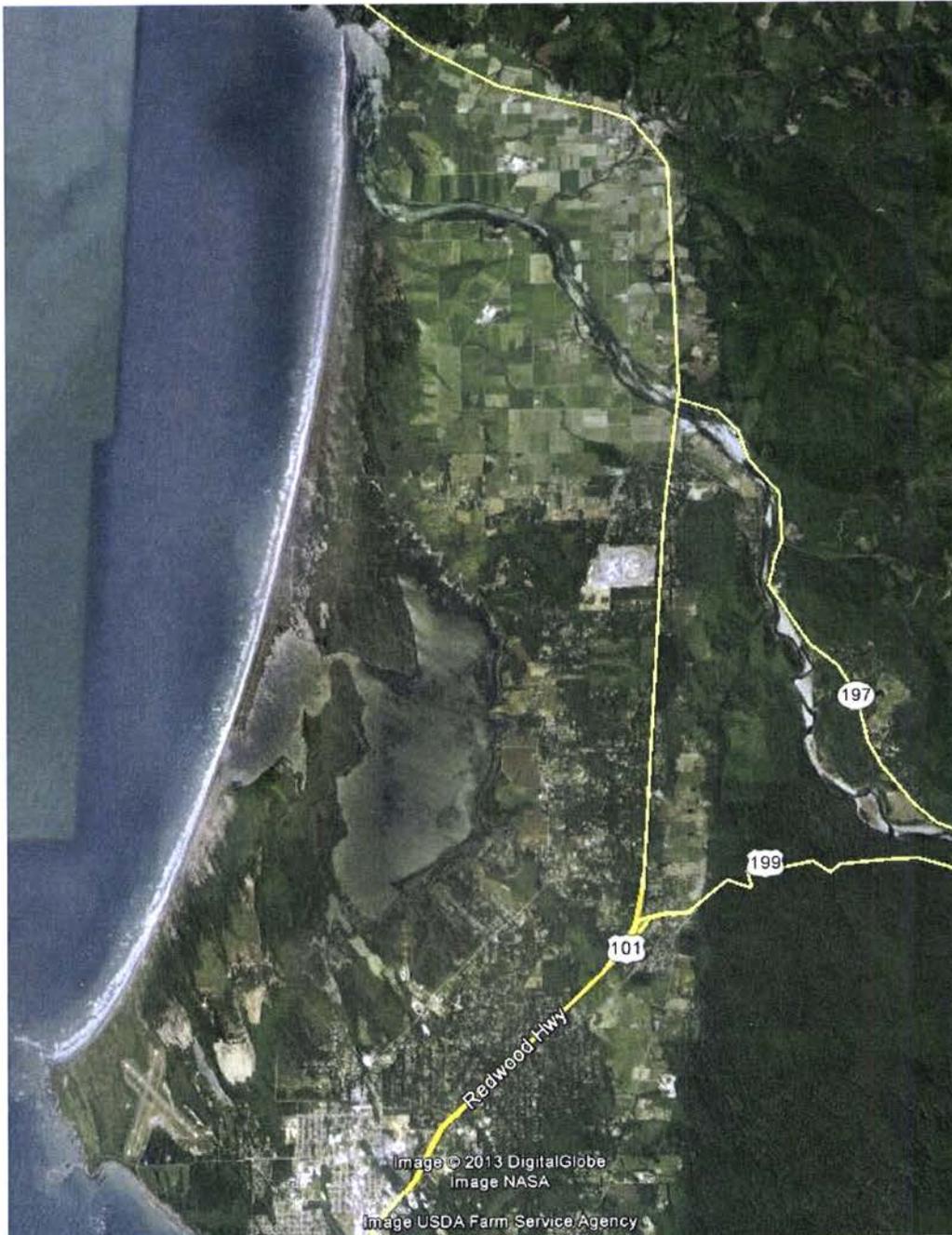


Figure 3. Dune fields between Pyramid Point at the mouth of the Smith River and Point St. George near Crescent City (from Cooper (1967)). The stippled areas are Flandrian dunes of various ages. The coarse stippling indicates an early episode of dune formation that was naturally stabilized over the course of vegetative succession, often by dense stands of Sitka spruce (*Picea sitchensis*) and shore pine (*Pinus contorta*). The finer stippling near the coast represents dunes formed by a later Flandrian episode. These areas contained large patches of active dune until they were artificially stabilized by planting European beach grass that now smothers much of the dune field. Inland from the stippled areas south of Lake Earl are dunes from a development cycle much earlier than the Flandrian. The old dunes above Point George are “perched” above coastal cliffs that limit the supply of sand.

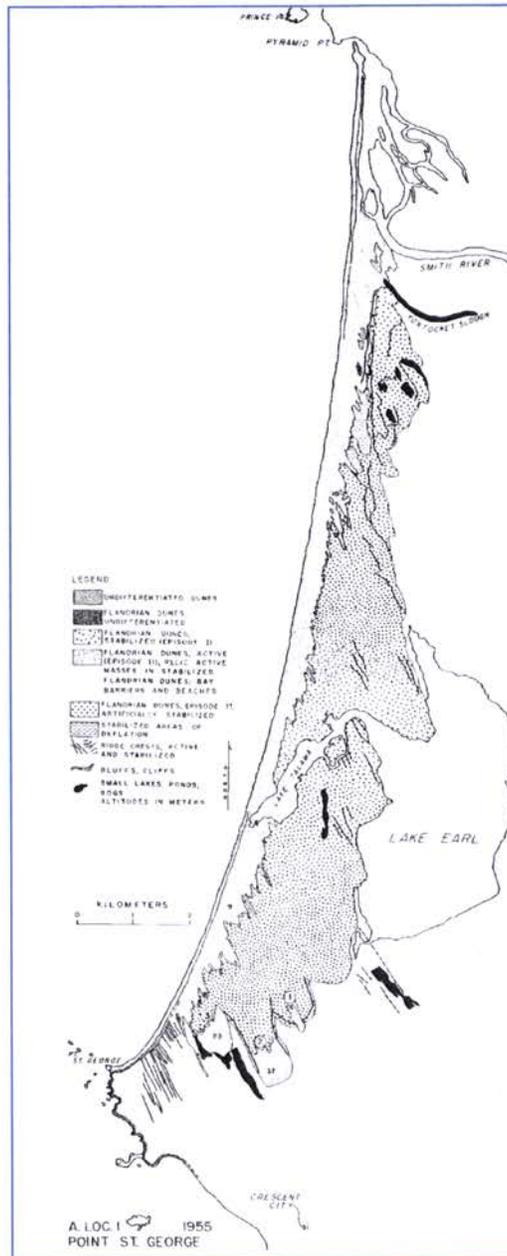


Figure 4. McNamara Field in the stabilized dunes above Point St. George. Dune lakes and wetlands are apparent toward the left.



Figure 6. Boundary of the dune-wetland ecological region between the mouth of the Smith River and Point St. George in Del Norte County. The boundary follows the edge of the coastal dune to Lake Earl, follows the marshy edge of Lake Earl until the lake curves toward the coast, jogs inland and follows Lake Earl Drive until it becomes Northcrest Drive, and then continues southwesterly to the coast to include all undeveloped areas of the ancient stabilized dune that includes McNamara Field.

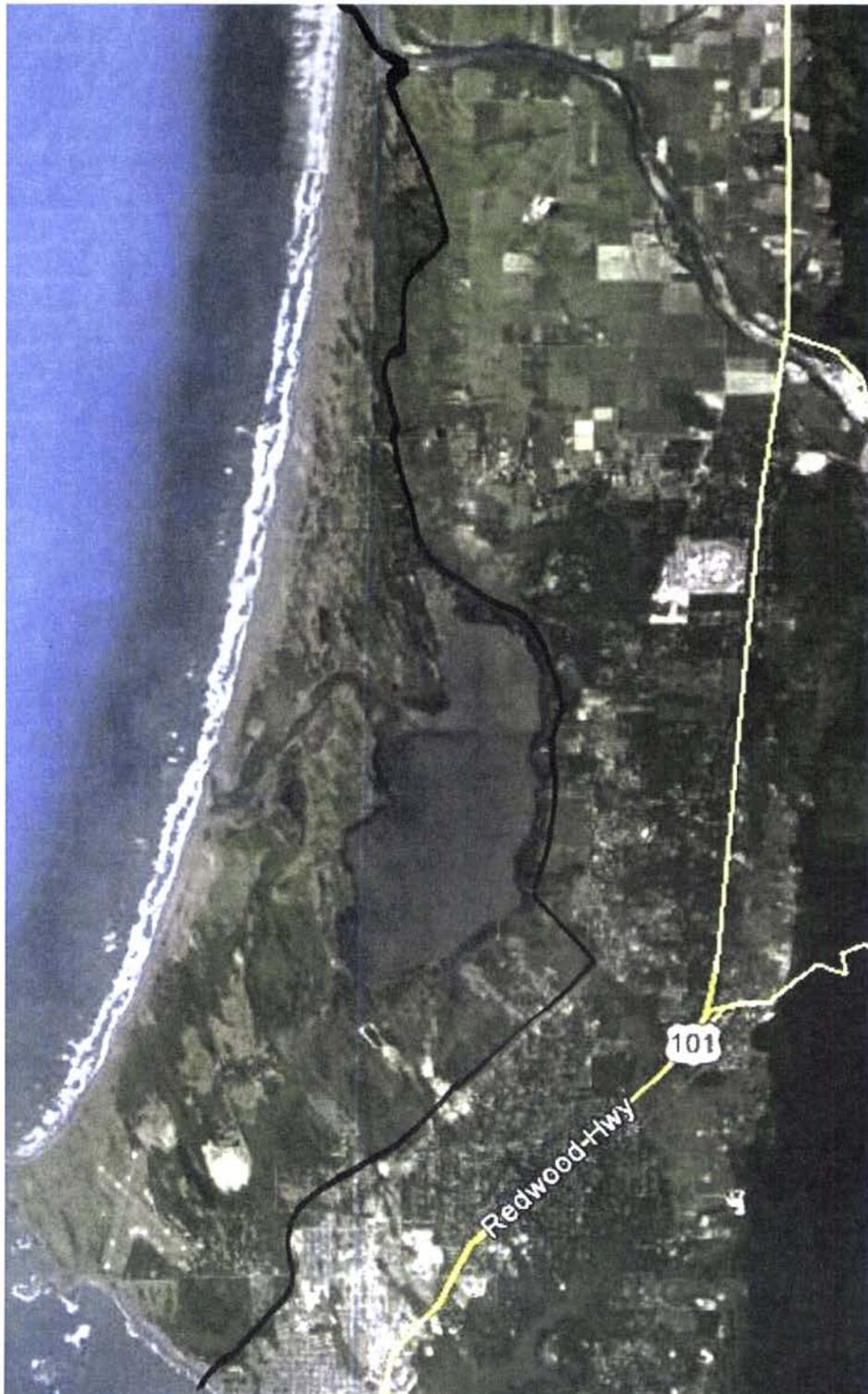
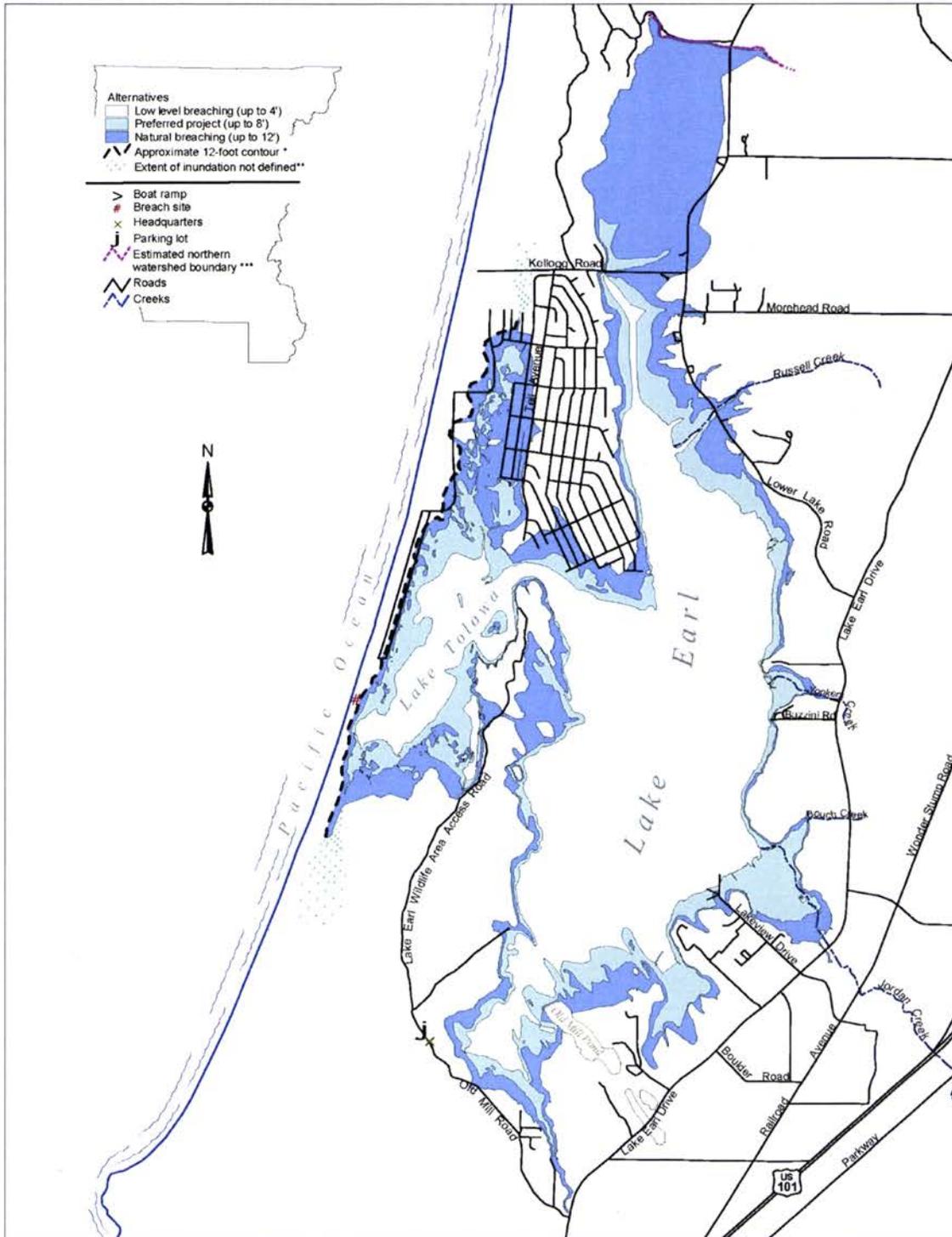


Figure 7. Northern dune peninsula and adjacent area to the north showing wetlands identified by the U. S. Fish and Wildlife Service as part of the National Wetland Inventory



Figure 8. Boundaries of Lake Earl lagoon within historical elevation contours. (from CDFG 2004, Figure 2).



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April 9, 2013

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COASTAL COMMISSION

BY MAIL AND FAX

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Board of Commissioners
Border Coast Regional Airport Authority
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EXHIBIT NO. 17

APPLICATION NO.

1-13-009 (Border Coast
Regional Airport Authority)
COMMENT LETTER FROM
KELLY SMITH (1 OF 4)

RE: Opposition to Coastal Development Permit (CDP) for Runway Safety Area (RSA)
Improvement Project Del Norte County Regional Airport, Jack McNamara Field (CEC)

Dear Commissioners:

I represent the Pacific Shores Property Owners Association, which includes hundreds of private property lots owners in the Pacific Shores Subdivision of Del Norte County. The Association opposes granting of a Coastal Development Permit (CDP) for the expansion of the Border Coast Regional Airport, its Runway Safety Area Improvement Project, or any project using land in the Pacific Shores subdivision for wetland mitigation for the airport projects.

It is the Association's position that the CDP application submitted to the Coastal Commission by the Airport Authority in February 2013 is woefully incomplete and should be rejected immediately.

The airport has presented a half-baked CDP application to the Coastal Commission which would apparently remove the dedicated public access to Association members' private Pacific Shores properties. The scheme pushed by California Department of Fish & Wildlife with other free-wheeling environmental agencies, would tear out and "restore" the roads as wetlands to mitigate the loss of wetlands by the airport project.

This application immediately serves to diminish the value and use of the private properties. The wetlands, species habitat and other "restoration" will also reduce the potential to develop the property, even mitigation is conducted only on those County roads or public lands adjacent to the private half acre lots throughout the subdivision.

Further physical taking will result from the intentional spreading of endangered species habitat and wetlands onto the private properties which will adjoin any lots or county roads "restored" to wetlands and habitat, a taking of private ownership without just compensation, in violation of the Fifth Amendment of our federal constitution and First Amendment of our state constitution.

The wetland mitigation effecting more than 15 acres of Pacific Shore roads and requiring state purchase of many more acres to turn into habitat would violate the California Environmental Quality Act (CEQA) by failing to analyze its potentially significant impacts to transportation, growth, land use, water quality, wetlands and services.

In violation of PRC §30231, the Pacific Shores wetland mitigation suggested in the airport's CDP application fails to address the potentially significant impacts of the changed surface water drainage. The entire 1,000-plus acres of the subdivision were designed and graded with runoff channels adjacent to the roads. The impacts of changing the drainage will include ponding, with its consequent odors and mosquito breeding, inadvertent creation of wetlands elsewhere, including on private land, as well as impacts to the existing water quality throughout the subdivision and the reduced feasibility of municipal improvements which are the right of the private property owners.

Altered land use patterns are also potential impacts. Access to lots will be steered around closed roads. Public recreational access will, apparently, be reduced with additional fencing.

At present however, the project is vaguely defined. It clearly is intended to promote the expansion of wetlands and habitat. But how, where exactly, and when are not revealed. No wetland delineations have been released. No actual restoration plans have been made public. If the Airport Commission and the County proceed with any binding agreements, including purchase agreements, CEQA compliance by way of an environmental impact report will be a post hoc rationalization.

Public Resources Code 302333(a) allows the "diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes" only "where there is no feasible less environmentally damaging alternative," where "feasible mitigation measures" "minimize environmental effects," and limited to the following:

(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.

(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps.

(3) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.

(4) Incidental public service purposes, including, but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.

(5) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.

(6) Restoration purposes.

(7) Nature study, aquaculture, or similar resource-dependent activities.”

PRC §30233(c) further requires:

“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.” Emphasis added.

Contrary to the legal interpretation of the above provided in the Airport’s CDP application, “incidental public services are limited to temporary disruptions and do not usually include permanent roadway expansions. Roadway expansions are permitted only when no other alternative exists and the expansion is necessary to maintain existing traffic capacity.” *Bolsa Chica Land Trust v. Superior Court* (1999) 71 Cal.App.4th 493, 517.

The *Bolsa Chica* court took exception to the Coastal Commission’s application of its own guidelines and did not, as the Airport’s application seems to conclude, give the Coastal Commission *carte blanche* to decide what incidental service might be expanded to include. See the application, page 2. Here it would clearly be a violation of PRC §30233.

Nor does the “nature study” exception apply. Both the airport runway destruction of wetlands, and any Pacific Shore road closures will inherently reduce any “nature study” opportunities. The airport wetlands will be gone. The Pacific Shores wetlands will be fenced in land further isolated from public access.

The Coastal Commission has always required of private development at Pacific Shores “a comprehensive and detailed project description.” The application submitted by the Airport is patently a work in progress. It lacks detail necessary for the Coastal Commission to even evaluate a development permit at Pacific Shores.

Whenever private landowners have sought development at Pacific Shores the Coastal Commission has repeatedly and consistently required the following:¹

1. A wetland delineation prepared by a qualified wetlands biologist, not only of the project site but the surrounding areas.

¹ See for example the Bicknell cease and desist item, CCC-06-CD-04, Exhibit 3 thereto, page 3.

2. A biological habitat assessment, "outlining the presence or absence of any state or federal listed species" of the lands of project area, prepared by a biologist with experience in this field.

This is critical information for the proposed Airport mitigation project. As discussed at length in the *Bolsa Chica* case, the Commission must make express findings of wetland development in or near ESHAs.

Therefore, the location of any proposed wetland mitigation at Pacific Shores must first consider the presence or absence of Environmentally Sensitive Habitat Areas (ESHAs) in order to analyze the impact of any wetland mitigation project upon such areas, and comply with PRC §30240.

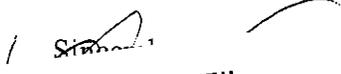
Nor can the impacts of any Pacific Shores wetlands mitigation project be analyzed without any actual delineation of existing wetlands. Without such delineation, restoring a road to wetland, cutting off water elsewhere (by changed drainage patterns, see above), may actually result in diminished wetlands which already exist.

Such unintended consequences have been the hallmark of the state's management of Lake Earl natural resources—from the Aleutian geese habitat debacle of early days to the eradication of Lake Earl salmon and the consequent overpopulation of laughably "endangered" Tidewater Goby.

To summarize, the Coastal Commission must have a complete application, with an genuine description of the wetland mitigation selected, before it can deem an application complete. This is vital for a proper evaluation as trustee and responsible agency. And it is only fair and proper for genuine public participation in the Coastal Commission's review.

Such proper evaluation by the Coastal Commission can only be made with 1) an environmental impact report pursuant to CEQA, with a genuine evaluation of alternatives, prepared before adoption of any Pacific Shores wetland mitigation, or approval of any CDP for airport expansion predicated on such mitigation; 2) A complete wetland delineation of Pacific Shores, completed before acceptance of an application, and its scheduling for hearing; 3) A biological assessment of the actual application project—wetland mitigation specifically described—must first be completed and submitted before any application can be considered complete, and finally; 4) ESHA findings of both the airport wetlands and any specific Pacific Shores wetland mitigation lands must be reached based on substantial evidence.

Thank you for your attention to this matter.


Signature on File

KELLY T. SMITH

Eileen Cooper, 2644 Roy Ave, Crescent City, CA 95531

August 10, 2013

Boarder Coast Regional Airport Authority (BCRAA)
150 Dale Rupert Road
Crescent City, CA 95531

REGARDING:

Jack McNamara Field Airport, CEC
Runway Safety Area (RSA) Project
Coastal Permits-Mitigation

EXHIBIT NO. 18

APPLICATION NO.

1-13-009 (Border Coast
Regional Airport Authority)

COMMENT LETTER FROM
EILEEN COOPER (1 of 3)

Bob Merrill North Coast District Office
California Coastal Commission
Eighth Street, Suite 130
Crescent City, CA 95521

Fencing:

The last phase of fencing around the airport will cut through valuable ESHA wetlands, dune swales, and rare Sitka Spruce/ Pine Shore forest habitat within Point St George conserved Parklands. It is my understanding that the Airport will be allowed easement to do so. Impacts to all three of these Coastal Environmentally Sensitive Habitat Areas (ESHA)- dunes, wetlands, Pine Shore/Sitka Spruce forest habitats along the fence line should be carefully mitigated. To maintain and enhance connectivity, and biological productivity of the Point St. George Parklands, it is important to provide passage underneath the fencing across the wetland/waterway, or dune swale, for small water dependent animals, such as otter and western pond turtles (species of concern) that regularly move through the parklands. The construction activities for the fencing can significantly impact the wetland, and the long term maintenance of keeping the fencing clear is destructive to wetland vegetation, biological productivity, and maintenance compaction of the wetland characteristics. Minimal fence construction strategy has already been provided. However, minimal maintenance strategy is also needed, and the avoidance of excessive vegetation removal and use of heavy equipment that will compact wetland soil characteristics within the lush wetland drainage area.

Western Lily Restoration area

The airport easement within proposed new fencing of Point St. George Parklands is planned to provide for restoration of Endangered Western Lily habitat. A difficult ecological compromise is proposed within 14+ acres: the removal of Sitka Spruce/Shore Pine trees and clearing of understory to aid the lily, which grows in more open habitat on the wetland periphery of such forests. The very small areas where lily currently exist needs restoration. However, the proposed area of clearing is itself ESHA-a globally imperiled forest type and S2 classification for all Sitka spruce series, of special concern in California (VegCamp, www.dfg.ca.gov/biogeodata/vegcamp/pdfs/NaturalCommunitiesList_Oct07.pdf). Also reference- senior ecologist Chad Roberts submittal to the Coastal Commission regarding FODN appeal of the original Airport Terminal permit application and the final Coastal permits for the terminal, including findings.

The western lily restoration strategy could be staged, first within an immediate smaller zone surrounding the lilies, to gauge success and gain experience. Please avoid removing excessive areas of imperiled forest, without demonstrated lily restoration success specific to this area.

Helping the Western Lily is a project in and of itself that has impacts to forest ESHA. The ESHA forest impacts that will be incurred from Western Lily restoration need to be mitigated. Impact to ESHA requires mitigation, despite the good intentions for the project that will impact forest ESHA.

LCP Policy, Marine and Water Resources, VII. D. Wetlands:

4. g. Due to the scale of the constraints maps, questions may arise as to the specific boundary limits of an identified environmentally sensitive habitat area. Where there is a dispute over boundary or location of an environmentally sensitive habitats area, the following may be requested of the applicant:

- i.) A base map delineating topographic lines, adjacent roads, location of dikes, levees, flood control channels and tide gates.
- ii.) Vegetation map
- iii.) Soils map

Review of this information shall be in cooperation with the Dept. of Fish and Game and the County's determination shall be based upon specific findings as to whether an area is or is not an environmentally sensitive habitat area based on land use plan criteria, definition, and criteria included in commission guidelines for wetland and other wet environmentally sensitive habitat areas as adopted February 4, 1981. The Dept. of Fish and Game shall have up to fifteen days upon receipt of County notice to provide review and cooperation.

LCP VII.E: Riparian Vegetation, 4: Policies a:

Riparian vegetation shall be maintained along streams, creeks and sloughs and other water courses within the Coastal Zone for their qualities as wildlife habitat, stream buffer zones, and bank stabilization.

LCP Policy, Marine and Water Resources, VI. C:

1. The County seeks to maintain and where feasible enhance the existing quality of all marine and water resources.
3. All surface and subsurface waters shall be maintained at the highest level of quality to insure the safety of the public health and the biological productivity of coastal waters.
6. Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. Development in areas adjacent to environmentally sensitive habitat areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

It should be pointed out that the Bay Meadows subdivision was given permits without regard to Sitka Spruce/PineShore forest ESHA. Therefore, there is much opportunity to enhance and conserve Sitka Spruce/PineShore forest both at Pacific Shores and at Bay Meadows.

Another opportunity to mitigate Sitka Spruce Forest impacts is at Elk Creek:

Invasive non-native English Ivy continues to overwhelm and suffocate most of the large Spruce trees along the waterways, part of the ESHA riparian habitat, an S2 classification for all Sitka spruce series, of special concern in California (VegCamp, www.dfg.ca.gov/biogeodata/vegcamp/pdfs/NaturalCommunitiesList_Oct07.pdf).

Wetland Mitigation:

Coastal wetland mitigation has greater scope and requirements than the Corps simple replacement formulas. The biological productivity of wetland mitigation has been shown to be inferior to such natural high quality areas, with a high failure rate (recent study from water quality wetland policy review):

http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/mitigation_finalreport_full081307.pdf

The only County owned property that is sufficient in size and similar in character to the impacted RSA wetlands is at the abandoned Pacific Shores Subdivision. The habitat type contains similar dune swale wetlands and Pine Shore forest type. The existing wetlands and environs at the abandoned Pacific Shores Subdivision have the maximum potential for restoration, because current derelict conditions are significantly degrading this biologically important area. The proposed airport mitigation at the abandoned PSS is an important correction and restoration effort.

Valuable wetlands, waters of the US, and rare dune habitat are currently being degraded by rampant illegal trash dumping, illegal OHV riding, and even illegal breaching of Lake Earl/Tolowa Coastal Lagoon, the largest coastal lagoon in the lower 48 States. The network of remote roadways within the abandoned subdivision continues to allow remote, unfettered access that supports and enables these activities. These baseline

conditions at the abandoned PSS are continue to significantly impair important wetlands, waters of the US, and rare dune habitats, and globally imperiled Pine Shore forest habitat.

The majority of all private property owners of the abandoned subdivision have already sold their lots, and the vast majority of remaining property owners have expressed a desire to sell at the assessed value. There is great hope for restoration, a step towards controlled access and the enhancement of the surrounding State Parklands, to become a showcase for endemic rare flowers, a pristine lagoon shoreline with a management plan that works. This mitigation plan is the most hopeful step towards restoration and conflict resolution that has been proposed within the past 40 years of dereliction.

The current baseline conditions of the abandoned Pacific Shores Subdivision have resulted in the degradation of one of California's most valuable lagoon, dune and wetland complexes. This mitigation effort has the potential to transform what has been an ugly scar on the land. The abandoned Pacific Shores is by far the most needed wetland restoration area in Del Norte County.

The network of roadways within the subdivision consist of compacted fill material, which fragments the wetland pockets that naturally exist throughout the abandoned subdivision. The natural northwest to southeast orientation of the wetland pockets is interrupted and fractured by the network of roads. The removal of roads will allow natural drainage patterns to return. Removal of the compacted soils of the roadways will allow these unnatural barriers to return to the natural wetland functions that existed before the roads were constructed. These areas should be restored to a permeable condition that follows natural contours.

The current efforts to acquire and restore the abandoned PSS, and to remove and restore roadways are the most hopeful steps towards correction of the unfettered access that enable illegal encampments and rampant dumping of leaky oil vehicles, machinery, refrigerators, stoves, everyday toxic household trash. This dumping continues to occur along the existing network of abandoned roads. Costly County cleanups have not been a solution. Illegal and frightening encampments have significantly destroyed rare Pine Shore vegetation, and create an atmosphere that repels visitation to this ecological wonderland.

Illegal OHV riding is rampant throughout the subdivision, where the network of roads allows remote, unfettered access that leaves ugly ruts within the lagoon shoreline, dunes, rare plant habitat, Endangered Oregon Silverspot Butterfly habitat, as well ponds throughout the subdivision.

The uncontrolled access to the abandoned subdivision has enabled the illegal breaching of Lake Earl Coastal Lagoon. These illegal breaching activities have defeated Army Corps Permits issued to California Fish and Wildlife to execute an effective and legal management plan for Lake Earl/Tolowa lagoon. The US Corps permits for lagoon management requires carefully timed breaching, so as to enhance springtime lagoon conditions and Endangered Tidewater Goby habitat. The unfettered access that has enabled illegal breaches, has jeopardized the Endangered Tidewater Goby within the lagoon, and has degraded the entire wetland lagoon environs.

I ask that the entire Coastal Commission record regarding the Permitting of California Fish and Game Management Plan for Lake Earl be considered a part of this record. There is important habitat value information about Lake Earl that highlights the importance of enhancing this area. Unfettered access has played a substantial roll in defeating the management plan for the lagoon, providing unrestricted access to the vulnerable breach area.

Thank you for your consideration,

Eileen Cooper- 465-8904

Kraemer, Melissa@Coastal

From: eileen cooper <upsprout@yahoo.com>
Sent: Wednesday, August 28, 2013 12:02 PM
To: Kraemer, Melissa@Coastal; Merrill, Bob@Coastal
Cc: eileen cooper
Subject: final draft comments FODN
Attachments: airport mitigation coastal permit.doc

Here are our our concerns as attached. I will mail a hard copy. The turtle pictures are the ones that were already emailed to you.

Please note the section about the lack of identification of forest ESHA impacts, which is an important to remedy. And we also highlight the insufficiency of 1:1 wetland mitigation for off site and dissimilar habitats.

Thank you
Eileen Cooper

EXHIBIT NO. 19
APPLICATION NO.
1-13-009 (Border Coast
Regional Airport Authority)
**COMMENTS FROM FRIENDS
OF DEL NORTE (1 of 10)**

Friends of Del Norte, *Committed to our environment since 1973*

A nonprofit, membership based conservation group,

advocating sound environmental policies for our region. PO Box 229, Gasquet, CA 95543

August 28, 2013,

ATT: Mr. Bob Merrill North Coast District Office, Melissa Kraemer,

California Coastal Commission

1385 Eighth Street, Suite 130

Arcata, CA 95521

REGARDING:

Jack McNamara Field Airport, CEC

Runway Safety Area (RSA) Project

Coastal Permits-Mitigation

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Introduction

The Friends of Del Norte have been directly engaged in guiding Del Norte County's new airport expansion and runway improvements, so as to promote the most ecologically sound choices. We hope that the resolution of conflicts at Pacific Shores Subdivision can enable thoughtful mitigation to proceed there. We understand the difficulties that the airport management faces, and the hasty changes in mitigation plans that have arisen in response to the land conflict issues at Pacific Shores.

We caution the Coastal Commission to insist on a higher mitigation ratio for actual wetland replacement (currently 1:1) especially since the new mitigation areas are off site and of different kind. One to one replacement will result in wetland losses for California, as manmade wetlands fail, especially with regard to biological productivity, which is most important to retain consistency with the Coastal Act.

We thank you and your staff for careful deliberation.

New Fencing Impacts and Recommendations

The last phase of proposed fencing around the airport will cut through valuable ESHA wetlands, dune swales, and rare Sitka Spruce/ Shore Pine forest habitat within Point St George conserved Parklands. It is my understanding that the Airport will be allowed easement to do so. Impacts to all three of these Coastal Environmentally Sensitive Habitat Areas (ESHA)- dunes, wetlands, Shore Pine /Sitka Spruce forest habitats along the fence line should be carefully mitigated. To maintain and enhance connectivity, and biological productivity of the Point St. George Parklands, it is important to provide passage underneath the fencing across the wetland/waterway, or dune swale, for small water dependent animals, such as otter, beaver and western pond turtles (CA species of special concern) that regularly move through the parklands. The construction activities for the fencing can significantly impact wetlands, and the long term maintenance of keeping the fencing clear is destructive to wetland vegetation, biological productivity, and maintenance compaction of the wetland soils. Conditions should require minimal fence construction strategy, as well as minimal maintenance strategy, and the avoidance of excessive vegetation removal and use of heavy equipment that will compact wetland soil characteristics within the lush wetland drainage area.

Other Fencing Impacts- ESHA mitigation for biological productivity/connectivity

The existing airport boundary fence at the Northern end of secondary runway 17/35 bisects a perennial dune pond, and restricts Western Pond turtles (CA species of concern) from use of their habitat. Please reference photos from biologist Alan Barron. Unfortunately this fence was constructed without regard for these globally vulnerable turtles. Sensitive pond turtles are now unfortunately restricted from use of half their pond to forage, mate etc. What if baby turtles swim through the fence and cannot return to the other side when they grow? One picture is worth a thousand words. Please correct this egregious mistake by creating passageways under this area of fence for turtles, beaver and otter. The entire existing airport fence was designed without regard for biological connectivity.

As an important onsite mitigation measure, please require an evaluation of the entire airport fence for wetland crossings, and require the restoration of biological connectivity by establishing small passageways for otter, beaver and western pond turtle access.

Western pond turtle:

California Department of Fish and Wildlife	SSC	Species of Special Concern
Bureau of Land Management	BLM:S	Sensitive
USDA Forest Service	USFS:S	Sensitive
Natureserve Global Conservation Status Ranks	G3G4T3 S3	Vulnerable

Western Lily Restoration Incurs Impacts to ESHA forest

The airport easement within proposed new fencing of Point St. George Parklands is planned to provide for restoration of Endangered Western Lily habitat. A difficult ecological choice is proposed within ~14 acres: the removal of Sitka Spruce/Shore Pine trees and clearing of understory to aid the lily, which grows in more open habitat on the wetland periphery of such forests. The very small areas where lily currently exist does need restoration. However, the proposed area of clearing is itself ESHA-a globally imperiled forest type and S2 classification for all Sitka spruce series, of special concern in California (VegCamp, www.dfg.ca.gov/biogeodata/vegcamp/pdfs/NaturalCommunitiesList_Oct07.pdf). Also reference-senior ecologist Chad Roberts submittal to the Coastal Commission (attached) regarding FODN appeal of the original Airport Terminal permit application and the final Coastal permits for the terminal, including findings that established Shore Pine/Sitka Spruce forest as ESHA in Del Norte County.

Helping the Western Lily is a project in and of itself that has impacts to forest ESHA. The ESHA forest impacts that will be incurred from Western Lily restoration need to be mitigated. Impact to ESHA requires mitigation, despite the good intentions for the project that will impact forest ESHA.

It appears that the entire RSA mitigation proposal does not recognize and account for these ESHA forest impacts:

Introduction, Section 1.1 Summary of impacts fails to identify Shore Pine/Spruce forest impacts.

Section 2.4 Proposed Mitigation fails to identify ESHA forest impacts

Section 3.1 and 3.2 Goals and Objectives fails to identify the need for Forest ESHA mitigation

Table 1- Coast Shrub/Forest identifies that at least 7 acres of the 14 acres of western lily habitat restoration area is upland, and 7 acres is wetland. This wetland and upland forest is listed as mitigation credit for western lily. Although the lily will be restored, the ESHA forest will be severely damaged, and trees removed. Forest ESHA impacts should also be listed as between 7 to 14 acres of ESHA forest impacts that will need to be mitigated! The forest ESHA includes both uplands and wetlands, as Sitka Spruce can grow in both uplands and peripheral wetlands, as their roots are tolerant of periodic flooding.

Please ask for a survey and an accounting of ESHA forest impacts at the lily site, and full replacement mitigation. It appears that currently there is nothing! (There is only 7 acres wetland credit and 7 acres of upland credit for Western Lily restoration, rather than accounting for forest impacts).

The Restoration plan claims that there will be a short lag time to establish mitigation. This is not true with regards to two important ESHA types: Sitka Spruce/Shore Pine forest (because trees take a long time to grow), and dune matt (because some of our thick dune matt is considered "old growth" taking a hundred years to become established, and there is competition difficulty with invasives. Careful long term monitoring will be necessary.

LCP Policy Marine and Water Resources

VII. D. Wetlands:

4. g. Due to the scale of the constraints maps, questions may arise as to the specific boundary limits of an identified environmentally sensitive habitat area. Where there is a dispute over boundary or location of an environmentally sensitive habitats area, the following may be requested of the applicant:

i.) A base map delineating topographic lines, adjacent roads, location of dikes, levees, flood control channels and tide gates.

ii.) Vegetation map

iii.) Soils map

Review of this information shall be in cooperation with the Dept. of Fish and Game and the County's determination shall be based upon specific findings as to whether an area is or is not an environmentally sensitive habitat area based on land use plan criteria, definition, and criteria included in commission guidelines for wetland and other wet environmentally sensitive habitat areas as adopted February 4, 1981. The Dept. of Fish and Game shall have up to fifteen days upon receipt of County notice to provide review and cooperation.

LCP VII.E: Riparian Vegetation, 4: Policies a:

Riparian vegetation shall be maintained along streams, creeks and sloughs and other water courses within the Coastal Zone for their qualities as wildlife habitat, stream buffer zones, and bank stabilization.

LCP Policy, Marine and Water Resources, VI. C:

1. The County seeks to maintain and where feasible enhance the existing quality of all marine and water resources.

3. All surface and subsurface waters shall be maintained at the highest level of quality to insure the safety of the public health and the biological productivity of coastal waters.

6. Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas. Development in areas adjacent to environmentally sensitive habitat areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas.

It should be pointed out that the Bay Meadows subdivision was given permits long before the airport permits, which established Sitka Spruce/Shore Pine forest ESHA. Therefore, there is much opportunity to enhance and conserve Sitka Spruce/Shore Pine forest both at Pacific Shores and at Bay Meadows.

Many of the acquired lots at Pacific Shores that will be used for conservation mitigation do have Pine Shore/Sitka Spruce habitat. An accounting of newly conserved acreage of Sitka Spruce/Shore Pine forest could be used for mitigation of the forest ESHA impacts (created by western lily restoration).

Another opportunity to mitigate Sitka Spruce Forest impacts is at Elk Creek along the recently approved Hobbs Wall Bike Trail. Invasive non-native English Ivy continues to overwhelm and suffocate most of the large Spruce trees along the bike trail, part of an ESHA riparian habitat, an S2 classification for all Sitka spruce series, of special concern in California. Mitigation measures could include an ivy removal/Sitka Spruce restoration management plan within the Hobbs Wall trail riparian areas.

(VegCamp, www.dfg.ca.gov/biogeodata/vegcamp/pdfs/NaturalCommunitiesList_Oct07.pdf).

Wetland Mitigation Formula Adjustments- Strong Performance/Monitoring

The biological productivity of manmade wetland mitigation has been shown to be inferior to natural wetland areas, with a high failure rate (recent study from water quality wetland policy review):

http://www.waterboards.ca.gov/water_issues/programs/cwa401/docs/mitigation_finalreport_full081307.pdf

This study shows that while actual acreage has been replaced in wetland mitigation sampling, the biological productivity largely fails! The Local Coastal Plan (LCP) and the Coastal Act emphasizes and requires biological productivity of ESHA be retained and enhanced!

That is why Coastal wetland mitigation has greater scope and requirements than the Corps simple replacement formulas.

We disapprove allowing just a 1:1 actual wetland mitigation ratio, when the wetland mitigation is being done off site, and now even proposed at various locations with dissimilar habitat values (and lower quality ratings). Surely California will be in jeopardy of wetland losses with such a low standard. We ask for a higher direct wetland replacement ratio, and an overall greater ratio than 4:1 if wetland mitigation moves to Bay Meadows or elsewhere other than Pacific Shores (which although offsite, does have similar habitat).

Within the RSA mitigation plan under the section titled Existing and Adjacent Facilities, the high quality of the surrounding wetlands of the adjacent Point St. George parklands (such as the habitat for western pond turtle and western lily areas) should be recognized, and accounted for within the formula to increase mitigation requirements for airport wetland losses, which are impacting Parklands. This includes forest, dune and wetland ESHA impacts. Again, please refer to the pictures of the vulnerable Western Pond Turtle at the airport.

The High Value of Mitigation at Pacific Shores

The only off site County owned property that is sufficient in size and similar in character to the impacted RSA wetlands is at the abandoned Pacific Shores Subdivision (PSS). The habitat type contains similar dunes, dune swale wetlands and Pine Shore/Sitka Spruce forest type. The existing wetlands and environs at the abandoned PSS have the maximum potential for restoration, because current derelict conditions are significantly degrading this biologically important area. The proposed airport mitigation at the abandoned PSS is an important correction and restoration effort.

Valuable wetlands, waters of the US, and rare dune habitat are currently being degraded by rampant illegal trash dumping, illegal OHV riding, and even illegal breaching of Lake Earl/Tolowa Coastal Lagoon, the largest coastal lagoon in the lower 48 States. The network of remote roadways within the abandoned subdivision continues to allow remote, unfettered access that supports and enables these activities. These baseline conditions at the abandoned PS continue to significantly impair important wetlands, waters of the US, rare dune habitats, and globally imperiled Pine Shore forest habitat.

It should be recognized that a significant portion of the value of acquiring the Pacific Shores (PS) lots depends on the ability to remove unfettered access along roads that enable degrading illegal

activities to occur. Lack of road removal should decrease the credit for lot acquisition in the mitigation formula. The airport mitigation plan should be penalized for not removing Pacific Shores roads. Restoration activities planned within the roadways would not occur, not just wetland mitigation, such as frog ponds (redlegged frog habitat, a sensitive species), and upland dune plant restoration.

If road removal cannot be accomplished, some kind of controlled gated access should be established to add value to the acquisition mitigation credits.

The majority of all private property owners of the abandoned subdivision have already sold their lots, and the vast majority of remaining property owners have expressed a desire to sell at the assessed value. There is great hope for restoration, a step towards controlled access and the enhancement of the surrounding State Parklands, to become a showcase for endemic rare flowers, a pristine lagoon shoreline with a management plan that works. This mitigation plan is the most hopeful step towards restoration and conflict resolution that has been proposed within the past 40 years of dereliction.

The current baseline conditions of the abandoned Pacific Shores Subdivision have resulted in the degradation of one of California's most valuable lagoon, dune and wetland complexes. This mitigation effort has the potential to transform what has been an ugly scar on the land. The abandoned Pacific Shores is by far the most needed wetland restoration area in Del Norte County.

The network of roadways within the subdivision consist of compacted fill material, which fragments the wetland pockets that naturally exist throughout the abandoned subdivision. The natural northwest to southeast orientation of the wetland pockets is interrupted and fractured by the network of roads. The removal of roads will allow natural drainage patterns to return. Removal of the compacted soils of the roadways will allow these unnatural barriers to return to the natural wetland functions that existed before the roads were constructed. These areas should be restored to a permeable condition that follows natural contours.

The current efforts to acquire and restore the abandoned PSS, and to remove and restore roadways are the most hopeful steps towards correction of the unfettered access that enable illegal encampments and rampant dumping of leaky oil vehicles, machinery, refrigerators, stoves, everyday toxic household trash. This dumping continues to occur along the existing network of abandoned roads. Costly County cleanups have not been a solution. Illegal and frightening encampments have significantly destroyed rare Pine Shore vegetation, and create an atmosphere that repels visitation to this ecological wonderland.

Illegal OHV riding is rampant throughout the subdivision, where the network of roads allows remote, unfettered access that leaves ugly ruts within the lagoon shoreline, entrapping Endangered Tidewater Goby (a significant takings). Repeated tire tracks destroy dunes and rare plants such as Endangered Silvery Phacelia, and food violets for Endangered Oregon Silverspot Butterfly. Ponds and wetlands with red legged frogs- threatened species of concern takings- are impacted throughout the subdivision.

The uncontrolled access to the abandoned subdivision has even enabled the illegal breaching of Lake Earl Coastal Lagoon. These illegal breaching activities have defeated Army Corps Permits issued to California Fish and Wildlife to execute an effective and legal management plan for Lake Earl/Tolowa lagoon. The US Corps permits for lagoon management requires carefully timed breaching, so as to enhance springtime lagoon conditions and Endangered Tidewater Goby habitat.

The unfettered access that has enabled illegal breaches, has jeopardized the Endangered Tidewater Goby within the lagoon, and has degraded the entire wetland lagoon environs.

I ask that the entire Coastal Commission record regarding the permitting of California Fish and Game Management Plan for Lake Earl be considered a part of this record. There is important habitat value information about Lake Earl that highlights the importance of enhancing this area. Unfettered access has played a substantial roll in defeating the management plan for the lagoon, providing unrestricted access to the vulnerable breach area.

Agricultural Mitigation Sites are Inconsistent with LCP Policy

Del Norte County has strong LCP agricultural resource and soil resource protection policies. We include important sections below. Using agricultural sites for mitigation of wetlands contradicts these strong protective LCP Agricultural and Soil Policies, and clearly makes selection of such agricultural sites inconsistent with the LCP. Ranching and farming interests have consistently tried to drain Del Norte County wetlands in behalf of maintaining maximum farming areas.

Within Del Norte County's General Plan Policy update (and LCP update attempt), agricultural lands surrounding the lagoon were prohibited from further subdivision, and 20 acre ag minimums were retained, to discourage development of the lagoon wetland resources, as well as agricultural lands surrounding the lagoon, thus preserving the resource values of the area. Although the LCP update was not completed, Del Norte County General Plan was updated, and enshrines this principal, protecting both agricultural land and the lagoon environs.

Bay Meadows Mitigation Site

Bay Meadows is the notable exception to the mentioned 20 acre agricultural preservation policy around the east side of the lagoon. This area had grandfathered planned community zoning already established for residential development before the General Plan update. Had it not been for this grandfathered status, Bay Meadows would have been designated 20 acre agricultural land, consistent with the General Plan Policy to discourage development surrounding the east side of the lagoon.

Bay Meadows is not a desirable site for dense development because of its proximity to the lagoon and distance from the central core of development within the urban areas of Crescent City. Because of this grandfathered zoning, we now have infrastructure recently extended to the Bay Meadows area (sewer and water), and an approved Coastal permit for a planned residential development- Harbor Center Tract- which is part of the original Bay Meadows tract. From an ecological standpoint, it would be desirable to turn back the clock and partially withdraw some development potential from the remaining Bay Meadows, thus better preserving resource values surrounding the lagoon. However, this does come with consequences of impacting or limiting real development potential to a site with sewer and water available.

At the recent Del Norte County Board of Supervisor's meeting, August 13, 2013, agenda item regarding Bay Meadows: <http://www.countyofdelnorte.us/agendas/bos/publishedmeetings.htm>, the property owner drafted two suggested concepts for providing a central mitigation area, but retaining

the development plans at Harbor Center Tract on the south end (already permitted), as well as creating new concentrated development plans on the north end. This has not been approved, but clearly as shown, this deal could place dense development far from the main road and adjacent to an important Lake Earl tributary, the Standard Veneer old mill pond, -marsh owned by CA Dept. of Fish and Wildlife. This development impact should be avoided. Although this scheme would need Coastal Development Permits, the County is asking for a nod of approval now, which should be discouraged. Dense development at Bay Meadows should only occur adjacent to the main road, Lake Earl Drive, and at a good distance from important wetland areas.

Vipond/Lakeside Loop parcels- high priority acquisition area

The remaining Lakeside Loop parcels would definitely be desirable to acquire. They are in a planning limbo-crisis, much like Pacific Shores. Development here was stopped with a Coastal Appeal process, because the lots never had an adequate wetland evaluation, and failed to provide buffers to the lagoon. Although the old planning documents did recognize a 10 foot lagoon at this site, the maps of the development were incorrectly drawn, and buffers to the lagoon wetlands were not provided. There is not enough room to provide septic systems to these lots without contaminating surrounding wells, the water table, and the lagoon itself. Therefore, we highly recommend making acquisition of the Lakeside Loop lots part of the mitigation plan. They are owned by McNamara (the original developer) but they are on the market, and unsuspecting buyers can be swindled, just like at Pacific Shores.

LCP Policy and General Plan Policy regarding selection of mitigation areas:

Both the LCP and the General Plan are on line at Del Norte County web site. Under Departments: Go to Community Development- planning info- documents LCP and General Plan. They are photo images of the pages, and cannot be edited. Here are some important sections:

Agricultural Lands and Soil Resources

LCP

Under Land Resources, III: General Policies for Agricultural Lands, C: LCP Policies-

4. Conversion of land designated for agriculture use shall be made only when agricultural use is no longer feasible and shall be subject to Coastal Act priorities for coastal land uses (e.g., recreation, coastal dependent industries). Priority shall also be given to land uses which are least likely to conflict with agricultural productivity or activity particularly other resource activities as set forth in the Land Resources- Forestry section and Marine and Water Resources chapter of this document.

Under Land Resources, III: General Policies for Agricultural Lands, B: Present Local Policies: The conservation element of the Del Norte County General Plan established the following as important goals in the maintenance of agricultural land:

- 1. Conserve soil resources to provide a continuing base for agricultural productivity and the County's economy.*
- 2. Reserve in agriculture those soils capable of producing a wide variety of valuable crops.*
- 3. Minimize disruption of viable agricultural areas.*

General Plan: Soil Resources: (this plan has been updated, since the LCP):

Goal 1.D. To maintain the productivity of Del Norte County's soils, reduce erosion, and prevent unsafe and unhealthy soil conditions.

Policies:

1.D.1 The County shall conserve soil resources to provide a continuing base for agricultural productivity and the county's economy by application of appropriate land use and zoning designations.

1.D.3 The County shall utilize low densities of development in areas where soils have moderate or severe limitations for sewage disposal, unless a public sewage system is available within an urban boundary.

1.D.7 The County shall work with agricultural interests in the continued development and implementation of Best Management Practices to minimize the impacts of tilling and grading on soil erosion.

Public Acquisition of Private Land: read the entire beginning section in both LCP and General Plan on line.

LCP: Under Housing/New Development: II New Development: Section G: Acquisition by State and Federal Agencies:

The erosion of the general tax base of this County has been accelerated by the continuing acquisition of private lands by State and Federal agencies. To date (1980) over ¼ of the total County is publicly owned and recent acquisition by the State of the Bliss Ranch and portions of the Bauer Ranch have increased public holdings. The impacts of these State acquisitions is to:

1. Convert productive agricultural lands to non-productive non-agricultural uses in contravention of the policy stated in Section 30242 of the Coastal Act.
2. Have a substantial economic impact in the County by reason of the termination of agricultural production.
3. Reduce or eliminate taxes generated by the private ownership of land.
4. Require substantial expenditure of public funds to acquire, maintain and develop the land. Etc.

General Plan:

Goal 3.D. To discourage unnecessary public land acquisition that may adversely affect agricultural production activities, reduce the County's tax base, and/or result in unneeded expenditure of public funds to acquire, maintain and develop additional land for public use. Etc.

LCP: Under **Land Use:** III Specific Area Recommendations: Section C. Lake Earl Area: Specific Area Recommendations:

- 8: The Hunter Ranch, south of Buzzini Road, is recommended as prime agricultural land due to its potentially higher productive soils and larger parcel size.

Thank you for your consideration,

Eileen Cooper, vice president Friends of Del Norte, on behalf of the Board
707-465-8904

Kraemer, Melissa@Coastal

From: Chad Roberts <rcr@robertsecp.com>
Sent: Wednesday, August 28, 2013 3:05 PM
To: 'Sandra E Jerabek'; Kraemer, Melissa@Coastal; Merrill, Bob@Coastal; Dixon, John@Coastal
Cc: Van Hattem, Michael@Wildlife; 'Karen KOVACS'
Subject: RE: Chad Roberts prelimin. review, BCRAA sites

All,

I've reviewed Sandra's summary of our prior conversations. The summary points in her email correctly represent my evaluations, although I am adding some additional relevant information below (RCR added comments in **bold blue**).

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From: Sandra E Jerabek [mailto:jerabek@jeffnet.org]
Sent: Wednesday, August 28, 2013 1:03 PM
To: Kraemer, Melissa@Coastal; Bob Merrill; John Dixon; Chad Roberts
Cc: Michael van Hattem; Karen KOVACS
Subject: Chad Roberts prelimin. review, BCRAA sites
Importance: High

<p>EXHIBIT NO. 20</p> <p>APPLICATION NO.</p> <p>1-13-009 (Border Coast Regional Airport Authority)</p> <p>COMMENTS FROM CHAD ROBERTS, Ph.D. (1 of 3)</p>
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Hello all,

Because Chad Roberts and I realize there is little time left for him to write up his full report from last week's visit, we forward the following preliminary comments on his behalf. There are only 8 points:

Summary of Chad Roberts Ph.D. observations

during August 23-24, 2013

visit to Point St. George, Pacific Shores Subdivision and Bay Meadows/Harbor Center and Moore areas (the latter sites with Jan Sirchuk). (also conducted brief overview Hambros sites):

1. Roberts continues to be impressed with habitats at Point St. George (PSG) which occur "nowhere else in California," [Ecological conditions in the Crescent City-Point St George coastal plain are relictual, representing a small area of conditions apparently more common in the state during the Pleistocene. The vegetation (and to great extent the soils) are akin to coastal conditions in Oregon, Washington, British Columbia, and Alaska rather than to other coastal portions of California (with a partial exception of the west side of Humboldt Bay and the former conditions on the McKinleyville terrace in Humboldt County). Taken in total these conditions, particularly vegetation alliances, do not occur anywhere else in California.] and he says the wetlands at PSG and the Airport are of the highest quality -- in part because they have hydrologic and habitat connectivity to a much larger, high quality complex at PSG and Tolowa Dunes State Park. (Roberts conducted original wetland surveys for Del Norte County PSG Management Plan.)

2. Wetlands at Airport are the same as wetlands at Pacific Shores, particularly the north east end of Airport are same; also both sites primarily groundwater supplied. **[The wetlands in the dunes and former dunes from northwest of Lake Earl to the airport vicinity lack significant surface water sources, and are hydrologically dependent on rainfall and the resulting groundwater for their existence. To some extent this is also true for the Bay Meadows site, but that site also receives significant inflow from upland areas to the east and southeast. The hydrology of the Moore site is dominated by surface and groundwater flow from the uplands to the east, and differs significantly from the hydrological conditions at the airport. The wetland hydrology within the Pacific Shores site closely matches the hydrology of most or all of the wetlands at the airport.]**
3. Bay Meadows is different, in part that it has older soils; is currently impacted by drainage channels which have changed the original wetlands and lowered groundwater levels; has more challenges that need to be mitigated.
4. At Bay Meadows providing habitat and hydrologic connectivity to Lake Earl Wildlife Area boundary would help, as the overall site drains toward that boundary and Lake Earl.
5. CRAM wetland analysis did not sample enough sites at Airport (or at any of the potential mitigation sites) to sufficiently rate the Airport wetland connectivity to Tolowa Dunes SP/PSG wetland complex. *(Roberts teaches CRAM around the state.)* **[CRAM assesses only current conditions within the assessment area (AA). As the next point indicates, future developments near the AA are not considered. Prior actions (anything occurring more than 5 years before the assessment) are not considered. Conditions or activities beyond 500 meters from the AA boundary are not considered (although this distance is extended to 2000 meters for certain hydrological influences). Thus CRAM is a snapshot of current condition in each wetland AA. Based on the limited CRAM sampling summarized in the CRAM report, existing wetlands in the three sampled sites present about equal conditions. However, the narrow selection of sampled wetlands is not sufficient to reflect the overall wetland conditions at any of the three sites. Sampling the wetlands within a site requires either a probabilistic sampling approach (what CRAM calls an “ambient survey,” based on a statistically based sample draw when all the wetlands on a site are mapped as part of the necessary sample frames) or an iterative sample process that achieves a “convergence” of scores in each wetland class. In addition, CRAM only captures existing conditions, and does not indicate the condition in “mitigation wetlands” manipulated to produce conditions that are not currently present. However, it should be noted that CRAM has been shown to be useful when used to track the changing conditions at mitigation sites as those conditions improve.]**
6. CRAM method does not analyze future impacts, so the method does not factor impacts from the two subdivisions on both sides of Bay Meadows site that will occur when they are developed.
7. In the case of Airport and Pacific Shores wetlands, we have greater certainty that there will not be *these* kinds of single- and multi-family development impacts on mitigation. (PSS has different issues, being open to trespass.)
8. Mitigation plans and other projects removing ESHA trees (Coastal shore pine/Sitka spruce series) need to quantify impact and mitigate for it. Coastal shore pine has S2.1 State rating of threatened/imperiled. **[The classification process used by the Department of Fish and Wildlife to identify threats to biodiversity is complex and sometimes difficult to parse. The Department publishes a summary that lists California plant alliances with both “global” and “state” sensitivity ranks. The rankings are based on NatureServe protocols, particularly for global ranks, The state ranking incorporate the NatureServe “threat” rankings. The state ranking for all beach pine forests is “S2.1” (see <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=24716&inline=1> see page 18). In the NatureServe coding this signifies that beach pine forests are “imperiled” (the “S2”) in California. The department also adds a “threat code extension;” the “x.1” extension is interpreted “seriously threatened in California (over 80% of occurrences threatened / high degree and immediacy of threat” (see <http://www.dfg.ca.gov/biogeodata/cnddb/pdfs/SPPlants.pdf>; scroll down to page 7). Beach pine forest is one of the most at-risk alliances in the state, as it occurs in only two coastal**

locations, the Del Norte coastal plain and coastal areas in the Humboldt Bay region. Its status as a Coastal Act ESHA can hardly be questioned.]