



Establishing Target Acres for Habitat Recovery in the Lower Columbia River and Estuary, cont'd

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Summary of Process

- **August 2013 SWG:**

Looked at setting recovery habitat recovery targets based on historical % composition to floodplain area (follows Tampa Bay method).

Issue: Requires a baseline habitat area to start with. Current values are too low (not enough habitat), 1800's values are too high (not enough recoverable habitat available to meet targets).

- **November 2013 SWG:**

Proposed alternate strategy for establishing baseline values. For each priority habitat within a Reach:

Set baseline acreage of 30% of the historic extent by 2030
40% of the historic extent by 2050

For all Reaches except D, there is sufficient 'recoverable' habitat to achieve these targets.

Summary of Process, cont'd

- **April 2014 SWG:**

Further characterization of Priority Habitat distribution by Reach:

- Amount restored
- Amount currently protected
- Amount of public land available for restoration/protection

Compare the following for historical versus present conditions:

- Maximum and average patch sizes
- Maximum and average Euclidean distance between patches
- Maximum and average distance between patches along linear hydrologic path

Present results here for a sample reach (Reach A), for the 30% recovery target.
Remaining Reaches to be characterized based on feedback from meeting.

Baselines Established (Nov '13 SWG)

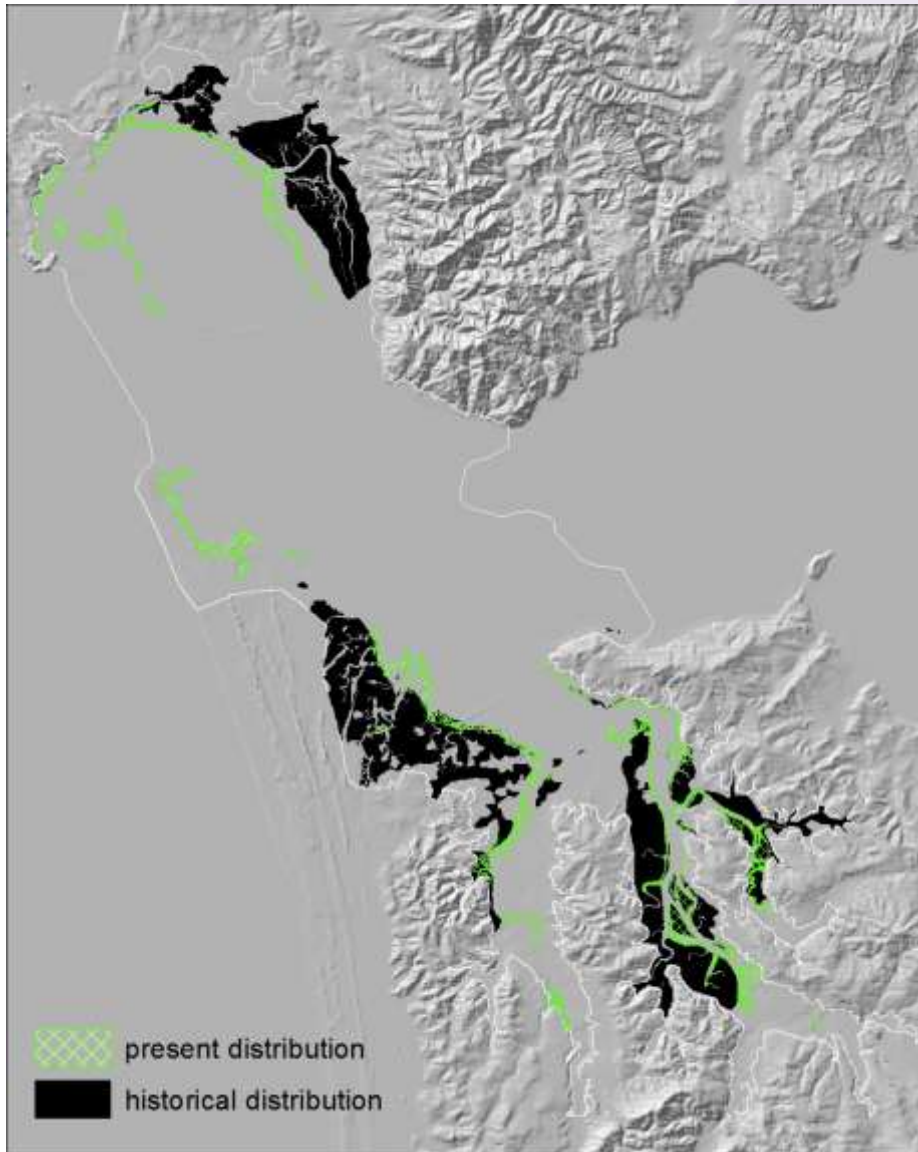
Recovery required to meet 30% baseline (30% of total historic extent of that Priority Habitat (PH))

Reach	All PH: Hist. Acres	All PH: Target 30% of Hist. Acres	All PH: Present Acres	Total Deficit, acres	Deficit Acres PH 1	Deficit Acres PH 2	Deficit Acres PH 3	Deficit Acres PH 4	Available Recoverable Habitat (acres)	Margin: Recov. – deficit (acres)
A	11,609	3,483	1,699	1,784	929	854	--	--	10,062	8,278
B	22,442	6,733	10,122	0	-251	-3,138	--	--	10,417	10,417
C	25,629	7,689	3,579	4,110	1,937	2,173	--	--	18,837	14,727
D	16,609	4,983	5,108	1,177	638	539	-950	-353	1,098	-79
E	15,686	4,706	4,236	1,690	1,157	-1,220	338	195	9,173	7,483
F	52,614	15,784	17,872	939	-319	836	-2708	103	24,567	23,628
G	29,719	8,916	9,974	683	-792	683	-949	--	2,510	1,827
H	3,342	1,003	1,132	0	-129	--	--	--	546	546
Totals	177,650	53,295	53,722	10,383					77,210	66,828

For all negative deficits (values in green), we will attempt to 'hold the line' for these habitats, which already meet the 30% target criteria.

Overall negative margins (right hand column) shown in red indicate not enough Recoverable Habitat to meet overall targets for that Reach

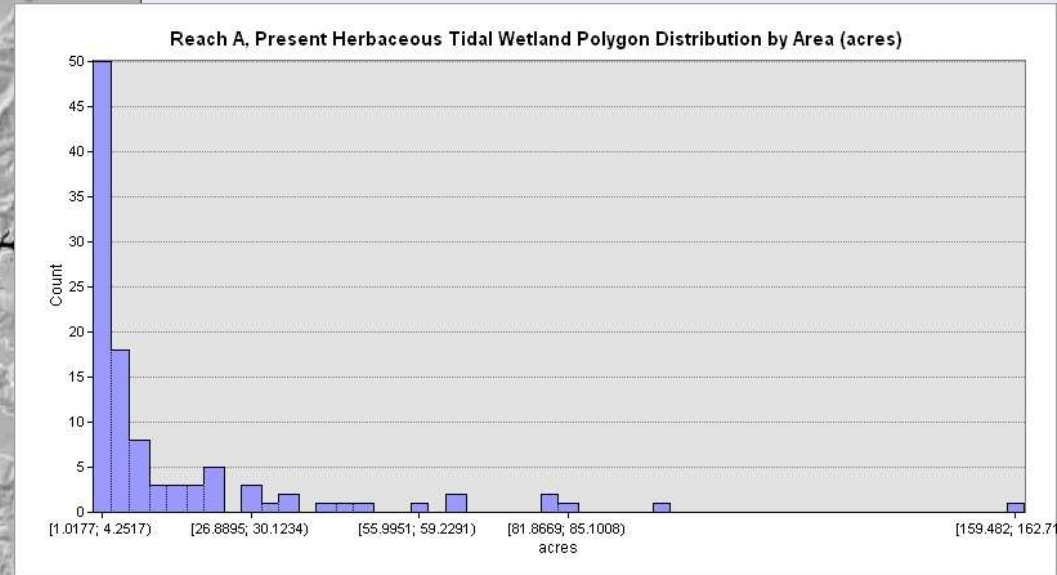
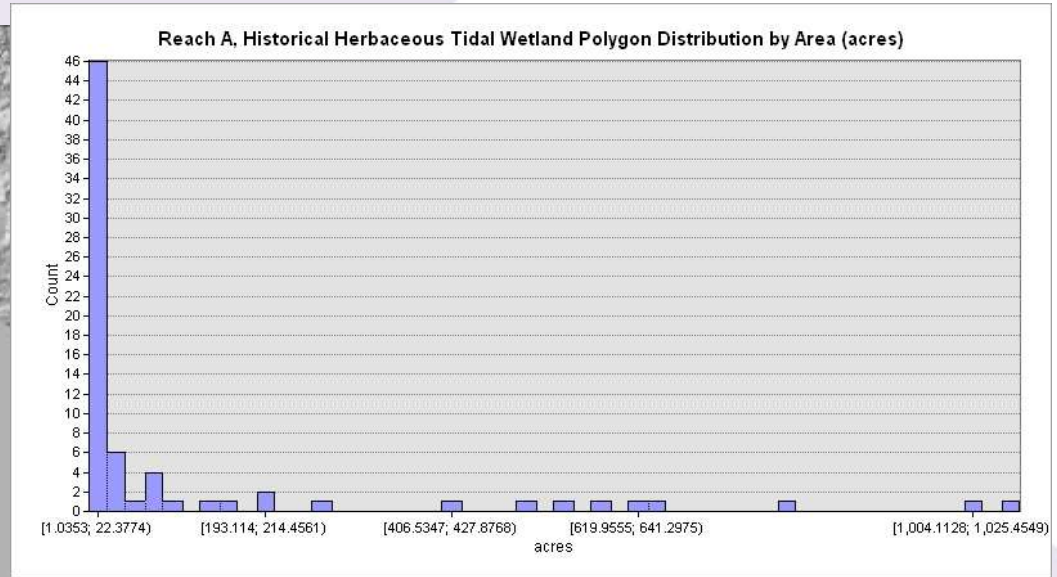
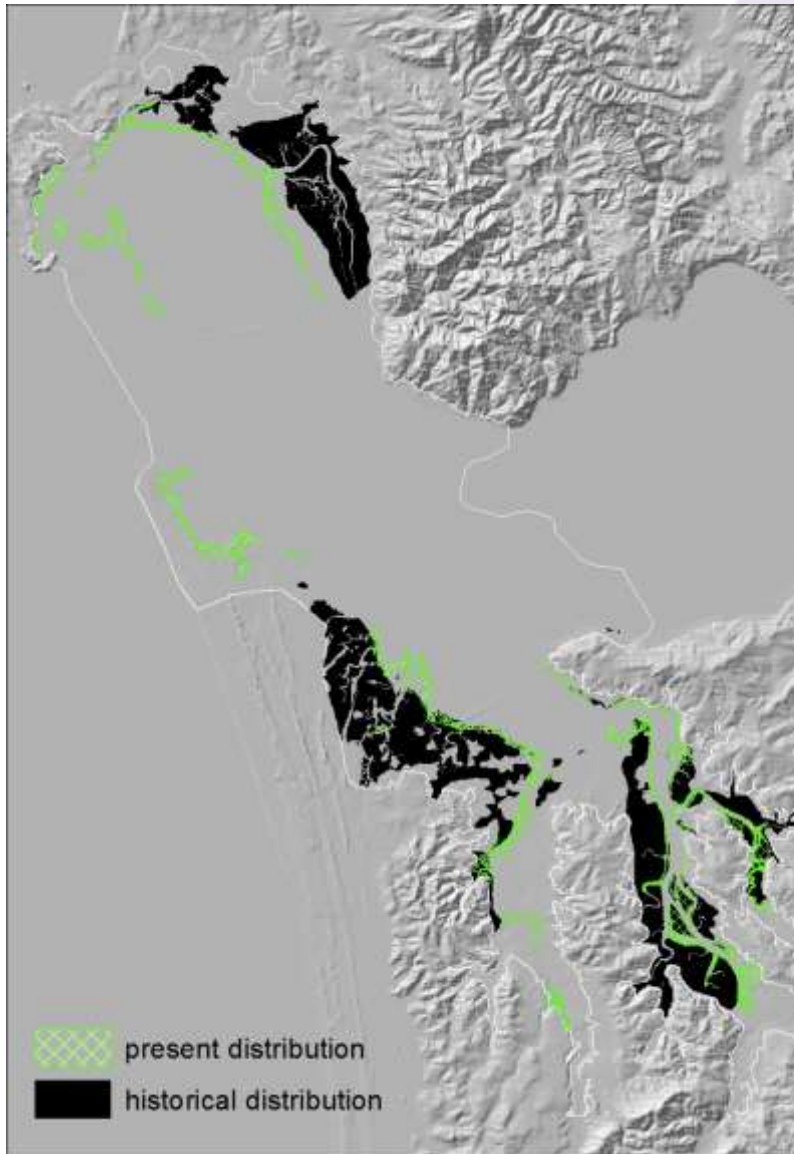
Sample Reach Evaluation (Reach A)



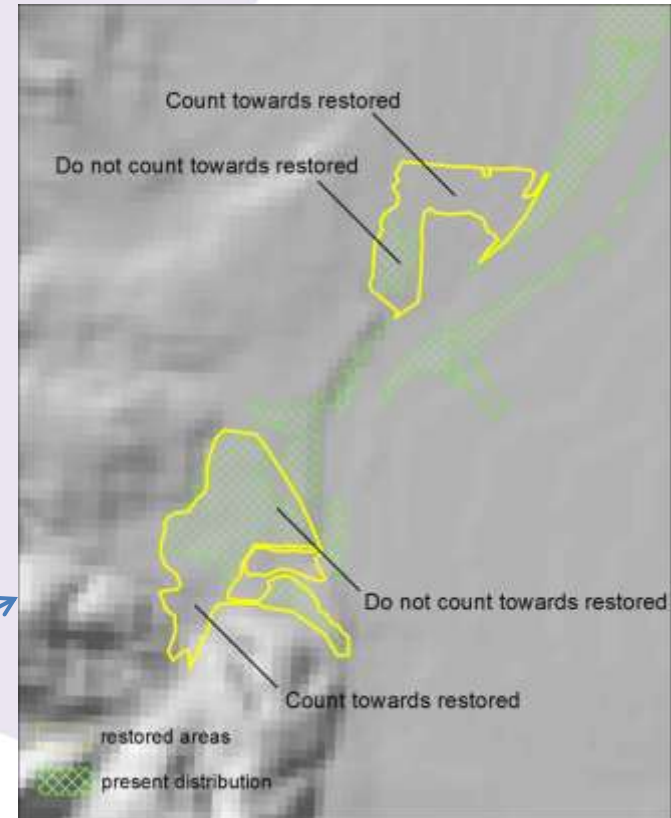
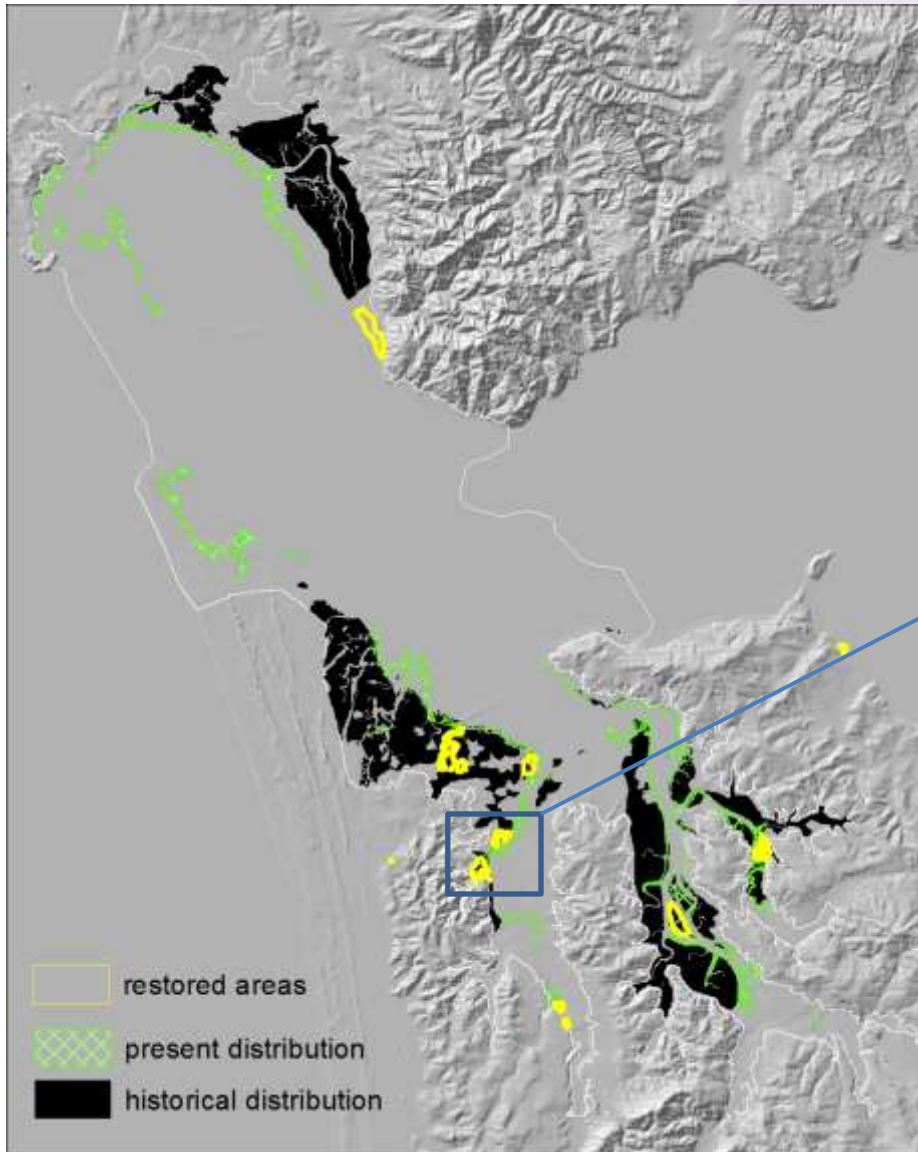
Distribution and Characteristics of Priority Habitat 1 - Herbaceous Tidal Wetlands

Parameter	Historical Distribution	Present Distribution
Tot. Acres	8031	1544
Max. patch size (acres)	1068	163
Avg. patch size (acres)	111	14
Patch size stddev. (acres)	236	24
Max. distance to nearest patch (m)		
Avg. distance to nearest patch (m)		
Stddev. distance to nearest patch (m)		

Sample Reach Evaluation (Reach A)

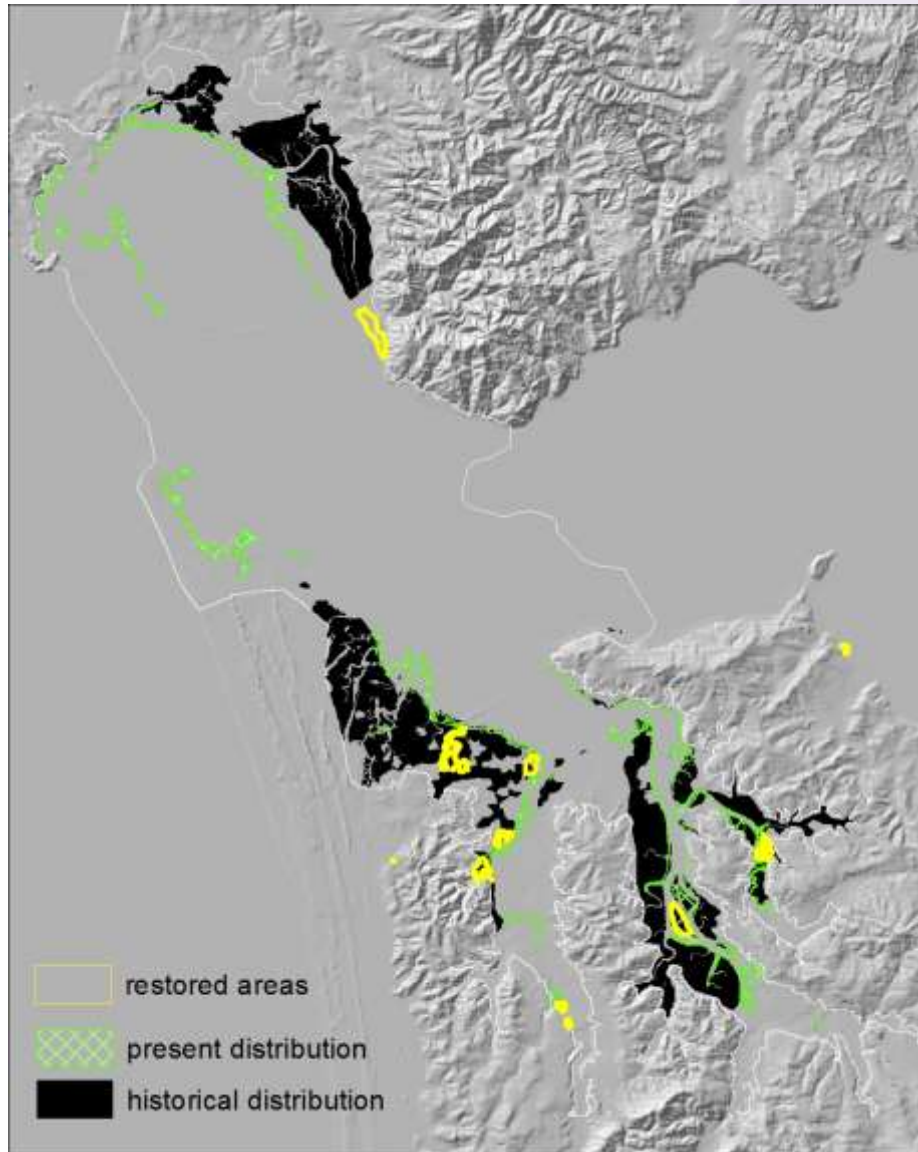


Sample Reach Evaluation (Reach A)



Example: Counting completed restoration towards target

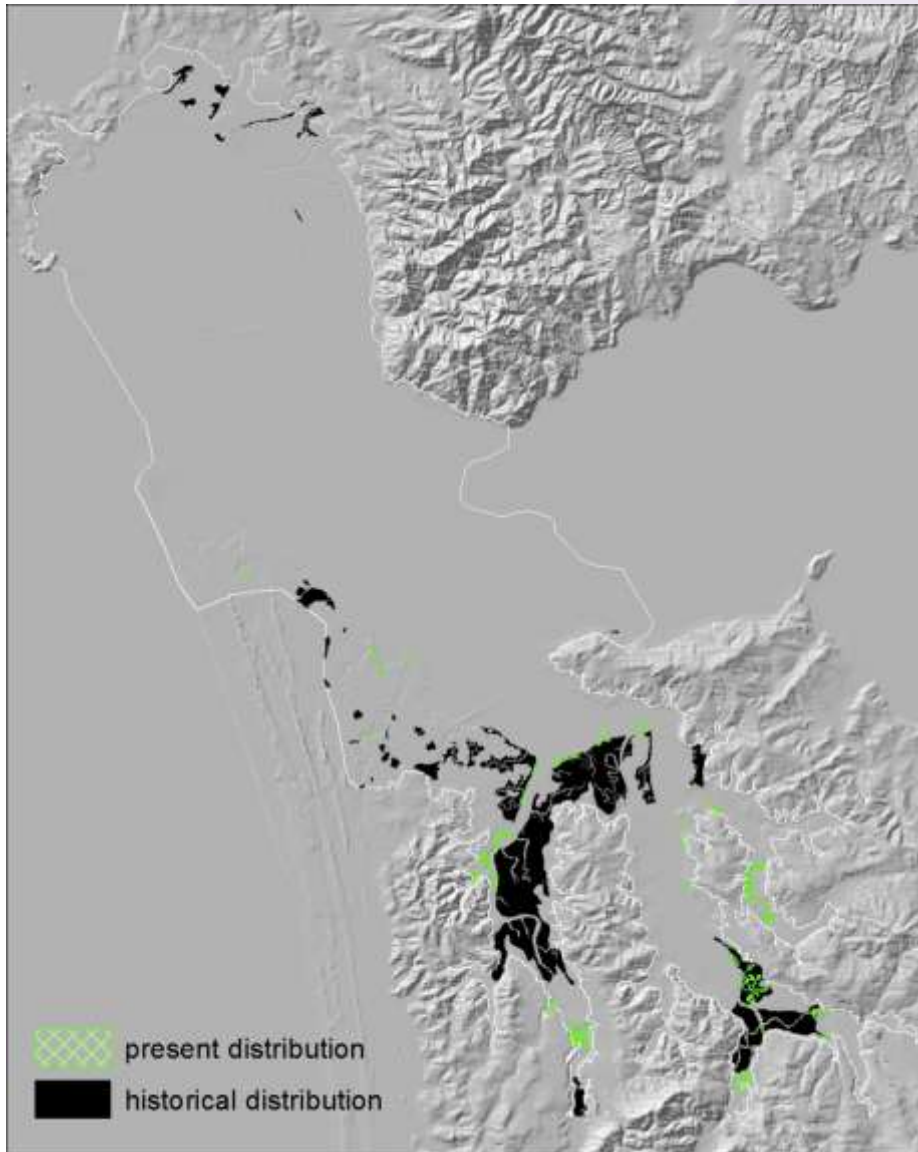
Sample Reach Evaluation (Reach A)



Current Restoration
Contributions Towards Target:
**Priority Habitat 1 -
Herbaceous Tidal Wetlands**

Project	Contributed Acres
Fort Columbia (WA)	12
Vera Slough (OR)	53
Port of Astoria Dike Breach	31
Otter Point	18
Fort Clatsop	20
Totals	134
Required to Meet Target (w/out restored acres)	929
Remaining to Meet Target (Target – Restored)	795

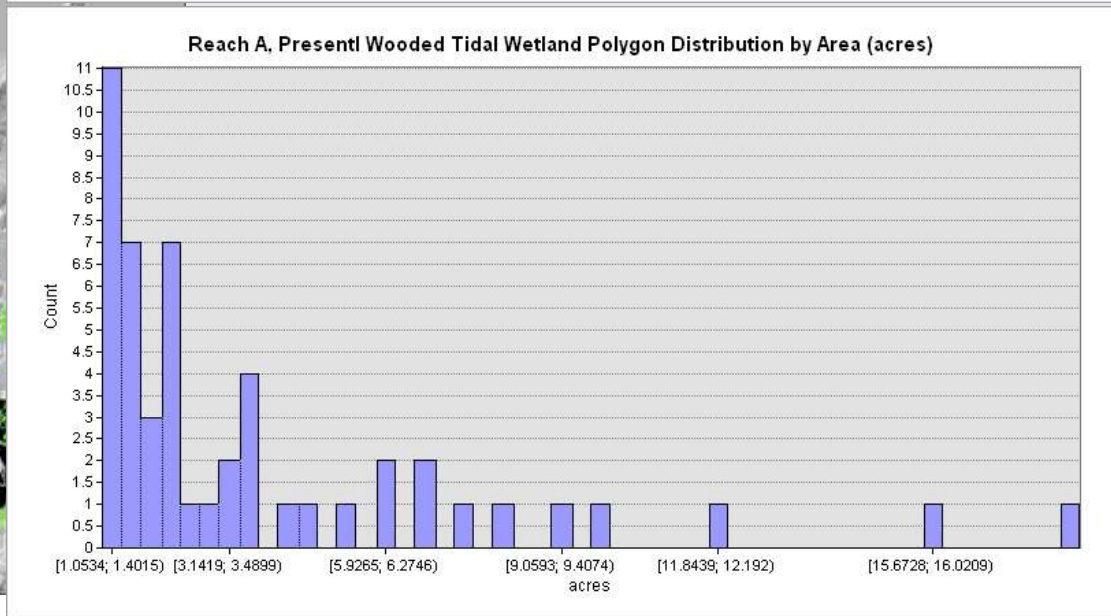
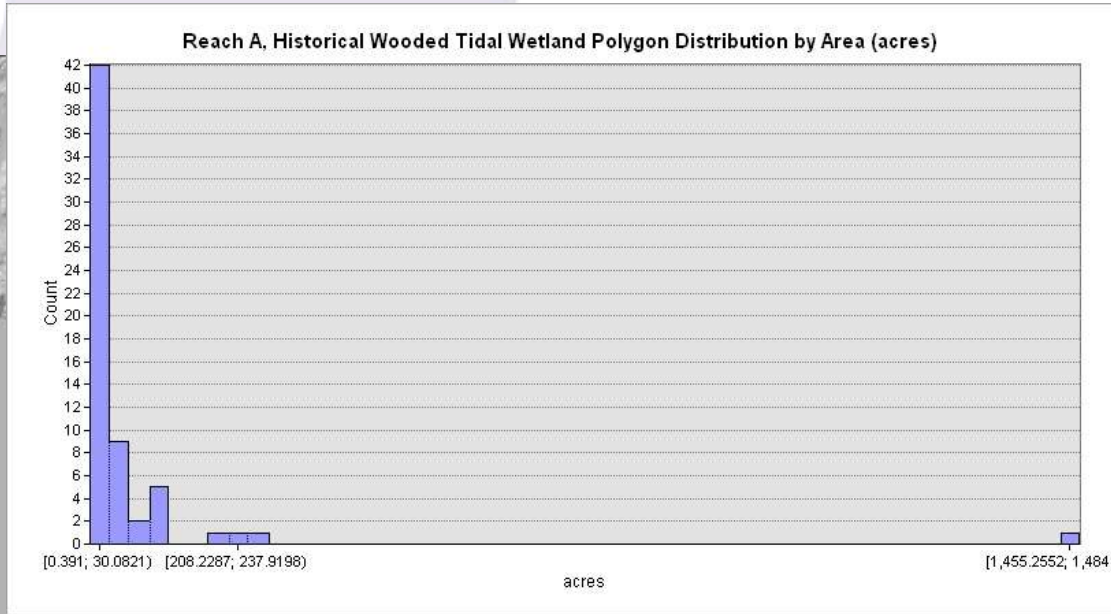
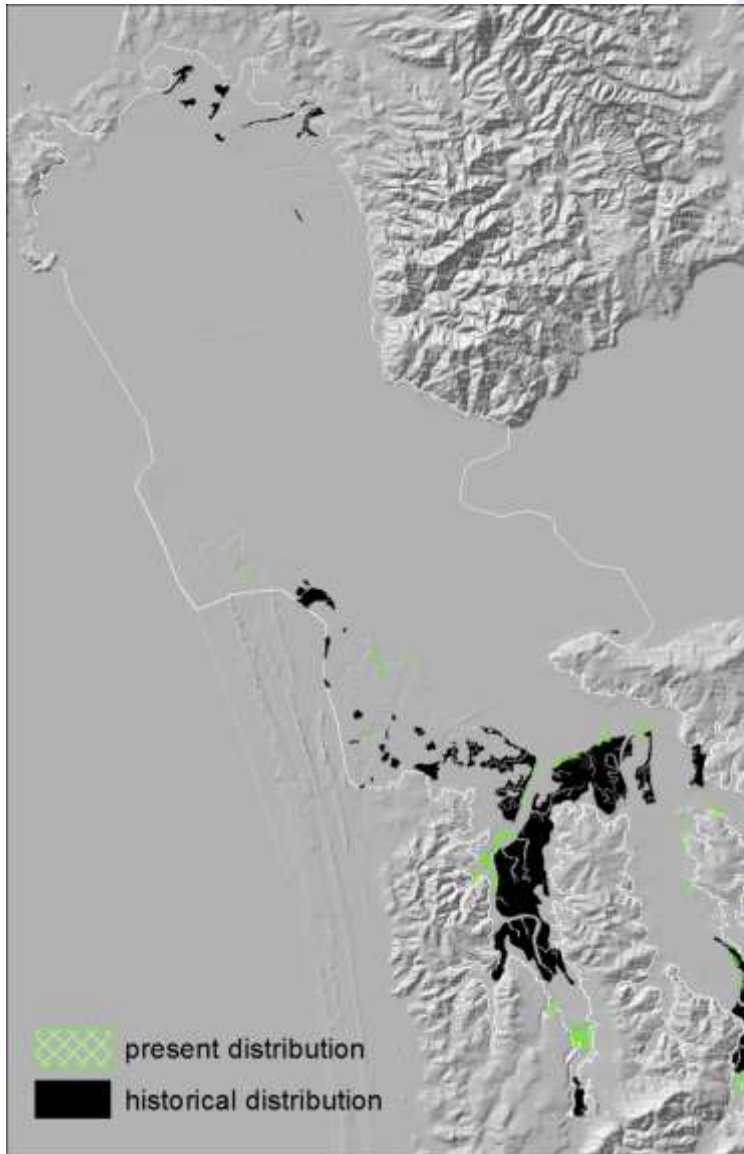
Sample Reach Evaluation (Reach A)



Distribution and Characteristics of Priority Habitat 2 - Wooded Tidal Wetlands

Parameter	Historical Distribution	Present Distribution
Tot. Acres	3,578	219
Max. patch size (acres)	1,485	19
Avg. patch size (acres)	58	4
Patch size stddev. (acres)	190	4
Max. distance to nearest patch (m)		
Avg. distance to nearest patch (m)		
Stddev. distance to nearest patch (m)		

Sample Reach Evaluation (Reach A)



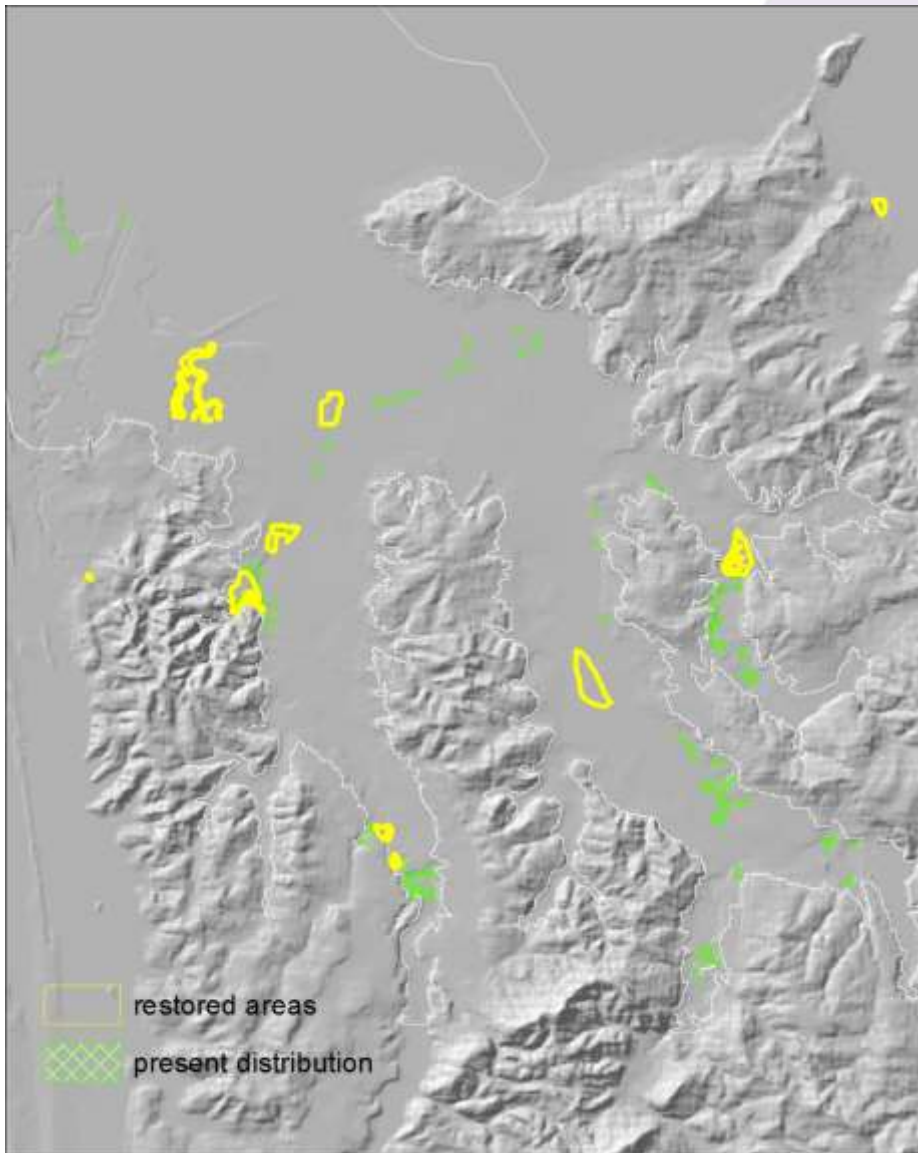
Sample Reach Evaluation (Reach A)

Current Restoration
Contributions Towards Target:
**Priority Habitat 1 -Wooded
Tidal Wetlands**

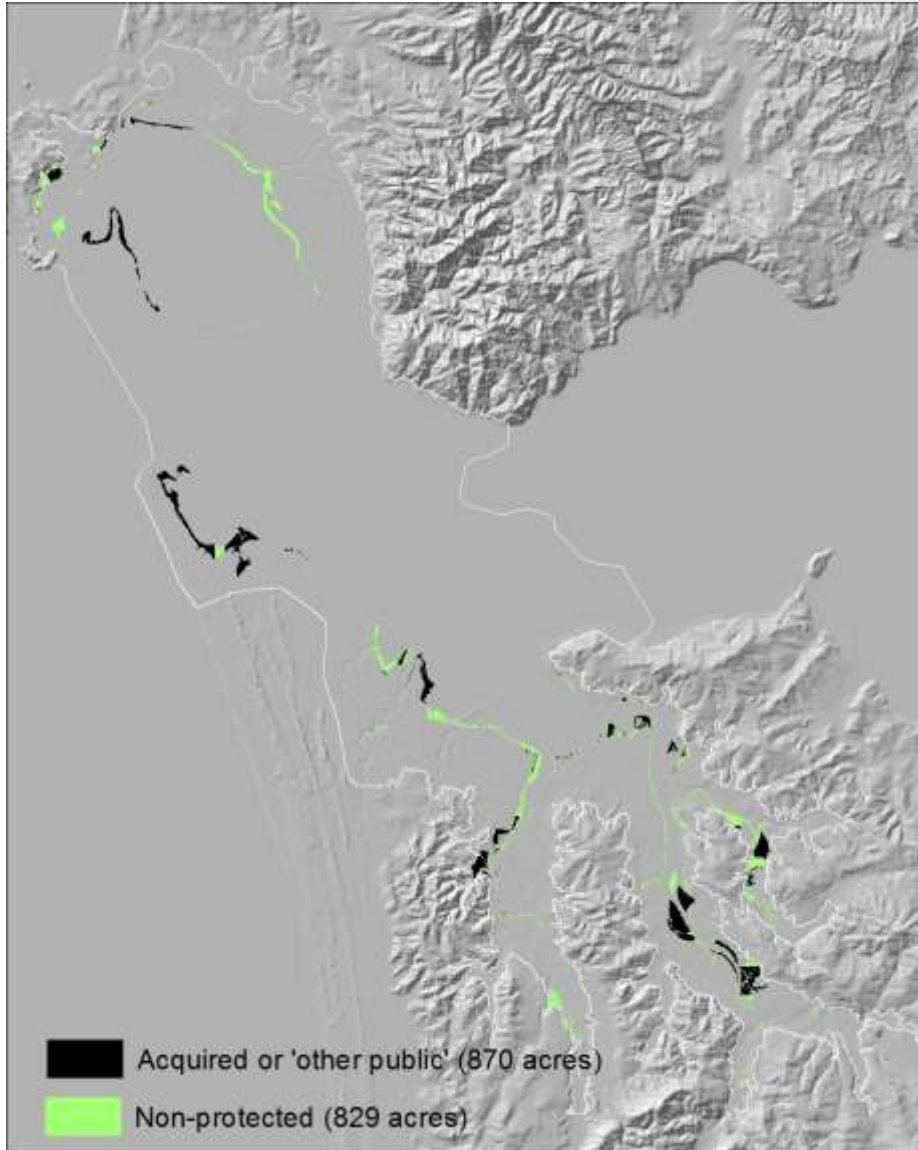
**Question: has any restored
area to date been converted
to 'wooded' tidal wetlands?**

Map shows little to no overlap
between restored areas and
wooded tidal.

How do we count towards
recovery of this habitat type?



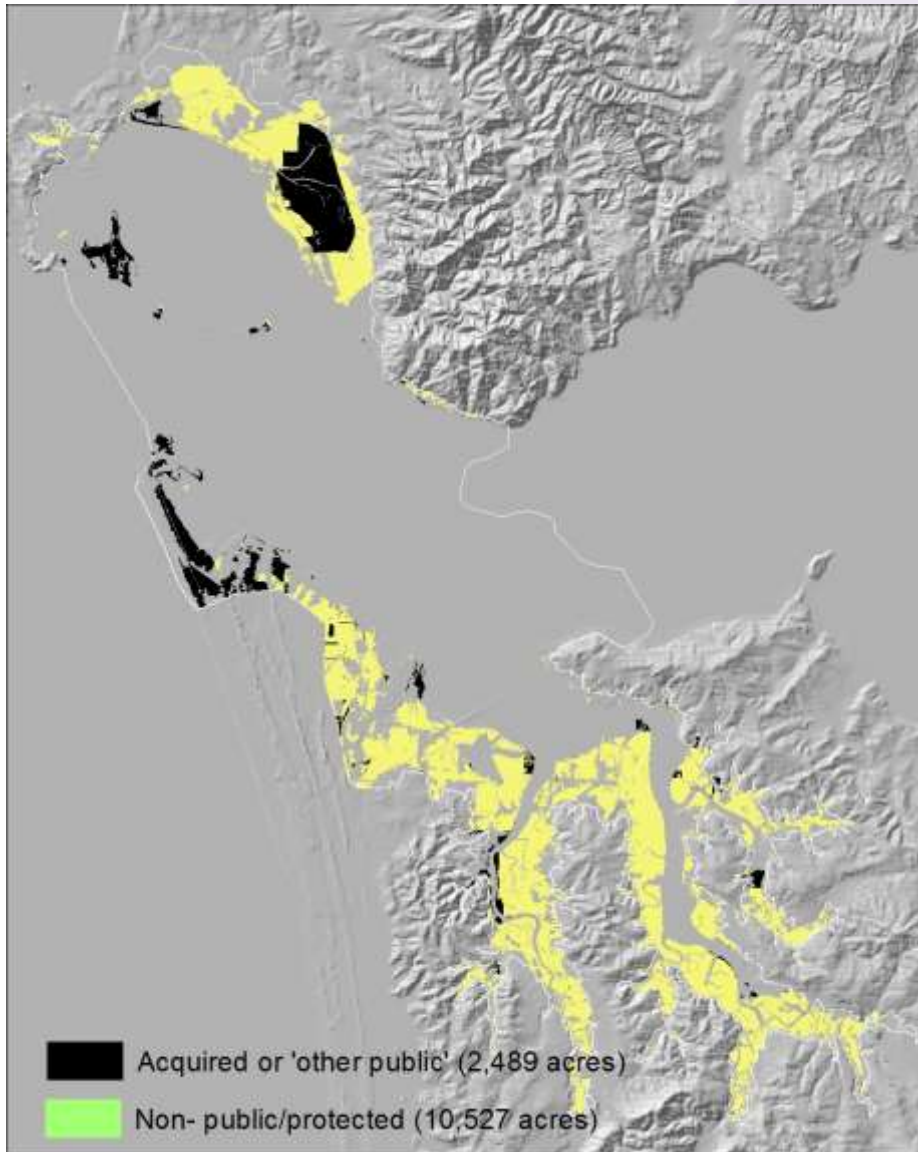
Sample Reach Evaluation (Reach A)



**All current Priority Habitats:
protected/public vs. non-
protected/public**

Of 1699 acres of present
Priority Habitat, roughly 50%
(870 acres) is public and/or
protected

Sample Reach Evaluation (Reach A)

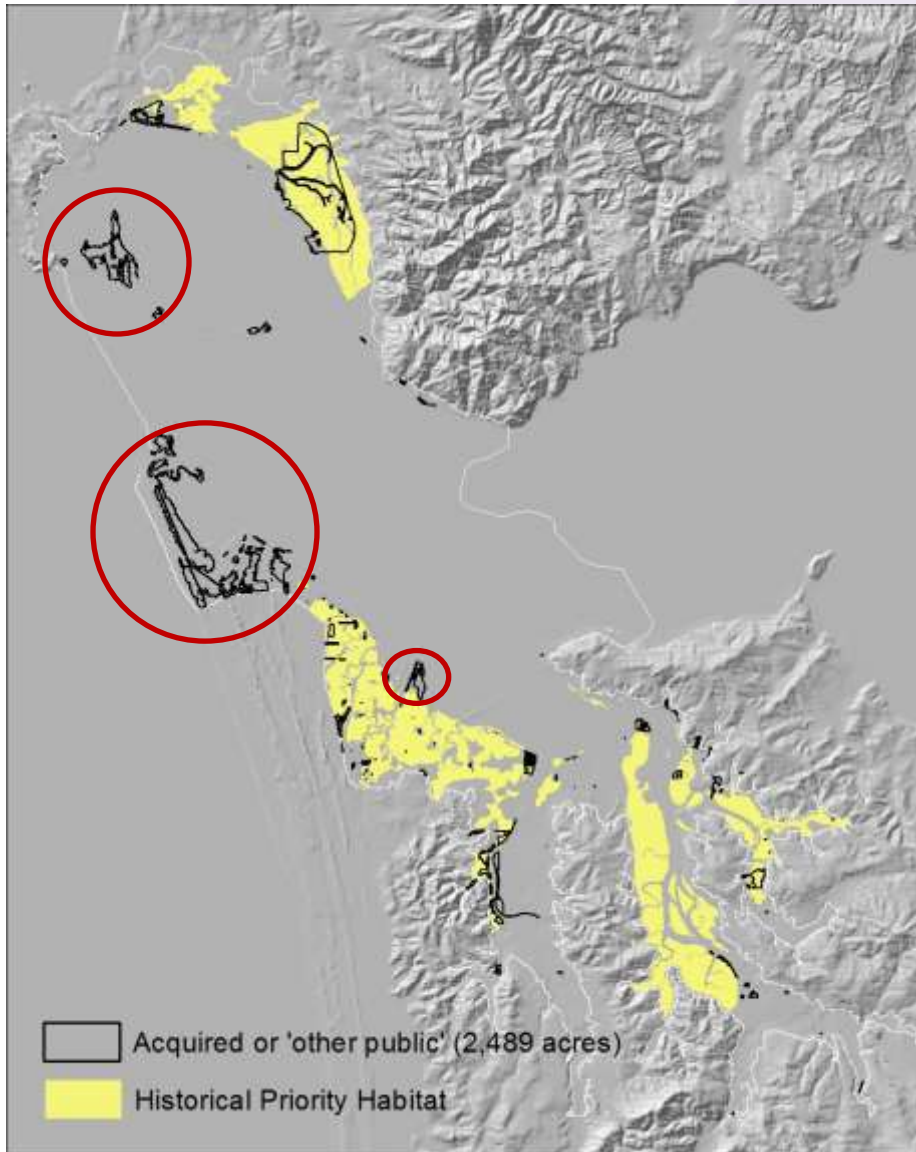


Recoverable Habitats: protected/public vs. non- protected/public

Approximately 2,489 acres are available for recovery from publicly held/protected lands.

Compare this to the 1,784 acres targeted for overall recovery for the Reach.

Sample Reach Evaluation (Reach A)



Recoverable Habitats: protected/public vs. non- protected/public

Approximately 2,489 acres are available for recovery from publicly held/protected lands.

Compare this to the 1,784 acres targeted for overall recovery for the Reach.

Note: much of this available public/protected acreage was not priority habitat historically.

Next Steps

Review latest analysis with SWG

Improve Distance estimates between patch sizes

Complete remaining Reach analyses (including Reach A) based on SWG input

Establish desired patch characteristics to achieve Redundancy, Representation, and Resiliency of Priority Habitats