Case Studies and Other Data Sources/Resources

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March 12, 2018

Olympia Workshop

Case Studies of Monitoring Programs

Retroactive evaluations:

- San Juan County Initiative
- Jefferson County
- WDFW Hydraulic Project Approvals

Permit records, site visits

- Snohomish County
- Thurston County

Remote sensing component

Ongoing compliance monitoring

- City of Kirkland
- Ecology Wetland Regulatory Effectiveness
- US Army Corps Mitigation Compliance

Case studies use outline of 5 key components

Sno Co Critical Areas Adaptive Management Plan (2008)

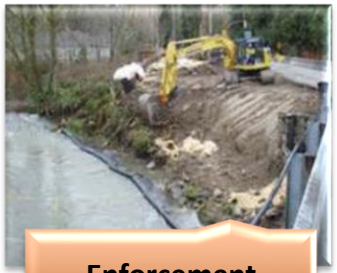
1. Gains or losses of function in Fish and Wildlife Habitat Conservation Areas, Wetlands and their buffers?
2. If losses, are adjustments needed to:
   a) Code?
   b) Permit review process?
   c) Enforcement improvements?
   d) Education efforts?
   e) Restoration projects?

Monitoring objectives

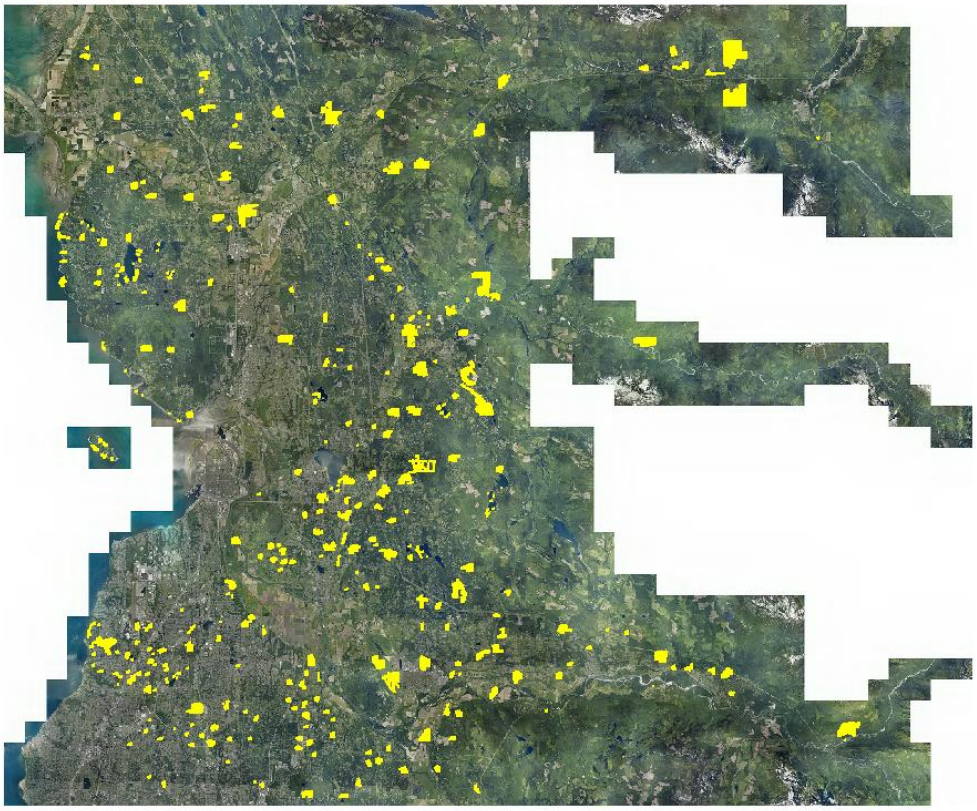
- Implementation & Compliance Monitoring 11/2007 to 4/2013

- Analyze effectiveness and implementation of permits and enforcement in protecting critical areas and their buffers:

  - analyze landcover change impacts
  - evaluate critical reviews in the permit tracking system
  - recommendations for improving permitting & enforcement



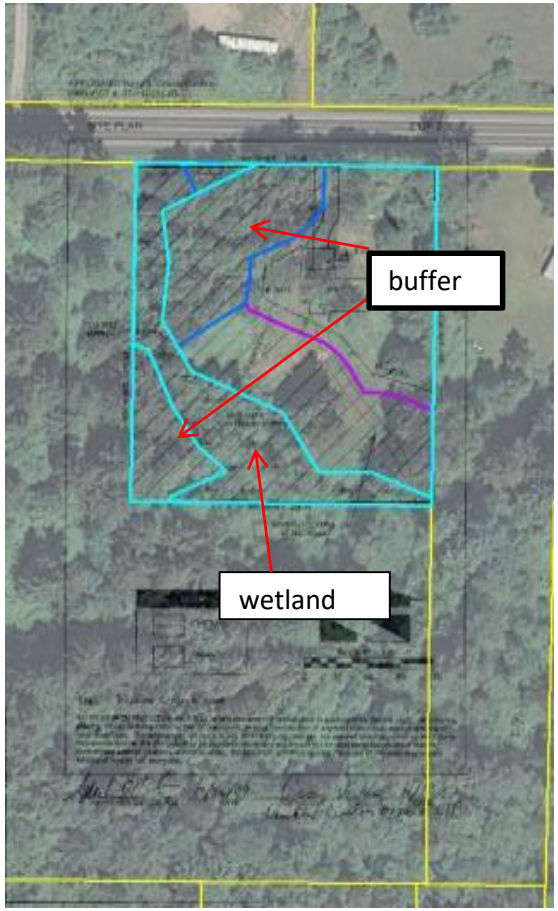
Critical Areas Site Plans (CASP) Parcel Analysis



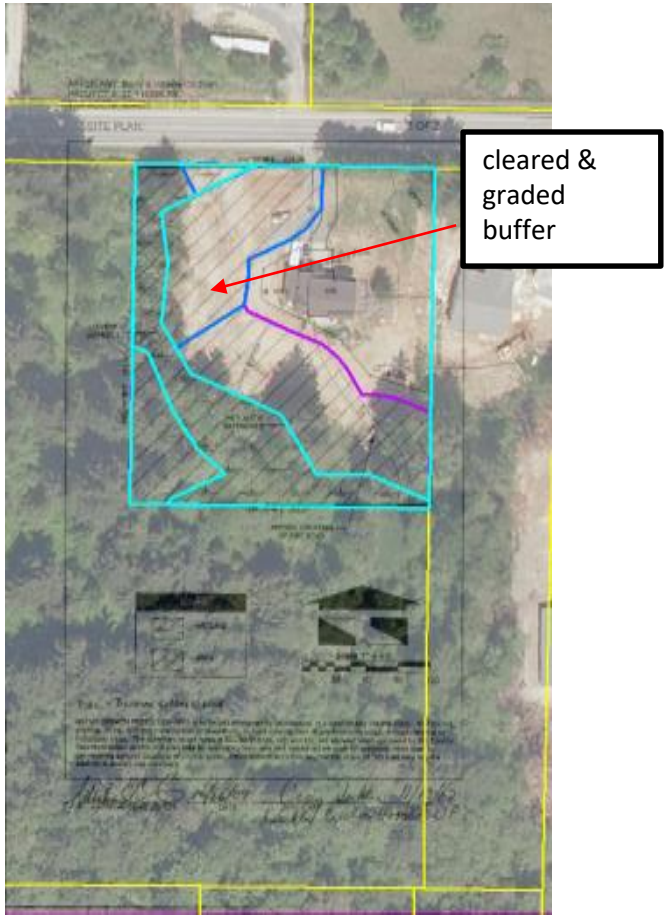
986 Critical Areas Site Plans (CASPs) recorded between November 2007 and April 2013 – 335 randomly selected

CASP Parcel Analysis

- Digitize critical areas and buffers
- Identify, classify and digitize land cover changes in protected areas of the CASPs



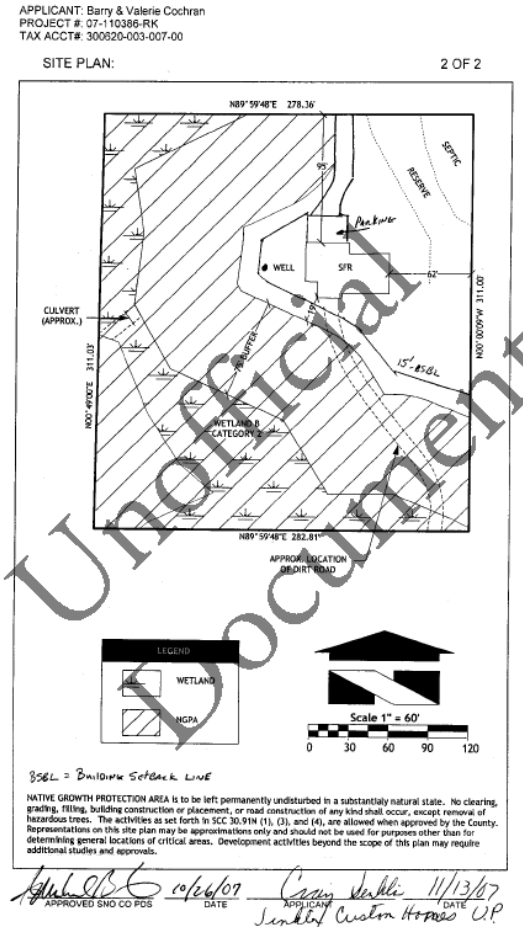
2007



2009

Key findings

- 109 acres of estimated impacts
- This is <1% of total critical and buffers identified on properties with permits and enforcement cases
- 70% occurred on properties with enforcement cases
- Half of the total occurred in wetlands
- > 70% of CASP had problems with accuracy
- No code changes warranted


APPLICANT: Barry & Valerie Cochran
PROJECT #: 07-110386-RK
TAX ACCT#: 300620-003-007-00

SITE PLAN: 2 OF 2

N89°59'48"E 278.36'

SEPTIC RESERVE

WELL

SFR

CULVERT (APPROX.)

311.03'

N00°49'00"E

311.00'

N00°00'00"W

15' BSBL

WETLAND B CATEGORY

N89°59'48"E 282.81'

APPROX. LOCATION OF DIRT ROAD

LEGEND

WETLAND

NGPA

Scale 1" = 60'

0 30 60 90 120

BSBL = Building Setback Line

NATIVE GROWTH PROTECTION AREA is to be left permanently undisturbed in a substantialy natural state. No clearing, grading, filling, building construction or placement, or road construction of any kind shall occur, except removal of hazardous trees. The activities as set forth in SCC 30.91N (1), (3), and (4), are allowed when approved by the County. Representations on this site plan may be approximations only and should not be used for purposes other than for determining general locations of critical areas. Development activities beyond the scope of this plan may require additional studies and approvals.

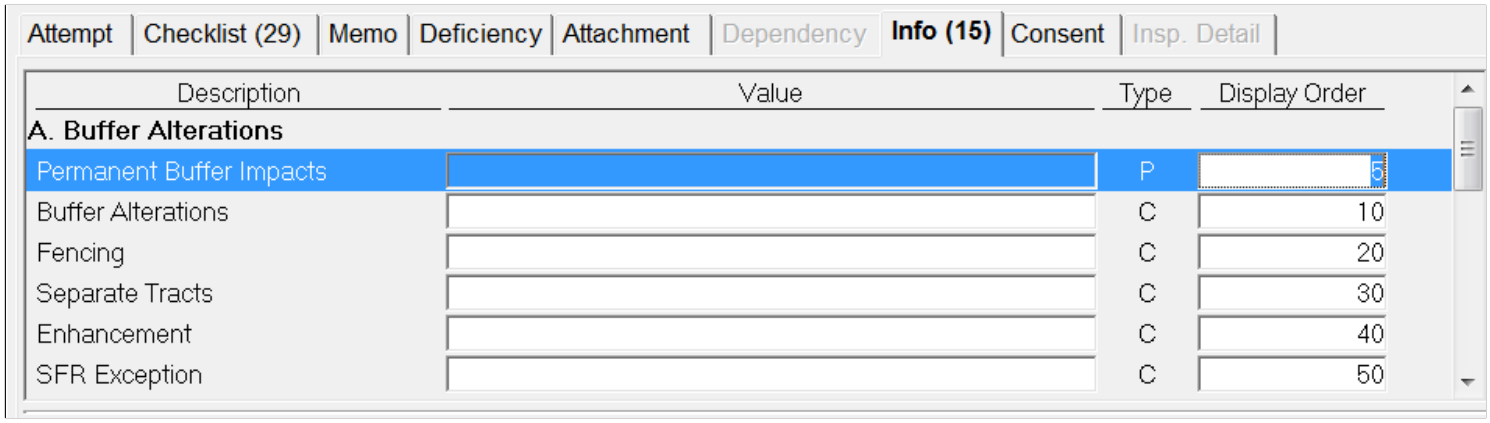
APPROVED SNO CO PDS 10/26/07 DATE

APPLICANT 11/13/07 DATE

Junkett Custom Homes UP

Recommendations

- Improve CASP accuracy
- Digitize and incorporate CASPs into GIS review of future permits
- Staff training (applicability, CA identification)
- Monitoring report every 8 years to align with GMA
- Improve Critical Area tracking in AMANDA



City of Kirkland tracking for SMP No Net Loss

ESTABLISH KEY OBJECTIVES AND STUDY QUESTIONS

STEP TWO

DATA COLLECTION

What are all the values, figures, and other possible data the City may want to collect?

GOALS

What are the short term and long term goals the SMP codes are intended to achieve?

PURPOSE & INTENT

Do the figures being collected capture the required information to show whether or not the City is maintaining ecological function and following the purpose and intent of the SMP?

ADMINISTRATION

Can code administrators apply the code and collect the data without being unnecessarily burdened?

BUILD CONCENSUS

Will the data be useful in future discussions with citizens, council, or commission members?

Excel spreadsheet

DESIGN THE MONITORING PROGRAM
STEP THREE

- Spreadsheet Tracking: Excel
  - Simple
  - Effective
  - Accessible
  - Short Term data collection
  - Easily Modified

- Permit Tracking Software Development (EnerGov)
  - Developed reviews and holds for specific project types
  - Long Term data collection
  - Reporting capabilities
  - Fee, security, inspection, and plan tracking

An ongoing program with 8-year reviews

DETERMINE THE MONITORING TIME FRAME

STEP FOUR

- Programmatic – Ongoing
- Interim internal check-ins
- Eight year review – Reporting

City of Kirkland spreadsheet

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
1	PLEASE READ TUTORIAL TAB FIRST															
2																
3					NATIVE VEGETATION (SQ FT) WITHIN SHORELINE SETBACK										MITIGATION FOR TREE REMOVAL	MITIGATION FOR 83.550.5.B.5 (10%) SQ FT
4	ADDRESS	PERMIT # OR DATE	APPLICANT NAME	PLANNER	# OF TREES REMOVED	# TREES RETAINED	# OF TREES PLANTED	SHRUBS	GROUND COVER	LAWN	REMOVAL OF LAWN	REMOVAL OF ORNAMENTAL	REMOVAL OF INVASIVE	AQUATIC VEGETATION		
5	XXXX Lake Washington Blvd	BLD10-00500	DOE	CPG												
6	XXX Lake Ave West	BLD10-00314	SMITH	CPG	0		0	0	0	0	0	0	0	0		
7	XXXX Lake Ave West	BLD11-00181	JONES	CPG		1	3	500	300	809	720	280	0	65		
8	XXXXX Holmes Point Road	BLD11-00431	JOHNSON	CPG	0		7	600	400	2280	0	0	0	0		
9	XXXXX Champagne Pt Rd SE	BLD11-00534	TAYLOR	CPG	0		3	365	170	950	535	0	0	0		
10	XXXX NE 154th St	BLD11-00351	JACKSON	CPG												
11	XXXX SW 166th	BLD11-00350,	JAMES	CPG												
12	XXXXX Champagne Pt Rd NW	MIS11-00006	DAWES	CPG	0		0	0	0	0	0	0	0	0		
13	XXX Lake Ave West	SHR11-00004	BAILEY	CPG												
14	XXX Lake Ave West	BLD11-00109	BRONSON	CPG	0		0	0	0	0	0	0	0	0		
15	XXXXX Holmes Point Road	1/10/2012	GLASS	CPG												
16	XXX Lake Ave West	BLD11-00462	SIMS	STL		6	6	90	632	400	990	0	0	0	Y	N
17	XXXX Rose Point Lane	BLD11-00689	RIVERA	CPG												
18	Marina Park Pier	exemption	City	TJS												
19	0	0	0	0												
20	0	0	0	0												
21	0	0	0	0												
22	0	0	0	0												
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44	0	0	0	0												
45	0	0	0	0												

TUTORIAL | DEVELOPMENT OR ACTION | PROJECT DETAILS & MISC. | SHORELINE SETBACK | VEGETATION | STABILIZATION | OVE ...

Spreadsheet posted on Commerce web site.

Tracks indicators for each project – built into staff review time

Example of measurable from Kirkland spreadsheet

- 2100 SF structures removed from shoreline setback
- 62 Native Trees Planted (15 Permits)
- 4000 SF Lawn removed (6 Permits)
- 8600 SF of Native Vegetation Planted along shoreline (13 Permits)
- 103 LF of Bulkhead Removed (3 Permits)
- 14,835 SF of Solid Pier Decking Removed
- 16,672 SF Grated Pier surface installed
- 1472 SF of Overwater Structures Removed
- 200 SF of in water Structures Removed
- 33 Piles Removed (5 parcels)
- 6000 SF Spawning Gravel Installed (6 parcels)

Ecology Wetlands Evaluation Program *

Site inspections

- As-built
- Mid-monitoring
- End of monitoring *(10 years)*

Formal follow-up letters

Review reports

- Track deadlines
- Ensure reports have complete information per Ecology's Order

** 401 WQ certifications for compensatory mitigation projects*

	Element	What to Look For (add in specifics from order, mitigation plan, and/or as-built)	Comments or Deviations from the Plan/Permit	Follow-up / Contingency	For Administr Use
On-the-Ground Elements					
1.	Grading	*(for example, slopes, elevations, topographic features, microtopography, soil treatment)*			
2.	Water/ hydroperiod	*(for example, water-control structures, specified water regime, wetland hydrologic indicators)*			
3.	Planting	*(including: presence, numbers, location, spacing, and size of planted or seeded vegetation species or plant communities; plant protectors, irrigation)*			
4.	Management/ control of invasive species	*(for example, mowing, rolling, spraying, covering with plastic)*			
5.	Habitat features	*(for example, nest boxes, snags, stumps, LWD, brush piles)*			
6.	Required acreage of mitigation	*(Does mitigation area appear to be the appropriate size?)*			
7.	Other	*(for example, buffers, signs, fences, trails)*			

Wetlands Program Benefits

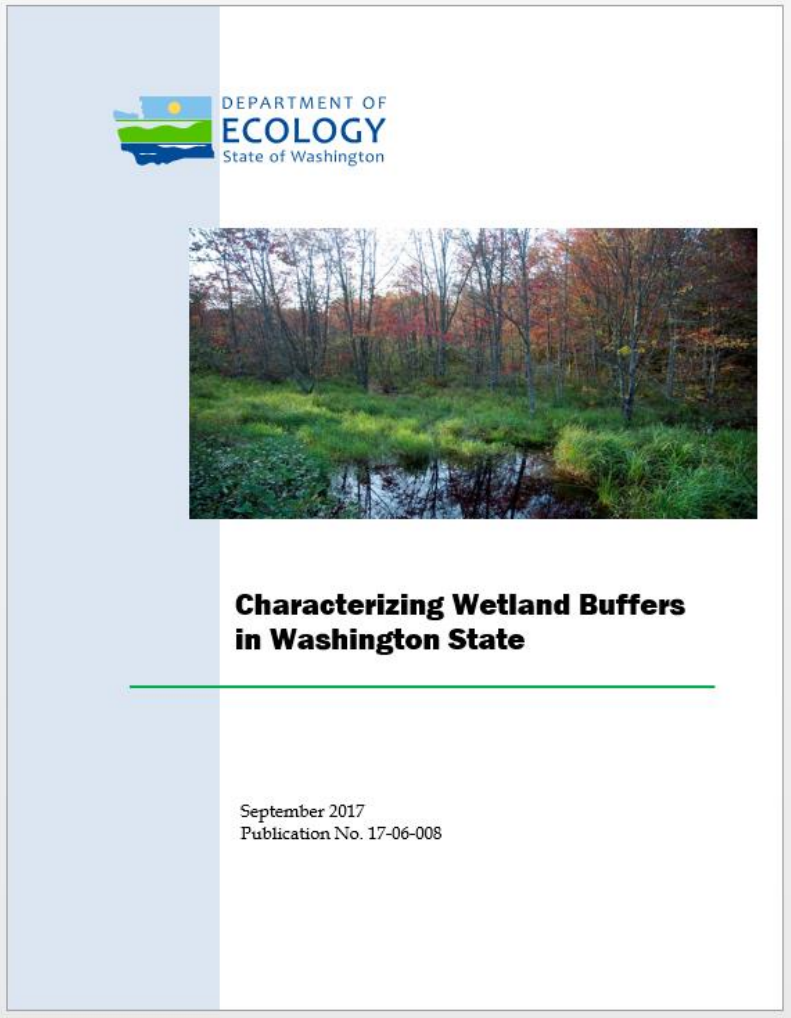
Increased mitigation success: work with the applicant to address issues that would result in site failure.

Improved permitting decisions: lessons learned during site visits can be applied to review of current mitigation proposals.

Voluntary compliance: improves when people expect oversight (less time needed to check on every project)

Improved **consistency and predictability** by standardizing permit conditions or project plan requirements

New Guidance: Evaluating Buffer Compliance

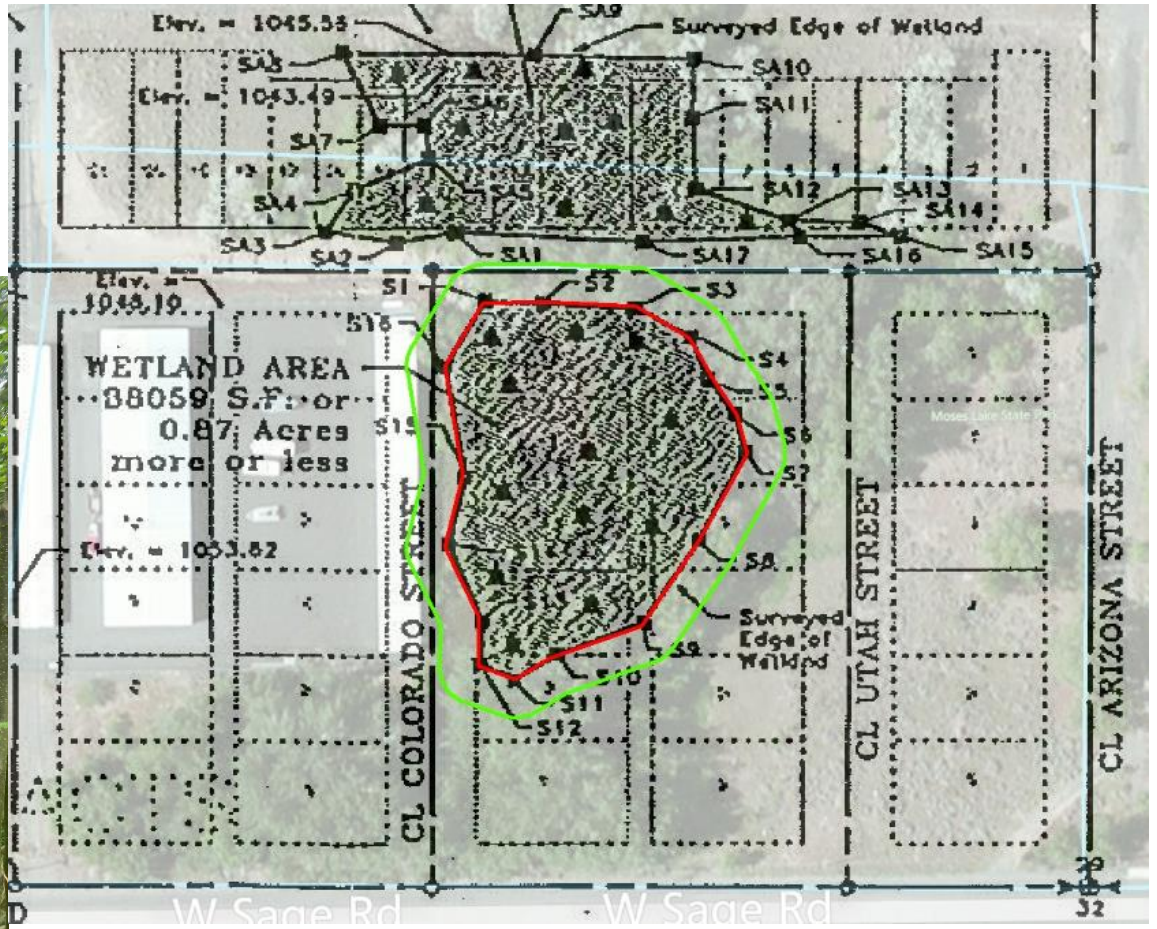


Outlines **steps** for characterizing how well regulations are protecting buffers.

Based on pilot of 10 randomly selected projects from:

- Pierce County
- Tacoma
- Marysville
- Moses Lake

Review Permits, Assess Sites



Compare Permit Requirements to CAO

	Buffer width (in feet) based on habitat score			
Wetland Category	**3-4**	**5**	**6-7**	**8-9**
Category I: Based on total score	75	105	165	225
Category I: Bogs and Wetlands of High Conservation Value	190			225
Category I: Coastal Lagoons	150		165	225
Category I: Interdunal				225
Category I: Forested	75	105	165	225
Category I: Estuarine	150 (buffer width not based on habitat scores)			
Category II: Based on score	75	105	165	225
Category II: Interdunal Wetlands	110		165	225
Category II: Estuarine	110 (buffer width not based on habitat scores)			
Category III (all)	60	105	165	225
Category IV (all)	40			

- Was permit issued according to CAO requirements?
- Was buffer width more or less protective than basic CAO buffer?

Are justification for changes documented?

Consistent w/CAO criteria?

Compare Permit to Built Conditions

Is vegetation management consistent? Fencing?

Signage?

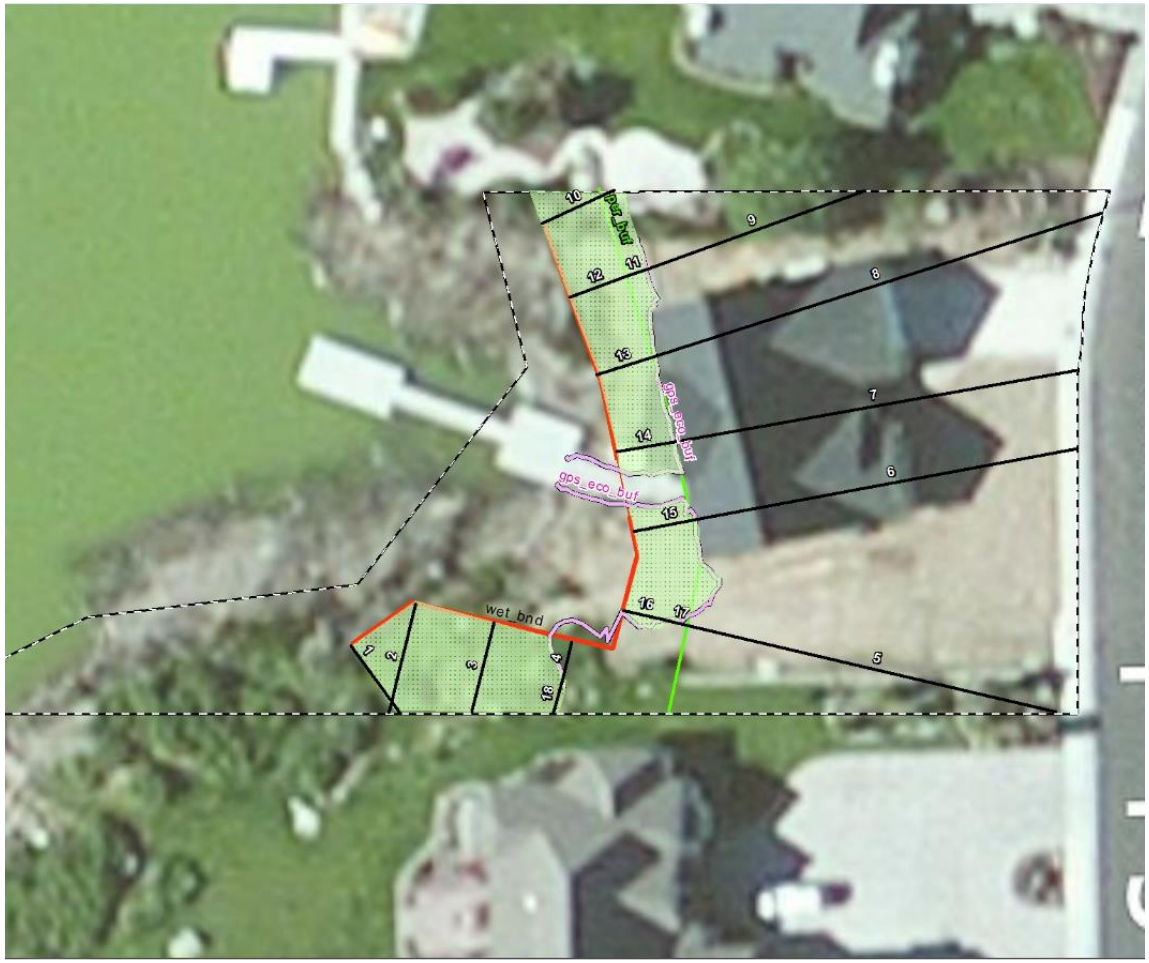
Characterize Ecological Condition of Buffer

% of wetland edge adjacent to "ecologically significant buffer"

Width of ecologically significant buffer

Area of ecologically significant buffer

What are dominant stressors?



Methods, Forms

Worksheet For Reviewing a Permit

Permit # _____

Date of permit_____ Date of CAO in effect when vested _____

Date of Review _____ Reviewed by: _____

Category of wetland for which permit is required

- Category I _____
- Category II _____
- Category III_____
- Category IV _____
- Other _____

Basic buffer width specified in the permit_____(including adjustment for habitat points and impact-reducing measures if properly documented) (N/A if not discussed in permit)

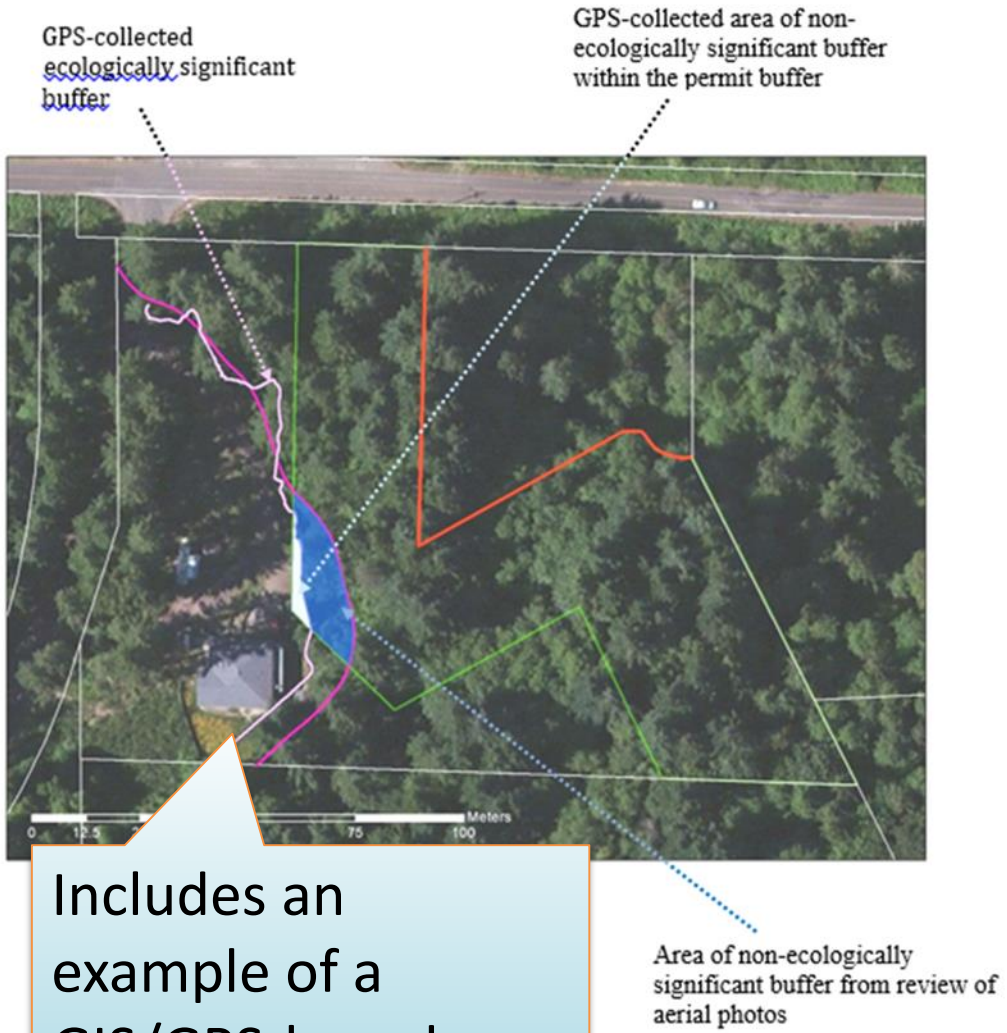
Allowable discretionary changes to buffer width

- Averaging _____ how much _____
- Reduction if enh_____ how much _____
- Increases for _____tions _____ what conditions _____
- Ot_____

Other req

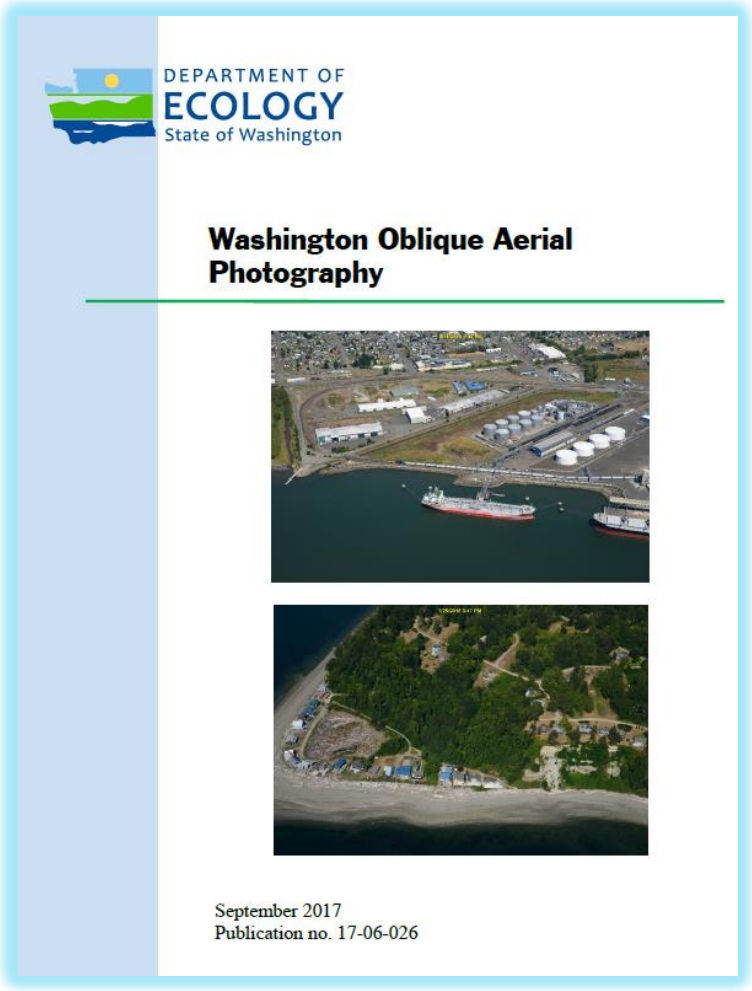
- En_____nity, removal of non-na_____
- Sig_____
- Fe_____
- Ot_____

Includes samples of forms used in these steps.



Includes an example of a GIS/GPS-based method to collect data

New: Guide for Using Ecology Air Photos



DEPARTMENT OF ECOLOGY
State of Washington

Shoreline Photo Viewer

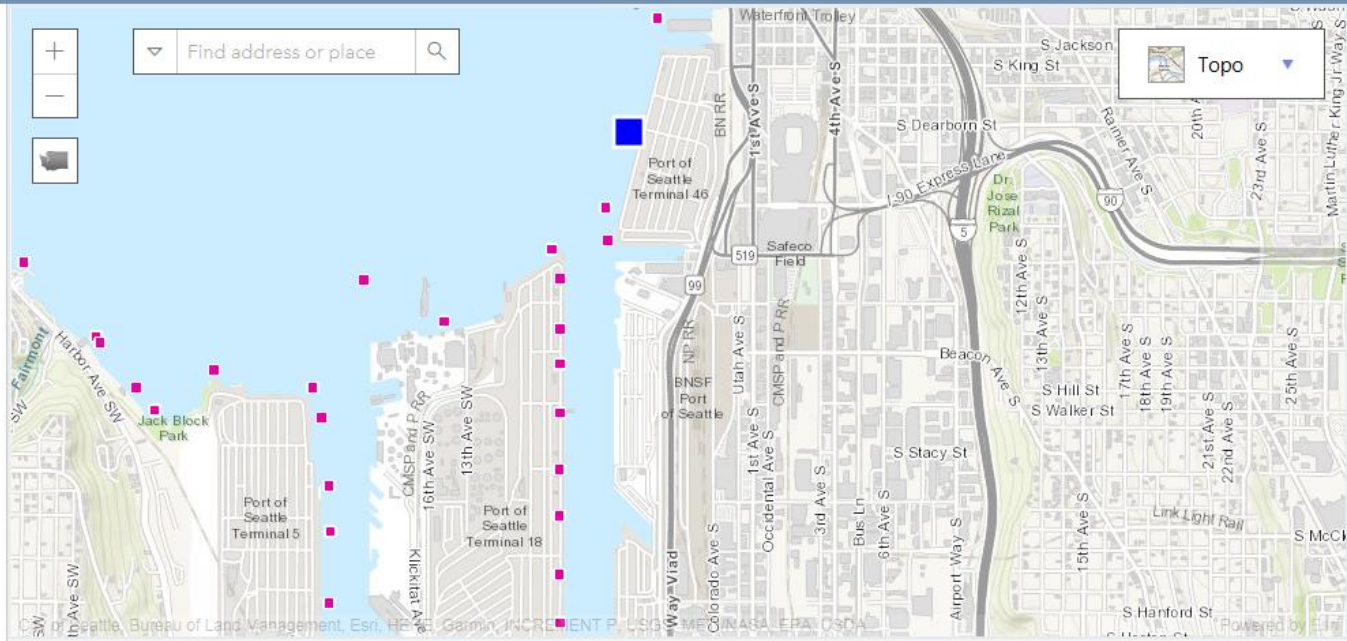
Choose a photo series:

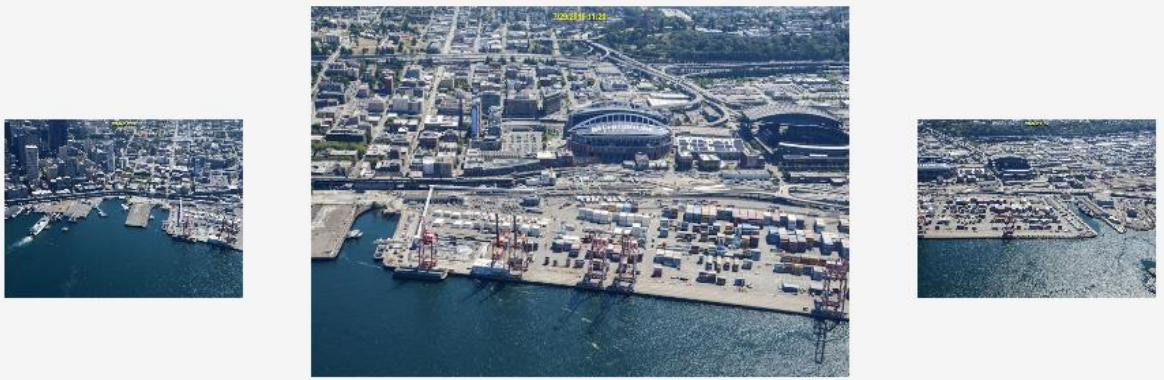
- (•) 2016-17
- ( ) 2006-07
- ( ) 2000-02
- ( ) 1992-97
- ( ) 1976-77

Compare years

Share page

Open Coastal Atlas map





Elliott Bay (7/29/2016)

2016

Back



2006

2000

1990



1970