

## Zone 2

Shore		north
Total Surveys		8
Start Point		Diamond Creek
End Point	Start Lat/Long	<b>N 59°40.236' W 151°42.357'</b>
	End Lat/Long	<b>N 59°33.918' W 151°33.490'</b>
Dates Walked		1989-92, 98, 2001, 2004-09
Spring Surveys		6
Fall Surveys		7
First Walked		1989
Last Walked		2009
Total Person-Hours		189
Total Trash Bags Collected		39
Total Estimated Weight of Trash Collected		519

### General Info

Date	29-Apr to 6-May-89	29-Apr-90	4-May-90	28-Apr-91
Start Time		1113	1430	1000
End Time		1313	1830	1630
Lowest Tide				

at time

Temperature (F)

Sky

Vertical Zones Walked:

High  
Middle  
Low

# of Observers		1	2	2	6
Hours Spent		1	2	4	6.5
Person-Hours		1	4	8	39
Shoreline Walked (miles)				4	4
Total Trip Mileage					
Did Observers . . .					

	Hike?	x	x	x	x
	Kayak?				
	Other (specify)?				

Trash Bags Collected

Estimated Weight of Collected Trash

2

### Wildlife

#### *Birds*

Loons		9		20
Sea Ducks		312	8	116
Other Ducks and Geese				
Bald Eagles				
	Adults	3	2	12
	Immatures	16	1	5
	Nests			1
Shorebirds				

Seabirds	129	106	195
Crows and Ravens	25		23
Others (see separate Bird list)	3	8	21

***Domestic Mammals***

Cattle  
Horses  
Dogs  
Other

***Land Mammals***

Moose

Adults  
Calves

Black Bears  
Brown Bears  
Land/River Otters  
Red Squirrels  
Tracks Identified  
Other

gull tracks

1

moose  
1

***Marine Mammals***

Sea Otters  
Harbor Seals  
Steller's Sea Lions  
Harbor Porpoises  
Whales

2

40  
2

Beluga  
Orca  
Minke  
Humpback  
Gray  
Unknown

Other/Unidentified

***Please note any unusual wildlife sightings***

1 Glaucous-winged Gull  
1 coyote follow

**Invertebrates**

(from the Intertidal Biodiversity Checklist)

***Please note any interesting observations or changes in abundance here***

***Sponges***

Breadcrumb Sponge  
Purple Sponge

***Cnidarians***

***Anemones***

x                      x                      x                      x

Burrowing Green Anemone  
Orange Colonial Anemone  
Frilled (Plumose) Anemone  
Christmas Anemone

***Sea Jellies***

Moon Jelly  
 Many-ribbed Hydromedusa  
 Compass Jelly  
 Lion's Mane Jelly

**Worms**

Giant Flatworm  
**Nemerteans**  
 Amphiporus (Two-spotted) Ribbon Worm  
 Red Ribbon Worm  
**Echiurans**  
 Fat Innkeeper (Alaskan Spoonworm)  
**Sipunculids**  
 Peanut Worm  
**Annelids**  
 Mussel Worm (Clam Worm)  
 Northern Feather Duster Worm (Carpet Worm)  
 Cone Worm  
 Calcareous Tube Worm  
 Spiral Tube Worm  
 Scaleworm

**Brachiopods**

Transverse Lampshell

**Mollusks**

<b>Chitons</b>	x		x	x
Gumboot Chiton				
Black Katy Chiton				
Brick Chiton				
Mossy Chiton				
Tiger Chiton				
Lined Chiton				
<b>Limpets</b>	x	x	x	x
Dunce Cap Limpet				
Plate Limpet				
<b>Snails</b>	x			x
Hairy Triton				
Sitka Periwinkle				
Helicina Margarite				
Puppet Margarite				
Aleutian Moonsnail				
Ridged Neptune				
Channeled Dogwinkle				
Emarginate Dogwinkle				
Friiled Dogwinkle				
File Dogwinkle				
Big-mouth Whelk				
<b>Nudibranchs</b>				
Maned Nudibranch				
False Sea Lemon (False Lemon Peel)				
Orange-tipped Nudibranch				
Opalescent Nudibranch				
Bushy-backed Nudibranch				
Little Brown Nudibranch				

<b>Clams</b>				X
Nuttal's Cockle				
Northwest Ugly Clam				
Arctic Rock Borer				
Baltic Macoma				
Stained Macoma				
Pacific Surf Clam				
Truncated Mya				
Steamer Clam (Pacific Littleneck Clam)				
Butter Clam				
Razor Clam				
<b>Mussels</b>	X		X	X
Horse Mussel				
Pacific Blue Mussel				
<b>Scallops</b>				
Pink Scallop				
<b>Jingles</b>				
Rock Jingle				
<b>Cephalopods</b>				
Giant Pacific Octopus	X			
Stubby Squid				
<b>Arthropods</b>				
<b>Barnacles</b>	X		X	X
Acorn Barnacle				
Pelagic Gooseneck Barnacle				
Thatched Acorn Barnacle				
<b>Crabs</b>				
Dungeness Crab	X			
Black-clawed Cancer Crab				
Red Hermit Crab	X			
Striped Hermit Crab				
Decorator Crab				
Carapace Crab				
Red King Crab				
Northern Kelp Crab				
Helmet Crab				
<b>Shrimp</b>				
Broken-back Shrimp				
Coonstripe Shrimp				
Sand Shrimp				
<b>Isopods</b>				
Pillbug Isopod				
Rockweek Isopod				
<b>Amphipods</b>	X			
Skeleton Shrimp				
Small Beach Hopper				
<b>Echinoderms</b>				
<b>Sea Stars</b>	X			
Little Six-rayed Star				
Red-banded Star (Rainbow Star)				
Ochre Star				
Sunflower Star				

Morning Sun Star  
 Stimpson's Sun Star  
 Rose Star  
 Leather Star  
 True Star (False Ochre Star, Mottled Star)  
 Blood Star  
**Brittle Stars**  
 Serpent Star  
 Daisy Brittle Star  
**Sea Urchins**  
 Green Sea Urchin  
 Red Sea Urchin  
**Sea Cucumbers**  
 Silky Burrowing Cucumber  
 Orange Cucumber (Red Cucumber)  
 Tar-spot Cucumber (Black Cucumber)  
**Sand Dollars**  
 Green-spined Sand Dollar (Northern Sand Dollar)

**Chordates**

**Tunicates**

Colonial Tunicate (Sea Pork)  
 Sea Peach

**Seaweeds**

Green Seaweed		x	x	x
	Band Attached			
	Washed Up			
Red Seaweed			x	x
	Band Attached			
	Washed Up			
Rockweed				
	Band Attached			
	Washed Up			
Kelps		x		
	Band Attached			
	Washed Up			
Eelgrass				
	Band Attached			
	Washed Up			

**Beach Substrate**

Type	rocky, pebt	sand	all
------	-------------	------	-----

**Bluff and Cliff Erosion**

Erosion Present

Comments	severe	severe	severe
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**Human Activities**

Walking	Signs of Actual observation	
Camping	Signs of Actual observation	1
Partying	Signs of Actual observation	
Fire Pits	Signs of Actual observation	
Trash Accumulations	Signs of Actual observation	1
Clamming	Signs of Actual observation	
Fishing	Signs of Actual observation	
Coaling	Signs of Actual observation	
Picnicking	Signs of Actual observation	
Horseback Riding	Signs of Actual observation	
Harvesting (specify)	Signs of Actual observation	
Other (specify)	Signs of Actual observation	

**Vehicle Use**

Cars/Trucks	Sets of tracks Actual observation	
ATVs/Motorcycles	Sets of tracks Actual observation	20
Bicycles	Sets of tracks Actual observation	
Aircraft	Sets of tracks Actual observation	
Other (specify)	Sets of tracks Actual observation	

**Structures on the Beach**

Buildings		
Docks		
Driftwood Structures		
Riprapped Areas		
Erosion Control Structures		
Abandoned Vehicles		
Abandoned Boats		
Boat Parts		1

**Archaeological Sites**

- Shell Middens
- Other (specify)

**Outfalls or Pipes**

- Number
- Comments

**Toxic Pollution**

- Fuel (oil, gas, etc.)
- Lubricating Oil
- Paint
- Batteries

**Trash & Debris**

(from International Coastal Cleanup Data Card)

***Shoreline and Recreational Activities***

Bags (Paper & Plastic)	2	1
Balloons		
Beverage Bottles, plastic, 2-liter or less		12
Beverage Bottles, glass		
Beverage Cans		
Caps, Lids		
Clothing, Cloth		
Cups, Plates, Forks, Knives, Spoons		
Food Wrappers/Containers		3
6-pack Holders		
Pull Tabs		
Shotgun Shells/Wadding		
Straws, Stirrers		
Toys		

***Ocean/Waterway Activities***

Bait Containers/Packaging		
Bleach/Cleaner Bottles		
Buoys/Floats	2	2
Crab/Lobster/Fish Traps		
Crates		
Fishing Line		

Fishing Lures		
Fishing Nets		
Light Bulbs/Tubes		
Oil/Lube Bottles		
Pallets	2	
Plastic Sheeting/Tarps		5
Rope/cable		1
Strapping Bands		

***Smoking-Related Activities***

Cigarettes/Cigarette Filters  
 Cigarette Lighters  
 Cigar Tips  
 Tobacco Packaging/Wrappers

***Dumping Activities***

Appliances (refrigerators, washers, etc.)		
Batteries		
Building Materials		
Cars/Car Parts		1
55-gallon Drums	1	
Tires		

***Medical/Personal Hygiene***

Condoms  
 Diapers  
 Syringes  
 Tampons/Tampon Applicators

***Debris Items of Local Concern***

Styrofoam pieces  
 Plastic Pieces  
 Paper products  
 Metal Pieces  
 Other

***Entangled Animals***

Type of Animal  
 Form of Entangling Debris  
 Comments

***Most Peculiar Item Collected?***

***Comments***



**Additional Observations and Comments**

9.13.10

2  
1  
25

5-May-91	19-May-92	23-Sep-98	16-Sep-01	10.3.04	09.24.05	09.30.06	9.23.07	9.13.10
1200		930	900	1230	1150	11:30	1200	11
1500		1230	1430	1630	1530	16:30	1630	2:30
			-3		2	3.9	1.9	
			820		113	1355	1848	
		50	50	45	54	45	45	60
		cloudy	cloudy	overcast	partly cloudy	clear		fog
			x	x	x	x	x	x
			x	x	x	x	x	x
			x					x
2	2	13	2	1	1	1	1	1
3	4	3	5.5	4.5	4	5	4.5	2
6	8	39	11	4.5	4	5	4.5	2
		2.5	2.5	2.7	2.75	2.5	5.85	3
			5	6.5	6.5	6	6.71	6
x	x	x	x	x	x	x	x	
2			2	2	2	2	4	1
			25	25	50	25	60	25
25		20	2	3	0		8	
			11	37	37	11	37	
					0			
2	1	1	3		1			9
1	1		1					1
1	4							
			3	2	0			



x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

x

shells

x

x

x

x

x

x

x

x x

x

x

x			x	
	x	x		x
	x	x	x	x
	x		x	
	x		x	
	x	x	x	x
			x	

rocky

sand

Rocky ebbles, sand cobble cobble sand, cobble

moderate

Active rock ridges, many edge many :tions. Gullies below  
 yes yes yes  
 Near Dunmore

1

1  
1

3  
1

2

x  
x

1  
2  
1

1

1

1

x

2

1

1

1

2  
1

1

1

1

2

1  
1

1

	3	1	2	1	1 cabin
1					
1	chassis (ol	1	1		2

1

6		3		1	
12	26	63	35	26	8
13				1	1
4	5	1	25	12	1
20	3	8			1
4	6	1		1	1
				1	1
1	5	8	4	3	2
				1	
	1			2	
				1	
1	1	2		1	
1		5	2		
2			1	1	1
5	2	5	1	3	1
			1		
		3		1	
1			1	1	



	7	2	3		2	1
	1					1
	3	1			1	
				7	2	1
	5	2	4	3	1	
				1	3	
	1				2	
		1			3	1
					1	
						1
	1	34		16		
2	1		1			1
	1					
	1					
			20		100	21
			4			30
	1				2	6

computer monitor, Asian and Russian bottles, Asian Amvcar on rocks

Aluminum cans, plastic containers, styrofoam, visqueen, fishing

Aluminum, glass bottles, glass all present.

Trash was generally less and mostly from drift. Large driftwood debris is Is treated lumber toxic?

Heavy  
erosion  
continues  
on the  
bluff, in  
substantia  
l mud and  
rock  
.. .

3 dead  
birds

10.9.10

3.5  
3  
70

10.9.10	10.9.11	10/29/2011	4/29/2012	9/22/2012	10.4.14	9.19.14	10.31.15	9.18.16
	12:40				13:40	13:00	12:00	12
	15:40				17:20	14:30	16:00	15:30
	1.9				3.5	3.3	2.6	-3.4
	15:40				18:04	6:27	11:40	10:31
	45			45	45	55	35	50
	Sun	1		clouds	sun	sun	sun	sun
	x				x	x	x	x
	x				x	x		
1	1	4	1	1	1	2	x	x
3.5	3.5	2	3.5	4.5	5	1.5	1	1
3.5	3.5	6	3.5	9	5	3	4	3.5
2	3.5	0.25	2.5	2.5	2	0.3	2.5	2
2	4.25	0.5		5	5.5	1.3	6	3
	x	x	x	x	x	x		
3	2	5	1	2	1	2	1	1
70	30	50	35	13	15	18	11	7
	1							
	15							
					2		1	1
					1		1	

49  
2  
4

39  
1  
2

27

1

2

x

3  
5

3  
2

2

1  
1

dead sea otter - skeleton

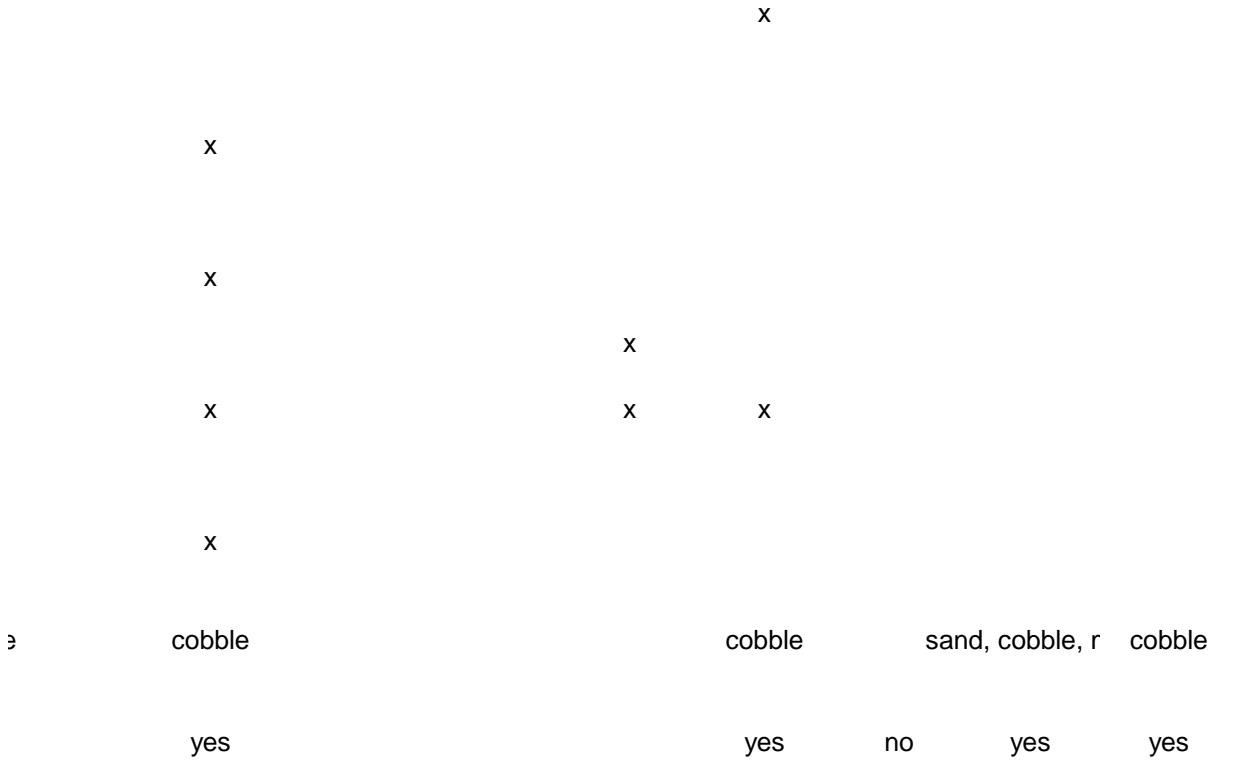
seal - 1/2 mile E. of H

x



x

x



Creek bed slide ~1.75 ft. South of Dams and Creek have more cobbles puffs and slouf in the past. Some prob

		x	x	x	x
3			x		x
1			x		x
			x		x
1		x	x		
		2			
			x		
			x		
2		1		x	1
		2			
		1			
					1



1 cabin

1

near cabin  
2: ATV, truck

1 red truck

1

1

1		2	1	4				
57	9	24	11	22	37	45	21	13
		2				9		
6	3		2		5	41	1	2
12		4	1	9	2	50		1
3	4	1	3	3			1	
2		1	2		2	11	2	2
4	1		6	6	1		1	
	4		2	6				
3		1		1	1			
1	1		1	1				
1				1				
2	3	1		2				
4	5	9	2	5	1	3	2	
			2					3
	1							
	2					1		

	2							
	1							
2						2	5	
3	3	1	2	6	2	10	1	6
						3		
3			30			12		
		1			1			
1								
2		1		3			48	
	3			2				
				1				
22	27	360	25	120	15	283	26	4
3	11	2	15		7	25		13
1	5		2	2		800	7	

sea otter  
none  
dead (bones)

harbor seal  
no  
dead

germacircl ATV part

working VHF mājāpārese plastic bottles

Marine debris is less. A clean up with ATV would be useful to haul out

marine debris is less than in the past. Styrofoam is down



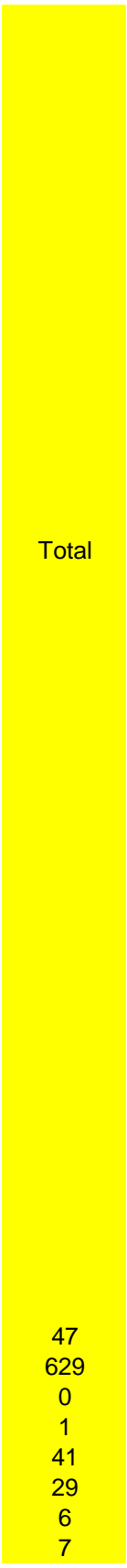
10/1/2017 9/23/2017  
 11:00 10:00  
 12:00 1:00  
 -0.4  
 11:23 PM  
 48 53

clouds/fog rain  
 all high & low  
 1 1  
 1  
 1 1  
 2 2  
 2.33 3  
 4.66 6  
 2.5  
 1 6.5  
 1 1

1 2  
 80 lbs

1  
 4  
 1  
 1 4  
 2

Total



47  
 629  
 0  
 1  
 41  
 29  
 6  
 7

862  
231  
79

0  
0  
16  
0

3  
0  
2  
0  
0  
4  
0  
2

coyote1

2      3

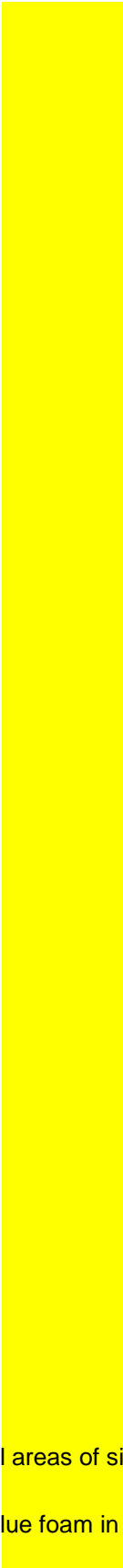
135  
120  
0  
0

0  
0  
0  
0  
0  
0  
0  
3

lahn cabin







1%

1-75%

1

1-75%

1%

cobble

erosion present: small areas of silty sediment slough- nothing excessive.

able tsunami debris was found - blue foam in stucco



1  
1

1

1

1  
1

1

2



3

1

1

4

2

41

25

2

10

458

13

19

27

2

116

2

114

29

30

26

55

15

1

0

17

10

12

9

5

10

19

55

8

6

6

			19
			5
	1		1
			16
12	15		12
1	2		7
			60
			9
1	1		46
			5
			1
			3
6	2		2
	1		0
			111
			11
			2
			0
1			0
	1		0
			0
			2
124	23		
9	26		
			1113
1	2		80
	1		0
<b>189</b>	<b>192</b>		0
			826

