

Zone 18

Shore	south
Total Surveys	9
Start Point	Aurora Lagoon outlet
End Point	Right Beach Campsite
Start Lat/Long	
End Lat/Long	
Dates Walked	1988-89, 91, 96, 1999,2003-09
Spring Surveys	6
Fall Surveys	8
First Walked	1988
Last Walked	2016
Total Person-Hours	796
Total Trash Bags Collected	144
Total Estimated Weight of Trash Collected	3629

General Info

Date	30-Apr-88	30-Apr-88	29-Apr to 6	4-Apr-91	27-Apr-91
Start Time			1200	1000	1800
End Time			2000	1300	2200
Lowest Tide					-1.9
					at time
					825

Temperature (F)

Sky

Vertical Zones Walked:

High		x			
Middle	x	x			
Low					

# of Observers	5	3	2	3	3
Hours Spent	3	2	8	3	4
Person-Hours	15	6	16	9	12
Shoreline Walked (miles)	2.5	2	3		1.5
Total Trip Mileage					
Did Observers . . .					

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

Trash Bags Collected

Estimated Weight of Collected Trash

	1	1			
--	---	---	--	--	--

Wildlife Birds

Loons					
Sea Ducks	100		250		
Other Ducks and Geese				33	
Bald Eagles					
	Adults	1	2	2	5
	Immatures			1	
	Nests			1	4
Shorebirds		1	2	1	200

Seabirds		10	250	500	20
Crows and Ravens		3	5	30	15
Others (see separate Bird list)	2		5		

Domestic Mammals

Cattle					
Horses					
Dogs				2	
Other					

Land Mammals

Moose					
		Adults			
		Calves			
Black Bears					
Brown Bears					
Land/River Otters					
Red Squirrels			1		
Tracks Identified					moose
Other					

Marine Mammals

Sea Otters					
Harbor Seals			1		
Steller's Sea Lions	1				
Harbor Porpoises	1				
Whales					
		Beluga			
		Orca			
		Minke			
		Humpback			
		Gray			
		Unknown			
Other/Unidentified				1	

Please note any unusual wildlife sightings

5 unidentified High winds--not many l

Invertebrates

(from the Intertidal Biodiversity Checklist)

Please note any interesting observations or changes in abundance here

Lots of dead sea urchi Thousands of dead mussels and t

Sponges

- Breadcrumb Sponge
- Purple Sponge

Cnidarians

Anemones

- 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

Chitons

Gumboot Chiton

Black Katy Chiton

Brick Chiton

Mossy Chiton

Tiger Chiton

Lined Chiton

Limpets

Dunce Cap Limpet

Plate Limpet

Snails

Hairy Triton

Sitka Periwinkle

Helicina Margarite

Puppet Margarite

Aleutian Moonsnail

Ridged Neptune

Channeled Dogwinkle

Emarginate Dogwinkle

Frilled Dogwinkle

File Dogwinkle

Big-mouth Whelk

Nudibranchs

Maned Nudibranch

False Sea Lemon (False Lemon Peel)

Orange-tipped Nudibranch

Opalescent Nudibranch

Bushy-backed Nudibranch

Clams

x

x

x

x

x

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

x x x x

Chordates

Tunicates
 Colonial Tunicate (Sea Pork)
 Sea Peach

Seaweeds

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

x x x
 x x

Beach Substrate

Type mud rocky, pebl sand, mud

Bluff and Cliff Erosion

Comments slight slight

Human Activities

Walking	Signs of Actual observation	1	
Camping	Signs of Actual observation		1
Partying	Signs of Actual observation		
Fire Pits	Signs of Actual observation	3	
Trash Accumulations	Signs of Actual observation		
Clamming	Signs of Actual observation		
Fishing	Signs of Actual observation	2	
Coaling	Signs of Actual observation		
Picnicking	Signs of Actual observation		
Horseback Riding	Signs of Actual observation		
Harvesting (specify)	Signs of Actual observation		
Other (specify)			Subsistenc Subsistenc Subsistenc

Vehicle Use

Cars/Trucks	Sets of tracks Actual observation		
ATVs/Motorcycles	Sets of tracks Actual observation		
Bicycles	Sets of tracks Actual observation		
Aircraft	Sets of tracks Actual observation	1	
Other (specify)			2

Structures on the Beach

Buildings		2	5	1
Docks				
Driftwood Structures				
Riprapped Areas				
Erosion Control Structures				
Abandoned Vehicles				
Abandoned Boats		2		
	Boat Parts			

Archaeological Sites

Shell Middens
Other (specify)

Outfalls or Pipes

Number 5
Comments

Toxic Pollution

Fuel (oil, gas, etc.) 1
Lubricating Oil Big diesel oil spill at head of spit.
Paint
Batteries

Trash & Debris

(from International Coastal Cleanup Data Card)

Shoreline and Recreational Activities

Bags (Paper & Plastic)
Balloons
Beverage Bottles, plastic, 2-liter or less
Beverage Bottles, glass 3
Beverage Cans 13 2 1
Caps, Lids
Clothing, Cloth 2
Cups, Plates, Forks, Knives, Spoons 18 1
Food Wrappers/Containers 1
6-pack Holders
Pull Tabs
Shotgun Shells/Wadding 20
Straws, Stirrers
Toys 1

Ocean/Waterway Activities

Bait Containers/Packaging
Bleach/Cleaner Bottles
Buoys/Floats 2 1 1
Crab/Lobster/Fish Traps
Crates
Fishing Line 11 1
Fishing Lures
Fishing Nets 1

Light Bulbs/Tubes
 Oil/Lube Bottles
 Pallets
 Plastic Sheeting/Tarps
 Rope/cable
 Strapping Bands

Smoking-Related Activities

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

Dumping Activities

Appliances (refrigerators, washers, etc.)	1
Batteries	
Building Materials	9
Cars/Car Parts	
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		
Glass pieces		
Metal Pieces		1
Other	1	

Dead Animals (not entangled)

Type of animal	Number
----------------	--------

Entangled Animals

Type of Animal
 Form of Entangling Debris
 Comments

Most Peculiar Item Collected? upholstered antique chair

Comments Rare to un Metal unco No trash.

Additional Observations and Comments Suggestions: less win

18-May-91	29-Sep-96	26-Sep-99	10.09.03	10.3.04	9.20.05	09.23.06	9.14.2007	6.12.10	
1445	700	1415	1000	1126	944	900			
1645	900	1645	1530	1500	1355	1235			
				4.9	-2.8	0.7			
				1147	1059	939			
	35-45 sunny	48 sunny	60 sunny	45 overcast	52 p. cloudy	50 clouds			
	x	x	x	x	x	x			
	x		x		x	x			
			x	x					
6	4	2	4	2	2	4	2	5	
2	2	2.5	5.5	3.5	4.5	3.5		9	
12	8	5	22	7	9	20	0	45	
1	2	3.5	2.5		1	2		3	
			2.5		2	2.5		6	
x	x	x	x	x	x	x	x		
			Mako out to site						
1	9		1	1	3	2	2	8	
	200		25	15	95	45	19	200	
			0						
	134	24	150	100	3	1			
		1	0						
	2		7			2	3		
			2		4				
			4						
			0						

5	152		0		1
	3	50	0		
		3			
			0	0	
			0	0	
		1	0	0	1
			0	0	
					2 tracks
			0	0	1
			0	0	1
			0	0	
			0	0	
	1		0	0	2
	moose, bear	coyote	moose		4
		3	2	0	
	1		13	1	3
			0	0	
			0	0	
			0	0	
			0	0	
			0	0	
			0	0	
			0	0	

birds flying. 1 dead sea 1 dead eagle in tide line.

arnacles. We were in 177 jellies on beach.

x

x

5

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

rocky, pebbles pebbles es, sand an'ocky, sand! rocky sand, cobble

none

2 x 1 3
1 x 4 1 3
4 4 1 2

x

3

3
1

1

1

1

e activity.

1

2

1

4

cabins

2

1--middle island mussel large piles at mid-tide

1	11		0	5		3	8	4
			0	3		1		
1	10	10	0	4	12	5	6	24
	8		0	2	2	3	4	1
	8	3	8	3	3	3	2	18
	15		0	9	6	4	13	30
1	5		0			5	2	5
	6		0				3	8
			0	2	5	3	6	17
			0					
	7		0	1	4	2	7	10
	2		0		1			1
1	3		0				1	1
	9		0		1	1	3	
	3		0		1			1
1	11		0	3		2	1	7
	1		1					
			0	1				
	2	1	0			1		
	12		0	5		3	2	3
	3		1			2	1	

	1	0		2	2	2
		0		3	2	1
	1	0	1	1	2	6
		0		6	4	
3	16	0	7	1	6	9
	1	0			1	3
		0	3		3	2
	1	0				1
		0			1	
		0				
	3	0				
		0				
	5	0	1	4	30	21
		0				
	4	1				
	2	0				
		0				1
		0				
		0				
	1	0				
	25		14	15	18	300
			3			
			6	1		
1				1 2		2 2

M/V Tustemena life ring rusty barrel

10 ft plastic

Does the state park ever clean this beach?

d, birthdays. Good to veı Beach very clean, all trash small, did not walk mainland part of lagoon. €

939
103
13

0
0
5
0

1
1
0
0
1
5

coyote coyote

4
0

2
1

16
11

3
3
1

23
31
1
3

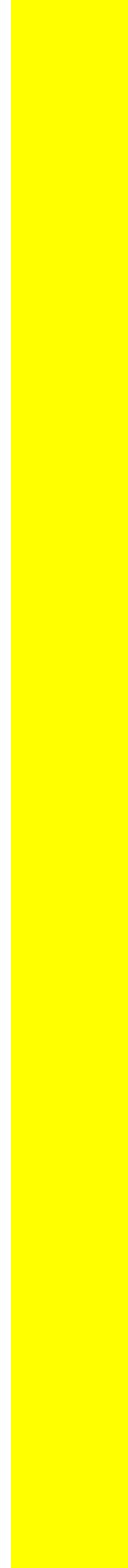
0
0
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1

x

x

x

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x

x
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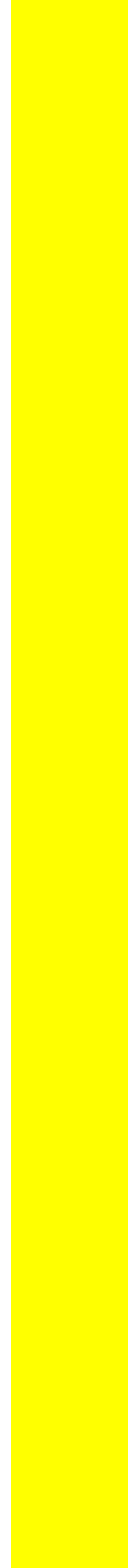
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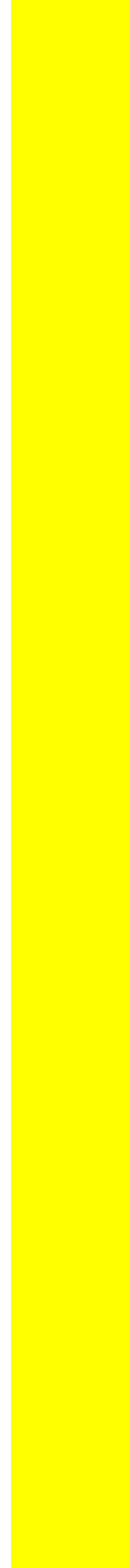
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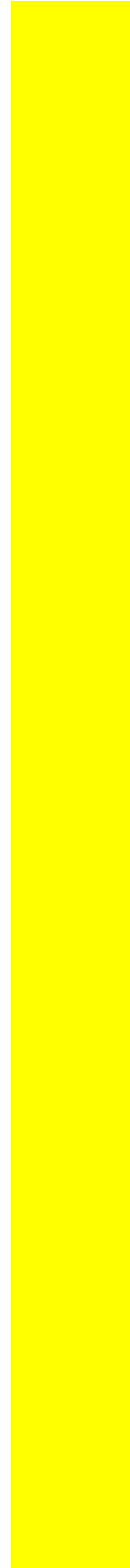
cobble



	8
	2
x	1
	1
	1
x	1
3	7

x
1

1



					1	1	
2	1	3	3	6	5	13	60
2							10
8	19		9	6	6	18	139
11	22	4	3	1	4	4	86
9	32	11	6	5	4	10	163
14	34	23	33	8	29	120	232
4	15	4		2	7	9	60
10	2	4	4	3	4	4	78
11	44	9	21	24	27	65	213
					1		6
							1
10	41	3	27		7	56	185
	2	2	1	4	1	3	16
	4					2	23
	2	1					23
1	13		1	3		3	24
4	13	4				6	61
				1	1		3
							3
2	16		1			4	40
2	3		1			1	36
	2		1		1		14

	2						10
	5						11
	2						16
	5	3					25
13	27	8	11	6	4	38.5	171
1	8		1	1		3	25
4	15	1	6	5	17	4	63
	2				1	6	6
					1	2	1
			3				5
							4
							0
138	144	14	13	69	78	37	448
							528
	1						7
							3
						1	1
			1				3
					1		0
			1	1		1	5
347	1067	70	1720	622	2331	205	4618
37	136	32	107	52	68	380	390
		10	7		67		18
			17	7	2	5	24
		2			30		15
25	2	5	20	15	2697	1000.5	105

jellies
9

: pipe, wig, gas tank, beach, w/ supply cup w/ formula, flip flops, rusted grill

plasmobranch egg sac (mermaid purse), red/brown circles (maybe from gasoline)