

## 2010 Summary

|  | <u>Zone 1</u>    | <u>Zone 2</u> | <u>Zone 3</u>          | <u>Zone 4</u> | <u>Zone 5</u> |
|--|------------------|---------------|------------------------|---------------|---------------|
| <b>Date</b>                                | 9.11,11.5        | 10.9.10       | 13.10,10.1..12,9.15,10 | 9.29.10       |               |
| <b>Start Time</b>                          |                  |               |                        |               |               |
| <b>End Time</b>                            |                  |               |                        |               |               |
| <b>Lowest Tide</b>                         |                  |               |                        |               |               |
|  | <b>at time</b>   |               |                        |               |               |
| <b>Temperature (F)</b>                     |                  |               |                        |               |               |
| <b>Sky</b>                                 |                  |               |                        |               |               |
| <b>Vertical Zones Walked:</b>              |                  |               |                        |               |               |
|  | High             |               |                        |               |               |
|  | Middle           |               |                        |               |               |
|  | Low              |               |                        |               |               |
| <b># of Observers</b>                      | 125              | 1             | 46                     | 34            | 1             |
| <b>Hours Spent</b>                         | 4                | 3.5           | 6.5                    | 5.5           | 1             |
| <b>Person-Hours</b>                        | 250              | 3.5           | 138.5                  | 60            | 1             |
| <b>Shoreline Walked (miles)</b>            | 5                | 2             | 6                      | 2.5           | 0.5           |
| <b>Total Trip Mileage</b>                  | 10               | 2             | 6                      | 4.5           | 1.5           |
| <b>Did Observers . . .</b>                 |                  |               |                        |               |               |
|  | Hike?            |               |                        |               |               |
|  | Kayak?           |               |                        |               |               |
|  | Other (specify)? |               |                        |               |               |
| <b>Trash Bags Collected</b>                | 20               | 3             | 11                     | 16            | 1             |
| <b>Estimated Weight of Collected Trash</b> | 350              | 70            | 225                    | 215           | 35            |

### Wildlife *Birds*

Loons  
Sea Ducks  
Other Ducks and Geese  
Bald Eagles

|                  |           |   |  |
|------------------|-----------|---|--|
|                  | Adults    | 9 |  |
|                  | Immatures | 1 |  |
|                  | Nests     |   |  |
| Shorebirds       |           |   |  |
| Seabirds         |           |   |  |
| Crows and Ravens |           |   |  |
| Others           | magpie    | 3 |  |

***Domestic Mammals***

|        |  |   |  |
|--------|--|---|--|
| Cattle |  |   |  |
| Horses |  | 1 |  |
| Dogs   |  | 4 |  |
| Other  |  |   |  |

***Land Mammals***

|                   |        |  |  |
|-------------------|--------|--|--|
| Moose             | Adults |  |  |
|                   | Calves |  |  |
| Black Bears       |        |  |  |
| Brown Bears       |        |  |  |
| Land/River Otters |        |  |  |
| Red Squirrels     |        |  |  |
| Tracks Identified |        |  |  |
| Other             |        |  |  |

***Marine Mammals***

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

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

**Invertebrates**

*(from the Intertidal Biodiversity Checklist)*

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

***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 Moonshell  
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**

Nuttall'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

**Mussels**

Horse Mussel  
Pacific Blue Mussel

**Scallops**

Pink Scallop

**Jingles**

Rock Jingle

**Cephalopods**

Giant Pacific Octopus  
Stubby Squid

**Arthropods**

**Barnacles**

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***

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 | Band<br>Attached<br>Washed Up |
| Red Seaweed   | Band<br>Attached<br>Washed Up |
| Rockweed      | Band<br>Attached<br>Washed Up |
| Kelps         | Band<br>Attached<br>Washed Up |
| Eelgrass      | Band<br>Attached<br>Washed Up |

**Beach Substrate**

Type

**Bluff and Cliff Erosion**

Comments

**Human Activities**

Walking

Signs of 18  
Actual observation 2 x

Camping

Signs of 1  
Actual observation

Partying

Signs of 6  
Actual observation x

Fire Pits

Signs of 20  
Actual observation 3 x

Trash Accumulations

Signs of  
Actual observation

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 1

Harvesting (specify)

Signs of  
Actual observation

Other (specify)

**Vehicle Use**

Cars/Trucks

Sets of tracks 3  
Actual observation 10

ATVs/Motorcycles

Sets of tracks 1  
Actual observation

Bicycles  
 Sets of tracks  
 Aircraft  
 Sets of tracks  
 Other (specify)  
 Actual observation  
 Actual observation

**Structures on the Beach**

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

**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)                     | 321 | 1  | 17  | 178 |   |
| Balloons                                   | 3   |    |     |     | 3 |
| Beverage Bottles, plastic, 2-liter or less | 100 | 57 | 44  | 23  |   |
| Beverage Bottles, glass                    | 159 |    | 131 | 91  |   |
| Beverage Cans                              | 209 | 6  | 35  | 125 | 9 |
| Caps, Lids                                 | 156 | 12 | 38  | 47  | 8 |
| Clothing, Cloth                            | 25  | 3  | 17  | 22  |   |
| Cups, Plates, Forks, Knives, Spoons        | 36  | 2  | 4   | 22  | 3 |
| Food Wrappers/Containers                   | 188 | 4  | 29  | 133 | 5 |
| 6-pack Holders                             | 10  |    | 12  |     | 3 |
| Pull Tabs                                  | 7   |    | 1   | 4   |   |
| Shotgun Shells/Wadding                     | 3   |    | 11  | 9   |   |
| Straws, Stirrers                           | 30  | 3  | 1   | 8   |   |
| Toys                                       | 17  | 1  | 2   | 24  | 2 |

**Ocean/Waterway Activities**

|                           |    |   |    |    |   |
|---------------------------|----|---|----|----|---|
| Bait Containers/Packaging | 2  | 1 |    |    |   |
| Bleach/Cleaner Bottles    | 7  | 2 | 16 | 1  |   |
| Buoys/Floats              | 4  | 4 | 7  | 3  |   |
| Crab/Lobster/Fish Traps   |    |   |    |    |   |
| Crates                    | 1  |   |    |    |   |
| Fishing Line              | 56 |   | 1  |    |   |
| Fishing Lures             | 17 |   | 2  |    |   |
| Fishing Nets              | 13 |   | 3  | 1  |   |
| Light Bulbs/Tubes         | 1  |   |    |    |   |
| Oil/Lube Bottles          | 3  | 2 |    | 1  |   |
| Pallets                   |    |   | 2  | 1  |   |
| Plastic Sheeting/Tarps    | 12 |   |    | 1  |   |
| Rope/cable                | 30 | 3 | 11 | 14 |   |
| Strapping Bands           | 10 |   | 1  | 3  | 1 |
|                           |    |   |    |    | 2 |

**Smoking-Related Activities**

|                              |     |   |    |     |   |
|------------------------------|-----|---|----|-----|---|
| Cigarettes/Cigarette Filters | 426 |   | 12 | 166 |   |
| Cigarette Lighters           | 4   | 3 | 3  |     |   |
| Cigar Tips                   | 66  |   | 3  |     | 1 |
| Tobacco Packaging/Wrappers   | 10  |   | 14 | 12  | 2 |

**Dumping Activities**

|   |    |   |    |     |   |
|---|----|---|----|-----|---|
| Appliances (refrigerators, washers, etc.) |    | 1 | 1  |     |   |
| Batteries                                 | 5  |   | 1  | 2   |   |
| Building Materials                        | 17 | 2 | 60 | 232 |   |
| Cars/Car Parts                            | 15 |   | 8  | 2   | 2 |
| 55-gallon Drums                           |    |   |    |     |   |
| Tires                                     | 4  |   | 3  | 2   |   |

**Medical/Personal Hygiene**

|                            |   |  |  |   |   |
|----------------------------|---|--|--|---|---|
| Condoms                    |   |  |  |   |   |
| Diapers                    | 3 |  |  |   | 2 |
| Syringes                   | 1 |  |  | 1 |   |
| Tampons/Tampon Applicators |   |  |  | 2 |   |

**Debris Items of Local Concern**

|                  |     |    |     |     |   |
|------------------|-----|----|-----|-----|---|
| Styrofoam pieces | 216 | 22 | 623 | 306 |   |
| Plastic Pieces   | 201 | 3  | 150 | 138 | 5 |
| Paper products   | 32  |    |     | 30  |   |
| Metal Pieces     | 14  |    |     | 6   |   |
| Other            | 211 | 1  | 6   | 1   |   |

**Entangled Animals**

Type of Animal  
Form of Entangling Debris  
Comments

**Most Peculiar Item Collected?**

chinese germacircle bottle



*Comments*

**Additional Observations and Comments**

**Zone 6   Zone 7   Zone 8   Zone 9   Zone 10   Zone 11   Zone 12   Zone 13   Zone 18**

9.15,2.1   9.15.10   9.20-10.11   18,9.15,8.1:20,8.18,8.115,10.24,9.:   10.5.10   9.20.10   6.12,9.25

11:15  
1:15  
1.7  
7:42  
50's  
clouds

x

|      |     |       |     |   |      |     |     |       |
|------|-----|-------|-----|---|------|-----|-----|-------|
| 21   | 20  | 34    | 25  | 3 | 43   | 15  | 1   | 22    |
| 7.5  | 2   | 51    | 8.5 | 4 | 16.5 | 1   | 2   | 13.5  |
| 45.5 | 40  | 102   | 47  | 4 | 94.5 | 15  | 2   | 121.5 |
| 3    | 1.5 | 21.25 | 9   | 3 | 4    | 0.5 | 2.5 | 6     |
| 6    | 3   | 42.5  | 12  | 3 | 4    | 1   | 5   | 9     |

x

x

|    |     |    |     |    |     |    |    |     |
|----|-----|----|-----|----|-----|----|----|-----|
| 2  | 18  | 1  | 19  | 3  | 27  | 3  | 1  | 16  |
| 80 | 150 | 25 | 285 | 56 | 285 | 35 | 10 | 450 |

1

x

28

x

x

50+

2

15-20

x

x  
x

x

1-75%

<1%

1-75%

sand, cobble, r, boulder, bedrock, mu

yes

yes

x

x

xx

x

12

3

|   |   |
|---|---|
|   | 1 |
|   | 4 |
| 1 | 1 |

|    |     |    |     |    |    |   |   |    |
|----|-----|----|-----|----|----|---|---|----|
| 36 | 154 | 15 | 107 | 44 | 45 | 7 |   | 6  |
|    | 1   | 0  | 1   |    | 1  |   | 1 | 2  |
| 14 | 43  | 10 | 49  | 18 | 21 | 5 |   | 32 |
| 21 | 12  | 4  | 38  | 4  | 23 | 7 |   | 12 |
| 19 | 32  | 6  | 68  | 29 | 55 | 8 |   | 27 |
| 8  | 34  | 3  | 56  | 20 | 42 | 8 | 1 | 44 |
| 4  |     | 3  | 30  | 12 | 7  | 3 |   | 9  |
| 22 | 15  | 4  | 58  | 7  | 21 |   |   | 18 |
| 16 | 36  | 2  | 121 | 14 | 36 | 8 |   | 28 |
| 1  | 1   | 0  | 2   |    | 1  | 1 |   |    |
| 4  |     | 0  | 14  |    | 5  | 1 |   |    |
| 1  | 2   | 0  |     | 2  | 7  |   |   | 20 |
| 1  | 19  | 2  | 25  | 1  | 9  | 3 |   | 1  |
| 3  | 4   | 0  | 1   | 1  | 5  |   |   | 1  |



|    |     |     |     |    |     |    |   |     |
|----|-----|-----|-----|----|-----|----|---|-----|
|    |     |     | 6   | 4  | 3   |    |   |     |
|    |     |     | 2   | 1  | 2   |    |   | 2   |
|    | 2   |     | 68  | 1  | 1   |    |   | 11  |
|    |     |     | 1   | 1  | 1   |    | 1 |     |
| 1  | 3   |     | 24  | 4  | 1   | 2  |   | 2   |
| 1  |     |     | 4   | 1  |     |    |   | 5   |
|    | 1   |     | 12  |    | 1   |    |   |     |
|    |     |     | 3   |    |     |    |   | 2   |
|    |     |     | 2   |    | 2   |    |   | 1   |
|    |     |     | 5   |    | 2   |    |   | 6   |
| 1  | 12  |     | 2   | 1  | 3   | 1  | 1 |     |
| 13 | 7   | 2   | 46  | 3  | 13  | 1  |   | 47  |
| 4  |     |     | 16  | 2  |     |    | 1 | 5   |
|    |     |     |     |    |     |    |   |     |
| 1  | 770 | 500 | 640 | 4  | 151 | 3  |   | 6   |
| 1  |     |     | 3   |    | 3   | 3  |   | 1   |
|    |     |     | 16  |    |     | 3  |   |     |
| 1  | 4   |     | 22  | 1  | 1   | 3  |   |     |
|    |     |     |     |    |     |    |   |     |
|    |     |     | 5   |    |     | 2  |   |     |
| 4  | 1   |     | 45  | 10 | 2   |    |   | 159 |
| 3  | 1   |     | 8   | 1  | 3   | 1  |   |     |
|    |     |     |     |    |     |    |   |     |
|    |     |     | 1   |    |     | 1  |   |     |
|    |     |     |     |    |     |    |   | 1   |
|    |     |     |     |    |     |    |   |     |
|    |     | 1   |     |    | 1   |    |   |     |
|    |     |     |     |    |     |    |   |     |
| 43 | 24  | 13  | 503 | 61 | 143 | 5  |   | 647 |
| 29 | 73  | 30  | 191 | 22 | 56  | 8  |   | 37  |
| 4  | 28  | 22  | 99  |    | 40  | 3  | 3 |     |
| 11 | 14  | 1   | 27  | 8  | 16  | 8  |   |     |
| 9  | 12  | 2   | 2   | 7  | 3   | 10 |   | 27  |

ratty underwear                      collec

lots of ducks in mud bay

mostly clean beach. Most trash located by condos at end of spit and under coast  
very clean, no public a



















note in a bottle at head of china poot bay from halibut core

tal businesses.

ccess. Few garbage pieces.natural erosion. Some metal from boat or vehicle parts- have remained there

**is**

OVER 16000 TOTAL PIECES OF DEBRIS

















e for years.