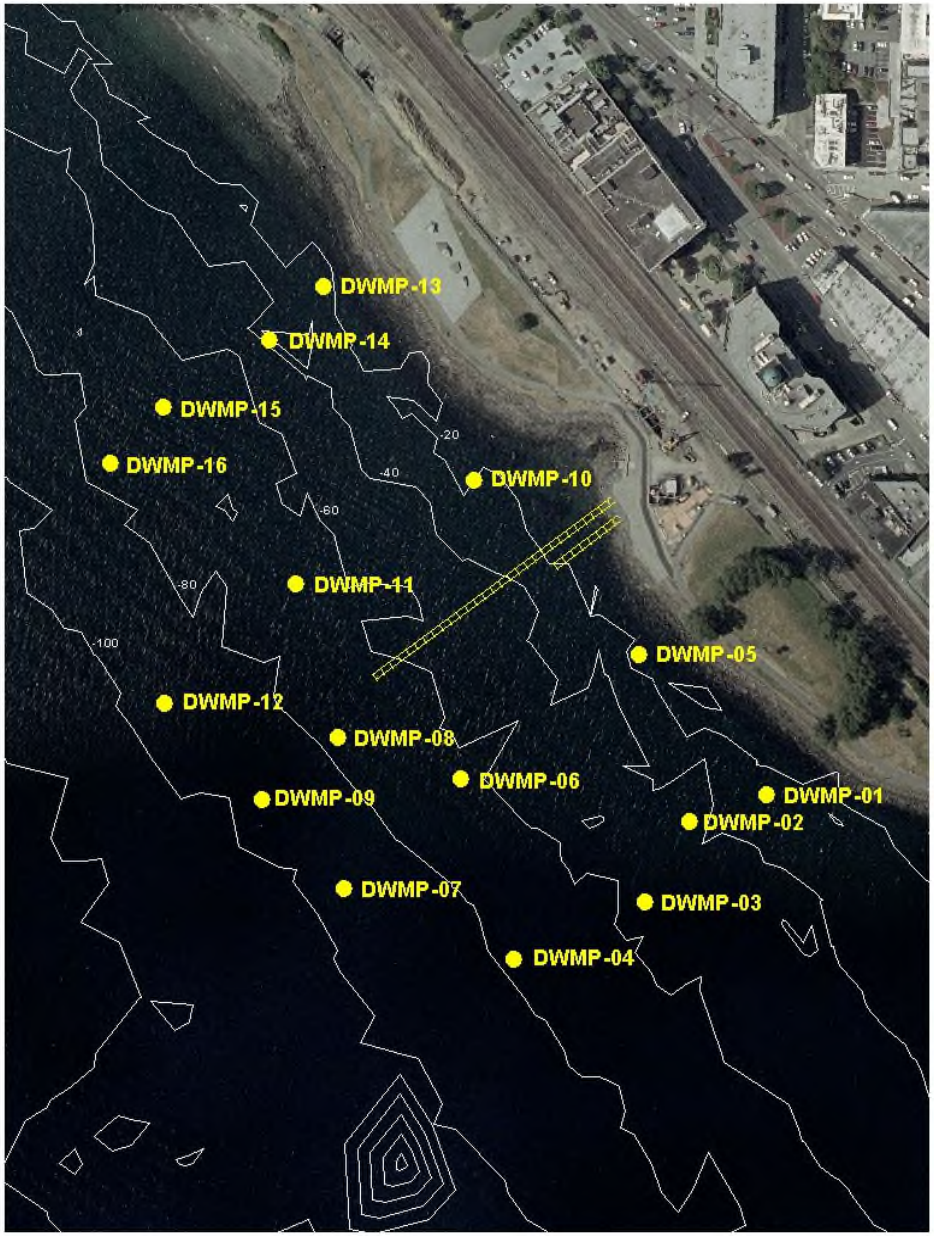
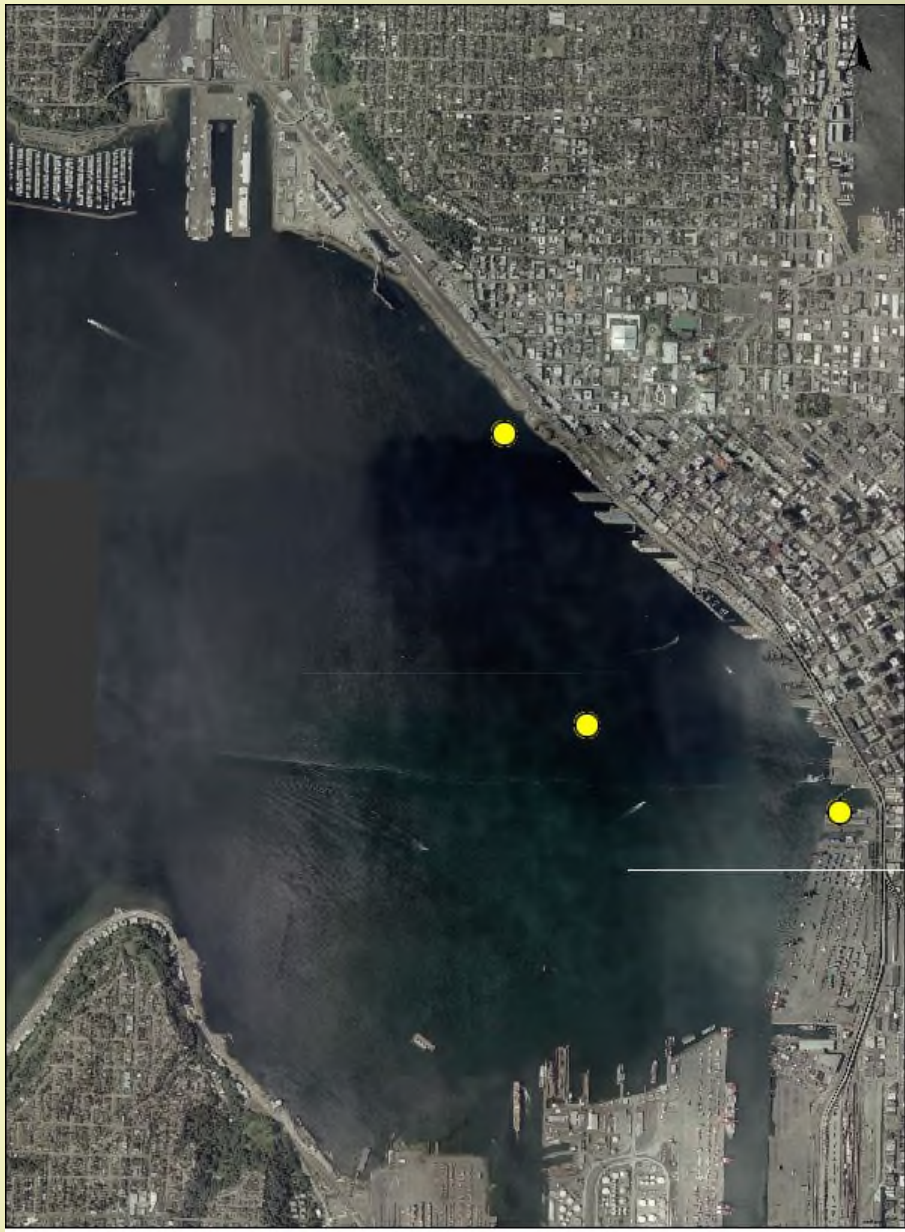
Elliott West /Denny Way CSO Long-Term Sediment Monitoring Program



Long-Term Water Quality Monitoring Stations

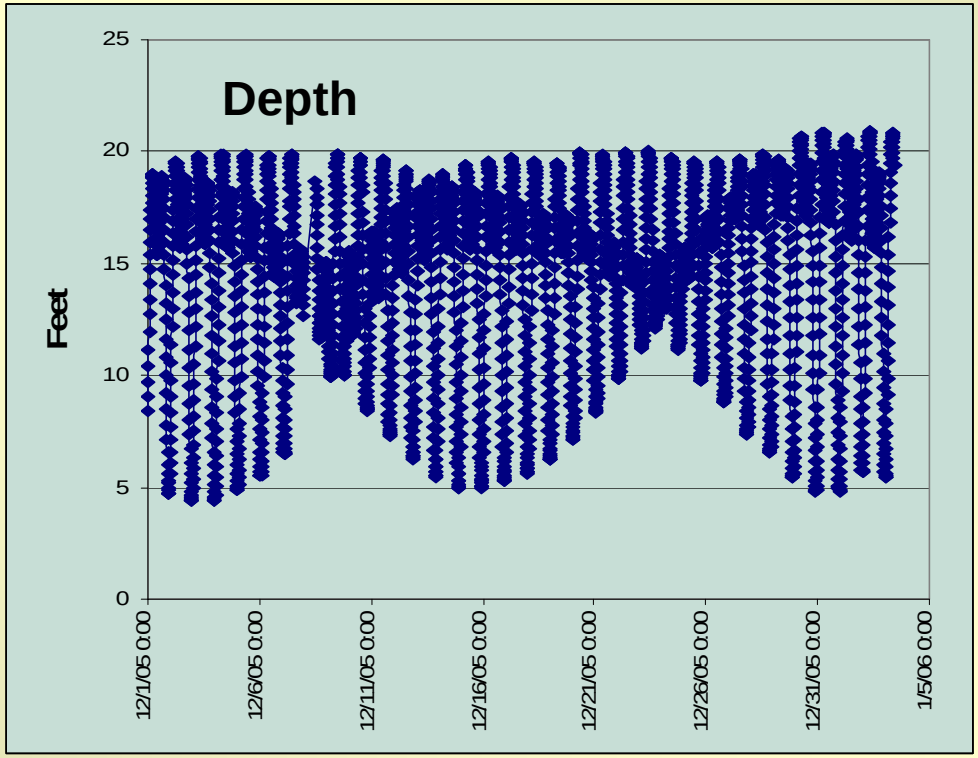


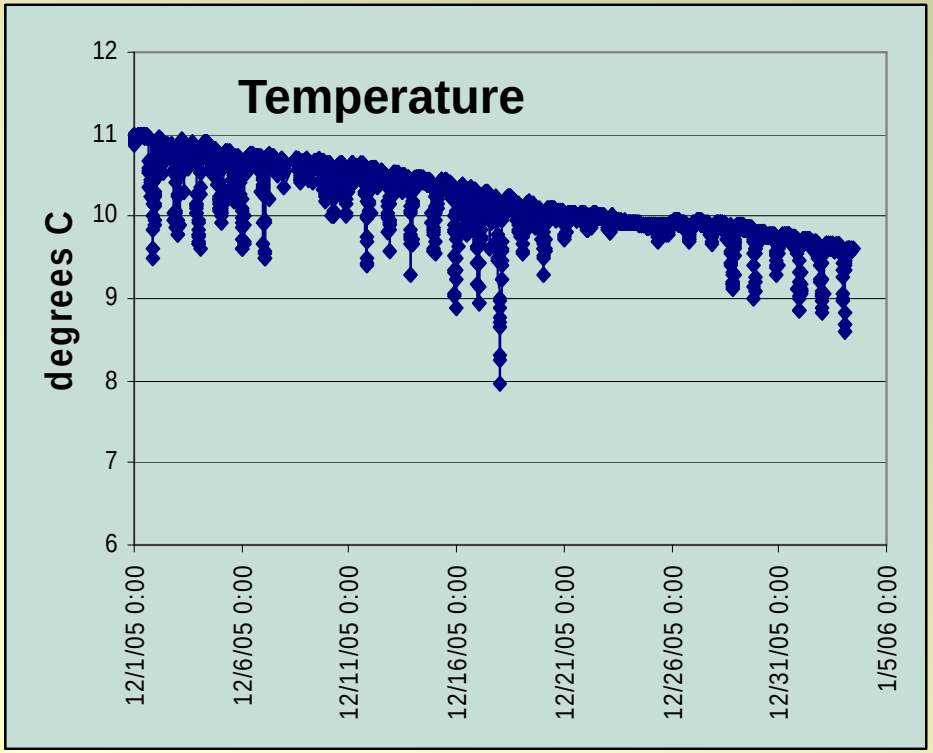
YSI Mooring
Data Collected Every 15 Minutes

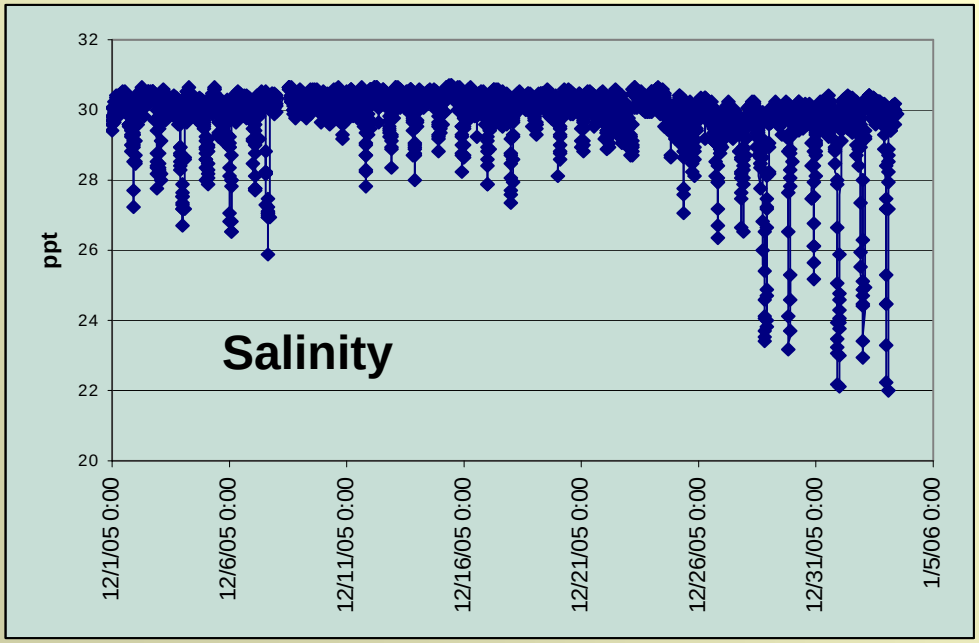
- Temperature
- Salinity
- Dissolved Oxygen
- Chlorophyll (fluorescence)
- Turbidity
- pH
- Depth

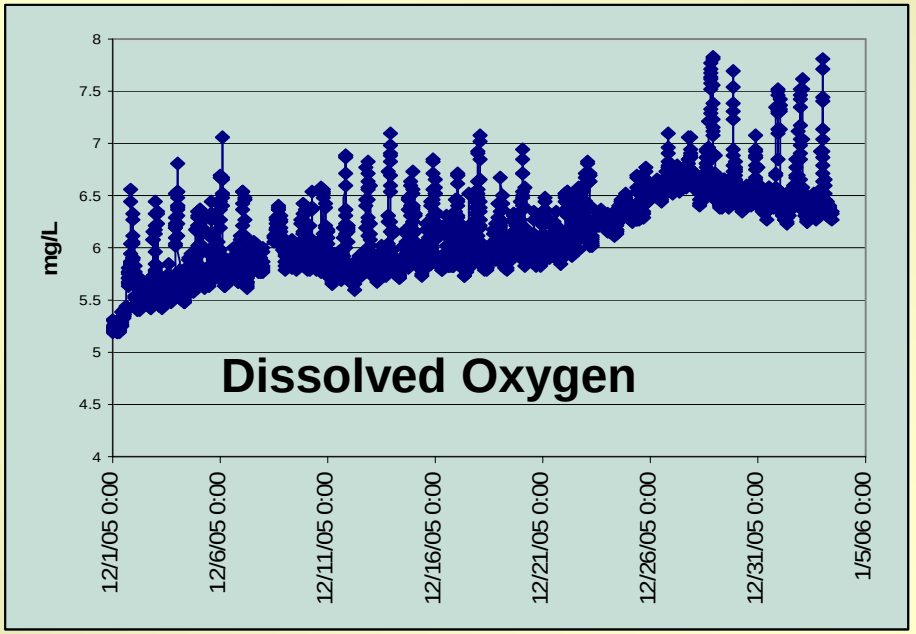
Data available on-line at:

http://www.ysieconet.com/public/WebUI/Default.aspx?hidCustomerID=92


Depth
Feet
25
20
15
10
5
0
12/1/05 0:00
12/6/05 0:00
12/11/05 0:00
12/16/05 0:00
12/21/05 0:00
12/26/05 0:00
12/31/05 0:00
1/5/06 0:00

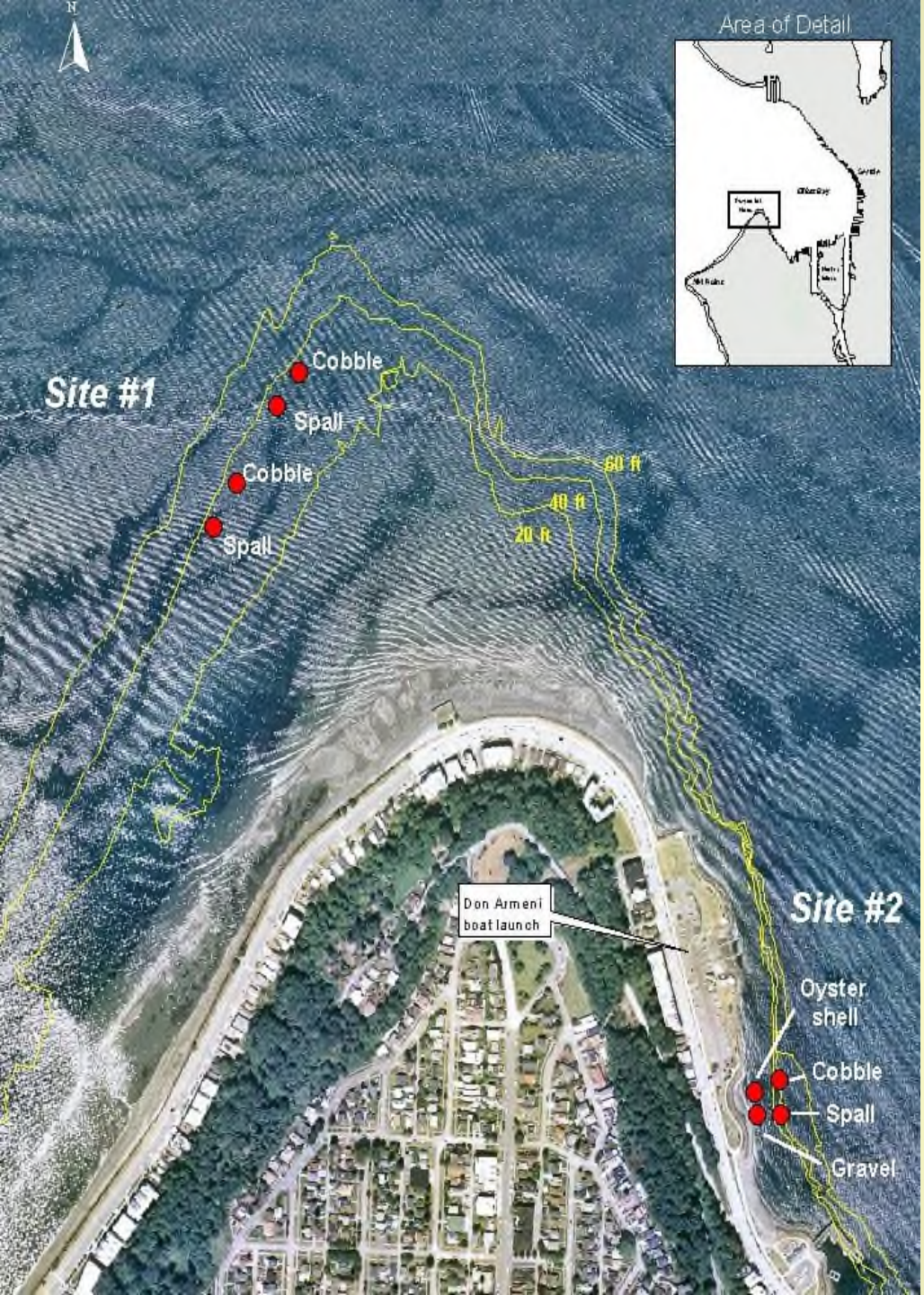

Temperature
degrees C
12
11
10
9
8
7
6
12/1/05 0:00
12/6/05 0:00
12/11/05 0:00
12/16/05 0:00
12/21/05 0:00
12/26/05 0:00
12/31/05 0:00
1/5/06 0:00


Salinity
ppt
32
30
28
26
24
22
20
12/1/05 0:00
12/6/05 0:00
12/11/05 0:00
12/16/05 0:00
12/21/05 0:00
12/26/05 0:00
12/31/05 0:00
1/5/06 0:00


Dissolved Oxygen
mg/L
8
7.5
7
6.5
6
5.5
5
4.5
4
12/1/05 0:00
12/6/05 0:00
12/11/05 0:00
12/16/05 0:00
12/21/05 0:00
12/26/05 0:00
12/31/05 0:00
1/5/06 0:00

Brightwater Mitigation:
Elliott Bay spot prawn tagging study

Multiple year shrimp tagging study designed to estimate spot shrimp growth and migration in Elliott Bay.

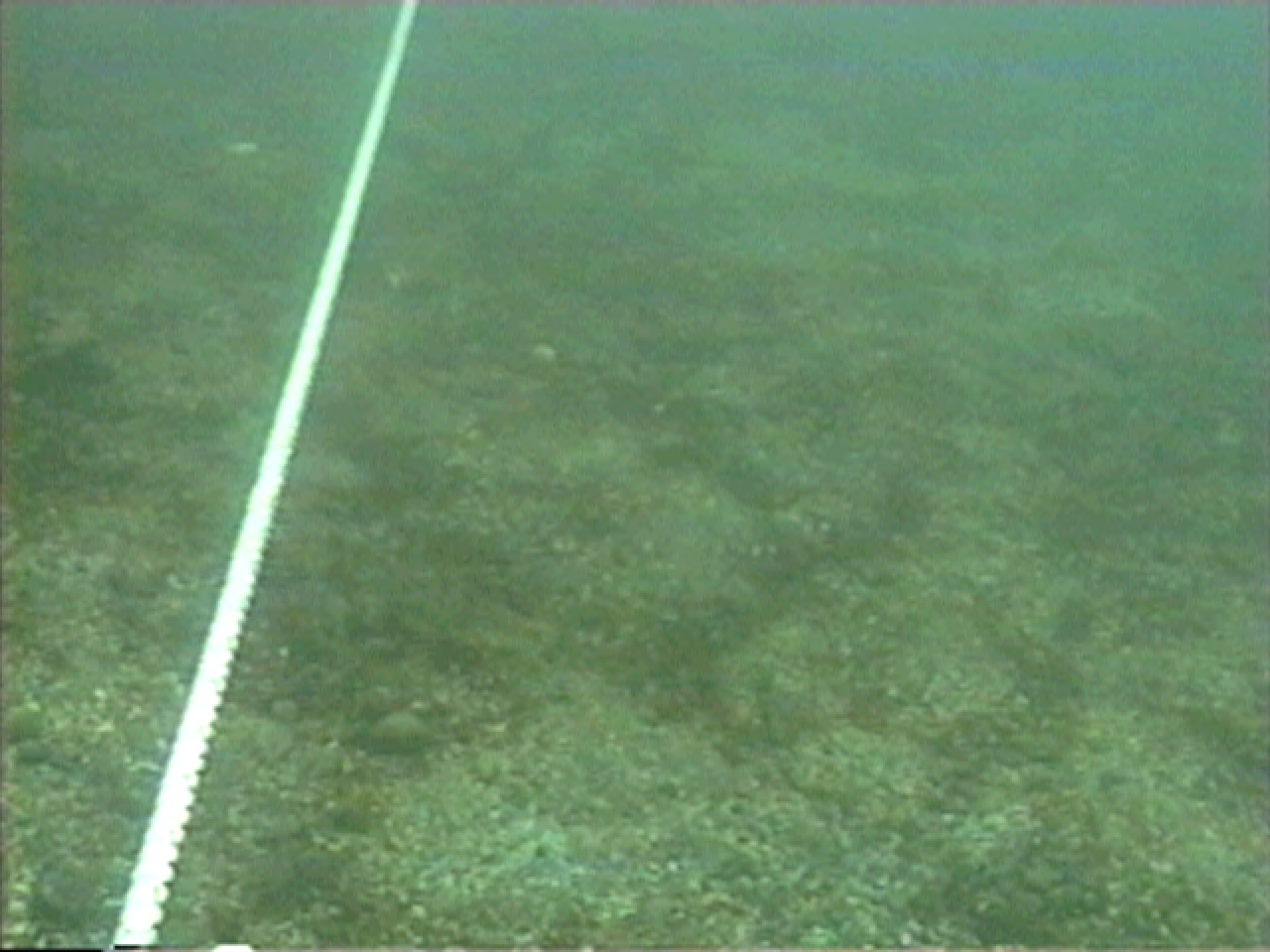


Project Goals

- Increase substrate diversity
- Increase amount of protective cover for organisms & surface for macroalgae
- Provide habitat for juvenile rockfish & salmonid prey
- Assess utility of oyster shell to increase habitat for juvenile Dungeness crab

Photo courtesy of US AC

Photo courtesy of US AC



Site 1
July 1998

Site 1
August 1999

Site 1
August 1999

Site 1
August 1999

Site 1
September 2002

Site 1
September 2002

Site 1
September 2002

Site 2
March 1998

Site 2
April 2000

Site 2
August 2000

Site 2
April 2001

Findings

- The materials are effective for creating substrate diversity & complex habitat
- Inconclusive if pea gravel increased juvenile salmonid prey; pea gravel plot appears to be eroding
- The cobble and quarry spall plots are effective for providing algae attachment sites and protective cover for rockfish/other fish
- Oyster shell may be more effective in shallow waters for attracting juvenile Dungeness crabs; shell is effective for attracting other crab species