# Results of Beach, Purse, and Pole Seine Surveys at the Courtenay River Estuary and Baynes Sound, Courtenay, B.C., 2000 

J.A. Jenkins, B.A. Bravender, C. Beggs, B. Munro, and D. Miller

Fisheries and Oceans Canada
Science Branch, Pacific Region
Pacific Biological Station
Nanaimo, B.C. V9R 5K6

2001

Canadian Data Report of
Fisheries and Aquatic Sciences 1077

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J.A. Jenkins, B.A. Bravender, C. Beggs ${ }^{1}$, B. Munro ${ }^{1}$, and D. Miller ${ }^{1}$

Fisheries and Oceans Canada
Science Branch, Pacific Region
Pacific Biological Station
Nanaimo, B.C. V9R 5K6

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Cat. No. Fs 97-13/1077E ISSN 0706-6465

Correct citation for this publication:

Jenkins, J.A., B.A. Bravender, C. Beggs, B. Munro, and D. Miller. 2001. Results of beach, purse, and pole seine surveys at the Courtenay River estuary and Baynes Sound, Courtenay, B. C., 2000. Can. Data Rep. Fish. Aquat. Sci. 1077: 39 p.

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#### Abstract

Jenkins, J.A., B.A. Bravender, C. Beggs, B. Munro, and D. Miller. 2001. Results of beach, purse and pole seine surveys at the Courtenay River estuary and Baynes Sound, Courtenay, B. C., 2000. Can. Data Rep. Fish. Aquat. Sci. 1077: 39 p.

This report gives data on the distribution and abundance of juvenile salmonids within the Courtenay River estuary and Baynes Sound, from a survey conducted between July and September, 2000.

In a total of 16 sampling trips, 350 juvenile salmonids were caught in 147 beach seine sets, 27 purse seine sets, and 7 pole seine sets. From these 350 fish, 156 juvenile salmonids were measured for length and weight, and condition factors were also calculated. Twelve thousand one hundred and ninety-nine non-salmonid fish were caught in addition to the juvenile salmonids.

There was a broad range of habitat types, including human modified areas, steep river banks and sandy mudflats. Vegetation at the sites included marsh grass, trees, shrubs, eelgrass and algae. Swift currents were measured at a few sites. Salinity, temperature, dissolved oxygen, and depth data were recorded at most sites.


## RÉSUMÉ

Jenkins, J.A., B.A. Bravender, C. Beggs, B. Munro, and D. Miller. 2001. Results of beach, purse and pole seine surveys at the Courtenay River estuary and Baynes Sound, Courtenay, B. C., 2000. Can. Data Rep. Fish. Aquat. Sci. 1077: 39 p.

Le présent rapport fournit des données sur la distribution et l'abondance des salmonidés juvéniles dans l'estuaire de la Courtenay et la baie Baynes, données recueillies pendant une campagne menée entre juillet et septembre 2000.

Au cours des 16 opérations d'échantillonnage, 350 salmonidés juvéniles ont été capturés dans 147 coups de senne de plage, 27 coups de senne à poche et 7 coups de senne à perche. Parmi ces 350 salmonidés juvéniles, 156 spécimens ont été mesurés (longueur et poids), et on a calculé les coefficients de condition. Outre les salmonidés juvéniles, on a capturé 12190 poissons autres que des salmonidés.

Les types d'habitat étaient très divers: zones modifiées par l'activité humaine, berges abruptes et battures. La végétation observée se composait de calamagrostis, d'arbres, d'arbustes, de zostère et d'algues. Les courants étaient rapides à certains endroits. La salinité, la température, l'oxygène dissous et la profondeur ont été mesurées à la plupart des stations.

## INTRODUCTION

From July 11 to September 6, 2000, sixteen sampling trips were made to determine the distribution and abundance of juvenile salmonids in the Courtenay River estuary and Baynes Sound, located on the east coast of Vancouver Island. Sampling during these trips consisted of beach seines, purse seines and pole seines, and assessed forty-seven sites within and outside the estuary. This study is a followup to the field program implemented during the summer of 1998 (MacDougall et al. 1999).

The Puntledge and Tsolum rivers merge to form the Courtenay River approximately two and a half kilometers upstream of the river mouth. As the river empties into Comox Harbour, a two-layered estuarine system with a brackish water upper layer and marine water at deeper depths is formed. There is a net seaward flow of freshwater, due to the low salinity in Comox Harbour compared to the adjacent sea, into Baynes Sound (Morris et al. 1979). Located on the east side of Vancouver Island, Baynes Sound is a narrow trough that is sheltered from wind and wave action by the Comox Bar to the north and Denman and Hornby Islands to the southeast. Waldie (1951) mentions that Baynes Sound is also protected from strong currents because of the presence of a rich organic sand and mud substrate.

Anthropological changes in this area in the past have adversely impacted much of the foreshore. The Courtenay River estuary has been subjected to dredging for marina and wharf construction, log handling, sorting and dumping, and sewage disposal. These activities have had a significant impact on the vegetation, substrate, and the shape of the basin. Water quality of the estuary and Baynes Sound is affected mainly by logging, mining effluents and sewage disposal. Coal mining in Baynes Sound was active during the early 1900's, and the last mine was closed in 1966 (Prentice 1988). The pH of the water may be affected by the sulphuric acid and sodium sulphate leeching from these mines. Both Comox Harbour and Henry Bay on Denman Island have been closed to shellfish harvesting due to high faecal contamination associated with sewage pollution (Morris et al. 1979).

To celebrate the new millennium, the Town of Courtenay and the Canadian Millennium Partnership Program initiated the Millennium Community Park and Habitat Restoration Project in 1998. The completion of this park in March, 2000 provided new salmonid rearing habitat, and three sites were sampled in this area during this survey.

In September 1997, Fisheries and Oceans Canada initiated the development of the Courtenay River Estuary Management Plan. The goals of this plan are to designate types of appropriate activities within the estuary, establish a co-ordinated project review board to address specific proposals within the management plan area, and to promote transparency and public participation in the development and implementation of the plan. This study, in addition to the field program implemented
in 1998, will augment the ecological information for this system by providing baseline data useful to the development of this plan.

## MATERIALS AND METHODS

A total of forty-seven sites within the Courtenay River estuary and Baynes Sound were sampled on sixteen trips between July 11 and September 6, 2000. Descriptions and GPS co-ordinates of the sites may be found in Tables 1, 2, and 3. Locations of the sites are shown in Figures 1 and 2. Based on the results of the 1998 survey twelve new sites were added within the Courtenay River estuary, and eight sites were removed. Sampling was also carried out at twenty-one sites in Baynes Sound.

Beach seining in the Courtenay River estuary was done from July 11 to August 15 (Table 4). In Baynes Sound, beach seining began on July 13 and was finished on August 3. Each site was sampled with a beach seine 13.5 m long and 2.9 m deep with 4.5 m wings of 1 cm stretched mesh and a 4.6 m bunt of 0.6 cm stretched mesh. Rope bridles 15 m in length were fitted to each end of the net. The net was pulled offshore to the full length of the rope bridles, where possible, set in a circle back to shore, and retrieved by hand. Duplicate sets were done at each site. Beach seining in the estuary was done using an 18.5 foot aluminium craft, with a 150 hp jet drive. In Baynes Sound a 20 foot Marinex aluminium boat with a 100 hp outboard motor was used.

By late July, the chinook in Baynes Sound had moved offshore and could no longer be captured with the beach seine. On August 11 sampling began in this area with a purse seine 61.5 metres long and 6.2 metres deep, consisting of a 24.6 metre section of 1.8 cm stretched mesh, a 24.6 metre section of 1.25 cm stretched mesh and a 12.3 metre bunt section of 0.6 cm stretched mesh. The net was 6.2 metres deep with a lead line of 2 pounds/fathom. A sea anchor was attached to the bunt section and a purse line of 1.25 cm nylon rope along the lead line allowed the entire length of the net to be pursed. The net was set from a 5.5 metre long aluminium craft powered by a V8 engine equipped with a Hamilton jet drive, fitted with a table at the stern to carry the net. Sets were made by anchoring one end of the net with the buoy and sea anchor and forming a circle with the remainder of the net. The net was then pursed and retrieved until the catch was confined in a small enclosure at the side of the boat. Single sets were done at each site. Only one purse seine was done in the estuary, off of Goose Spit at site 46 (Table 5).

Pole seining was carried out on July 27. Single sets were completed at sites 41,42 , and 44 and duplicate sets were done at sites 43 and 45 (Table 6). The pole seine measured 5.2 metres long and 2.1 metres deep, with $3 / 8^{\prime \prime}$ mesh and poles 4.3 metres long. Where possible, the net was opened to span the full width and pulled the length of the site. At sites 42 and 45 , the net was pulled along a portion of the shore.

At most sites the entire catch of non-salmonids was counted and identified to species where possible. Where necessary, the catch was randomly subsampled using a dipnet so as to try and sample all species present in the catch. These fish were then identified and counted and the results multiplied by the subsample proportion to estimate the total catch.

The catch of salmonids was counted and identified to species. Coho and chinook were further identified as marked (CWT) with a clipped adipose fin, unmarked or wild. All or a subsample of salmonids were then anaesthetised with Alka Seltzer ${ }^{\text {TM }}$ on shore at the site. The fork length of each fish to the nearest millimetre was recorded, and they were damp dried and weighed to the nearest 0.1 g in water using an Ohaus Model No. C305 portable balance. The fish were then placed in a bucket of water from the sampling site to recover, and were released once they were actively swimming inside the bucket.

All sampling was terminated on September 6 as the catches of salmon had dropped off to zero in most areas.

A condition factor ( K ) for all salmonids was determined using the equation:

$$
K=\frac{W}{L^{3}} \times 10^{5}
$$

where $K$ is the condition factor, $W$ is the wet weight of the fish in grams, and $L$ is the fork length of the salmon in millimetres (Meehan et al. 1978).

Tide heights for Tables 9, 10 and 11 were determined using the Canadian Tide and Current Tables (Canadian Hydrographic Service, Fisheries and Oceans Canada 2000).

A YSI 85 oxygen, conductivity, salinity and temperature meter was used in the Courtenay River estuary and Baynes Sound. Salinity and temperature were recorded at the surface, and then at 1 metre intervals to the bottom, or to 5 metres depth at each site, and dissolved oxygen levels were measured in $\mathrm{mg} / \mathrm{L} \pm 2 \%$. Depth ranges were recorded in Baynes Sound using a Humminbird 100SX portable sounder. Two GPS units were used during the survey, an Eagle Explorer and a Motorola TRAXAR GPS Navigator.

## RESULTS

Table 7 contains the abbreviated, scientific, and common names of captured fish species. Temperature, salinity, and dissolved oxygen levels may be found in Table 8. A total of 147 beach seines, 27 purse seines and 7 pole seines were completed (Tables 4, 5 and 6). In all catches combined there were 147 coho, 98 chinook, 39 steelhead, 22 rainbow, 43 cuthroat, and 1 chum for a total catch of 350
juvenile salmonids (Tables 9, 10 and 11). A total of 12199 non-salmonid fish were also caught in the seine sets. This included 5270 perch, 3329 sculpins, and 567 sticklebacks.

Lengths and weights were recorded and condition ( $K$ ) factors were calculated for a total of 156 juvenile salmonids, including 93 chinook. Eighty-three of these fish were unmarked, 8 were wild, and 2 were marked (Table 12). Lengths, weights, and K-factors were also recorded for 62 coho ( 49 unmarked, 10 fry, 2 wild, and 1 marked). One chum salmon was also measured and weighed. The minimum Kfactor ( 0.74 ) was calculated for a chinook salmon captured on July 20 at site 30 . The maximum recorded K-factor was 1.70, calculated for a chinook salmon caught at site 11 on August 1.

The habitat types within the Courtenay River estuary were varied, from fine mud to sand substrate with little slope (e.g. sites 1 and 17), to very steep sloped gravel beaches covered in marsh grass (e.g. sites 12 and 14). Within Baynes Sound the sites ranged from shallow sloped banks with gravel and sand substrate (e.g. sites 28 and 27) to moderately sloped banks with boulders present midshore (e.g. site 34). Coal was located at sites 30 and 31 , with site 31 containing the greatest proportion.

Sampling sites $8,14,21,23,39,41$ and 42 were located in areas which had been impacted by development, including the construction of large rip rap breakwaters, cement walls and pilings, dredged basins, and areas where foreshore vegetation had been removed or paved over. Vegetation at sites along the Courtenay River included marsh grass, shrubs, and trees. Sites within the estuary typically contained algal species, including Fucus sp. and Ulva sp., often with marsh grass and shrubs in the high intertidal or backshore.

Sites 21, 41, and 42 were constructed during the Millennium Community Park and Habitat Restoration Project in 1998. The goal was to produce new salmonid rearing habitat. During several sampling trips coho fry, juvenile coho, and juvenile chinook were found at sites 21 and 41 . No salmonids were found at site 42, although it was sampled only once with a pole seine on July 27, 2000.

Some areas of the estuary were characterised by high currents including sites 1 and 12 , both located along the river channel. Sites 6 , located on the north side of Goose Spit, and 24, located in Baynes Sound, were also areas of very swift currents.

## ACKNOWLEDGMENTS

Thanks are due to the staff at the Puntledge River Hatchery for their enthusiastic support including Dale Fetzner, Bob Addy, Laurent Frisson, Tony Galesloot, Jim Campbell, Sterling Stephens, and Christine Berg, who made the field sampling possible and contributed many suggestions to the project. Diane Duncan helped to co-ordinate staff and take care of managing expenses. Volunteers
included AI Mitchell, Colin Glover, Neil Krassey, Terry O'Toole, Dale Peterson, Ms. Kwan, Ray Roberts, Jim Stirling, John Naylor, Reg Webber, Neil Brodie and Nairn Sutti. Paul Winchell, Science Branch, also assisted in the field work. Jim Van Tine, Habitat and Enhancement Branch, kindly provided the net and boat to carry out the purse seine sampling. Mel Sheng, Habitat and Enhancement Branch, Restoration Unit, provided assistance for the field sampling as well. Dr. Colin Levings provided comments on the manuscript.

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Table 1. GPS locations and descriptions of beach seine sites sampled.

| $\begin{array}{\|l\|} \hline \text { Site } \\ \text { No. } \\ \hline \end{array}$ | Description | GPS |
| :---: | :---: | :---: |
| 1 | Site located in the upper estuary at the mouth of dredged small boat slough. Moderate to steep slope, fine mud substrate. Riverbanks covered in marsh grasses and small shrubs near the water's edge, large trees less than 1 m back from the water. Swift currents. Salinity at $0.0 \%$. | $\begin{array}{\|l\|} \hline 494055.87 \\ 1245831.12 \\ \hline \end{array}$ |
| 1A | Site located in a man-made groove off the main river channel. Steep slope. Riprap at entrance, mud/gravel inside with large organic debris present. Marsh and shrubs at higher elevations. Connects at head through a culvert to pond in Millennium Park. Salinity ranges between $0.0 \%$ and $1.6 \%$ at the surface. | $\begin{array}{\|l\|} 494130.48 \\ 1245939.78 \end{array}$ |
| 4 | Site located where riprap breakwater intersects shoreline, west side of estuary. Rocky/gravel substrate, very gradual slope. Fucus sp., and large eelgrass bed offshore. Salinity ranges between $22.7 \%$ at the surface to $24.3 \%$ at 1 m depth. | N/A |
| 6 | Site sampled on the north side of Goose Spit. Sandy substrate, steep slope, some marsh grass on upper shore. Swift currents. Salinity ranges between $13.4 \%$ at the surface to $26.8 \%$ at 4 m depth. | $\begin{array}{\|l\|} \hline 493945.80 \\ 1245524.70 \end{array}$ |
| 8 | Site sampled within the Comox Marina, at Grid \#2. Large rocks, pebble and sand mix on shore, steep slope into the water. Little intertidal vegetation. Sheltered from wind and wave action. Salinity ranges between $20.6 \%$ at the surface to $27.0 \%$ at 1 m depth. | $\begin{array}{\|l\|} \hline 494013.21 \\ 1245537.10 \end{array}$ |
| 11 | Site located at the mouth of Duck Slough in upper estuary. Gravel substrate, moderate slope, and marsh grass on upper shore. Salinity ranges between $0.2 \%$ at the surface to $2.7 \%$ at 1 m depth. | N/A |
| 12 | Site sampled adjacent to airpark, on west side of river channel. Steep gravel beach, marsh grass in backshore. Swift current. Salinity ranges between $0.1 \%$ at the surface to $1.1 \%$ at 1 m depth. | N/A |
| 14 | Site sampled within abandoned dredged boat basin on west side of river channel, north of boat launch. Very steep slope, tall marsh grass, trees to waterline. Fucus sp., Ulva sp. Salinity ranges between $0.4 \%$ at the surface to $7.3 \%$ at 1 m depth. | $\begin{array}{\|l\|} \hline 494059.12 \\ 1245506.00 \end{array}$ |
| 15 | Site sampled on south side of Goose Spit. Gentle sloping mid-sized gravel, substrate became sandy at low intertidal/subtidal area, tall grasses and evergreens in backshore, about 5 m from shore. Exposed to wind and wave action. Salinity ranges between 20.9 \% at the surface to $27.6 \%$ at 4 m depth. | $\left\lvert\, \begin{aligned} & 493933.73 \\ & 1245506.64 \end{aligned}\right.$ |
| 17 | Site sampled on riverbank, across from Lewis Park. Moderately sloping river banks, sandy substrate covered with marsh grass. Swift current. Salinity at $0.0 \%$. | $\begin{array}{\|l\|} \hline 494138.95 \\ \hline 1245946.30 \\ \hline \end{array}$ |

Table 1 (cont'd).

| Site <br> No. | Description | GPS |
| :---: | :---: | :---: |
| 18 | Site located on east shore of main river channel. Shallow slope. Gravel/mud substrate. Marsh at higher elevation. Salinity at surface 0.2 \%. | N/A |
| 19 | Site located on west side of island, shallow slope. Gravel/mud/sand substrate to marsh on upper shore. Salinity at surface $5.6 \%$. | N/A |
| 20 | Site located at head of slough in front of floodgate to Duck Slough. Steep slope, mud substrate. Salinity ranges between $0.3 \%$ at the surface to $9.0 \%$ at 2 m depth. | $\begin{array}{\|ll\|} \hline 4941 & 02.08 \\ 12458 & 37.88 \end{array}$ |
| 21 | Site located in man-made bay in Millennium Park at the head of the boat slough. Steep slope, mud/gravel substrate, sparse marsh on upper shore. Heavy overgrowth of vegetation in water. Salinity ranges between $0.1 \%$ at the surface to $0.4 \%$ at 1 m depth. | $\begin{array}{\|l\|} \hline 494134.18 \\ 1245933.93 \end{array}$ |
| 22 | Site located in airpark marina at confluence with main river channel. Steep slope. Gravel/mud substrate, sparse vegetation, and pilings on upper shore. Salinity ranges between $0.7 \%$ at the surface to 17.8 $\%$ at 1 m depth. | N/A |
| 23 | Site located in abandoned man-made sewage treatment lagoon. Shallow to steep slope. Fine mud substrate. Thick marsh vegetation. Salinity ranges between $11.3 \%$ at the surface to $10.8 \%$ at 1 m depth. | N/A |
| 24 | Site located at the confluence of the Puntledge and Tsolum rivers. Shallow slope. Gravel/cobble/sand substrate. Riparian on upper shore. Very swift currents. Salinity at $0.0 \%$. | $\begin{array}{\|l\|} \hline 494157.01 \\ 1245948.81 \end{array}$ |
| 25 | Site located on the western shore of Sandy Island. Moderate slope. Gravel/sand substrate. Eelgrass bed offshore. Sparse marsh vegetation, debris on upper shore. Salinity ranges between 24.6 \% at the surface to $27.1 \%$ at 3 m depth. | $\begin{array}{\|l\|l\|} \hline 49 & 37 \\ 124 & 00.87 \\ \hline \end{array}$ |
| 26 | Site in Henry Bay on Denman Island. Sand/gravel. Moderate slope with large trees on upper shore. Eelgrass bed offshore. Salinity ranges between $24.7 \%$ at the surface to $27.1 \%$ at 4 m depth. | $\begin{array}{\|l\|} \hline 4936 \\ 124 \\ 124 \\ \hline \end{array}$ |
| 27 | Site located north of Denman Point on Denman Island. Sand offshore with eelgrass bed. Gravel beach, riparian upshore, rocky with Fucus sp., slight slope. Salinity ranges between $24.7 \%$ at the surface to $25.9 \%$ at 2 m depth. | $\begin{array}{\|l\|} \hline 493544.81 \\ 1245018.65 \end{array}$ |
| 28 | Site located at Denman Point on Denman Island. Shallow slope. Gravel/cobble/sand substrate. Riparian on upper shore. Salinity ranges between $24.8 \%$ at the surface to $26.9 \%$ at 4 m depth. | $\begin{aligned} & 4933.706 \\ & 12451.321 \end{aligned}$ |
| 29 | Site located at Oyster Shop. Sand/eelgrass offshore, moderate slope. Gravel boulders higher, narrow riparian strip on upper shore. Shallow slope gravel. Gravel foreshore, fairly steep to riparian zone. Salinity ranges between $24.2 \%$ at the surface to $26.7 \%$ at 2 m depth. | $\begin{array}{\|l\|} \hline 493354.64 \\ 1245225.71 \end{array}$ |

Table 1 (cont'd).

| Site <br> No. | Description | GPS |
| :---: | :--- | :---: |
| 30 | Site at the mouth of Union Bay. Moderate slope. Gravel/sand/mud <br> substrate. Coal on upper shore. Salinity ranges between $22.6 \%$ at <br> the surface to 27.7 \% at 5 m depth. | 493507.02 <br> 1245301.08 <br> 31Site located at mouth of Hart Creek. Shallow slope. Coal dominated <br> substrate with mud/gravel on lower shore. Salinity ranges between <br> $23.9 \%$ to 24.5 \%o at the surface. |
| 32 | Site located at Willemar Bluff. Salinity ranges between 18.3 \% at the <br> surface to 26.8 \% at 4 m depth. | N/A 494016.60 |
| 33 | Site sampled at Point Holmes. Gravel upper shore and midshore, <br> with sand flat offshore. Moderately sloped with some algae present. <br> Salinity ranges between 24.7 \%o at the surface to 27.6 \%o at 5 m <br> depth. | 49413452.28 <br> 34Site sampled at Kingfisher Inn. Moderate slope, boulders midshore, <br> sand/boulder low shore, eelgrass and kelp offshore. Fucus sp. <br> Present on the upper slope. Salinity ranges between 21.9 \%o at the <br> surface to 26.7 \% at 5 m depth. |
| 39 | Site located in man-made anchorage off main river channel. Shallow <br> slope, mud/gravel substrate. Cement walls and pilings on upper <br> shore. Salinity ranges between 0.6 \%o to 20.0 \% at the surface. | N/A 18.02 |
| 40 | Site located at mouth of Millard Creek. Shallow slope, mud <br> substrate. Thick marsh and riparian on upper shore. Salinity ranges <br> between 21.5 \%o at the surface and 21.9 \%o at 1 m depth. | N/A |

Table 2. GPS locations and descriptions of purse seine sites sampled.

| Site <br> No. | Description | GPS |
| :---: | :---: | :---: |
| 35 | Offshore site located near Cape Lazo. Depth ranges between 17 and 18 m . | N/A |
| 36 | Offshore site located near Palliser Rock. Salinity ranges between $26.7 \%$ at the surface to $27.9 \%$ at 5 m depth. Depth ranges between 12 and 16 m . | $\begin{array}{\|l\|} \hline 493748.01 \\ 1245002.51 \end{array}$ |
| 37 | Offshore site northeast of Sandy Island. Salinity ranges between $26.2 \%$ at the surface to $27.7 \%$ at 3 m depth. Depth ranges between 12 and 19 m . | N/A |
| 46 | Offshore site sampled on the north side of Goose Spit. Swift currents. Salinity ranges between $13.4 \%$ at the surface to $26.8 \%$ at 4 m depth. Depth ranges between 22 and 27 m . | $\begin{aligned} & 493945.694 \\ & 12455.656 \end{aligned}$ |
| 47 | Offshore site sampled on south side of Goose Spit. Exposed to wind and wave action. Salinity ranges between $20.9 \%$ at the surface to 27.6 \% at 4 m depth. Depth ranges between 7 and 18 m . | $\begin{aligned} & 4939.477 \\ & 12454.021 \end{aligned}$ |
| 48 | Offshore site located off the western shore of Sandy Island. Eelgrass bed. Salinity ranges between $24.6 \%$ at the surface to $27.1 \%$ at 3 m depth. Depth at approximately 12 m . | $\begin{array}{\|l\|} \hline 493700.87 \\ 1245112.19 \\ \hline \end{array}$ |
| 49 | Offshore site in Henry Bay on Denman Island. Eelgrass bed. Salinity ranges between $24.7 \%$ at the surface to $27.1 \%$ at 4 m depth. Depth ranges between 33 and 35 m . | $\begin{aligned} & 4936.176 \\ & 12450.998 \end{aligned}$ |
| 50 | Offshore site located at Denman Point on Denman Island. Salinity ranges between $24.8 \%$ at the surface to $26.9 \%$ at 4 m depth. | $\begin{aligned} & 4933.706 \\ & 12451.321 \end{aligned}$ |
| 51 | Offshore site located at Oyster Shop. Sand/eelgrass. Salinity ranges between $24.2 \%$ at the surface to $26.7 \%$ at 2 m depth. | $\begin{aligned} & 4933.691 \\ & 12452.574 \end{aligned}$ |
| 52 | Offshore site at the mouth of Union Bay. Salinity ranges between $22.6 \%$ at the surface to $27.7 \%$ at 5 m depth. Depth ranges between 22 and 25 m . | $\begin{array}{\|l\|} \hline 493459.50 \\ 1245253.75 \end{array}$ |
| 53 | Offshore site located at Willemar Bluff. Salinity ranges between 18.3 $\%$ at the surface to $26.8 \%$ at 4 m depth. Depth ranges between 12 and 23 m . | $\begin{aligned} & 4940.315 \\ & 12452.059 \end{aligned}$ |
| 54 | Offshore site sampled at Point Holmes. Salinity ranges between $24.7 \%$ at the surface to $27.6 \%$ at 5 m depth. Depth ranges between 9 and 29 m . | $\begin{aligned} & 4941.121 \\ & 12451.149 \end{aligned}$ |
| 55 | Offshore site sampled at Kingfisher Inn. Eelgrass and kelp. Salinity ranges between $21.9 \%$ at the surface to $26.7 \%$ at 5 m depth. Depth ranges between 19 and 21 m . | $\begin{aligned} & 4937.058 \\ & 12454.475 \end{aligned}$ |

Table 3. GPS locations and descriptions of pole seine sites sampled.

| Site <br> No. | Description | GPS |
| :---: | :--- | :---: |
| 41 | Site located in a man-made groove off the main river channel. Steep <br> slope. Riprap at entrance, mud/gravel inside with large organic <br> debris present. Marsh and shrubs at higher elevations. Connects at <br> head through a culvert to pond in Millenium Park. Salinity ranges <br> between 0.0 \% and 1.6 \% at the surface. | 124593130.48 |
| 42 | Site located in man-made pond in Millenium Park. Steep slope. <br> Marsh and shrubs at higher elevations. Culvert at southern end to <br> boat slough. Salinity at 0.0 \%o. | 1245934.86 |
| 43 | Site located at the mouth of Duck Slough in upper estuary. Gravel <br> substrate, moderate slope, marsh grass on upper shore. Salinity <br> ranges between 0.2 \%o at the surface to 2.7 \%o at 1 m depth. | N/A |
| 44 | Site in small, shallow pothole in upper marsh near site 11. Sampled <br> at low tide. Mud/debris. Steep slope. Heavy marsh vegetation. <br> Salinity at 7.5 \%o at the surface. | 494055.95 <br> 1245833.26 <br> 45Site located at head of slough in front of flood gate to Duck Slough. <br> Steep slope, mud substrate. Salinity ranges between 0.3 \%o at the <br> surface to 9.0 \%o at 2 m depth. |
| 1245837.82 .08 |  |  |

Table 4. Sampling schedule for the 2000 Courtenay River estuary and Baynes Sound beach seine survey.

| Date | $\begin{array}{\|c} \hline \text { Jul- } \\ 11 \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { Jul- } \\ \hline 13 \\ \hline \end{array}$ | $\begin{array}{\|c} \hline \text { Jul- } \\ 17 \\ \hline \end{array}$ | $\begin{array}{\|c} \text { Jul- } \\ 20 \end{array}$ | $\begin{array}{\|c\|} \hline \text { Jul- } \\ 25 \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \text { Aug- } \\ 01 \\ \hline \end{array}$ | $\begin{array}{\|c\|} \hline \text { Aug- } \\ 03 \\ \hline \end{array}$ | $\begin{gathered} \text { Aug- } \\ 09 \end{gathered}$ | $\begin{gathered} \text { Aug- } \\ 15 \end{gathered}$ | Total Sets |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Trip No. | 1 | 2 | 3 | 4 | 5 | 7 | 8 | 9 | 11 |  |
|  | Sets |  |  |  |  |  |  |  |  |  |
| Stn. <br> No. |  |  |  |  |  |  |  |  |  |  |
| 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 6 |
| 1A | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 4 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| 6 | 2 | 0 | 2 | 0 | 2 | 2 | 0 | 2 | 0 | 10 |
| 8 | 2 | 0 | 2 | 0 | 2 | 2 | 0 | 2 | 0 | 10 |
| 11 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 8 |
| 12 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 2 | 6 |
| 14 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 4 |
| 15 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 6 |
| 17 | 2 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 | 6 |
| 18 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 19 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 20 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 6 |
| 21 | 2 | 0 | 0 | 0 | 2 | 2 | 0 | 2 | 0 | 8 |
| 22 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 2 | 6 |
| 23 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 3 |
| 24 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 6 |
| 25 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 4 |
| 26 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 6 |
| 27 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 6 |
| 28 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 29 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 6 |
| 30 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 4 |
| 31 | 0 | 2 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 4 |
| 32 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 6 |
| 33 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 4 |
| 34 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 |
| 39 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 | 2 | 8 |
| 40 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| Total Sets | 18 | 16 | 19 | 16 | 16 | 16 | 18 | 18 | 10 | 147 |

Table 5. Sampling schedule for the 2000 Courtenay River estuary and Baynes Sound purse seine survey.

| Date | Aug- | Aug- | Aug- | Aug- | Aug- |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sep- |  |  |  |  |  |  |  |
|  | 11 | 17 | 22 | 24 | 29 | 06 | Total <br> Sets |
| Trip <br> No. | 10 | 12 | 13 | 14 | 15 | 16 |  |
|  | Sets |  |  |  |  |  |  |
| Stn. <br> No. |  |  |  |  |  |  |  |
| 35 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |
| 36 | 0 | 0 | 1 | 0 | 0 | 1 | 2 |
| 37 | 0 | 1 | 1 | 0 | 0 | 0 | 2 |
| 46 | 0 | 0 | 0 | 0 | 1 | 0 | 1 |
| 47 | 1 | 0 | 1 | 0 | 1 | 0 | 3 |
| 48 | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| 49 | 0 | 1 | 0 | 1 | 0 | 1 | 3 |
| 50 | 0 | 0 | 0 | 1 | 0 | 0 | 1 |
| 51 | 0 | 1 | 0 | 1 | 0 | 0 | 2 |
| 52 | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| 53 | 1 | 0 | 0 | 0 | 1 | 0 | 2 |
| 54 | 1 | 0 | 1 | 0 | 1 | 1 | 4 |
| 55 | 0 | 1 | 0 | 1 | 1 | 0 | 3 |
| Total | 3 | 5 | 5 | 5 | 5 | 4 | 27 |
| Sets |  |  |  |  |  |  |  |

Table 6. Sites sampled during the July 27 Courtenay River estuary pole seine survey.

| Stn. <br> No. | 41 | 42 | 43 | 44 | 45 | Total Sets |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sets | 1 | 1 | 2 | 1 | 2 | 7 |

Table 7. Species of fish captured and abbreviations.

| Fish Species | Common name | Abbreviation |
| :--- | :--- | :--- |
| Ammodytes hexapterus | Pacific sandlance | PASA |
| Apodichthys flavidus | Penpoint gunnel | PEGU |
| Brachyistius frenatus | Kelp surfperch | KELP |
| Cymatogaster aggregata | Shiner surfperch | SHIN |
| Damalichthys vacca | Pile surfperch | PILE |
| Embiotoca jacksoni | Black surfperch | BLAC |
| Family Bathymasteridae | Unidentified ronquil | RONQ |
| Family Bothidae | Unidentified sanddab | SAND |
| Family Cottidae | Unidentified sculpin | UNSC |
| Family Embiotocidae | Unidentified perch | UNPE |
| Family Hexagrammidae | Unidentified greenling | UNGR |
| Family Pholididae | Unidentified gunnel | UNGU |
| Family Scorpaenidae | Unidentified rockfish | UNRO |
| Family Blenniidae | Unidentified blenny | UNBL |
| Gasterosteus aculeatus | Threespine stickleback | THST |
| Lumpenus sagitta | Pacific snake prickleback | SNPR |
| Oncorhynchus keta | Juvenile chum | CHUM |
| Oncorhynchus kisutch | Juvenile unmarked coho | COHO |
| Oncorhynchus kisutch | Juvenile marked coho | MKCO |
| Oncorhynchus kisutch | Juvenile wild coho | WLCO |
| Oncorhynchus kisutch | Coho salmon fry | COFR |
| Oncorhynchus mykiss | Juvenile rainbow trout | RAIN |
| Oncorhynchus tshawytscha Juvenile unmarked chinook | CHIN |  |
| Oncorhynchus tshawytscha Juvenile marked chinook | MKCH |  |
| Oncorhynchus tshawytscha Juvenile wild chinook | WLCK |  |
| Hippoglossus stenolepis | Pacific halibut | HALI |
| Order Pleuronectiformes | Unidentified flatfish | FLAT |
| Pholis laeta | Crescent gunnel | CRGU |
| Pholis ornata | Saddleback gunnel | SAGU |
| Platichthys stellatus | Starry flounder | STFL |
| Salmo clarki clarki | Cutthroat trout | CUTT |
| Salmo gairdneri | Juvenile steelhead | STHE |
| Syngnathus leptorhynchus | Bay pipefish | BAPI |
|  |  |  |

Table 8. Temperature, salinity and dissolved oxygen data ( $\mathrm{n} / \mathrm{s}=$ not sampled).

| Date/Site | Time (PST) | Depth <br> (m) | Temp $\left({ }^{\circ} \mathrm{C}\right)$ | Salinity (\%) | Oxygen (mg/L) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| July 11/00 |  |  |  |  |  |
| Site 17 | 0900 | surface | 16.8 | 0.0 | $\mathrm{n} / \mathrm{s}$ |
| Site 1 | 0920 | surface | 16.9 | 0.0 | $\mathrm{n} / \mathrm{s}$ |
| " |  | 1 | 16.8 | 0.0 | $\mathrm{n} / \mathrm{s}$ |
| Site 18 | 1005 | surface | 17.2 | 0.2 | $\mathrm{n} / \mathrm{s}$ |
| Site 8 | 1045 | surface | 19.2 | 24.5 | $\mathrm{n} / \mathrm{s}$ |
| " |  | 1 | 18.9 | 24.7 | $\mathrm{n} / \mathrm{s}$ |
| Site 6 | 1200 | surface | 19.1 | 24.9 | $\mathrm{n} / \mathrm{s}$ |
| " |  | 1 | 18.8 | 24.8 | $\mathrm{n} / \mathrm{s}$ |
| Site 19 | 1237 | surface | 21.8 | 5.6 | $\mathrm{n} / \mathrm{s}$ |
| Site 20 | 1310 | surface | 18.8 | 0.3 | $\mathrm{n} / \mathrm{s}$ |
| " |  | 1 | 18.7 | 0.3 | $\mathrm{n} / \mathrm{s}$ |
| " |  | 2 | 20.4 | 9.0 | $\mathrm{n} / \mathrm{s}$ |
| Site 11 | 1400 | surface | 18.7 | 0.2 | 9.30 |
| " |  | 1 | 18.7 | 0.2 | 9.30 |
| Site 21 | 1440 | surface | 19.2 | 0.1 | $\mathrm{n} / \mathrm{s}$ |
| " |  | 1 | 18.6 | 0.1 | $\mathrm{n} / \mathrm{s}$ |
| " |  | 2 | 18.1 | 0.1 | $\mathrm{n} / \mathrm{s}$ |
| July 13/00 |  |  |  |  |  |
| Site 32 | 0805 | surface | 18.1 | 18.3 | 8.17 |
| " |  | 1 | 18.5 | 21.5 | 7.88 |
| Site 26 | 0900 | surface | 18.9 | 25.3 | 8.01 |
| " |  | 1 | 18.8 | 25.3 | 7.57 |
| Site 27 | 0959 | surface | 19.3 | 25.4 | 8.31 |
| " |  | 1 | 19.0 | 25.5 | 8.90 |
| Site 28 | 1035 | surface | 18.8 | 25.6 | 7.84 |
| " |  | 1 | 18.7 | 25.6 | 7.69 |
| Site 29 | 1130 | surface | 19.0 | 24.8 | 8.95 |
| " |  | 1 | 19.0 | 24.9 | 8.41 |
| Site 30 | 1235 | surface | 19.4 | 24.5 | 7.15 |
| " |  | 1 | 19.3 | 24.6 | 7.36 |
| Site 31 | 1310 | surface | 19.7 | 24.5 | 7.21 |
| Site 15 | 1350 | surface | 19.4 | 20.9 | 7.82 |
| " |  | 1 | 19.1 | 23.8 | 8.44 |
|  |  |  |  |  |  |
| July 17/00 |  |  |  |  |  |
| Site 22 | 1300 | surface | 20.2 | 0.7 | 7.47 |
| " |  | 1 | 20.4 | 17.8 | 6.84 |

Table 8 (cont'd).

| Date/Site | Time <br> (PST) | Depth <br> $(\mathrm{m})$ | Temp <br> $\left({ }^{\circ} \mathrm{C}\right)$ | Salinity <br> $(\%$ o $)$ | Oxygen <br> $(\mathrm{mg} / \mathrm{L})$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| July 17/00 | 1415 | surface | 28.3 | 11.3 | 9.47 |
| Site 23 | 1415 | surface | 21.4 | 1.1 | 10.17 |
| Site 39 | 1440 | 1 | 21.5 | 10.4 | 7.70 |
| " |  | 1 | surface | 20.1 | 23.7 |
| Site 6 | 1510 | 1.91 |  |  |  |
| " |  | 1 | 19.8 | 23.8 | 9.40 |
| Site 8 | 1605 | surface | 21.7 | 20.6 | 7.45 |
| " |  | 1 | 20.5 | 22.0 | 7.29 |
| Site 20 | 1640 | surface | 22.3 | 1.2 | 10.50 |
| " |  | 1 | 22.5 | 1.5 | 10.30 |
| Site 14 | 1715 | surface | 21.2 | 0.4 | 9.20 |
| " |  | 1 | 21.1 | 0.5 | 9.42 |
| Site 24 | 1740 | surface | 21.1 | 0.0 | 8.38 |
| " |  | 1 | 21.0 | 0.0 | 8.35 |
| Site 1A | 1845 | surface | 21.3 | 0.0 | 7.93 |
| " |  | 1 | 21.3 | 0.0 | 7.59 |
| Site 23 | 1920 | surface | 23.1 | 8.8 | 7.90 |
| " |  | 1 | 24.1 | 10.8 | 7.39 |
|  |  |  |  |  |  |
| July 20/00 |  |  |  |  |  |
| Site 15 | 0825 | surface | 18.9 | 25.0 | 9.54 |
| " |  | 1 | 18.1 | 25.7 | 9.98 |
| Site 32 | 0855 | surface | 18.9 | 25.6 | 10.51 |
| " |  | 1 | 18.2 | 25.9 | 10.10 |
| Site 33 | 0925 | surface | 17.8 | 26.6 | 10.46 |
| " |  | 1 | 17.0 | 26.5 | 9.69 |
| " |  | 2 | 16.8 | 26.5 | 10.09 |
| Site 25 | 1000 | surface | 20.2 | 25.4 | 10.87 |
| " |  | 1 | 19.2 | 25.3 | 10.90 |
| " |  | 2 | 18.9 | 25.5 | 10.85 |
| Site 26 | 1030 | surface | 20.0 | 25.3 | 11.05 |
| " |  | 1 | 19.5 | 25.4 | 12.10 |
| " |  | 2 | 19.0 | 25.4 | 11.38 |
| Site 27 | 1155 | surface | 21.4 | 25.4 | 10.56 |
| " |  | 1 | 18.4 | 25.9 | 11.03 |
| " |  | 2 | 17.7 | 25.9 | 11.12 |
| Site 29 | 1230 | surface | 21.1 | 25.1 | 10.00 |
| " |  | 1 | 19.5 | 25.3 | 10.76 |
|  |  |  |  |  |  |

Table 8 (cont'd).

| Date/Site | Time <br> (PST) | Depth <br> $(\mathrm{m})$ | Temp <br> $\left({ }^{\circ} \mathrm{C}\right)$ | Salinity <br> $(\%)$ | Oxygen <br> $(\mathrm{mg} / \mathrm{L})$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| July 20/00 |  |  |  |  |  |
| Site 29 | 1230 | 2 | 19.3 | 25.6 | 10.83 |
| Site 30 | 1300 | surface | 22.4 | 25.2 | 9.46 |
| " |  | 1 | 20.1 | 25.3 | 11.35 |
|  |  |  |  |  |  |
| July 25/00 |  |  |  |  |  |
| Site 39 | 0805 | surface | $\mathrm{n} / \mathrm{s}$ | $\mathrm{n} / \mathrm{s}$ | $\mathrm{n} / \mathrm{s}$ |
| Site 6 | 0835 | surface | 18.5 | 24.9 | 8.67 |
| " |  | 1 | 14.1 | 27.9 | 7.80 |
| Site 8 | 0920 | surface | 18.6 | 26.0 | 7.09 |
| " |  | 1 | 16.5 | 27.0 | 7.40 |
| Site 11 | 1010 | surface | 20.0 | 0.7 | 9.38 |
| " |  | 1 | 19.9 | 0.7 | 9.27 |
| Site 14 | 1045 | surface | 20.9 | 1.7 | 10.70 |
| " |  | 1 | 21.2 | 7.3 | 9.95 |
| Site 24 | 1145 | surface | 20.6 | 0.0 | 9.68 |
| " |  | 1 | 20.5 | 0.0 | 9.60 |
| Site 17 | 1240 | surface | 20.6 | 0.0 | 9.29 |
| " |  | 1 | 20.6 | 0.0 | 8.88 |
| " |  | 2 | 20.6 | 0.0 | 9.02 |
| Site 21 | 1310 | surface | 20.6 | 0.2 | 8.96 |
| " |  | 1 | 20.5 | 0.4 | 8.64 |
|  |  |  |  |  |  |
| July 27/00 |  |  |  |  |  |
| Site 41 | 0900 | surface | 16.4 | 1.6 | 3.37 |
| Site 42 | 0925 | surface | 17.5 | 0.0 | 9.08 |
| " |  | 1 | 17.6 | 0.0 | 6.60 |
| Site 45 | 0945 | surface | 16.7 | 2.6 | 8.40 |
| Site 44 | 1010 | surface | 17.2 | 7.5 | 6.26 |
| Site 43 | 1020 | surface | 16.6 | 3.3 | 9.48 |
|  |  |  |  |  |  |
| August |  |  |  |  |  |
| 1/00 |  |  |  |  |  |
| Site 22 | 1320 | surface | 20.5 | 0.7 | 10.50 |
| " |  | 1 | 20.3 | 1.6 | 9.50 |

Table 8 (cont'd).

| Date/Site | $\begin{aligned} & \text { Time } \\ & \text { (PST) } \end{aligned}$ | Depth <br> (m) | Temp ( ${ }^{\circ} \mathrm{C}$ ) | Salinity (\%) | Oxygen (mg/L) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| August $1 / 00$ |  |  |  |  |  |
| Site 8 | 1400 | surface | 18.6 | 23.7 | 8.00 |
| " |  | 1 | 17.9 | 24.2 | 8.60 |
| Site 6 | 1445 | surface | 19.4 | 18.1 | 9.33 |
| " |  | 1 | 17.6 | 24.4 | 9.42 |
| Site 12 | 1615 | surface | 21.8 | 0.4 | 9.88 |
| " |  | 1 | 21.6 | 0.5 | 10.45 |
| Site 11 | 1640 | surface | $\mathrm{n} / \mathrm{s}$ | n/s | $\mathrm{n} / \mathrm{s}$ |
| Site 4 | 1715 | surface | 19.1 | 22.7 | 9.00 |
| -" |  | 1 | 18.2 | 24.3 | 9.70 |
| Site 40 | 1750 | surface | 26.1 | 21.5 | 7.71 |
| " |  | 1 | 25.8 | 21.9 | 6.00 |
| Site 21 | 1820 | surface | 21.1 | 0.3 | 8.40 |
| " |  | 1 | 21.1 | 0.2 | 8.60 |
|  |  |  |  |  |  |
| August $3 / 00$ |  |  |  |  |  |
| Site 15 | 0820 | surface | 17.6 | 24.2 | 9.56 |
| " |  | 1 | 17.5 | 24.2 | 9.38 |
| " |  | 2 | 17.5 | 24.5 | 9.37 |
| Site 32 | 0848 | surface | 17.1 | 24.6 | 9.41 |
| " |  | 1 | 16.9 | 24.7 | 9.16 |
| " |  | 2 | 16.9 | 24.8 | 9.33 |
| Site 33 | 0915 | surface | 17.1 | 24.7 | 9.24 |
| " |  | 1 | 17.1 | 24.7 | 9.19 |
| Site 25 | 1000 | surface | 18.5 | 24.7 | 9.83 |
| " |  | 1 | 18.1 | 24.7 | 10.00 |
| Site 26 | 1040 | surface | 18.8 | 24.7 | 9.80 |
| " |  | 1 | 18.1 | 24.7 | 9.28 |
| Site 27 | 1140 | surface | 19.2 | 24.7 | 9.60 |
| " |  | 1 | 18.5 | 24.7 | 9.33 |
| Site 29 | 1220 | surface | 20.3 | 24.2 | 9.51 |
| " |  | 1 | 19.7 | 24.2 | 8.94 |
| Site 31 | 1255 | surface | 21.3 | 23.9 | 8.23 |
| " |  | 1 | 19.0 | 23.9 | 9.41 |
| " |  | 2 | 18.7 | 23.9 | 9.84 |
| Site 34 | 1335 | surface | 21.5 | 23.9 | 11.10 |
| " |  | 1 | 19.8 | 24.0 | 12.22 |

Table 8 (cont'd).

| Date/Site | $\begin{gathered} \hline \text { Time } \\ \text { (PST) } \end{gathered}$ | Depth <br> (m) | Temp $\left({ }^{\circ} \mathrm{C}\right)$ | Salinity (\%) | Oxygen <br> (mg/L) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| August <br> $9 / 00$      <br> 9      |  |  |  |  |  |
| Site 12 | 0910 | surface | 18.9 | 0.1 | 10.00 |
| " |  | 1 | 18.9 | 0.2 | 10.21 |
| Site 39 | 0945 | surface | 19.3 | 0.6 | 10.30 |
| " |  | 1 | 19.5 | 19.7 | 5.22 |
| Site 6 | 1020 | surface | 19.0 | 23.9 | 9.55 |
| " |  | 1 | 18.7 | 24.5 | 9.48 |
| Site 8 | 1050 | surface | 19.4 | 22.8 | 8.70 |
| " |  | 1 | 18.4 | 25.5 | 10.25 |
| ." |  | 2 | 17.6 | 26.0 | 9.38 |
| Site 11 | 1210 | surface | 19.9 | 0.3 | 10.30 |
| " |  | 1 | 19.8 | 2.7 | 10.40 |
| Site 1 | 1230 | surface | 20.4 | 0.0 | 9.89 |
| " |  | 1 | 20.3 | 0.0 | 9.27 |
| " |  | 2 | 20.3 | 0.0 | 9.44 |
| Site 21 | 1255 | surface | 20.4 | 0.2 | 8.80 |
| " |  | 1 | 20.3 | 0.3 | 9.40 |
| Site 24 | 1330 | surface | 21.2 | 0.0 | 10.28 |
| " |  | 1 | 20.9 | 0.0 | 9.90 |
| Site 20 | 1400 | surface | 21.4 | 0.7 | 10.40 |
| " |  | 1 | 21.3 | 6.5 | 9.98 |
|  |  |  |  |  |  |
| August |  |  |  |  |  |
| Site 54 | 1100 | surface | $\mathrm{n} / \mathrm{s}$ | n/s | n/s |
| Site 53 | 1145 | surface | 17.8 | 26.1 | 9.63 |
| " |  | 1 | 17.8 | 26.0 | 9.78 |
| " |  | 2 | 17.4 | 26.2 | 10.04 |
| Site 47 | 1230 | surface | 19.2 | 22.5 | 8.75 |
| " |  | 1 | 19.0 | 24.5 | 10.04 |
| " |  | 2 | 19.2 | 24.8 | 10.08 |
|  |  |  |  |  |  |
| $\begin{gathered} \text { August } \\ 15 / 00 \end{gathered}$ |  |  |  |  |  |
| Site 17 | 0825 | surface | 18.2 | 0.0 | 9.83 |
| " |  | 1 | 18.2 | 0.0 | 10.10 |
| Site 1 | 0900 | surface | 18.2 | 0.0 | 10.93 |
| " |  | 1 | 18.2 | 0.0 | 10.85 |
| Site 12 | 0925 | surface | 18.4 | 1.1 | 10.88 |

Table 8 (cont'd).

| Date/Site | Time (PST) | Depth <br> (m) | Temp ( ${ }^{\circ} \mathrm{C}$ ) | Salinity (\%) | Oxygen (mg/L) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { August } \\ 15 / 00 \end{gathered}$ |  |  |  |  |  |
| Site 12 | 0925 | 1 | 18.4 | 1.1 | 10.40 |
| Site 39 | 1000 | surface | 19.3 | 20.0 | 10.70 |
| Site 22 | 1030 | surface | 18.7 | 1.1 | 9.90 |
| " |  | 1 | 18.6 | 1.6 | 9.65 |
| August$17 / 00$ |  |  |  |  |  |
| Site 37 | 0900 | surface | 17.4 | 26.2 | 11.20 |
| " |  | 1 | 16.5 | 26.8 | 10.80 |
| Site 48 | 0935 | surface | 17.3 | 26.5 | 11.50 |
| " |  | 1 | 17.1 | 26.5 | 11.31 |
| " |  | 2 | 17.0 | 26.6 | 10.84 |
| Site 49 | 1010 | surface | 17.5 | 26.4 | 9.26 |
| " |  | 1 | 17.5 | 26.5 | 10.64 |
| " |  | 2 | 17.4 | 26.5 | 10.43 |
| Site 51 | 1035 | surface | 16.6 | 26.6 | 10.43 |
| " |  | 1 | 16.6 | 26.7 | 9.59 |
| " |  | 2 | 16.6 | 26.7 | 10.55 |
| Site 55 | 1140 | surface | 16.9 | 21.9 | 9.17 |
| " |  | 1 | 17.4 | 24.4 | 9.86 |
| " |  | 2 | 17.5 | 26.0 | 10.91 |
| August 22/00 |  |  |  |  |  |
| Site 54 | 0830 | surface | 15.5 | 26.7 | 9.78 |
| " |  | 1 | 15.0 | 27.1 | 9.95 |
| " |  | 2 | 14.9 | 27.1 | 10.11 |
| " |  | 3 | 14.8 | 27.2 | 9.94 |
| Site 35 | 0915 | surface | $\mathrm{n} / \mathrm{s}$ | n/s | n/s |
| Site 37 | 1000 | surface | 16.2 | 26.7 | 9.48 |
| " |  | 1 | 14.0 | 27.6 | 9.84 |
| " |  | 2 | 13.8 | 27.6 | 9.30 |
| " |  | 3 | 13.7 | 27.7 | 9.46 |
| Site 36 | 1030 | surface | 15.3 | 27.2 | 9.59 |
| " |  | 1 | 14.8 | 27.3 | 9.56 |
| " |  | 2 | 14.3 | 27.5 | 9.06 |
| " |  | 3 | 14.0 | 27.5 | 9.20 |

Table 8 (cont'd).


Table 8 (cont'd).

| Date/Site | $\begin{gathered} \hline \text { Time } \\ \text { (PST) } \end{gathered}$ | Depth <br> (m) | Temp $\left({ }^{\circ} \mathrm{C}\right)$ | Salinity (\%) | Oxygen (mg/L) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{gathered} \text { August } \\ 29 / 00 \end{gathered}$ |  |  |  |  |  |
| Site 54 | 0830 | 3 | 15.5 | 26.6 | 9.72 |
| " |  | 4 | 15.4 | 26.7 | 9.37 |
| Site 53 | 0900 | surface | 15.5 | 26.2 | 9.25 |
| " |  | 1 | 15.3 | 26.8 | 9.55 |
| " |  | 2 | 15.3 | 26.8 | 9.36 |
| " |  | 3 | 15.3 | 26.8 | 9.39 |
| " |  | 4 | 15.3 | 26.8 | 9.03 |
| Site 47 | 0945 | surface | 15.9 | 26.0 | 9.60 |
| -" |  | 1 | 15.8 | 26.5 | 8.79 |
| " |  | 2 | 15.6 | 27.1 | 8.91 |
| " |  | 3 | 14.3 | 27.3 | 8.70 |
| " |  | 4 | 13.9 | 27.6 | 8.44 |
| Site 55 | 0940 | surface | 16.1 | 22.9 | 8.63 |
| " |  | 1 | 16.0 | 25.1 | 8.75 |
| " |  | 2 | 15.9 | 25.6 | 8.08 |
| " |  | 3 | 15.8 | 26.3 | 7.50 |
| " |  | 4 | 15.7 | 26.5 | 7.98 |
| " |  | 5 | 15.7 | 26.7 | 9.14 |
| Site 46 | 1140 | surface | 16.6 | 13.4 | 10.29 |
| " |  | 1 | 15.9 | 25.2 | 8.39 |
| " |  | 2 | 15.6 | 26.4 | 8.67 |
| " |  | 3 | 15.5 | 26.7 | 8.26 |
| " |  | 4 | 15.4 | 26.8 | 8.11 |
| September 6/00 |  |  |  |  |  |
| Site 36 | 0915 | surface | 15.5 | 26.7 | 12.08 |
| " |  | 1 | 15.0 | 26.9 | 11.70 |
| " |  | 2 | 14.4 | 27.3 | 10.32 |
| " |  | 3 | 13.8 | 27.5 | 9.89 |
| " |  | 4 | 13.3 | 27.8 | 8.60 |
| " |  | 5 | 13.2 | 27.9 | 8.79 |
| Site 54 | 1030 | surface | 15.2 | 27.2 | 9.34 |
| " |  | 1 | 14.7 | 27.4 | 9.23 |
| " |  | 2 | 14.3 | 27.5 | 9.14 |
| " |  | 3 | 14.1 | 27.6 | 8.96 |
| " |  | 4 | 14.0 | 27.6 | 9.32 |

Table 8 (cont'd).

| Date/Site | Time <br> $(\mathrm{PST})$ | Depth <br> $(\mathrm{m})$ | Temp $\left({ }^{\circ} \mathrm{C}\right)$ | Salinity <br> $(\%)$ | Oxygen <br> $(\mathrm{mg} / \mathrm{L})$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| September <br> $6 / 00$ |  |  |  |  |  |
| Site 54 | 1030 | 5 | 14.0 | 27.6 | 9.61 |
| Site 49 | 1130 | surface | 15.7 | 26.4 | 12.37 |
| " |  | 1 | 15.1 | 26.7 | 12.24 |
| " |  | 2 | 14.9 | 26.9 | 12.90 |
| " |  | 3 | 14.9 | 27.0 | 12.77 |
| " |  | 4 | 14.8 | 27.1 | 12.88 |
| " |  | 5 | 14.8 | 27.1 | 13.01 |
| Site 52 | 1210 | surface | 15.9 | 22.6 | 11.42 |
| " |  | 1 | 15.5 | 24.0 | 11.03 |
| " |  | 2 | 15.8 | 25.9 | 11.36 |
| " |  | 3 | 14.7 | 27.3 | 11.39 |
| " |  | 4 | 14.0 | 27.6 | 11.66 |
| " |  | 5 | 13.8 | 27.7 | 12.49 |

Table 9. Fish captured during the beach seine survey (refer to Table 7 for abbreviations).

| Date Isite | Set No. | Time | $\begin{aligned} & \text { Tide } \\ & \text { (m) } \end{aligned}$ |  | PE | ${ }_{\text {LE }}$ | EE |  | $\begin{aligned} & \hline \mathrm{BL} \\ & \mathrm{AC} \end{aligned}$ |  | $\begin{aligned} & 0 \mathrm{SA} \\ & \mathrm{QND} \end{aligned}$ |  |  | $\begin{aligned} & \text { NUN } \\ & =\text { GR } \end{aligned}$ |  |  | N UN | UN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | $\begin{array}{\|c\|} \hline \mathrm{BA} \\ \mathrm{PI} \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| July |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 17 | 1 | 0835 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |  | 09 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 0900 | 1.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 05 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 1 | 1 | 0920 | 1.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 |
| " | 2 | 0930 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 |
| 18 | 1 | 1005 | 2.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 |  | 07 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 |
| " | 2 | 1015 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 |  | 01 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 0 | 0 |
| 8 | 1 | 1045 | 2.4 | 0 | 0 | 0 | 25 | 0 | 0 | 0 | 1 | 59 | 0 | 1 | 0 | 0 |  | 02 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 |
| " | 2 | 1100 | 2.9 | 0 | 0 | 0 | 41 | 0 | 0 | 0 | 0 | 36 | 0 | 0 | 0 | 0 |  | 03 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 1 |
| 6 | 1 | 1200 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 1 | 0 | 0 | 0 |  | 0 O | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 1210 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 6 | 0 | 0 | 1 | 0 |  | 01 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 19 | 1 | 1237 | 3.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 28 | 0 | 1 | 0 | 0 |  | 01 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 |
| " | 2 | 1245 | ${ }^{\prime}$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 1 | 0 | 0 | 0 |  | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 |
| 20 | 1 | 1310 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 5 | 0 | 0 | 0 | 0 | 0 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| " | 2 | 1325 | 3.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 3 | 0 | 0 | 0 |  | 02 | 20 | 0 | 0 | 5 | 1 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 11 | 1 | 1400 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 |  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| " | 2 | 1415 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 00 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 |
| 21 | 1 | 1440 | 4.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 042 | 42 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 1500 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 |  | 07 | 7 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOT |  |  |  |  |  |  | 66 |  |  |  | 3 | 183 | 11 | 2 | 1 |  |  |  | ${ }^{87}$ |  |  | 20 | 1 |  |  |  | 26 |  |  |  |  | 3 |  | 21 | 10 |  | 2 |
| ${ }^{13}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| July |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 32 | 1 | 0805 | 0.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 31 | 18 | 0 | 0 | 1 |  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 081 | " | 0 | 0 | 2 | 4 | 0 | 0 | 0 | 4 | 5 | 0 | 0 | 1 | 0 |  | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| 26 | 1 | 0900 | 1.3 | 1 | 0 | 10 | 41 | 0 | 0 | 0 | 0 | 72 | 0 | 1 |  | 0 |  | 02 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 57 |
| " | 2 | 0918 | ${ }^{\prime}$ | 0 | 0 | 8 | 281 | 0 | 0 | 0 | 0 | 70 | 0 | 0 | 103 | 0 |  | 07 | 70 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 0 | 0 | 0 | 0 |  |
| 27 | 1 | 0959 | 1.4 | 11 | 0 | 0 | 30 | 33 | 0 | 0 | 0 | 35 | 0 |  | 47 | 0 |  | 01 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 3 | 0 | 0 | 0 | 0 | 0 | 55 |
| " | 2 | 1010 |  | 1 | 0 | 32 | 44 | 0 | 0 | 0 | 0 | 40 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 5 | 0 | 0 | 0 | 0 | 0 |  |
| 28 | 1 | 1035 | 1.6 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 185 | 0 | 0 | 1 | 0 | 0 | 07 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 |  |


Table 9 (cont'd).

| $\begin{aligned} & \text { Date } \\ & \text { ISite } \end{aligned}$ | $\begin{aligned} & \text { Set } \\ & \text { No. } \end{aligned}$ | Time PST | $\begin{aligned} & \hline \text { Tide } \\ & (\mathrm{m}) \end{aligned}$ | $\begin{aligned} & \hline \mathrm{PA} \\ & \mathrm{SA} \end{aligned}$ | $\begin{aligned} & \mathrm{PE} \\ & \mathrm{GU} \end{aligned}$ | $\begin{aligned} & \mathrm{KE} \\ & \mathrm{LP} \end{aligned}$ | $\begin{aligned} & \mathrm{SH} \\ & \mathrm{IN} \end{aligned}$ | $\begin{aligned} & \mathrm{Pl} \\ & \mathrm{LE} \end{aligned}$ | $\begin{aligned} & \text { BL } \\ & A C \end{aligned}$ | $\begin{aligned} & \mathrm{RO} \\ & \mathrm{NQ} \end{aligned}$ | $\begin{aligned} & \hline \text { SA } \\ & \text { ND } \end{aligned}$ | $\begin{aligned} & \mathrm{UN} \\ & \mathrm{SC} \end{aligned}$ | $\begin{aligned} & \text { UN } \\ & \text { PE } \end{aligned}$ | $\begin{aligned} & \mathrm{UN} \\ & \mathrm{GR} \end{aligned}$ | $\begin{aligned} & \mathrm{UN} \\ & \mathrm{GU} \end{aligned}$ | $\begin{aligned} & \hline \text { UN } \\ & \text { RO } \end{aligned}$ |  | $\begin{aligned} & \text { TH } \\ & \text { ST } \end{aligned}$ |  | $\begin{aligned} & \mathrm{CH} \\ & \mathrm{UM} \end{aligned}$ |  |  |  |  |  |  |  |  |  | $\begin{aligned} & \text { FL } \\ & \text { AT } \end{aligned}$ |  |  |  |  | $\begin{aligned} & \text { ST } \\ & \mathrm{HE} \end{aligned}$ | BA PI |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 17 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| July |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 23 | 1 | 1920 | 4.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 12 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 7 | 0 | 0 | 2 | 0 | 0 | 0 |
| " | 2 | 1930 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 34 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOT |  |  |  | 2 |  |  | 144 |  | 1 |  | 291 | 333 | 252 |  | 3 |  |  | 55 | 5 |  | 5 |  |  | 13 | 15 | 19 |  |  |  | 8 |  | 10 | 7 | 4 |  |  |
| 20 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| July |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15 | 1 | 0825 | 3.0 | 0 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 2 | 0 | 0 | 0 |
| " | 2 | 0830 | 2.8 | 0 | 0 | 0 | 69 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| 32 | 1 | 0855 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 0900 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 137 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 33 | 1 | 0925 | 2.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 62 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 0935 | 2.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 284 | 167 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 94 | 0 | 0 | 2 | 0 | 0 | 0 |
| 25 | 1 | 1000 | 1.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 131 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 1 | 8 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 1010 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 111 | 0 | 40 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 26 | 1 | 1030 | 1.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 23 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 |
| " | 2 | 1040 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 33 | 0 | 23 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 17 |
| 27 | 1 | 1155 | 1.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 1205 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 82 | 0 | 33 |  | 0 | 0 | 0 |  |  | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 2 |  | 0 | 0 | 0 | 0 | 22 |
| 29 | 1 | 1230 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 48 | 109 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| " | 2 | 1240 | 1.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 120 | 95 | 0 | 23 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 |
| 30 | 1 | 1300 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 79 | 34 | 0 | 21 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 12 | 0 | 0 | 1 | 0 | 0 | 43 |
| " | 2 | 1310 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 465 | 9 | 0 | 11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 77 |
| TOT |  |  |  |  |  |  | 75 |  |  |  |  | 1124 | 1036 |  | 201 |  |  | 39 | 1 |  |  |  |  |  |  | 4 |  |  | 3 | 168 |  |  | 7 |  |  | 193 |
| 25 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| July |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 39 | 1 | 0805 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 56 | 8 | 0 | 1 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 0815 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 28 | 0 | 0 | 5 | 0 | 0 | - | 0 | - | 0 | 0 | 0 | 0 | - | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 6 | 1 | 0835 | 2.8 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 78 | 115 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 0845 | 2.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 18 | 25 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 8 | 1 | 0920 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 2 | 0 | 1 | 0 | 0 | 0 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |

Table 9 (cont'd).

| $\begin{aligned} & \text { Date } \\ & \text { Site } \end{aligned}$ | Set $\mathrm{No}$. . | ${ }_{\text {PST }}^{\text {Time }}$ | $\underset{\text { (m) }}{\substack{\text { Tide }}}$ |  | PE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | FL |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 25 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| July |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 8 | 2 | 0925 | 2.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 。 |  | 7 | 5 | 0 | 0 | 0 | 0 | 0 | 20 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 |
| 11 | 1 | 1010 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | - 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 0 | 2 | 0 | 0 | 0 |
| " | 2 | 10 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 1 | 0 | 0 | 0 | 0 | - 6 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 0 | 0 | 3 | 0 | 0 | 0 |
| 14 | 1 | 1045 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |  | 12 | 30 | 0 | - | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 |
| " | 2 | 1050 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 12 | 24 | 0 | 0 | 0 | 0 | 18 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 0 | 0 | 0 | 0 | 0 | 0 |
| 24 | 1 | 1145 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 0 | 0 | 0 | 0 | 25 | 0 |
| " | 2 | 1155 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | - 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 0 | 0 | 0 | 2 | 4 | 0 |
| 17 | 1 | 1240 | 3.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 1245 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| 21 | 1 | 1310 | 3.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 2 | 0 | 0 | 0 | 0 | 0 | 49 | 0 | 0 | 62 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 0 | 0 | 0 | 0 | 0 |
| * | 2 | 1345 | 3.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 23 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 0 | 0 | 0 | 0 | 0 |  |
| TOT |  |  |  | 8 |  |  |  |  |  |  |  |  | 323 | 73 |  | 7 |  |  | 110 | 28 |  | 86 |  |  |  | 1 | 6 |  |  |  |  |  | 8 | 2 | 29 |  |
| 1 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Aug |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22 | 1 | 1320 | 1.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 13 | 36 | 0 | 1 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 |  | 1 | 0 | 0 |  |
| " | 2 | 1330 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 12 | 175 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 4 | 0 | 0 | 0 |
| 8 | 1 | 1400 | 1.5 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 20 | 1115 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 1410 | 1.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 18 | 66 | 0 | 41 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 |
| 6 | 1 | 1445 | 2.3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 1 | 153 | 0 | 3 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 0 | 0 | 0 | 0 | 2 |
| " | 2 | 145 | 2.7 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 13 | 75 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 60 | 0 | 0 | 0 | 0 |  |
| 12 | 1 | 1615 | 3.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 2 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 0 | 0 | 0 | 0 |  |
| " | 2 | 1620 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 00 | 0 | 0 | 0 | 0 |  |
| 11 | 1 | 1640 | 4.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 4 | 0 | 0 |
| * | 2 | 1650 | 4.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 5 | 0 | 0 | 0 | 00 | 0 | 0 | 19 | 0 | 0 |
| 4 | 1 | 1715 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 10 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| " | 2 | 1725 | 4.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 1 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 0 | 0 | 0 | 0 | 0 |  |
| 40 | 1 | 1750 | 4.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 3 | 10 | 0 | 0 | 0 | 0 | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 0 | 0 | 2 | 0 | 0 |  |
| " | 2 | 1800 | 4.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - |  | 4 | 0 | 0 | 0 | 0 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 02 | 20 | 0 | 0 | 0 | 0 |  |
| 21 | 1 | 1820 | 5.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 0 | 0 | 0 | 0 | 0 |  |
| " | 2 | 1830 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 O | 0 | 0 | 0 | 0 |  |
| TOT |  |  |  | 26 |  |  |  |  |  |  |  |  | 88 | 1649 |  | 73 |  |  | 54 | 2 |  | 1 |  | 2 |  |  | 9 |  |  | 22 | 2 |  | 8 | 23 |  | 2 |


| $\begin{aligned} & \text { Dote } \\ & \text { ISite } \end{aligned}$ | Set No. | ${ }_{\text {PST }}^{\text {Time }}$ | Tide (m) |  | A PE | ${ }_{\text {KE }}^{\text {LP }}$ | E SH | H ${ }_{\text {Pl }}$ | ${ }_{\text {I }}^{\text {BL }}$ | R R O |  | UN | UN |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ${ }_{\text {PI }}^{\text {BA }}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 3 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Aug |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 15 | 1 | 0820 | 4.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 100 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 0825 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |  | $0$ | $0$ |
| 32 | 1 | 0848 | 4.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 0855 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | $0$ | $0$ |
| 33 | 1 | 0915 | 3.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9 | 44 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 1 | 0 | 0 | 0 |
| " | 2 | 0925 | 3.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 42 | 12 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 32 | 0 | 0 | 0 | 0 | 0 | $0$ |
| 25 | 1 | 1000 | 3.3 | 32 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 44 | 8 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 1015 | 3.2 | 21 | 10 | 1 | 0 | 0 | 0 | 0 | 0 | 41 | 72 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | $0$ |
| 26 | 1 | 1040 | 2.9 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 80 | 0 | 19 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 8 |
| " | 2 | 1050 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 23 | 63 | 0 | 104 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 10 |
| 27 | 1 | 1140 | 2.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 37 | 0 | 48 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 24 |
| " | 2 | 1150 | 2.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 7 | 0 | 3 | 0 | 0 | 15 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | $10$ |
| 29 | 1 | 1220 | 1.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 136 | 0 | 23 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 11 |
| " | 2 | 1230 | 1.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | $15$ |
| 31 | 1 | 1255 | 1.4 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 43 | 0 | 1 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 |  | 0 |
| " | 2 | 1305 | 1.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 40 | 26 | 2 | 90 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | $2$ |
| 34 | 1 | 1335 | 1.2 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 8 | 1 | 54 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | - | 0 | 0 | 1 | 0 |  | 90 |
| " | 2 | 1345 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 15 | 0 | 62 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  |
| TOT |  |  |  |  |  | 1 |  |  |  |  |  | 431 | 612 | 4 | 437 |  |  | 24 |  |  |  |  |  |  |  | 3 |  |  |  | 97 |  |  | 2 |  |  | 245 |

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Table 9 (cont'd).
Date Set Time Tide PA PE KE SH PI BL RO SA UN UN UN UN UN UN TH SN CH CO MK WL CO RA CH MK WL HA FL CR SA ST CU ST SA
SSite No, PST (m) SA GU LP IN LEAC NQ ND SC PE GR GU RO BL ST PR UM HO CO CO FR IN IN CH CK LI AT GU GU FL TT HE PI

Table 10. Fish captured during the purse seine survey (refer to Table 7 for abbreviations).

| $\begin{aligned} & \text { Date } \\ & \text { Sile } \end{aligned}$ |  | Time | $\begin{aligned} & \text { Tide } \\ & (\mathrm{m}) \end{aligned}$ | $\begin{aligned} & \mathrm{PA} \\ & \mathrm{SA} \end{aligned}$ | $\begin{aligned} & \text { PE } \\ & \text { GU } \end{aligned}$ | ${ }_{\text {LP }}$ | SH | $\begin{aligned} & \hline 181 \\ & \text { LE } \\ & \hline \end{aligned}$ | $\begin{aligned} & B L \\ & =A C \\ & \hline \end{aligned}$ | $\begin{aligned} & \mathrm{RO} \\ & \mathrm{NQ} \end{aligned}$ | $\begin{aligned} & \text { SAA } \\ & \hline \text { ND } \end{aligned}$ | $\begin{aligned} & \text { A UN } \\ & 0 . S C \end{aligned}$ | $\begin{aligned} & \text { NUN } \\ & \hline \end{aligned}$ | $\begin{aligned} & V_{U N} \\ & =G R \end{aligned}$ |  | $\begin{aligned} & \text { WUN } \\ & \text { URO } \end{aligned}$ | $\begin{aligned} & \text { NUN UN } \\ & \text { ob } \end{aligned}$ | $\begin{aligned} & \mathrm{N} \text { TH } \\ & \mathrm{L} \text { ST } \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 NO. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Aug |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 54 | 1 | 1100 | 2.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 53 | 1 | 1145 | 2.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 47 | 1 | 1230 | 3.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 |
| TOT |  |  |  |  |  |  |  |  |  |  |  | 2 | 2 |  |  |  |  | 10 |  |  |  |  |  |  |  | 3 |  |  |  |  |  |  |  |  |  | 2 |
| 17 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Aug |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 37 | 1 | 0900 | 2.3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 48 | 1 | 0935 | 1.8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 49 | 1 | 1010 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 51 | 1 | 1035 | 1.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 1 | 1140 | 1.2 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Aug |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 54 | 1 | 0830 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 35 | 1 | 0915 | 3.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 37 | 1 | 1000 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 36 | 1 | 1030 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 47 | 1 | 1125 | 3.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| TOT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 24 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Aug |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 48 | 1 | 0830 | 2.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 49 | 1 | 0900 | 2.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 50 | 1 | 0940 | 2.7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | - | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 51 | 1 | 1010 | 2.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 55 | 1 | 1040 | 3.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |
| TOT |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Table 10 (cont'd).


| /8it | Set No. | Time | $\begin{aligned} & \text { Tide } \\ & (m) \end{aligned}$ | PA |  | KE | SH | PI |  | RO | SA |  | PE | UN | G | Ro | 厚 |  | T | SN | UM | CO | co | co | FR | in | in | CH |  | HA | FL |  |  | FL | T | ST |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| July |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 41 | 1 | 0900 | 1.5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 42 | 1 | 0925 | 1.6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 45 | 1 | 0945 | 1.9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 21 | 0 | 0 | 0 | 0 | 0 |  | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| " | 2 | 0950 | " | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 19 | 0 | 0 | 0 | 0 | 0 |  | 9 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| 44 | 1 | 1010 | 2.1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |  |  | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 43 | 1 | 1020 | 2.2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 0 | 0 | 0 | 0 |  | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 |
| " | 2 | 1030 | 2.4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 2 | 0 | 0 | 0 |  |  | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| TOT |  |  |  |  |  |  |  |  |  |  |  | 48 | 3 |  |  |  |  |  | 22 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | 2 |  |  |  |

Table 12. Lengths, weights and K-factors for juvenile salmonids (see Table 7 for abbreviations).

| Date | Site | $\begin{aligned} & \text { Time } \\ & \text { (PST) } \end{aligned}$ | Set <br> No. | Fish Spp. | Length (mm) | Weight (g) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11-Jul | 17 | 0835 | 1 | CHIN | 86 | 6.9 | 1.08 |
| 11-Jul | 17 | 0835 | 1 | CHIN | 85 | 6.7 | 1.09 |
| 11-Jul | 17 | 0835 | 1 | CHIN | 74 | 4.5 | 1.11 |
| 11-Jul | 17 | 0835 | 1 | CHIN | 77 | 5.0 | 1.10 |
| 11-Jul | 17 | 0835 | 1 | CHIN | 81 | 5.4 | 1.02 |
| 11-Jul | 17 | 0835 | 1 | CHIN | 82 | 6.0 | 1.09 |
| 11-Jul | 17 | 0835 | 1 | CHIN | 80 | 5.6 | 1.09 |
| 11-Jul | 17 | 0835 | 1 | CHIN | 87 | 6.6 | 1.00 |
| 11-Jul | 17 | 0835 | 1 | CHIN | 81 | 5.4 | 1.18 |
| 11-Jul | 17 | 0835 | 1 | CHIN | 69 | 4.0 | 1.22 |
| 11-Jul | 1 | 0920 | 1 | CHIN | 76 | 4.6 | 1.05 |
| 11-Jul | 1 | 0920 | 1 | CHIN | 81 | 5.7 | 1.25 |
| 11-Jul | 1 | 0920 | 2 | CHIN | 80 | 5.8 | 1.13 |
| 11-Jul | 1 | 0920 | 2 | COHO | 70 | 3.8 | 1.11 |
| 11-Jul | 1 | 0930 | 2 | COHO | 64 | 3.1 | 1.18 |
| 11-Jul | 18 | 1005 | 1 | CHIN | 82 | 6.2 | 1.12 |
| 11-Jul | 8 | 1045 | 1 | CHIN | 72 | 4.8 | 1.29 |
| 11-Jul | 19 | 1237 | 1 | CHIN | 81 | 5.0 | 1.10 |
| 11-Jul | 19 | 1245 | 2 | CHIN | 85 | 6.1 | 0.99 |
| 11-Jul | 20 | 1310 | 1 | CHIN | 80 | 4.4 | 0.86 |
| 11-Jul | 20 | 1325 | 2 | MKCO | 105 | 10.1 | 0.87 |
| 11-Jul | 20 | 1325 | 2 | COHO | 81 | 6.1 | 1.34 |
| 11-Jul | 20 | 1325 | 2 | COHO | 60 | 2.6 | 1.20 |
| 11-Jul | 20 | 1325 | 2 | COHO | 64 | 2.8 | 1.07 |
| 11-Jul | 20 | 1325 | 2 | COHO | 87 | 7.2 | 1.09 |
| 11-Jul | 20 | 1325 | 2 | COHO | 93 | 9.0 | 1.12 |
| 11-Jul | 20 | 1325 | 2 | CHIN | 92 | 8.4 | 1.08 |
| 11-Jul | 20 | 1325 | 2 | CHIN | 86 | 6.2 | 0.97 |
| 11-Jul | 20 | 1325 | 2 | CHIN | 74 | 4.4 | 1.09 |
| 11-Jul | 21 | 1440 | 1 | COHO | 57 | 2.2 | 1.19 |
| 11-Jul | 21 | 1440 | 1 | COHO | 62 | 3.0 | 1.26 |
| 11-Jul | 21 | 1440 | 1 | COHO | 64 | 3.2 | 1.22 |
| 11-Jul | 21 | 1440 | 1 | COHO | 56 | 1.9 | 1.08 |
| 11-Jul | 21 | 1440 | 1 | COHO | 61 | 2.5 | 1.10 |
| 11-Jul | 21 | 1440 | 1 | COHO | 54 | 1.2 | 0.76 |
| 11-Jul | 21 | 1440 | 1 | COHO | 63 | 2.6 | 1.04 |
| 11-Jul | 21 | 1440 | 1 | COHO | 69 | 3.0 | 0.91 |

Table 12 (cont'd).

| Date | Site | Time <br> (PST) | Set <br> No. | Fish Spp. | Length <br> $(\mathrm{mm})$ | Weight <br> $(\mathrm{g})$ | K <br> Factor |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| 11-Jul | 21 | 1440 | 1 | COHO | 59 | 2.2 | 1.07 |
| 11-Jul | 21 | 1440 | 1 | COHO | 62 | 3.2 | 1.34 |
| 11-Jul | 21 | 1440 | 1 | CHIN | 73 | 3.6 | 0.93 |
| 11-Jul | 21 | 1440 | 1 | CHIN | 87 | 7.2 | 1.09 |
| 13-Jul | 32 | 0805 | 1 | CHIN | 90 | 7.6 | 1.04 |
| 13-Jul | 26 | 0900 | 1 | CHIN | 113 | 14.7 | 1.02 |
| 13-Jul | 26 | 0900 | 1 | CHIN | 134 | 27.2 | 1.13 |
| 13-Jul | 29 | 1140 | 2 | CHIN | 110 | 11.9 | 0.89 |
| 13-Jul | 29 | 1140 | 2 | CHIN | 78 | 4.8 | 1.01 |
| 13-Jul | 29 | 1140 | 2 | CHIN | 75 | 4.2 | 1.00 |
| 13-Jul | 29 | 1140 | 2 | CHIN | 85 | 7.6 | 1.24 |
| 13-Jul | 29 | 1140 | 2 | CHIN | 90 | 8.2 | 1.12 |
| 13-Jul | 29 | 1140 | 2 | CHIN | 75 | 4.5 | 1.07 |
| 13-Jul | 29 | 1140 | 2 | CHIN | 78 | 5.8 | 1.22 |
| 13-Jul | 30 | 1235 | 1 | CHIN | 74 | 3.6 | 0.89 |
| 13-Jul | 30 | 1235 | 1 | CHIN | 92 | 8.7 | 1.12 |
| 13-Jul | 31 | 1310 | 1 | CHIN | 85 | 6.7 | 1.09 |
| 13-Jul | 15 | 1350 | 1 | CHIN | 90 | 6.9 | 0.95 |
| 17-Jul | 39 | 1440 | 1 | CHIN | 79 | 5.2 | 1.05 |
| 17-Jul | 39 | 1440 | 1 | CHIN | 76 | 4.6 | 1.05 |
| 17-Jul | 39 | 1440 | 1 | CHIN | 79 | 5.3 | 1.07 |
| 17-Jul | 39 | 1440 | 1 | CHIN | 80 | 6.0 | 1.17 |
| 17-Jul | 39 | 1440 | 1 | CHIN | 75 | 4.7 | 1.11 |
| 17-Jul | 39 | 1440 | 1 | CHIN | 89 | 7.4 | 1.05 |
| 17-Jul | 39 | 1440 | 1 | CHIN | 71 | 3.9 | 1.09 |
| 17-Jul | 39 | 1440 | 1 | COHO | 70 | 3.7 | 1.08 |
| 17-Jul | 39 | 1440 | 1 | CHIN | 74 | 4.1 | 1.01 |
| 17-Jul | 39 | 1450 | 2 | CHIN | 80 | 5.7 | 1.11 |
| 17-Jul | 20 | 1650 | 2 | CHIN | 81 | 5.7 | 1.25 |
| 17-Jul | 14 | 1720 | 2 | COHO | 70 | 3.8 | 1.12 |
| 17-Jul | 14 | 1720 | 2 | COHO | 65 | 3.1 | 1.13 |
| 17-Jul | 14 | 1720 | 2 | COHO | 65 | 2.8 | 1.02 |
| 17-Jul | 14 | 1720 | 2 | COHO | 60 | 2.5 | 1.16 |
| 17-Jul | 14 | 1720 | 2 | CHIN | 81 | 5.7 | 1.25 |
| 17-Jul | 14 | 1720 | 2 | CHIN | 94 | 7.9 | 0.95 |
| 17-Jul | 24 | 1740 | 1 | CHIN | 80 | 5.9 | 1.15 |
| 17-Jul | 24 | 1740 | 1 | CHIN | 82 | 5.7 | 1.03 |
| 17-Jul | 24 | 1740 | 1 | CHIN | 88 | 7.0 | 1.03 |

Table 12 (cont'd).

| Date | Site | $\begin{aligned} & \text { Time } \\ & \text { (PST) } \end{aligned}$ | Set <br> No. | Fish Spp. | Length (mm) | Weight <br> (g) | K Factor |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 17-Jul | 24 | 1740 | 1 | CHIN | 79 | 5.1 | 1.03 |
| 17-Jul | 24 | 1740 | 1 | CHIN | 90 | 8.0 | 1.10 |
| 17-Jul | 1A | 1845 | 1 | COFR | 61 | 2.6 | 1.15 |
| 17-Jul | 1A | 1845 | 1 | COFR | 61 | 2.9 | 1.28 |
| 17-Jul | 1A | 1845 | 1 | COFR | 60 | 2.7 | 1.25 |
| 17-Jul | 1 A | 1845 | 1 | COFR | 63 | 2.6 | 1.04 |
| 17-Jul | 1A | 1845 | 1 | COFR | 62 | 2.4 | 1.01 |
| 17-Jul | 1A | 1850 | 2 | COFR | 55 | 2.1 | 1.26 |
| 17-Jul | 1A | 1850 | 2 | COFR | 65 | 3.3 | 1.20 |
| 17-Jul | 1A | 1850 | 2 | COFR | 61 | 2.6 | 1.15 |
| 17-Jul | 1A | 1850 | 2 | COFR | 58 | 2.0 | 1.03 |
| 17-Jul | 1A | 1850 | 2 | COFR | 57 | 2.3 | 1.24 |
| 17-Jul | 23 | 1920 | 1 | CHIN | 88 | 7.3 | 1.07 |
| 20-Jul | 25 | 1000 | 1 | CHIN | 125 | 22.3 | 1.14 |
| 20-Jul | 25 | 1000 | 1 | CHIN | 141 | 36.1 | 1.29 |
| 20-Jul | 25 | 1000 | 1 | CHIN | 127 | 24.1 | 1.18 |
| 20-Jul | 30 | 1300 | 1 | CHIN | 80 | 3.8 | 0.74 |
| 25-Jul | 39 | 0815 | 2 | CHIN | 94 | 8.9 | 1.07 |
| 25-Jul | 6 | 0845 | 2 | CHIN | 83 | 5.9 | 1.03 |
| 25-Jul | 6 | 0845 | 2 | CHIN | 97 | 9.3 | 1.02 |
| 25-Jul | 8 | 0925 | 2 | CHIN | 88 | 7.3 | 1.07 |
| 25-Jul | 11 | 1020 | 2 | CHIN | 85 | 6.3 | 1.03 |
| 25-Jul | 11 | 1020 | 2 | COHO | 75 | 4.5 | 1.07 |
| 25-Jul | 21 | 1310 | 1 | COHO | 63 | 3.0 | 1.20 |
| 25-Jul | 21 | 1310 | 1 | COHO | 62 | 2.4 | 1.01 |
| 25-Jul | 21 | 1310 | 1 | COHO | 66 | 3.3 | 1.15 |
| 25-Jul | 21 | 1310 | 1 | COHO | 64 | 2.5 | 0.95 |
| 25-Jul | 21 | 1310 | 1 | COHO | 66 | 3.5 | 1.22 |
| 25-Jul | 21 | 1345 | 2 | COHO | 76 | 4.9 | 1.12 |
| 25-Jul | 21 | 1345 | 2 | COHO | 61 | 2.7 | 1.19 |
| 25-Jul | 21 | 1345 | 2 | COHO | 65 | 3.4 | 1.24 |
| 25-Jul | 21 | 1345 | 2 | COHO | 63 | 2.6 | 1.04 |
| 25-Jul | 21 | 1345 | 2 | COHO | 57 | 2.2 | 1.19 |
| 25-Jul | 21 | 1345 | 2 | CHIN | 82 | 5.8 | 1.05 |
| 1-Aug | 6 | 1455 | 2 | CHIN | 128 | 22.9 | 1.10 |
| 1-Aug | 6 | 1455 | 2 | CHIN | 128 | 27.5 | 1.31 |
| 1-Aug | 6 | 1455 | 2 | CHIN | 101 | 11.5 | 1.12 |
| 1-Aug | 6 | 1455 | 2 | CHIN | 92 | 10.1 | 1.30 |

Table 12 (cont'd).

| Date | Site | Time <br> (PST) | Set <br> No. | Fish Spp. | Length <br> $(\mathrm{mm})$ | Weight <br> $(\mathrm{g})$ | K <br> Factor |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| 1-Aug | 11 | 1650 | 2 | WLCO | 73 | 4.8 | 1.23 |
| 1-Aug | 11 | 1650 | 2 | WLCO | 75 | 4.6 | 1.09 |
| 1-Aug | 11 | 1650 | 2 | CHIN | 94 | 8.6 | 1.04 |
| 1-Aug | 11 | 1650 | 2 | CHIN | 80 | 8.7 | 1.70 |
| 1-Aug | 11 | 1650 | 2 | CHIN | 85 | 7.1 | 1.16 |
| 1-Aug | 11 | 1650 | 2 | CHIN | 86 | 6.8 | 1.07 |
| 1-Aug | 11 | 1650 | 2 | CHIN | 86 | 6.8 | 1.07 |
| 1-Aug | 21 | 1820 | 1 | COHO | 70 | 3.6 | 1.05 |
| 3-Aug | 25 | 1000 | 1 | CHIN | 160 | 47.4 | 1.16 |
| 3-Aug | 26 | 1050 | 2 | CHIN | 123 | 17.4 | 0.94 |
| 3-Aug | 31 | 1305 | 2 | CHIN | 103 | 11.1 | 1.02 |
| 9-Aug | 20 | 1410 | 2 | COHO | 84 | 6.6 | 1.11 |
| 9-Aug | 20 | 1410 | 2 | COHO | 79 | 6.6 | 1.34 |
| 9-Aug | 20 | 1410 | 2 | COHO | 79 | 5.8 | 1.18 |
| 9-Aug | 20 | 1410 | 2 | COHO | 70 | 3.7 | 1.08 |
| 9-Aug | 20 | 1410 | 2 | COHO | 72 | 4.1 | 1.10 |
| 9-Aug | 20 | 1410 | 2 | COHO | 79 | 5.8 | 1.18 |
| 9-Aug | 20 | 1410 | 2 | COHO | 78 | 5.5 | 1.16 |
| 9-Aug | 20 | 1410 | 2 | COHO | 88 | 7.9 | 1.16 |
| 9-Aug | 20 | 1410 | 2 | COHO | 73 | 4.5 | 1.16 |
| 9-Aug | 20 | 1410 | 2 | COHO | 75 | 4.6 | 1.09 |
| 9-Aug | 20 | 1410 | 2 | COHO | 88 | 7.2 | 1.06 |
| 11-Aug | 53 | 1145 | 1 | CHIN | 175 | 65.0 | 1.21 |
| 11-Aug | 53 | 1145 | 1 | CHIN | 115 | 17.5 | 1.15 |
| 15-Aug | 17 | 0825 | 1 | COHO | 57 | 1.8 | 0.97 |
| 15-Aug | 17 | 0825 | 1 | COHO | 70 | 3.9 | 1.14 |
| 15-Aug | 17 | 0830 | 2 | COHO | 57 | 2.2 | 1.19 |
| 15-Aug | 1 | 0900 | 1 | COHO | 57 | 1.8 | 0.97 |
| 17-Aug | 37 | 0900 | 1 | WLCK | 145 | 29.8 | 0.98 |
| 17-Aug | 37 | 0900 | 1 | WLCK | 150 | 44.0 | 1.30 |
| 17-Aug | 37 | 0900 | 1 | WLCK | 140 | 30.7 | 1.12 |
| 17-Aug | 37 | 0900 | 1 | WLCK | 135 | 28.9 | 1.18 |
| 17-Aug | 48 | 0935 | 1 | WLCK | 138 | 28.9 | 1.10 |
| 17-Aug | 48 | 0935 | 1 | WLCK | 154 | 42.2 | 1.16 |
| 17-Aug | 48 | 0935 | 1 | WLCK | 124 | 21.8 | 1.14 |
| 17-Aug | 49 | 1010 | 1 | MKCH | 135 | 27.7 | 1.13 |
| 17-Aug | 49 | 1010 | 1 | WLCK | 140 | 30.9 | 1.13 |
| 22-Aug | 54 | 0830 | 1 | CHIN | 218 | 131.0 | 1.26 |

Table 12 (cont'd).

| Date | Site | Time <br> (PST) | Set <br> No. | Fish Spp. | Length <br> $(\mathrm{mm})$ | Weight <br> $(\mathrm{g})$ | K <br> Factor |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |
| 22-Aug | 54 | 0830 | 1 | MKCH | 250 | 170.0 | 1.09 |
| 22-Aug | 47 | 1125 | 1 | CHIN | 138 | 26.8 | 1.02 |
| 22-Aug | 47 | 1125 | 1 | CHIN | 154 | 40.8 | 1.12 |
| 22-Aug | 47 | 1125 | 1 | CHUM | 150 | 31.9 | 0.95 |
| 24-Aug | 55 | 1040 | 1 | CHIN | 130 | 20.7 | 0.94 |



Figure 1. Map of the Courtenay River estuary showing the twenty-six sites sampled in the 2000 survey.


Figure 2. Map of Baynes Sound showing the twenty-one sites sampled in the 2000 survey.


[^0]:    ${ }^{1}$ Fisheries and Oceans Canada Habitat and Enhancement Branch
    Puntledge River Hatchery
    Courtenay, B.C. V9N 5N3

