

# FISHERIES AND OCEANS CANADA

## SOUTH COAST ASSESSMENT BULLETIN

### CREEL SURVEY DATA REVIEW PACKAGE

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## Area 29 August 2019



*Prepared By:*

South Coast Salmon Stock Assessment Section

Thursday 27<sup>th</sup> August, 2020



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Canada



Table 1: Numbers of Interviews conducted contributing to the area by day and access site.

| Date        | Day Type | Cooper's<br>Green<br>PM | Cowichan<br>Bay<br>PM | Crofton<br>Ramp<br>AM | Gibson's<br>AM | Ladysmith |    | McDonald Beach |    | Planetarium |    | Sewell's<br>West<br>PM | Thunderbird<br>Marina |    |
|-------------|----------|-------------------------|-----------------------|-----------------------|----------------|-----------|----|----------------|----|-------------|----|------------------------|-----------------------|----|
|             |          |                         |                       |                       |                | AM        | PM | AM             | PM | AM          | PM |                        | AM                    | PM |
| 29 Jul 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 30 Jul 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 31 Jul 2019 | Midweek  |                         | 1                     |                       |                |           |    | 1              |    |             |    |                        |                       |    |
| 01 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 02 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 03 Aug 2019 | Weekend  |                         |                       |                       |                |           |    | 1              |    |             |    | 1                      |                       |    |
| 04 Aug 2019 | Weekend  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 05 Aug 2019 | Weekend  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 06 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        | 2                     |    |
| 07 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 08 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 09 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    | 4           |    |                        |                       |    |
| 10 Aug 2019 | Weekend  |                         |                       |                       |                | 1         |    |                |    |             |    |                        | 5                     |    |
| 11 Aug 2019 | Weekend  |                         |                       |                       |                |           |    |                | 23 |             |    |                        |                       |    |
| 12 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                | 8  |             |    |                        |                       |    |
| 13 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 14 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 15 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 16 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 17 Aug 2019 | Weekend  |                         |                       |                       |                |           | 5  |                |    |             |    |                        | 9                     |    |
| 18 Aug 2019 | Weekend  |                         |                       | 1                     |                |           |    |                |    | 10          |    |                        |                       |    |
| 19 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 20 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 21 Aug 2019 | Midweek  |                         |                       |                       | 1              |           |    |                |    |             |    | 1                      |                       |    |
| 22 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 23 Aug 2019 | Midweek  |                         |                       |                       |                |           |    | 12             |    |             |    |                        |                       |    |
| 24 Aug 2019 | Weekend  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 25 Aug 2019 | Weekend  | 1                       |                       |                       |                |           | 1  |                | 6  |             |    |                        |                       |    |
| 26 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             | 1  |                        |                       |    |
| 27 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 28 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                | 6  |             |    |                        |                       |    |
| 29 Aug 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 30 Aug 2019 | Midweek  |                         |                       |                       |                | 1         |    |                |    |             |    |                        |                       | 1  |
| 31 Aug 2019 | Weekend  |                         |                       |                       |                |           |    |                |    | 14          |    |                        |                       |    |
| 01 Sep 2019 | Weekend  |                         |                       |                       |                |           |    |                | 44 |             |    |                        |                       |    |
| 02 Sep 2019 | Weekend  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |
| 03 Sep 2019 | Midweek  |                         |                       |                       |                |           |    |                |    |             |    |                        |                       |    |

Table 2: Daily tally of interviews, catch and effort.

| Date        | Day                 | Average Fishing Conditions | Interviews & Log Trips | Chinook | Coho | Sockeye | Halibut | Observed Fishing | Flight Time | Expanded Fishing |
|-------------|---------------------|----------------------------|------------------------|---------|------|---------|---------|------------------|-------------|------------------|
| 29-Jul-2019 | Monday              |                            | 2                      | 1       |      |         |         |                  |             |                  |
| 30-Jul-2019 | Tuesday             |                            | 1                      |         |      |         |         | 7                | 1125        | 12               |
| 31-Jul-2019 | Wednesday           | calm/rippled               | 3                      | 1       |      |         |         |                  |             |                  |
| 01-Aug-2019 | Thursday            |                            | 3                      | 2       |      |         |         | 34               | 1128        | 60               |
| 02-Aug-2019 | Friday              |                            | 2                      | 3       | 2    |         |         |                  |             |                  |
| 03-Aug-2019 | Saturday            | choppy                     | 4                      | 1       | 1    |         |         | 40               | 1139        | 73               |
| 04-Aug-2019 | Sunday              | choppy                     | 3                      |         |      |         |         |                  |             |                  |
| 05-Aug-2019 | Monday (B.C. Day)   |                            | 1                      |         | 1    |         |         | 207              | 1120        | 373              |
| 06-Aug-2019 | Tuesday             |                            | 2                      | 5       |      |         |         |                  |             |                  |
| 07-Aug-2019 | Wednesday           | choppy                     | 5                      | 6       |      |         |         | 83               | 1139        | 144              |
| 08-Aug-2019 | Thursday            |                            | 0                      |         |      |         |         | 51               | 1135        | 89               |
| 09-Aug-2019 | Friday              | choppy                     | 8                      | 13      |      |         |         |                  |             |                  |
| 10-Aug-2019 | Saturday            | choppy                     | 8                      | 16      |      |         |         | 219              | 1137        | 395              |
| 11-Aug-2019 | Sunday              | choppy                     | 23                     | 25      | 1    |         |         |                  |             |                  |
| 12-Aug-2019 | Monday              | calm/rippled               | 10                     | 16      | 1    |         |         |                  |             |                  |
| 13-Aug-2019 | Tuesday             |                            | 3                      | 5       |      |         |         |                  |             |                  |
| 14-Aug-2019 | Wednesday           |                            | 4                      | 9       | 1    |         |         | 170              | 1154        | 300              |
| 15-Aug-2019 | Thursday            |                            | 3                      | 7       |      |         |         |                  |             |                  |
| 16-Aug-2019 | Friday              |                            | 4                      | 13      |      |         |         |                  |             |                  |
| 17-Aug-2019 | Saturday            | calm/rippled               | 16                     | 29      |      | 1       |         |                  |             |                  |
| 18-Aug-2019 | Sunday              | choppy                     | 14                     | 14      | 1    |         |         | 259              | 1143        | 465              |
| 19-Aug-2019 | Monday              |                            | 2                      | 3       |      |         |         |                  |             |                  |
| 20-Aug-2019 | Tuesday             |                            | 2                      | 7       |      |         |         |                  |             |                  |
| 21-Aug-2019 | Wednesday           | frequent whitecaps         | 2                      |         |      |         |         |                  |             |                  |
| 22-Aug-2019 | Thursday            |                            | 0                      |         |      |         |         | 45               | 1139        | 79               |
| 23-Aug-2019 | Friday              | calm/rippled               | 14                     | 9       |      |         |         |                  |             |                  |
| 24-Aug-2019 | Saturday            |                            | 2                      | 5       |      |         |         |                  |             |                  |
| 25-Aug-2019 | Sunday              | choppy                     | 9                      | 17      |      |         |         |                  |             |                  |
| 26-Aug-2019 | Monday              | frequent whitecaps         | 4                      | 10      |      |         |         |                  |             |                  |
| 27-Aug-2019 | Tuesday             |                            | 1                      | 4       |      |         |         |                  |             |                  |
| 28-Aug-2019 | Wednesday           | choppy                     | 6                      | 7       | 1    |         |         |                  |             |                  |
| 29-Aug-2019 | Thursday            |                            | 0                      |         |      |         |         |                  |             |                  |
| 30-Aug-2019 | Friday              | choppy                     | 5                      | 13      |      |         |         | 153              | 1142        | 266              |
| 31-Aug-2019 | Saturday            | calm/rippled               | 17                     | 18      | 3    |         |         |                  |             |                  |
| 01-Sep-2019 | Sunday              | calm/rippled               | 44                     | 46      | 2    |         |         | 306              | 1241        | 621              |
| 02-Sep-2019 | Monday (Labour Day) |                            | 0                      |         |      |         |         |                  |             |                  |
| 03-Sep-2019 | Tuesday             |                            | 0                      |         |      |         |         |                  |             |                  |
|             | Totals              | choppy                     | 80                     | 132     | 5    |         |         | 89*              |             | 156*             |
|             | Totals              | choppy                     | 97                     | 125     | 7    | 1       |         | 181*             |             | 327*             |

\* Average number of boats Observed and Expanded

**Table 3: Simple area based cpue (catch per boat trip) expansion.**

| Day Type | Average Expanded Boats | Number of Days | Total Estimated Effort | CPUE    |        |         |         | Retained |      |         |         |
|----------|------------------------|----------------|------------------------|---------|--------|---------|---------|----------|------|---------|---------|
|          |                        |                |                        | Chinook | Coho   | Sockeye | Halibut | Chinook  | Coho | Sockeye | Halibut |
| Weekend  | 327                    | 10             | 3270                   | 1.2890  | 0.0720 | 0.01    |         | 4215     | 235  | 33      |         |
| Midweek  | 156                    | 21             | 3276                   | 1.65    | 0.0630 |         |         | 5405     | 206  |         |         |

**Table 4: Recent years estimates of retained catch and effort.**

| Year     | Month  | Total Effort | Chinook Kept | Coho Kept | Sockeye Kept | Halibut Kept |
|----------|--------|--------------|--------------|-----------|--------------|--------------|
| 2014     | August | 14159        | 832          | 105       | 48820        |              |
| 2015     | August | 3333         | 2833         | 144       |              |              |
| 2016     | August | 3606         | 545          | 47        |              |              |
| 2017     | August | 3845         | 2322         | 104       |              |              |
| 2018     | August | 10610        | 2086         | 816       | 23303        |              |
| 2019     | August | 7253         | 7308         | 250       | 0            | 0            |
| 5-Yr Avg | August | 7111         | 1724         | 243       | 36062        |              |

**Table 5: Sport Head Recovery Review.**

| Species | Creel Marked Catch | Creel Mark Rate | Creel Submission Rate | iRec Marked Catch | iRec Mark Rate | iRec Submission Rate | Sport Head Recoveries |
|---------|--------------------|-----------------|-----------------------|-------------------|----------------|----------------------|-----------------------|
| Coho    | 250                | 100%            | 1%                    | 118               | 100%           | 3%                   | 3                     |
| Chinook | 103                | 1%              | 2%                    | 1554              | 18%            | 0%                   | 2                     |

**Table 6: Guided Proprtions Review.**

| Data Source      | Interviews / Angler Days | Guided Proportion |
|------------------|--------------------------|-------------------|
| Creel Interivews | 173                      | 4%                |
| iRec Anglers     | 15300                    | 13%               |
| iRec Responses   | 303                      | 2%                |

4 of 6 Thursday 27<sup>th</sup> August, 2020



Table 7: Proportion of each day's fishing by hour.

| Areas     | Day Type | 6:00 AM | 7:00 AM | 8:00 AM | 9:00 AM | 10:00 AM | 11:00 AM | 12:00 PM | 01:00 PM | 02:00 PM | 03:00 PM | 04:00 PM | 05:00 PM | 06:00 PM | 07:00 PM | 08:00 PM | 09:00 PM | 10:00 PM |
|-----------|----------|---------|---------|---------|---------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 29B       | Midweek  | 8%      | 24%     | 43%     | 59%     | 71%      | 77%      | 74%      | 51%      | 30%      | 20%      | 17%      | 17%      | 15%      | 6%       | 0%       | 0%       | 0%       |
| 29B       | Weekend  | 14%     | 31%     | 46%     | 53%     | 61%      | 60%      | 49%      | 47%      | 41%      | 31%      | 25%      | 21%      | 12%      | 5%       | 0%       | 0%       | 0%       |
| 29C       | Midweek  | 6%      | 15%     | 28%     | 41%     | 46%      | 50%      | 52%      | 44%      | 30%      | 28%      | 29%      | 29%      | 26%      | 16%      | 3%       | 0%       | 0%       |
| 29C       | Weekend  | 10%     | 23%     | 33%     | 40%     | 50%      | 54%      | 50%      | 49%      | 44%      | 37%      | 33%      | 27%      | 17%      | 9%       | 1%       | 0%       | 0%       |
| 29DE 29DW | Midweek  | 5%      | 20%     | 32%     | 44%     | 48%      | 51%      | 50%      | 42%      | 25%      | 25%      | 25%      | 29%      | 24%      | 14%      | 2%       | 0%       | 0%       |
| 29DE 29DW | Weekend  | 11%     | 24%     | 32%     | 40%     | 50%      | 52%      | 49%      | 49%      | 42%      | 36%      | 34%      | 29%      | 20%      | 9%       | 1%       | 0%       | 0%       |
| 29E       | Midweek  | 9%      | 25%     | 47%     | 56%     | 69%      | 74%      | 70%      | 49%      | 30%      | 23%      | 20%      | 19%      | 17%      | 7%       | 0%       | 0%       | 0%       |
| 29E       | Weekend  | 14%     | 32%     | 48%     | 53%     | 66%      | 67%      | 52%      | 51%      | 46%      | 35%      | 27%      | 21%      | 14%      | 7%       | 0%       | 0%       | 0%       |
| 29F       | Midweek  | 5%      | 20%     | 33%     | 41%     | 46%      | 47%      | 47%      | 41%      | 24%      | 27%      | 27%      | 31%      | 26%      | 15%      | 2%       | 0%       | 0%       |
| 29F       | Weekend  | 11%     | 23%     | 31%     | 38%     | 50%      | 55%      | 50%      | 51%      | 45%      | 39%      | 37%      | 31%      | 22%      | 11%      | 1%       | 0%       | 0%       |
| 29G       | Midweek  | 11%     | 29%     | 43%     | 54%     | 56%      | 56%      | 51%      | 40%      | 19%      | 18%      | 20%      | 24%      | 19%      | 8%       | 0%       | 0%       | 0%       |
| 29G       | Weekend  | 11%     | 29%     | 41%     | 48%     | 59%      | 58%      | 47%      | 46%      | 41%      | 34%      | 31%      | 24%      | 21%      | 9%       | 1%       | 0%       | 0%       |

**Table 8: Daily Fishing Conditions.**

| Date        | Day Type | Cooper's<br>Green | Cowichan<br>Bay | Crofton<br>Ramp       | Gibson's              | Ladysmith    | McDonald<br>Beach | Planetarium           | Sewell's<br>West | Thunderbird<br>Marina |
|-------------|----------|-------------------|-----------------|-----------------------|-----------------------|--------------|-------------------|-----------------------|------------------|-----------------------|
| 29 Jul 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 30 Jul 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 31 Jul 2019 | Midweek  |                   | calm/rippled    |                       |                       |              | calm/rippled      |                       |                  |                       |
| 01 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 02 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 03 Aug 2019 | Weekend  |                   |                 |                       |                       |              | choppy            |                       |                  |                       |
| 04 Aug 2019 | Weekend  |                   |                 |                       |                       |              |                   |                       | choppy           |                       |
| 05 Aug 2019 | Weekend  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 06 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 07 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  | choppy                |
| 08 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 09 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   | choppy                |                  |                       |
| 10 Aug 2019 | Weekend  |                   |                 |                       |                       | choppy       |                   |                       |                  | choppy                |
| 11 Aug 2019 | Weekend  |                   |                 |                       |                       |              | choppy            |                       |                  |                       |
| 12 Aug 2019 | Midweek  |                   |                 |                       |                       |              | calm/rippled      |                       |                  |                       |
| 13 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 14 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 15 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 16 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 17 Aug 2019 | Weekend  |                   |                 |                       |                       | calm/rippled |                   |                       |                  | calm/rippled          |
| 18 Aug 2019 | Weekend  |                   |                 | frequent<br>whitecaps |                       |              |                   | choppy                |                  |                       |
| 19 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 20 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 21 Aug 2019 | Midweek  |                   |                 |                       | frequent<br>whitecaps |              |                   |                       | choppy           |                       |
| 22 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 23 Aug 2019 | Midweek  |                   |                 |                       |                       |              | calm/rippled      |                       |                  |                       |
| 24 Aug 2019 | Weekend  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 25 Aug 2019 | Weekend  | choppy            |                 |                       |                       | choppy       | choppy            |                       |                  |                       |
| 26 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   | frequent<br>whitecaps |                  |                       |
| 27 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 28 Aug 2019 | Midweek  |                   |                 |                       |                       |              | choppy            |                       |                  |                       |
| 29 Aug 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 30 Aug 2019 | Midweek  |                   |                 |                       |                       | choppy       |                   |                       |                  | choppy                |
| 31 Aug 2019 | Weekend  |                   |                 |                       |                       |              |                   | calm/rippled          |                  |                       |
| 01 Sep 2019 | Weekend  |                   |                 |                       |                       |              | calm/rippled      |                       |                  |                       |
| 02 Sep 2019 | Weekend  |                   |                 |                       |                       |              |                   |                       |                  |                       |
| 03 Sep 2019 | Midweek  |                   |                 |                       |                       |              |                   |                       |                  |                       |