



THE STATE  
of **ALASKA**  
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Fish and Game**

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TO: Nick Sagalkin, Regional Supervisor  
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SUBJECT: Preliminary  
2017 Salmon  
Forecasts

FROM: Kevin Schaberg, Regional Finfish Research Supervisor  
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Regional research, management, and biometric staff have developed and reviewed the 2017 run forecasts for pink and sockeye salmon stocks in Region IV. This is a relatively early release for Region IV forecasts, and numbers should be considered preliminary until inclusion in the annual statewide document to be released in early 2017.

Total run forecasts are shown in tables 1 and 2 as point estimates and ranges. The ranges are 80% prediction intervals, meaning that we have 80% confidence that the actual 2017 run will fall within this range. Estimated escapements are subtracted from the total run forecasts to yield estimated 2017 harvests; these harvest estimates are shown as point estimates for pink and sockeye salmon. Pink salmon (as well as Spiridon sockeye salmon) harvests are also reported as 80% ranges.

Confidence in each forecast varies based on data relationships in the underlying models. Full methods and discussion will be included in the statewide document.

Table 1.—Point estimate and ranges of preliminary 2017 Region IV sockeye salmon forecasts.

| Stock                   | Escapement goal<br>(thousands)                 | 2017 run                          | Point estimate<br>(thousands) | Range<br>(thousands) |
|-------------------------|--|-----------------------------------|-------------------------------|----------------------|
| Spiridon                | NA   | Forecast                          | 288                           | 239–337              |
|                         |  | Escapement                        | 0                             |                      |
|                         |  | Harvest estimate                  | 288                           |                      |
| Ayakulik                | SEG (early and late runs<br>combined): 200–400 | Forecast                          | 451                           | 193–709              |
|                         |  | Escapement                        | 300                           |                      |
|                         |  | Harvest estimate                  | 151                           |                      |
| Early-run Karluk        | BEG: 110–250                                   | Early-run forecast                | 294                           | 200–387              |
|                         |  | Early-run escapement              | 180                           |                      |
|                         |  | Early-run harvest estimate        | 114                           |                      |
| Late-run Karluk         | BEG: 170–380                                   | Late-run forecast                 | 814                           | 618–1,011            |
|                         |  | Late-run escapement               | 275                           |                      |
|                         |  | Late-run harvest estimate         | 539                           |                      |
| Total Karluk            |  | Total Karluk run forecast         | 1,108                         | 818–1,399            |
|                         |  | Total Karluk escapement           | 455                           |                      |
|                         |  | Total Karluk harvest<br>estimate  | 653                           |                      |
| Early-run Upper Station | BEG: 43–93                                     | Early-run forecast                | 125                           | 69–182               |
|                         |  | Early-run escapement <sup>a</sup> | 65                            |                      |
|                         |  | Early-run harvest estimate        | 60                            |                      |
| Late-run Upper Station  | BEG: 120–265                                   | Late-run forecast                 | 215                           | 101–328              |
|                         |  | Late-run escapement               | 186                           |                      |
|                         |  | Late-run harvest estimate         | 29                            |                      |
| Frazer Lake             | BEG: 75–170                                    | Forecast                          | 237                           | 113–361              |
|                         |  | Escapement <sup>b</sup>           | 137                           |                      |
|                         |  | Harvest estimate                  | 100                           |                      |
| Total Alitak District   |  | Total Alitak run forecast         | 577                           | 283–870              |
|                         |  | Total Alitak escapement           | 388                           |                      |
|                         |  | Total Alitak harvest<br>estimate  | 189                           |                      |

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| Stock              | Escapement goal<br>(thousands) | 2017 run                         | Point estimate<br>(thousands) | Range<br>(thousands) |
|--------------------|--------------------------------|----------------------------------|-------------------------------|----------------------|
| Early-run Chignik  | BEG: 350–450                   | Early-run forecast               | 1,266                         | 319–2,213            |
|                    |                                | Early-run escapement             | 400                           |                      |
|                    |                                | Early-run harvest estimate       | 866                           |                      |
| Late-run Chignik   | SEG: 200–400                   | Late-run forecast                | 938                           | 456–1,420            |
|                    |                                | Late-run escapement <sup>c</sup> | 338                           |                      |
|                    |                                | Late-run harvest estimate        | 600                           |                      |
| Total Chignik      |                                | Total Chignik run forecast       | 2,204                         | 775–3,634            |
|                    |                                | Total Chignik escapement         | 738                           |                      |
|                    |                                | Total Chignik harvest estimate   | 1,466                         |                      |
| Nelson River       | BEG: 97–219                    | Forecast                         | 585                           | 303–868              |
|                    |                                | Escapement                       | 158                           |                      |
|                    |                                | Harvest estimate                 | 427                           |                      |
| Late-run Bear Lake | BEG: 117–195                   | Late-run forecast                | 450                           | 233–667              |
|                    |                                | Late-run escapement              | 156                           |                      |
|                    |                                | Late-run harvest estimate        | 294                           |                      |

<sup>a</sup> Alaska Board of Fisheries instituted an optimal escapement goal (OEG) of 25,000 fish in 1999, this was amended to 30,000 fish from 2014-2016.

<sup>b</sup> The Frazer Lake point estimate of  $S_{MSY}$  (escapement) is increased by an additional 20,000 fish, which is the 20-year median of the number of fish that pass through Dog Salmon weir but do not ascend the Frazer Lake fish pass.

<sup>c</sup> An inriver run goal of 75,000 sockeye salmon is added to the lower bound of the Chignik late-run SEG for management objectives.

Table 2.—Point estimate and ranges of preliminary 2017 Region IV pink salmon forecasts.

| Stock                  | Escapement goal (millions)   | 2017 run                      | Point estimate (millions) | Range (millions) |
|------------------------|--|-------------------------------|---------------------------|------------------|
| Kodiak Management Area | SEG (Mainland and Kodiak Archipelago combined): 2.25–6.0<br>Odd Year | Wild stock total run forecast | 23.4                      | 13.3–33.6        |
|                        |  | Wild stock escapement         | 5.0                       |                  |
|                        |  | Wild stock harvest estimate   | 18.4                      | 8.3–28.6         |
|                        |  | Kitoi Bay hatchery harvest    | 9.7                       | 7.2–12.2         |
|                        |  | Total KMA harvest estimate    | 28.1                      | 15.4–40.8        |
| South Alaska Peninsula | SEG: 1.75–4.0  | Total run forecast            | 15.6                      | 11.4–19.8        |
|                        |  | Escapement                    | 4.0                       |                  |
|                        |  | Harvest estimate              | 11.6                      | 9.7–15.8         |

**Cc:** Templin, Munro, Wadle, Murphy, Jackson, Anderson, Foster, Finkle, Schrof, Wattum, Wilburn, Spalinger, Fox, Nichols, Johnson, Barnard, Ruhl, Lipka, Stumpf, Loewen, Tracy, KRAA, CRAA, Kodiak AC