



MEMORANDUM

TO: Members
Alaska Board of Fisheries

DATE: September 30, 2020

FROM: Sam Rabung *SR*
Director Division of Commercial Fisheries

SUBJECT: Southeast Region Salmon
Stock of Concern
Recommendations

and

Dave Rutz *DR*
Director, Division of Sport Fish

The *Policy for the Management of Sustainable Salmon Fisheries* (SSFP; 5 AAC 39.222) directs the Alaska Department of Fish and Game (department) to report to the Alaska Board of Fisheries (board) on the status of salmon stocks and identify any stocks that present a concern related to yield, management, or conservation during regular board meetings. A management concern is defined (5 AAC 39.222) as “a concern arising from a chronic inability, despite use of specific management measures, to maintain escapement for a stock within the bounds” of the established escapement goal, and “chronic inability” means “continuing or anticipated inability to meet escapement thresholds over a four to five year period, which is approximately equivalent to the generation time of most salmon species.”

This memorandum summarizes the results of the stock of concern evaluation for Southeast Alaska Region salmon stocks for the 2020/2021 board regulatory cycle. Following the 2020 salmon season, all salmon stocks with formal escapement goals in the Southeast Alaska management area were examined for potential stock of concern status. Four stocks previously designated as stocks of management concern at the 2018 Southeast region board meeting were also evaluated. This evaluation included input from headquarters, regional, and area staff from both fishery divisions. Department recommendations and brief summaries on the status of underperforming stocks are provided below; more detailed accounting of management prescriptions applied over the last 5 years including additional tables, and maps outlining time and area restrictions are available upon request. The department recommends no change in status for the 4 existing stocks of management concern, based on criteria for removing the stock of concern designation outlined in action plans developed at the 2018 board meeting (Lum and Fair 2018a, 2018b; Walker et al. 2018). The department also recommends that 6 additional stocks be listed as stocks of management concern.

KING SALMON

Chilkat River king salmon:

In 2018, the board designated the Chilkat River king salmon run as a stock of management concern. Stock assessment information and management measures were summarized in an action plan developed at the 2018 board meeting (Lum and Fair 2018a). The Chilkat River king salmon escapement goal has been achieved in 2 consecutive years (2019–2020) and 2 of the past 5 years since 2016 (Figure 1). The department recommends continuing the stock of management concern designation for this stock.

King Salmon River king salmon:

In 2018, the board designated the King Salmon River king salmon run as a stock of management concern. Stock assessment information and management measures were summarized in an action plan developed at the 2018 board meeting (Lum and Fair 2018a). The King Salmon River king salmon escapement goal has been achieved in only 1 year in the past 5 years since 2016 (Figure 2). The department recommends continuing the stock of management concern designation for this stock.

Unuk River king salmon:

In 2018, the board designated the Unuk River king salmon run as a stock of management concern. Stock assessment information and management measures were summarized in an action plan developed at the 2018 board meeting (Lum and Fair 2018b). The Unuk River king salmon escapement goal has been achieved in 2 of the past 5 years (2016–2020; Figure 3). The department recommends continuing the stock of management concern designation for this stock.

Chickamin River king salmon:

The current biological escapement goal range of 2,150 to 4,300 large king salmon (primarily age-1.3 fish and older) was established for the Chickamin River in 1997, based on stock-recruit analysis (McPherson and Carlile 1997; Heintz et al. 2017). The Chickamin River king salmon escapement goal has been achieved in only 1 of the past 5 years since 2016 (Figure 4).

Stock Assessment: The Chickamin River is a glacial system that empties into Behm Canal, 67 km northeast of Ketchikan. The Chickamin River supports a mostly inside-rearing stock of king salmon. Immature and mature fish are harvested in marine mixed stock fisheries in Southeast Alaska and northern British Columbia. Coded-wire tagging of this stock was conducted from 1982 to 1986 and from 1992 to 2007. Escapement estimates of large spawners are based on mark-recapture estimates of total escapement (1995, 1996, and 2001–2005) and expanded peak survey counts from standardized helicopter index surveys of the drainage. Concurrent years of mark-recapture studies and index surveys were used to develop an expansion factor (4.75) to convert peak index survey counts to estimates of total escapement. Mark-recapture studies showed that an average 21% of the total escapement is counted during index surveys. A radio telemetry study in 1996 also showed that index counts are conducted in stream reaches where more than 80% of all spawning occurs.

Based on coded-wire tagging studies conducted in the 2000s, it was observed that nearly all (99%) of the Chickamin River king salmon harvest occurred in Southeast Alaska. During this time period,

the troll fishery accounted for about half of the total harvest, followed by net fisheries (combined 35%) and sport fisheries (15%). Currently, the waters of east Behm Canal are closed to salmon fishing year-round and there are no directed fisheries that target this stock. The Chickamin River stock, like other king salmon stocks in the region, has recently experienced a decline in productivity.

Management Measures: Management measures outlined in the Unuk River action plan (Lum and Fair 2018b) to reduce harvest on Unuk River king salmon would also reduce harvest on Chickamin River king salmon, given the close proximity of the two drainages (less than 30 km apart in northern Behm Canal).

Stock of Concern Recommendation: Escapements of large Chickamin River king salmon were below the escapement goal range in 4 of the past 5 years from 2016 to 2020 (and 4 consecutive years 2016–2019). As a result, the department recommends this stock be designated as a stock of management concern.

Stikine River king salmon:

The current biological escapement goal range of 14,000 to 28,000 large king salmon (primarily age-1.3 fish and older) was established for the Stikine River in 2000, based on a stock-recruit analysis by Bernard et al. (2000). The Stikine River king salmon escapement goal has not been achieved for 5 consecutive years (Figure 5).

Stock Assessment: The Stikine River is a transboundary glacial system that supports an outside-rearing stock of king salmon. The Stikine River originates in British Columbia and flows into central Southeast Alaska near the towns of Petersburg and Wrangell. Stikine River king salmon have been coded-wire-tagged since 2000 to estimate smolt and adult production and harvest rates. Escapements were evaluated through survey counts conducted on the Little Tahltan River, a tributary in the upper Stikine River drainage, from 1975 to 1984, and weir counts from 1985 to present. Since 1996, mark-recapture studies have been conducted to estimate total Stikine River escapement; these studies indicate the Little Tahltan River weir counts are quite variable in comparison to the total Stikine River escapement, and represent 3% to 33% of the total annual escapement. The Stikine River stock, like other king salmon stocks in the region, has recently experienced a decline in productivity.

Beginning in 2005, directed commercial and liberalized sport fisheries for king salmon were implemented in marine waters in District 108 near Petersburg and Wrangell and inriver in Canada during years of surplus king salmon production to the Stikine River. Directed commercial and liberalized sport fisheries were implemented between 2005 and 2009, and limited directed fisheries occurred in 2011, 2012, and 2015. In years of directed king salmon fishing, total harvest rates on Stikine River king salmon ranged between 50% and 70%. In other years, harvest rates averaged about 20%. Most harvest occurs in the late winter and spring commercial troll fisheries, commercial drift gillnet and sport fisheries in District 108 and in Canadian inriver gillnet and First Nations fisheries. Due to conservation concerns, fisheries known to intercept Stikine River king salmon were restricted in 2018, 2019, and 2020, and the harvest rate was reduced to 2% each year.

Management Measures: The Stikine River king salmon run spawns entirely in Canada and is managed through provisions of Chapter 1 of the U.S.-Canada Pacific Salmon Treaty. The treaty dictates that both parties shall take actions necessary to ensure that escapement objectives are achieved. Paragraph 4 of Chapter 1 outlines steps to be taken by both countries if the escapement

goal is not achieved in 3 consecutive years. Actions to reduce harvest are outlined in annual, bilateral Pacific Salmon Commission Transboundary Technical Committee management plans developed prior to each fishing season and include restrictions in Canadian and Alaskan commercial, sport, and subsistence fisheries. Annual management plans are predicated on preseason forecasts of run abundance and adjusted inseason to determine bilaterally agreed upon allowable catches. Restrictions were taken inseason in 2016 and 2017 due to inseason projections indicating escapement would be less than the escapement goal. From 2018 to 2020, Stikine River king salmon runs were projected to be less than the escapement goal and additional restrictions were taken preseason. Restrictions in Alaska fisheries have included delaying the start of the drift gillnet fishery by 1 to 2 weeks, area and mesh restrictions in the drift gillnet fishery, non-retention of king salmon in the sport and troll fisheries through mid-July, and closure of the subsistence fishery until June 21. Restrictions in Canadian fisheries have included delaying the start of the commercial fishery, non-retention in the commercial fishery, and a voluntary reduction in the First Nation's food fishery harvest. Although Canadian managers did not anticipate directed fishing on king salmon in Canadian inriver fisheries, the intent was to manage those fisheries inseason based on terminal run size projections (thus, directed harvest could be warranted if projections allowed). Finally, the test fishery operated as a recapture event for the stock assessment project was not operated from 2017 through 2020 (TTC 2018, 2019a, 2020).

Stock of Concern Recommendation: Escapements of Stikine River king salmon were below the escapement goal range for 5 consecutive years since 2016. As a result, the department recommends this stock be designated as a stock of management concern. However, the department and the board have previously considered but not designated underperforming transboundary river stocks as stocks of concern, because they spawn entirely in Canada and are managed under stipulations of the Pacific Salmon Treaty. The department will continue to manage the Stikine River king salmon run in accordance with the treaty and as required by the *United States-Canada Salmon Management Plan* (5 AAC 33.361).

Andrew Creek king salmon:

The current biological escapement goal range of 650 to 1,500 large king salmon (primarily age-1.3 fish and older) was established for Andrew Creek in 1998, based on stock-recruit analysis (Clark et al. 1998). The Andrew Creek king salmon escapement goal has been achieved in only 1 of the past 5 years since 2016 (Figure 6).

Stock Assessment: Andrew Creek is a clearwater tributary of the lower Stikine River, located on the Alaska mainland near Petersburg and Wrangell. The Andrew Creek king salmon run is a mostly inside-rearing stock. Harvests of immature and mature Andrew Creek fish occur primarily in Southeast Alaska and to a small extent in northern British Columbia fisheries, based on coded-wire tag recoveries of king salmon from Southeast Alaska hatcheries that use Andrew Creek brood stock. Escapement estimates are based on weir counts (1976–1984) and expanded index counts using a combination of helicopter, fixed-wing, and foot surveys (1975 and since 1985). Four years of concurrent weir counts and index surveys were used to develop an expansion factor (1.95) to convert peak index survey counts to estimates of total escapement. The Andrew Creek stock, like other king salmon stocks in the region, has recently experienced a decline in productivity.

Beginning in 2005, directed commercial and liberalized sport fisheries for king salmon were implemented in marine waters in District 108 near Petersburg and Wrangell during years of surplus king salmon production to the Stikine River as described above. These directed fisheries likely

increased harvest rates on Andrew Creek king salmon; however, escapement only fell below goal twice from 2005 through 2015 (628 in 2009 and 587 in 2012).

Management Measures: Management measures outlined in annual, bilateral Pacific Salmon Commission management plans (e.g., TTC 2018, 2019a, 2020) to reduce harvest on Stikine River king salmon have also reduced harvest on Andrew Creek king salmon and will continue to do so.

Stock of Concern Recommendation: Escapements of Andrew Creek king salmon were below the escapement goal range in 4 of the past 5 years from 2016 to 2020. As a result, the department recommends this stock be designated as a stock of management concern.

Taku River king salmon:

The current biological escapement goal range of 19,000 to 36,000 large king salmon (primarily age-1.3 fish and older) was established for the Taku River in 2009, based on a stock-recruit analysis by McPherson et al. (2010). The Taku River king salmon escapement goal has not been achieved in the 5 previous years since 2016 (Figure 7).

Stock Assessment: The Taku River is a transboundary glacial system that supports an outside-rearing stock of king salmon. The Taku River originates in British Columbia and drains over 17,000 square kilometers before its terminus at Taku Inlet, approximately 40 km northeast of Juneau. Wild smolt were coded-wire-tagged from 1976 to 1981 and from 1993 to present. Total escapement was estimated from mark-recapture studies conducted 1989–1990, 1995–1998, 2000–2012, and 2014–2019. In all other years, escapements were estimated from expanded helicopter survey index counts. Concurrent mark-recapture estimates and index surveys were used to develop an expansion factor (5.2) to convert peak index survey counts to estimates of total escapement. The Taku River stock, like other king salmon stocks in the region, has recently experienced a decline in productivity.

Starting in 2005, directed commercial and liberalized sport fisheries for king salmon were implemented in marine waters in District 111 (near Juneau) and inriver in Canada during years of surplus king salmon production to the Taku River. In years of directed fishing, total harvest rates averaged about 40%. In other years, harvest rates averaged about 20%, and most harvest occurred in the late winter and spring commercial troll fisheries (mid-March through June), commercial drift gillnet and sport fisheries in District 111, and in Canadian inriver gillnet and Aboriginal fisheries. Due to conservation concerns, fisheries known to intercept Taku River king salmon were restricted in 2018 and 2019 and the harvest rate was reduced to 1% and 3%, respectively.

Management Measures: The Taku River king salmon run spawns entirely in Canada and is managed through provisions of Chapter 1 of the Pacific Salmon Treaty. The treaty dictates that both parties shall take actions necessary to ensure that escapement objectives are achieved. Paragraph 4 of Chapter 1 outlines steps to be taken by both countries if the escapement goal is not achieved in 3 consecutive years. Actions to reduce harvest are outlined in annual, bilateral Pacific Salmon Commission Transboundary Technical Committee management plans developed prior to each fishing season and include restrictions in Canadian and Alaskan commercial, sport, and personal use fisheries (e.g., TTC 2018, 2019a, 2020). Annual management plans are predicated on preseason forecasts of run abundance and adjusted inseason to determine bilaterally agreed upon allowable catches. Restrictions in Alaska fisheries have included area, time, and mesh restrictions in the drift gillnet fishery, night closures in the drift gillnet fishery, non-retention of king salmon in the sport fishery through the end of June, non-retention of king salmon in troll fisheries through

mid-July, and delayed openings of the personal use fishery by up to two weeks. Restrictions in the Canadian fisheries have included: delayed start of the commercial fishery by up to two weeks, non-retention and mesh size restriction in the commercial fishery, no recreational fishing, and a voluntary reduction in the First Nation's food fishery harvest. Although Canadian managers did not anticipate directed fishing on king salmon in Canadian inriver fisheries, the intent was to manage those fisheries inseason based on terminal run size projections (thus, directed harvest could be warranted if projections allowed). The test fishery operated as a recapture event for the stock assessment project was not operated from 2016 through 2020. In addition, management measures outlined in the Chilkat River and King Salmon River action plan (Lum and Fair 2018a) to reduce harvest of king salmon in the commercial and sport fisheries in District 111 serve to also reduce harvest on Taku River king salmon and will continue to do so.

Stock of Concern Recommendation: Escapements of Taku River king salmon were below the escapement goal range for 5 consecutive years since 2016. As a result, the department recommends this stock be designated as a stock of management concern. However, the department and the board have previously considered but not designated underperforming transboundary river stocks as stocks of concern, because they spawn entirely in Canada and are managed under stipulations of the Pacific Salmon Treaty. The department will continue to manage the Taku River king salmon run in accordance with the treaty and as required by the *United States-Canada Salmon Management Plan* (5 AAC 33.361).

SOCKEYE SALMON

McDonald Lake sockeye salmon:

In 2018, the board designated the McDonald Lake sockeye salmon run as a stock of management concern. Stock assessment information and management measures were summarized in an action plan developed at the 2018 board meeting (Walker et al. 2019). Estimated commercial harvest rates on McDonald Lake sockeye salmon averaged 24% during the 3 years 2017–2019, when management actions were implemented, compared to an average harvest rate of 53% during the preceding 3 years. The McDonald Lake sockeye salmon escapement has not been achieved 5 consecutive years (Figure 8).

Klukshu River sockeye salmon:

The current biological escapement goal range of 7,500 to 11,000 sockeye salmon was established for the Klukshu River in 2013 based on run-reconstruction and stock-recruit analysis (Eggers and Bernard 2011). The Klukshu River sockeye salmon escapement goal has only been achieved in 1 of the past 5 years since 2016 (Figure 9; as of 22 September 2020, the Klukshu River weir sockeye salmon count was 4,234 fish, and the escapement is unlikely to meet goal).

Stock Assessment: The Klukshu River is a Canadian tributary of the Alsek River, which flows into the Gulf of Alaska approximately 80 km southeast of Yakutat. Klukshu River sockeye salmon are harvested primarily in U.S. commercial set gillnet fisheries in Dry Bay and in Canadian inriver recreational and traditional Aboriginal fisheries. Escapements to the Klukshu River have been enumerated annually since 1976 at an adult counting weir just upstream of the confluence of the Klukshu and Tatshenshini rivers. The Klukshu River weir is currently the principle tool for monitoring sockeye salmon stocks in the Alsek River. Note that although 7,584 sockeye salmon were counted at the Klukshu River weir in 2016, Canadian inriver harvest reduced the escapement

to 7,391 sockeye salmon, which was below the lower bound of the biological escapement goal range of 7,500 to 11,000 sockeye salmon (TTC 2019b).

Management Measures: Like other transboundary river stocks, the Klukshu River sockeye salmon run is managed through provisions of the Pacific Salmon Treaty. The treaty dictates that both parties shall take actions necessary to ensure that escapement objectives are achieved. Paragraph 4 of Chapter 1 outlines steps to be taken by both countries if the escapement goal is not achieved in 3 consecutive years. Actions to reduce harvest are outlined in annual, bilateral Pacific Salmon Commission Transboundary Technical Committee management plans developed prior to each fishing season and include restrictions in Canadian and Alaskan commercial, sport, and subsistence fisheries (e.g., TTC 2018, 2019a, 2020). Annual management plans are predicated on preseason forecasts of run abundance and adjusted inseason to determine bilaterally agreed upon allowable catches. Inseason abundance is gauged by weekly sockeye salmon CPUE in the Dry Bay set net fishery and escapement is determined by weir counts on the Klukshu River. The fishery is limited to 24 hours if desired CPUE levels are not achieved. In addition, the sockeye fishery has been limited by king salmon conservation measures which have included delaying the start of the sockeye fishery and limiting fishing time in recent years.

Stock of Concern Recommendation: Escapements of Klukshu River sockeye salmon were below the escapement goal range in 4 of 5 years from 2016 to 2020 (the final 2020 escapement is pending but unlikely to meet goal). As a result, the department recommends this stock be designated as a stock of management concern. However, the department and the board have previously considered but not designated underperforming transboundary river stocks as stocks of concern, because they spawn entirely in Canada and are managed under stipulations of the Pacific Salmon Treaty. The department will continue to manage the Klukshu River sockeye salmon run in accordance with the treaty and as required by the *United States-Canada Salmon Management Plan* (5 AAC 33.361).

PINK SALMON

Northern Southeast Inside Subregion Pink Salmon:

The current biological escapement goal range of 2.5 to 6.0 million index spawners was established for Northern Southeast Inside (NSEI) Subregion pink salmon in 2009 based on a yield analysis (Heinl et al. 2008). The NSEI Subregion pink salmon escapement goal has been achieved in 1 of the past 5 years since 2016 (Figure 10; the 2020 escapement index calculation is pending but unlikely to meet goal).

Stock Assessment: The vast majority (88%) of the NSEI pink salmon harvest occurs in commercial purse seine fisheries, which are managed inseason through extensive monitoring of harvests, fishing effort, and movement of pink salmon into spawning streams. Nearly all of the pink salmon harvested in Southeast Alaska are of wild origin; hatchery-produced pink salmon have contributed an average of only 1% of the annual common property harvest over the last decade (Piston and Heinl in press).

Pink salmon production in Southeast Alaska is dispersed across more than 2,500 coastal streams. The only feasible method of assessing escapements is through aerial surveys, and annual peak aerial survey counts form the basis of pink salmon escapement indices that have been maintained and updated since statehood. Escapement goals have been established for aggregates of pink salmon indices in 3 broad subregions: Southern Southeast Subregion, Northern Southeast Inside Subregion, and Northern Southeast Outside Subregion. (Pink salmon are largely harvested in

mixed stock fisheries; therefore, it is not possible to allocate harvests of pink salmon at finer scale than these broad subregions.) Subregion escapement goals are further divided into management targets for smaller “stock groups”, collections of index streams that, because of their close proximity to one another, support pink salmon runs with similar migration routes and run timing and, presumably, similar productivity and exploitation rates. Stock group management targets are not formal escapement goals (as defined in the Policy for Statewide Salmon Escapement Goals 5 AAC 39.223) but are useful for assessing abundance and ensuring escapements are well-distributed across the region. The NSEI Subregion comprises 295 pink salmon index streams in 21 stock groups located on inside waters of Southeast Alaska north of Sumner Strait in districts 9, 10, 11, 12, 13 (Peril Straits and Hoonah Sound), 14, and 15.

Southeast Alaska pink salmon harvest and escapement indices have not exhibited persistent trends in odd- or even-year dominance over most of the historical data set since 1960, and the harvest series dating back to the early 1900s shows both odd- and even-year brood lines generally responding to changing environmental regimes in a similar way (Piston and Heinl in press). For simplicity, both brood lines were combined in establishing Southeast Alaska pink salmon escapement goals. Examination of the distribution of pink salmon abundance at a finer scale within the region since 1960 reveals some instances of cyclic dominance; for example, NSEI Subregion pink salmon harvest exhibited no clear dominance from 1960 to 1983, moderate odd-year dominance from 1984 to 1991, no clear dominance from 1992 to 2006, and extreme odd-year dominance from 2007 to 2018 that ended with a poor pink salmon run in 2019 (Piston and Heinl in press).

Management Measures: The department implemented severe restrictions on the traditional purse seine fishery in the NSEI Subregion in response to poor pink salmon runs in 2008, 2012, 2014, 2016, 2018, 2019, and 2020. Total purse seine opening hours in traditional fisheries was reduced by approximately 85% compared to odd years between 2007 and 2017, along with concurrent major reductions in the amount of area opened. Large swaths of the NSEI Subregion, including nearly all of districts 11, 12, 13 (Peril Strait), and 14, were typically not opened at all, and purse seine fisheries conducted annually at a small area at Point Augusta (statistical area 112-14) and in some years at the fringes of the subregion, such as the Kuiu Island shore (District 9) and parts of District 10, accounted for 97% of the subregion purse seine harvest in those years. As a result, commercial pink salmon harvests were greatly reduced in years when the escapement goal was not met (Figure 11).

Stock of Concern Recommendation: Escapement indices of NSEI Subregion pink salmon were below the escapement goal range in 4 of 5 years from 2016 to 2020. The 2020 escapement index calculation is pending; escapements in 2020 look to be much improved over the parent year (2018), but the final escapement index is also likely to be just below the escapement goal. Under the most common guideline for “chronic inability” to meet escapement goals in the sustainable salmon fishery policy, this stock would qualify for designation as a stock of concern. Based on this guideline, the department recommends that NSEI Subregion pink salmon be designated as a stock of management concern. However, in the past, the department has not recommended pink salmon runs as stocks of concern because the existing guideline does not apply well to pink salmon for the following reasons: 1) the 2-year life cycle leads to genetically separate odd- and even-year brood lines of pink salmon spawning in the same streams but in alternate years and under varying conditions; 2) unlike other salmon species, pink salmon all return at the same age, making survival rates substantially more variable than exhibited by other species that spread risk over multiple age classes; 3) this also enables pink salmon to respond dramatically to changes in the marine

environment, reducing the relationship between the number of spawners and the subsequent adult return; 4) population structure of pink salmon is very shallow compared to other salmon, thus pink salmon stock groups are not genetically well defined as in other salmon; and 5) the short life history and highly variable productivity requires flexible management to respond *inseason* as understanding of abundance improves and allows managers to balance harvest opportunity with escapement.

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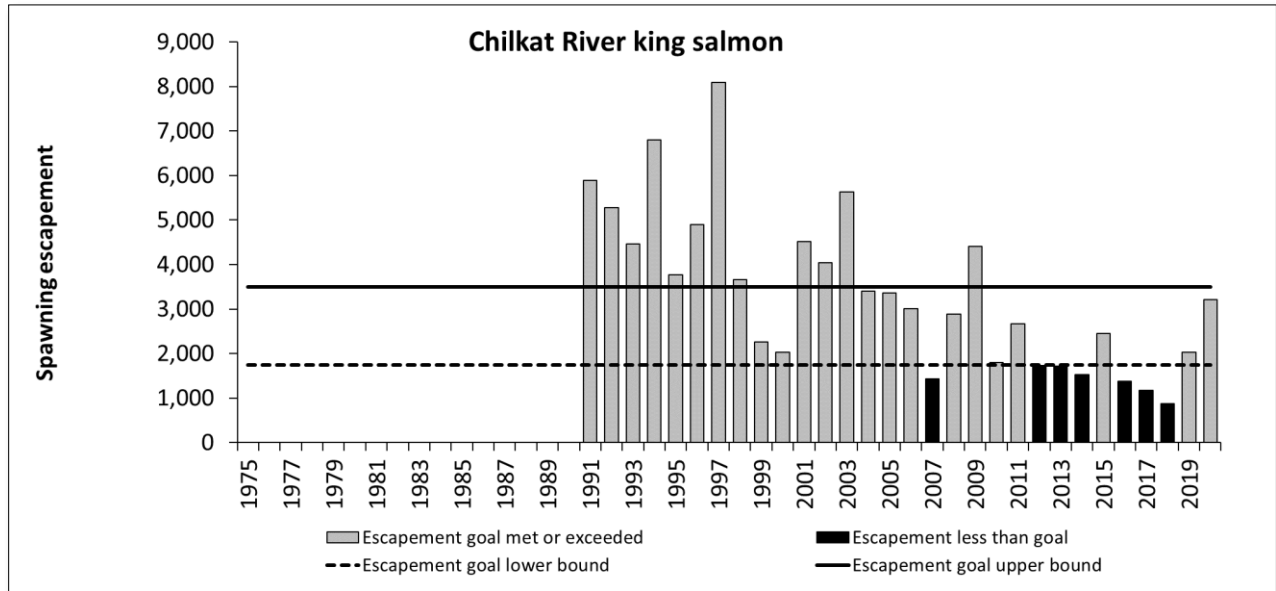


Figure 1.—Chilkat River king salmon escapements, 1991–2020, and the biological escapement goal range of 1,750–3,500 large spawners.

Note: Spawning escapement estimates for 2020 are considered preliminary.

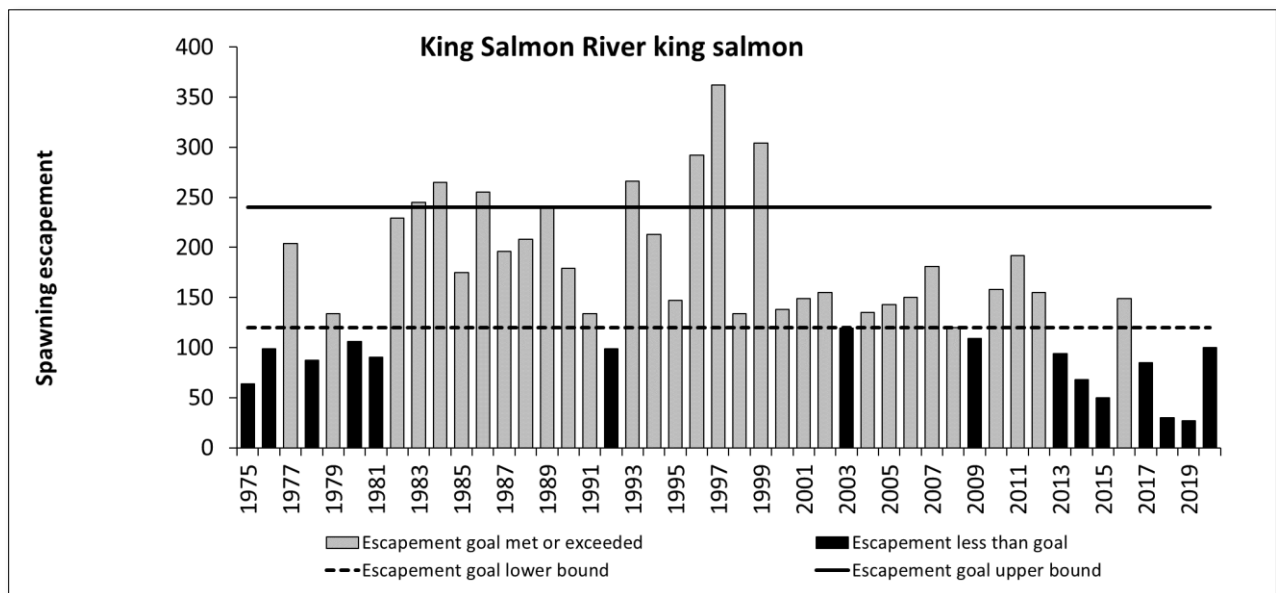


Figure 2.—King Salmon River king salmon escapements, 1975–2020, and the biological escapement goal range of 120–240 large spawners.

Note: Spawning escapement estimates for 2020 are considered preliminary.

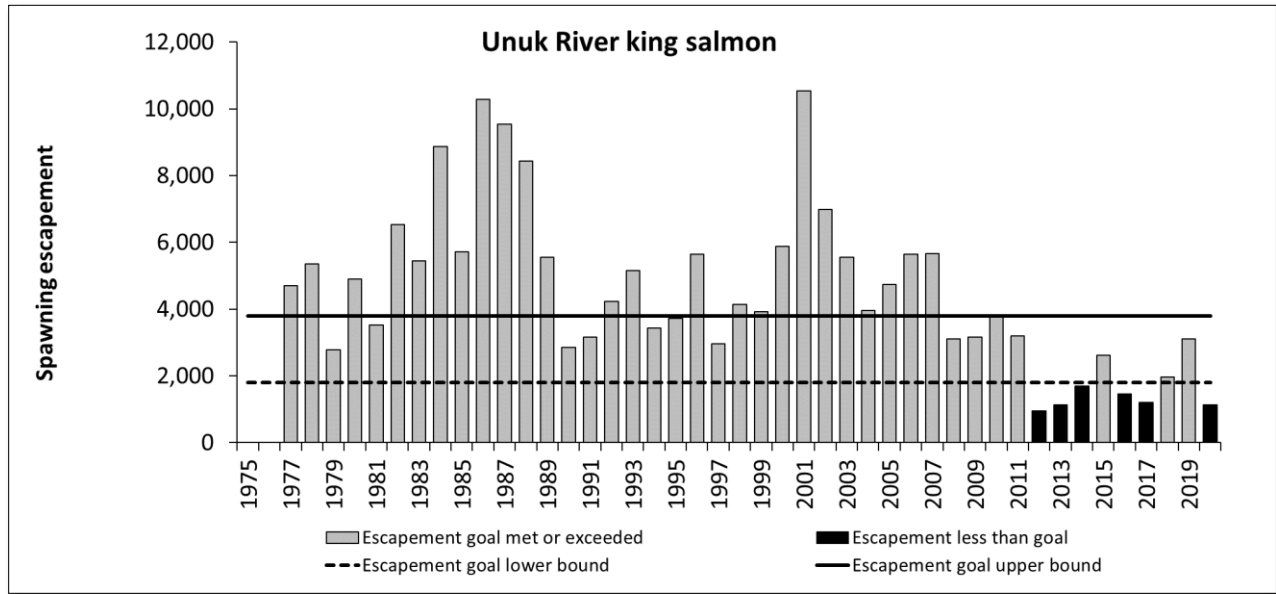


Figure 3.—Unuk River king salmon escapements, 1977–2020, and the biological escapement goal range of 1,800–3,800 large spawners.

Note: Spawning escapement estimates for 2020 are considered preliminary.

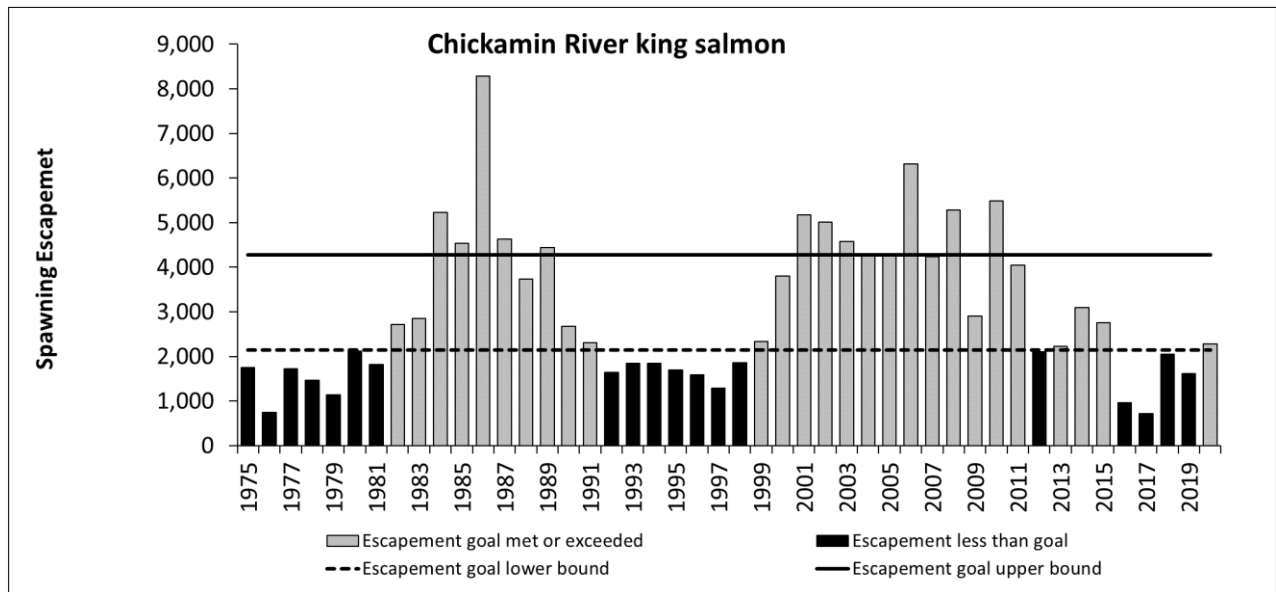


Figure 4.—Chickamin River king salmon escapements, 1975–2020, and the biological escapement goal range of 2,140–4,275 large spawners.

Note: Spawning escapement estimates for 2020 are considered preliminary.

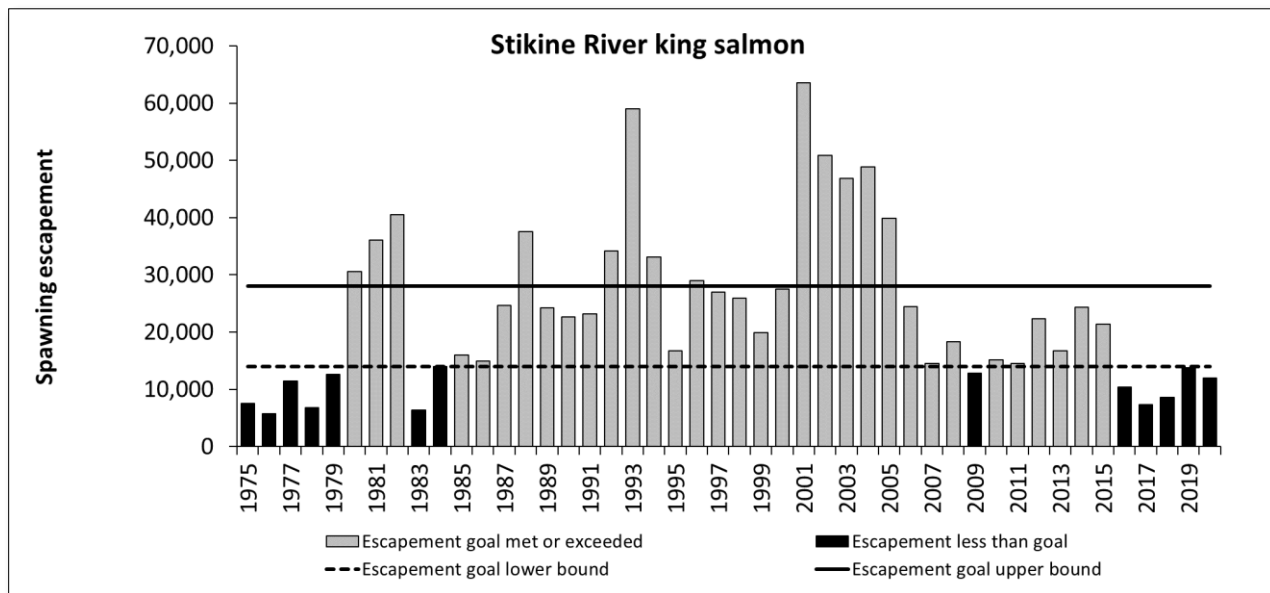


Figure 5.—Stikine River king salmon escapements, 1975–2020, and the biological escapement goal range of 14,000–28,000 large spawners.

Note: Spawning escapement estimates for 2020 are considered preliminary.

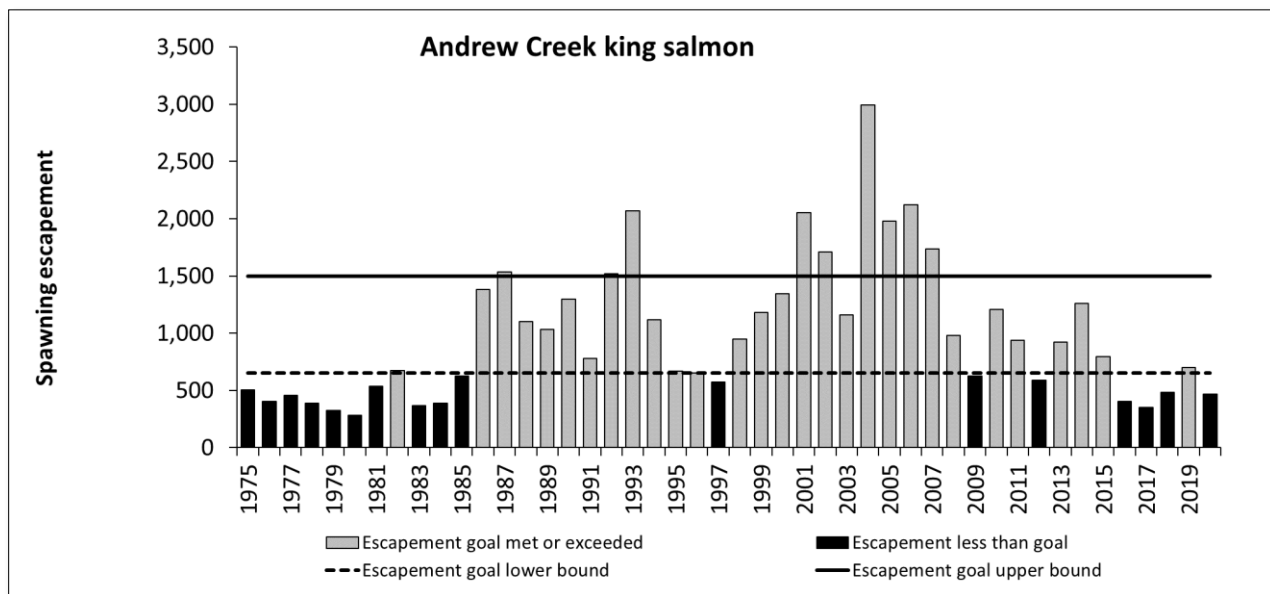


Figure 6.—Andrew Creek king salmon escapements, 1975–2020, and the biological escapement goal range of 650–1,500 large spawners.

Note: Spawning escapement estimates for 2020 are considered preliminary.

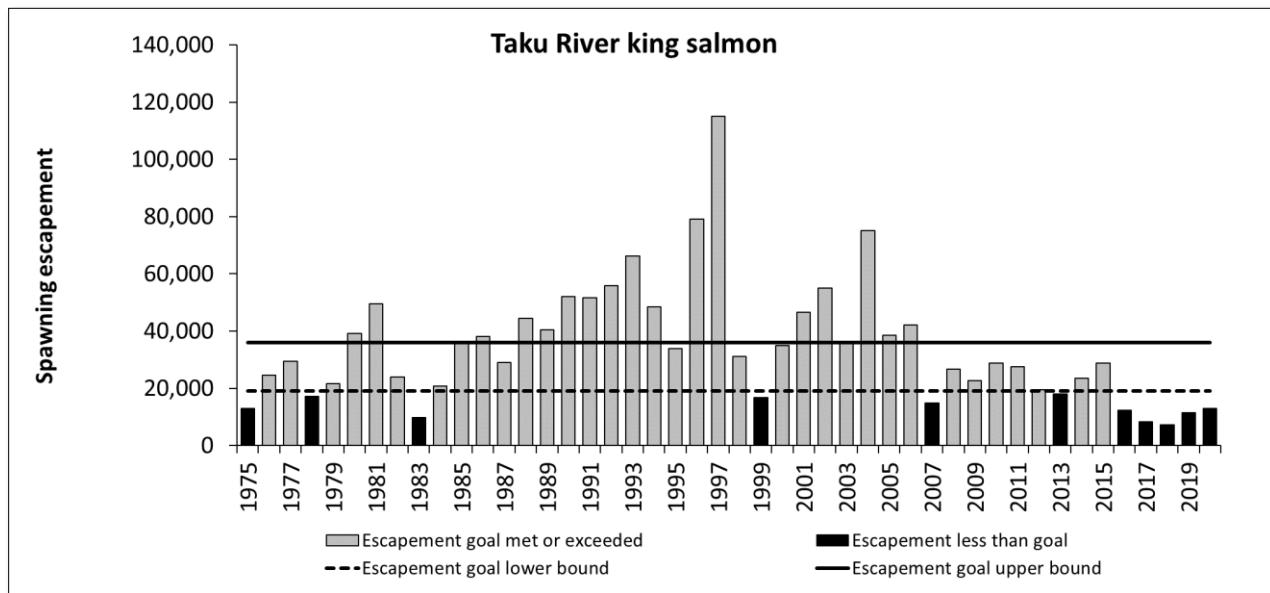


Figure 7.—Taku River king salmon escapements, 1975–2020, and the biological escapement goal range of 19,000–36,000 large spawners.

Note: Spawning escapement estimates for 2020 are considered preliminary.

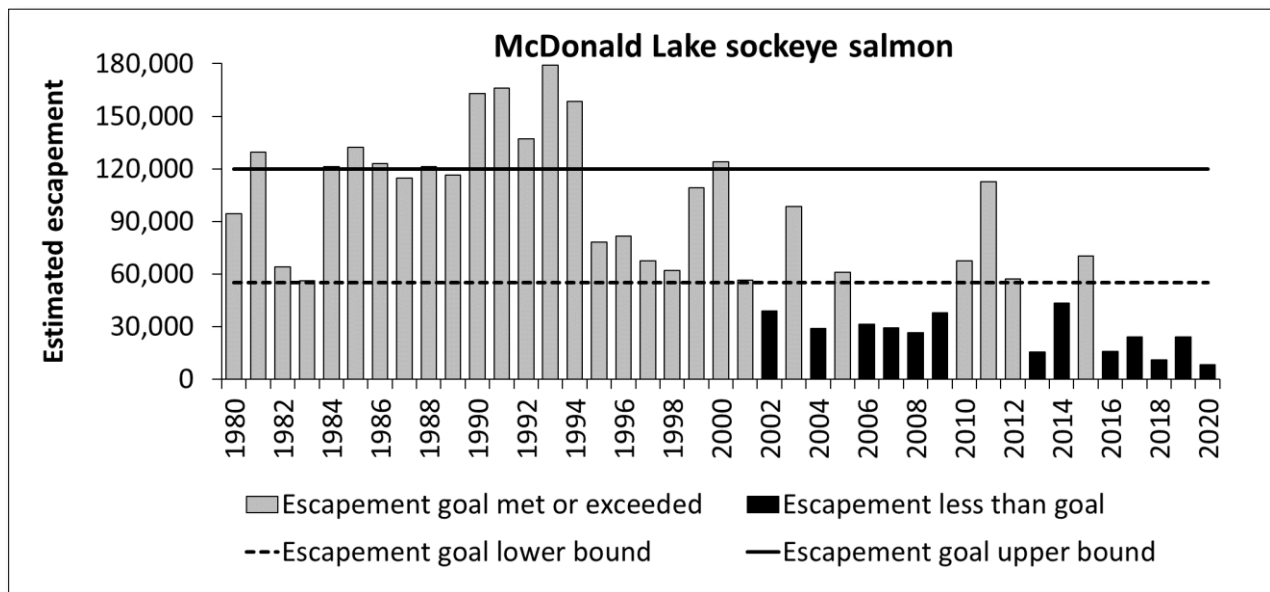


Figure 8.—McDonald Lake sockeye salmon escapements, 1980–2020, and the sustainable escapement goal range of 55,000–120,000 spawners.

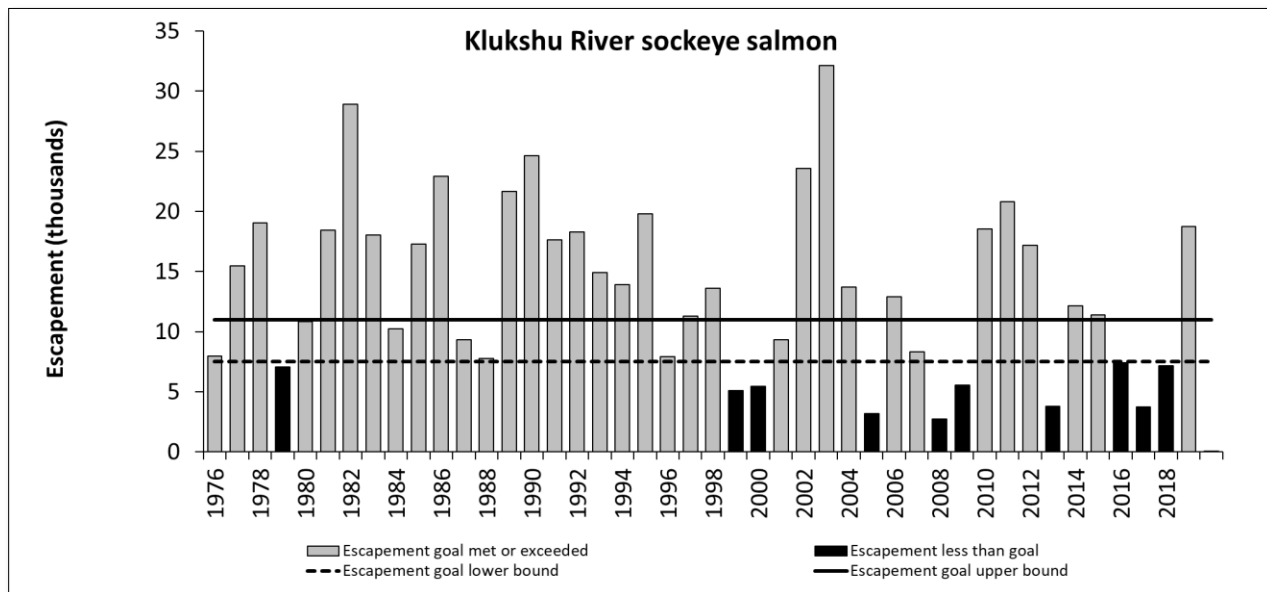


Figure 9.—Klukshu River sockeye salmon escapements, 1976–2020, and the biological escapement goal range of 7,500–1,100 spawners.

Note: As of 22 September 2020, the Klukshu River weir sockeye salmon count was 4,234 fish, and the escapement is unlikely to meet goal.

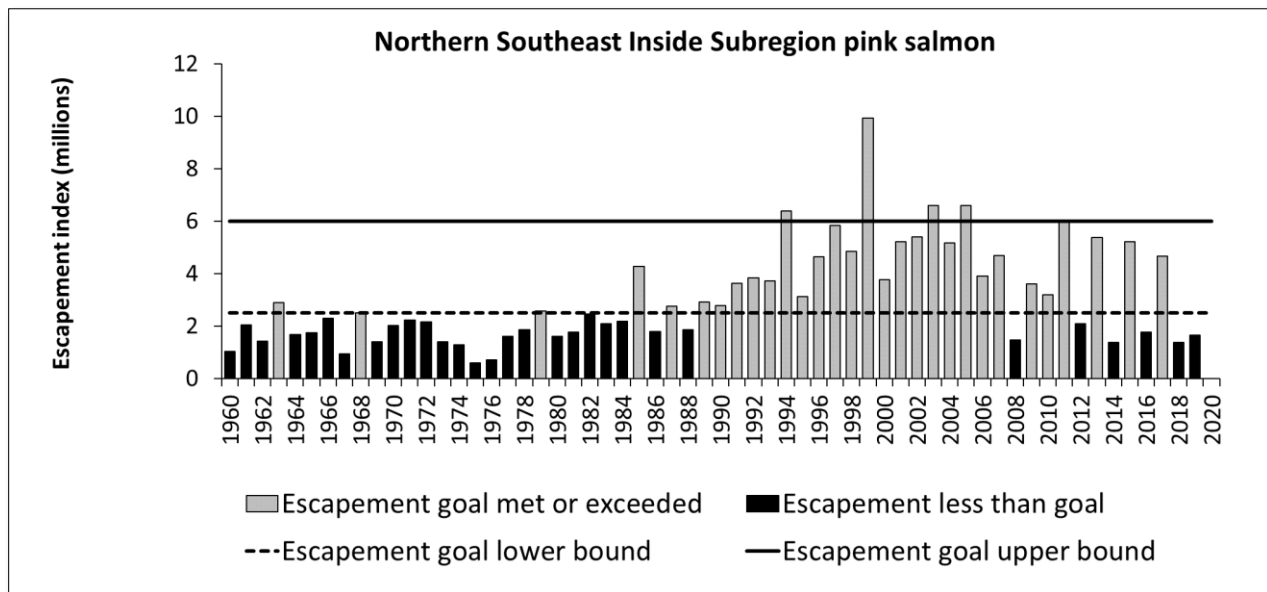


Figure 10.—Northern Southeast Inside Subregion pink salmon escapement index, 1960–2020, and biological escapement goal range of 2.5–6.0 million index fish.

Note: The 2020 escapement index calculation is pending but is unlikely to meet goal.

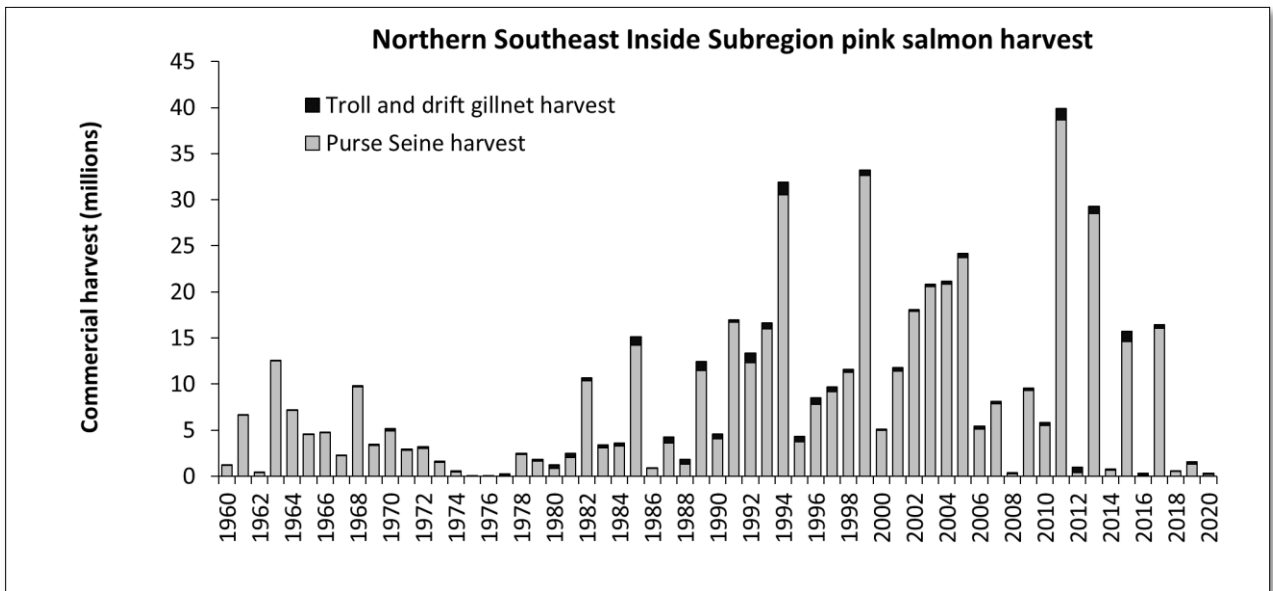


Figure 11.—Commercial common property harvest of Northern Southeast Inside Subregion pink salmon, 1960–2020.