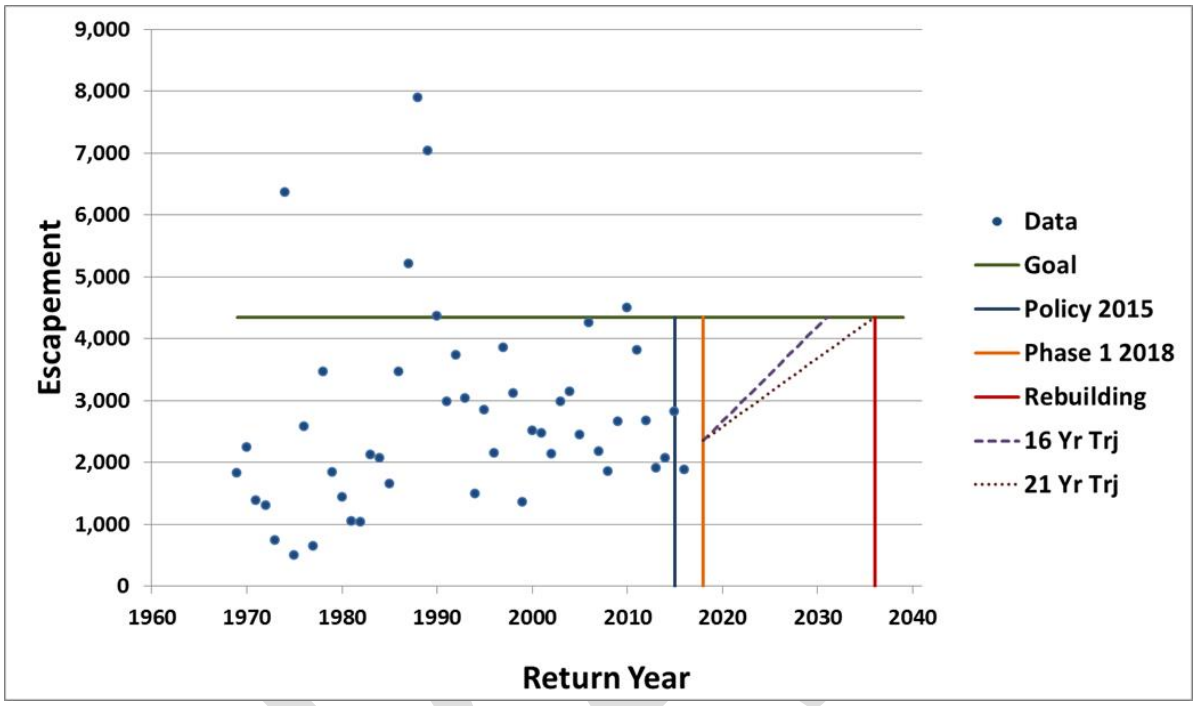
Policy C-3622 was developed to enhance conservation of natural origin salmon in Willapa Bay while maintaining or enhancing the economic well-being and stability of the commercial and recreational fishing industries. The policy set out a framework to rebuild natural origin salmon populations over a period of 20-25 years. Successful implementation of the policy would prevent ESA listing and/or reduce the likelihood of post season harvest exceeding preseason projections.



Two key provisions included were intended to maintain the rebuilding trajectory.

General Guiding Principle: 8) If it becomes apparent that a scheduled fishery will exceed the aggregated pre-season natural-origin Chinook mortality (impact) expectation, the Department shall implement in-season management actions in an effort to avoid cumulative mortalities of natural-origin Chinook in excess of the aggregated pre-season projection

Fall Chinook: 7) Maintaining Rebuilding Trajectory. If the **postseason estimate** (as presented at the annual Commission review) of aggregated natural-origin Chinook salmon mortality exceeds the **preseason projection**, the Department staff shall make a recommendation to the Commission regarding an adjustment to the allowable impacts for the subsequent year.

In interpreting this provision, it is helpful to consider the context in which it was developed. Each year during preseason planning a fishing season was established for Willapa Bay that resulted in an expected mortality of natural-origin Chinook salmon consistent with achieving the management objective. Prior to Policy C-3622, commercial fisheries management lacked the adaptive management tools needed to make in-season adjustments necessary to achieve management objectives. Unfortunately, this often resulted in a greater number of natural-origin mortalities than were projected preseason. This policy addressed this concern by including the specific language in paragraph 7.

An important point is that the policy identifies the performance metric as salmon mortality, not a postseason estimate of the harvest rate. Although a harvest rate performance metric was considered, the final Commission policy identified the performance metrics as natural-origin salmon mortality for at least three reasons:

1) The salmon mortality performance metric was most closely linked to the concerns regarding to the addition of commercial fishing days, and associated mortalities, during inseason management.
2) The salmon mortality performance metric was directly linked to what the Department manages for during the season – natural-origin impacts.
3) The postseason estimate of the harvest rate can be affected by multiple factors, including the actual versus predicted runsize of natural-origin fall Chinook salmon, and unanticipated/unobserved losses to factors such as pre-spawning mortality. However, over the long run, if the Department controls the impacts during the season, the rebuilding trajectory would be maintained despite imprecision in forecasts.

The information available at the annual Commission review indicated in neither year was there an adjustment necessary (Table 1).

Table 1. Natural origin fall chinook impacts as presented at the annual Commission review

	Pre-season projection		**Post-season impacts**	**Policy Guidance #7**
2015 with estimated recreational impacts	735	>	669	No adjustment necessary for 2016
2016 with estimated recreational impacts	651	>	535	No adjustment necessary for 2017

Once information for 2015 became finalized, it became clear that the total impacts to natural origin Chinook (1,116) exceeded the preseason projection of 735 (Table 2). However, in terms of escapement, the actual escapement was 8.6% higher than forecasted.

Table 2. Natural origin fall chinook realized harvest impacts for 2015.

	Pre-season forecast and planned harvest	Actual performance
Commercial	581	515
Recreational (SW + FW)	154	601
Total	735	1,116
Escapement	3,100	3,366

Based on these results we will be making an upward adjustment to the recreational fishery encounter rates to improve the 2017 harvest planning model.