

Salmon Amendment Committee Report

Amendment 16 to the Pacific Coast Salmon Fishery
Management Plan: Annual Catch Limits and
Accountability Measures

Report Content

- The SAC Report Contains Proposed Alternatives for Consideration by the Council. The Alternatives are Organized Around These Topics:
 - Classifying Stocks in the FMP
 - Applying the MSA International Exception to Specifying ABC, ACLs, and AMs
 - Establishing Objective and Measurable Status Determination Criteria (SDC)
 - Establishing a Framework for Specification of OFL/ABC/ACL
 - Determining Appropriate Accountability Measures
 - Establishing *De Minimis* Fishing Provisions

Status of Amendment Process

- The SAC Made Significant Progress, but Not as Much as Desired
 - Final Action In November can be Achieved
- SAC Believes ACL Requirements can be Addressed Without Substantive Changes in Preseason Planning Process or NOF/SOF Fishery Structure
- There Will be Significant Changes in SDC and Reporting on Overfishing, Overfished, Approaching Overfished, etc.
- SAC Proposes Stock Classification, Designating Ecosystem Components, and Application of the International Exception
 - Will Simplify Description of Contingent Alternatives
 - Seek Council Guidance, Direction, Concurrence with Recommendations
- Most Difficult Remaining Issue Relates to OFL/ABC/ACL Framework
- *De Minimis* Fishing Problem is Limited Largely to Sacramento River Fall Chinook

Classifying Stocks in the FMP

- In the Fishery
 - Target Stocks – Stocks That Support the Fishery
 - Non-Target Stocks – Stocks to be Avoided (ESA Stocks)
- Not In The Fishery
 - Ecosystem Components – Low Vulnerability
- Stock Complexes
 - Stock Groups with Indicator Stocks for Management Purposes
- Classification Affects Application of SDC, ACL/AM Provisions
- International Exception
 - Similar to Classification – Affects ACL/AM Application

Status Quo Classification

- “In the Fishery” – 69 stocks in FMP
(Tables 1, 2, and 3, Pg 6)
 - Coho Stocks (22) – Hatchery, ESA, Washington Coastal, Puget Sound, Canadian
 - Chinook (45) – Hatchery, ESA, Central Valley Fall/Late Fall, Northern California Coast, Southern Oregon Coast, Mid-Northern Oregon Coast, Columbia River Summer and Fall, Washington Coast, Canadian
 - Pink (2) – Puget Sound, Canadian
- Ecosystem Components - None

Classification Summary

- The SAC Recommends Classifying Non-ESA FNM Chinook and Pink Stocks as Ecosystem Components (Tables 5, 6, and 7, Pg 12)
 - Would Not Require SDC or ACLs
- All Stocks Remaining From Current FMP Would be Classified as “In The Fishery”
 - Complexes for ACLs Using KRFC and SRFC as Indicators for S OR/N CA Chinook and Central Valley Fall/Late Fall Chinook
- The SAC Recommends Applying the International Exception to Puget Sound and Washington Coast Coho, Columbia River Summer Chinook, and to Canadian Chinook and Coho Stocks.
 - Would not Require ACLs
 - Would Require SDC, but SDC for Canadian Stocks Would Not be Defined in Council FMP
- SAC Requests Council Take Action to Adopt Recommendations as Preliminary Preferred Alternatives
 - Will Help Facilitate Specification of SDC and ACL Framework

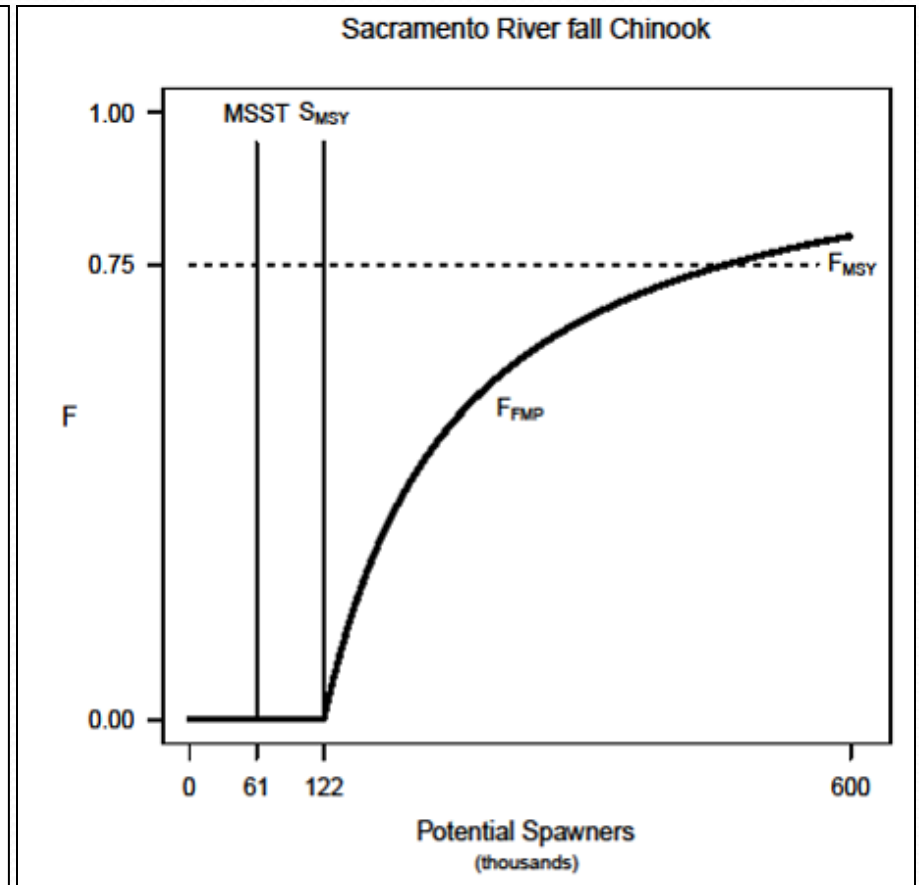
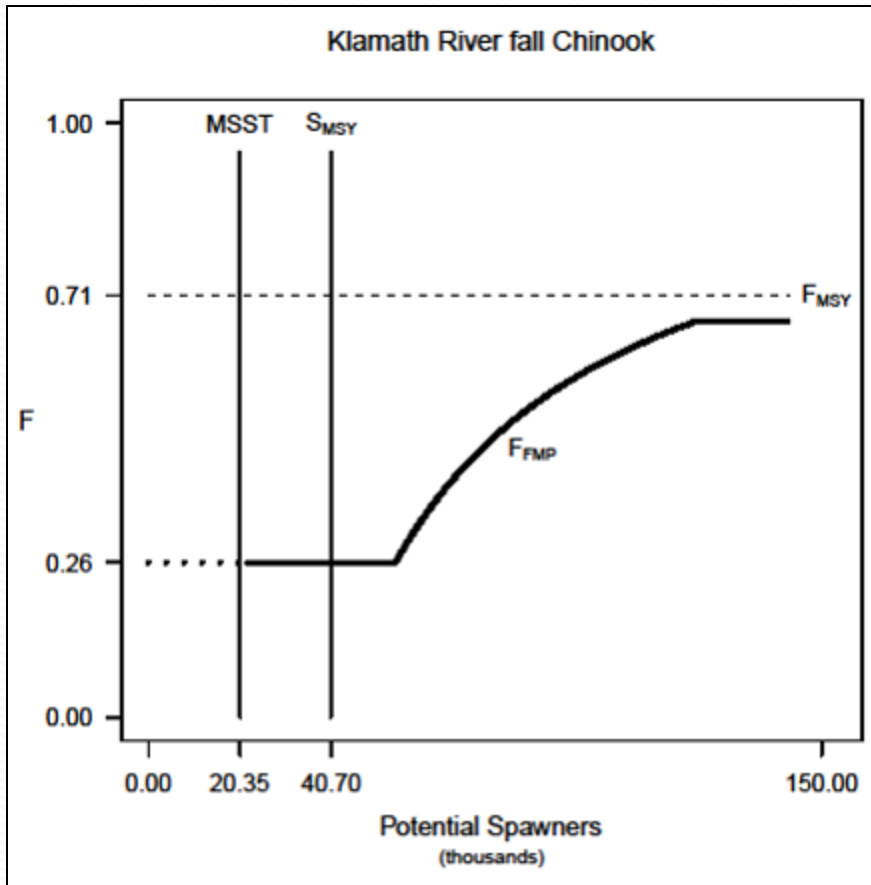
Status Determination Criteria

- Overfishing, Overfished, Approaching Overfished, Rebuilt
- Must be Consistent with MSA, NS1Gs, Objective, Measurable, and Feasible to Implement
- Based on SAC Proposed Classification, SDC Would be Developed for:
 - Sacramento River Fall Chinook
 - Klamath River Fall Chinook
 - South Oregon Coast Chinook
 - Columbia River Summer Chinook
 - Washington Coast Coho
 - Puget Sound Coho
- SDC Remain Undefined for Klamath Spring Chinook, Canadian Chinook and Coho

Single Year Alternative SDC

- Overfishing – MFMT - Exploitation Rate Exceeds F_{MSY}
Exploitation Rate
- Overfished – MSST - Spawning Escapement $< S_{MSY}/2$
- Approaching Overfished – Spawning Escapement
Projected $< S_{MSY}/2$
- Rebuilt – Spawning Escapement $> S_{MSY}$

SDC Examples



Multi-Year Alternative SDC

- Overfishing – MFMT - Exploitation Rate Exceeded F_{MSY}
Exploitation Rate (Same as Single Year)
- Overfished – Recent 3-Year Geometric Mean of Spawning Escapements $< S_{MSY}/2$ (MSST)
- Approaching Overfished – Geometric Mean of Recent 2-Year Spawning Escapements and Projected Spawning Escapement $< S_{MSY}/2$
- Rebuilt – Recent 3-Year Geometric Mean of Spawning Escapements $> S_{MSY}$

SDC Summary

- SAC Recommends Two Alternatives Based on F_{MSY} and $S_{MSY}/2$
 - Single Year and 3-Year Geometric Mean
 - Consistent With MSA, NS1Gs, Objective and Measurable, Implementation is Practical
 - The SAC Requests Council Approval of These Alternatives
- The SAC Requests Guidance on Other Potential Alternatives
 - Other Levels of MSST
 - Other Temporal Scales

OFL/ABC/ACL Framework

- $OFL > ABC \geq ACL$
- Must Account for Mortality in All Fisheries
- ABC Must Account for Scientific Uncertainty in OFL
- Can be Based on Individual Stocks or Stock Complexes
- Based on SAC Proposed Classification and International Exceptions, ACLs Only Applicable to:
 - Sacramento River Fall Chinook - Indicator for Central Valley Fall/Late Fall Chinook
 - Klamath River Fall Chinook – Indicator for Southern Oregon/Northern California Chinook

ACL Framework Features

- OFL is an Annual Estimate of MSY
 - Potential Metrics Include Catch (C), and Spawning Escapement (S)
 - C Based: $C_{OFL} > C_{ABC} = C_{ACL}$
 - $C_{OFL} = F_{MSY} * N_t$
 - S Based: $S_{OFL} < S_{ABC} = S_{ACL}$
 - $S_{OFL} = (1 - F_{MSY}) * N_t$
- OFL > ABC: Accounting For Scientific Uncertainty
 - Tier 1: 5% for Directly Estimated F_{MSY}
 - Tier 2: 10% for Proxy Based F_{MSY} Estimates
- ABC = ACL
- Possible to Have Sector ACL for C Based Framework
 - $ACL > ACL_{PFMC}$
 - $ACL_{PFMC} = ACL_{Commercial} + ACL_{Sport}$

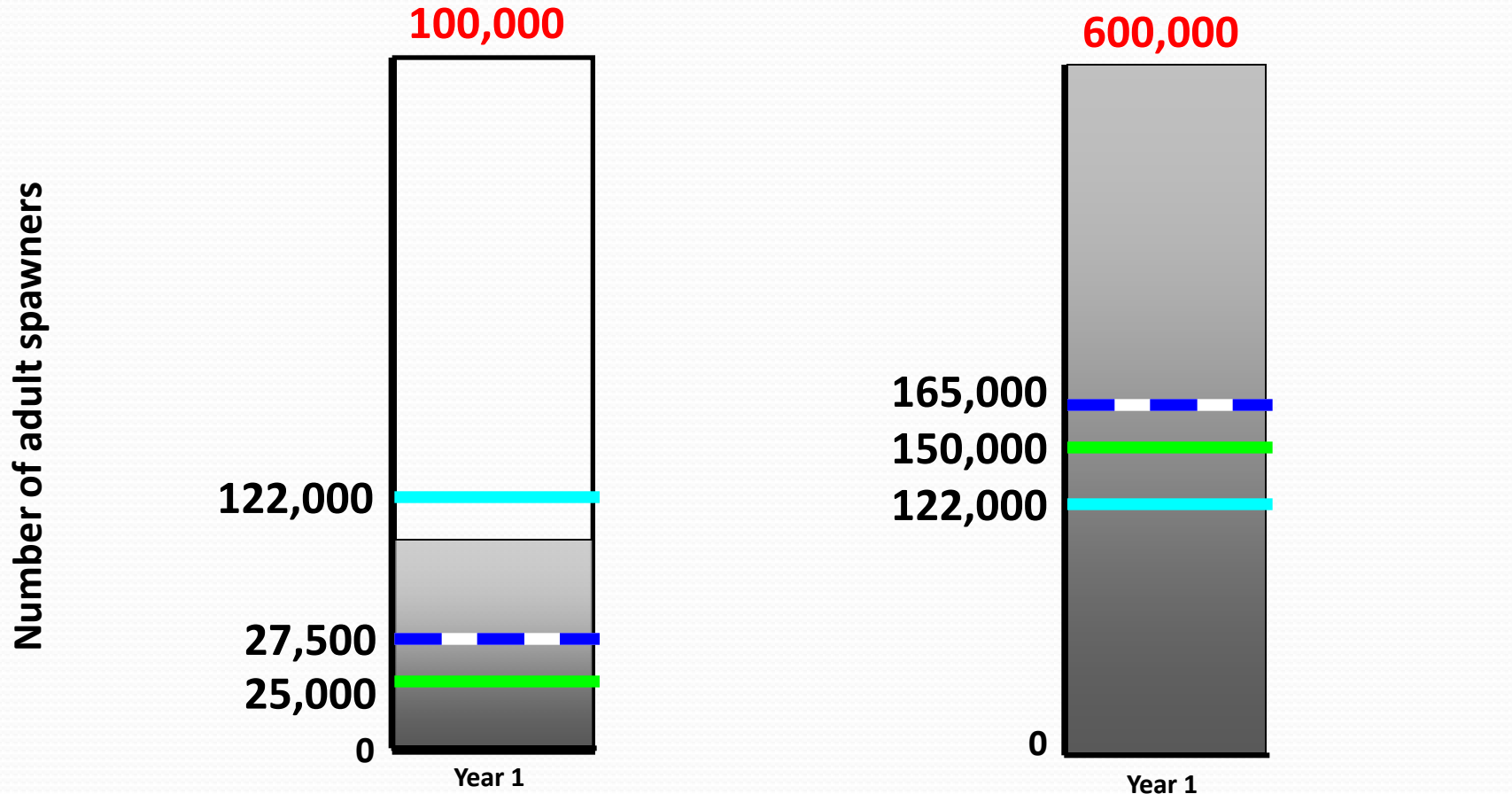
Potential Alternatives

- Status Quo: Undefined (Table 9 Pg 26, Alt 1)
- Individual (Indicator) Stock Based
 - F-Based Considered But Not Allowed (Alt 2)
 - C- and S-Based Currently Considered Viable (Alt 3 and 4)
- Species Level Complexes - None Proposed by SAC
 - Data and Models Used for South Of Falcon Assessments Are Currently Not Suitable for Large Scale Quota Management

C and S Frameworks Utilizing F

- Consistency with MSA and NS1Gs
 - C Based - Catch Based Definitions are Consistent
 - S Based - Escapement Based Definitions Would Require Flexibility and Justification
- Implementation Practicality: Both C and S Based
 - Preseason Estimates Available For Fishery Planning
 - Stock Specific Inseason Catch and Escapement Estimates Currently Unavailable
- Post Season ACL Evaluation: Both C and S Based
 - Estimates of Abundance
 - KRFC: Preliminary in One Year, “Final” in Two Years
 - SRFC: “Final” in One Year

Example: SRFC with a **LOW** and **HIGH** forecast abundance:
100,000 and **600,000** hatchery and natural spawners



 S_{MSY}

 S_{OFL}

 S_{ABC} and S_{ACL}

OFL/ABC/ACL Framework Summary

- SAC Requests Council Approval of Two Alternatives – C Based (Alt 3) and S Based (Alt 4)
 - Based F_{MSY} and Preseason Abundance
 - Uncertainty Based on Tiered Buffers (5% and 10%)
- Alternatives Not Considered Viable
 - F Based (Alt 2)
 - Based on Buffered Conservation Objective
- The SAC Requests Guidance on Other Potential Alternatives
 - Other Tiers for Uncertainty Buffers
 - Other Methods of Accounting for Uncertainty

Accountability Measures

- None Specified, but Many FMP Measures Qualify
 - Inseason – Closure Authority, Quota Monitoring, Gear/Bag/Size/Trip Limits, Reporting Requirements, Conservation Alert Action, etc.
 - Postseason – Annual SAFE Document, Overfishing Concern Assessment, Methodology Review, etc.
- Additional Alternatives May be Considered
 - Annual Catch Targets
 - Others Related to ACL, ACL_{PFMC} , etc.
 - Modify Conservation Alert Action

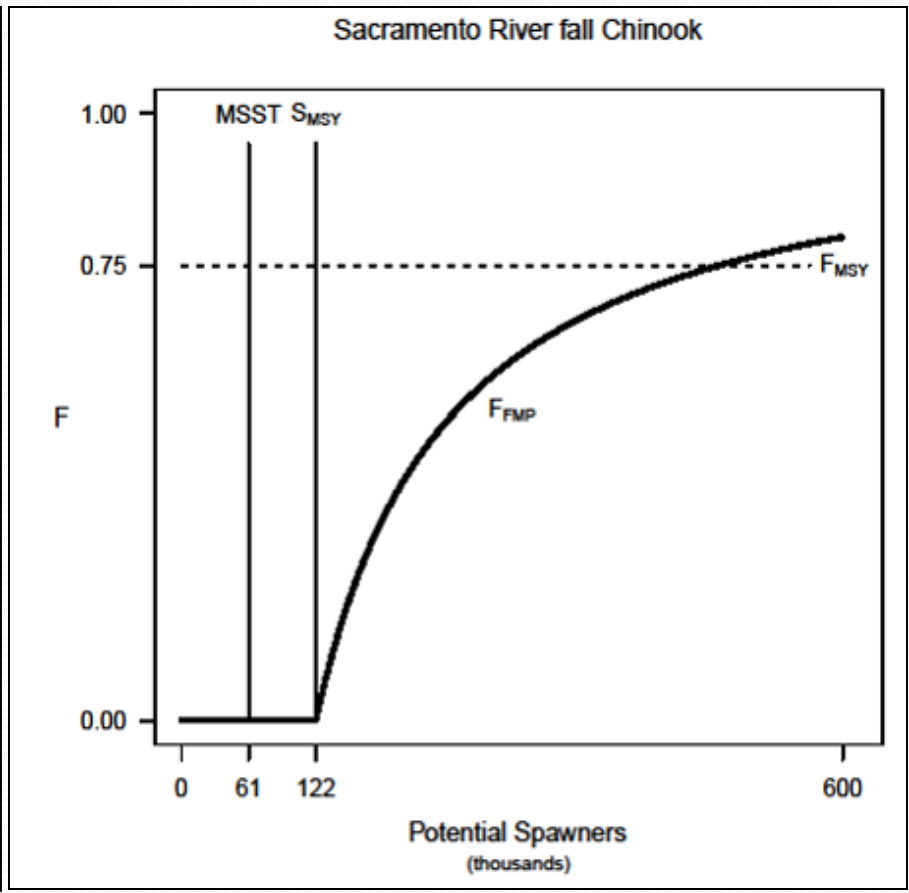
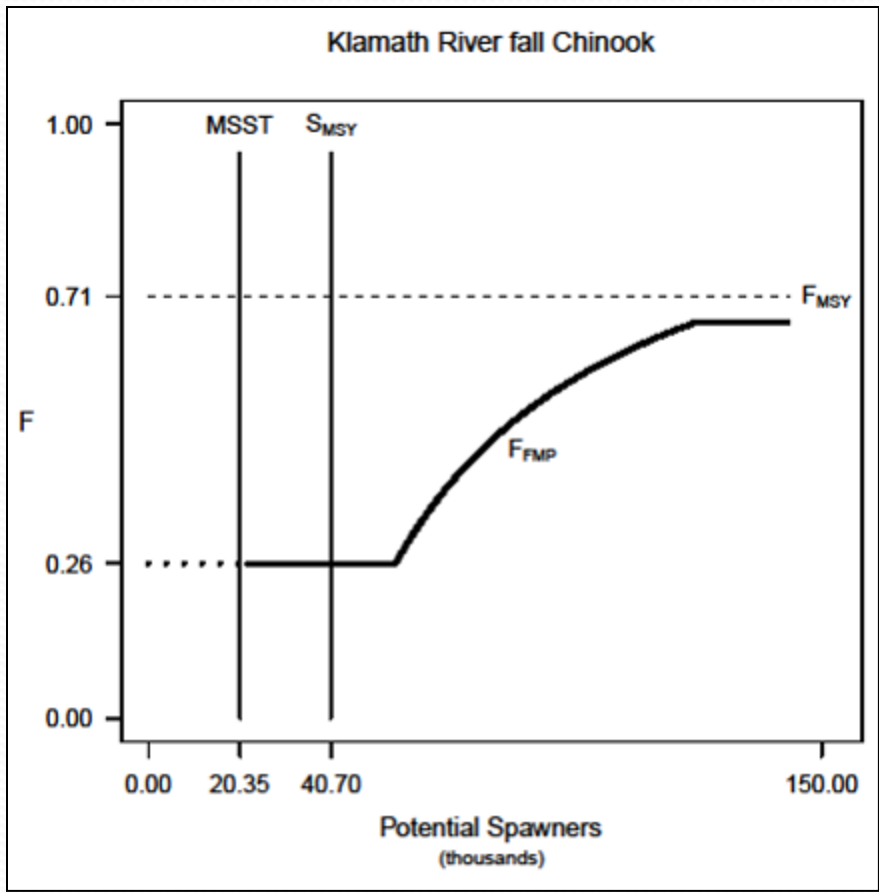
De Minimis Fishing Provisions

- Allow Minimal Harvest Impacts on Weak Stocks to Provide Access to Abundant Stocks
- Many Stocks Have Provisions: Explicit or Implicit
 - Explicit: Klamath River Fall Chinook, Puget Sound Coho
 - Implicit: Washington Coast Coho
- Some Have No Provisions
 - Sacramento River Fall Chinook
 - Southern Oregon Coast Chinook
- Provides Default Rebuilding Plan
 - Allows Some Fishing During Rebuilding Phase
 - Could Transition to Formal Rebuilding Plan When Complete

De Minimis Alternatives

- Modify Conservation Objective Control Rules to Allow Limited Exploitation Rate
 - < 38% AEQ Exploitation Rate ~ LCR Tule ESA Consultation Standard
 - < 26% Spawner Reduction Rate ~ Klamath Chinook
 - < 20% Exploitation Rate ~ Puget Sound Coho
 - < 8% Exploitation Rate ~ OCN Coho
- Alternatives Could be Based on Total or Council Area Exploitation Rates
- Exploitation Rates Could Scale Down at Lower Abundance Levels

Control Rules With and Without *De Minimis* Provisions

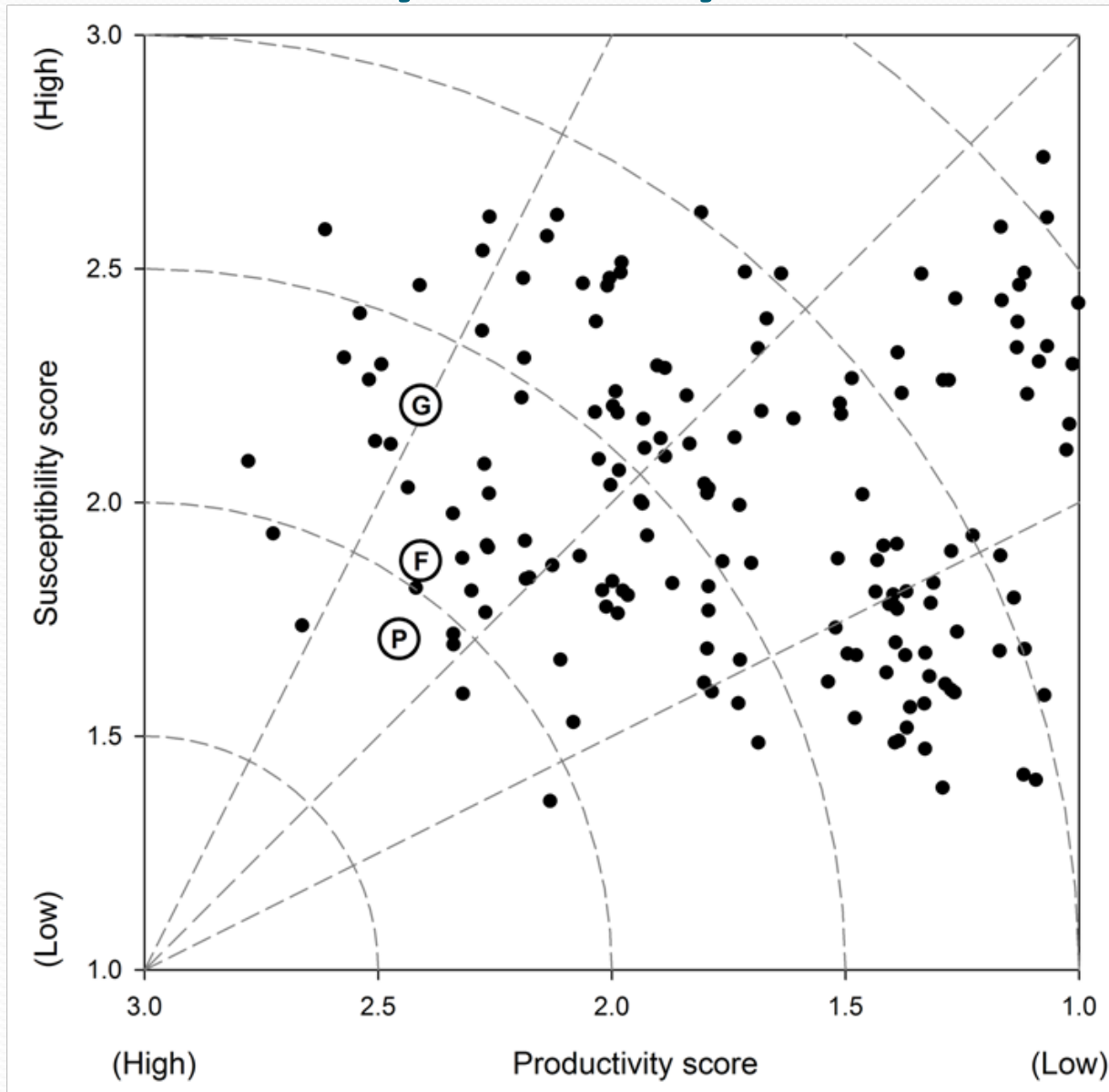


SAC Requests

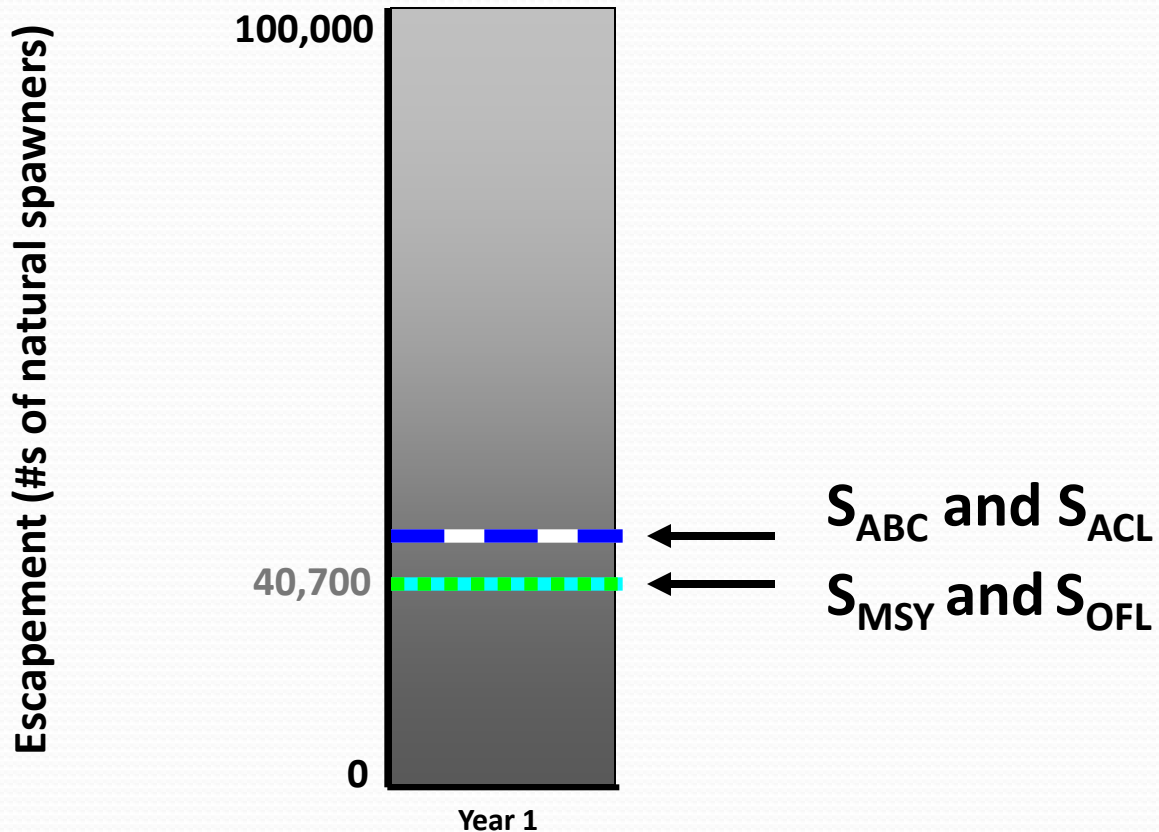
- Council Action: To Allow Development and Analysis of SDC and ACL Alternatives
 - Stock Classification: Preliminary Preferred Alternative (Tables 5, 6, and 7, Pg 12)
 - International Exceptions: Preliminary Preferred Alternative (Tables 5, 6, and 7)
- Council Guidance
 - SDC: Range of Alternatives (Table 8, Pg 16)
 - ACL Framework: Range of Alternatives (Table 9, Pg 26)
 - AM: No Specific Requests
 - *De Minimis* Fishing Provisions: Range of Alternatives (Pg 28)

The End

Vulnerability Analysis



S-Based Reference Points Based on Buffered Conservation Objective



Not drawn to scale; distance between reference points just illustrative.
Example: KRFC