Potential Basin-Wide Scenarios (condensed form)

- **Goal of all these scenarios would be to achieve the high-range goals. Some might achieve them sooner than others or might have higher certainty of achieving them.**
- **The biological strategies below focus on the strategies/actions during the early portion (e.g., first 25-years) of scenario implementation.**
- **We anticipate that the Task Force would flesh out the additional components of any scenarios (including SCEEs and governance), and also develop additional detail on strategies for the future implementation periods (e.g., using the more detailed table that we have distributed).**
- **The Task Force could also develop greater specificity (e.g., at the stock scale) for any scenario or set of scenarios.**
- **We anticipate that a discussion of tradeoffs among scenarios would be included in the Phase 2 Recommendations Report.**

Theme	Stepwise Incremental Approach with Benchmarks	Maximum Habitat Effort + Enhanced Effort in other Threats, with Benchmarks	Frontload Maximum Effort in All Threats	Climate Change Contingency
Description	Continues efforts similar to current levels on all fronts in the near term. Identifies benchmarks. Results evaluated relative to benchmarks after a certain time period and if benchmarks not met, additional actions are triggered.	Maximizes efforts in the near term to restore habitat. Enhances efforts in other threats. Identifies benchmarks. Results evaluated relative to benchmarks after a certain time period and if benchmarks not met, additional actions are triggered.	Maximum effort in near term on all fronts directed toward achieving goals as soon as possible.	Recognizes challenges of climate and makes strategic choices in light of related risks. Focuses the most effort in near term on securing stronghold populations identified for their ability to withstand worst-case climate scenarios. For non-stronghold stocks/populations, continue existing levels of effort for first 25 years.
Biological Strategies	**Hydro:** Continue to implement aggressive spill program under existing configuration. **Trib habitat:** Continue current level of effort in tributary habitat restoration throughout the basin and continue efforts to more strategically target populations and actions that will provide the greatest contribution to long-term recovery goals. **Estuary habitat:** Continue current level of effort in estuary habitat. **Blocked areas:** Proceed incrementally as laid out in existing plans.	**Hydro:** Continue to implement aggressive spill program under existing configuration. **Trib habitat:** Substantially increase level of effort and ensure that efforts more strategically target populations and actions that will provide the greatest contribution to long-term recovery goals in order to maximize habitat restoration throughout the basin. **Estuary habitat:** Substantially increase level of effort to maximize estuary habitat restoration.	**Hydro:** Begin immediate efforts to breach one or more dams. **Trib habitat:** Substantially increase level of effort and ensure that efforts more strategically target populations and actions that will provide the greatest contribution to long-term recovery goals in order to maximize habitat restoration throughout the basin. **Estuary habitat:** Substantially increase level of effort to maximize estuary habitat restoration. **Blocked areas:**	**Hydro:** Implement operations and configurations to address flow and temperature effects from climate change. **Trib habitat:** Maximum restoration effort to secure habitats least vulnerable to climate change or most likely to improve climate resilience in stronghold populations. **Estuary habitat:** Maximum restoration effort to secure habitats least vulnerable to climate change or most likely to improve climate resilience in stronghold populations.

	Predation: Continue existing predator control actions. **Hatchery:** Continue to limit release numbers, strategically implement mitigation and supplementation programs, and incremental hatchery reforms to control impacts/risks in key natural production areas. **Harvest:** Continue to curtail or eliminate directed fisheries and limit incidental impacts to levels that do not impede recovery through use of abundance-based management frameworks.	**Blocked areas:** Explore and begin to implement experimental reintroduction with interim hatchery supplementation concurrent with evaluation of passage potential. **Predation:** Identify and implement targeted opportunities to enhance predator control actions. **Hatchery:** Continue to limit release numbers, strategically implement mitigation and supplementation programs, and incremental hatchery reforms to control impacts/risks in key natural production areas. **Harvest:** Continue to curtail or eliminate directed fisheries and limit incidental impacts to levels that do not impede recovery through use of abundance-based management frameworks.	• Maximize/expedite efforts to reintroduce fish into blocked areas (Chief Joe/Grand Coulee and HCC) and with habitat restoration above HCC to prepare for eventual passage at HCC. • Ramp up efforts to expand distribution in tributary habitat (e.g., Cowlitz, Lewis, Willamette Basin, Deschutes – and any other significant blockages in tributaries). **Predation:** Population scale removals to reduce numbers and corresponding predation impacts. **Hatchery:** Further reduce release numbers, concentrate mitigation, refine supplementation programs, and speed up hatchery reforms to control impacts/risks in key natural production areas. **Harvest:** Continue to curtail or eliminate directed fisheries and limit incidental impacts to levels that do not impede recovery; close or severely limit harvest to maximize natural spawning escapement in selected stocks or populations.	**Blocked areas:** Consider how currently blocked areas could help mitigate for effects of climate change in stronghold populations and implement actions to increase resiliency to climate change. **Predation:** Identify and implement targeted opportunities to enhance predator control actions, including predation impacts related to climate effects (e.g., walleye, bass, species that have expanded their range because of climate change). **Hatcheries:** Reconfigure hatchery programs consistent to minimize risks to stronghold populations, and help conserve populations most threatened by climate change. **Harvest:** Adjust harvest as needed to ensure that impacts on stronghold populations do not impede achievement of natural production goals. Focus fishery opportunities on hatchery mitigation stocks.
Benchmarks	For all strategies: Identify benchmarks. After 15-25 years, evaluate results relative to benchmarks. If not met, additional actions are triggered.	For all strategies: Identify benchmarks. After 15-25 years, evaluate results relative to benchmarks. If not met, additional actions are triggered.	For all strategies: Identify benchmarks. After 15-25 years, evaluate results relative to benchmarks. If not met, evaluate needed changes in strategies.	Evaluate population status (e.g. how are populations responding to climate change) at 25 and 50 years to determine populations to focus on during the upcoming time frame.

SCE&E Considerations and Strategies	• All H approach. • Closest to status quo SCE&E. • By making some more radical decisions contingent on not meeting benchmarks, provides time for more public buy in and planning for addressing SCE&E impacts of those actions.	• All H approach. • Would require substantially increased funding for enhanced efforts. • Habitat efforts could have implications for private landowners and public lands management; could also create jobs. • By making some decisions contingent on benchmarks, provides time for more public/political buy in and planning for addressing SCE&E impacts of those actions.	• All H approach. • Costly: Would require drastically increased funding for enhanced efforts. • Habitat efforts could have implications for private landowners and public lands management; could also create jobs. • Do not have public consensus at this point. • Disruptive to power and navigation sectors and to fishery interests. • Current mitigation funds for habitat and hatchery production would likely be substantially reduced.	• To be developed.
Critical Uncertainties/Research Needs	• Latent mortality • Freshwater habitat productivity • Hatchery benefits vs. adverse effects • Ocean conditions			
Regional Considerations	How might specific strategies affect different stocks, groupings of stocks, or regions differently?			
Innovation & experimental management	Task Force could develop and incorporate into any aspect of any scenario.			

Strategic choices, sequencing considerations, early successes, stock specificity	Task Force could develop and incorporate into any scenario.
Climate/population considerations	In addition to a scenario with a climate adaptation theme, Task Force could develop and incorporate assumptions and/or strategic choices related to climate and population growth into any scenario.
Path Forward/ Governance Considerations	Path forward/governance considerations in general and specific to any particular scenario will be developed by workgroup.