

Integrating Climate-Smart Conservation into our Ecosystem Restoration Program for the Lower Columbia River.

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Since the late 1800's, the lower Columbia River ecosystem lost approximately 50% of its native historic habitat largely to development and agriculture. Over 23,758 acres have been restored or protected by regional partners in the past 20 years, a significant effort to reverse the trajectory of degradation. Areas that have been acquired and restored for conservation purposes function as a *de facto* reserve network. To ensure our reserve network is protective of native species, we established native habitat coverage targets, using established conservation biology approaches that describe the quantity, types, and priority locations for recovery of habitat to meet our goal of *historic* habitat diversity. Nonetheless, ample recent conservation biology research concludes that the historic habitat mosaic no longer serves as an appropriate guide for maintaining biodiversity with transitioning climate and ecosystem conditions. Climate-smart conservation requires a shift from trusting our traditional conservation practices will be effective and sufficient in the face of rapid climate change to an intentional process that integrates climate change into all aspects of resource management. Two important concepts that require us to change our standard practices include managing for change and not only persistence, and managing for the transformation of ecosystems using forward-thinking goals – anticipatory versus reactive adaptation. Protecting species will require a shift from place-based strategies that maintain the integrity of local reserves to dynamic approaches that promote landscape permeability and species' ability to move through landscapes so they can persist. This presentation will provide an overview of conservation biology approaches for integrating shifting climate conditions into conservation practices such as reserve planning, and how we've begun integrating climate-smart measures into the ecosystem restoration program within the lower Columbia River.