

Title: Working with Nature Across the Land-Use Spectrum: a Holistic Approach to Ecological Resilience

Many approaches to ecological restoration and enhancement of ecosystem services focus on particular parts of the landscape – open spaces high in watersheds, urban areas in valleys, waterways or shorelines. This cookie-cutter approach to dividing up large physical and ecological systems is more tractable, but may fail to maximize benefits across the full system. Across the land use gradient from open space high in watersheds, to urbanized and farmed valleys, to the shoreline, nature-based interventions can provide multiple benefits to people and wildlife. This presentation will highlight several novel initiatives across the land-use spectrum that are working toward this holistic approach to restoration of ecological functions and ecosystem services in the San Francisco Bay Area. They stem from a synthesis of the scientific literature on ecological resilience, and they focus on shorelines, creeks, urban areas, working landscapes, and open spaces. While the entire complex equation of how to optimize ecosystem services and ecological functions across the landscape is not yet solvable, these initiatives begin to point toward a path for a new approach to resilience focused on working with nature to benefit from natural processes.

Presenter: Dr. Letitia Grenier, San Francisco Estuary Institute

Letitia Grenier is a Senior Scientist at the San Francisco Estuary Institute, where she co-directs the Resilient Landscapes Program. She was the science lead for the 2015 State of the Estuary Report (a SF Estuary Partnership project) and the 2015 climate change update to the Baylands Ecosystem Habitat Goals (a California Coastal Conservancy project), heading a team of over 200 environmental scientists, managers, and regulators to develop science-based recommendations for restoring and maintaining the health the Bay's tidal wetlands in the face of rising sea levels and other stressors.

She is a principal investigator for the Delta Landscapes project, which has completed in-depth analyses on the change in the Delta over time and is now offering science-based guidance on how ecosystem health can be recovered as part of this working landscape. Letitia holds a Ph.D. in Conservation Biology from the University of California at Berkeley and has previously worked on investigating bioaccumulation of contaminants in estuarine food webs, the condition of California's wetlands, and other ecological questions about San Francisco Bay. Her focus now is to work with partners to conserve California's living resources by developing landscape-scale, collaborative visions and solutions for ecological resilience.