Connectivity Strategic Plan Update Meeting, July 1, 2014

Pollinators Group

The CSP points out that population connectivity is important for demographic exchange, gene flow, species movement among core areas & patches & shifts in geographic range in response to environmental changes such as wildfire & climate change.

MSP Butterfly Species Connectivity

- MSP butterfly species include Quino checkerspot, Thorne's hairstreak, Harbison's dunskipper, Hermes copper & wandering skipper.
- Is there a potential loss of population connectivity for any of these species? What are the factors affecting connectivity for each species? Rank each species for its risk of loss of connectivity.
- Develop specific questions & objectives to address connectivity issues for those species at highest risk for loss of connectivity.
- What approach & methods could we take to address connectivity issues for butterflies? How would our methods vary depending on species?

MSP Rare Plant Connectivity – Small & Isolated Populations

- Use the rare plant – pollinator spreadsheet to evaluate the SL, SO & SS plant species & rank each species for risk for loss of connectivity between populations.
- For those species at high risk for loss of connectivity, identify those factors that contribute to this risk. Is there a potential pollinator connectivity concern or are other factors more important?
- Genetic studies are planned for several MSP rare plant species to assess genetic population structure. If there are species where it is determined to be important to enhance gene flow among populations, how could we determine if this is a pollinator connectivity issue? What would be the best approach & methods to address questions about pollinator connectivity in rare plant populations?

Rare Plant Connectivity – Community Level Concerns with Maintaining Ecological Function

- Identify important pollinator groups that provide pollination services to native shrubland, grassland, forbland & vernal pool plant communities in western San Diego County. Identify & rank threats to important pollinator groups. Characterize the plant species & habitat attributes that are required to maintain diverse, abundant & resilient pollinator communities.
- Use the rare plant – pollinator spreadsheet to assess different vegetation categories for risk of loss of pollinator services as a result of loss of connectivity. Consider the general extent & configuration of patches of vegetation within the landscape matrix of urban development, Conserved Lands, & undeveloped but unprotected lands. Review the distribution & abundance of rare plants within each vegetation category. Develop criteria & then prioritize each vegetation community for risk of loss of pollinator connectivity. This prioritization should include an assessment of the risk of losing pollinator connectivity to rare plants. What questions need to be addressed for those vegetation categories prioritized to be at highest risk of loss of pollinator connectivity? What approaches & methodologies could be used to address these questions?