



North Pacific Landscape Conservation Cooperative

Terrestrial Connectivity Work Group Call April 6, 2017

Attendees: Betsy Glenn (NWCSC), Frank Lake (USFS), Jen Watkins (Conservation NW), Steve Brockmann (USFWS), Tom Miewald (NPLCC), Tory Stevens (BC Parks), Mary Mahaffy (NPLCC)

Conceptual Model:

Important to look at communities and not just species – think and act holistically
Scale and scope important too

Human footprint and growth important across the NPLCC, including transportation corridors

Loss of snowpack also identified as very important as it affects terrestrial connectivity in many parts of the NPLCC. Loss of snowpack is not as important in CA; however, sudden oak death, invasive species and likely other pathogens are or will be in the near future.

Betsy said they are having similar conversations for NW CSC priorities. Their partners have identified that impacts related to transportation, municipal development, and agricultural practices are high priority to address; however it is recognized that isn't the role of the CSC.

There was a discussion about addressing forested versus non-forested habitats.

- In Alaska, key transition is ocean/forest/alpine. There are few wetlands that are not forested. Issues with losing alpine because of forest encroachment. Also alpine-like conditions are being created in from of receding glaciers (early succession).

Tom talked about the importance of ecoregional perspective for connectivity; multi-scaled. We could have an umbrella project that looks at connectivity analyses but looks to see what is important ecoregionally.

Tory mentioned The Nature Conservancy's publication "*Conserving Nature's Stage: Mapping omnidirectional connectivity for resilient terrestrial landscapes in the Pacific Northwest*" by Brad McRae, et. al; June 2016 ([publication link](#)). Great tool but only includes as far north as the Washington/BC border. It provides subregion classifications. The publication includes the following paragraph: "Our definition of connectivity

(modified from Meiklejohn et al. 2010) is: *the degree to which regional landscapes, encompassing a variety of natural, semi-natural and developed land cover types, will sustain ecological processes and are conducive to the movement of many types of organisms.*"

Yellow cedar were discussed:

- In the Southern Siskiyou, yellow cedars are not likely to be reproductively successful with temperature and precipitation changes.
- Connectivity is an important consideration as we look to where yellow cedar will move (or need to be moved) so they can be maintained as current conditions change

Maintaining or restoring connectivity would lead to resilient habitats (versus opposite how it was written in the results chain from the in-person meeting Important to focus on fracture zones and try to decrease the number of pinch points

- Need to identify areas where there are, or will be, problems
- Key issues that merit attention at the entire LCC range
 - What science has been completed that shows critical linkages
 - Do we have what we need or are there gaps

The following were identified as important for decisions at the LCC level:

- Maintaining and restoring forest health and structure:
 - Forest management (including addressing changes in fire frequency and intensity)
 - Maintaining and restoring terrestrial connectivity in a changing environment:
 - human development (transportation corridors, municipal and rural development)
 - loss of snowpack
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Movement of Terrestrial Species

Threats \ Targets	Movement of terrestrial species	
2 Municipal Development	Very High	6
4 Transportation Corridors	High	7
5 Increased outbreaks of Invasive Species, Pests, & Pathogens	High	1
5 Forest management practices	High	3
4 Loss of Snowpack	High	3
4 Increased Fire Frequency, extent and severity	High	1
4 Rural development & agriculture	High	7
5 Shifts in vegetation community distribution	High	0
3 Changes in Phenology	High	0
4 Drought/Moisture	Medium	0
3 Energy Transmission	Medium	0
3 Recreation (Trails, ATVs, snowmobiles, etc.)	Low	4
3 Extreme weather events and associated land impacts	Low	0

Connection of terrestrial ecological systems

Threats \ Targets	Connection of terrestrial ecological systems	
3 Loss of Snowpack	Very High	0
5 Forest management practices	High	2
4 Drought/Moisture	High	0
3 Municipal Development	High	4
4 Increased Fire Frequency, extent and severity	High	2
3 Extreme weather events and associated land impacts	High	0
5 Transportation Corridors	Medium	1
5 Increased outbreaks of Invasive Species, Pests, & Pathogens	Medium	1
5 Energy Transmission	Medium	0
4 Rural development & agriculture	Medium	6
3 Changes in Phenology	Medium	0

Movement of Avian Species

Threats \ Targets	Movement of avian species	
5 Shifts in vegetation community distribution	High	9*
5 Forest management practices	Medium	4
3 Increased Fire Frequency, extent and severity	Medium	1
4 Energy Transmission	Medium	0
3 Changes in Phenology	Medium	0
5 Increase outbreaks invasive species/pests/pathogens	NR	
4 Rural development and agriculture	NR	1*



