



Forest Service  
U.S. DEPARTMENT OF AGRICULTURE

# Observations from northwestern California

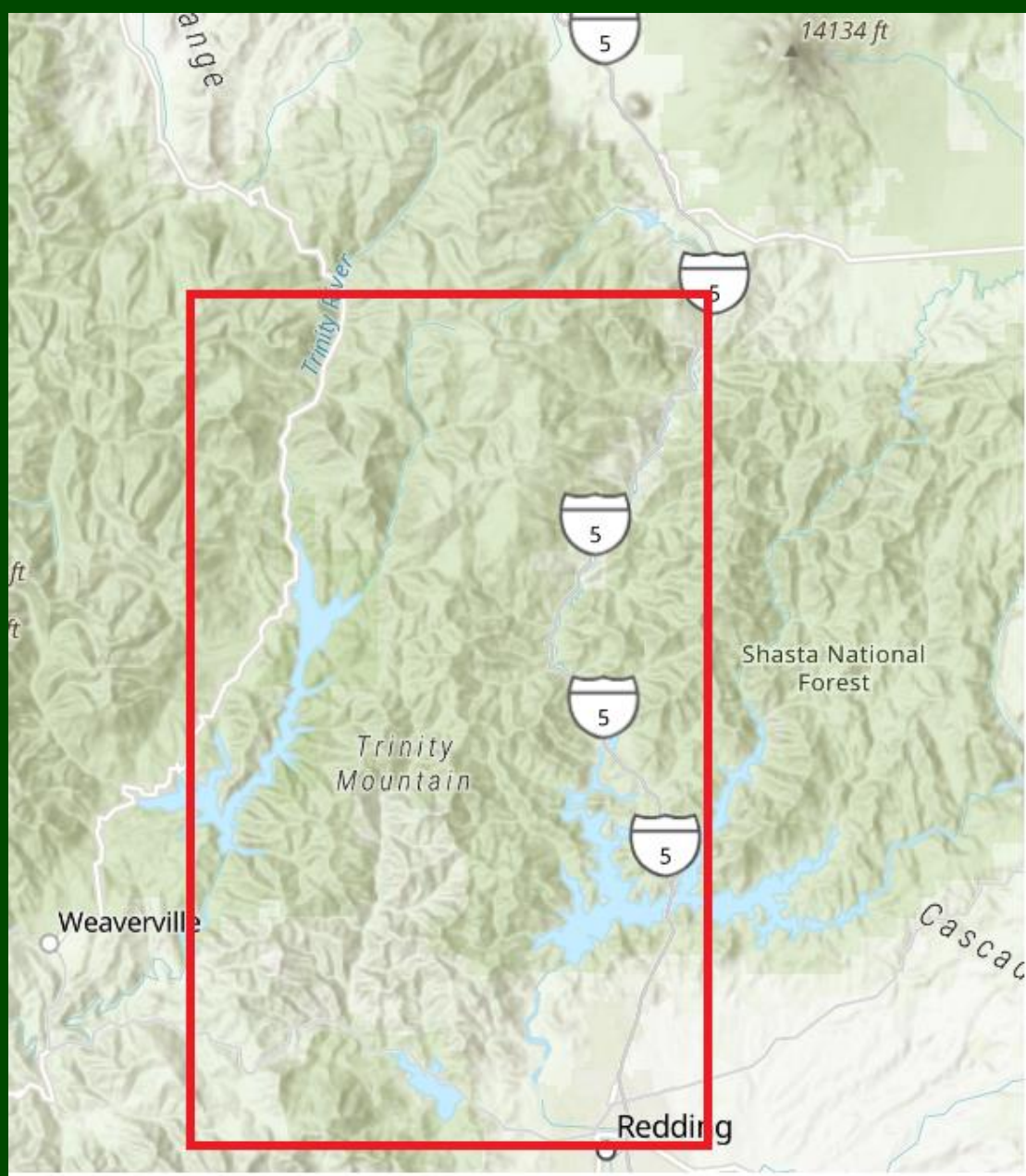
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Ashley Hawkins, Forest Health Protection













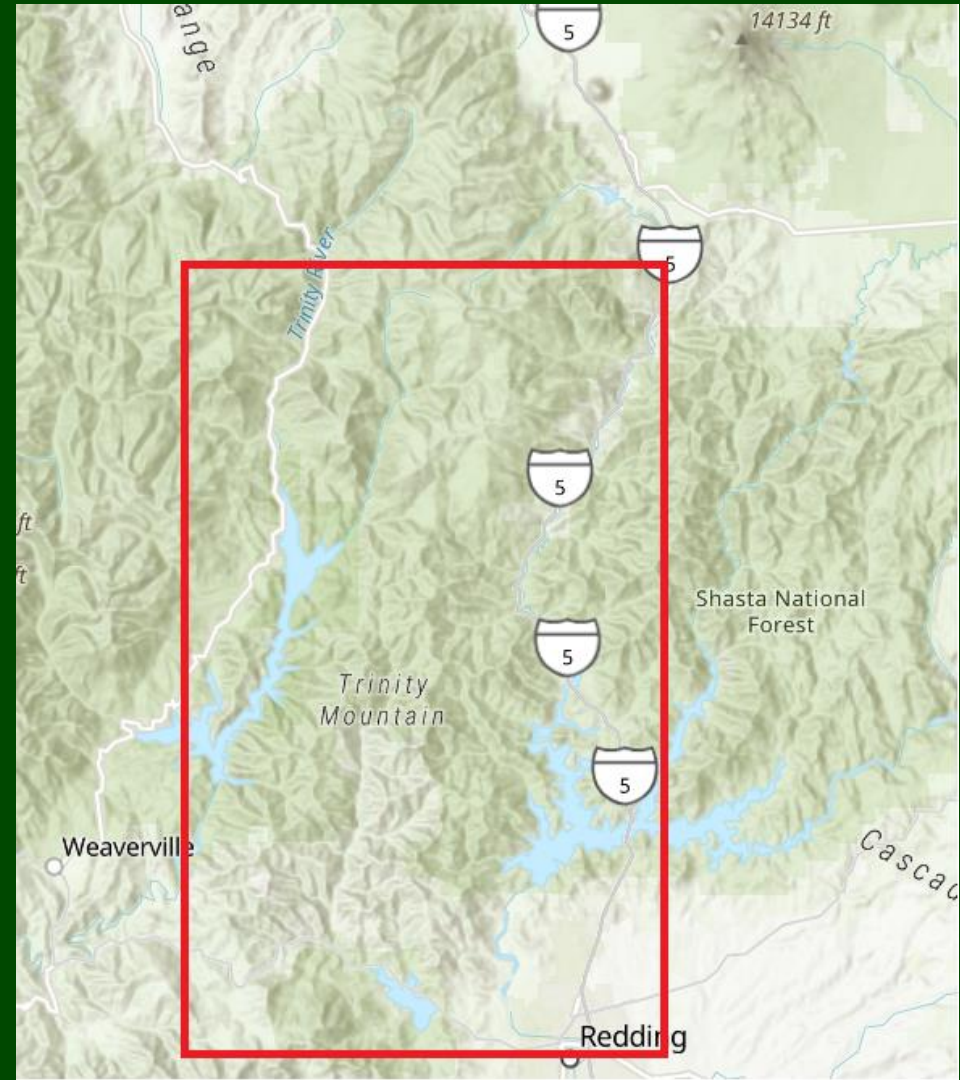






# Southeast Klamath Mountains

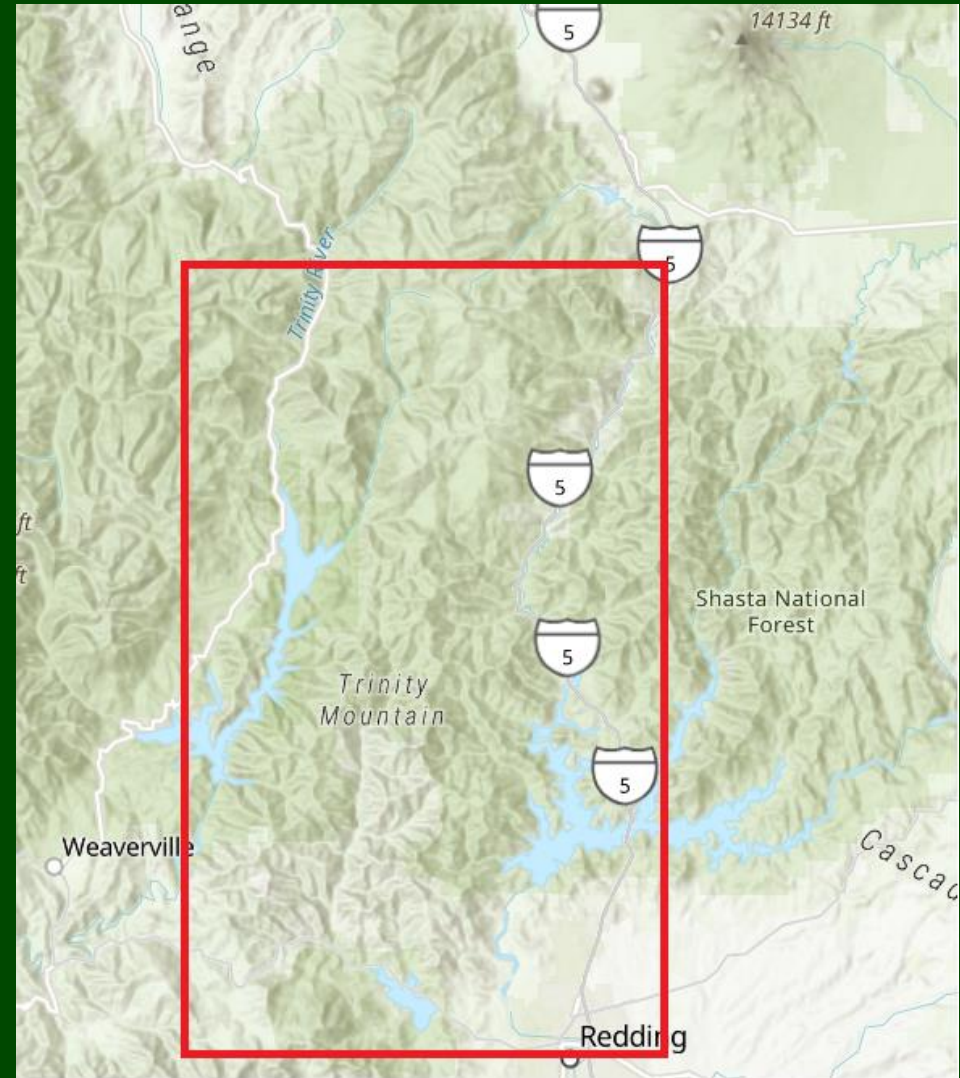
- $\leq$  600m (2000')
- Abiotic/Biotic?
- Drought?
- Pathogens?
- Insects?





# Southeast Klamath Mountains

- *Elytroderma deformans*
- *Sydowia polyspora*
- *Sphaeropsis* (Diplodia) *sapinea*
- Douglas-fir mortality





*Neofusicoccum mediterraneum*

giant sequoia





















*Neofusicoccum mediterraneum*

Port-Orford-cedar























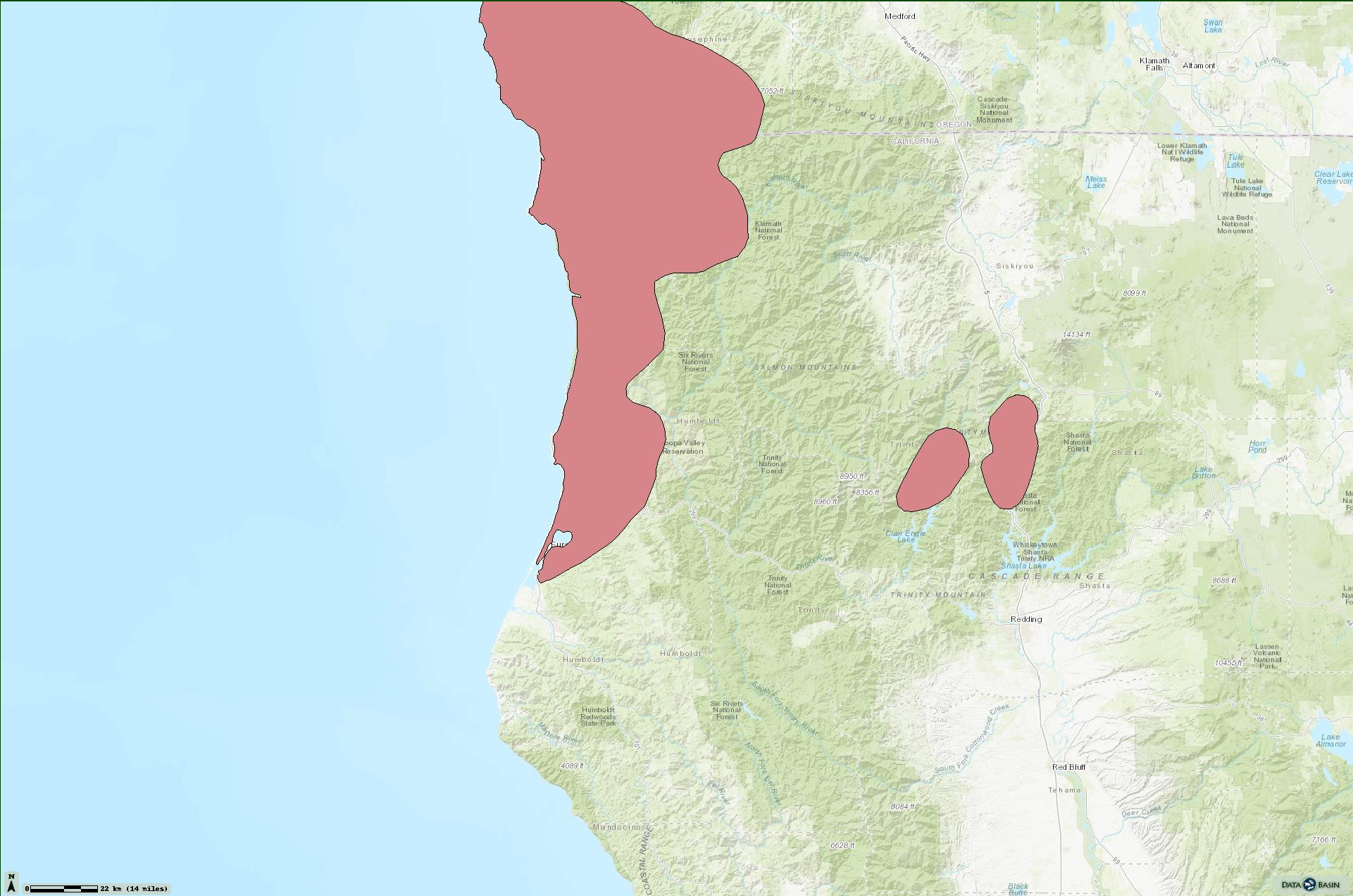




# Port-Orford-cedar root disease

*Phytophthora lateralis*

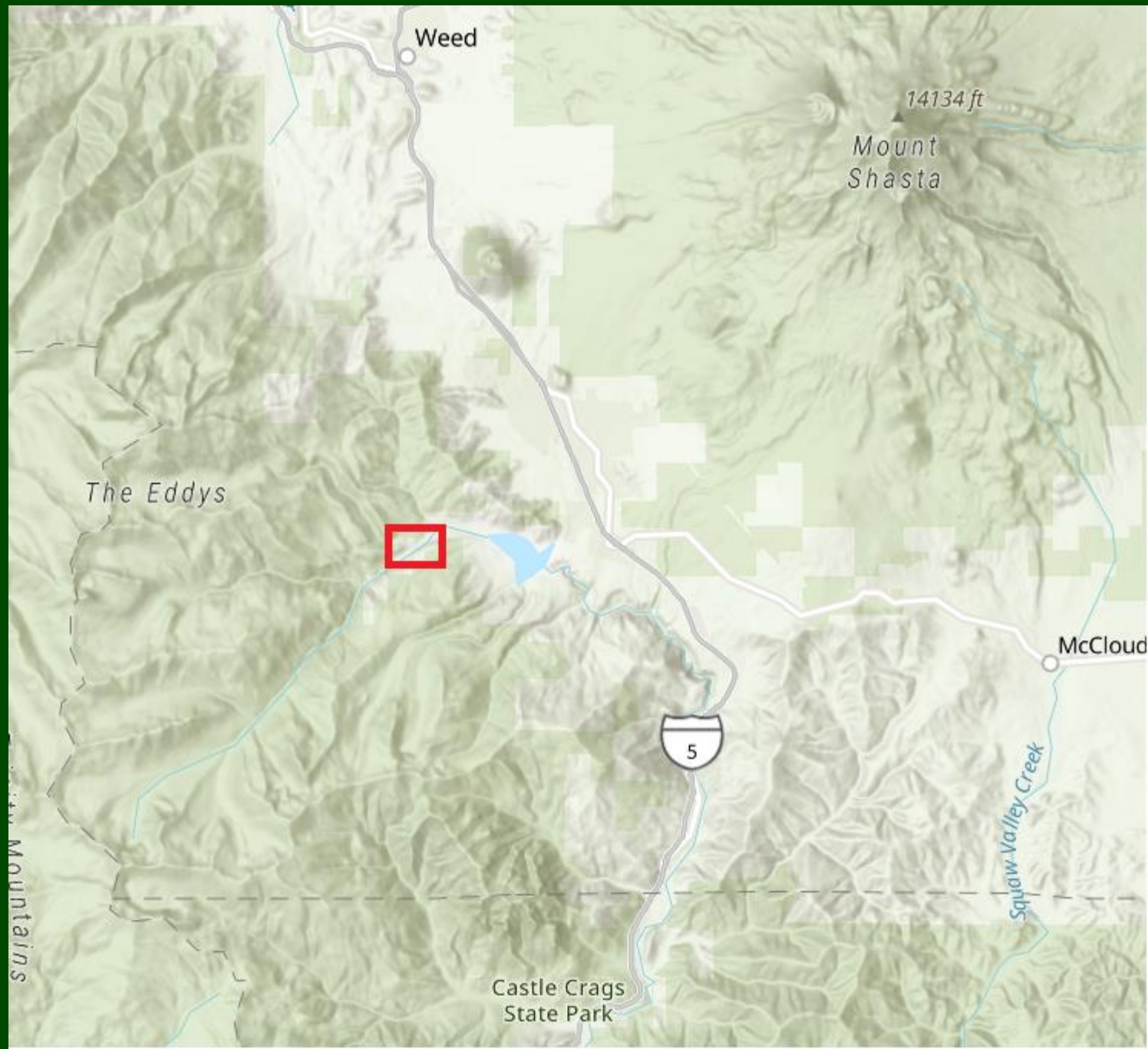




0 22 km (14 miles)

DATA BASIN











**Thank you!**