

Local Importance	Broad Importance (Grand Challenge)	Testable Questions
Local forests are being clear-cut to allow planting of Douglas Fir	Sustainable Forest Practices	Do buffer zones around creeks improve water quality and soil runoff?
		How will a monoculture of Douglas fir affect associated species in the ecosystem?
Low snowfall amounts signal a water shortage next summer	Water Resources	How does soil type affect water retention?
		How does potential irrigation resource influence crops to be planted?
Local farmers are converting to organic farming	Food Supply	How does organic farming affect soils?
		How do soil practices affect crop yield?
Water supply	Environmental Sustainability	What desalinization designs are the most effective and economically viable? (engineering problem)
		How does soil type affect water content?
Landslides	Natural Hazards	How does soil type affect landslide risk?
		How does topography affect landslide risk?
Sea level rise	Climate Change	How much urban area will be lost to predicted sea level rise?
		How will sea level rise affect mineral content and agricultural value of low lying agricultural areas?
Landscape Values	Resource Utilization	How does resource utilization impact economic systems?
		How does changing landscape cover (e.g., grass to native plants) affect soil health?