A CASE STUDY OF CLIMATE CHANGE IMPACTS ON WETLANDS

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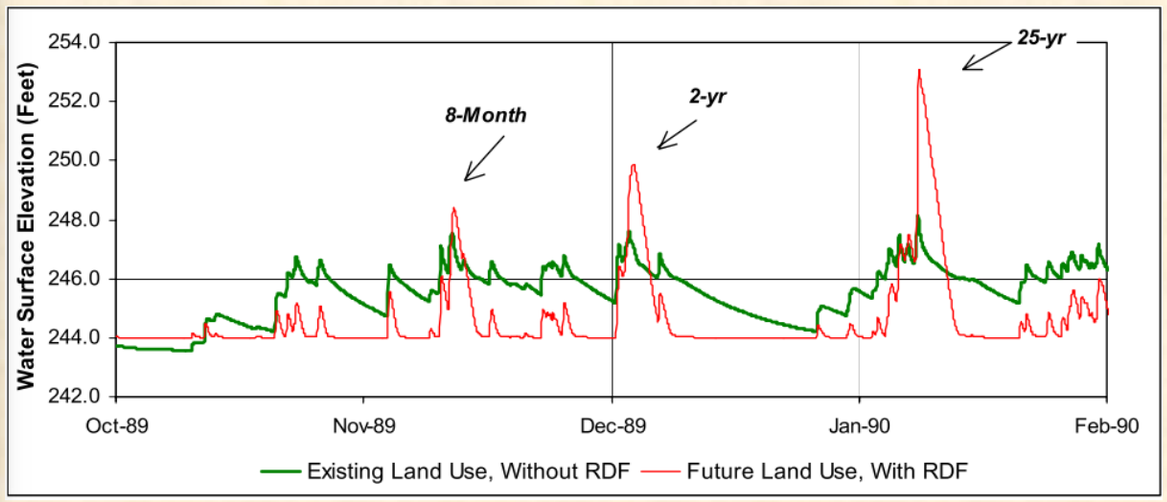
Climate Change Projections:

- Wetter winters and drier summers for Pacific NW
- Increases in storm intensity and magnitude for Puget Sound

Case Study Site: Des Moines Creek Regional Detention Facility (RDF)

- 30+ acres comprised of forested, scrub-shrub, emergent and open water wetlands
- 130 acre-feet of storm-water detention
- RDF altered wetland hydrology especially during storm events….SO….



Research Questions:

1. Does altered hydrology of the RDF mimic PNW climate change?
2. Is RDF an ideal candidate for analyzing wetland plant community impacts related to PNW climate change?

Results:

- Potential hydrologic correlations between RDF and climate change projections for 2-yr and 5-yr events
- No qualitative evidence of transition from **forested->scrub-shrub->emergent->open water** pseudo-indicative of climate change impacts
- RDF with modifications may be ideal candidate

Recommendations:

- Run HSPF model for RDF using climate change data
- Develop comprehensive vegetation monitoring plan to assess plant species richness

Committee: Kern Ewing, Jim Fridley, Alan Hamlet

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