Portland Vancouver ULTRA-Ex

**Social Dimension**
- Land use and planning effects
- Civic ecology/governance
- Environmental education

**Ecological Dimension**
- Riparian greenspaces
- Water quality
- Stormwater management

**Project scale**
- Riparian greenspace management
- Water quality analyses
- Stormwater and green infrastructure
- Economic analyses

**Ultra wide scale**
- Land use and planning effects
- Perceptions of residents
- Decision makers and environmental information
- Role of K-12 and citizen education

Tryon Creek, Lake Oswego, OR

East Portland bioswales
Top Ten Early Observations from the PV ULTRA

6. Tributary monitoring stations where surrounding agricultural land were converted into urban areas see significant declines in water quality

7. Bioswales are seen very positively ... but in someone else’s front yard, please

8. Bioswales efficiently retain metals from street runoff; bioswale soil in Portland has not yet become toxic

9. However, “the water is brown ... on the other side of the Columbia”

10. Portland residents return surveys better than Vancouver residents
Top Ten Early Observations from the PV ULTRA

1. Riparian restoration gains have caught up with riparian development losses, in both Portland and Vancouver.

2. Improved water quality in a nearby stream may increase the value of your home.

3. Water provider institutions make decisions based on economics and rate payer concerns ... climate change and effects on water supply or water quality is not yet a significant decision criterion.

4. Perhaps you’ve seen Portlandia? ... but I’m guessing you haven’t seen Vancouvria??

5. The legacy effects of Portland's disappeared streams and pipe networks are worse for water quality than Clark County sprawl.
Portland Vancouver ULTRA-Ex questions – Does governance matter?

Ecological Integrity & Change

Perception & Monitoring

Governance & Behavior

For riparian ecosystems in urbanizing areas:

Do differences in levels of governance affect the resilience of urban ecosystems?  
* A tentative yes, but more analysis is needed *

Do alternative land use planning strategies affect urban ecosystem integrity & services?  
* Yes, but there are multiple pathways available to affect positive change *

Does monitoring ecosystem services provide a feedback loop in urban socio-ecological systems?  
* Results from the riparian restoration and green infrastructure projects argue yes *