

Social-Ecological Approaches to Watershed Science

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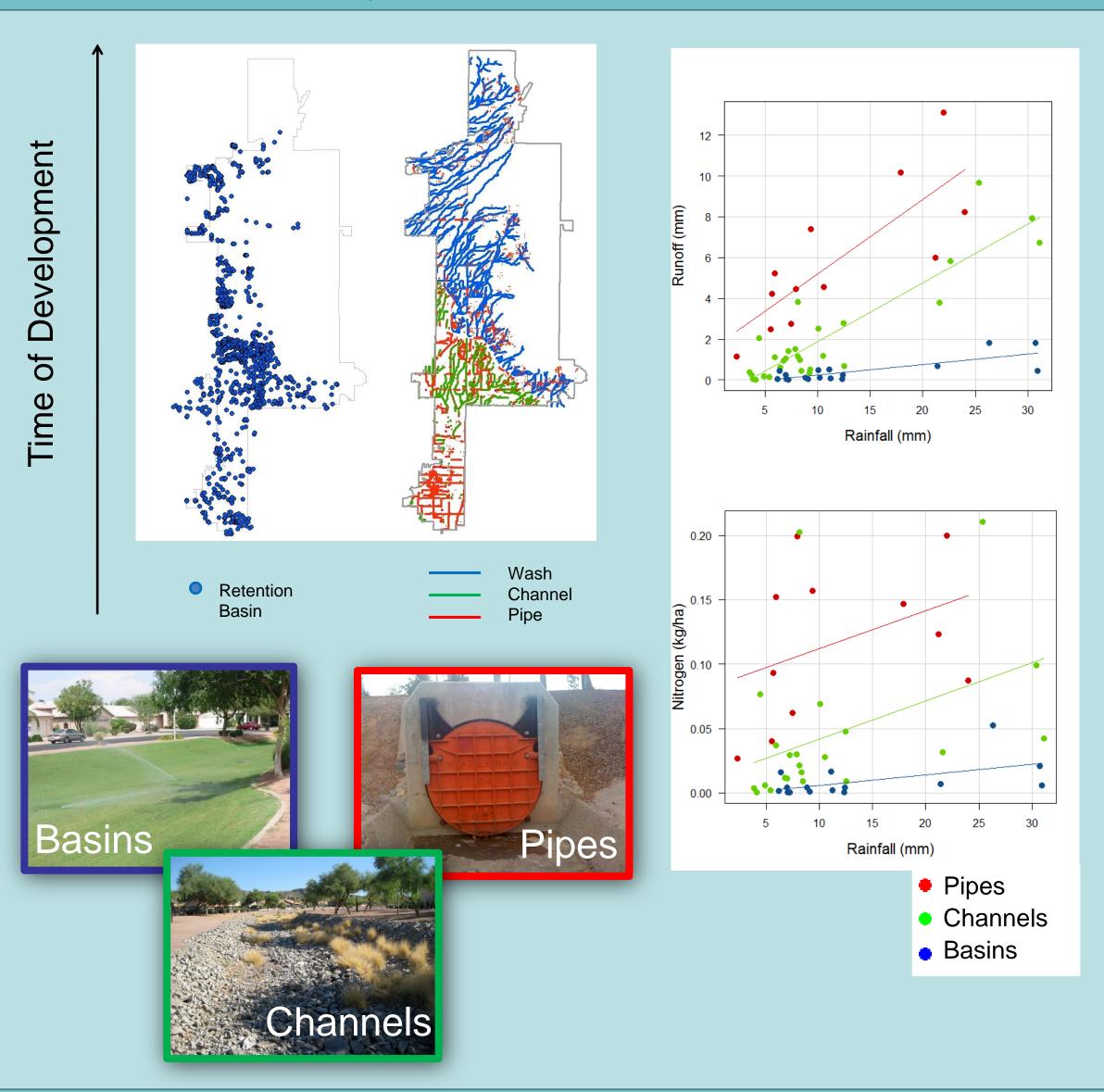


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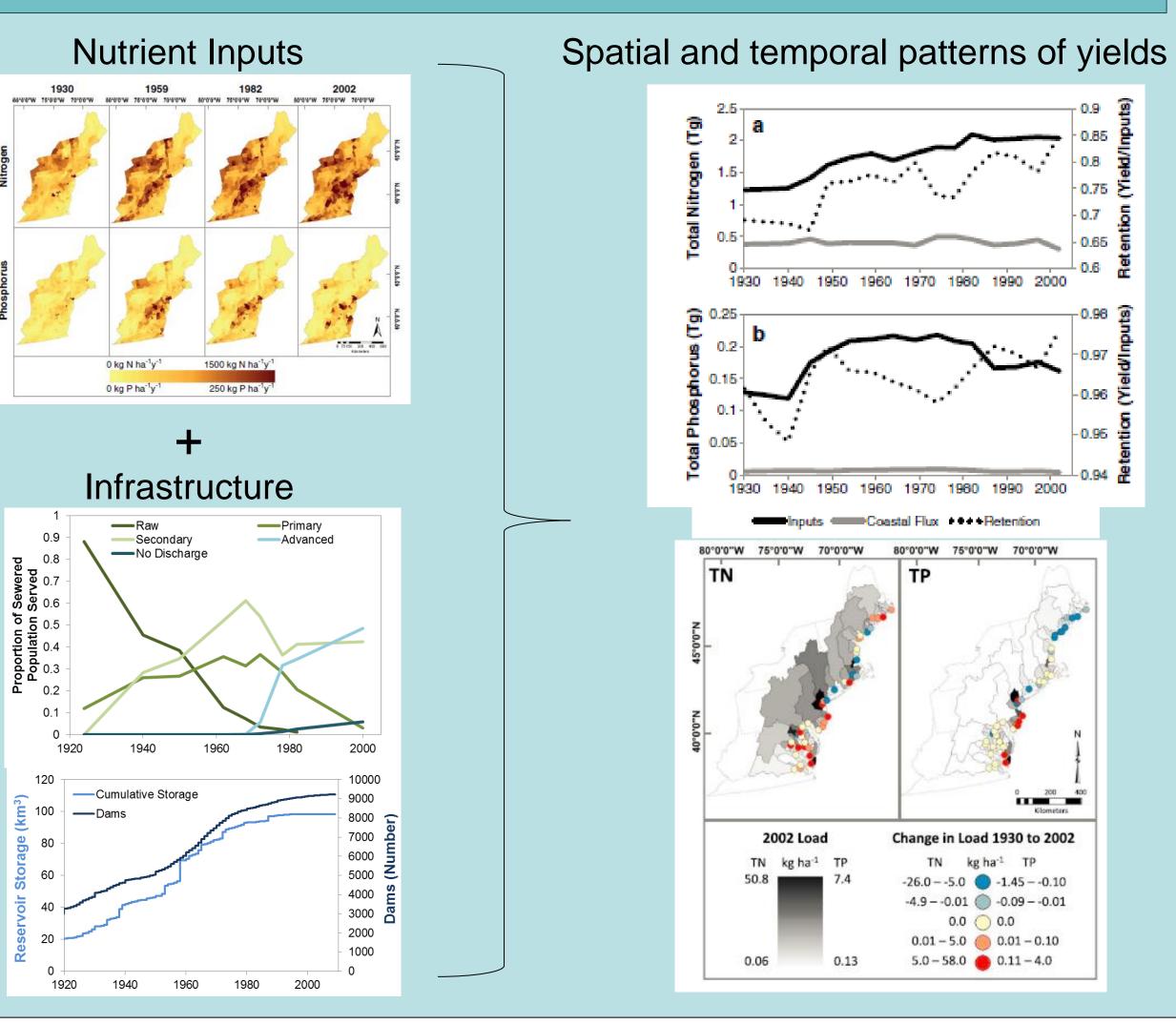
How do humans affect nutrients and

Stormwater infrastructure drives variation in water and nutrient delivery from urban watersheds in Arizona

water fluxes from watersheds?

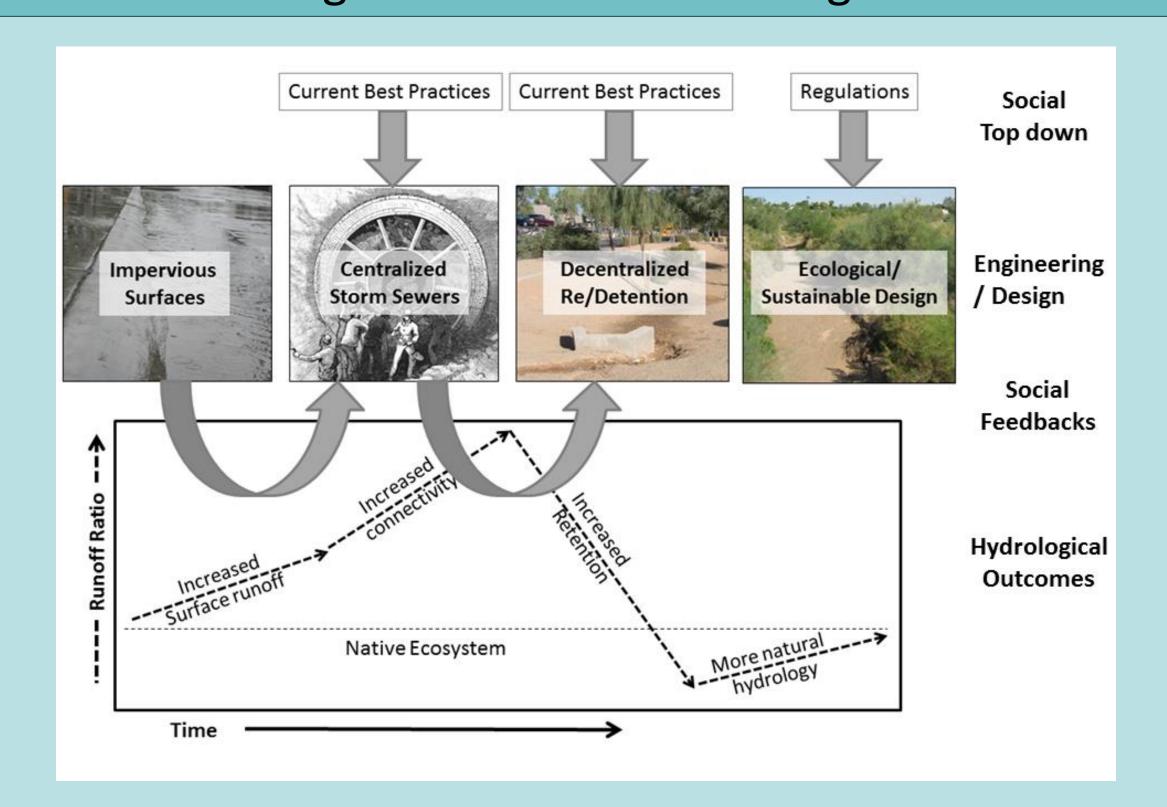


Regional nutrient yields from the northeastern US are driven by nutrient inputs, infrastructure development, and climate

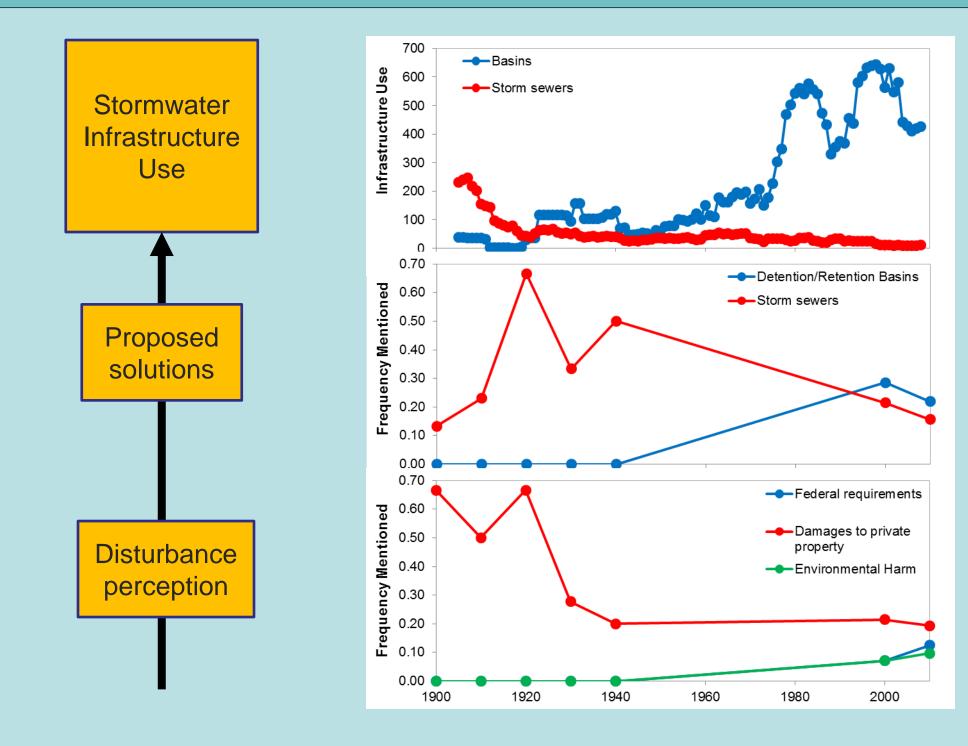


What processes lead SES to change over time?

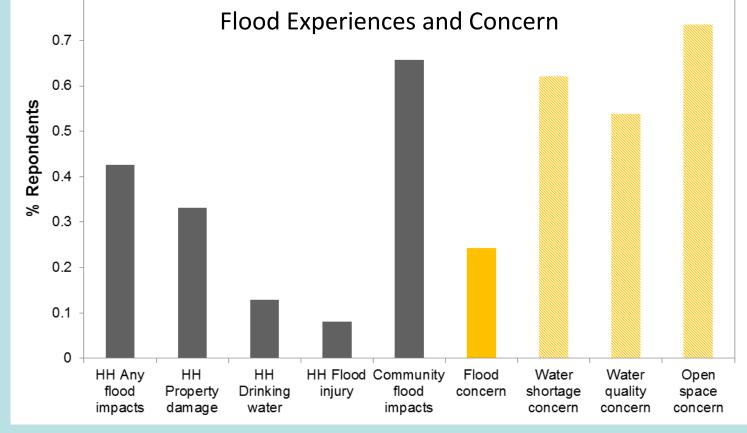
What are the roles of top-down and bottom-up drivers of change in stormwater management?



Changes in stormwater infrastructure use are related to discussions of infrastructure and stormwater-related disturbances in the media.



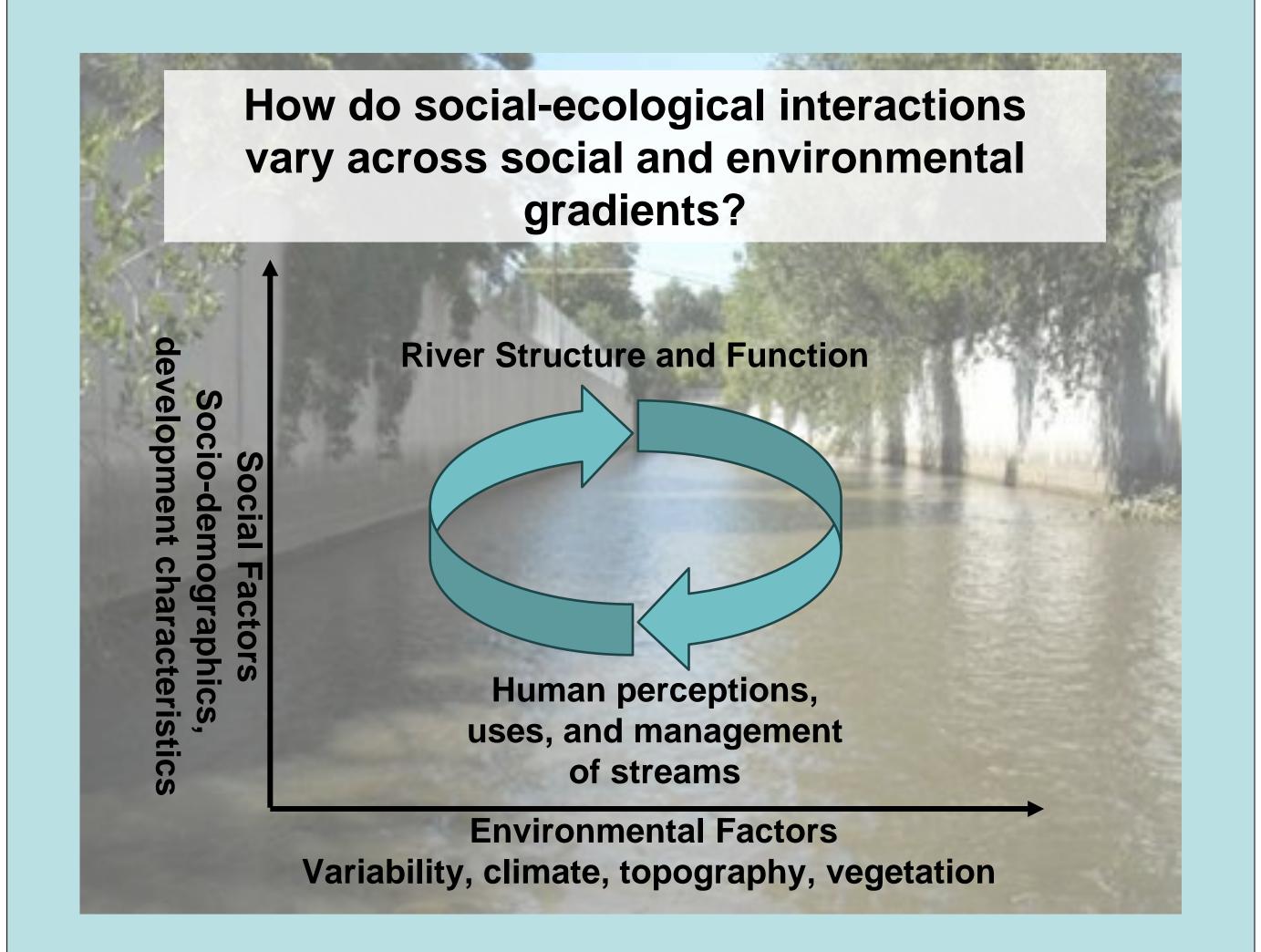
Declines in flood concerns over time does not reflect a lack of flood experiences or impacts.



Over 65% of surveyed households in urban Utah reported experiences with flooding in their community, and 40% reported impacts for their household, yet only 24% reported being concerned about flooding in the future.

2337 households across Salt Lake, Cache, and Wasatch Counties, UT

Prospective MILES Research



Research Themes

- How do SES linkages vary across social and ecological gradients?
- <u>Linkages</u>: perceptions, uses, management, and ecology of rivers
- o <u>Gradients</u>:
 - Land use: urban-rural gradients
 - Stream flow permanence gradients
- 2. How does the framing of public discourse about river ecosystems vary across communities? Are risk/hazards and ecosystem services frameworks representative of how people see their environments? How does framing of environmental issues affect management decisions?
- 3. How does culture affect the demand (types and amount) of ecosystem services?

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