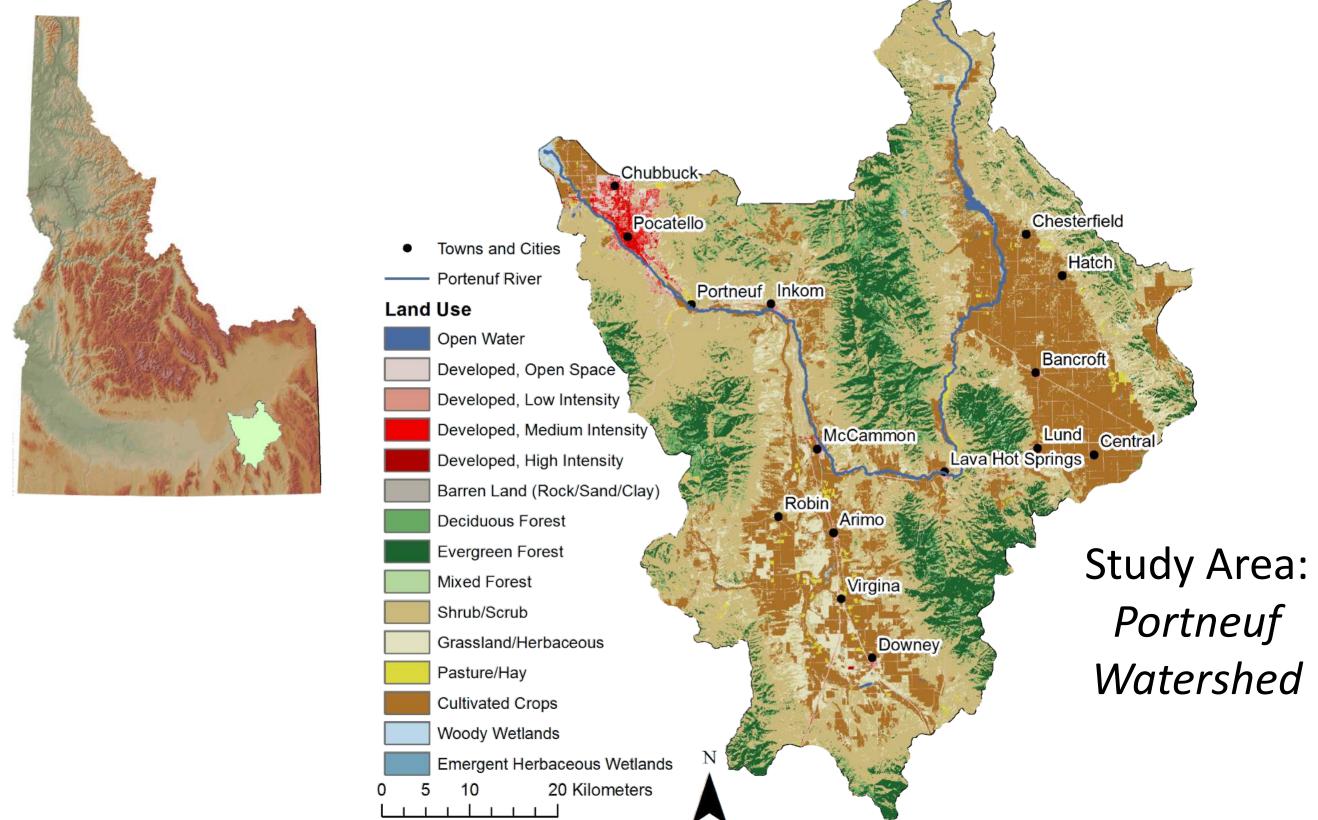


Background

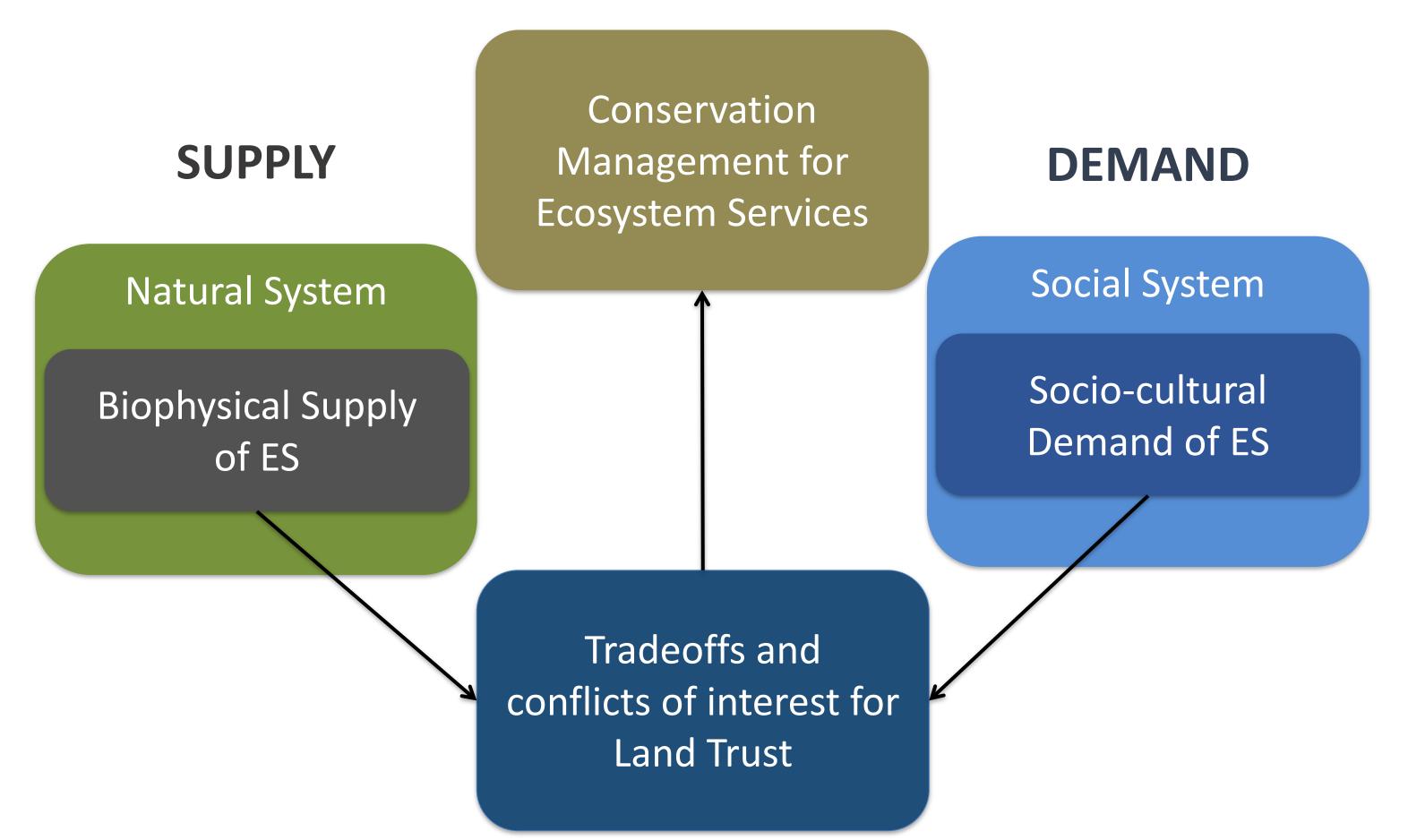
Integrating ecosystem services (ES) into planning and decision-making can lead to better outcomes, fewer unintended consequences, and more efficient use of taxpayer dollars. ES can act as a tool to evaluate the benefits humans obtain from protected areas and private lands. The Sagebrush Steppe Land Trust operates within the Portneuf Watershed and has four clearly defined conservation goals on private land: habitat quality, water quality, cultural heritage, open space and scenic views, while also recognizing the importance of recreational access within the watershed. These conservation goals easily translate into ecosystem services. With clearly defined ES goals for conservation, we can compare the biophysical supply of these conservation ES goals with the sociocultural demand for these ES.



Research Questions

- 1. What is the current state of ecosystem service (ES) conservation goal supply in the Portneuf watershed?
- 2. Do local stakeholders prioritize the same ES conservation goals as the Sagebrush Steppe Land Trust?

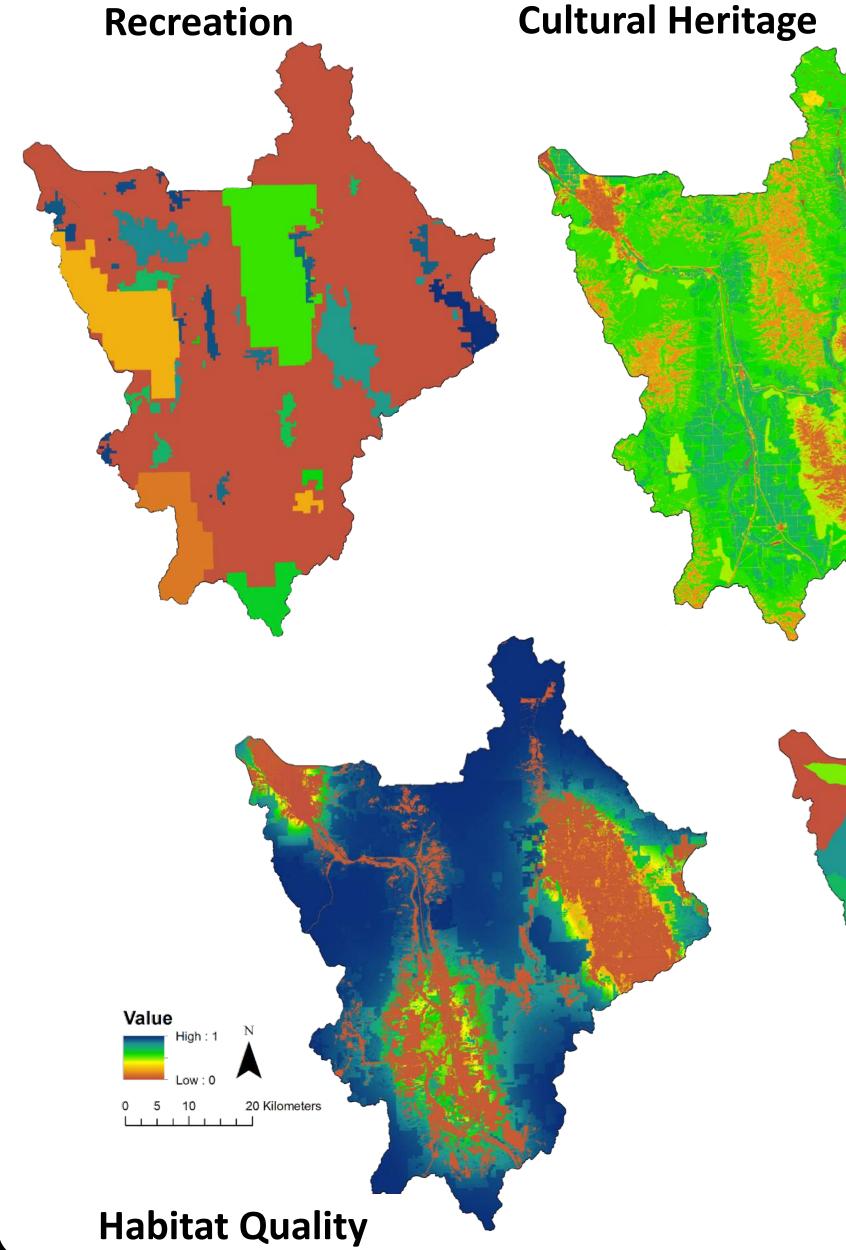
ES Framework and Methods

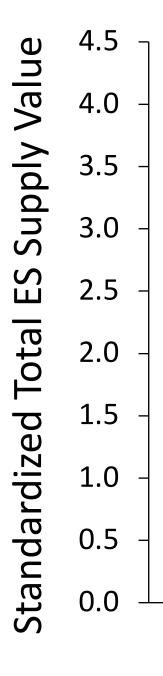


Adapted from: Wei et al. 2017; Castro et al. 2014; Burkhardt et al. 2012

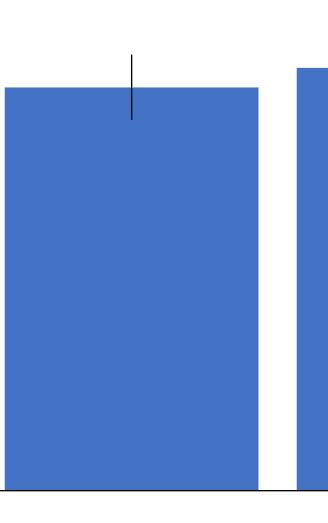
Implementing Ecosystem Service Valuation into Land **Trust Conservation in the Portneuf Watershed**

ES Supply: Land Trust Conservation Goals









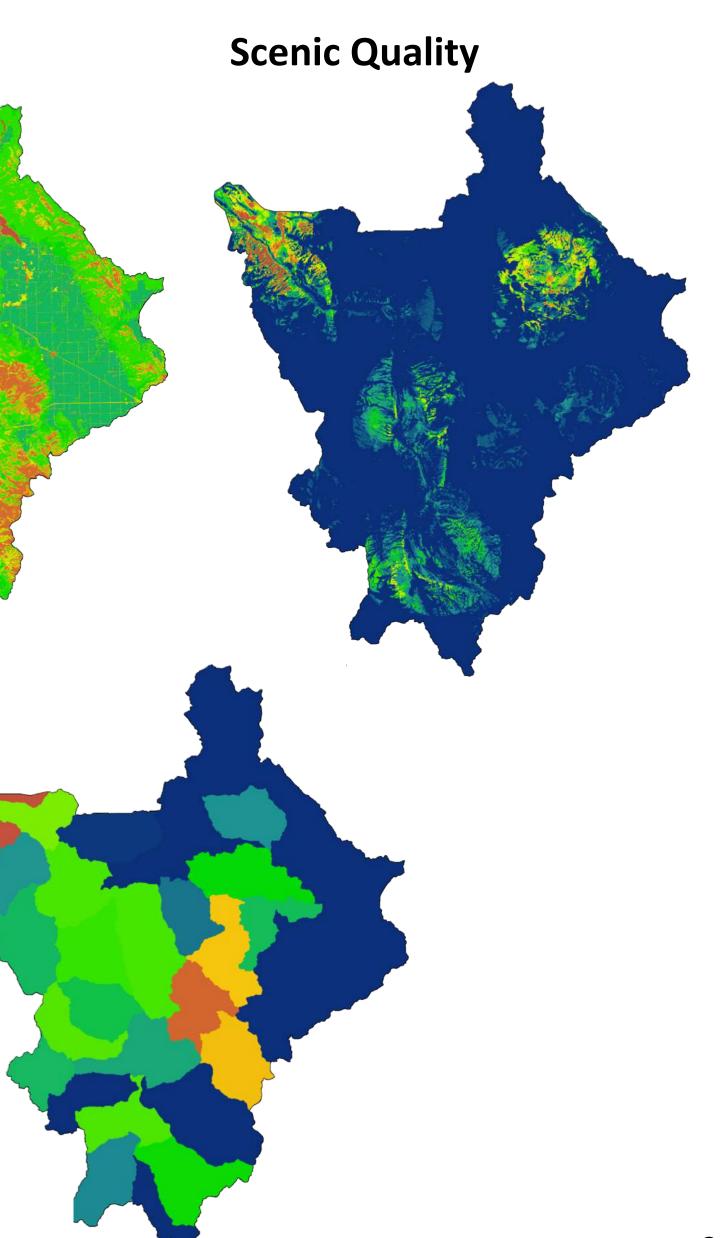
Conservation Easements



USFS Land

Areas of Intrest with Varying Levels of Protection

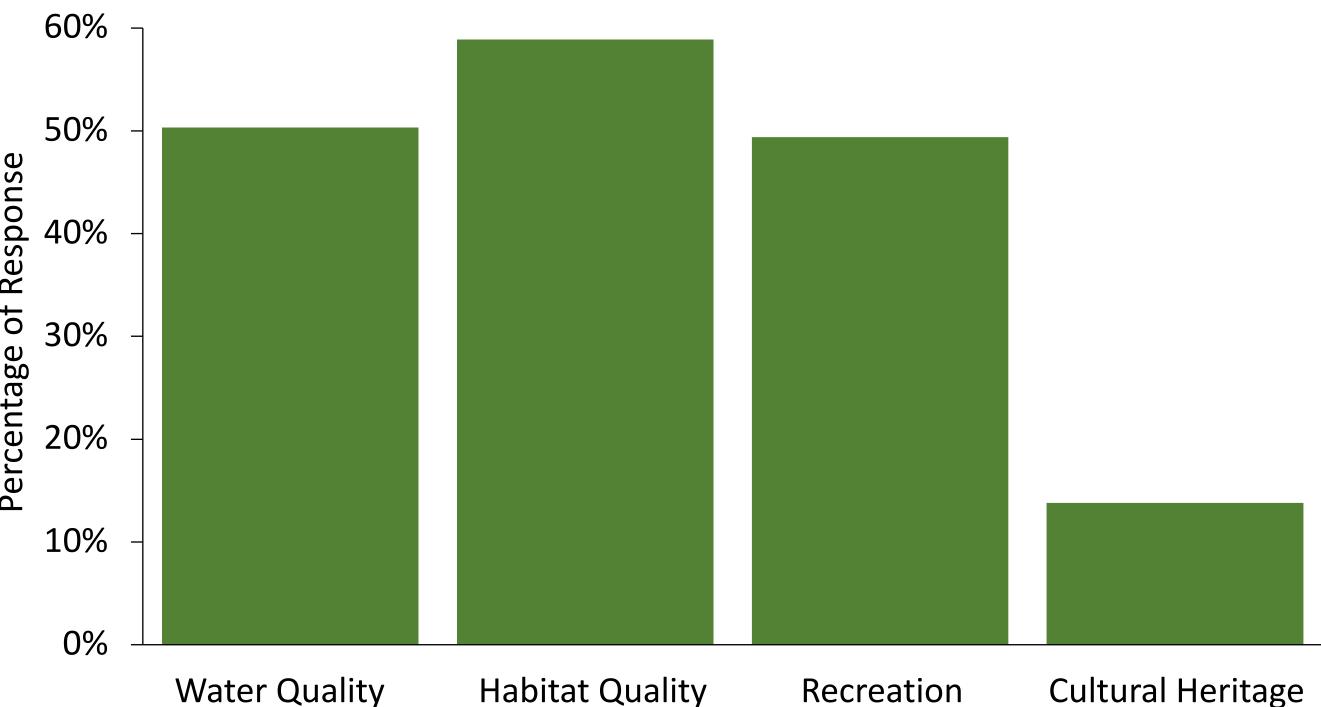
Dainee Gibson, Cristina Quintas-Soriano, Antonio Castro Social-Ecological Research Lab, Department of Biological Sciences, Idaho State University



Water Quality

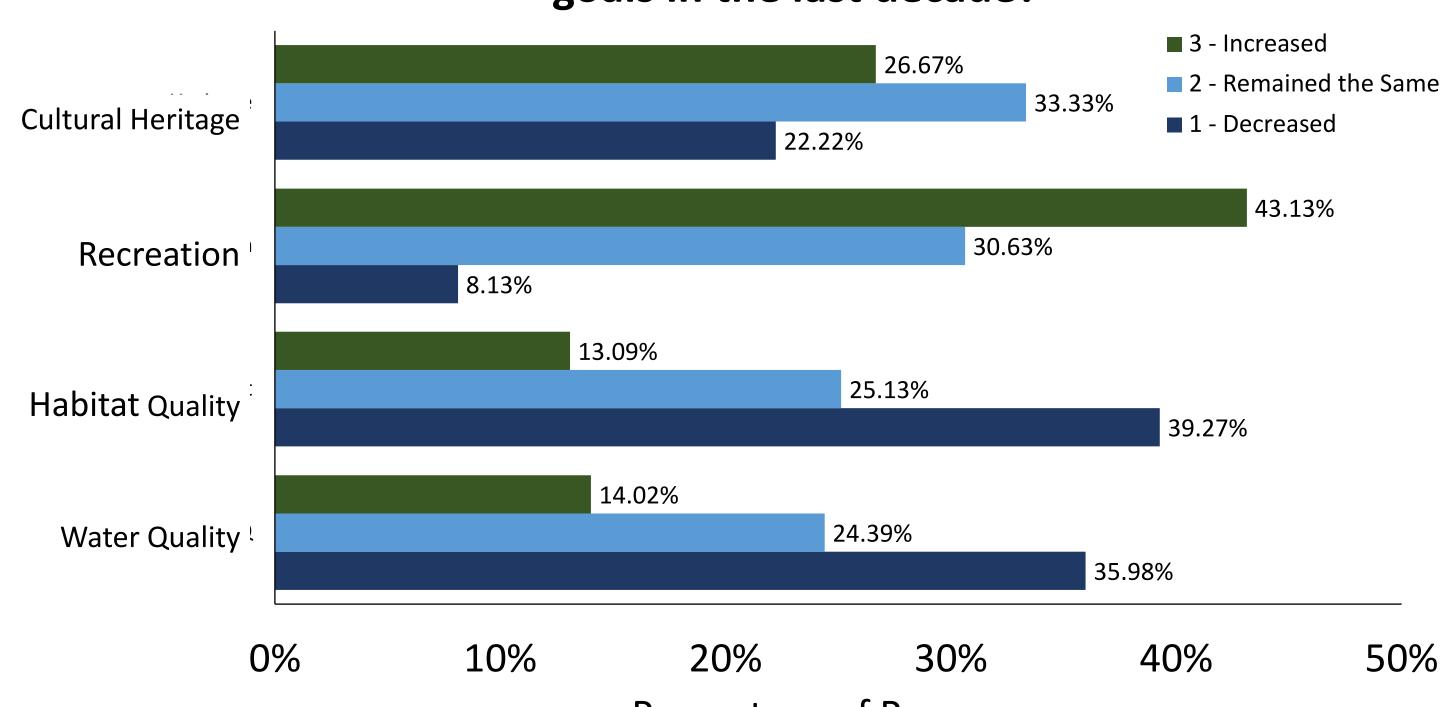
Social Demand of ES Conservation Goals





Water Quality

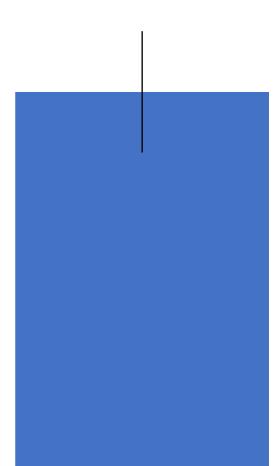
What has been the trend of these ES conservation goals in the last decade?



Ecosystem Services

All Summed





BLM Land

Private Land

Conclusions/Future Directions

Results suggest an agreement about the importance of conserving both habitat quality and water quality within the Portneuf, both of which have varying levels of provision throughout the area. Cultural heritage appears to be an overlooked service by the local stakeholders.

Working closely with the Sagebrush Steppe Land Trust, further data analyses will include a hotspot analysis of the ES supply, as well as an identification of private lands that supply multiple bundled ES at the same time. Future demand research will analyze specific stakeholder groups in terms of their opinions about these ES conservation goals.

Acknowledgements

This project was made possible by the NSF Idaho EPSCoR Program and by the National Science Foundation under award number IIA-1301792. Additional thanks to Matt Lucia and the Sagebrush Steppe Land Trust for their continual support and collaboration. Please contact Dainee at gibsdain@isu.edu or visit antoniojcastro.com for additional information.





What ES conservation goals are most important for **Portneuf watershed stakeholders?**

Percentage of Response





