Sustainable Northwest

Oregon Coast Community Forest Initiative

Mid-Coast Place Based Planning Partnership Meeting

April 23rd 2019

Outline

Introduction

Problem Statement

Community Forest Model and NW Community Forest Coalition

Case study: Arch Cape

Modelling tools: Arch Cape results

Conclusion: How can we collaborate with our Mid-Coast partners

Reference slides : Funding road map

Sustainable Northwest

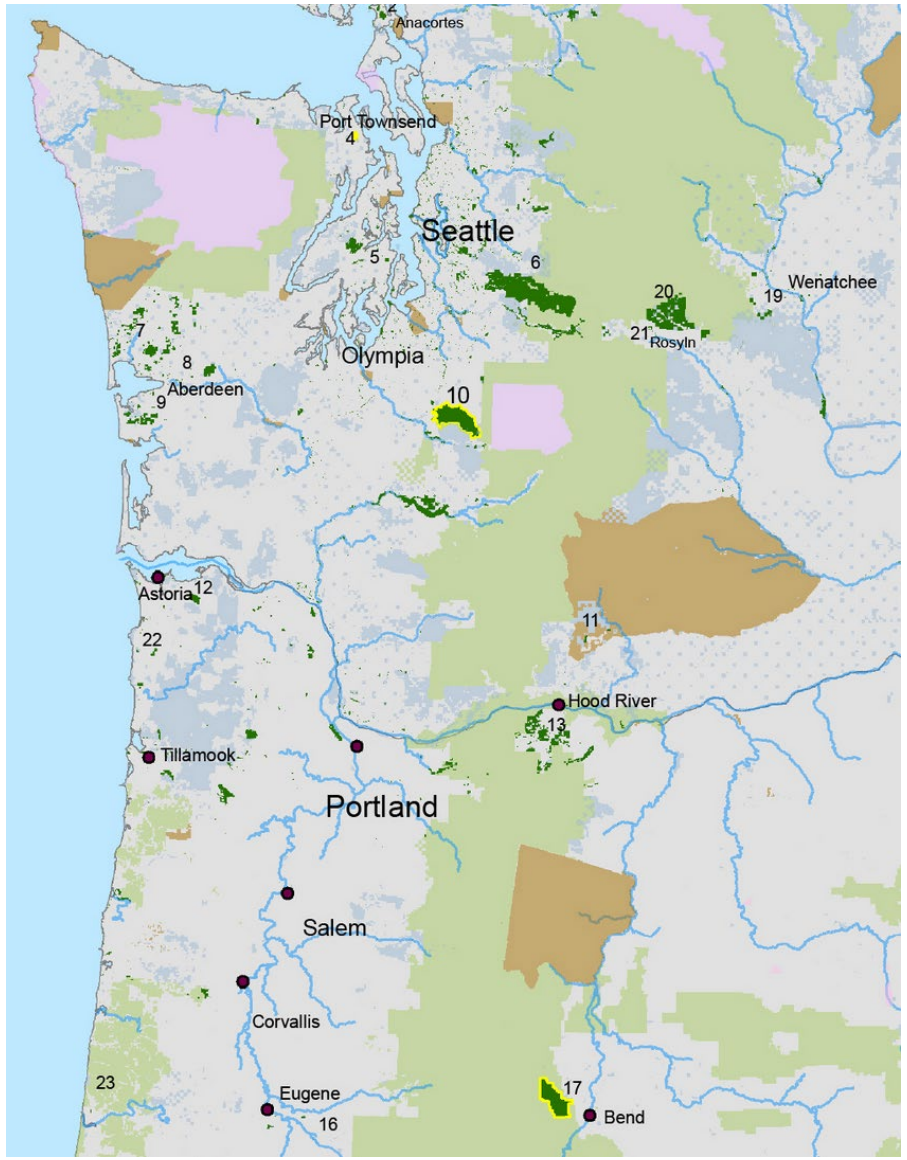
…brings people, ideas, and innovation together so that nature, local economies, and rural communities can thrive.

Northwest Community Forest Coalition

- Created in May 2015
- 30 regional partners
- Policy, planning, and projects
- Committed to increasing the scale and extent of community forests in the region
- Pilot projects on the Oregon Coast work to ensure positive impact for watershed resilience and public health

NORTHWEST COMMUNITY FOREST COALITION

“NW” – mapping the geography



County, Municipal and Community Forests

1. Whatcom County – Canyon Lake Community Forest, etc.
2. Anacortes Community Forest
3. Seattle City Light
4. Chimacum Ridge – proposed for WA State Community Forest Trust
5. Kitsap County
6. City of Seattle
7. Hoquiam City Forest
8. Montesano City Forest
9. Grays Harbor County Forest
10. Nisqually Community Forest – proposed
11. Mt. Adams Community Forest
12. Astoria City Forest
13. Hood River County Forests
14. Wallowa Lake Moraines Partnership – proposed
15. Mt. Emily Recreation Area – Union County
16. Webb Community Forest
17. Skyline Community Forest – proposed
18. Indian Creek Community Forest
19. Stemilt-Squilchuck Community Forest – Chelan County
20. Teanaway Community Forest Trust (state owned)
21. Rosyln Urban Forest
22. Ecola Creek Forest Reserve (City of Cannon Beach)
23. Oregon Coast Community Forest Association

Mt. Adams Resource Stewards

Map produced by Mt. Adams Resource Stewards

More on our website http://nwcommunityforests.org/about-the-coalition/

Community Forest Definition and Principles

Community Forests are **working forests owned and managed by a local government or by a community-based organization** on behalf of a community and defined by the following characteristics:

Provide **local control over and enjoyment** of the monetary and non-monetary benefits offered by forest resources.

Governance structure **ensures collaboration and community participation** in and responsibility for management decisions.

The community has **secure and reliable access to forest benefits** that support and reinforce community priorities.

The conservation values of the **forestland ecosystem are permanently protected**.

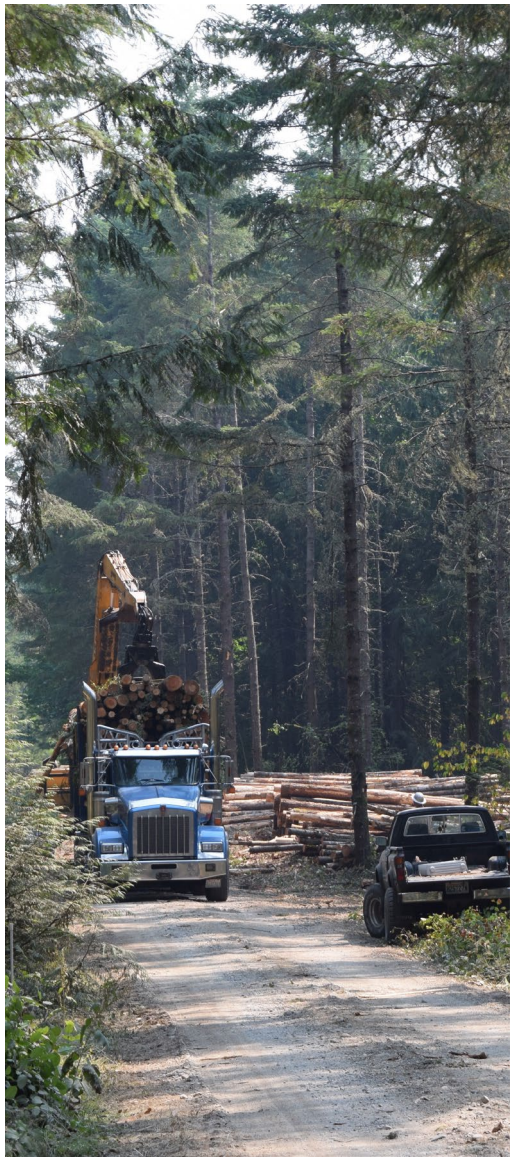
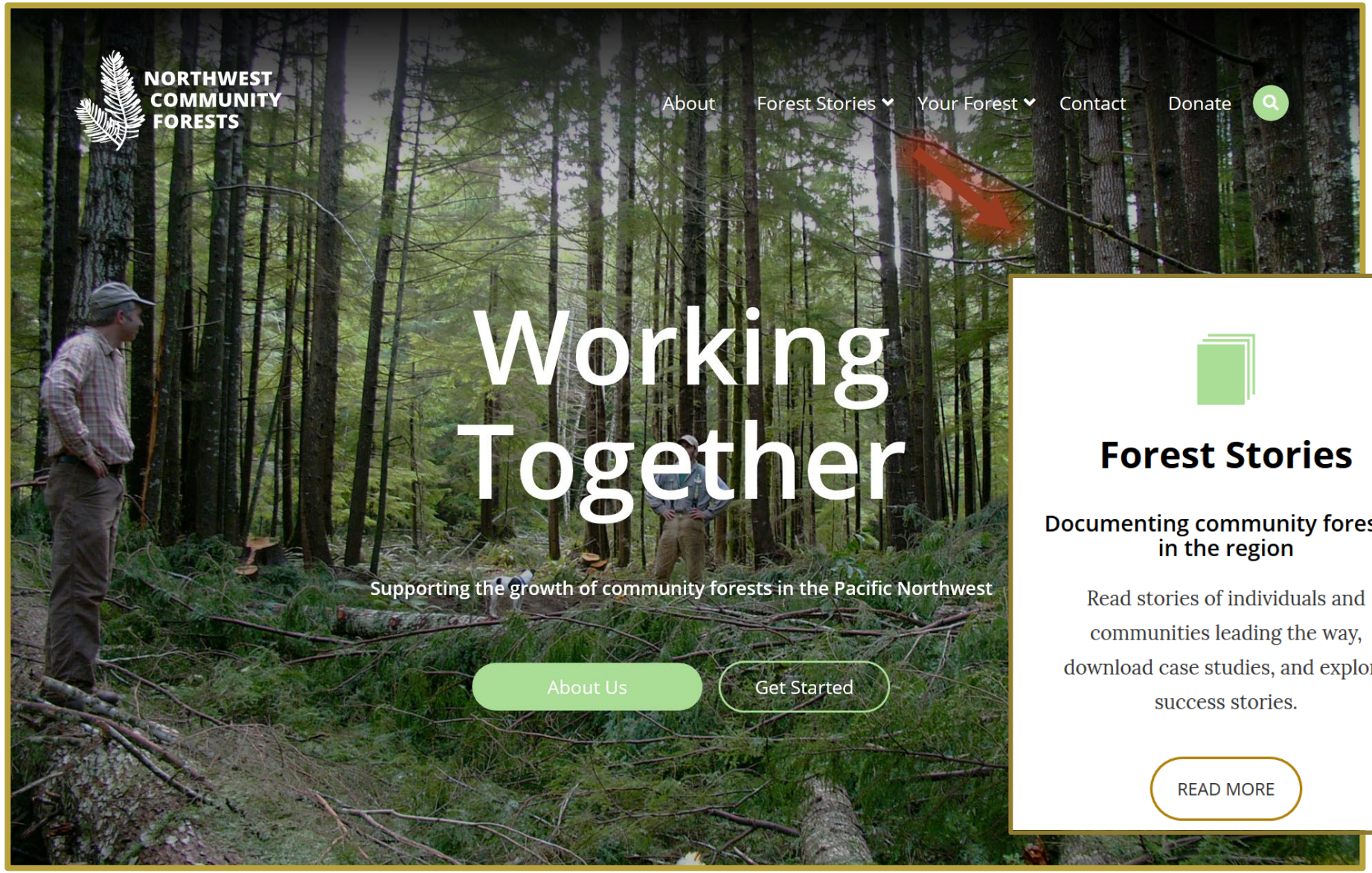


Image: 2017 Field Tour of Chimacum Ridge

Our Website: NWCommunityForests.Org



Resource Guide coming soon!

Example: Arch Cape

Community Forest Definition and Principles

- Drinking water protection
- Local decision-making authority
- Local benefits of forest uses
- Conservation easements, Land swaps, Low-impact forest management

Forestry | Land | *Ecotrope*

Cannon Beach trades timberland for watershed

by **Cassandra Profita** Follow Ecotrope Sept. 8, 2010 4:22 a.m. | Updated: Feb. 19, 2013 1:46 p.m.

The Oregon Board of Forestry today agreed to swap several hundred acres of forestland in Cannon Beach's watershed for city-owned forest parcels nearby.

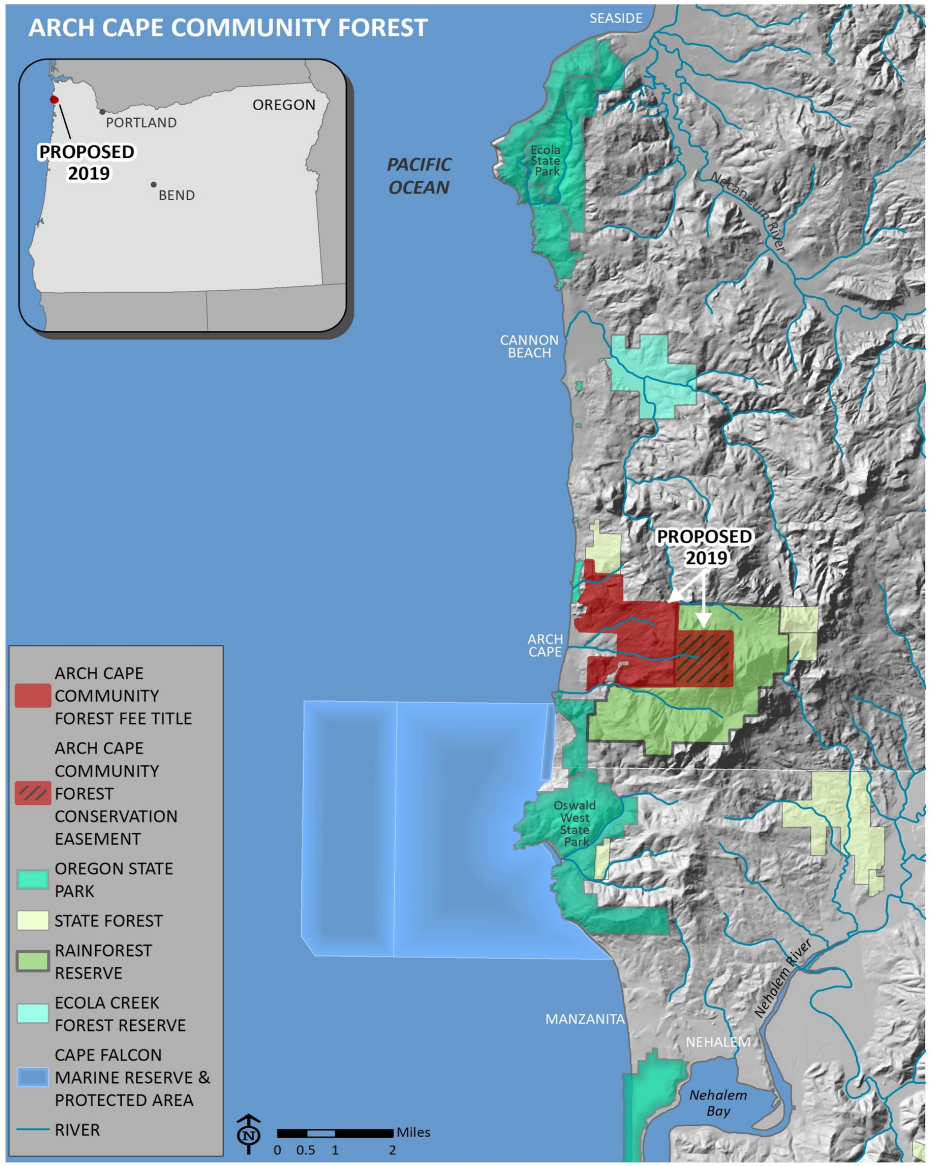
The deal has been in the works for awhile, and has been hailed as a win-win for both parties. Cannon Beach gets ownership of most of its watershed, and the Oregon Department of Forestry gets an equivalent parcel of land it can manage for timber, recreation and habitat.

The city brought the deal to the state, and then went out of its way to pass a $4 million bond measure last year so it could buy forestland with equivalent timber value to trade. Now, the city enters a new phase of deciding how to manage forestland for environmental and recreational values.

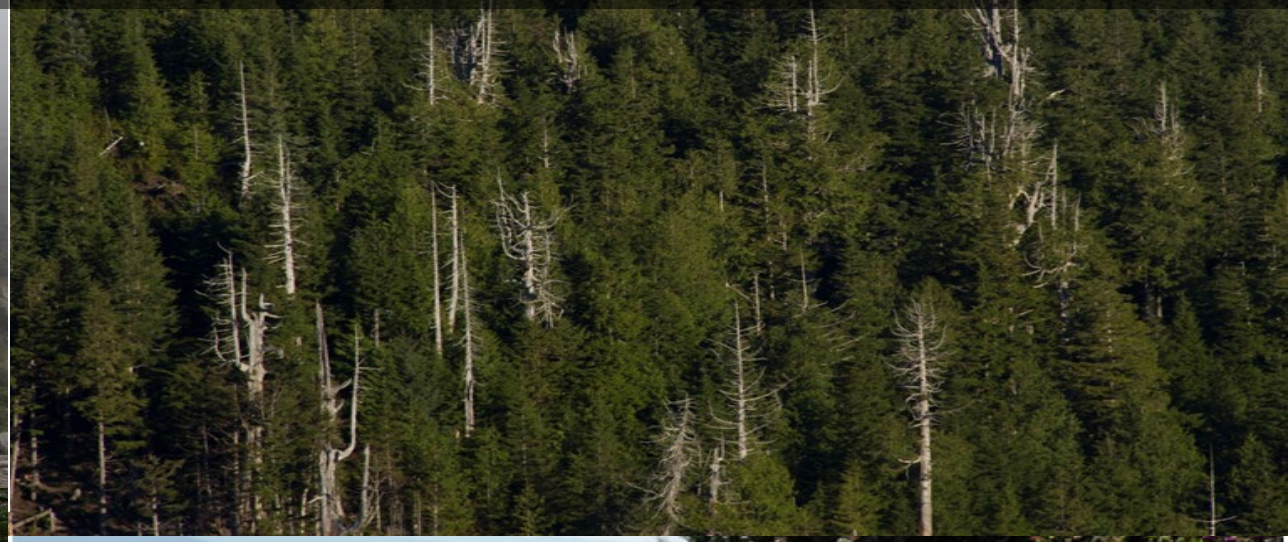
In a land exchange approved today by the Oregon Department of Forestry, the city of Cannon Beach will take ownership of its watershed from the state and protect it from water-quality impacts such as logging.

earthFIX
news fixed on the environment

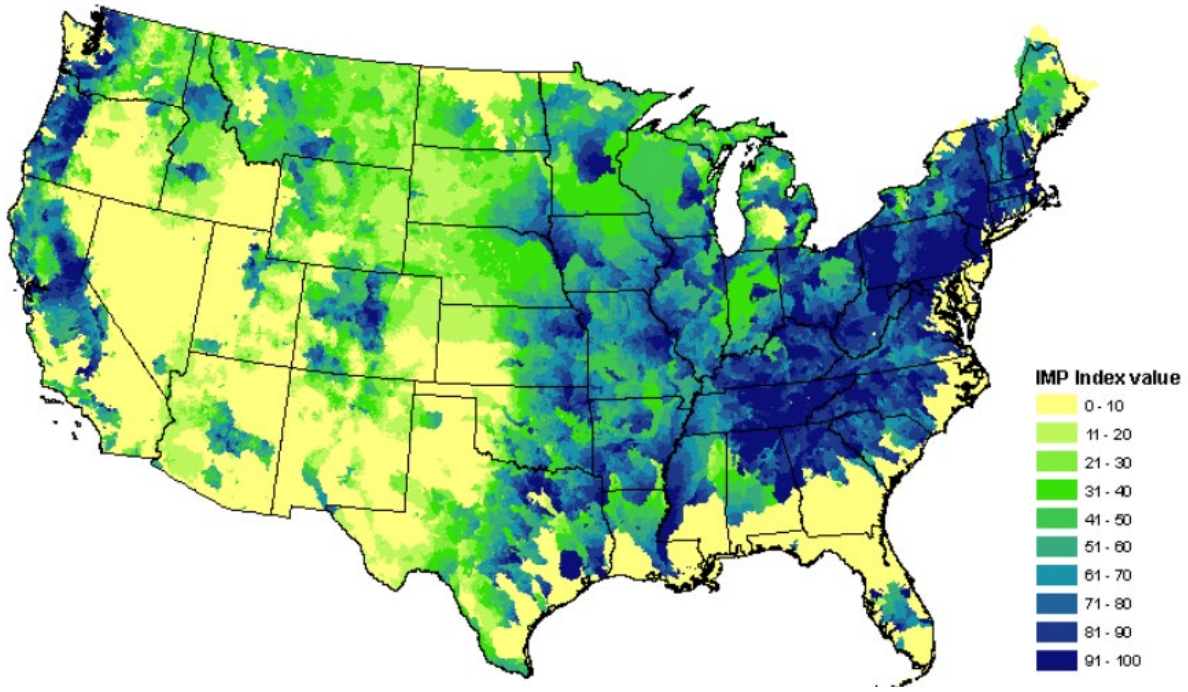
EarthFix is a public media partnership of Oregon Public Broadcasting, Idaho Public Television, KCTS9 Seattle, KUOW Puget Sound Public Radio, Northwest Public Radio and Television, Jefferson Public Radio, KLCC and the Corporation for Public Broadcasting.



The District has spent over $1 million during the last several years to remedy the water treatment plants inability to effectively treat the surface water, leading to the District building a new water treatment plant.

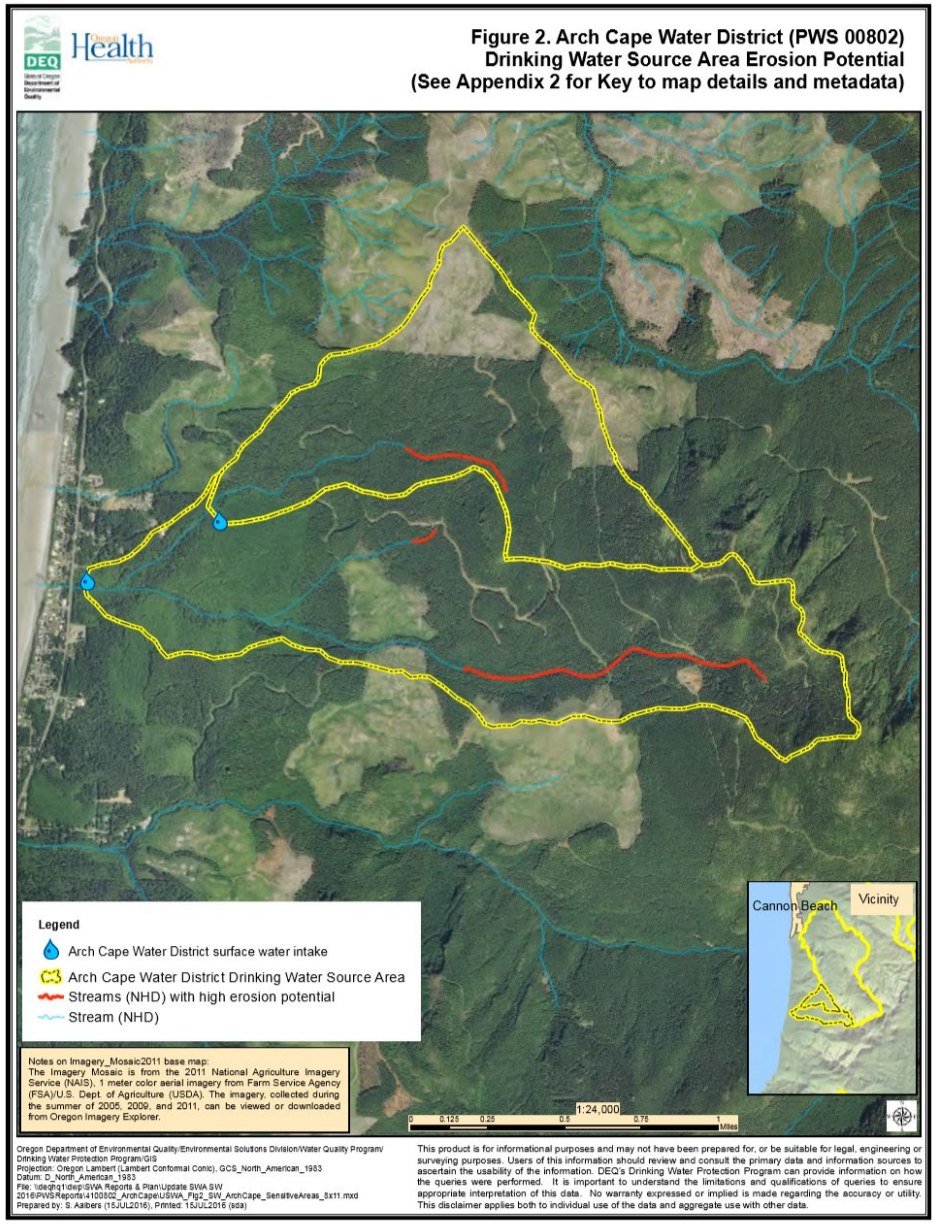


Drinking watersheds on the Oregon Coast

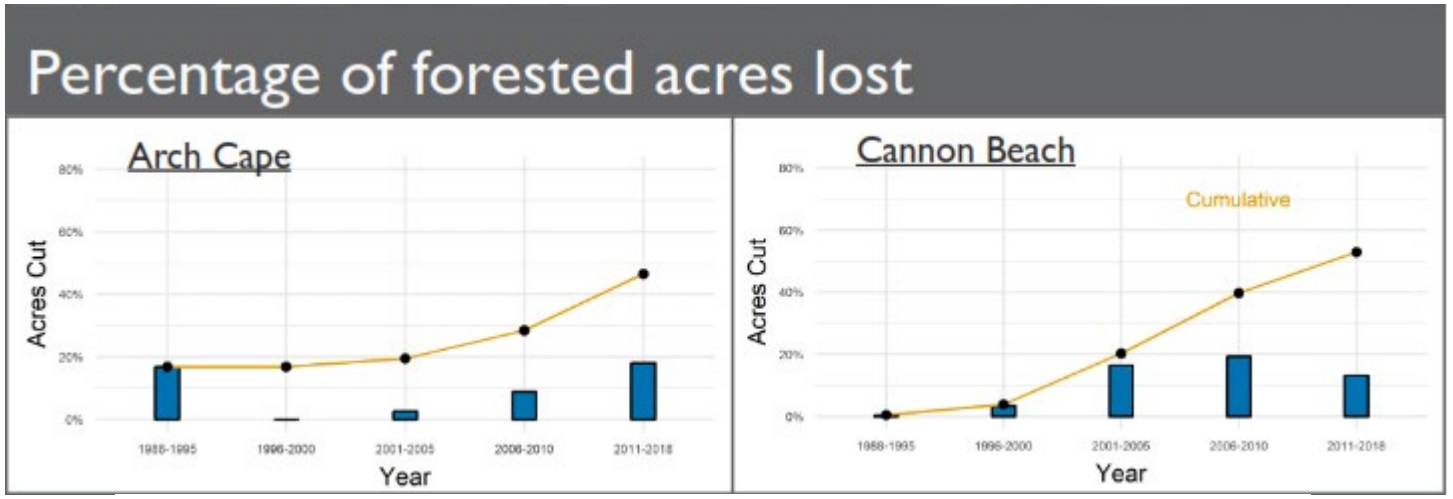


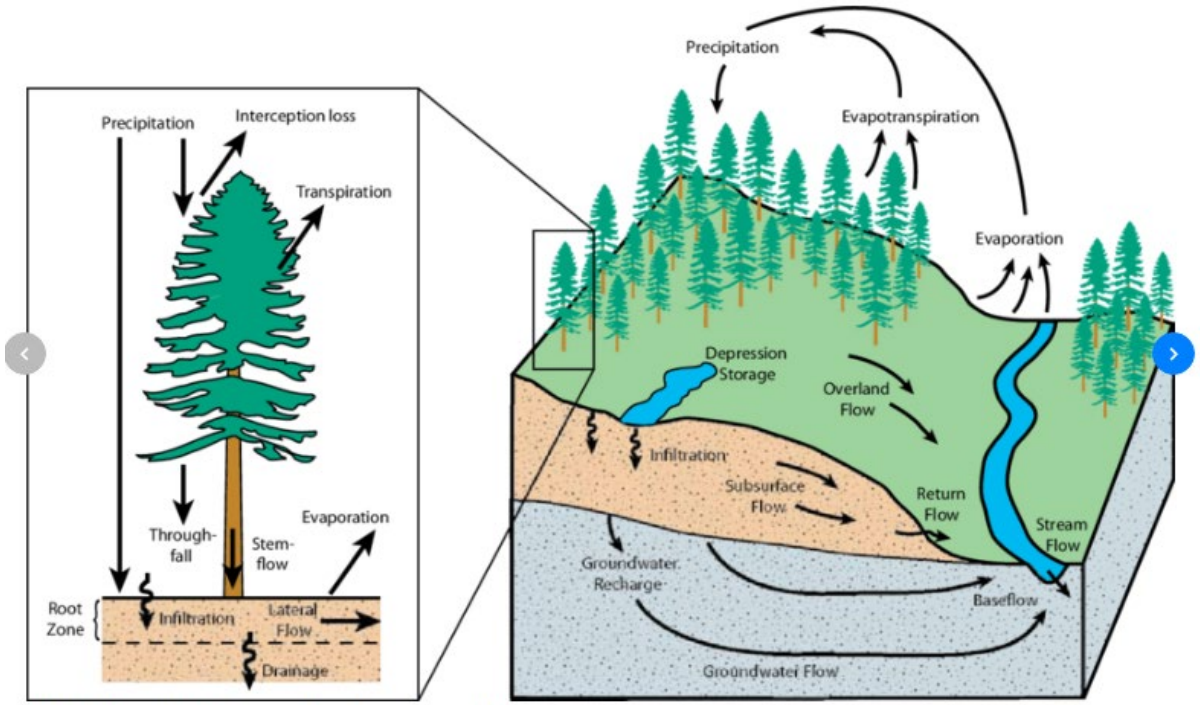
- Higher values represent areas most important for surface drinking water (USDA Forests to Faucets Data, 2016)
- 50 drinking watersheds on the coast are at risk and need resilience planning

Conservation Planning

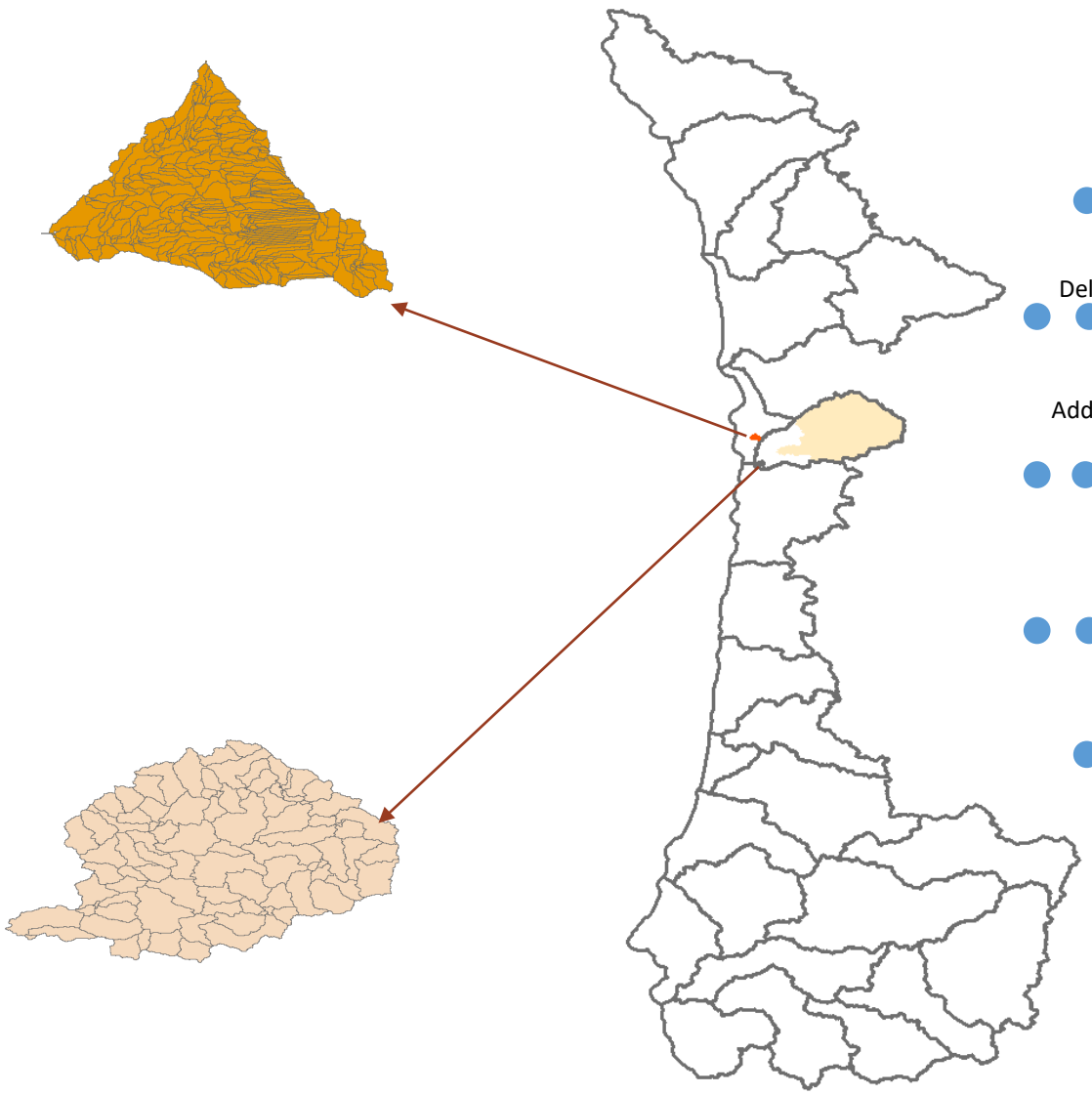


Updated with additional NRCS data 11/3/2016





Hydrological Modeling



Water Balance equation used in SWAT modeling

$$SW_t = SW_0 + \sum_{I=1}^{t} (R_{day} - Q_{surf} - E_a - w_{seep} - Q_{gw})$$

Data preprocessing

Delinate watersheds

Add Landuse (slope and soils)

Define HRU's

Input weather data

Model Simulation

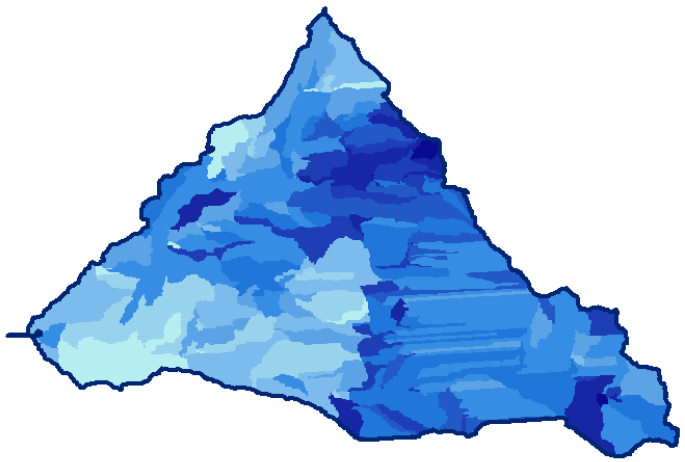
Post-processing and Calibration

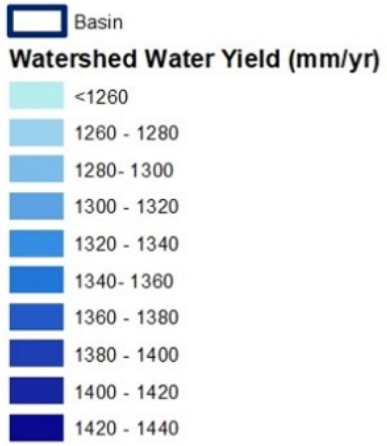
Baseline Scenario

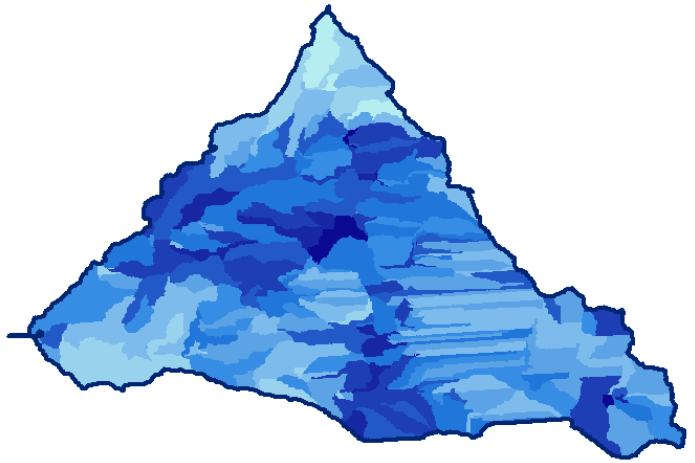
Harvest Scenario

Source: Dr. Adnan Rajib, ORISE Fellow, EPA ORD Cincinnati
https://mygeohub.org/groups/water-hub/swatshare_landing

Comparison of Spatial Hotspots



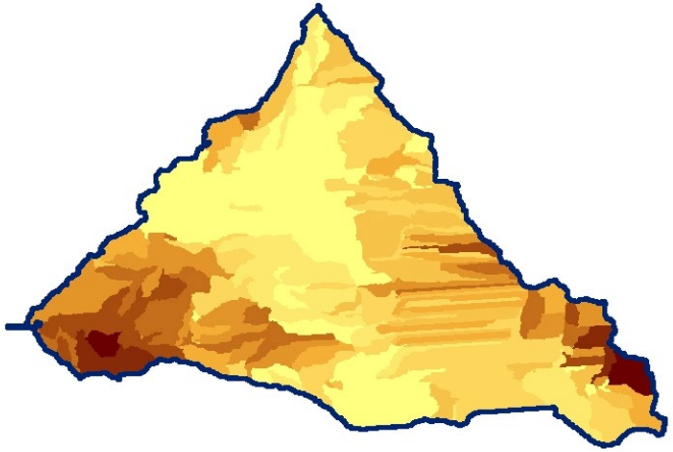


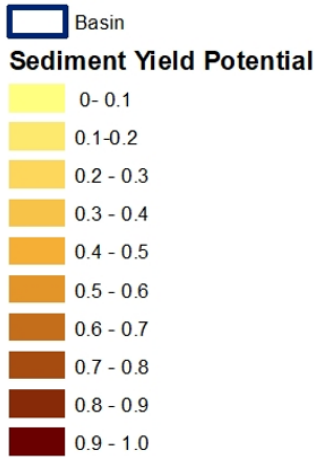


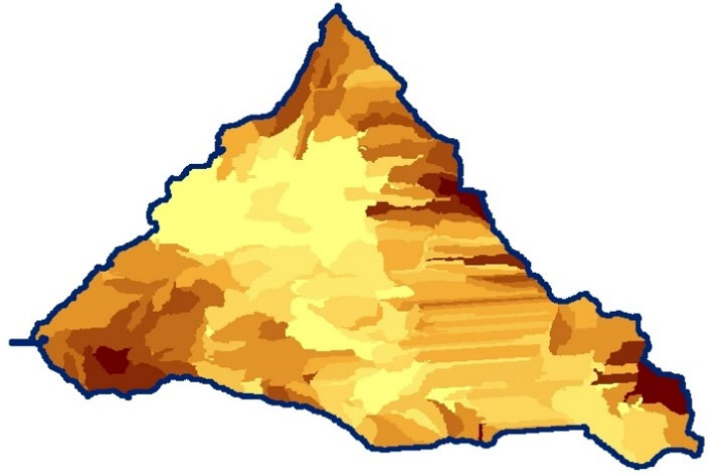
Baseline

Warmer colors mean high sediment yield and water yield from catchments

Harvest

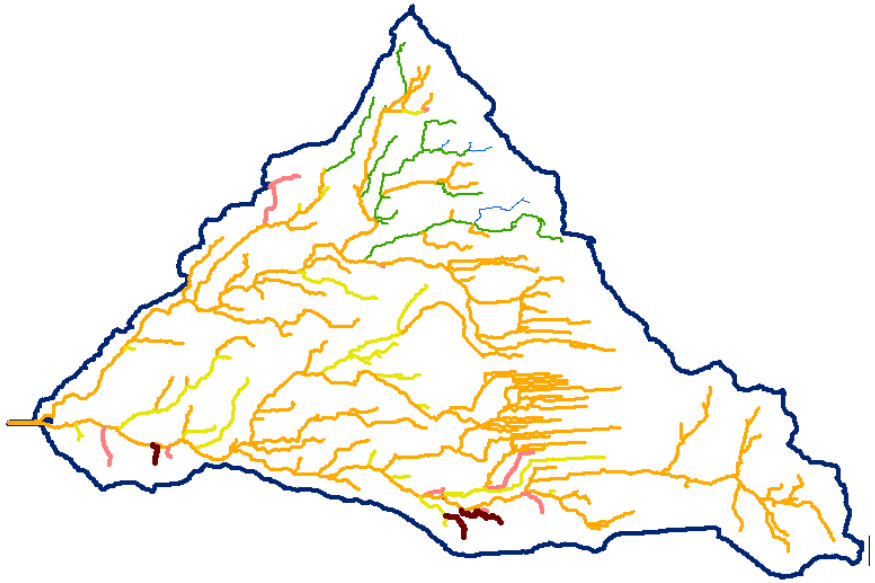




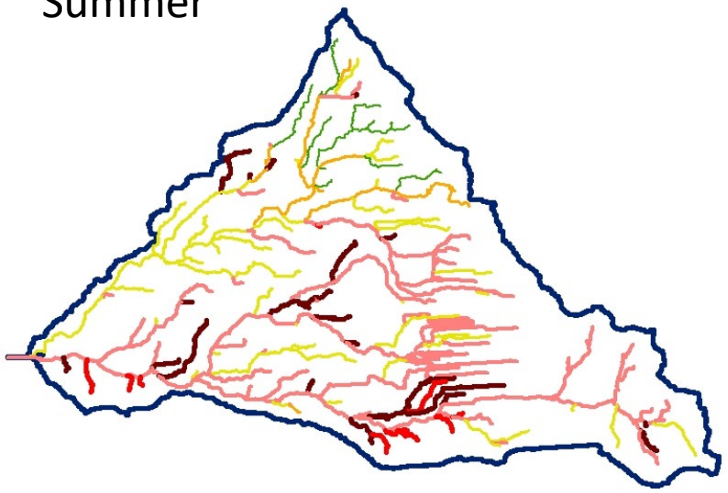


Lower water yield post harvest. Fog drip from the canopy might play a role in the water balance. (Har, 1982)

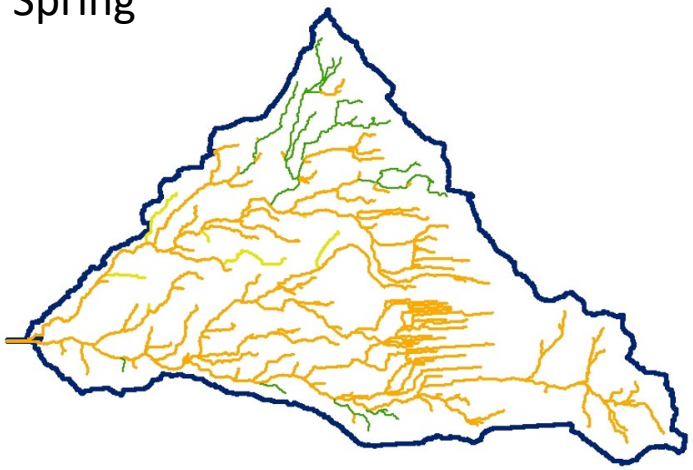
Annual Changes in Streamflow



Summer



Spring

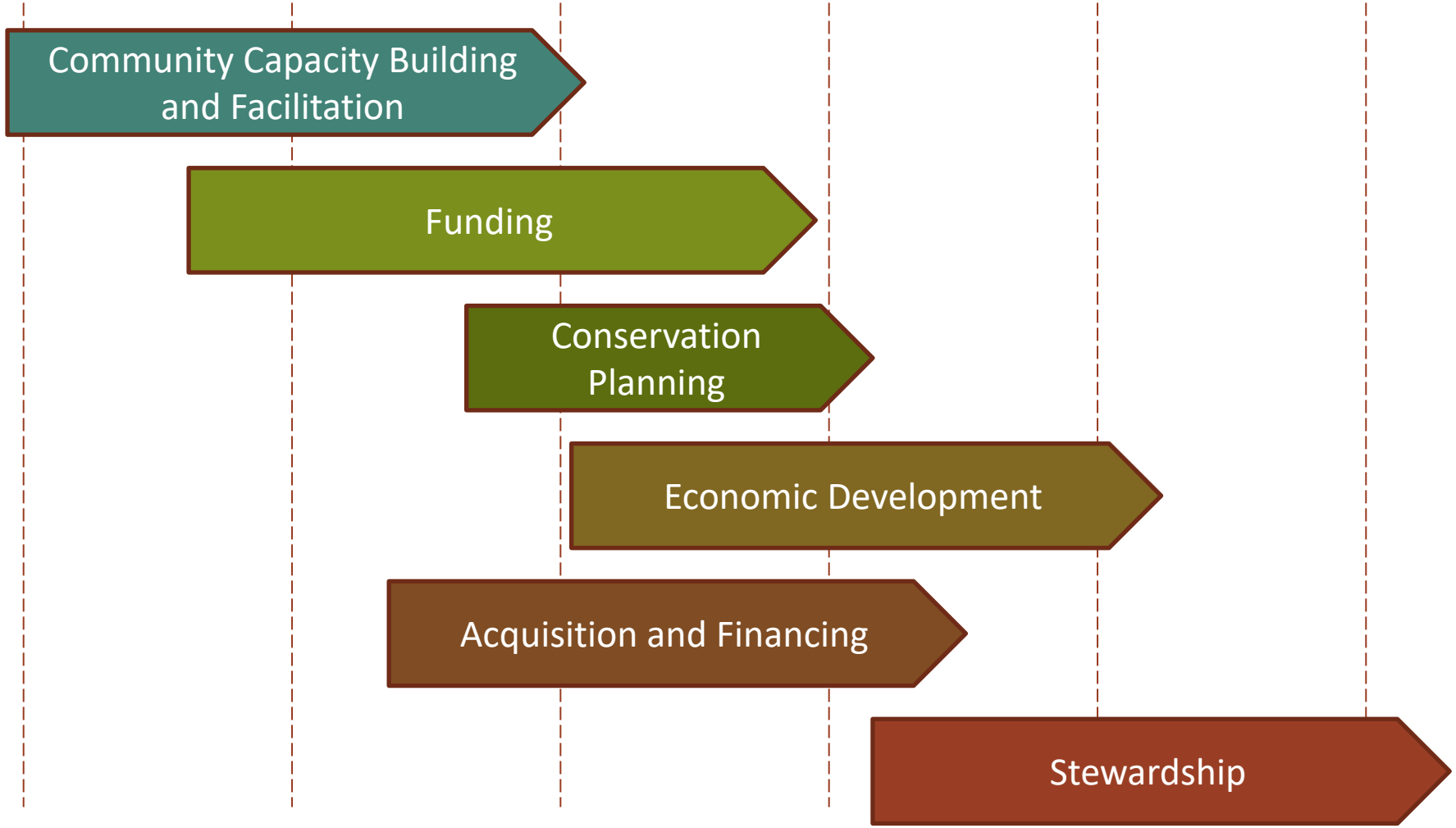


- Overall the streamflow decreases for Arch Cape. During summer the base flow (groundwater recharge) contributes to the streamflow without rainfall.

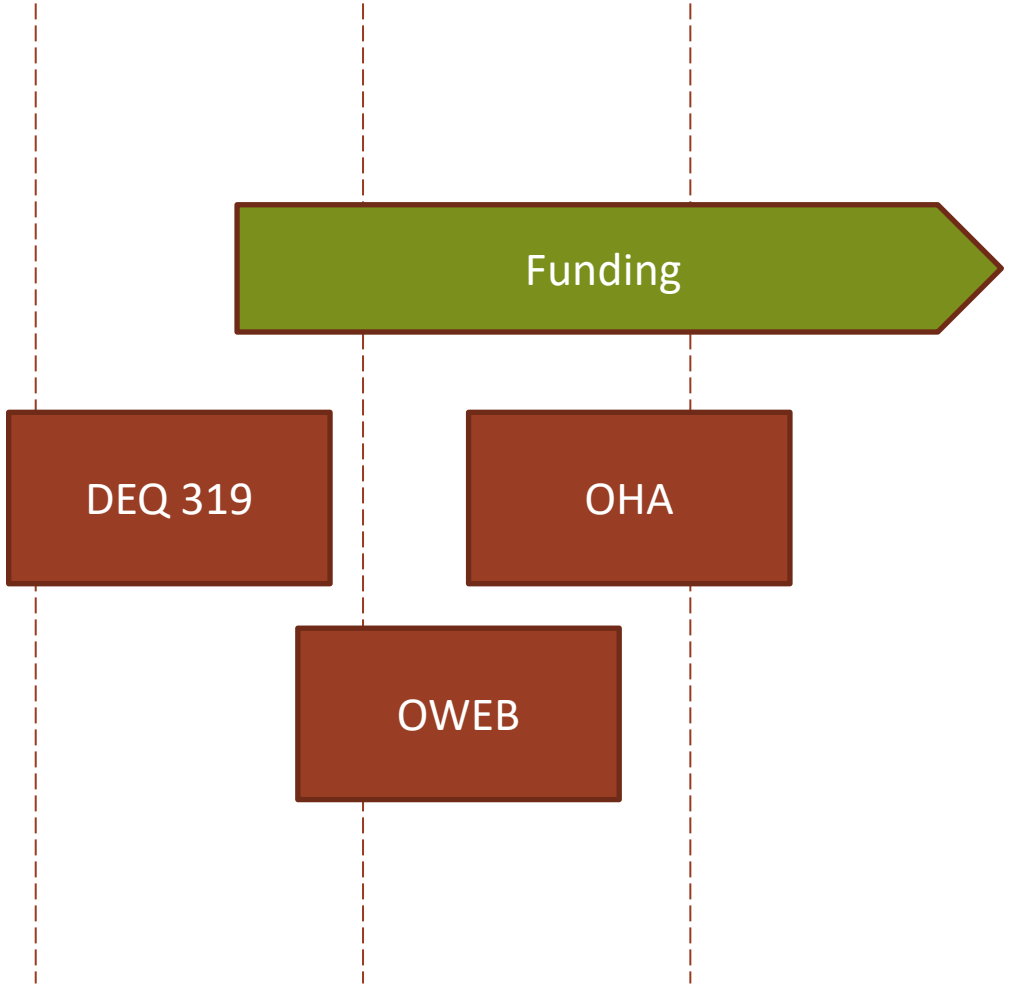
Discussion Questions

- How do the modeling results align with the experience of local water managers?
- Local interest in exploring community ownership of strategic parcels within the DWSA?
- Local partners and organizations to connect with?
- How can Sustainable Northwest help providing technical assistance?

Roadmap


Community Capacity Building and Facilitation
Funding
Conservation Planning
Economic Development
Acquisition and Financing
Stewardship

Funding



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