

Optimizing Restoration Investments in the Truckee Watershed

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Lots of Restoration Investments in Truckee Watershed



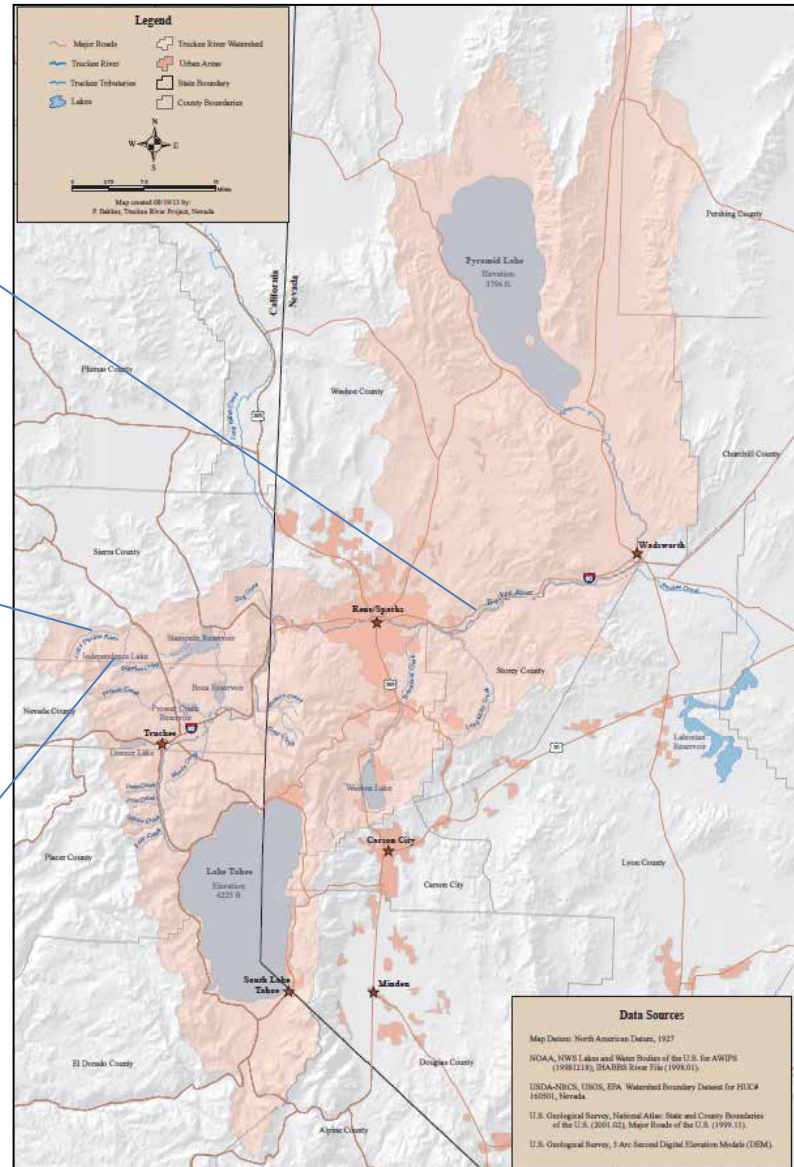
Stream restoration - McCarran



Meadow restoration - Perazzo

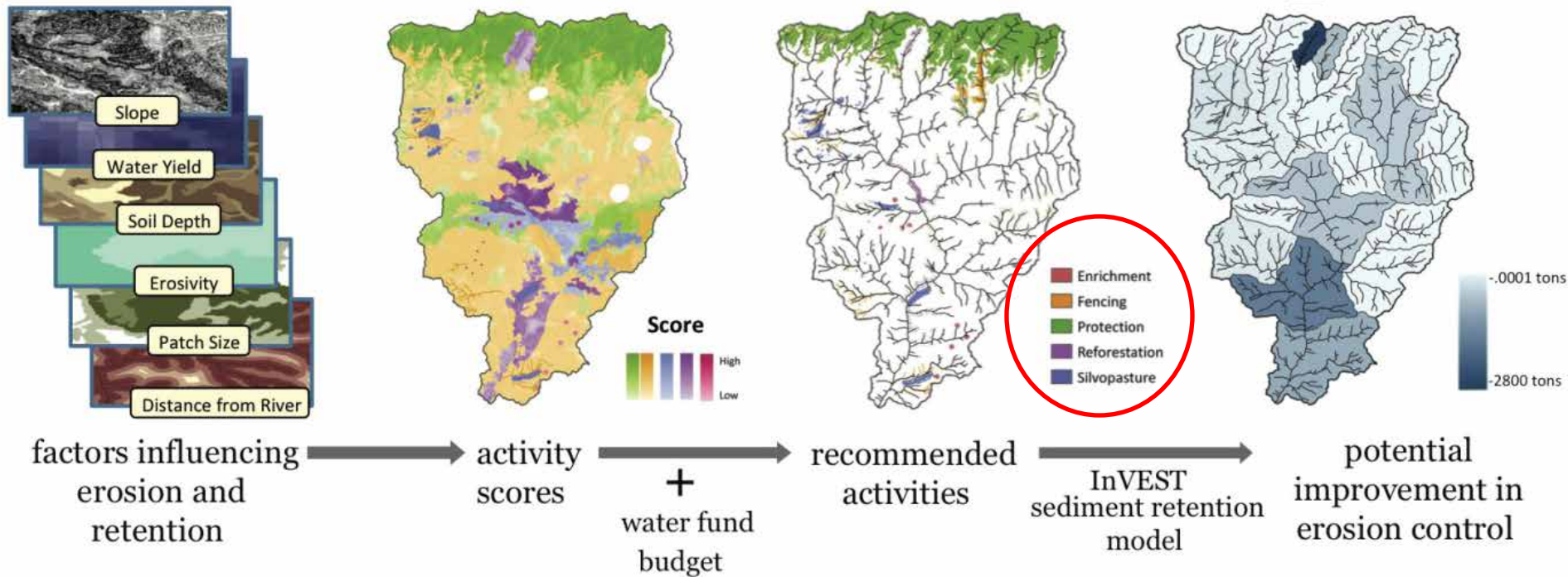


Forest restoration – Independence Lake





Resource Investment Optimization System



Combines biophysical, social, and economic data to identify best locations for protection and restoration to maximize the ecological return on investment.

Water Benefits from Restoration Economic Study



Forest Restoration



Land Conservation



Meadow Restoration

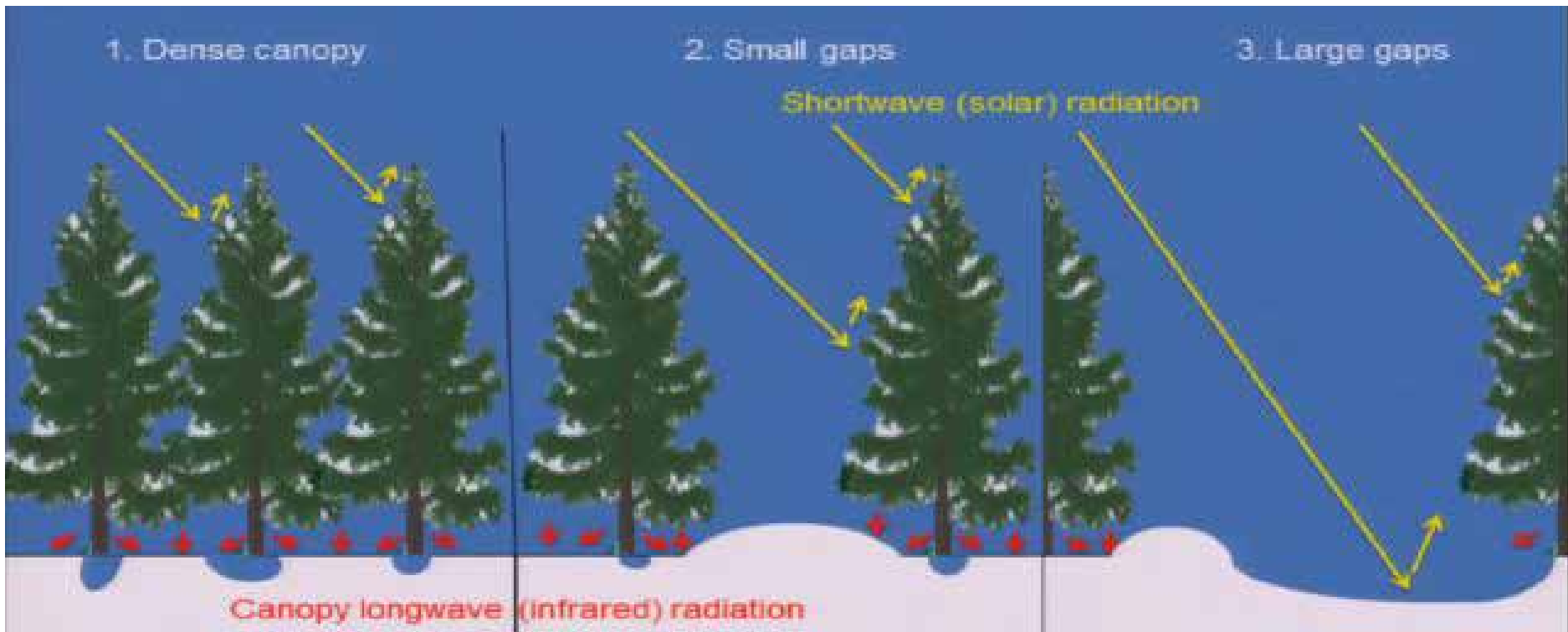
76,544 acres

17,896 acres

2,450 acres private;
1,885 acres private

Science and Economics of Water Benefits

Forest Restoration



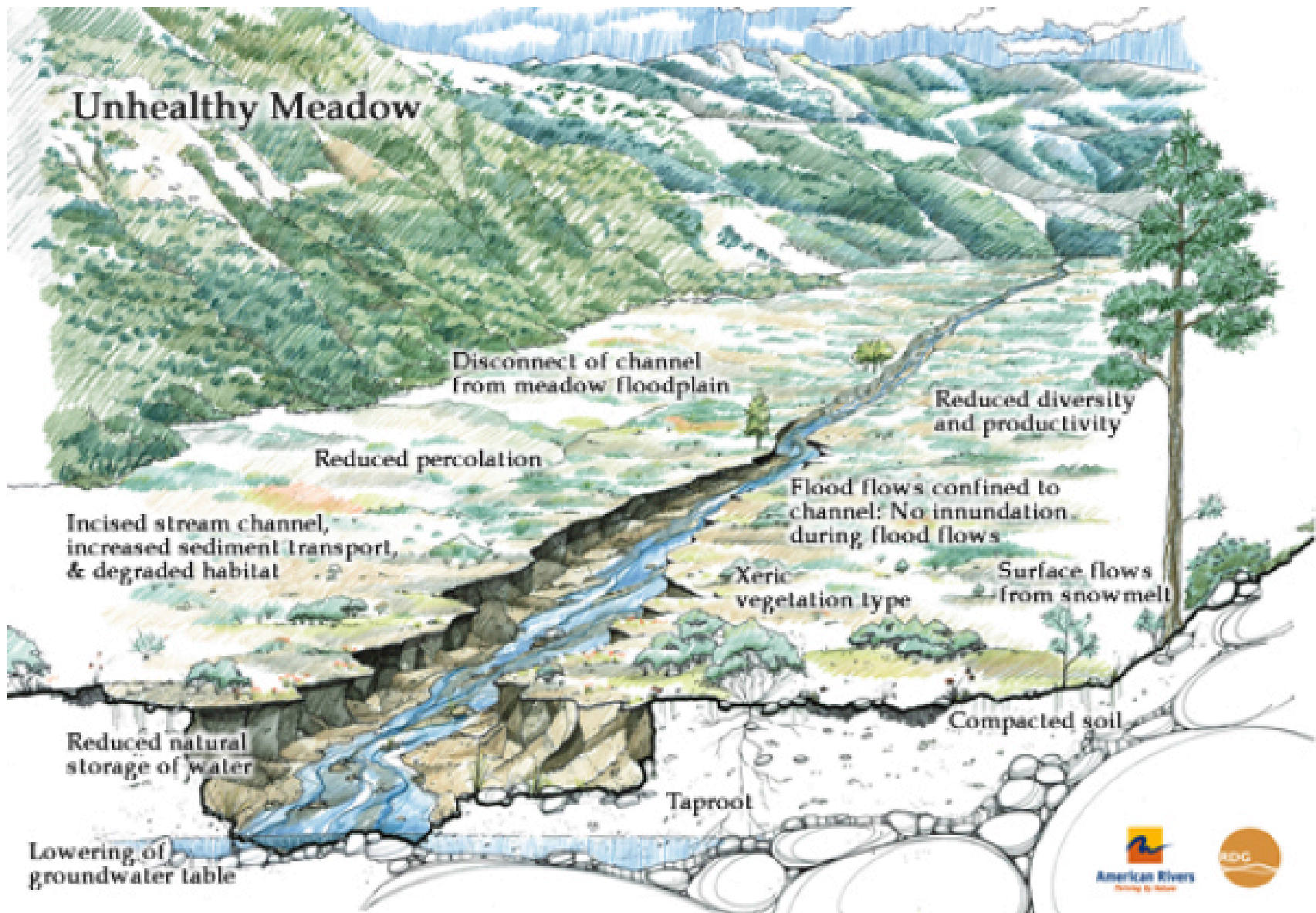
Science and Economics of Water Benefits



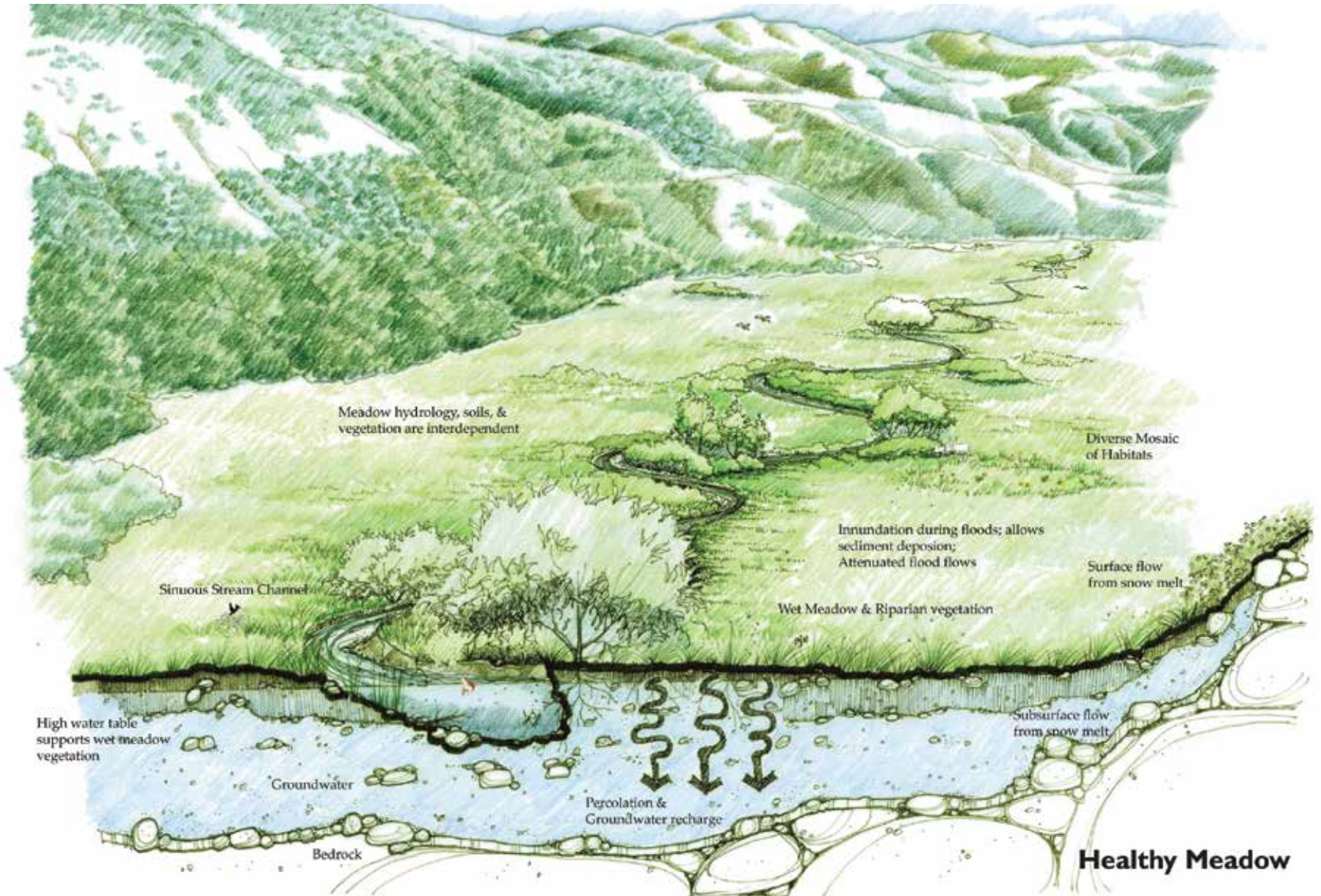
Forest Restoration



Science and Economics of Water Benefits



Science and Economics of Water Benefits



Science and Economics of Water Benefits



Forest Restoration



Land Conservation



Meadow Restoration

0.1-0.4 AF/acre
increase in water

7,654-30,618 AF

0.01-0.6 AF/acre
increase in water

213-2,130 acre feet

0.5-0.7 AF/acre
shift in water timing

943-1,320 acre feet

1 Acre Foot (AF) = 325,851 gallons

Water Benefits from Restoration Economic Study



Forest Restoration



Land Conservation



Meadow Restoration

\$200-\$1,000/acre

\$566-801/acre

\$1,869-\$2,514/acre

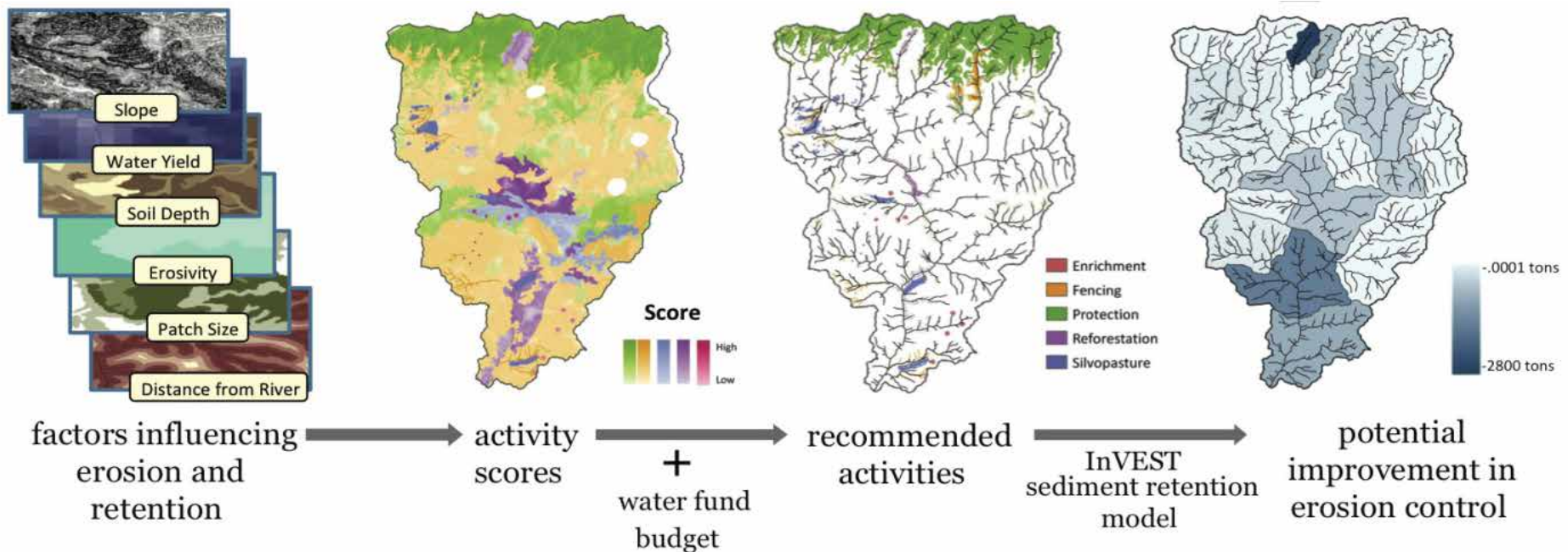
\$50 million (1/2 land conservation)

Benefit - Cost Ratio = 50-75%

Optimizing Restoration Investments

Which set of watershed investments (in which activities, and where) will yield the greatest returns towards multiple objectives?

What change in ecosystem services can I expect from these investments?



Optimizing Restoration Investments

<i>National Fish and Wildlife Foundation</i>	<i>\$227,700</i>
<i>The Nature Conservancy</i>	<i>\$121,325</i>
<i>Truckee River Fund, TMWA</i>	<i>\$32,775</i>
<i>Northern Nevada Water Planning Commission</i>	<i><u>\$58,075</u></i>
<i>Total</i>	<i>\$439,875</i>

Optimizing Restoration Investments

Summer 2014-Spring 2016

- Data collection to run model
- Stakeholder engagement with key public and private partners.
- Model Development – develop scenarios for restoration activities that will maximize water yield and quality in the headwaters in the most cost-effective manner.