

Broadening the Scope to Increase Resilience: Expanding Stormwater Management Beyond Regulated Areas

Bruce Roll, Director Watershed Management



“ Houston, We Have a Problem ”

Clean Water Services

- **Water resources management utility serving 600,000 residents of urban Washington County**
- **Wastewater treatment, stormwater management and regional water supply planning**
- **12 Partner Cities**
- **State's fastest growing County**



Hard Questions

- **How do we move from utility obligations to large landscape restoration on a watershed scale?**
- **How do we integrate multiple water quality and ecological needs into an effective focused community restoration program?**
- **How do we ensure that restoration projects have 20 years of stewardship?**
- **How do we weave EXISTING local, state and federal resources together to maximize water quality and ecological benefits?**





Landscape-scale conservation is a concept that has arisen in response to the challenges of interesting weather events, urbanization and a perceived excessive focus on site based conservation. It aims to take a holistic approach, looking not just at biodiversity issues, but also issues such as local economies, agriculture, and the health and social benefits of the environment.



Watershed Resilience



Sustainable Economies



Recreation and Human Health

Landscape Conservation Values



Connected Habitat and Biodiversity



One Water

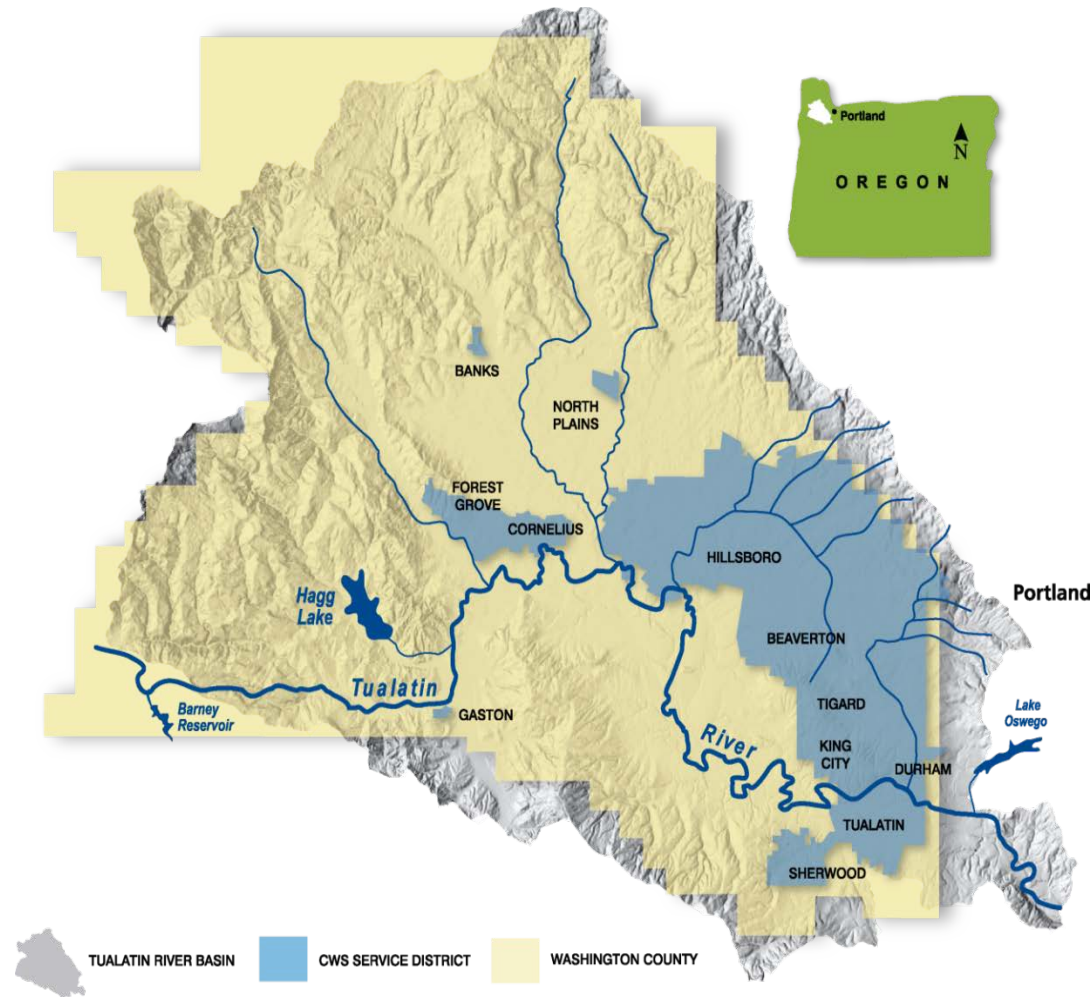


Cultural Heritage and Local Sense of Place

Adapted from www.largelandscapenetwork.org

Tualatin River Watershed

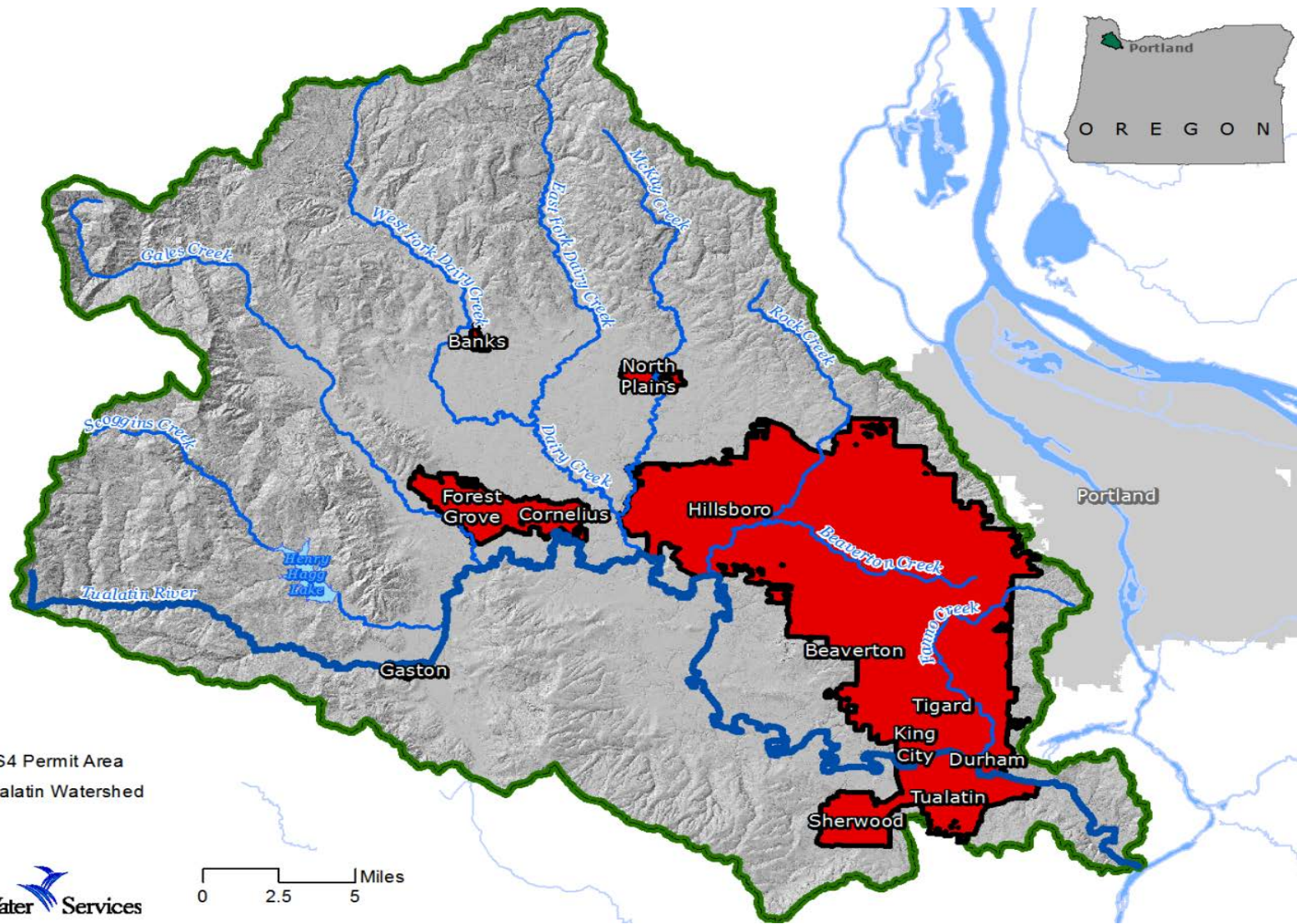
- 712-square mile basin, 80-mile river
- Only source is rainfall
- 15% Urban
- 35% Agriculture
- 50% Forestry




The Catalyst: Watershed-based Permit

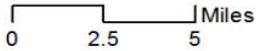
- Nation's first Municipal Watershed-Based NPDES Permit issued in 2005
- Integrated permits for 4 treatment plants and municipal stormwater system (MS4)
- Includes water quality trading
 - Riparian restoration
 - Flow restoration





-  MS4 Permit Area
-  Tualatin Watershed

CleanWater  Services

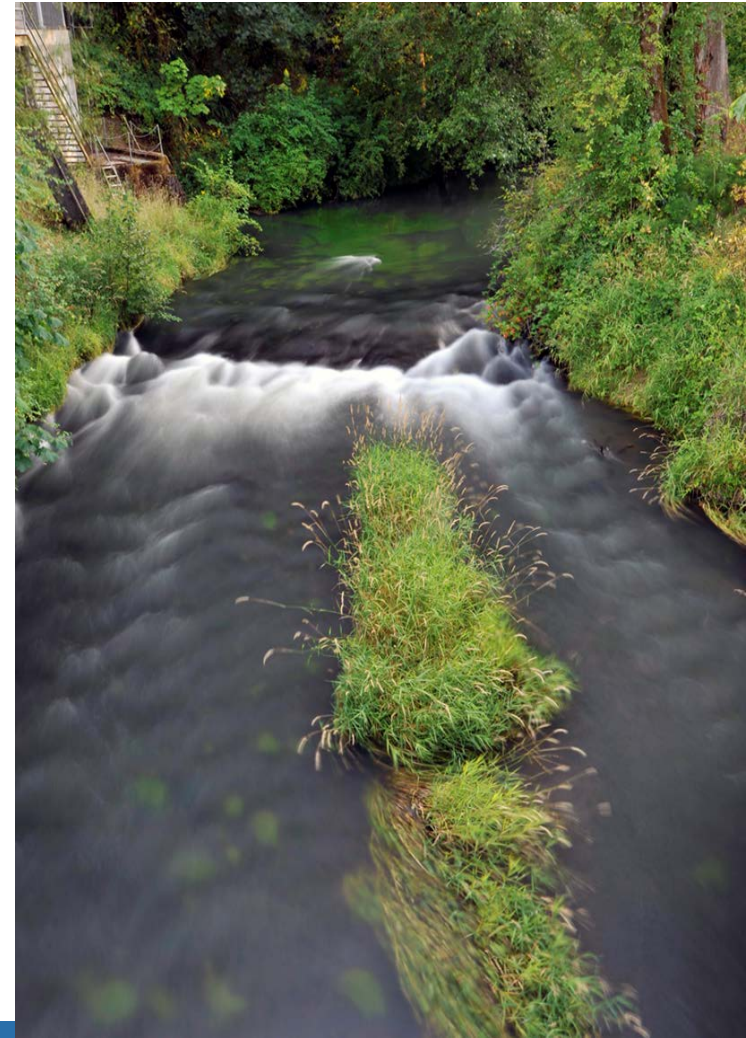


Steps in the Watershed Planning Process

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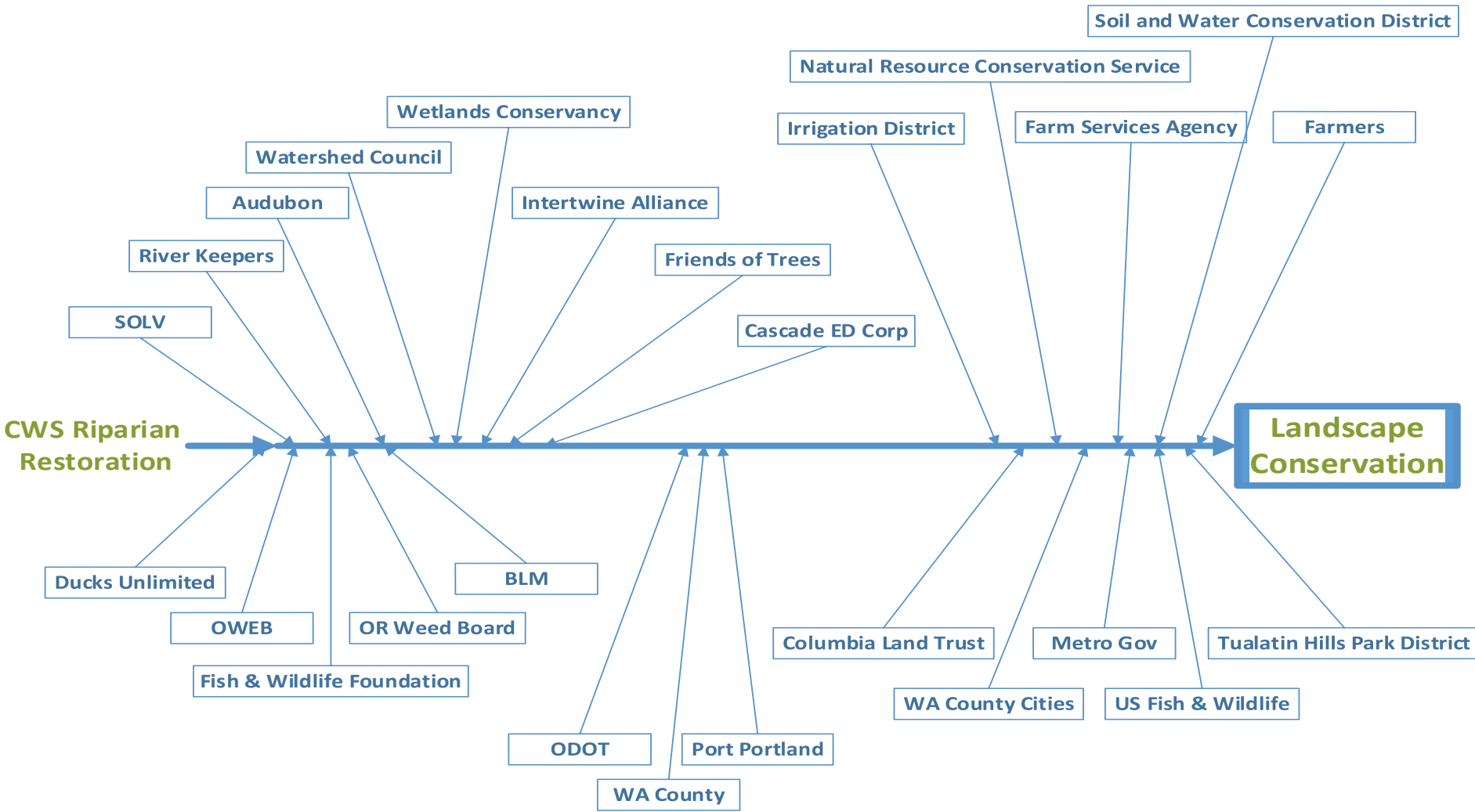
- Step 1:** • Build partnerships
- Step 2:** • Characterize your watershed
- Step 3:** • Finalize goals and identify solutions
- Step 4:** • Design an implementation program
- Step 5:** • Implement the watershed plan
- Step 6:** • Measure progress and make adjustments

Maybe there is another approach.....



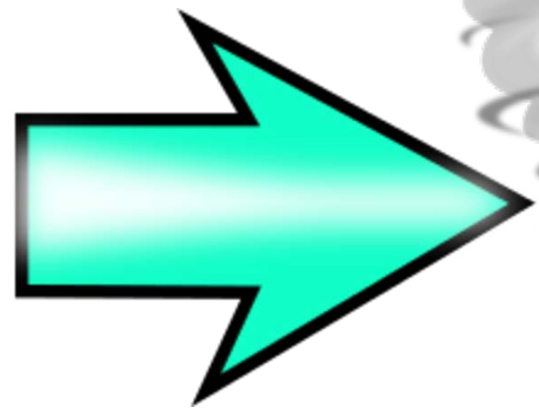
Plants are good for Mother Nature and our Community.







TUALATIN SOIL AND
WATER CONSERVATION
DISTRICT





Tualatin River



Riparian Buffer
Tualatin River



Wetland Enhancement

Riparian Buffer
Tualatin River



Irrigation Efficiency

Wetland Enhancement

Riparian Buffer
Tualatin River



**Conservation
Water Quality
Management
Plan**

Tualatin River





Image © 2012 Metro, Portland, Oregon

Google earth

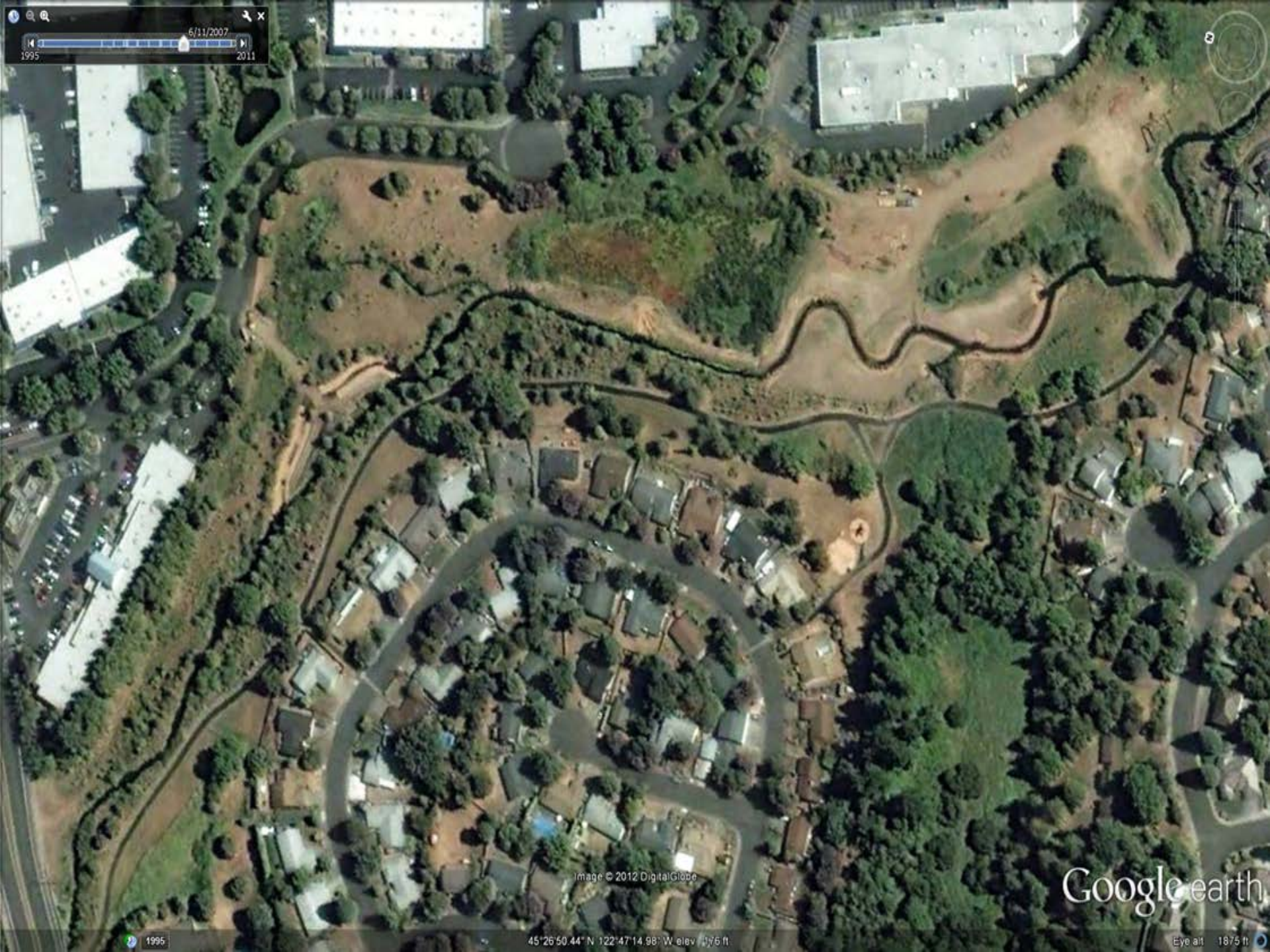


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Google earth

8/20/2011



Google earth









Results

- 120 river miles restored (10 plus per year)
- A new National Wildlife Refuge
- 80 plus farms enrolled
- Cost to CWS 10 million (leveraged 200 million +)
- Access to more than 25,000 acres
- 8 million plus native plants in the ground

Eleven Keys to Landscape Conservation

- Restoration Innovation
- A Catalyst
- Common Community Vision
- Common Language
- Community Values
- Co-investment
- Good Business
- The Long Haul
- Mother Nature
- Partnerships
- Watershed Approach





THE PROJECT

THE FACTS

GET INVOLVED

**We're planting 1,000,000 and
we need *your help!***

www.JoinTreeForAll.org

CleanWater  Services

