

Distribution of resident cutthroat trout during the summer of 2002 in the Hinkle Creek study watershed.

### Watersheds Research Cooperative (WRC)

The Hinkle Creek Paired Watershed Study and Research Demonstration Area is funded through the Watersheds Research Cooperative in the College of Forestry at Oregon State University. The WRC is an umbrella cooperative for environmental research associated with intensive forest management on private industrial forestland. Hinkle Creek is the primary project of the WRC at this time. Current cooperators include: Roseburg Forest Products; Oregon Forest Industries Council; Oregon Department of Forestry; Douglas County; Oregon Department of Fish & Wildlife.

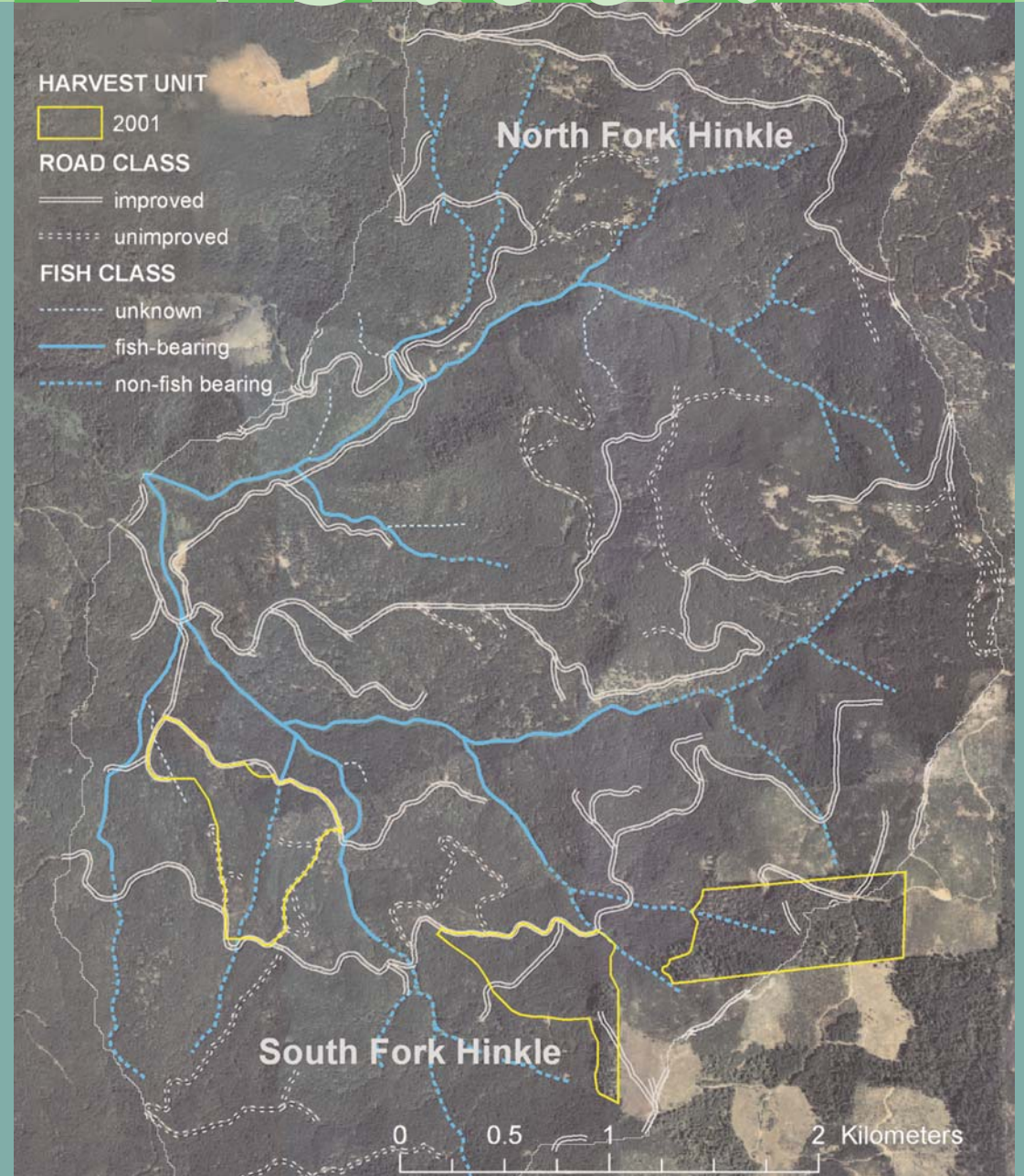
Membership in the WRC requires a minimum contribution or a similar value of in-kind support. Representatives of the members of the WRC sit on an advisory committee that shapes cooperative goals and establishes research priorities. For further information regarding membership in the WRC contact: Arne Skaugset, c/o Department of Forest Engineering, 215 Peavy Hall, Corvallis, OR 97331, phone: 541-737-3283, email: Arne.Skaugset@oregonstate.edu.

### Collaborators

The Hinkle Creek Paired Watershed Study is alive and well today because of a diverse group of people, personalities, companies, organizations, and agencies. These people and groups have given money, in-kind support, hard work, administrative support, time, positive thoughts, and good karma. The people and groups that Hinkle Creek owes its existence to include: Roseburg Forest Products; Douglas County; Oregon Watershed Enhancement Board; Forest Engineering Department and Forest Science Department, College of Forestry, Oregon State University; Oregon Forest Industries Council; Oregon Department of Forestry; Oregon Department of Fish & Wildlife; Umpqua Fisheries Enhancement Derby; USGS-FRESC, Department of Fisheries and Wildlife; College of Agricultural Sciences, Oregon State University; Resource Management Services; Douglas Timber Operators.

Design & layout by Forestry Communications Group, College of Forestry, Oregon State University

# Hinkle Creek



## What is Hinkle Creek?

**Hinkle Creek is a working forest.**

Located northeast of Roseburg, Oregon, Hinkle Creek supports a stand of 55-year old harvest regenerated Douglas-fir. The watershed is owned by Roseburg Forest Products, whose long-term objective is to produce high quality wood products in perpetuity.

Hinkle Creek is also the site of a new, state-of-the-art paired watershed study to investigate the effects of contemporary forest practices on water quality, fisheries, and aquatic habitat at the scale of a complete watershed. It is the first paired watershed study initiated in Oregon in over 30 years and it will be the first ever paired watershed study located completely on private forestland.

Hinkle Creek is the location of a demonstration area where the public can come and observe modern intensive forest management. It is also a place where watersheds, water quality, and fisheries area being studied. Thus, it is a place to see how well these two seemingly mutually exclusive activities get along.



Cutthroat trout.

## The Science

The Hinkle Creek study site consists of two similar sized forested watersheds, the North Fork and the South Fork of Hinkle Creek. The North Fork has been set aside and will be the control watershed. The South Fork will be the treatment watershed.

Six headwater watersheds have been designated as study watersheds. Two study watersheds in the North Fork basin will remain untreated throughout the study. Four study watersheds in the South Fork basin will be harvested in compliance with forest practice rules using high-lift, skyline-yarding equipment from existing roads. Stream discharge, water quality, as well as population data of aquatic invertebrates and amphibians will be measured in all of the study watersheds.

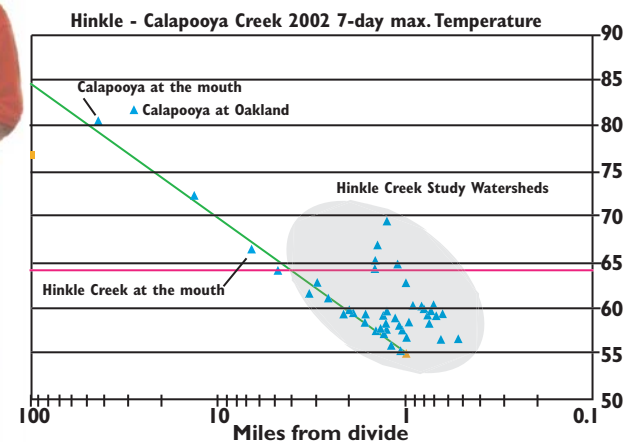
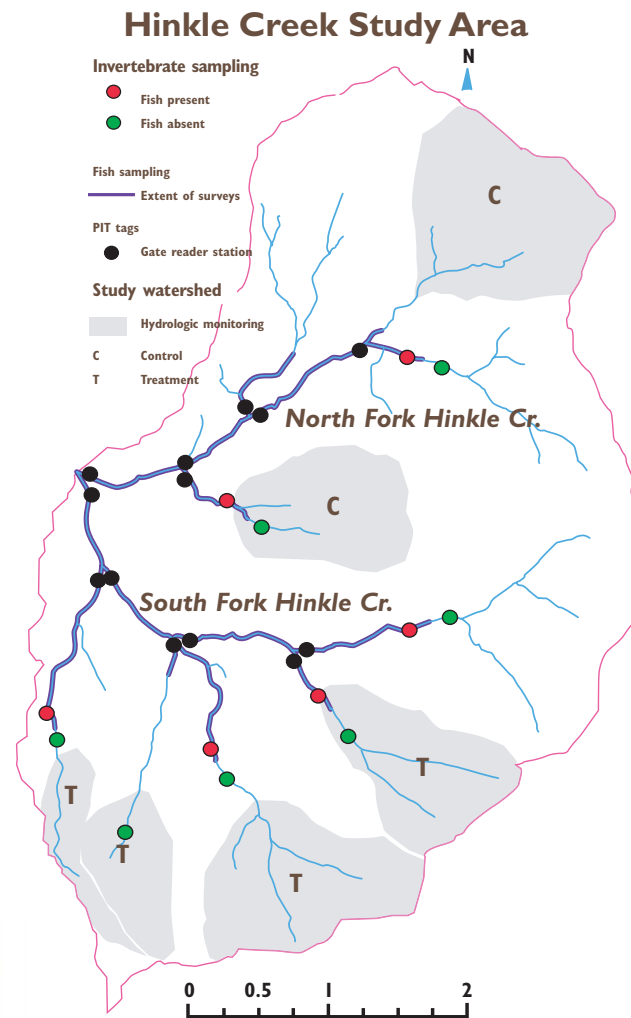
In addition, stream discharge and water quality of the North and South Forks will be measured at the confluence. Fisheries, aquatic invertebrate, and amphibian population data will be collected in the main stem of each watershed.

The Hinkle Creek, Paired Watershed Study will last 10 years.



Judy Li with one of her aquatic invertebrates.

Doug Bateman and Arne Skaugset illustrate PIT tag technology using a mobile antenna.



## Scientific Infrastructure

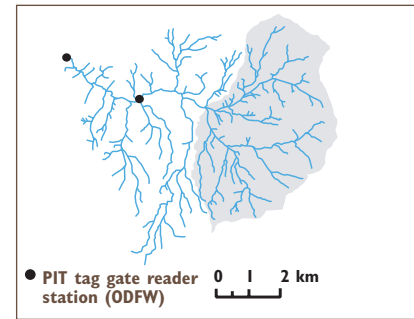
Approximately \$500,000 of contributed funds and \$250,000 of in-kind support have gone into Hinkle Creek to date.

Infrastructure includes:

- fish traps at the confluence on the North and South Forks,
- USGS gauging stations at the same locations,
- 600 (approximately) tagged resident cutthroat trout in the study watersheds,
- 13 antenna installed to track the movement of the tagged fish,
- Over 45 thermistors to track stream temperature in the watersheds
- 2003 will be the third summer that stream temperature and fisheries data have been collected.



Jon House (USGS) describes a stream gauging installation to John Seward (ODF).



PIT tag insertion in trout.



Fish traps on the N and S Forks of Hinkle Creek at their confluence.