Forest Industry Contributions to Coastal Coho Recovery

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Plum Creek

Planning and Administration

- Local landowner involvement:
  - Participate in Watershed Councils
  - Serve on research advisory committees, weed boards
  - Conduct road and culvert inventories
  - Conduct fish surveys

Implementation

- Habitat Improvement
  - LWD placement
    - During and Separate from harvest
- Passage Barrier Removal
- Road Sediment Reductions
  - Reducing landslide risks (old and new roads)
  - Abandonment
  - General maintenance (e.g., wet weather haul)
- Estuary Enhancement (e.g., Yaquina R. near Toledo)
- Riparian Conifer regeneration (e.g., spruce/cedar plantings)
- Biodiversity Maintenance (e.g., replant native species, control of exotic pests)

Elk Creek Tree Placement Project

• 32" DBH Douglas-fir trees (root wads attached) yarded into stream using tree puller machine in Summer 2004.

• Large gravel bar formed during Winter 2004.

• Four coho salmon observed spawning on same gravel bar weeks later.

Anderson Creek Culvert Replacement

- No salmon present upstream of fish barrier culvert for 35+ years. Only cutthroat trout observed in two 75m reaches upstream of culvert prior to replacement.
- Culvert removed and railcar bridge installed in Summer 2004.

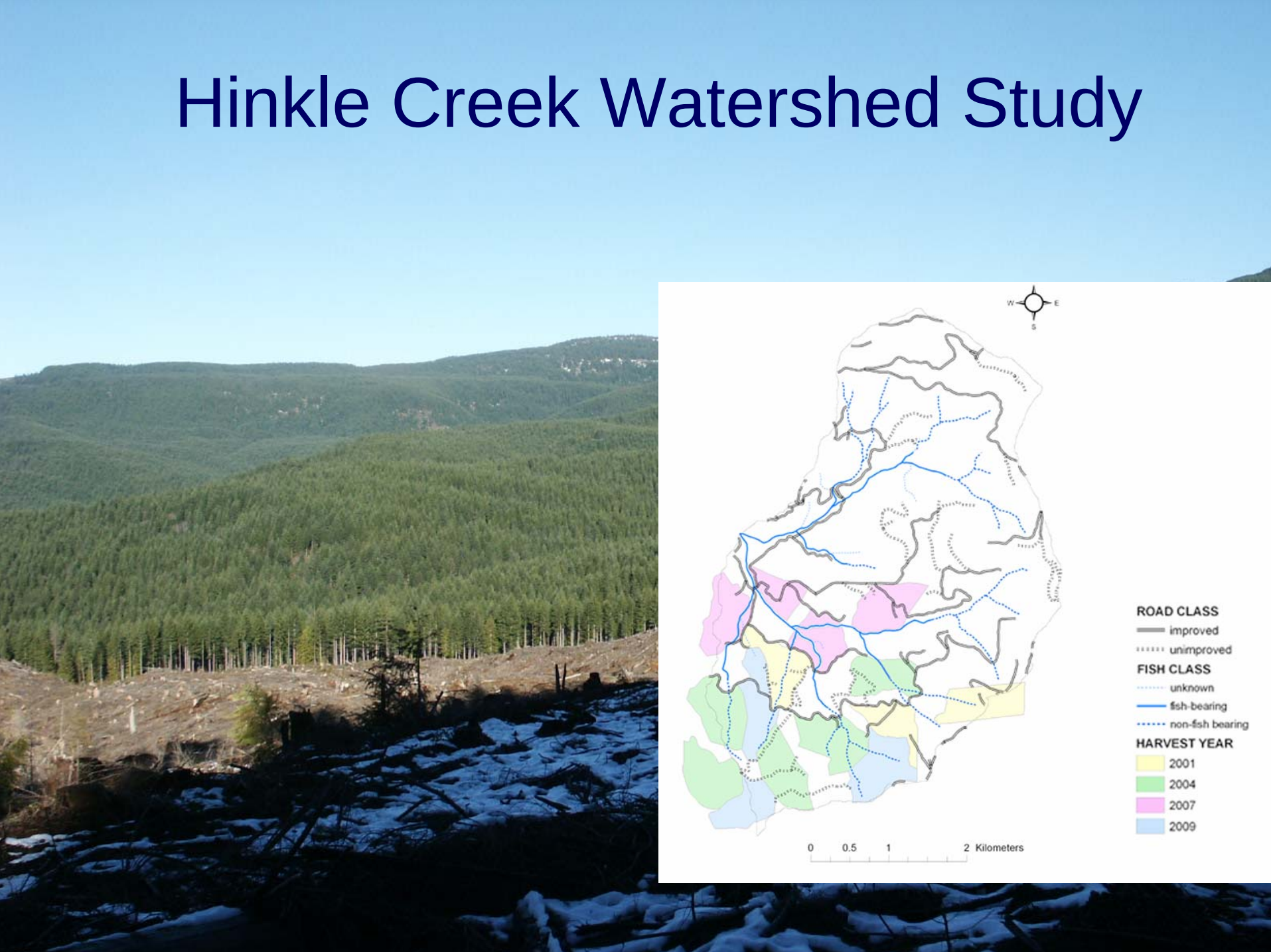
- 8 coho salmon observed spawning in Winter 2004. Twenty-five salmon redds counted.
- 57 and 84 coho salmon fry counted in same two 75m reaches in Summer 2005.

Research and Monitoring

- Basic landowner questions:
  - How effective are current Best Management Practices?
  - What influence does forestry have on aquatic ecosystems?
- Answers obtained through cooperative local, regional, and national research and monitoring efforts
  - Emphasis on cause-effect relationships, fundamental processes and principles; outcome oriented
- Examples:

  -Watershed-scale studies of forest practice effectiveness
    - The Hinkle Creek Watershed Study
    - The New Alsea Study
      - Mid-coast watershed, Drift Creek tributaries
    - Others in the works – The Watershed Research Cooperative (OSU)

Hinkle Creek Watershed Study



Hinkle Creek Watershed Research Components

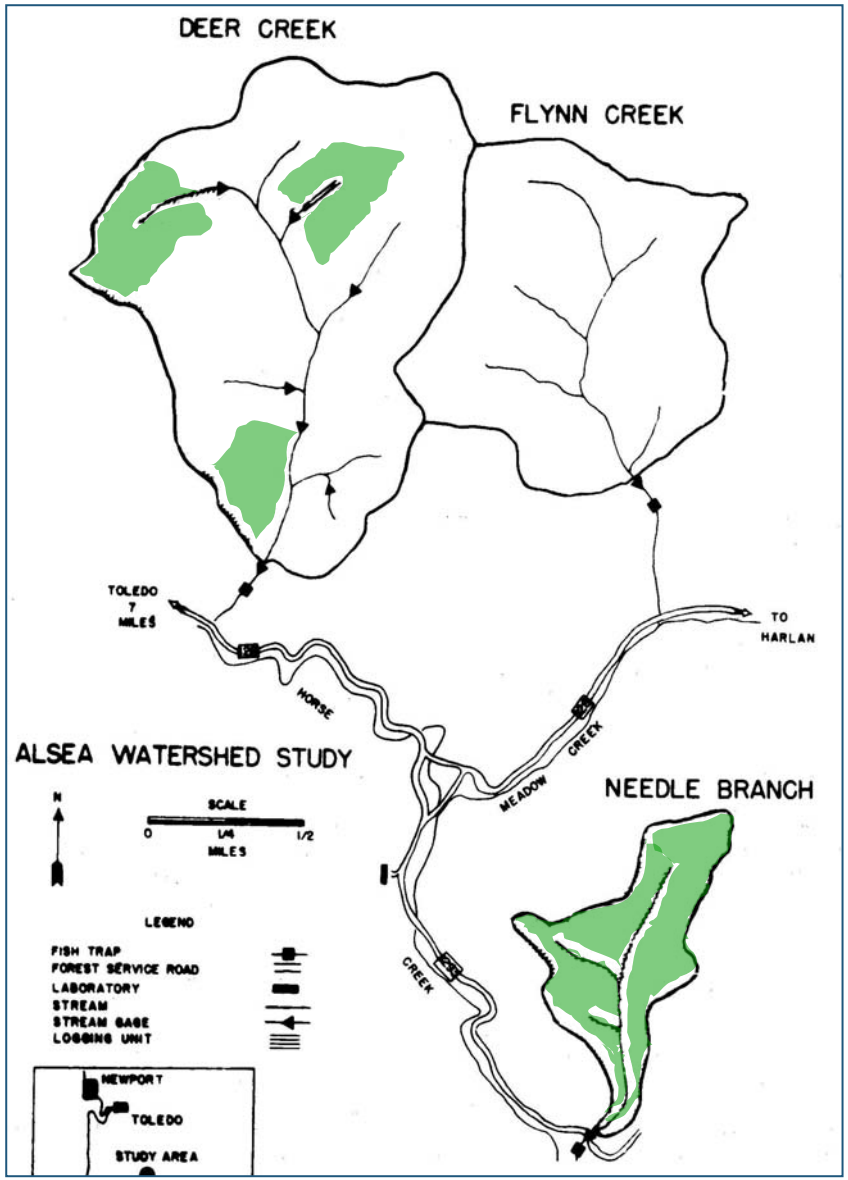
Discharge

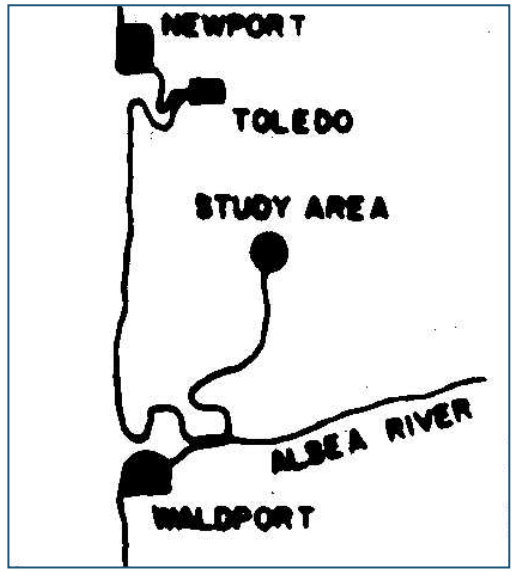
Fish Respo

Macroi

Amphibians

Alsea Watershed Study





1959-1973 - Original study

1989 - Monitoring for discharge, temperature, & nutrients re-established

Research and Monitoring

- Examples, continued:
  - Headwater streams
    - What is their structure and function?
      - The Headwaters Research Cooperative
      - November symposium will summarize current knowledge
  - Fish Passage
    - What culverts are true and significant barriers?
      - Investigating fish movement needs and abilities
    - What are most cost-effective solutions?
    - Can we measure results of barrier removal?

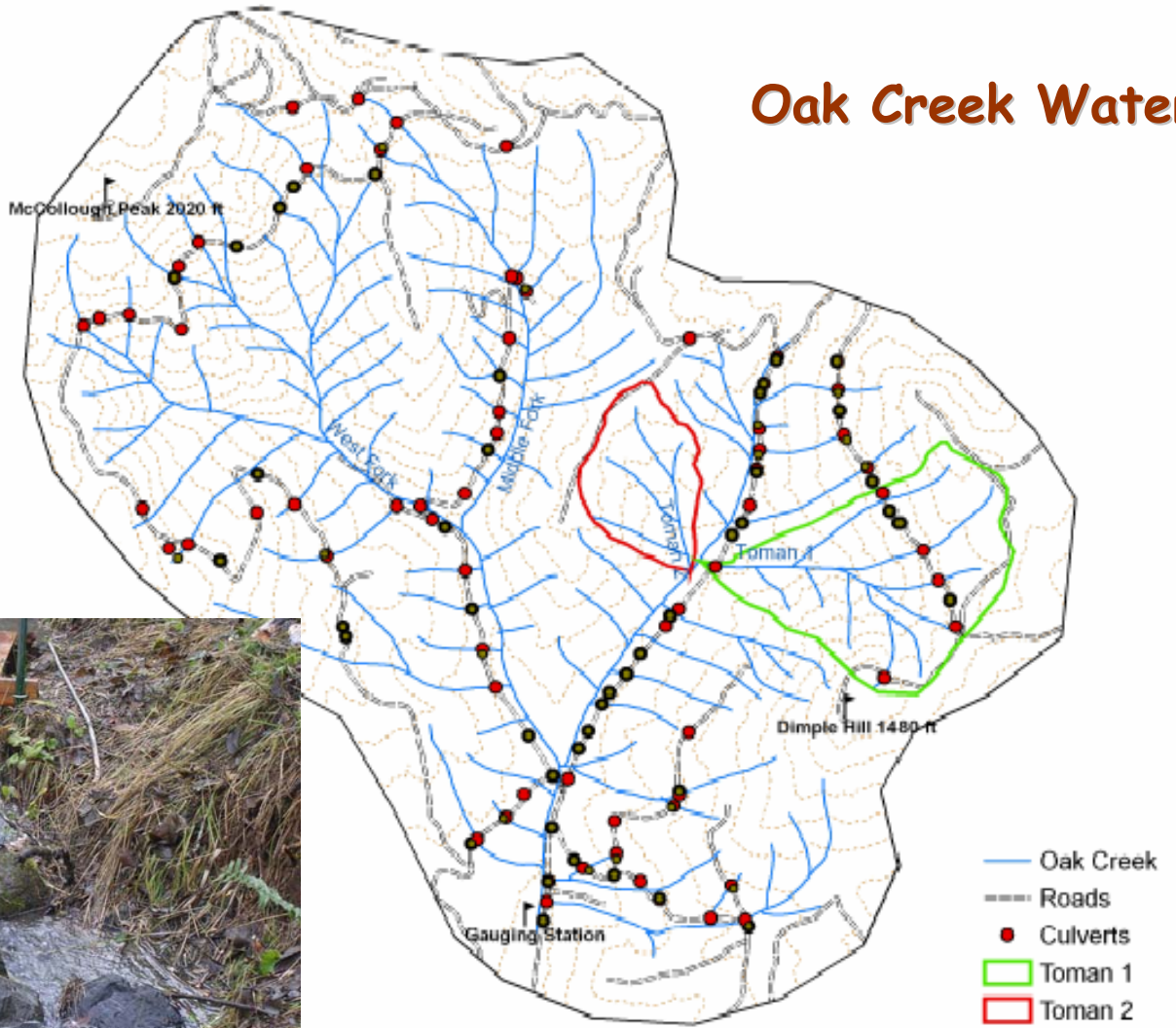
Research and Monitoring

- Examples, continued:
  - Stream Temperature
    - How effective are current buffering strategies?
      - ODF RIPSTREAM project (ongoing)
      - Hinkle, Alsea studies
    - Are there alternatives?
      - Fundamental principles of stream heating and cooling
      - OSU study (Newton)
    - How does the amount of "fish food" affect temperature sensitivity?
    - Individual landowner monitoring (support for TMDLs, buffer effectiveness, etc.)

Research and Monitoring

- Examples, continued:
  - Road Sediment Production
    - What is the effect of disconnecting roads from streams?
      - Oak Creek study (OSU)
  - Landowner facilitation of agency, university projects
    - ODFW monitoring
      - Adult salmon and steelhead returns
      - Habitat trends
      - Juvenile abundance

Utility of Disconnecting Roads



Research and Monitoring

- Landowner Motivations
  - The Oregon Plan
    - Local solution to species in decline
  - Sustainable Forestry Initiative (SFI)
    - Nation-wide standards
    - Core indicators for compliance
    - Independent third-party audits

- Conclusions
  - Forest landowners *actively* involved
  - Contribute funding and expertise to address limiting factors
  - Support research and monitoring for improved implementation
    - Aimed to achieve rapid, efficient coho recovery