



# Confederated Tribes of the Umatilla Indian Reservation

Environmental Science and Technology Program

Phase I Renewable Energy Study

October 1, 2002

# Project Overview

- Facilitate CTUIR participation in regional and national growth in renewable sustainable energy development
- Identification of energy technologies that may mitigate the pollution impacts of existing technologies on resources significant to the Tribes.
- Phased approach to renewable energy development for short term needs and long term growth
- Assess renewable energy resource (RER) development opportunities and prioritize options.

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UMATILLA



Signatories of the Walla Walla Treaty Council

# Confederated Tribes of the Umatilla Indian Reservation (CTUIR)

- Cayuse, Umatilla, and Walla Walla Tribes
- Treaty of 1855
- Constitution and By laws 1949
- Nine member Board of Trustees
  - Elected by General Council members over 18 year old
  - Members of BOT and General Council sit on Commissions
- Approximately 2350 enrolled members
- Umatilla Indian Reservation
  - ~187,000 acres
  - Checker boarded

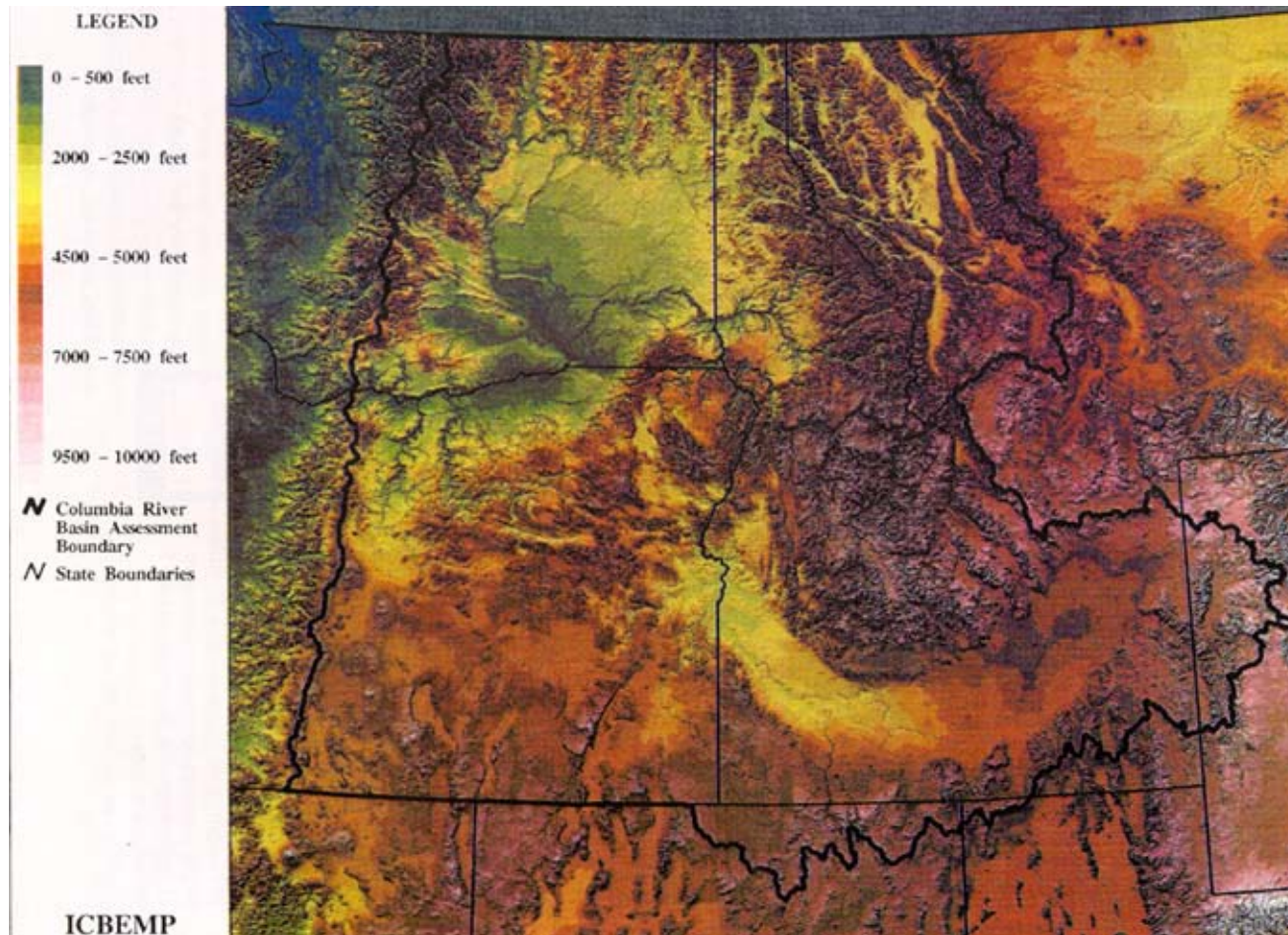
# Project Location

- Region
- Usual and Accustomed Lands
- Reservation



Indian Country

# Columbia Basin



# Regional Resources

- Columbia River
  - Water
  - Fisheries (Salmon)
  - Hydro-electric
  - Transportation
- Wind
  - Columbia River Gorge winds across the Deschutes Umatilla Plateau
- Agriculture
  - Dry land farming
  - Irrigation
- Industrial infrastructure
  - Transportation
  - Hanford (technology, potential land resources)
  - Wood Products

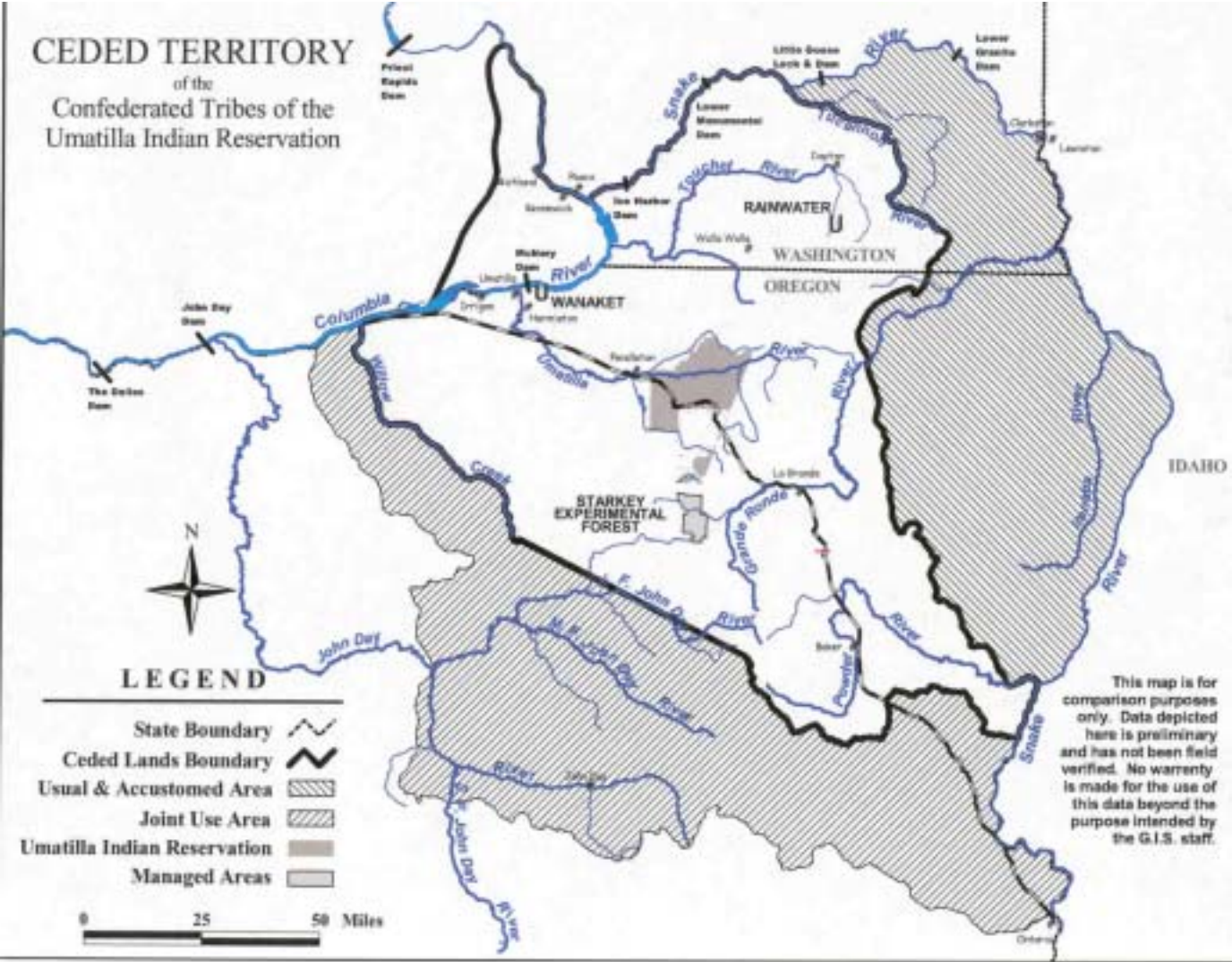
## Regional Resources cont.

- **Energy Corridor**

- Electric Transmission
  - Bonneville Power Administration
  - Hydro-electric
  - Coal powered electricity
- Transportation Corridor
  - I-84
  - Railroad
  - Columbia River
- Wind
  - Columbia River Gorge winds across the Deschutes Umatilla Plateau
  - Stateline wind project.
- Natural Gas Transmission
  - PGE/PGT NG pipeline
  - Natural Gas powered plants



# Ceded lands and joint use areas



# Ceded Lands

- Federal Land Management
  - Forest Service
    - Wood, mineral, wind
  - BLM
    - Wood, mineral, wind
- Hanford Clean up
  - Industrial Blocks at the Hanford site
- Chemical Weapons Demilitarization
  - Land Reuse Umatilla Chemical Weapons Depot
- Economic and Commercial Development
  - Wanaket, Wanapa

# Umatilla Indian Reservation



Natural Gas Pipeline Explosion

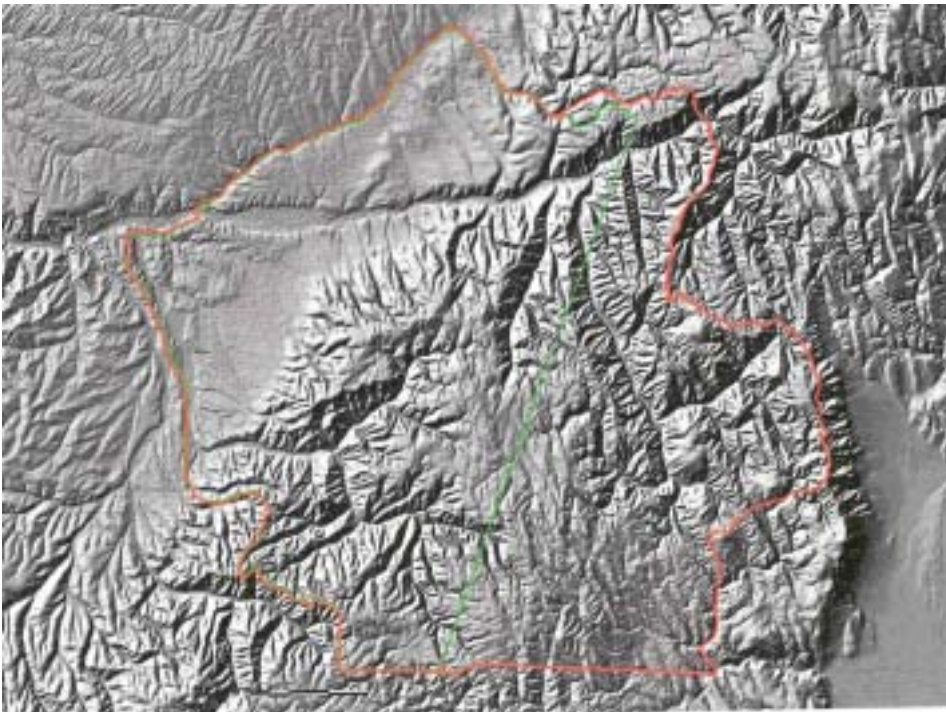
# Umatilla Indian Reservation

- Agriculture
  - Farm committee
  - Grain elevator (UPRR)
- Umatilla River
  - Umatilla Basin Project
  - Salmon restoration activities
- Plateau Uplands
  - Traditional plant food
  - Big game
- Wind

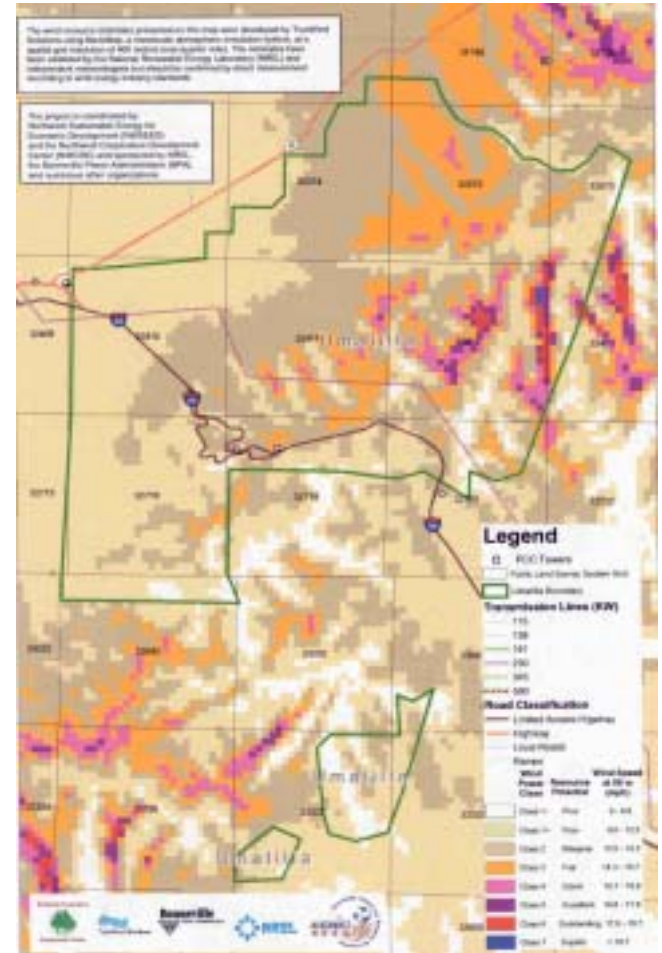
FIGURE 7 – GENERALIZED LAND USE DESIGNATIONS



# Umatilla Indian Reservation



Physiographic view and East Boundary



Wind Potential

# Umatilla Indian Reservation cont.

- Transportation
  - Interstate 84
  - Railroad
- Housing
  - Rural
  - Housing developments (HUD)
- Economic Development
  - Wildhorse Resort (Casino, Golf, RV)
  - Tamastlikt Cultural Institute
  - Wanapa Energy Development
  - Fuel distribution

# Project Overview

- A preliminary 12 Month assessment 3 Major Task Areas
- Multiphase effort to research energy development trends and potential for the CTUIR on reservation and ceded lands.

## **Task 1. Identify Renewable Energy Resources**

- Industrial, commercial, and residential options
- Researching existing information on available technologies
- Develop GIS tools to identify available resources and infrastructure

## **Task 2 Determine technical and economic viability of development**

- Assess renewable energy quality and quantity from wind, solar photovoltaic, solar thermal, and biomass as a source of diesel, ethanol, and pellet fuels.
- Evaluate technically, economically, and culturally appropriate development paths

## **Task 3 Develop a business plan**

- Prioritize options and develop business plan.

# Project Participants

- CTUIR Environmental Science and Technology Program
  - Renewable Energy Resource Identification and quantification
  - Regulatory issues
  - Cultural issues
- CTUIR Department of Economic and Community Development
  - Economic feasibility
  - Business plan
- CTUIR Tribal Government and Administration
  - Policy coordination with commissions
    - DNR, DECD, Farm, DNR, others
  - GIS
  - Land use/Tax planning



# Requested Technical Support

- Technical consultation on each of the renewable energy options
  - Assistance with resource assessment such as technical availability, reliability, and performance
  - State of commercial technologies for proposed options
- Better understanding of national, state, and regional incentive programs for renewable energy development

# Contact Information

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