



Agriculture and Energy Efficiency

Vern Rice, Energy Specialist Supervisor, Central Electric Cooperative

Merlin Berg, Wy' East Coordinator, Wy' East Resource Conservation & Development

Terry Johnson, Energy Program Manager, Cascade Pacific Resource Conservation & Development

Brad Miller, Agriculture Sector Lead, BPA Energy Efficiency

Boyd Wilson, Moderator, BPA Energy Efficiency Representative



How This Project Started

- Working with the Resource Conservation and Development Councils (Brad Miller)
 - Discussions with USDA and various other Ag-related agencies
 - Wy' East RC&C in Central Oregon
 - Cascade Pacific RC&D in Western Oregon
 - Other RC&Ds in Washington
 - Future expansion to Idaho and Montana

Vern Rice, Central Electric Coop

- CEC has participated in BPA conservation programs since 1984; hardware & IWM.
- Want to increase conservation, in all customer sectors, to avoid Tier II power purchases.
- Currently participating in the pilot SWSE program.

Background on Central Electric



- CEC background and why we're interested in Ag energy efficiency.
- Founded in 1940 and commenced service to 11 farms in the Bend / Redmond area.
- We now serve 1645 irrigation accounts.

Save Water, Save Energy

- As designed, it will help CEC achieve conservation in the irrigation/agriculture customer sector.
- Provides some staffing (irrigation boots on the ground) that are needed to achieve conservation goals.
 - In field analysis, process claims for BPA incentives, PTR entry.
- Offers info to irrigators on non-BPA programs to encourage growers to take action that will save energy and accomplish goals of the irrigator.
 - (Profitability, stretch water supplies, good stewardship of resources.)
- If done correctly, the program can result in better customer relations between CEC and customers. CEC invited to sit in on Field Analyst selection committee.

Current Status

- SWSE Looks like a good fit for CEC growers who are a mix of professional irrigators and hobby farmers. They could all use the services of SWSE, especially Integrated Water Management (IWM).
- Primary services, IWM, some Variable Frequency Drives (VFD's), custom projects.
- Already being perceived well by the irrigation community. SWCD, Irrigation districts, growers.
- ECM example; Adding VFD to rural legend “Big Bertha”.



Merlin Berg, Wy' East RC&D



Energy for Agriculture

Conservation Saves Energy!

Drainage Water Management

Conservation Tillage

Rotational Grazing

Irrigation Water Management

Manure Management

Digesters

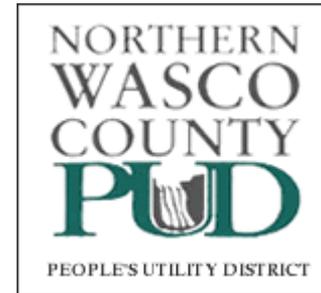


Wy' East RC&D

Wy' East Mission:

- Invest
- people
- partnerships
- resources
- Sustainable future in the Mid-Columbia and Central Oregon

Utilities Served by Wy' East



Best Practices

- **Focus on Deemed Measures**
- **Scientific Irrigation Scheduling**
- **Irrigation-Related Measures**
- **Green Motors**
- **Variable Frequency Drives**
- **Transformer De-energization**
- **New Agricultural Construction**
- **Agricultural Lighting**
- **Freeze Resistant Stock Water Tanks/Fountains**
- **Other Agricultural Measures, Seek Deemed Measures First**

Note: Not all utilities will offer rebates for all equipment or measures described above. More information will be provided by RC&D technical staff.

Other Programs for Farmers

- Oregon Department of Energy – Business Energy Tax Credit (BETC)
- Oregon Department of Energy - Energy Loan Program (SELP)
- Federal Investment Tax Credits
- USDA Rural Development - REAP
- USDA Natural Resource Conservation Service Environmental Quality Incentives Program (EQIP)



The Dalles Irrigation District Project

The Dalles Irrigation District AWEPP



This map is for informational purposes and was not prepared for, and is not suitable for, legal, engineering, or surveying purposes. Users of this information should review or consult the primary data and information sources to ascertain the usability of the information. Map prepared by USGA-NRCS, Oregon State Office, Portland, OR



The Dalles Irrigation District

Agriculture Water Enhancement Program (AWEP)

- Promotes ground and surface water conservation and improves water quality by helping farmers and ranchers voluntarily implement agricultural water enhancement activities.

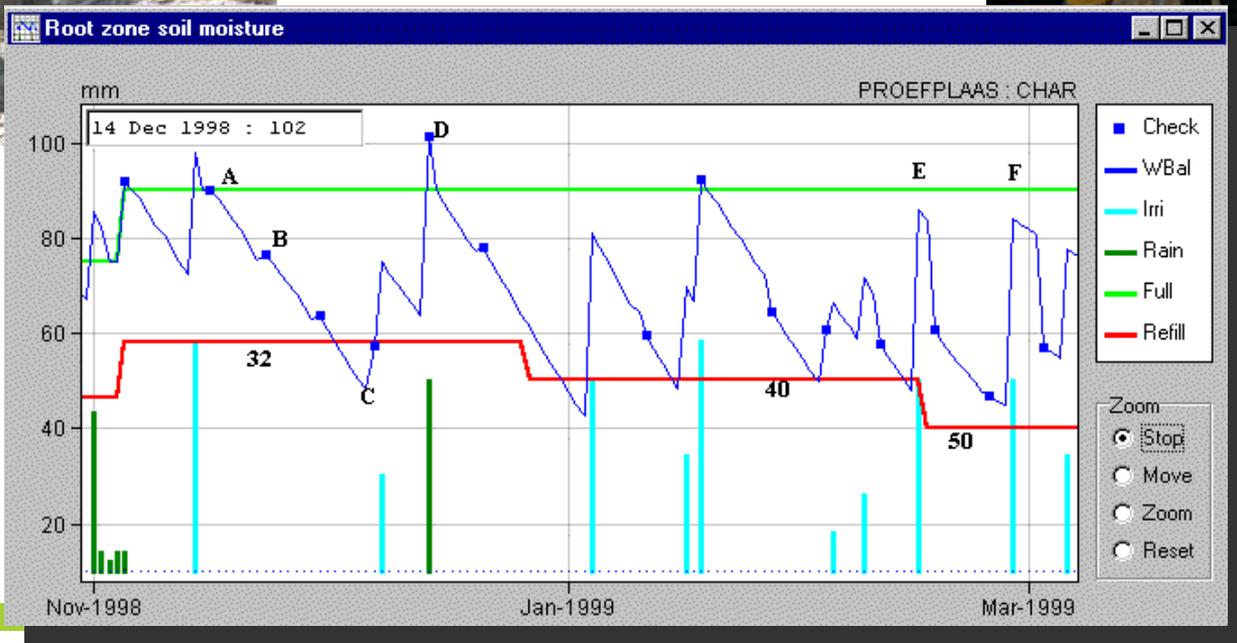
The Cooperative Conservation Partnership Initiative (CCPI).

- With CCPI, partners request assistance for a specific project area or resource concern. In the case of TDID that resource concern was water and energy.

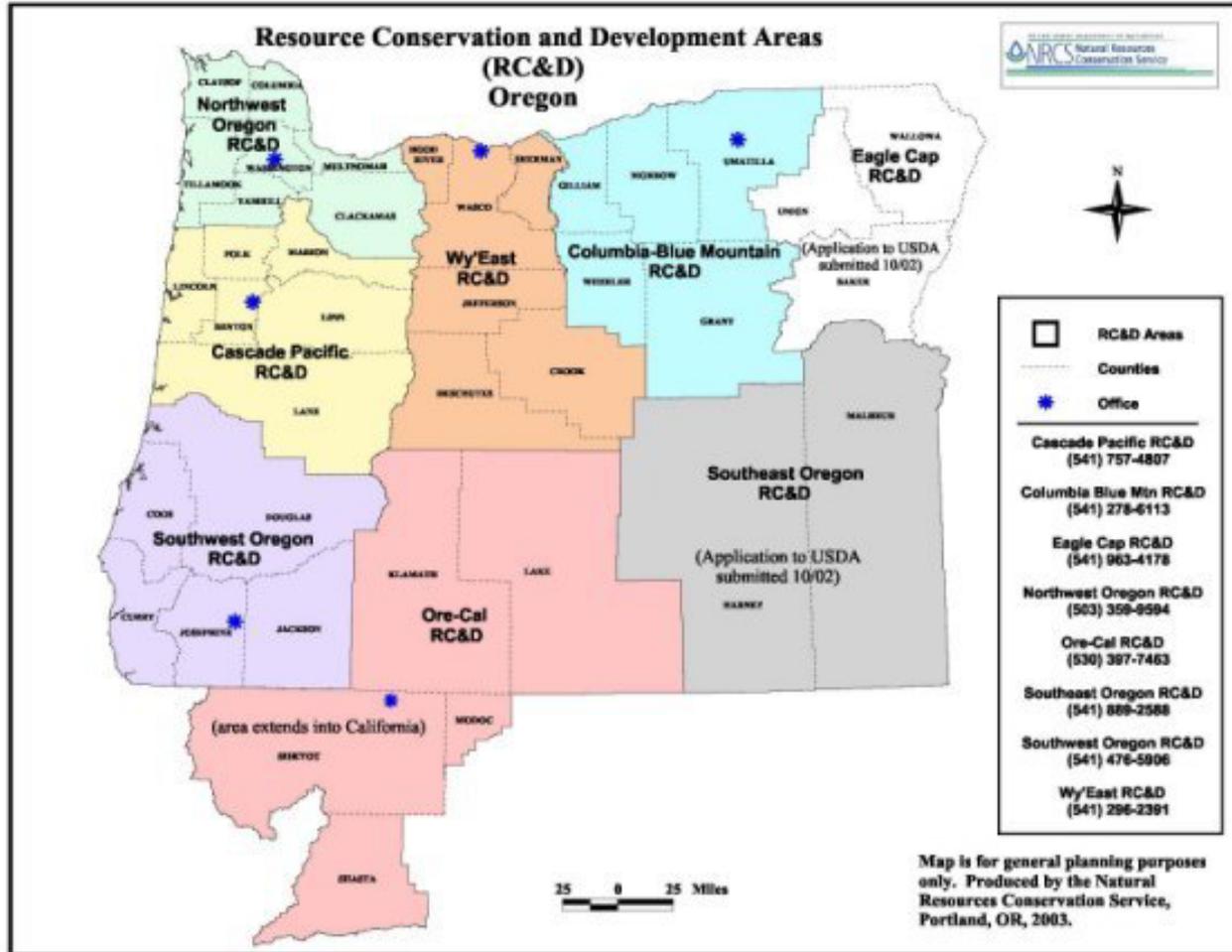
Bonneville Power Administration Energy Efficiency & Conservation Program.

- The Bonneville Power Administration (BPA) and the Pacific Northwest Region of the Bureau of Reclamation offer technical and financial incentives to use federal power more efficiently.

Soil Moisture Monitoring



Oregon RC&Ds



Cascade Pacific RC&D History

- Cascade Pacific Energy Program founded spring 2008
- Based around the USDA Rural Energy for America Program (REAP)
- Serving Ag producers and rural small businesses in central western Oregon
- Mission: to help clients identify, develop & fund energy improvement projects
- Energy efficiency improvements as well as renewable energy systems
- Project facilitation from concept to completion to funding

Current Focus

- Focus on Deemed Measures
- Continue initial concepts, with modifications for BPA Ag Pilot
- Expand service area to all 18 western Oregon counties
- Energy improvement priorities
- Energy efficiency
- Renewable energy



Priorities for Cascade

- Facility priorities
 - Agricultural producers
 - Rural small businesses

Target EE Measures

- Irrigators (line sizing, pumps & motors, low-flow sprinklers, etc.)
- Dairies (boilers, ventilation, processing, etc.)
- Greenhouse nurseries (HVAC, wall & roof panels, irrigation, etc.)
- Livestock housing (lighting, ventilation, HVAC, etc.)
- Wineries (CA rooms, compressed air, line insulation, etc.)
- On-farm processors (premium motors, VFDs, lighting, etc.)
- Golf courses (irrigation motors, VFDs & sprinklers, etc.)

Next Steps

- Present the Ag EE Pilot to utility conservation contact people
- Outreach to growers served by participating utilities
- Coordinate with utilities, BPA, USDA, NRCS, SWCDs, Extension Service
- Focus on Deemed Measures

Participating Utilities

Utilities Working with Cascade Pacific:

- Consumers Power, Inc. (CPI)
- Central Lincoln PUD (CLPUD)
- Emerald PUD (EPUD)
- Eugene Water and Electric Board (EWEB)

Contact Information

- Vern Rice, Central Electric Cooperative
541-548-2144 x175
- Merlin Berg, Wy' East RC&D Coordinator
541-296-2391 x117
- Terry Johnson, Cascade Pacific RC&D
541-760-6444

BPA Contact

For more information, contact:

Name: Brad Miller

Title: Ag Sector Lead

E-mail: bdmiller@bpa.gov

Telephone number: 503-230-3764

End of Presentation

- Thank you for attending today.