

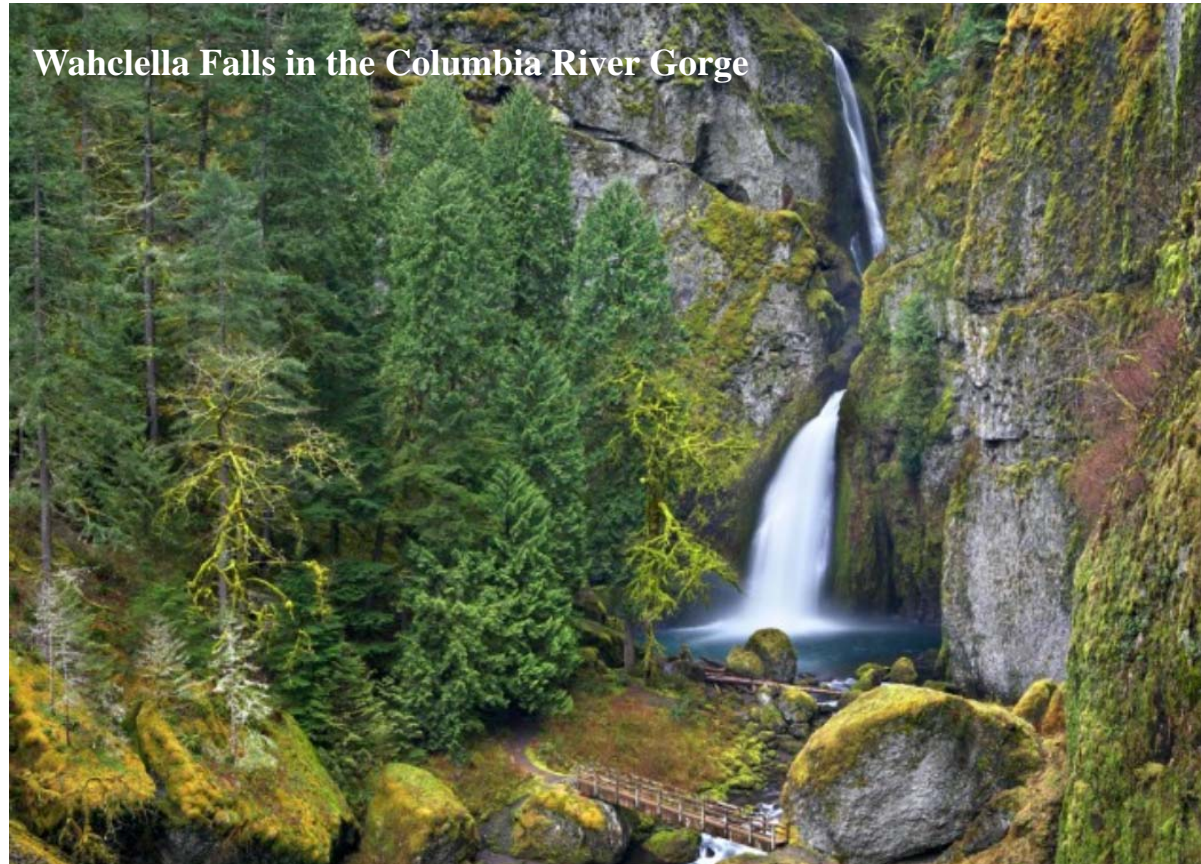
Water Quality Program



DEQ

State of Oregon
Department of
Environmental
Quality

Advanced Monitoring in Oregon: Opportunities, Challenges and the Future



ACWA Advanced Monitoring Session

Wednesday Aug 17th

Jennifer Wigal - Water Quality Program Manager (presenter)

Aaron Borisenko - Water Quality Monitoring Manager



Worlds of possibility...?

Or...

**Be careful
what you
ask for?**



Investigation?

Implementing regulatory programs?

General information?

Investigations

Using data sondes to understand causes



Using passive sampling devices to investigate presence of pollutants



Regulatory Programs

Water Quality Standards:

Temperature:

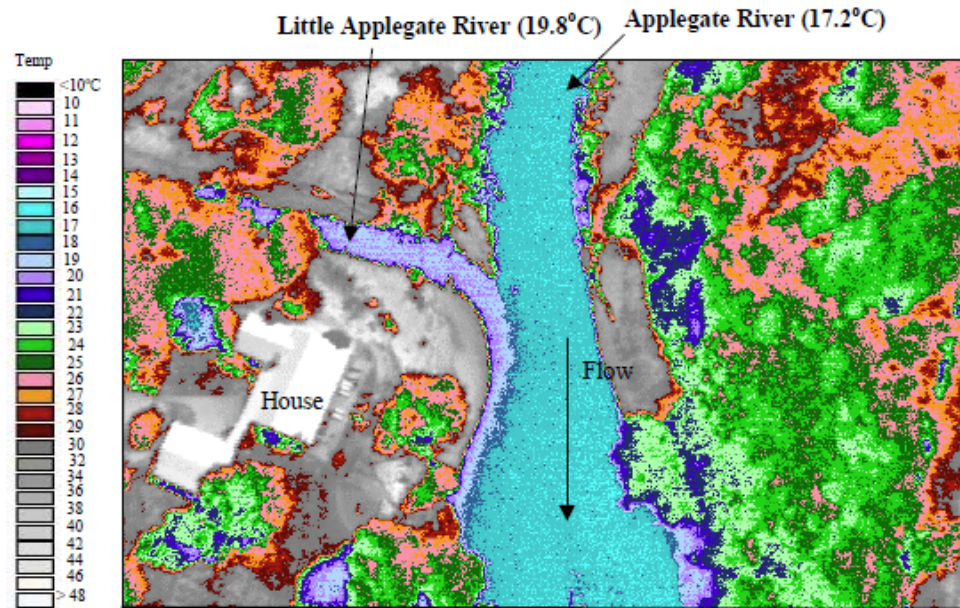
7-day average of maximum daily temperatures

Dissolved Oxygen:

minimum of the 7 consecutive-day floating average of the calculated daily mean



TMDLs: Forward Looking Infrared (FLIR)



Permitting and compliance

- Greater understanding opens door to more complex expression of limits
 - More robust reasonable potential analysis?
 - Seasonal limits?
 - Flow-based and other “dynamic” limits?
 - Expectations for compliance monitoring?



Key Issues: Resources and Costs

- Data storage!
- State staff resources and expertise to interpret data
- Ability to communicate (complex!) conclusions to public
- Cost to purchase and maintain equipment; keep up with new technologies



Partnerships

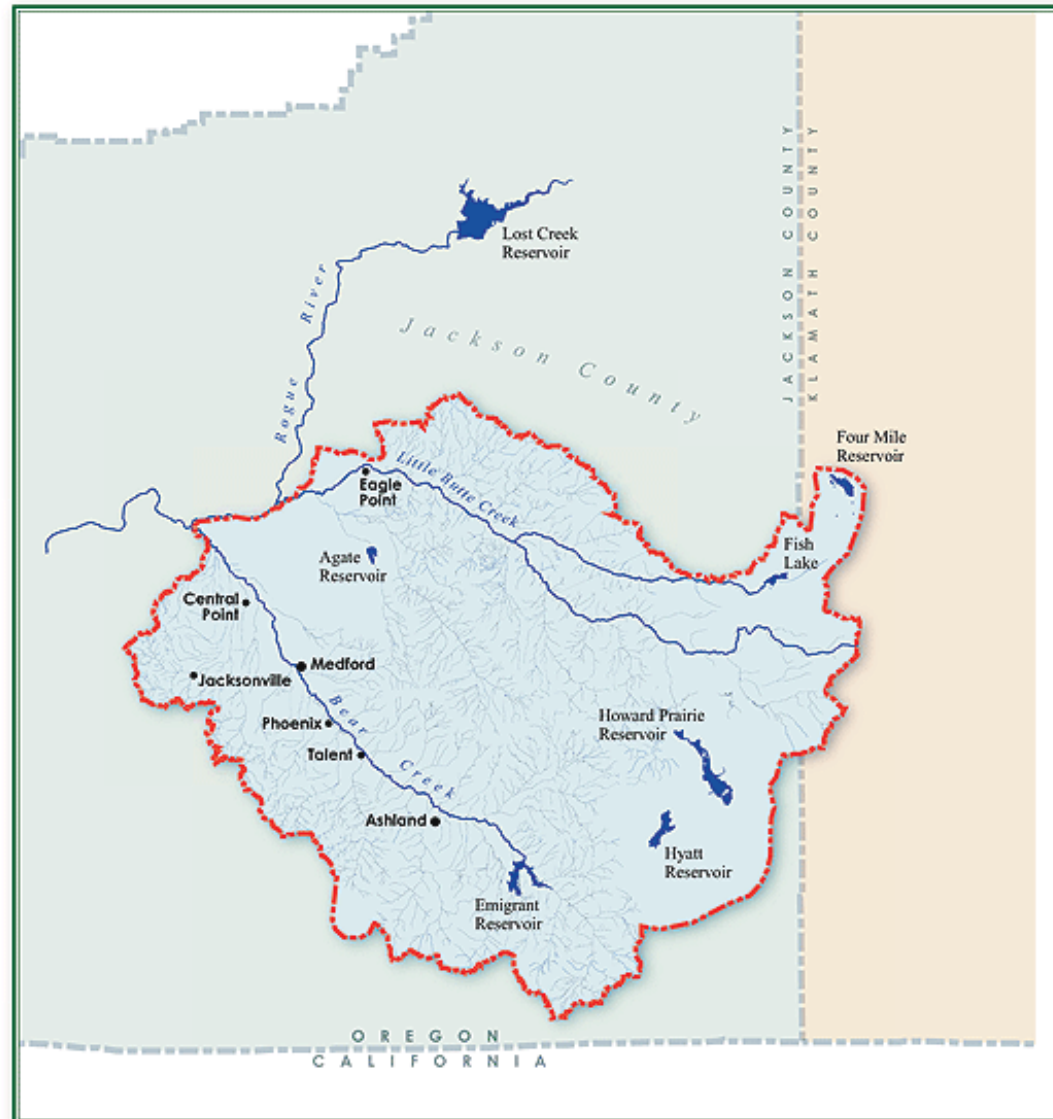
Examples leveraging capabilities and resources:

- Bureau of Reclamation
 - using existing gauging stations to transmit data from data sonde
- Oregon Water Resources Department
 - Concurrent collection of quality and quantity data



Water for Irrigation, Streams and Economy –WISE

Monitoring to evaluate irrigation effectiveness efforts



What will the future look like for advanced technologies?

Online
Real-time
Multi-parameter
Visual interface (graphs and maps)
Webcams
Drones
Triggered data collection events
User alert systems
Advanced data systems
Integrated indices
Predictive uses



Contact us:

Jennifer Wigal

WQ Program Manager

wigal.jennifer@deq.state.or.us

503.229.5323

Aaron Borisenko

WQ Monitoring Manager

borisenko.aaron@deq.state.or.us

503.693.5723

