

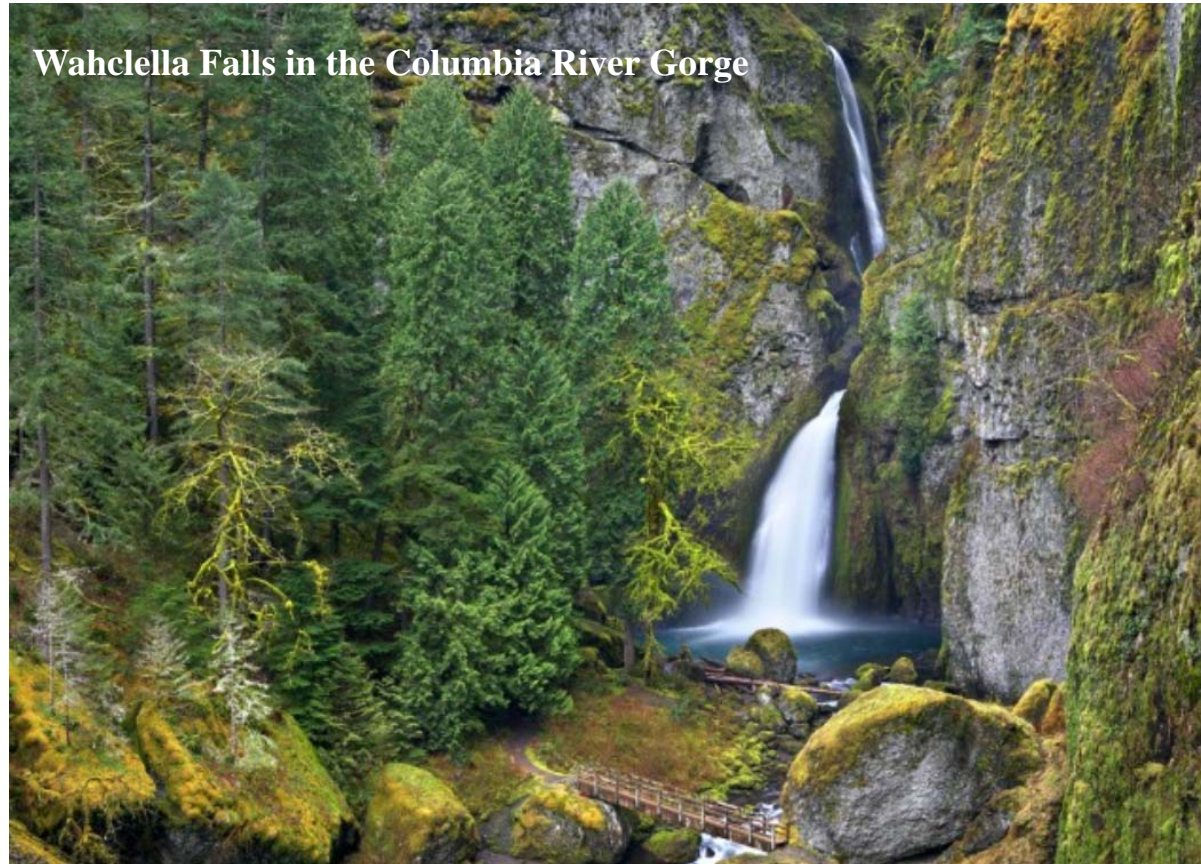
Water Quality Program



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:

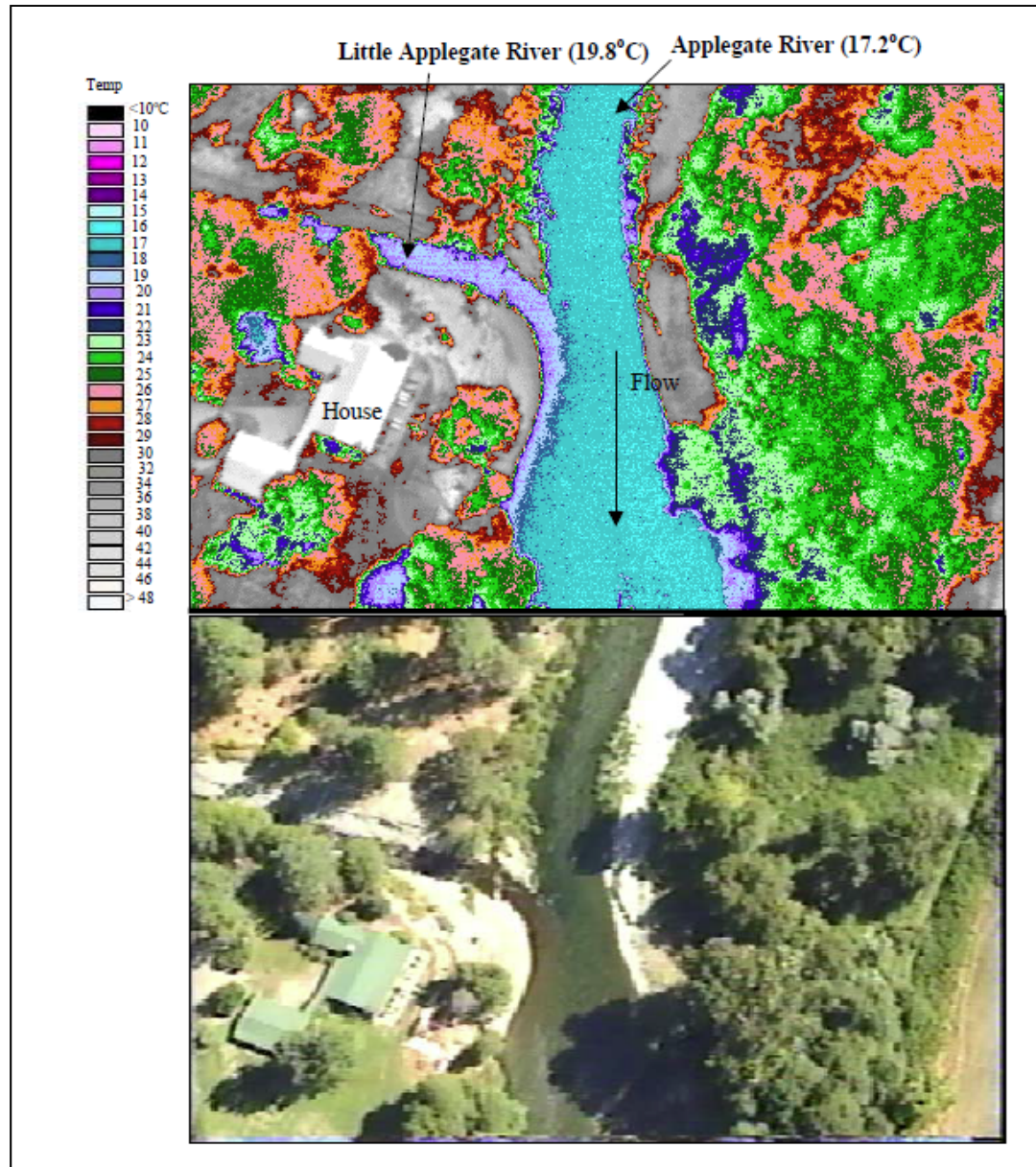
7-day average of maximum daily temperatures

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



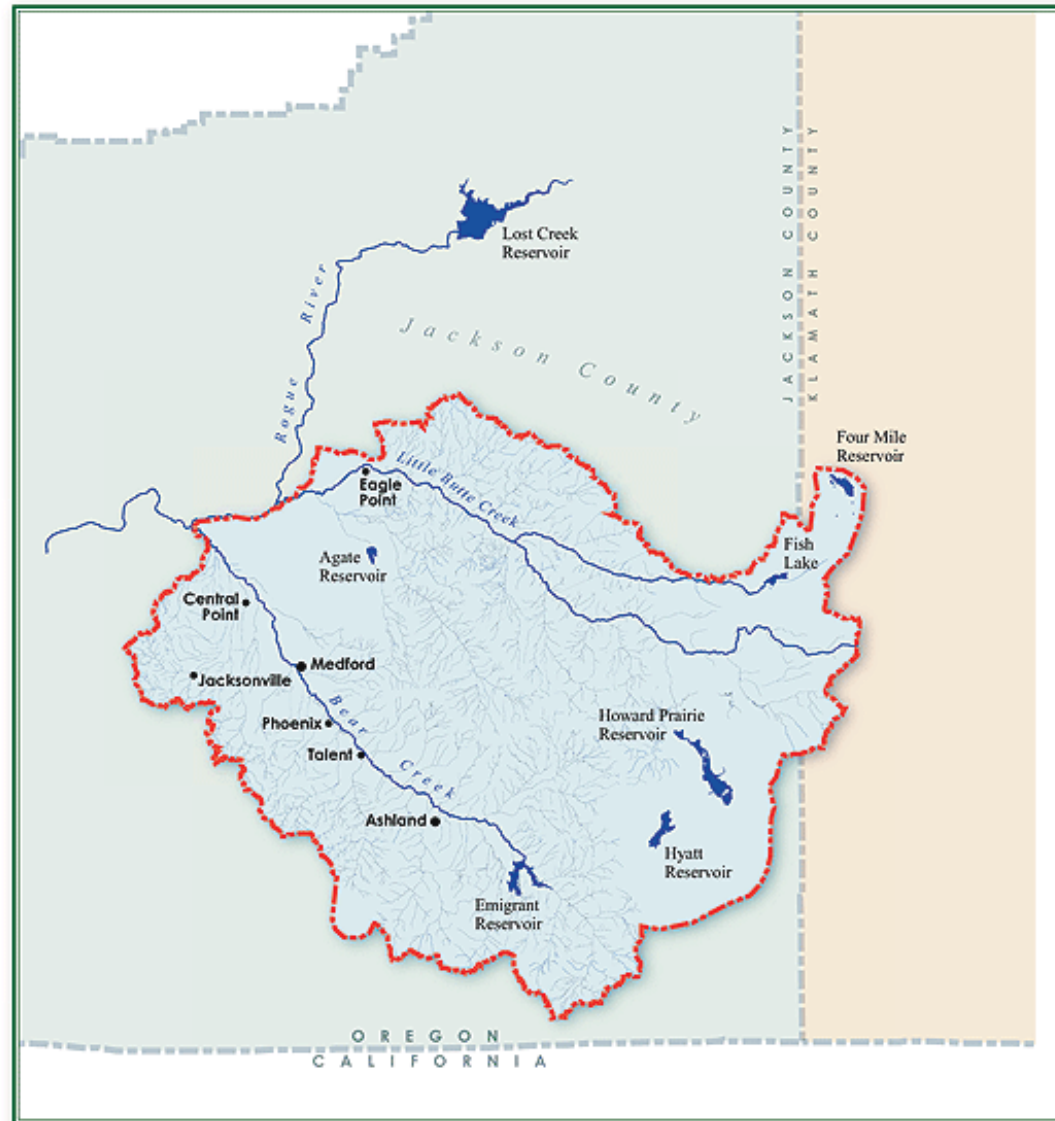
Partnerships

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

