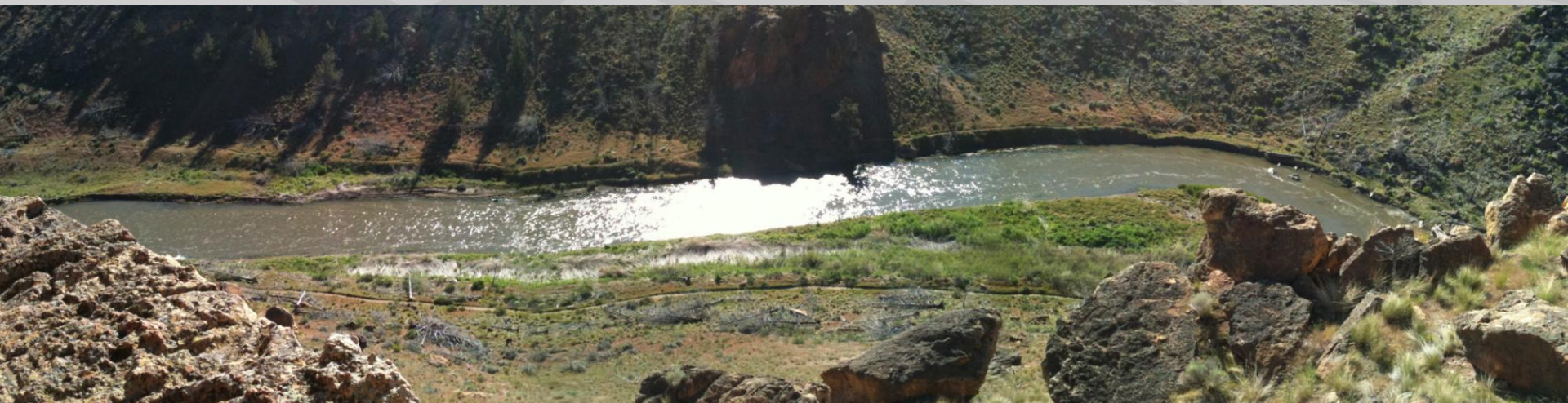


# Description of the Integrated Basin Scale Opportunity Assessment: Deschutes Basin

Gary Johnson, USDOE Water Power Program, on  
assignment from PNNL

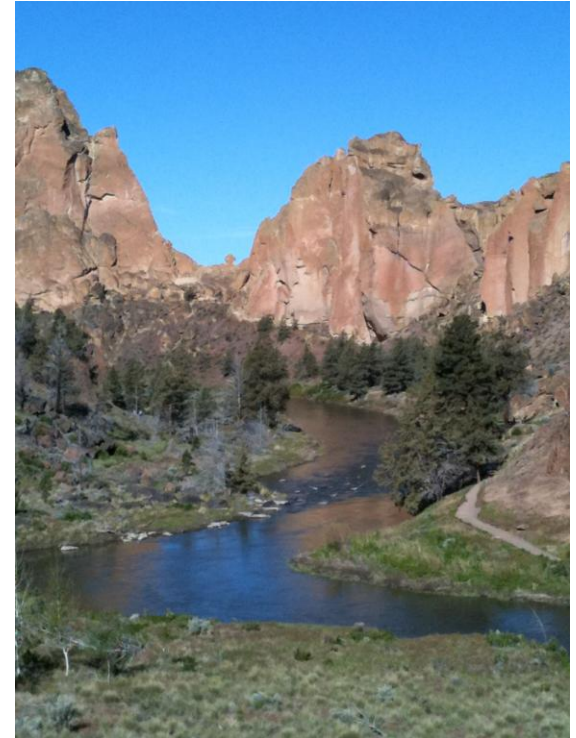
for

Simon Geerlofs, Project Manager, Pacific Northwest  
National Laboratory



# Content

- ▶ What is the Basin Scale Opportunity Assessment Initiative?
- ▶ Who is involved and what are the goals (at the National Scale)?
- ▶ Where does the Deschutes Basin fit in?
- ▶ What have we done to date?
- ▶ What are the next steps in the Deschutes?



## MOU for Hydropower among DOE, DOI and DOA

- Signed in March 2010, MOU highlights 7 key areas for interagency collaboration.
- Major ongoing activities to date
  - Assessments of energy generation potential and analysis of potential climate change impacts to energy generation at federal hydropower facilities
  - Basin Scale Opportunity Assessments -- Exploring opportunities for collaboration across entire river basins to increase generation and improve environmental conditions
  - Green Hydropower Certification
  - Federal Inland Hydropower Working Group
  - Joint Development and Demonstration of Advanced Technologies
  - Renewable Energy Integration and Energy Storage
  - Permitting for Federal and Non-federal Projects at Federal Facilities



# Goal for Opportunity Assessment

- ▶ In collaboration with stakeholders, develop and test in a case study an ***approach*** for basin scale identification and analysis of sustainable hydropower and environmental protection/restoration opportunities, while protecting other water uses.
  - Stakeholder engagement
  - System-scale analysis
  - Data aggregation, display, and dissemination
  - Inform—Opportunity assessments are meant to inform; **not interfere with ongoing regulatory or planning processes.**

# Partners (to date)—It's a big tent...

- ▶ MOU Agencies Leads—DOE, USACE, BOR
  - Kerry McCalman, CJ McKeral, Mike Pulskam—BOR
  - Hoyt Battey, Gina Krump, TJ Heibel, Gary Johnson—DOE
  - Kamau Sadiki, Lisa Morales—USACE
- ▶ National Steering Committee:
  - Jeff Leahey, Linda Church Ciocci—NHA
  - Julie Keil—Portland General Electric
  - John Seebach—American Rivers
  - Richard Roos-Collins—Natural Heritage Institute
  - Fred Ayer—Low Impact Hydropower Institute
  - Jeff Opperman—The Nature Conservancy
- ▶ Case Study Stakeholder Involvement
  - Logistics Team—DRC, COID, PGE, BOR, BOC, TU, USACE...
  - Site Visit and Interviews—20+
  - Stakeholder Workshops—40+
- ▶ Technical Team: PNNL, ORNL, ANL
- ▶ Outreach Team: Kearns and West



Protecting nature. Preserving life.™



Portland General Electric



HYDROPOWER REFORM COALITION  
Putting water, wildlife, and people back in rivers.

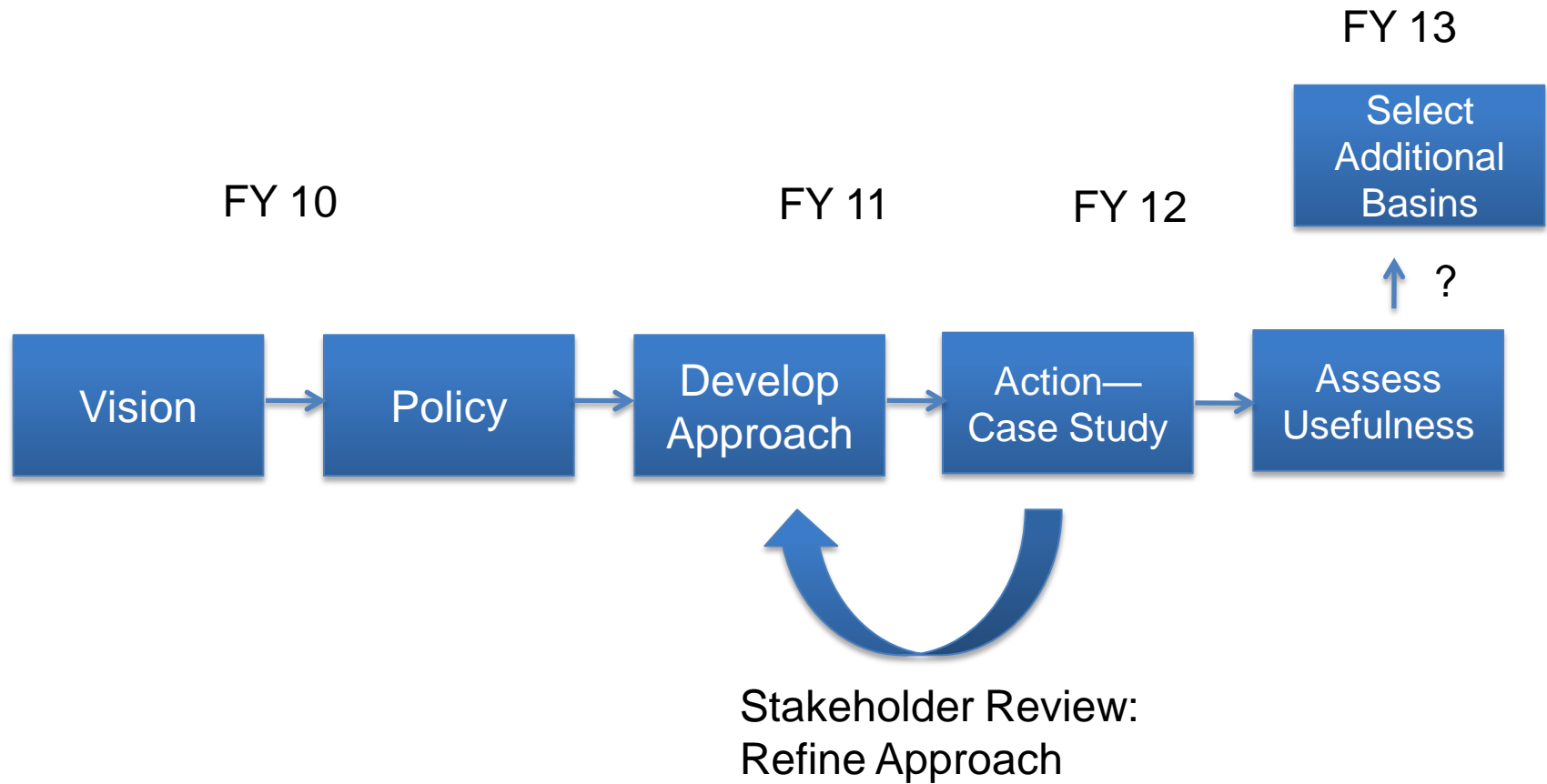


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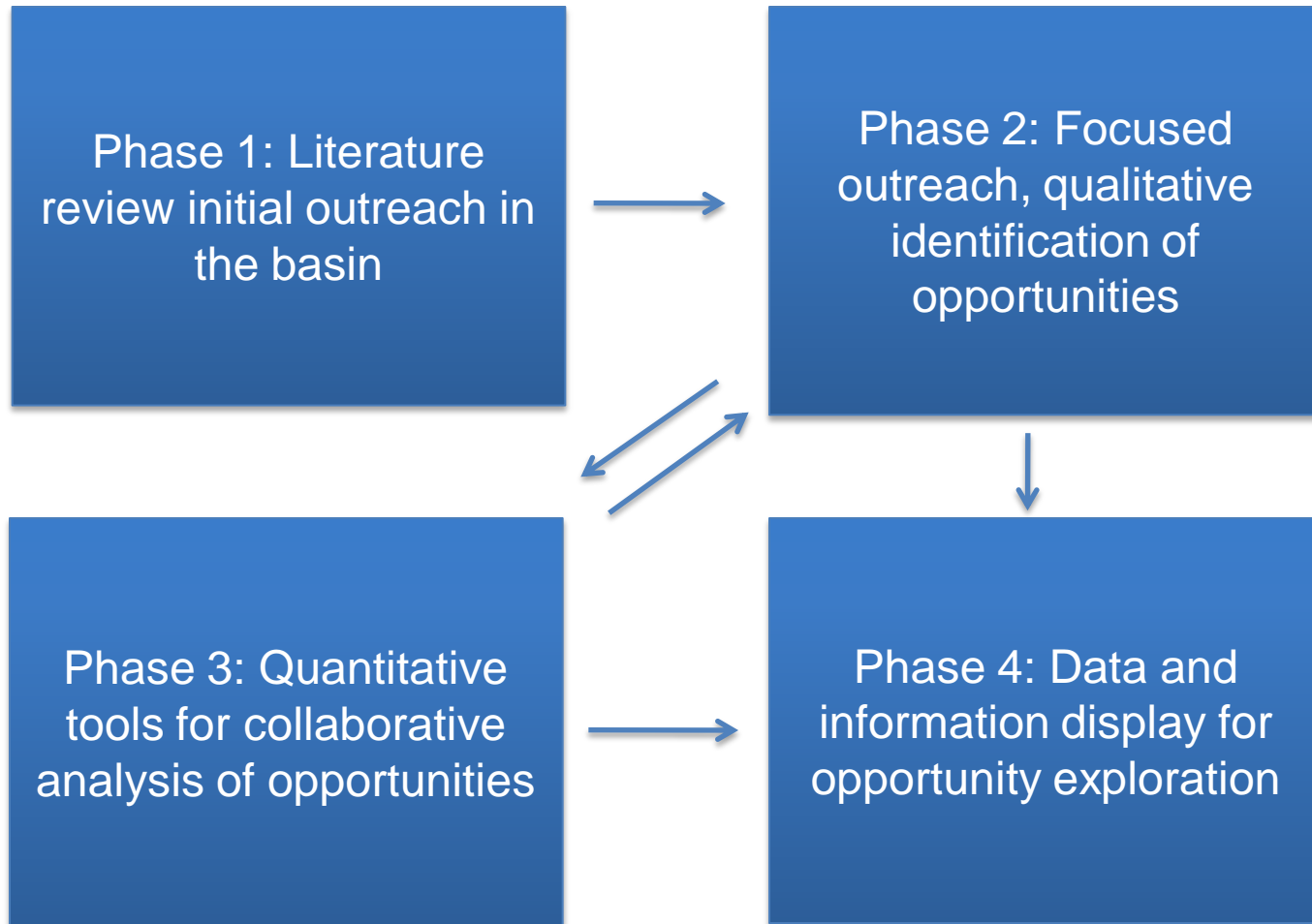


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# Assessment Process: Thousand-Foot View

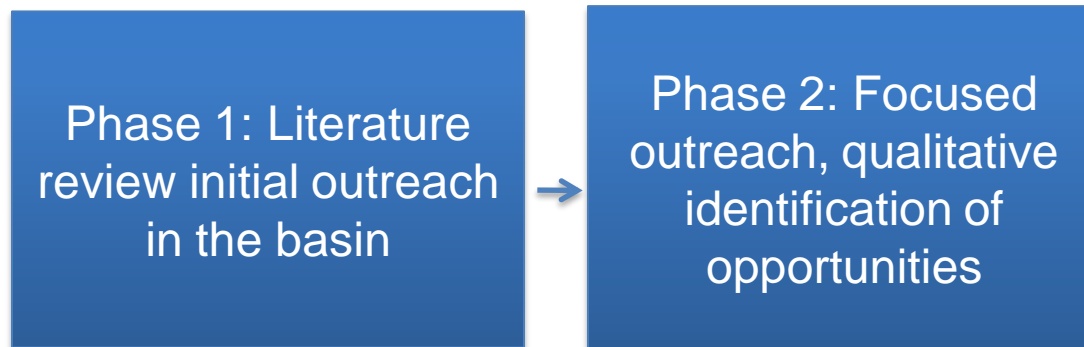


# Case Study Approach



# Deschutes Process and Schedule To Date

- ▶ February: Deschutes Basin Case Study Selection (1)
- ▶ March: Logistics Team—Introduce team to the basin (2)
- ▶ June: Site visit—Technical team visit of hydro, irrigation, and environmental sites (2)
- ▶ June/July: Stakeholder interviews—What are the opportunities for environment, hydro, and other important water uses in the basin? (2)
- ▶ July: Workshop—Stakeholder discussion on opportunities and analyses (2)
- ▶ August: Workshop Report, reviewed by participants (2)



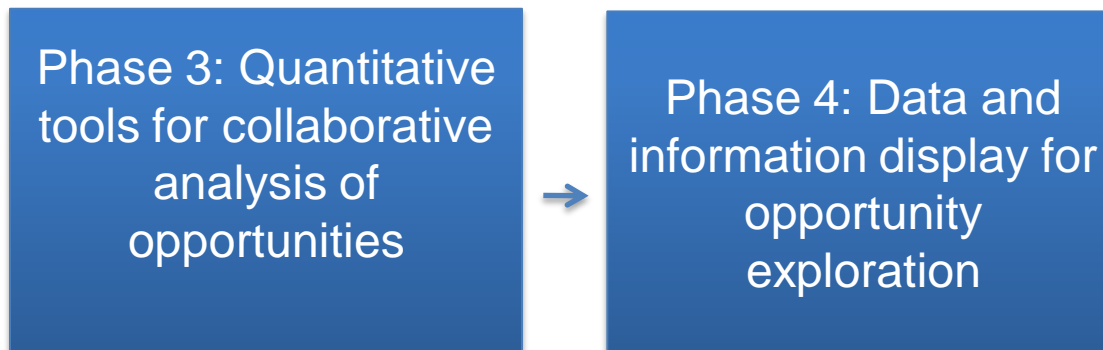
# July Workshop Results

- ▶ The following approach for the entire research package was identified, discussed and agreed to by the group unanimously.
  - Systemic, basin-wide water balance model to allow for simulation and visualization of opportunity scenarios
  - Aggregate information to document previously identified hydropower and environmental opportunities
  - Conduct a basin-wide analysis of in-conduit/in-canal hydro opportunities.



# Deschutes: Proposed Next Steps

- ▶ September 2011: Prepare qualitative opportunity assessment; scope quantitative studies for FY 12 (based on stakeholder engagement)
- ▶ October-November 2011: Stakeholder review of qualitative assessment and quantitative scoping and second workshop (2)
- ▶ November 2011-August 2012: Collaborative quantitative assessment and information display for exploration (3,4)
- ▶ September 2012: Conclude case study



# Thank you -- Questions?



# Annex

# Touchstones and Final Thoughts

- ▶ Hydro + Environment + Other Water Uses
- ▶ National Goals and Audiences + Local Goals and Audiences
- ▶ Stakeholder Process + Modeling and Analysis
- ▶ Think system scale and/or system impact
- ▶ Case study: limited time, limited funding—“Rapid” assessment approach
- ▶ Identify and clarify feasible opportunities—Not here to make recommendations or set plans for the basin

# Discussion Starters

- ▶ How can we best engage with you to ensure transparency and a collaborative process?
- ▶ What is the appropriate role for national laboratory system-scale analysis in the Deschutes Basin?
- ▶ How can we avoid “re-inventing the wheel”? We hope to work with you and with existing tools already in the toolbox.
- ▶ Others??