The Role of the Oklahoma Water Survey at the University of Oklahoma

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History of the Oklahoma Water Survey

- Founded in 2011
- First director was Dr. Bob Puls, who retired in 2015
- Early focus on Water Data Portal and outreach on fracking and produced water
- Had not been active since 2015
- Part of the recently formed Corix Plains Institute, which also includes the Archeological, Biological, Climatological, and Geological Surveys
Overall Goals

• Have an impact on the sustainability of our water resources in Oklahoma
• Make the University of Oklahoma more of a player in providing solutions to the water issues in the state
• Connect the OU faculty, students, and staff to the Oklahoma Water Community

...how will we do this:

by focusing on doing **MORE**
Monitoring
Outreach
Research
Education

Oklahoma Water Survey

Office of the Vice President for Research
Norman Campus and Norman Campus Programs at OU-Tulsa
Monitoring

• Have professional staff trained in sampling and QA/QC
• Providing monitoring service and assistance for OU researchers and Oklahoma stakeholders
  – *How can we partner with your group?*
• Monitor selected, high-impact long term sites
  – Kessler Farms
  – Trailwoods development in Norman
  – City of Tulsa pervious concrete demonstration
  – *Let us know your high-impact site that we can add to this list*
Monitoring

• Provide one-stop shop for public data gathering and distribution on OWS website

• Data products
  – Historic and current open surface water data for Oklahoma (and related data products)
  – Developing protocol and potential online site for distribution of hard-to-find data sets
    • *We are currently open to ideas on what data sets would be useful for you*
Monitoring

• Exploring Plains Institute coordinated monitoring
  – Discussions to monitor around a theme of extreme events (floods) at select sites across the state (co-located with long-term USGS gages)
    • Water Quality [sediment, nutrients, and metals] (OWS)
    • Aquatic Community Disruption (OBS)
    • Geomorphology and Erosion; loss of cultural sites (OAS, OGS, and OWS)
Outreach

• Developing a new website at OKH2O.org
• Creating professional development program and training portal
  – What workshop topics would you like to see?
• Providing outreach assistance to OU faculty and Oklahoma stakeholders, to a wide variety of audiences
  – How can we work together on outreach programming?
Outreach

• Organizing and cooperating in local conferences
• Continuing to partner with OWRB, OCC, and others to implement innovative stormwater BMP demonstrations across the state
  – Are you in need to a stormwater BMP at your site?
• Provide more outreach on current and future research at OU through media releases, trade literature, etc. so that Oklahoma stakeholders are aware of our work
Outreach

• Potential signature outreach activity:
  – POND (Protecting our Neighborhood Detention) Program targeting volunteer monitoring of detention ponds
  • Will include:
    – Water Quality Surveying
    – Bird Watching Aesthetic Improvements

• We are potentially looking for partner communities for proof-of-concept trials
Research

• Coordinate large-scale proposals to provide solutions for Oklahoma water issues
  – *Currently involved with OU produced water portfolio development under the coordination of the Oklahoma Secretary of Science and Technology*

• Involve stakeholders across the state with OU research proposals

• Encourage faculty to pursue and be involved with research that directly impacts the water resources in Oklahoma
Education

• Serve as a conduit between Oklahoma stakeholders and the classroom
  – *Please let us know if you would be willing to share your water knowledge with OU students*

• Provide an internship portal for students
  – *Please send us your internship opportunities!*

• Provide outside the classroom learning opportunities for students (volunteer)
  – *Please let us know if you need volunteers!*
Education

• Currently working on “Hydrology and Water Security” and “Civil Engineering” online M.S. programs

• Making progress towards dual degree program in Environmental Engineering, Environmental Science, and Environmental Sustainability with a university in Puebla, Mexico
Education

• Potential signature education activity:
  – New student organization: SAFE (Sooners Aiding Flood Emergencies)
    • Will potentially include:
      – Student training on preparation and response in case of floods
      – Student assistance in flood preparation and cleanup
      – Potential for outreach workshops related

• This is very preliminary, but we are potentially looking for partners for establishing this student organization