

**CFAES WATER QUALITY TASK FORCE**

**2018 FACULTY OPEN FORUM  
FEEDBACK SUMMARY**

November 2018

## METHODS

In the spring of 2018, the CFAES WQTF hosted a series of four (4) open meetings/forums with CFAES faculty and staff to invite input and engage in discussion about the structure of a future CFAES WQ Initiative – see flyer below. We advertised for the events by way of email listserv(s), flyers posted on monitors and bulletin boards in College buildings, and via departmental communication managers. Each event included a discussion facilitator (WQTF Chair or Member) and note takers (WQTF Program Manager and Members). The sessions were audio-recorded for reference during information processing. The open forums were 90 minutes each and the discussion was guided by the following questions – handout also below.

- What are the most pressing issues the WQI should address?
- What are the priority impacts and sources of impairment?
- What specific kinds of activities and programs should be included in the CFAES Water-Quality Initiative?

Among the four events, a total of 60 faculty and staff engaged in lively dialogue, sharing valuable insights around water quality topics. Event times, locations, and numbers of participants are as follows.

Date	Location	Number of Participants
April 4	Columbus – Ag Admin Bldg	12
April 6	Wooster - Research Services Bldg	13
April 9	Zoom (online)	24
April 12	Columbus – Ag Admin Bldg	14

The summary presented in the following pages focuses on faculty and staff response to the last question above regarding recommendations for activities and programs to include in a College Water Quality Initiative.

## What to Include in a CFAES WATER QUALITY INITIATIVE

### General & Process-related Recommendations

#### Scope

- While addressing water quality in Ohio, remain aware that water and OSU are both global.
- Define water quality comprehensively to include the systematic interactions of biological, chemical, and physical dimensions, not only chemical and nutrient issues.
- Take a Systems view of issues, including costs and applications, with broadened topic areas, for example decision processes, economics & policy.

#### Approach

- Lay out the roles of the college
- Set Goals, Metrics & Outcomes.
  - Also, in Defining Success, address important activities such as *relationship building* that are time consuming, yet difficult to measure in conventional metrics.
- Prioritize? Or go after it all? One conversation voiced differing opinions.
  - On one side, if Lake Erie HABs are THE driving issue and impetus, limited resources should be focused to maximize impact on that issue.
  - The opposing view sees OSU as a world-class institution that does not have to limit its scope and should *go after it all!*
- Stakeholder Input
  - In developing an initiative, the Colleges should facilitate a stakeholder driven process to ensure it aligns with broader interests and is relevant to stakeholder communities.
  - The farmer community and watershed organizations are specific examples noted.
- Funding
  - Address level of College commitment and initiative longevity with funding being a primary indicator.
  - Also lay out, if possible, who is going to pay for what.
- Adaptive Management Approach
  - An initiative should be broad & robust for the long-term, yet adaptable to address current issues.
  - It should not be a *flavor-of-the-day* effort.

## Facilitating Engagement

The College can play a key role as a convener on a variety of levels and platforms.

### *Policy & Debated Issues*

- Encourage & create opportunities to engage policy makers.
- Provide resources & staff to form better relationships and teams between the research and policy worlds.
- The College could be a fair arbiter for science-based discussions, to address contested issues with political and private implications. For example, the soil P stratification and till / no-till debate; cost-effective, on-farm practices vs engineered, proprietary solutions.

### *Build Relationships & Partnerships with External Public and Private Organizations*

- Genuinely engage and involve stakeholders in the public, private and non-profit sectors (Agri-business, enviro's, researchers, industry) to learn and respond to their needs.
- Serve as a catalyst for PPP's and collaborations, resource generation, successes, develop marketable technology, etc.
- Provide resources for engagement.
- Support opportunities to bring business, students, innovation, research and public together; e.g. Smart Ag competition

### *Foster Collaborations within CFAES / OSU*

- Explore new ways of repacking faculty, recognizing the range of expertise within and across colleges.
- Define challenges and develop teams around systems, perhaps drawing from the Discovery Themes model.
- Provide more opportunities for collaborations, funding, and identifying the right people to bring together.

### Research:

- Inventory WQ researchers, projects, publications.
- Connect & support teams for broader impacts, successful grant projects.
- Support grant proposal development.
- Provide / help secure funding for practice & research.

### *On-farm Research*

- Explore, incentivize innovation & technology development with on-farm demonstrations and trials.
- Support grassroots efforts to establish landowner – research cooperatives.
- Focus on what to implement quickly.

### *Specific topic areas suggested for research investment*

- Nutrient sources on sub-watershed scale.
- Addressing impaired watersheds.
- Urban storm water and green infrastructure.
- Long-term soils research and funding mechanisms. Opportunity: N Appalachian experimental station property.
- Food production - source water, wastewater; human health. Interdisciplinary teams are needed.
- Southern OH: Infrastructure needed to monitor WQ. Consider seed money to fill gaps.

### Extension

- Invest in personnel to extend capacity on topics in more areas of the state; e.g. livestock, manure statewide
- Integrate WQ topics in 4H and other youth curriculum & programming

### Teaching

- Inventory WQ-related courses.
- Incentivize development of coursework to fill gaps.
- Advance WQ-geared programs.
- Develop ways to connect people and opportunities across the College / OSU, e.g. symposia, WQ certification / specialization (look into other colleges / university models).
- Develop an undergrad seminar in WQ, introducing students to the range of topics & expertise across the College.

### Extension-Teaching-Research Links

- Active learning - Cultivate more opportunities to link with research, outreach & extension for *active learning*. Incentivize time investment in teaching that accomplishes this. Build on research experience for undergraduates.
- Explore and/or build on the role of Extension to link researchers with communities.
- Connect graduate students with County educators to help design and conduct research.

### Outreach, Communications & Messaging

- When identifying problems to audiences (especially farmers), be clear about what solutions we know work and, importantly, what we don't - what we are still working on.
- Balance the messaging with respect to conservation practices in agriculture - *some people are already using best practices*.
- Make complex materials, e.g. nutrient mass balance, more accessible to farmers & non-scientists.
- Increase funding & support for extension and outreach communications (beyond branding).
- Work to achieve consistency in messaging from OSU, Extension, and Sea Grant, about what we are doing and to balance info people receive from other sources.
- Enhance and/or enhance accessibility to resources for Extension Educators to communicate topics of College research & findings, e.g. edge-of-field research outcomes.
- In communicating with corporate partners who want to support activities in the college, articulate capacity and what we can do (e.g. precision agriculture and other technologies). Sometimes WQ gets lumped into sustainability.
- Avoid politically-charged language, e.g. climate change.

### Lead by example

- Audit College/ OSU facilities' WQ footprint.
- Explore opportunities for CFAES to demonstrate as a role model; this needs to be better understood.
- Consider investing in updating facilities. Opportunity: Waterman.

**CFAES**

# Help Design our Water-Quality Initiative

## Attend an Open Faculty / Staff Forum



We want to hear from you!

The **CFAES Water Quality Task Force** seeks input from college faculty and staff to help design a future Water Quality Initiative (WQI) for the college. These open forums are an opportunity for us to get your input about:

- What types of water quality issues or challenges should be a focus for the WQI?
- What should the college WQI do? How can it best support your work on water quality?

### Columbus Campus - 2 dates

Agricultural Admin. Bldg. Auditorium

**Wed April 4, 2018 | 9:00 – 10:30 A.M.**

**Thurs April 12, 2018 | 12:00 – 1:30 P.M.**

### Wooster Campus

Research Services Building, Room 130

**Fri April 6, 2018 | 1:30 – 3:00 P.M.**

### ZOOM “Virtual” Forum

ZOOM Meeting # 789611552 or [Link](#)

**Mon April 9, 2018 | 3:00 – 4:30 P.M.**

RSVP is encouraged to help us plan for seating & refreshments; and to email the ZOOM meeting link, if applicable.

Contact: Andrew Bahrou, Bahrou.1@osu.edu



**THE OHIO STATE UNIVERSITY**

COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES



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## Help Design our Water-Quality Initiative Open Faculty / Staff Forum

The **CFAES Water Quality Task Force** seeks input from college faculty and staff to help design a future Water Quality Initiative (WQI) for the college. These open forums are an opportunity for us to get your input about these guiding questions:

### What are the most pressing issues the WQI should address?

#### Example Sources of Impairment

- Nutrient losses/runoff
- Sediment/Soil Erosion
- Agrichemicals (pesticides/herbicides)
- Pathogens, from livestock, septic systems
- Personal care products, pharmaceuticals
- Dams & other hydrogeomorphic alterations
- Urban/industrial chemicals & compounds
- Stormwater, Combined Sewer Overflows
- Invasive species
- Hydraulic fracturing
- Changes in agricultural drainage systems
- OTHER IDEAS?

#### Example Types of Impacts

- Human Health
- Health of Aquatic Ecosystems
- Ecosystem Services
- Recreation / Aesthetics
- Economic Development
- OTHER IDEAS?

### What activities & programs should be included in the CFAES WQI?

#### Examples

- Allocate college funds to directly support water quality related research by CFAES faculty and staff.
- Facilitate efforts to obtain external research funding
- Facilitate increased research collaboration across OSU and with other universities
- Convene working groups to review literature to help inform policy makers, management agencies & practitioners
- Lead or support efforts to expand a water quality monitoring system in Ohio.
- Build & host a public WQ data archive.
- Expand CFAES outreach, extension & public education efforts focused on WQ.
- Incentives to expand coursework on WQ.
- Create a public portal about water quality conditions across Ohio
- OTHER IDEAS?

### What questions do you have about the WQ Task Force / Initiative?

Interested in staying engaged in Water Quality Initiative planning and/or implementation activities? Be sure to provide your info on a sign-up sheet.



**Initiative Recommendations, (almost) at-a-glance**

<p>Columbus 4-4-18</p> <p><b><u>WQI process &amp; in general</u></b> While addressing OH WQ, remain aware that <u>water and OSU</u> are both <u>global</u></p> <p>Define: WQ - interacting bio, chem, and phys aspects, i.e. not just a chem / nutrient issue Goals and Roll(s) of College Define success; e.g. to include relationship-building</p> <p><b><u>Engagement</u></b> College as a fair arbiter for science-based discussions. Address soil P stratification / till no-till debate; cost-effective, on-farm practices vs high-cost, engineered, proprietary solutions (political, private implications) Build relationships, partnerships; e.g. agri-business, enviro's, researchers, industry. Genuinely engage &amp; involve stakeholders; to learn and respond to their needs.</p>	<p>Wooster 4-6-18</p> <p><b><u>WQI process &amp; in general</u></b> Prioritize? Or go after it all? Differing opinions. Facilitate a stakeholder driven process to ensure aligned interests. Address questions of funding; who's going to pay for what Avoid political language, e.g. climate change.</p> <p><b><u>Engagement</u></b> College as a convener; catalyst for PPP's and collaborations, resource generation, successes. Provide resources for engagement New ways of repacking faculty; e.g. Discovery Themes. Define challenges; develop teams Encourage &amp; create opp's to engage policy makers.</p> <p><b><u>Messaging, communications</u></b> increase funding &amp; support beyond branding; relies on comm, extension &amp; outreach.</p>	<p>Zoom 4-9-18</p> <p><b><u>WQI process &amp; in general</u></b> Systems look at problems; including costs and applications.</p> <p><b><u>Engagement</u></b> Foster collaborations w/ private sector; develop marketable tech College as a convener; across colleges; Resources / staff to broker better relationships between the research/policy teams world Support &amp; provide opp's to bring business, student, innovation, research and public together; e.g. Smart Ag competition Engage watershed involvement in evaluation/assessment/solutionS Engage the farm community</p> <p><b><u>Messaging, communications</u></b> Consistency needed from OSU, Extension, Sea Grant, about what we are doing and to balance info Resources for educators to communicate topics that have back up from college community; e.g. edge-of-field research Balance messaging; some people are already doing BMPs</p>	<p>Columbus 4-12-18</p> <p><b><u>WQI process &amp; in general</u></b> Should be <u>broad, robust</u> for the long-term, <u>yet adaptable</u> to address current issues. Define WQ, Systematic interactions between biological, chemical, and physical dimensions. Broaden topic areas; include decision processes &amp; policy Define metrics and outcomes</p> <p><b><u>Engagement</u></b> Foster collaborations / build teams around systems; recognize range of expertise; provide more opp's for collaborations, funding, and identifying the right people to bring together.</p> <p><b><u>Messaging, communications</u></b> Corporate partners who want to support activities in the college; articulate capacity and what we can do; sometimes WQ gets lumped into sustainability.</p>
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<p><b><u>Messaging, communications</u></b> When identifying problem, be clear about solutions and what solutions we are still working on. Make complex materials, e.g. nutrient mass balance, more accessible to farmers &amp; non-scientists</p> <p><b><u>Teaching</u></b> Coursework; incentives; WQ specializations; develop ways to connect people and opportunities across the college / university, e.g. symposia, WQ cert. (look into other colleges' / unis' models); inventory WQ-related courses.</p> <p><b><u>Research:</u></b> Inventory WQ researchers, projects, publications; Connect &amp; support teams for broader impacts, successful grant projects.</p> <p><b><u>Lead by example;</u></b> audit college/ university WQ footprint;</p>	<p><b><u>On-farm Research</u></b> Explore, incentivize innovation &amp; technology development with demo's / trials on farms; landowner – research cooperatives; involve landowners; grassroots efforts; focus on what to implement quickly.</p> <p><b><u>Lead by example;</u></b> CFAES to demonstrate as a role model; this needs to be better understood.</p> <p>Provide / help secure funding for practice &amp; research.</p>	<p><b><u>Extension – Research Links</u></b> Connect grad students with County educators to design and conduct research</p> <p><b><u>Outreach</u></b> 4H / youth curriculum / programming</p> <p><b><u>Extension</u></b> Invest in personnel to extend capacity on topics in more areas of the state; e.g. livestock, manure statewide</p> <p><b><u>Research</u></b> Grant proposal &amp; development support.</p> <p><b><u>Lead by example</u></b> audit OSU facilities' WQ footprint; investment, resources would be needed to update facilities; consider Waterman.</p> <p><b><u>Areas needing research / investment</u></b> Nutrient sources on sub-watershed scale. Addressing impaired watersheds. Urban Storm water; GI; CFAES as a leader.</p>	<p><b><u>Extension, Teaching, Research Links</u></b> more opp's to link w/ outreach/ extension; active learning; build on research experience for undergrads; advance WQ geared programs; incentivize time investment in teaching / linking. Extension as link for community / researchers. WQ undergrad seminar, incl. college range of topics &amp; expertise</p> <p><b><u>Areas needing research / investment</u></b> Long-term soils research; funding mechanisms; N Appalachian experimental station property.</p> <p>Food production; source water, wastewater; human health; Interdisciplinary teams; fund important aspects.</p> <p>Southern OH; Infrastructure to monitor WQ in SE OH; e.g. at Western off agricultural plots; Seed money to fill gaps.</p>
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Columbus 4-4-18	Wooster 4-6-18	Zoom 4-9-18	Columbus 4-12-18
<p><b><u>Sources / Impacts</u></b>  Nutrient Loss  Erosion  Sediment  Septics; pathogens  Dissolved greenhouse gases  Food Processors  Urban environments  Effects of Urbanization  Aging infrastructure  Hydrology, flooding;</p> <p><b><u>Social, Management</u></b>  Distrust in Agri community  Outreach / education /  awareness; BMP relevance  outside Lake Erie; other / urban  contributors  Water / WQ definitions,  perceptions</p> <p><b><u>Messaging</u></b>  Inconsistent messaging, Till, no-  till results &amp; complexities</p>	<p><b><u>Sources / Impacts</u></b>  Sediment  Livestock, manure  Septics, failing  Rural WWTP's, financing  Mines; waste regs roll-back  Legacy contamination  Hydrology; USACE issues  Climate; Weather; changes;  excess water on farms;  Pharmaceuticals, biota  Wastes diverted from landfills;  food waste, compost sites,  anaerobic digesters.</p> <p><b><u>Social, Management</u></b>  Outreach / education /  awareness; lengthy process  convincing stakeholders about  problems  Nutrients; when will regs apply to  outside of LE basin?</p> <p><b><u>Messaging</u></b>  Communications support; less  funding; dif. priorities</p>	<p><b><u>Sources / Impacts</u></b>  Nutrients; N, too; not just P  Manure, lagoons  Sediment; drinking water  treatment  Urban storm water; GI  OH river; HABs recent yrs  Fracking; injection wells  Recreation; community  development  Anaerobic digesters; on-farm &amp;  large-scale WWTP;</p> <p><b><u>Messaging</u></b>  Inconsistent messaging; nutrient  source (i.e. surface runoff vs tile  vs instream); result – poor buy-  in to BMPs</p> <p>Inconsistent messaging; wrt HABs  from OEPA vs OSU</p>	<p><b><u>Sources / Impacts</u></b>  Nutrients; Nitrogen  Biota, missing in research focus;  e.g. LE invasive spp.,  Lake dredgings; USACE  Re-mining strip mines  Drinking water; public health;  Schools WQ concerns  Drinking water &amp; private wells,  fallen off the radar.  OH River basin overlooked  Anaerobic digestion systems  Turf grass; research gaps</p> <p><b><u>Social, Management</u></b>  Shifting WQ views; chemical vs  aquatic habitat  Human systems drivers.  Decision processes; policies  NRCS 'soil health'; needs better  connection to yield / economic  development</p> <p><b><u>Messaging</u></b>  Advancement, fundraising;  Materials, talking points.  Communication, language; farm  vs watershed science</p>