

# Welcome to the Lake Alice WMP Steering Committee Meeting



## Steering Committee Agenda, 9/7/23 2:00-4:00 pm EST

| Time        | Agenda Item  | Action                    |
|-------------|--|---------------------------|
| 1:50 - 2:00 | Pre-meeting gathering time                                 |                           |
| 2:00 - 2:15 | Welcome and chat storm, agenda overview, group norms       | Informational + feedback  |
| 2:15 - 2:20 | Engagement Update  | Informational             |
| 2:20 - 2:25 | Data collection and analysis update                        | Informational             |
| 2:25 - 3:00 | Permits and permitting for new construction and stormwater | Informational + questions |
| 3:00 - 3:10 | Break if needed  |                           |
| 3:10 - 3:45 | Funding stormwater projects                                | Informational + questions |
| 3:45 - 4:00 | Next steps   |                           |

### Purpose:

- Build shared awareness of the current and future permitting, regulatory, and funding methods for stormwater management.

## Steering Committee (SC) Responsibilities

### Members (all UF unless otherwise noted)

Eban Bean: Ag. and Biological Engineering

Mark Brenner: Geological Sciences

Chuck Cichra: Forest, Fisheries, & Geomatic Sci.

Mark Clark: Soil, Water, & Ecosystem Sciences

\*Matt Cohen: Forest, Fisheries & Geomatic Sci.

\*Dave Conser: City of Gainesville - Urban Forestry

Lillian Crawford: Landscape Architecture

Marty Dempsey: Rec. Sports, Student Life

Stefan Gerber: Soil, Water, & Ecosystem Sci.

Stacie Greco: Alachua Co. Env. Protection Dept.

John Guerra: Env. Health and Safety

\*Mark Hostetler: Wildlife Ecology & Conserv.

Jared Howard: Facility Services - Utility Water

\*Mark Hoyer: Florida LakeWatch

\*Alan Ivory: Wildlife Ecology & Conserv.

Yi Luo: Landscape Architecture

Jeanna Mastrodicasa: Institute of Food & Agricultural Sciences

\*Nia Morales: Wildlife Ecology & Conservation

\*Mark Newman: Eng. School of Sustainable Infrastructure

\*Steve Noll: History

AJ Reisinger: Soil, Water, & Ecosystem Sci.

John Sansalone: Eng. School of Sustainable Infrastructure

Tom Schlick: Facility Services - Grounds

Bill Smith: University Athletic Association

\*Taylor Stein: Forest, Fisheries & Geomatic Sci.

Amanda Subalusky: Biology

\*Kim Tanzer: Faculty Emeritus, Architecture

\*Matt Whiles: Soil, Water, & Ecosystem Sci.

\*Missy Williams: Facility Services

### Responsibilities

1. Use your technical, scientific, institutional, historical, and community knowledge and expertise to provide input and feedback to the PT throughout the project
2. Help design and implement process to gather input and feedback from community stakeholders

Those names with asterisk were not in attendance at the Steering Committee meeting.

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## Chat storm warm-up

**In chat, answer: What tree species do you associate with the UF campus?**



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## Group norms to guide our work together

### ***We will...***

1. Stay engaged and speak up when we have questions, need to slow down, or move on
2. Respect different ideas and perspectives, focus on solutions
3. Share knowledge and expertise
4. Inform the groups we report to/represent about the SC's work, and bring forward any issues that need our attention
5. Track issues and ideas that need attention at another time or place

***Any additions? Any objections?***

***No additions or objections***

Facilitated  
Engagement  
Update

- **Engagement planning:** Task Force members shaped plans and process for critical key input sessions this fall -- thanks!
- **Website** (see QR code): Thank you Rachel!
- **Technical Exchange Workshops:** Gather technical info and resources from faculty and community experts (all virtual)
  - #1, date: 11 participants
  - #2, date: 11 participants
  - #3, date 10 registered so far
- **Community vision workshops:** Gather input on the future of Lake Alice and the watershed from the entire community
  - #1, virtual, September 12, 12:00-1:00 pm - registration required (24 so far)
  - #2, virtual, September 27, 7:00-8:00 pm - registration required (10, 5 of which are registered for 1 & 2)
  - #3, in person, October 4, 4:30-7:00 pm, Straughn Professional Development Center; no registration required - people come/go at any time



*Website QR code, hold phone camera up to screen*

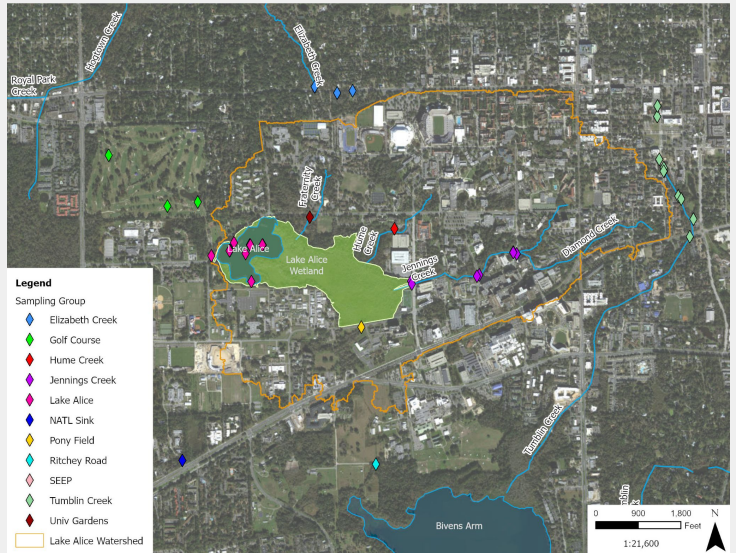
***Show of hands:  
Who has or will  
attend a TEW or  
do the survey?***

***Vision workshop?***

## Data Collection & Analysis Update

## Data collection and analysis

- From the FDEP, USGS, County, Lakewatch, SJRWMD
- Provided by AJ Reisinger and Mark Clark from studies on campus
- Fish data from the Florida Natural History Museum database
- Theses, dissertations, papers, and articles through the Tech Exchange Workshops, individuals, and searches
- 59 WQ stations on/near campus, in 11 general areas
  - 24 WQ stations within 5 areas in the Lake Alice Watershed
- No flow data have been reported in the Lake Alice Watershed



## Data collection and analysis - continued

- Large number of parameters collected among stations (~215)
- Richest datasets for nutrients, field parameters, and TSS
- Most parameters have a period of record through September 2022
- Fish data from museum includes 110 specimens, 30 locations, 27 species, 1939-2017
- BioGator data includes list of species by Conservation Area (plants, birds, etc.)
- Theses and dissertations collected from UF Library and Steering Committee
- Various journal articles
- Newspaper stories about the lake, many involving management decisions and maintenance

*Additions? Attend the final TEW or use the online TEW survey (see QR code)*



## Permits and permitting for new construction and stormwater on campus

### Purpose:

- Explain the Municipal Separate Storm Sewer System (MS4) and SJRWMD Master Plan permit, current permit and requirements for stormwater, and expected changes
- Explain the current impairments in the waterbodies on campus and the implications of the Clean Waterways Rule

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## Campus Stormwater Management

### Building Permits

1. Required by State of Florida; administered by the UF Environmental Health & Safety
2. Intent is to design buildings to prevent damage from rain and flooding and to manage stormwater to prevent damage to buildings and the associated access to the building

### Environmental Resource Permit (ERP)

1. Required by State of Florida; administered by the St. Johns River Water Management District
2. Intent is to manage impacts to wetlands and ensure stormwater runoff is captured and treated without causing impacts to natural waterbodies

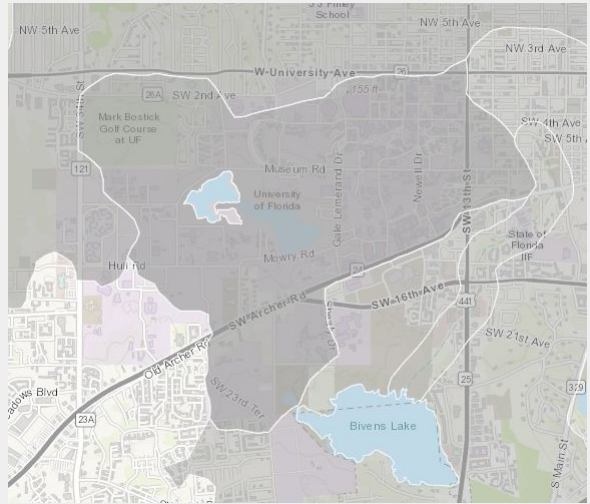
### NPDES Municipal Separate Storm Sewer System (MS-4)

1. Required by the Federal Government through the Clean Water Act
2. Permit administered and issued by the State of Florida through FDEP
3. Intent is to improve surface water quality by requiring a robust stormwater management program with defined and measurable stormwater control practices to minimize the discharge of pollutants from the sewer system

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## Current Impairments in the Lake Alice Watershed

- Lake Alice (Lake) WBID 2719A
  - Total phosphorus
  - Mercury (in fish tissue)
- Lake Alice Outlet (Watershed) WBID 2719
  - Total phosphorus (insufficient biological data)
  - Chlorophyll-a
  - Fecal coliform (E. coli new applicable bacteria parameter)
  - Dissolved oxygen (causative pollutant not identified)
- Within the Orange Creek Basin which has a BMAP, but no TMDL for Lake Alice



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## Current SJRWMD ERP Master Plan Permit

- UF Master Drainage System - Permit 4-001-15570-19, 10-year duration
- Lake Alice Watershed 1,097.9 acres, 87 acres Lake Alice
- Ponds, streams, and depressional areas provide pretreatment and Lake Alice permitted as wet detention
- Existing impervious area of 443.4 acres and an additional proposed 169 acres of impervious
- Impervious surface may not be re-allocated among the 40 basins without a modification to the permit
- Permit requires:
  - No violation of state WQ standards
  - Install and maintain erosion and sediment control
  - Wetland delineation for projects, and plans for any construction within the 50-foot approved wetland buffer
  - Limestone encounter, sinkhole, or solutions cavity requires District contact
  - Designated construction limits
  - Annual report showing balance of impervious areas by basin (UF 1-3 and 5-9)
  - Measure and report water levels in monitoring wells quarterly
  - Implement University of Florida Hazardous Waste Minimization Guide, Chemical Waste Management Guide, and Handling Procedure for Oil and Other Maintenance Related Waste and Natural Disaster/Hurricane Emergency Plan
  - Stormwater inspections every 2 years
  - Construction commencement notification
  - Monthly basin inspections

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## MS4 Permit - Phase II Generic Permit

- Municipal Separate Storm Sewer System (MS4) - Permit FLR4E067, 5-year duration
- Listed Receiving Waters
  - Lake Alice (Closed Basin)
  - Hogtown Creek (Closed Basin)
  - Tumblin Creek/Bivens Arm Lake (Orange Creek Basin)
- Permit requires:
  - Implementation of a Stormwater Management Program (SWMP)
  - Assess and adjust SWMP to maximize efficiency and make reasonable further progress toward reducing discharge of pollutants
  - Implement minimum control measures
    - Public education and outreach on stormwater impacts
    - Public involvement/participation
    - Illicit discharge detection and elimination
    - Construction site stormwater runoff control
    - Post-construction stormwater management in new development and redevelopment
    - Pollution prevention/good housekeeping for municipal operations
  - Annual reporting (years 2&4 after renewal)
  - Maintain records for 3 years from date coverage expires

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## Future permitting

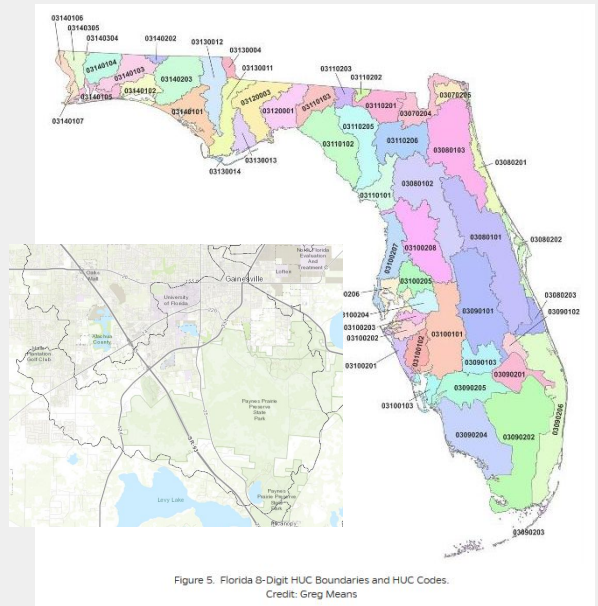
- Current MS4 - Permit FLR4E067 expires in 2024
- Current ERP Master Plan Permit expired November 22, 2020, but is in the process of being renewed
- Future ERP Master Plan Permit - submitted in 2022
  - Lake Alice Watershed identified as 1,006.3 acres, 22.5 acre lake area, and 45.7 percent impervious
  - Conceptual permit that requests an additional 35.5 acres of impervious area in the Lake Alice Watershed and surrounding depressional basins
  - Requires an annual development report
  - Individual projects will require modification of the conceptual permit
  - Wetlands were delineated in 2022 as part of renewal
  - Projects within 50-feet of wetlands require project-specific permit review
  - Modeling showed a 1% increase in storage volume in Lake Alice for future conditions
- Permit has not been issued in draft yet, or finalized

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## Clean Waterways Act

- CWA rule-making complete, awaiting adoption by Legislature
- Stormwater treatment systems are to be designed to achieve 80% TSS removal
- Requires greater of, a 55% reduction in TN and a 80% reduction of TP , or post-development being lower than pre-development
- HUC12 with impaired waters:
  - 80% reduction for TN and TP **and** post-loading < pre-loading; **OR**
  - In lieu of specific requirements may meet level of treatment specified in the basin-specific design and performance criteria for load reductions, follow an approved alternative restoration plan, **or other watershed management plan**



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Break



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## Funding Stormwater Projects

### Purpose:

- Clarify the various methods that are available and typically used for funding stormwater projects
- Gather feedback on which methods might be easiest to implement and have the highest impact on stormwater management

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## Funding methods

- *“Until recently, storm water management in many municipalities has either been ignored or received attention only when major problems resulted during major storm events.”* (Debo and Reese 1995)
- Preferred funding method for stormwater is a service charge
- Must be based on a stormwater program
- Needs to be based on the cost of providing service
- Potential rate considerations:
  - Impervious area
  - Impervious and gross area
  - Gross area and development intensity
  - Gross area only
  - Ability to be implemented
  - Equity
  - Uniformity



## Funding methods - continued

- Modification factors can also be included:
  - Base rate
  - Basin-specific surcharges to cover capital projects
  - Surcharges for vulnerable facilities
  - Reductions in fees for projects that incorporate detention, retention, infiltration, treatment, or energy dissipation
  - Water quality
  - Intensity
  - Level of service

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### *Funding Methods and Rate Type Feedback*

| Method Type                        |
|------------------------------------|
| 1. Impervious area*                |
| 2. Gross area and impervious area* |
| 3. Gross area and intensity        |

| Frequency     |
|---------------|
| A. One-time   |
| B. Recurring* |

*Answer in chat: Which of these funding methods would have the highest impact on stormwater management and be the easiest to implement? Why?*

The majority of members identified #1 and #2 with B being the best option.

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## Next Steps

**In chat:**

**What did you find most valuable today?**

**What would you like to know more about?**

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### **Actions List: Post actions to be performed sometime after the completion of the session.**

| Action item  | Who is responsible                         | When completed by |
|--|--|-------------------|
| How to manage dry material and plant selection on parking lots | Linda - AJ/John<br>S/Scott/Amy (Who else?) | End of September  |
|  |  |                   |
|  |  |                   |
|  |  |                   |

## Project Overview and Timeline

The information below here is for your information only and will not be discussed in detail at the meeting.

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### Project Team (PT) and Consultant Team (CT) Responsibilities

#### PT (UF Administration)

Linda Dixon, PM, Planning, Design, and Construction  
Rachel Mandell, Planning, Design, and Construction  
Mark Helms, Facilities Services  
Chuck Kammin, Facilities Services  
Matt Williams, Office of Sustainability  
Kaylee August, Office of Sustainability  
Angelique Hennon, Business Affairs Technical Services

#### PT Responsibilities

1. On behalf of the University, serve as the project decision makers
2. Manage the Lake Alice Watershed Project
3. Provide guidance and support to gather input and feedback from the Steering Committee (SC) and community stakeholders

#### Consultant Team (CT)

**Project manager:** Scott Knight, Wetland Solutions

**Technical team:** Wetland Solutions (prime); Jones Edmunds (stormwater); GSE (geotechnical); and DRMP (survey)

**Facilitation and public engagement:** Rooted in Process (facilitation lead); Blackhawk Facilitation; Carroll, Franck & Assoc.

#### CT responsibilities, at the direction of the PT

1. Apply professional expertise to complete the technical elements and develop recommendations in collaboration with the PT and SC
2. Jointly develop an equity-centered stakeholder engagement design and work plan; gather perspectives from all stakeholders and provide results to help shape decisions
3. Support the PT and SC to be fully informed and work collaboratively

## Steering Committee (SC) Responsibilities

### Members (all UF unless otherwise noted)

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Jeanna Mastrodicasa: Institute of Food & Agricultural Sciences  
 Nia Morales: Wildlife Ecology & Conservation  
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 \*Steve Noll: History  
 AJ Reisinger: Soil, Water, & Ecosystem Sci.  
 John Sansalone: Eng. School of Sustainable Infrastructure  
 Tom Schlick: Facility Services - Grounds  
 Bill Smith: University Athletic Association  
 \*Taylor Stein: Forest, Fisheries & Geomatic Sci.  
 Amanda Subalusky: Biology  
 Kim Tanzer: Faculty Emeritus, Architecture  
 \*Matt Whiles: Soil, Water, & Ecosystem Sci.  
 \*Missy Williams: Facility Services

### Responsibilities

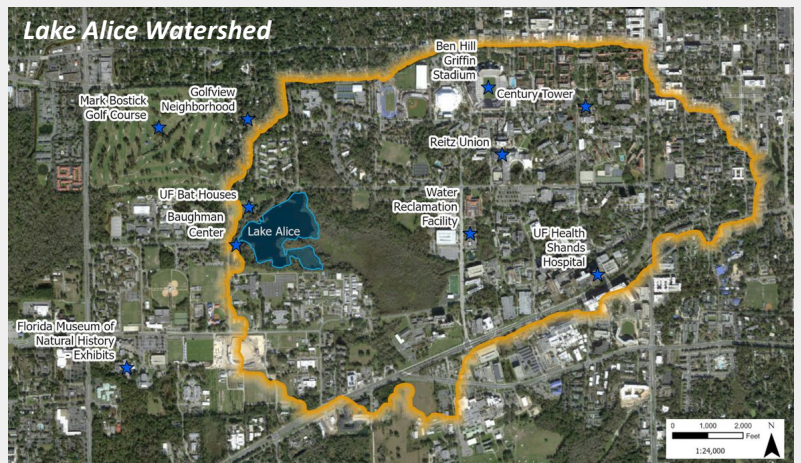
1. Use your technical, scientific, institutional, historical, and community knowledge and expertise to provide input and feedback to the PT throughout the project
2. Help design and implement process to gather input and feedback from community stakeholders

Those names with asterisk were not in attendance at the first Steering Committee meeting.

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## Project overview

- Watershed is ~1,000 acres, mostly on UF campus
- Significant topography and impervious surfaces
- UF maintenance has focused on immediate needs and problems



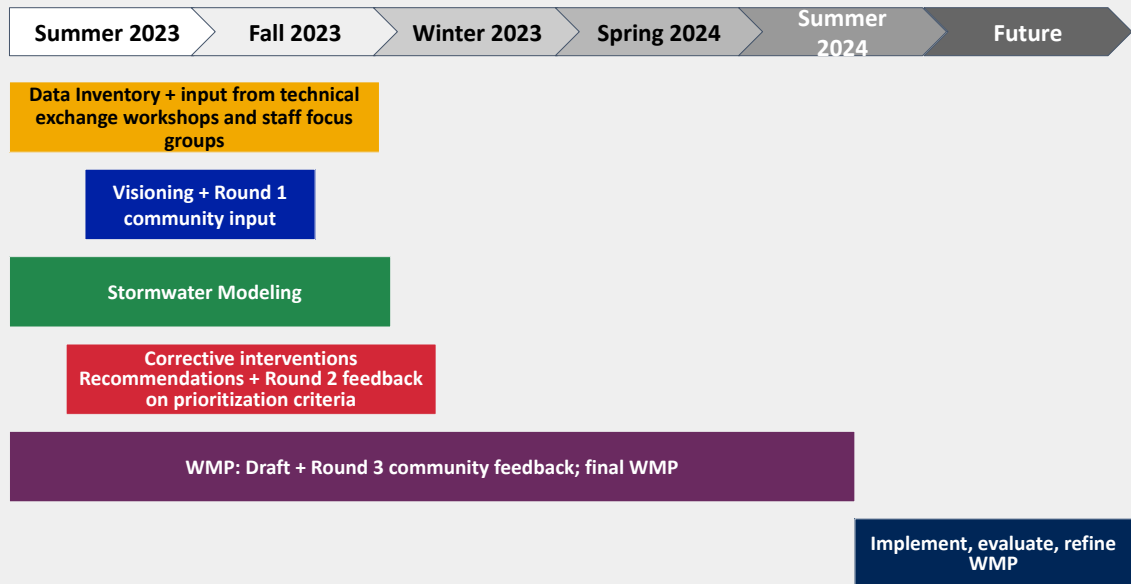
### Watershed Management Plan goals

- Holistic framework for stormwater management of the lake, creeks, wetlands, and stormwater infrastructure
- Define uses, users, and policies
- Evaluate current stormwater design requirements, operation, and maintenance
- Provide recommendations for future watershed management as campus development continues: water quality/quantity, vegetation, climate resilience, stormwater, funding

### Project leadership:

- Project team of 6 UF administrators plus consulting leads
- 29-member Steering Committee

## Project Timeline



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## Major Project Elements

### Facilitated Engagement (now-summer 2024)

- Technical exchange workshops, late Aug-mid-Sept
- Round 1 input on vision, Sept-Oct
- Round 2 feedback on prioritization criteria for corrective interventions, Oct-Nov
- Round 3 feedback on draft WMP, Apr-May 2024

### Long-Term Watershed Vision (early fall)

- Prepare background information
- Round 1: Gather input on the watershed vision, compile and analyze results, and report out

### Data Inventory (now-fall)

- Gathers available data (including from experts via Technical Exchange Workshops)
- Data analysis and write-up for WMP

### Stormwater Modeling (now-fall)

- Inventory stormwater and update model
- Evaluation chokepoints, erosion, sedimentation
- Model future conditions
- Write up modeling for WMP

### Corrective Intervention Recommendations (late summer-early winter)

- Prepare ranking of identified flooding and erosion areas
- Conduct targeted site visits; develop concept costing
- Draft prioritization criteria and gather feedback from and SC and community stakeholders; use results to prepare technical memorandum

### Watershed Management Plan (now-summer 2024)

- Write data and literature review
- Write stormwater modeling report
- Draft WMP
- Round 3: Gather broad feedback and use results to shape final WMP

## 1. Draft long-term watershed vision

**Task:** Draft a long-term vision for the watershed -- what it looks like, what it's used for, and how it is managed. This is based on technical, regulatory, and policy information; informed by stakeholder perspectives; and provides clear guidance for developing the watershed management plan.

### Process and timing

1. **Aug-Sept 2023:** Consulting team prepares background information and engagement details per the agreed-upon engagement work plan
2. **Sept-Oct 2023: Round 1 input** -- Consulting team gathers input on the watershed vision from PT, SC, and community stakeholders; compiles and analyzes results; and reports out

### Deliverables

1. Engagement materials
2. Outreach and engagement activities
3. Engagement results: Data, compilation, analysis / report
4. Watershed vision statement



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## 2. Data inventory

**Task:** Collect available data for the watershed including geographic data (topography, soils, land use) and physical data (water quality, water quantity, soils, vegetation, wildlife). Review of Lake Alice and the watershed, as well as UF planning documents, environmental permits, and news articles. Compile and evaluate data, reports, and articles to document management decisions, current condition, impairments, and changes in the watershed that should be considered in developing the WMP.

### Process and timing

1. **May-Oct 2023:** Consulting team gathers available data, including requesting data from PT and SC
2. **Aug - Sept 2023:** Gather information/projects from technical experts through Technical Exchange Workshops.
3. **Sept 2023:** Gather information from UF staff and regulators through focus groups.
4. **Aug 2023 - April 2024:** Data analysis

### Deliverables

1. Presentation of data inventory and findings to PT and SC
2. Data write-up included in Watershed Management Plan



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### 3. Stormwater modeling

**Task:** Stormwater modeling includes updating and refining the existing model for the Lake Alice Watershed based on new development and further basin subdivision. Stormwater simulation will identify areas with insufficient capacity, flooding, erosive velocities, and sedimentation. The results will be used to identify and **prioritize areas for corrective interventions.**

#### Process and timing

1. **May-Aug 2023:** Stormwater inventory
2. **July-Aug 2023:** Model updates
3. **Aug-Sept 2023:** Chokepoint, erosion, and sedimentation evaluation
4. **Sept-Nov 2023:** Future conditions modeling

#### Deliverables

1. Presentation of stormwater updates and results to PT and SC
2. Modeling write-up included in Watershed Management Plan

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### 4. Corrective intervention recommendations

**Task:** Identify the three highest-priority flooding areas and three highest-priority erosion areas in the Lake Alice Watershed. Develop and gather feedback on criteria to prioritize recommendations. Develop project concepts for prioritized flooding and erosion projects. Prepare cost estimates for developed project concepts. Summarize all findings in a technical memorandum.

#### Process and timing

1. **Sept 2023:** Consulting team prepares ranking of identified flooding and erosion areas
2. **Sept-Nov 2023:** PT and SC jointly discuss and provide feedback to consulting team
3. **Sept-Dec 2023:** Consulting team conducts targeted site visits
4. **Oct-Nov 2023:** Consulting team develops concept costing
5. **Oct-Nov 2023:** Round 2 -- Consulting team drafts prioritization criteria and gathers feedback from PT and SC and community stakeholders; use results to prepare technical memorandum

#### Deliverables

1. Project concepts and cost estimates for correction of identified flooding and erosion issues
2. Round 2 feedback results on prioritization criteria
3. Technical memorandum with three highest-priority flooding and three highest-priority erosion issues

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## 5. Prepare Final Watershed Management Plan

**Task:** Synthesize all project findings into a comprehensive WMP for Lake Alice. Develop recommendations and strategies for addressing identified issues on campus that align with identified priorities and the vision for the Lake Alice Watershed.

### Process and timing

1. **Aug-Dec 2023:** Consulting team writes data and literature review
2. **Aug-Dec 2023:** Consulting team writes stormwater modeling report
3. **Oct 2023-Apr 2024:** Consulting team drafts WMP
4. **Apr-May 2024:** Round 3 -- Consulting team prepares engagement materials and gathers broad feedback from SC and community stakeholders, and uses results to shape final WMP

### Deliverables

1. Draft WMP
2. Round 3 feedback results on draft WMP
3. Based on feedback, final WMP