



Stantec



OHM

Advancing Communities®

Piqua Hydraulic Canal and Dam Safety Design Project

Steering Committee Meeting 1 – June 13th 2022

Agenda

1. Welcome and Introductions
2. Project Overview
 1. Scope
 2. Schedule
3. Roles and Responsibilities
4. Review project study areas and alternatives
5. Group discussion on alternatives for Echo and Franz
6. Stakeholder nominations

Welcome and Introductions



We are the community advancement firm.

We believe in the power of multidisciplinary teamwork to find ideas that aren't just different—they're better.





17 Offices

Indiana | Ohio | Michigan | Tennessee

Community is at the center of everything we do.

We've been Advancing Communities since 1962 by keeping our singular forward-thinking focus on putting people first.

AUTHORIZED TO TRANSACT BUSINESS IN ALABAMA, ARKANSAS, GEORGIA, KENTUCKY, PENNSYLVANIA AND WISCONSIN

City of
PIQUA  *Chillicothe*



Stantec



Now You.....

“My name is _____,
I live _____ and
locally I am

”

Project Overview

Project Purpose

Identify design alternatives for the hydraulic canal system which includes Swift Run Lake, Echo Lake and Franz Pond, which satisfy safety requirements of ODNR and **retain the quality of life the waterways bring for the community.**

Goals:

1. Slow and Right
2. Collaborative
3. Transparent
4. Thorough

This Project Is **NOT** About Changing
the ODNR Standards and Guidelines

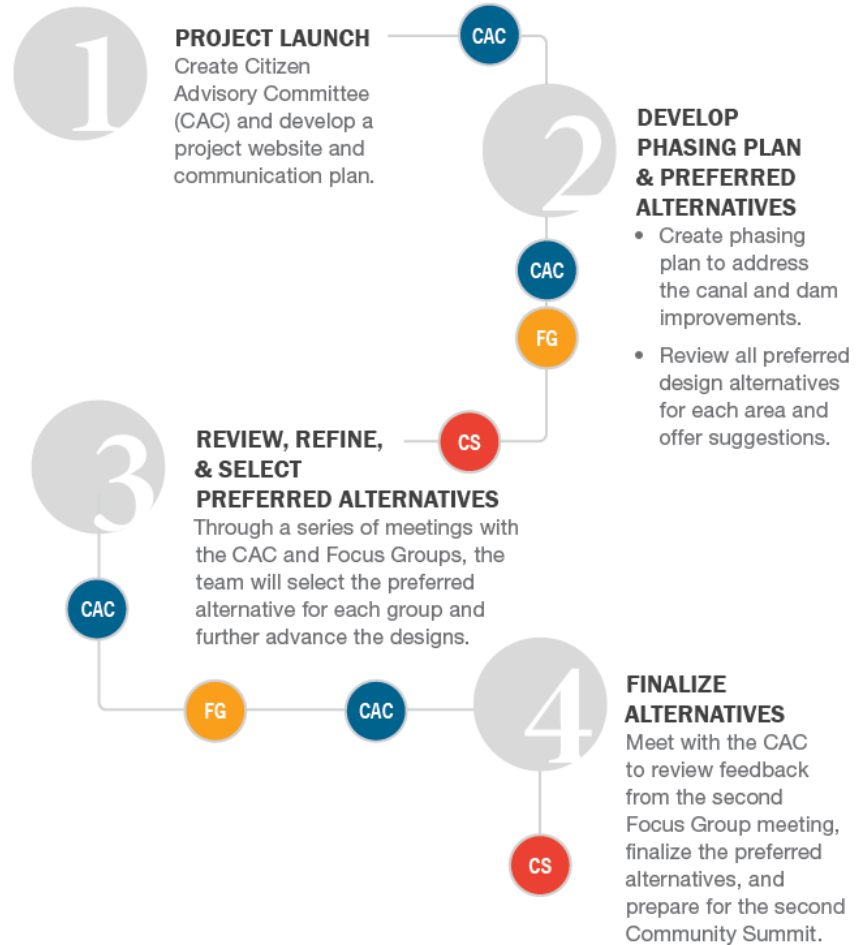
Process

A brief overview of the process as part of this effort.

CAC – Citizen Advisory Committee

FG – Focus Groups

CS – Community Summit



Draft Schedule

MEETING SCHEDULE - DRAFT

UPDATED 06-13-2022

Client Kick-Off Meeting

Review project purpose, scope, schedule, and conduct goal setting/idea generation activities.

Tuesday, May 3rd, 2022

9am | Virtual

Citizen Advisory Committee Meeting 1

Review an overview of the purpose and desired outcome of the study and present select alternatives.

Monday, June 13th, 2022

3:30pm | City Offices

Focus Groups Round 1

A series of focus group discussions will be conducted to gain specific insight and feedback on each area.

Monday, July 11th, 2022

3:00pm - 4:30pm | Location TBD

Citizen Advisory Committee Meeting 2 - Virtual

Review the focus group feedback and select alternatives for Franz Pond and Echo Lake. Plan for the first round of community engagement.

Monday, July 25th, 2022

3:00pm - 4:30pm | Virtual

Community Summit 1

A public meeting to review the purpose of the project, the process, the draft phasing plan, and select alternatives for each area.

Monday, August 8th, 2022

3:00pm - 4:30pm | Location TBD

Citizen Advisory Committee Meeting 3

Review the community input gathered and select a preferred alternative for each area with the consideration of modifications or changes to the preferred alternatives. Plan for the second round of community engagement.

Monday, August 22nd, 2022

3:00pm - 4:30pm | In Person
Location TBD

Focus Groups Round 2

Review the preferred alternative for each area.

Monday, September 12th, 2022

3:00pm - 4:30pm | Location TBD

Community Summit 2

A public meeting to serve as an educational forum on the outcome of planning and preferred alternatives.

Monday, October 17th, 2022

3:00pm - 4:30pm | Location TBD

Citizen Advisory Committee Meeting 4

Review feedback from the second round of focus group meetings and community summit.

Monday, November 14th, 2022

3:00pm - 4:30pm | Virtual / In-Person
Location TBD

Finalize and Submit!

December, 2022

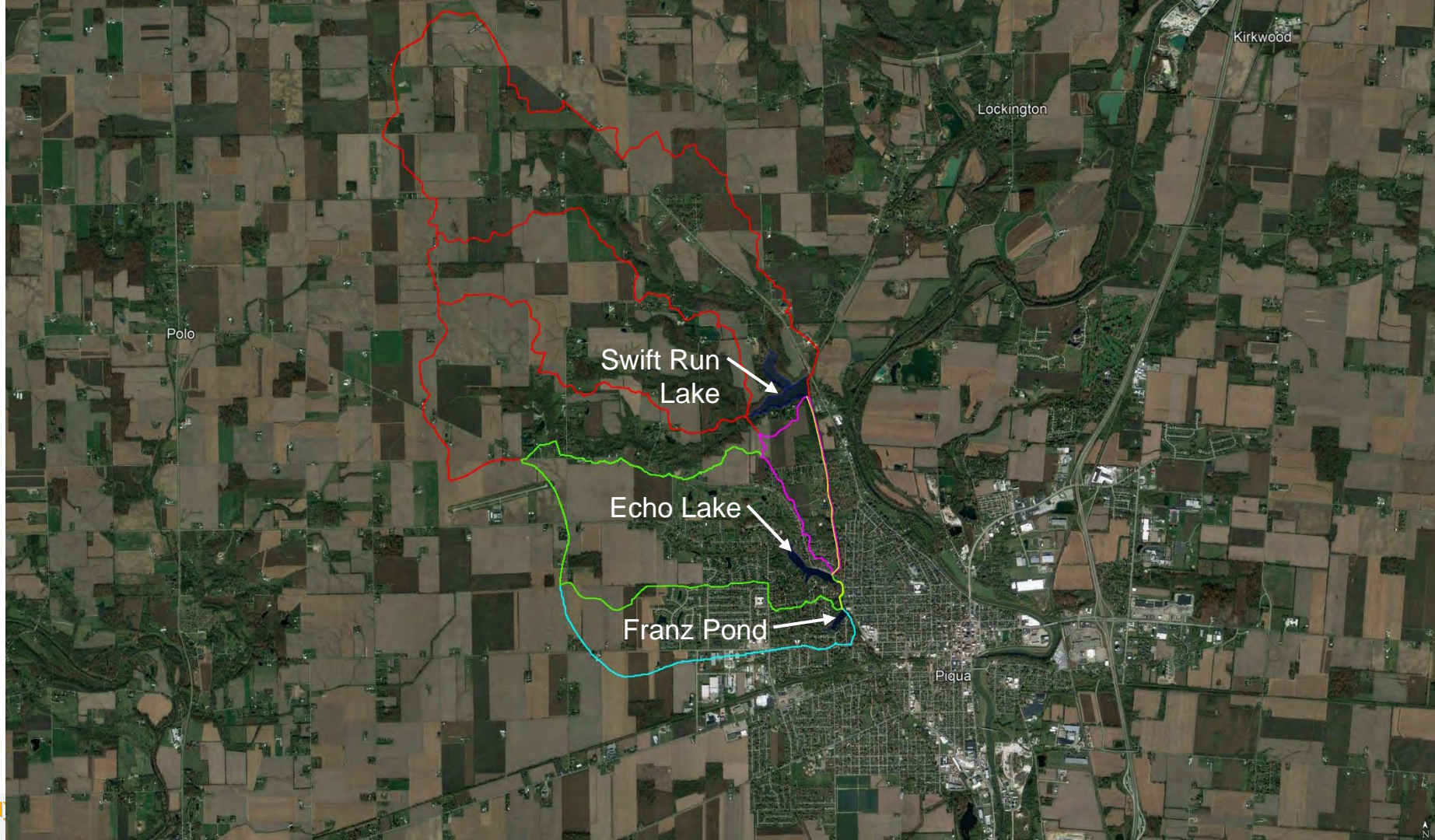


Quick Facts

History

1. The hydraulic canal system was originally built in the 1860's and 1870's by the Piqua Hydraulic Company to provide power to downtown industries.





Polo

Lockington

Kirkwood

Swift Run
Lake

Echo Lake

Franz Pond

Picua

System Overview

1. Length of canal from Franz Pond to Swift Run Lake is about 2 miles (10,000 feet).
2. Embankment heights vary from <5 feet to 30 feet.
3. Watersheds:
 - a) Swift Run Lake – 7.42 square miles.
 - b) Echo Lake – 1.95 square miles.
 - c) Franz Pond – 1.05 square miles.
 - d) Additional Canal – 0.37 square miles.
4. All dams are currently ODNR Class I dams (high hazard).
5. Drinking Water Sources:
 - a) Quarry and Great Miami River are used as options 1 and 2.
 - b) Less than 5% from Swift Run Lake.

ODNR Evaluations and Requirements

1. Evaluations:

- a) Performed every 5 years. Most recently in 2019.
- b) Current issues include:
 - i. Insufficient spillway capacity to pass design storm.
 - ii. Ongoing maintenance of dams and hydraulic canal.

2. Requirements (same as nationwide):

- a) Design Storm Events (based on Height, Storage and Hazard):
 - i. Class I (High Hazard) – 100% PMF (Probable Maximum Flood)
 - ii. Class II (Medium Hazard) – 50% PMF
 - iii. Class III (Low Hazard) – 25% PMF
 - iv. Class IV (Exempt)

Piqua Dam Classifications

1. All dams are ODNR Class I dams (high hazard).
 - a) Swift Run Lake Dam is being evaluated for reclassification to Class II.
2. Need to be able to pass the 100% PMF (Probable Max Flood) storm event.
 - a) PMF/PMP (24-hours) \approx 27 inches
 - b) Largest Storm Event at Lockington Dam (1995 < 48-hours) = 10.75 inches

How it works



Swift Run Lake

Spillways #2 and #3

Spillway #1

Echo Lake

Franz Pond



System Overview

Where do we start....the current plan of attack:

1. First start with the preferred alternative for Swift Run
 - Decrease outflow to Spillway 1 to increase capacity for other lakes
2. Second, address Franz Pond outflow
 - Outflow flows to Echo Lake, so we need to address this next
3. Third, address Echo Lake and the canal system
 - Carefully address the dam and outflow for minimum disturbance

Finalize plan for swift run and submit to ODNR for review ASAP. This gets 'us' going and builds trust and goodwill.

Swift Run Plan

Goal: Decrease Flow to Spillway 1/ODNR Compliance

- Lower the damn on north side
- Improve the spillway condition
- H2O levels stay similar to existing
- Decreases flows to Spillway 1

Swift Run Lake

Spillways #2 and #3

Spillway #1

Echo Lake

Franz Pond



Swift Run Plan

Goal: Decrease Flow to Spillway 1/ODNR Compliance

- Lower the damn on north side
- Improve the spillway condition
- H2O levels stay similar to existing
- Decreases flows to Spillway 1

- By reducing flow to Spillway 1 this maintain/increases capacity
- Keeps capacity for water flowing from Franz and Echo
- Helps alleviate disturbance (widening) of the canal to meet PMF

Swift Run Lake ← Spillways #2 and #3

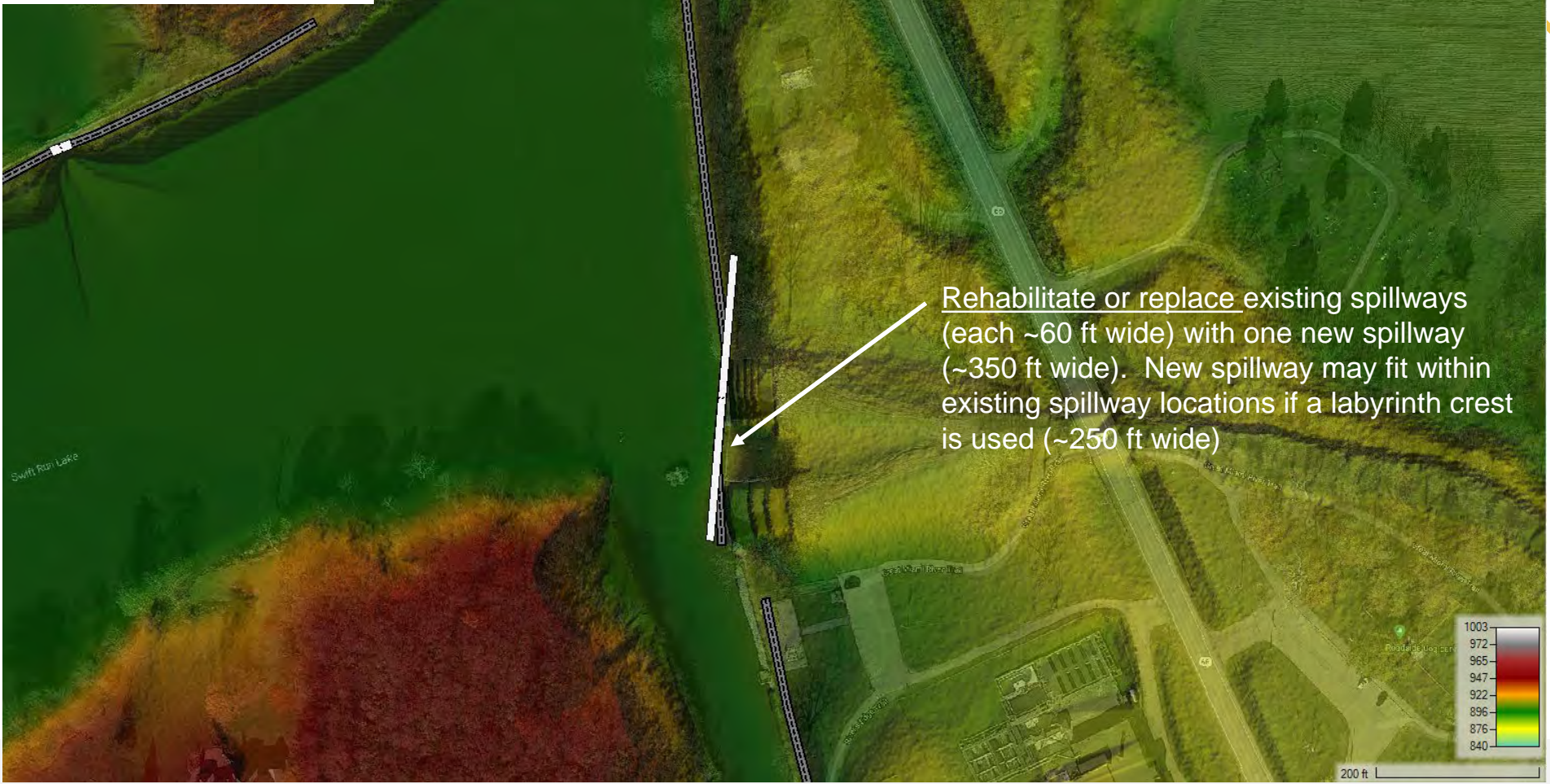
← Spillway #1

Echo Lake

Franz Pond



Swift Run Lake Alternatives 1, 2 and 3



Franz Pond Options

Swift Run
Lake

Spillways #2 and
#3

Spillway #1

Echo Lake

Franz Pond

Goal: Reduce flows to Echo and the Canal

• Two Options:

Option 1

- Pushes flows into existing city storm system
- Pond turns to wetland feature/park

Option 2

- Raise the berm
- Widen the canal
- Push flows to Echo Lake



How it works

Option 1

- Will result in minimal work to the canal between Echo and Spillway 1

Option 2

- will require significant work to the canal in both widening, trenching, tree removal

Swift Run Lake

Spillways #2 and #3

Spillway #1

Echo Lake

Franz Pond

Goal: Reduce flows to Echo and the Canal

• Two Options:

Option 1

- Pushes flows into existing city storm system
- Pond turns to wetland feature/park

Option 2

- Raise the berm
- Widen the canal
- Push flows to Echo Lake

Echo Lake Options: To be discussed

Swift Run
Lake

Spillways #2 and
#3

Spillway #1

Echo Lake

Franz Pond

Goal: Maintain

- Plans for Echo Lake will depend on what alternative is preferred for Franz
- May require significant improvements to the dam
- May require significant improvements to the canal system

Summary Approach

Improve Swift Run to minimize flow to spillway 1

Reduce impacts to bike path and park along canal

Plans for Echo TBD, criteria to be developed by committee and public

Transition to natural area, thereby reducing flows to canal and Echo

Echo Lake

Franz Pond



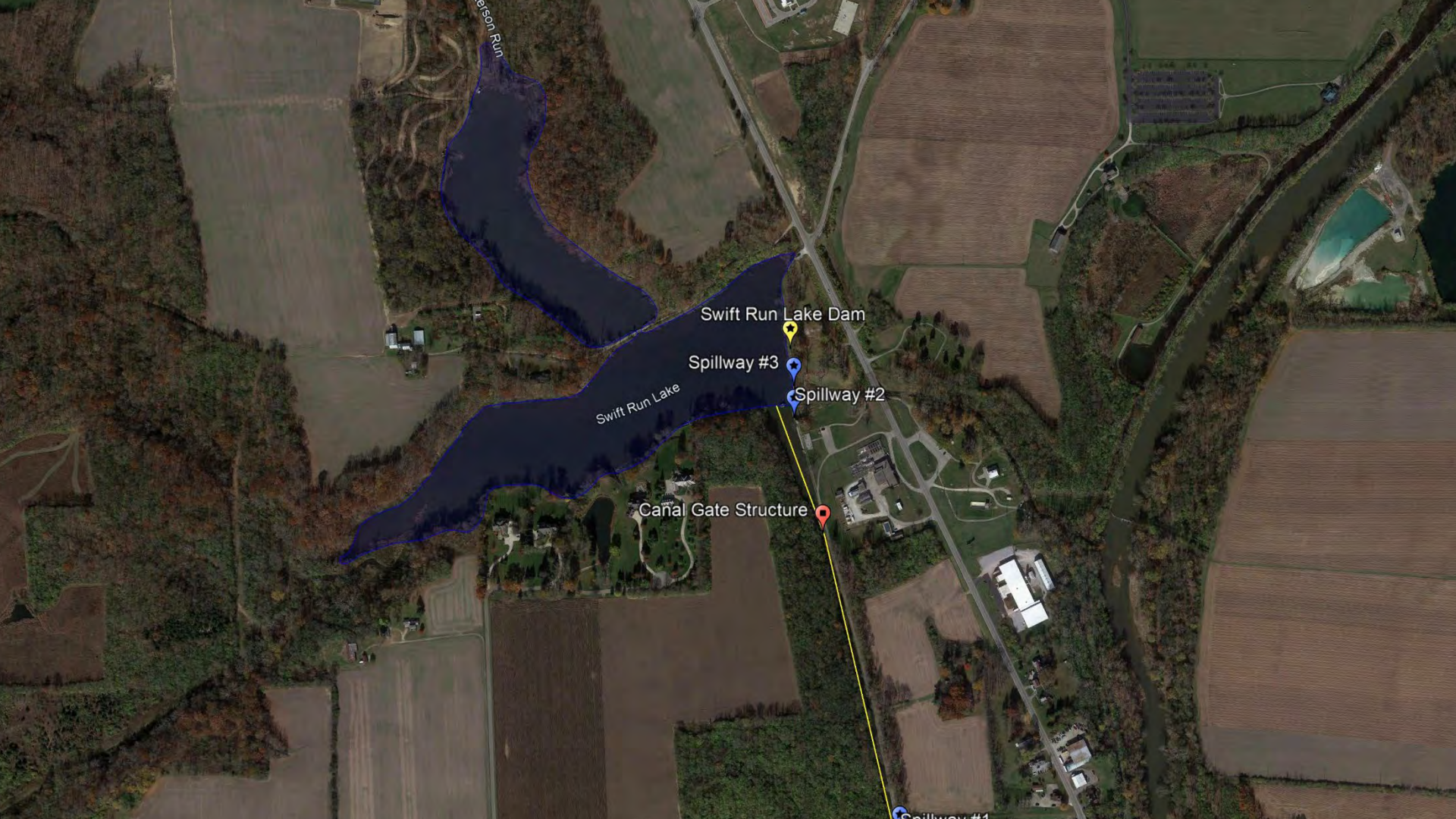
Group Discussion

Group Discussion

Swift Run:

1. Do you understand and support the concept?
2. Are there any issues you foresee?
3. Are there missed opportunities not considered?





Person Run

Swift Run Lake Dam

Spillway #3

Spillway #2

Swift Run Lake

Canal Gate Structure

Spillway #1

Group Discussion

Franz Pond:

1. Questions about the two options
 1. Option 1 lower water levels and divert water to storm system
 2. Raise the dam and widen parts of the canal leading to Echo
 3. May result in significant widening of canal between Echo and Spillway 1
2. What are there any issues you foresee with the options?
3. Are there missed opportunities not considered?





Franz Pond

Franz Pond Dam

Group Discussion

Echo Lake:

1. Do you understand and support the concept?
2. Are there any issues you foresee?
3. Are there missed opportunities not considered?





Echo Lake

Echo Lake Dam



Stakeholder Nominations

Stakeholder Nominations

1. Part of the next step in the process will be to meet with small groups of stakeholders to get their insights/opinions
2. Please fill out the stakeholder nomination form
3. Note if there is a specific water body the stakeholder may be most interested in

Next Steps

Next Steps

1. Stakeholder Meetings – Week of July 10th
2. Citizen Advisory Committee Meeting 2 – July 25
3. Community Summit – August 8th



OHM-Advisors.com

Share your vision with us, and together, we'll
create great places for people.