HERSHEY'S MILL DAM PARK OPEN SPACE MASTER PLAN

East Goshen, Chester County Pennsylvania



PUBLIC MEETING #2: Concept Review

Thursday 1.26.2017, 6-7:00 PM East Goshen Township Building 1580 Paoli Pike West Chester, PA

Agenda Items:

7:00 - 7:10 7:10 - 7:45

7:45 - 8:15 8:20 - 8:30 8:30 - 9:00 Committee Business / Introductions Presentation (Please hold questions until end) 1. Review Public Feedback 2. Review Project Goals 3. Concept Review Discussion / Feedback Next Steps / Finish Presentation Informal Discussion



Simone Collins Landscape Architecture Peter M. Simone, FASLA, RLA Project Principle Sarah Leeper, RLA Project Manager Melisa Barley, Landscape Architect Project LA

Princeton Hydro

Geoffrey M. Goll P.E.

Civil Engineer – expertise in dam removal for dam safety compliance, fish migration, floodplain reconnection, and habitat restoration.

Meeting	Date & Time	Meeting Subject
Hershey's Mill Committee Meeting #1	Nov 17, 6:30 pm	Project Introduction / Brainstorming
Hershey's Mill Public Meeting #1	Dec 5, 7:00 pm	Project Introduction / Brainstorming
Hershey's Mill Committee Meeting #2	Jan 17, 6:30 pm	Site Concepts
Hershey's Mill Public Meeting #2	<u>Jan26, 7:00 pm</u>	Site Concepts
Hershey's Mill Committee Meeting #3	Feb 23, 6:30 pm	Draft Plan
Hershey's Mill Public Meeting #3	Mar 23, 7:00 pm	Draft Plan Presentation - 60 day review
Hershey's Mill Committee Meeting #4	May 24, 6:30 pm	Review draft plan Comments
Hershey's Mill Public Meeting #4	Jun 22, 7:00 pm	Final Plan Presentation

Public Brainstorming

GOALS:

- Master Plan
- Open exchange of ideas
- Respect neighbor's privacy
- Ecological sustainability
- Low maintenance landscape

FACTS:

- Mosquitos
- Fishing
- History of Limited Public Access
- Swim Club Trail to Mill
- Brush looks messy
- Maintains Sewer Line
- Flooding 2-3x per year

What We're Losing:

- Waterfall
- Ice Skating
- View from deck
- History
- Industrial Mill History
- Snapping turtles

- Animals: deer, fish
- Rid of geese
- Open water / views
- Loss of privacy
- Property value
- Serenity, "Calmness" CONCEPTS:
 - History signage
- Flowing meadow
- Quietness
- Mulch trails
- Waterfall (pump)
- Budget?
- Phases
- Buffer planting
- Gravel, not paved
- Pedestrian easements to open space
- Limit on-street parking
- Native wildflower meadow
- Preserve ecology
- HOA-shared parking
- Improve look keep natural

- On-site parking not feasible
- Simple loop trail
- No trail system
- Explore trail along Hershey Mill Rd
- Trails for walking
- Trails are intrusive
- Keep wall
- Pond near waterfall
- External access
- Enhance neighborhood
- Bird sanctuary
- Pollinators/ butterflies
- Bird houses, bat boxes
- No trails
- Natural "wilderness"
- Less is more
- Parking?
- Neighborhood park
- Leave as natural as possible
- Foster ecological sustainability

Public Survey #1

231 Respondents



Q9: What are the 3 (three) most important aesthetic or cultural resources of the existing Hershey's Mill Dam site (1 being the most important and 3 being the least important)?



to the dam Dam Wall History that is intrinsic to the dam structure Tranquility of the area

Spillway

Sights and sounds of wildlife

Surface waters including stream below dam in and around the dam Water impoundment above the dam

Plants in and around the dam

Sound of the waterfall

Q10: What are your 5 (five) most wanted improvements to be accommodated in the master plan design for the area above the dam (1 being the most important and 5 being the least important)?







S GOAL OJECT Ľ

Expand, revise & add new goals throughout the public participation.

- Engage in an open and transparent exchange of ideas where all ideas are considered and where everyone's voice can be heard throughout the design process.
- Foster ecological sustainability through plant and animal diversity and by employing best practices in landscape and park design.
- Protect and preserve the privacy of adjacent and nearby residences through proper setbacks, screening and other techniques.
- Create landscapes that are low maintenance and that will create new cultural landscape values in each surrounding neighborhood.
- Develop realistic completion time fames for project benchmarks

What is a beautiful and healthy landscape?

Creating beautiful and healthy landscapes:

- Respect environments and their natural processes
- There are many standards for beautiful
- Balance Science with Art
- Strive for diversity
- Design for today and the future
- Build on opportunities to educate
- Limit inputs i.e. fertilizer, maintenance, etc.

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What are the standards for defining beautiful and healthy landscapes?



The Sustainable Sites Initiative (SITES)

The SITES program was developed through a collaborative, interdisciplinary effort of the American Society of Landscape Architects, The Lady Bird Johnson Wildflower Center at The University of Texas at Austin, and the United States Botanic Garden. SITES promotes sustainable land development and management practices for both sites with and without buildings.

SITES GUIDING PRINCIPLES

- Do no harm.
- Apply the precautionary principle.
- Design with nature and culture.
- Use a decision-making hierarchy of preservation, conservation, and regeneration.
- Provide regenerative systems as intergenerational equity.
- Support a living process.
- Use a systems thinking approach.
- Use a collaborative and ethical approach.
- Maintain integrity in leadership and research.
- Foster environmental stewardship

Sustainable
SITES
Initiative[®]

The Sustainable Sites Initiative (SITES)

RATING BASIS

- **1.** Site Context
- 2. Pre-Design Assessment + Planning
- 3. Site Design—Water
- 4. Site Design—Soil + Vegetation
- 5. Site Design—Materials Selection
 - 6. Site Design—Human Health + Well-Being
 - 7. Construction
 - 8. Operations + Maintenance
 - 9. Education + Performance Monitoring
 - **10. Innovation or Exemplary Performance**

Sustainable SITES Initiative[®]



Meadow Lake / Morton Arboretum - Lisle, IL



Shoemaker Green - University of Penn, Philadelphia PA

Hunts Point Landing - Bronx, New York

Evans Parkway Neighborhood Park - Silver Spring, MD

Scenic Hudson's Long Dock Park – Beacon NY

Open Space Plan & Central Chester Trail Plan

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Existing Features

- **Existing Trails** PA Bike Route L T **Existing Trailhead**
- P **Existing Trail Parking** Growth Centers
- Intermodal Stop
 - East Goshen Open Space HOA / Private Recreation Schools





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Open Space Plan & Central Chester Trail Plan



Existing Conditions Plan – 12 Pedestrian Easements

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Existing Foot Trails



Concept Foot Trail Plan – Shows all Possibilities











Concept Foot Trail Plan – Questions or Comments?



Existing Conditions Plan



KEY ELEVATIONS



KEY ELEVATIONS



Concept Bubble Plan



Impoundment Concept





Step Pools / Waterfall

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Impoundment Concept – Clarifying Questions?



Design Elements

Various design elements are incorporated into each concept. The following elements will be reviewed to understand the unique quality and benefits of each element and identify the objectives for including them in the concept plans.

Water:

- Pond
- Stream
- Step Pools

Plantings:

- Riparian Buffer
- Wet Meadow / Meadow
- Wetlands

What is a Pond?

A pond is a <u>body of standing water</u>, either natural or artificial, that is usually smaller than a lake. They may arise naturally in floodplains as part of a river system, or they may be somewhat isolated depressions (examples include vernal pools and prairie potholes). <u>Usually</u> they contain <u>shallow water with marsh</u> and <u>aquatic plants and animals</u>. The type of life in a pond is generally determined by a combination of factors including <u>water level</u> <u>regime</u> (depth and duration of flooding),<u>nutrient levels</u>, <u>shading</u> by trees, and <u>presence or absence of streams</u>.

Benefits:

- Wildlife Diversity
- Wildlife water source
- Increased species movement
- Sediment trap
- Cultural

What is a Pond?



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What is a Pond?

Tens to hundreds of years

Pond Environments are not static

 Without human management ponds are constantly progressing to a climax plant community. A pond starts with a bare bottom that slowly gives way to submerge vegetation, emerging vegetation, and finally will fill in completely forming meadow and forest plant communities.

ELEMEN

CONCEPT

- Create ponds to allow for open water views from neighboring homes and from Reservoir Road.
- Maintain pond depth necessary for healthy aquatic life (3' min)
- Maintain water movement through pond.
- Create a pond forebay to trap sediment
- Provide vegetation along pond edges to promote both terrestrial and aquatic life.
- Incorporate trees along pond edges while preserving key views into and across the site.
- Locate ponds off of main stream channel to allow for flood events (keep sediment out of pond).
- Use fill to create an upland "island" planting next to pond

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Pond Objectives for Site

Control Mosquitoes

- Adult mosquitoes lay their eggs anywhere they can find still water. Within 48 hours the eggs begin to hatch, and then, depending primarily upon temperature, the larvae evolve into adults within 4 to 31 days.
 - **Combating Mosquitoes**
 - Reduce their natural habitats:
 - Insure water movement in ponds.
 - Remove manmade areas of standing water i.e. buckets, roof gutters, or play equipment
 - Provide habitat for natural predators:
 - Fish
 - Bats
 - Birds
 - Amphibians

Pond Objectives for Site

- Develop management plan for ponds
 - Remove Sedimentation from Forebay every 5 years
 - Partner with surrounding property owners to limit fertilization in surrounding areas
 - Maintain Ecological Balance with removal of excessive vegetation
 - Maintain Water Flow through ponds
 - Encourage Aeration within ponds



A stream is a body of <u>water</u> with a <u>current</u>, confined within a bed and banks. Streams are important as conduits in the water cycle, instruments in groundwater recharge, and corridors for fish and wildlife migration. The biological <u>habitat</u> in the <u>immediate vicinity</u> of a stream is called a <u>riparian zone</u>. Streams play an important corridor role in <u>connecting fragmented</u> <u>habitats</u> and thus in conserving biodiversity.

Benefits:

- Wildlife Corridor
- Fish movement
- Ground Water Recharge



Ridley Creek Below Dam (to remain the same) Simone Collins Landscape Architecture • Princeton Hydro

Stream Objectives for Site

- Step stream to create naturalistic looking stream bed at dam breach.
 - Step pools
- Maintain Hydrology as close to existing conditions as possible at wetlands.
- Provide vegetation along stream edges to promote both terrestrial and aquatic life.
- Incorporate trees along stream edges (cool water) while preserving key views into and across the site.
- Develop management plan for stream corridor
 - Monitor stream banks for erosion
 - Removal of invasive plant species



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Step Pools

A riparian buffer zone is an area of trees and shrubs adjacent to a natural <u>waterway</u>, including streams, lakes, ponds and wetlands. The purpose of a riparian buffer zone is to capture <u>sediment</u>, <u>nutrients</u>, <u>pesticides</u> and other contaminants in order to reduce their entry into waterways. In addition, riparian buffers are a type of <u>wildlife corridor</u> that create <u>habitat</u> for wildlife activity and movement.

Benefits:

- Cool water temperatures
- Filter sediment & nutrients
- Flood control
- Habitat
- Bank Stabilization





CONCEPT

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Riparian Buffer Objectives for Site

- Preserve and enhance existing riparian buffers
- Create 20' wide riparian buffers along new stream corridor / pond edges
- Incorporate trees within Riparian Buffer while preserving key views into and across the site.
 - Develop management for riparian buffers
 - Invasive monitoring and removal
 - Seasonal removal of perennial material
 - Periodic removal of woody vegetation as required (3-5 yrs..)



A meadow includes taller, warm season grasses. Meadows can also have blooming perennials, such as butterfly weed and blackeyed Susans. Uplands and meadows are characterized as being dry the majority of the year. Soils at these sites often consist of sandy clay and shale with very little topsoil and subject to drought. Meadows / grasslands occur natural in nature in areas of disturbance or where shallow soils can not support shrubs and trees. If left unmanaged in Eastern Pennsylvanian most meadow will grow first into shrublands and then forest. Meadow are home to a variety of plants, birds, mammals and beneficial insects.

Benefits

- Habitat and food for insects, and animals
- Natural filter of sediments and pollutants
- Prevents erosion
- Reduces maintenance





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Meadow Objectives for Site

- Provide visually open areas to preserve views
 - Design areas of lower meadows and taller meadows
- Limit Pedestrian access to private properties
- Use in areas of steep slopes
- Limit maintenance needs mowing
 - Develop management for Meadow
 - Seasonal Mowing Early Spring for winter habitat and wildlife coverage
 - Identify areas to be allowed to succeed into shrubland and forest
 - Invasive monitoring and removal
 - Remove woody material as required

What is a wetland?

Although wetlands are often wet, a wetland might not be wet yearround. In fact, some of the most important wetlands are only seasonally wet. Wetlands are the <u>link between the land and the</u> <u>water</u>. They are transition zones where the flow of water, the cycling of nutrients, and the energy of the sun meet to produce a <u>unique ecosystem</u> characterized by <u>hydrology</u>, <u>soils</u>, <u>and</u> <u>vegetation</u>—making these areas <u>very important features of a</u> <u>watershed</u>.

- United States Environmental Protection Agency



What is a wetland?

Benefits of Wetlands

- 1. Groundwater recharge
- 2. Groundwater discharge
- 3. Flood flow alteration
- 4. Sediment stabilization
- 5. Sediment/toxicant retention
- 6. Nutrient removal / transformation
- 7. Carbon transformation
- 8. Production export (creates food that moves downstream)
- 9. Wildlife diversity/abundance
- **10. Wildlife breeding**
- **11. Wildlife migration**
- 12. Wildlife wintering

What is a wetland?



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Wetland Objectives for Site

- Preserve and enhance existing wetlands
 - For permitting purposes, replace wetlands as required
 - Develop management for wetlands
 - Invasive monitoring and removal
 - Periodic removal of woody vegetation as required (3-5 yrs.)



Impoundment Concept – Clarifying Questions?



Concept Foot Trail Plan – Shows all Possibilities



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Next Meetings:

Public Meeting #2: Initial Concepts / Feedback

Committee Meeting #3 Draft Plan Review Thursday 7-8:00 PM Jan 26, 2017

Thursday 6:30-7:30 PM Feb 23, 2017 Location: Township Building

Location: Township Building

Township Project Website:

https://eastgoshen.org/about-us/hershey-mill-dam &

https://eastgoshen.org/boards/hersheys-mill-dam-committee

Web Survey:

Tell People about the Online Survey:

https://www.surveymonkey.com/r/HersheyMill2-Concept

Contact Info: Please Copy All Parties

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