

# *Bushkill Creek Greenway*



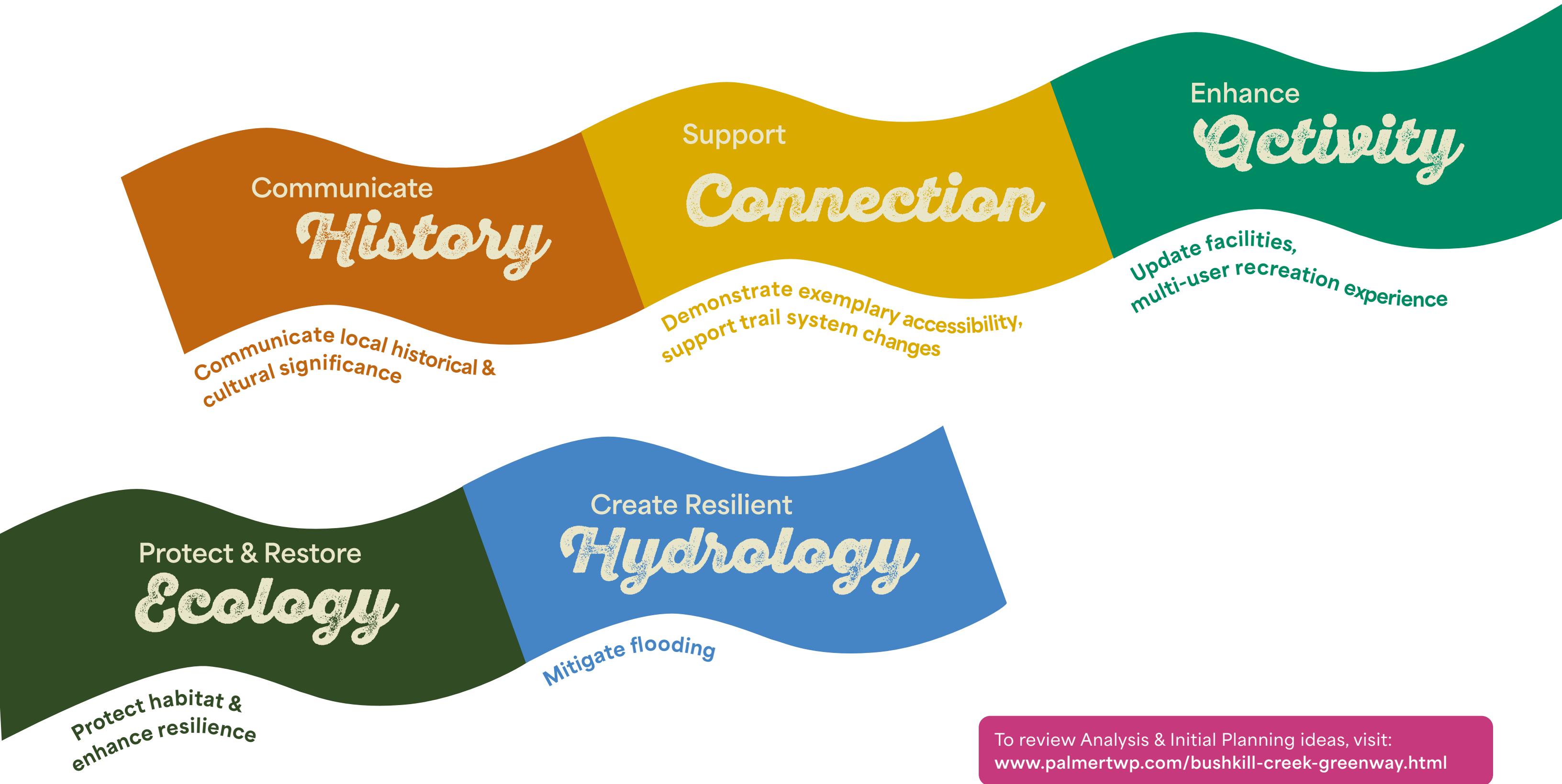
## Public Meeting #2

75% Concepts

August 19, 2025



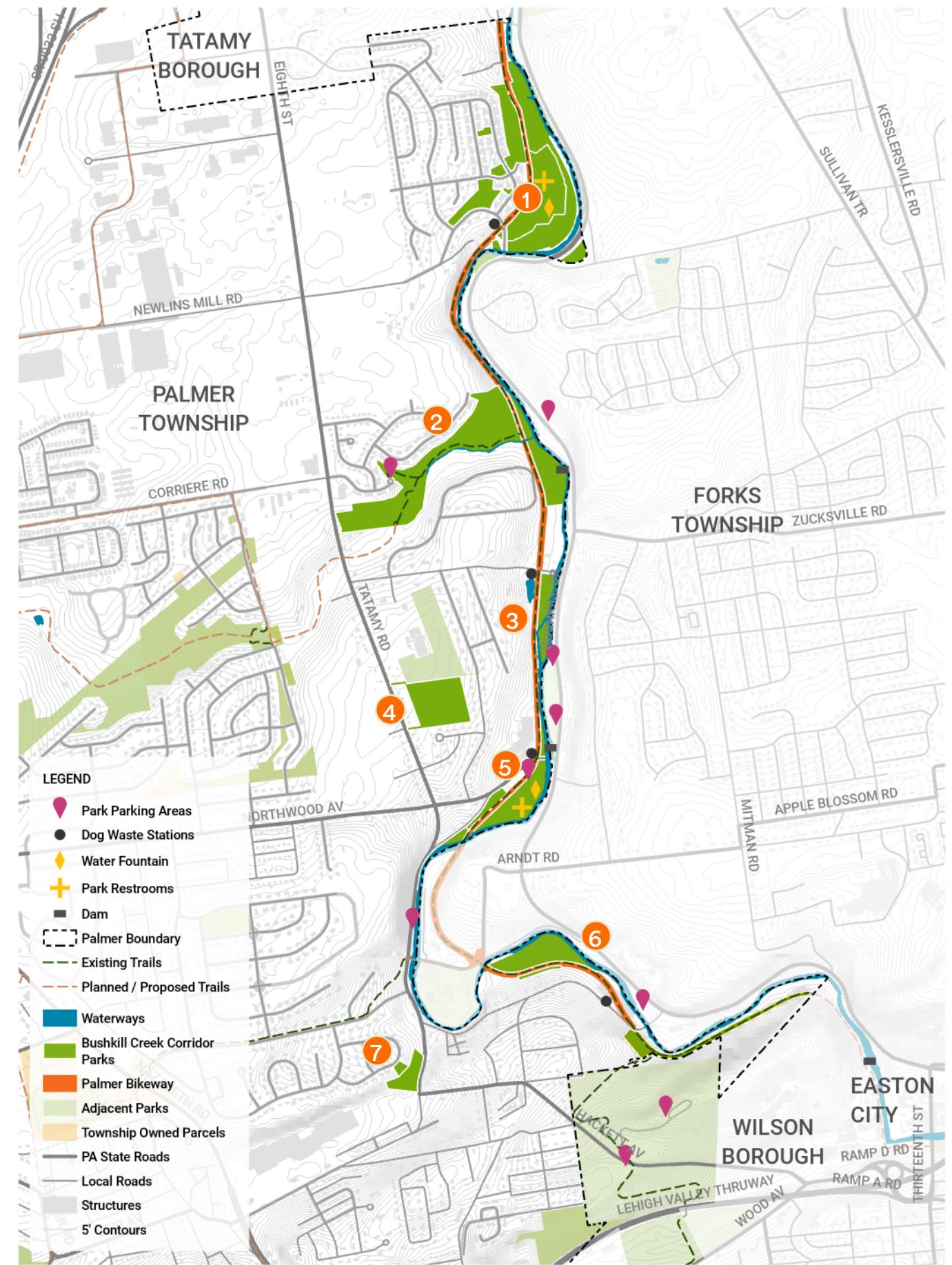
# Project Goals



# Bushkill Creek Greenway

What parcels are included?

- 1 Mill Race Park & Tot Lot
- 2 Penn's Grant Open Space
- 3 Two Fool's Island (Potential Future Acquisition)
- 4 Keystone Park
- 5 Penn Pump Park & Potential Future Open Space at Northwood Ave
- 6 Binney & Smith Preserve (Binney & Smith Open Space)
- 7 Hillcrest Open Space & Tot Lot



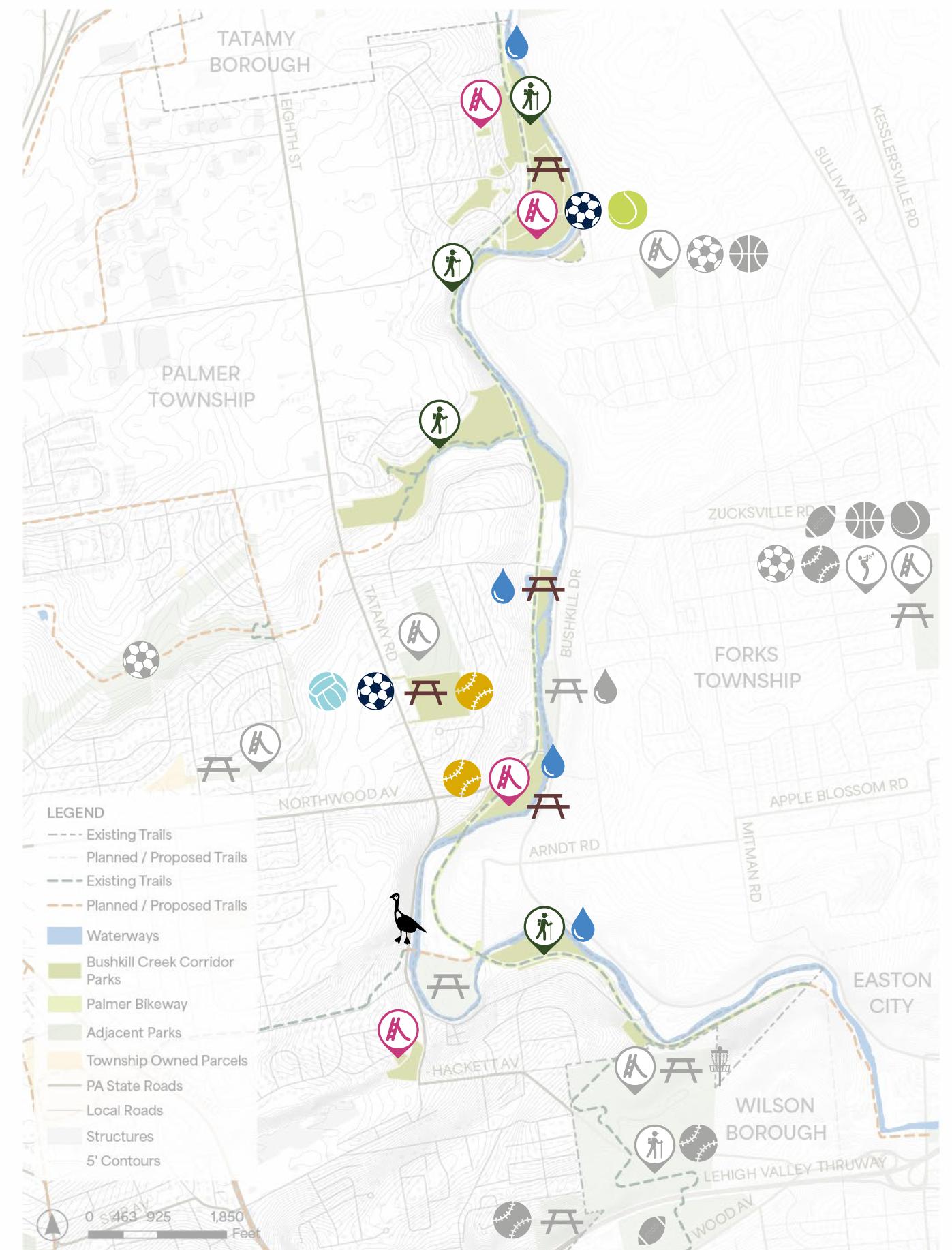
# Recreational Resources

## Amenities & Programming

### LEGEND:

-  Hiking / Walking Trails
-  Play Areas
-  Live Music
-  Picnicking Areas
-  Baseball Fields
-  Basketball Courts
-  Disc Golf Courses
-  Football Fields
-  Soccer / Multi-use Fields
-  Tennis / Pickleball Courts
-  Volleyball Courts
-  Water Access Areas
-  Waterfowl Observation Area

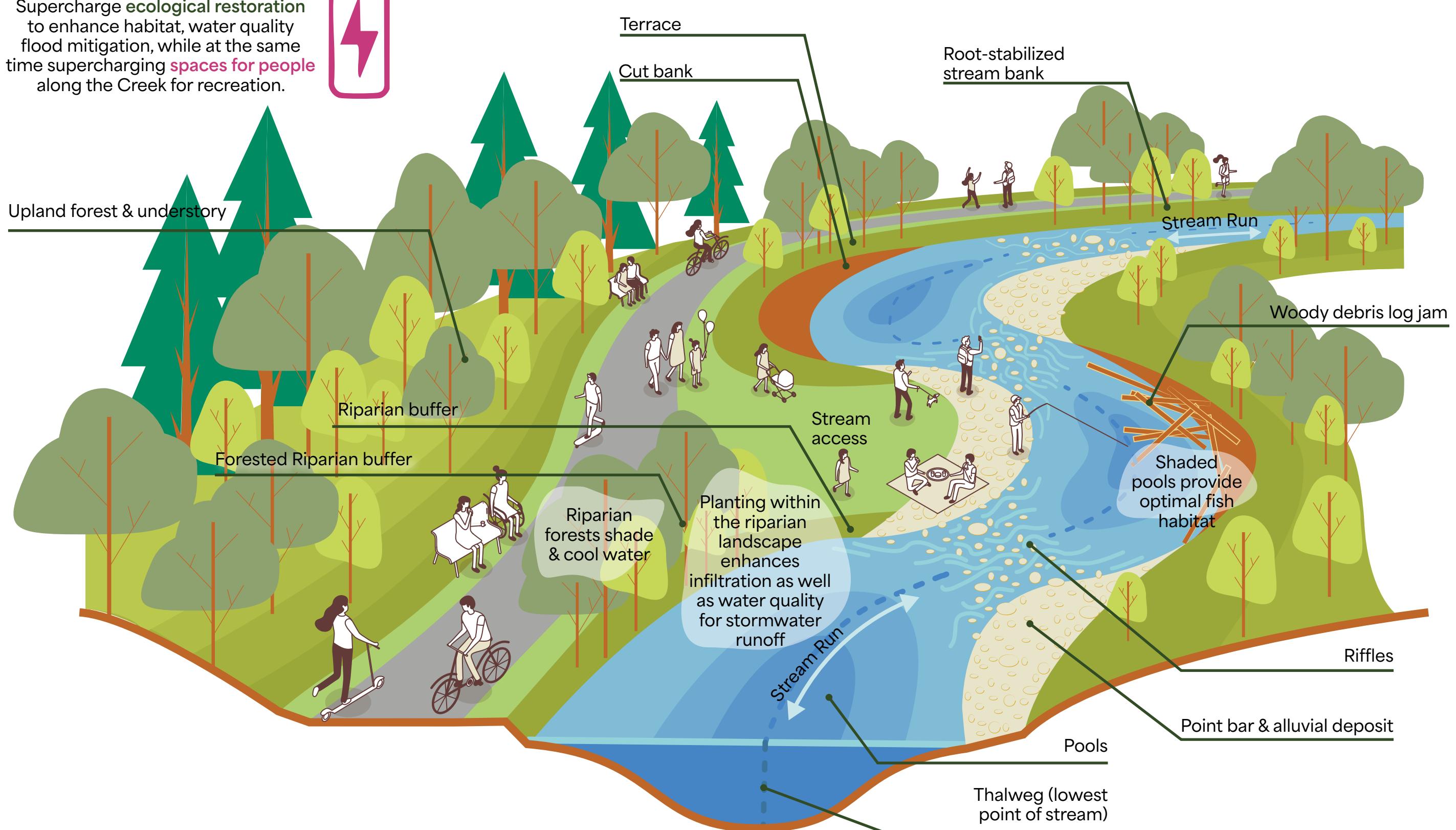
-  Gray Icon: Recreational Resource Not Within Scope



# Ecology + Activity



Supercharge **ecological restoration** to enhance habitat, water quality, flood mitigation, while at the same time supercharging **spaces for people** along the Creek for recreation.

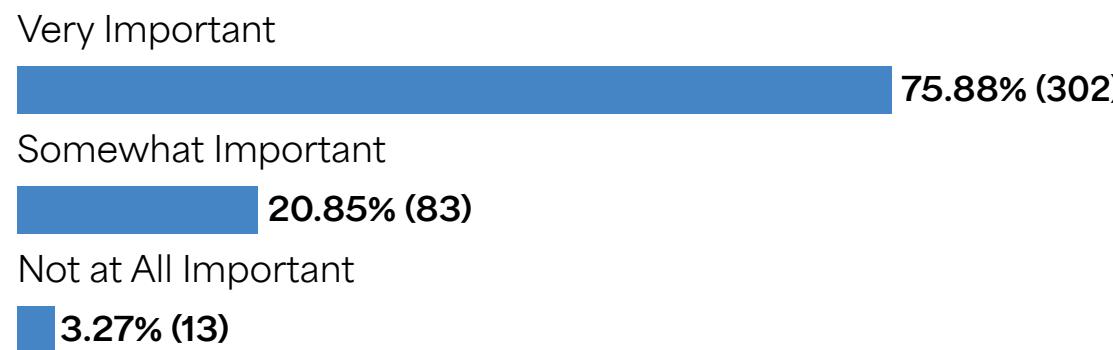


# Ecology + Activity

**Q10: How important is it to you for Palmer Township to invest in **ecological restoration and conservation** of natural lands?**

398 total responses (54 skipped)

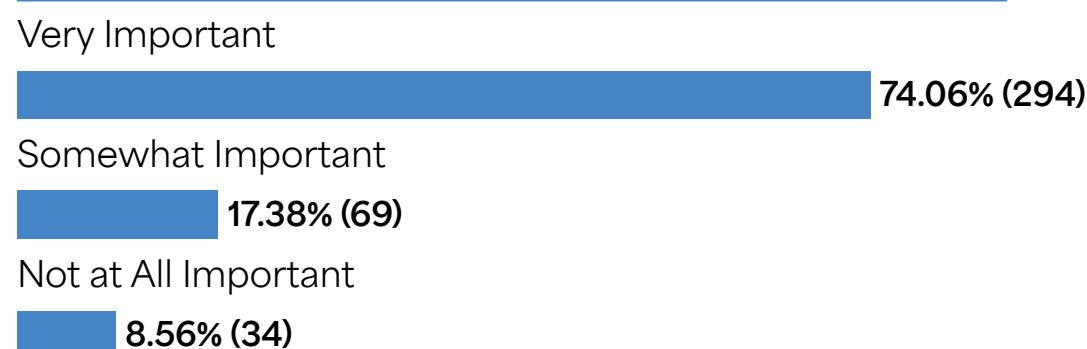
## All responses



**Q11: How important is it to you for Palmer Township to plan for **potential impacts of climate change** (such as flooding, habitat loss, extreme heat, etc.)?**

397 total responses (55 skipped)

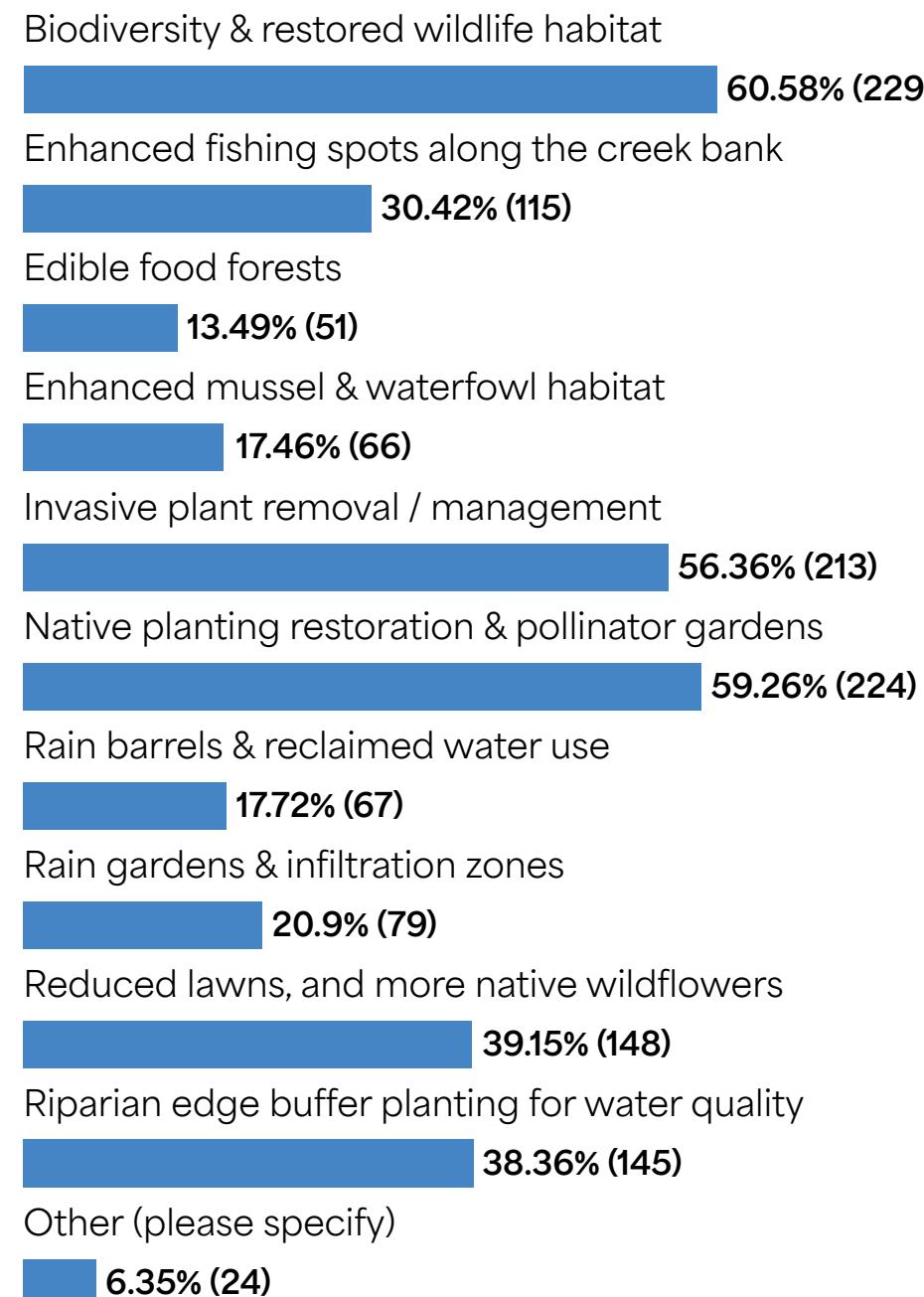
## All responses



**Q9: To **enhance ecology**, what should be added or improved in the Bushkill Creek Greenway? Choose up to 3.**

378 total responses (74 skipped)

## All responses



# Regional Context

## Trail networks

### REGIONAL TRAIL NETWORKS:

- 1 9/11 National Memorial Trail (1,500 miles)
- 2 D&L Trail (140 miles)
- 3 Delaware River Water Trail (200 miles)
- 4 Forks Township Recreation Trail (2 miles)
- 5 Karl Stirner Arts Trail (2.2 miles)
- 6 Lehigh River Water Trail (75 miles)
- 7 Palmer Township Trail Network (1.4 miles)
- 8 Plainfield Township Recreation Trail (6.7 miles)
- 9 South Bethlehem Greenway (2.4 miles)
- 10 Stockertown Rail Trail (1 mile)
- 11 Tatamy Trail (0.25 miles)
- 12 Two Rivers Trailway (20 miles)
- LINK Trail Network (125 miles)

### EXISTING TRAILS INCLUDED IN THIS STUDY:

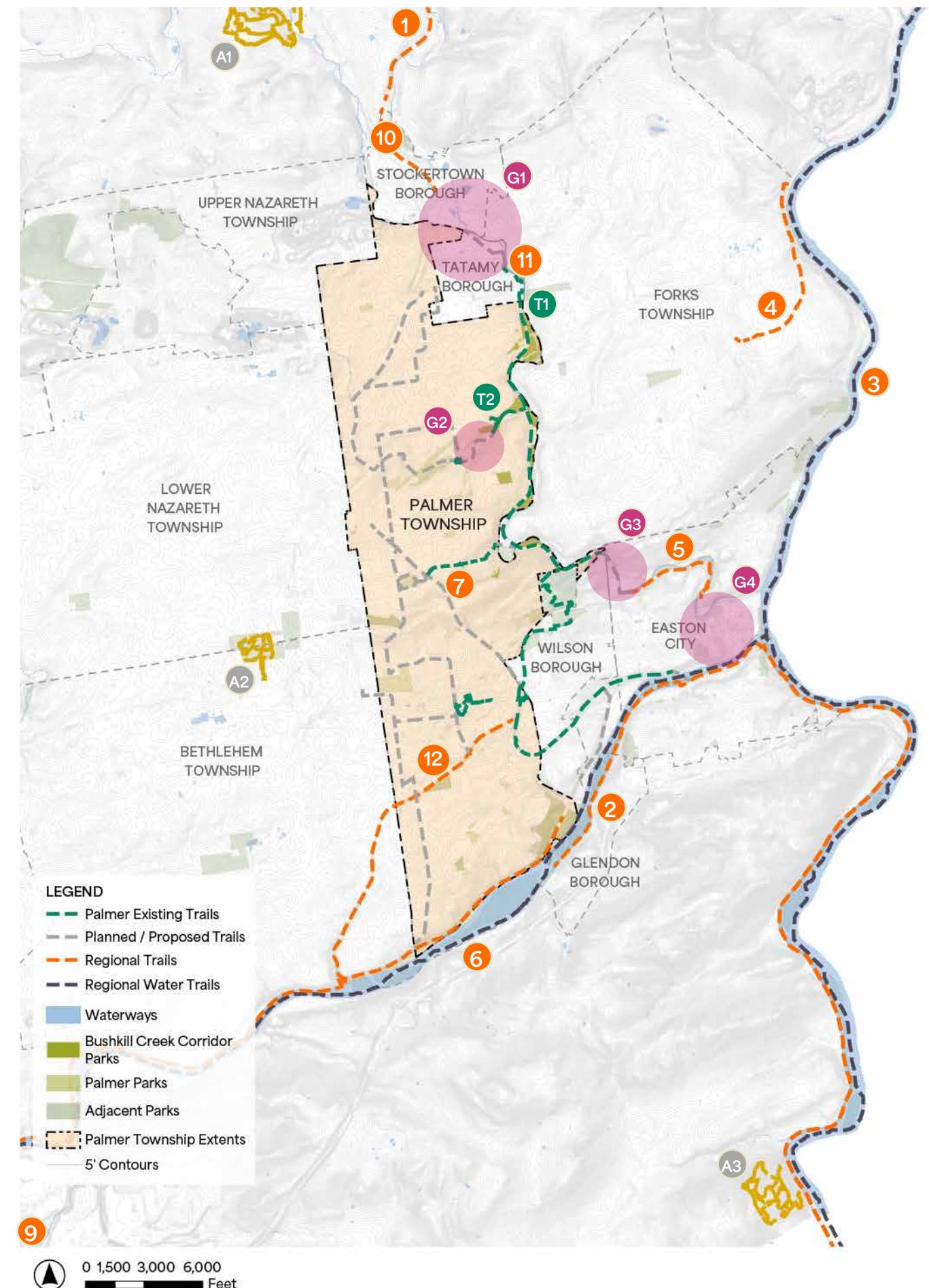
- T1 Palmer Bikeway (3.0 miles)
- T2 Schoeneck Creek Trail A.K.A. Penn's Grant Path (0.7 miles)

### ADJACENT PARK TRAILS:

- A1 Jacobsburg Environmental Education Center Trails (19.7 miles)
- A2 Louise W. Moore County Park Trails (2.7 miles)
- A3 Marlton Wildlife Sanctuary Trails (4.2 miles)

### REGIONAL TRAIL NETWORK GAPS:

- G1 Between Tatamy Trail & Stockertown Rail Trail
- G2 Between Schoeneck Creek Trail & Trail at Fox Run Open Space
- G3 Between Palmer Bikeway & KSAT at 13th Street
- G4 Between KSAT & D&L Trail through the City of Easton



# Bushkill Creek Greenway

## Trail Amenities

Survey No. 1, Select responses related to trails

**Q7: To enhance amenities & safety, which elements should be improved or added to the Bushkill Creek Greenway? Choose up to 3.**

396 total responses (56 skipped)



Public restrooms / 57.07% (226)



Water fountains & bottle-filling stations / 52.78% (209)



Signage / 42.17% (167)



Seating / 26.01% (103)



Dog-friendly spaces / 25.25% (100)



Better safety & security measures / 21.97% (87)



Bike repair stands and pumps / 18.94% (75)



Shade / 18.94% (75)



Public art / 14.9% (59)

# Survey #1 Results

May 17, 2025-June 22, 2025

**Q6: To enhance visitation, which offerings should be added to the Bushkill Creek Greenway? Choose up to 3.**

176 Palmer Township responses (11 skipped)

## All responses

Ecological education (trout, mussels, bird-watching, etc.)



**39.9% (158)**

Foraging & plant identification walks



**34.85% (138)**

Play, Nature-based



**27.02% (107)**

**Q7: To enhance amenities & safety, which elements should be improved or added to the Bushkill Creek Greenway? Choose up to 3.**

396 total responses (56 skipped)

## All responses

Signage (historic, plants, educational, wayfinding, etc.)



**42.17% (167)**

Water fountains & bottle-filling stations



**52.78% (209)**

Public restrooms



**57.07% (226)**

# Survey #1 Results

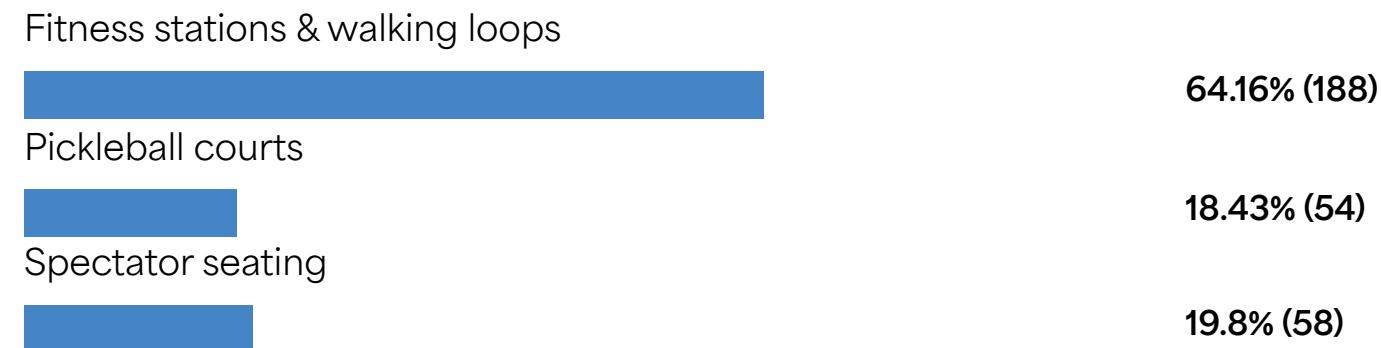
May 17, 2025-June 22, 2025

**Q8: To enhance **sports & fitness**, which recreational elements should be improved or added to the Bushkill Creek Greenway?**

**Choose up to 3.**

293 total responses (159 skipped)

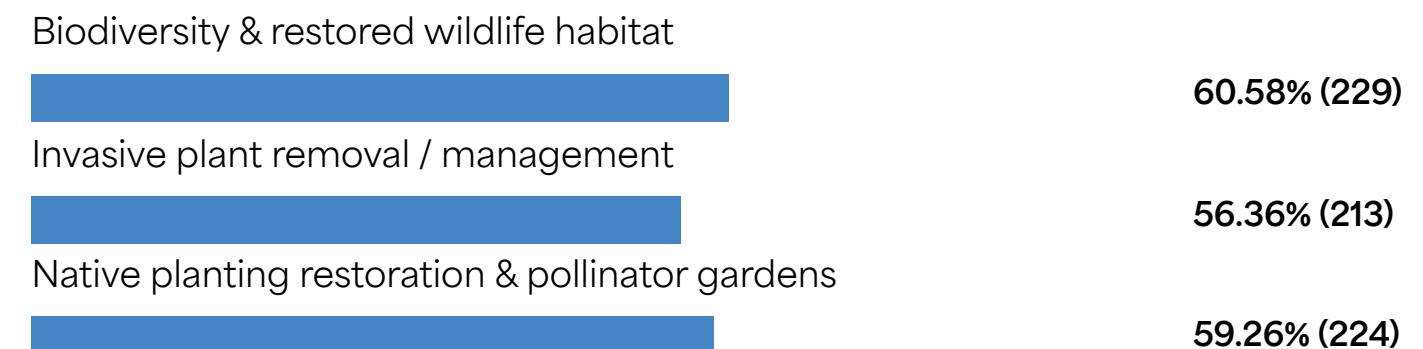
## All responses



**Q9: To **enhance ecology**, what should be added or improved in the Bushkill Creek Greenway? Choose up to 3.**

378 total responses (74 skipped)

## All responses



# Play Richness Analysis

Mapping existing play options



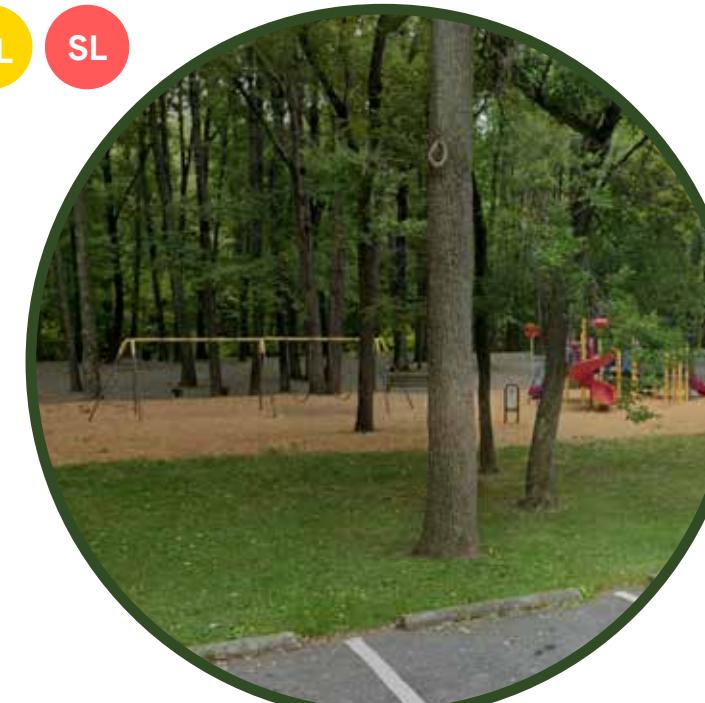
SP SW CL SL



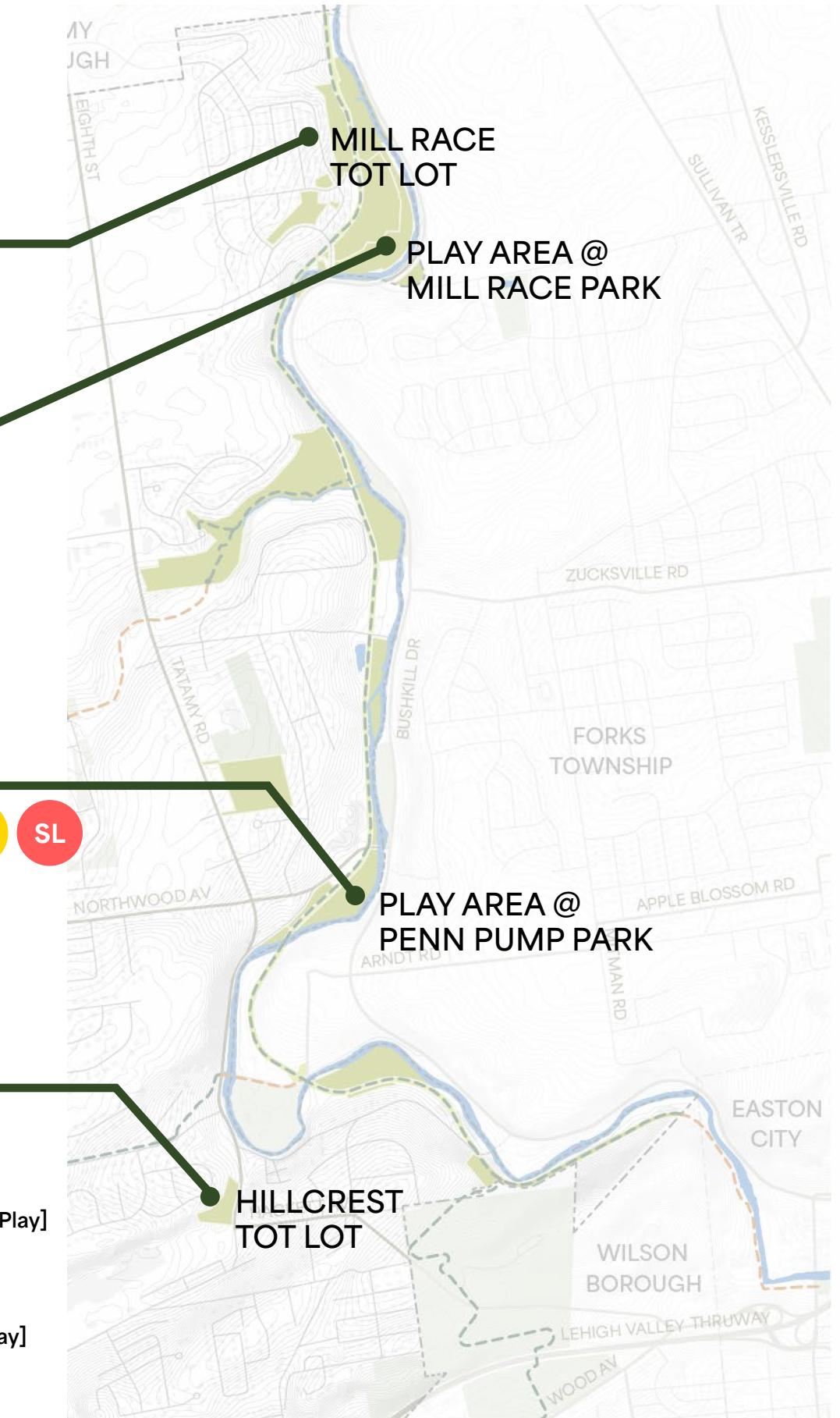
CL SL



CL SL



SW CL SL



SP Competitive Play (Sports)

SW Swinging Play

CL Climbing / Balancing Play

SL Sliding Play

SE [Sensory / Exploration Play]

WA [Water Play]

RO [Spinning / Rotating Play]

FI [Fitness / Adult Play]

# Play & Wellness



# Mill Race Park & Tot Lot

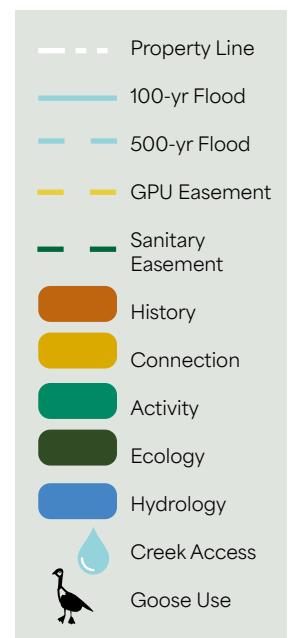
## Analysis



① Soccer field after a heavy rain, 2019  
Image courtesy of Dave Dampel

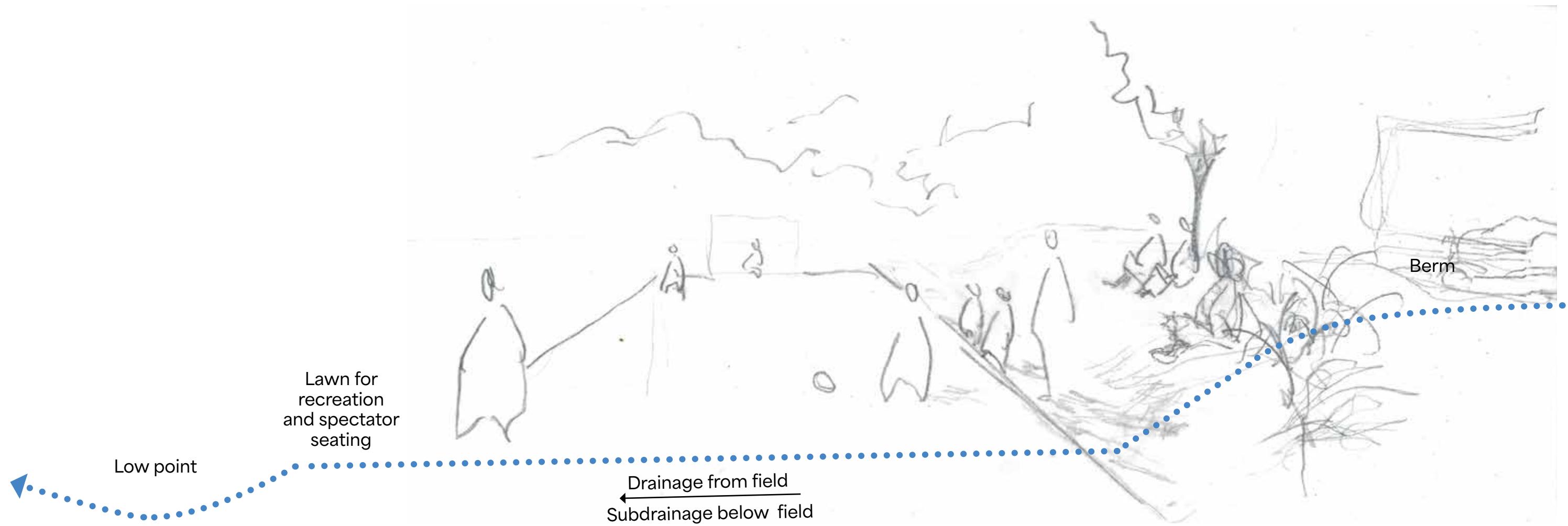


② Soccer Field after flooding at elevation ~296, 2020  
Image courtesy of Dave Dampel



# Stormwater Management

## Design Strategy



# Mill Race Park & Tot Lot

## Precedents

"CUT" AND WETLANDS



"FILL" & BERMS



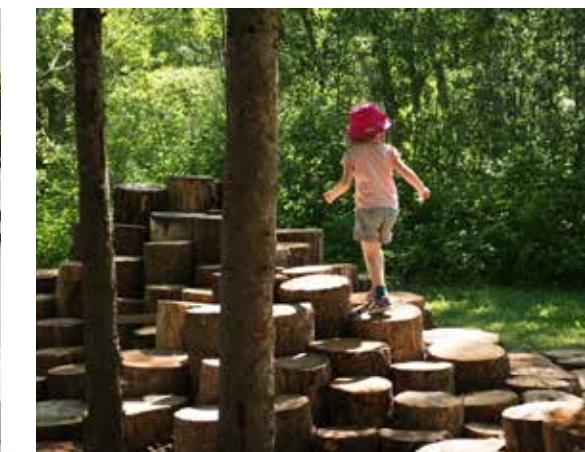
SPORTS IMPROVEMENTS



NATURAL PLAY & SLOPES



ECOLOGICAL RESTORATION



# Mill Race Park & Tot Lot

Concept 1



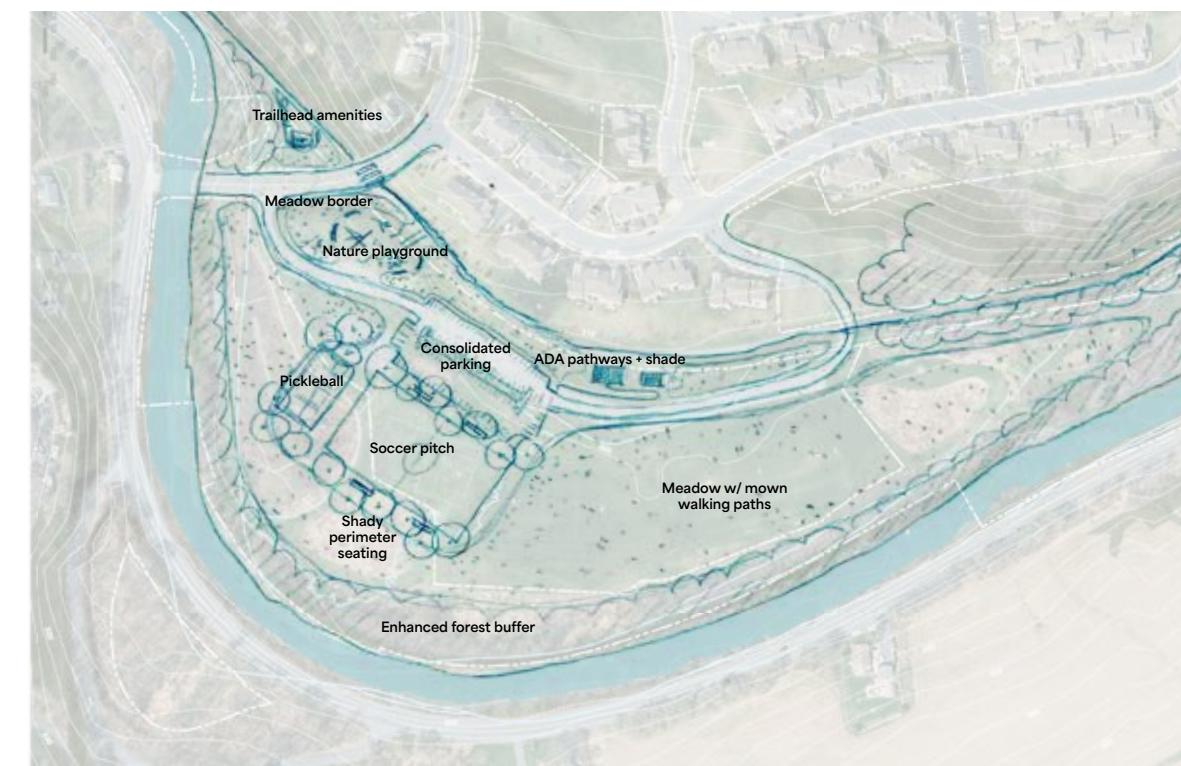
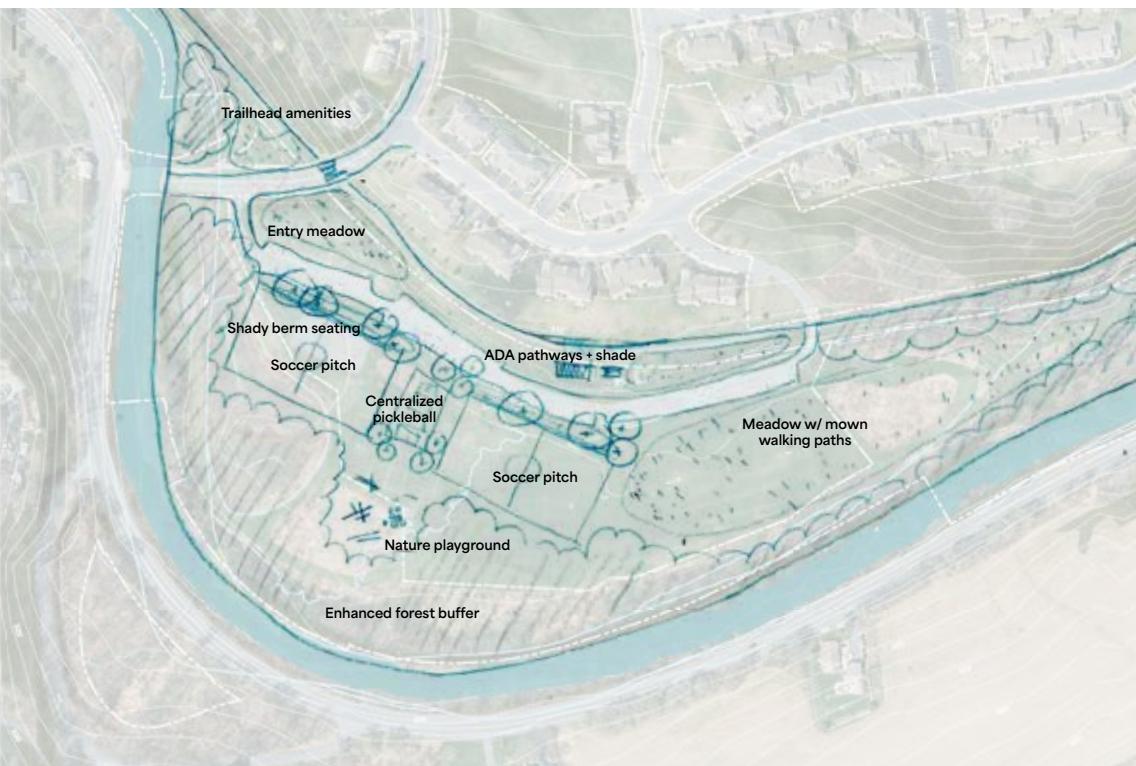
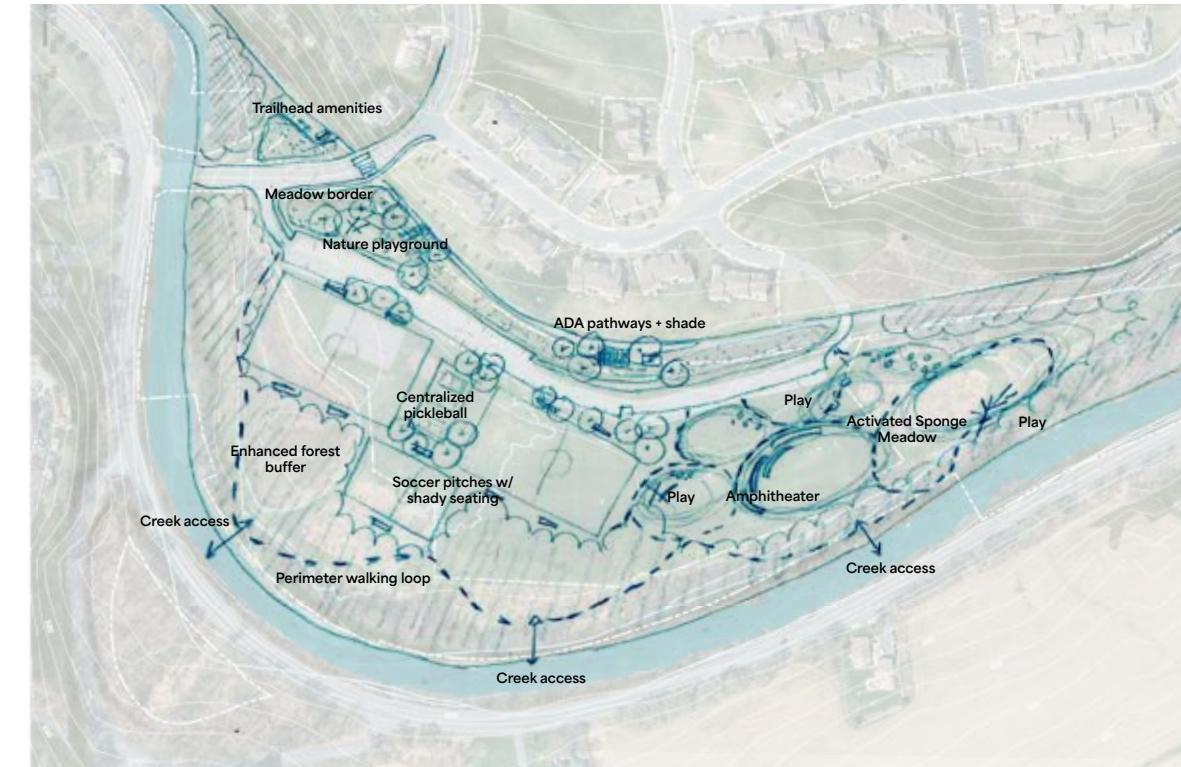
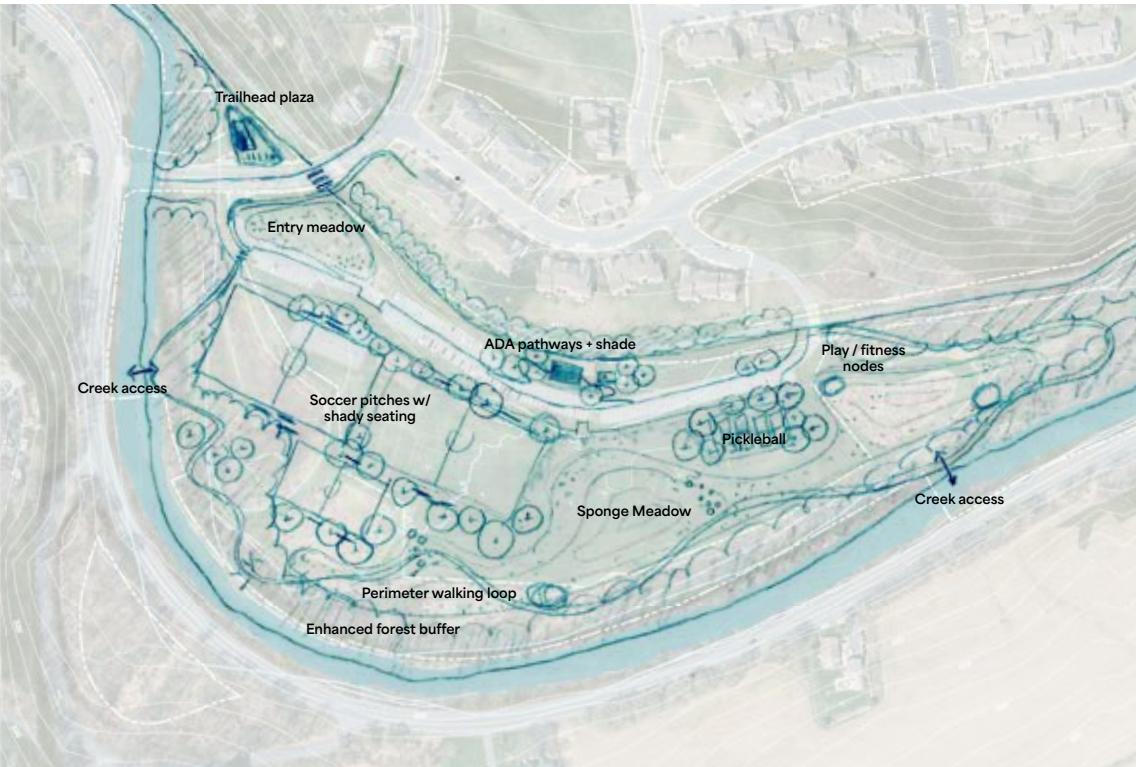
# Mill Race Park & Tot Lot

Concept 2



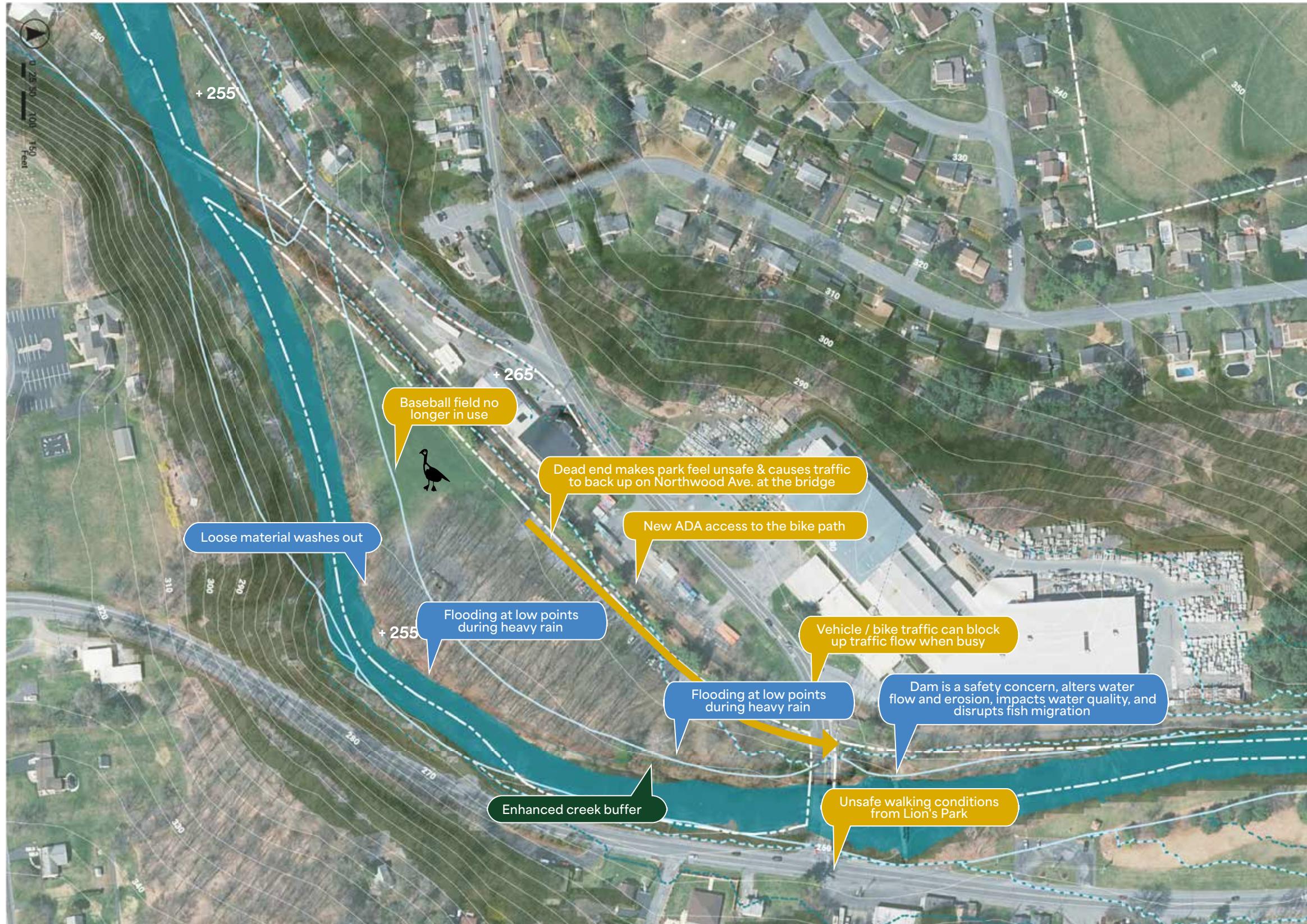
# Mill Race Park & Tot Lot

## Process Sketches



# Penn Pump Park

## Analysis



# Penn Pump Park

## Precedents

NATURAL PLAY



GATHERING PLACES



CREEK ACCESS



WETLANDS & STORMWATER



ECOLOGICAL RESTORATION



# Evolution of the Bushkill

## HISTORIC MILL & Dam locations



Walter's Mill & Dam  
Sources: Sigal Museum, NCHGS Marx Room at the Easton Public Library



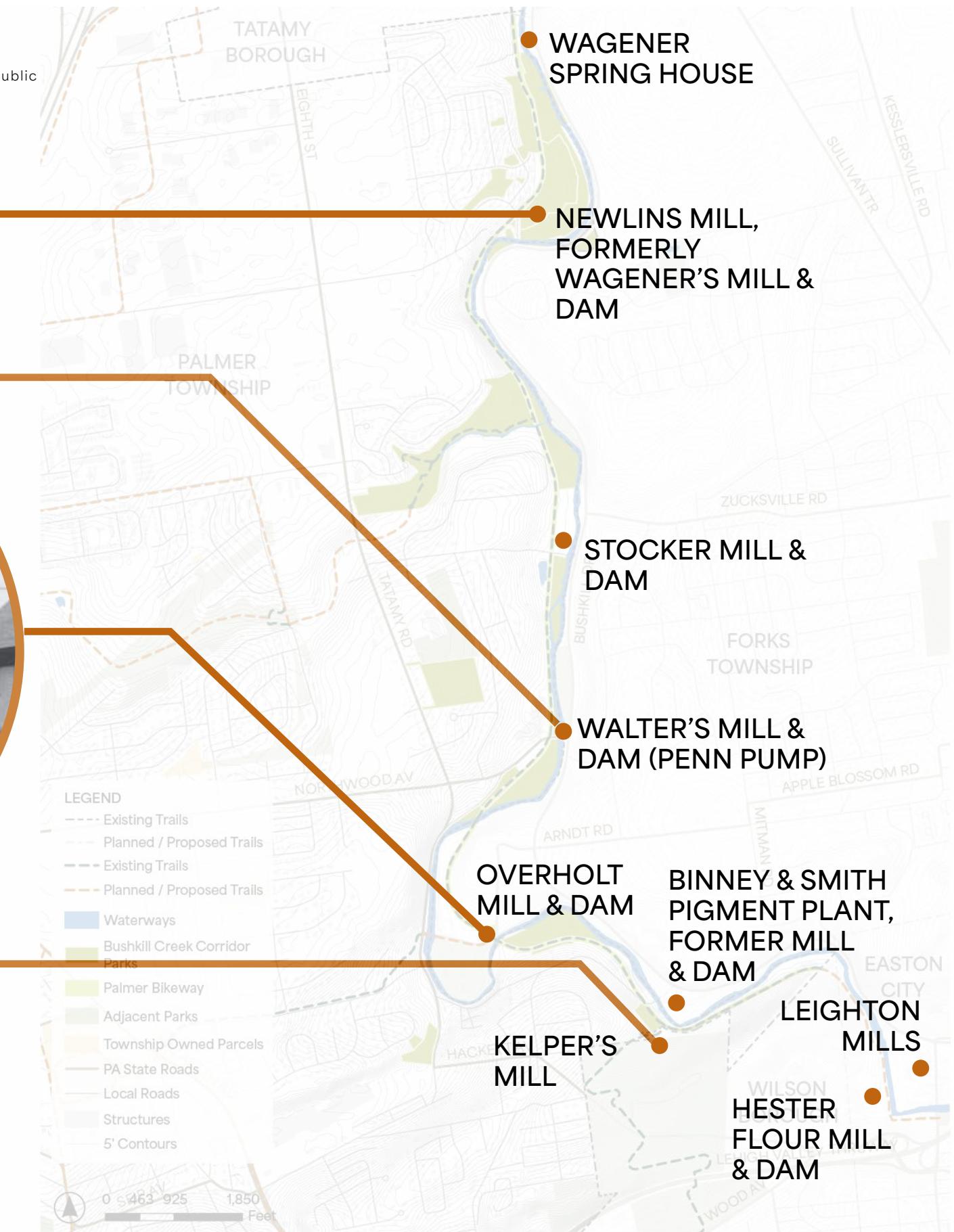
Kelper's Mill  
Source: Sigal Museum, NCHGS



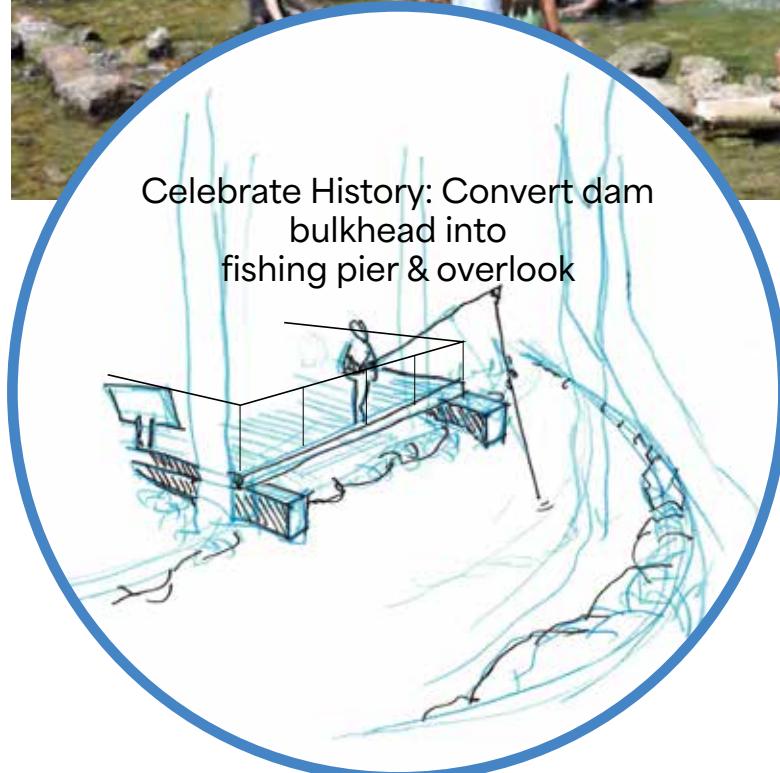
Wagener Homestead & Dam  
Source: Marx Room at the Easton Public Library



Overholt Mill, 1944  
Source: NCHGS

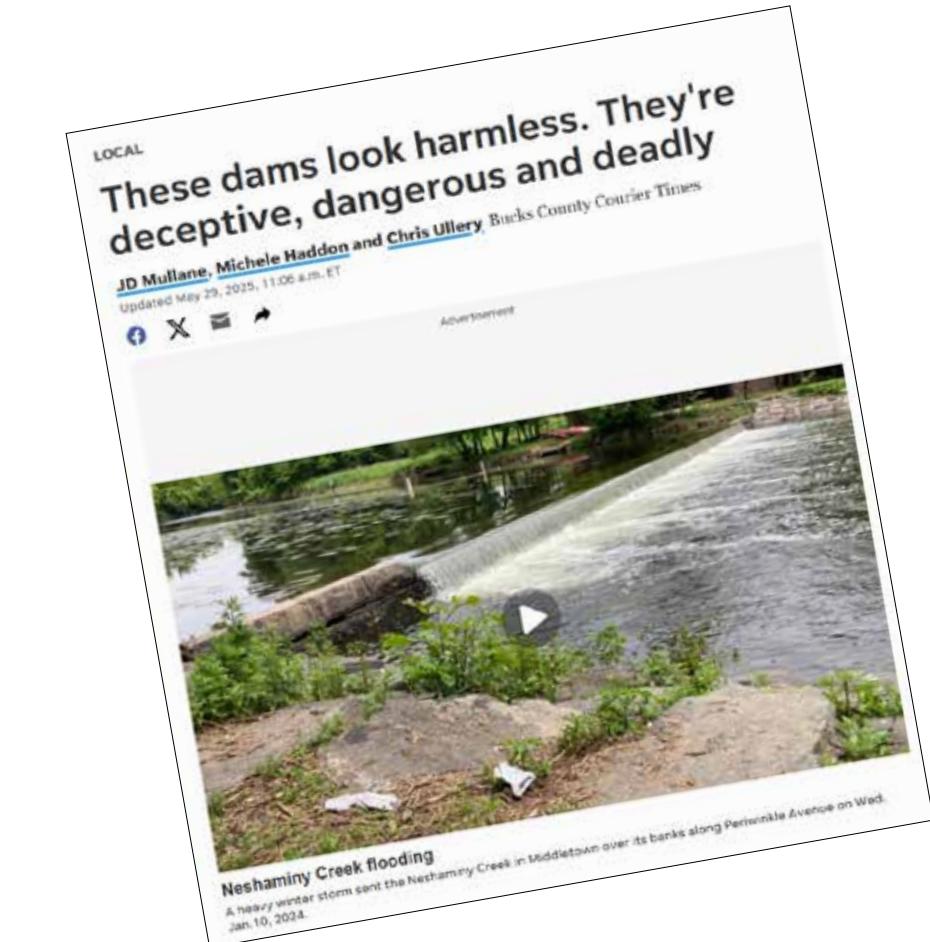


# Penn Pump Park - Dam No. 6



## PROS OF DAM REMOVAL

1. Restoring creek banks enhances water retention capacity, thereby reducing both the frequency and severity of flooding events.
2. Stream restoration improves water quality by reducing sedimentation and enhancing overall ecosystem health.
3. Restored fish passage & aquatic habitat for fish & freshwater mussels
4. Removing dams eliminates a public safety hazard & increased liability for the Township
5. The dam is a focal point for recreation, contributing to park congestion and increased law enforcement presence.
6. Funds are available through DRBC mitigation funds, NFWF, PA DEP, PA DCNR, and Northampton County



# Penn Pump Park

## CONCEPT 1



# Penn Pump Park

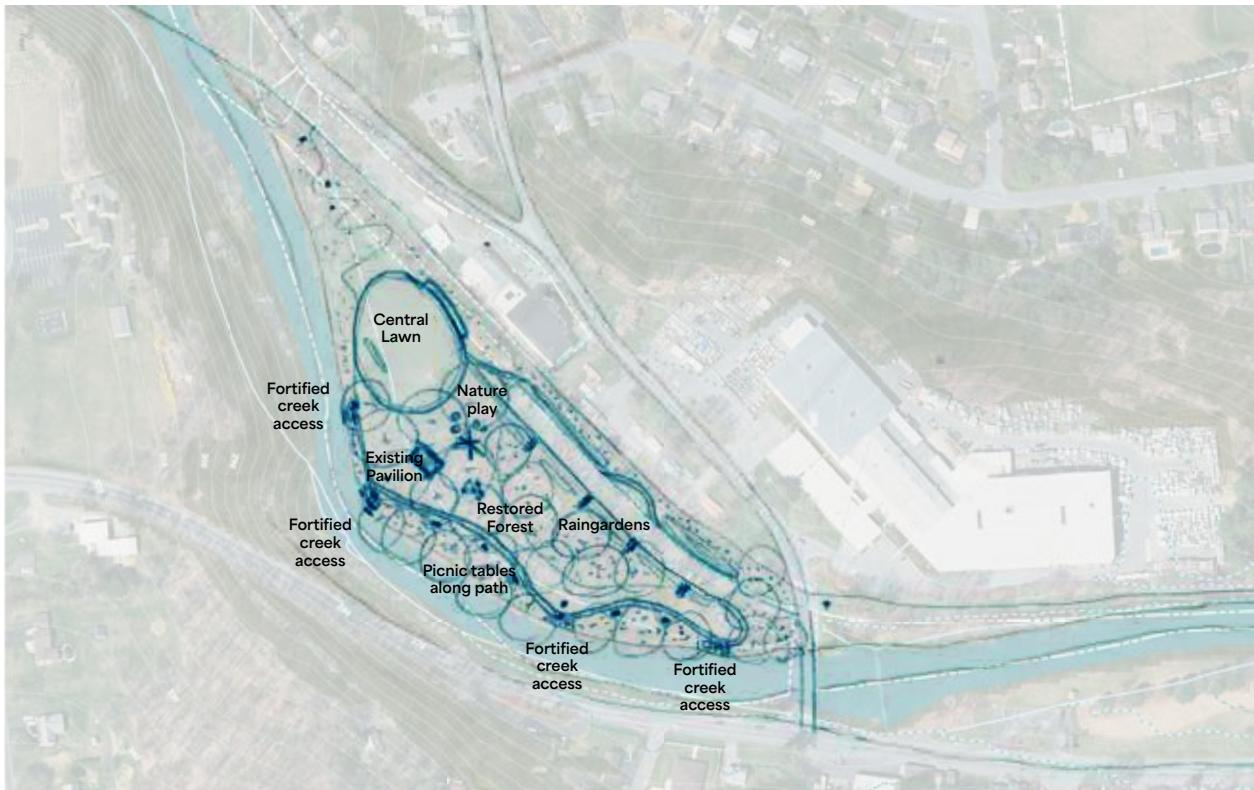
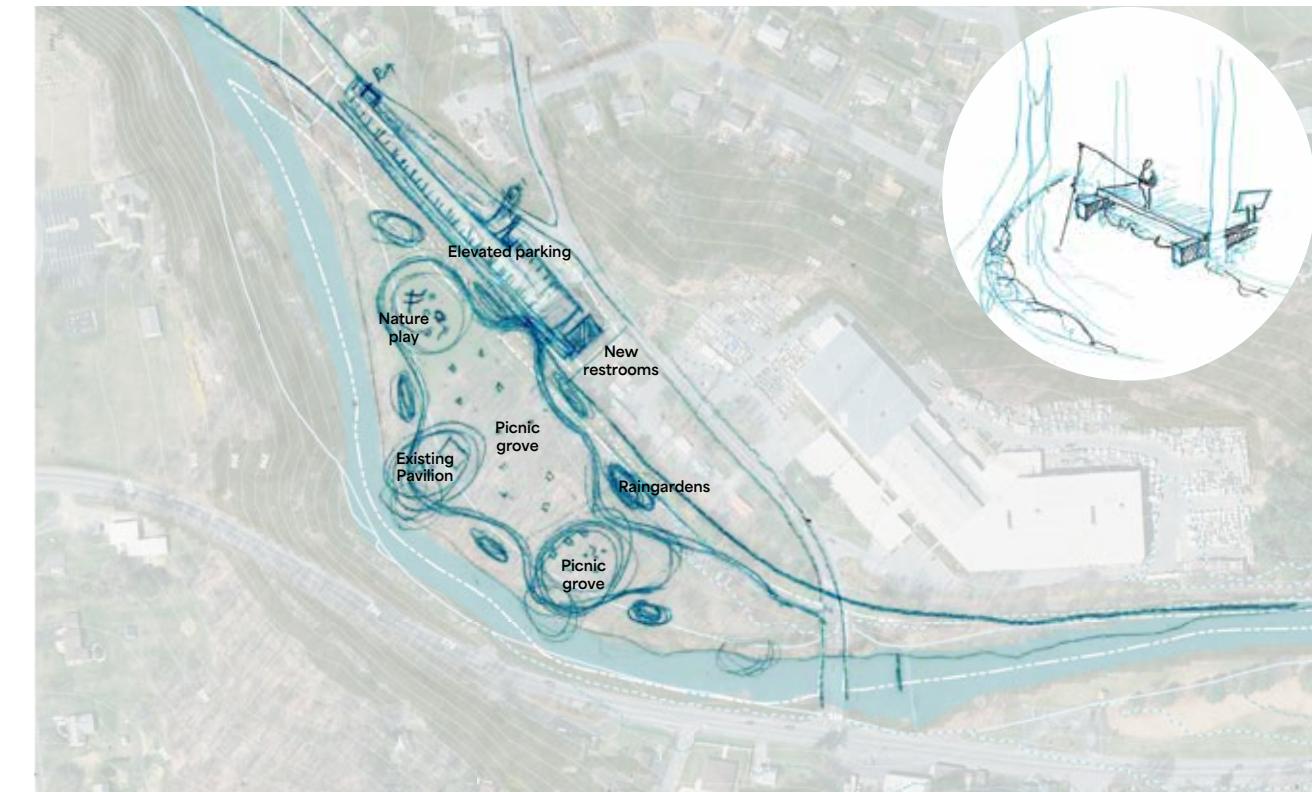
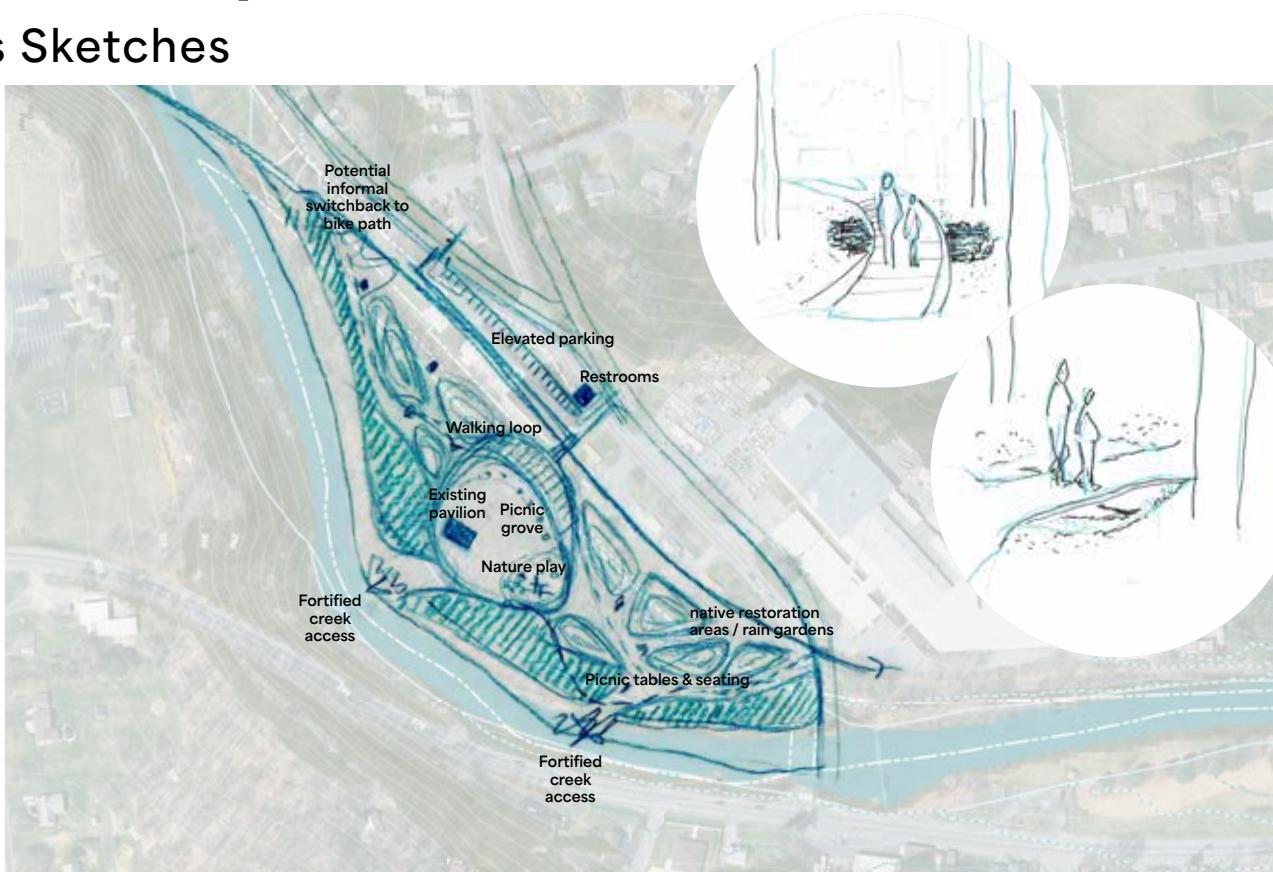
## CONCEPT 2



1" = 80'

# Penn Pump Park

## Process Sketches



# Penn Pump Park

## Connectivity



# Keystone Park

## Analysis



# Keystone Park

## Concept 1



# Keystone Park

## Concept 2



# Keystone Park

## Process Sketches



# Two Fool's Island

## Analysis



Ecological Typologies

### Central Appalachian Alkaline Glade and Woodland

#### Trees

eastern redbud (*Cercis canadensis*)  
eastern red-cedar (*Juniperus virginiana*)  
chinquapin oak (*Quercus muehlenbergii*)  
hackberry (*Celtis occidentalis*)  
northern white cedar (*Thuja occidentalis*)  
pignut hickory (*Carya Glabra*)  
red oak (*Quercus rubra*)  
sugar maple (*Acer saccharum*)  
white oak (*Quercus alba*)

#### Shrubs

downy arrow-wood (*Viburnum rafinesquianum*)  
running serviceberry (*Amelanchier humilis*)

#### Herbaceous

barren strawberry (*Waldsteinia fragarioides*)  
glade flax (*Linum sulcatum* var. *sulcatum*)  
hairy beardtongue (*Penstemon hirsutus*)  
hairy pinweed (*Lechea mucronata*)  
orange-grass st. john's-wort (*Hypericum gentianoides*)  
prairie ragwort (*Packera plattensis*)  
bergamot (*Monarda fistulosa* ssp. 1)  
violet bushclover (*Lespedeza violacea*)  
western hairy rockcress (*Arabis hirsuta*)  
western wallflower (*Erysimum capitatum*)  
cliff stonecrop (*Sedum glaucophyllum*)\*  
hidden spikemoss (*Selaginella eclipsis*)\*  
tall larkspur (*Delphinium exaltatum*)\*  
three-lobed violet (*Viola triloba*)\*

### North-Central Appalachian Large River Floodplain

#### Trees

box elder (*Acer negundo*)  
cottonwood (*Populus deltoides*)  
silver maple (*Acer saccharinum*)  
sycamore (*Platanus occidentalis*)

#### Herbaceous

basil bee-balm (*Monarda clinopodia*)  
green dragon (*Arisaema dracontium*)  
canada moonseed (*Menispermum canadense*)  
nodding trillium (*Trillium flexipes*)  
smooth burmarigold (*Bidens laevis*)  
american lotus (*Nelumbo lutea*)\*  
coast violet (*Viola brittoniana*)\*  
eastern prairie white-fringed orchid (*Platanthera leucophaea*)\*  
heartleaf plantain (*Plantago cordata*)\*  
limestone wild petunia (*Ruellia strepens*)\*  
long's bulrush (*Scirpus longii*)\*  
maryland bur-marigold (*Bidens bidentoides*)\*  
navel-shape cornsalad (*Valerianella umbilicata*)\*  
stalked bulrush (*Scirpus pedicellatus*)\*  
tidal spikerush (*Eleocharis aestuaria*)\*

### Northeastern Interior Dry-Mesic Oak Forest

#### Trees

black birch (*Betula lenta*)  
black oak (*Quercus velutina*)  
hickory (*Carya* spp.)  
red maple (*Acer rubrum*)  
red oak (*Quercus rubra*)  
scarlet oak (*Quercus coccinea*)  
white oak (*Quercus alba*)  
yellow birch (*Betula alleghaniensis*)

#### Herbaceous

American wintergreen (*Pyrola americana*)  
basil bee-balm (*Monarda clinopodia*)  
blunt-lobe woodsia (*Woodsia obtusa*)  
bottlebrush grass (*Elymus hystrix*)  
common alexanders (*Zizia aurea*)  
early buttercup (*Ranunculus fascicularis*)  
shinleaf (*Pyrola elliptica*)  
sicklepod (*Arabis canadensis*)  
climbing fern (*Lygodium palmatum*)\*  
goldenseal (*Hydrastis canadensis*)\*  
small whorled pogonia (*Isotria medeoloides*)\*

ASSOCIATED SPECIES; \*SPECIES OF CONCERN

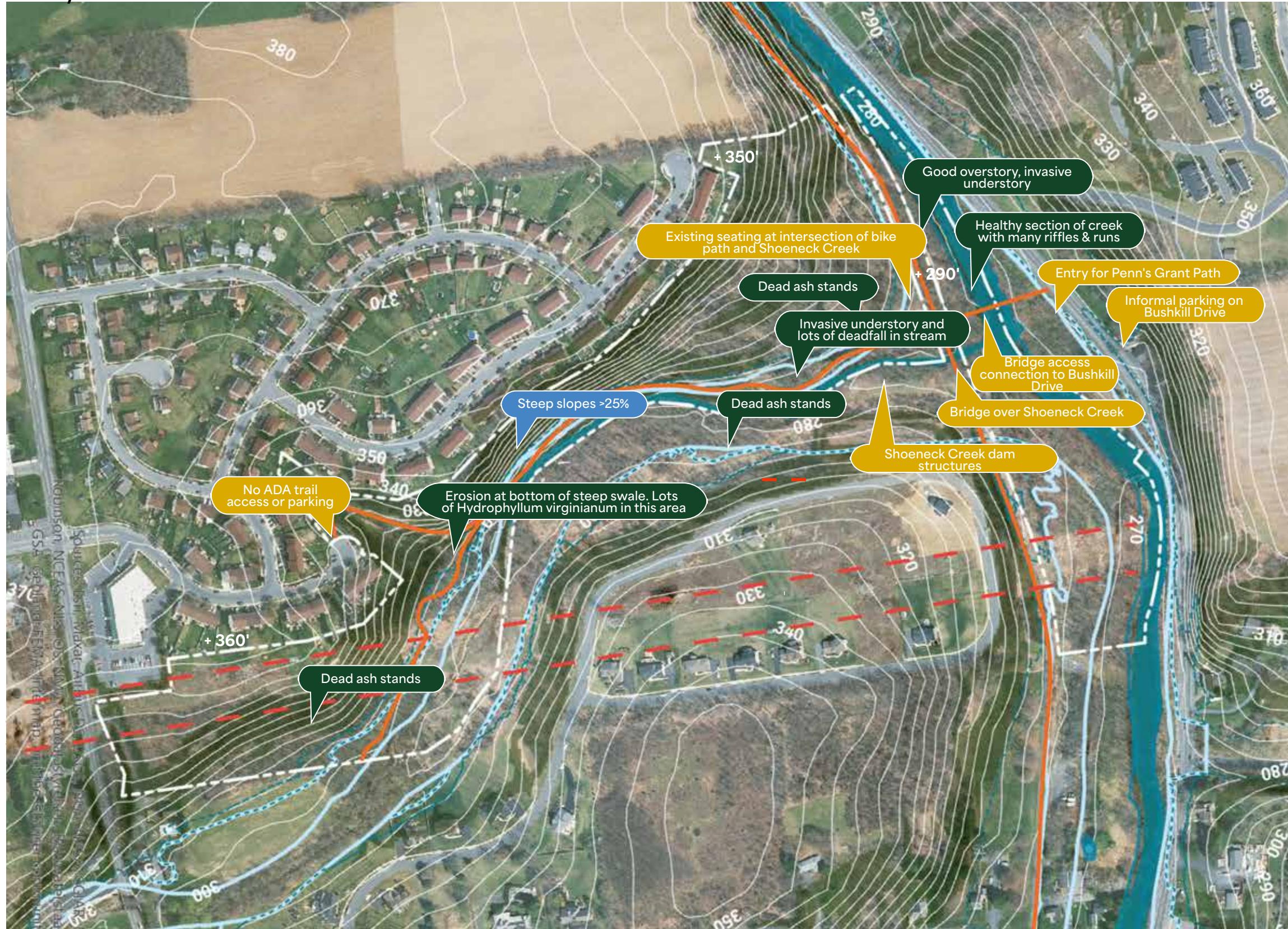
# Two Fool's Island

## Concept



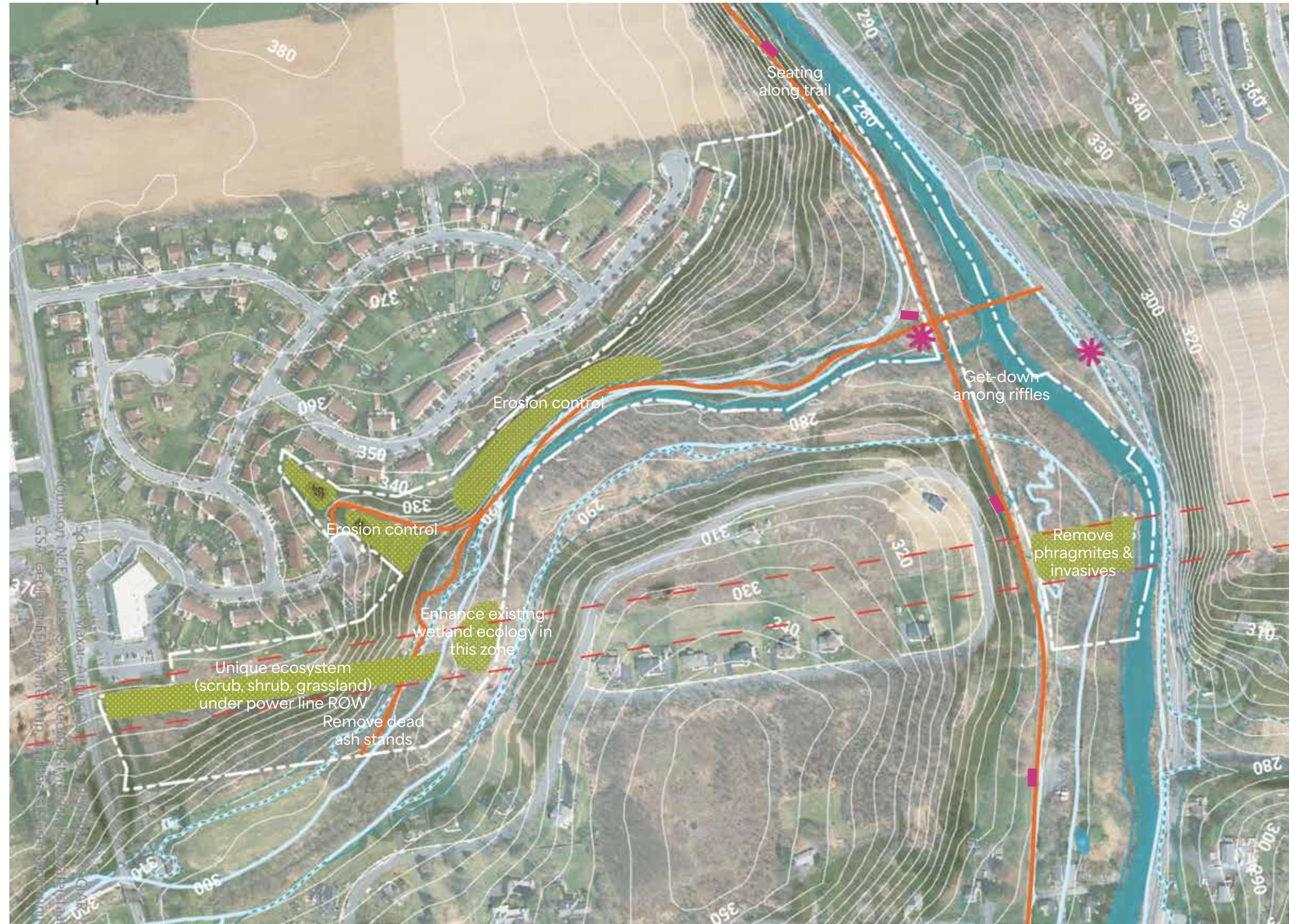
# Penn's Grant Open Space

## Analysis



# Penn's Grant Open Space

## Concept



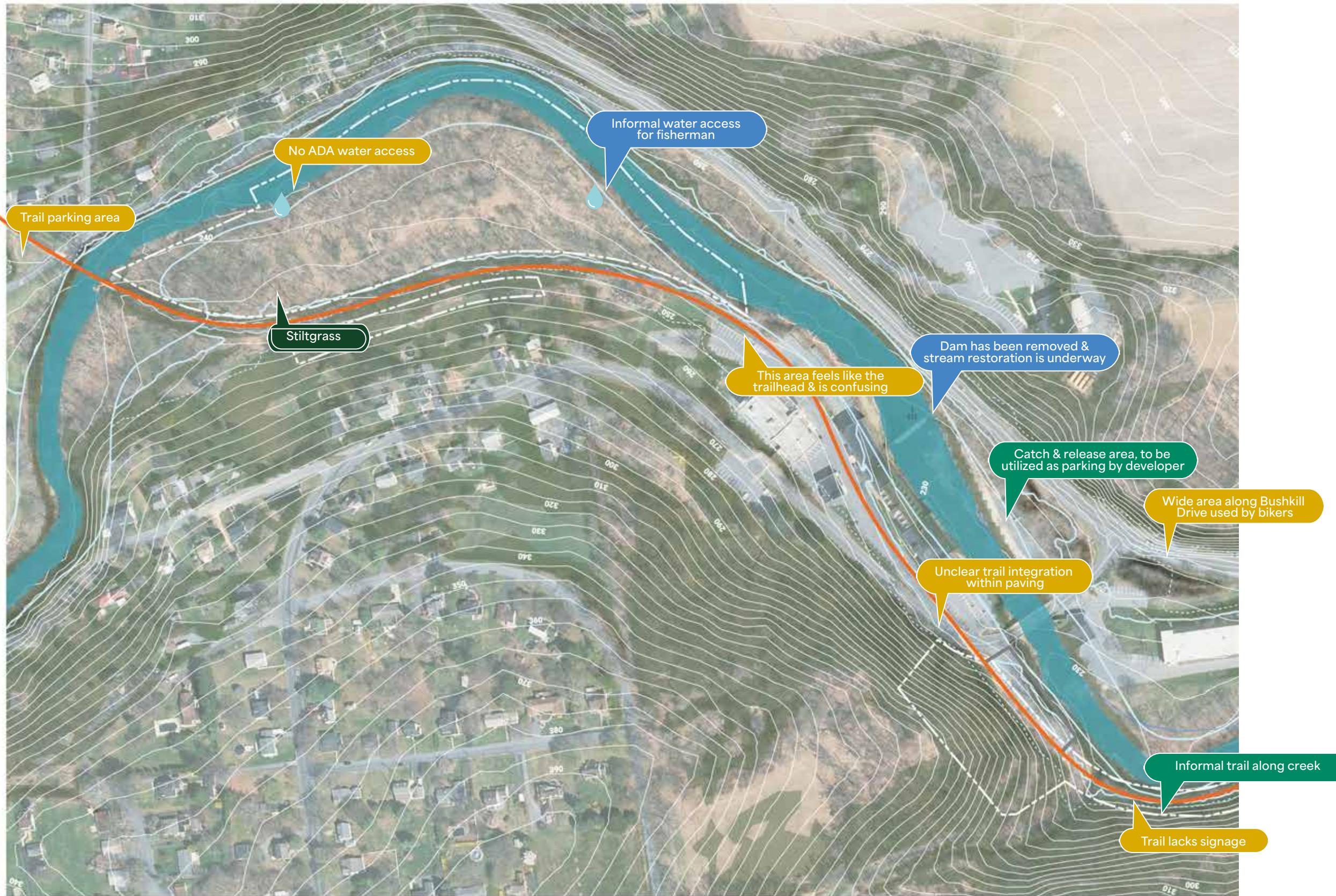
# Greenway Access at Penn's Grant Open Space

Connectivity



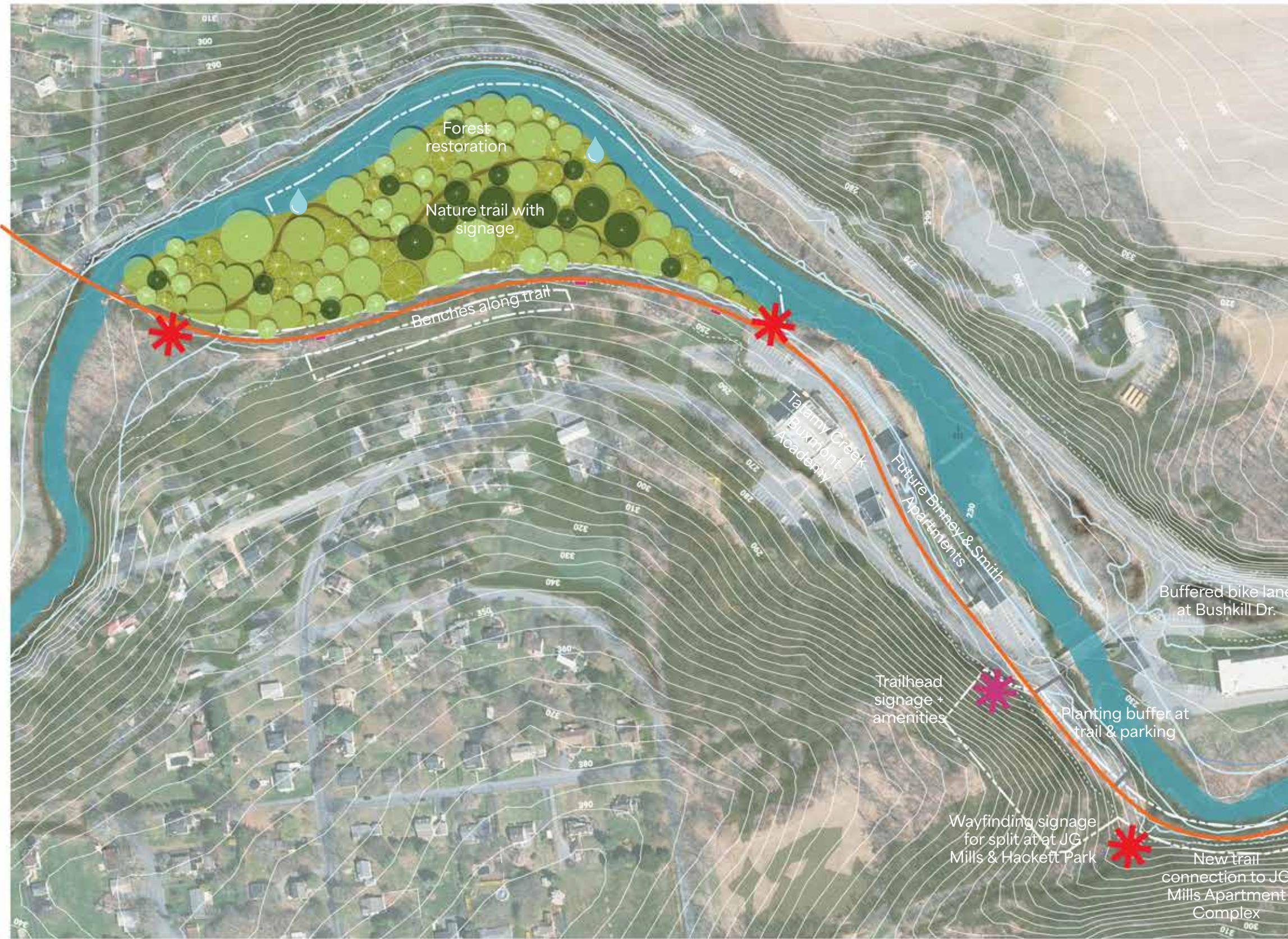
# Wildlands Conservancy Binney & Smith Preserve

## Analysis



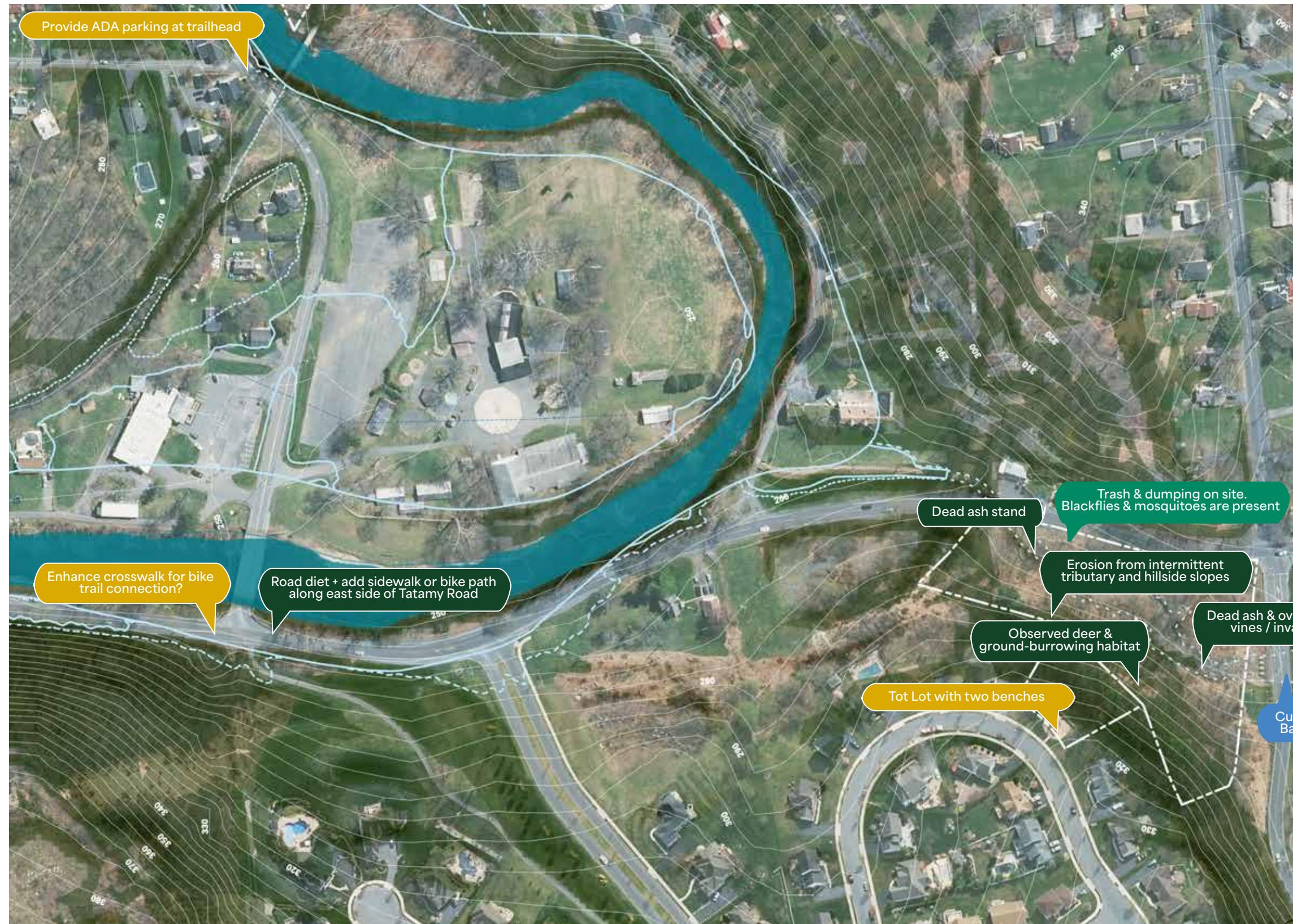
# Wildlands Conservancy Binney & Smith Preserve

## Concept



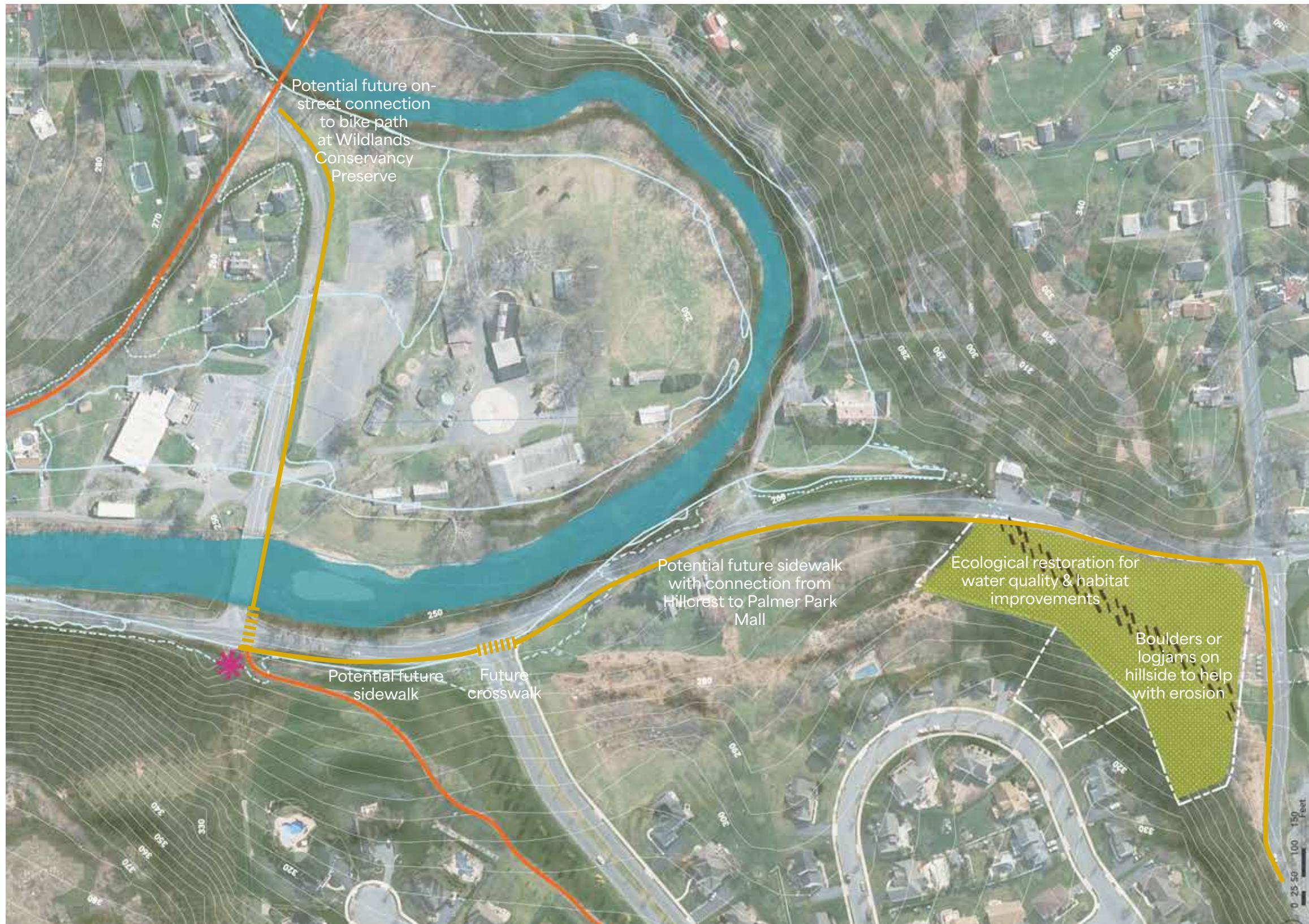
# Hillcrest Open Space & Tot Lot

## Analysis



# Hillcrest Open Space & Tot Lot

## Concept



# Signage & Wayfinding Visual Inventory

## Existing assets



Palmer Township Standard Park Entry Signage



Palmer Bikeway Trail Signage



Standard Playground Rules Signage



Palmer Township Standard Park Entry Signage - Alternate



Palmer Trail Map Standard Signage



Palmer Township Standard Park Rules Signage

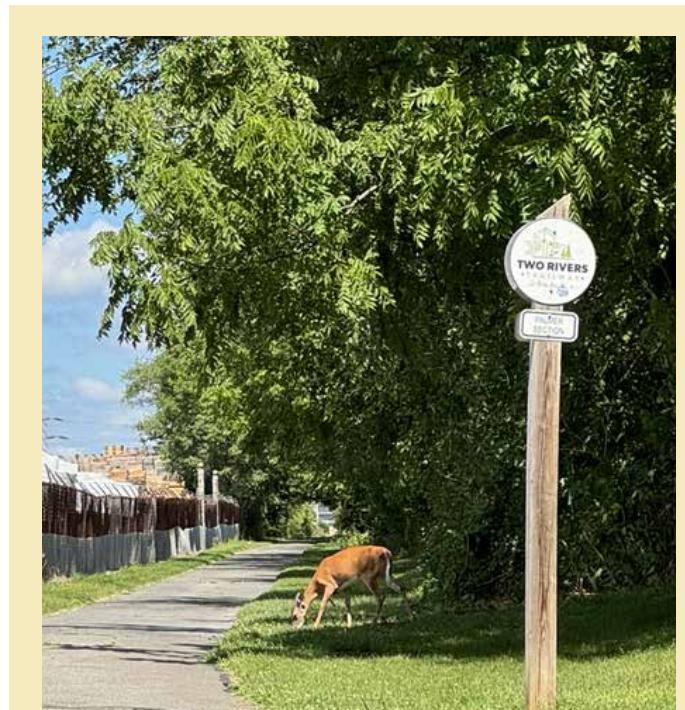
# Signage & Wayfinding Visual Inventory

## Existing relevant branding identities

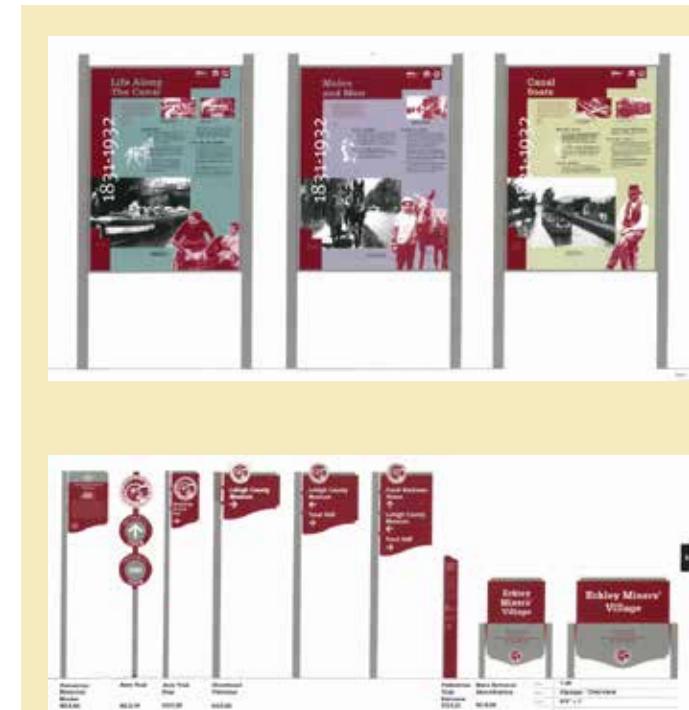
## LIVABLE LANDSCAPES GRANT



# TWO RIVERS TRAILWAY



## DELAWARE & LEHIGH (D&L) TRAIL

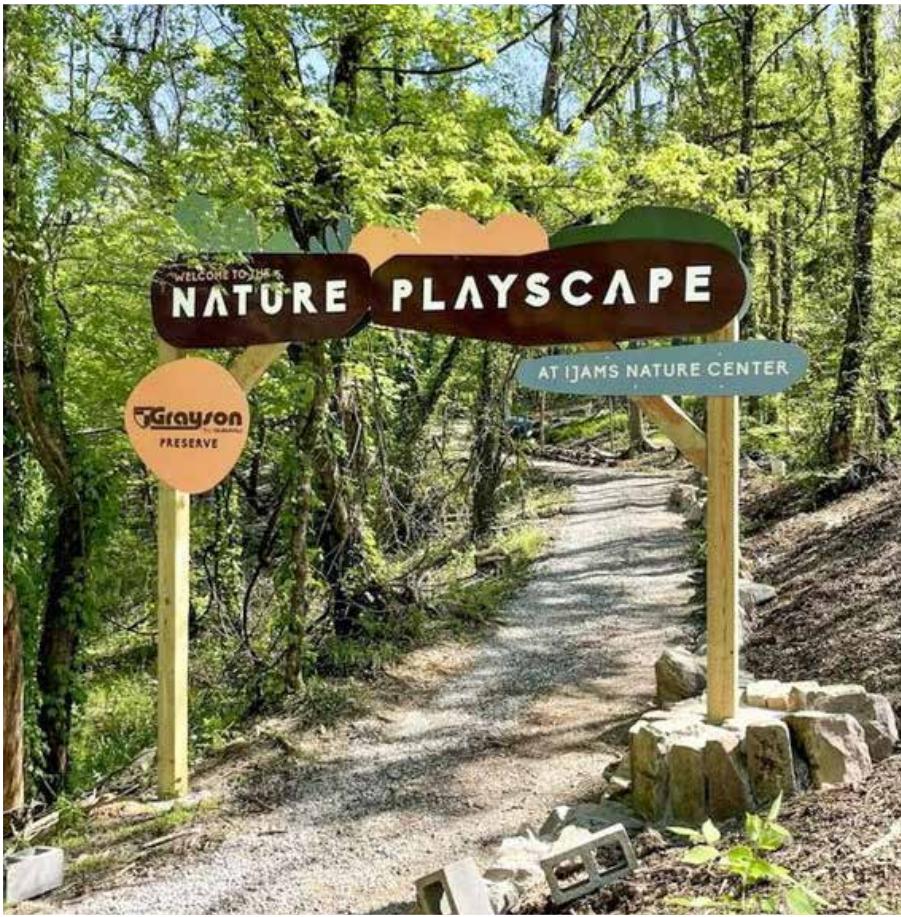


9/11 NATIONAL MEMORIAL TRAIL



# Signage & Wayfinding

## Inspiration

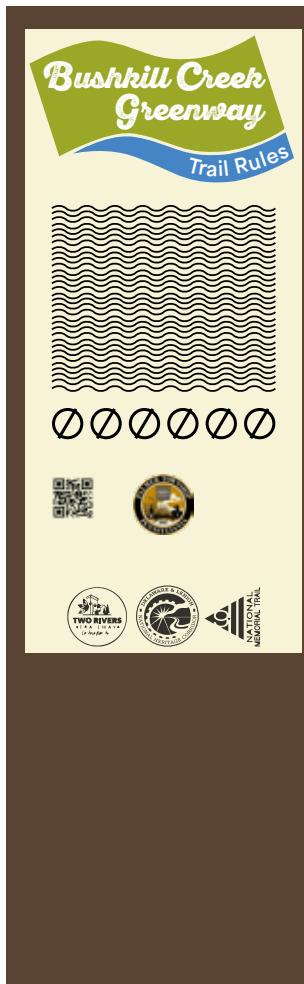


# Signage & Wayfinding

## Potential Signage Suite



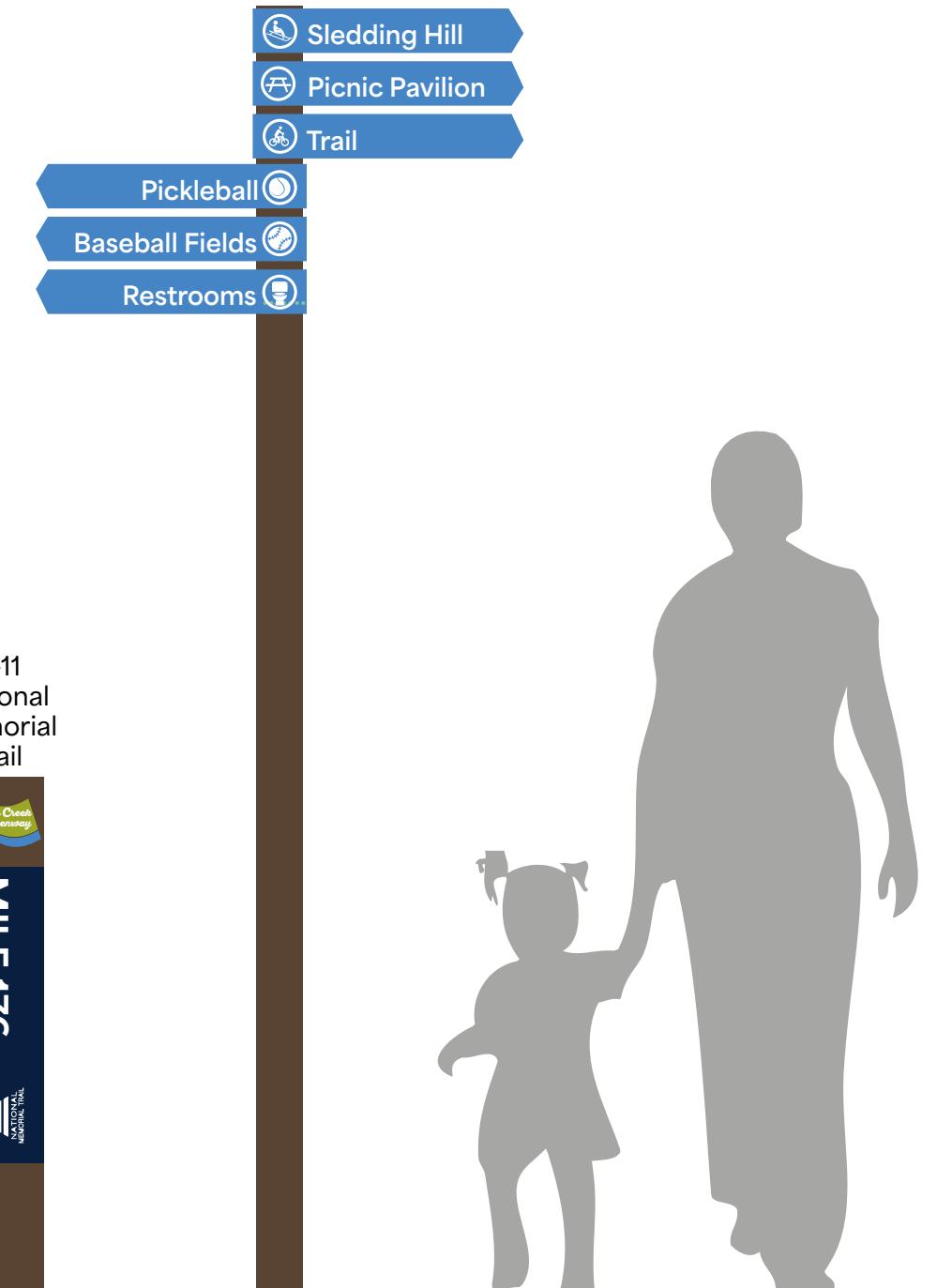
Park Identification



Trail or Park Rules



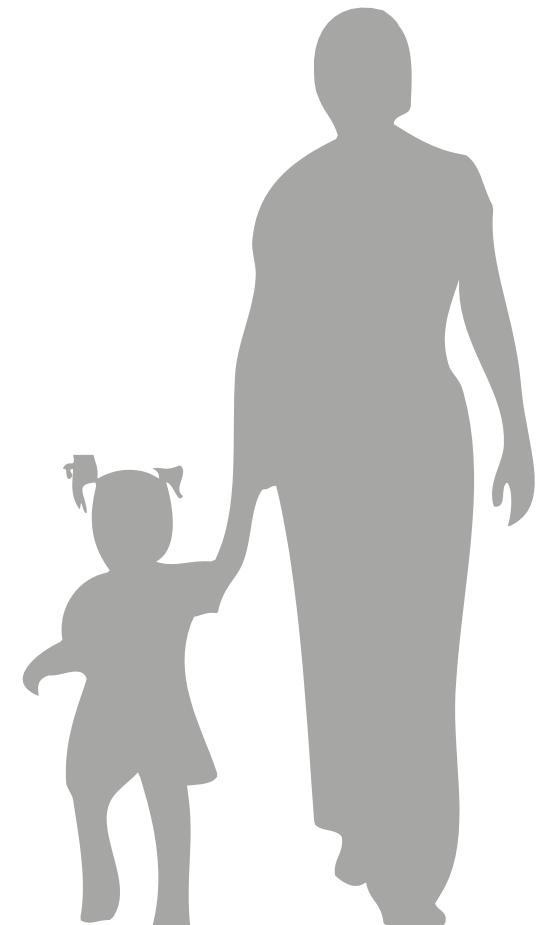
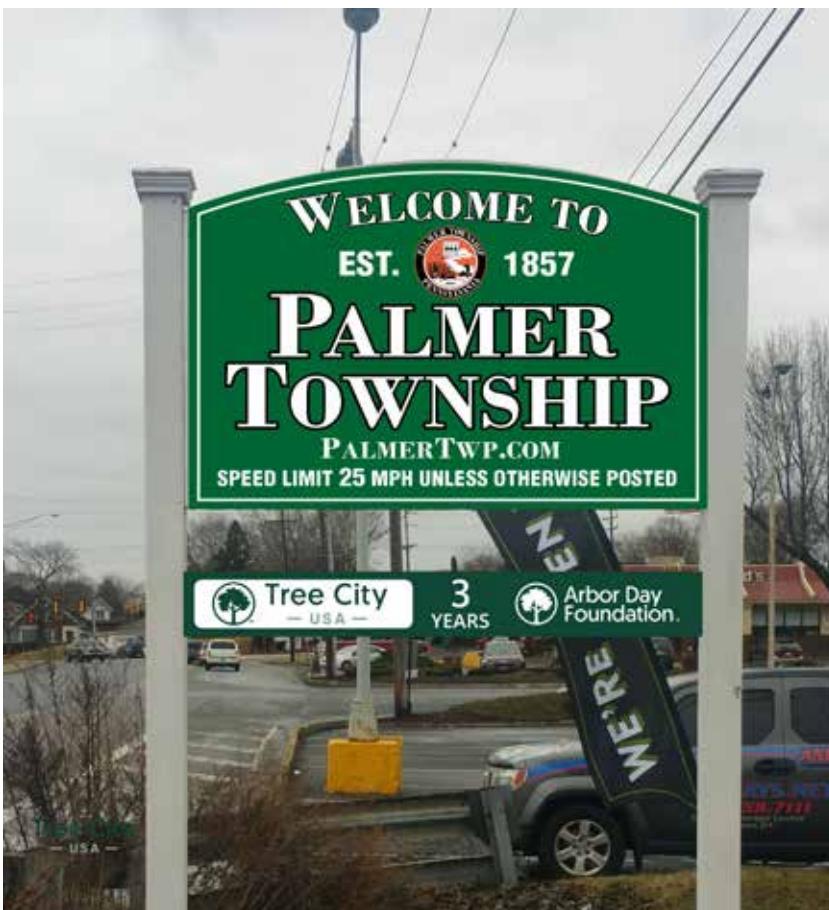
Mile Marker System



Directional Signage

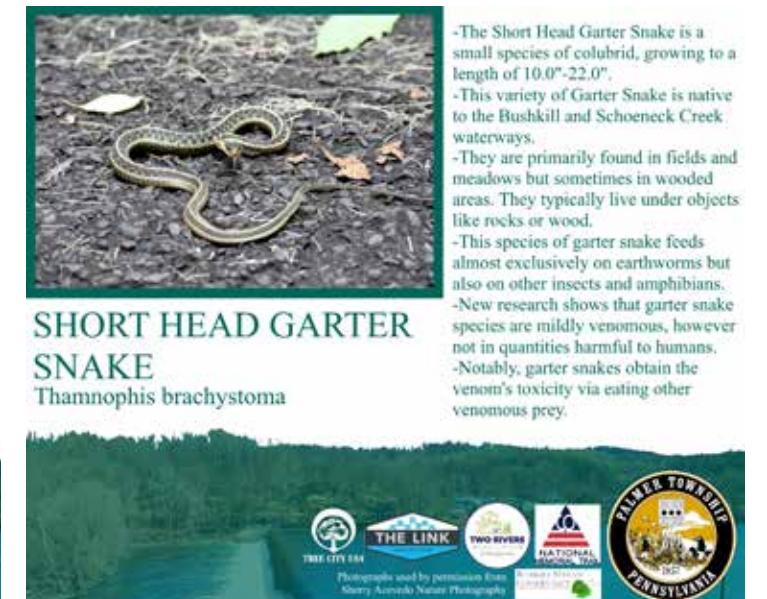
# Signage & Wayfinding

Using Existing Guidelines



# Signage & Wayfinding

## Interpretive Signage: PSU Local Climate Action Program



-The Short Head Garter Snake is a small species of colubrid, growing to a length of 10.0"-22.0".  
-This variety of Garter Snake is native to the Bushkill and Schoeneck Creek waterways.  
-They are primarily found in fields and meadows but sometimes in wooded areas. They typically live under objects like rocks or wood.  
-This species of garter snake feeds almost exclusively on earthworms but also on other insects and amphibians.  
-New research shows that garter snake species are mildly venomous, however not in quantities harmful to humans.  
-Notably, garter snakes obtain the venom's toxicity via eating other venomous prey.

