"South River Meadow" (11-Acres)

Preliminary Recommendations from the Open Space Committee

Renamed 12/13/16 at joint meeting of Ad-Hoc Park & Open Space Committees

IRd a

Laurie Sanders, M.S. A Natural Focus LLC November 18, 2016

10

Acquired in 2006

Gemetery-Hill-R

Conway

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arsons-Rd.



- ✓ Aesthetic Value

- ✓ Varied Habitats



Plus >2,000' along South River!



Benefits Include

✓ Walking Distance to Downtown ✓ Agricultural Value ✓ Recreational Value ✓ Historical Significance ✓ Wildlife Habitat, including Coldwater Fishery & Rare Species Habitat

In wake of massive damage in Franklin County from Tropical Storm Irene (2005), FRCOG study is conducted and shows that this parcel is the best location for added compensatory flood control on South River



TOWN OF CONWAY, MASSACHUSETTS BOARD OF SELECTMEN SOUTH RIVER RESTORATION PROJECT

MAY 2016





Since 2005, many Town **Committees and Ad-hoc** groups generate ideas for site's future uses, including:

- ullet

"Agreement on a set of compatible activities for the overall use of the property."

• Memorial Park • Natural Park Safe Linkage to Other Parks • Senior Housing • Soccer Field • Community Gardens • Nature Trails Gazebo for music Picnic, horseshoes, etc Wastewater Treatment • Safety Complex

Planning Board, 2014

highlight the site's environmental constraints (i.e. steep slopes, flooding, wetlands, etc)









BUCKLAND

Natural History Assessment Takes Into Account Multiple Factors, Including:

(112)

(116)

11.2

✓ Landscape Context

South River

D.a.r.

State Forest 4. J. S.

CONWAY

ANKLIN COUNTY

HAMPSHIRE COUNT





Topography



 \checkmark

Bigger Picture

170.0





✓ Priority Habitat for Rare Species

Relationship to OtherProtected Parcels



And finally, these recommendations were developed with an eye toward:

- ✓ Low-maintenance
- ✓ Low-cost
- Realistic and not precluding other potential uses
 (e.g. senior housing, wastewater, safety complex, etc)



Using a Natural History Approach, the site was subdivided into 9 Ecological/Management Units



Remeter

5b

SouthRivel

5a

9

1. Riparian Habitat (~ 1.75 acres)

- Wildlife value
- Stream habitat
- Water quality





Many values of the Riparian Area are threatened by the spread of exotic, invasive plants



The worst being Japanese Knotweed!





- Alters geologic processes ightarrow
- Reduces plant diversity
- Poor flower for most pollinators
- Alters natural plant succession ightarrow
- Eliminates nesting habitat ightarrow
- Impacts aesthetics
- Reduces opportunities for recreation

Japanese Knotweed





Recommendations for RIPARIAN AREA

1.Control invasive plants in this zone using cut-stump treatment and foliar applications

2. Create 50' (or greater) forested corridor along the South River. (cottonwood, sycamore, silver maple, butternut, etc)

3. Work with MA NHESP to secure cuttings of balsam poplar, a species in decline, from the Bear River



5. Selectively place signs on certain tree species to improve the public's knowledge of local flora





Benefits:

- Improved water quality
- Reduced erosion
- Greater species diversity
- Restored/improved habitat integrity (floodplain forest, gravel bars, bank)
- Reduced water temperature (cold-water fishery)
- Increased stabilized slopes
- Improved fish habitat (spawning, temperature)
- Improved wildlife corridor
- Improved wood turtle habitat (nesting, foraging)
- Conservation assistance to two plant species in decline (balsam poplar, butternut)
- Potential habitat improvement for Virginia Veined white, a butterfly in decline, which relies on toothwort (Dentaria diphylla)
- Public access to river

2. Compensatory Flood Storage (1 acre)



Recommendations for COMPENSATORY FLOOD STORAGE AREA

1.Plant 50 feet (or more) along South River with native canopy species

2. Manage the compensatory flood storage swale/detention area as herbaceous/shrub meadow with 3-5 year mowing schedule

3. Prohibit agricultural activities in this area and encourage mix of native grasses, wildflowers, shrubs and trees





3. Control invasive plants using mechanical control, grubbing (where appropriate), foliar application and cut-stump treatment/injection herbicide

4. Create a walking trail to the river edge and install a bench near the river

5. Install informational sign to describe river's history (4-40 after 1869 flooding), synopsis of studies since Tropical Storm Irene, goals of compensatory storage project, value and functions of riparian forests, and threats to these corridors from invasive plants



Benefits:

- Improved water quality (intercepts runoff from fertilizer and/or pesticides from adjacent agricultural activity)
- Reduced erosion
- Greater plant and animal diversity (esp. insects, birds, frogs and toads)
- Improved wood turtle habitat (foraging & shelter)
- Improved pollinator habitat and increased pollinator diversity
- Potential nesting habitat for song sparrow, yellowthroats, yellow-warblers, and savannah sparrow (possible)
- Improved understanding about land use history, river dynamics, compensatory storage project, and impacts of certain non-native, invasive plants on habitat, geologic processes, nutrient cycling, aesthetics and recreation



3. WETLAND PARALLELING SHELBURNE FALLS ROAD (~1 acre)



Existing condition: Mostly native plants, but some invasive non natives (e.g. multiflora rose, purple loosestrife)



Gemetery

3

SouthRiver

Recommendation for WETLAND

1. Manage invasive species, in particular multiflora rose, purple loosestrife and burdock







Benefits:

- Greater plant and animal diversity
- Improved wood turtle habitat (foraging & shelter)
- Improved pollinator habitat and increased pollinator diversity
- Maintains habitat for wetland species





4. BUFFER STRIP & 6' WALKING PATH (~1/2 acre)





- 1. Allow a 10-15 foot border to lie fallow beyond the wetland and riparian border so that wildflowers and native shrubs and grasses can grow along the existing forested riparian boundary and edge of the compensatory flood storage basin. Annually manage this buffer strip for invasive plants. Brush hog the strip every 3-5 years after October 15.
- 2. Install nesting boxes for tree swallows and bluebirds





Benefits:

- Greater plant diversity
- Improved pollinator & insect habitat and increased number of pollinators



NOTE: Preliminary field surveys in 2016 estimated > 100 species of bees & > 50 species of butterflies



Install 6-foot trail beyond buffer (& beyond site)

Improved public access

 Promotes wellness through walking; encourage history walks in collaboration with the Conway Historical Society, the library and the local elementary school



Additional Benefits:

- Improved water quality
- Reduced erosion
- Greater wildlife habitat, including improved wood turtle habitat (foraging and shelter)



GemeteryHi

5b

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5. PARKING AREA, ACCESS ROAD & ROAD & ADJACENT UPLANDS UPLANDS ALONG SHELBURNE FALLS ROAD (~ 1.5 acre)



5b: Dominated by White Pine

5a: Dominated by Oak









Recommendations for PARKING AREA, ACCESS ROAD AND UPLAND FOREST

- 1. Regrade access road and improve parking area (5 spaces)
- 2. Remove rock, earth piles and Highway Department equipment
- 3. Install sign for cyclists following the scenic bike route and add small bike rack
- 4. Install kiosk describing human history, geology, and ecology of site, with tie-in to **Howland Cemetery**
- 5. Install doggie bag dispenser to foster responsible clean-up for dog-owners

- Brushhog/clear raspberries, multiflora rose and other vegetation that has grown in during the last 20 years along Shelburne Falls Road. Remove one or two trees to create picnic area with view. Install a picnic table on this level terrace.
- Control multiflora, Asiatic
 bittersweet in area closest to
 access road and honeysuckle
 in area dominated by white
 pine
- Inform neighbors about not dumping lawn clippings and yard waste



Benefits:

- Improved public access (cars, walkers, cyclists), especially for people with limited mobility
- Improved view for neighbors and as part of Scenic Road and Scenic vista criteria
- Improved passive recreation (picnic), better signage and new access to the level terrace that is currently unused and almost impenetrable due to raspberry and multiflora Improved habitat (less invasives) in section dominated by white pine
- Better understanding of site history
- Improved sanitation (dog waste) and water quality
- Does not preclude future change of use for senior housing or safety complex



6. MEADOW & TIMBER-FRAME BARN WEST OF ACCESS ROAD (~.7 acre)

- 1. Create 6-foot mowed loop trail that connects to main trail and begins at parking area
- 2. Install simple pavilion (15' x 20') near river edge but outside of riparian zone and newly created 10-15' shrub/herbaceous border
- 3.Create 1-handicapped accessible parking space next to pavilion





4. Determine age of timber-frame building and how it was used at the former mill site

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5. Control purple loosestrife

6. Brushhog on 2-4 year rotation to maintain meadow habitat

7. Work with UMASS to conduct ground penetrating radar map to try to assess location of former Duck Cloth Mill (1900-1908)

8. Install bird boxes –including a kestrel box







7. RICH WOODS CORRIDOR & PATH TO SHELBURNE FALLS ROAD (~0.6 acre)





Trail along old farm road connects the field to Shelburne Falls Road, which was originally the bed for the electric railway line. The vegetation is typical of a rich, mesic



glacial history and human history over the course of the last 13,000 years.

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Remnants of old dam

As small and narrow as this part of the property is, it's really interesting!



Exposed till deposits

Recommendations for RICH WOODS CORRIDOR

- 1. Maintain wooden walking bridge over wetland
- 2. Control non-native plants to maintain the integrity, diversity and views that this short stretch of forest provides. High diversity of ferns and wildflowers and the area least compromised by non-native, invasive plants
- 3. Describe the geology in this area and how it relates to the cemetery, seeps, and bend in the river (glacial lake, glacial outwash, hard pan, etc) and proximity of Tucker & Cook dam below.

Benefits:

- Alternate public access to Shelburne Falls Road and allows for continued walk through Howland Cemetery and connect with land under conservation restriction on hillside
- Maintain diversity of spring wildflowers by controlling non-native plant growth
- Improves understanding of interesting geology of site

8. Isolated Wetland (~4,000 s.f.)



Recommendations for ISOLATED WETLAND

- 1. Monitor and control purple loosestrife and other invasives
- 2. Determine history
- 3. Excavate to provide a vernal pool or pond habitat for toads and other wildlife

Benefits:

- Reduces the seed source of invasive plants on and near the property
- Improves the understanding of the site's history
- If pursued, increases habitat for certain amphibians and other species that depend on quiet water habitats



9. AGRICULTURAL FIELD (~ 3.25 acres)



Site is underlain by PRIME AGRICULTURAL SOILS (DARK GREEN)





Recommendations for AGRICULTURAL FIELD

- Allowed uses would include hay, organic artisanal crops (flowers & herbs), or grazing (sheep, goats, cows)
- 2. Prohibit the foliar application of herbicides, fungicides and insecticides
- 3. Identify acre for wastewater needs for downtown
- 4. Set aside ¼ acre for community garden



Benefits:

- Growing hay or allowing for grazing reflects Conway's long tradition as a grazing/pasture community and supports a local farmer
- If future uses included artisanal crops, improved pollinator habitat with diversity of flowers (nectar, pollen and as host plants)
- Improved water quality and wildlife health by prohibiting use of foliar pesticide sprays
- Potential opportunity to improve wood turtle habitat by contracting mowing operations to 2-3 year schedule in the fall





About the Consultant

Laurie Sanders, M.S., is a naturalist and ecological consultant. She has prepared natural history assessments for the City of Northampton, the Lathrop Community in Easthampton, and for private clients in Massachusetts, the Adirondacks and Idaho. Here in Massachusetts, she has found dozens of new locations for rare plants and animals, most notably the only known population of a hybrid cross between green dragon and jack-in-the-pulpit.

She was the first wetland circuit rider for MA DEP and for ten years, she was the host and producer of Field Notes for public radio's NEPR. Her pieces have aired nationally on Living on Earth and Morning Edition. In 2016 she was awarded the Bud Foster Award by the Connecticut River Watershed Council for her outstanding contribution to the public's understanding and appreciation of the Connecticut River watershed. She is currently the co-director of Historic Northampton.

She lives with her husband and daughter in Westhampton, Massachusetts.

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Special thanks to Chris Buelow, Janet Chayes, Jack Farrell, Betsy Higgins, Tom Hutcheson, Michael Jones, Fred Morrison, Melissa Patterson, Barbara Pelissier, Michele Turre for their knowledge and insights, to the Conway residents who shared their ideas with me, and to all the other Conway residents who have served on committees and ad-hoc groups and thought long and hard about this interesting piece of property.