CONWAY POLLINATOR ACTION PLAN



Identifying and Expanding Wild Pollinator Habitat in the Town of Conway

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The Conway Pollinator Action Plan is part of the Regional Pollinator Action Plan for Franklin County, which identifies strategies to develop pollinator habitat at a municipal and landscape scale through community engagement. The Regional Pollinator Action Plan includes the towns of Heath, Shelburne, Conway, Greenfield, Montague, Bernardston, Wendell, and Orange. To view the Regional Pollinator Action Plan, the Regional Pollinator Habitat Corridor Implementation Toolkit, and the Pollinator Action Plans for each of the other participating towns, go to https://frcog.org/franklin-county-regional-pollinator-plan/.

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LANDSCAPE ANALYSIS

Natural resource inventory and parcel maps of the Town of Conway were developed with MassGIS and other available geospatial data to identify existing land cover and land use, priority habitat, water resources, development patterns and areas of habitat fragmentation, protected open space and municipal properties, paved and gravel roads in town, and other relevant resources in each town. The method of landscape-scale analysis followed these steps:

- Identify pollinator habitat by analyzing land cover and land use, protected open space, rivers and wetlands, Natural Heritage and Endangered Species (NHESP) BioMap2 Core Habitat, utility corridors and right-of-ways.
- Consider special geologic, hydrologic, soil, vegetation, and microclimate assets in Conway that serve as valuable resource areas for the whole lifecycle of pollinators across multiple seasons, including nesting, larval, and adult stages.
- Include locally observed habitat and known habitat resource areas.
- Identify existing conditions, habitat, and development patterns, and areas of habitat fragmentation.
- Use GIS and local knowledge to create the maps.

Landscape analysis for the Town of Conway included the following maps, which can be found at the end of the *Conway Town Action Plan*:

- Permanently Protected and Municipal Properties
- Habitat and Environmental Resources
- Land Cover and Land Use

The existing conditions analysis shows that Conway is a predominantly rural town, with large areas of forest in the southern half of town. Areas throughout the northern half of Conway and along Roaring Brook Road consist of large tracts of sunny, open landscape primarily used for agriculture. Conway's village center, located in the geographic center of town, is characterized by moderately dense, village style residential neighborhoods along the South River and several of its tributaries. The town is traversed by the winding South River as it flows from southwest to northeast to join with the Deerfield River, which flows along the town's northern boundary. The South River, wide enough to allow access to the sun and bordered in places by residences and open fields, provides a significant pollinator corridor. Many other waterways crisscross the town, flowing predominantly through forested areas. Wetlands in Conway are generally found in forested areas at the headwaters to tributaries. Of these waterways, the South River and Bear River contain the most NHESP Priority Habitat and BioMap 2 Core Habitat—state-designated high-quality habitat and intact ecosystem areas. The large block of contiguous forest

protected as the Conway State Forest and nearby Poplar Hill also represent large areas of staterecognized quality habitat, as does the utility corridor that runs east-west through the South River State Forest in the northern part of town. The Town of Conway owns two medium-sized undeveloped parcels: one at the Conway Grammar School and another adjacent to the Conway State Forest. The Commonwealth owns a significant amount of land in Conway including the South River State Forest, Flagg Mountain, Poland Brook Wildlife Management Area, and the Conway State Forest. Hundreds more acres in town are permanently protected private land.

Maps of existing and potential sites for pollinator habitat areas and corridors were developed through both GIS landscape analysis and community input. A pollinator planning workshop with the Conway community was held on March 29, 2021 via Zoom to review the GIS landscape analysis maps of the town and to inventory locally known existing pollinator habitats areas and connectivity, and potential locations for creating new pollinator habitat in town. Sixteen people attended the workshop.

This local knowledge was used in conjunction with land use data to create the following maps, which can be found at the end of the *Conway Town Action Plan*:

- Existing & Potential Sites of Pollinator Habitat
- Pollinator Corridors & Habitat Step

EXISTING HABITATS AND RESOURCE AREAS

According to the Natural Resources Conservation Service (NRCS), the best pollinator habitat will generally have access to food, cover, and water within close proximity, as well as connectivity to other important habitats, such as deciduous forests. Sunny and open conditions, field edges, and hedgerows are needed for ground nesting sites, as well as wood and pithy-stem nesting pollinators.

Existing pollinator habitats and resources areas can be inferred from the "Sunny Open Landscapes" and "Forested and Open Wetlands" data displayed in the *Town of Conway Pollinator Corridors & Habitat Stepping Stones* map. These two composite prime pollinator land cover data layers consist of the following MassGIS 2016 land cover types:

Sunny Open Landscapes Cultivated Pasture/hay Developed open space Grassland Scrub/shrub

Forested and Open Wetlands Forested wetland Non-forested wetland

These land cover types meet the characteristics described by the NRCS as beneficial for pollinators, and therefore provide the basis for inferring the presence of pollinator corridors and stepping stones.

In addition to pollinator habitat that is identified through GIS landscape analysis, local knowledge contributed by the Conway workshop participants further identified existing wild locations, farms, pollinator-friendly gardens, municipal and utility areas, and connected corridors that are important for wild native pollinators in town. These locations are indicated as "existing pollinator sites" on the *Existing and Potential Sites of Pollinator Habitat* map.

Neighborhood Networks and Pollinator Corridors

Conway is home to a variety of land stewards, from homesteaders and permaculturalists to organic farmers and residential gardeners. In addition to sharing the mission of creating native pollinator habitat on the land that they care for, many of Conway's land stewards are actively networking to help provision others with practical knowledge, plants, materials, and labor needed for implementing and sustaining pollinator habitat in Conway Center and on larger properties in town.

The Conway community is already very interested and engaged in creating and stewarding local, native pollinator habitat. Continuing to build upon the momentum and the collective capacity among residents to carry out this work is an important long-term strategy. Residents are equipped with a high level of awareness, intention, and information that supports their work, including a focus on local native ecotypes with genomes from local native species.

Landowners of parcels of any size acreage should be encouraged to support this mission of ecosystem restoration and pollinator resilience.

Attendees of Conway's Pollinator Planning workshop identified a series of residential properties in neighborhoods near Conway Center where residents are applying ecological gardening and landscaping practices focused on creating habitat for native pollinators in their backyards and properties. One neighborhood corridor extends north of Main Street from Conway Center along Elm Street and Reeds Bridge Road. Many of these properties have frontage on the South River and residents have an awareness of the riparian buffer along the river as an important forage area for native pollinators. There is interest within the neighborhood to coordinate a collective effort to improve the pollinator resources in the South River corridor. This would involve managing thick stands of Japanese knotweed which dominate the streambanks. Other properties in the Reeds Bridge Road pollinator corridor are not on the South River but offer a mix of wooded landscapes with small patches of open space were native plants grow.

This Reeds Bridge Road neighborhood pollinator corridor connects and extends south of Main Street down Whately Road to a broad sunny valley around Pumpkin Hollow Brook. The Conway Community Swimming Pool is a manmade reservoir directly to the south, which features fresh water surrounded by a woodland edge. Wildside Gardens¹ is a 10-12 acre permaculture demonstration site directly to the east off Fisher Place Road, which provides pollinator meadows and gardens in several areas with native plants added every year.

Another area providing stepping stones of connectivity for pollinators is located on Main Poland Road near Keyes Swamp and Poland Brook State Wildlife Management Area on the southwestern town boundary. Abbott Hollow is a botanical sanctuary for medicinal and endangered native plants that utilizes microclimates to accommodate particular plants' habitat needs. This initiative is particularly helpful for supporting native wild pollinators whose numbers are in decline due to the disappearance of native plants and habitat areas overtaken by invasive species. A neighbor to the botanical garden cultivates pollinator habitat on their own property, supports the botanical sanctuary project, and is helping neighboring land owners create pollinator meadows on their properties too. The Main Poland Road pollinator neighborhood is connected through wooded areas extending along Chapel Brook into Ashfield.

South Shirkshire Road is another pollinator neighborhood where organic gardens, herb farms, and small scale fruit and vegetable farms are well connected and represent a pollinator corridor and resource area for wild native pollinators. Farms on South Shirkshire Road include Wilder Hill Gardens, Thyme Herbal, Hart Farm, Beaumont's Berries, and the property is marked with a sign indicating that wildlife habitat is cultivated there.

¹ <u>https://wildsidegardens.org/projects/</u>

Specific Locations Identified by Stakeholders

The following locations are a mix of residential or non-profit parcels identified by Conway residents and Town committee members who attended Conway's Pollinator Planning workshop as sites actively cultivating or managing for pollinator habitat. These sites are indicated in red on the *Existing & Potential Sites of Pollinator Habitat* map.

Site	Location	Area (acres)	Condition/Management Practices
Upland farm			Mowing 1x annually to keep landscape open
Conway Grammar School	Fournier Road		Hand drawn map for mowing plan adjustments to keep grass in non-used areas longer to help pollinators
Private residence	Graves Road	4-5	Prairie Moon Nursery wet and dry seed mixes plus added plugs
Private residence	Reeds Bridge Road	0.2	Sunny open landscape, woodland and wetlands. Growing insects, straight species, 3 season bloom, pesticide-free plants.
Private residence	Wildside Gardens	10-12	Native plants are added every year
Private residence	Abbott Hollow Botanical and Medicinal Sanctuary		Sanctuary for endangered plants, microclimates, connected woods area extends to Chapel Brook, Ashfield.
Private residence	Near Keyes Swamp	7	Open space for pollinators; owner donating labor and instruction
Mass Audubon	Conway Hills Wildlife Sanctuary	105	Tree planting
Swamp	North Poland Road	2	Solar field to be planted with pollinator plants – New England pollinator seed mix and native plants planted by NEXAMP for the screening.

Town-Owned Parcels

In recent years, Conway Grammar School began working on a pollinator-friendly mowing regimen in an area of open land in front of the school. Residents have noticed milkweed growing there now. It has been a challenge, however, to ensure that mowing continues to be done at the optimal timing for pollinators due to the demands on town staff to meet landscape maintenance needs elsewhere in town and perhaps a lack of understanding of why and how mowing should be modified to help wild native pollinators. The same is true for modifying mowing practices on town road right-of-ways.

The South River Meadow provides public access to the South River via an open meadow near the center of town. The site underwent restoration in 2016 to restore the river's access to a portion of its floodplain, to stabilize a section of eroding riverbank, and to mitigate and manage the invasive species that were overtaking the property. A group of dedicated volunteers called Friends of the South River and the Town's Open Space Committee are managing the on-going ecological stewardship of the property and as well as its recreational amenities, which include walking paths, a swimming hole, seating, educational signage, and a parking area. Management of the landscape includes pollinator-friendly mowing practices and significant revegetation of the site with native plants, which makes South River Meadow extremely valuable for wild native pollinators. It is an outstanding example of a small town leveraging its land assets to protect natural resources, enhance ecosystem services and safeguard the community from flooding, and doing so through community partnership. The site is part of the Town Center Neighborhood Pollinator Corridor that extends north along the South River and along Reeds Bridge Road.

EXPANDING POLLINATOR HABITAT

The inventory of existing and potential sites for pollinator habitat in Conway shows a series of well-connected pollinator corridors as well as isolated stepping stones of connectivity between pollinator corridors. The connectivity of existing pollinator habitat may be enhanced by implementing projects at the sites labeled "Potential Sites" on Conway's *Existing & Potential Sites of Pollinator Habitat* map, and by expanding pollinator habitat in areas indicated as existing stepping stones on Conway's *Pollinator Corridors & Habitat Stepping Stones* map. Pollinator habitat can be expanded through more general approaches too. Conway residents, farmers, and stewards of large parcels of cultivated land can all adopt pollinator-friendly land management practices and actively work to enhance local ecosystems with native plants, regardless of where they reside in relation to one of the identified corridors or stepping stones. Expanding existing and implementing new pollinator habitat in Conway will be accomplished by bringing together pollinator stakeholders to work together to pursue opportunities and build upon the Town's many assets and strengths.

Prime Opportunity Areas

Conway's prime opportunity areas for pollinator habitat include residential gardens and homesteads, farms, and town-owned parcels.

Residential Gardens and Homesteads

The Conway community is already quite interested and engaged in creating and stewarding local, native pollinator habitat. Continuing to build upon the momentum and the collective capacity among residents to carry out this work is an important long-term strategy. Some residents are equipped with a high level of information that supports their work while others need more guidance.

One strategy to help residents procure appropriate pollinator plants would be to organize neighborhood buying groups to make bulk purchases from reputable nurseries. See the *Regional Pollinator Habitat Corridor Implementation Toolkit* for native-plant nurseries that facilitate bulk purchasing. This approach would help ensure the procurement of appropriate native pollinator plants and would help make them more affordable.

Another important strategy for incorporating pollinator habitat in residential areas, especially in the center of Conway, is to combine pollinator-friendly designs and practices with flood resilience and residential stormwater management changes. Conway Center has a history of damaging floods and water quality issues on the South River, and residents recognize the need to design more green stormwater infiltration infrastructure and change land management practices, such as mowing regimes, to mitigate these problems. Combining outreach to

residents that addresses the complimentary needs for water management and landscaping for pollinator habitat could help make residential areas much more ecologically beneficial.

For private property owners who may not already be considering pollinator habitat needs, plant lists and site typology designs available in the *Regional Pollinator Habitat Corridor Implementation Toolkit* can support private land-owners in taking that extra step toward pollinator-friendly practices.

Farmland and Large Cultivated Parcels

A number of farms in Conway were identified as already taking steps to benefit pollinator habitat because they use organic methods. Still, they acknowledge that there is room for improvement in their practices to be even more pollinator-friendly. Some agricultural operations in town may not already be thinking about pollinator habitat and could be encouraged to do so; among them, vegetable farms and hayfields, orchards, and livestock farms.

Monocropping, poorly timed mowing, and pesticide application are three common agricultural practices that can tend to have deleterious effects on pollinators.² Planting a diversity of plants with staggered flowering times, even if only in strips planted expressly for pollinators, can mitigate the impact of the monocrops, which have a limited timespan for providing food and do not support the complete lifecycle of many pollinators. Mowing areas not needed for hay only once a year after the availability of nectar and pollen resources has been exhausted better supports pollinators. Conventional pesticides are almost universally harmful to pollinators, as are some organic options. Tailoring spraying practices to protect pollinators is one option for adapting to pollinators. However, reducing pesticide application is the preferred option.

Farmland can be supplemented with pollinator habitat along woodland edges, in hedgerows, pollinator planting strips, buffer strips (including road buffer strips), steeply sloped sections of field, and around resource areas such as ponds, wetlands, and streams. Successfully establishing habitat for wild native pollinators includes planting new native plants and managing the invasive species that can overtake and undermine new plantings. Information on problematic cold season grasses can be found in the Meadow Establishment section of the *Regional Pollinator Action Plan*. The task of managing invasive species, such as Japanese knotweed, is already a major undertaking in Conway.

Some farmers may have limited experience with cultivating native pollinator plant species. In addition to gaining a strong understanding of why pollinator habitat is valuable on farms, farmers need to know when, where, what, and how to plant pollinator habitat on their land. Resources for farmers on how to propagate, establish, and maintain native plantings are essential to this kind of transition in agricultural practices. The United States Department of

² Monocropping is the practice of growing a single crop year after year.

Agriculture (USDA) provides some resources on pollinator value in conservation plantings (see the Resources section of the *Regional Pollinator Action Plan*). It is likely that much more research is needed in this area.

Given the small profit margin farm businesses work within, farmers will also likely need resources for the extra work to enhance pollinator habitat. Many of the grants and reimbursements available to farmers for environmental stewardship, especially through the USDA NRCS, have provisions for funding pollinator improvements, but farmers in Conway need resources for applying to those grants, including a schedule of grant cycles and guidelines for design, plant selection, and management. The NRCS provides incentives for pollinators in many of their grants, including the Conservation Stewardship Program. A table of potential agricultural grants and funding sources for farmers to implement pollinator habitat on farmland can be found in the discussion of funding sources in the *Regional Pollinator Action Plan*.

There may be an emerging market for local ecotype native plant seed propagation that local farms could take advantage of, as many pollinator gardeners have found they have to source seeds from out of state. Propagating native pollinator plants could have the double benefit of providing abundant pollinator habitat and economic benefit.

In addition to the farms with existing pollinator habitat, workshop participants also identified additional potential sites, some of which are indicated in orange on the *Existing & Potential Sites of Pollinator Habitat* map:

- o Thibeau's hay fields, farm fields, edges and hedgerows
- o Roaring Brook
- o Boyden Brothers

- Angie's Farm
- David Lee permanently protected land
- o Armstrong Farm

Town-Owned Parcels

The Town of Conway owns a handful of open space parcels. The following list of town-owned parcels, some of which are indicated in orange on the *Existing & Potential Sites of Pollinator Habitat* map, may have potential to accommodate pollinator-friendly landscape management practices:

- o Conway Grammar School and Fournier Lot
- o Town Forest
- o Town Field
- o The Bigelow Property
- Road right-of-ways

Conway Town Field is a spacious community park area with playgrounds, a baseball field, basketball courts, large lawn areas, and public parking. Pumpkin Hollow Brook runs along the park's western boundary where *Aegopodium podagraria*, commonly known as 'bishop's weed' or 'goutweed' has colonized the ground layer along the streambank. The park's sunny open space and riparian buffer on Pumpkin Hollow Brook are part of the Town Center Neighborhood Pollinator Corridors that extend south along Whately Road and north along Reeds Bridge Road and the South River. The value of existing habitat assets for pollinators at the park could be significantly improved through mitigation of invasive species, including the goutweed, and enhancement of the riparian buffer with native tree, shrubs, and herbaceous plants.

The Conway Highway Department is in charge of much of the landscape maintenance on townowned land and would be the primary caretaker of pollinator habitat developed in public spaces. The Highway Department will need guidance and support to change current landscape practices and recommendations will be needed to save time, trouble and costs with fewer and simpler mowing regimens and other ecological stewardship practices that are pollinatorfriendly. Given current and on-going demands on Town funding, staffing, and time, it is important for residents to continue their support of the Conway Highway Department and volunteers who participate in Town committees, such as the Open Space Committee, and Parks and Recreation Committee. These groups, along with the Friends of the South River, can continue to engage Conway residents in outreach and education initiatives that will further community goals for pollinator implementation projects on public land.

Other Opportunity Areas

The following areas also offer great potential for expanding and enhancing Conway's pollinator habitat through general approaches and practices to enhance local ecosystems with native plants.

The Conway Swimming Pool

The Conway Swimming Pool is a swimming area for town residents with an associated parking area located off of Whately Road. The "pool" is nestled down in the valley of Pumpkin Hollow Brook just south of Town Center and is actually a reservoir created by an impoundment on the brook. The Conway Swimming Pool is owned and run by Conway Community Swimming Pool, Inc,³ and is not a town owned property. Creating pollinator habitat on the site would be an opportunity to connect to and enhance the pollinator corridor along Pumpkin Hollow Brook. Coordination would have to happen with the members of the pool's governing Board.

³ www.ConwaySwimmingPool.org.

Riparian Areas

The multifold benefits of the land around rivers, streams, lakes, and ponds include sun, water, forage, and nesting habitat. While there are already many riparian corridors that function well as bee habitat, others are compromised by the presence of invasive species, especially Japanese knotweed. Support for ongoing prevention and eradication projects will likely benefit pollinators.

The Town of Conway recently applied for a MVP grant to redirect the South River away from Shelburne Falls Road by reconnecting it to one of its former oxbows. The design includes the establishment of riparian buffers whose plant selection and management could be customized to enhance pollinators.



Conceptual design of the South River MVP Oxbow Reconnection Project

Recreational Trails

Stepping stones of connectivity between pollinator corridors are essential for wild, native pollinators to safely travel and to access food and nesting resources. Conway has a wealth of hiking trails in a variety of wild areas, from steep riverine corridors like those found in the South River State Forest where the South River converges with the Deerfield River, to open upland meadows like in the Conway Hills Wildlife Sanctuary, to the sunny swamps around Poland Brook State Wildlife Management Area, to the shady contiguous forest in Conway State Forest. Hiking and recreational trails offer the potential for stepping stones of connectivity between larger pollinator corridors across the town by offering key food, nesting, and other life cycle needs for pollinators in the relative safety and ecological suitability of trail edges. These stepping stones can be reinforced by creating patches along recreation trails that provide forage with pollinator plants as well as bee nesting sites located away from where people will be hiking.

Paved and Gravel Roads

Gravel roads in rural parts of Conway can be especially good opportunities for pollinator habitat because they offer connectivity between larger pollinator corridors. Wild pollinators can find food, nesting, and meet other life cycle needs along continuous roadside edges between major habitat areas.

The Conway Highway Department is in charge of much of the landscape maintenance on Townowned transportation right-of-ways. Modifying mowing practices or managing existing roadside edges to serve as corridors for pollinator movement could create effective and important habitat connections for native pollinators, which may otherwise be difficult to establish. For example, limiting roadside mowing to a narrow road-edge strip can leave habitat for pollinators while meeting safety requirements. The *Handbook for Supporting Pollinators through Roadside Maintenance and Landscape Design* prepared by the U.S. Department of Transportation Federal Highway Administration could be used as a starting point for Highway Departments interested in adjusting their mowing practices.⁴ Management practices presented in the handbook emphasize win-win strategies that maintain public safety standards *and* save time, trouble and costs with fewer and simpler mowing regimens and other ecological practices.

Solar Installations

Ground-mounted solar is often sited on open sites and habitats that benefit native wildlife, and are advantageous places to manage for pollinator habitat because they equate to very large areas of contiguous sunny, dry, open space where flexible mowing needs can accommodate

⁴ U.S. Department of Transportation Federal Highway Administration, "Handbook for Supporting Pollinators through Roadside Maintenance and Landscape":

https://www.environment.fhwa.dot.gov/env_topics/ecosystems/Pollinators_Roadsides/BMPs_pollinators_landsca pes.pdf

pollinator life cycles. Conway is home to a ground-mounted solar installation owned by NEXAMP. Refer to discussions of large scale solar arrays in the *Regional Pollinator Action Plan* for more information on the value and management of ground-mounted solar for pollinator habitat in this plan for recommended zoning bylaw language for solar installations that reinforces pollinator habitat.

Utility Corridors

The town is traversed by an east-west power utility corridor across the north of town. The utility right-of-way is maintained by the power company to reduce conflicts between the infrastructure and the brush and woody vegetation. This vegetation includes native plants providing excellent pollinator forage and nesting habitat within the utility right-of-way. The common practice of using herbicides in utility corridors to manage tree and shrub growth indiscriminately kills native vegetation and pollinator habitat when applied by broad spraying. Practices can be developed that would allow for both effective maintenance of the right-of-way as well as ecological health and pollinator habitat value. Key areas of ecological overlap between significant natural areas like streams and rivers, isolated wetlands, and open cultivated areas with the utility and highway corridors in town would also be of particular interest for analysis and assessment of habitat potential. Refer to the discussion of Utility Corridors and Improving Infrastructure Maintenance in the *Regional Pollinator Action Plan* for more information on the potential and challenge of utility corridors.

Outreach & Education

Increasing pollinator resources in a community will involve a variety of stakeholders, including Town staff, residents, local farms and businesses. As discussed in the *Regional Pollinator Action Plan* and in this plan, even though pollinator habitat areas can be resilient and lowmaintenance landscapes, creating and managing them over the long-term often requires labor, time and money.

Along with the Friends of the South River, there are several groups in Conway working to empower residents through outreach, education, and project initiatives that will further community goals for pollinator-friendly practices in town. The Town's website can serve as a community information resource that provides guidance on how to create and expand pollinator habitat on private properties, how to support efforts undertaken by the Town, and how to connect with groups in Conway and across the County working to implement the *Conway Pollinator Action Plan* and the *Regional Pollinator Action Plan*. The Friends of the South River maintain a website that could also be a source of pollinator information for the community.

Conway residents have a strong sense of place and appreciate the Town's natural resources. Ultimately, positive change for pollinators will rely on local level networks working to implement strategies for landscape change in Conway's prime opportunity areas for pollinator habitat.

The *Summary of Implementation Opportunities and Strategies in Conway* table lists ideas brainstormed during the Conway pollinator planning workshop for expanding pollinator habitat in town.

Summary of Implementation Opportunities and Strategies in Conway				
Opportunity/Location	Strategy	Jurisdiction	Potential Partners	
South River Oxbow Reconnection Project	Plant and manage riparian buffer as pollinator habitat by incorporating the riparian plants provided in the Riparian Zones plant list and managing for the proliferation of native plants over invasive species	Private/Town	MVP Program, Residents	
Residential gardens and homesteads	Gather information and resources including pollinator plant lists and mowing regimen changes for protecting seed heads and over- wintering insects on private property. Share with town boards and committees, neighborhood networks, schools, the Senior Center, and church groups to help with community outreach.	Private/Town	Residents	
Residential gardens, homesteads, and properties town-wide	Coordinate neighborhood groups to organize bulk purchases of native pollinator plants from reputable sources such as New England Wetland Plants and Nasami Farm.	Private	Residents, landowners	
Businesses and public spaces	Gather information and resources on incorporating pollinator habitat into the yards and public spaces of businesses in town. Procure and install educational signage about native pollinator habitat in public spaces.	Private/Town	Residents, business, Town	
Properties town-wide	Utilize local knowledge and neighborhood networks to provide site assessments to help identify pollinator opportunities, priorities and challenges on properties town-wide.	Private	Residents, landowners	
Farmland and Large Cultivated Parcels	Gather information and resources including plant lists, mowing regimen changes, grant funding, plant starts and seed sources for farmland and large cultivated parcels. Reach out to farmers and landowners to pilot pollinator toolkit strategies on their farm fields, hayfields, and field edges, and to learn and apply invasive species management strategies on their land.	Private	Residents, farmers, landowners, including Boyden Brothers, Roaring Brook Farms, Angie's Farm, Thibeau's, Dave and Faith's, Natural Roots, David Lee Farm, Totmans, Graves Farm, and others	
Properties town-wide	Provide Plant Identification resources for recognizing young pollinator plants, and plants at different life stages, and encourage their protection from mowing. Develop and share a master document with plant ID information and photos.	Private/Town	Friends of the South River, Open Space Committee, landowners	
Conway Town Fields	Assess potential for pollinator-friendly mowing practices in non- recreational areas and for expanding the riparian buffer on Pumpkin Hollow Brook with native plants. Mitigate and manage invasive species.	Town	Conway Parks, Recreation & Trails Committee	
Town Roads	Support the Highway Department in adopting pollinator-friendly mowing on roadside edges and public properties.	Town	Residents, Town, Highway Department	

Summary of Implementation Opportunities and Strategies in Conway				
Opportunity/Location	Strategy	Jurisdiction	Potential Partners	
Conway Swimming Pool	Apply pollinator-friendly mowing practices in non-recreational areas. Manage invasive species and expand the forest edge with native plants.	Private	Conway Community Swimming Pool, Inc.	
Conway Grammar School	Continue to advocate for a pollinator-friendly mowing regimen through education and outreach and maximize its application on the property. Develop support for pollinator habitat demonstration garden.	Town	Residents, Town, Highway Department	
Bigelow Property	Support the Open Space Committee in taking steps towards creating access, mitigating invasive plants, and creating pollinator habitat on the Bigelow Property in Conway Center.	Town	Open Space Committee	
New development town- wide, and large ground- mounted solar arrays, including NEXAMP site	Support the Planning Board in adopting recommendations for Potential Changes to Conway Zoning Bylaws	Town	Planning Board	
Open water, wetlands, and river corridors	Coordinate river corridor stewardship, including management strategies for Japanese knotweed. Incorporate pollinator habitat into flood resiliency projects along the South River.	Town, Private	Friends of the South River, Open Space Committee, landowners	
Permanently Protected conservation land	Incorporate into the language of conservation restrictions that the restriction holder holds the right to plant and manage pollinator habitat within the area of the restriction.	Land Trusts, State	Landowners	
Residential gardens, homesteads, botanic gardens, farms	Explore potential conflicts between managed and native bees and whether beekeepers can manage for wild native pollinators and still produce honey from the managed bees.	Private	Beekeepers	

Recommendations for Potential Changes to Conway Zoning Bylaws

One way to create and protect pollinators is by updating land use regulations to address pollinator habitat. For this project, the FRCOG reviewed Conway's land use regulations and identified potential changes to the Zoning Bylaw. Conway's Planning Board can review potential changes and decide whether to pursue the proposed amendments. The key areas where changes can be incorporated are:

o Site Plan Review,

- o Special Permits,
- Large-Scale Solar Facilities, and
- Open Space Residential Development/ Conservation Development/ Major Residential Development.

Site Plan Review

- 1. **Content of Site Plan** Add existing or proposed locations of pollinator habitat to the required contents of the Site Plan. Pollinator habitat consisting of native wildflower and tree species can be an alternative to grass or other proposed landscaping.
- 2. Review Criteria Add creation and/or conservation of pollinator habitat as a criteria.
- 3. Landscape Maintenance Add requirement for annual monitoring and maintenance of the pollinator habitat to the Site Plan Review conditions.

Special Permits

- 1. **Content of Application** Add existing or proposed locations of pollinator habitat to suggested contents of the Special Permit Application.
- 2. **Special Permit Criteria** Add creation and/or conservation of pollinator habitat as a criteria.
- 3. Landscape Maintenance Add requirement for annual monitoring and maintenance of the pollinator habitat to the Special Permit conditions.

Large Scale Solar Facilities

- Content of Application Add a paragraph requiring that a native flowering planting plan that supports pollinators be planted under the solar array instead of grass or semi pervious or impervious materials.
- 2. Review Criteria Add creation and/or conservation of pollinator habitat as criteria.

3. Landscape Maintenance – Add requirement for annual monitoring and maintenance of the pollinator habitat to the Special Permit conditions.

Open Space Residential Design (OSRD)/ Conservation Development/ Major Residential Design

- 1. **Content of Application** Add existing or proposed locations of pollinator habitat to suggested contents of the development plan.
- 2. Review Criteria Add creation and/or conservation of pollinator habitat as criteria.
- 3. Landscaping Require or encourage the planting of pollinator habitat as an alternative to grass or traditional landscaped areas in the development plan and make provisions for the maintenance of these areas.
- 4. **Maintenance** Add requirement for annual monitoring and maintenance of the pollinator habitat to the Special Permit conditions.

A summary of the specific sections follows as a guide for Conway to amend their land use regulations to address pollinator habitat. Each of the *Town Pollinator Plans* includes model language specific to the respective Town that can be used to update land use regulations.

Recommendations for Changes to Conway's Zoning Bylaws

Article 6: Administration

Section 63 Special Permit Guidelines

63 c) (add text below in italics)

(f) Open Space & Habitat – *Does the proposed development provide permanently protected open space and/or provide pollinator or other wildlife habitat areas.*

Section 64 Site Plan Review

64 f) Required contents of Site Plan (add text in italics)

15. The location and a description of proposed *protected* Open Space, *Pollinator and other Wildlife Habitat* and Recreation Areas.

64 j) Review Criteria (add text in italics)

8. Protection of farmland and forestry resources and pollinator and wildlife habitat.

Article 9: Large Scale Solar Facilities

Section 91 Large Scale Solar Facilities

91 (f) Operation & Maintenance Plan and Landscape Plan – add paragraph in italics below

The Project proponent shall submit a native flowering planting plan that supports pollinators with plants to be located under the proposed PV array and the perimeter around the array (see diagram) to increase pollinator habitat in accordance with UMASS Clean Energy's Extension Pollinator Friendly Solar PV Guide. Applicant will also provide a Maintenance Plan to maintain the pollinator habitat.

Article 10: Age Restricted Housing Community (ARHC)

Section 10.3-2 Natural and Neighborhood Features (add sentence below in italics)

In the landscaped areas of the common open space of the ARHC, pollinator habitat shall be provided as an alternative to grass to the extent feasible.

Bigelow Property Concept Design

The development of the Conway Pollinator Action Plan included the creation of a pollinator concept design for the Town's Bigelow Property, the site chosen by the participants in the Conway pollinator workshop. The site is a meadow, so if the Town chooses to move forward with pollinator habitat at the site, the concept design could be developed following the recommendations of the Meadow Habitat Design Typology and Meadow Plant List provided in the *Regional Pollinator Habitat Corridor Implementation Toolkit*.

The Bigelow Property is a 2.3 acre, town-owned site in Conway Center that is permanently protected. The site is located across Shelburne Falls Road from the South River Meadow and across Cemetery Hill Road from Howland Cemetery. The site is surrounded by residential properties to the south, west and east. The site is mostly open and contains a significant amount of invasive plant species, which would have to be removed and managed. The Pollinator Roadside Edge habitat could draw plant species from the Meadow Plant list with a focus on only grasses, sedges, and herbaceous plants since this roadside edge would likely be mown periodically. The Pollinator Meadow would have mostly grasses, sedges, and herbaceous plants, while the Woodland Edge Pollinator Habitat could feature woody trees and shrubs from the Meadow Plant List in addition to a range of grasses, sedges, and herbaceous plants.

The concept design represents a preliminary vision for how the site could be restored to provide native pollinator habitat. The Bigelow Property is labeled on the *Existing & Potential Sites of Pollinator Habitat* map to show its context within the town and how it would connect to existing pollinator corridors or stepping stones.

Pollinator Roadside Edge

Pollinator Meadow

A loop trail at the site interior is far from homes on all sides

Woodland Edge

Bigelow Property

*Design is conceptual and represents general types and locations of habitat plantings envisioned South River Meadow Property

Source: Esrl, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the CIS User Community, Esrl, HERE, Garmin, (c) OpenStreetMap contributors, and the CIS user community

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Franklin Regional Council of Governments Potential Pollinator Habitat Implementation Concept Design BIGELOW PROPERTY

Howland

Cemetery

CEMETERY HILL ROAD

Pollinator Corridor Implementation Toolkit Regional Pollinator Plan for Franklin County

TOWN OF CONWAY



Sheldunie Falls Road

MAPS

MAPS OF EXISTING & POTENTIAL POLLINATOR HABITAT SITES

Existing & Potential Sites of Pollinator Habitat

Pollinator Corridors & Stepping Stones

LANDSCAPE ANALYSIS MAPS

Habitat and Environmental Resources Land Cover and Land Use Permanently Protected & Municipal Properties







Pollinator Habitat



Prime Pollinator Land Cover data extracte Cover and Land Use (https://docs.digital.mass.gov/dataset/massgis-data-2016-land-coverland-use) by Future Lands Designs in collaboration with the FRCOG Planning Department



Town of Conway Habitat and Environmental Resources

Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), (c) OpenStreetMap contributors, and the GIS User Community





Town of Conway Land Cover and Land Use





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https://docs.digital.mass.gov/dataset/massgis-data-2016-land-coverland-use



Miles