



**TOWN OF CONCORD**  
**COMMUNITY PRESERVATION COMMITTEE**  
 141 KEYES ROAD, CONCORD, MA 01742  
 TEL. (978) 318-3290 FAX (978) 318-3291

**Application for CPA Funding**  
**Due no later than 4:00pm on Friday, September 21, 2018**

Applicant: Town of Concord - Division of Natural Resources

Co-Applicant (if applicable): \_\_\_\_\_

Project Name: Old Calf Pasture Habitat Restoration

Project Location/Address: 20A Lowell Road

Purpose: (Select all that apply)

- Open Space       Community Housing       Historic Preservation       Recreation

Project Budget:

Amount of CPA Funds Requested:      \$ 15,000  
 Amount from Other Funding Sources:      \$ \$2,000  
 Total Project Budget:      \$ \$17,000  
 (If multi-year project, note current phase only)

Please check which of the following is included with this Application:

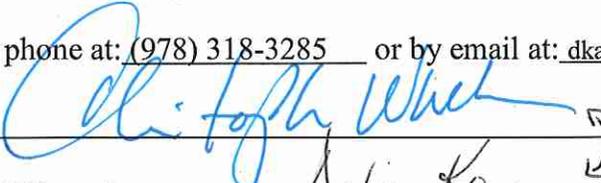
- |   |  |
|---|--|
| <input checked="" type="checkbox"/> One Paragraph Project Summary *             | <input checked="" type="checkbox"/> Timeline *   |
| <input checked="" type="checkbox"/> Map (if applicable)                         | <input checked="" type="checkbox"/> Architectural plans, site plans, photographs (if appropriate)            |
| <input checked="" type="checkbox"/> Narrative *                                 | <input type="checkbox"/> Copy of Audit or most recent Financial Information (Non Profit Organizations Only)* |
| <input checked="" type="checkbox"/> Selection Criteria and Needs Assessment     | <input type="checkbox"/> Letters of Support (if any)   |
| <input checked="" type="checkbox"/> Detailed Project Budget *                   |  |
| <input checked="" type="checkbox"/> Feasibility Assessment                      |  |
| <input checked="" type="checkbox"/> Statement of Sustainability (if applicable) |  |

\* Required Documentation

The Contact Person for this Project is: Delia Kaye, Natural Resources Director

All Correspondence should be mailed to: 141 Keyes Road, Concord MA 01742

The Contact Person can be reached by phone at: (978) 318-3285 or by email at: dkaye@concordma.gov

Signature of Applicant: 

Signature of Property Owner (if different): 

**For Historic Preservation Projects Only** – please check the box below left and acknowledge:

I/We have read the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties and understand that planning for and execution of this project must meet these standards.

### CPC's Selection Criteria and Needs Assessment

This application meets the following Selection Criteria as found in the 2018 Community Preservation Plan:

- a.) **Eligibility** – Under the CPA legislation, CPA funds can be used for “*the acquisition, creation, and preservation of open space*” This proposal seeks to improve the habitat for an existing Town-owned conservation land, one which provides habitat for the largest known regional population of a state-listed rare species. Given the size of the meadow, and the expanse of the buckthorn, treatment areas have been targeted over time. As each area is treated, ever-expanding zones of invasives-free meadow are emerging and providing much improved habitat for the Britton’s violet and other native flora and fauna. A population inventory conducted in 2017 document a total of 2,666 violets (both *Viola. brittoniana* and hybrids) across the entirety of the Old Calf Pasture property. This is the highest recorded amount of violets found at Old Calf Pasture since 2001.
- b.) **Consistency with Town-wide Planning** – The restoration of this land is consistent with the objectives of both the 2015 Open Space and Recreation plan and the 2018 Comprehensive Long Range Plan. The 2015 OSRP identifies Major Wildlife and Water Protection Corridors and calls for their protection; including the quality of rivers, riparian wildlife corridors, and opportunities for walking paths. Controlling invasive species greatly improves the habitat for native flora and fauna in the rivers and along the riparian corridors. The 2015 OSRP also highlights the need to monitor wildlife and biodiversity including efforts to protect rare species and their habitats.

This project also meets three goals of the 2005 Comprehensive Long Range Plan as highlighted below.

GOAL LU-1.3 *Protect open space and agricultural land.* This project would improve a 21-acre parcel in Concord for conservation purposes.

GOAL NR 1: *Preserve existing natural resources.* Old Calf Pasture contains 1/3-mile of river frontage on the Sudbury and Concord Rivers, and 10 acres of riparian woodland. The 9 acres of open river meadow and portions of the riparian woodlands provide habitat for the largest known population of the state-Threatened Britton’s violet. Continued control of the invasive glossy buckthorn will restore habitat for the violet as well as native plant and wildlife communities.

GOAL NR 1.4 *Protect habitats of state-listed species.* The Division of Natural Resources targeted Old Calf Pasture as a high priority for invasives control because of the opportunity to improve habitat for the rare violet as well as other native flora and fauna.

- c.) **Support by Boards, Committees, Community & Town Meeting Actions** – Town planning documents identify the urgent need to control invasive species. The NRC supports this restoration project and Town Meeting 2014 and 2016 authorized CPC funding to continue and expand preservation efforts.

- d.) **Enhancement of existing Town-owned open space, recreation, historic, and/or housing assets** – This proposal will improve habitat for a rare violet by expanding efforts to control a problematic invasive species.
- e.) **Service of Multiple or Underserved Populations** – This proposal improves conservation land for the public, and for native flora and fauna.
- f.) **CPA Purposes** – This proposal meets one of the four CPA purposes: open space preservation.
- g.) **Administrative and Financial Management** – The Division of Natural Resources has taken the lead on several restoration projects using CPA and other funding sources and has demonstrated the ability to administer project funds on schedule and within budget.
- h.) **Successful Implementation of Similar Projects** – DNR staff develops bid documents and oversees projects on a regular basis. The DNR has overseen a habitat improvement plan development at Old Calf Pasture since 2007, and implementation since 2008.
- i.) **Site Control** – The site is owned by the Town of Concord.
- j.) **Financial Need** – The cost to fully restore the site is not a planned capital cost in the Town's budget. It is therefore necessary to seek outside funds to continue the work that is underway.
- k.) **Sources of Funding** – The adjacent landowner funded a 5-year restoration project between 2008 and 2012, and CPA funds were secured for treatment for the past six years. The Town provides assistance in removing invasive species and oversees all aspects of project coordination.
- l.) **Project Plan Feasibility** – The proposal seeks to continue a phased approach to control invasives at an ecologically valuable site. Efforts to continue must be ongoing to halt the continued spread of glossy buckthorn.
- m.) **Urgency of Project** – It is important to build on the work already done to preserve improvements made to date, and to address additional areas of infestation.
- n.) **Maintenance Provisions** – The Division of Natural Resources has been overseeing the work at the site and will continue doing so to ensure that habitat improvements are maintained.
- o.) **Permanent Restriction** – No permanent restriction is proposed as part of this project
- p.) **Reimbursement** – This proposal does not seek reimbursement of previously appropriated funds.
- q.) **Incorporation of Sustainable Design Features** – This proposal seeks to restore the site to a more ecologically functional system.

- r.) **Four Sustainability Principles** – Please see above response.
- s.) **Local Qualified Vendors** – The Town will adhere to state bidding rules, and will award projects to local bidders where it is legal and feasible to do so.
- t.) **Normal CPC Schedule:** This proposal does not request the CPC to act outside their normal schedule.
- u.) **Land Acquisition** – N/A.

**Budget**

This proposal seeks funding for an additional year of invasive species treatment, at a cost of \$15,000. Matching costs are provided in the amount of \$2,000 for project oversight and assistance in invasives removal. The cost of treatment is related to the density of the area treated, the sensitivity of the habitat, and the age and growth of the target species. Dense stands of small individuals are treated directly by qualified herbicide applicators, while larger specimens are cut by volunteers and removed from the site by Town staff.

**Feasibility**

The proposal seeks to continue a phased approach to control invasives at Old Calf Pasture. Past efforts have substantially restored habitat for the rare violet and native flora and fauna.

**Statement of Sustainability**

This proposal would address invasive species at a high priority conservation land, reducing the impact of non-native species on native flora and fauna.

**Timeline**

The project would be conducted in the fall and winter of 2019.

**Project Summary:** The Town of Concord is requesting CPA funding in the amount of \$15,000 to continue habitat improvements at the Old Calf Pasture. This conservation land supports the largest regional population of the state-listed Britton's violet (*Viola brittoniana*), which has been diminishing in the presence of the invasive glossy buckthorn (*Frangula alnus*). DNR has been working with local conservation organizations and individuals to control glossy buckthorn and monitor the violet populations at the meadow since 2008. Funding is requested from the Open Space category.

### Narrative



Britton's violet

The Old Calf Pasture is a 21-acre parcel at the confluence of the Sudbury and Assabet Rivers, acquired by the Town in 1962. Approximately 10 acres of the site is riparian woodlands, and 9 acres is open river meadow. The remainder consists of about 1 acre of the former Reformatory Branch railroad bed.

The rare Britton's violet, identified in the meadow in 1992 by local Carlisle botanist Sally Zielinski, is a blue or purple violet found in river floodplains, especially in mowed fields and along disturbed trail edges. Six populations of this violet occur along the Concord River (four in Concord and one each in Carlisle and Bedford).

About one-third of the vascular plant taxa in Massachusetts are non-native, but only about 7 percent of these plants are considered invasive. Glossy buckthorn is native to Europe, northern Africa, and central Asia and was introduced in New England as an ornamental and for wildlife habitat improvement. It grows as a multi-stemmed shrub or small (20-foot) tree and can form dense stands in forest understories and former open fields. Leaves are dark green and glossy above, and twigs are dark with prominent white lenticels.

Like many other non-native plants, glossy buckthorn generally lacks local predators or parasites, giving it a competitive advantage over native species. It grows rapidly and vigorously resprouts after cutting. Its high seed germination rate and longer growing season (emerging earlier in the spring and retaining leaves longer through the fall) also contributes to its success. Although its berries are eaten by birds and other wildlife, it is mildly



Glossy buckthorn

toxic, and offers very low nutritional value. Its presence severely reduces native species diversity and richness of plant and wildlife assemblages.

Glossy buckthorn is included on the Massachusetts Prohibited Plant List, and federal, state, local, and non-profit organizations are undertaking strategies to eradicate this (and other invasive plants) and restore natural systems. At the Old Calf Pasture, glossy buckthorn has been identified as the greatest threat to the Britton's violet population, and restoration efforts have been underway since 2008. Restoration efforts have targeted specific areas of the open meadow and field edges, and each year treatment has covered previously treated areas and ever widening zones of new treatment.



Dense buckthorn in the open meadow (2007)

The Concord population of this violet is the largest known in New England, and the presence of buckthorn poses a continued threat to the violet. Its loss or significant reduction would cause a major reduction on Britton's violet biomass in the region, and may also have genetic consequences for the species long-term survival. The dense buckthorn also poses a serious threat to the Old Calf's Pasture habitat diversity and richness.



After treatment

The open wet meadow areas has been identified as the primary priority. Work to remove any invasives within the wooded areas is a secondary but still important priority to eliminate the introduction of major seed sources into the meadow.



**Legend**

 Project Site

Old Calf Pasture  
2019 CPA Application

