Gray's Mill: Rhode Island Wildlife Habitat Incentives Program Application

U.S. Department of Agriculture

OMB NO. 0578-0013

A. **APPLICATION FOR LONG-TERM CONTRACTED ASSISTANCE THROUGH THE WHIP PROGRAM**

B. To be completed by NRCS; check appropriate box:
- ☐ This transaction is for CCC
- ☑ This transaction is for NRCS

C. State: Rhode Island	D. County: Newport
1. Applicant Name and Address: Ralph Guild or Anne W. Baker Gray's Grist Mill 29 Drift Road Westport, MA 02790	2. Applicant Name and Address:
1 a. Phone: (508) 636-3272	2 a. Phone:

I (We) hereby apply for participation in this program and submit the following information in support of the application. I (We) hereby attest that the name(s) listed in Items 1 and 2, have complete control of the property described in Item 3 below.

3. Description and location of farm, ranch, or other unit:
Site is on the northeast side of Adamsville Road, bisected by the RI/ MA state line. AP. 42, Lot 97, Little Compton and Map 79, Lot 21, Westport, MA

4. The land is owned by the applicant(s): ☑ Yes ☐ No If the answer to Item 4 is NO, provide an explanation below:

5. Description of area(s) needing treatment. Type and severity of problem(s), and treatment needed to correct the problem(s):
See Attached

6. I (We) understand this application does not obligate the applicant(s) or _____ to enter into a contract.

6 a. Signature(s): _____ 6 a. Date: _____

6 b. Signature(s): _____ 6 b. Date: _____

7. The land has been evaluated and determined to be eligible for the program for which applied ownership criteria is met by the following methods:
Personal Knowledge: _____

Knowledge of: ☐ 7 a. Conservation District Board Members ☐ 7 b. FSA Records ☐ 7 c. Deed ☐ 7 d. Other, explain: _____

8. If application is for WRP, check appropriate box.

☐ 8 a. 10 Year Restoration Agreement ☐ 8 b. 30 Year Easement ☐ 8 c. Permanent Easement

9. If application is for GRP, check appropriate box.

☐ 9 a. 10 Year Contract ☐ 9 b. 15 Year Contract ☐ 9 c. 20 Year Contract ☐ 9 d. 30 Year Contract

☐ 9 e. 30 Year Easement ☐ 9 f. Permanent Easement

The signature by the NRCS representative signifies a CCC-NRCS transaction as indicated above.

10. Authorizing Official for: _____ 10 a. Signature: Anne W. Baker 10 a. Date: 1/14/09

OMB DISCLOSURE STATEMENT

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. This valid OMB control number for this information collection is 0578-0013. The time required to complete this information collection is estimated to average 0.75 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection information.

PRIVACY ACT STATEMENT

The above statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 522a). Furnishing this information is voluntary; however, failure to furnish correct, complete information will result in the withholding or withdrawal of such technical or financial assistance. The information may be furnished to other USDA agencies, the Internal Revenue Service, the Department of Justice, or other State or Federal law enforcement agencies, or in response to orders of a court, magistrate, or administrative tribunal.

NONDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, political beliefs, sexual orientation, or marital or family status. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 1400 Independence Avenue, S.W., Washington, D.C. 20250-9410 or call (202) 720-5964.

Question 5.

Gray's Mill Pond, historically a limnetic habitat type, has been greatly altered due to excessive deposition of sediment. As a result, the former deep water habitat is estimated to have decreased in overall size 56% over the last sixty years. In turn, the Alewife and American Eel, which utilize the site for critical stages in their life history, are being displaced. Without the removal of the excess sediment and associated vegetation, this habitat will no longer be able to sustain populations of these anadromous and catadromous species.

NRCS Natural Resources Conservation Service

Rhode Island Wildlife Habitat Incentives Program
Pre-Application Checklist

Property Owner/ Applicant Information:

Applicant or Contact Name: Ralph Guild or Anne W. Baker

Property Owner(s): Ralph Guild

Address: Gray's Grist Mill
29 Drift Road, Westport, MA 02790

(if different from Owner)
Address:

Phone : 508-636-3272 **Fax:** **Email:**

Plat & Lot Number (s): AP. 42, Lot 97 in Little Compton, RI
Map 79, Lot 21, Westport, MA

Please Enclose Property Map of Proposed Project Area

Directions: *Fill out above information and either provide digital output of your answers to the assesment sheet below using word processing software of your choice or attach hardcopy of your answers to this form.*

A. What Type of Habitat (s) are you interested in restoring, enhancing, or creating?

- ☐ Freshwater Wetland:
  - ☐ Riparian Wetland Habitat
  - ☐ Stream Habitat
  - ☐ Vernal Pool
  - ☐ Forested Wetland
  - ☐ Emergent Wetland
- ☒ Anadromous Fish Passage
  Target Species: River Herring
- ☐ Other Habitat Type(s)
- ☐ Upland- Early Successional Wildlife Habitat
  - ☐ Warm Season Grassland
  - ☐ Seedling/Sapling Forest
  - ☐ Field Border
- ☐ Coastal Wetland
  - ☐ Eelgrass Meadow
  - ☐ Salt Marsh
  - ☐ Brackish Marsh
  - ☐ Freshwater Tidal Marsh
  - ☐ Coastal Lagoon

B. Total Acres of Property approx. 12.4 **C. Total Restoration Area (if known)** Dredge area = 1.6 acres

D. Total Habitat Area that will benefit from restoration (if known):

E. USGS Watershed Identification:

F. What project stage are you at in the restoration/conservation process?

- ☐ **Inventory and Evaluation**
- ☐ **Assessment of Problems and Stressors**
- ☐ **Restoration/Conservation Planning**
- ☐ **Restoration Conceptual Design**
- ☒ **Engineering Design**
- ☐ **Restoration Installation and Implementation**

G. Please Provide Brief Narrative of Project Stage: See enclosed report

H. Are other funding sources (in kind or cash) from other partners involved in your project? If yes, Please list partners and enumerate. See enclosed report

I. Describe Habitat or Property Management Goals if Known: See enclosed report

J. What land cover types occur on your property ? What is the area of each cover type?

- ☐ Cropland (Please Define)
- ☐ Pastureland
- ☐ Hayland
- ☒ Wetland (Types if known)
- ☐ Forest (Types if known)
- ☒ Open Water
- ☐ Urban
- ☐ Suburban
- ☐ Commercial
- ☐ Residential
- ☐ Other Land cover Types:

K. List On site and Off Site Environmental Stressors (If Known) and Describe Resource Concerns I.E. (Invasive Species, Loss of Habitat, Barriers to Fish Passage etc.)

See enclosed report

L. Briefly explain history of site as it relates to land/water management and historical human uses.

See enclosed report

M. Has any ecological investigations (plants, animals, hydrology, etc) been conducted at location? If so explain and submit hardcopies: See enclosed report

Submit digital copy and/or hardcopy of answers to this Pre-Application Check List to:

Andrew Lipsky
Biologist
USDA-NRCS
60 Quaker Lane
Suite 46
Warwick RI 02886
Andrew.Lipsky@ri.usda.gov

Rhode Island Wildlife Habitat Incentives Program
Pre-Application Checklist

A-F see form

G. Two Thirds of the project is located within the State of Rhode Island. The other third of the project is located in Massachusetts. The Rhode Island regulatory agency (Department of Environmental Management) is conducting their final review of the proposal. This project has been approved by the regulatory agency in Massachusetts (Massachusetts Department of Environmental Protection).

H. Ralph Guild, the property owner, will be assuming the majority of the costs for this project.

I. The major goal of the project is to create a lacustrine habitat that will support an anadromous fish population.

J. see form

K. The size of the open water area associated with Gray's Mill Pond has decreased 43.01% from the estimated size in 1939 to the approximate measurement of the open water from the 1997 aerial photograph due to sedimentation (see Figure 1). In addition, the size of the open water on-site was estimated to be only 9,445 square feet in August of 2002[1].

It should be noted that in 2000 the National Oceanic and Atmospheric Administration (NOAA) funded the construction and installation of a steep pass fish ladder. This ladder is currently installed and functioning. However, with the loss of open water habitat, the habitat for juvenile river herring has been greatly diminished. The current depth of the pond is such that each summer virtually no open water is available for developing fish. Successful navigation of the fish ladder and spawning by alewife results in virtually one hundred percent (100%) mortality with the elimination of open water habitat by late summer. As such, the applicant has proposed the dredging of the pond.

L. <u>History of Gray's Mill</u>

Originally settled in the late 17th century, a mill pond was created within Adamsville (formerly Taborville) when the stream, Adamsville Brook, which flowed through the village, was dammed. A grist/ saw mill was built and was powered by a wooden wheel. This mill was responsible for supplying ground meal for human use, fodder for animals and sawed timbers for construction. The economic hub created by the mill resulted in a number of other businesses locating their enterprises in the mill's vicinity, including a black smith, meat market, bakery, harness shop, and ice houses.

The Industrial Revolution resulted in changes to the power source of the mill. Specifically, in the mid 19th century, the mill incorporated a turbine into the redesigned mill. The mill, and associated turbine, was destroyed in 1938 when a hurricane swept

[1] It should be noted that 2002 was a drought year.

through the area. At this time, the mill was rebuilt to be powered by a gasoline engine and, consequently, the pond was abandoned as the mill's power source.

The mill and associated property was acquired by the applicant in 1980. The mill was restored at this time and continued to produce Rhode Island's famous Jonnycake meal for another seventeen (17) years. However, when the mill was no longer a profitable venture, the applicant was forced to shut it down in 1999.

History of Gray's Mill Pond

As mentioned, the pond was created in the late 17th century when Adamsville Brook was dammed to power Gray's Mill Pond. In 1938, with the incorporation of a gasoline powered engine for the mill, there was no longer a reason to maintain the mill pond. Due to the lack of maintenance, the overall size of the pond has decreased over time. The following table details the estimated size and the decrease in size of Gray's Mill Pond over the last sixty (60) years.

Year	*Estimated Size of Open Water in Gray's Mill Pond[2] (square feet)*
1939	139,500
1951	117,125
1981	106,850
1997	79,500

The reduction in the size of the pond is primarily a result of an increase in organic matter, sedimentation and encroachment of vegetation within the pond. Figure 1 of this report provides a graphic depiction of the open water reduction for 1939 – 1997 through the overlay of aerial photographs.

M. See enclosed Figure 2 for a complete list of vegetative species found within the intended project area. The following list details the animals that were identified to be utilizing the site.

Avians

Common Name	*Scientific Name*
American Black Duck	*Anas rubripens*
Belted Kingfisher	*Megaveryle alcyon*
Canada Goose	*Branta canadensis*
Green Winged Teal	*Anas crecca carolinensis*
Mallard	*Anas platyrhynchos*
Northern Flicker	*Colaptes auratus*
Ring-Billed Gull	*Larus delawarensis*
Turkey Vulture	*Cathartes aura*

[2] Approximate size is based on vegetative encroachment as interpreted from RIGIS aerial photographs from the above referenced years. See Figure 1.

Amphibians

Common Name	*Scientific Name*
Bull Frog	*Rana catesbeiana*
Green Frog	*Rana clamitans melanota*
Pickerel Frog	*Rana palustris*
Spring Pepper	*Hyla crucifer*
Wood Frog	*Rana sylvatica*

Mammals

Common Name	***Scientific Name***
Eastern Chipmunk	*Tamias striatus*
Eastern Gray Squirrel	*Sciurus carolinensis*
Opossum	*Didelphis virginiana*
Raccoon	*Procyon lotor*
Striped Skunk	*Mephitis mephitis*
White-tail Deer	*Odocoileus virginiana*

Various species of fish are also known to utilize Gray's Mill Pond. Bluegill (*Lepomis macrochirus*) was observed to be the most abundant species. Trout (Family *Salmonidea*) were seen, though this is primarily due to the fact that Gray's Mill Pond is stocked annually by the RI DEM. Alewife (*Alosa pseudoharengus*), being an anadromous fish, spend a majority of their lives in salt water, but return to freshwater to spawn. Historically, Alewife used Gray's Mill Pond as a breeding habitat. Due to the restoration of the fish ladder, Gray's Mill Pond is more easily accessible as breeding habitat for the species. It should be noted that other species that utilize both freshwater and salt water habitats during their lifespan could also utilize this site. Specifically, American Eel (*Anguilla rostrata*), which are catadromous, spending the majority of its life in freshwater rivers and lakes and returning to the ocean in order to spawn, could potentially utilize this habitat.

Figure 1. Decline of Open Water Habitat from 1939 to 2002

Gray's Mill Pond

Little Compton, RI
Westport, MA

200 0 200 400 Feet

1997 RIGIS Ortho Image #4218

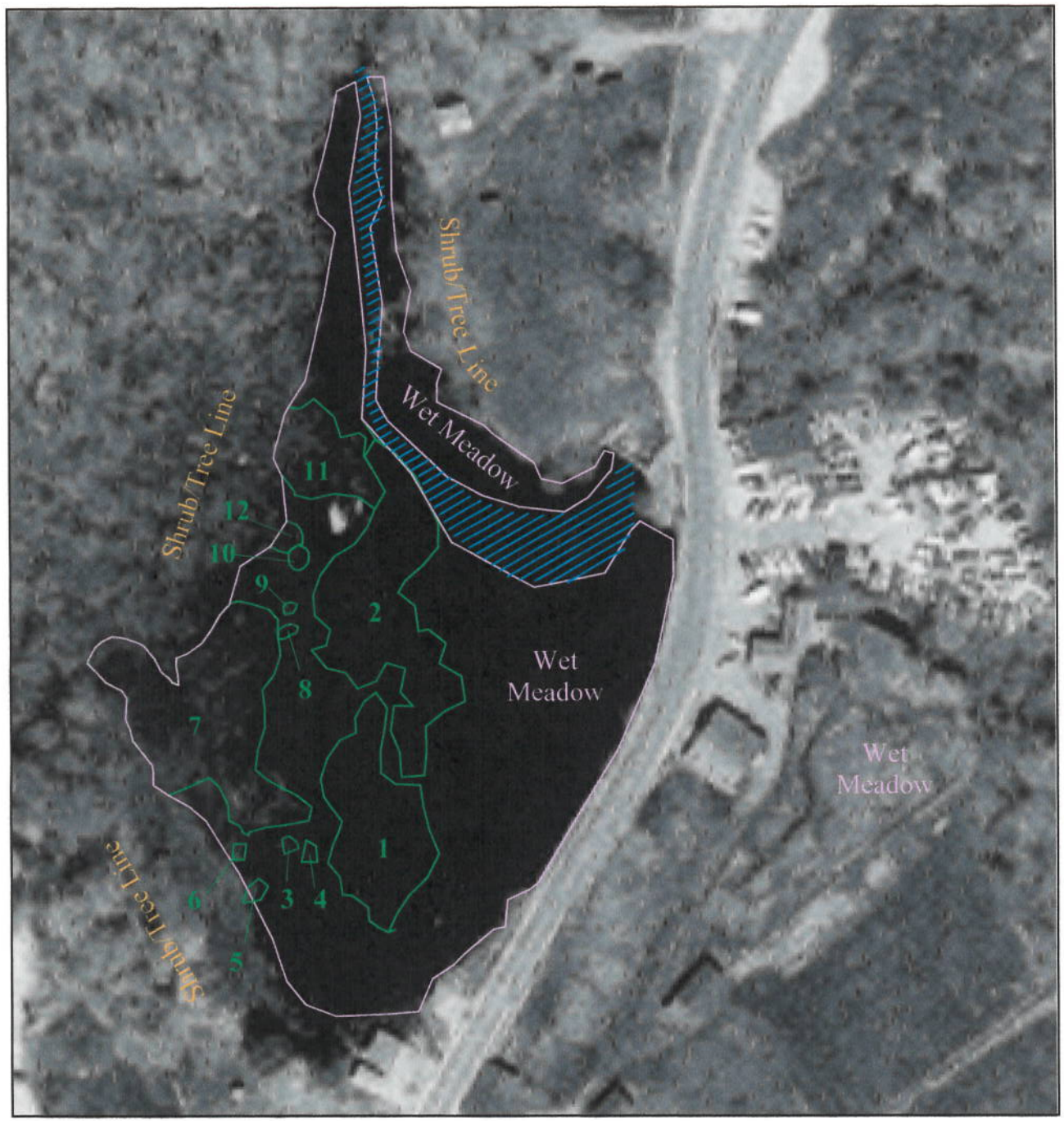
Approximate Shoreline of Gray's Mill Pond in 1939
Approximate Shoreline of Gray's Mill Pond in1981
Approximate Present Day Vegetation Line

N
W E
S

Note: This map shows Gray's Mill Pond in April of 1997. The yellow lines represent the approximate vegetative edge of Gray's Mill Pond as shown on the 1981 RIGIS ortho image #1905, taken on 4/13/81. The blue line represents the approximate vegetative edge of Gray's Mill Pond as shown on aerial photograph #3903, taken on 5/10/39.

Natural Resource Services, Inc.

Figure 2. Vegetative Composition of Intended Project Area



Gray's Mill Pond

Little Compton, RI
Westport, MA

VEGETATION COMPOSITION MAP

August 28, 2002

1997 RIGIS Orhto Image
#4218

N
W
E
S

Standing Water on 8-28-02
Wet Meadow
Vegetation Units
Shrub/Tree Line
*See Vegetation Composition sheet.

100 0 100 Feet

Natural Resource Services, Inc.

Vegetative Composition of Gray's Mill Pond
August 28, 2002

Unit 1:	Black Willow (*Salix nigra*)	100%
Unit 2:	Black Willow (*Salix nigra*)	100%
Unit 3:	Buttonbush (*Cephalanthus occidentalis*)	100%
Unit 4:	Buttonbush (*Cephalanthus occidentalis*)	100%
Unit 5:	Buttonbush (*Cephalanthus occidentalis*)	70%
	Swamp Loosestrife (*Decodon verticillatus*)	25%
	Arrow Arum (*Peltandra virginica*)	3%
	Wool Grass (*Scirpus cyperinus*)	.5%
	Pinkweed (*Polygonum pensylvanicum*)	.5%
Unit 6:	Buttonbush (*Cephalanthus occidentalis*)	85%
	Arrow Arum (*Peltandra virginica*)	5%
	Pinkweed (*Polygonum pensylvanicum*)	5%
	Common Three-square (*Scirpus pungens*)	4%
	Swamp Loosestrife (*Decodon verticillatus*)	1%
Unit 7:	Swamp Loosestrife (*Decodon verticillatus*)	85%
	Buttonbush (*Cephalanthus occidentalis*)	5%
	Touch-me-not (*Impatiens capensis*)	5%
	Arrow Arum (*Peltandra virginica*)	4%
	Pinkweed (*Polygonum pensylvanicum*)	.5%
	Reed Canary Grass (*Phalaris arundinacea*)	.5%
	Cattail, Broad leaf (*Typha latifolia*)	
Unit 8:	Buttonbush (*Cephalanthus occidentalis*)	95%
	Pinkweed (*Polygonum pensylvanicum*)	3%
	Arrow Arum (*Peltandra virginica*)	2%
Unit 9:	Buttonbush (*Cephalanthus occidentalis*)	95%
	Arrow Arum (*Peltandra virginica*)	3%
	Pinkweed (*Polygonum pensylvanicum*)	2%
Unit 10:	Buttonbush (*Cephalanthus occidentalis*)	97%
	Pinkweed (*Polygonum pensylvanicum*)	2%
	Arrow Arum (*Peltandra virginica*)	1%
Unit 11:	Buttonbush (*Cephalanthus occidentalis*)	75%
	Black Willow (*Salix nigra*)	10%
	Reed Canary Grass (*Phalaris arundinacea*)	5%
	Swamp Loosestrife (*Decodon verticillatus*)	5%
	Arrow Arum (*Peltandra virginica*)	3%
	Pinkweed (*Polygonum pensylvanicum*)	.5%
	Swamp Rose (*Rosa palustris*)	.5%
	Steeple Bush (*Spireae tomentosa*)	

Unit 12:	Swamp Loosestrife (*Decodon verticillatus*)	90%
	Arrow Arum (*Peltandra virginica*)	9%
	Buttonbush (*Cephalanthus occidentalis*)	1%
Wet Meadow:	Pinkweed (*Polygonum pensylvanicum*)	
	Arrow Arum (*Peltandra virginica*)	
	Umbrella Sedge (*Cyperus strigosus*)	
	Common Three-square (*Scirpus pungens*)	
	Wool Grass (*Scirpus cyperinus*)	
	Cardinal Flower (*Lobelia cardinalis*)	
	Spike Rush (*Eleocharis obtusa*)	
	Soft-stemmed Bulrush (*Scirpus validus*)	
	Buttonbush (*Cephalanthus occidentalis*)	
	Blue Flag (*Iris versicolor*)	
	Pickrelweed (*Pontederia cordata*)	
	Reed Canary Grass (*Phalaris arundinacea*)	
	Spatterdock (*Nuphar luteum*)	
	Water Horsetail (*Equisetum fluviatile*)	
	Common Burreed (*Sparganium americanum*)	
	Green Bulrush (*Scirpus atrovirens*)	
	Devil's Beggar's Tick (*Bidens frondosa*)	
Shrub/Tree Line:	Swamp Rose (*Rosa palustris*)	
	Speckled Alder (*Alnus rugosa*)	
	Red Maple (*Acer rubrum*)	
	Buttonbush (*Cephalanthus occidentalis*)	
	Fox Grape (*Vitis labrusca*)	
	Black Willow (*Salix nigra*)	
	Arrow Arum (*Peltandra virginica*)	
	Reed Canary Grass (*Phalaris arundinacea*)	
	Cardinal Flower (*Lobelia cardinalis*)	
	Poison Ivy (*Toxicodendron radicans*)	
	Three-way Sedge (*Dulichium arundinaceum*)	
Wet Meadow (south of mill)	Reed Canary Grass (*Phalaris arundinacea*)	
	Sensitive Fern (*Onoclea sensibilis*)	
	Pussy Willow (*Salix discolor*)	
	Joe-pye-weed (*Eupatorium maculatum*)	
	Umbrella Sedge (*Cyperus strigosus*)	
	Blue Flag (*Iris versicolor*)	
	Soft Rush (*Juncus effusus*)	
	Wool Grass (*Scirpus cyperinus*)	
	Swamp Rose (*Rosa palustris*)	
	Swamp Milkweed (*Asclepias incarnata*)	
	Devil's Beggar's Tick (*Bidens frondosa*)	
	Halberd-leaved Tearthumb (*Polygonum arifolium*)	