



Peat Pond at Arlington's Great Meadows

**The Friends of
Arlington's Great Meadows**

Annual Report

December, 2005
Arlington, Massachusetts

www.FoAGM.org

What is Arlington's Great Meadows?

Arlington's Great Meadows (AGM) is a 183-acre parcel of land owned by the Town of Arlington and located in adjacent East Lexington. It has long been enjoyed by area residents as a place of natural beauty offering diverse natural habitats, including extensive wetlands, upland forests, meadows, vernal pools, and other natural communities. It is home to a vast array of animals, birds, amphibians, and plants of a great many species, and it is a stopping-off place for many species of birds during their annual migrations. As the largest natural, undeveloped space in Arlington or Lexington, it is a treasure worth protecting and improving.

Who are The Friends of Arlington's Great Meadows?

The Friends of Arlington's Great Meadows ("FoAGM or the "Friends") is a group of residents of Arlington, Lexington and beyond who care deeply about Arlington's Great Meadows. The Friends are committed to the preservation and stewardship of this remarkable natural landscape by working together with officials of the towns of Arlington and Lexington and with citizens everywhere who share their interest.

How the Friends Got Started

In 1997, the Arlington Conservation Commission engaged botanist and naturalist Frances Clark to perform a study of AGM. In July 2001, Ms. Clark submitted a report containing a detailed description of AGM's features, an inventory of its animal and plant species, and recommendations for its protection and enhancement. The Arlington Conservation Commission then held a number of open meetings to present the findings. These meetings strengthened the interest of people who were already familiar with AGM and stimulated the involvement of many other citizens who had not been aware of this beautiful natural space in our midst. One of the recommendations of the Clark Report was that a group be established with representatives from Arlington and Lexington to protect and manage AGM on a continuing basis. In March of 2002, The Friends of Arlington's Great Meadows held its first organizational meeting, which was attended by approximately 75 people.

What FoAGM Has Accomplished

Since its formation in 2002, FoAGM has worked in a variety of ways to protect and enhance AGM and to encourage its use for education of people of all ages and for the enjoyment of being in nature. The purpose of this Annual Report is to inform the Arlington Board of Selectmen and the citizens of Arlington, Lexington and beyond, about the activities and accomplishments of the Friends of Arlington's Great Meadows in its third year, through the end of 2005. Annual Reports for prior years can be found on FoAGM's web site, www.foagm.org.

ACCOMPLISHMENTS

2005 proved to be another busy year for Friends of Arlington's Great Meadows. Although there is still more to do, much has been accomplished. We wish to thank everyone who has helped in one way or another with these efforts.

Boardwalk Construction

Following a two-year application process, the Massachusetts Department of Conservation and Recreation awarded FoAGM an \$11,000 Recreational Trails Program (RTP) grant to complete the largest trail improvements in AGM to date: the construction of two new boardwalks. Installation of the new boardwalks has solved longstanding wetland trail problems, allowed more residents to safely experience the beauty of the Great Meadows during all four seasons of the year, permitted unimpeded passage across the Meadows without damage to plants and wildlife, and created a platform for some truly magnificent views.

Organized and led by Steering Committee member Mike Tabaczynski, this important community service project depended on the participation of more than sixty volunteers in one or both boardwalk building projects, including a broad mix of ages and genders, first-timers and old hands with a diverse set of skills, backgrounds, and affiliations. Volunteers came from Arlington, Lexington and Waltham, and represented such organizations as FoAGM, Arlington Land Trust, Lexington Conservation Stewards, Lexington Bicycle Advisory Committee, Friends of the Minuteman Bikeway, New England Mountain Bike Association, Appalachian Mountain Club, Friends of the Western Greenway, Lexington Tree Committee, and Waltham Land Trust. The Arlington Land Trust (ALT) served as the fiscal agent for the grant funds.

The first boardwalk, constructed on July 23 in hot, humid weather, bridges a wetland area on the perimeter of the Meadow near the Minuteman Bikeway, across from the Waldorf School. To complete this boardwalk, thirty-five volunteers carried heavy sixteen-foot lumber and other supplies in from the Bikeway. The 210-foot-long structure required \$3,411 of materials and nearly 270 hours of labor.

The second boardwalk, constructed on the beautiful fall weekend of September 24-25 – an ideal way to celebrate National Public Lands Day – spans the large central marsh and connects the north and south upland areas of Great Meadows. This time, twenty-nine Lexington High School volunteers and twenty-nine adult volunteers were instrumental in moving many tons of lumber and concrete blocks necessary to build a 440-foot-long structure. Completion of this phase of the project required more than 530 hours of labor and \$6,170 of materials.

In summary, a total of 800 hours and \$9,582 were spent to construct a total of 650 feet of boardwalk at an average cost of \$14.74 per foot with an impressive average productivity of 0.813 feet per person hour. Volunteers contributed a total labor value of \$8,475 to match the RTP grant which funded the cost of the supplies.



July Boardwalk Construction



September Boardwalk Work

The skills, productivity and dedication of the volunteers and crew leaders who completed the boardwalk project significantly raised the bar for future conservation projects in Arlington and Lexington. Their contribution will help ensure that Great Meadows will provide a positive experience for human visitors and a secure habitat for wetland plants and animals for years to come.

Other Resource Management Activities

Trail Relocation During the boardwalk construction project, FoAGM relocated a 150-foot trail section to align with the newly constructed smaller boardwalk and to facilitate closure of a 200-foot section of trail that was eroded and routed through a wetland. These changes maintained an important bird viewing site listed in the guidebook.

Vehicle Prevention Early in the year, FoAGM learned that a street-sized four-wheel-drive motor vehicle had entered AGM from the East Village nursing home parking lot. Within a week, FoAGM arranged to have the chain that lay near that entrance reinstalled, locked and marked with bright paint and reflective tape. FoAGM also distributed keys to both Lexington fire stations and the Lexington police to allow emergency vehicle access to AGM through this gate.

Signs and Kiosks FoAGM installed two new entrance signs and a dozen entrance marker posts at various entry points to the Meadows during the year. These signs and markers measurably increased public awareness of who owns AGM and that it is a managed property. The two previously installed kiosks were used throughout the year to post notices to the visiting public about various activities and current issues in AGM.

Vandalism and Unauthorized Cutting Vandalism and the unauthorized cutting of trees and brush in AGM increased from previous years.

Particularly problematic was the area near the picnic table across the bikeway from the Waldorf School, where there was evidence of regular bonfires and underage drinking accompanied by persistent trash, broken glass, and damage to signs and the kiosk. The bonfires consumed all nearby deadwood, including logs and brush that had been used to close an eroded trail behind the picnic table the previous fall. As a result, a number of seedling pine trees that had been planted in the closed area were trampled and damaged. The few trees left are growing very slowly, probably due to poor soil conditions since rainfall has been generally very good over the last growing season.

Unauthorized cutting of trees and brush also continued and worsened this year in other areas of the Meadows. During the fall in particular, unknown parties constructed an unauthorized trail in the northeastern corner of the Meadows near Circle Road, cutting a number of native trees and blazing trees and rocks with white paint. Shortly after this unauthorized trail was reported, FoAGM took action to close it, removing the blazes and blocking and obscuring the trail with deadwood. We are considering purchasing trees next year to replace the many native ones cut. Creation of such unauthorized trails is problematic because it fragments wildlife habitat and makes the area more confusing to visitors.

Finally, shortly after the second and longer section of boardwalk was completed in September, vandals on two occasions knocked out several of its concrete block foundations, causing potentially unsafe passage for visitors. On each occasion, FoAGM succeeded in effecting satisfactory repairs within days (partially thanks to the diligence and timeliness of visitors in observing and reporting the problems). To discourage further vandalism, a plan was initiated to cement the concrete block foundations together with construction adhesive and attach them to the wooden structures with steel straps. At least twenty foundations were reinforced in this manner before wet winter conditions prevented further work. We plan to complete the remaining twenty-five or so foundations next spring.

To help curtail such vandalism and unauthorized tree cutting, FoAGM plans to follow an approach with three main elements:

- Educate the public about why these activities are detrimental to natural open space and encourage visitors to be watchful for questionable activities. This will be done primarily through signs, the FoAGM web site, and newspaper articles.
- Mark and trim all legitimate trails so they can be easily and clearly identified by visitors.

- Strengthen all existing work and use more robust, vandal-resistant construction techniques in future trail work.

Public Response and Future Plans Feedback from the public about the work we have been doing has been nearly 100% positive. Next year, look for significant projects involving trail marking and navigation, erosion control and restoration.

Management of Invasive Plants

“Invasive exotic plants” are a major problem in Arlington’s Great Meadows, as they are in much of the United States. They are called “exotic” because they are not native to this area, many having come from other continents or other parts of North America. They are called “invasive” because, without animals or diseases to keep them in check, they tend to spread quickly and crowd out native plants which are part of our natural heritage and upon which native wildlife depend for their existence.

Some exotic invasive plants, such as Purple Loosestrife and Phragmites, are so widespread in the central wet meadow of AGM that even extensive efforts are not likely to make a difference. With limited volunteer hours and limited funds, we choose our battles carefully. The goals of FoAGM regarding invasive plants are (1) to remove invasive plants in selected, strategic areas where our efforts can make a difference, and (2) to restore those areas to native vegetation and to prevent the return of invasive plants. Our efforts to manage invasive plants have been undertaken following discussion with, and approval by, the Lexington Conservation Commission and the Arlington Board of Selectmen.

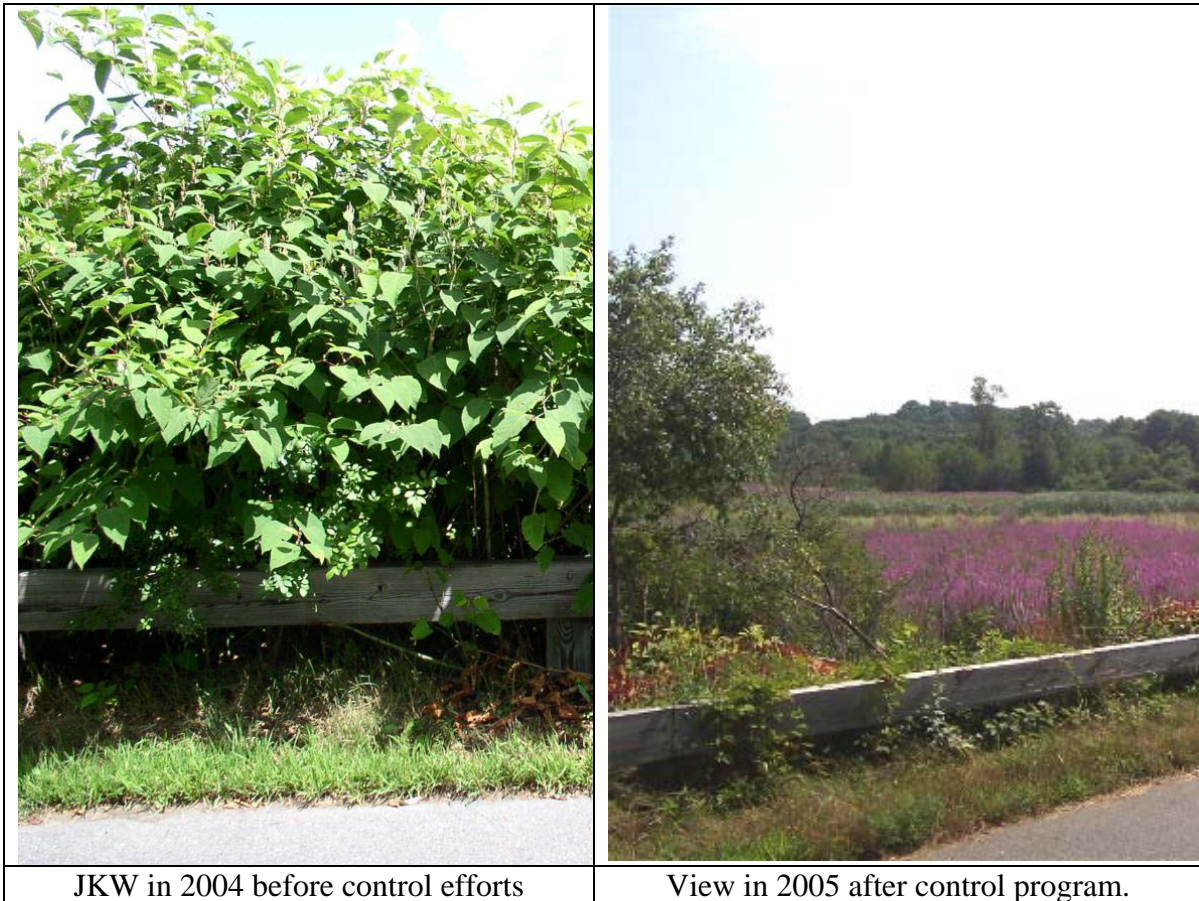
Japanese Knotweed Project This year, FoAGM selected a major thicket of Japanese Knotweed (JKW or *Fallopia japonica*, also known as *Polygonum cuspidatum*) along the bikeway east of the Waldorf School as the prime target for invasive plant control. In this location, JKW had crowded out nearly all other plants and completely blocked the only meadow viewing spot from along the bikeway.

According to the USDA Forest Service, “*Fallopia japonica*, is becoming widely recognized as a problem in the United States . . . [It] is extremely difficult and expensive to control and is regarded as a serious pest by the public and authorities alike . . . There are few people who share the fondness for the plant displayed by its 19th century importers. Japanese knotweed spreads quickly to form dense thickets that exclude native species and are of little value to wildlife, leading to it being described as an environmental weed. . . The extensive rhizome system of this weed can reach 15 to 20 m in length . . . and enables the plant to achieve early emergence and great height, which combine to shade out other vegetation, and reduce native species diversity. . . .” www.invasive.org/eastern/biocontrol/12Knotweed.html

After conducting extensive research, FoAGM concluded that there are no proven or surefire methods of eradicating JKW. Accordingly, we decided to conduct a controlled experiment employing two alternative strategies suggested by the literature, neither of which involves the use of herbicides.

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- *Strategy One: Dig and Cover:* In the Spring of the year, volunteers including FoAGM members and students from three local high schools cut and cleared away the dead stalks from last year and dug out the large root crowns and rhizomes along a 30-foot section of the embankment adjacent to the bikeway. The last step was to cover this portion with black landscape plastic with the aim of preventing new growth and eventually killing the rhizomes in which JKW stores energy for the next year's growth.
- *Strategy Two: Cut, Cut, Cut:* An alternative strategy, employed at both ends of the black plastic area, was to repeatedly cut and clear the JKW stalks, without attempting to dig up the rhizomes. Throughout the growing season, volunteers cut back the new shoots, which re-grew with remarkable vigor – sometimes rivaling the vigor of the volunteers! The goal was to drain energy from the plants and to interrupt the process by which energy from the growing stems is stored in the rhizomes for the following year.



Results to Date By the end of the growing season, both areas were mostly clear of visible JKW. In the Dig and Cover area, the black plastic had largely prevented re-growth, except around the edges. The Cut, Cut, Cut area was also mostly free of JKW shoots, however since the underground rhizomes still appear to be viable, we anticipate that at least one more season of repeated cutting will be required to make a difference. Other species of plants have grown into portions of the area, some native and some non-native, including the invasive Garlic Mustard, which has been mostly removed.

Next Steps It is too early at this point to draw any firm conclusions from our experimentation with JKW removal methods. In the Dig and Cover area, the mystery is whether the JKW will rebound next spring -- or whenever the plastic is eventually removed. Once the JKW has been adequately controlled, we plan to sow seeds of various native grasses and other herbaceous plants in the uncovered area. From then on, we will continue to watch for re-growth of invasives and remove them. Volunteers willing to help with this rewarding project will be greatly appreciated. Contact Don Miller at donaldbmiller@comcast .net or 781-646-4965 (home).

Educational and Outreach Activities

General Meeting At our spring general meeting, held in April, Jim Gomes, Director of the Environmental League of Massachusetts, spoke on the value of open space. The Environmental League of Massachusetts is dedicated to protecting the natural environment of Massachusetts. It works with other organizations to advocate for statewide policies that benefit the local environment, such as land use planning, parks protection, and adequate funding for environmental protection. An Arlington resident, Jim offered some specifics pertinent to Arlington's Great Meadows. More information on ELM can be found at www.environmentalleague.org

Nature/Birding Walks

February Tracking Walk A wildlife tracking walk was held in February under perfect conditions: forty-eight hours after a snowfall and warm enough weather to soften the ground so that it captured good prints. Lydia Rogers from Walden Keeping Track led a group of thirteen to Infinity Pond in the Great Meadows. Right beside the parking lot, participants observed the galloping pattern of the cottontail rabbit and the alternating, surprisingly small track of a grey fox. Also evident was the print where a crow with knobby feet had landed in the snow with an outstretched wing. The half-melted subterranean passageways of the voles revealed the network they create under the snow. Just past the pond, the group found raccoon prints and the star-like tracks of a mink. Down at the open stream were the bounding tracks of a fisher and the slightly duck-footed hopping tracks of a grey squirrel. It was a rewarding walk, and several participants lingered on as they tried to read the stories of nighttime visitors to Arlington's Great Meadows. More information on animal tracking and Walden Keeping Track may be obtained by contacting FoAGM Steering Committee member Sandra Ruggiero.

Early Spring Nature Walk In March, FoAGM Steering Committee members Laurel Carpenter and Don Miller, both of whom are advanced students in the Native Plants Program of the New England Wildflower Society (NEWFS), led a walk entitled "Early Signs of Spring." Although the ground was deep in snow, participants learned to observe plant structures present throughout the winter and also saw evidence of insects, birds and other wildlife. The walk was well attended, with a mix of plant devotees and families with children interested in learning more about the Meadows.

Biodiversity Days Open House at Infinity Pond In June, FoAGM and Citizens for Lexington Conservation (CLC) honored “Biodiversity Days” with an "Open House" at Infinity Pond, a certified vernal pool. On this hot day, the shady pond was a good spot to spend a Saturday morning. About twenty children and adults attended the event, hosted by FoAGM Steering Committee member Andrea Golden. Everyone had a net or kitchen strainer to sample the pond life, and every dip seemed to bring up at least one tadpole. Bullfrogs, green frogs, spring peepers and American toads are all represented in the tadpole population at the pond. Insect larvae, including dragonfly and damselfly larvae were also common catches.



Biodiversity Day at Infinity Pond



Russ Cohen & Edible Plants

Edible Plants Walk In June, Arlington resident Russ Cohen, author of *Wild Plants I Have Known...And Eaten*, led a very successful edible plant walk. This well-publicized event, co-sponsored by FoAGM and the Appalachian Mountain Club (AMC), was attended by thirty-five people, the highest turnout for any educational event this year. Following Russ’s excellent presentation, participants were able to sample many different plants growing in the Meadows. Russ explained how to cook and prepare these wild plants and also provided guidance about poisonous plants. More information about Russ Cohen and his work can be found on his website: <http://users.rcn.com/eatwild/sched.htm>.

Trail Talk and Walk In October, FoAGM Steering Committee member and local trail crew leader Mike Tabaczynski led a walk in which he reviewed trail design and construction and other land management issues such as invasive plant control, visitor experience, and habitat restoration and maintenance. The group viewed and discussed a number of different areas in the Meadows requiring land management decisions such as boardwalk installation, wetlands protection and erosion control.

October Bird Walk Chris Floyd of Lexington led fifteen participants from three organizations (Menotomy Bird Club, CLC, and FoAGM) on a fall bird walk. A sunny day that started with several inches of snow on the ground warmed to nearly 70 degrees by the end of the walk. Beginning at Arlington Reservoir and continuing through the Meadows, participants observed forty-two bird species, including Eastern Phoebe, Carolina Wren, Golden-crowned Kinglet, Ruby-crowned Kinglet, Yellow-Rumped Warbler, Palm Warbler, and American Goldfinch. The new boardwalks made the route from the Arlington Reservoir through Arlington's Great Meadows much easier as it is now possible to do a complete loop through AGM.

School Programs In the fall of 2004, FoAGM Steering Committee member Sandra Ruggiero, assisted by her 11th grade science students at the Waldorf High School, gave vernal pool presentations to three 5th grade classes at the Brackett School in Arlington, as well as to two 5th grade classes from the Dallin School. In April and May the same elementary and high school students were scheduled to meet at Infinity Pond in AGM to study the aquatic life, but unfortunately two classes were rained out. The elementary classes received a "Vernal Pool Field Guide" for their classrooms, and each student was given a "Great Meadows Tour Guide" so they could return with their families for self-guided walks.

Community Outreach

Town Days FoAGM was represented at Arlington Town Day in September. At the 166th Annual East Village Fair in East Lexington, FoAGM had a booth with maps, informational material, trail guides, and offered guided tours of the Meadows to visitors. Throughout the day, many interested guests stopped by the booth to review materials and ask questions about the Meadows.

Media Coverage Media coverage in 2005 also expanded community awareness of the activities of FoAGM. Our walks and other activities were regularly posted in the calendar section of the *Lexington Minuteman* and the *Arlington Advocate*. Publicity in these newspapers was key to volunteer recruitment for the boardwalk project, and both publications, as well as Lexington's *Colonial Times*, ran feature stories on the project with front page photographs of local volunteers.

Stewardship FoAGM has continued its role as steward of Arlington's Great Meadows. In this capacity, it has acted as liaison with the Arlington Board of Selectmen, as well as the Arlington Conservation Commission and the Lexington Conservation Commission, when groups have requested permission to use the meadow for various activities, or when projects have required regulatory approval. In January 2005, Steering Committee Chairman David White made a presentation to the Arlington Board of Selectmen on FoAGM's activities and the Board commended FoAGM for its work.

Outreach to Meadow Neighbors In February, representatives of the FoAGM Steering Committee met with the Emerson Gardens Condominiums Board of Trustees to discuss matters of mutual interest. The meeting was cordial and productive. FoAGM representatives arranged the meeting to get to know each other as "neighbors" and to explore ways in which these two groups can cooperate to further our respective goals related to the Meadows. FoAGM representatives explained that we welcome new volunteers and participation in our activities and that Steering Committee meetings are open to all.

Ongoing Educational Activities FoAGM has continued to fulfill its mission to educate the public at large about the Great Meadows. It has provided information about the Meadows and its activities via the FoAGM web site as well as through notices posted on the kiosk near the Minuteman Bikeway entrance. Special topics have included invasive plants and updates on trail work. FoAGM reprinted and continues to distribute a revised AGM trail guide.

Financial Report

During this third year, the Friends of Arlington's Great Meadows substantially benefited from the partnership with the Arlington Land Trust (ALT), a nonprofit charitable organization, which has generously offered to manage funds on our behalf. We received donations ranging from \$3 to \$300 and averaging \$68 from private individuals and families, for a total of \$1,353 in contributions. Other income was \$9,858 from a state RTP grant and a \$2000 grant from the Fields Pond Foundation, totaling \$11,858 in grants for a grand total income of \$13,211.

Our expenses were \$80 for a wetlands permit, \$134 for printing and copying, and \$10,319 for land stewardship, giving grand total expenses of \$10,533. All of this activity left the 2005 FoAGM fund balance at \$5,989, up \$2,678 from 2004.

FoAGM would like to extend a warm thank you to all who contributed to the preservation of one of the most valuable resources in Arlington and Lexington. Those desiring to make a tax deductible donation can make a check out to "ALT FoAGM Fund" and mail it to FoAGM, Box 492, Arlington, MA 02476, or use a credit card online at www.networkforgood.org (Enter "arlington land" in the search field and select state of MA. Select Arlington Land Trust and enter "FoAGM" as a designation.)

Acknowledgements

Many individuals and groups outside FoAGM have provided guidance, encouragement, physical labor, and other assistance. We would like to thank them here.

- Arlington Board of Selectmen
 - Lexington Board of Selectmen
 - Arlington Land Trust
 - Arlington Conservation Commission
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 - Lexington Department of Public Works
 - The Waldorf School and Waldorf High School students and faculty
 - Students of Arlington High School
 - Students of Lexington High School
 - Lexington Christian Academy
 - Beverly Healthcare East Village
 - Citizens for Lexington Conservation
 - Menotomy Bird Club
 - New England Mountain Bike Association
 - Lexington Bicycle Advisory Committee
 - Walden Keeping Track
 - Boy Scouts of America
 - Emerson Gardens Condominium Association
 - Lexington's Colonial Times
 - Arlington Advocate
 - Lexington Minuteman
 - Russ Cohen
 - Jim Gomes and the Environmental League of Massachusetts
- Special thanks to all the volunteers who worked on the boardwalk construction and other stewardship projects.

The Committees of FoAGM

Education Committee

- Sandra Ruggiero, Co-Chair
- Andrea Golden, Co-Chair
- Laurel Carpenter

Invasive Plants Committee

- Don Miller, Chair
- Anne Gibbs
- Andrea Golden
- Betty Wright

Legal Committee

- David White, Chair
- Nathaniel Stevens
- John Bartenstein

Resource Management Committee

- Mike Tabaczynski, Chair
- Anne Gibbs
- Betty Wright
- Don Miller
- Roly Chaput

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We, the FoAGM Steering Committee, wish to thank those listed above and the many others who have helped The Friends of Arlington's Great Meadows in this, our third year of existence. We look forward to continuing our efforts to protect and provide stewardship for this varied and beautiful piece of natural land which we are lucky to have so close by. We hope our work will mean that we and all future generations can enjoy it and learn from it.

Respectfully submitted,

The Steering Committee

John Bartenstein

Don Miller

David White

Andrea Golden

Sandra Ruggiero

Laurel Carpenter

Mike Tabaczynski

Photo credits: JKW before control efforts by Mike Tabaczynski, Biodiversity Day by Barry Golden, all others by David White.

