



Dear Friend of Fermilab Natural Areas,

Since the last newsletter, Fermilab Natural Areas has moved forward, due to the support and hard work of our Board of Directors and members! After getting most of the legal and procedural niceties out of the way, the Board met in April and we discussed the range of ways forward for the organization. Obviously, there is still a vast amount of work to be done to begin to fulfill all the parts of our mission.

In May, the Board met and spent the entire meeting touring Fermilab grounds with a view toward becoming more familiar with the site, and with some of the potential projects. For those who were unable to attend this meeting and tour, I'd like to take the opportunity to re-create (as much as possible on paper!) the range of what we looked at, and the potential directions for our activities in the future.

Our next meeting of the Board will be at Fermilab, in Wilson Hall, One North Meeting Room, July 10, at 7 pm. Please feel free to join us. All board meetings are open to the public, and your participation is welcome!

If you have any questions about Fermilab Natural Areas, or about the projects briefly described below, please [contact us](#) via email or phone.

Six potential projects for the future

In no particular order, here are six projects which we have identified to begin FNA's real work toward improving the natural areas at Fermilab.

1. When Fermilab was first built, the town of Weston treated its wastewater in an old-fashioned oxidation pond system. This pond was approximately 2.5 acres, and over the years after the opening of the Lab, was not put to much use. During the 1990's, the Land Management Committee convinced the Lab to draw down the pond, turn off the treatment equipment, and begin transforming it into a marsh. The spot was renamed "Nepese" marsh for the Native-American word for



“pond”. The bottom elevation was sculpted to create islands and submerged areas for emergent plants. As you can see from the above picture, there is currently a bench (a result of a local Eagle scout project) and the potential for a walking trail. This is already a good birding spot, and upgrading the marsh with supplemental plantings, better water level controls, and the development of trails would result in a terrific addition to



the biodiversity of the Lab as well as a new amenity for visitors. A closer look at the vegetation in the marsh (see photo to the left) gives an idea of the diversity and the desirability of this area for wildlife.

2. Oak savannas are among the rarest communities remaining since settlement of Illinois in the 1840's. At Fermilab, we have a remnant that has been degraded over the years by invasions of non-native plants, especially reed canary grass, blackberries, silver maples and box elders. Nevertheless, this 35 acre tract has real potential for restoration to a showcase quality savanna. All it takes is time, money and lots of work! We have submitted grant proposals to the Illinois Department of Natural Resources two years in a row to accomplish this, however, the DNR's C2000 grant program appears to be stuck in Springfield, so we are currently preparing grant applications for the private sector.



3. One of the most familiar areas of the Lab to the casual visitor is the Margaret Pearson Prairie Interpretive Trail. This trail includes a walk through restored prairie and into mature forest land. You can take a short (1/4 mile) or a somewhat longer (1 mile) prairie walk, or hook up with the extensive woodland trails in the “Big Woods” next to the prairie. We have plans to upgrade the current signage (see picture) and extend the trail system to include other natural features. A related project will create a virtual tour of the Lab's natural areas on line, and a down-loadable Podcast tour that will “guide” you through your own tour of Fermilab in your car or bicycle.



4. The largest physical feature at the Lab is the four-mile in circumference Tevatron ring – home of the proton beam that is accelerated to near the speed of light to create the high energy experiments that are the Lab’s reason for existing. The square mile of land within the ring is the site of the earliest prairie reconstruction at Fermilab in 1975, and nearly 500 acres of additional prairie since. A large area of the prairie, notably the southern half, has become degraded over the last 10 – 15 years, and will require extensive restoration work in the near future. In addition to the work itself, this large project represents a golden opportunity to carefully monitor such a second-stage project and learn more about the succession of prairie restoration.



5. In the early 1990’s, a new accelerator ring, the Main Injector, was constructed at Fermilab. This project is located in the southwest quadrant of the site and required



the destruction of approximately six acres of forested wetland in the Indian Creek watershed. To compensate for this loss, Fermilab created ten acres of forested and sedge meadow wetland adjacent to Indian Creek, within the ring itself. Although wetland creation has a less than perfect history (to say the least), owing to a combination of factors, this project has been very successful. In fact, in 2003, the Laboratory was awarded a

Conservation and Native Landscaping Award by U.S. EPA, Region V for this project. The picture really doesn’t do this area justice, because the dozens of sedge species are not visible, nor are the uncommon birds, butterflies and other wildlife that use this area. Management of this area for the foreseeable future will require careful control of invasive trees, shrubs and forbs, such as thistles, reed canary grass, silver maples and cottonwoods.

6. Fermilab has many lakes and ponds sprinkled throughout the site. If these waterways are not maintained – especially the shorelines – they will erode and be a net negative impact to the environment. An engineering solution to shoreline erosion is to armor the banks with large stones (called rip-rap). Equally effective, but more attractive, a natural solution is to establish a natural shoreline native plants that would normally



grow in the shoreline habitat. Most of these plants are relatively sensitive to their surroundings, however, and won't normally establish themselves in competition with aggressive "weeds" that essentially can grow anywhere. To get the native plants to grow and fulfill their function requires careful selection of the species, and hand planting. Fermilab Natural Areas recently purchased shoreline plants and found volunteers to plant them along the south shore of Swan Lake, just in front of Wilson Hall. Hopefully, in a few years, this shoreline will present a beautiful, natural stage for Wilson Hall!

Future Projects

We are striving to promote projects that fulfill all three of the main elements of our mission: Restoration and conservation, community involvement, and environmental research. Although we envision a strongly project-oriented approach, there are opportunities for supporting continuing efforts to further the FNA vision, such as support for Fermilab's annual seed harvest, Arbor Day, volunteer work days, and "Third Thursday" clean-ups.

Please [join us](#) if you haven't already, and feel free to give us your thoughts, ideas, suggestions. We need your help!!

Rod Walton, President
Fermilab Natural Areas
June 23, 2008