

May 11, 2018

Ian Wade
Capital Projects Manager
City of Aurora
Public Works/Engineering
Aurora, IL

Cardno

6605 Steger Road
Monee, IL 60449
USA

Phone: +1 708 534 3450
Fax: +1 708 534 3480

www.cardno.com

Subject: Aurora Native Plantings Landscaping Recommendations

Dear Mr. Wade:

Cardno is pleased to present you with this proposal for stewardship activities throughout the City of Aurora for the 2018 season (May-December). Cardno conducted site walkthroughs on April 2nd to assess management priorities. This proposal describes the various stewardship activities and associated cost estimates we would recommend be implemented during the 2018 season. In an effort to maximize value and insure that funds are being used only when maintenance is needed, all cost estimates have been provided on a time and material basis.

Cherry Hill Lake – ±12.0 acres

Based on site conditions during our walkthrough, Cardno recommends splitting this site into two sections. The eastern half of the site has a much larger density of native prairie species that should be allowed to spread while the western half shows very little signs of any beneficial native vegetation.

On the eastern portion of the site, two or three herbicide treatments during the 2018 season are recommended. These treatments would be followed by a prescribed burn in the fall to remove any vegetative debris, providing a weed-free seed bed for native species the following spring.

Due to the current lack of any native vegetation and large populations of invasive and undesirable species, the western portion of the site would benefit from a complete brown-out, an herbicide application to kill all vegetation present leaving an empty soil bed. Cardno suggests a boom-spray application of a non-selective herbicide to kill all vegetation within this area of the site. Cardno would then till and re-seed this area with a high-quality prairie seed mix of a combination of species similar to those found on the eastern half of the site.

Orchard Lake – ±10.4 acres

Cardno found this site to be the highest quality of all those visited. Very few invasive species were found on site but small populations of reed canary grass, sweet clover, and teasel were encountered. To ensure that this site maintains a dense population of high-quality prairie species, two herbicide applications are recommended for the 2018 growing season followed by a prescribed burn in the fall.

Greenfield Lake – ±2.0 acres

During Cardno's visit to this site it was evident that recent woody clearing had been conducted within the project area. No woody vegetation remained in the area and there was very little groundcover. The only herbaceous vegetation encountered was made up solely of invasive species. It is unknown whether or not the stumps of the cut material were treated with herbicide. There will be a large number of resprouts to treat if no stump treatment occurred at the time of clearing.

Based on these conditions, Cardno suggests mowing the project area in August to remove remaining stumps and any vegetation that has sprouted. Following the mowing event, we recommend an herbicide application. Later in the season Cardno would prepare the seed bed and apply native seed to this area to establish a healthy seed bank. This native seed would include winter wheat as a cover crop to protect the banks and recently installed native seed from erosion throughout the winter.

SEC of Orchard and Galena – ±3.5 acres

During our site visit it was apparent that the main concern with this location is the erosion taking place along the banks of the pond. There are areas that have invasive species where woody clearing could be conducted, but this would only exacerbate the erosion problem by destabilizing the banks. There are also small areas that would benefit from herbicide applications, but these do not cover the entirety of the project area. If there is a specific portion of this site that is of greater concern, Cardno could conduct some woody clearing, two herbicide applications, and then install a buffer of native plantings to improve the aesthetics of the area. Pricing will vary greatly depending on the ultimate scope.

Indian Trail and Farnsworth – ±1.3 acres

Due to the existing conditions on site and the proximity of the waterway, Cardno recommends cutting select woody species within the project boundary and conducting two herbicide applications to treat the teasel and phragmites on site. It is advisable to leave the cattails that already exist on site as they deter phragmites from taking over the entire basin and they provide habitat cover for multiple species, as well as heat cover for the basin in the winter. It is important to note that phragmites spread rhizomously, and due to the proximity of the river and the existence of phragmites along its boundaries, it is expected that phragmites will continue to spread into the project area.

Aurora Police Department – ±10.1 acres

Dense patches of Canada thistle exist within this project boundary, along with scattered clusters of phragmites, cattails, and reed canary grass. There are also areas where native species are thriving. This location will only require two to three herbicide applications during the 2018 growing season. A prescribed burn in the fall will also assist with greatly reducing the density of invasive thistle species on site.

It was also noted that there are large patches where turf grass was either seeded or has spread onto the site. If these areas of turf grass are desired then no extra work is needed. If the City of Aurora would prefer to remove the turf grass from within the native prairie, a broadcast boom-spray treatment can be conducted to completely brown-out these areas followed by seeding with a native prairie mix.

Kautz and Montgomery – ±2.7 acres

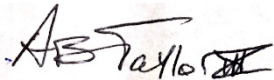
The only herbaceous vegetation that exists on site consists of invasive species and weedy plants. There is also a large amount of Wild parsnip on site which poses a serious health risk to any that come into contact with it because of the oils on the plant that cause severe rashes and burns. Due to the severely degraded condition of this site, it is recommended that the entire area be treated with herbicide and new native plantings and seed installed. Cardno would plan to conduct two herbicide applications to kill off all vegetation, with one mowing visit between the two herbicide treatments. Cardno would then plan to seed the site in the fall and remove the small amount of woody invasive species present.

There is also a large area of bare soil directly north of the parking lot on this site. Cardno would suggest tilling this area and installing native seed to decrease the amount of bare soil on site.

Please see the breakdown of costs for each task listed below. Cardno would be happy to add or remove any project tasks that the City of Aurora sees fit. The provided costs are based on our recommendations and any work outside of the provided recommendations would require a revision to these costs.

ESTIMATED STEWARDSHIP COST (Time and Material: Not to Exceed): **\$61,000.00**

Sincerely,



Chip Taylor
Staff Scientist
for Cardno
Direct Line +1 608-509-2912
Email: chip.taylor@cardno.com

Table # 1 City of Aurora 2018 Native Areas Stewardship

Site Name	Unit	# of Units	Total
Cherry Hill Lake			
• East Side Herbicide Application	Visits	2	3,900.00
• East Side Prescribed Burn	LS	1	3,600.00
• West Side Brown-Out	LS	1	1,600.00
• West Side Native Seeding	LS	1	5,900.00
			Total: \$15,000.00
Orchard Lake			
• Herbicide Application	Visits	2	5,150.00
• Prescribed Burn	LS	1	4,100.00
			Total: \$9,250.00
Greenfield Lake			
• Mowing	LS	1	1,125.00
• Herbicide Application	Visits	1	750.00
• Native Seeding	LS	1	2,625.00
			Total: \$4,500.00
SEC Corner of Orchard & Galena			
• Selective Woody Clearing	LS	1	2,100.00
• Herbicide Application	LS	1	900.00
• Native Planting	LS	1	6,500.00
			Total: \$9,500.00
Indian Trail and Farnsworth			
• Herbicide Applications	Visits	2	1,750.00
• Selective Woody Clearing	LS	1	550.00
			Total: \$2,300.00
Aurora Police Department			
• Herbicide Application	Visits	3	5,525.00
• Prescribed Burn	LS	1	4,100.00
• Turf Herbicide Application	LS	1	500.00
• Native Seeding	LS	1	550.00
			Total: \$10,675.00
Kautz and Montgomery			
• Herbicide Application	Visits	2	4,350.00
• Mowing	LS	1	1,125.00
• Selective Woody Clearing	LS	1	500.00
• Native Seeding	LS	1	3,800.00
			Total: \$9,775.00