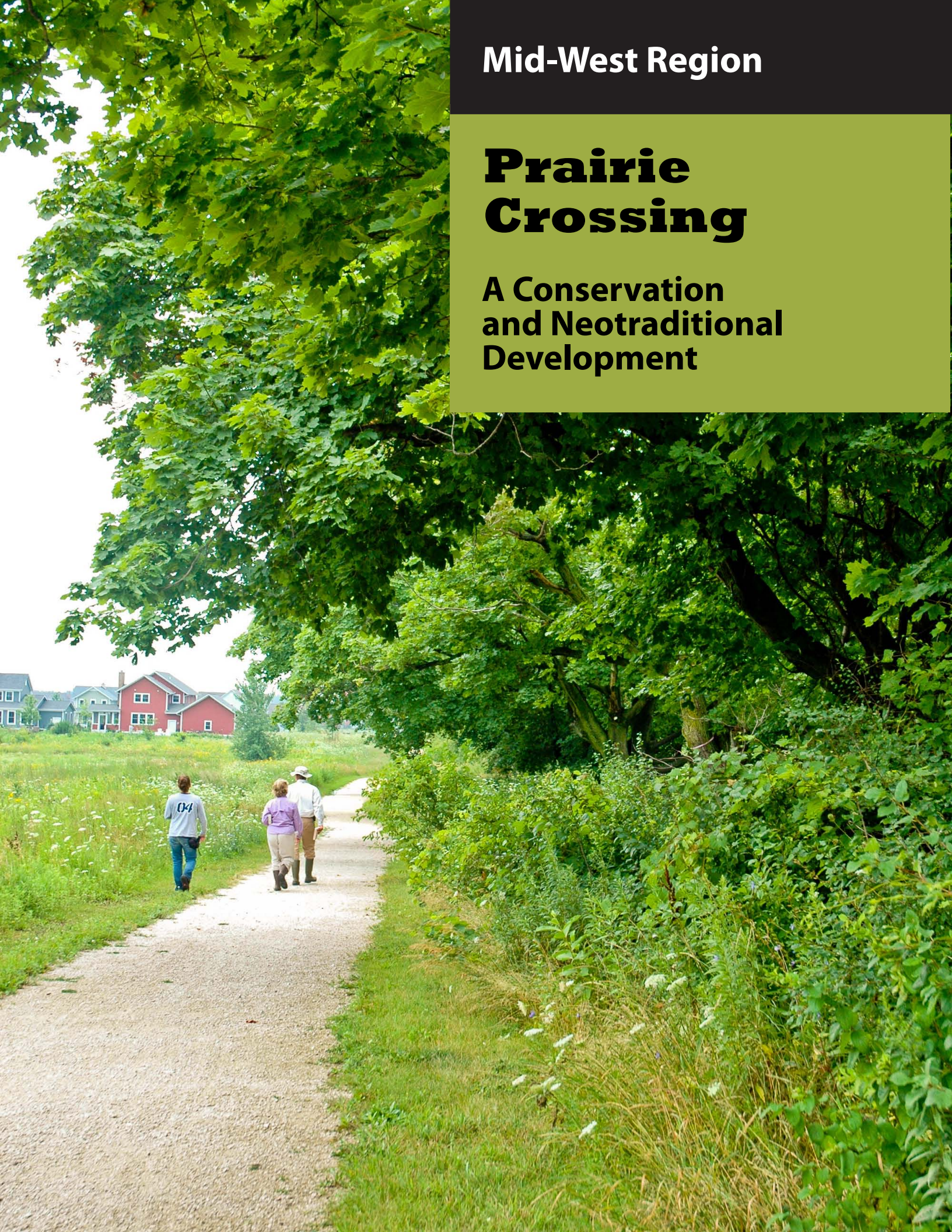


**Mid-West Region**

# **Prairie Crossing**

**A Conservation  
and Neotraditional  
Development**



# Before Development



**Figure 1:** The site before development in 1980 is almost entirely farmland, with hedgerows outlining the fields and small patches of forest.

# Overview

**Location:** Grayslake, Illinois  
Chicago metropolitan area

**Year:** 1992

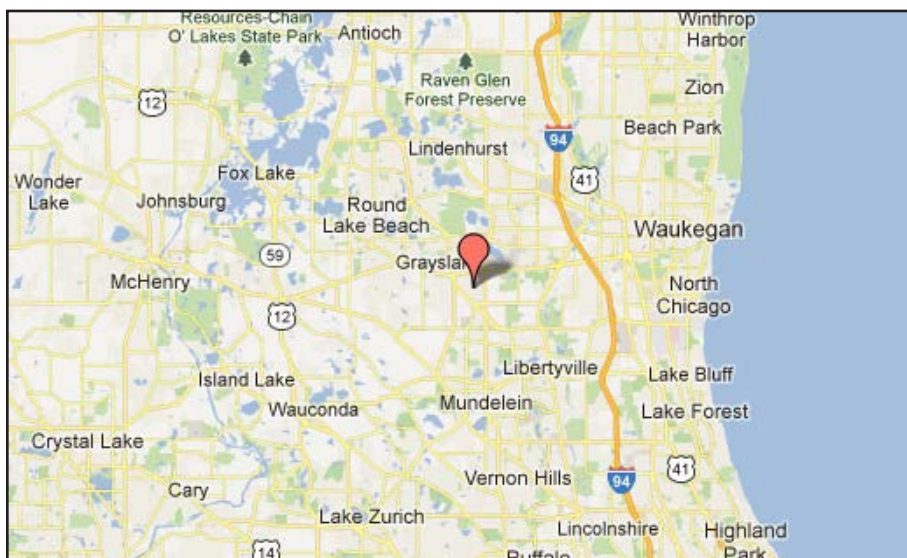
**Developer:** Gaylord Donnelley (initial development),  
Victoria and George Ranney since 1992  
working under Prairie Holdings  
Corporation, Chicago

**Planner/Designer:** Philip Enquist, Skidmore, Owings &  
Merrill LLP, Chicago; Peter Calthorpe  
and Matt Taecker, Calthorpe Associates,  
Berkeley, CA; Peter L. Schaudt, ASLA,  
Peter Lindsay Schaudt Landscape  
Architecture, Inc., Chicago; Jim Brown,  
LANDECON, Libreville, IL; William  
Johnson, FASLA, principal, Peter Walker,  
William Johnson and Partners, Berkeley,  
CA; J. Christopher Lannert, ASLA, the  
Lannert Group, St. Charles, IL.

**Development Size:** 677 acres


**Number of Units:** 395 homes (359 single family homes; 36  
condominiums)

**Open Space:** Approximately 60%



**Figure 2:** Location of the site, north of Chicago, and just south of Greyslake, Illinois.

Prairie Crossing is a conservation/ neo-traditional development located 40 northwest of Chicago Illinois. Original plans in the early 70's for the 677 acres called for 2,400 homes. A 15 year legal battle ensued brought against



the development plans by the county and local governments and area property owners. The lawsuit was settled when the land was purchased in 1987 by the Prairie Holdings Corporation headed by Gaylord Donnelley and seven other area property owners. Prairie Holdings Corporation purchased the land with the intent to develop it responsibly while preserving open space and agricultural lands. The Ranney's established ten guiding principles to guide Prairie Crossings development:

- environmental protection and enhancement;
- a healthy lifestyle;
- a sense of place;
- a sense of community;
- economic and racial diversity;
- convenient and efficient transportation;
- energy conservation;
- lifelong learning and education;
- aesthetic design and high-quality construction; and
- economic viability.

Donnelley and the Ranney's interviewed several landscape architects and chose Bill Johnson of Johnson, Johnson and Roy, to design their community. As the development began to take form, other landscape architects and architects were hired to complete later phases. Calthorpe Associates were hired to design the Station Village which includes a transit stop and commercial space.

Prairie Crossing was designed to be an active community with a public charter school, hospital, two train stations, retail, restaurant, and office space. So while it is touted as a conservation community, and it does have elements of clustering that are fundamental to conservation subdivisions, it also has neotraditional elements. The transit options and mixed use are basic neotraditional or New Urbanist concepts.

Over 60% of the land at Prairie Crossing is preserved open space. Open space consists of farm fields, pastures, greenways, a constructed lake and ponds, and 165 acres of restored prairie. Prairie Crossing also has a 9 acre village green, neighborhood playgrounds, tennis courts, ice skating, cross-country skiing, and fishing and boating docks. Easements on the open space are held by the liberty Prairie Conservancy, and the Washington DC based Conservation Fund, which holds the easement to 150 acres of farmland. Recreation opportunities are provided by the trails, Lake Leopold and various open space areas on-site. Residents have access to trails on-site that connect with trails throughout the region.

Prairie Crossing was designed to protect and increase critical habitat for native plant species and attract wildlife. Egrets, blue herons, muskrats, and coyotes exist on site, with a den identified in 2010. The water in Lake Leopold is clean enough for swimming, and is also clean enough to provide habitat for 'at risk' fish species. The 'at risk' fish species stocked by the Illinois Department of Natural Resources (DNR) include the blackchin and blacknose shiners, the Iowa darter, and the banded killfish. The Illinois DNR also uses the lake as a research site.

Drainage tiles, the remnants of the previous agricultural land use, were

removed returning the land to its natural hydrological processes. Wetlands were restored, and vegetative swales created which treat stormwater runoff on-site. Sediments and contaminants are removed and the water significantly cleaned before it enters Lake Leopold. The stormwater treatment system at Prairie Crossing has reduced the runoff conveyance off-site by 60%. Stormwater runoff quantity has been minimized by the construction of narrow streets, and the use of vegetated swales to capture the runoff.

Approximately 30 rain gardens were installed to collect rain water between the houses in the development clusters. They range in size from 200 to 500 square feet and most were created to retain water and some were created to allow water to infiltrate into the soil. They were planted with native, moisture loving plants.

Prairie Crossing develops a yearly management plan for the open spaces in the community. Prescribed burns are regularly used to maintain the native prairie, and the open spaces are managed for invasive species.

#### **References:**

Gibson, L. 2006. Prairie Lights. University of Chicago Magazine. Volume 99. Issue 2. Accessed at: <http://magazine.uchicago.edu/0612/features/prairie-print.shtml>

Kane, R. C. 2003. Prairie Flower: An ecologically conscious housing development begins to mature west of Chicago. Accessed at: <http://www.asla.org/lamag/lamia/october/feature1.html>

Prairie Crossing (PC). 2007. Prairie Crossing: A Conservation Community Website. Accessed at: <http://www.prairiecrossing.com/>

Prairie Crossing Homeowner's Association Environmental Management Plan - 2012. Accessed at <http://www.prairiecrossing.com>.

#### ***Additional consultants who worked on Prairie Crossing include:***

Environmental consulting/resource management: Steven L. Apfelbaum, Applied Ecological Services, Brodhead, WI.

Wetlands consultants: Steven L. Apfelbaum, Applied Ecological Services, Brodhead, WI; Don Hey, Hey & Associates, Chicago.

Engineers: John Ezzi, P & D Technologies, Oak Brook, IL.

Farm general manager: Dave Konrad.

Farm consultants: Richard de Wilde, Viroqua, WI; John Callawaert, Chicago.

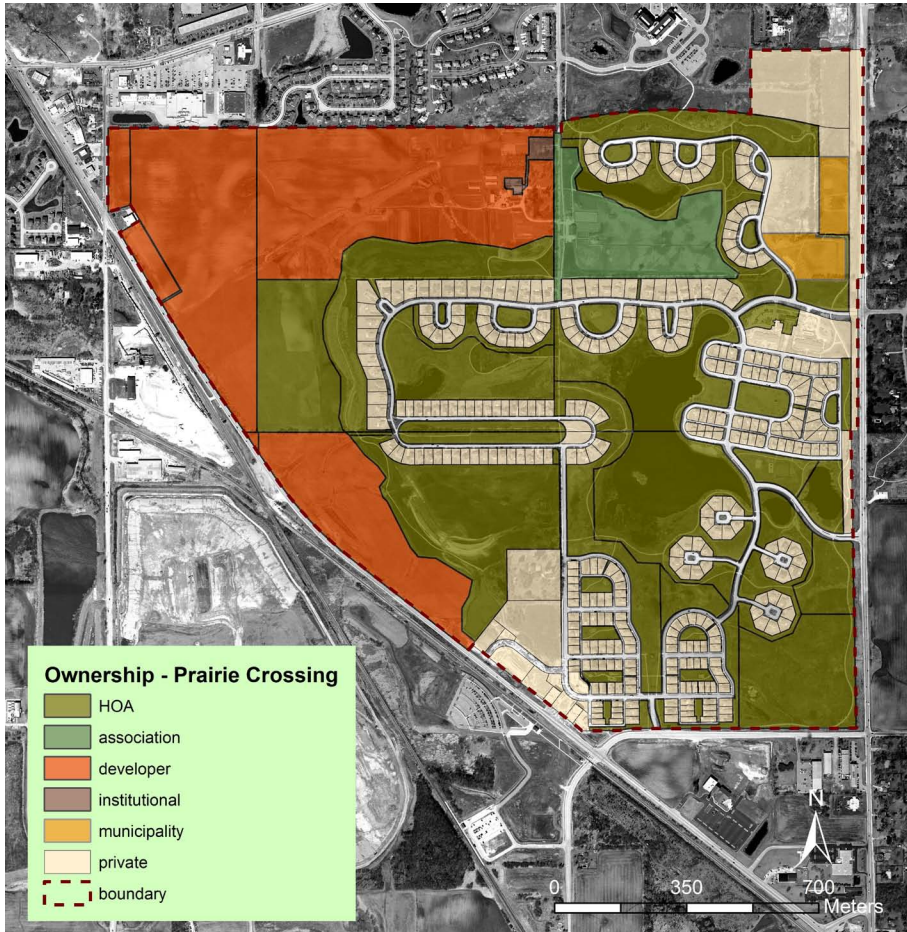
Environmental team leader: Michael Sands





**Figure 3:** A 2006 aerial photograph showing the site boundaries in red and the 22 house lots in three clusters.

# Ownership



**Figure 4:** Ownership of the open space at Prairie Crossing, showing the privately-owned parcels, the conservancy owned by the home owners association (HOA) and the farmland still owned by the developer.

The ownership of the open space is primarily held by the home owners association, and the developer. A Foundation was established to provide for the management of the open space and common spaces of the community.

**Table 1:** Breakdown of the ownership of the open space by area and percent of total.

<b>Ownership</b>	<b>Parcels #</b>	<b>acres</b>	<b>Area</b>	
			<b>ha</b>	<b>%</b>
HOA	51	260.48	105.5	41.40
Association	1	25.05	10.15	3.98
Developer	6	144.72	58.61	23.00
Institutional	2	1.56	0.63	0.25
Municipality	3	9.28	3.76	1.47
Private	390	139.81	56.62	22.2
Roads		48.33	19.57	7.68
<b>Total area</b>		<b>629.22</b>	<b>254.84</b>	<b>100</b>

# Habitat



**Figure 5:** The vegetative cover of the common open spaces in the development.

The common open space is largely maintained as prairie with a moderate level of intervention. There are also a variety of smaller spaces maintained in turf and ornamental plantings, including the 9-acre community green. The result is a development with large patches of high quality habitat, and good corridors connection to other patches and corridors in the surrounding region.

**Table 2:** A summary of vegetative cover in the open spaces at Prairie Crossing.

<b>Open Space cover</b>	<b>acres</b>	<b>ha</b>	<b>Total Area</b>	
			<b>% of OS</b>	<b>% of TD</b>
<i>Natural moderate intervention</i>	33.53	13.58	7.94	5.33
<i>Natural managed</i>	202.95	82.19	48.09	32.25
<i>Ornamental minimal</i>	3.95	1.60	0.94	0.63
<i>Ornamental mixed</i>	6.27	2.54	1.49	1.00
<i>Agricultural</i>	172.63	69.92	40.90	27.44
<b>Total area of Open Space</b>	<b>422.06</b>	<b>170.93</b>	<b>100.00</b>	
<b>Total area of development</b>	<b>629.22</b>	<b>254.83</b>		<b>67.08</b>
<b>Yards cover</b>	<b>#</b>	<b>%</b>		
Mix of Turf and Prairie	42	56.8		
Prairie	27	36.5		
Wildflowers	5	7.0		



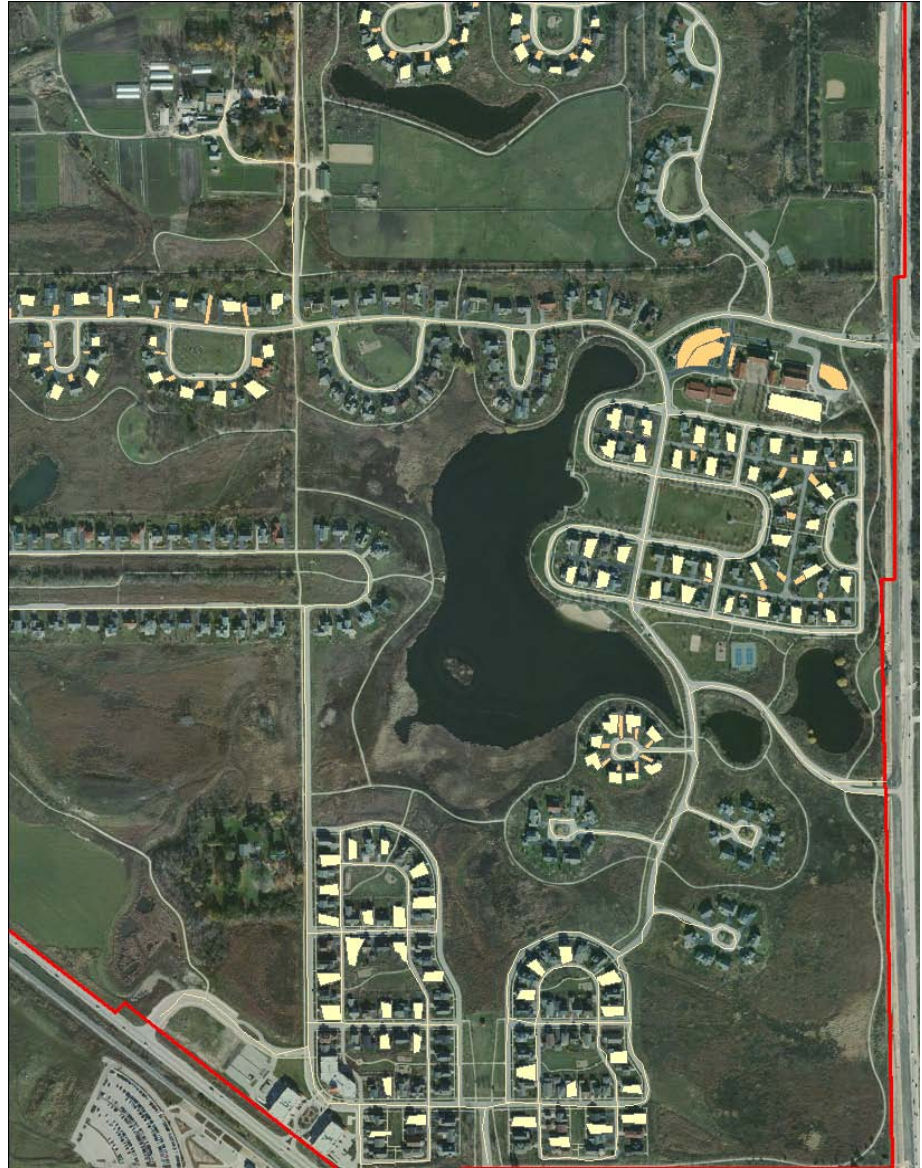
**Table 3:** A summary of the native plant analysis for the site. The conservancy rated very high in native plants and had a very high overall site rating for habitat potential.

	<i>Native Plants</i>	<i>Plant Cover</i>	<i>Notes</i>	<i>Rating</i>
	<i>%</i>	<i>%</i>		<i>% of total possible points</i>
<i>Transect 1A</i>	54.55	100	Burned last year, area of transect has a lot of quackgrass, but a greater percentage of natives observed elsewhere on this site.	70
<i>Transect 1B</i>	66.67	90	n/a	70
<i>Transect 2</i>	100	100	Pond has some interloping endangered fish species. Overall moderate amphibian habitat, quite a few frogs visible during transect. Trees on site have injury and a lot of dead wood. Other plants (forbs/shrubs) look good.	92.5
<i>Transect 3</i>	60	100	Private lot maintained by homeowner. One of the first homes built in the development. Good diversity, lots of native plants. Minimal turf. Lots of white sweet clover and aspen suckers. One dead aspen, other trees (non-native) look better.	33.33
<i>Transect 4</i>	100	100	Weed species are of higher quantity here. Low diversity. A few individual plants of purple looestrife observed, as well as hairy willow.	63.33
<i>Transect 5</i>	63.64	100	Transect located in wetland near lake. Big bluestem dominates the area surrounding the transect location	26.67
<i>Transect 6</i>	57.89	100		36.67
<i>Transect 7</i>	100	100		95
<i>Transect 8</i>	100	100		80
<b><i>Site Average</i></b>	<b><i>78.08</i></b>	<b><i>98.89</i></b>		<b><i>63.06</i></b>

The highest ranking transects for native plants were those taken in the managed prairie around the lake and pond. Other transects showed the effects of being close to sources of exotic invasives and/or less developed management. The site suffered in its overall rating from a lack of consistency between the open space parcels.



# Stormwater



**Figure 6:** Impervious surface on the site was measured by sampling the roofs and driveways and measuring the roads.

The development rates very well in impervious surface measures, and also in terms of stormwater best management practices. Stormwater is managed through a series of rain gardens, vegetated swales, and wetlands, before joining the lake and ponds.

**Table 4:** Total imperviousness of the development is low at 9.5%

	<b>Acres</b>	<b>% of Subdivision</b>
Roads	26.3	4.4
Roofs	21.97	3.7
Driveways	6.02	1.0
Parking Lots	2.98	0.5
<b>Total Area</b>	<b>57.27</b>	<b>9.5</b>

# Recreation



**Figure 7:** Recreational opportunities at Prairie Crossing.

There are a variety of recreational opportunities in the development. Lake Leopold offers swimming and boating. Fishing is available both at the lake and ponds on site. There are 18 km (11.19 miles) of trails, and a variety of recreation fields and tot lots and play structures throughout the community.

**Table 5:** Recreational opportunities in the open space, are available in 50.78 percent of the development area.

	<i>Area</i>			
	<i>acres</i>	<i>ha</i>	<i>% of open space</i>	<i>% total development</i>
Passive	272.29	110.28	55.96	43.27
Active	47.27	19.14	9.71	7.51
Inaccessible	167.02	67.64	34.33	26.54
Total open space	486.58	197.06	100	
Total development	629.22	254.83		77.33
Trail length	11.19 miles	18.00 km		

# Visual Quality

Visual quality was defined for the development using two measures: consistency of the landscape enhancement plantings, and distance to community open space. The rating was primarily for common spaces in this analysis, however, given the relationship in the development goals between private yard and common space plantings, the influence of private plantings on the visual quality was also reviewed.

Distance to open space was calculated by identifying the average distance from each home to the nearest community open space. Since the community open space is integrated with the development clusters, the average distance to a greenspace was low at 4.54 meters (14.91 feet). The clustered design of the development allowed for most homes (264 out of a total of 373) to be immediately adjacent to open space, and most of the remainder have open space immediately across a street or alley.

**Table 5:** Visual quality ratings for Prairie Crossing.

<i>Consistency of landscape enhancement plantings</i>	<i>high</i>	
<b><i>Average distance to open space</i></b>	<b><i>4.54 m</i></b>	<b><i>14.91 ft.</i></b>
Number of residential parcels	373	
Maximum distance to open space	60.45 m	198.34 ft.
Minimum distance to open space	0.0 m	0.0 ft.