



PRUDENTERRA

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Urban Example Land Walk Report

Agroecologist: Luke Robert Gran

Land Walk Date: April 2, 2016

Report Submitted: May 13, 2016

Client(s): Jane and John Doe

Contact Person: Jane Doe

Phone(s): Phone

Email(s): Email

Home Address: Address

County: County

Summary

Jane and John value the trees surrounding their home in the Park neighborhood of Town, Iowa. They would like to invest wisely in the management of their two-thirds of an acre of land. This includes determining which trees and shrubs should be kept or removed, and what new species could be added. Jane and John love nature and embrace wildlife of all kinds, with a special affection for their resident woodchucks. Over the next ten to fifteen years of stewardship, they want to enjoy and improve the land, leaving it in a better condition than when they received it.



CLIENT GOALS (Based on a phone call and site visit with Jane and John.)

1. *Be smart about the trees and shrubs: determine which should be kept or removed, and which new species to add.*
2. *Promote abundant, native biodiversity of plants and animals.*
3. *Be better able to enjoy the backyard; make it walkable and park-like.*
4. *Ameliorate gully erosion and discourage public use of their private land.*

GOAL-ORIENTED RECOMMENDATIONS

1. *Be smart about the trees and shrubs: determine which should be kept or removed, and which new species to add.*
 - 1.1. Strategic Tree Selection for shagbark hickory and oaks. Remove undesirable elm, burning bush, mulberry, ash, bitternut hickory, honeylocust, buckthorn.
 - 1.2. Oak/Hickory Savanna Restoration to achieve “park-like” setting with thriving understory. Achieve this by removing all overstory trees that are not oak, hickory, or walnut.
 - 1.3. Eradicate invasive species such as burning bush, honeylocust, buckthorn, tartarian honeysuckle. For larger 1” caliper shrubs, cut with a chainsaw and spray stump with 50% glyphosate (Roundup®) herbicide solution. The best time of year to do this management is during the months of July through January. If you wish, for very small plants, use a pliers and pull the invasive shrubs by hand in early spring.
 - 1.4. Plant new diverse shrubs and understory trees (see table on page that follows for which zone should be planted with which species). Cage shrubs and trees from deer browse for the first five years of establishment.
 - 1.5. Treat the high quality ash tree with systemic insecticide this May, repeat every two years as long as you wish to maintain this tree free of emerald ash borer infestation.
 - 1.6. Plant a new front yard shade tree cluster of native Iowa oaks. We can deliver a high quality tree to you or even help you plant it. Make sure to plant them correctly (appropriate depth) and maintain a three foot radius around them free of living ground vegetation. I recommend fabric mulch, held down by landscape staples (6” long) and with a couple buckets of wood chip mulch on top.
 - 1.7. Manage front yard maple tree with exposed roots with a 4” deep wood chip mulch zone. Frequent lawnmower damage to exposed roots may weaken or kill the tree.
2. *Promote abundant native biodiversity*
 - 2.1. Restore prairie in your front yard where full sun is available.



- 2.1.1. Seed diverse, local ecotype prairie species. Once the overstory is opened up from the tree thinning, many native prairie species will be able to thrive and support beneficial insects, birds, and other wildlife.
- 2.1.2. A faster but more expensive option for establishing prairie is to plant native prairie plugs. This reduces the amount of time that an establishing prairie appears “scrubby” or “weedy”.
- 2.2. In oak savanna restoration, use periodic fire, brush-capacity weedwacking, or goat browsing to stimulate native species in the soil seedbank.
- 2.3. Maintain 5-6 standing dead trees for structural habitat diversity to support cavity nesting animals like wood ducks, bats, and woodpeckers.
- 2.4. Build strategic wildlife brush shelters to support a diversity of wildlife and maintain them (do not burn, but rather, keep adding brush every 3-6 months).
<https://www.nwf.org/activity-finder/outdoor-activities/build-a-wildlife-brush-shelter.aspx>
- 2.5. Add simple water features to allow more critters to enjoy your land.
 - 2.5.1. Consider a small tank that can be warmed in winter with a livestock water heater. Additionally, bees can be watered with a shallow pan of water, full of rocks to land on.
3. *Be better able to enjoy the backyard; make it walkable, park-like.*
 - 3.1. This will be achieved through many of the plans outlined in this report, such as invasive species removal, thinning the overstory trees to enable the understory to thrive, and reducing soil erosion. Additionally, enjoyment will be increased by improving the habitat for wildlife, which will provide more wildlife viewing opportunities.
 - 3.2. To bring some of the woodland enjoyment indoors, fell a mature (24”+ diameter) black walnut (or salvage the downed walnut log off the forest floor). Have it milled for home use or share the lumber with friends.
4. *Ameliorate gully erosion and discourage public use of private land.*
 - 4.1. Ameliorate gully erosion in the backyard:
 - 4.1.1. Remove concrete pathway/trail and replace with living roots (will also discourage public confusion about trail).
 - 4.1.2. Leave downed woody debris (branches, leaves, twigs) perpendicular to the slope to slow water and soil movement.
 - 4.1.3. Divert water off the path using water bars at a 45 degree angle from the direction of water movement.



- 4.1.4. Strategic Tree Selection thinning will help increase sunlight hitting the forest floor, stimulating herbaceous layer vegetation with more fibrous, living roots covering and holding onto the soil.

I look forward to assisting you further as needed with the implementation of these land enhancements.

Best Wishes,

Luke Robert Gran
Forester, Owner



New Vision Land Management Map



Zone	Management Actions
1	Oak savanna restoration
2	Strategic Tree Selection
3	Shade tolerant native shrubs
4	Backyard flowerbed/landscaping
5	Shade tolerant native shrubs, flowers, and grasses
6	Full sun Prairie reconstruction

-  Ash tree candidate for emerald ash borer insecticide treatment
-  native oak shade tree cluster
-  remove cement trail
-  strategic brush piles
-  private walking path



Proposed Implementation in Four Phases



Phase	Color	Management Actions
1	Red	Treat ash tree, plant new trees and shrubs, break up concrete path
2	Blue	Native shrubs and plants south side of house, debris diverting water, strategic tree selection, and brush piles
3	Green	Oak Savanna restoration forestry cutting
4	Orange	Prairie reconstruction and woodland path development



Soils Map



Map Unit Symbol	Map Unit Name	Acres in AOI
236D	Lester loam, Bemis moraine, 10 to 16 percent slopes	0.3
236F	Lester loam, Bemis moraine, 16 to 22 percent slopes	0.1
1314	Hanlon-Spillville complex, channeled, 0 to 2 percent slopes	0.1
L138B	Clarion loam, Bemis moraine, 2 to 6 percent slopes	0.1

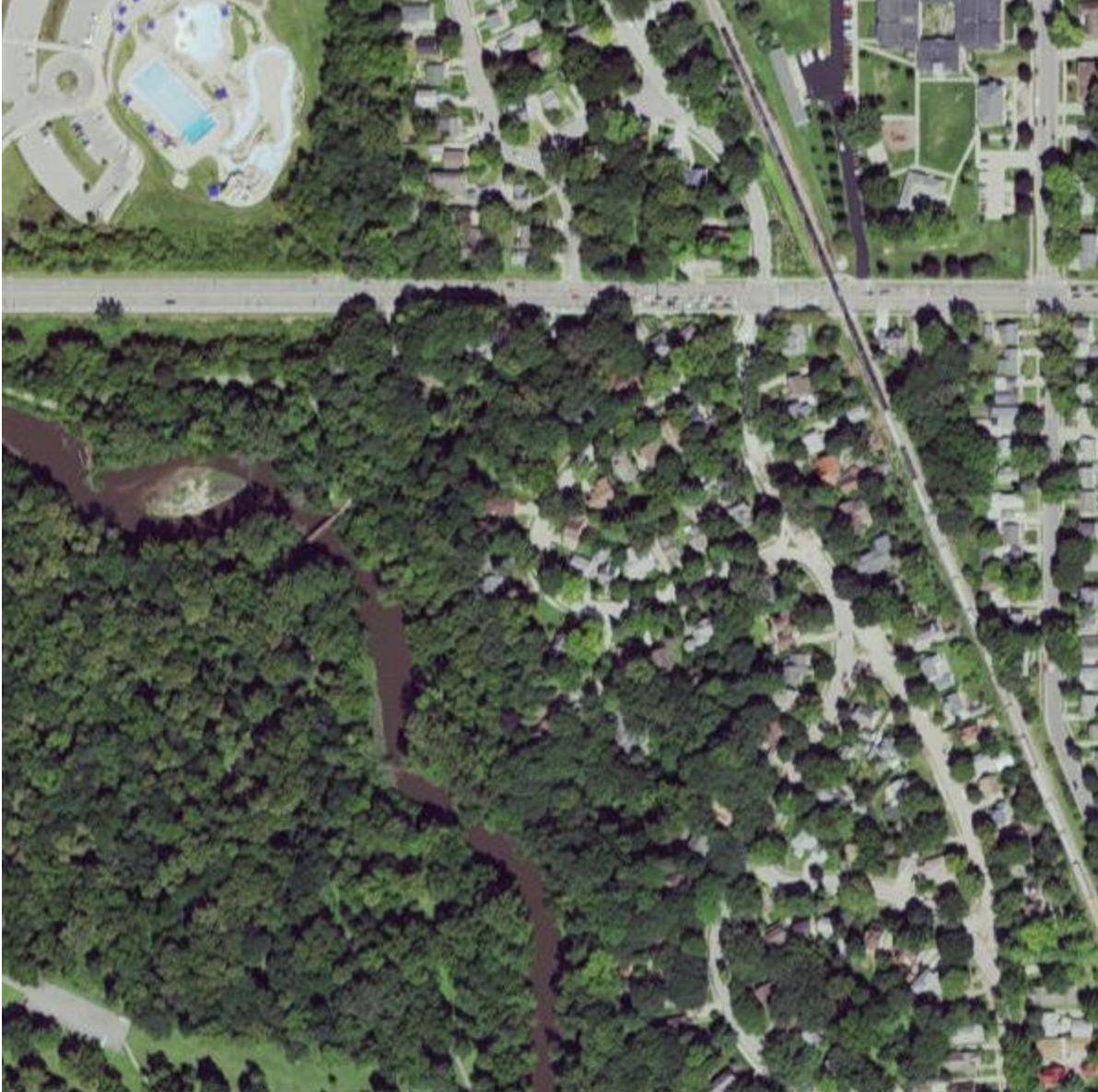


Light Image Detection and Range (LiDAR) relief map of the terrain in the neighborhood





2015 aerial photograph





Aerial photograph in 2007-2010



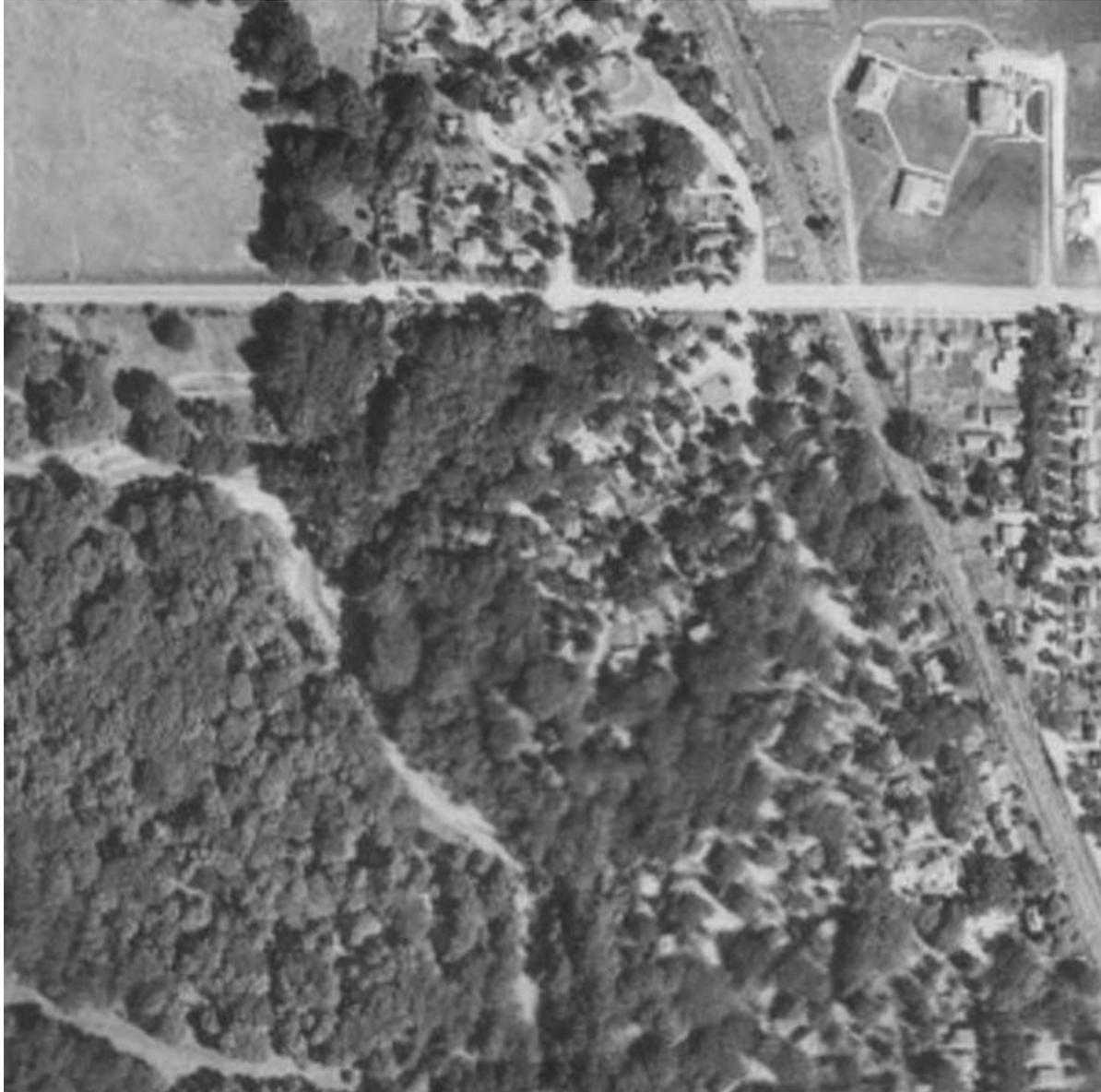


1980s aerial photograph





1950s aerial photograph





1930s aerial photograph





Historic Vegetation Map. In the 1830s-1840s all the farm was prairie and wetlands



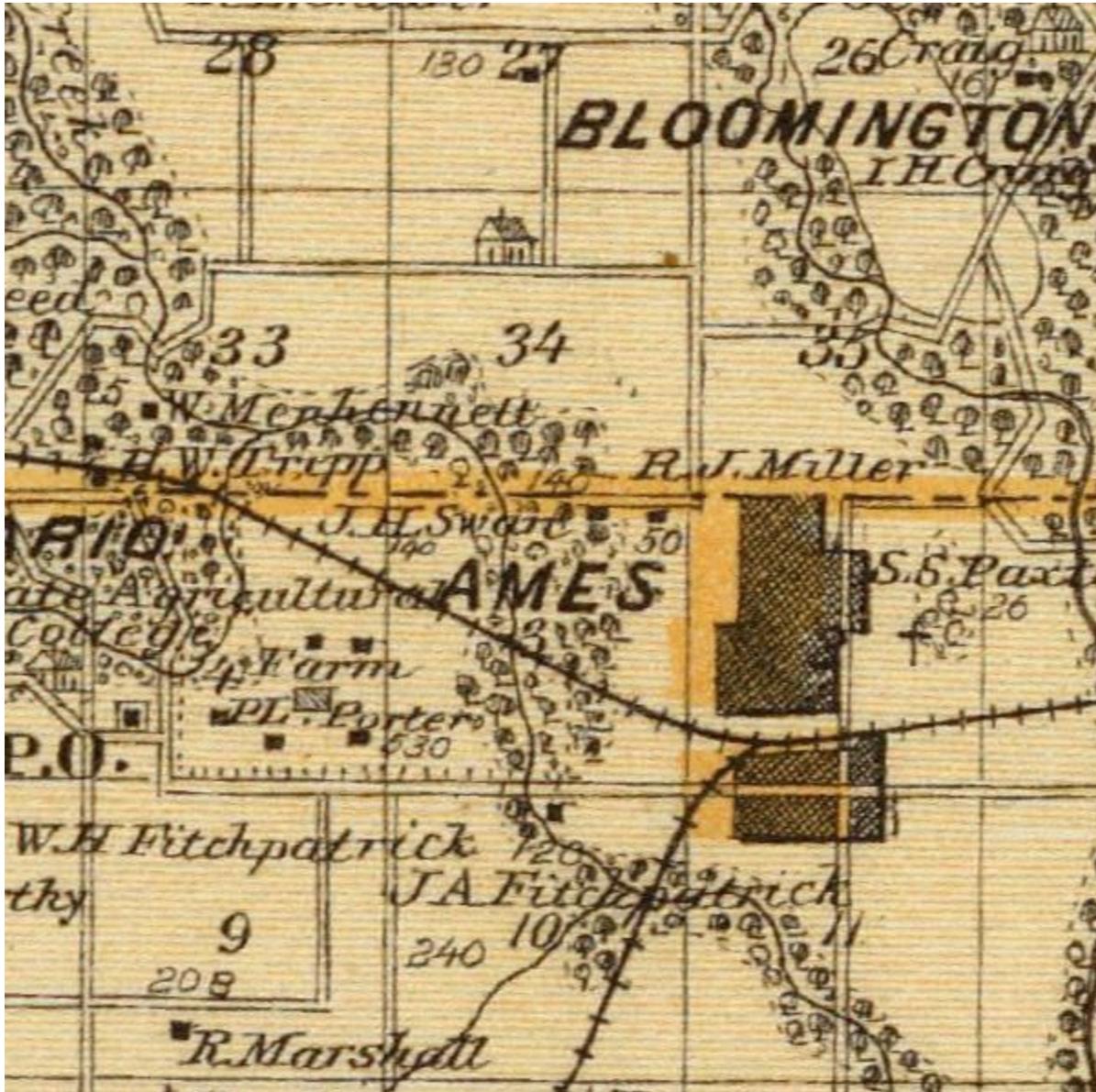
Vegetation was surveyed in the 1850s, prior to European settlement. Your land was forested, located in a transition zone near the edge of tallgrass prairie.

- Legend**
-  City/Village
 -  Field
 -  Forest
 -  Prairie
 -  Scattered Trees
 -  Water/Wetland

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The **Andreas Atlas** recorded settlers in the 1875 in your neighborhood.



Aerial photos and other graphics accessed at the Iowa Geographic Map Server - Iowa

State University Geographic Information Systems Support and Research Facility

www.ortho.gis.iastate.edu/

Soil map accessed at the USDA online Web Soil Survey <http://websoilsurvey.sc.egov.usda.gov>