

Quarry Estates Conservation Areas

Information for Residents

April 2019

Quarry Estates has been developed in partnership with the City of Ames to include a unique stormwater management system. To this end the site is designed to capture and hold all stormwater (rain and snow-melt) within the development, helping reduce pressure on the City's storm sewer system. This means that stormwater is directed into the large ponding area (see map), where a significant amount of water infiltrates into the soil rather than going directly into the storm sewer.

As an additional benefit, the ponding area is planted with native plant species. The lower section of the ponding area is planted with more wetland-type species, and the upper drier slopes are vegetated with native prairie species. Using native plant species (those that occurred historically in Iowa, pre-European settlement) has numerous benefits: the naturally deep rooted plants help stabilize the slopes, increase water infiltration in the bottom area, and create habitat for birds and other animals that do not respond to non-native landscapes.

Quarry Estates has two additional native vegetation areas: along the southern edge that borders Ada Hayden Heritage Park, and along the eastern edge of the subdivision. These conservation areas are planted with native prairie species to provide a natural complement to the habitat created by the ponding area and the Ada Hayden Heritage Park. Many birds and other native animals take advantage of this landscape that is quite distinct from that found in other housing sites.

Management of the conservation areas at Quarry Estates is provided through the Homeowners Association. Homeowners with property adjacent to the conservation areas do not need to do any management on their own and are restricted from altering the established native vegetation. This includes no direct modifications such as planting trees or landscaping/garden plants, and also destructive actions like dumping grass clippings or other debris in the conservation areas. To avoid the deleterious effects of phosphorus run-off (algal blooms in water bodies and decreased water quality) it is recommended homeowners use non-phosphorus fertilizers.

The conservation areas of Quarry Estates are in various stages of development; as houses are built and final grading is done each easement is seeded with native species. These areas take some time to establish and develop a mature stand. Young stands commonly have weeds that the management company removes as needed, with fewer weeds each growing season as the native plants mature. It is usually year three before the stand is mature, so conservation easements on older houses will have a distinctly different look than those adjacent to newer houses.

Homeowners are welcome to add native trees or shrubs to their non-easement landscape. This helps reduce invasive species problems and further extends the native habitat created by the conservation easements and Ada Hayden Heritage Park. There is a list of suggested species, and some to avoid, at the end of this report.

The points below review some of the rationale for the design of Quarry Estates:

1. City Ordinances: City of Ames and Friedrich Iowa Realty are committed to promoting more environmentally sensitive landscaping and protecting the adjacent watershed via use of improved storm water management practices.
2. Esthetics and Beautification: Many citizens are increasingly interested in nature and natural areas; having native vegetation within the subdivision provides opportunity for residents to enjoy a park-like landscape right in their own neighborhood and enjoy a year-round opportunity for attractive and satisfying wildlife viewing.
3. Habitat creation: Providing native vegetation attracts native animals and increases ecological value of the site relative to traditional landscapes that are vegetated with non-native species.
4. Reduced landscape maintenance: once established a healthy native area requires less management than mowed lawns, leading to reduced management costs.

5. Stormwater flow into Ada Hayden Heritage Park: Capturing precipitation runoff and sump pump flow in the large central basin protects the water in the adjacent downstream park areas from pollutants.

6. Property values: Housing near natural areas commands a premium over similar housing in traditional landscapes.

Recommended native species for yards and other non-conservation areas:

- Trees: Bur oak, White oak, swamp white oak, hazelnut, eastern wahoo, service berry, honey locust, black maple, shagbark hickory, KY coffee tree, hackberry, American linden and native hawthorns
- Shrubs: hazelnut, coralberry, arrow wood, service berry, lead plant, buttonbush,
- Maples: avoid Norway, Amur and Tartarian (see below under invasive species)
 - Sugar maple:
 - Ames is west of its range. This species struggles there unless very well sited.
 - <http://maple.dnr.cornell.edu/pubs/trees.htm>
 - http://www.na.fs.fed.us/pubs/silvics_manual/volume_2/acer/saccharum.htm
 - Black Maple: does much better in our area than sugar maple.
 - http://www.na.fs.fed.us/pubs/silvics_manual/volume_2/acer/nigrum.htm
- Lindens:
 - Littleleaf linden:
 - *native to Europe*: <http://www.plantmaps.com/nrm/tilia-cordata-small-leaved-lime-little-leaf-linden-native-range-map.php>
 - American Linden is native, preferred, and somewhat less susceptible to Japanese Beetles: http://www.na.fs.fed.us/pubs/silvics_manual/volume_2/tilia/americana.htm
- Species to avoid:
 - Avoid invasive species or those that re-seed profusely (leading to increased management needs):
 - *Amur maple should be avoided*:
 - <http://www.dnr.state.mn.us/invasives/terrestrialplants/woody/amurmaple.html>
 - <http://dnr.wi.gov/topic/Invasives/fact/AmurMaple.html>
 - Flowering pear: includes the very invasive Bradford pear:
 - <http://mdc.mo.gov/newsroom/avoid-invasive-trees-such-bradford-pear-landscape-plantings>
 - <http://caseytrees.org/blog/invasive-tree-week-bradford-pear/>

Maples:

- Norway & Amur maples are invasive and should be avoided
- Tartarian maple: Not as invasive as Amur maple but not native to our area
- Norway maple: not native to the US and considered invasive
 - <http://www.nps.gov/plants/alien/pubs/midatlantic/acpl.htm>
 - <http://www.dnr.state.mn.us/invasives/terrestrialplants/woody/norwaymaple.html>

Crabapples: showy for short period then very prone to losing leaves, dropping fruit, and generally unattractive look

Ginkgo: native to China, female trees drop foul-smelling, slippery fruit

More information:

- <https://www.fs.fed.us/wildflowers/pollinators/gardening.shtml>
- <http://www.bringingnaturehome.net/>
- <https://prairieecologist.com/2019/03/25/letting-nature-take-its-course/>