



Proposal for Brookby Estate
Aquinas College
Grand Rapids MI 49503
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Summary:

The Brookby estate borders approximately 400 feet of stream frontage on Coldbrook Creek as it flows from Fisk Lake. The project area encompasses roughly 11,000 square feet and includes a broad swath of creekside habitat. Historically, Coldbrook Creek flowed from Fisk Lake through oak savanna and beech and sugar maple forests, and was the source of the water for the first pumped water supply in Grand Rapids, Michigan. Since then, much of the creek has been diverted underground and forgotten by most. Currently, Aquinas College Biology Club cleans trash from the creek twice each year, and there has been an awakened interest in exposing and restoring underground parts of the creek as they flow to the Grand River. Aquinas College owns a large part of the aboveground portion of the creek and could help to showcase sustainable stormwater practices and provide a demonstration site for streambank restoration.

Management of this stream frontage currently involves mowing turf grass up to the stream when the ground is firm enough to support a riding mower.

A stream bank restoration project will accomplish 4 major goals:

- Provide habitat for aquatic and terrestrial wildlife
- Reduce stormwater runoff
- Reduce mowing and other inputs needed to sustain turf grass
- Increase water quality

Work Plan:

We recommend planting in a wetland meadow that features native sedges and flowers selected to provide pollinator habitat for insects during the entire growing season. Plants native to Michigan have evolved here, and once established, require no fertilizer and little to no supplemental water input. Native plants also provide habitat and food sources for the insects, birds, and other wildlife that make Michigan home. The turf grass will be treated with aquatic safe herbicide and seed will be installed directly into the dead turf. The first two seasons of growth will be the establishment phase. Mowing treatments may be needed to remove seedheads of annual weeds. The necessity of this treatment will be determined by site visits. After 2 seasons the project will begin to look more established and blooming native flowers will

be beautiful throughout the year. A mowing treatment may be recommended every 3 to 5 years to remove trees and shrubs. If desired, a prescribed burn can also be conducted by the trained and certified wildfire management crew at Kalamazoo Nature Center. Historically, Michigan landscapes were maintained by fire, and a prescribed burn releases nutrients into the soil and removes weed trees and other unwanted species.

Tasks:

- Meet with stakeholders to determine species list, and discuss project borders and aesthetics
- Herbicide
- Install seed
- Mow to specified height
- Monitor
- Incorporate student projects to grow and plant supplemental native species (optional)