



*Natural Features Inventory
of the Davis Creek Watershed*

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Project Overview

Natural Features Inventories are relatively new tools for conservation planning, commencing within the past twenty years and gaining popularity only very recently. Though no conclusive definition for this type of study exists, common features of such inventories include the identification, classification, and cataloging of biological communities as well as plant and animal species. Special attention is typically paid to threatened or endangered species and remnants of undisturbed communities. The value of these studies in effective conservation planning is immeasurable.

Knowledge of the natural features found within an area as well as the geographic distribution of these elements improves the efficacy of land and water use planning. Studies performed within natural boundaries, such as watersheds, often cross political jurisdictions. Watershed-based planning encourages partnerships between neighboring jurisdictions.

This larger view of the watershed also creates the opportunity for balanced planning. When citizens are given a clear picture of the natural features within their watershed, they have the opportunity to be pro-active in land use planning. It is important to recognize that biological communities often require individual planning and conservation measures. Balancing biological communities and species needs with the demands of development is imperative for not only minimizing impact on these sensitive elements but for conserving these resources as new watershed development occurs. Cities and townships which have been successful in striking this balance often attract new interest and generate pride in their communities. A baseline inventory of natural features such as provided by this project can be a tool in this important element of the community planning process.

The Davis Creek Watershed Natural Features Inventory has cataloged historical as well as current biological species and communities found within the watershed. Few comprehensive studies of this sort have been performed in this watershed. The uniqueness of this study, both for the watershed and for other future inventories, is exemplified by the combination of field and remotely gathered data. The distinctive feature of this approach was the concurrent use of field inventories with digital land use/land coverage of the watershed developed from October 1997 satellite imagery. The combination of these features allows for a holistic understanding of the interactions occurring within the watershed, as information is collected at multiple scales. End products include not only species lists of various plants and animals found in the watershed, but commentary on natural community connectivity and degrees of fragmentation.

Over 250 species of flora and fauna were documented via field visits, with emphasis being placed on terrestrial communities. Many of the species documented are common to highly disturbed sites. However, three “listed” plants have recently been documented within the watershed; Rosinweed (*Silphium integrifolium*) and Cut-leaved Water Parsnip (*Berula erecta*), both listed as Threatened in Michigan, as well as Prairie False Indigo (*Baptisia lactea*), listed as Special Concern by the State of Michigan. In addition, records of eleven listed birds exist, including the Prairie Warbler (*Dendroica dominica*), the Northern Goshawk (*Accipiter gentilis*), the Least Bittern (*Ixobrychus exilis*) and the Red-shouldered Hawk (*Buteo lineatus*), all Threatened in

Michigan. Though few examples of natural biological communities exist within the watershed, the wetlands surrounding East Lake appear to have undergone relatively minimal disturbances. A Tamarack Bog is located at the southern end of the lake, providing valuable wildlife habitat.

Through sophisticated processing of satellite imagery, information about the land uses and land covers within the watershed was compiled. It was found that approximately 26% of the watershed is

characterized by urban land covers. Agriculture is another dominant land use, particularly near the Creek's headwaters at East Lake, comprising 24% of the entire watershed. Forests and discrete stands of trees make up 23% of the watershed. The remaining 27% is split between open lands (12%), shrublands (7%), wetlands (6%), and water (2%).

As part of this project, a web-based Natural Features Guide was produced in order to improve public access to the information gathered, and serve as an educational tool to spur interest in these important features that surround the stakeholders within this watershed community. This guide is currently housed at The Forum of Greater Kalamazoo's website, at <http://www.theforum.org/nfi>. Copies of this report are available for download in pdf (Adobe Acrobat) format at <http://www.kieser-associates.com>.

