Developing a Method for Chronicking Historic Landscape Change: A Case Study of the Mill River Watershed

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INTRODUCTION

Since the early 1640's, the Mill River and its tributaries have provided local industry with a cheap and accessible power source. Grist mills appeared first, followed by the wool, cotton and paper industries. These industries clustered around natural falls along the Mill River, ideal sites for the erection of power-harnessing dams. Industrial growth has the potential to alter a landscape beyond the immediate impacts of dam and factory construction. Population growth is one such example, resulting in an increase in the residential and agricultural needs of the affected community. The purpose of this project was to map industrialization of the Mill River Watershed, and to collect information into a GIS database that could then be used to assess the impact of local industry on long-term landscape change. Due to map availability, this project focused on Northampton.

METHODS

300 years of historic maps (1700-1903) were geo-referenced in ArcGIS. Maps were obtained from the Mill River Greenway Initiative, Forbes Library, and Historic Northampton. Geo-referencing was conducted by comparing historic maps with a base map constructed from local road and hydrology data published by the Massachusetts Office of Geographic Information (MassGIS). It was assumed that the main intersections in towns along the Mill River had remained in the same general location throughout the region's post-colonial history. Maps varied greatly both in accuracy and in detail. As a result, it was necessary to compare maps with local industrial histories. Archival sources provided detailed information regarding mill and factory locations, names, changes in ownership, number of employees, product, and power source. These details were incorporated into layer attribute tables. Figures 3-6 chart industrial growth at three sites on the Mill River: the Nonotuck Mill site, Paper Mill Village, and the Upper Mill dam. Figures 7-10 chart changes in power source over time.