

## **Watershed Plan for the North Chili Tributary of Black Creek O-117-19-7**

### **III. The Watershed**

#### **A. Watershed Description**

##### 1. Environmental Maps

The watershed is approximately 5.4 square miles (approximately 3,400 acres) in size. It lies predominantly in the northwest corner of the Town of Chili. A small portion (12.5%) extends across Chili's western boundary into Riga, and an even smaller portion extends across Chili's northern boundary into Ogden. Several maps showing environmental features of the watershed are included at the end of this chapter. Streams are shown on all of the maps. Environmental maps include:

- New York State Designated Wetlands: See Map 3
- Federal Wetlands: See Map 4
- Topography: See Maps 5-6
- Hydric and Potentially Hydric Soils: See Map 7

##### 2. Groundwater Resources

Aquifers within this watershed are comprised almost solely of limestone and dolomite rock types. These aquifers can have well yields of between 50 to 150 gallons per minute. In addition, there is one known artesian well in Hubbard Park. This well continuously produces water at a rate of approximately 50 gallons per minute that is discharged to this watershed via a channel of unknown origin. The channel crosses Hubbard Park, Parkway, and Union Street, and enters sub-tributary O-117-19-7-1.

#### **B. Description of Major Land Uses, Locations and Percentage of Imperviousness**

##### 1. Land Use Maps

Maps showing land use features of the watershed are included at the end of this chapter. Streams are also shown on the maps. Land use maps include:

- Existing Land Use: See Map 8 and Table 1.
- Waste Sites: See Map 9
- Sanitary Sewers: See Map 10
- Mile-square maps showing subdivision ponds, cross culverts, sanitary and storm sewers, drainage ditches, and watercourses are available at the Chili Town Hall at the office of the Superintendent of Public Works.

##### 2. Undeveloped/Agriculture

Two different approaches were used to assess agricultural activity within this basin. The two approaches yielded significantly different acreage results:

- Review of Farm Service Agency aerial photography shows about 600 acres in agricultural use.
- A search through current Monroe County Real Property Service tax records shows about 287 acres in agricultural use.

This discrepancy may be because the Town Assessor may list the whole parcel as a “vacant use” when part of it is in crop production. Farm Service Agency records are updated as farmers report to the Agency. However, some farms do not have to report annually, so data may not be current. Generally, the trend is towards fewer acres in agriculture. Interpretation of current aerial slides, along with detailed field investigations, would certainly reduce this difference in acreage results.

Approximately one-fourth of the cropland in the watershed is highly erodible. This is about the same as the county average.

The predominant crops grown are grain corn, wheat, and soybeans or kidney beans (with a cover crop of clover frequently established). This is typically a good crop rotation that minimizes soil loss, nutrient transport, and pesticide leaching. Fertility requirements are relatively low for these field crops as compared to vegetable crops. Typically, grain crops effectively utilize macro nutrients. Field topography and existing field buffers are good for controlling runoff from most crop fields.

Field crop farms in this watershed are not expected to be a significant source of environmental problems unless there is gross mismanagement.

### 3. Percentage of Impervious Surfaces

In 1997, estimates of the percentage of impervious surfaces in the Chili portion of the subwatershed were made by Monroe County Department of Planning and Development staff based on current land use and on potential land use if currently undeveloped lands were developed according to existing zoning. The results of that estimate are shown in Table 1, both in terms of percent and acreage. Using the numbers in Table 1, it is calculated that as of 1997, there were approximately 150 acres of impervious surfaces in this subwatershed. If the lands in this subwatershed were developed according to current zoning, the potential for impervious surfaces is approximately 750 acres. Impervious surfaces are of concern in this watershed plan because of the relationship between impervious surfaces and the generation of stormwater runoff. The greater the impervious surfaces, the greater the amount of stormwater runoff that will be generated and must be managed to prevent flooding and to minimize pollutants carried to waterways with that runoff. This will be addressed in more detail in later chapters.

Insert imperviousness table



insert Map of State Wetlands: Map 3.

Insert map of federal wetlands: Map 4

insert topography map North: Map 5

insert topography map South: Map 6



insert soils map: Map 7

Insert existing land-use map: Map 8

Insert waste site map: Map 9

Insert sanitary sewer map: Map 10