

1.0 SETTING OF THE WATERSHED – PEOPLE, PLACES AND THINGS

1.1 Watershed Management Area and Sub-Watersheds:

As described on the New Jersey Department of Environmental Protection Division of Watershed Management website (<http://www.state.nj.us/dep/watershedmgt/index.html>), a watershed is “the area of land that drains into a body of water such as a river, lake, stream or bay. It is separated from other systems by high points in the area such as hills or slopes. It includes not only the waterway itself but also the entire land area that drains to it. For example, the watershed of a lake would include not only the streams entering the lake but also the land area that drains into those streams and eventually the lake. Drainage basins generally refer to large watersheds that encompass the watersheds of many smaller river and streams.”

The New Jersey Northeast Watershed Region is comprised of Watershed Management Areas (WMAs) 3, 4, 5 and 6. Of these, WMAs 3, 4 and 6 comprise the Passaic Watershed.

WMA6 represents the area drained by waters from the upper reaches of the Passaic River Basin, including the Passaic River from its headwaters in Morris County to the confluence of the Pompton River. WMA 6 lies in portions of Morris, Somerset, Sussex, Union and Essex counties and includes the Upper & Middle Passaic River, Whippany River and Rockaway River Watersheds and covers approximately 361 square miles. Table 1.1.1 lists municipalities within WMA 6. The location of WMA 6 is shown on Plate 1.1.1.

The Upper Passaic River Watershed is approximately 50 miles long and consists of a drainage area approximately 143 square miles in portions of Somerset, Morris, Union and Essex Counties. This section of the Passaic River is a significant source of drinking water for a much of northeastern New Jersey. Major tributaries to the Upper Passaic River includes Dead River, Rockaway River, Whippany River, and Black Brook. The Great Swamp National Wildlife Refuge is located within the Upper Passaic River Watershed. Plate 1.1.2 shows the subwatersheds of WMA 6.

Approximately one-half of this watershed is undeveloped or vacant, with the remainder primarily residential and commercial; however, this watershed is facing significant development in the vacant areas.

The Upper Passaic River Watershed is upstream of Pine Brook, while the Middle Passaic River Watershed runs from Pine Brook to Two Bridges, at the confluence with the Pompton River.

The Middle Passaic River Watershed has a drainage area of approximately 11 square miles and includes Great Piece Meadows and Deepavaal Brook. The Great Piece Meadows is a freshwater wetland and is prone to flooding. The Great Piece Meadows is privately owned by various entities.

The Rockaway River Watershed has a drainage area of approximately 137 square miles and is approximately 37 miles long. The Rockaway River flows east to its confluence with the Whippany River at Pine Brook. Major tributaries include Stone Brook, Mill Brook, Beaver Brook, and Den Brook. The land use patterns in this area are complex and include vacant areas, parklands, residential development and industrial/commercial uses.

The Whippany River Watershed drains approximately 70 square miles and is located entirely within Morris County. The river is approximately 18 miles long and flows to the Passaic River. Two major tributaries are Black Brook and Troy Brook. The population is centered in Morristown, Parsippany-Troy Hills, Hanover Township and East Hanover Township.

Table 1.1.1 Municipalities Within Watershed Management Area 6

COUNTY	MUNICIPALITY	In WMA6		COUNTY	MUNICIPALITY	In WMA 6	
		Sq Mi	%			Sq Mi	%
Essex	Caldwell Boro	1.0	83.2	Morris	Mendham Boro	1.2	20.7
Essex	Cedar Grove Twp	0.5	1.1	Morris	Mendham Twp	9.9	55.4
Essex	Essex Fells Boro	1.4	97.7	Morris	Mine Hill Twp	1.9	61.9
Essex	Fairfield Boro	7.3	70.7	Morris	Montville Twp	14.8	78.3
Essex	Livingston Twp	14.1	100.0	Morris	Morris Plains Boro	2.6	100
Essex	Millburn Twp	4.7	47.2	Morris	Morris Twp	15.8	100
Essex	North Caldwell	0.5	17.2	Morris	Morristown Town	3.0	100
Essex	Roseland Boro	3.6	100.0	Morris	Mount Arlington	0.1	2.6
Essex	Verona Boro	0.1	3.8	Morris	Mountain Lakes	2.9	100
Essex	West Caldwell Boro	2.8	55.0	Morris	Parsippany-Troy Hills	25.5	100
Essex	West Orange Town	2.5	20.1	Morris	Randolph Twp	13.2	62.5
Morris	Boonton Town	2.5	100.0	Morris	Rockaway Boro	2.1	100
Morris	Boonton Twp	8.7	100.0	Morris	Rockaway Twp	39.5	87.2
Morris	Chatham Boro	2.4	100.0	Morris	Roxbury Twp	3.1	14.3
Morris	Chatham Twp	9.4	100.0	Morris	Victory Gardens	0.1	100
Morris	Denville Twp	12.6	100.0	Morris	Wharton Boro	2.2	100
Morris	Dover Town	2.8	100.0	Somerset	Bernards Twp	21.4	88.4
Morris	East Hanover Twp	8.2	100.0	Somerset	Bernardsville Boro	4.0	30.7
Morris	Florham Park Boro	7.5	100.0	Somerset	Bridgewater Twp	0.1	0.1
Morris	Hanover Twp	10.8	100.0	Somerset	Far Hills Boro	0.5	11.1
Morris	Harding Twp	20.5	100.0	Somerset	Warren Twp	11.5	58.7
Morris	Jefferson Twp	21.2	49.9	Sussex	Hardyston Twp	1.5	4.7
Morris	Kinnelon Boro	6.1	31.6	Sussex	Sparta Twp	4.1	10.2
Morris	Lincoln Park Boro	2.3	32.7	Union	Berkeley Heights	3.8	61.3
Morris	Long Hill Twp	12.1	100.0	Union	New Providence	3.6	98.6
Morris	Madison Boro	4.2	100.0	Union	Summit City	3.9	64.5

Table 1.1.2 Subwatersheds of WMA 6

Major Subwatershed	Drainage Area Square Miles
Upper Passaic	143*
Middle Passaic	11*
Rockaway	137
Whippany	70

*** Values rounded down to maintain total value of 361 s.m.**