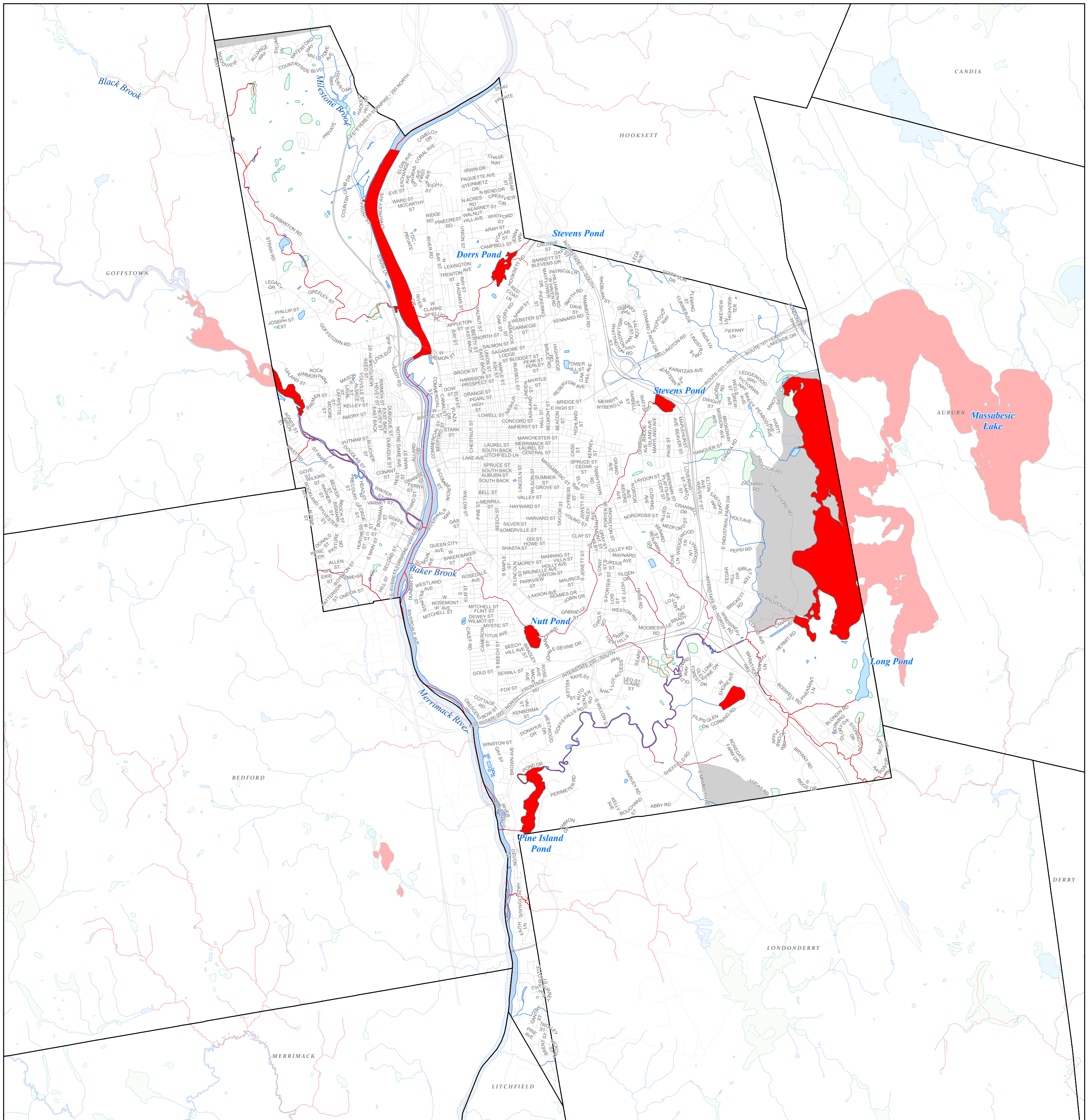










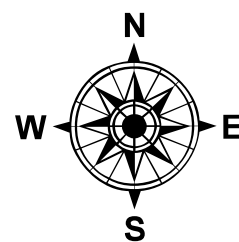
Appendix A

Impaired and TMDL Waters Updates



Legend

-  303(d) Impaired Stream
-  303(d) Impaired Waterbody
-  Local Roads
-  State or Interstate
-  Pond, Reservoir
-  Swamp, Marsh
-  Stream, River
-  Non-Urban Area



**Impaired Waters
Manchester, NH**



**Comprehensive
Environmental
Incorporated**

Data Sources: GRANIT, City of Manchester

Impaired Waters Based on the Final 2020/2022 303(d) List

c

Waterbody Name	Segment ID and Category		Impairment(s)	Approved TMDL	Comments
Baker Brook	NHRIV700060803-08	5	Chloride		
Black Brook	NHRIV700060801-05-02	5	Benthic-macroinvertebrates		
		5	pH		
Black Brook-Hardy Brook	NHRIV700060801-05-01	5	Dissolved oxygen saturation		Added 2020/2022
		5	Dissolved oxygen		
		5	Lead		
		5	pH		
Cohas Brook	NHRIV700060703-08	5	pH		
	NHRIV700060703-09	4a	<i>E. coli</i>	9/21/2010	
Cohas Brook- Long Pond Brook	NHRIV700060703-05	5	Benthic-macroinvertebrates		
		5	pH		
		4a	<i>E. coli</i>	9/21/2010	
		4c	Stream habitat assessment		
Crystal Lake	NHLAK700060703-02-01	5	Dissolved oxygen saturation		
Crystal Lake- Town Beach	NHLAK700060703-02-02	5	Dissolved oxygen saturation		Removed 2018
		4a	<i>E. coli</i>	9/21/2010	
Melody Pines Day Camp Beach	NHLAK700060703-02-03	5	Dissolved oxygen		Removed 2018
		5	Dissolved oxygen saturation		Removed 2018
Dorrs Pond	NHLAK700060802-01	5	Chloride		
		4a	Chlorophyll	5/12/2011	
		4a	Dissolved oxygen	5/12/2011	
		4a	Phosphorous	5/12/2011	
Dorrs Pond Inlet	NHRIV700060802-13	5	Chloride		
Dorrs Pond- E Inlet	NHRIV700060802-16	5	Chloride		
Humphrey Brook	NHRIV700060803-15	5	Chloride		
Little Cohas- Unnamed Brook	NHRIV700060804-05	5	Benthic-macroinvertebrates		
		5	Chloride		
		5	Iron		
		5	Dissolved oxygen		
		5	Dissolved oxygen saturation		
		5	pH		
Massabesic Lake	NHLAK700060702-03	5	Dissolved oxygen		
		5	Dissolved oxygen saturation		
		5	Cyanobacteria		
		4c	Non-native aquatic plants		
		4a	pH	9/20/2007	
McQuesten Brook	NHRIV700060803-16	5	<i>E. coli</i>		Added 2018
		5	Chloride		
		5	Dissolved oxygen		Removed 2018
		5	Dissolved oxygen saturation		
		5	pH		
Merrimack River	NHRIV700060802-14-02	5	Aluminum		
		5	Dissolved oxygen saturation		Removed 2020/2022
		5	pH		
	NHRIV700060803-14-02	4a	<i>E. coli</i>	9/21/2010	
		5	Aluminum		
		5	pH		
		4a	<i>E. coli</i>	9/21/2010	
NHRIV700060804-11	4b	Phosphorous		Added 2018	
NHRIV700060804-11	4a	<i>E. coli</i>	9/21/2010		
Merrimack River- Amoskeag Dam	NHIMP7000600802-04	4a	<i>E. coli</i>	9/21/2010	

Waterbody Name	Segment ID and Category	Impairment(s)	Approved TMDL	Comments
Namaske Lake	NHLAK700060607-02	5	Chlorophyll	
		5	Phosphorous	
		5	pH	
		4a	<i>E. coli</i>	9/21/2010
		4c	Non-native aquatic plants	
Nutt Pond	NHLAK700060803-01	5	Chloride	
		5	pH	
		4a	Chlorophyll	5/12/2011
		4a	Phosphorous	5/12/2011
		4a	Dissolved oxygen saturation	5/12/2011
		4c	Non-native aquatic plants	
Pine Island Pond	NHLAK700060703-04	5	pH	
		4a	Chlorophyll	5/12/2011
		4a	Cyanobacteria	5/12/2011
		4a	Dissolved oxygen saturation	5/12/2011
		4a	Dissolved oxygen	5/12/2011
Piscataquog River	NHRIV700060607-22	5	pH	
		4b	<i>E. coli</i>	
Rays Brook	NHRIV700060802-15	5	Chloride	
		4a	<i>E. coli</i>	8/29/2011
Saint Anselm Brook- To Piscataquog River	NHRIV700060607-35	5	Chloride	Added 2020/2022
		5	Dissolved oxygen saturation	Added 2020/2022
		5	Dissolved oxygen	
		5	pH	
		4a	<i>E. coli</i>	8/29/2011
South Perimeter Brook	NHRIV700060804-12	5	Chloride	
		5	Iron	
Stevens Pond	NHLAK700060803-02	5	Chloride	
		4a	Chlorophyll	5/12/2011
		4a	Dissolved oxygen saturation	5/12/2011
		4a	Dissolved oxygen	5/12/2011
		4a	pH	9/20/2007

Notes: The "TMDL for 158 Acid Impaired Ponds and 21 Aluminum Impaired Lakes" and the "Northeast Regional Mercury TMDL" do not specify waste load

Green shading - Impairments removed since NOI.

Blue shading - Impairments added since NOI.

Requirements for TMDL and water quality limited waterbodies, specifically bacteria, phosphorus, lead, iron and chloride, are outlined in

Table 6-3 (Updated). Additional Sampling Parameters for Discharges to Impaired Waters (Based on 2020/2022 303(d) List)

Sample Parameter	Impairment	Impaired Water																		Method			
		Namaske Lake	Pine Island Pond	Dorrs Pond	Stevens Pond	Dorrs Pond Inlet Brook	Dorrs Pond-E Inlet	Humphrey Brook	Little Cohas-Unnamed	Baker Brook	Black Brook	Black Brook-Hardy Brook	Cohas Brook	Cohas Brook-Long Pond	Crystal Lake	Massabesic Lake	McQuesten Brook	Piscataquog River	Ray Brook		Saint Anslam Brook-To Piscataquog River	South Perimeter Brook	Merrimack River
pH	pH	X	X		X			X		X	X	X	X		X	X	X		X		X	X	Field Meter
Dissolved Oxygen	DO Saturation DO		X	X	X			X			X			X	X	X			X			X	Field Meter or Laboratory Analysis: 365.1; 365.2; 365.3
Total Phosphorus	Phosphorus DO saturation DO Excess algal growth Chlorophyll-a Cyanobacteria	X	X	X	X			X			X			X	X	X			X		X	X	Laboratory Analysis: SM 4500-P
BOD5	DO Saturation DO		X	X	X			X			X			X	X	X			X		X	X	Laboratory Analysis: 360.1; 360.2
Aluminum	Aluminum																				X		Laboratory Analysis: EPA 405.1, SM 5210
Lead	Lead										X												Laboratory Analysis: 200.7
Iron	Iron							X													X		Laboratory Analysis: EPA 200.7
Chloride	Chloride			X	X	X	X	X	X							X		X	X	X	X		Laboratory Analysis: 300; SM 4500-Cl
No additional sampling required	Benthic macro-invertebrates Non-native aquatic plants	X						X		X		X		X								X	Per additional MS4 guidance from NHDES, no additional monitoring is required.