

Freshwater Habitats

Streams and Rivers

Major Watersheds of New York

We used the 8-digit Hydrologic Unit Code (HUC) system to organize our presentation of the distribution and condition of stream and river Macrogroups. Ten 8-digit HUCs are found in New York (Figure 69). These watersheds are depicted underlying all aquatic habitat distribution maps below.

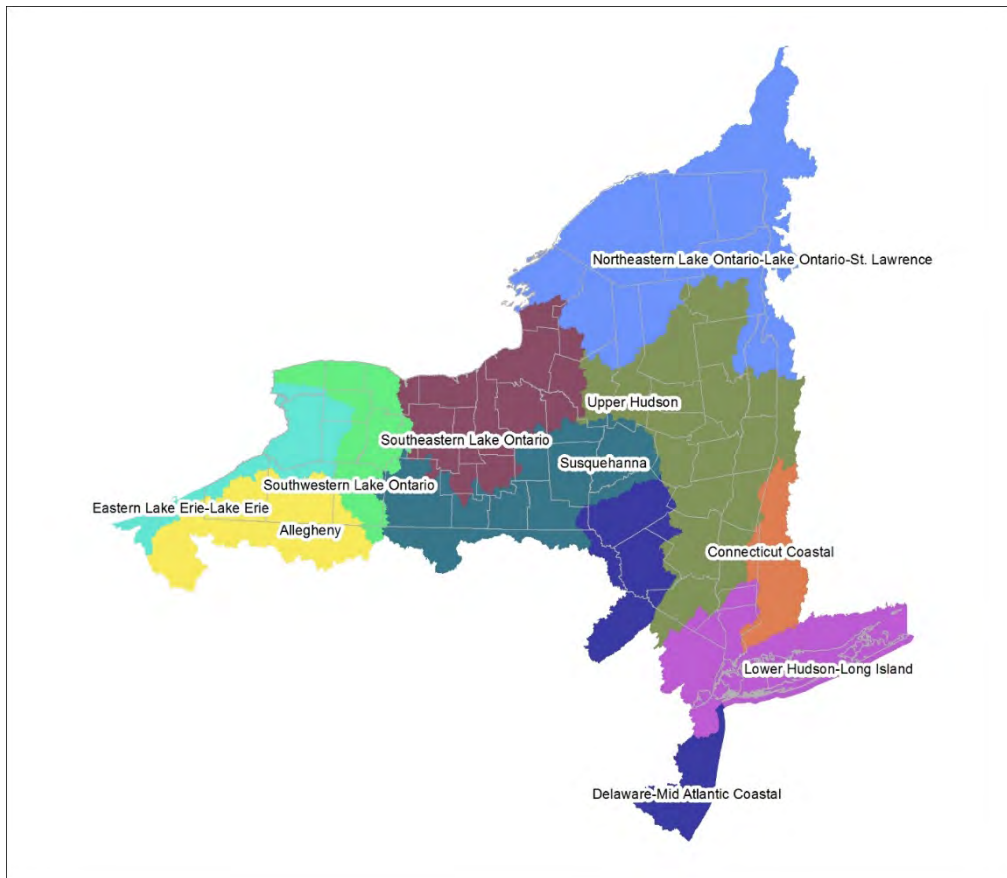


Figure 1. Major (HUC 8) watersheds of NY.

The NY SWAP habitats in this report are classified and described using the classification system developed through regional and state SWAP efforts. This is also the system used in the Species Status Assessments to link each SGCN to a habitat type. The classification is hierarchical and this report depicts and assesses 43 types at the Macrogroup level. Methodology and definitions for the classification system can be found in The Nature Conservancy’s report on the project (Olivero and Anderson 2008) and the NYS Freshwater Blueprint (White et al. 2011). In this report for streams and rivers we summarize information at the level of the Macrogroup, defined

as the combination of stream size, gradient, and buffering due to geology. Links of species to stream temperature can be found in the tables of SGCN associated with each Macrogroup. A map of the aquatic habitats of New York at the Macrogroup level is in Figure 70 and a summary of numbers of segments and total length of segments is in Table 28. A table with the complete classification hierarchy for each NY SWAP marine habitat type is included in Appendix A. Analysis of extent and condition of lakes and ponds could not be completed in time for this draft, but SGCN associations are given for each lake and pond Macrogroup.

Condition Assessment Scores

We summarized four condition metrics for each reach: the percentage of the local catchment covered by impervious surfaces, an index of the impact of riparian development and agriculture, the number of stream crossings by roads, and the alteration of flows by dams. These indicators were derived from The Nature Conservancy’s project, “Condition of the Northeast Terrestrial and Aquatic Habitats” (Anderson et al. 2013) and full descriptions of the justification and methodology can be found there. “Condition” may be a misleading term because these are remotely assessed metrics and can only reflect one aspect of condition—landscape context. Other important factors influencing stream condition cannot be addressed at this spatial scale.

We provide charts of average condition by major watershed. The number of reaches included in each watershed (at the bottom of each bar) may differ from metric to metric because each metric variously required inclusion or exclusion of data within assessment watersheds but just outside the New York State boundary.

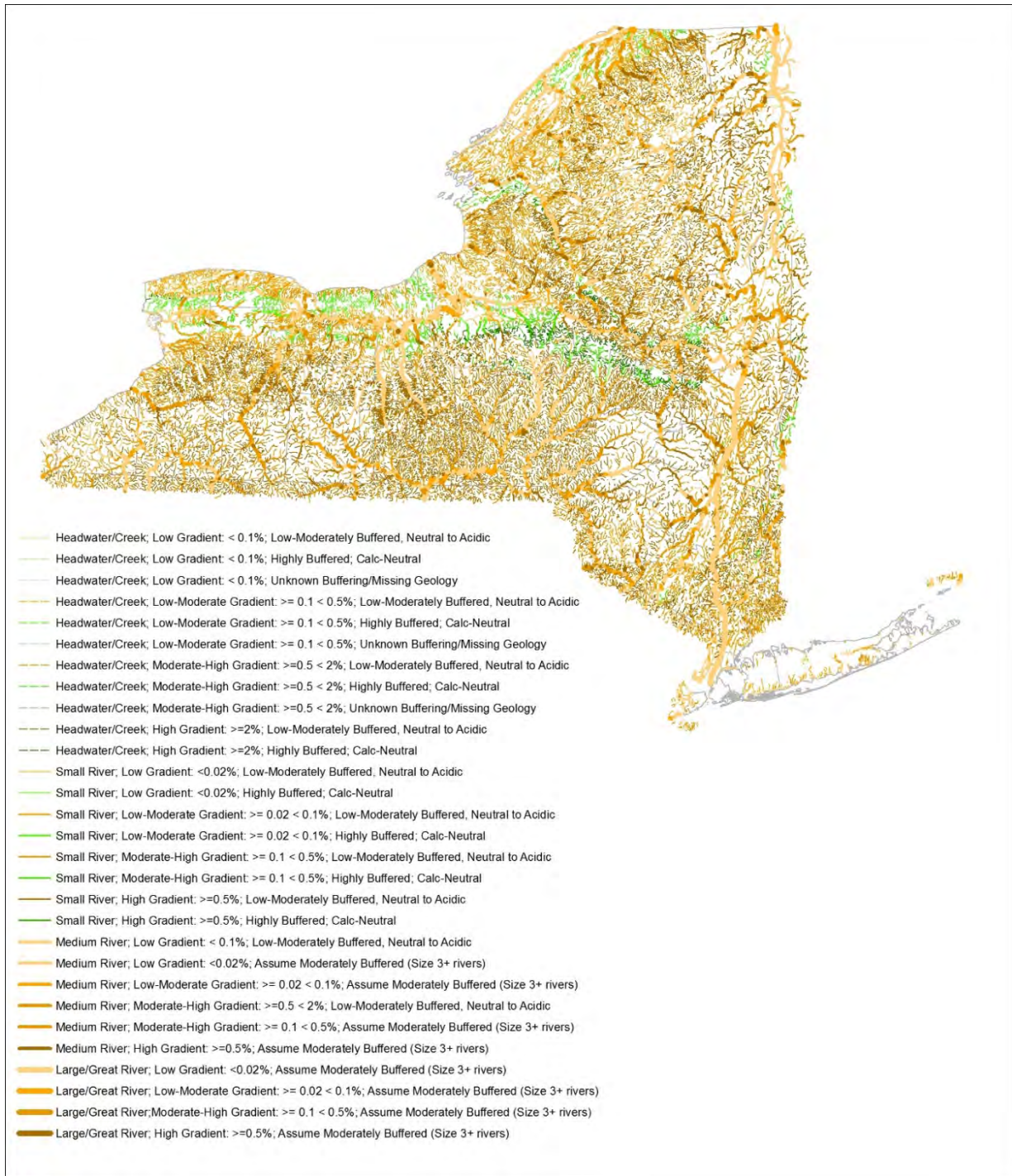


Figure 2. Aquatic habitat Macrogroups of New York.

Table 1. Number and total length of stream and river segments assigned to all Macrogroups in 10 major NY watersheds.

Macrogroup	Allegheny		Connecticut Coastal		Delaware-Mid Atlantic Coastal		Eastern Lake Erie-Lake Erie		Lower Hudson-Long Island	
	No. sgmts	Length (km)	No. sgmts	Length (km)	No. sgmts	Length (km)	No. sgmts	Length (km)	No. sgmts	Length (km)
Unlabeled	45	36.8	31	30.9	27	31.5	80	150.8	410	265.2
Headwater/Creek_High Gradient: >=2%_Highly Buffered; Calc-Neutral	0	0.0	25	36.9	4	4.5	4	5.7	2	4.6
Headwater/Creek_High Gradient: >=2%_Low-Moderately Buffered, Neutral to Acidic	864	1577.7	479	686.2	1058	2065.4	665	1468.4	633	681.2
Headwater/Creek_Low Gradient: < 0.1%_Highly Buffered; Calc-Neutral	0	0.0	35	17.4	1	0.3	72	78.9	1	1.0
Headwater/Creek_Low Gradient: < 0.1%_Low-Moderately Buffered, Neutral to Acidic	230	225.1	301	189.8	415	235.9	278	309.2	1207	797.0
Headwater/Creek_Low Gradient: < 0.1%_Unknown Buffering/Missing Geology	0	0.0	0	0.0	0	0.0	19	21.9	0	0.0
Headwater/Creek_Low-Moderate Gradient: >= 0.1 < 0.5%_Highly Buffered; Calc-Neutral	0	0.0	19	26.0	0	0.0	104	242.8	4	7.0
Headwater/Creek_Low-Moderate Gradient: >= 0.1 < 0.5%_Low-Moderately Buffered, Neutral to Acidic	213	367.1	211	221.9	271	244.4	369	616.9	590	686.8
Headwater/Creek_Low-Moderate Gradient: >= 0.1 < 0.5%_Unknown Buffering/Missing Geology	0	0.0	0	0.0	0	0.0	18	23.8	0	0.0
Headwater/Creek_Moderate-High Gradient: >=0.5 < 2%_Highly Buffered; Calc-Neutral	0	0.0	37	76.6	2	0.6	19	31.7	6	12.6
Headwater/Creek_Moderate-High Gradient: >=0.5 < 2%_Low-Moderately Buffered, Neutral to Acidic	581	1461.5	497	610.1	643	998.6	783	1555.7	689	803.1
Headwater/Creek_Moderate-High Gradient: >=0.5 < 2%_Unknown Buffering/Missing Geology	0	0.0	0	0.0	0	0.0	2	0.7	0	0.0

Small River_High Gradient: >=0.5%_Highly Buffered; Calc-Neutral	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Small River_High Gradient: >=0.5%_Low-Moderately Buffered, Neutral to Acidic	16	10.5	4	3.2	61	98.5	43	51.5	23	21.6
Small River_Low Gradient: <0.02%_Highly Buffered; Calc-Neutral	0	0.0	0	0.0	0	0.0	3	6.1	0	0.0
Small River_Low Gradient: <0.02%_Low-Moderately Buffered, Neutral to Acidic	59	89.2	9	5.4	44	49.9	88	80.6	141	134.3
Small River_Low-Moderate Gradient: >= 0.02 < 0.1%_Highly Buffered; Calc-Neutral	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Small River_Low-Moderate Gradient: >= 0.02 < 0.1%_Low-Moderately Buffered, Neutral to Acidic	33	79.4	6	23.4	9	10.9	42	75.6	18	32.4
Small River_Moderate-High Gradient: >= 0.1 < 0.5%_Highly Buffered; Calc-Neutral	0	0.0	1	1.5	0	0.0	0	0.0	0	0.0
Small River_Moderate-High Gradient: >= 0.1 < 0.5%_Low-Moderately Buffered, Neutral to Acidic	80	157.3	20	65.8	44	121.5	129	226.7	33	48.0
Medium River_High Gradient: >=0.5%_Assume Moderately Buffered (Size 3+ rivers)	4	1.6	5	7.6	37	30.7	11	12.8	1	0.2
Medium River_Low Gradient: < 0.1%_Low-Moderately Buffered, Neutral to Acidic	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0
Medium River_Low Gradient: <0.02%_Assume Moderately Buffered (Size 3+ rivers)	120	157.8	18	34.7	147	154.4	36	63.2	26	54.7
Medium River_Low-Moderate Gradient: >= 0.02 < 0.1%_Assume Moderately Buffered (Size 3+ rivers)	16	43.0	8	13.4	45	59.2	17	35.7	4	4.5
Medium River_Moderate-High Gradient: >= 0.1 < 0.5%_Assume Moderately Buffered (Size 3+ rivers)	8	19.0	19	30.6	63	132.3	23	56.1	2	4.5
Medium River_Moderate-High Gradient: >=0.5 < 2%_Low-	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0

Moderately Buffered, Neutral to Acidic											
Large/Great River_High Gradient: >=0.5%_Assume Moderately Buffered (Size 3+ rivers)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Large/Great River_Low Gradient: <0.02%_Assume Moderately Buffered (Size 3+ rivers)	0	0.0	0	0.0	0	0.0	0	0.0	30	76.7	
Large/Great River_Low-Moderate Gradient: >= 0.02 < 0.1%_Assume Moderately Buffered (Size 3+ rivers)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Large/Great River_Moderate-High Gradient: >= 0.1 < 0.5%_Assume Moderately Buffered (Size 3+ rivers)	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	
Grand Total	2269	4225.8	1725	2081.2	2871	4238.6	2805	5114.9	3820	3635.4	

Table 28 (continued).

Macrogroup	Northeastern Lake Ontario-Lake Ontario-St. Lawrence		Southeastern Lake Ontario		Southwestern Lake Ontario		Susquehanna		Upper Hudson		Total	
	No. sgmts	Length (km)	No. sgmts	Length (km)	No. sgmts	Length (km)	No. sgmts	Length (km)	No. sgmts	Length (km)	No. sgmts	Length (km)
Unlabeled	358	529.2	312	572.9	137	296.0	148	174.4	285	439.0	1833	2526.6
Headwater/Creek_High Gradient: >=2%_Highly Buffered; Calc-Neutral	49	74.6	158	359.6	19	15.5	87	231.4	329	734.6	677	1467.4
Headwater/Creek_High Gradient: >=2%_Low-Moderately Buffered, Neutral to Acidic	1918	3808.9	1502	3324.2	800	1841.3	2720	6504.0	2922	6629.5	13561	28586.8
Headwater/Creek_Low Gradient: < 0.1%_Highly Buffered; Calc-Neutral	113	156.2	232	340.3	93	88.0	42	32.1	112	54.8	701	769.0
Headwater/Creek_Low Gradient: < 0.1%_Low-Moderately Buffered, Neutral to Acidic	2202	2050.2	1317	1440.3	459	491.6	623	404.1	1674	1141.6	8706	7284.8
Headwater/Creek_Low Gradient: < 0.1%_Unknown Buffering/Missing Geology	2	4.0	0	0.0	0	0.0	0	0.0	0	0.0	21	25.9

Headwater/Creek_Low-Moderate Gradient: >= 0.1 < 0.5%_Highly Buffered; Calc-Neutral	156	392.8	285	599.5	146	321.1	43	71.6	75	102.5	832	1763.2
Headwater/Creek_Low-Moderate Gradient: >= 0.1 < 0.5%_Low- Moderately Buffered, Neutral to Acidic	1708	3045.2	1091	2148.0	658	1364.0	481	540.0	1092	1746.6	6684	10980.8
Headwater/Creek_Low-Moderate Gradient: >= 0.1 < 0.5%_Unknown Buffering/Missing Geology	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	18	23.8
Headwater/Creek_Moderate-High Gradient: >=0.5 < 2%_Highly Buffered; Calc-Neutral	131	315.6	302	703.5	150	309.6	86	221.1	243	471.9	976	2143.2
Headwater/Creek_Moderate-High Gradient: >=0.5 < 2%_Low- Moderately Buffered, Neutral to Acidic	3008	6570.4	1980	4358.4	895	1979.2	1622	3194.5	2527	5667.2	13225	27198.8
Headwater/Creek_Moderate-High Gradient: >=0.5 < 2%_Unknown Buffering/Missing Geology	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	0.7
Small River_High Gradient: >=0.5%_Highly Buffered; Calc- Neutral	0	0.0	10	6.5	0	0.0	4	2.7	20	28.6	34	37.7
Small River_High Gradient: >=0.5%_Low-Moderately Buffered, Neutral to Acidic	312	562.9	146	221.7	67	74.6	115	141.2	274	554.9	1061	1740.6
Small River_Low Gradient: <0.02%_Highly Buffered; Calc- Neutral	3	4.5	48	42.7	15	12.3	20	30.2	1	0.2	90	96.0
Small River_Low Gradient: <0.02%_Low-Moderately Buffered, Neutral to Acidic	425	567.9	348	285.5	126	87.9	201	194.4	306	280.2	1747	1775.4
Small River_Low-Moderate Gradient: >= 0.02 < 0.1%_Highly Buffered; Calc-Neutral	1	2.2	19	37.8	14	19.0	5	12.2	3	4.2	42	75.3
Small River_Low-Moderate Gradient: >= 0.02 < 0.1%_Low- Moderately Buffered, Neutral to Acidic	93	194.0	62	112.0	60	118.1	58	73.9	62	140.2	443	859.8
Small River_Moderate-High Gradient: >= 0.1 < 0.5%_Highly Buffered; Calc-Neutral	1	0.2	33	72.0	4	3.1	3	3.6	19	30.0	61	110.4
Small River_Moderate-High Gradient: >= 0.1 < 0.5%_Low-	211	544.1	124	227.6	123	209.5	266	436.7	224	591.2	1254	2628.4

Moderately Buffered, Neutral to Acidic												
Medium River_High Gradient: >=0.5%_Assume Moderately Buffered (Size 3+ rivers)	172	150.7	27	18.5	16	12.3	26	19.9	113	120.6	412	374.9
Medium River_Low Gradient: < 0.1%_Low-Moderately Buffered, Neutral to Acidic	0	0.0	0	0.0	6	5.4	0	0.0	0	0.0	6	5.4
Medium River_Low Gradient: <0.02%_Assume Moderately Buffered (Size 3+ rivers)	541	797.6	326	286.8	159	224.3	366	346.0	398	491.8	2137	2611.2
Medium River_Low-Moderate Gradient: >= 0.02 < 0.1%_Assume Moderately Buffered (Size 3+ rivers)	98	174.5	20	39.7	34	61.6	78	124.9	69	170.4	389	727.0
Medium River_Moderate-High Gradient: >= 0.1 < 0.5%_Assume Moderately Buffered (Size 3+ rivers)	167	322.6	32	50.3	43	89.6	106	183.8	148	399.7	611	1288.5
Medium River_Moderate-High Gradient: >=0.5 < 2%_Low-Moderately Buffered, Neutral to Acidic	0	0.0	0	0.0	2	13.3	0	0.0	0	0.0	2	13.3
Large/Great River_High Gradient: >=0.5%_Assume Moderately Buffered (Size 3+ rivers)	0	0.0	5	0.9	0	0.0	1	0.3	2	1.0	8	2.1
Large/Great River_Low Gradient: <0.02%_Assume Moderately Buffered (Size 3+ rivers)	13	54.6	97	116.8	0	0.0	33	40.7	94	188.3	267	477.0
Large/Great River_Low-Moderate Gradient: >= 0.02 < 0.1%_Assume Moderately Buffered (Size 3+ rivers)	2	10.9	6	14.8	0	0.0	16	27.5	4	10.0	28	63.3
Large/Great River_Moderate-High Gradient: >= 0.1 < 0.5%_Assume Moderately Buffered (Size 3+ rivers)	0	0.0	6	13.5	0	0.0	5	7.2	1	1.0	12	21.7
Grand Total	11684	20333.6	8488	15393.7	4026	7637.2	7155	13018.5	10997	20000.1	55840	95679.0

Headwater/Creek; Low Gradient; Low-Moderately Buffered

Distribution

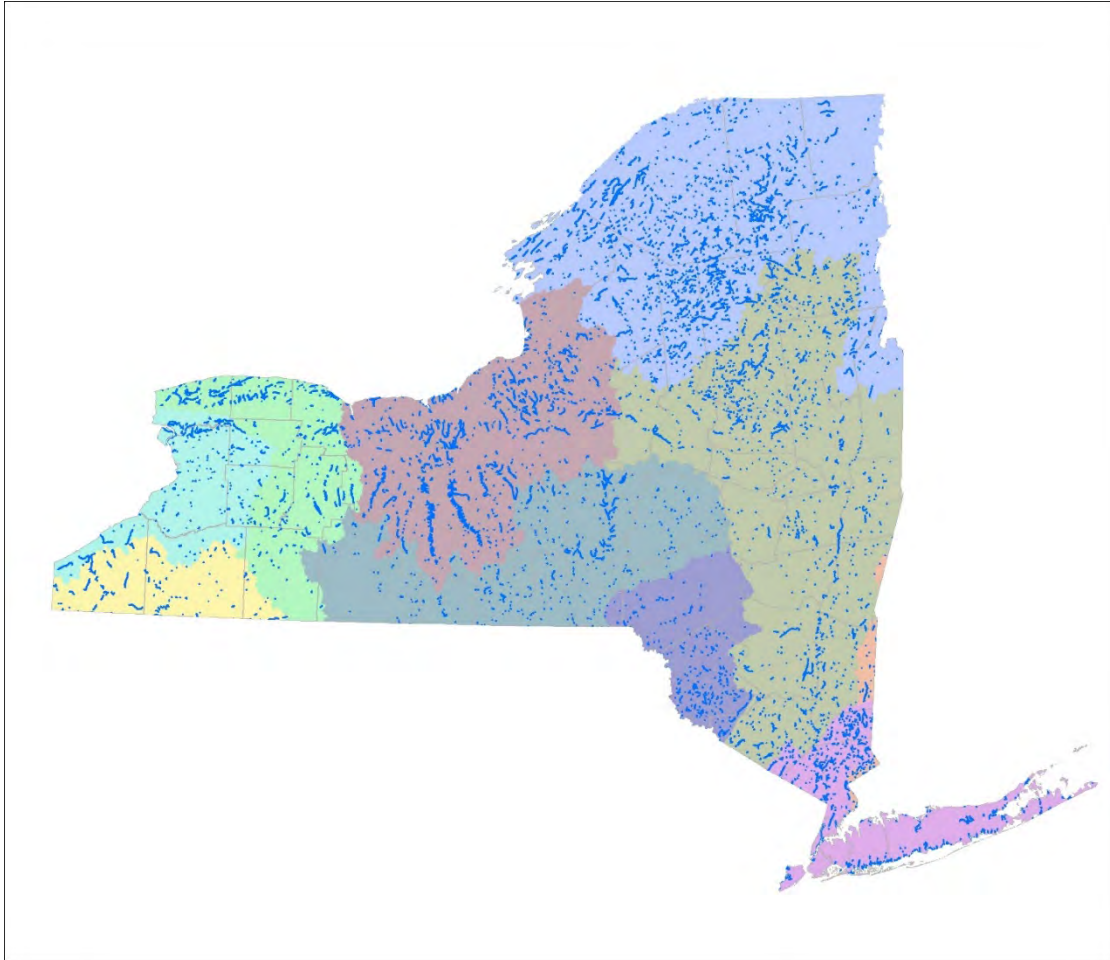


Figure 3. Distribution of the Macrogroup Headwater/Creek; Low Gradient; Low-Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

This Macrogroup is well distributed throughout New York (Figure 71).

Condition

The reaches with the best average condition appear to be in the Northeastern Lake Ontario-Lake Ontario-St. Lawrence watershed, which also has the most reaches of this Macrogroup (Figure 72, Figure 73, Figure 74, Figure 75). The Lower Hudson-Long Island and Eastern Lake Erie-Lake Erie watersheds have the reaches in poorest condition.

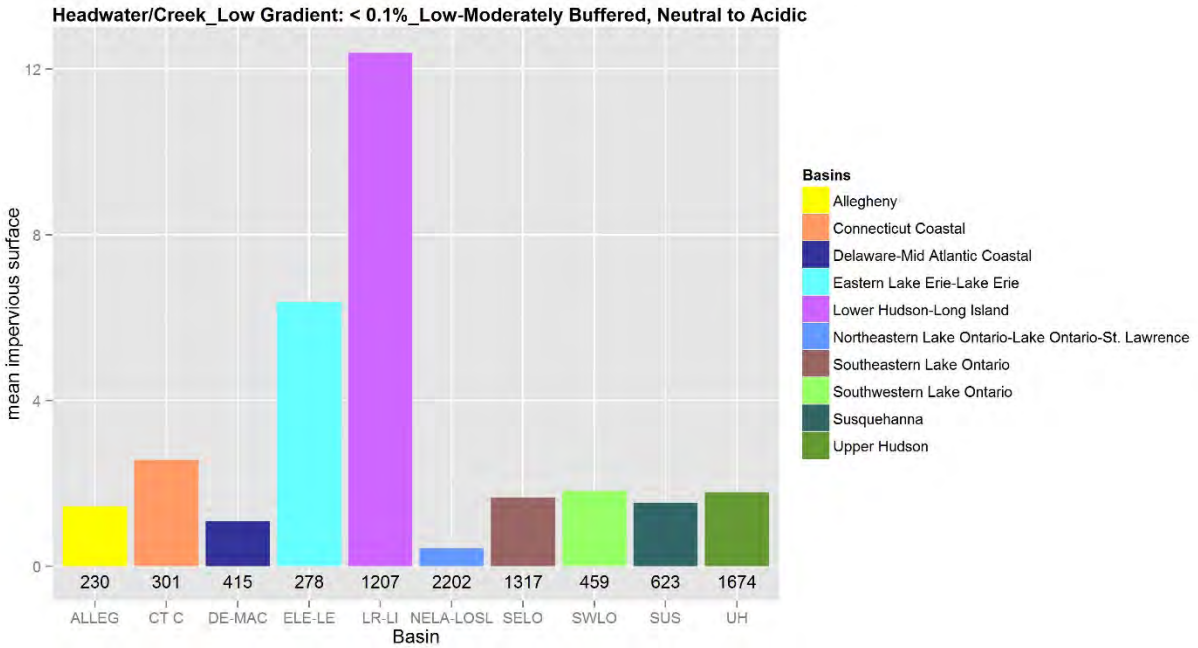


Figure 4. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

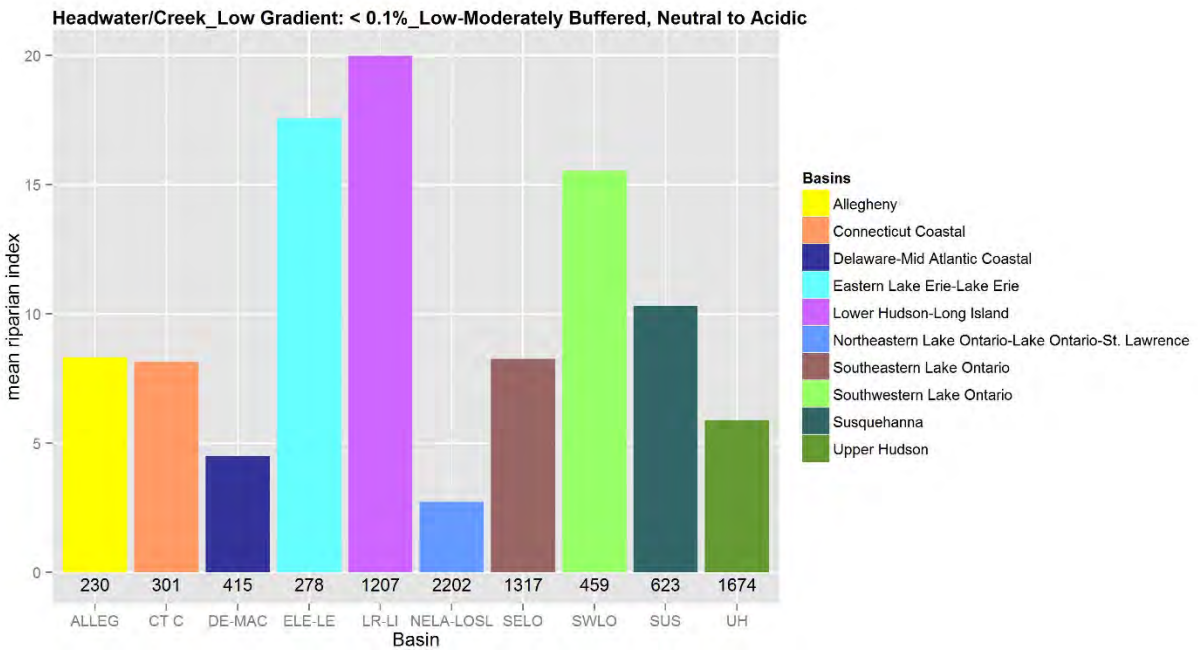


Figure 5. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

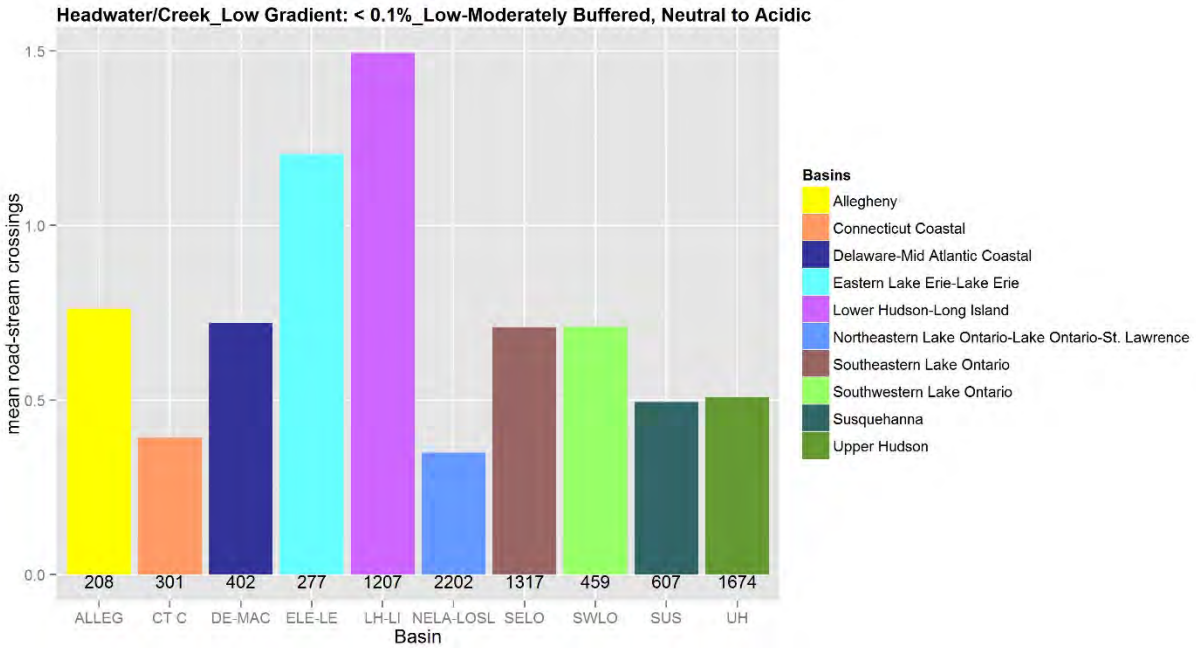


Figure 6. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

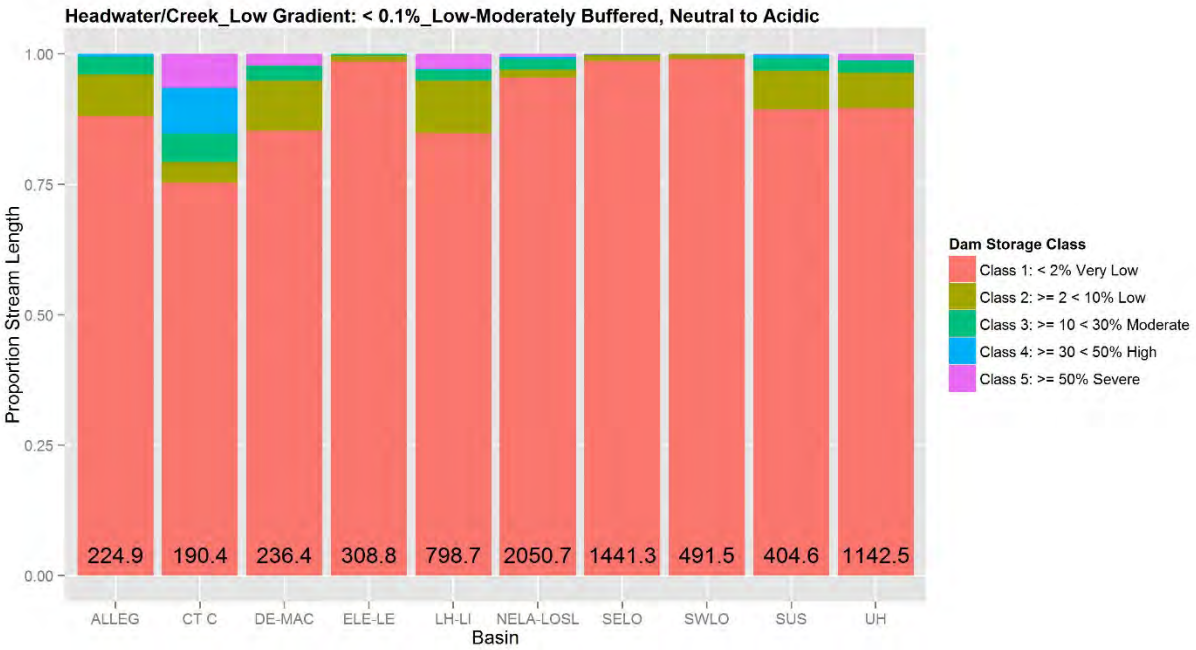


Figure 7. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Twelve SGCN are associated with this Macrogroup (Table 29).

Table 2. SGCN associated with Headwater/Creek; Low Gradient; Low-Moderately Buffered.

Species	Common name	SGCN category	Habitat link
<i>Somatochlora minor</i>	Ocellated emerald	4	Headwater/Creek; Low Gradient; Low Buffered
<i>Cryptobranchus alleganiensis</i>	Eastern hellbender	2	Headwater/Creek; Low Gradient; Moderately Buffered, Neutral; Cold
<i>Alasmidonta varicosa</i>	Brook floater	2	Headwater/Creek; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Catostomus catostomus</i>	Longnose sucker	3	Headwater/Creek; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Cordulegaster erronea</i>	Tiger spiketail	2	Headwater/Creek; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Cordulegaster obliqua</i>	Arrowhead spiketail	3	Headwater/Creek; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Couesius plumbeus</i>	Lake chub	3	Headwater/Creek; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Headwater/Creek; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Margaritifera margaritifera</i>	Eastern pearlshell	3	Headwater/Creek; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Villosa iris</i>	Rainbow	2	Headwater/Creek; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Headwater/Creek; Low Gradient; Moderately Buffered, Neutral; Warm
<i>Notropis dorsalis</i>	Bigmouth shiner	3	Headwater/Creek; Low Gradient; Moderately Buffered, Neutral; Warm

Headwater/Creek; Low Gradient; Highly Buffered

Distribution

Reaches of this Macrogroup occur primarily along the St. Lawrence, and in an east-west band from the Upper Hudson to Lake Erie (Figure 76).

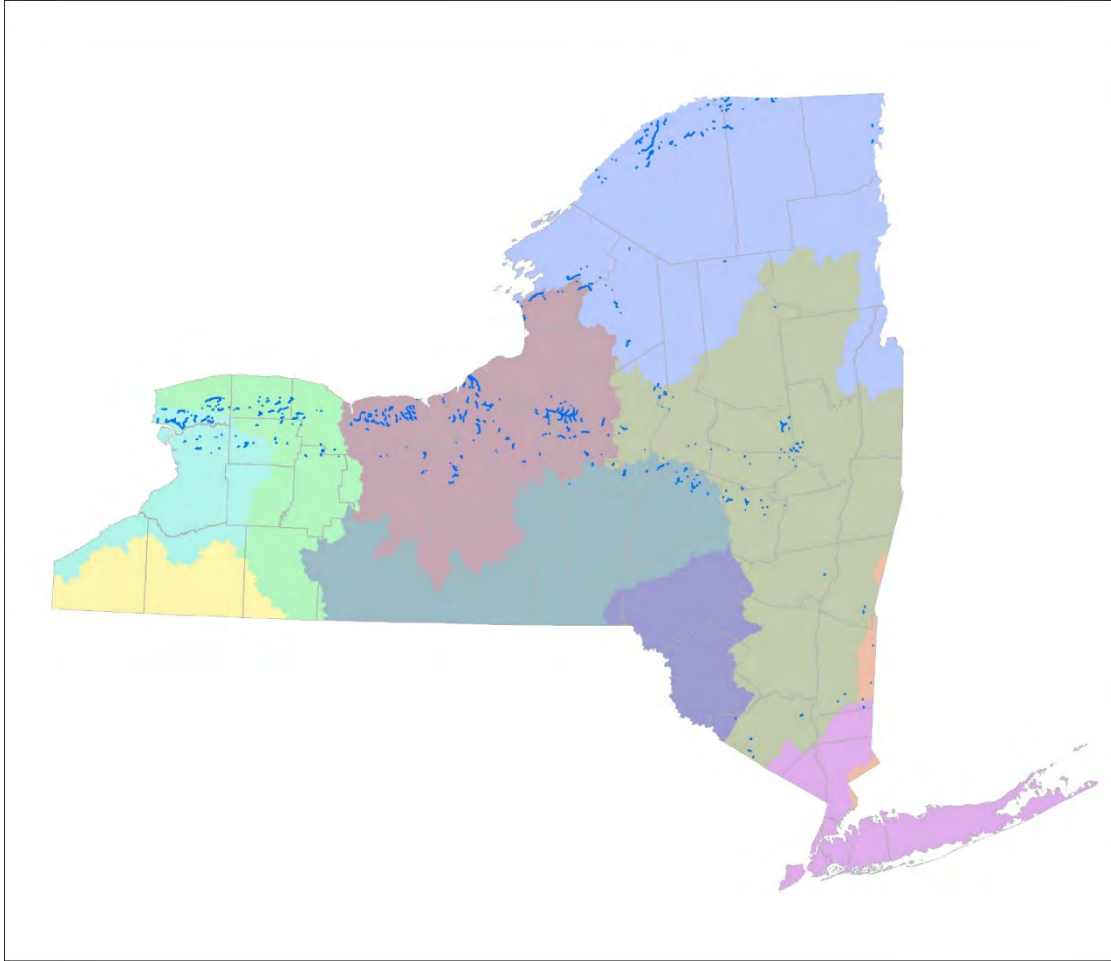


Figure 8. Distribution of the Macrogroup Headwater/Creek; Low Gradient; Highly Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

The Susquehanna watershed has the reaches in the best condition (Figure 77, Figure 78, Figure 79, Figure 80), while the Eastern Lake Erie-Lake Erie and Southwest Lake Ontario watersheds have the reaches in the worst condition.

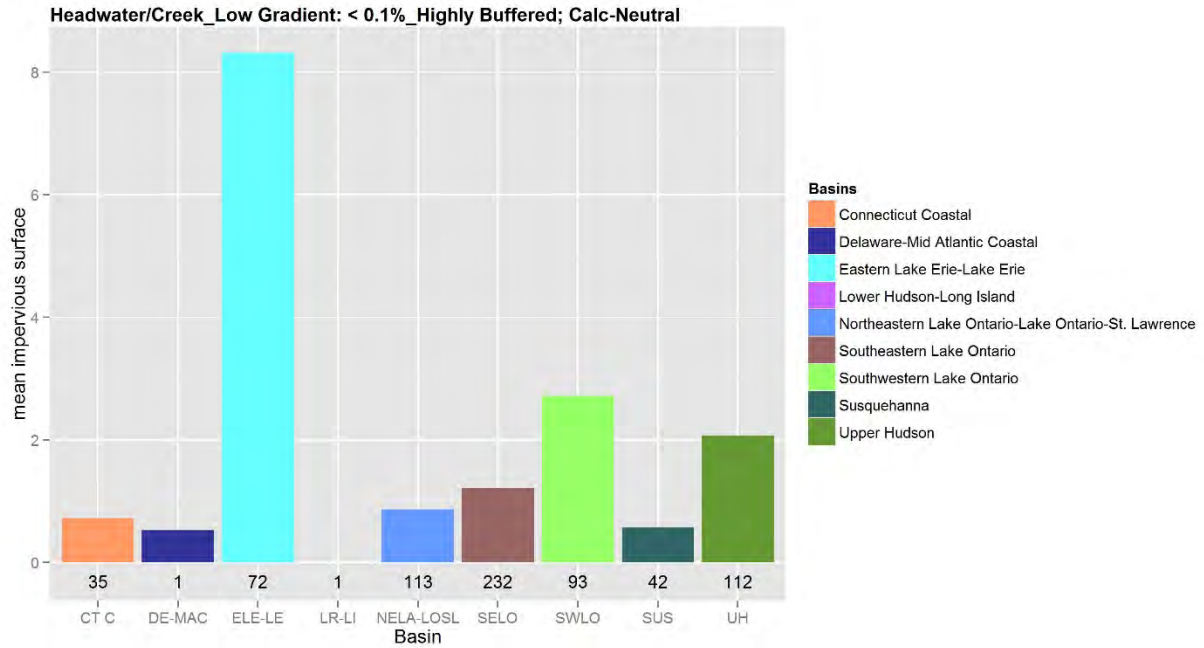


Figure 9. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

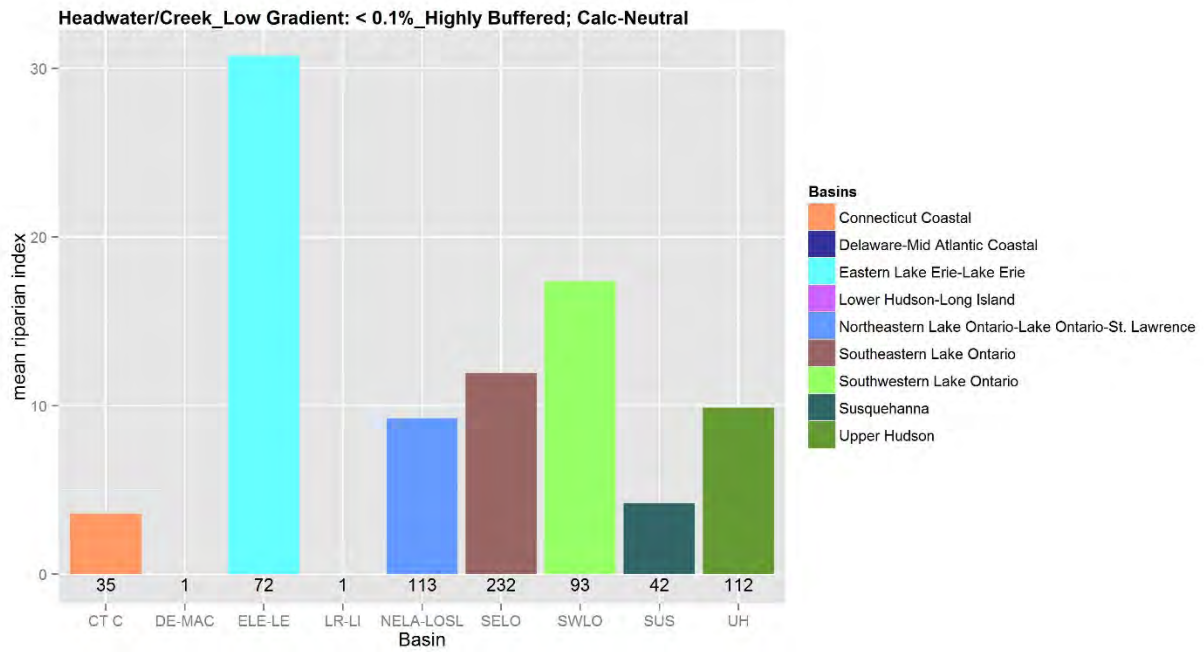


Figure 10. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

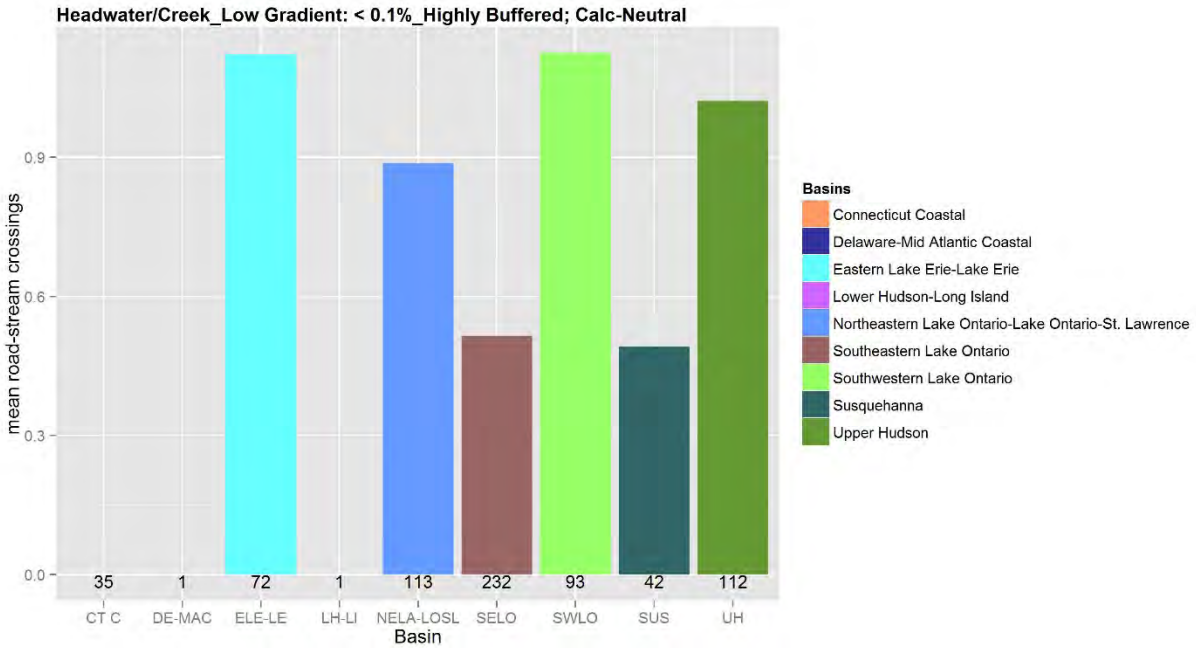


Figure 11. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

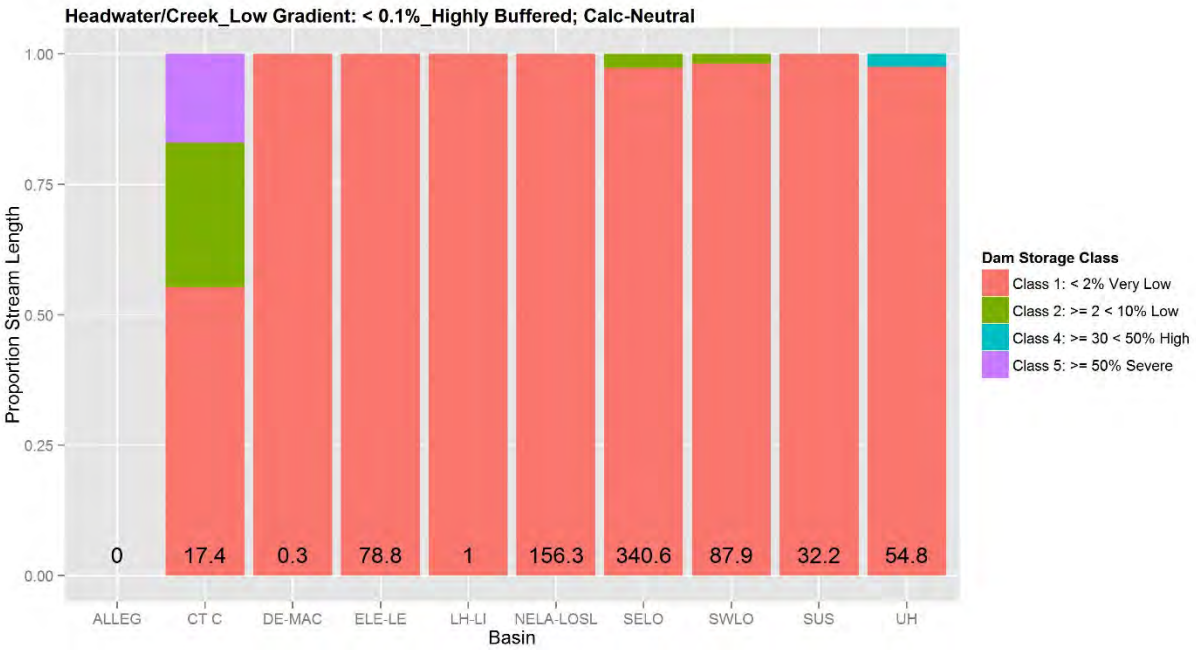


Figure 12. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Four SGCN are associated with this Macrogroup (Table 30).

Table 3. SGCN associated with Headwater/Creek; Low Gradient; Highly Buffered.

Species	Common name	SGCN category	Habitat link
<i>Eurycea longicauda</i>	Eastern long-tailed salamander	2	Headwater/Creek; Low Gradient; Highly Buffered, Calcareous; Transitional Cool
<i>Villosa iris</i>	Rainbow	2	Headwater/Creek; Low Gradient; Highly Buffered, Calcareous; Transitional Cool
<i>Fusconaia flava</i>	Wabash pigtoe	2	Headwater/Creek; Low Gradient; Highly Buffered, Calcareous; Warm
<i>Villosa iris</i>	Rainbow	2	Headwater/Creek; Low Gradient; Highly Buffered, Calcareous; Warm

Headwater/Creek; Low-Moderate Gradient; Low-Moderately Buffered

Distribution

This Macrogroup is well distributed throughout New York (Figure 81).

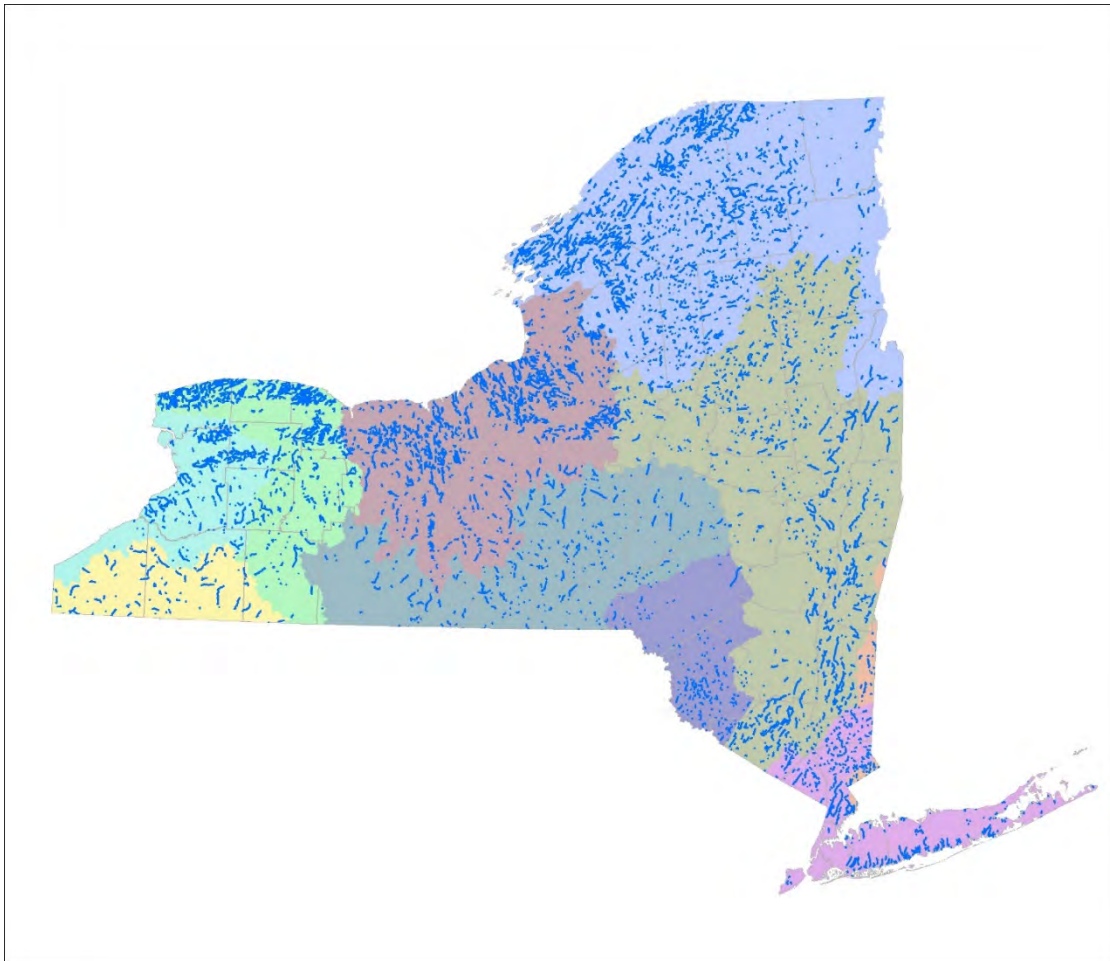


Figure 13. Distribution of the Macrogroup Headwater/Creek; Low-Moderate Gradient; Low-Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

The Delaware-Mid-Atlantic Coastal and Northeastern Lake Ontario-Lake Ontario-St. Lawrence watersheds have the reaches in the best condition, while the Lower Hudson-Long Island watershed appears to have the reaches in the worst condition (Figure 82, Figure 83, Figure 84, Figure 85).

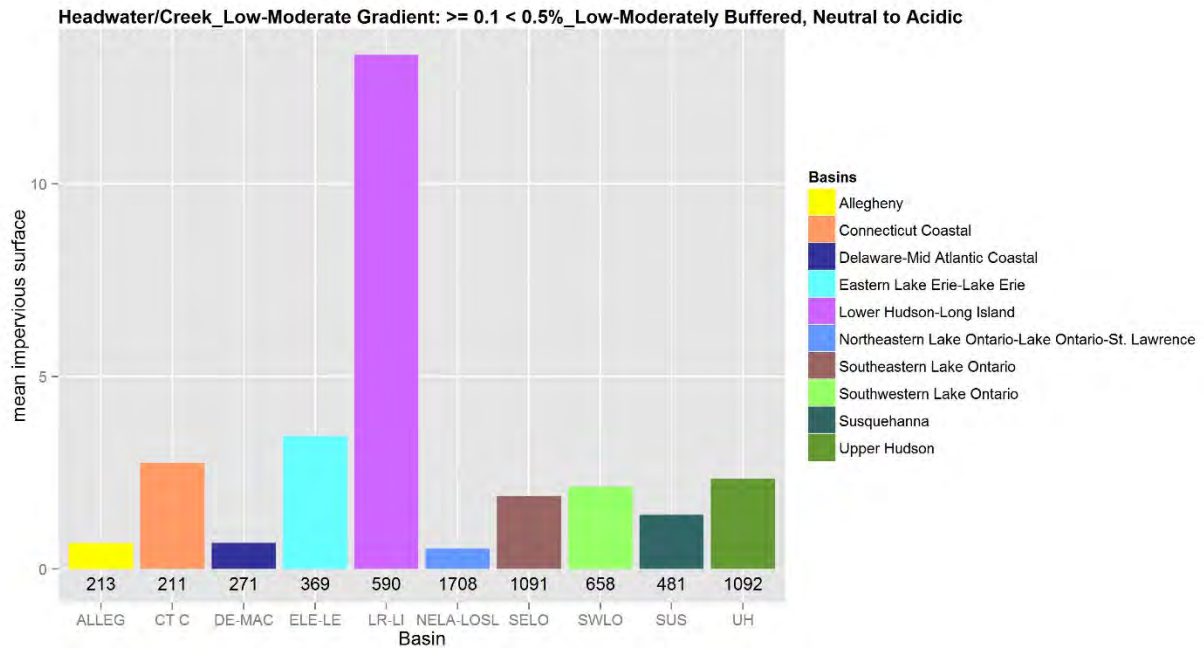


Figure 14. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

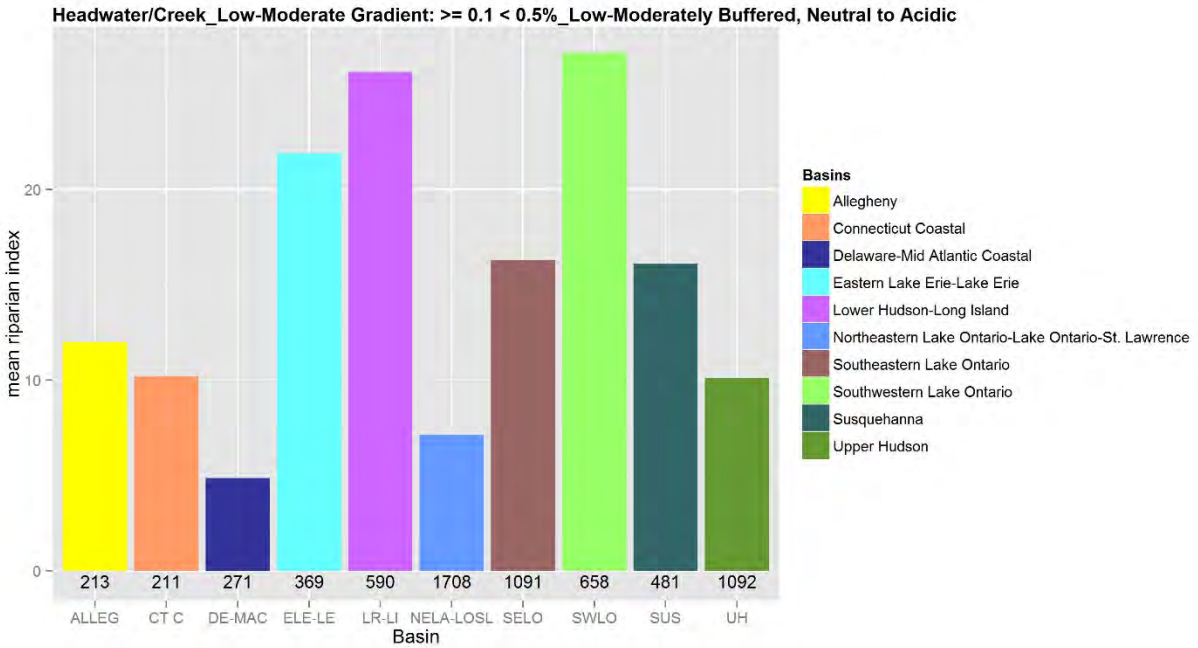


Figure 15. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

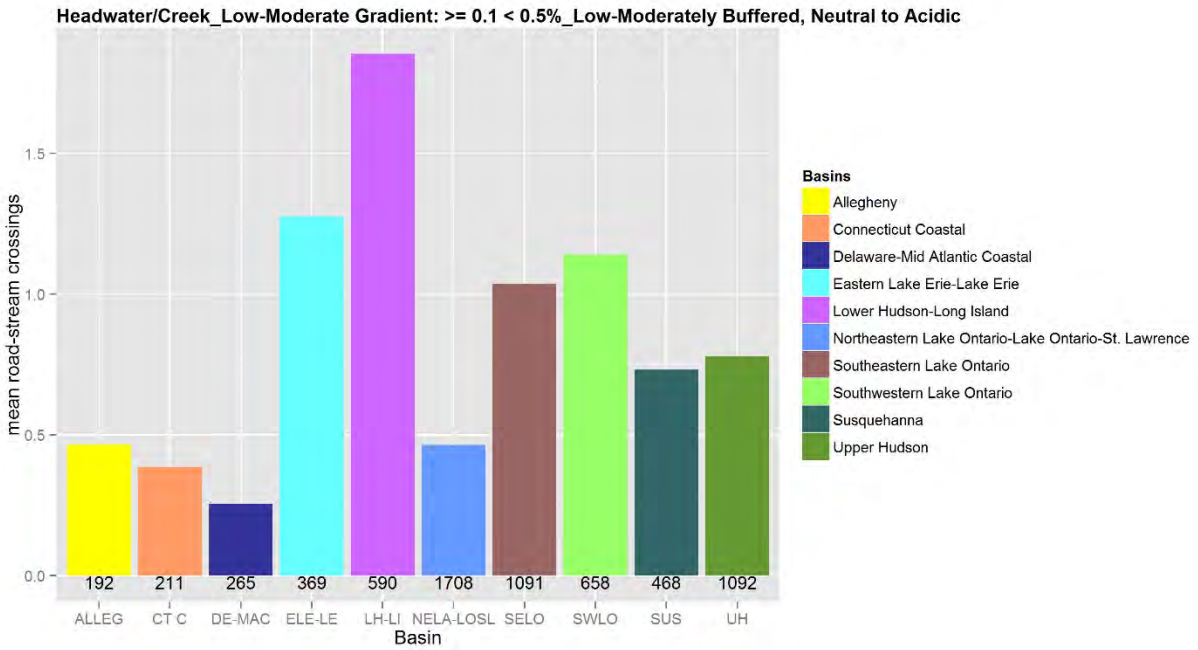


Figure 16. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

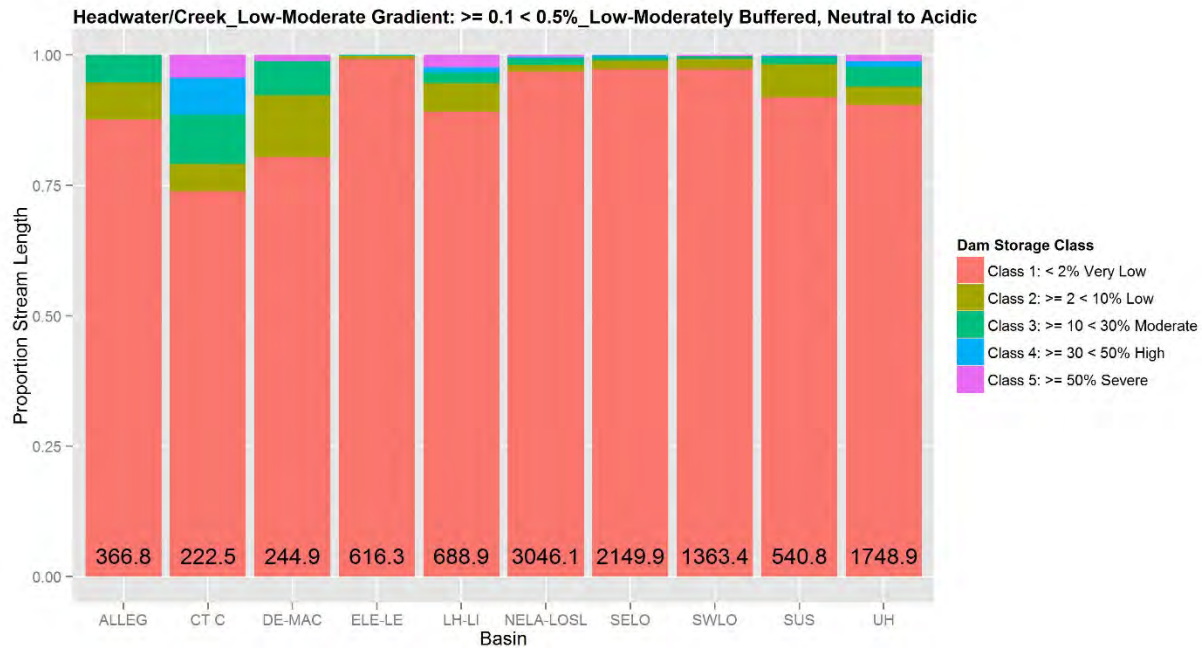


Figure 17. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Eighteen SGCN are associated with this Macrogroup (Table 31).

Table 4. SGCN associated with Headwater/Creek; Low-Moderate Gradient; Low-Moderately Buffered.

Species	Common name	SGCN category	Habitat link
<i>Lanthes vernalis</i>	Southern pygmy clubtail	2	Headwater/Creek; Low-Moderate Gradient; Low Buffered, Acidic; Cold
<i>Ophiogomphus aspersus</i>	Brook snaketail	2	Headwater/Creek; Low-Moderate Gradient; Low Buffered, Acidic; Cold
<i>Ophiogomphus colubrinus</i>	Boreal snaketail	2	Headwater/Creek; Low-Moderate Gradient; Low Buffered, Acidic; Cold
<i>Alasmidonta varicosa</i>	Brook floater	2	Headwater/Creek; Low-Moderate Gradient; Low Buffered, Acidic; Transitional Cool
<i>Catostomus</i> sp.	Sucker variant (late spawning sucker of eastern Adirondacks)	2	Headwater/Creek; Low-Moderate Gradient; Low Buffered, Acidic; Transitional Cool
<i>Catostomus utawana</i>	Summer sucker	2	Headwater/Creek; Low-Moderate Gradient; Low Buffered, Acidic; Transitional Cool

Species	Common name	SGCN category	Habitat link
<i>Alasmidonta viridis</i>	Slipper shell	2	Headwater/Creek; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Cordulegaster erronea</i>	Tiger spiketail	2	Headwater/Creek; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Cordulegaster obliqua</i>	Arrowhead spiketail	3	Headwater/Creek; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Fusconaia flava</i>	Wabash pigtoe	2	Headwater/Creek; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Ichthyomyzon greeleyi</i>	Mountain brook lamprey	3	Headwater/Creek; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Headwater/Creek; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lasmigona subviridis</i>	Green floater	2	Headwater/Creek; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Ligumia nasuta</i>	Eastern Pondmussel	3	Headwater/Creek; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Margaritifera margaritifera</i>	Eastern pearlshell	3	Headwater/Creek; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Toxolasma parvum</i>	Lilliput	3	Headwater/Creek; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Utterbackia imbecillis</i>	Paper pondshell	3	Headwater/Creek; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Villosa iris</i>	Rainbow	2	Headwater/Creek; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool

Headwater/Creek; Low-Moderate Gradient; Highly Buffered

Distribution

Reaches of this Macrogroup occur primarily along the St. Lawrence, and in an east-west band from the Upper Hudson to Lake Erie, with scattered reaches in the Hudson Valley (Figure 86).

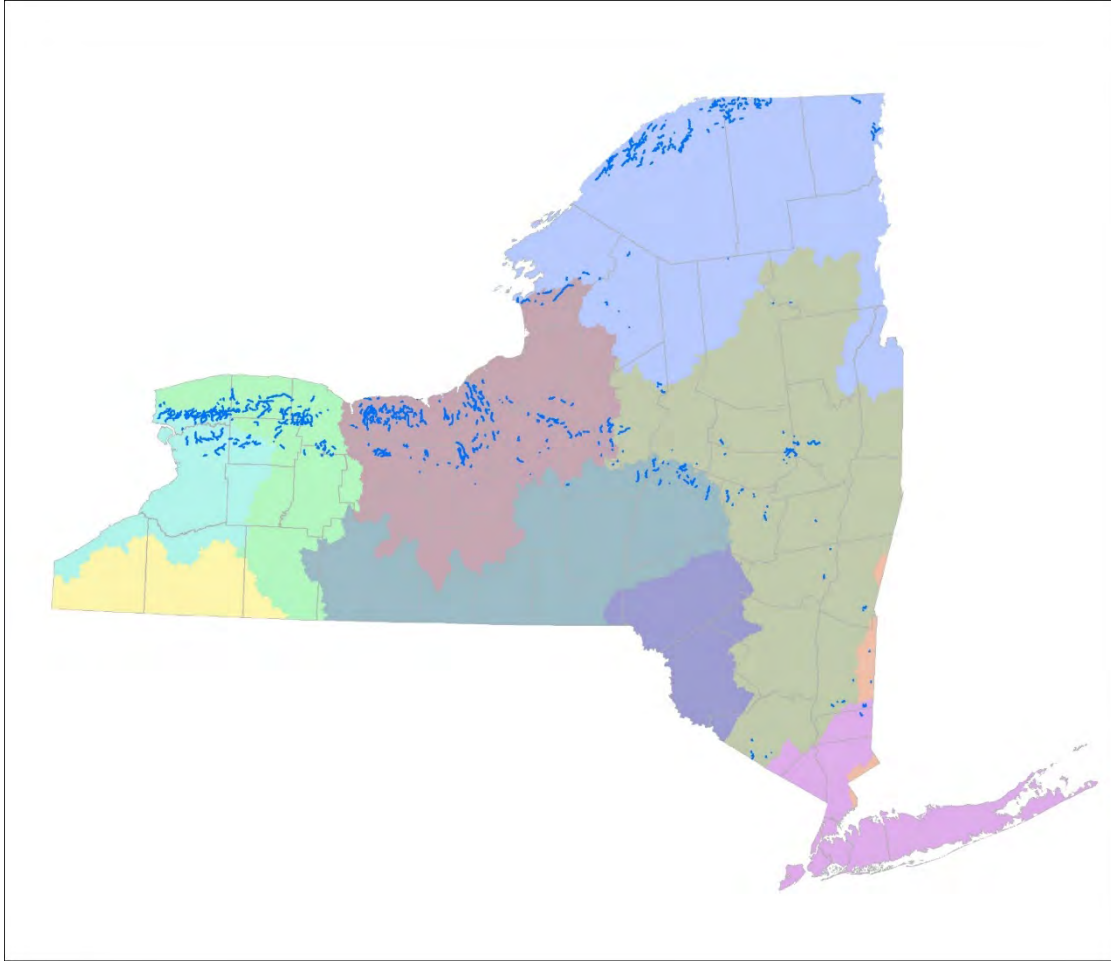


Figure 18. Distribution of the Macrogroup Headwater/Creek; Low-Moderate Gradient; Highly Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

The few examples of this Macrogroup in the Connecticut Coastal and Lower Hudson-Long Island watersheds appear to be in decent condition (Figure 87, Figure 88, Figure 89, Figure 90). The Eastern Lake Erie-Lake Erie watershed appears to have the reaches in the worst condition; the metrics are otherwise mixed as to the relative condition among watersheds.

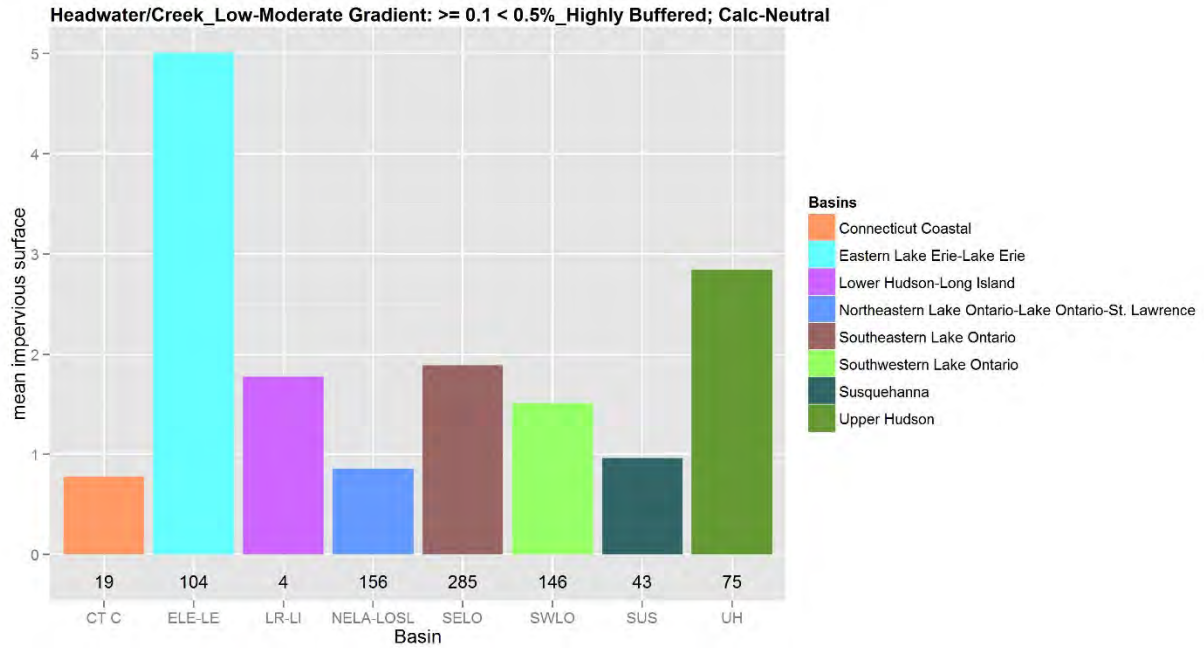


Figure 19. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

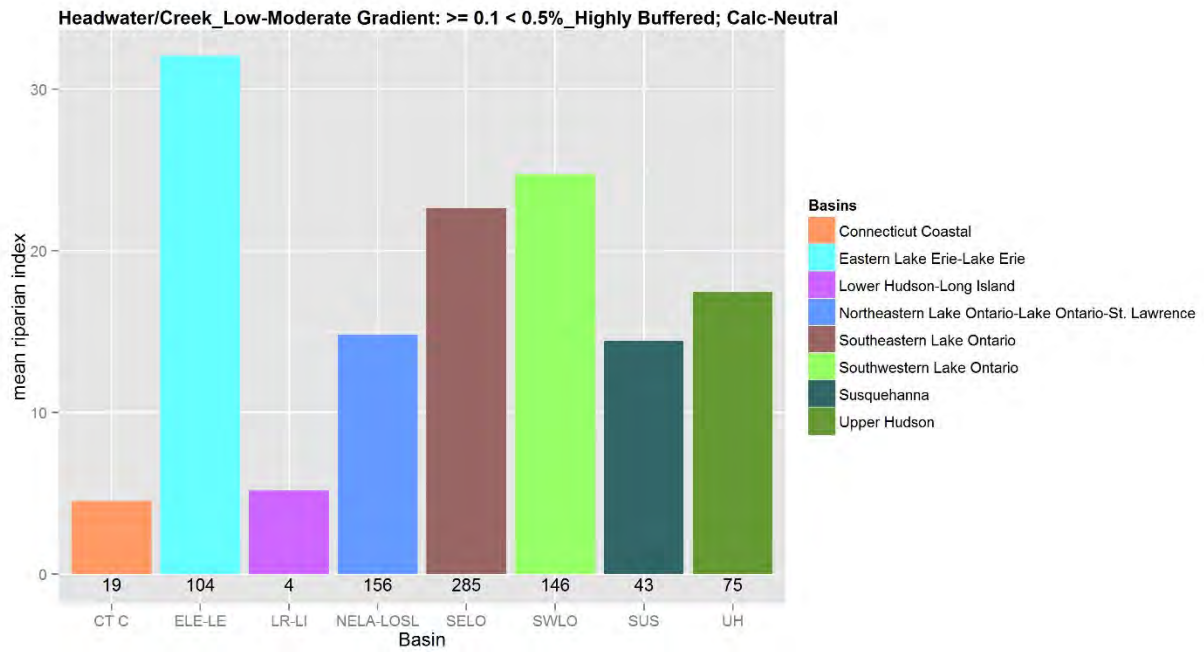


Figure 20. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

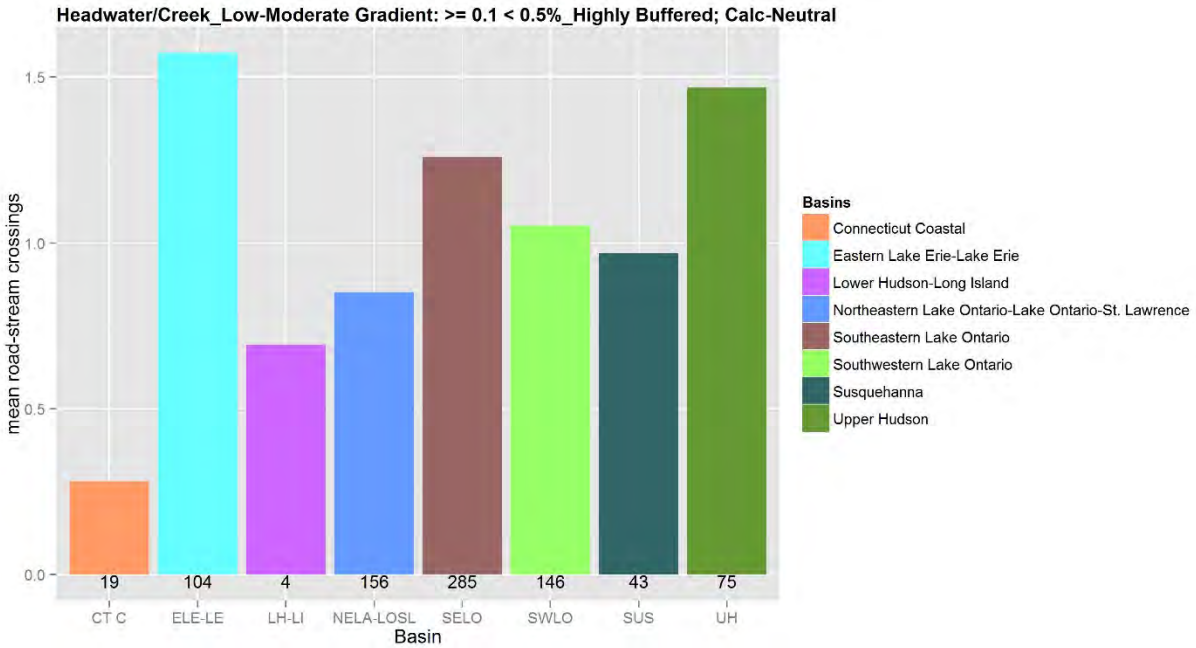


Figure 21. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

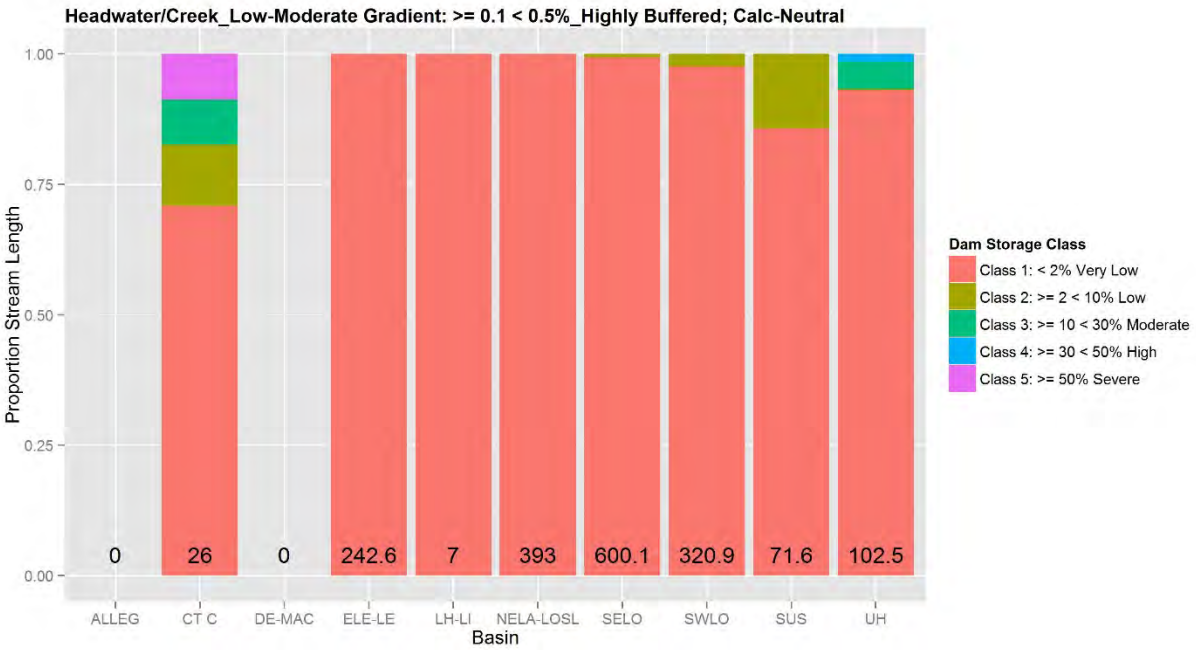


Figure 22. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Two SGCN are associated with this Macrogroup (Table 32).

Table 5. SGCN associated with Headwater/Creek; Low-Moderate Gradient; Highly Buffered.

Species	Common	SGCN	Habitat link
Fusconaia flava	Wabash pigtoe	2	Headwater/Creek; Low-Moderate Gradient; Highly Buffered, Calcareous; Transitional Cool
Villosa iris	Rainbow	2	Headwater/Creek; Low-Moderate Gradient; Highly Buffered, Calcareous; Transitional Cool

Headwater/Creek; Moderate-High Gradient; Low-Moderately Buffered

Distribution

This Macrogroup is well distributed throughout New York (Figure 91).

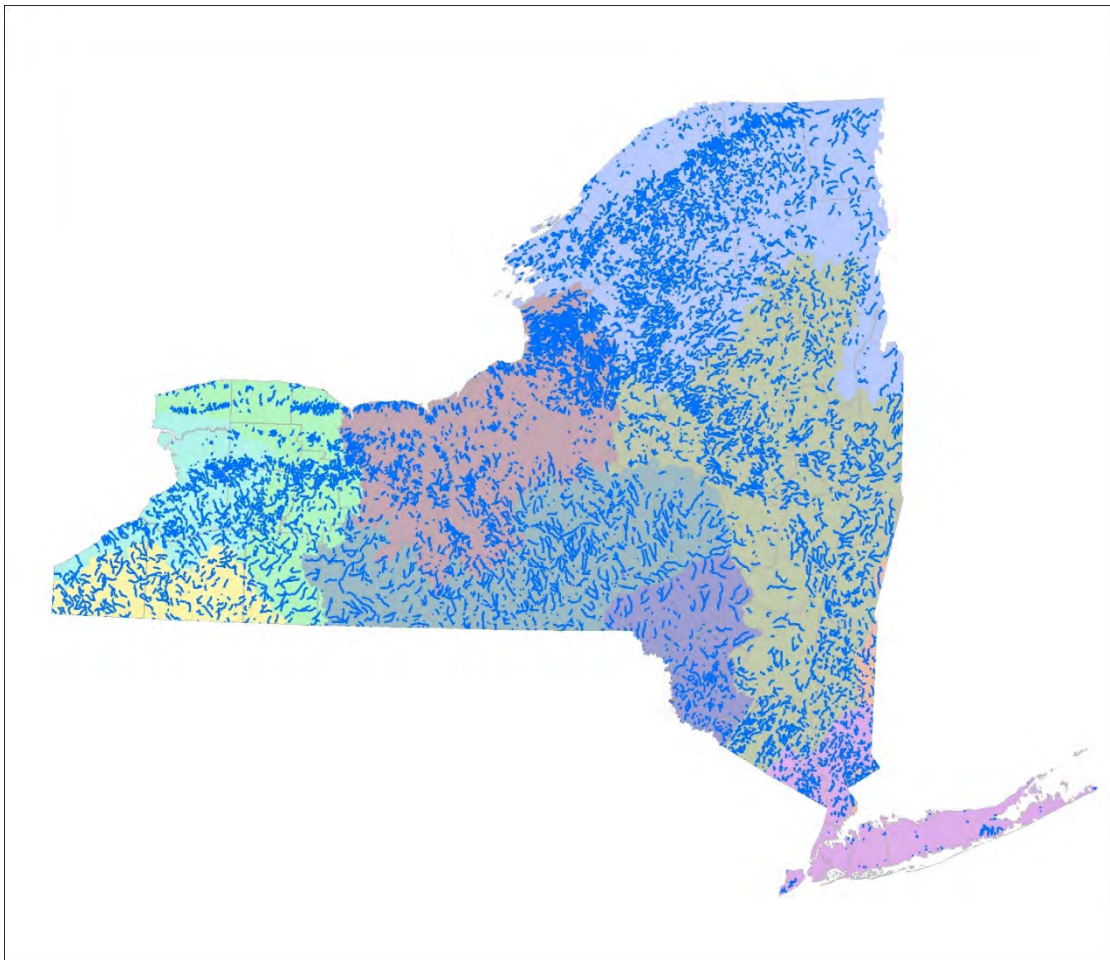


Figure 23. Distribution of the Macrogroup Headwater/Creek; Moderate-High Gradient; Low-Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

Reaches in the Northeastern Lake Ontario-Lake Ontario-St. Lawrence watershed are in the best condition, while reaches in the Lower Hudson-Long Island watershed are in the worst condition (Figure 92, Figure 93, Figure 94, Figure 98). Reaches in the Southwestern Lake Ontario watershed have substantial riparian impacts as well, presumably due to agriculture.

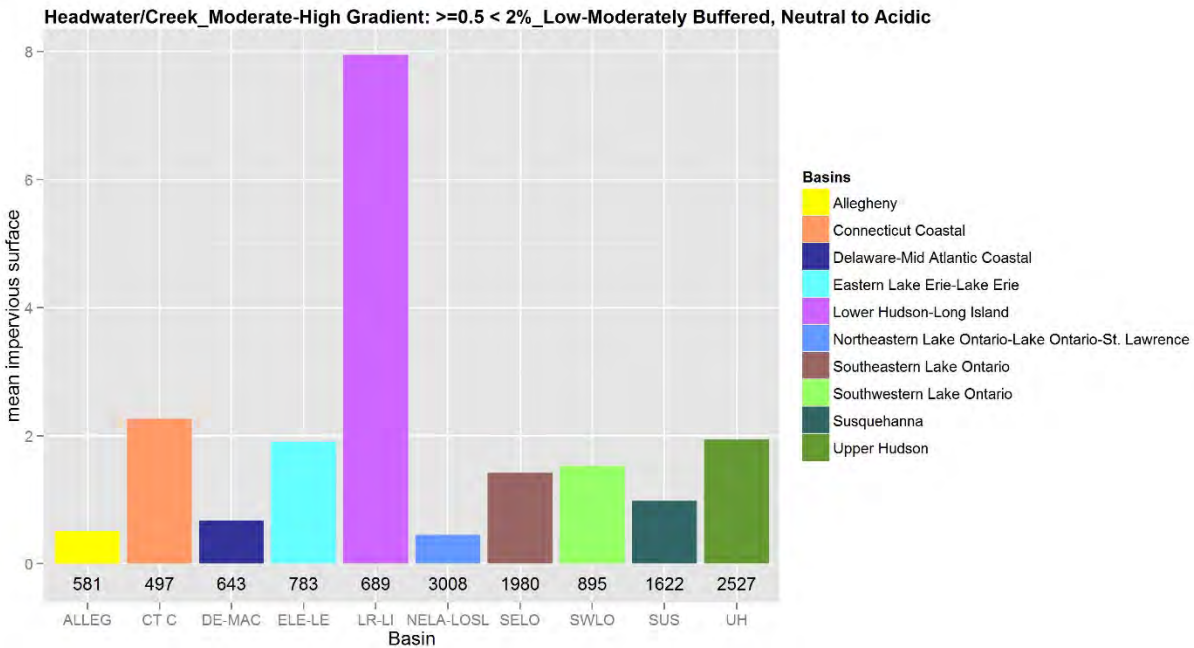


Figure 24. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

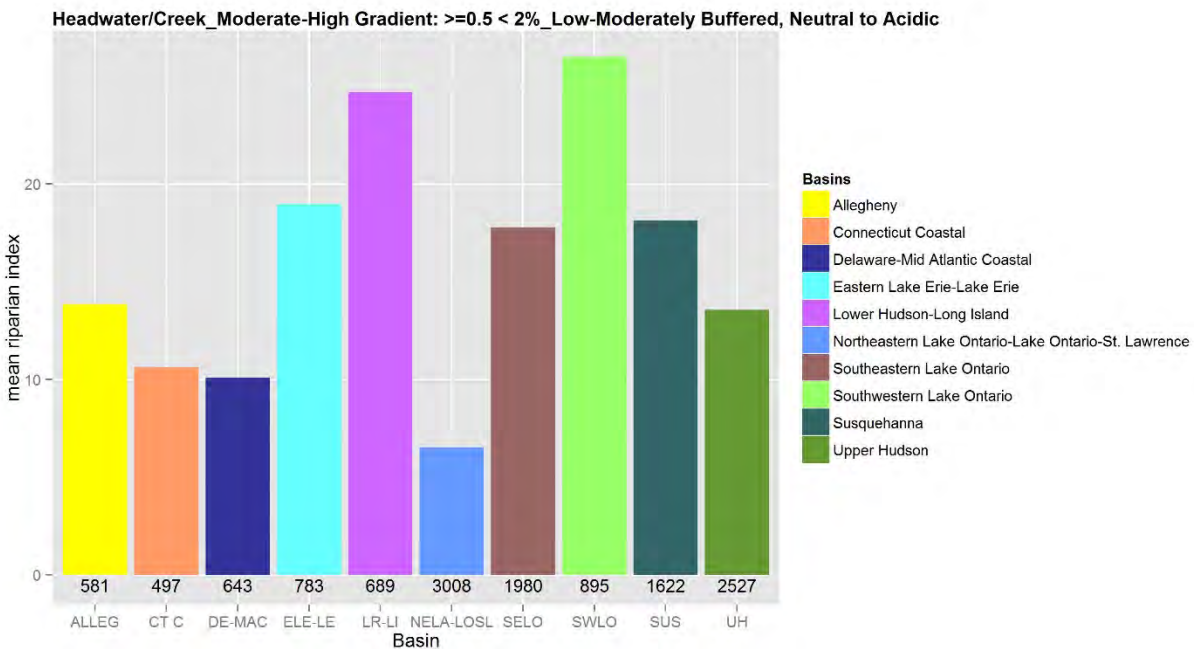


Figure 25. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

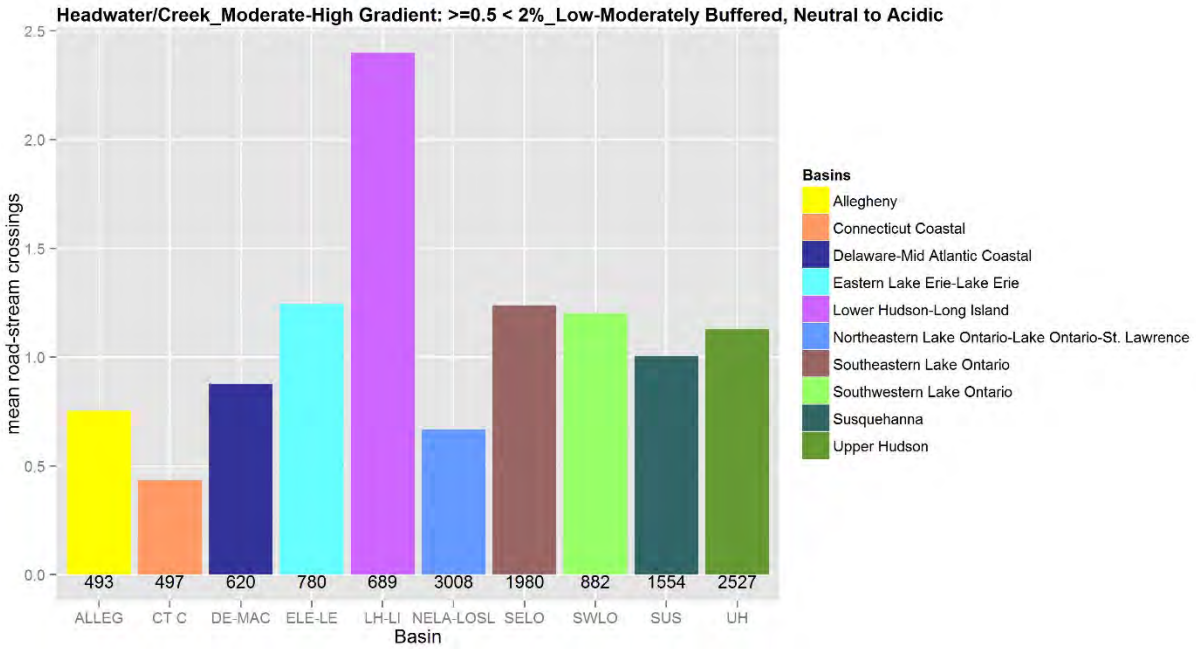


Figure 26. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

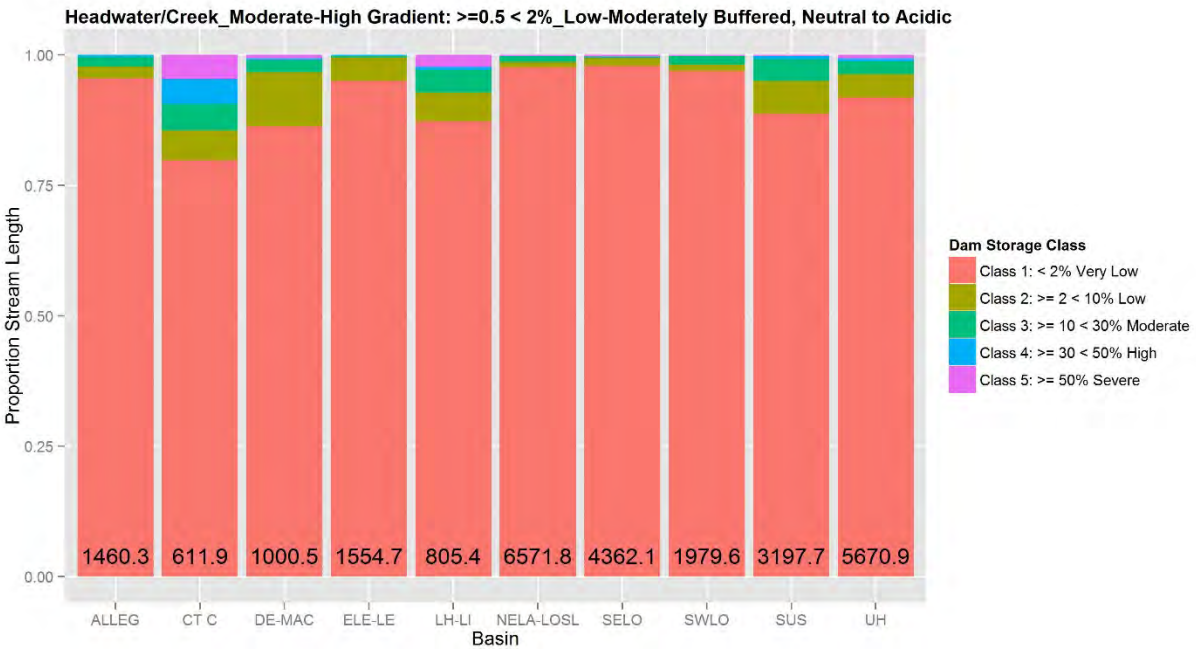


Figure 27. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Four SGCN are associated with this Macrogroup (Table 33).

Table 6. SGCN associated with Headwater/Creek; Moderate-High Gradient; Low-Moderately Buffered.

Species	Common name	SGCN category	Habitat link
<i>Fusconaia flava</i>	Wabash pigtoe	2	Headwater/Creek; Moderate-High Gradient; Low Buffered, Acidic; Cold
<i>Margaritifera margaritifera</i>	Eastern pearlshell	3	Headwater/Creek; Moderate-High Gradient; Low Buffered, Acidic; Cold
<i>Lampsilis fasciola</i>	Wavy-rayed lampmussel	2	Headwater/Creek; Moderate-High Gradient; Moderately Buffered, Neutral; Cold
<i>Lasmigona subviridis</i>	Green floater	2	Headwater/Creek; Moderate-High Gradient; Moderately Buffered, Neutral; Cold

Headwater/Creek; Moderate-High Gradient; Highly Buffered

Distribution

Reaches of this Macrogroup occur primarily along the St. Lawrence, and in an east-west band from the Upper Hudson to Lake Erie, with scattered reaches in the Hudson Valley (Figure 96).

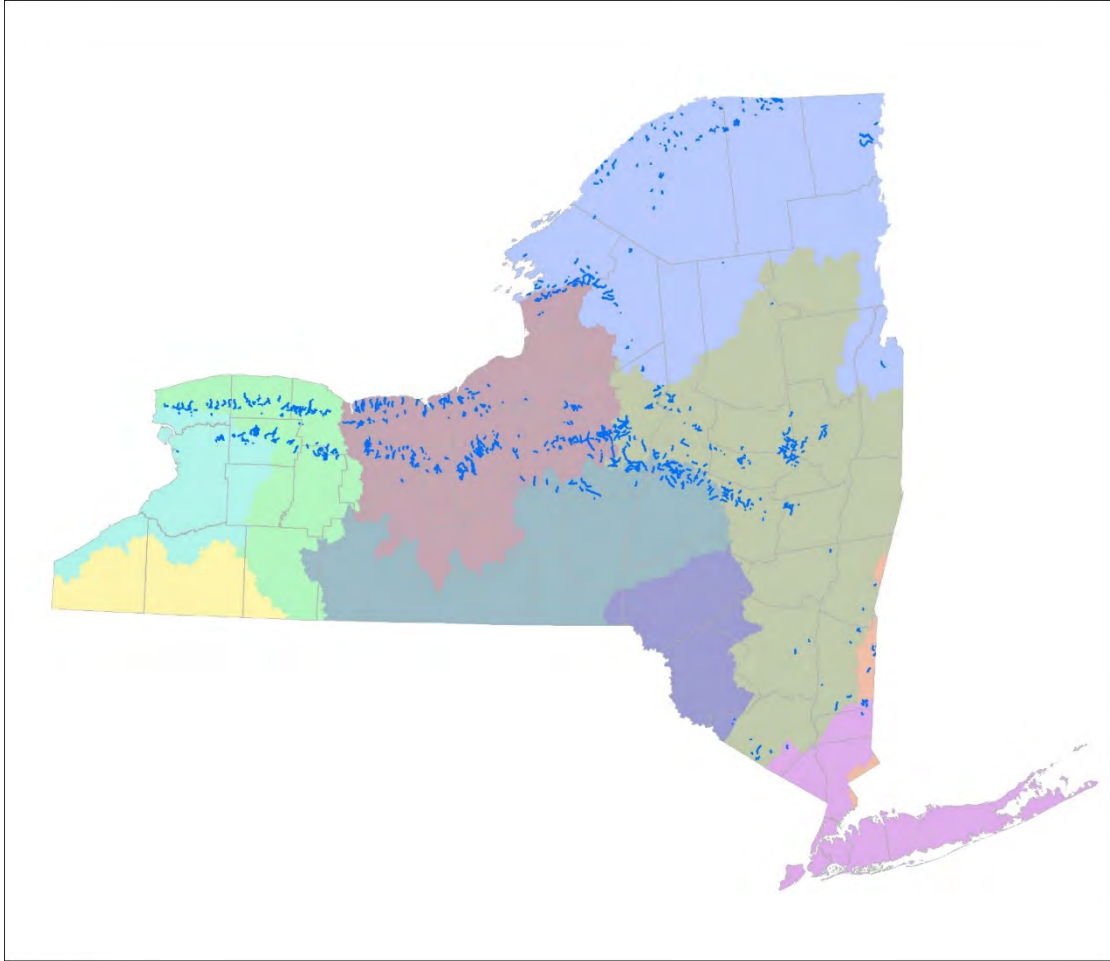


Figure 28. Distribution of the Macrogroup Headwater/Creek; Moderate-High Gradient; Highly Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

Reaches in the best condition appear to be in the Connecticut Coastal and Northeastern Lake Ontario-Lake Ontario-St. Lawrence watersheds, whereas reaches in poorest condition appear to be in the Eastern Lake Erie-Lake Erie, Southeastern Lake Ontario, and Lower Hudson-Long Island watersheds (Figure 97, Figure 98, Figure 99, Figure 100).

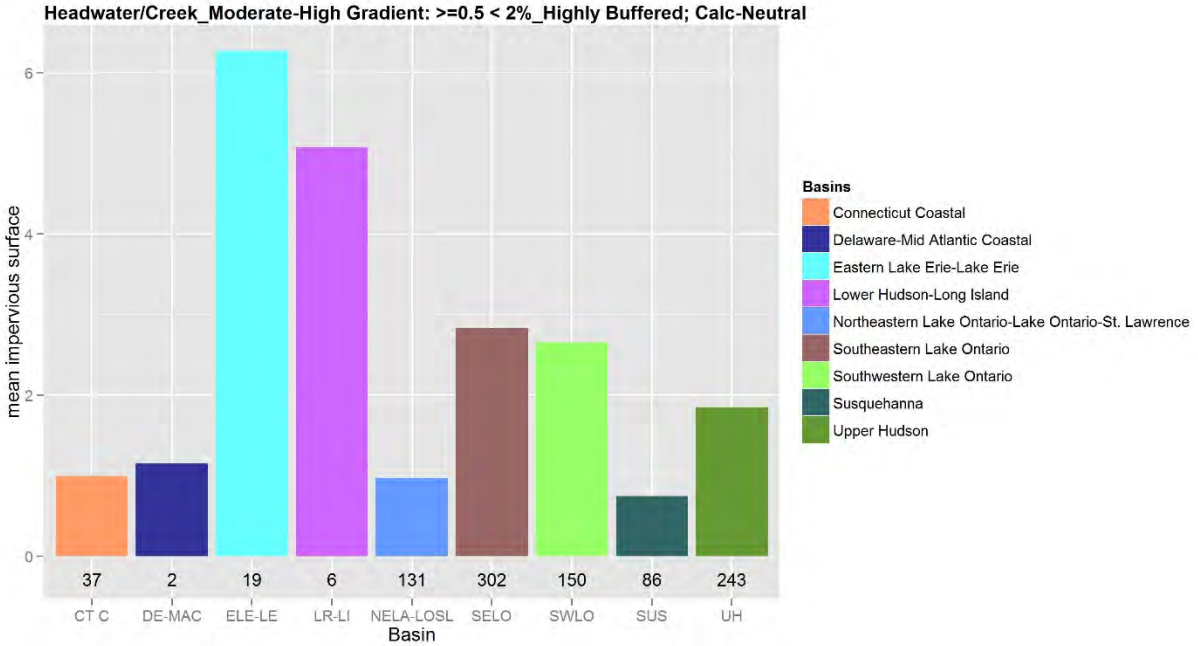


Figure 29. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

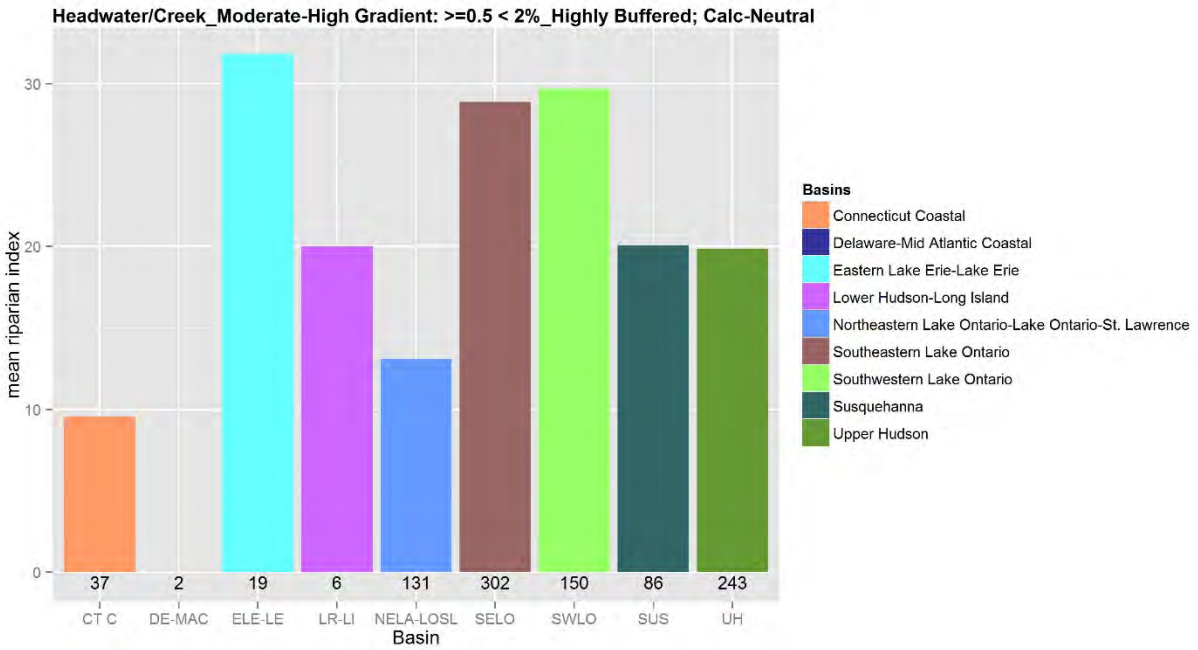


Figure 30. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

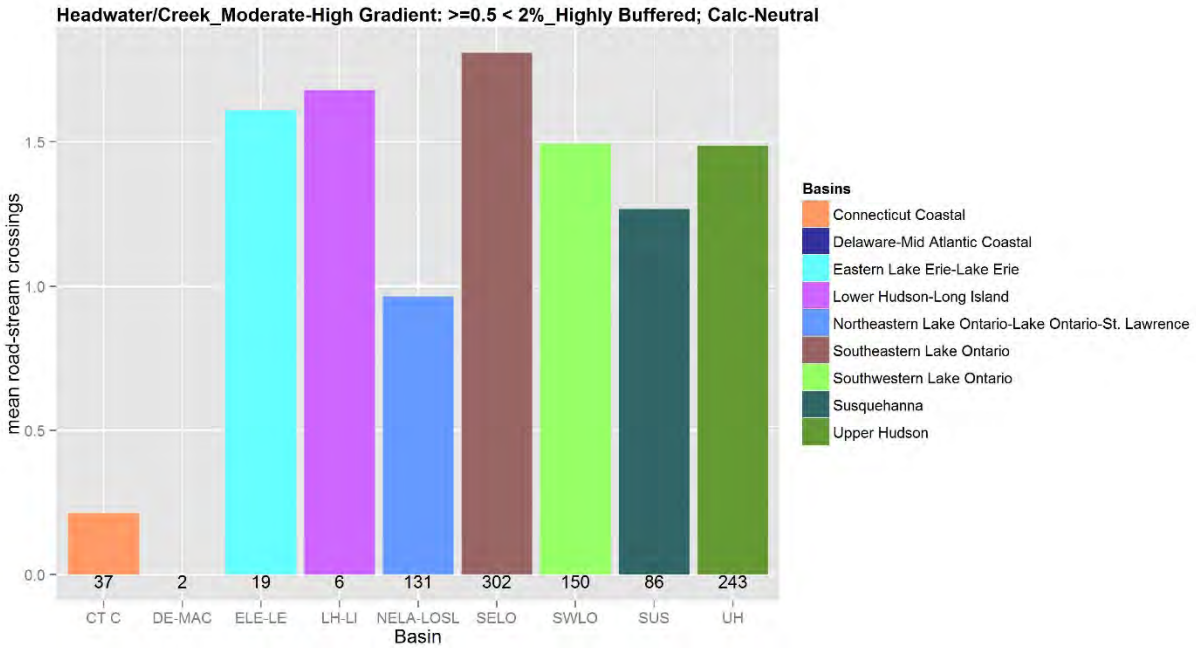


Figure 31. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

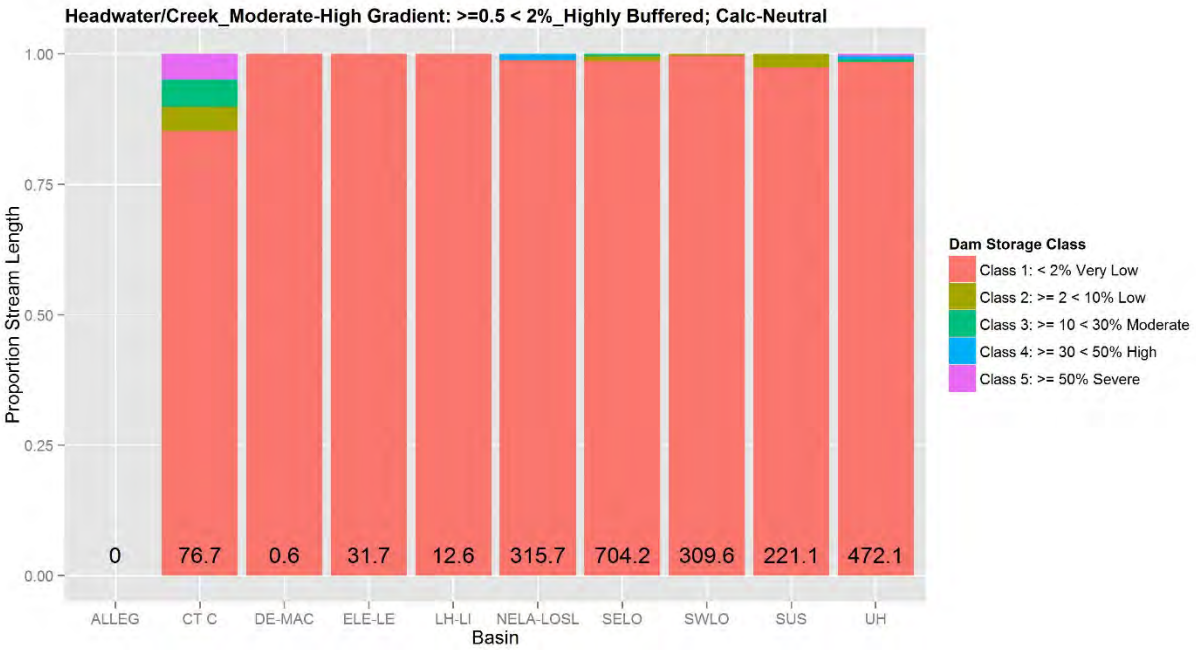


Figure 32. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

One SGCN is associated with this Macrogroup (Table 34).

Table 7. SGCN associated with Headwater/Creek; Moderate-High Gradient; Highly Buffered.

Species	Common name	SGCN category	Habitat link
Villosa iris	Rainbow	2	Headwater/Creek; Moderate-High Gradient; Highly Buffered, Calcareous; Cold

Headwater/Creek; High Gradient; Low-Moderately Buffered

Distribution

Reaches of this Macrogroup are in hilly and mountainous regions of the state and are either absent or rare in the Lake Plain and Coastal Plain (Figure 101).

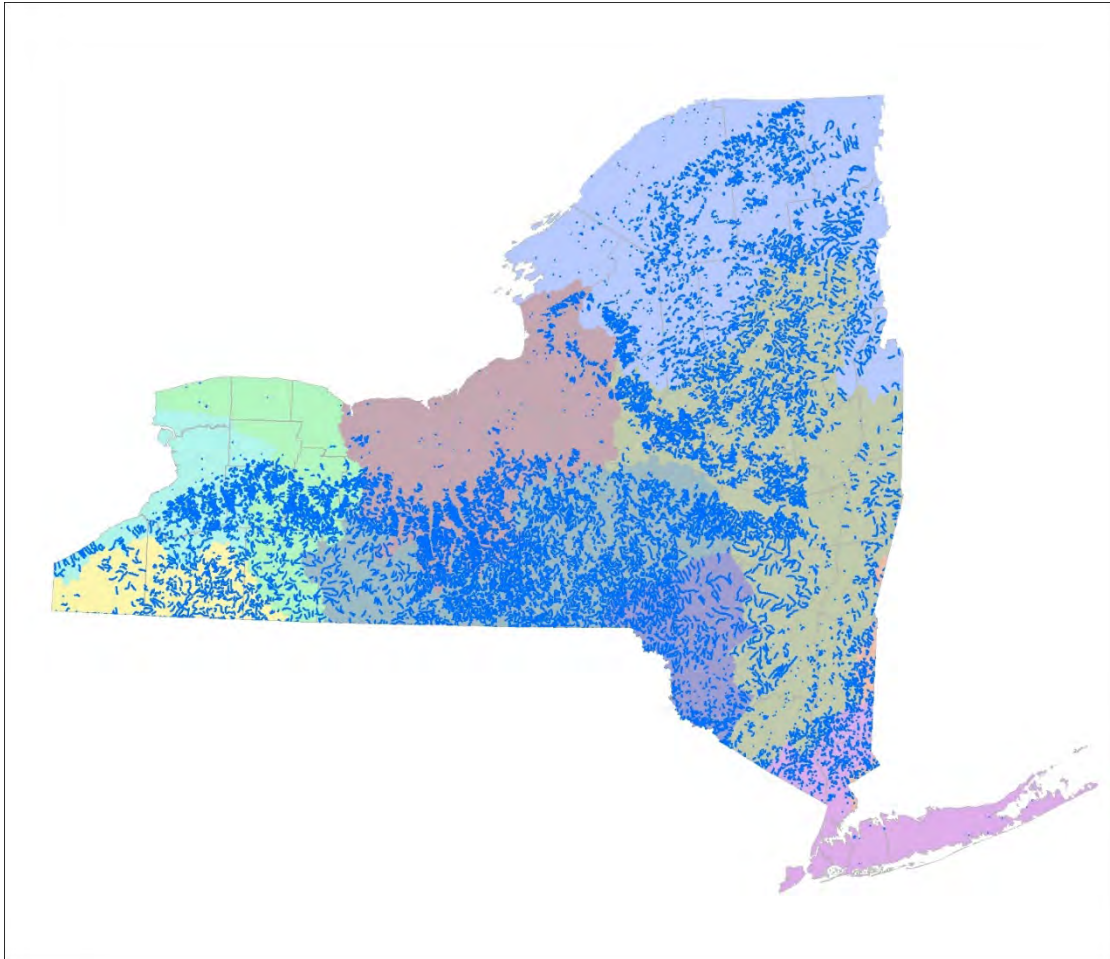


Figure 33. Distribution of the Macrogroup Headwater/Creek; High Gradient; Low-Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

Reaches in the best condition appear to be in the Allegheny and Northeastern Lake Ontario-Lake Ontario-St. Lawrence watersheds, whereas reaches in poorest condition appear to be in the Lower Hudson-Long Island watershed (Figure 102, Figure 103, Figure 104, Figure 105).

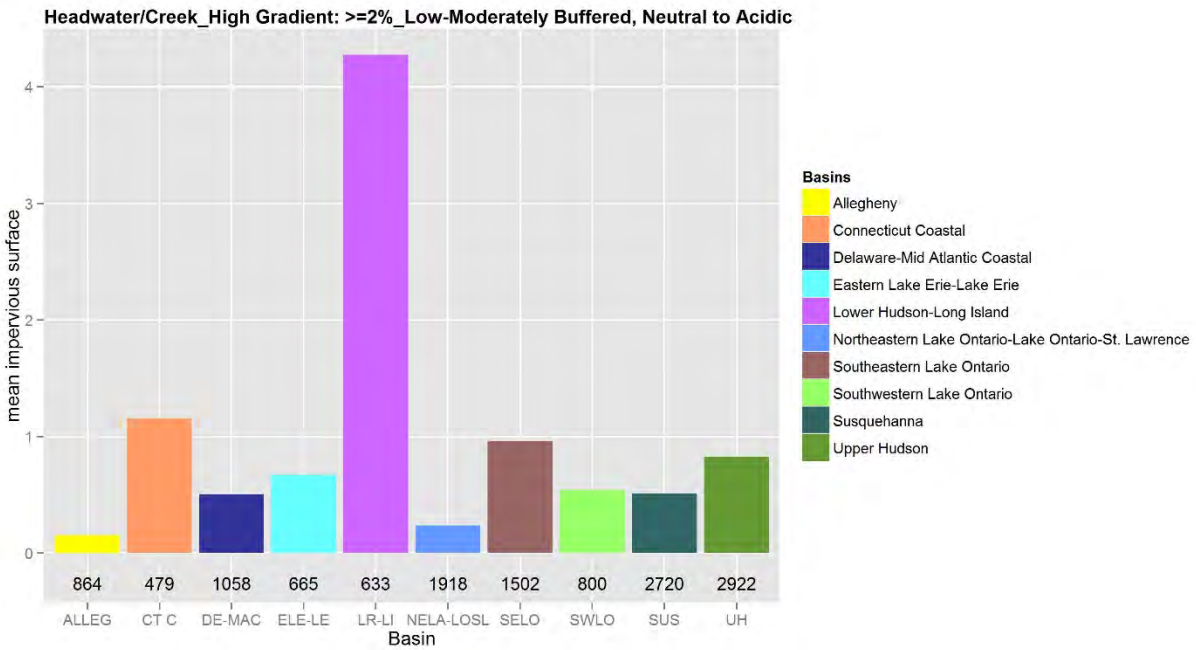


Figure 34. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

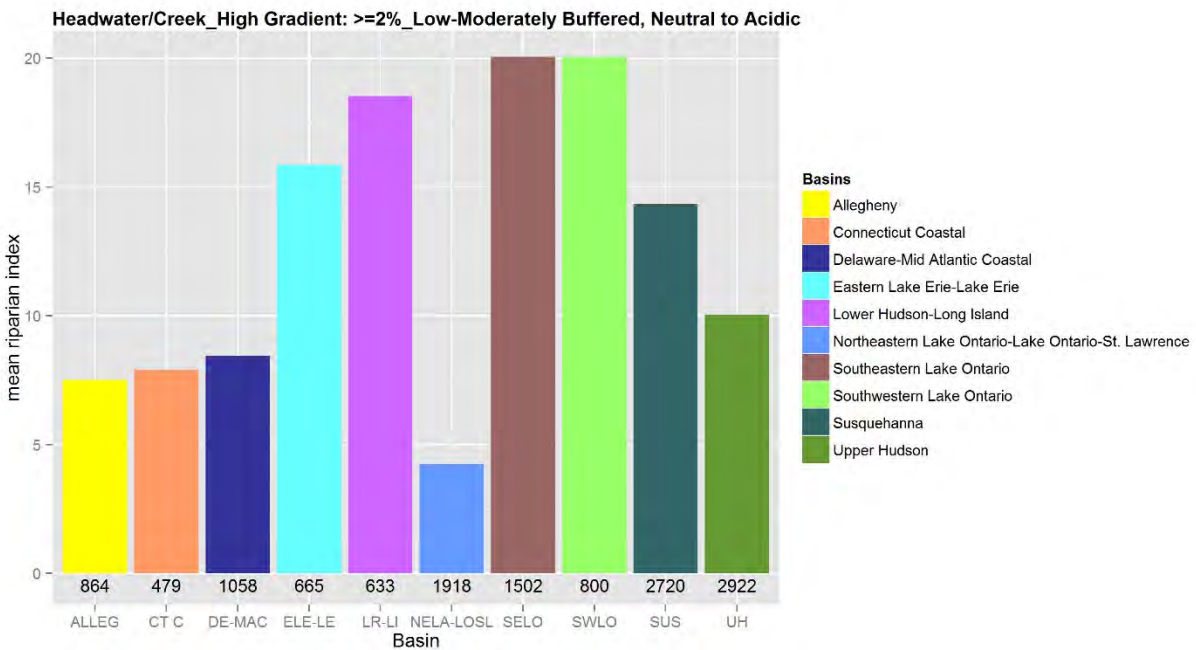


Figure 35. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

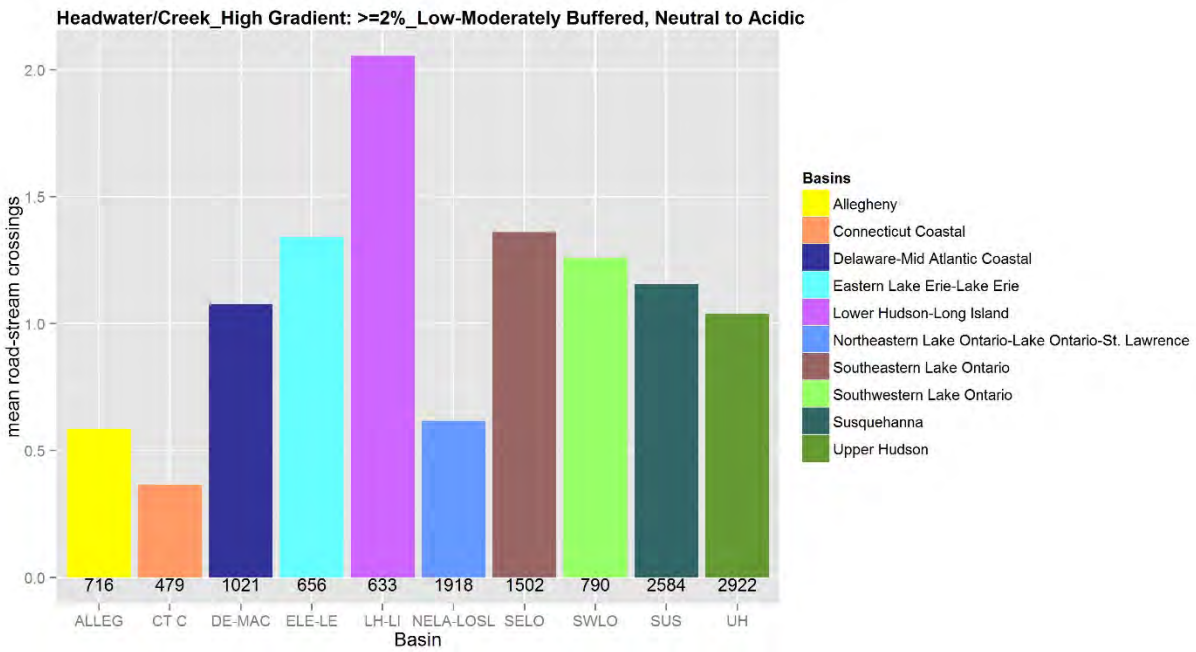


Figure 36. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

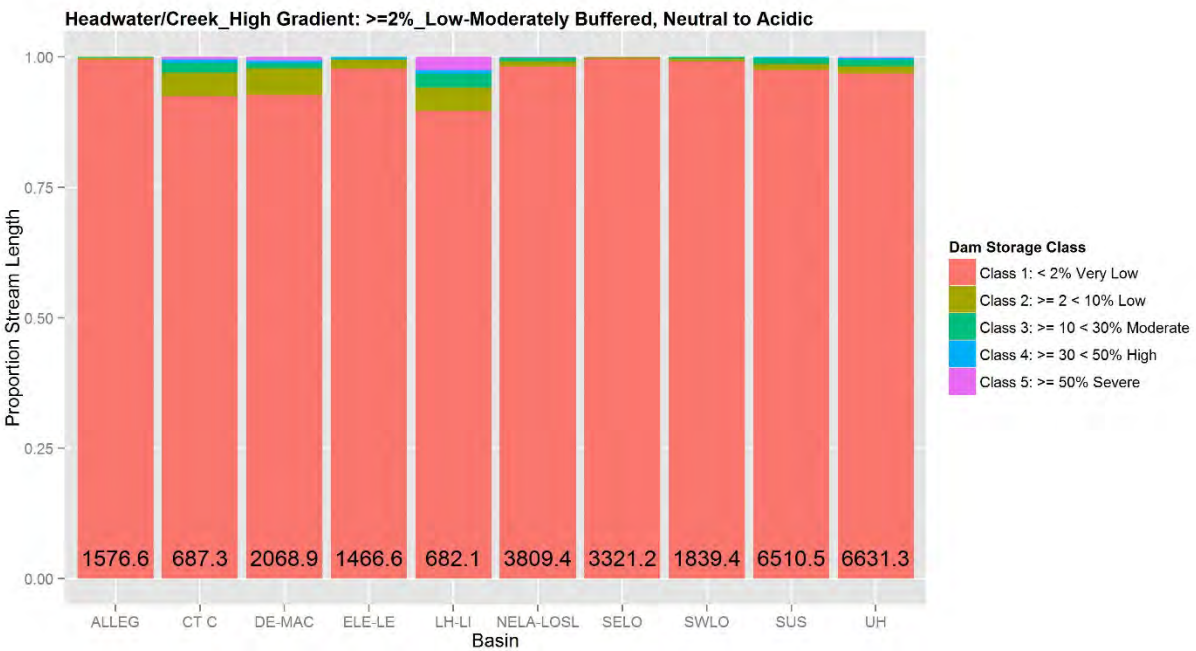


Figure 37. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

One SGCN is associated with this Macrogroup (Table 35).

Table 8. SGCN associated with Headwater/Creek; Moderate-High Gradient; Highly Buffered.

Species	Common name	SGCN category	Habitat link
Margaritifera margaritifera	Eastern pearlshell	3	Headwater/Creek; High Gradient; Low Buffered, Acidic; Cold

Headwater/Creek; High Gradient; Highly Buffered

Distribution

High gradient, highly buffered stream reaches occur in the Adirondack foothills and the hilly portions of the Southeastern Lake Ontario, Susquehanna, and Upper Hudson watersheds (Figure 106).

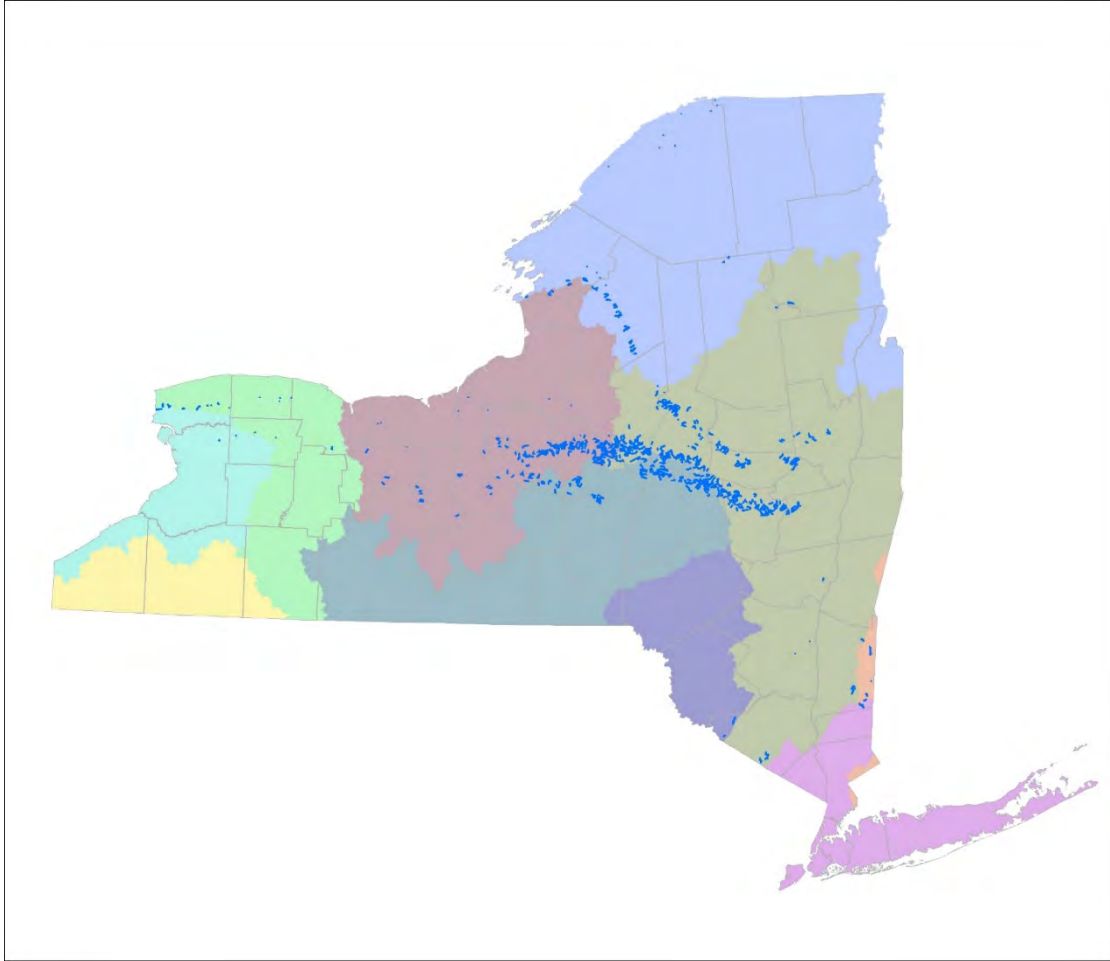


Figure 38. Distribution of the Macrogroup Headwater/Creek; High Gradient; Highly Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

The watershed with the best average reach condition appears to be the Lower Hudson-Long Island and Delaware-Mid-Atlantic Coastal, although there are very few reaches, as well as the Connecticut Coastal watershed (Figure 107, Figure 108, Figure 109, Figure 110). The few examples in the Eastern Lake Erie-Lake Erie watershed appear highly impacted, as do reaches in the Southeastern Lake Ontario watershed.

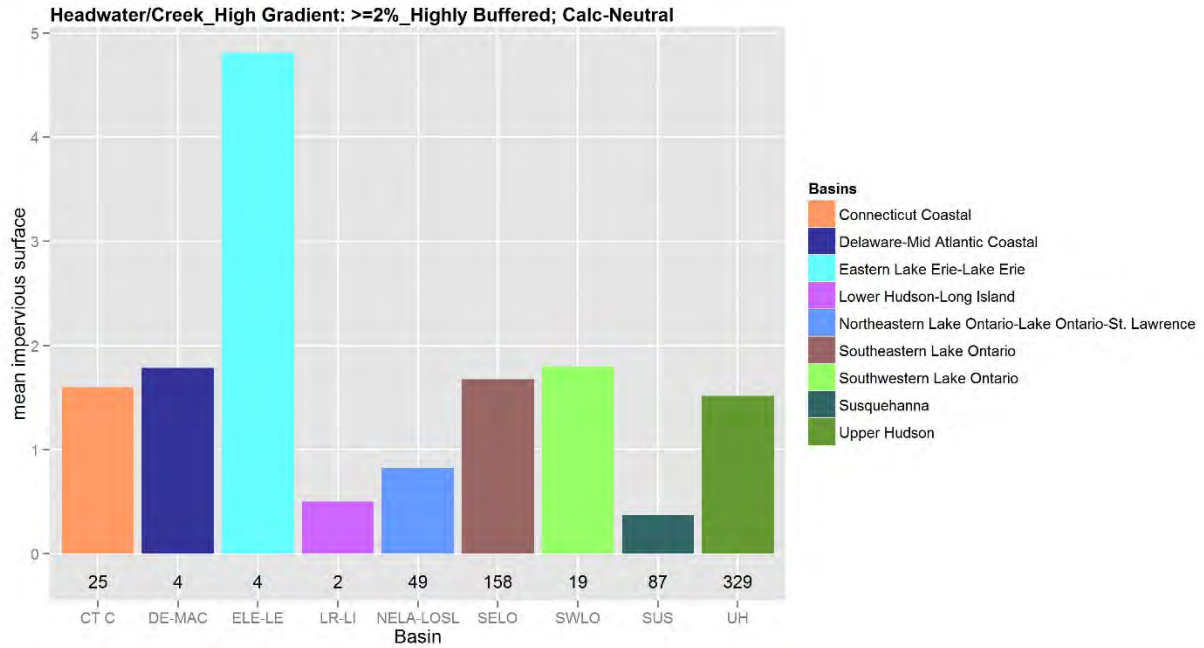


Figure 39. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

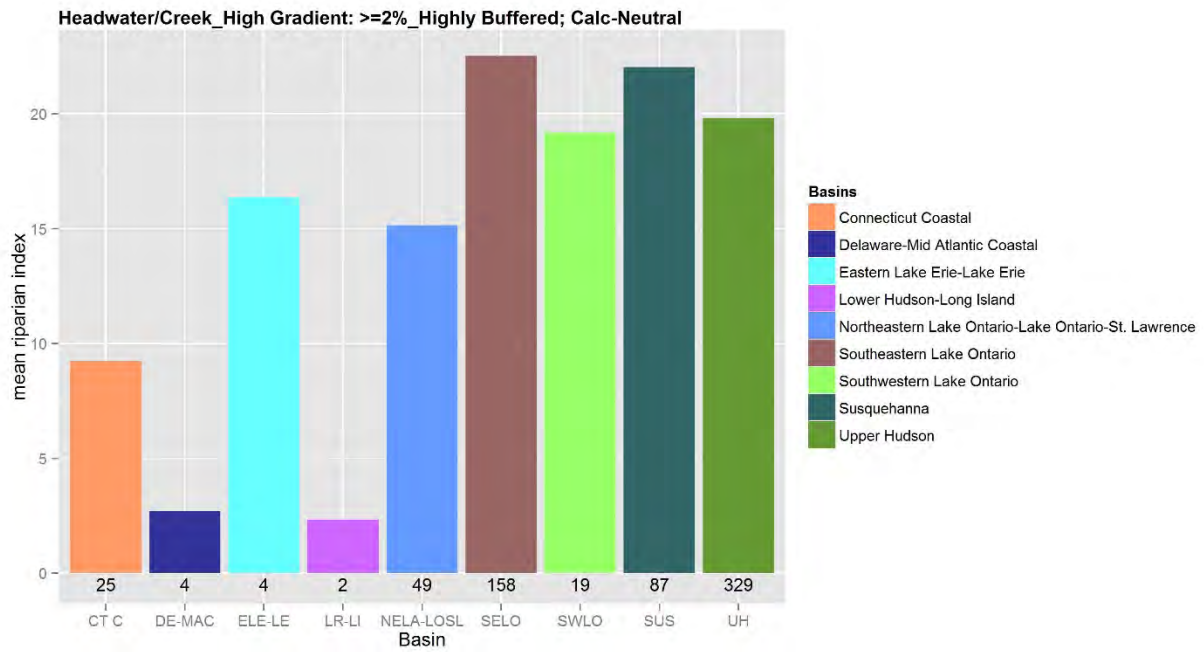


Figure 40. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

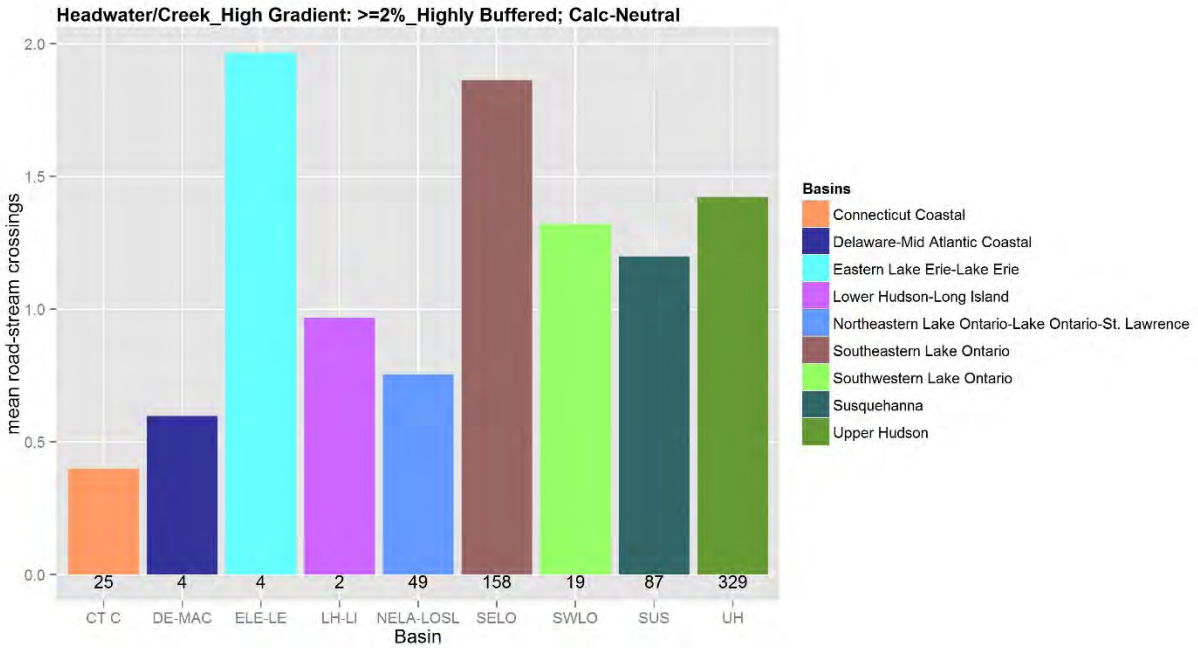


Figure 41. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

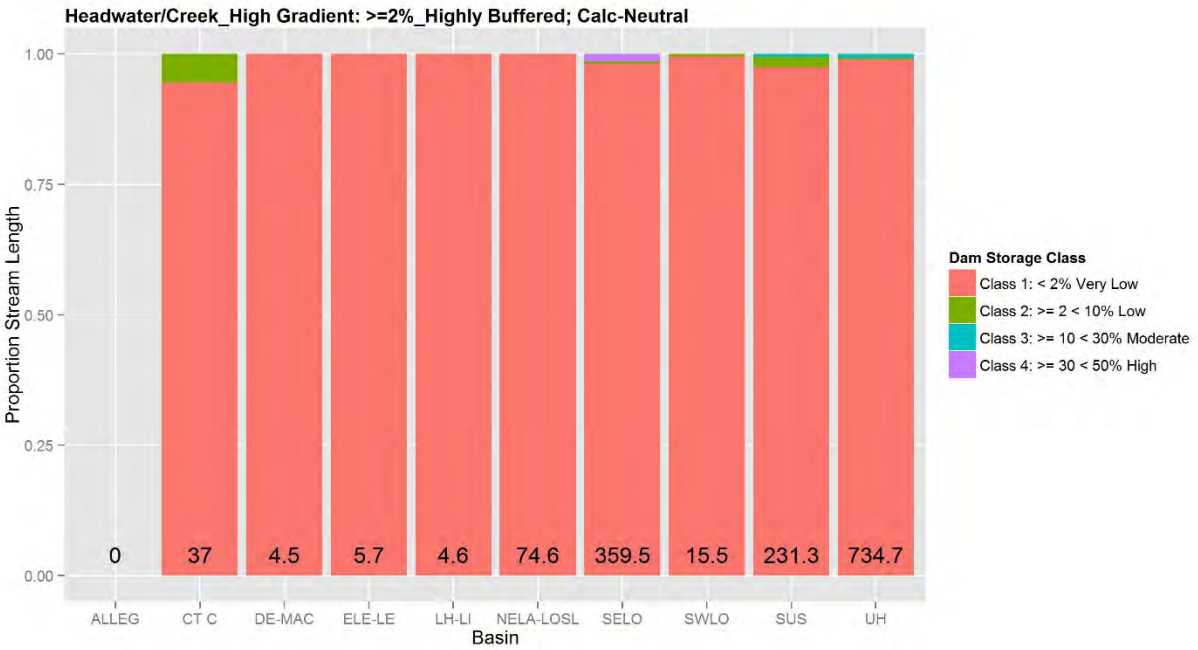


Figure 42. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

No SGCN are associated with this Macrogroup.

Small River; Low Gradient; Low-Moderately Buffered

Distribution

This Macrogroup is well distributed throughout New York (Figure 111).

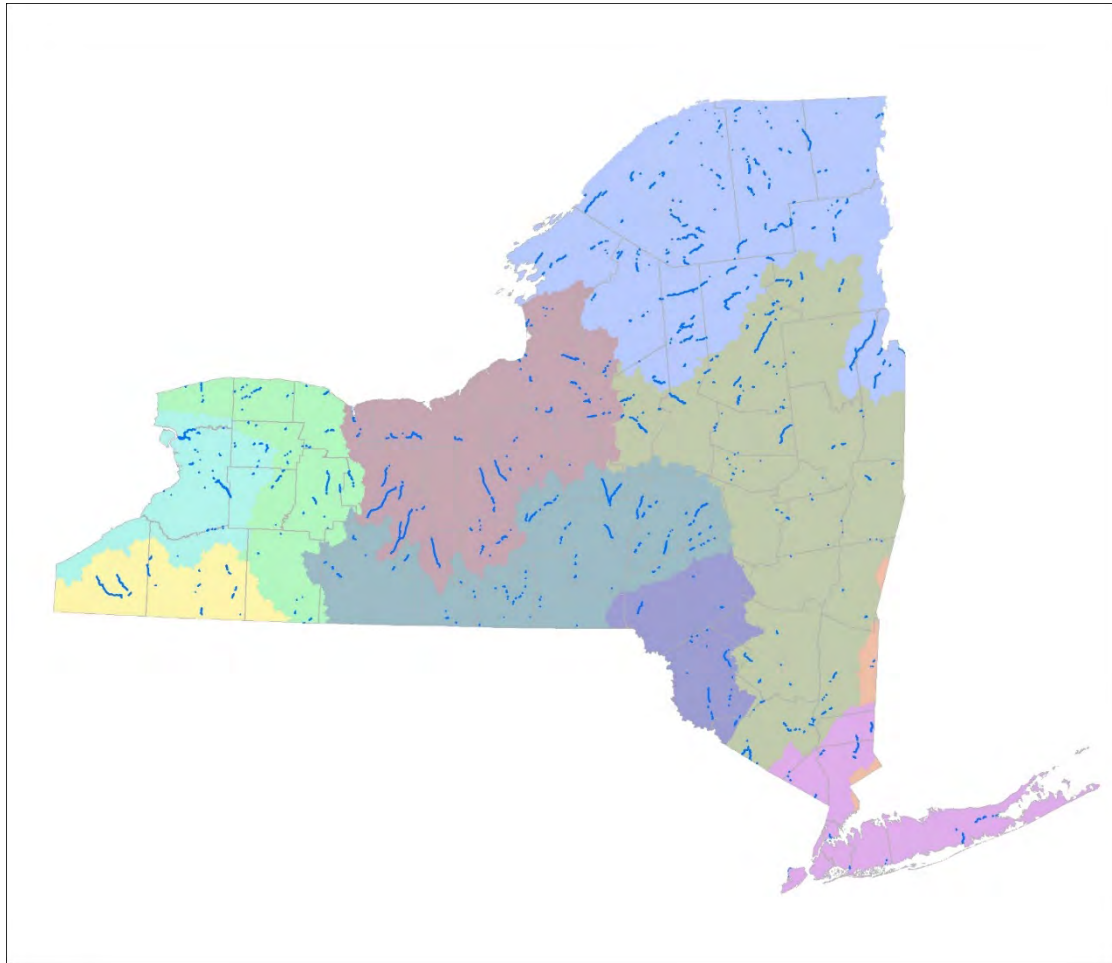


Figure 43. Distribution of the Macrogroup Small River; Low Gradient; Low-Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

Reaches in the Eastern Lake Erie-Lake Erie and Lower Hudson-Long Island watersheds appear to be in the worst condition, while no watershed stands out as having the reaches in the best condition (Figure 112, Figure 113, Figure 114, Figure 115).

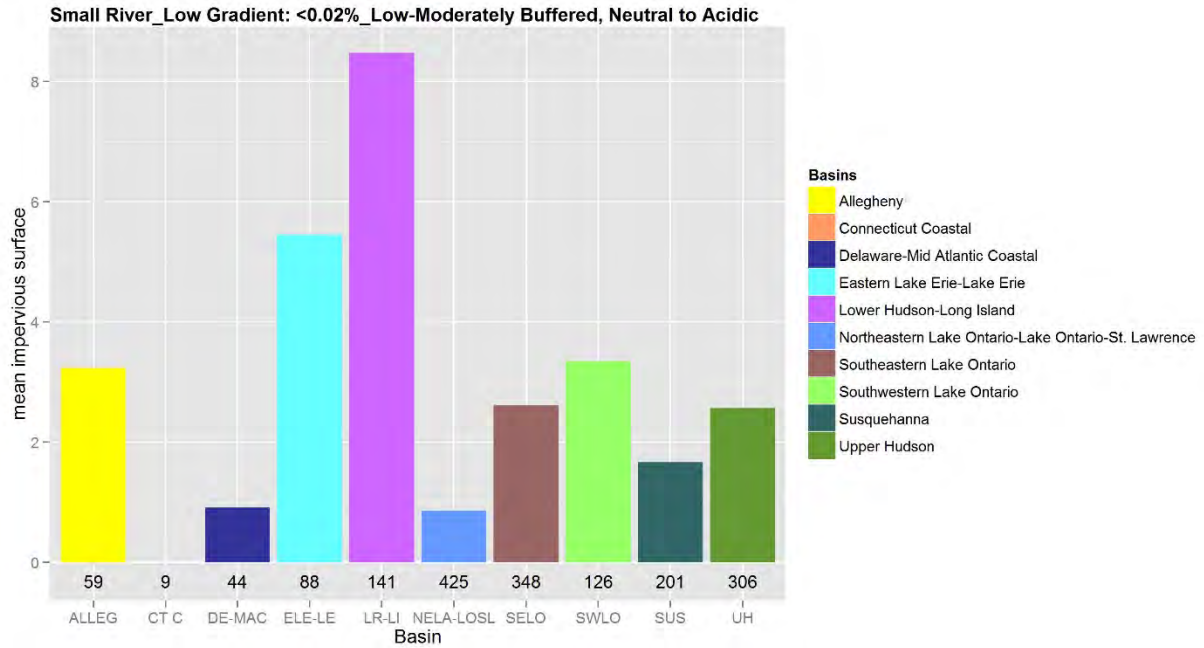


Figure 44. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

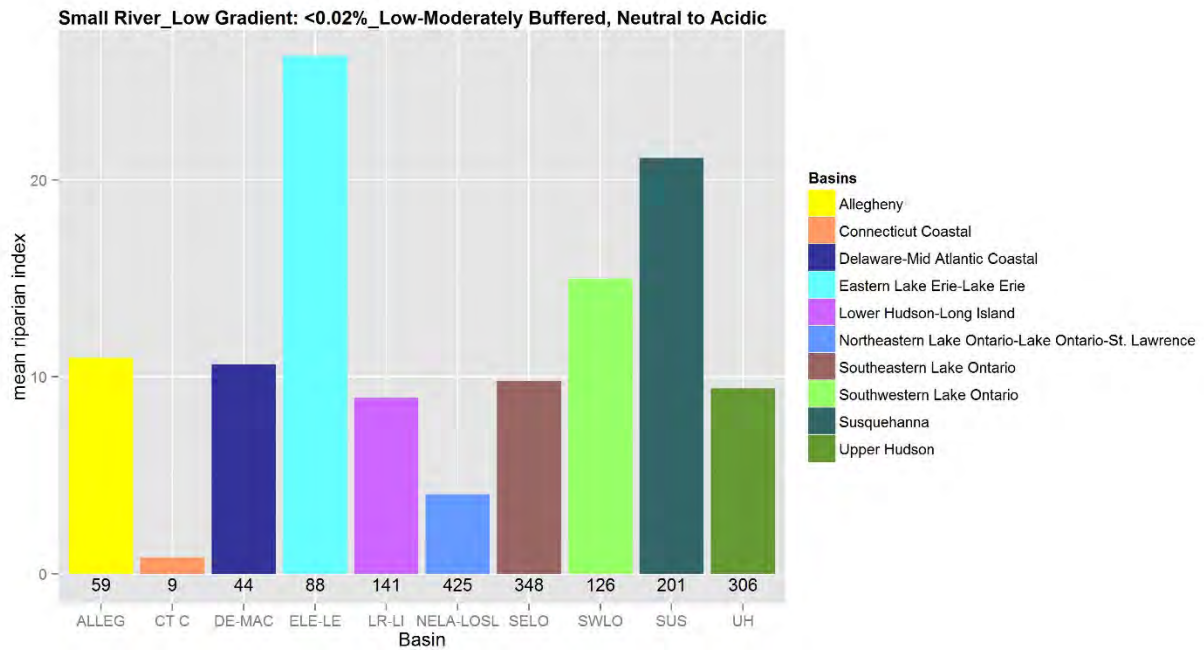


Figure 45. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

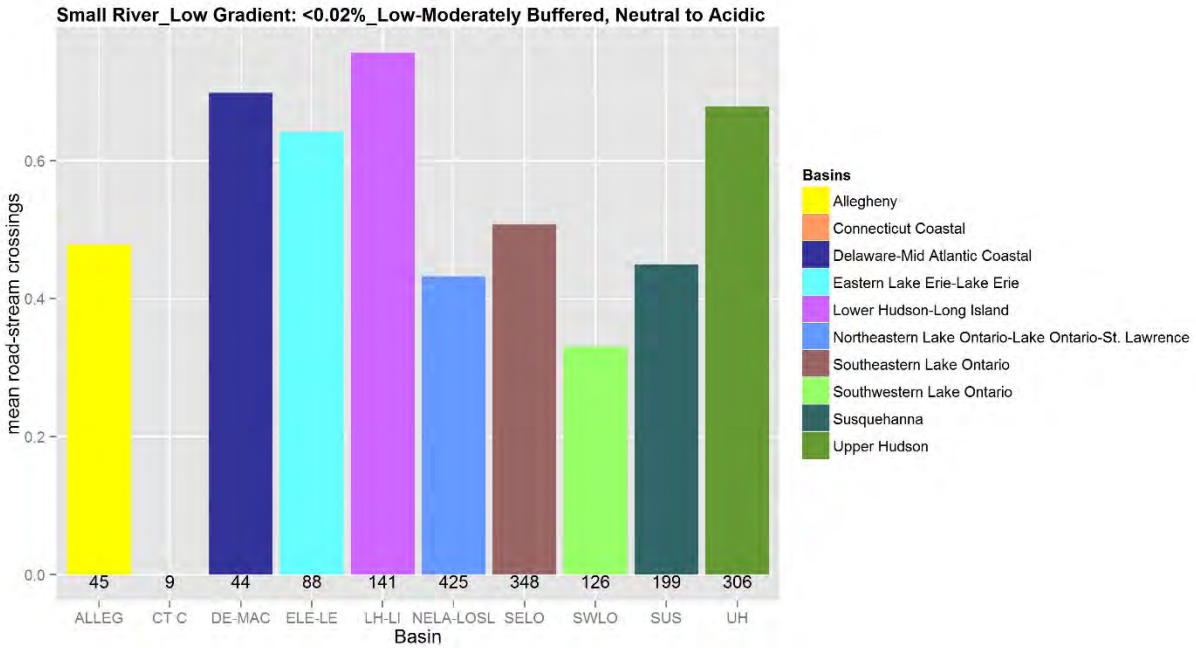


Figure 46. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

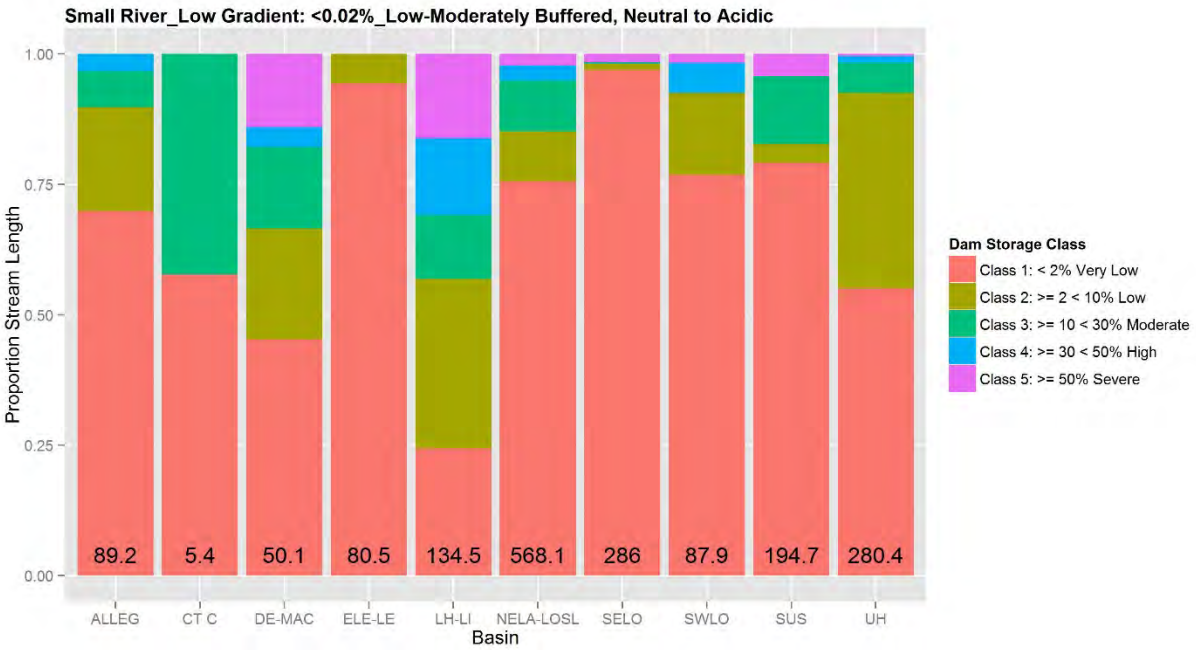


Figure 47. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Twenty-four SGCN are associated with this Macrogroup (Table 36).

Table 9. SGCN associated with Small River; Low Gradient; Low-Moderately Buffered.

Species	Common name	SGCN category	Habitat link
<i>Hybopsis amblops</i>	Bigeye chub	2	Small River; Low Gradient; Moderately Buffered
<i>Cryptobranchus alleganiensis</i>	Eastern hellbender	2	Small River; Low Gradient; Moderately Buffered, Neutral; Cold
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	2	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Alasmidonta marginata</i>	Elktoe	3	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Alasmidonta varicosa</i>	Brook floater	2	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Amblema plicata</i>	Threeridge	3	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Etheostoma exile</i>	Iowa darter	3	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Fusconaia flava</i>	Wabash pigtoe	2	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lasmigona subviridis</i>	Green floater	2	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Ligumia nasuta</i>	Eastern Pondmussel	3	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Notropis chalybaeus</i>	Ironcolor shiner	3	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Pleurobema clava</i>	Clubshell	2	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Potamilus alatus</i>	Pink heelsplitter	3	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Ptychobranchus fasciolaris</i>	Kidneyshell	3	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Salvelinus fontinalis</i>	Brook trout (wild)	3	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Utterbackia imbecillis</i>	Paper pondshell	3	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Villosa fabalis</i>	Rayed bean	2	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Villosa iris</i>	Rainbow	2	Small River; Low Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Alosa pseudoharengus</i>	Alewife	3	Small River; Low Gradient; Moderately Buffered, Neutral; Warm

Species	Common name	SGCN category	Habitat link
<i>Ameiurus melas</i>	Black bullhead	3	Small River; Low Gradient; Moderately Buffered, Neutral; Warm
<i>Cincinnatia cincinnatiensis</i>	Campelema spire snail	4	Small River; Low Gradient; Moderately Buffered, Neutral; Warm
<i>Etheostoma maculatum</i>	Spotted darter	2	Small River; Low Gradient; Moderately Buffered, Neutral; Warm
<i>Notropis dorsalis</i>	Bigmouth shiner	3	Small River; Low Gradient; Moderately Buffered, Neutral; Warm

Small River; Low Gradient; Highly Buffered

Distribution

This rare Macrogroup occurs primarily in the Susquehanna, Southeastern Lake Ontario, and Southwestern Lake Ontario watersheds (Figure 116).

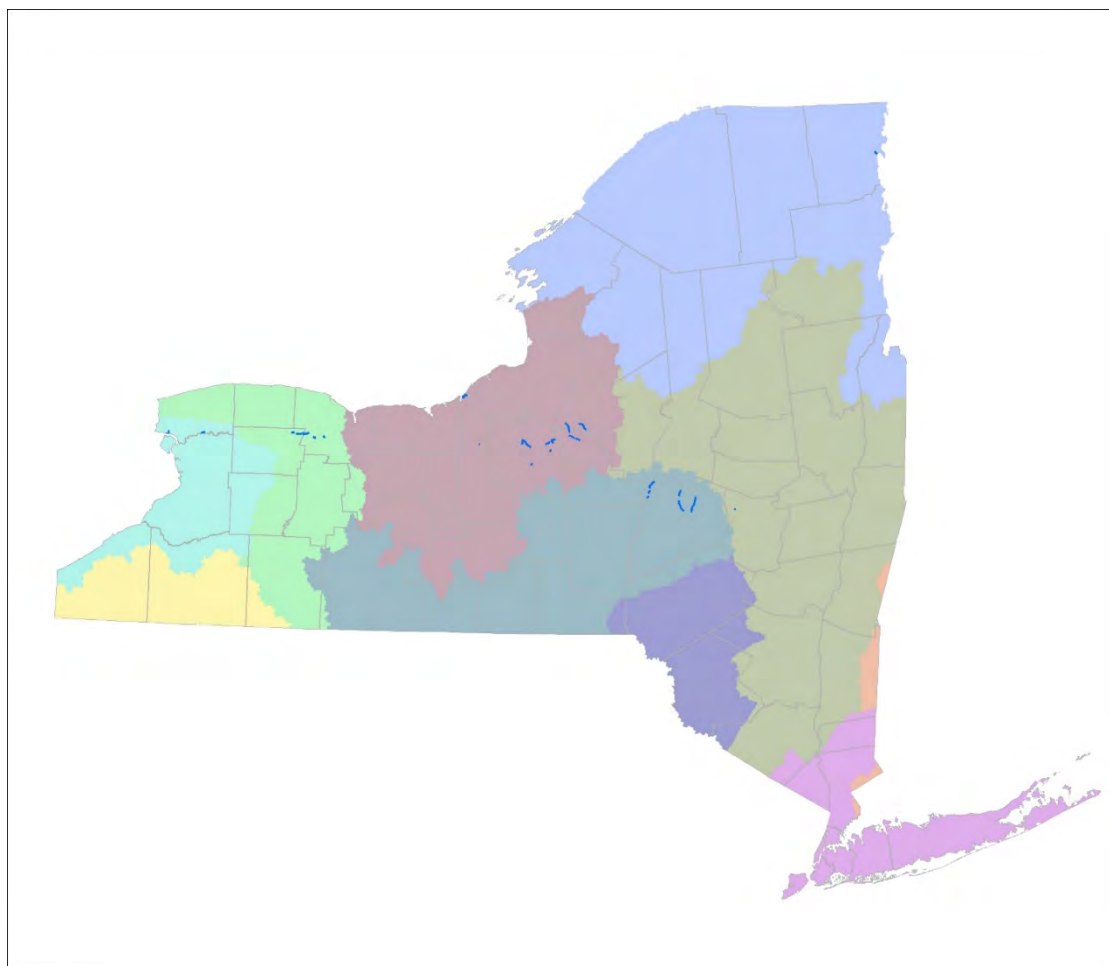


Figure 48. Distribution of the Macrogroup Small River; Low Gradient; Highly Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

Condition metrics paint an inconsistent picture of condition of reaches in this Macrogroup by watershed, complicated by the rarity of the Macrogroup (Figure 117, Figure 118, Figure 119, Figure 120).

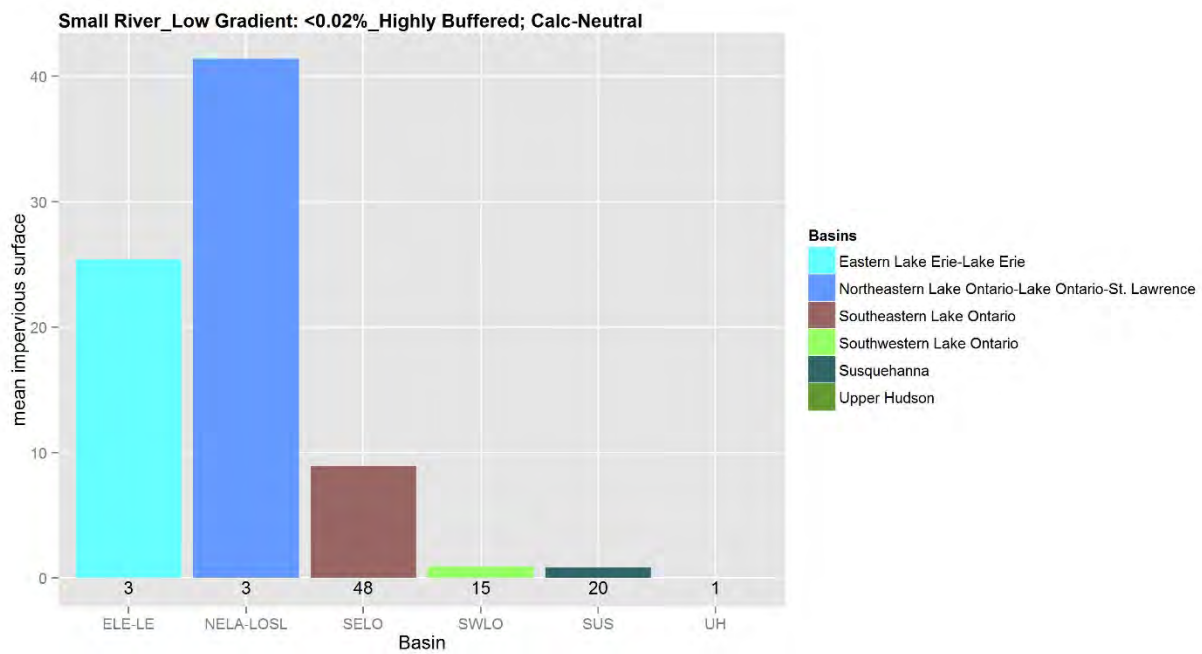


Figure 49. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

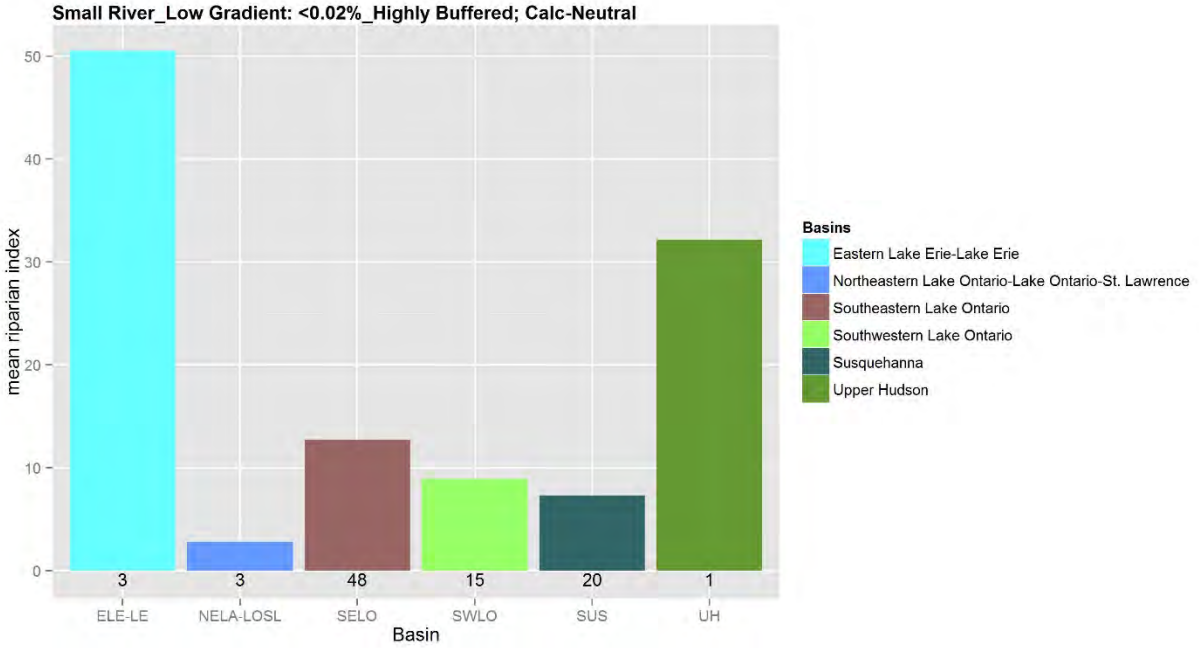


Figure 50. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

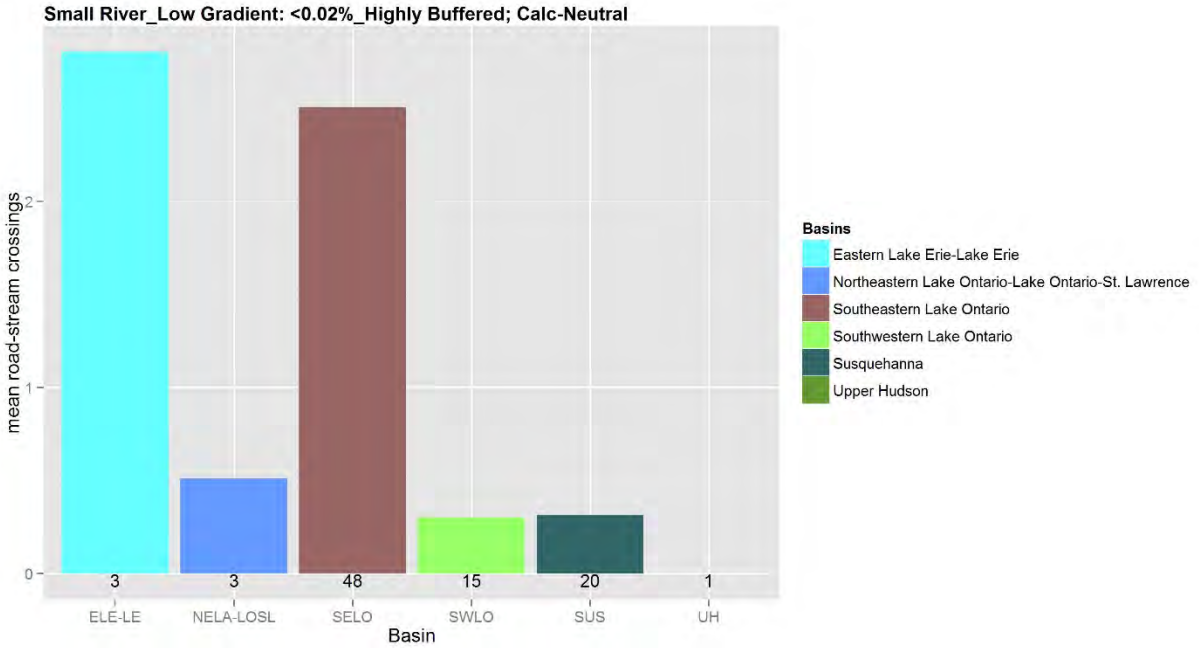


Figure 51. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

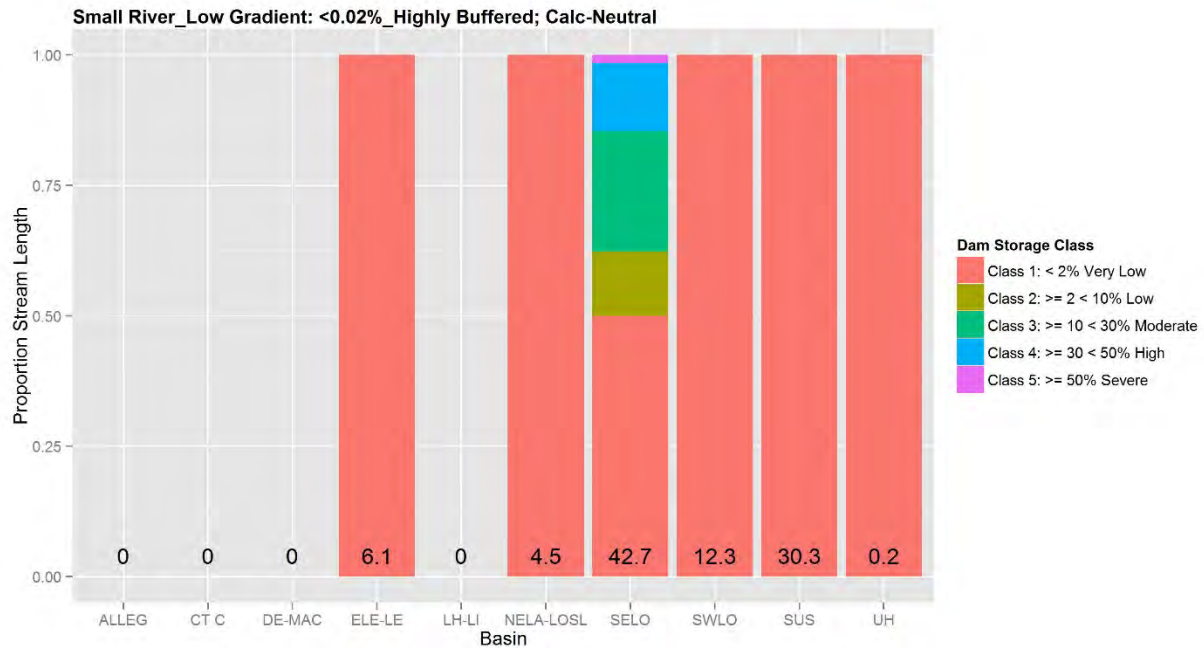


Figure 52. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Two SGCN are associated with this Macrogroup (Table 37).

Table 10. SGCN associated with Small River; Low Gradient; Highly Buffered.

Species	Common name	SGCN category	Habitat link
<i>Alasmidonta varicosa</i>	Brook floater	2	Small River; Low Gradient; Highly Buffered, Calcareous; Transitional Cool
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Small River; Low Gradient; Highly Buffered, Calcareous; Transitional Cool

Small River; Low-Moderate Gradient; Low-Moderately Buffered

Distribution

This Macrogroup is well distributed throughout New York (Figure 121).

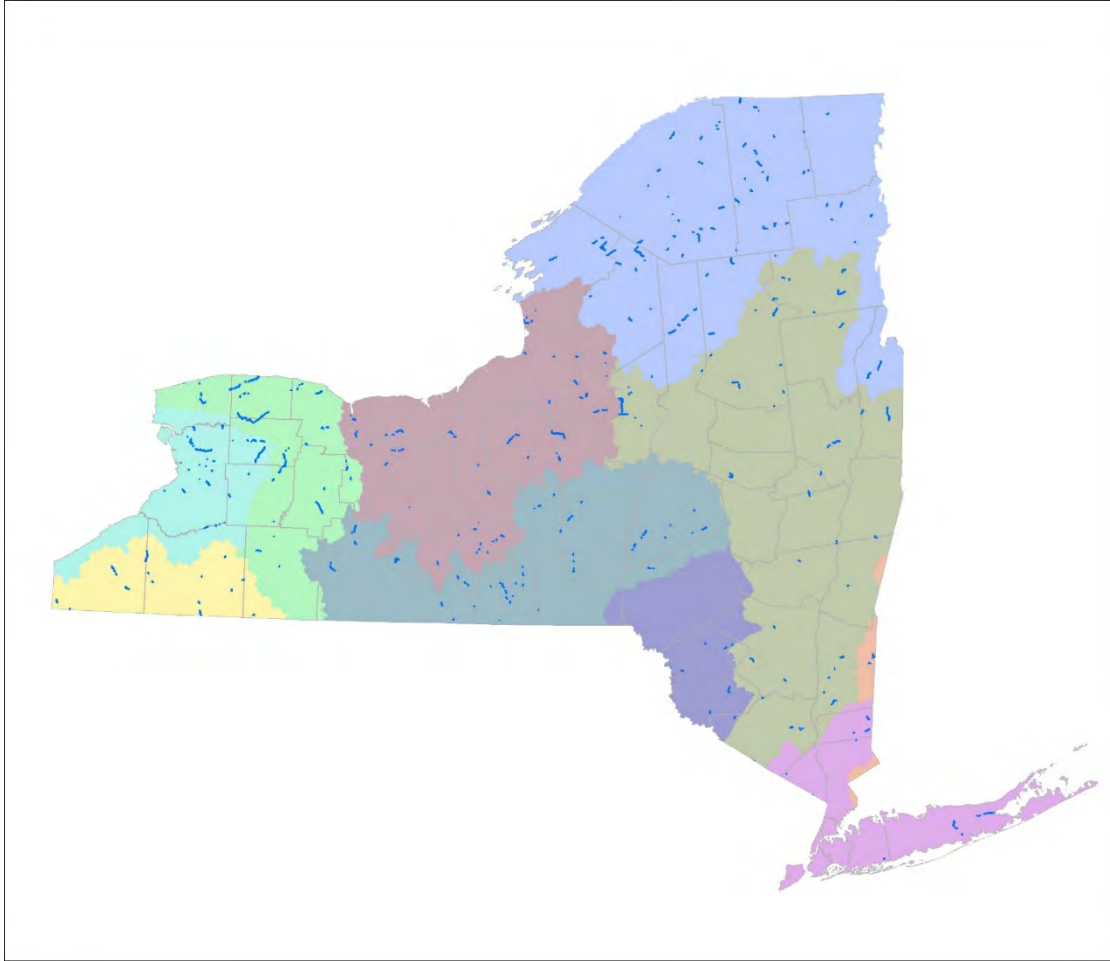


Figure 53. Distribution of the Macrogroup Small River; Low-Moderate Gradient; Low-Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

The watersheds with the best average condition of reaches in this Macrogroup appear to be Allegheny, Connecticut Coastal, Delaware Mid-Atlantic Coastal, and Northeastern Lake Ontario-Lake Ontario-St. Lawrence, whereas the watersheds with the poorest average condition are Lower Hudson-Long Island and Eastern Lake Erie-Lake Erie (Figure 122, Figure 123, Figure 124, Figure 125).

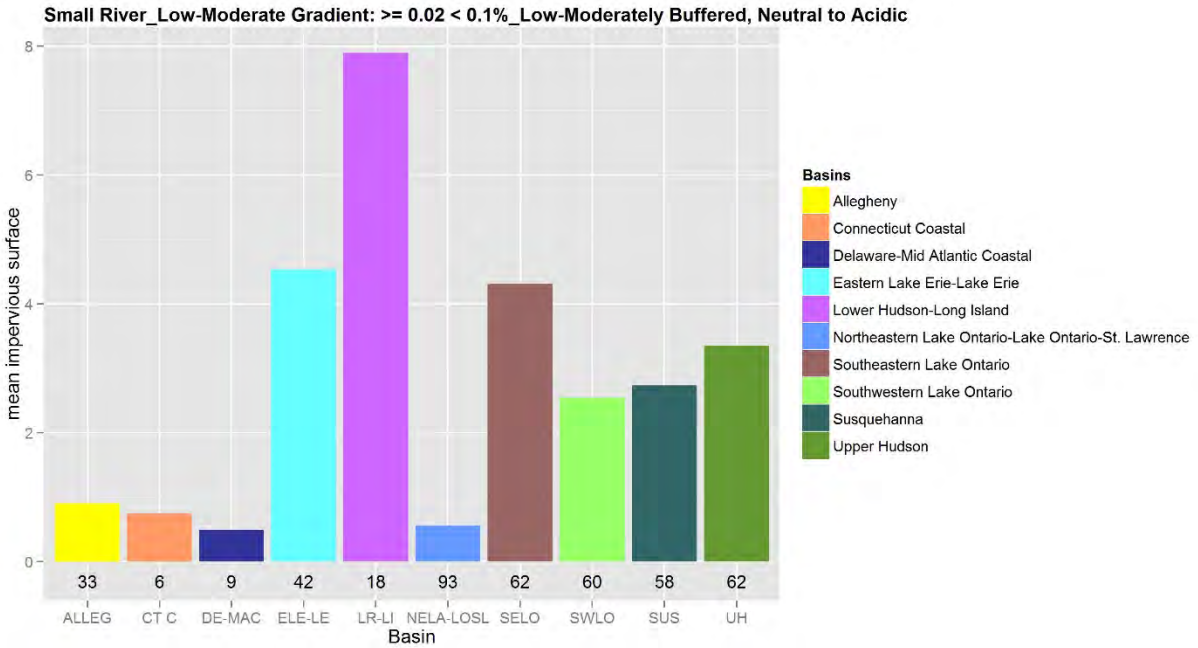


Figure 54. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

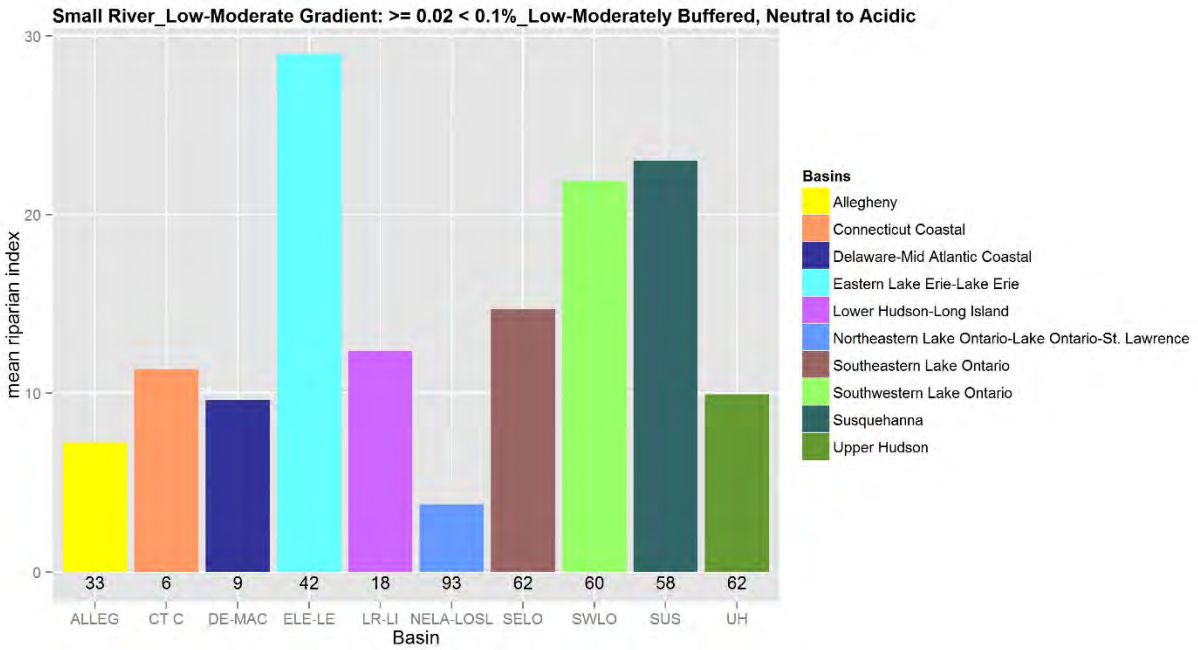


Figure 55. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

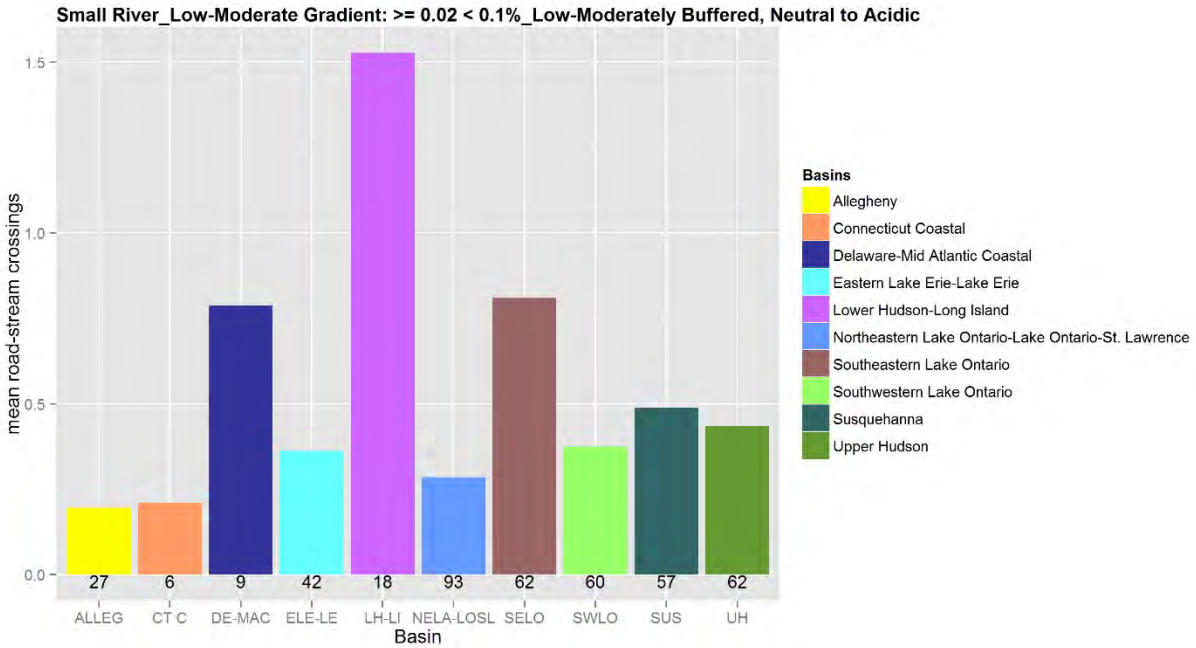


Figure 56. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

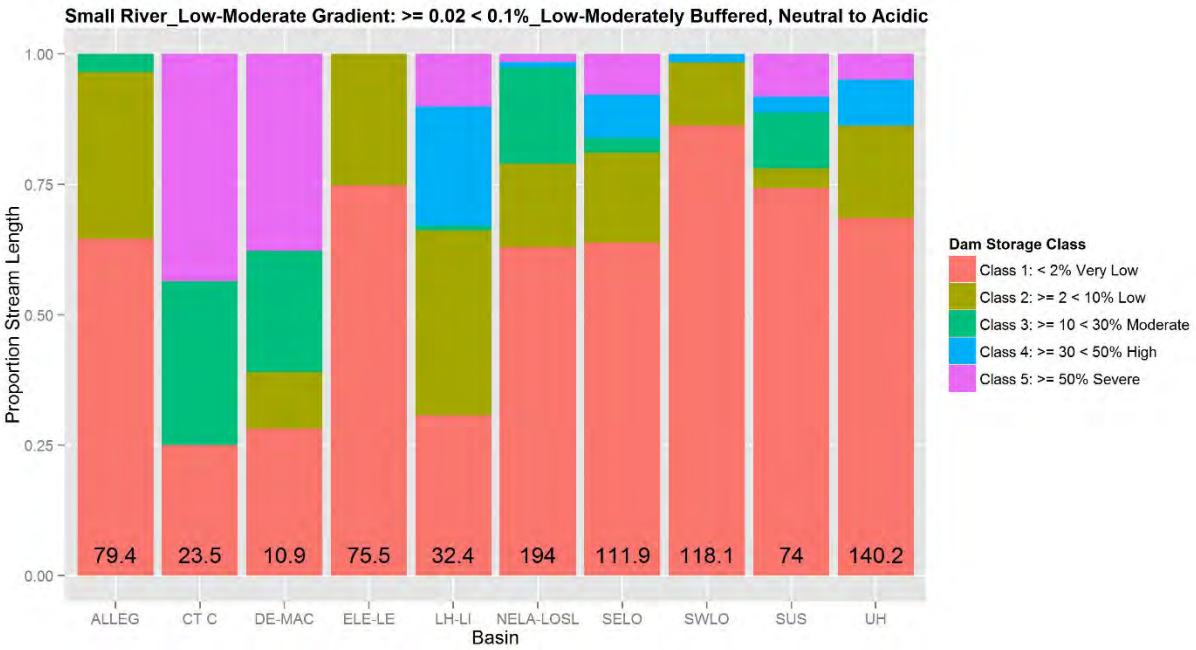


Figure 57. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Five SGCN are associated with the Macrogroup Small River; Low-Moderate Gradient; Low Buffered (Table 38) and 21 are associated with the Macrogroup Small River; Low-Moderate Gradient; Moderately Buffered (Table 39).

Table 11. SGCN associated with Small River; Low-Moderate Gradient; Low Buffered.

Species	Common name	SGCN category	Habitat link
<i>Lanthus vernalis</i>	Southern pygmy clubtail	2	Small River; Low-Moderate Gradient; Low Buffered, Acidic; Cold
<i>Ophiogomphus anomalus</i>	Extra-striped snaketail	4	Small River; Low-Moderate Gradient; Low Buffered, Acidic; Cold
<i>Ophiogomphus aspersus</i>	Brook snaketail	2	Small River; Low-Moderate Gradient; Low Buffered, Acidic; Cold
<i>Ophiogomphus colubrinus</i>	Boreal snaketail	2	Small River; Low-Moderate Gradient; Low Buffered, Acidic; Cold
<i>Somatochlora cingulata</i>	Lake emerald	2	Small River; Low-Moderate Gradient; Low Buffered, Acidic; Cold

Table 12. SGCN associated with Small River; Low-Moderate Gradient; Moderately Buffered.

Species	Common name	SGCN category	Habitat link
<i>Actinonaias ligamentina</i>	Mucket	3	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	2	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Alasmidonta varicose</i>	Brook floater	2	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Alosa aestivalis</i>	Blueback herring	3	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Warm
<i>Amblyma plicata</i>	Threeridge	3	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Anguilla rostrata</i>	American eel	2	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Warm

Species	Common name	SGCN category	Habitat link
<i>Aphredoderus sayanus gibbosus</i>	Western pirate perch	3	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Fusconaia flava</i>	Wabash pigtoe	2	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lampsilis cardium</i>	Plain pocketbook	3	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lasmigona subviridis</i>	Green floater	2	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lepomis megalotis</i>	Northern sunfish (formerly longear sunfish)	1	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Warm
<i>Ligumia nasuta</i>	Eastern Pondmussel	3	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Ligumia recta</i>	Black sandshell	2	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lythrurus umbratilis</i>	Redfin shiner	3	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Warm
<i>Margaritifera margaritifera</i>	Eastern pearlshell	3	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Notropis heterolepis</i>	Blacknose shiner	3	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Pleurobema sintoxia</i>	Round pigtoe	3	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Potamilus alatus</i>	Pink heelsplitter	3	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Ptychobranchnus fasciolaris</i>	Kidneyshell	3	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Villosa iris</i>	Rainbow	2	Small River; Low-Moderate Gradient; Moderately Buffered, Neutral; Transitional Cool

Small River; Low-Moderate Gradient; Highly Buffered

Distribution

This rare Macrogroup occurs primarily in the Susquehanna, Southeastern Lake Ontario, and Southwestern Lake Ontario watersheds (Figure 126).

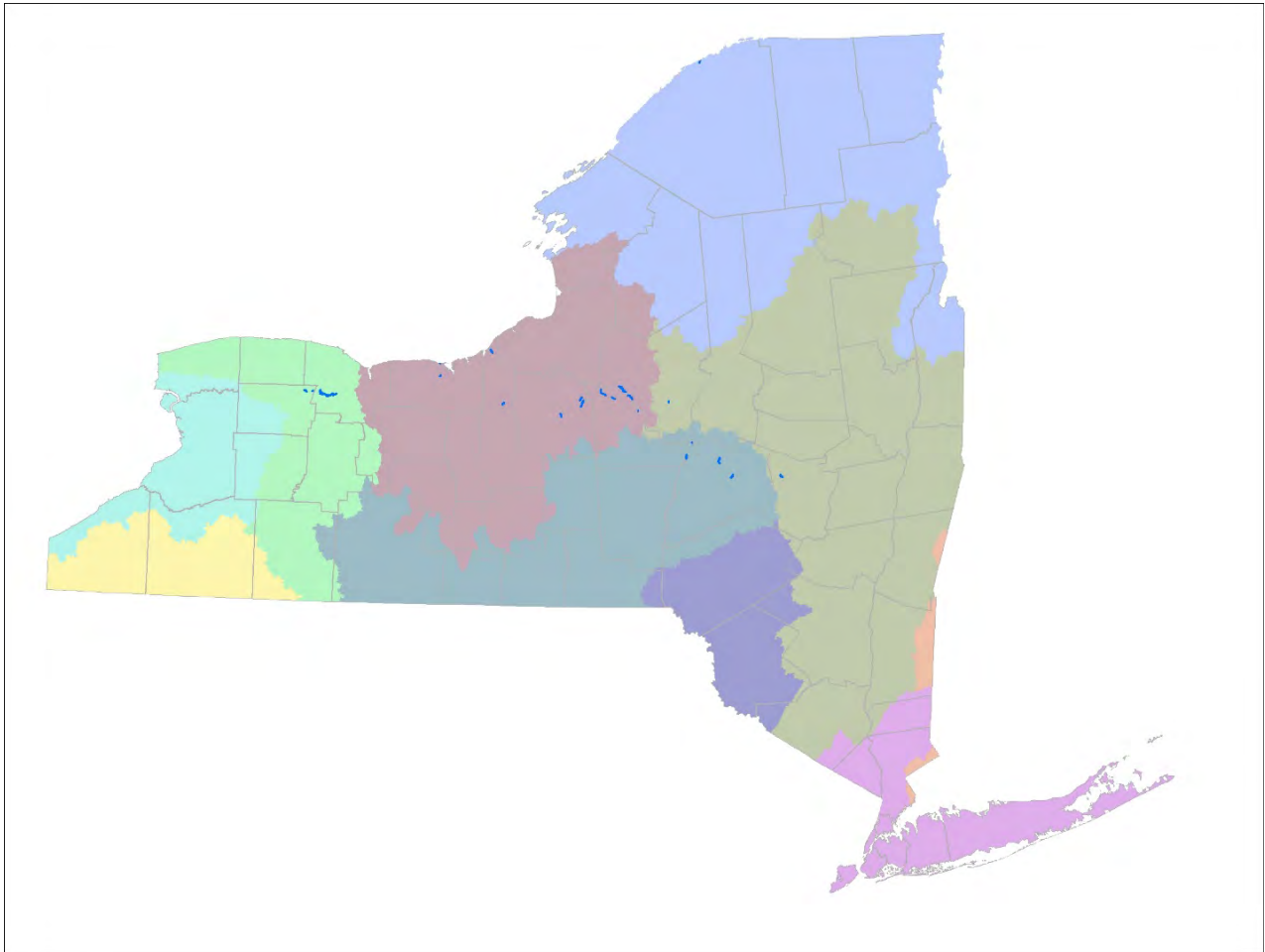


Figure 58. Distribution of the Macrogroup Small River; Low-Moderate Gradient; Highly Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

Average condition by watershed was not clear using these metrics, due in part to the rarity of the Macrogroup (Figure 127, Figure 128, Figure 129, Figure 130).

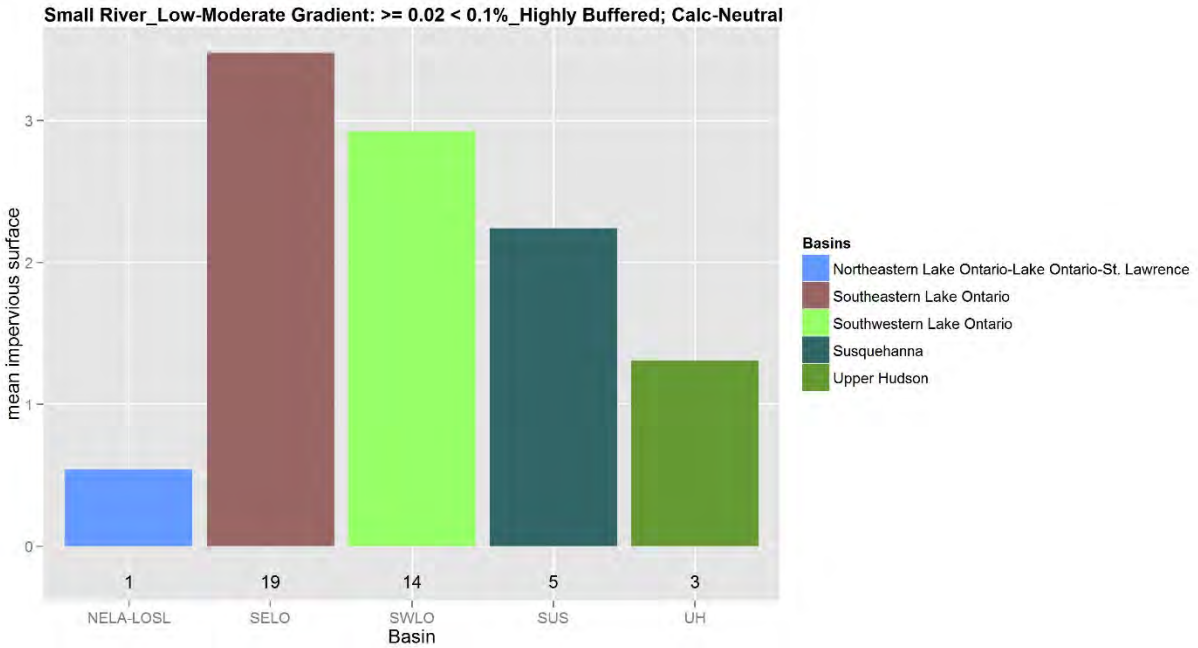


Figure 59. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

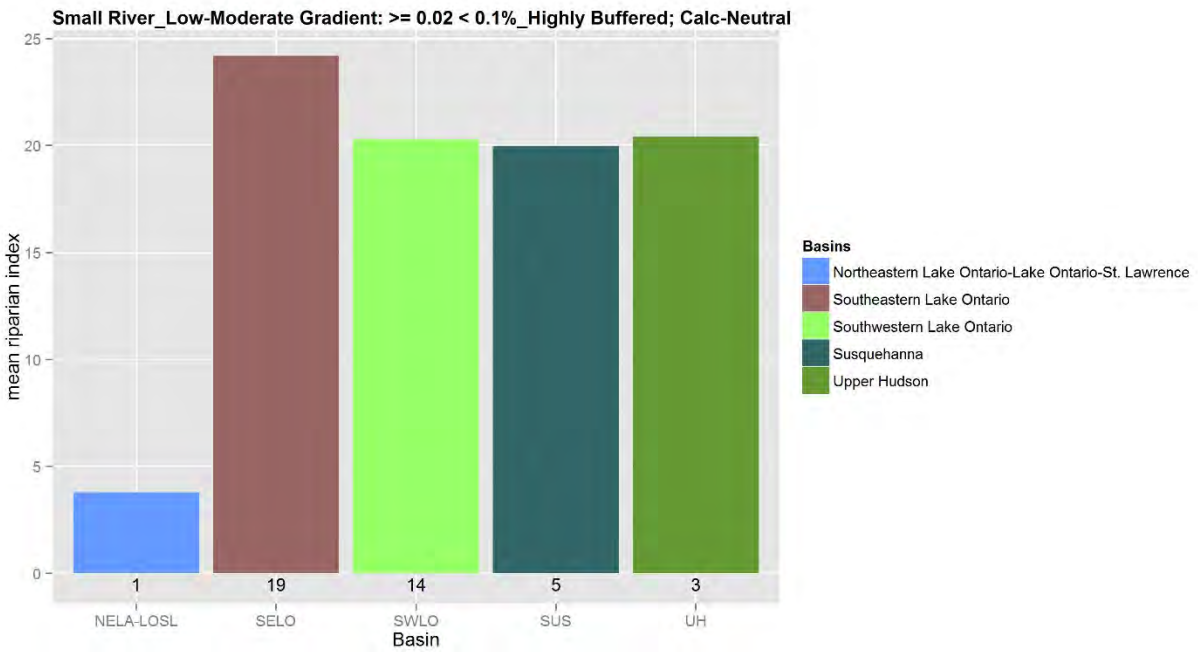


Figure 60. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

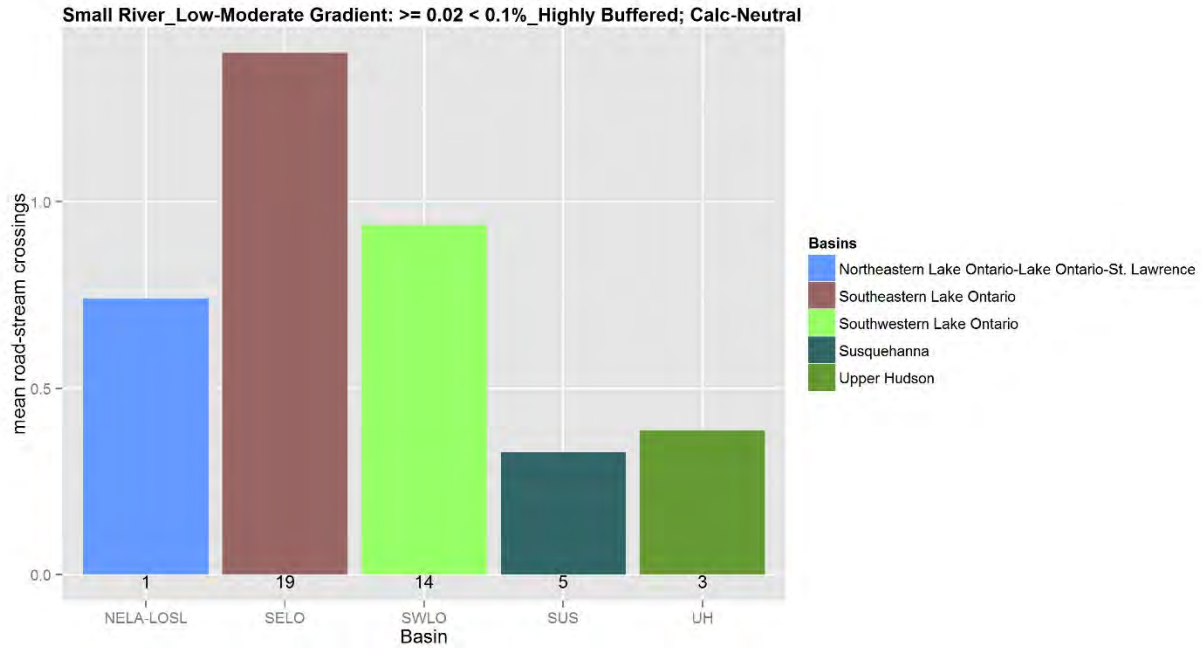


Figure 61. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

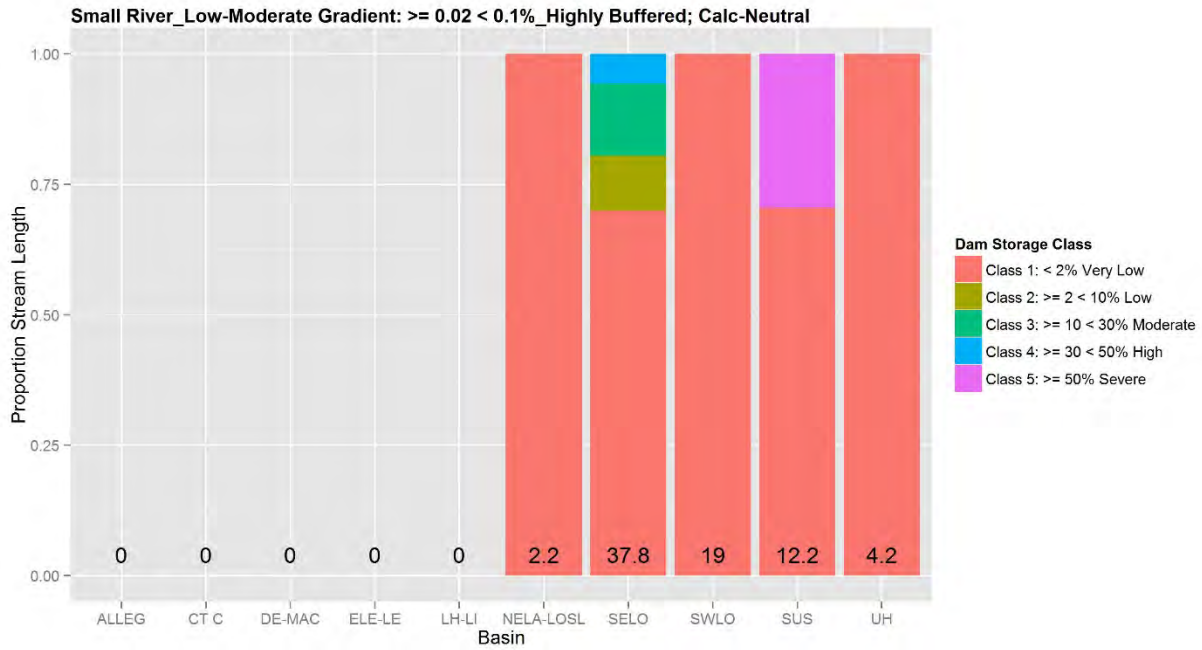


Figure 62. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Four SGCN are associated with this Macrogroup (Table 40).

Table 13. SGCN associated with Small River; Low-Moderate Gradient; Highly Buffered.

Species	Common name	SGCN category	Habitat link
<i>Alasmidonta marginata</i>	Elktoe	3	Small River; Low-Moderate Gradient; Highly Buffered, Calcareous; Transitional Cool
<i>Fusconaia flava</i>	Wabash pigtoe	2	Small River; Low-Moderate Gradient; Highly Buffered, Calcareous; Transitional Cool
<i>Lampsilis cardium</i>	Plain pocketbook	3	Small River; Low-Moderate Gradient; Highly Buffered, Calcareous; Transitional Cool
<i>Villosa iris</i>	Rainbow	2	Small River; Low-Moderate Gradient; Highly Buffered, Calcareous; Transitional Cool

Small River; Moderate-High Gradient; Low-Moderately Buffered

Distribution

This Macrogroup is well distributed throughout New York (Figure 131).

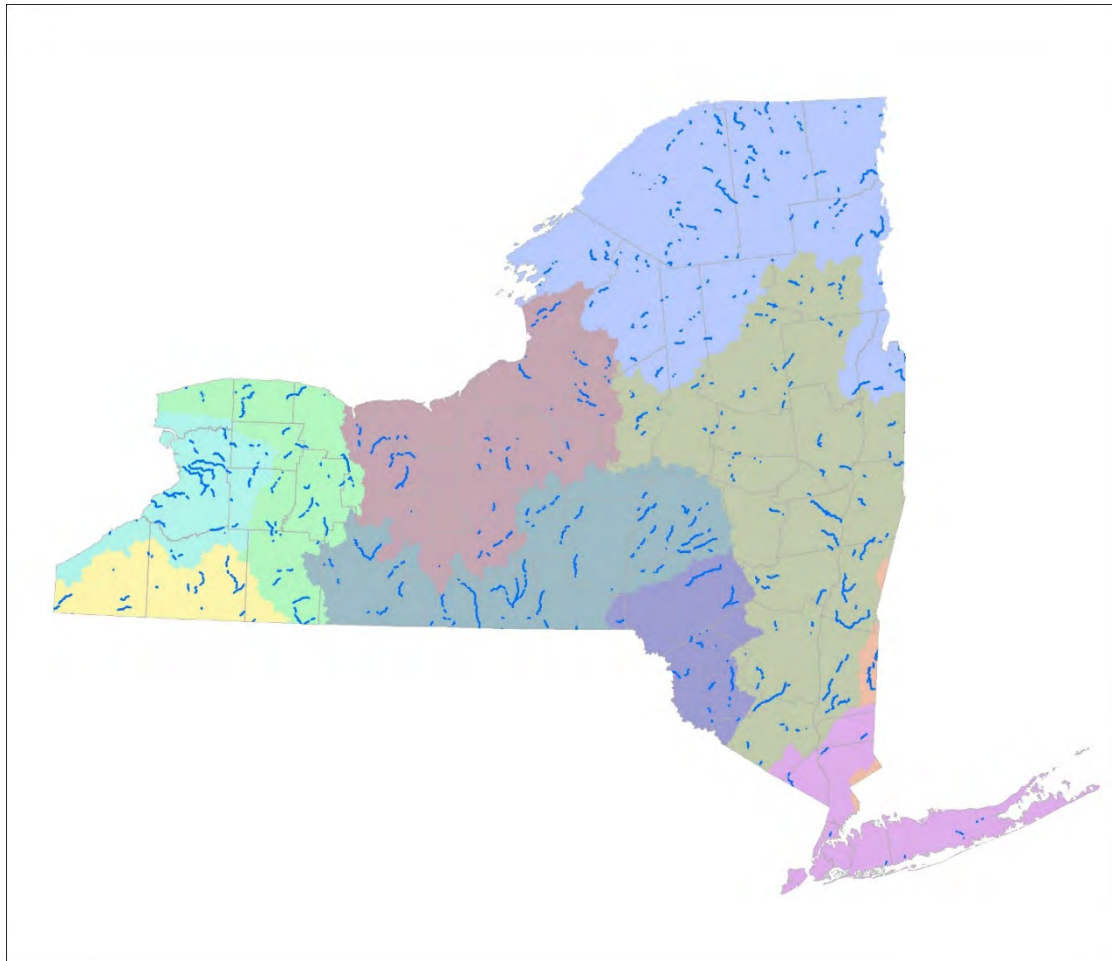


Figure 63. Distribution of the Macrogroup Small River; Moderate-High Gradient; Low-Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

The Allegheny, Connecticut Coastal, Delaware Mid-Atlantic Coastal, and Northeastern Lake Ontario-Lake Ontario-St. Lawrence watersheds have the reaches of this Macrogroup in the best average condition, whereas the Eastern Lake Erie-Lake Erie and Lower Hudson-Long Island watersheds contain the reaches in poorest average condition (Figure 132, Figure 133, Figure 134, Figure 135).

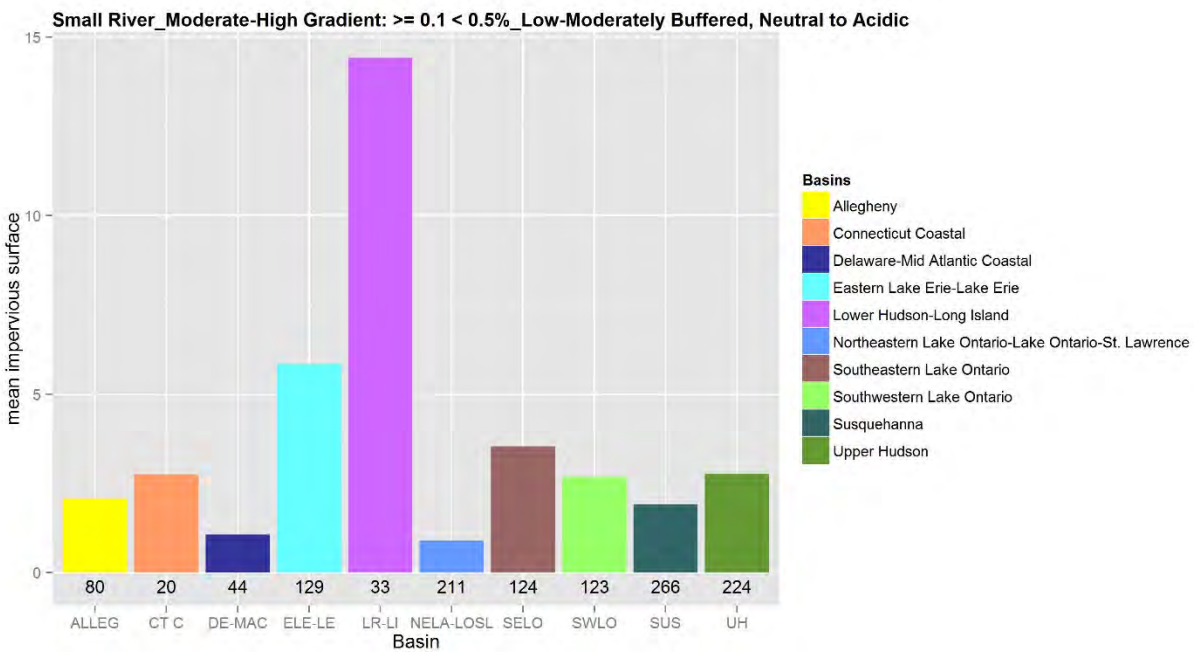


Figure 64. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

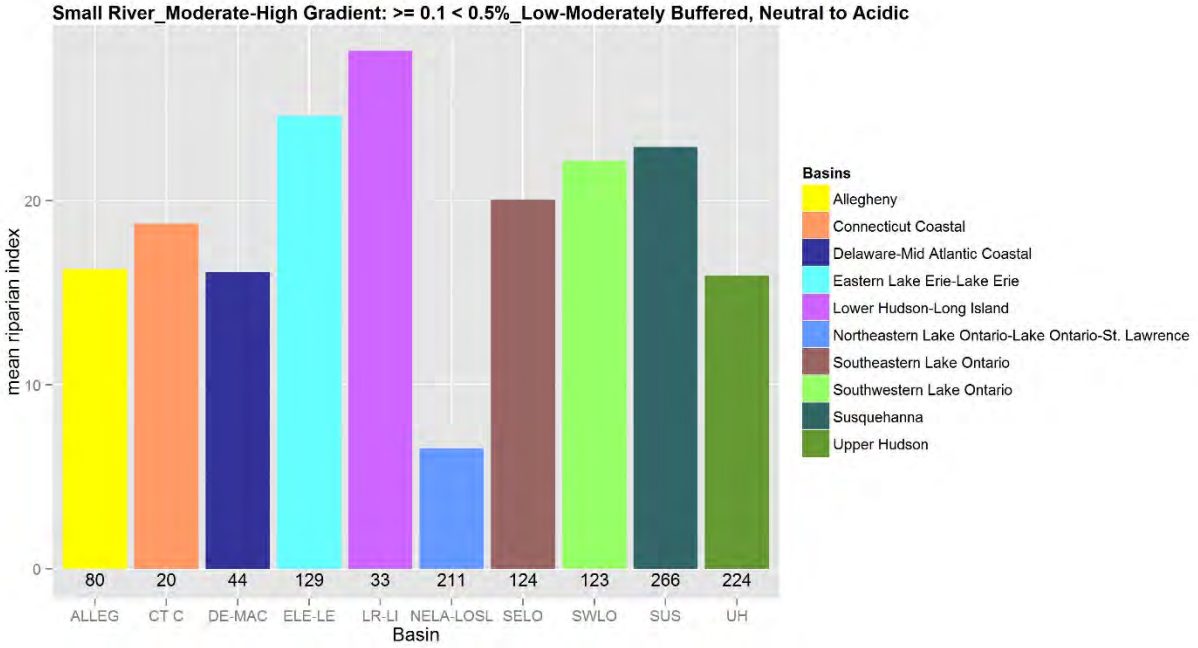


Figure 65. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

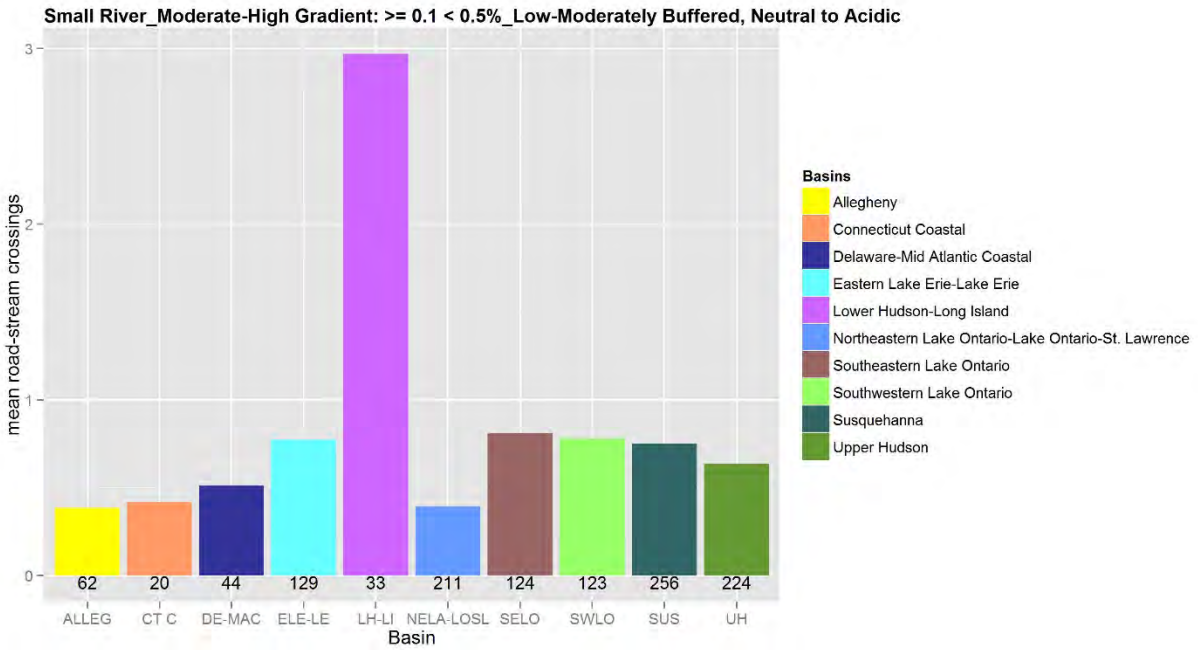


Figure 66. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

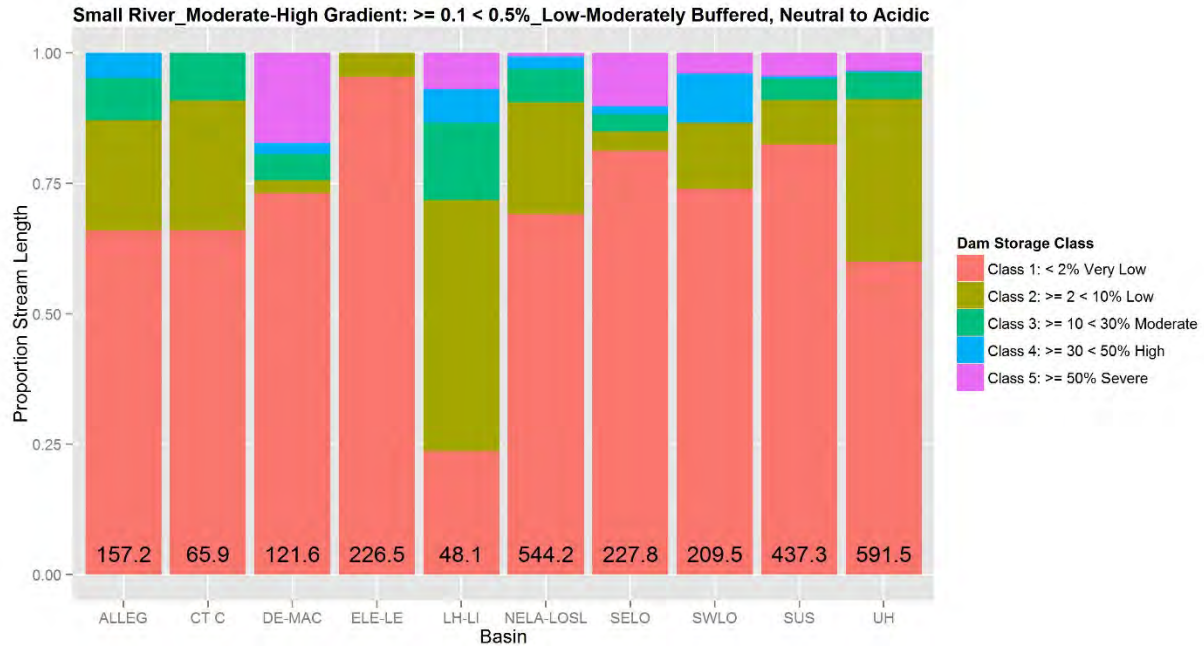


Figure 67. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Thirteen SGCN are associated with this Macrogroup (Table 41).

Table 14. SGCN associated with Small River; Moderate-High Gradient; Low-Moderately Buffered.

Species	Common name	SGCN category	Habitat link
<i>Alasmidonta varicosa</i>	Brook floater	2	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Alasmidonta viridis</i>	Slipper shell	2	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Fusconaia flava</i>	Wabash pigtoe	2	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lampsilis cardium</i>	Plain pocketbook	3	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Lasmigona subviridis</i>	Green floater	2	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Leptodea ochracea</i>	Tidewater mucket	2	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Ligumia nasuta</i>	Eastern Pondmussel	3	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Margaritifera margaritifera</i>	Eastern pearlshell	3	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Cold

Species	Common name	SGCN category	Habitat link
<i>Pleurobema sintoxia</i>	Round pigtoe	3	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Ptychobranchus fasciolaris</i>	Kidneyshell	3	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Villosa fabalis</i>	Rayed bean	2	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Transitional Cool
<i>Villosa iris</i>	Rainbow	2	Small River; Moderate-High Gradient; Moderately Buffered, Neutral; Transitional Cool

Small River; Moderate-High Gradient; Highly Buffered

Distribution

This rare Macrogroup occurs primarily in the Susquehanna, Southeastern Lake Ontario, Southwestern Lake Ontario, and Upper Hudson watersheds (Figure 136).

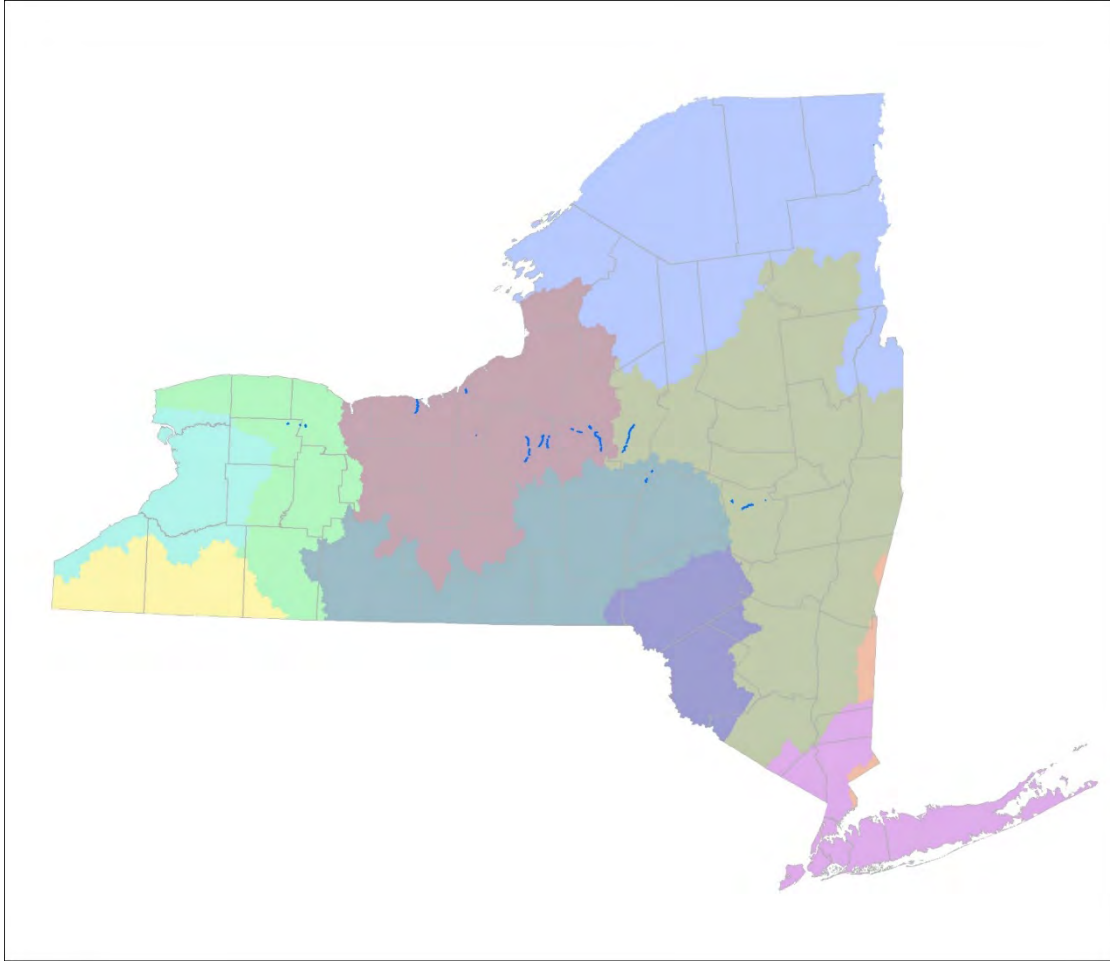


Figure 68. Distribution of the Macrogroup Small River; Moderate-High Gradient; Highly Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

The rarity of this Macrogroup makes it hard to generalize among watersheds. One reach in the Northeastern Lake Ontario-Lake Ontario-St. Lawrence watershed appears to be in poor condition compared to the average in other watersheds (Figure 137, Figure 138, Figure 139, Figure 140).

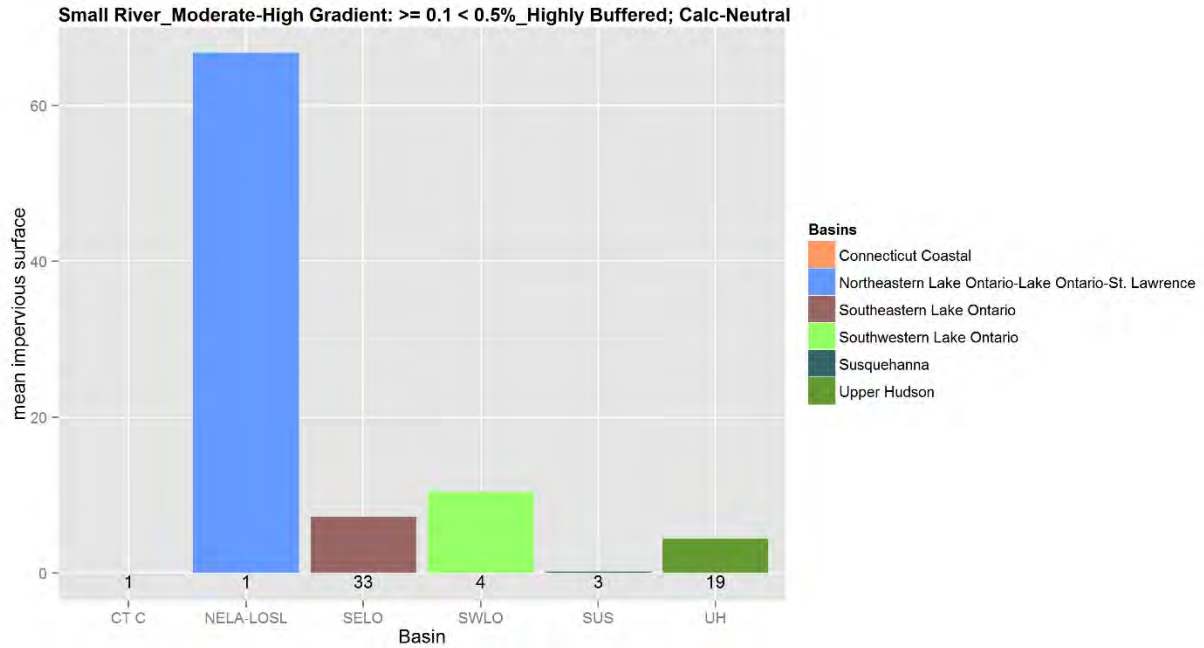


Figure 69. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

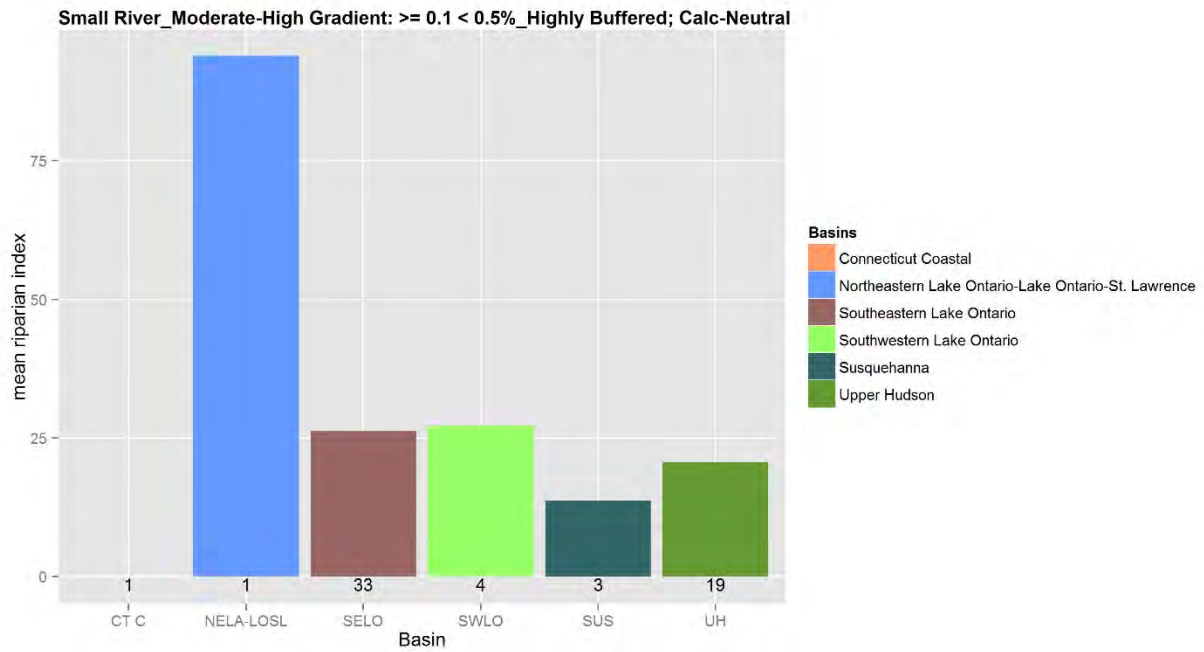


Figure 70. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

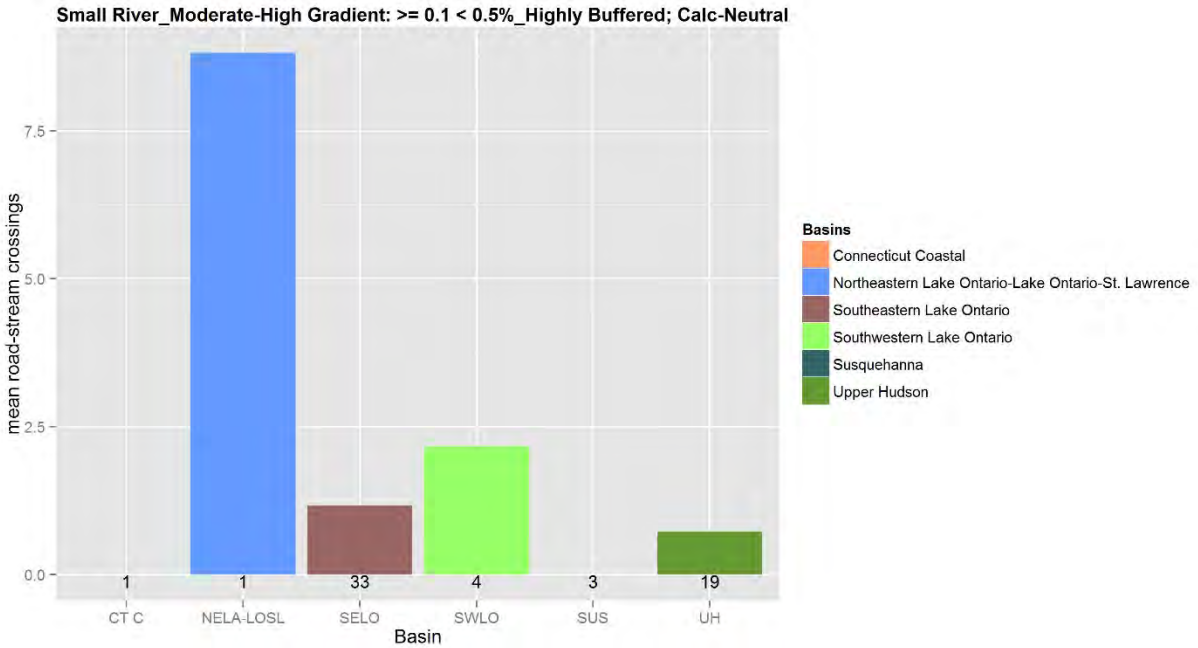


Figure 71. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

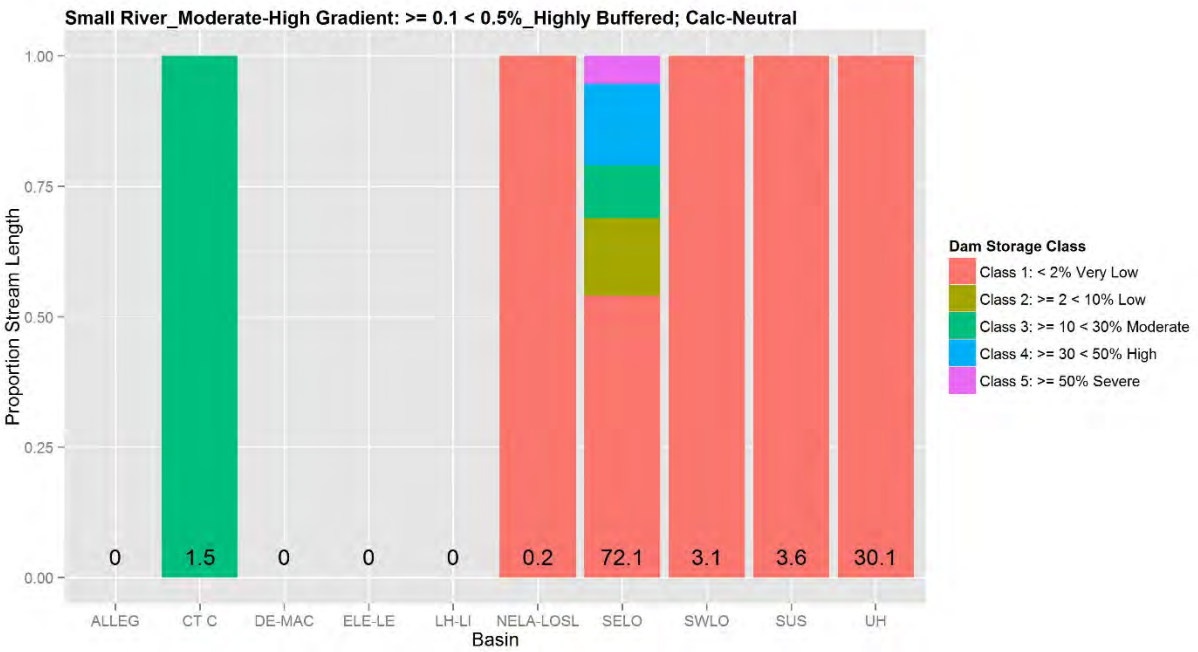


Figure 72. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Two SGCN are associated with this Macrogroup (Table 42).

Table 15. SGCN associated with Small River; Moderate-High Gradient; Highly Buffered.

Species	Common name	SGCN category	Habitat link
<i>Lampsilis cardium</i>	Plain pocketbook	3	Small River; Moderate-High Gradient; Highly Buffered, Calcareous; Transitional Cool
<i>Villosa iris</i>	Rainbow	2	Small River; Moderate-High Gradient; Highly Buffered, Calcareous; Transitional Cool

Small River; High Gradient; Low-Moderately Buffered

Distribution

This Macrogroup is well distributed throughout New York but rare on Long Island (Figure 141).

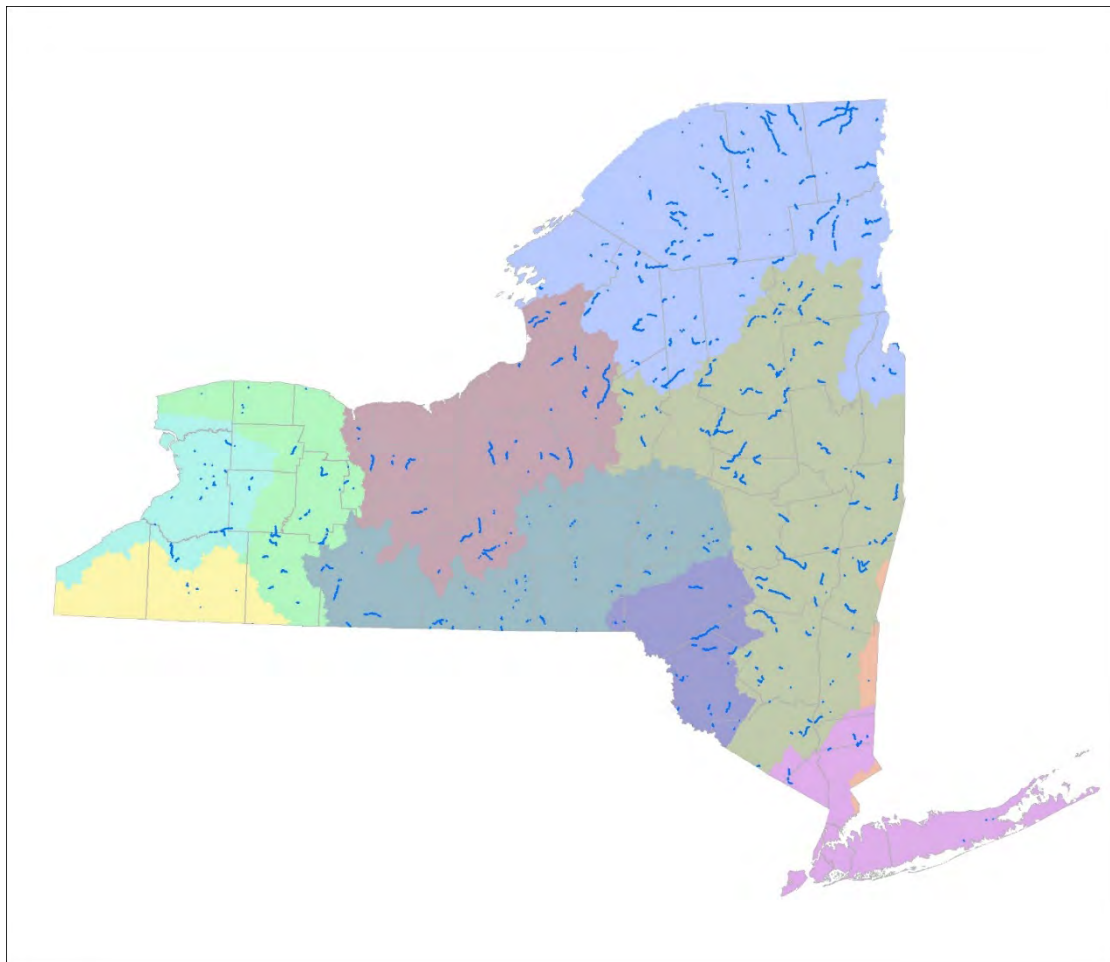


Figure 73. Distribution of the Macrogroup Small River; High Gradient; Low-Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

Lower Hudson examples of this Macrogroup appear to be in much worse condition than those elsewhere in the state (Figure 142, Figure 143, Figure 144, Figure 145).

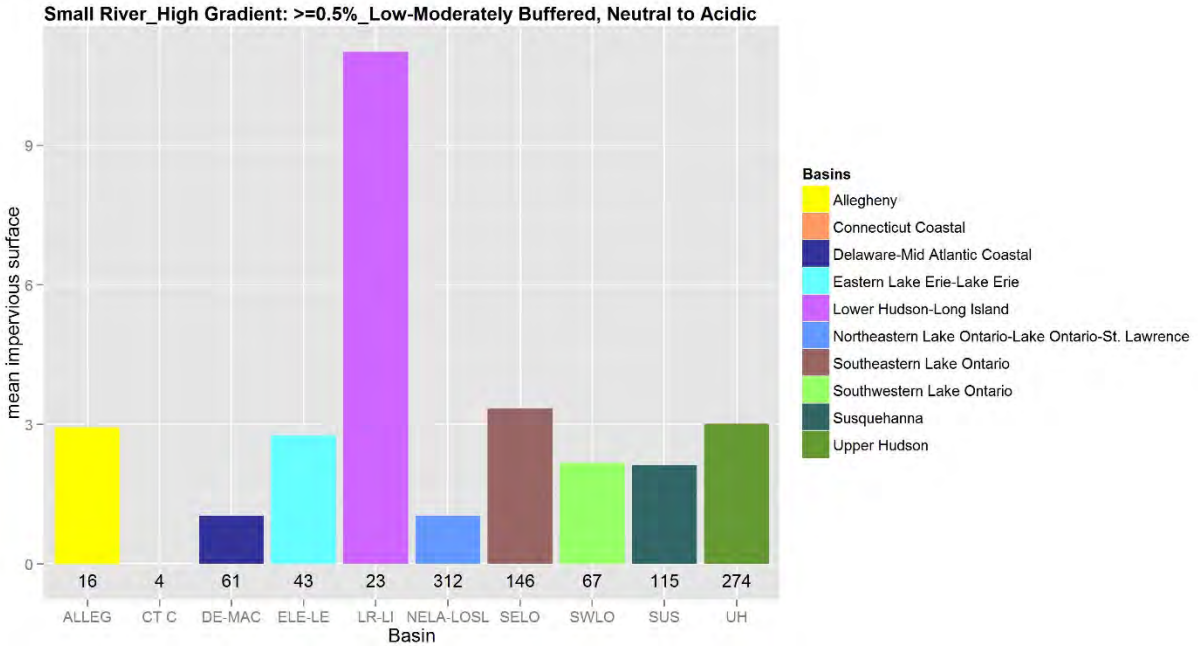


Figure 74. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

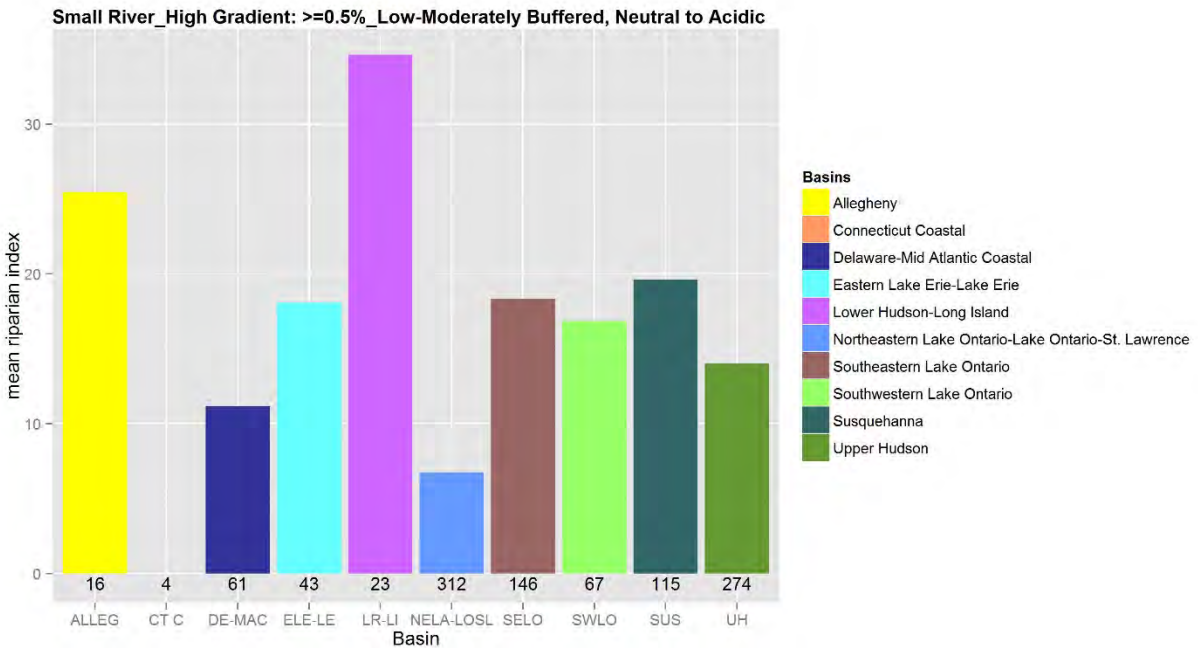


Figure 75. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

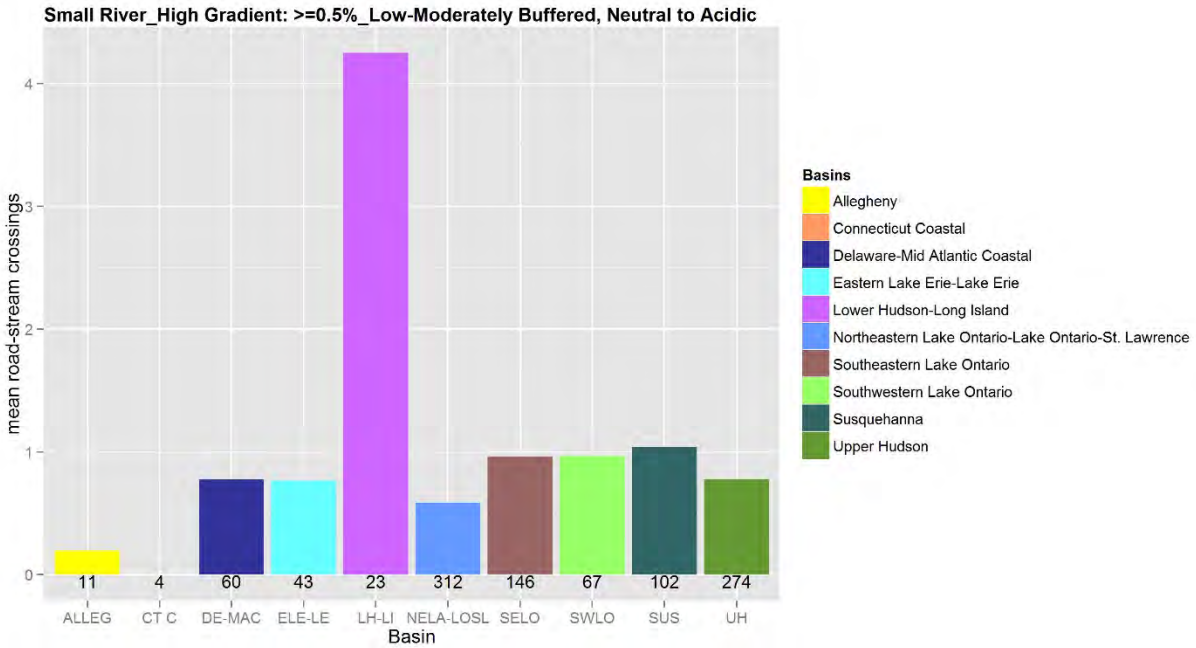


Figure 76. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

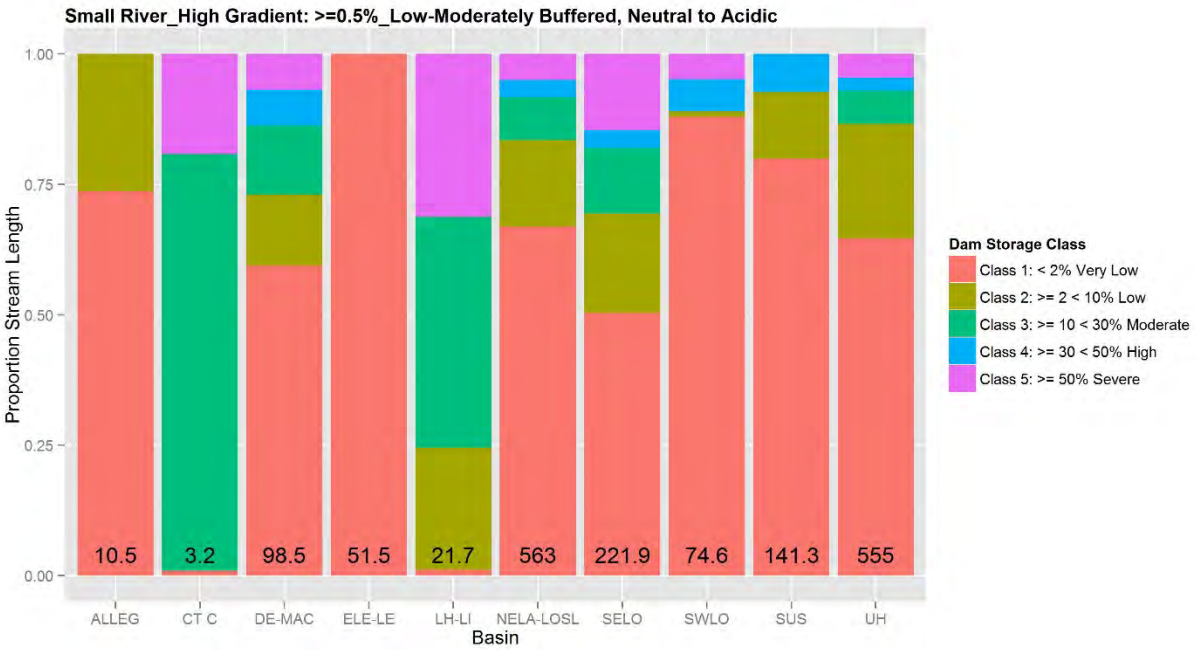


Figure 77. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Four SGCN are associated with this Macrogroup (Table 43).

Table 16. SGCN associated with Small River; High Gradient; Low-Moderately Buffered.

Species	Common name	SGCN category	Habitat link
Margaritifera margaritifera	Eastern pearlshell	3	Small River; High Gradient; Moderately Buffered, Neutral; Cold
Alasmidonta heterodon	Dwarf wedgemussel	2	Small River; High Gradient; Moderately Buffered, Neutral; Transitional Cool
Margaritifera margaritifera	Eastern pearlshell	3	Small River; High Gradient; Moderately Buffered, Neutral; Transitional Cool
Potamilus alatus	Pink heelsplitter	3	Small River; High Gradient; Moderately Buffered, Neutral; Transitional Cool

Small River; High Gradient; Highly Buffered

Distribution

This rare Macrotype occurs in three watersheds only: Southeastern Lake Ontario, Susquehanna, and Upper Hudson (Figure 146).

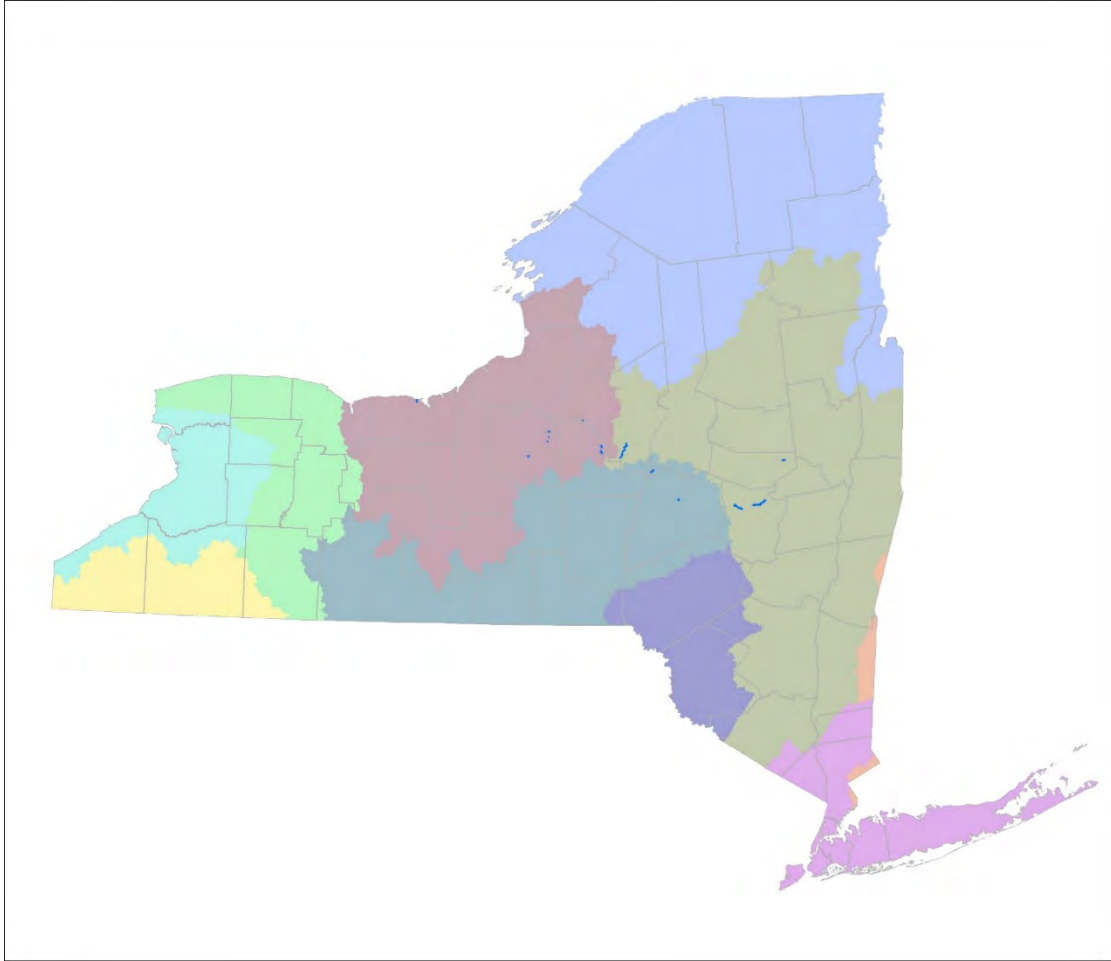


Figure 78. Distribution of the Macrogroup Small River; High Gradient; Highly Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

The few reaches in the Susquehanna watershed have the best average condition (Figure 147, Figure 148, Figure 149, Figure 150).

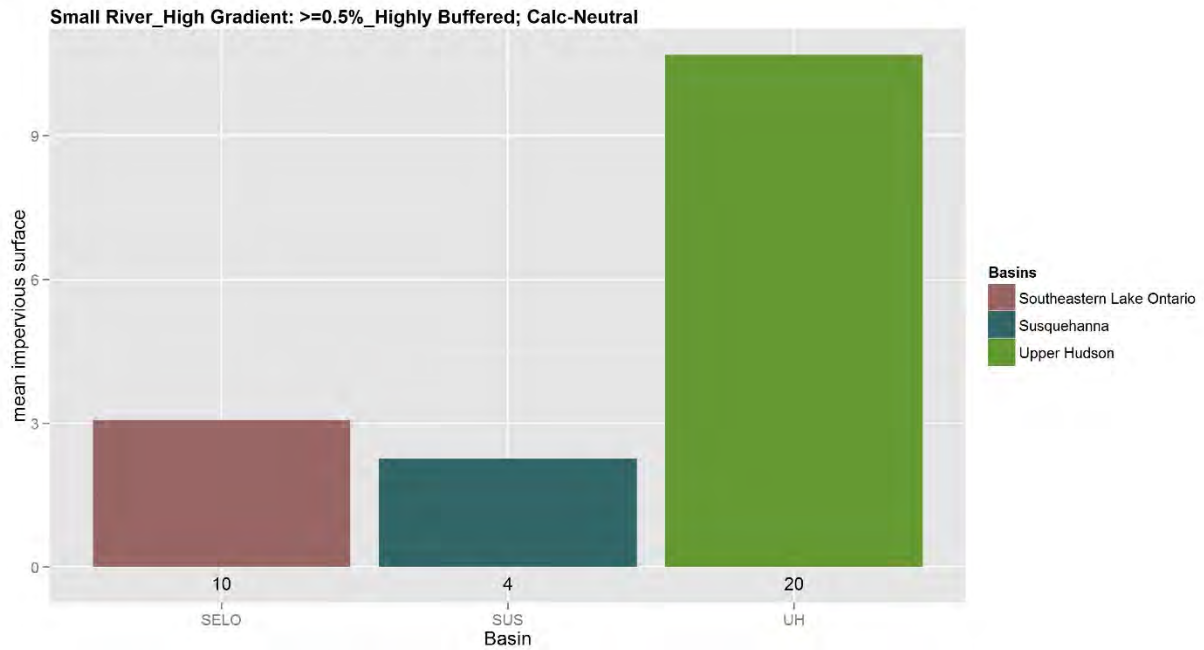


Figure 79. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

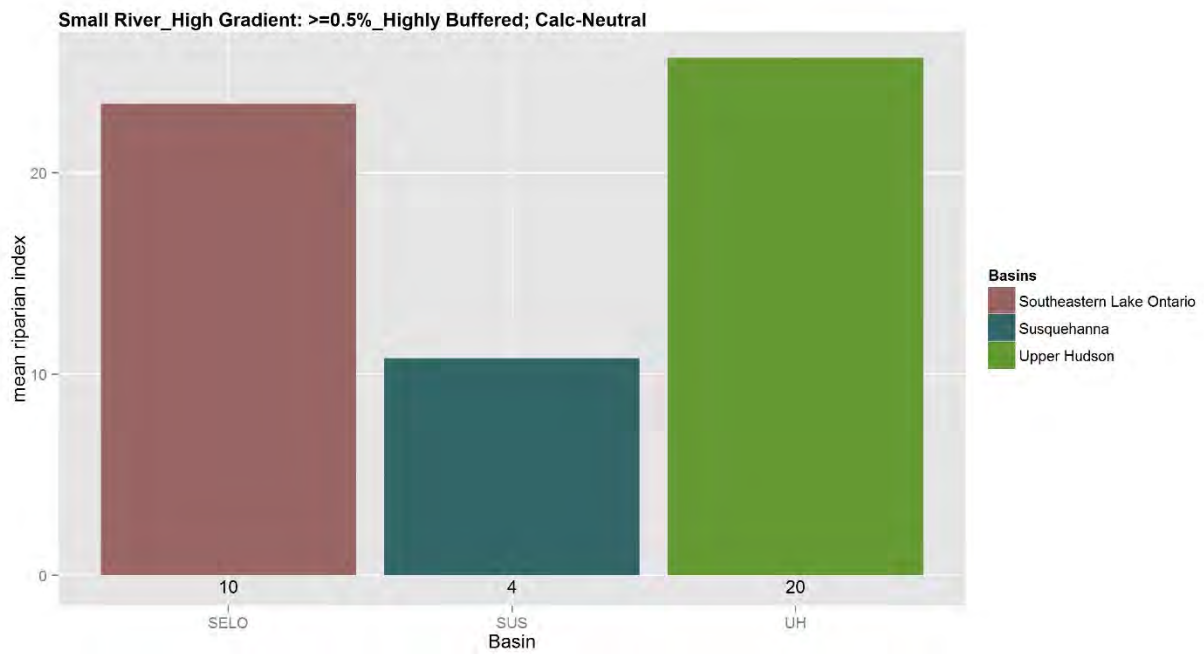


Figure 80. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

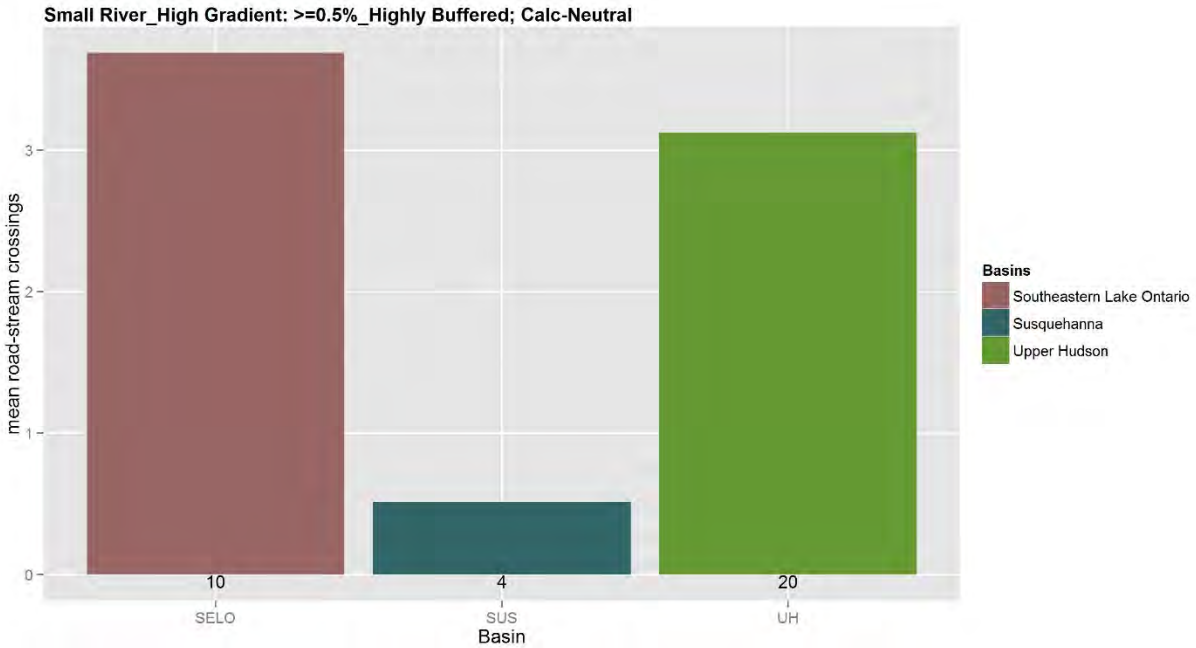


Figure 81. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

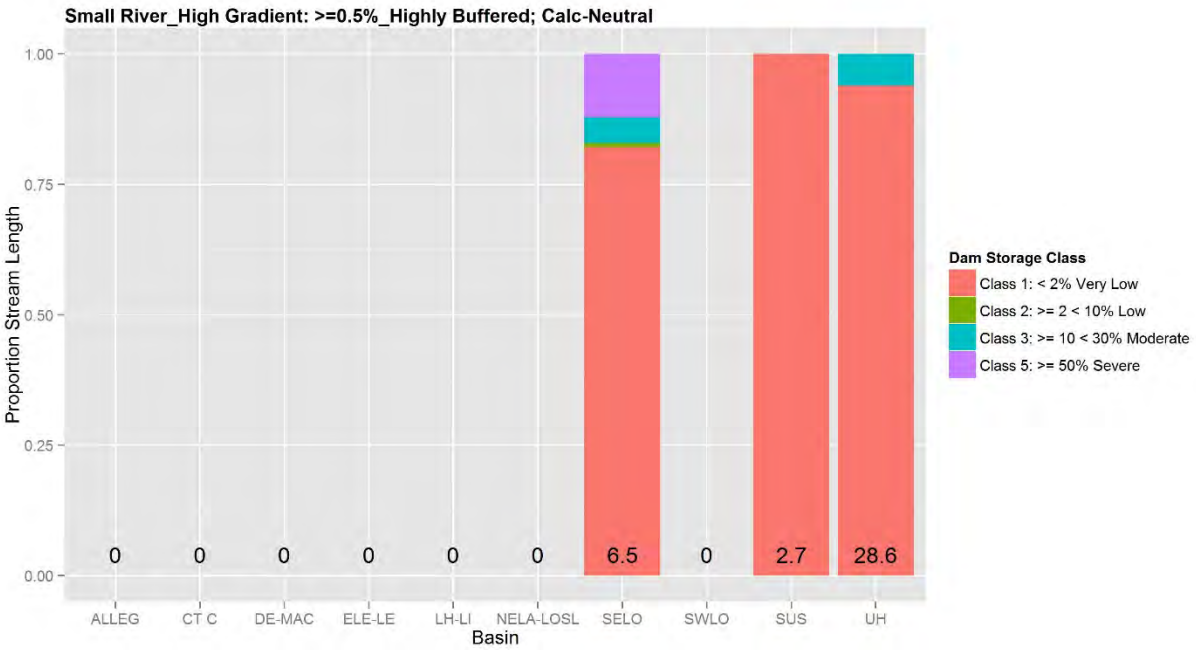


Figure 82. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

No SGCN are associated with this Macrogroup.

Medium River; Low Gradient; Assume Moderately Buffered

Distribution

This Macrogroup is well distributed throughout New York with the exception of Long Island (Figure 151).

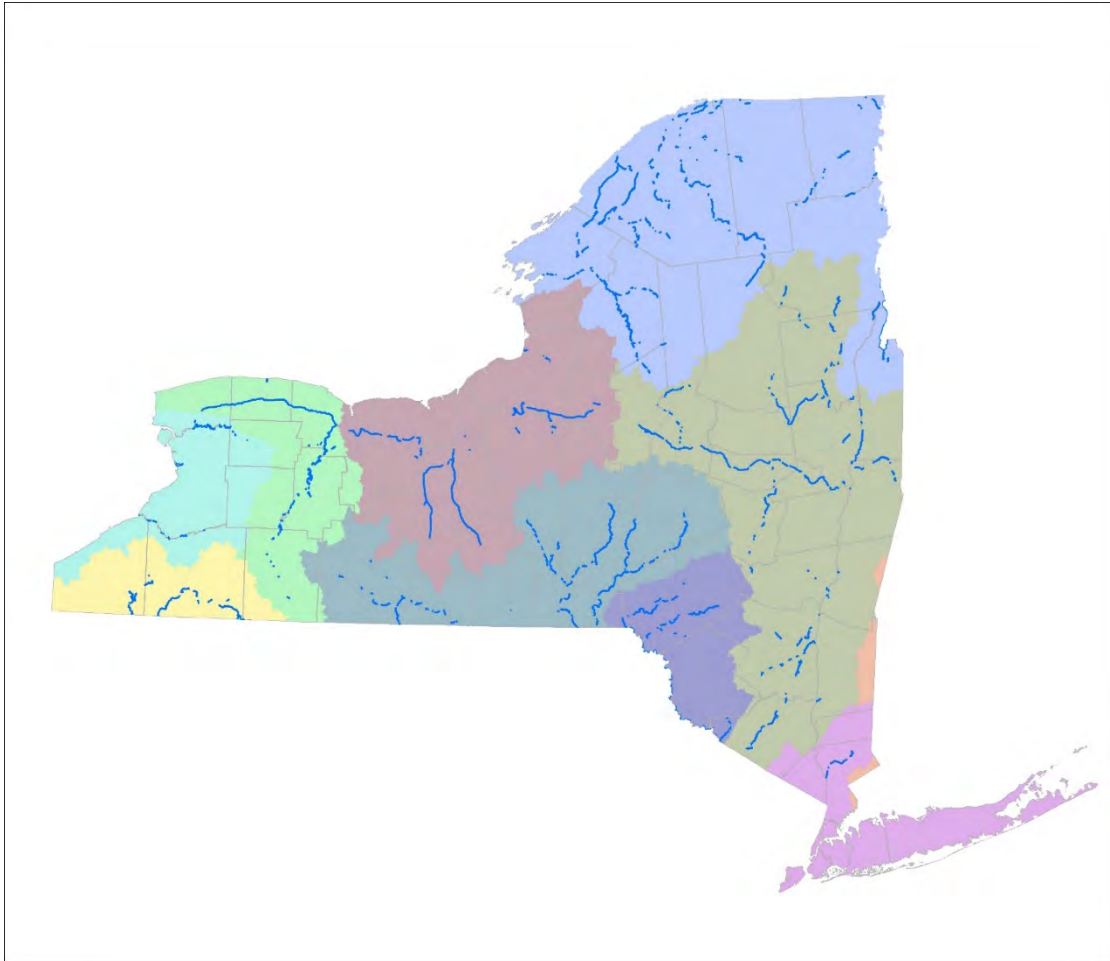


Figure 83. Distribution of the Macrogroup Medium River; Low Gradient; Assume Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

Watersheds with the best average condition of reaches of this Macrogroup include Allegheny, Connecticut Coastal, and Southeastern Lake Ontario, whereas watersheds with the poorest average condition included Eastern Lake Erie-Lake Erie, Southwestern Lake Ontario, Susquehanna, and Upper Hudson (Figure 152, Figure 153, Figure 154, Figure 155).

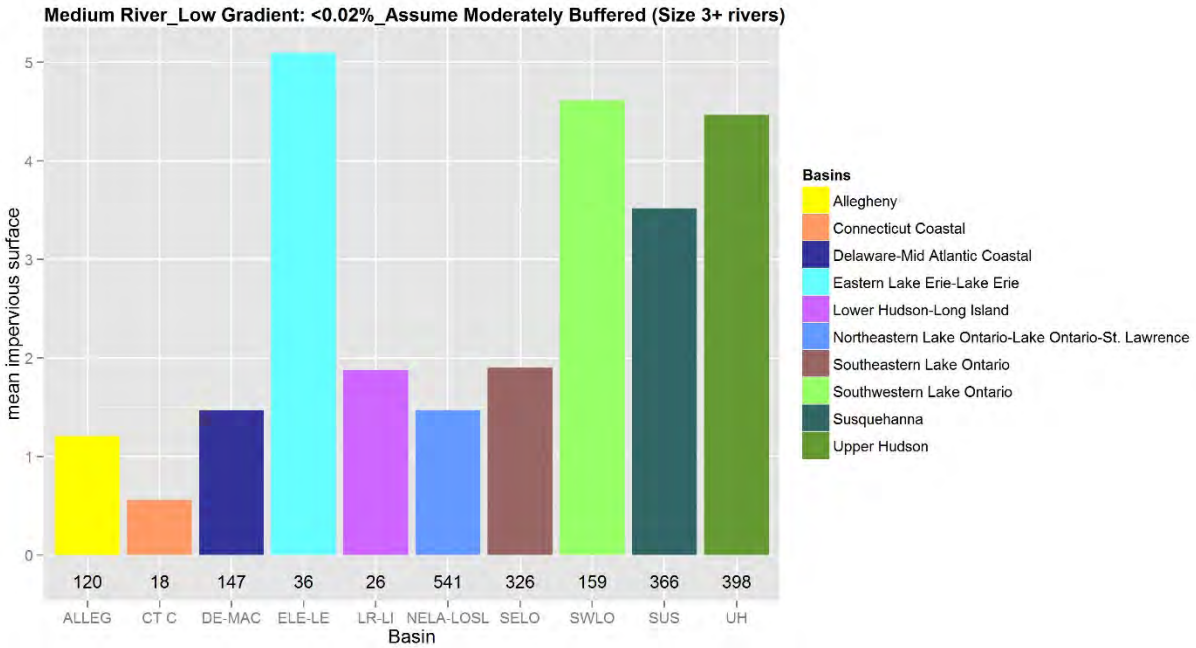


Figure 84. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

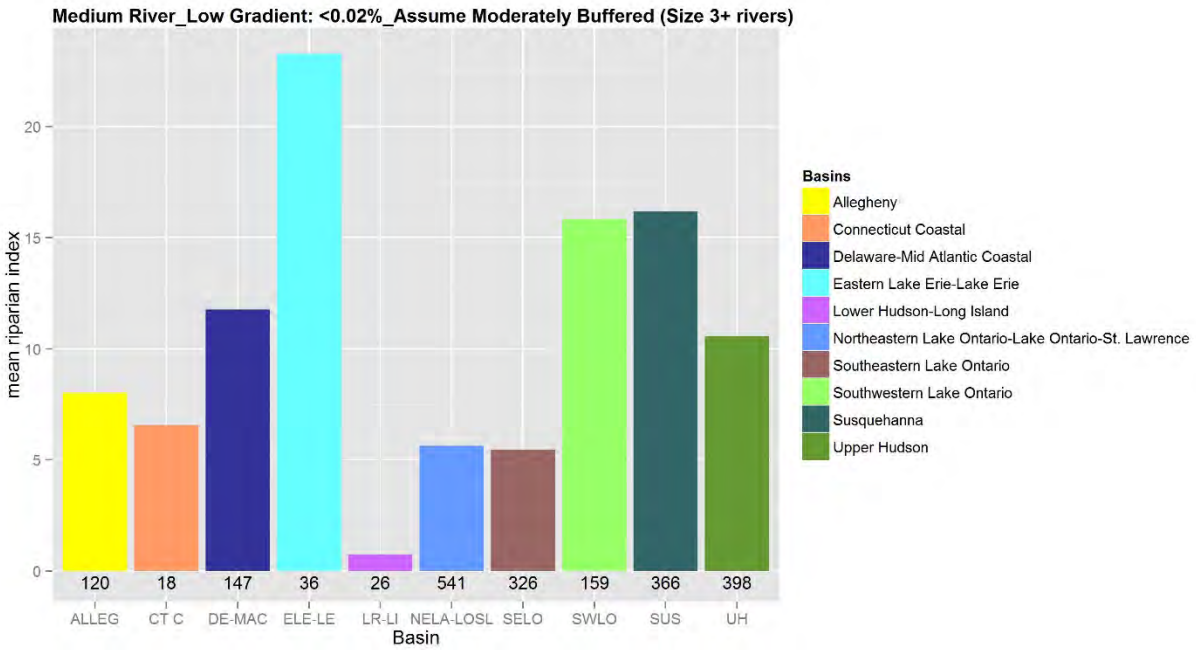


Figure 85. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

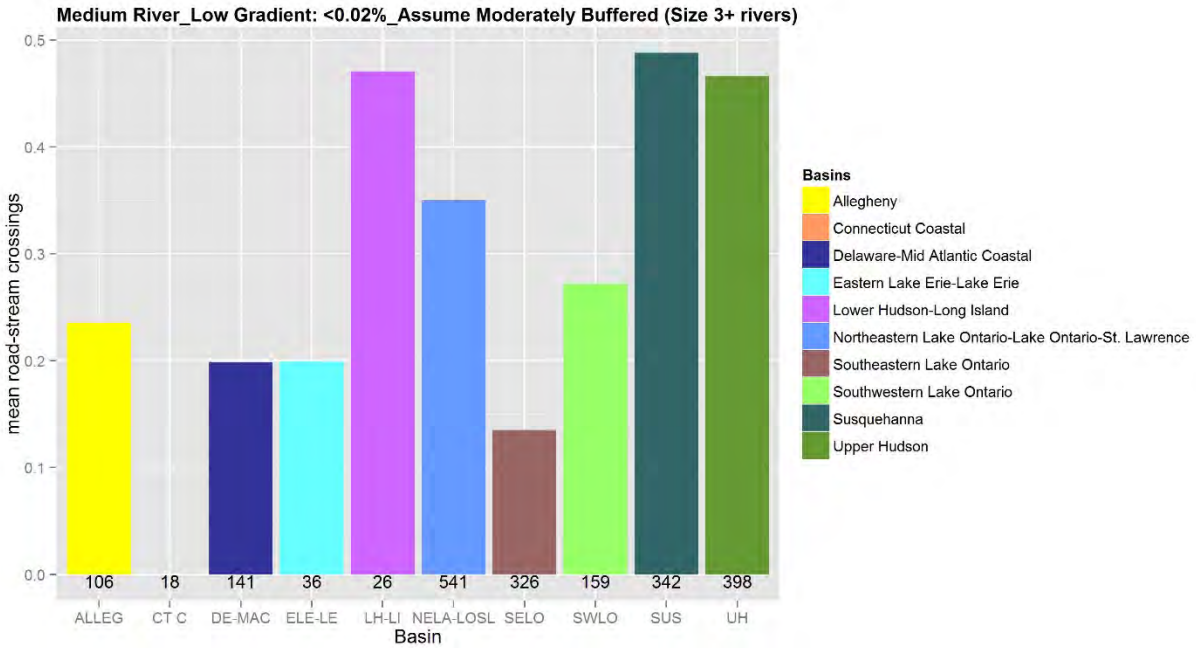


Figure 86. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

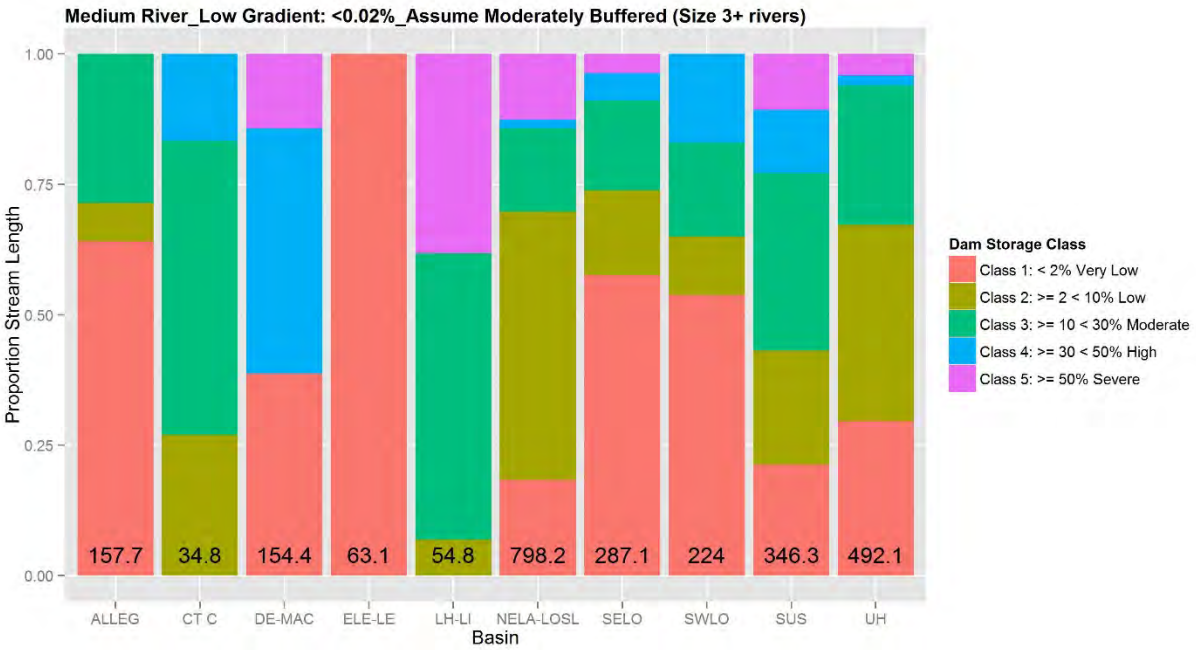


Figure 87. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Thirty-five SGCN are associated with this Macrogroup (Table 44).

Table 17. SGCN associated with Medium River; Low Gradient; Assume Moderately Buffered.

Species	Common name	SGCN category	Habitat link
<i>Hybopsis amblops</i>	Bigeye chub	2	Medium River; Low Gradient; Assume Moderately Buffered
<i>Actinonaias ligamentina</i>	Mucket	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Alasmidonta marginata</i>	Elktoe	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Alasmidonta varicosa</i>	Brook floater	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Alasmidonta varicosa</i>	Brook floater	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Alasmidonta viridis</i>	Slipper shell	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Amblema plicata</i>	Threeridge	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Anodonta implicata</i>	Alewife floater	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Anodonta implicata</i>	Alewife floater	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Cryptobranchus alleganiensis</i>	Eastern hellbender	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Cold
<i>Fusconaia flava</i>	Wabash pigtoe	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lampsilis cardium</i>	Plain pocketbook	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lampsilis fasciola</i>	Wavy-rayed lampmussel	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Lampsilis ovata</i>	Pocketbook	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lasmigona subviridis</i>	Green floater	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Lasmigona subviridis</i>	Green floater	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm

Species	Common name	SGCN category	Habitat link
<i>Ligumia nasuta</i>	Eastern Pondmussel	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Ligumia recta</i>	Black sandshell	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Ligumia recta</i>	Black sandshell	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Margaritifera margaritifera</i>	Eastern pearlshell	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Moxostoma carinatum</i>	River redhorse	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Notropis dorsalis</i>	Bigmouth shiner	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Pleurobema sintoxia</i>	Round pigtoe	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Pleurobema sintoxia</i>	Round pigtoe	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Potamilus alatus</i>	Pink heelsplitter	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Ptychobranchus fasciolaris</i>	Kidneyshell	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Toxolasma parvum</i>	Lilliput	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Truncilla truncata</i>	Deertoe	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Utterbackia imbecillis</i>	Paper pondshell	3	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Villosa fabalis</i>	Rayed bean	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Villosa iris</i>	Rainbow	2	Medium River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm

Medium River; Low-Moderate Gradient; Assume Moderately Buffered

Distribution

Reaches in this Macrogroup are well distributed throughout New York, with very few locations in the Lower Hudson-Long Island and Connecticut Coastal watersheds (Figure 156).

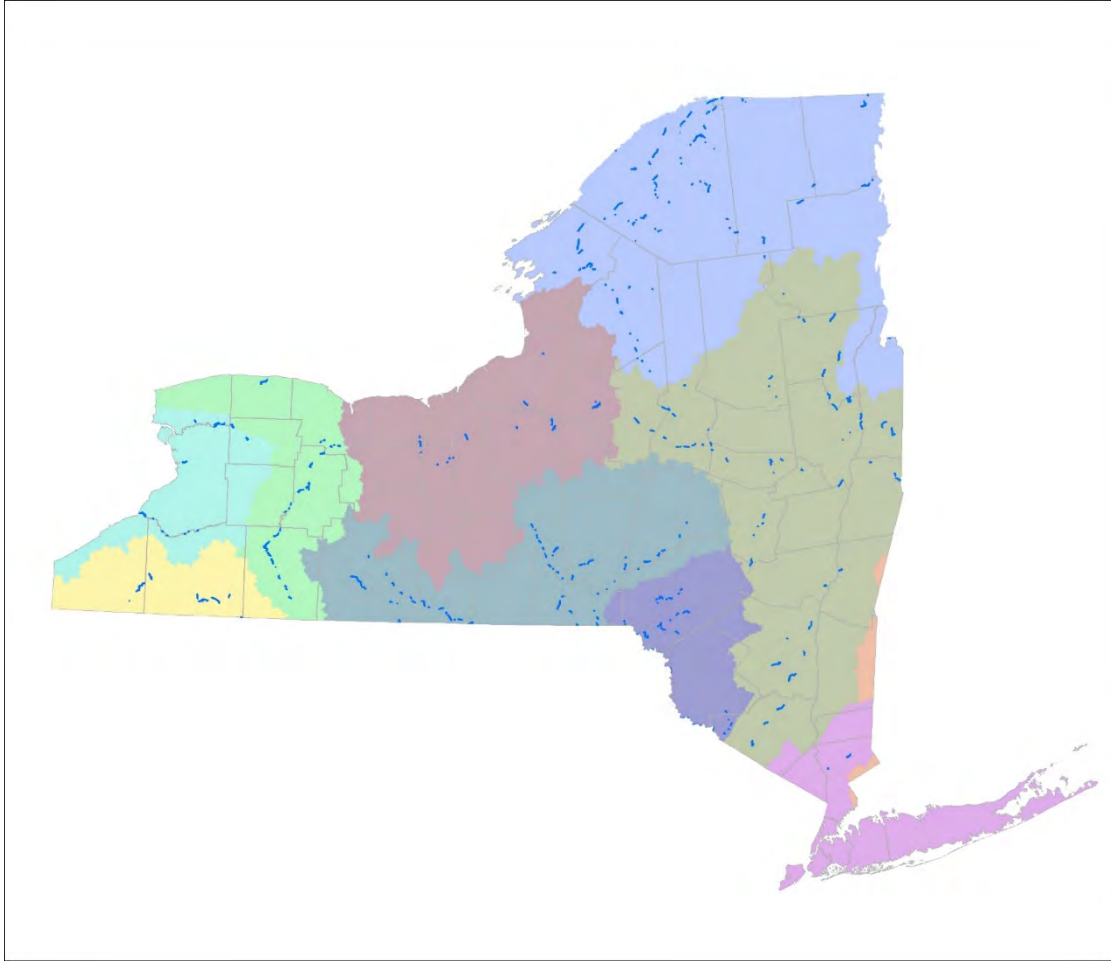


Figure 88. Distribution of the Macrogroup Medium River; Low-Moderate Gradient; Assume Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

Condition metrics paint an inconsistent picture of overall average condition by watershed (Figure 157, Figure 158, Figure 159, Figure 160).

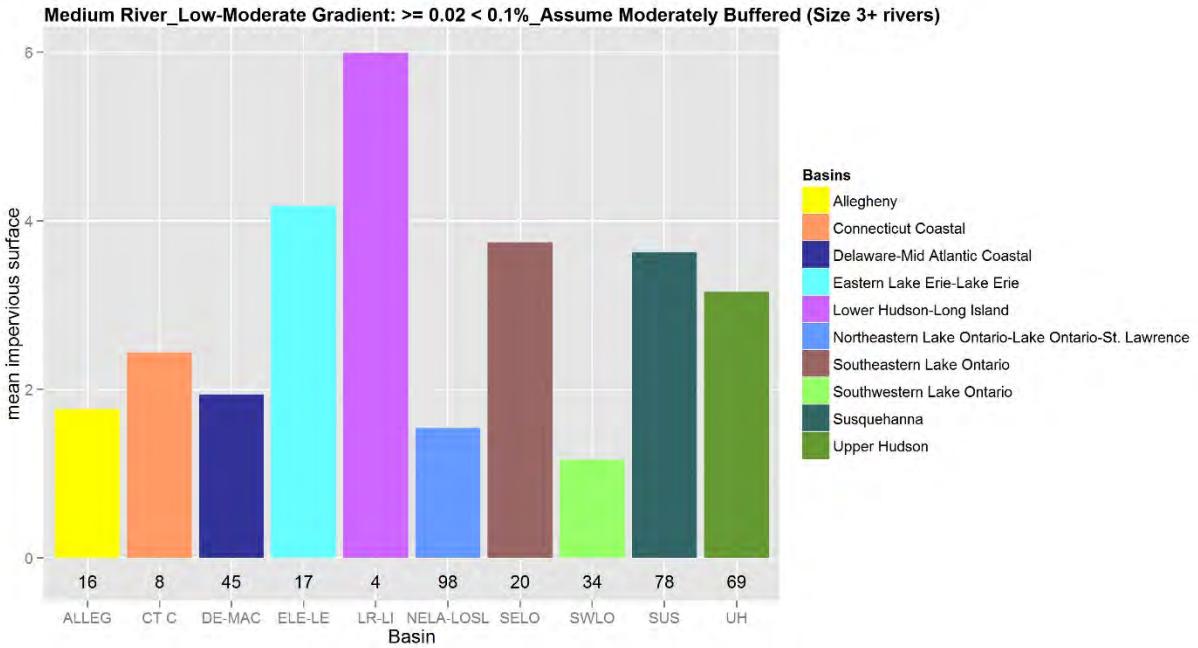


Figure 89. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

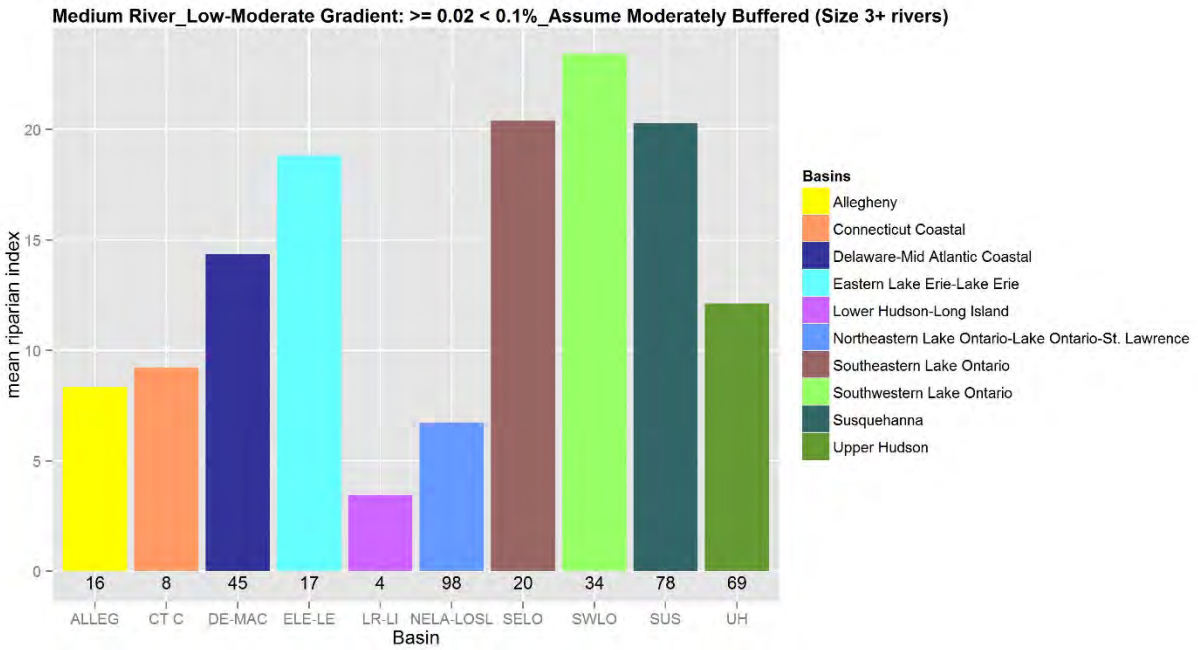


Figure 90. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

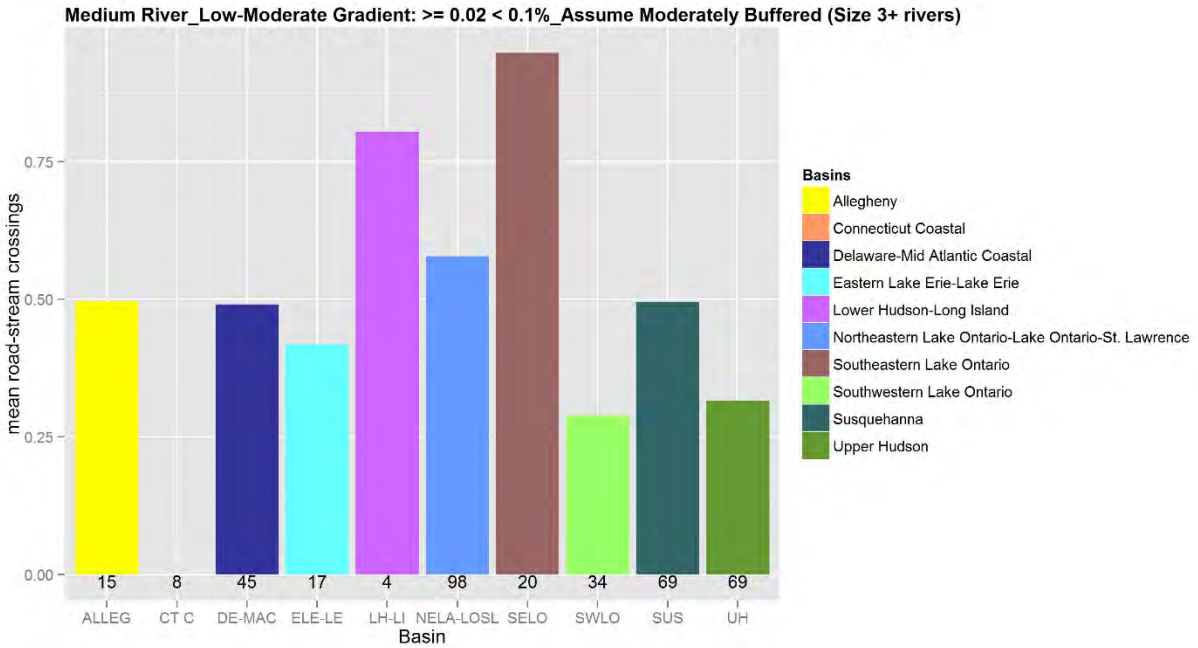


Figure 91. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

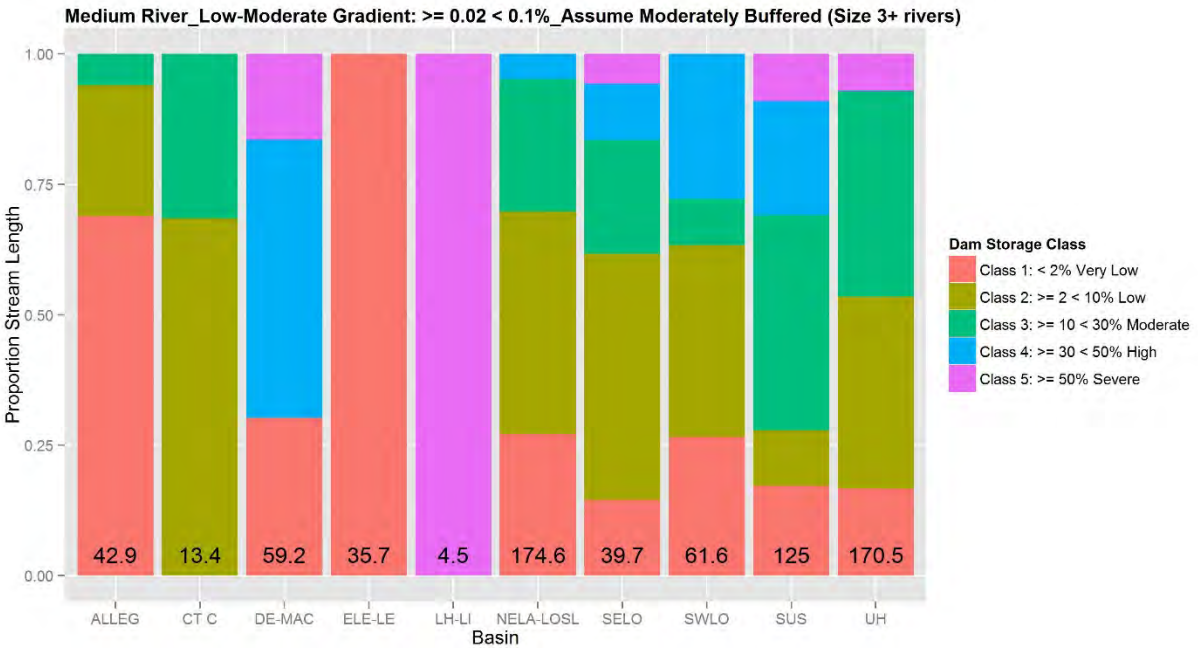


Figure 92. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Thirty-one SGCN are associated with this Macrogroup (Table 45).

Table 18. SGCN associated with Medium River; Low-Moderate Gradient; Assume Moderately Buffered.

Species	Common name	SGCN category	Habitat link
<i>Acipenser fulvescens</i>	Lake sturgeon	3	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Actinonaias ligamentina</i>	Mucket	3	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional
<i>Alasmidonta marginata</i>	Elktoe	3	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Alasmidonta varicosa</i>	Brook floater	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional
<i>Alasmidonta varicosa</i>	Brook floater	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Anguilla rostrata</i>	American eel	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Anodonta implicata</i>	Alewife floater	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional
<i>Anodonta implicata</i>	Alewife floater	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Esox masquinongy</i>	muskellunge	3	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Etheostoma camurum</i>	Bluebreast darter	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional
<i>Fusconaia flava</i>	Wabash pigtoe	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Ichthyomyzon bdellium</i>	Ohio lamprey	3	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional
<i>Lampsilis cardium</i>	Plain pocketbook	3	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional
<i>Lampsilis cardium</i>	Plain pocketbook	3	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lampsilis fasciola</i>	Wavy-rayed lampmussel	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lampsilis ovata</i>	Pocketbook	3	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lasmigona subviridis</i>	Green floater	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional
<i>Lasmigona subviridis</i>	Green floater	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm

Species	Common name	SGCN category	Habitat link
<i>Ligumia recta</i>	Black sandshell	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Notropis amoenus</i>	Comely shiner	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional
<i>Notropis heterodon</i>	Blackchin shiner	3	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Notropis heterolepis</i>	Blacknose shiner	3	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional
<i>Notropis procne</i>	Swallowtail shiner	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional
<i>Ophiogomphus anomalus</i>	Extra-striped snaketail	4	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional
<i>Ophiogomphus aspersus</i>	Brook snaketail	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional
<i>Potamilus alatus</i>	Pink heelsplitter	3	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Somatochlora cingulata</i>	Lake emerald	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Cold
<i>Truncilla truncata</i>	Deertoed	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Villosa iris</i>	Rainbow	2	Medium River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm

Medium River; Moderate-High Gradient; Assume Moderately Buffered

Distribution

Reaches in this Macrogroup are well distributed throughout New York, with very few locations in the Lower Hudson-Long Island and Connecticut Coastal watersheds (Figure 161).

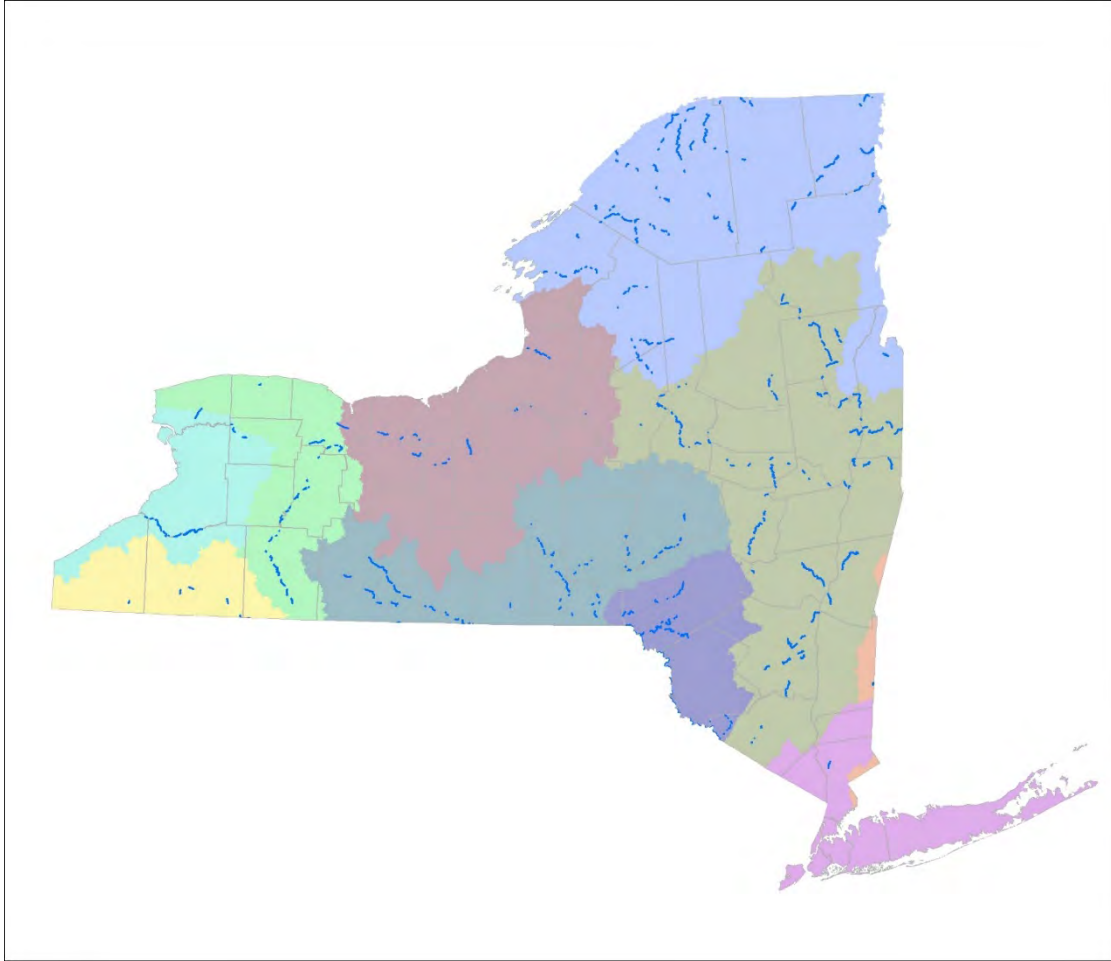


Figure 93. Distribution of the Macrogroup Medium River; Moderate-High Gradient; Assume Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

No watershed stands out clearly as having reaches with better or poorer average condition based on our condition metrics (Figure 162, Figure 163, Figure 164, Figure 165).

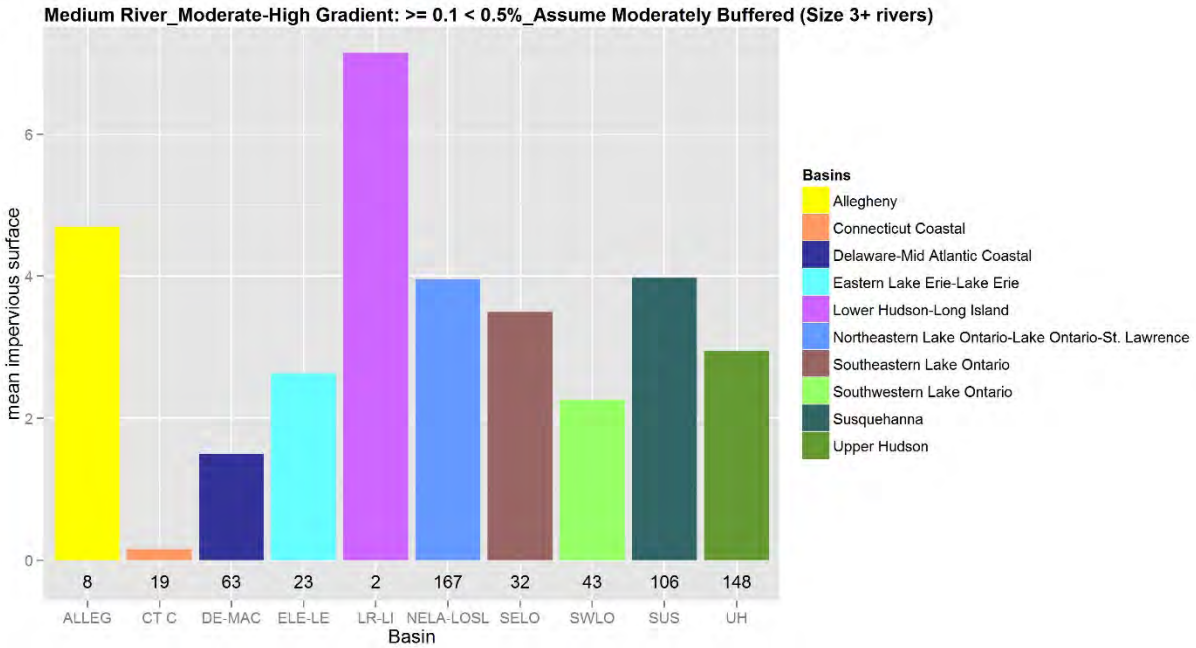


Figure 94. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

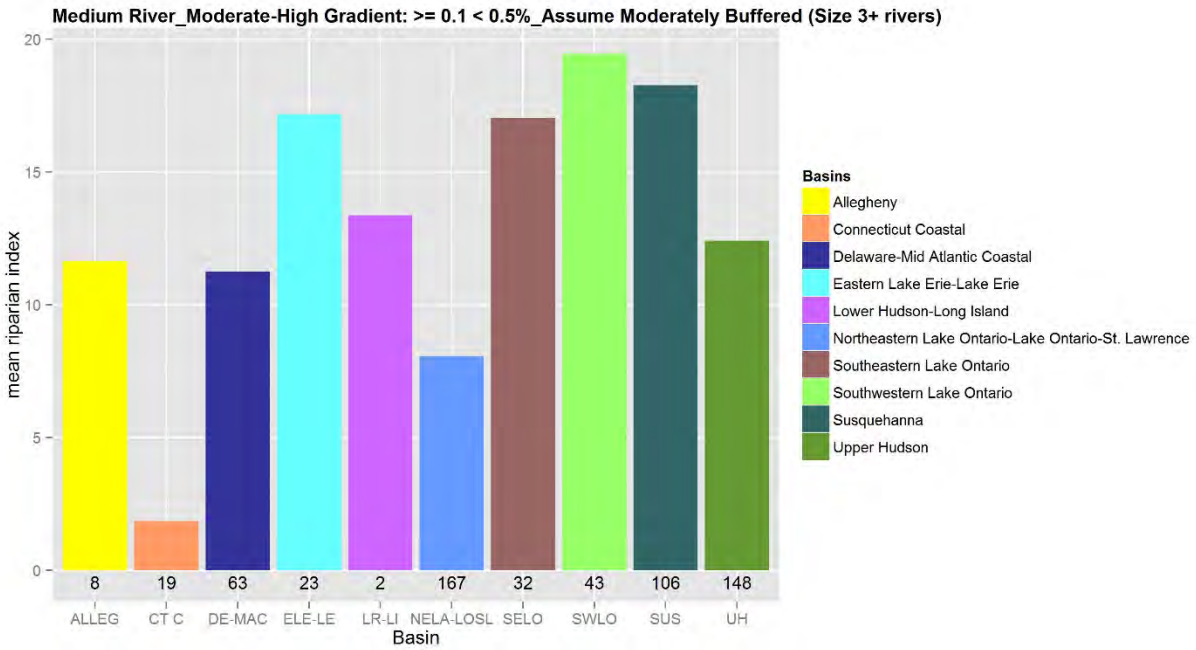


Figure 95. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

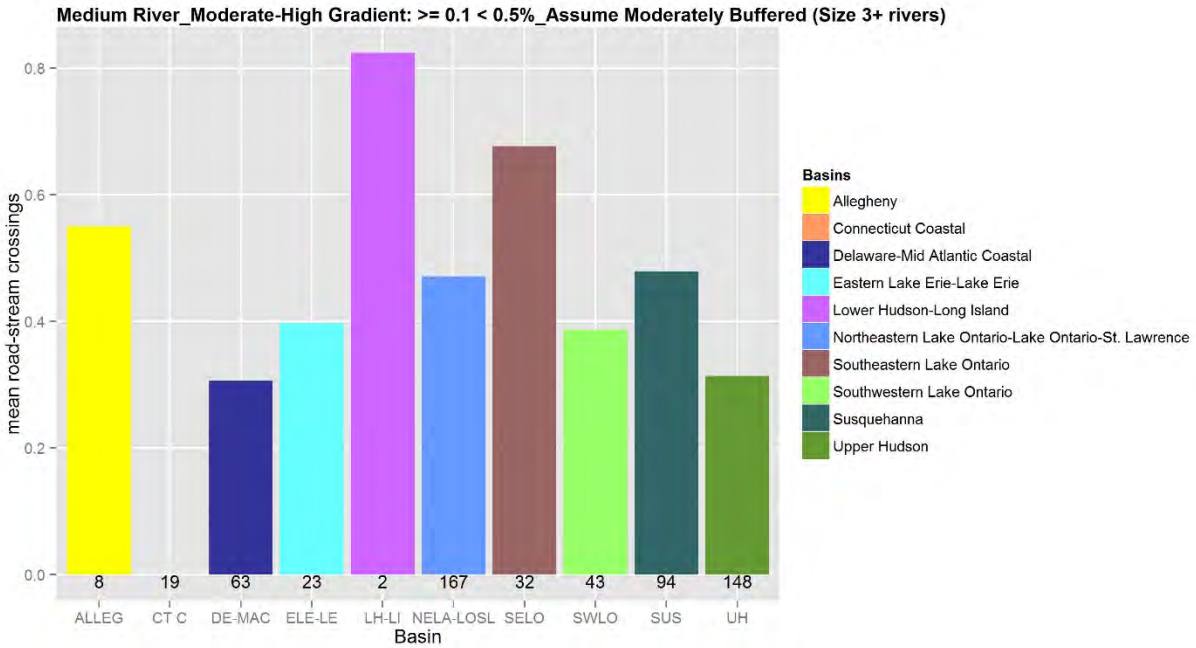


Figure 96. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

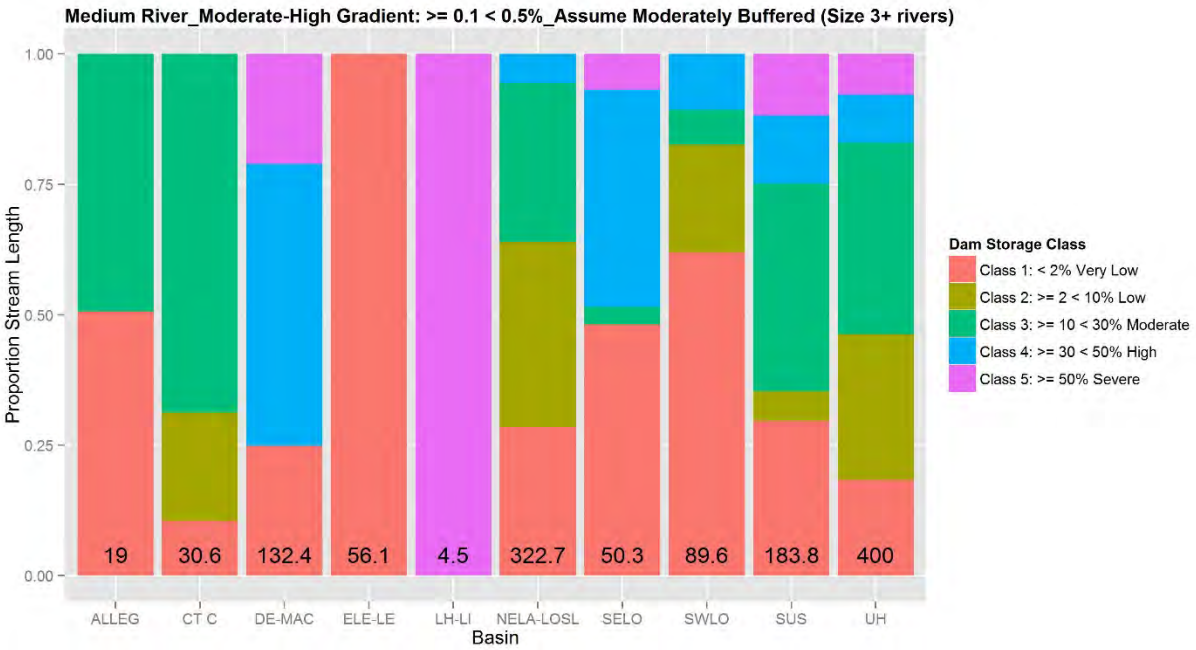


Figure 97. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Twenty SGCN are associated with this Macrogroup (Table 46).

Table 19. SGCN associated with Medium River; Moderate-High Gradient; Assume Moderately Buffered.

Species	Common name	SGCN category	Habitat link
<i>Actinonaias ligamentina</i>	Mucket	3	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	2	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Alasmidonta heterodon</i>	Dwarf wedgemussel	2	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Alasmidonta varicosa</i>	Brook floater	2	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Alasmidonta varicosa</i>	Brook floater	2	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Amblyma plicata</i>	Threeridge	3	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Anodonta implicata</i>	Alewite floater	2	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Anodonta implicata</i>	Alewite floater	2	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Exoglossum laurae</i>	Tonguetied minnow	3	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Fusconaia flava</i>	Wabash pigtoe	2	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lampsilis cardium</i>	Plain pocketbook	3	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lasmigona subviridis</i>	Green floater	2	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Lasmigona subviridis</i>	Green floater	2	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Margaritifera margaritifera</i>	Eastern pearlshell	3	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Pleurobema sintoxia</i>	Round pigtoe	3	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Potamilus alatus</i>	Pink heelsplitter	3	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Toxolasma parvum</i>	Lilliput	3	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Truncilla truncata</i>	Deertoe	2	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Villosa iris</i>	Rainbow	2	Medium River; Moderate-High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm

Medium River; High Gradient; Assume Moderately Buffered

Distribution

Reaches in this Macrogroup are well distributed throughout New York, although there are very few locations in the Allegheny, Lower Hudson-Long Island, and Connecticut Coastal watersheds (Figure 166).

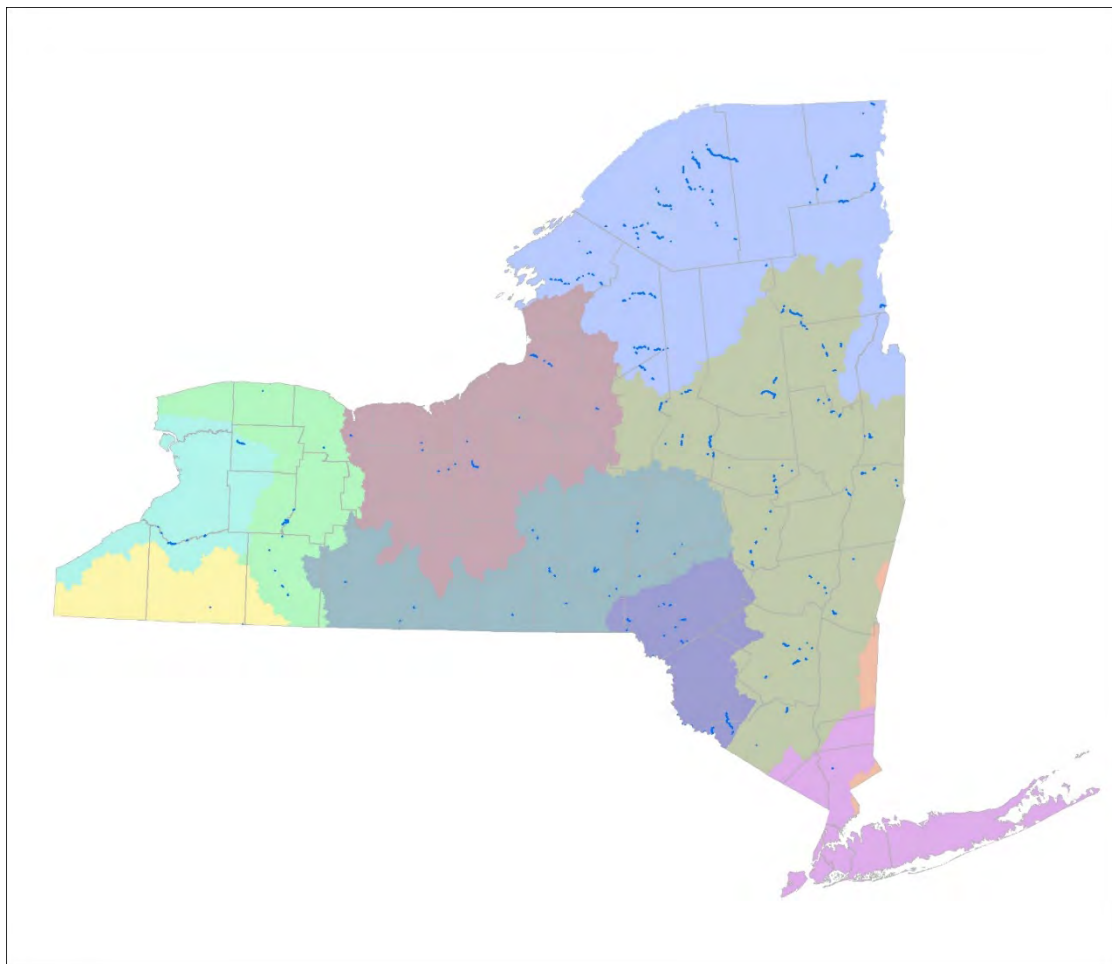


Figure 98. Distribution of the Macrogroup Medium River; High Gradient; Assume Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

Condition appears to be better overall in the watersheds where this Macrogroup is rare, such as the Allegheny, Eastern Lake Erie-Lake Erie, Connecticut Coastal, and Lower Hudson-Long

Island, and poorest overall in Southeastern Lake Ontario, Susquehanna, and Northeastern Lake Ontario-Lake Ontario-St. Lawrence (Figure 167, Figure 168, Figure 169, Figure 170).

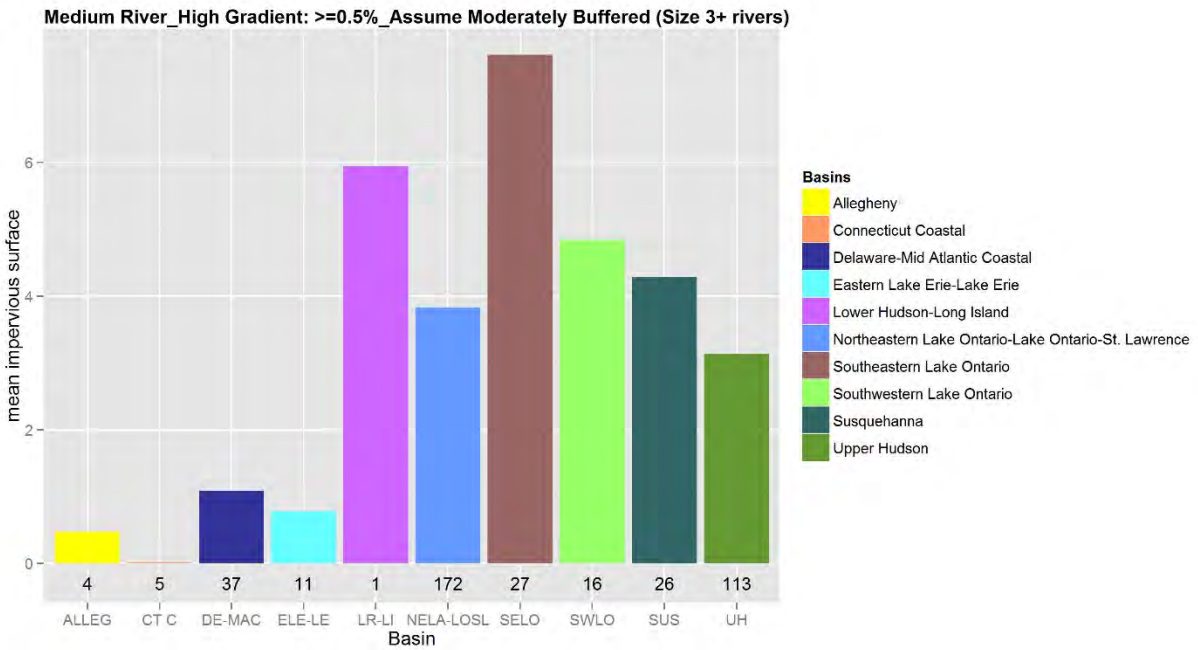


Figure 99. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

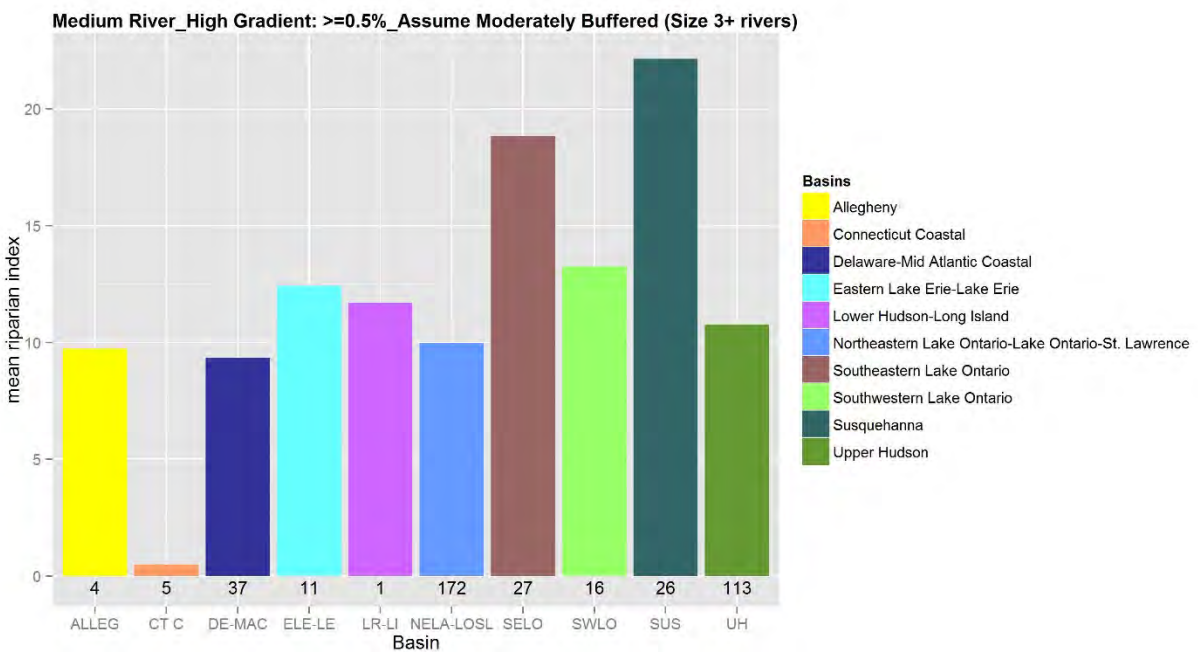


Figure 100. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

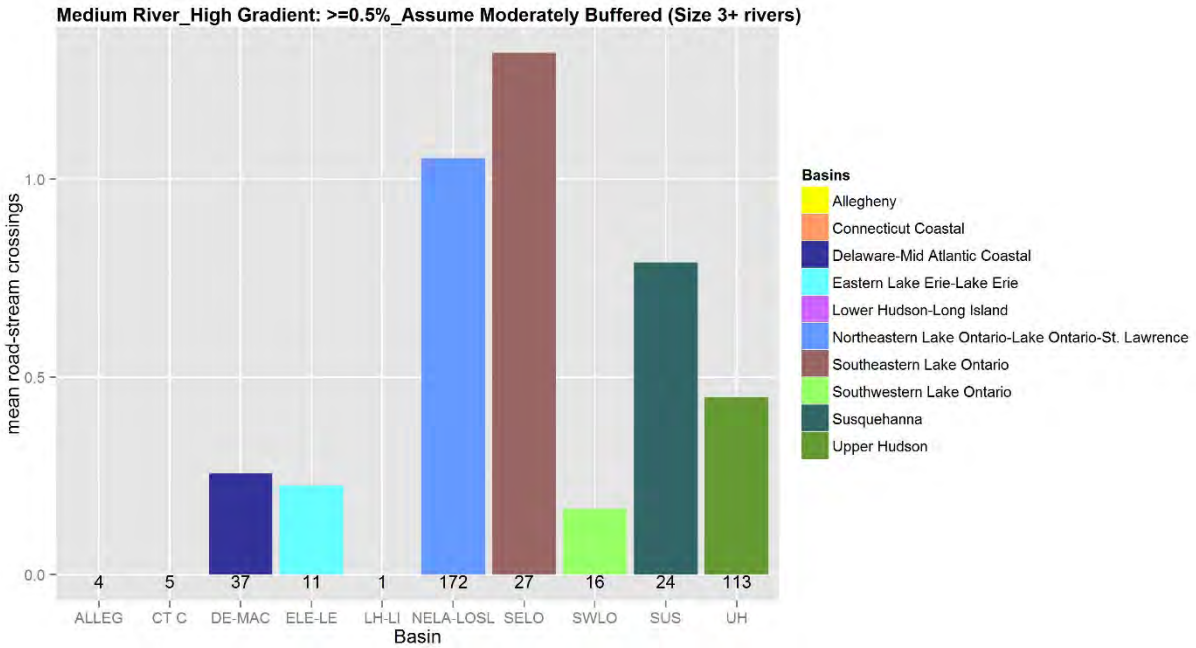


Figure 101. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

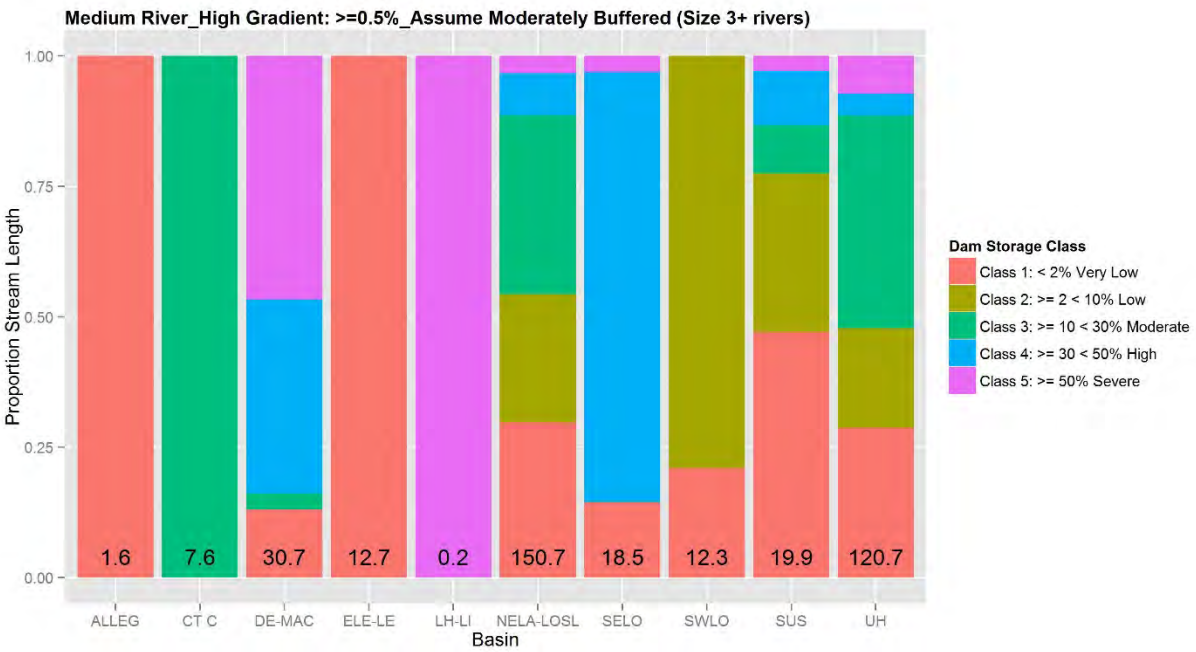


Figure 102. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Eight SGCN are associated with this Macrogroup (Table 47).

Table 20. SGCN associated with Medium River; High Gradient; Assume Moderately Buffered.

Species	Common name	SGCN category	Habitat link
Alasmidonta heterodon	Dwarf wedgemussel	2	Medium River; High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
Alasmidonta marginata	Elktoe	3	Medium River; High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
Alasmidonta varicosa	Brook floater	2	Medium River; High Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
Anodonta implicata	Alewife floater	2	Medium River; High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
Lampsilis cariosa	Yellow lampmussel	2	Medium River; High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
Lasmigona subviridis	Green floater	2	Medium River; High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
Ligumia nasuta	Eastern Pondmussel	3	Medium River; High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
Villosa iris	Rainbow	2	Medium River; High Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm

Large/Great River; Low Gradient; Assume Moderately Buffered

Distribution

This Macrogroup includes portions of the Hudson, Susquehanna, and Oswego Rivers (Figure 171). It may erroneously include portions of the Erie Canal.

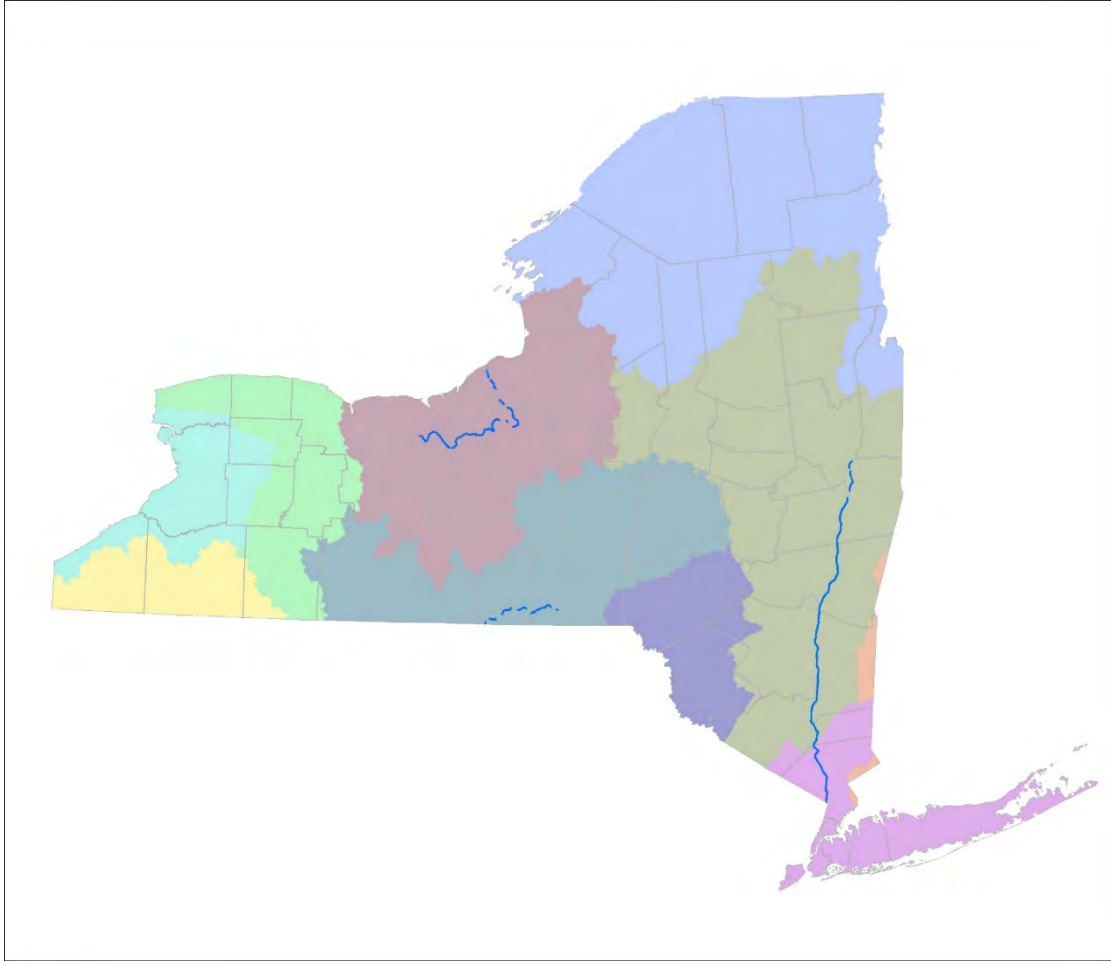


Figure 103. Distribution of the Macrogroup Large/Great River; Low Gradient; Assume Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

The condition metrics suggest different average condition by watershed, with only the rivers in Northeastern Lake Ontario-Lake Ontario-St. Lawrence consistently appearing to be in the best condition (Figure 172, Figure 173, Figure 174, Figure 175).

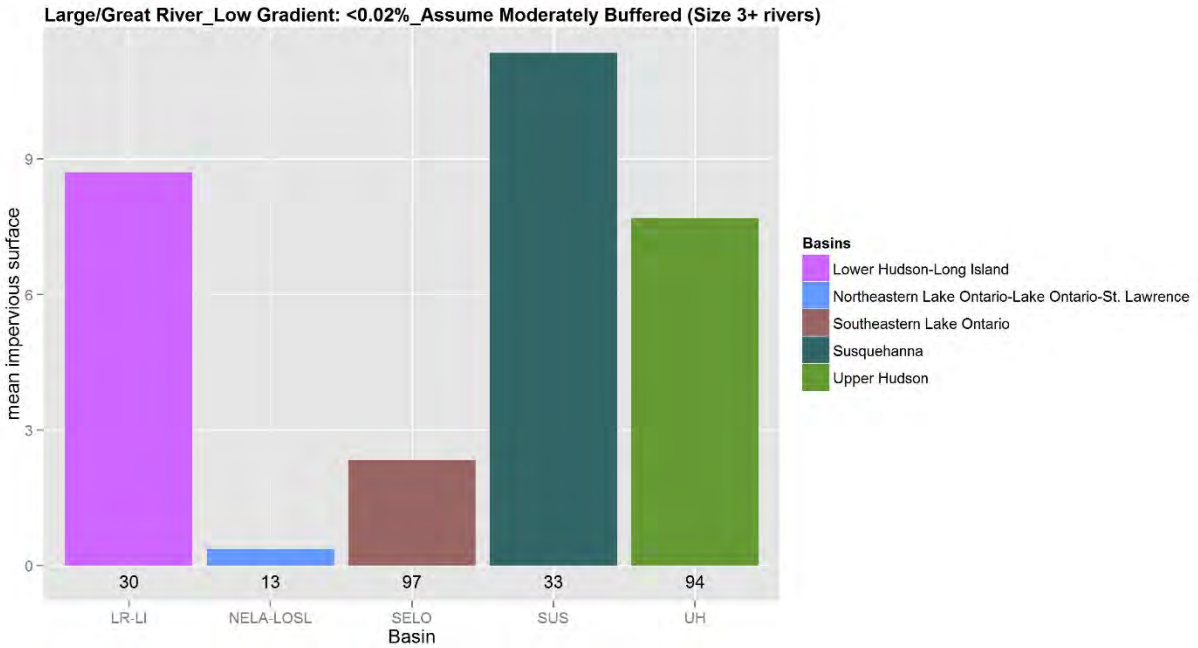


Figure 104. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

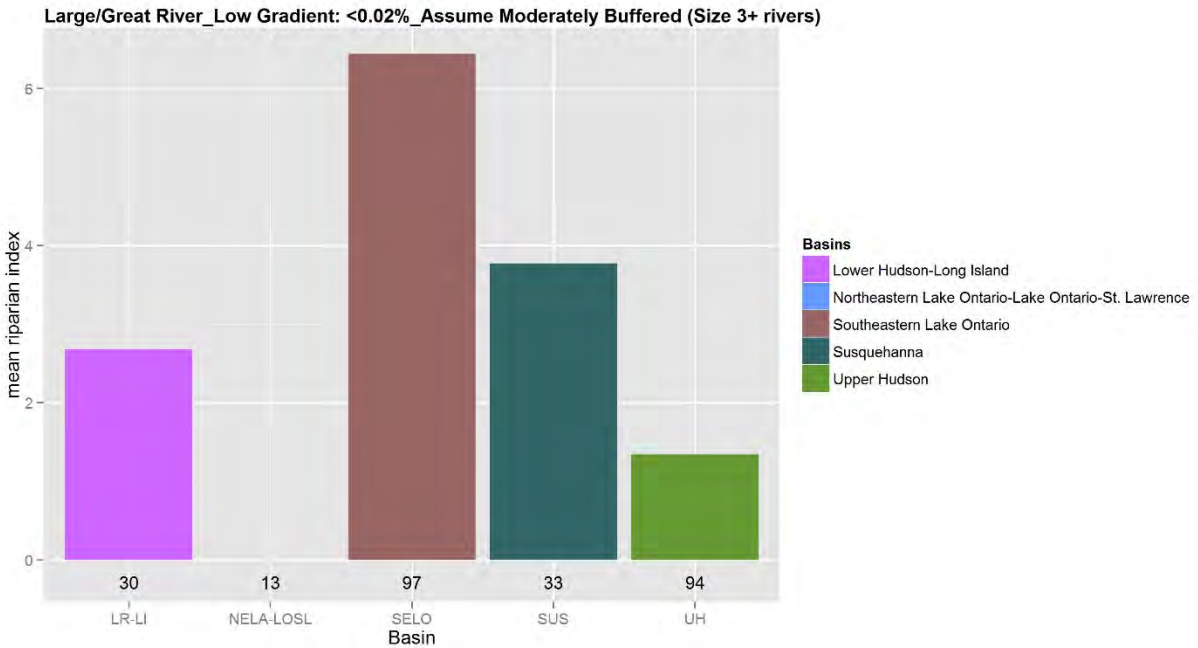


Figure 105. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

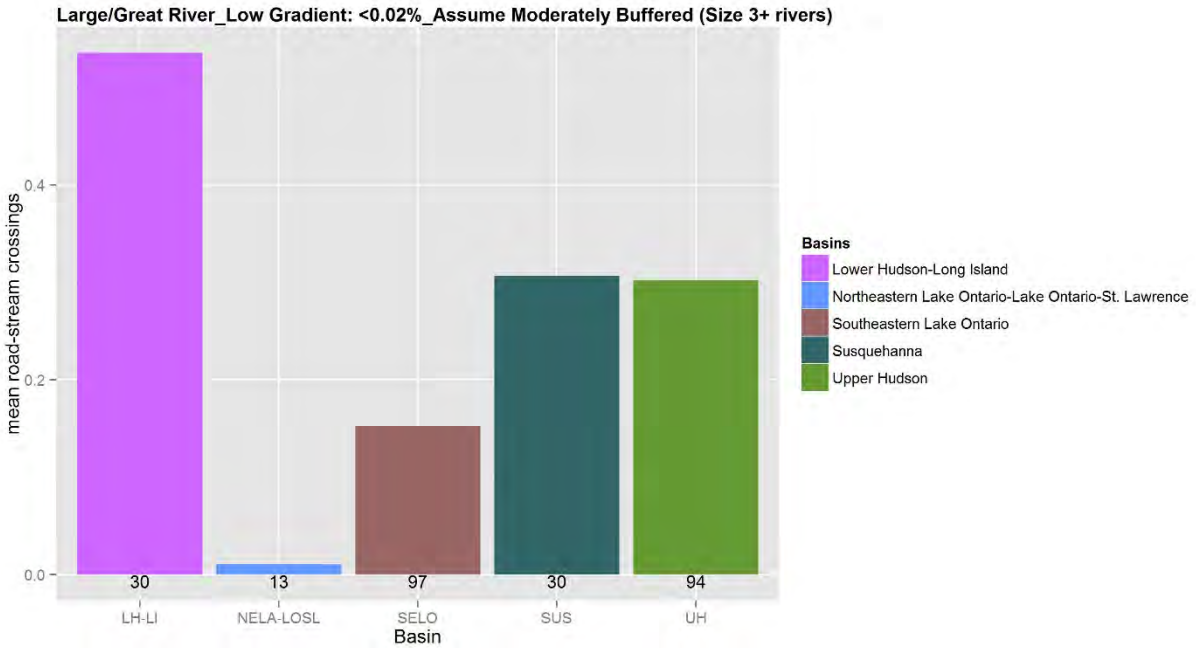


Figure 106. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

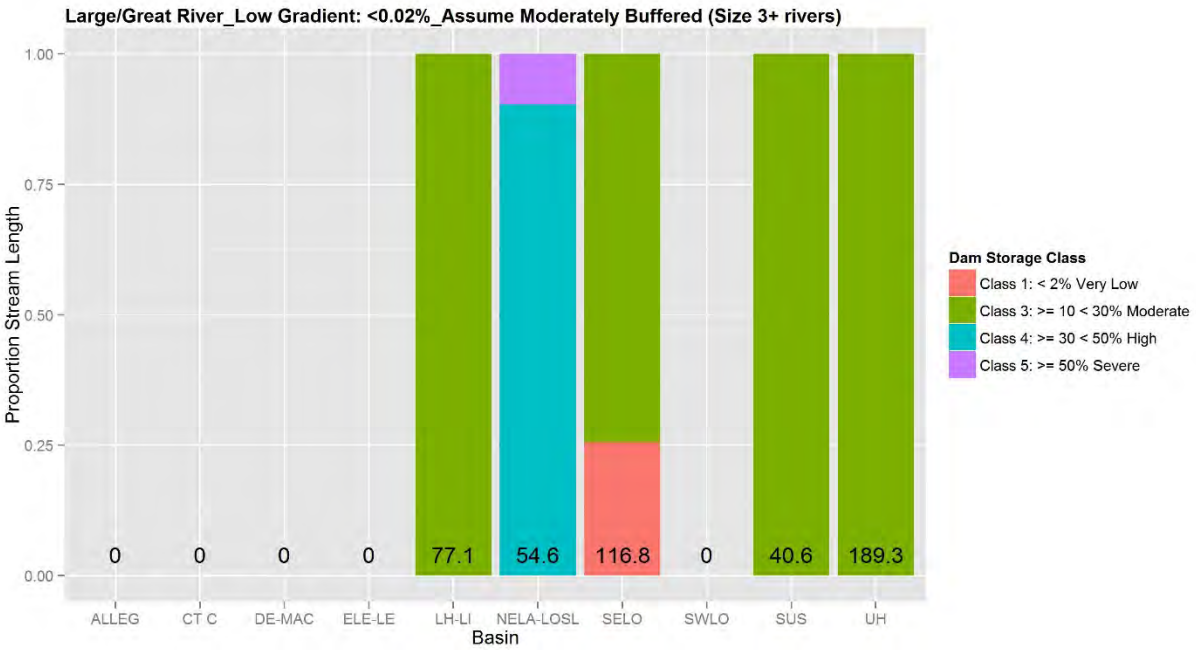


Figure 107. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Eight SGCN are associated with this Macrogroup (Table 48).

Table 21. SGCN associated with Large/Great River; Low Gradient; Assume Moderately Buffered.

Species	Common name	SGCN category	Habitat link
<i>Alasmidonta marginata</i>	Elktoe	3	Large/Great River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Alasmidonta varicosa</i>	Brook floater	2	Large/Great River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Alosa aestivalis</i>	Blueback herring	3	Large/Great River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Alosa pseudoharengus</i>	Alewife	3	Large/Great River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Anodonta implicata</i>	Alewife floater	2	Large/Great River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Large/Great River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lasmigona subviridis</i>	Green floater	2	Large/Great River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Leptodea ochracea</i>	Tidewater mucket	2	Large/Great River; Low Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm

Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered

Distribution

This Macrogroup includes portions of the Hudson, Susquehanna, and Oswego Rivers (Figure 176).

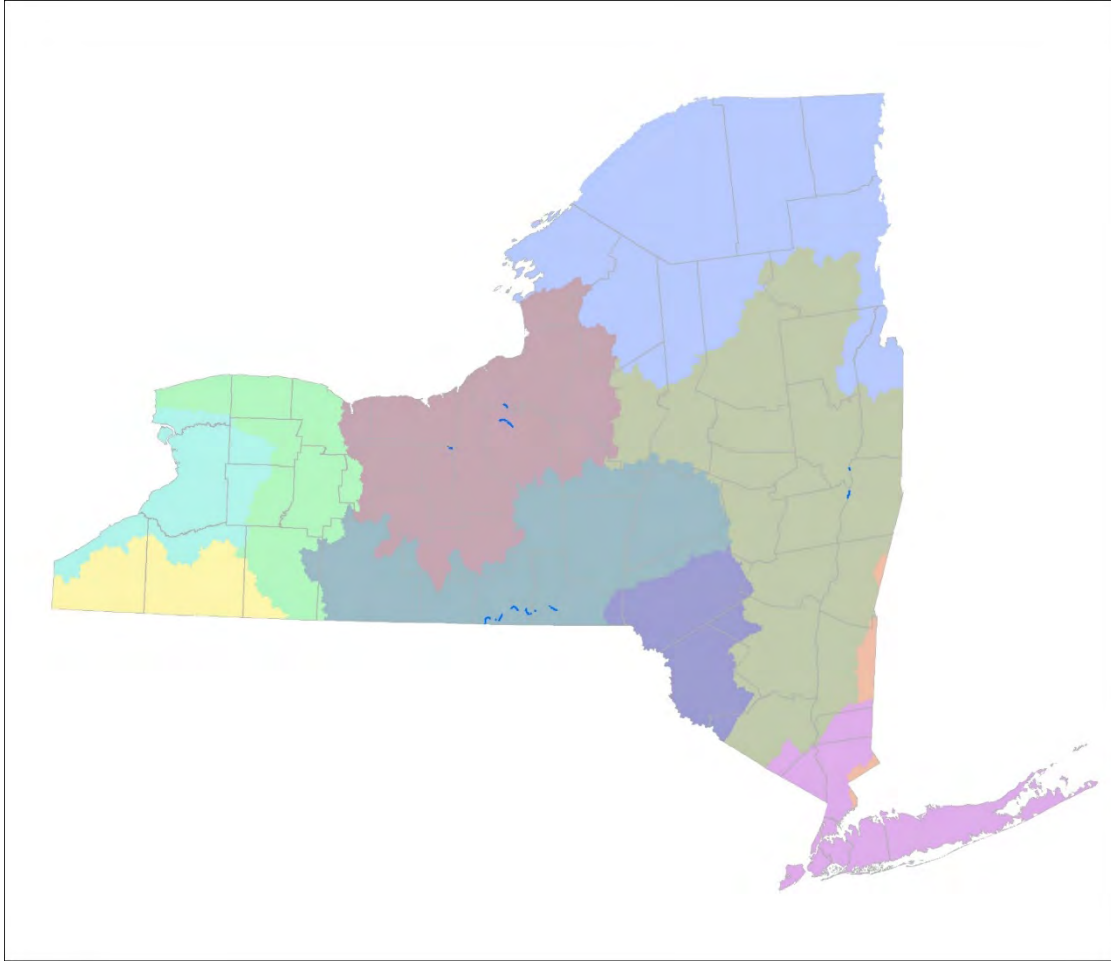


Figure 108. Distribution of the Macrogroup Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

The portions of the Hudson and Susquehanna rivers falling in this Macrogroup appear to be in worse condition than the portion of the Oswego that does (Figure 177, Figure 178, Figure 179, Figure 180).

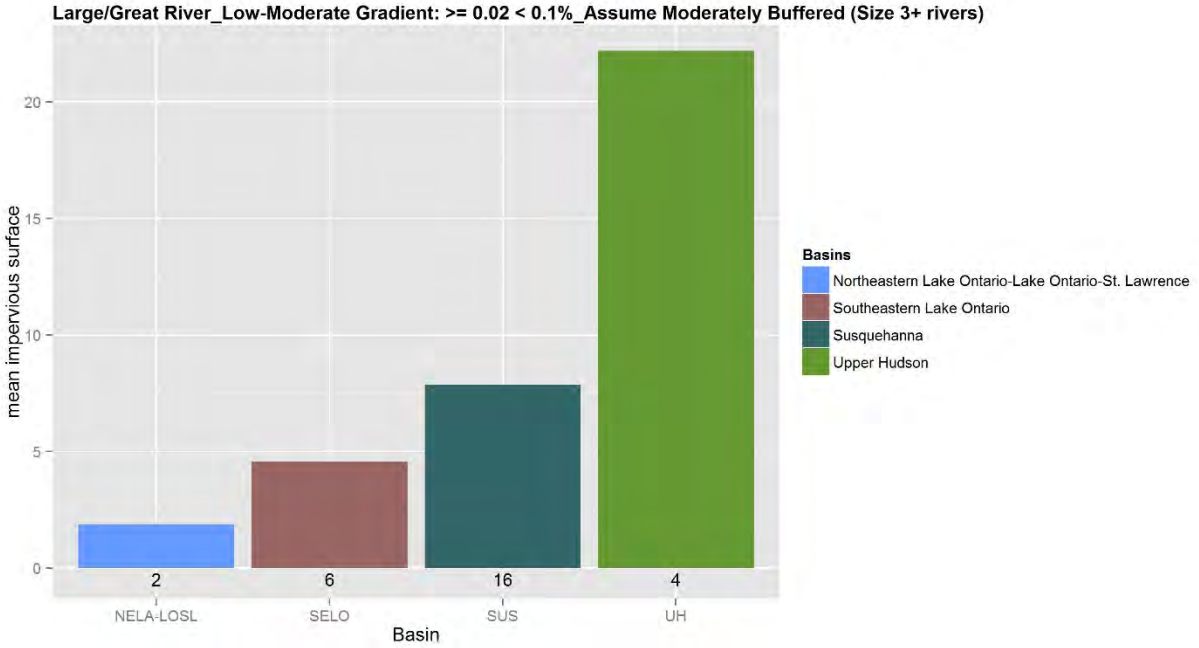


Figure 109. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

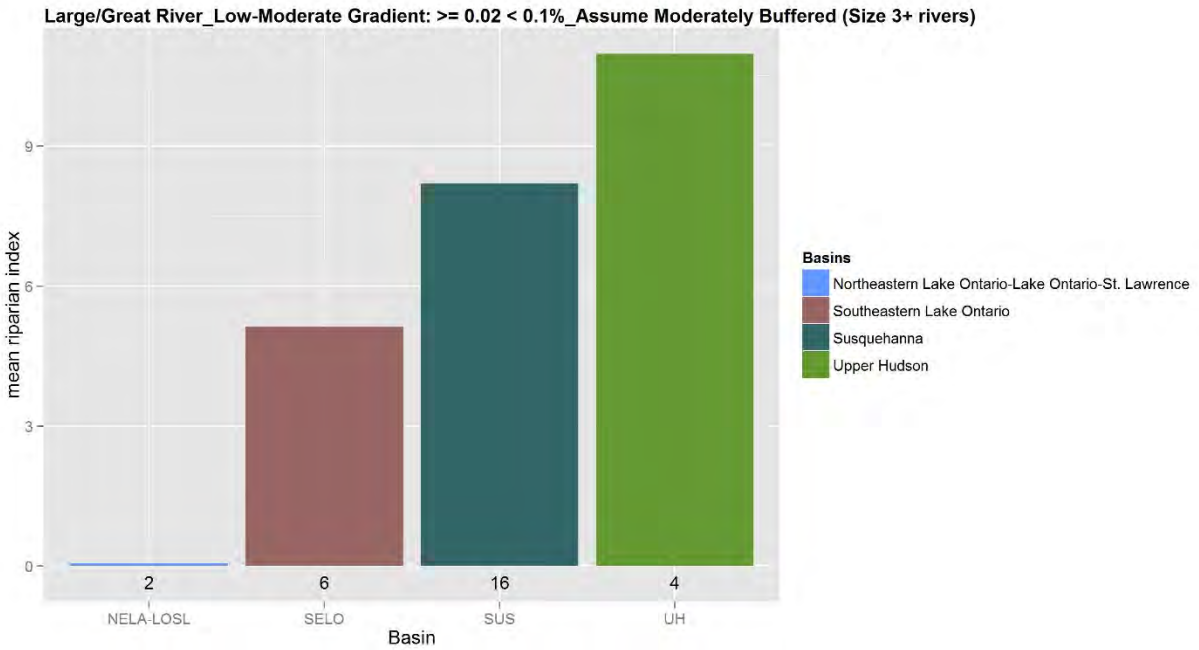


Figure 110. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

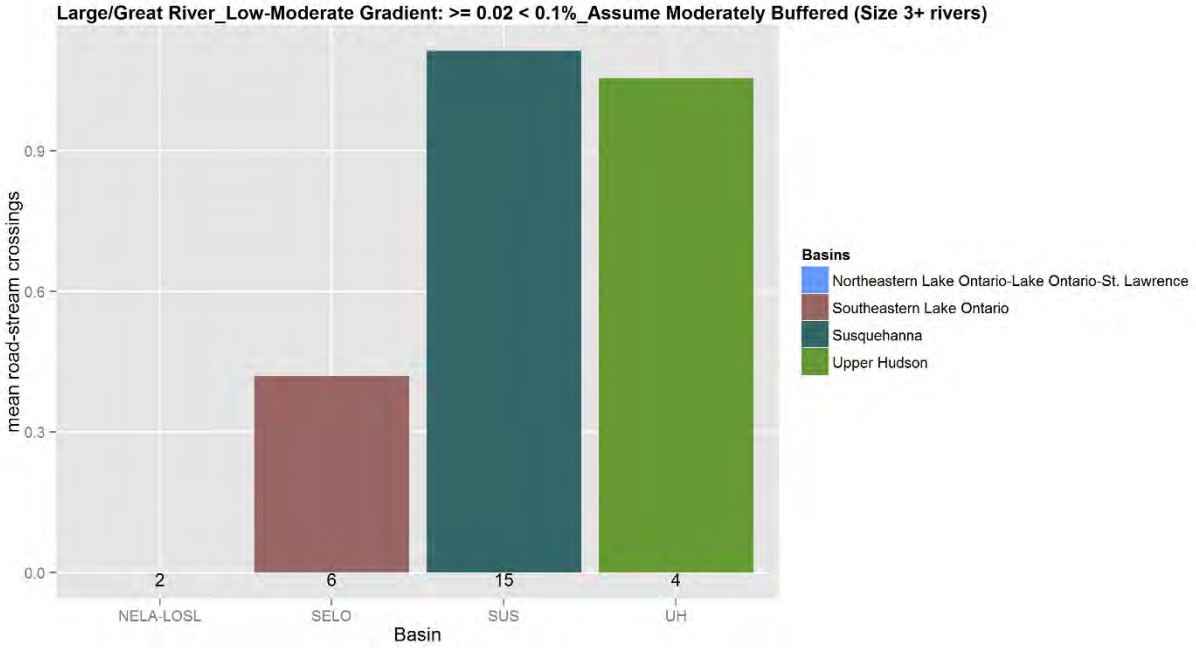


Figure 111. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

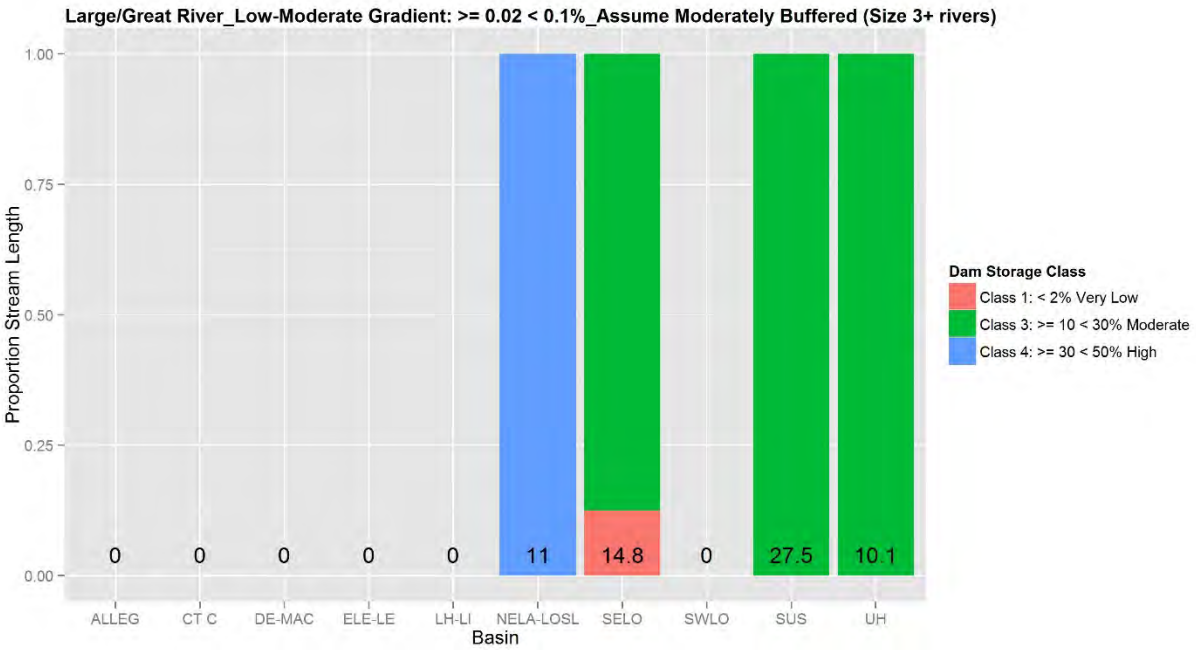


Figure 112. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

Eighteen SGCN are associated with this Macrogroup (Table 49).

Table 22. SGCN associated with Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered.

Species	Common name	SGCN category	Habitat link
<i>Acipenser fulvescens</i>	Lake sturgeon	3	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Alasmidonta marginata</i>	Elktoe	3	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Alasmidonta varicosa</i>	Brook floater	2	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Ammocrypta pellucida</i>	Eastern sand darter	3	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Anguilla rostrata</i>	American eel	2	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Anodonta implicata</i>	Alewife floater	2	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Cryptobranchus alleganiensis</i>	Eastern hellbender	2	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Esox masquinongy</i>	muskellunge	3	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Hiodon tergisus</i>	Mooneye	2	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lampsilis cariosa</i>	Yellow lampmussel	2	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Lasmigona subviridis</i>	Green floater	2	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Leptodea ochracea</i>	Tidewater mucket	2	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Menidia menidia</i>	Atlantic silverside	3	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Notropis anogenus</i>	Pugnose shiner	3	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Warm
<i>Notropis bifrenatus</i>	Bridle shiner	3	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Notropis heterolepis</i>	Blacknose shiner	3	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool

Species	Common name	SGCN category	Habitat link
<i>Ophiogomphus anomalus</i>	Extra-striped snaketail	4	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool
<i>Sander canadensis</i>	Sauger	1	Large/Great River; Low-Moderate Gradient; Assume Moderately Buffered (Size 3+ rivers); Transitional Cool

Large/Great River; Moderate-High Gradient; Assume Moderately Buffered

Distribution

This Macrogroup includes portions of the Hudson, Susquehanna, and Oswego Rivers (Figure 181).

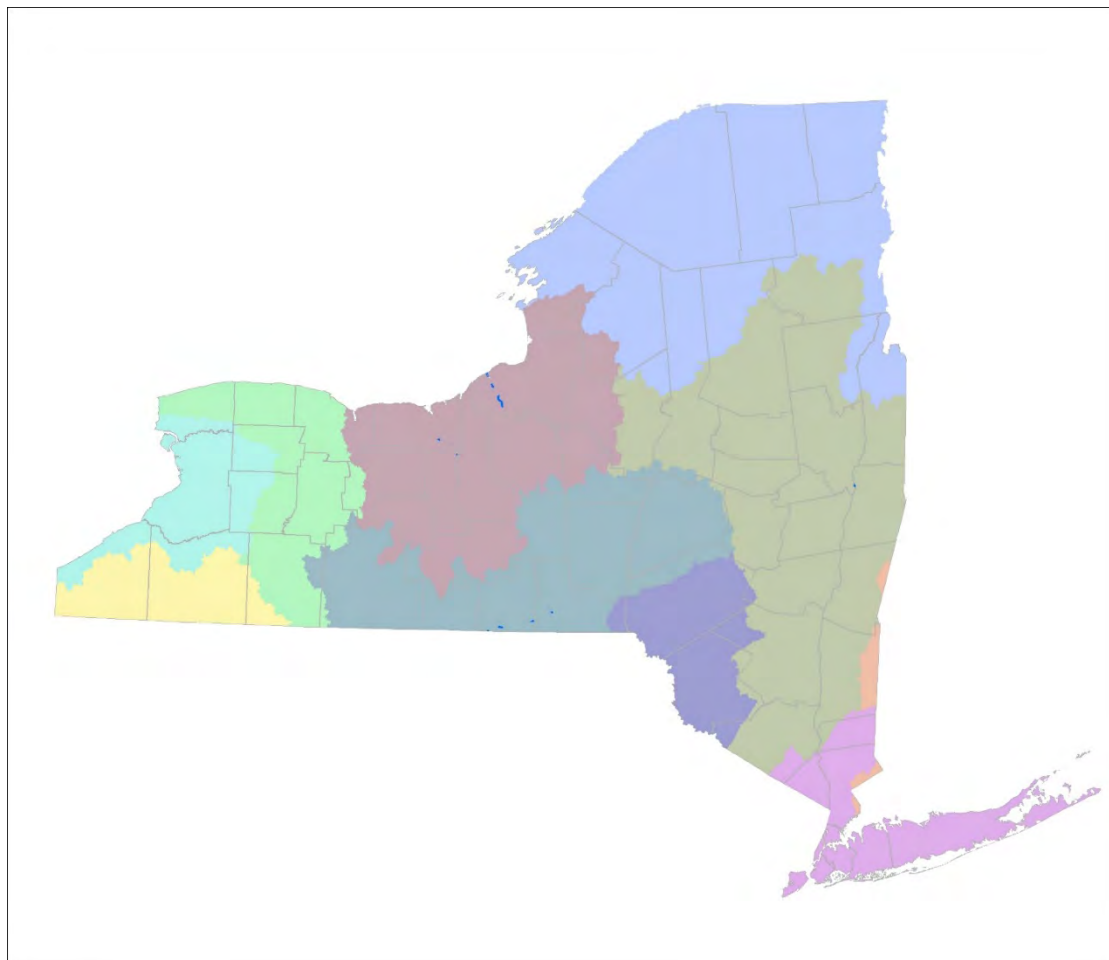


Figure 113. Distribution of the Macrogroup Large/Great River; Moderate - High Gradient; Assume Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

The portion of the Oswego River falling into this Macrogroup appears to be in worse condition than the portions of the Susquehanna and Hudson rivers that do (Figure 182, Figure 183, Figure 184, Figure 185).

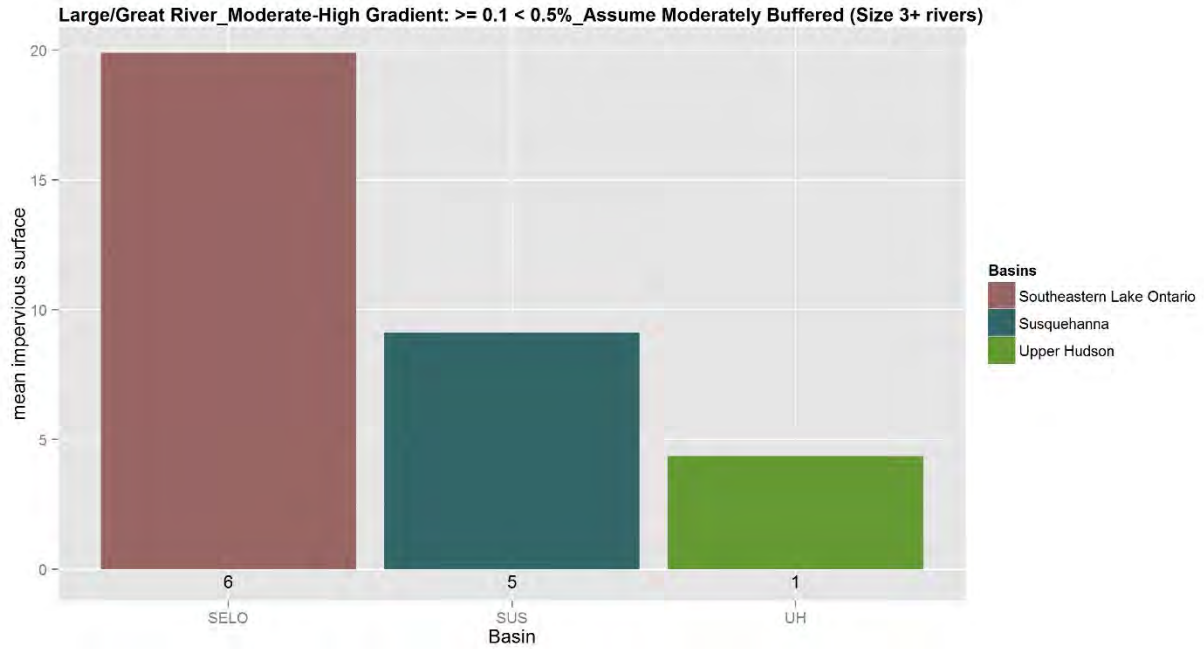


Figure 114. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

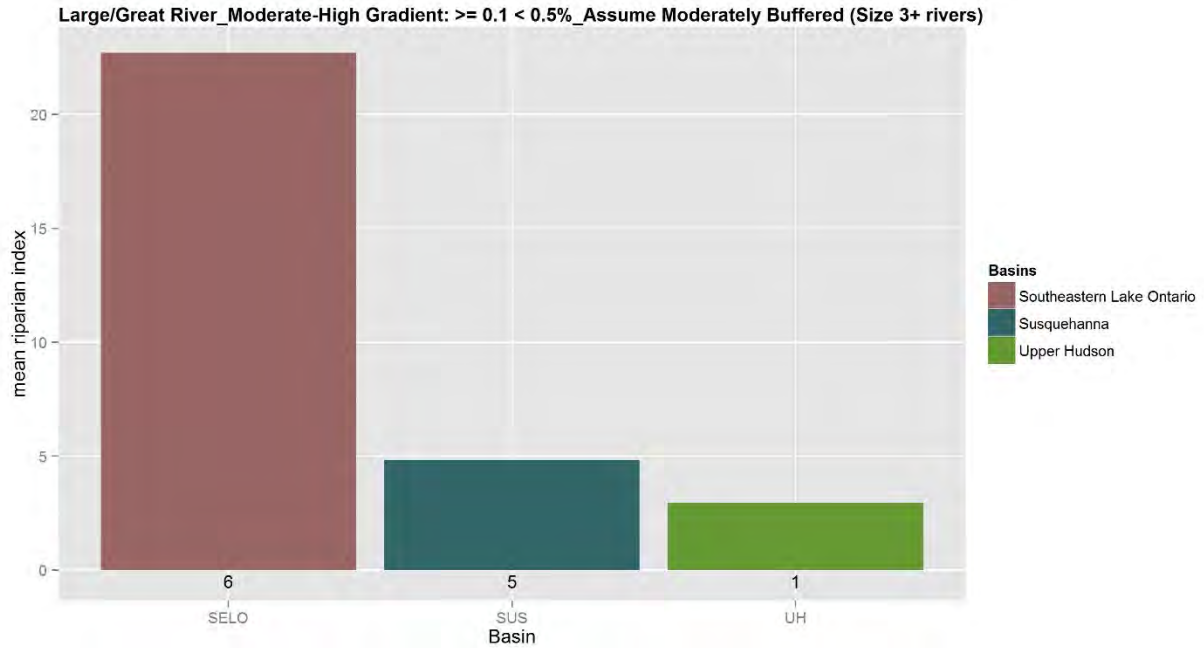


Figure 115. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

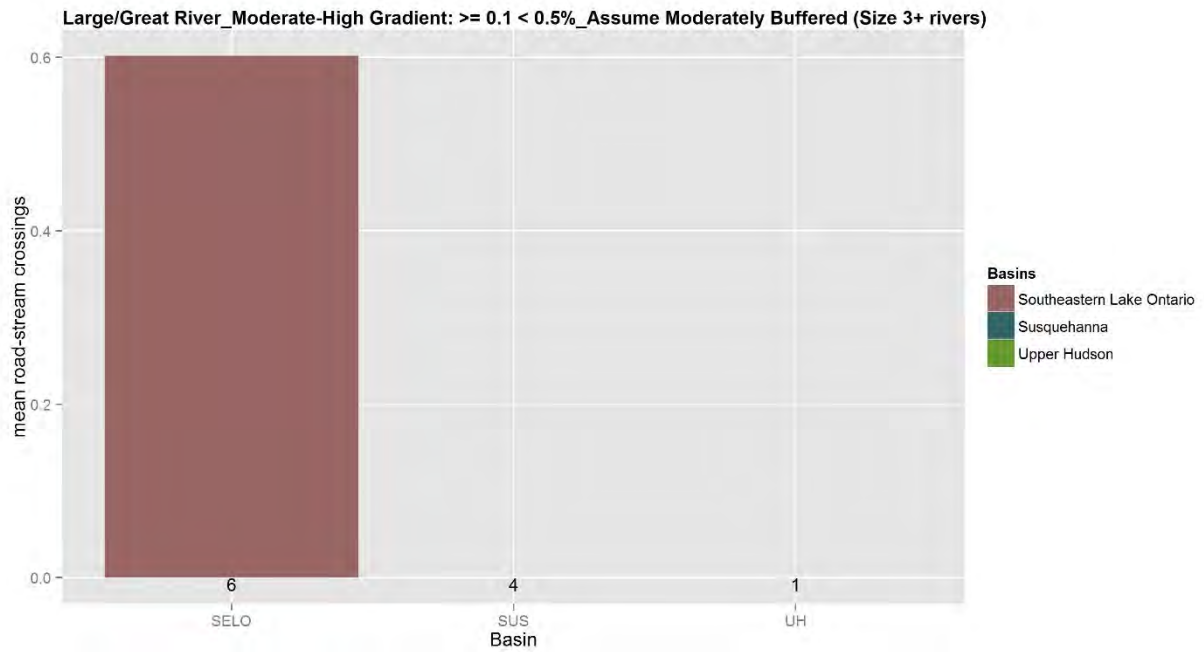


Figure 116. Mean number of road-stream crossings per stream mile of segments of the specified Macrogroup in each major NY watershed.

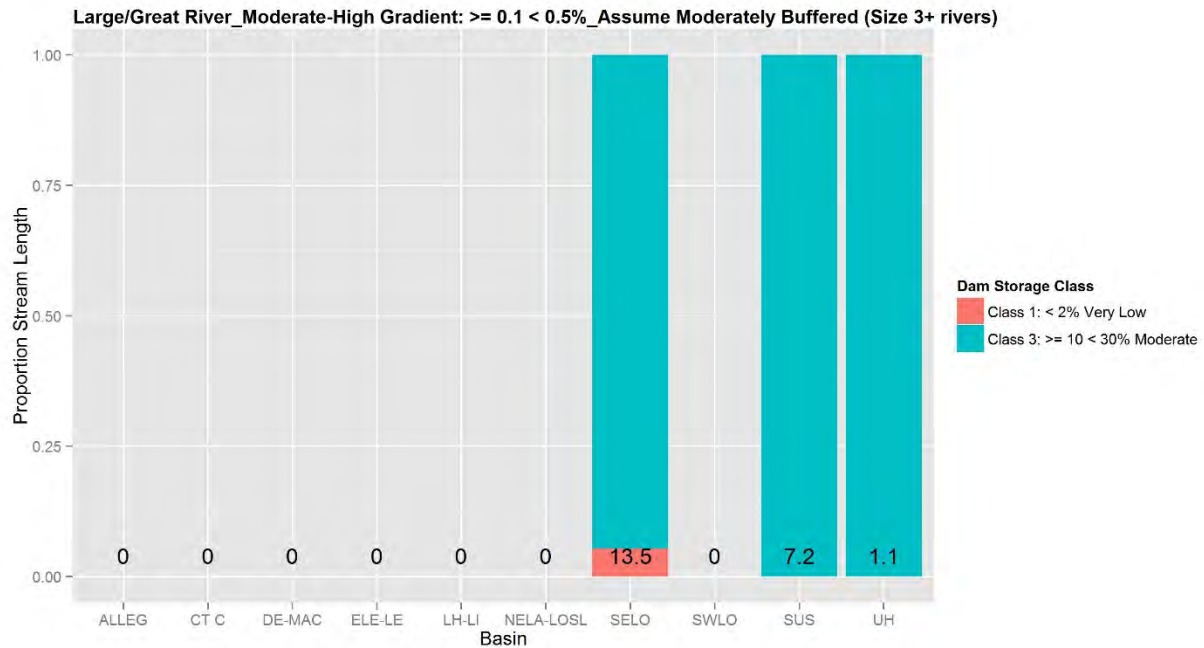


Figure 117. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

No SGCN are associated with this Macrogroup.

Large/Great River; High Gradient; Assume Moderately Buffered

Distribution

This Macrogroup includes portions of the Hudson, Susquehanna, and Oswego Rivers (Figure 186).

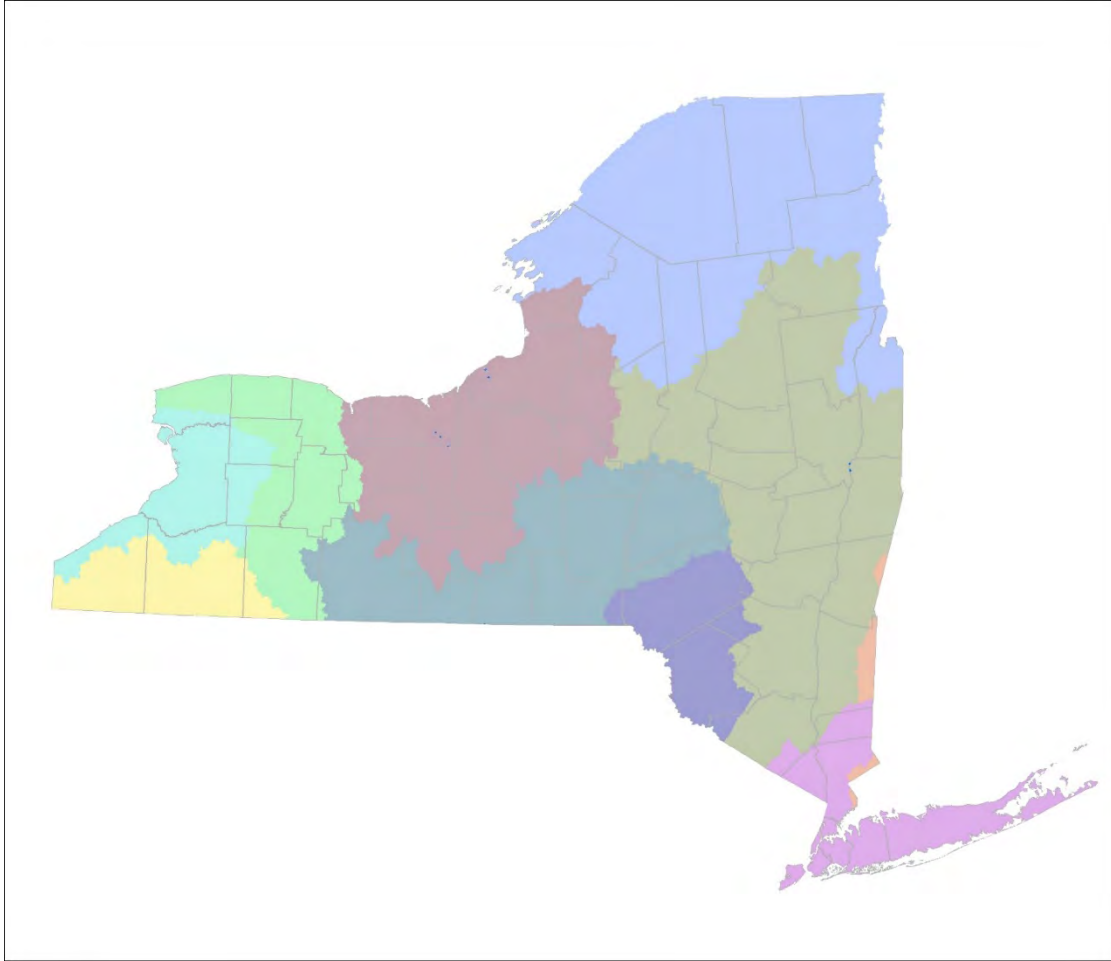


Figure 118. Distribution of the Macrogroup Large/Great River; High Gradient; Assume Moderately Buffered in New York. Major watershed boundaries are shown beneath stream segments.

Condition

The portion of the Susquehanna River falling into this Macrogroup appears to be in better condition than the portions of the Hudson and Oswego that do (Figure 187, Figure 188, Figure 189). There were no road-stream crossings documented for any of the eight reaches.

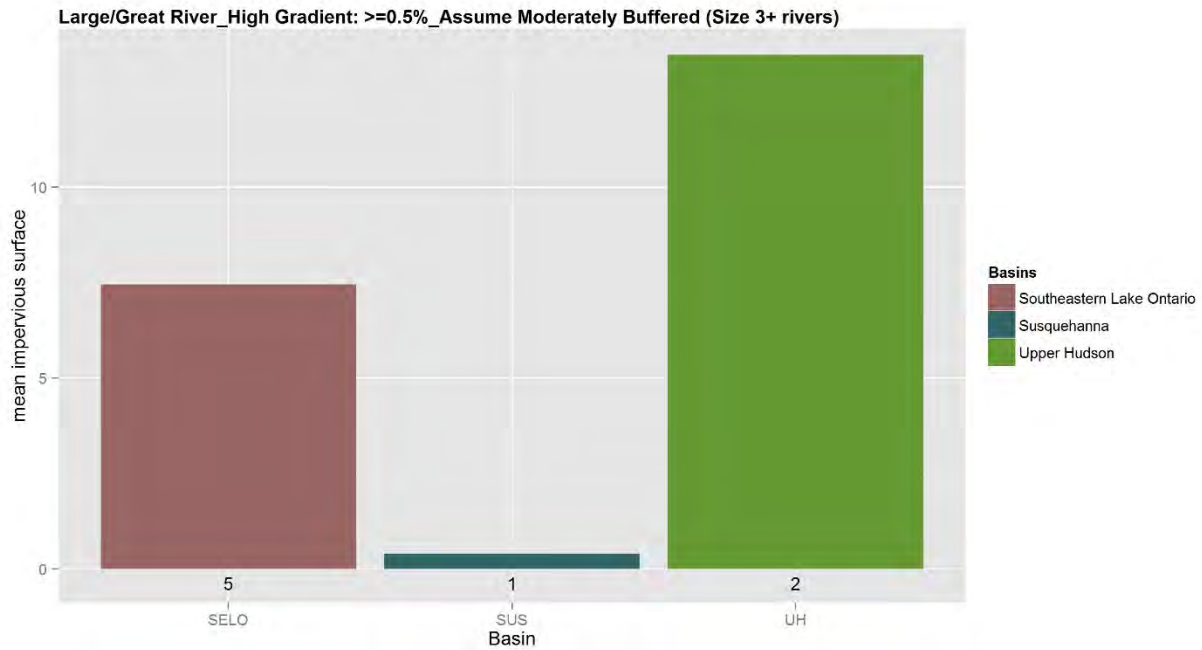


Figure 119. Mean impervious surface of catchments containing a segment of the specified Macrogroup in each major NY watershed.

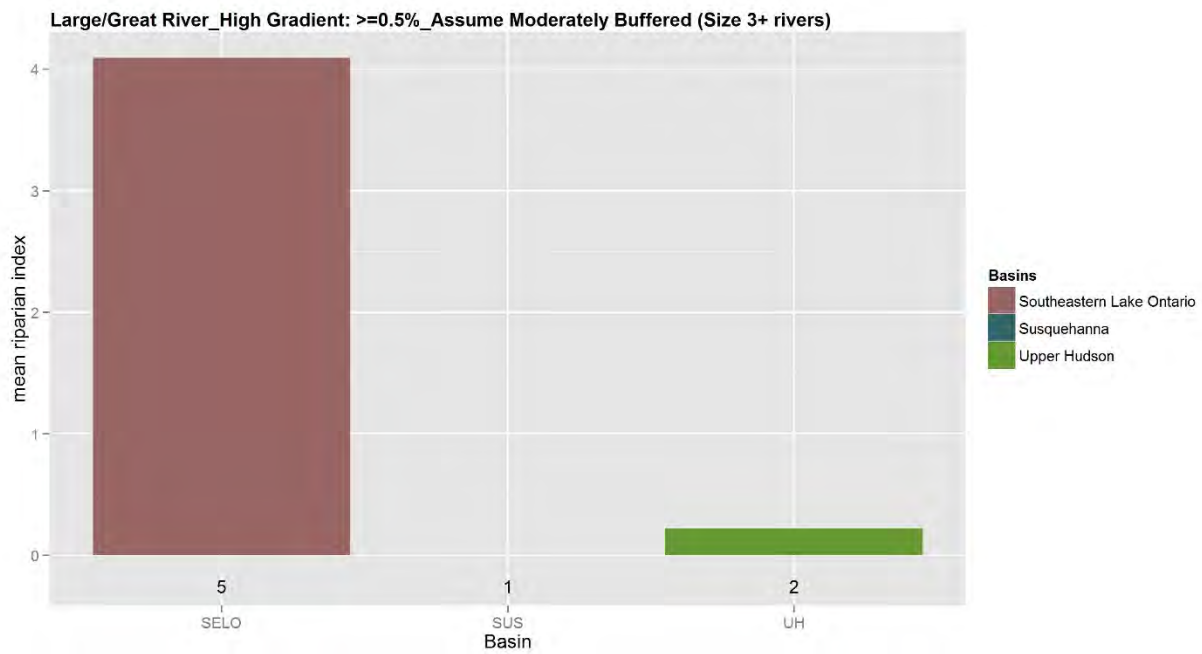


Figure 120. Mean impact of agriculture and development along segments of the specified Macrogroup in each major NY watershed.

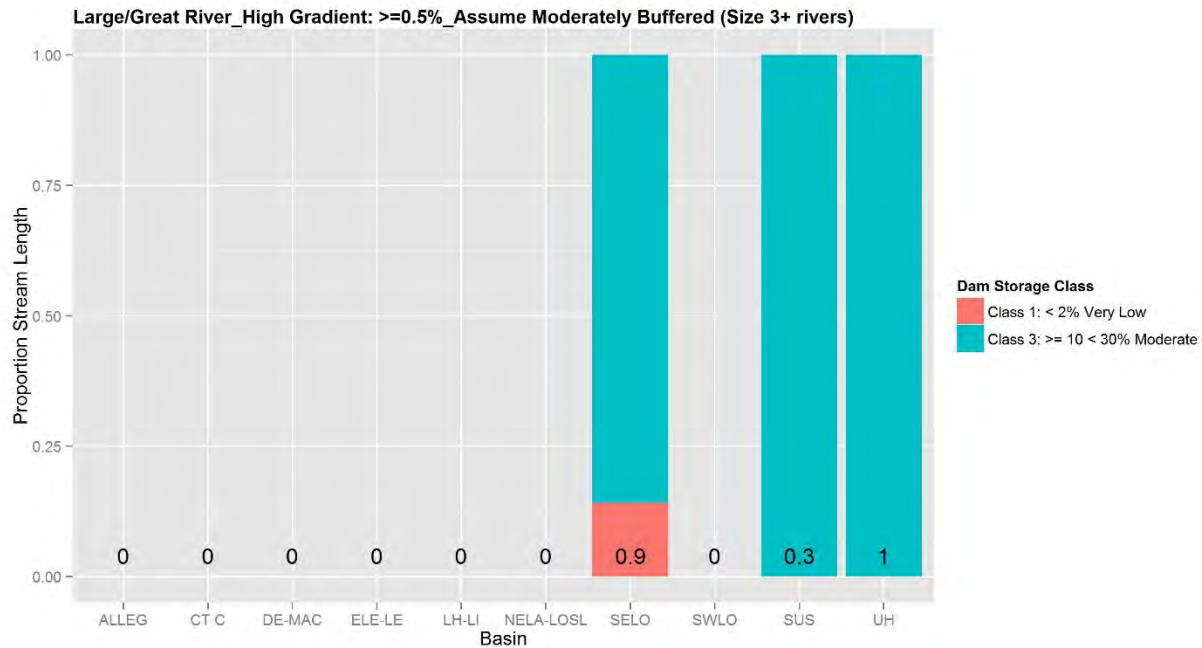


Figure 121. Proportion of stream length in each class of dam storage in each major NY watershed.

Associated SGCN

No SGCN are associated with this Macrogroup.

Riverine Cultural; Created Stream

Distribution

No map of this Macrogroup is available.

Condition

Associated SGCN

Three SGCN are associated with this Macrogroup (Table 50).

Table 23. SGCN associated with Riverine Cultural; Created Stream.

Species	Common name	SGCN category	Habitat link
<i>Ameiurus melas</i>	Black bullhead	3	Ditch/Artificial Intermittent Stream
<i>Cambarus diogenes</i>	Devil crawfish	4	Ditch/Artificial Intermittent Stream
<i>Lithobates sphenoccephalus utricularius</i>	Southern leopard frog	4	Ditch/Artificial Intermittent Stream

Vernal Pool

Distribution

No statewide map of vernal pools is available.

Condition

Remotely assessed condition metrics for vernal pools are not available, as the distribution of this type is not mapped.

Associated SGCN

Fourteen SGCN are associated with this Macrogroup (Table 51).

Table 24. SGCN associated with Vernal Pool.

Species	Common name	SGCN category	Habitat link
<i>Ambystoma jeffersonianum</i>	Jefferson salamander	4	Vernal Pool
<i>Ambystoma laterale</i>	Blue-spotted salamander	1	Vernal Pool
<i>Ambystoma opacum</i>	Marbled salamander	3	Vernal Pool
<i>Ambystoma tigrinum</i>	Eastern tiger salamander	2	Vernal Pool
<i>Anaxyrus fowleri</i>	Fowlers Toad	3	Vernal Pool
<i>Chelydra serpentina</i>	Snapping turtle	3	Vernal Pool
<i>Clemmys guttata</i>	Spotted turtle	2	Vernal Pool
<i>Emydoidea blandingii</i>	Blanding's Turtle	2	Vernal Pool
<i>Glyptemys insculpta</i>	Wood turtle	2	Vernal Pool
<i>Hemidactylium scutatum</i>	Four-toed salamander	2	Vernal Pool
<i>Lestes unguiculatus</i>	Lyre-tipped Spreadwing	2	Vernal Pool
<i>Pseudacris triseriata</i>	Western chorus frog	3	Vernal Pool
<i>Pseudotriton ruber ruber</i>	Northern red salamander	4	Vernal Pool
<i>Scaphiopus holbrookii</i>	Eastern spadefoot	3	Vernal Pool

Freshwater Lakes and Ponds

Maps herein are based on the dataset described by Olivero-Sheldon et al. (2014). The dataset is undergoing revisions by The Nature Conservancy. Lakes are not sorted by size in the available dataset, except that Lakes and Ponds are categorized separately.

Table 25. Number and total area of lakes and ponds in 10 major NY watersheds.

Watershed	Eutrophic ¹ pond		Mesotrophic pond		Oligotrophic pond		Eutrophic ¹ lake		Mesotrophic lake		Oligotrophic lake		Total ²	
	No.	Area (ac)	No.	Area (ac)	No.	Area (ac)	No.	Area (ac)	No.	Area (ac)	No.	Area (ac)	No.	Area (ac)
Allegheny	131	1665.3	8	95.9	1	97.6	12	12179.9	3	537.8	3	13373.2	158	27949.6
Connecticut Coastal	72	398.7	35	478.8	0		26	645.2	10	670.2	3	431.0	146	2623.9
Delaware-Mid Atlantic Coastal	101	947.7	239	4663.5	6	521.8	61	3583.4	71	17985.5	0	0.0	478	27701.9
Eastern Lake Erie-Lake Erie	313	2902.8	4	101.4	0		59	2926.7	2	26.9	1	49.0	379	6006.8
Lower Hudson- Long Island	618	7406.1	161	2676.4	5	207.6	93	6572.7	68	12253.8	11	5939.0	966	35155.4
NE Lake Ontario- Lake Ontario-St. Lawrence	149	1899.0	1098	37951.4	3	281.3	48	8054.1	379	851844.8	150	107674.7	1830	1007718.1
Southeastern Lake Ontario	427	5648.3	94	2243.6	1	17.3	92	10334.1	15	60922.2	17	123478.4	647	202655.9
Southwestern Lake Ontario	271	3248.1	11	184.2	0		56	5111.0	4	215.5	5	5304.4	347	14063.2
Susquehanna	366	3340.7	79	1137.1	4	200.6	102	6031.9	36	3882.0	2	4243.1	589	18835.3
Upper Hudson	733	7503.5	759	15871.8	9	619.1	183	7418.5	278	78938.6	23	18615.9	1985	128967.1
Grand Total	3181	34960.0	2488	65404.0	29	1945.1	732	62857.5	866	1027277.2	215	279108.6	7525	1471677.3

¹ Includes those classified as hypereutrophic. ² Totals include some unclassified lakes and ponds.

Great Lakes; Shoals and Bays; Shoals and Bays

Distribution

No map of this Macrogroup is available.

Associated SGCN

Three SGCN are associated with this Macrogroup (Table 53).

Table 26. SGCN associated with Great Lakes; Shoals and Bays; Shoals and Bays.

Species	Common name	SGCN category	Habitat link
<i>Aythya affinis</i>	Lesser scaup	3	Great Lakes Aquatic Bed
<i>Aythya marila</i>	Greater scaup	3	Great Lakes Aquatic Bed
<i>Clangula hyemalis</i>	Long-tailed duck	3	Great Lakes Aquatic Bed

Lake; Pond; Eutrophic

Distribution

This Macrogroup is well distributed throughout New York (Figure 190).

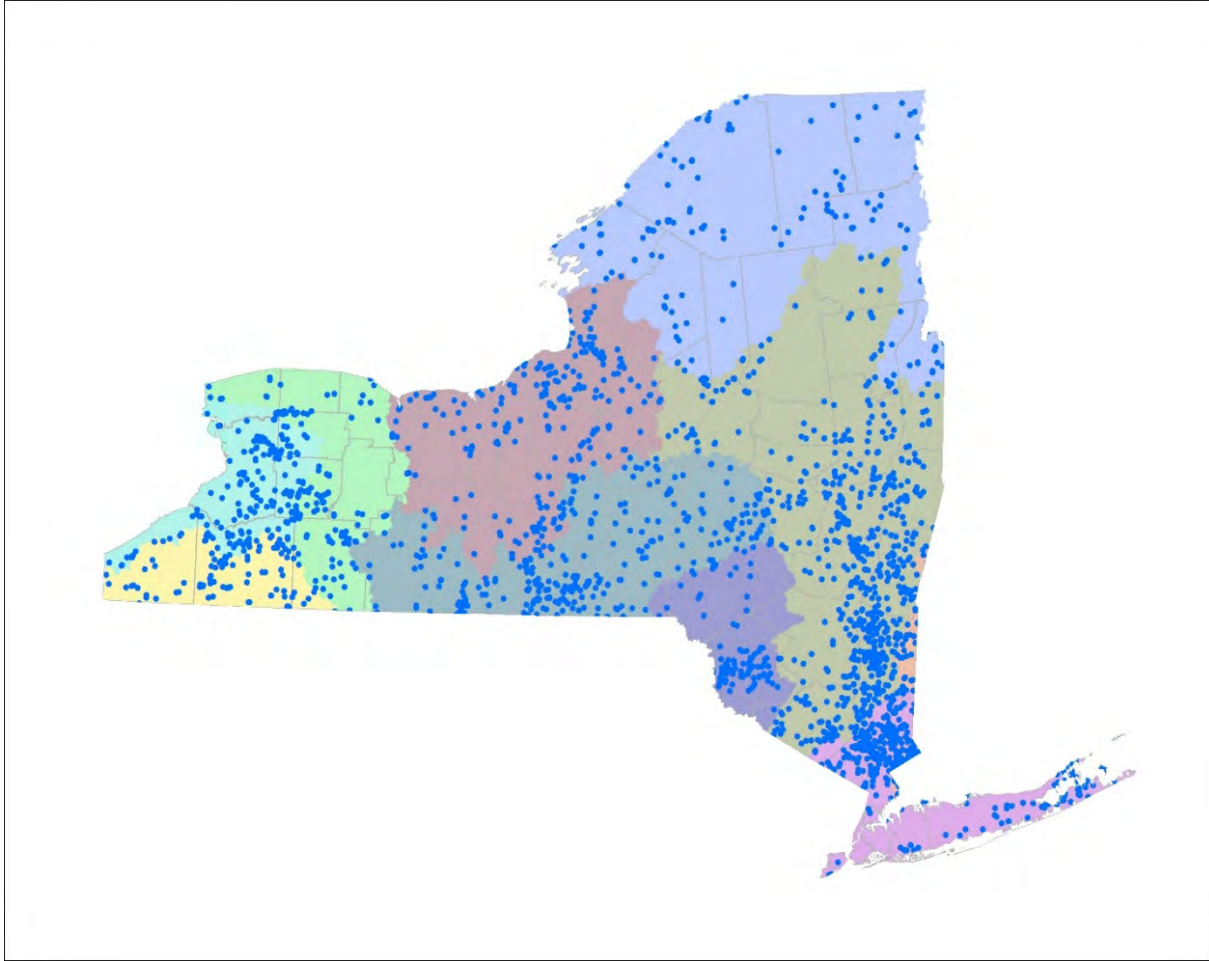


Figure 122. Distribution of the Macrogroup Lake; Pond; Eutrophic in New York. Ponds are represented by uniform points to ensure they are visible. Major watershed boundaries are shown beneath stream segments.

Condition

Eutrophic ponds in the most intact landscapes can be found in the Delaware-Mid-Atlantic Coastal and Northeast Lake Ontario-Lake Ontario-St. Lawrence watersheds, and the most developed landscapes in the Lower Hudson-Long Island watersheds (Figure 191).

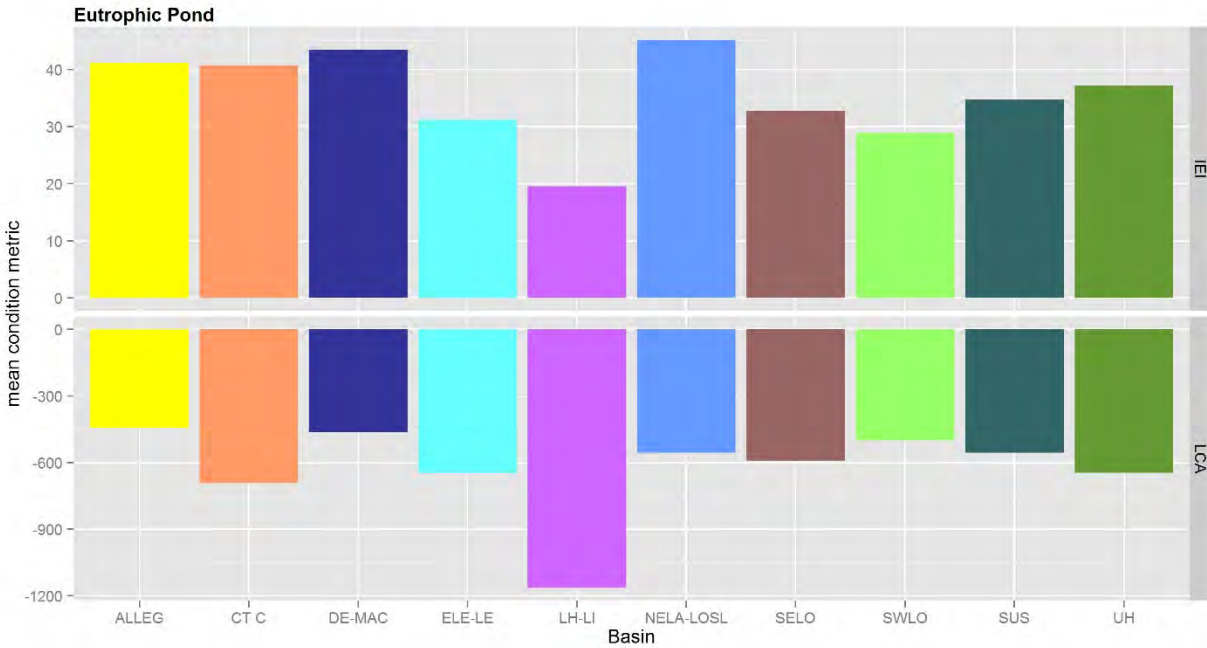


Figure 123. Index of Ecological Integrity score (top) and Landscape Condition Assessment score (bottom) for Eutrophic Pond in each major basin in New York.

Associated SGCN

Five SGCN are associated with this Macrogroup (Table 54).

Table 27. SGCN associated with Lake; Pond; Eutrophic.

Species	Common name	SGCN category	Habitat link
<i>Acris crepitans</i>	Eastern cricket frog	2	Lake; Pond; Eutrophic
<i>Anas discors</i>	Blue-winged teal	3	Lake; Pond; Eutrophic
<i>Enneacanthus obesus</i>	Banded sunfish	3	Lake; Pond; Eutrophic
<i>Lithobates sphenoccephalus utricularius</i>	Southern leopard frog	4	Lake; Pond; Eutrophic
<i>Sternotherus odoratus</i>	Eastern musk turtle (stinkpot)	2	Lake; Pond; Eutrophic

Lake; Pond; Mesotrophic

Distribution

This Macrogroup is well distributed in the Adirondacks, Catskills, and Lower Hudson, and sparsely distributed elsewhere (Figure 192).

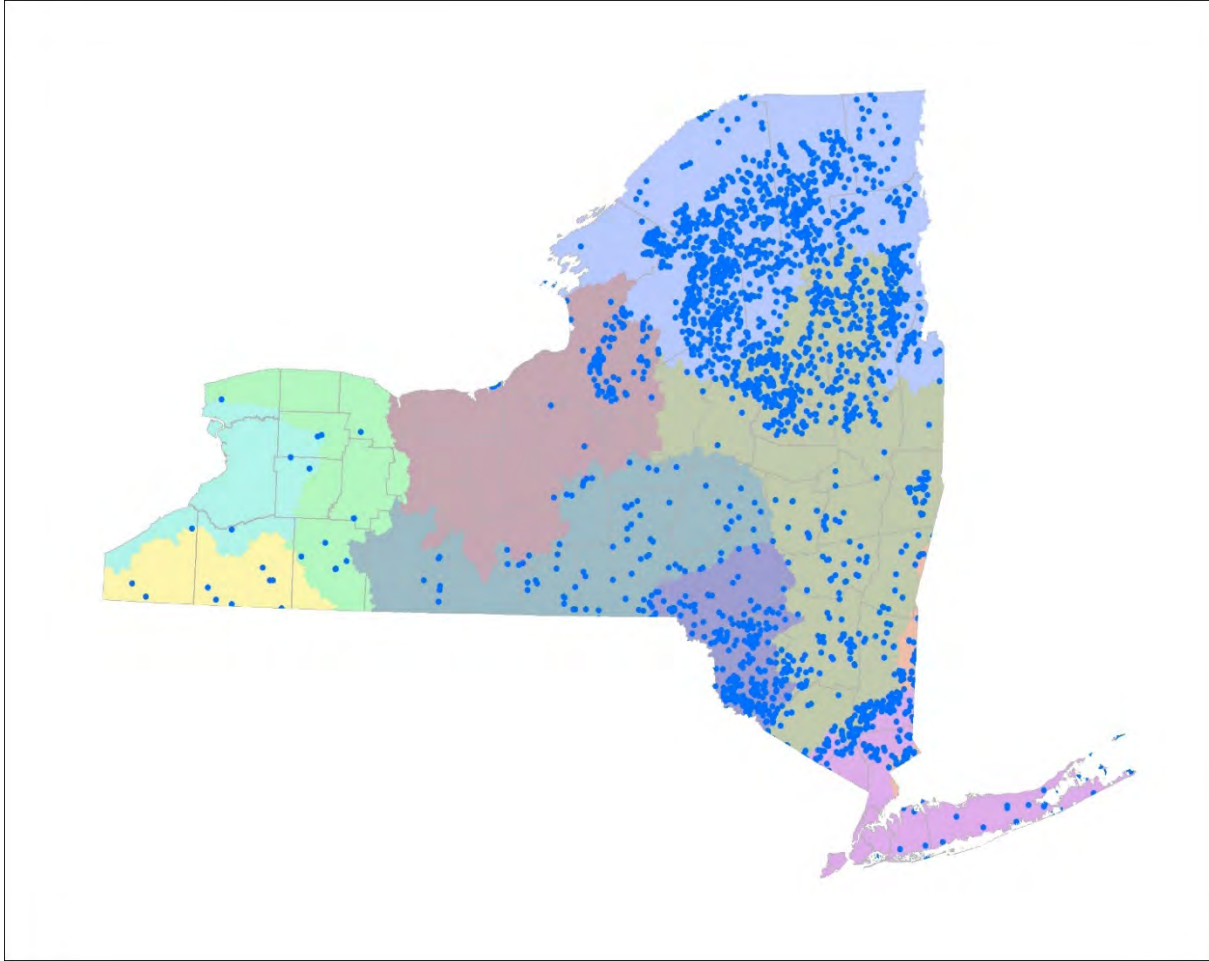


Figure 124. Distribution of the Macrogroup Lake; Pond; Mesotrophic in New York. Ponds are represented by uniform points to ensure they are visible. Major watershed boundaries are shown beneath stream segments.

Condition

The Delaware-Mid-Atlantic Coastal and Upper Hudson watersheds have Mesotrophic Ponds in the best landscapes, while the Lower Hudson-Long Island watershed had those in the most developed landscapes (Figure 194).

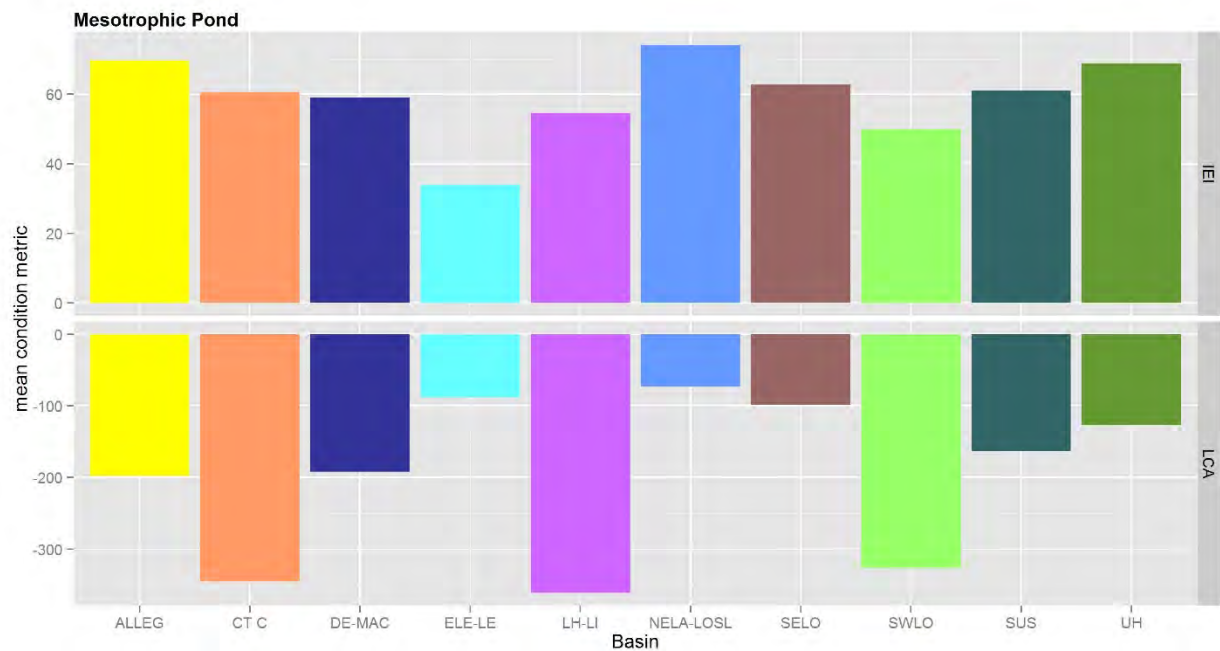


Figure 125. Index of Ecological Integrity score (top) and Landscape Condition Assessment score (bottom) for Mesotrophic Pond in each major basin in New York.

Associated SGCN

No SGCN are associated with this Macrogroup.

Lake; Pond; Oligotrophic

Distribution

This Macrogroup is distributed sparsely across the state (Figure 194).

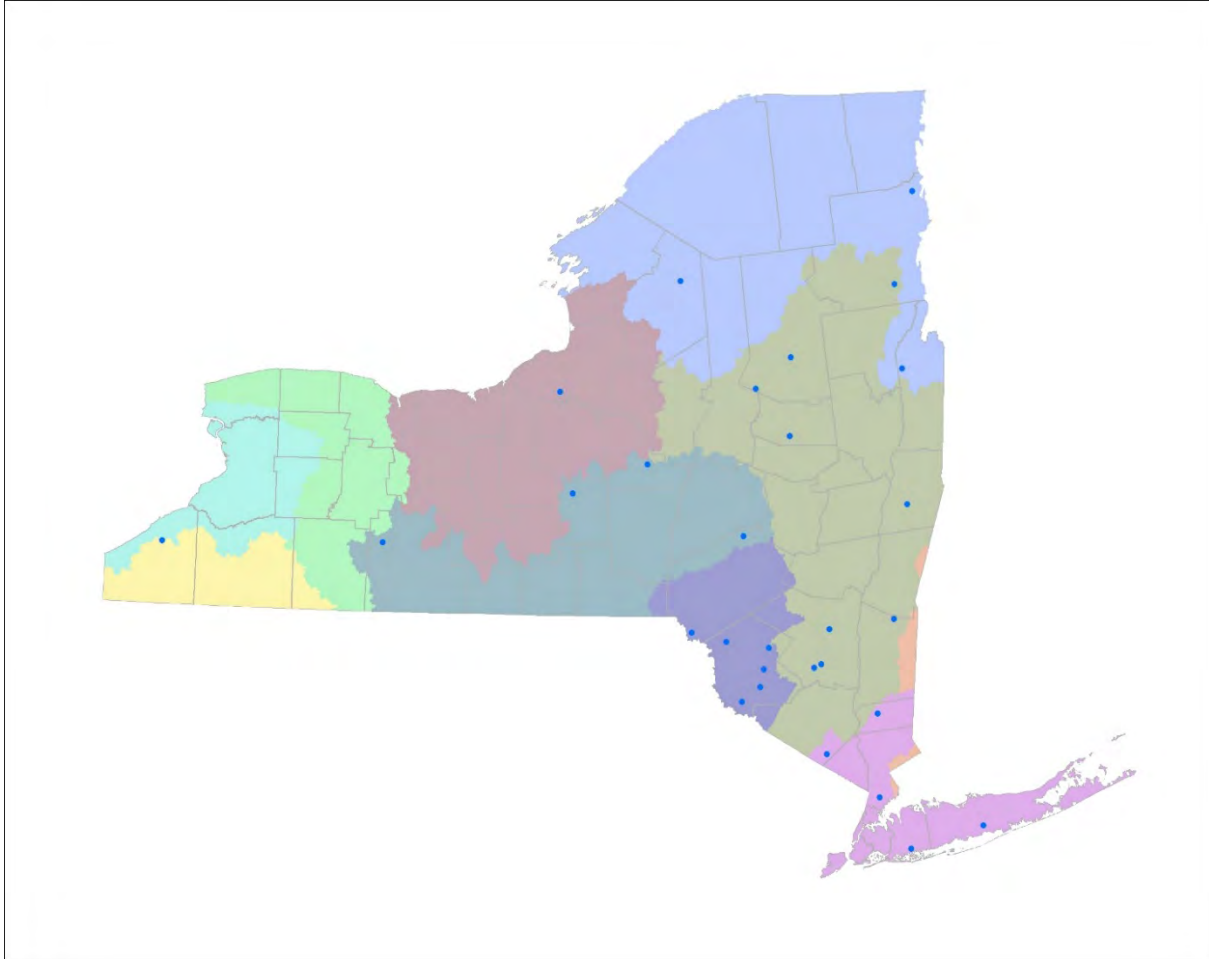


Figure 126. Distribution of the Macrogroup Lake; Pond; Oligotrophic in New York. Ponds are represented by uniform points to ensure they are visible. Major watershed boundaries are shown beneath stream segments.

Condition

The Northeast Lake Ontario-Lake Ontario-St. Lawrence, Southeast Lake Ontario, and Upper Hudson watersheds have Oligotrophic Lakes in the most intact landscapes, while the Lower Hudson-Long Island watershed had the examples in the most developed landscape (Figure 198).

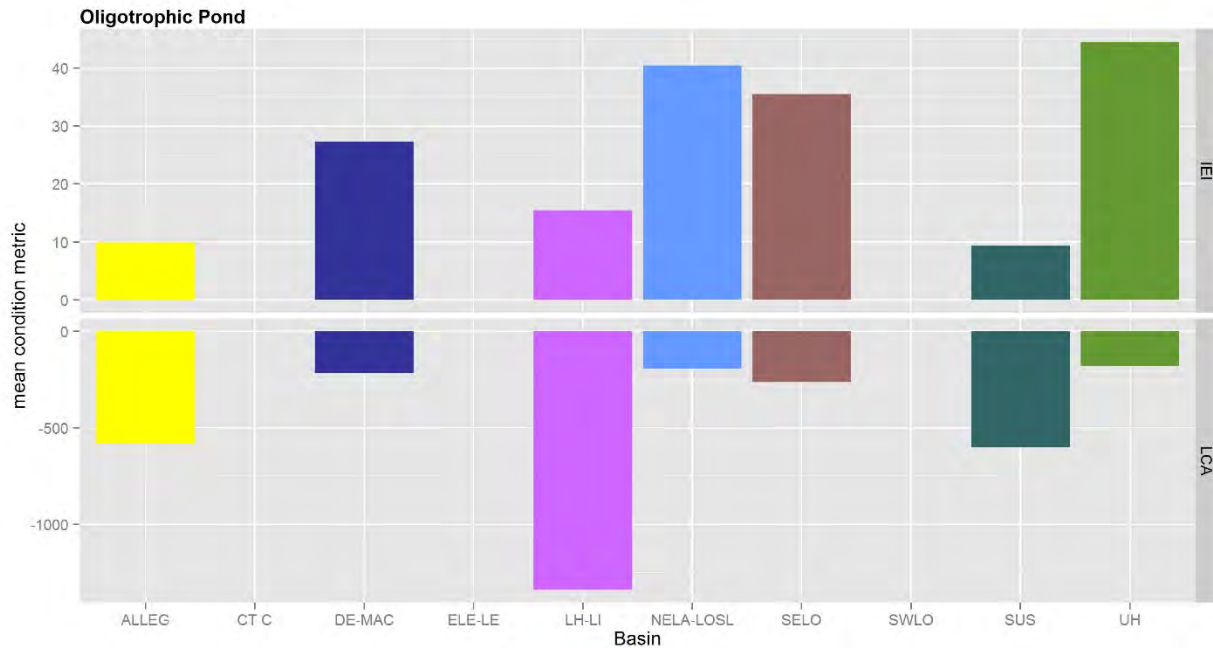


Figure 127. Index of Ecological Integrity score (top) and Landscape Condition Assessment score (bottom) for Mesotrophic Pond in each major basin in New York.

Associated SGCN

One SGCN is associated with this Macrogroup (Table 55).

Table 28. SGCN associated with Lake; Pond; Oligotrophic.

Species	Common name	SGCN category	Habitat link
<i>Bucephala clangula</i>	Common goldeneye	3	Lake; Pond; Oligotrophic

Lake; Small-Very Large Lake; Eutrophic

Distribution

Eutrophic Lakes are well distributed throughout New York, but more rare at high elevations (Figure 196).

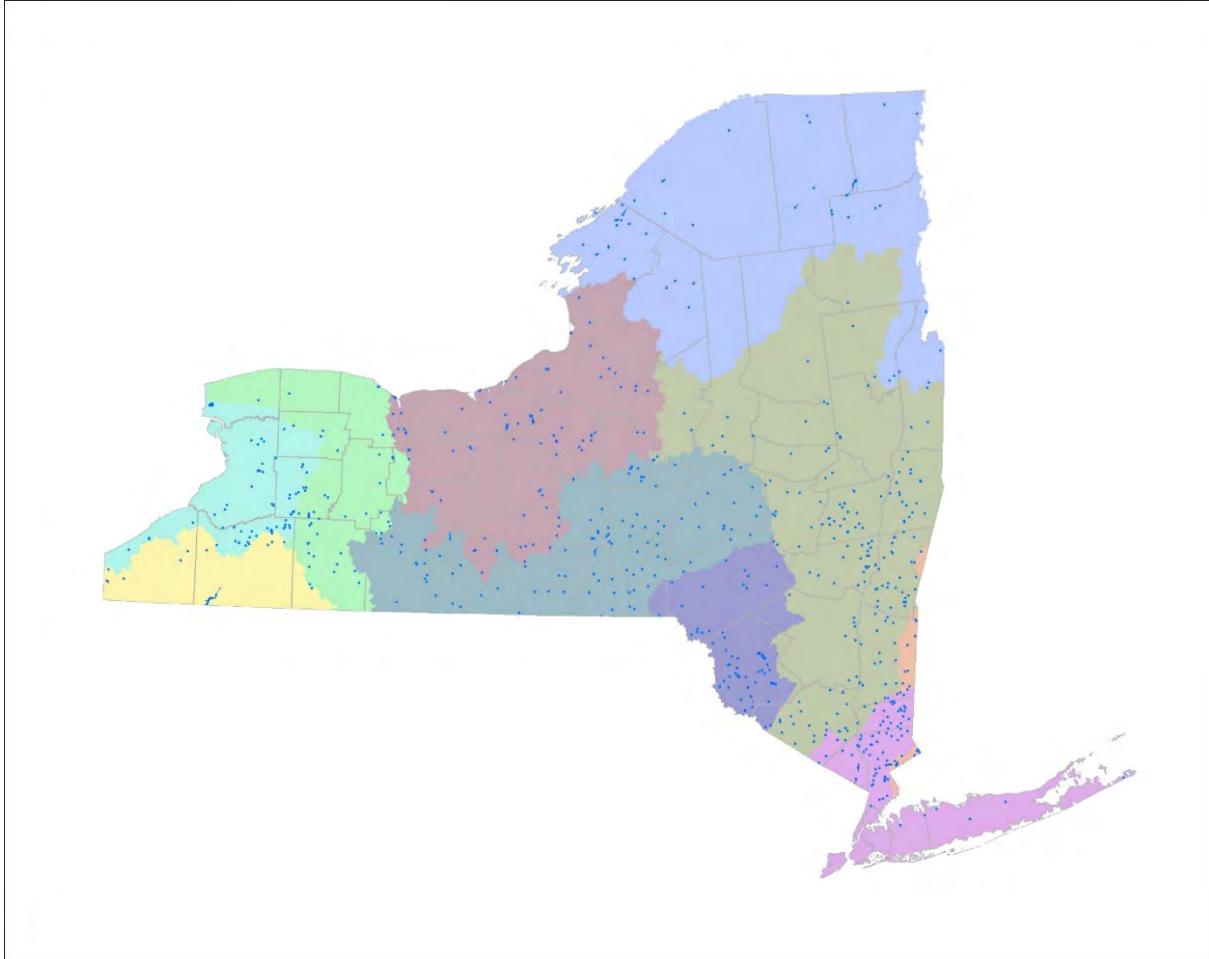


Figure 128. Distribution of Eutrophic Lake in New York. Lakes are represented by uniform points overlying polygons to ensure they are visible. Major watershed boundaries are shown beneath stream segments.

Condition

The Connecticut Coastal and Northeast Lake Ontario-Lake Ontario-St. Lawrence watersheds had Eutrophic Lakes in the best condition, while the Lower Hudson-Long Island watershed's examples were in the most developed landscapes (Figure 197).

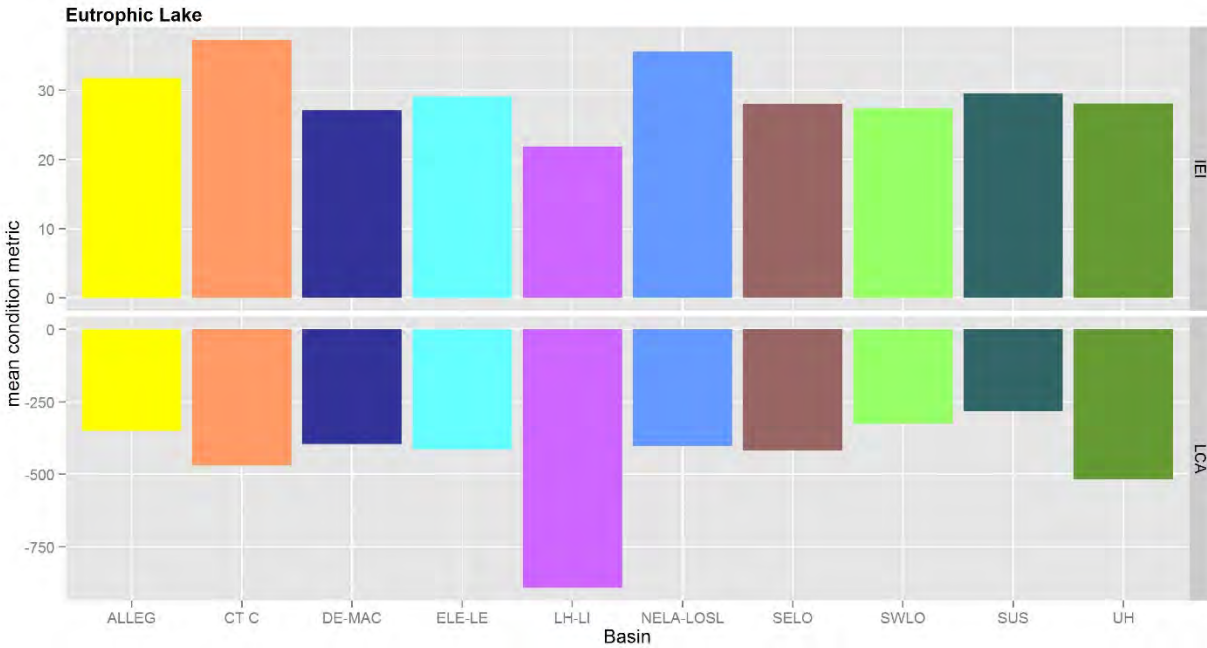


Figure 129. Index of Ecological Integrity score (top) and Landscape Condition Assessment score (bottom) for Eutrophic Lake in each major basin in New York.

Associated SGCN

One SGCN is associated specifically with Eutrophic Lake (Table 56).

Table 29. SGCN associated with Lake; Small Lake; Eutrophic.

Species	Common name	SGCN category	Habitat link
<i>Sternotherus odoratus</i>	Eastern musk turtle (stinkpot)	2	Lake; Small Lake; Eutrophic

Lake; Small-Very Large Lake; Mesotrophic

Distribution

Mesotrophic Lakes are found mainly in the Adirondacks, Catskills, and Lower Hudson; some of the Finger Lakes are also classified as mesotrophic (Figure 198).

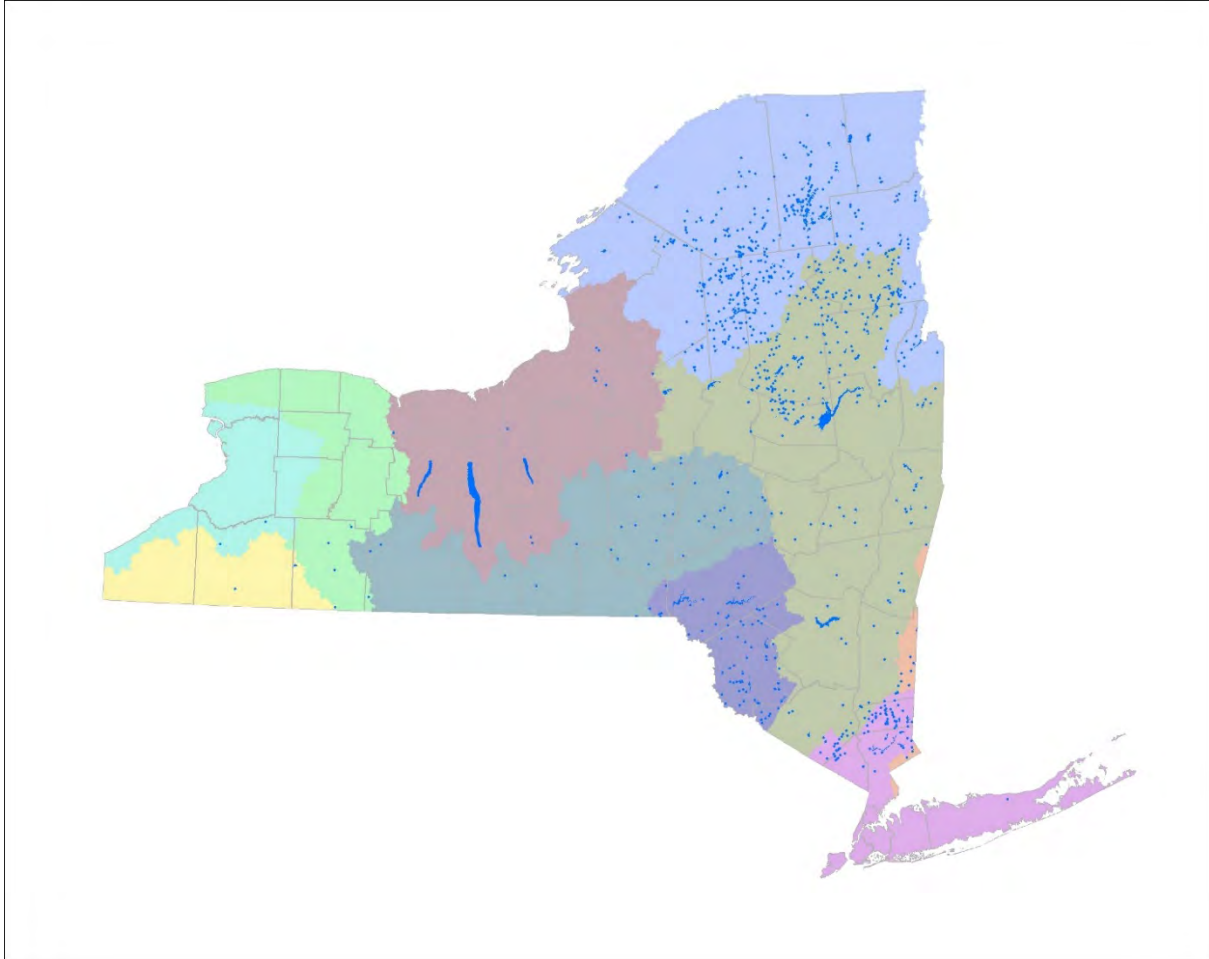


Figure 130. Distribution of Mesotrophic Lake in New York. Lakes are represented by uniform points overlying polygons to ensure they are visible. Major watershed boundaries are shown beneath stream segments.

Condition

The Northeast Lake Ontario-Lake Ontario-St. Lawrence and Upper Hudson watersheds have the Mesotrophic Lakes in the most intact landscapes, while the Lower Hudson-Long Island and Southwest Lake Ontario watersheds have those in the most developed landscapes (Figure 199).

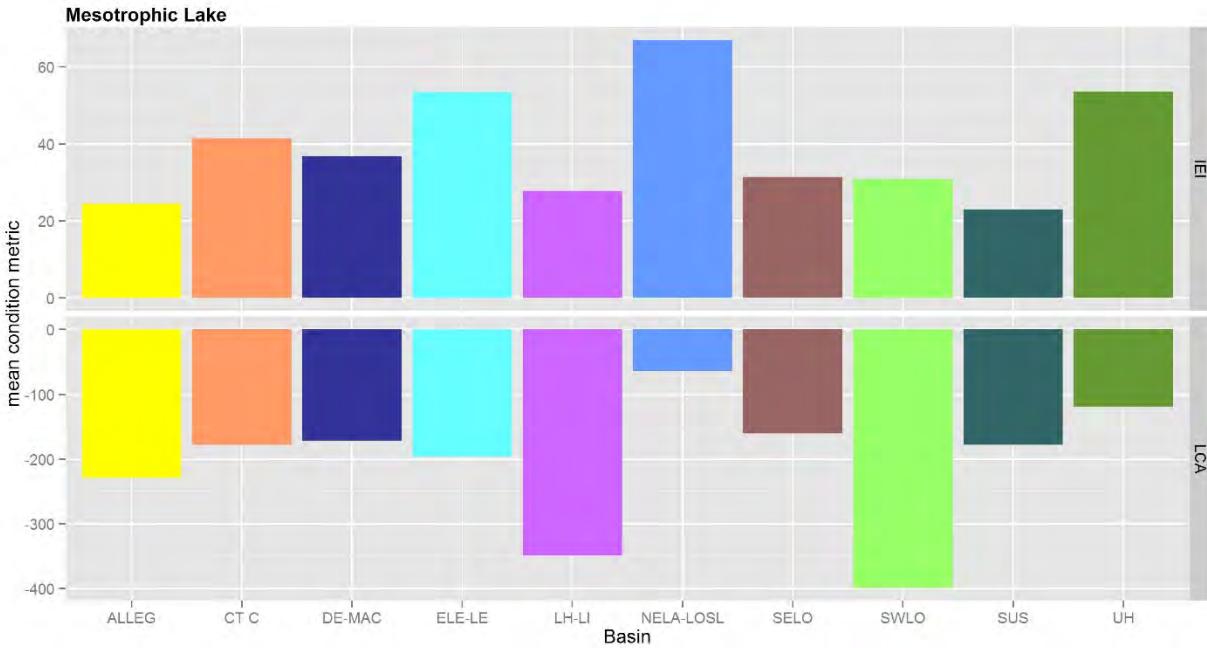


Figure 131. Index of Ecological Integrity score (top) and Landscape Condition Assessment score (bottom) for Mesotrophic Lake in each major basin in New York.

Associated SGCN

One SGCN is associated specifically with Mesotrophic Lake (Table 57).

Table 30. SGCN associated with Lake; Medium Lake; Mesotrophic.

Species	Common name	SGCN category	Habitat link
<i>Cincinnatia cincinnatiensis</i>	Campeloma spire snail	4	Lake; Medium Lake; Mesotrophic

Lake; Small-Very Large Lake; Oligotrophic

Distribution

Oligotrophic Lakes are found mainly in the Adirondacks and Finger Lakes regions of New York (Figure 200).

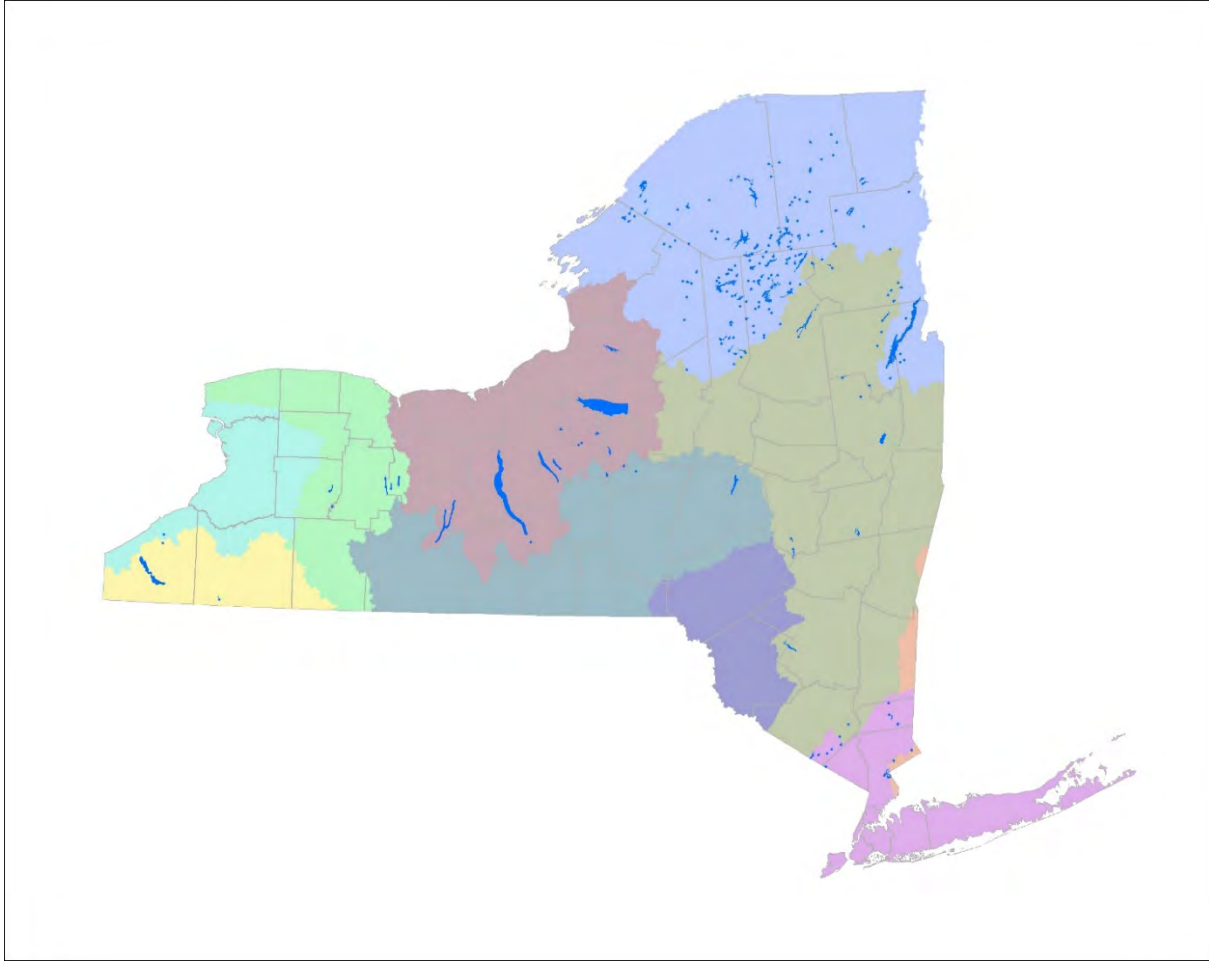


Figure 132. Distribution of Oligotrophic Lake in New York. Lakes are represented by uniform points overlying polygons to ensure they are visible. Major watershed boundaries are shown beneath stream segments.

Condition

The Northeast Lake Ontario-Lake Ontario-St. Lawrence and Upper Hudson watersheds have Oligotrophic Lakes in the most intact landscapes, while the Allegheny and Connecticut Coastal watersheds have the examples in the most developed landscapes (Figure 201).

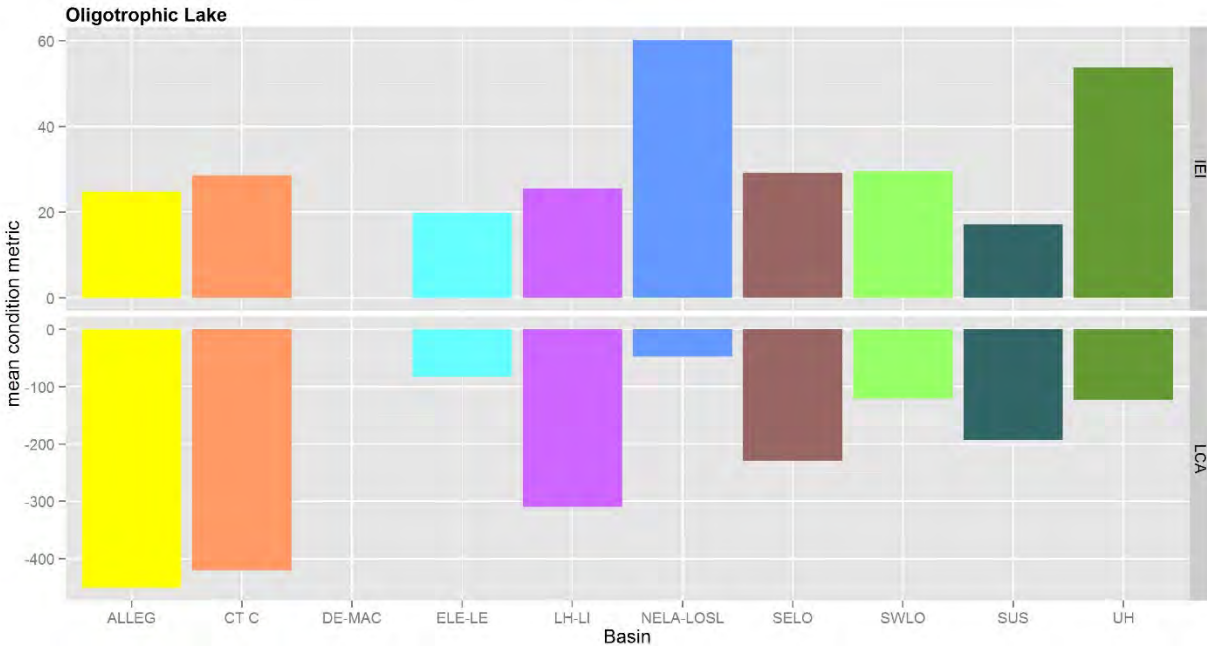


Figure 133. Index of Ecological Integrity score (top) and Landscape Condition Assessment score (bottom) for Mesotrophic Lake in each major basin in New York.

Associated SGCN

Two SGCN are associated specifically with Oligotrophic Lake (Table 58).

Table 31. SGCN associated with Lake; Medium Lake; Oligotrophic.

Species	Common name	SGCN category	Habitat link
<i>Gavia immer</i>	Common Loon	3	Lake; Medium Lake; Oligotrophic
<i>Lyogyrus walkeri</i>	Canadian dusksnail	4	Lake; Medium Lake; Oligotrophic

Lake; Reservoir

Distribution

No statewide map of Reservoirs is available.

Associated SGCN

Three SGCN are associated specifically with Reservoirs (Table 59)

Table 32. SGCN associated with Reservoirs.

Species	Common name	SGCN category	Habitat link
<i>Acris crepitans</i>	Eastern cricket frog	2	Lake; Reservoir
<i>Apalone spinifera spinifera</i>	Eastern spiny softshell	2	Lake; Reservoir

<i>Chelydra serpentina</i>	Snapping turtle	3	Lake; Reservoir
----------------------------	-----------------	---	-----------------

Lake; Other

Fifty-six SGCN are associated with Lakes but at higher levels in the habitat classification (Table 60).

Table 33. SGCN associated with Lakes at the Formation or Formation Class level.

Species	Common name	SGCN category	Habitat link
<i>Acella haldemani</i>	Spindle lymneae	4	Lake
<i>Alosa aestivalis</i>	Blueback herring	3	Lake
<i>Alosa pseudoharengus</i>	Alewife	3	Lake
<i>Anax longipes</i>	Comet darner	3	Lake
<i>Apalone spinifera</i>			
<i>spinifera</i>	Eastern spiny softshell	2	Lake
<i>Ardea alba</i>	Great egret	3	Lake
<i>Aythya affinis</i>	Lesser scaup	3	Lake
<i>Aythya marila</i>	Greater scaup	3	Lake
<i>Brachymesia gravida</i>	Four-spotted pennant	2	Lake
<i>Bucephala clangula</i>	Common goldeneye	3	Lake
<i>Chelydra serpentina</i>	Snapping turtle	3	Lake
<i>Enallagma laterale</i>	New England bluet	2	Lake
<i>Epitheca semiaquea</i>	Mantled baskettail	3	Lake
<i>Graptemys geographica</i>	Northern map turtle	3	Lake
<i>Hydroprogne caspia</i>	Caspian Tern	3	Lake
	Sylvan hygrotus		
<i>Hygrotus sylvanus</i>	diving beetle	4	Lake
<i>Lithobates</i>			
<i>septentrionalis</i>	Mink frog	4	Lake
<i>Melanitta americana</i>	Black scoter	3	Lake
<i>Necturus maculosus</i>	Common Mudpuppy	3	Lake
<i>Nehalennia integricollis</i>	Southern sprite	4	Lake
<i>Nixe rusticalis</i>	None	4	Lake
<i>Plegadis falcinellus</i>	Glossy ibis	3	Lake
<i>Podiceps auritus</i>	Horned Grebe	3	Lake
<i>Polyodon spathula</i>	Paddlefish	2	Lake
<i>Procloeon mendax</i>	None	4	Lake
<i>Procloeon ozburni</i>	None	4	Lake
<i>Procloeon simile</i>	None	4	Lake
<i>Procloeon vicinum</i>	A mayfly	4	Lake
<i>Pungitius pungitius</i>	Ninespine stickleback	3	Lake
<i>Siphonurus barbaroides</i>	None	3	Lake
<i>Siphonurus barbarus</i>	None	3	Lake

Species	Common name	SGCN category	Habitat link
Valvata perdepressa	Purplecap valvata	4	Lake
Valvata sincera	Mossy valvata (boreal turret snail)	4	Lake
Birgella subglobosus	Globe siltsnail	4	Lake; Large Lake
Clangula hyemalis	Long-tailed duck	3	Lake; Large Lake
Coregonus hoyi	Bloater (bloater chub)	1	Lake; Large Lake
Gasterosteus aculeatus	Threespine stickleback	2	Lake; Large Lake
Gillia altilis	Buffalo pebblesnail	4	Lake; Large Lake
Stylurus spiniceps	Arrow clubtail	3	Lake; Large Lake
Valvata lewisi	Fringed valvata	4	Lake; Large Lake
Etheostoma exile	Iowa darter	3	Lake; Medium Lake
Etheostoma fusiforme	Swamp darter	3	Lake; Medium Lake
Notropis bifrenatus	Bridle shiner	3	Lake; Medium Lake
Notropis heterodon	Blackchin shiner	3	Lake; Medium Lake
Prosopium cylindraceum	Round whitefish	3	Lake; Medium Lake
Somatochlora cingulata	Lake emerald	2	Lake; Medium Lake
Birgella subglobosus	Globe siltsnail	4	Lake; Pond
Lyogyrus walkeri	Canadian duskysnail	4	Lake; Pond
Salvelinus fontinalis	Brook trout (wild)	3	Lake; Pond
Catostomus sp.	Sucker variant (late spawning sucker of eastern Adirondacks)	2	Lake; Small Lake
Catostomus utawana	Summer sucker	2	Lake; Small Lake
Somatochlora cingulata	Lake emerald	2	Lake; Small Lake
Clangula hyemalis	Long-tailed duck	3	Lake; Very Large Lake
Couesius plumbeus	Lake chub	3	Lake; Very Large Lake
Larus thayeri	Thayer's gull	4	Lake; Very Large Lake
Melanitta fusca	White-winged scoter	3	Lake; Very Large Lake
Melanitta perspicillata	Surf scoter	3	Lake; Very Large Lake
Myoxocephalus thompsonii	Deepwater sculpin	3	Lake; Very Large Lake