

Tree BMPs for WIPs

Sample of Data Available

RFB

Opportunity by County--- Highest Total Ag Acreage

A	B	C	D	E	F
State	County Name	Crop	Mixed Open	Pasture	Total Ag Opportunity
PA	Lancaster	11,985	5,059	12,248	29,292
PA	Franklin	9,766	2,101	10,801	22,668
VA	Augusta	3,160	1,641	17,651	22,452
PA	Bradford	4,845	2,303	15,203	22,350
PA	Bedford	5,895	2,347	11,621	19,863
VA	Rockingham	5,013	1,520	12,319	18,852
NY	Steuben	5,561	2,068	11,150	18,778
NY	Otsego	4,122	1,135	13,138	18,395
NY	Chenango	4,759	1,057	11,880	17,695
PA	Tioga	1,306	10,248	5,327	16,881
PA	Centre	6,062	2,438	7,187	15,687
DE	Sussex	11,885	1,384	1,065	14,334
MD	Frederick	4,092	1,581	8,336	14,009
PA	York	6,043	2,232	5,576	13,852
PA	Susquehanna	2,349	1,514	9,381	13,245
PA	Cumberland	6,300	1,926	4,992	13,218
PA	Huntingdon	4,047	1,421	7,250	12,718
MD	Washington	4,525	1,815	5,744	12,084

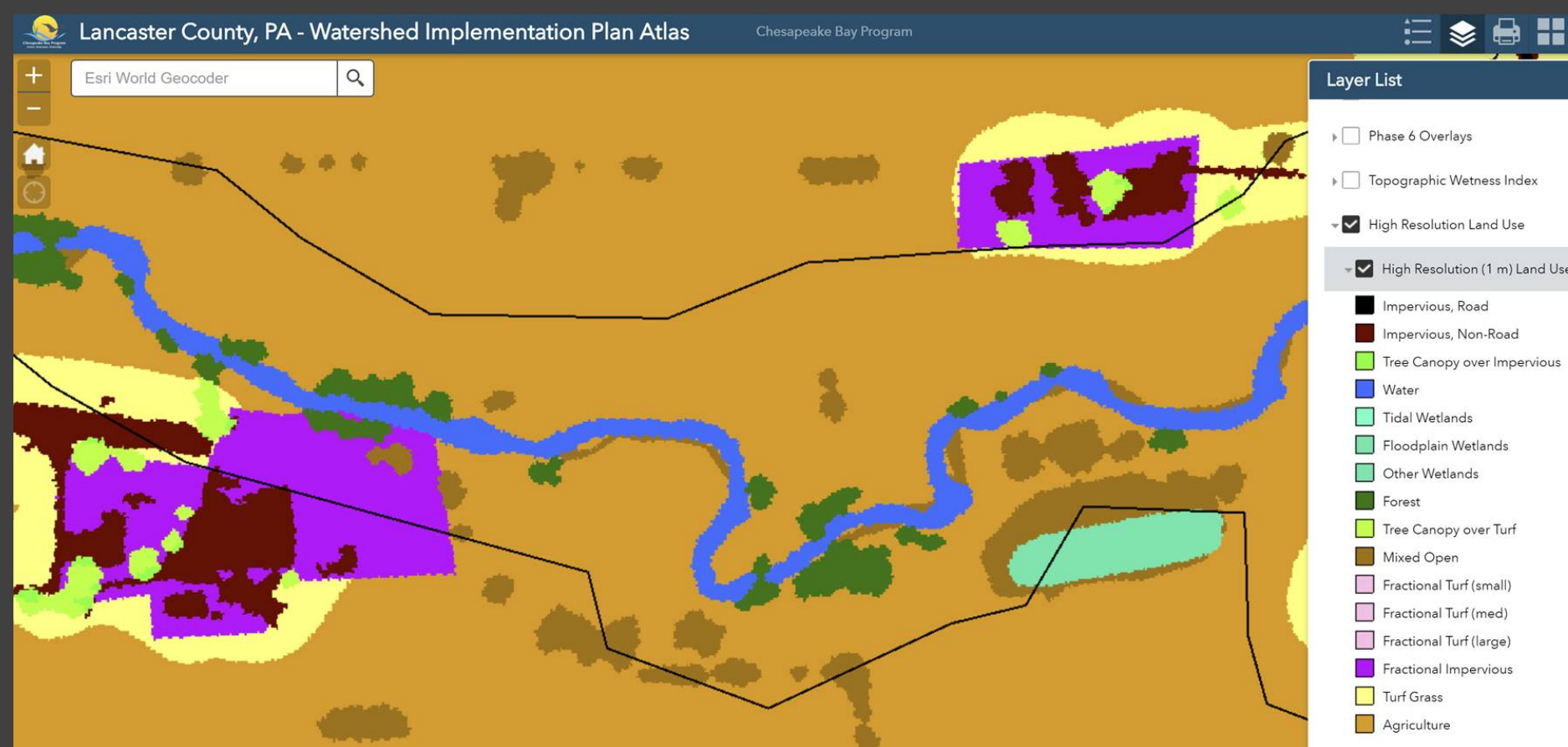
RFB Opportunity by County--- Highest Pasture Acreage

	A	B	C	D	E	F	G	H	I
1	ST	County Name	CBW	Total Area	Mixed Op	Turf Grass	Crop	Pasture	
2	VA	AUGUSTA	Y	11456	517	1769	1010	8159	
3	NY	DELAWARE	N	12509	1049	3110	2051	6298	
4	VA	ROCKINGHAM	Y	9928	520	1861	1382	6165	
5	NY	ALLEGANY	N	10234	738	983	2555	5959	
6	NY	ONEIDA	N	13156	1298	2770	3303	5786	
7	NY	HERKIMER	N	13788	2989	2255	3223	5321	
8	NY	STEUBEN	Y	11343	904	2339	3079	5021	
9	NY	SCHOHARIE	N	7716	344	646	1942	4784	
10	PA	BRADFORD	Y	6788	648	602	1018	4520	
11	PA	WAYNE	N	7525	554	1108	1570	4293	
12	PA	CUMBERLAND	Y	10908	908	2196	3747	4057	
13	PA	ADAMS	Y	9497	586	1945	2954	4012	
14	NY	CHENANGO	Y	6768	385	614	1774	3995	
15	VA	SHENANDOAH	Y	6425	343	1223	1110	3748	
16	PA	BRADFORD	Y	5974	512	687	1075	3701	
17	VA	CLARKE	Y	5154	283	673	498	3699	
18	VA	ROCKBRIDGE	Y	4736	238	736	132	3629	
19	PA	FRANKLIN	Y	9494	656	1813	3513	3512	
20	PA	FRANKLIN	Y	7705	353	1155	2719	3477	
21	PA	SUSQUEHANNA	Y	5549	596	805	857	3291	
22	PA	SOMERSET	N	6832	1087	1300	1284	3161	
23	VA	PAGE	Y	4518	198	816	379	3125	
24	PA	BEDFORD	Y	6583	571	1308	1589	3115	
25	PA	INDIANA	N	6995	746	1131	2004	3114	
26	NY	LIVINGSTON	N	6699	445	869	2314	3071	

Urban Tree/Forest Planting Opportunity by County--- Highest to Lowest

A	B	C	D	E	F	G	H	I	J	
ST	County Name	CBV	FED	REG	Total Area	Mixed Op	Turf Grass	Impervious	Impervious Net	
NY	HERKIMER	N	NonFED	NonREG	5964.87	2988.89	2254.94	349.60	371.43	
NY	DELAWARE	N	NonFED	NonREG	5686.14	1049.47	3110.03	906.42	620.21	
NY	ONEIDA	N	NonFED	NonREG	5383.18	1297.55	2770.12	639.79	675.72	
NY	ONTARIO	N	NonFED	NonREG	5249.51	1920.12	2463.13	313.70	552.56	
NY	STEUBEN	Y	NonFED	NonREG	4373.28	904.15	2338.77	682.51	447.85	
NY	TOMPKINS	N	NonFED	NonREG	4232.86	1700.20	2080.12	208.23	244.32	
NY	ONONDAGA	N	NonFED	NonREG	4148.48	649.99	2266.30	428.44	803.75	
MD	WASHINGTON	Y	NonFED	MS4	4043.45	749.91	2395.05	214.58	683.91	
PA	CUMBERLAND	Y	NonFED	NonREG	3926.23	907.85	2196.07	399.82	422.49	
PA	ADAMS	Y	NonFED	NonREG	3243.73	586.28	1944.68	302.46	410.31	
VA	ROCKINGHAM	Y	NonFED	NonREG	3243.12	519.62	1861.36	413.93	448.22	
PA	FRANKLIN	Y	NonFED	NonREG	3161.52	655.54	1812.72	291.79	401.48	
PA	JEFFERSON	N	NonFED	NonREG	3156.21	1133.82	1551.66	146.26	324.47	
PA	SOMERSET	N	NonFED	NonREG	3145.96	1087.45	1300.25	272.86	485.40	
PA	BLAIR	Y	NonFED	NonREG	3124.78	556.86	1805.23	337.14	425.56	
PA	CHESTER	N	NonFED	MS4	2947.62	565.18	1736.70	124.59	521.15	
VA	AUGUSTA	Y	NonFED	NonREG	2935.92	516.88	1769.49	409.28	240.28	
PA	TIOGA	Y	NonFED	NonREG	2923.73	1783.23	909.70	129.63	101.16	
PA	TIOGA	Y	NonFED	NonREG	2758.55	1645.24	856.19	151.54	105.58	
PA	BEDFORD	Y	NonFED	NonREG	2716.33	576.01	1604.47	281.24	254.61	
VA	CHESAPEAKE	Y	NonFED	MS4	2701.86	509.66	1130.11	304.85	757.25	
VA	VIRGINIA BEACH	Y	NonFED	MS4	2597.35	550.50	841.20	335.70	869.95	
WV	HARDY	Y	NonFED	NonREG	2583.11	591.99	1580.41	165.79	244.92	

Where can Buffers be Planted (Targeted)?



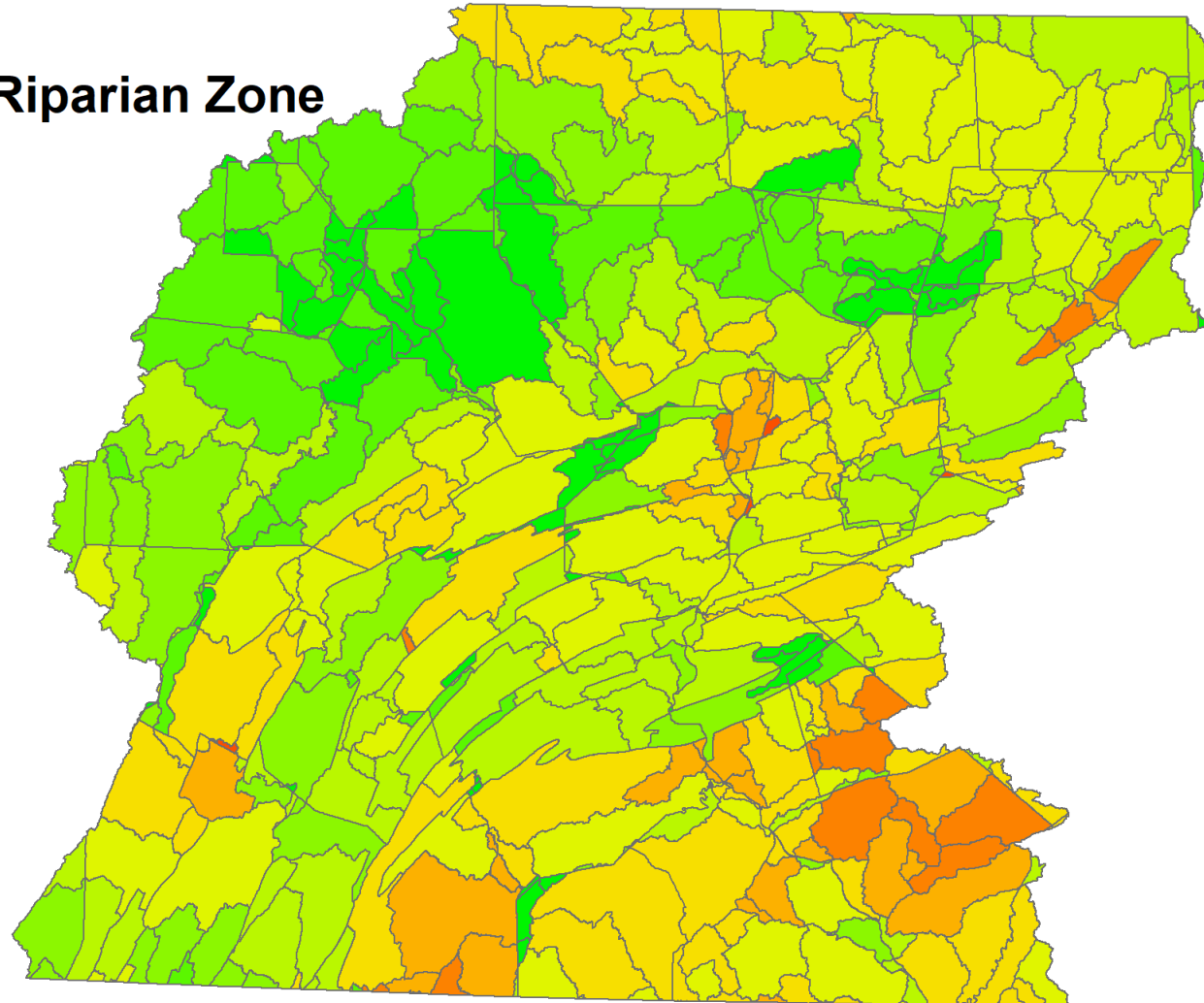
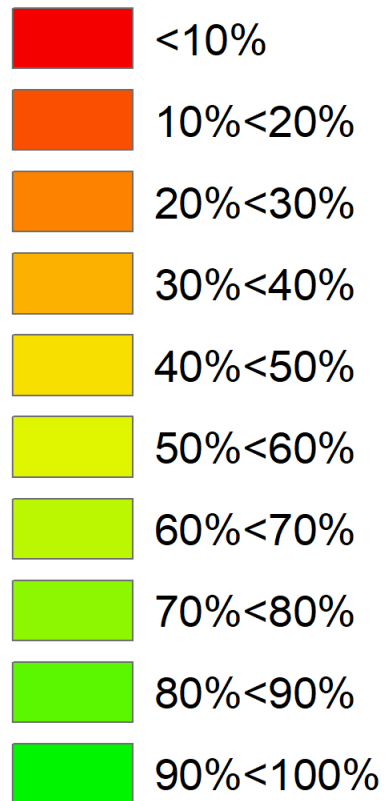
- CBPO is developing a data tool that will allow users to visualize data from the Phase 6 Model, including potential areas for riparian forest buffers.
- Other organizations could use the data as well to develop even more specific targeting tools.

Work by: John Wolf, Emily Trentecoste, Matt Johnston and others at CBPO

Percent of Riparian Zone Covered by Trees

Legend

Percent Trees in Riparian Zone



- Traditionally, the CBP's Forestry Workgroup has recommended a goal of 70 percent tree canopy.
- Due to existing land uses, 70 percent coverage within the riparian zone may not be possible.
- PA could target a 60 percent tree canopy goal within riparian zones.

Analysis Done by Matt Johnston at CBPO for
Pennsylvania

A similar analysis could be done for other
states...

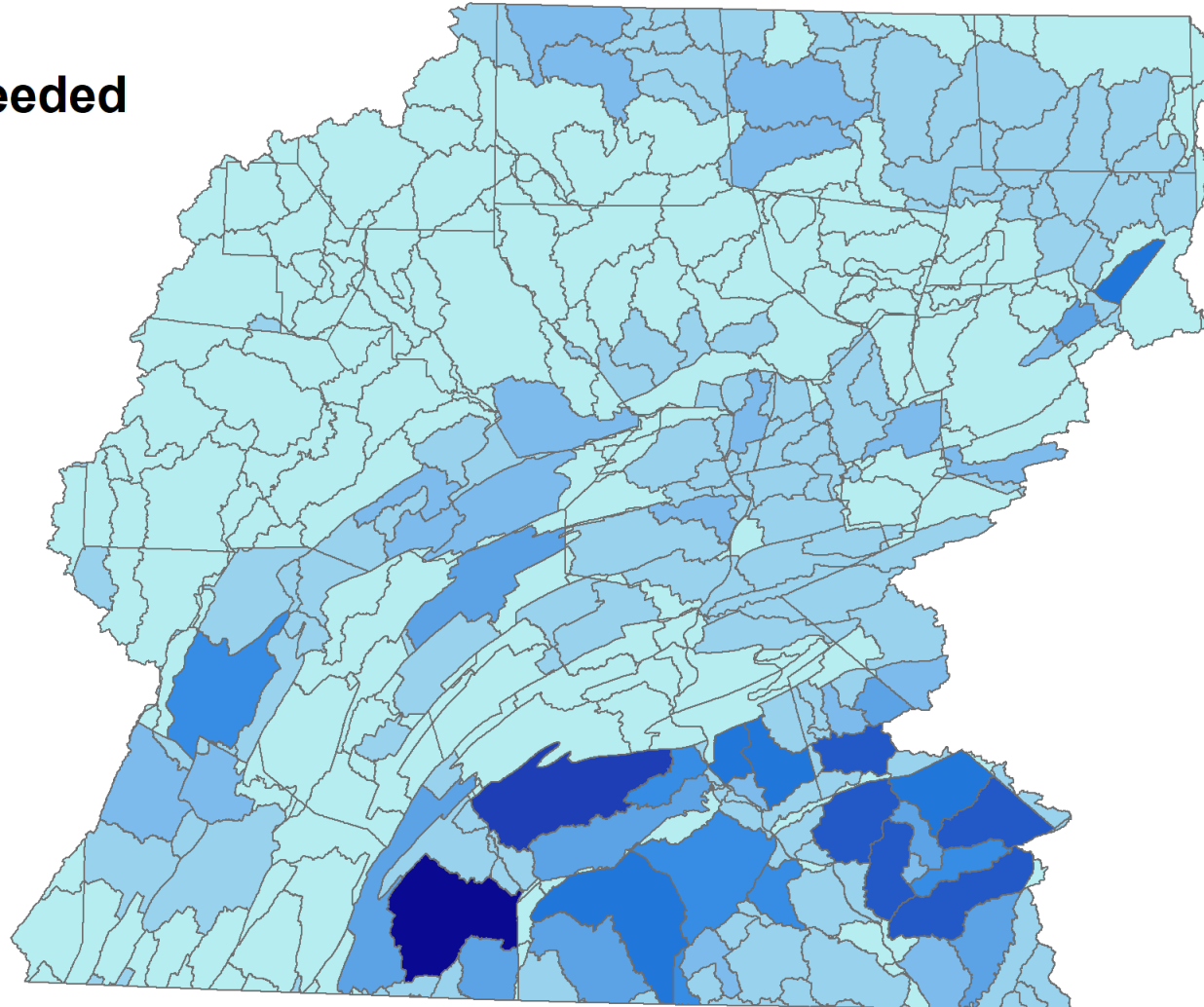
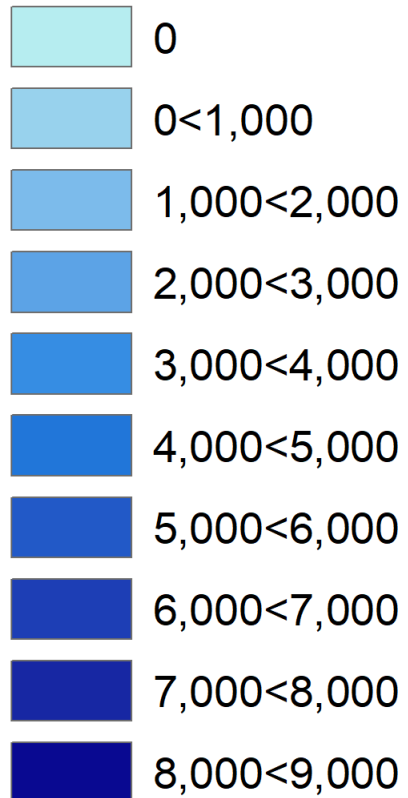
Rules for Setting Tree Planting Goals

- Every land-river segment should achieve 60 percent tree/wetland coverage within its riparian zones, defined as 30 meters from surface water.
- Any land-river segment already achieving 60 percent tree/wetland coverage is exempt from additional riparian plantings in this exercise.
- Maximum Implementation Rules by Land Use:
 - Only 50% of bufferable crop, hay and pasture is eligible for buffers within each land-river segment.
 - Only 25% of bufferable turfgrass is eligible for trees within each land-river segment.
 - Only 5% of bufferable turfgrass is eligible for buffers within each land-river segment.
 - Only 20% of bufferable turfgrass is eligible for tree canopy within each land-river segment.
 - Only 10% of bufferable impervious is eligible for trees within each land-river segment.
 - Only 0% of bufferable impervious is eligible for buffers within each land-river segment.
 - Only 10% of bufferable impervious is eligible for tree canopy within each land-river segment.
- Employing these rules achieved the following implementation levels:
 - 36,608 acres of buffers on cropland
 - 47,795 acres of buffers on pasture/hay
 - 3,529 acres of buffers on turfgrass
 - 14,116 acres of tree canopy on turfgrass
 - 30,834 acres of tree canopy on impervious

Acres of Trees Needed to Accomplish 60% Tree Coverage

Legend

Acres of Trees Needed

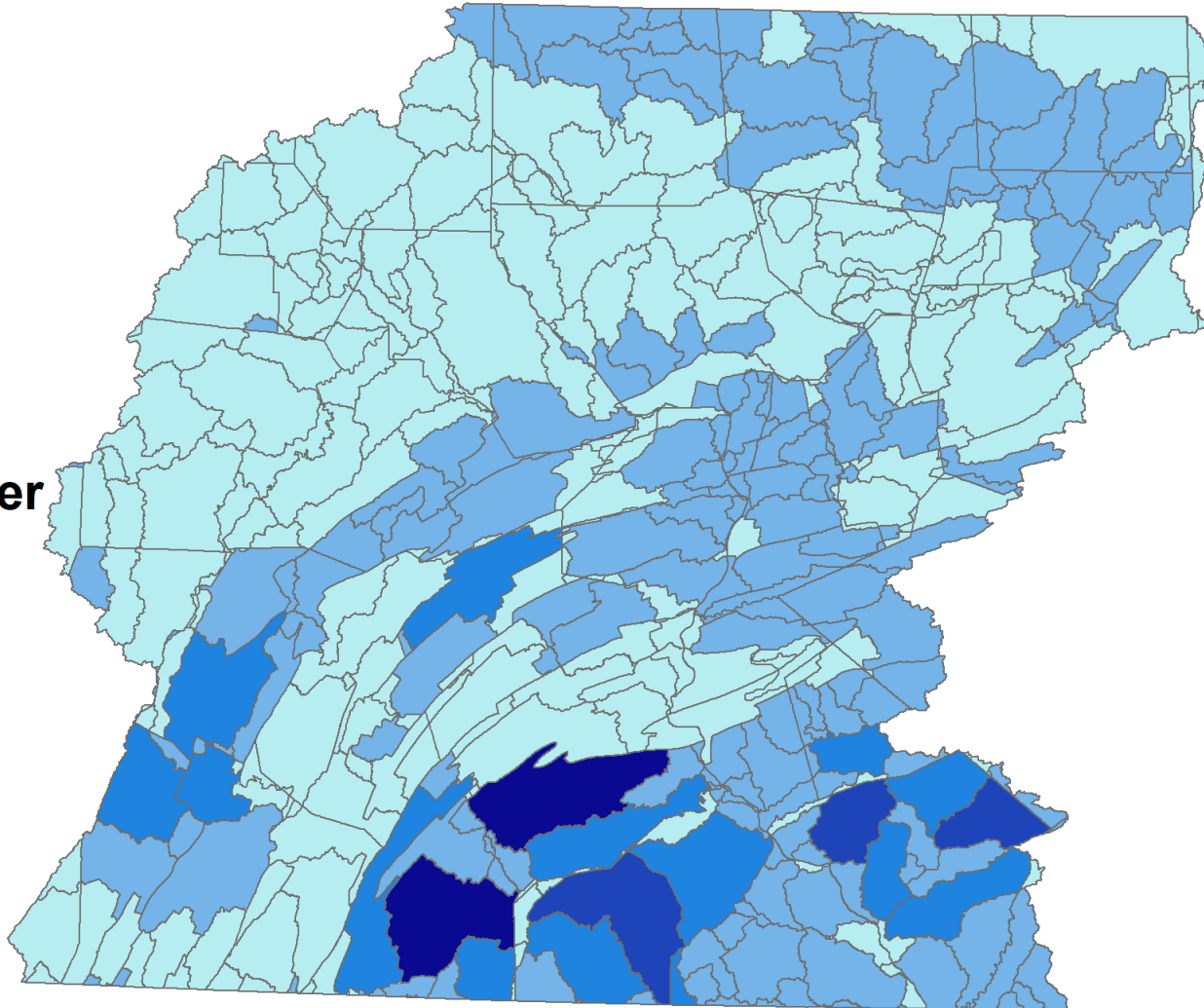
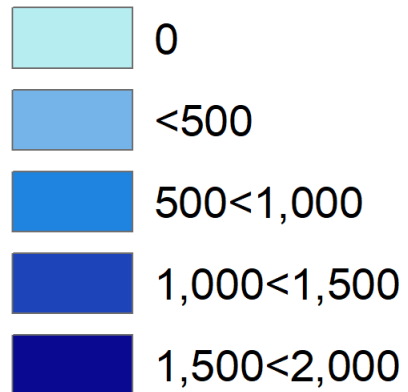


- This represents tree and buffer plantings across all land use categories.
- The majority of plantings needed are in south-central PA.

Acres of Crop Buffers Needed

Legend

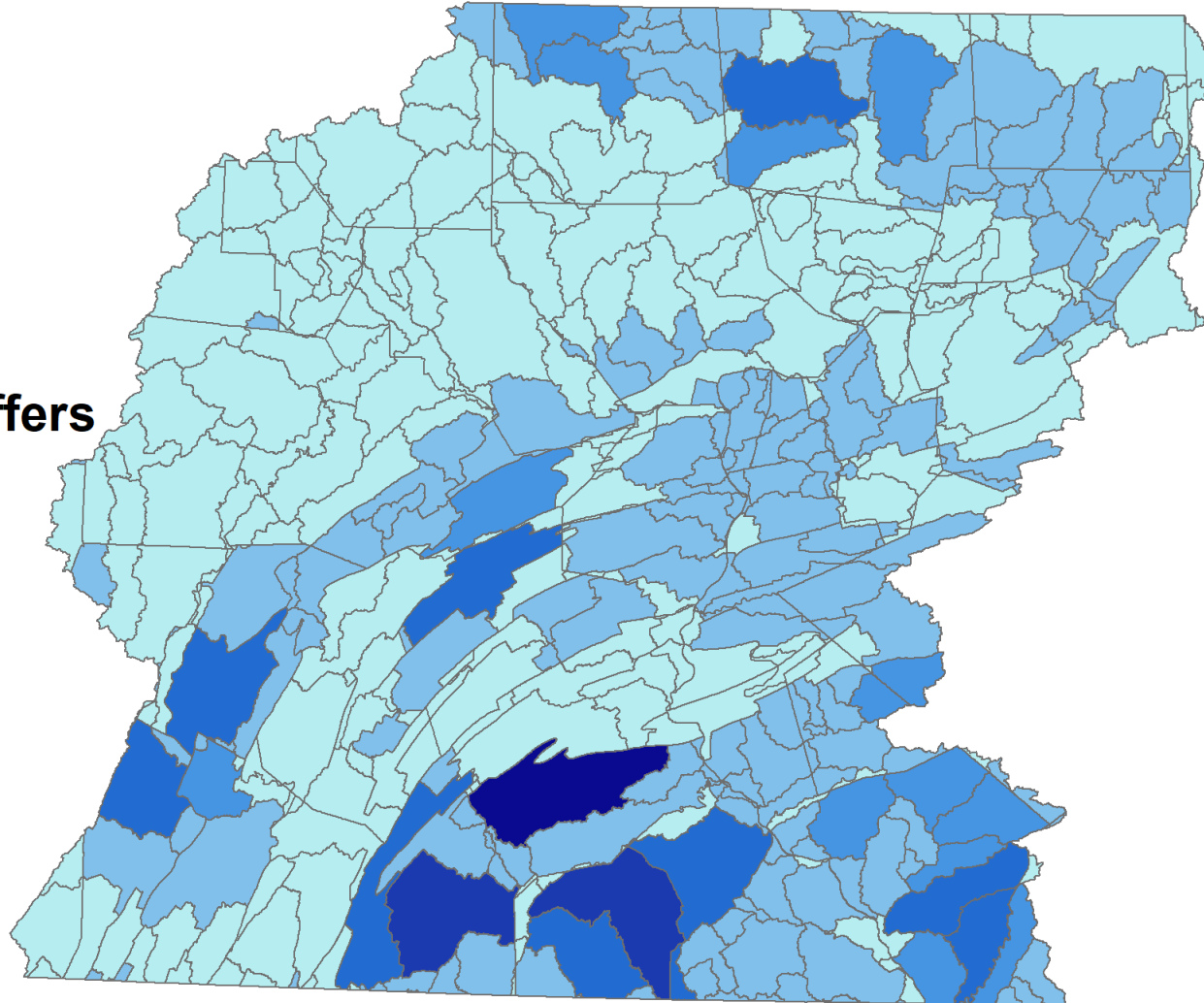
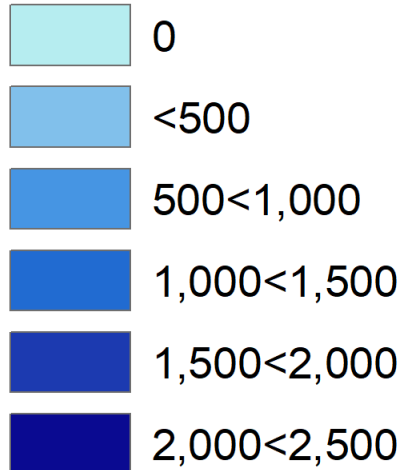
Acres of Crop Buffer



Acres of Pasture/Hay Buffers Needed

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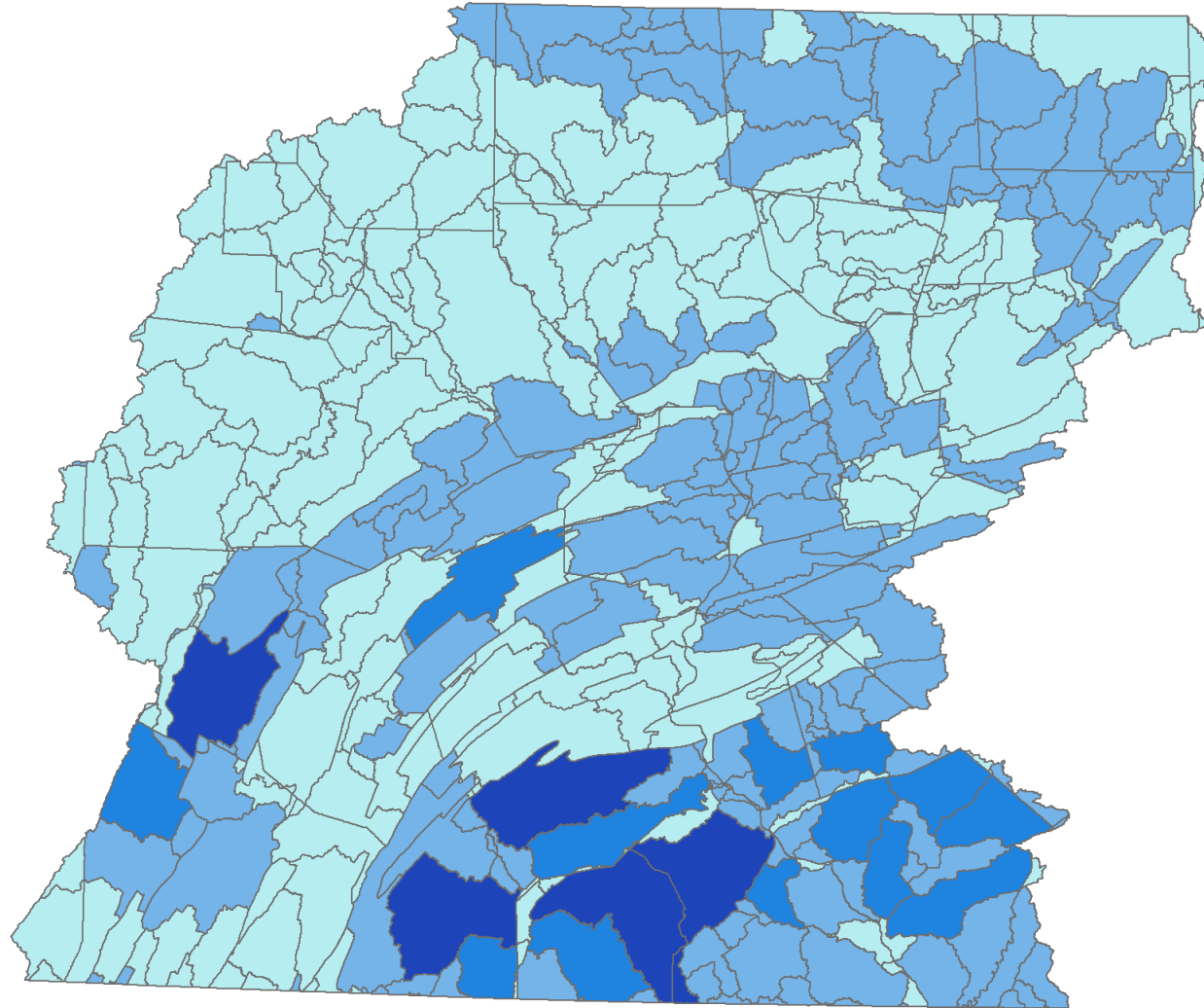
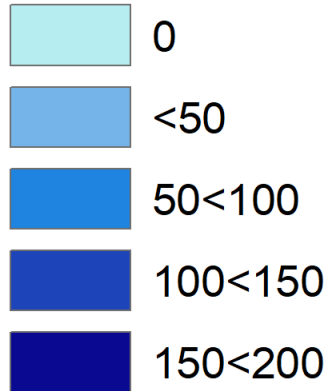
Acres Pasture/Hay Buffers



Acres of Turf Buffers Needed

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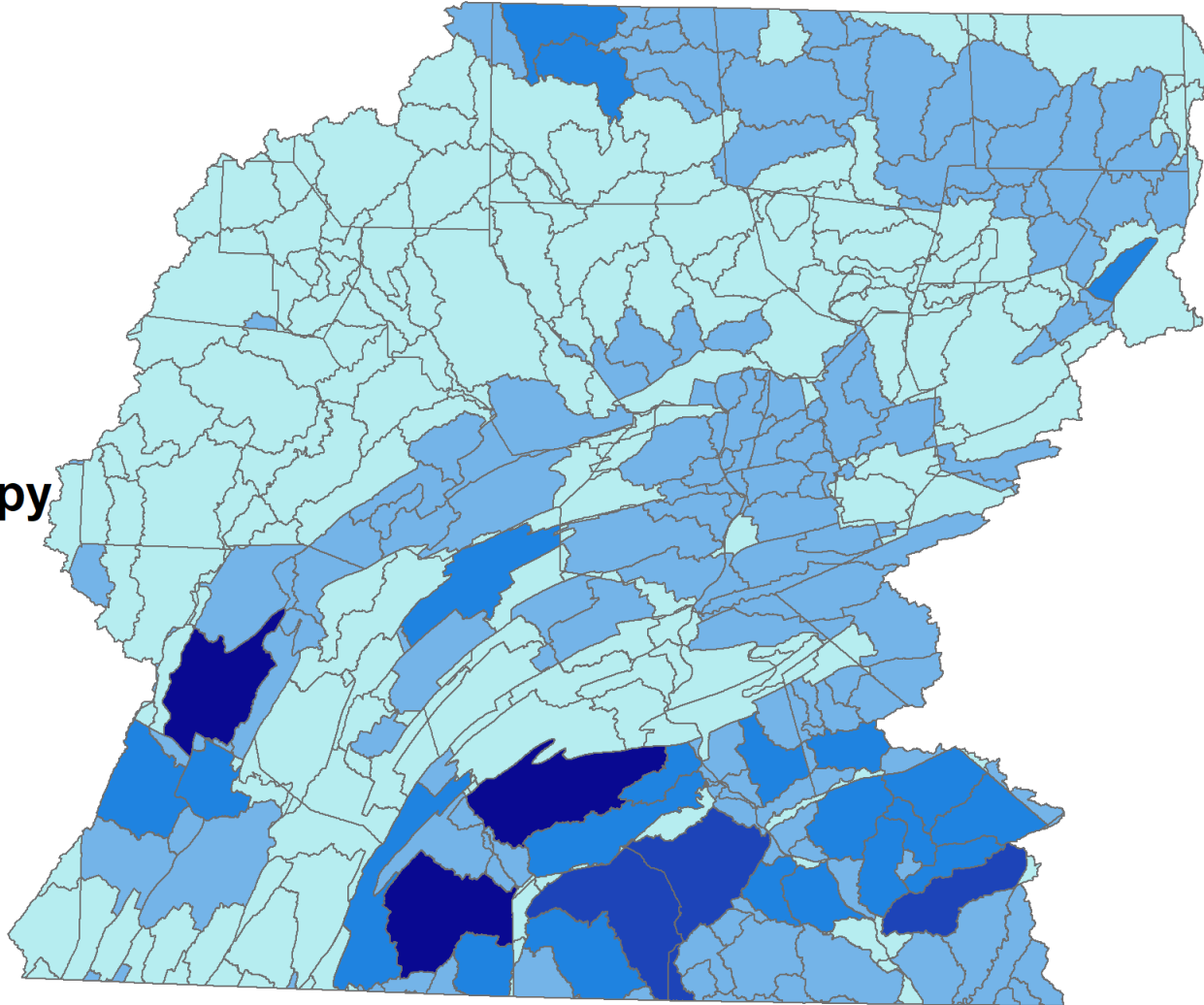
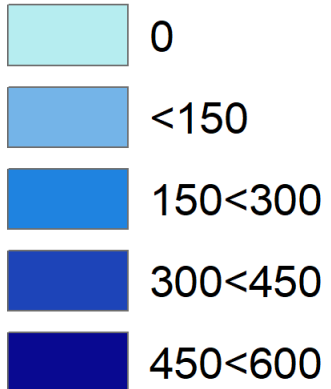
Acres Turf Buffers



Acres of Tree Canopy over Turf Needed

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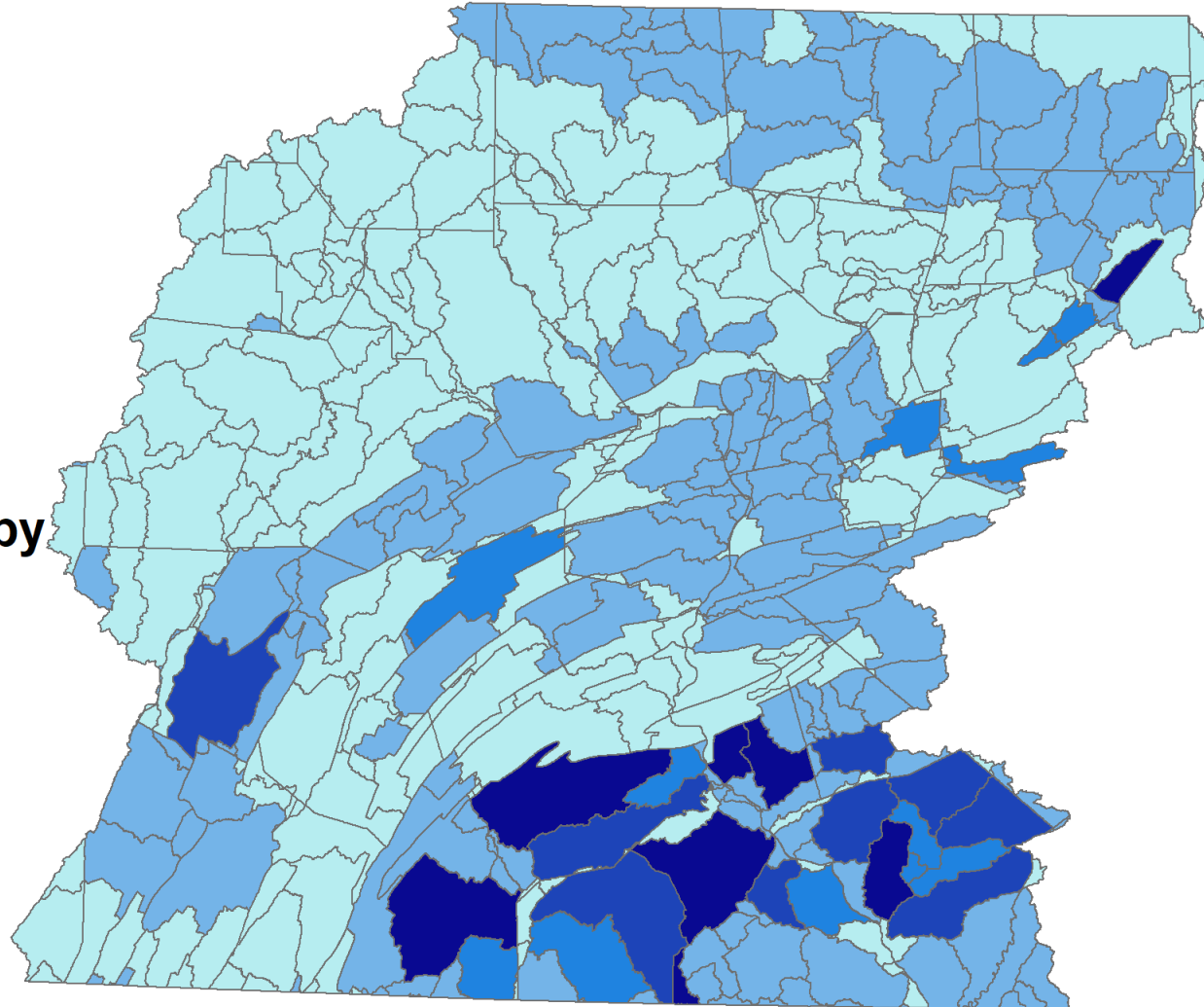
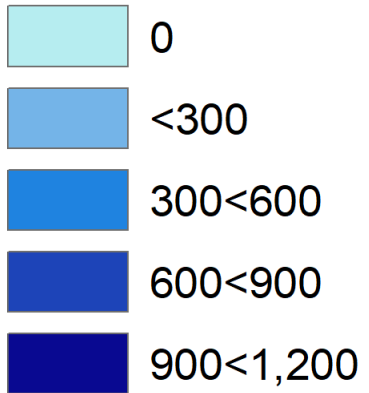
Acres of Turf Tree Canopy



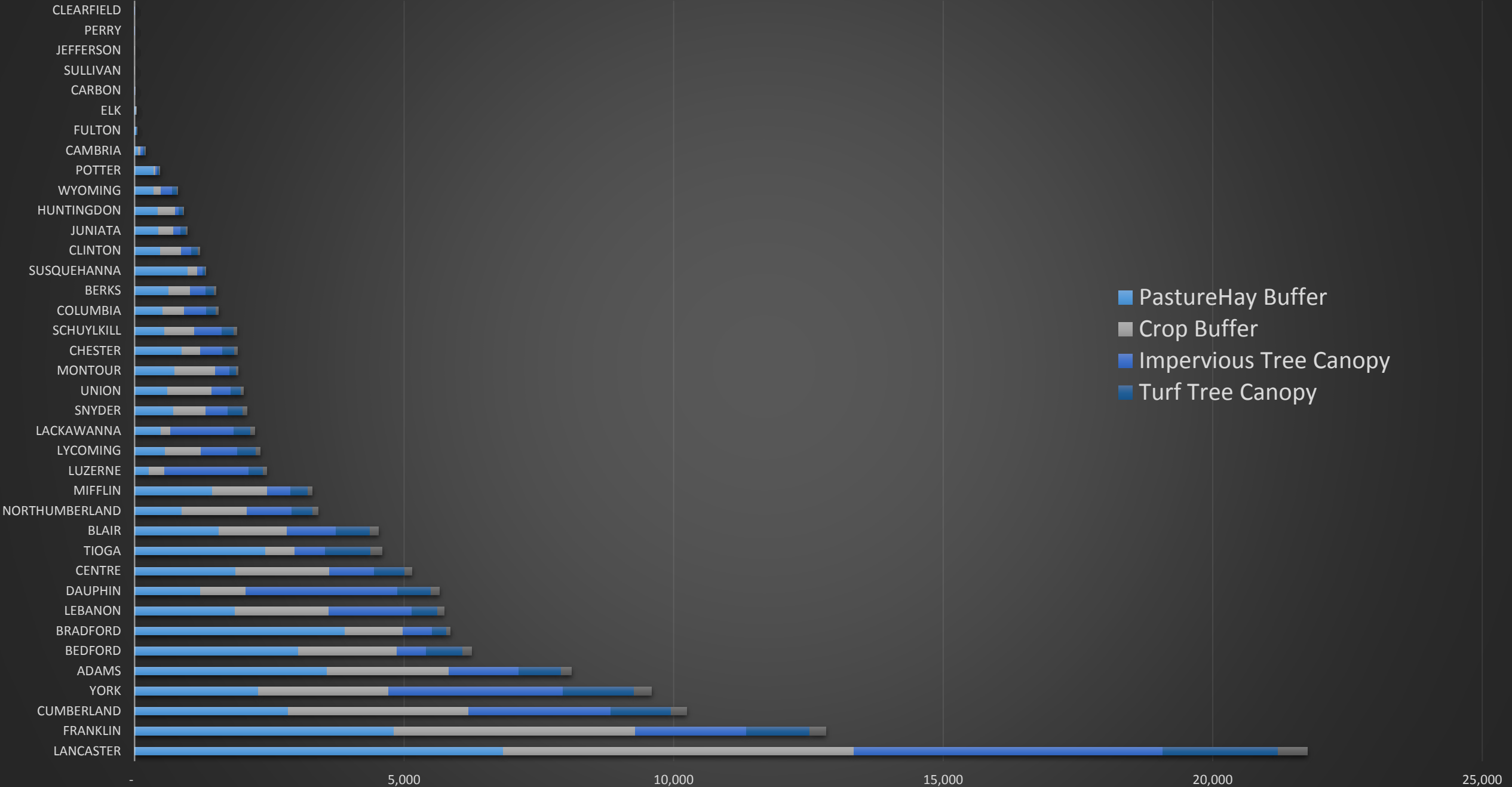
Acres of Tree Canopy over Impervious Needed

Legend

Acres of ImpTree Canopy



Acres of Buffers and Tree Canopy Needed by County to Achieve 60% Coverage within Riparian Area



Percent Coverage of Tress in Riparian Zone	Pasture/Hay Buffer	Crop Buffer	Tree Canopy Over Imp	Tree Canopy over Turf	Turf Buffer	Total
50	16,764	16,353	17,713	6,383	1,596	58,809
55	29,340	25,128	23,630	9,734	2,433	90,265
60	47,796	36,608	30,835	14,117	3,529	132,885
65	62,223	44,501	34,955	16,891	4,223	162,791
70	68,941	47,554	36,304	17,815	4,454	175,068

