

# Review of Land Use Change in the 14 Prototype Counties: 2013/14 – 2017/18

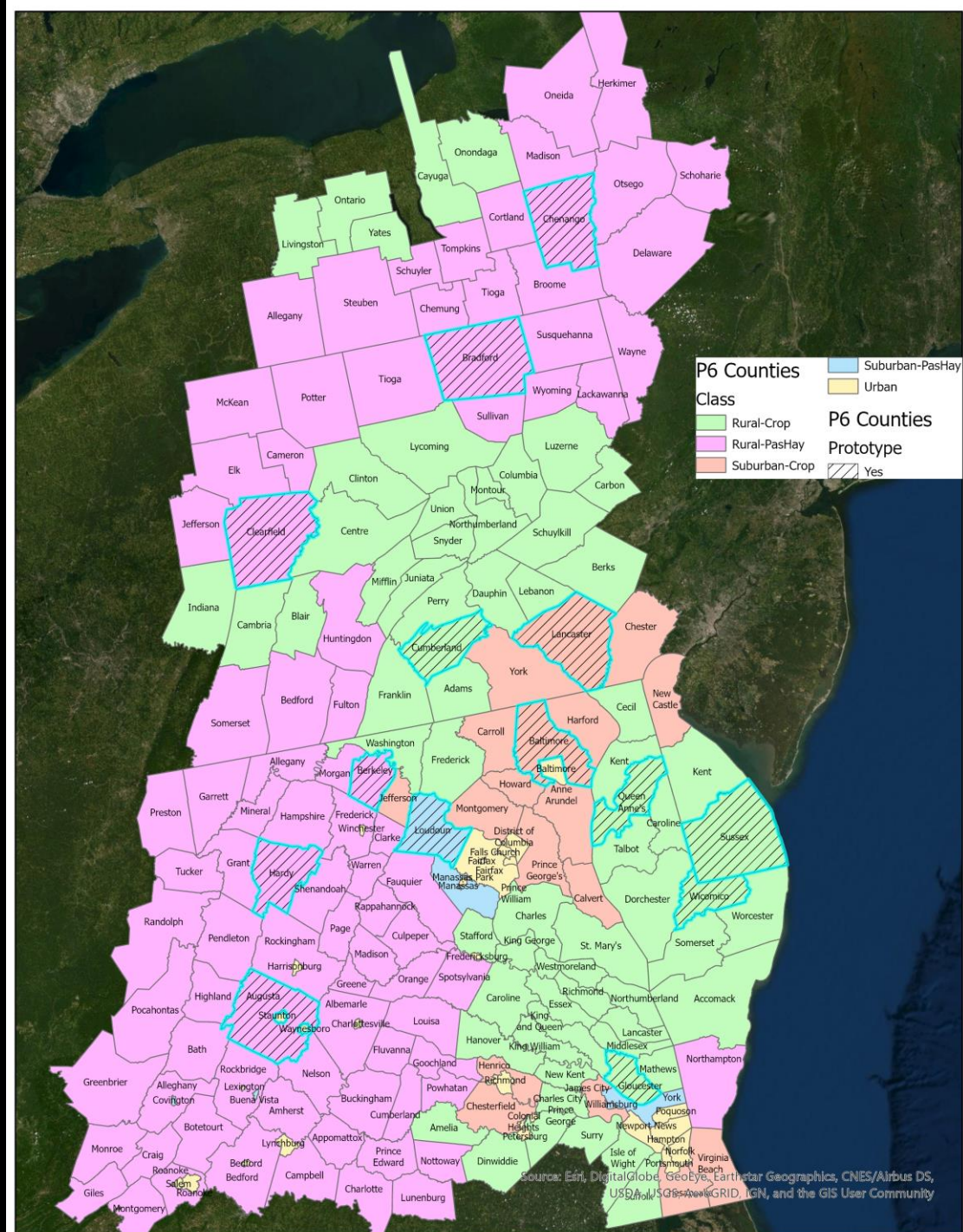
- These slides present initial tabular data for draft land use change from 2013/14 to 2017/18 that are proposed for use in CAST-21.
- Focus your review on whether the magnitude and types of the land conversion (e.g., from cropland to forest, forest to development, etc.) make sense based on your knowledge of the prototype counties or the knowledge of others who are familiar with land use trends in these counties.
- You can also visualize the changes that these tables are based on at the following site:  
<http://cicapps.org/obj1lu/>

# Notes and Caveats

- You are reviewing a draft land use change data product.
- The land use change data will be revised based on both internal review by the U.S. Geological Survey and Chesapeake Conservancy and external review by CBP Partners and stakeholders.
- All changes will be incorporated in a draft final land use change product to be produced by the end of May. Revised visual and tabular data will then be posted on the land use change viewer, <http://cicapps.org/obj1lu/>, for all counties as the data are produced through the month of June.

# Land Use Change in the 14 Prototype Counties: 2013/14 – 2017/18

FIPS	CNTY_NAME	P_Crop	P_Dev	Class
10005	SUSSEX	97.4%	18.8%	Rural-Crop
24005	BALTIMORE	66.7%	38.6%	Suburban-Crop
24035	QUEEN ANNES	96.3%	14.2%	Rural-Crop
24045	WICOMICO	94.5%	20.6%	Rural-Crop
36017	CHENANGO	28.3%	5.8%	Rural-PasHay
42015	BRADFORD	39.2%	5.7%	Rural-PasHay
42033	CLEARFIELD	42.0%	8.1%	Rural-PasHay
42041	CUMBERLAND	65.8%	24.6%	Rural-Crop
42071	LANCASTER	68.2%	29.2%	Suburban-Crop
51015	AUGUSTA	27.1%	9.3%	Rural-PasHay
51073	GLOUCESTER	85.1%	12.6%	Rural-Crop
51107	LOUDOUN	33.1%	27.7%	Suburban-PasHay
54003	BERKELEY	33.1%	23.8%	Rural-PasHay
54031	HARDY	22.2%	6.4%	Rural-PasHay



# Land Use Change in the 14 Prototype Counties: 2013/14 – 2017/18

- Land use change code establishes rules to translate land cover change (2013 – 2017) derived from spectral data into land use change. The rules integrate the 2017 land use, parcels, and landscape context information with land cover change data.
- Adjusting these rules/code for one county alters conditions in all other counties. To make this effort manageable, a representative sample of the ~200 Chesapeake Bay watershed counties was needed to develop and refine the rules and to manage the CBP Partner review.
- Prototype counties were chosen by the LUWG to be representative of all states, physiographic provinces, levels of urbanization, and diversity of agricultural practices.

FIPS	CNTY_NAME	P_Crop	P_Dev	Class
10005	SUSSEX	97.4%	18.8%	Rural-Crop
24005	BALTIMORE	66.7%	38.6%	Suburban-Crop
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# How to Interpret Land Use Change Tables: 2013/14 – 2017/18

Gain and Loss Tables: e.g., in Augusta County, Virginia, 70 acres of cropland in 2013/14 were converted to non-cropland in 2017/18 and 279 acres of non-cropland in 2013/14 were converted into cropland in 2017/18, yielding a net increase of 210 cropland acres.

		CRP	FOR	INR	IR	MO	PAS	TCI	TCT	TG	WAT
Augusta	LOSS	70	1,715	152	17	2,764	126	74	441	237	1
	GAIN	279	469	596	3	1,286	1,558	50	346	1,002	6
	NET	210	(1,246)	444	(13)	(1,477)	1,432	(24)	(95)	765	5

County CrossTab Tables: e.g., of the 70 acres of cropland in 2013/14 that were converted to non-cropland in 2017/18 (row #1), 25 acres were converted to forest, 41 acres to impervious surfaces, and 4 acres to other uses. Of the 279 acres of non-cropland that transitioned to cropland (column #1), 194 were converted from forest, 8 acres from impervious surfaces, 63 acres from mixed open, etc.

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	-	25.06	41.12	-	1.05	0.80	-	1.01	0.62	-	69.65
Forest	193.59	0.04	96.23	0.01	1,027.52	284.38	-	0.02	113.24	-	1,714.98
Impervious Non-Roads	7.93	0.94	55.20	2.38	35.61	29.84	33.24	3.01	39.24	-	152.20
Impervious Roads	-	0.04	-	-	-	-	16.19	0.48	-	-	16.71
Mixed Open	62.94	402.74	214.37	0.75	1,017.51	1,206.11	0.15	138.76	731.54	6.25	2,763.61
Pasture	0.30	39.58	82.23	-	1.12	-	-	1.22	1.52	-	125.97
Tree Canopy Over Impervious	1.23	0.05	44.54	-	16.58	2.78	-	-	8.36	-	73.54
Tree Canopy over Turf Grass	13.34	0.05	86.59	-	199.77	33.59	-	-	107.47	-	440.81
Turf Grass	-	0.77	30.75	0.24	4.85	0.13	-	200.62	-	-	237.35
Water	-	0.23	-	-	-	-	-	1.02	-	-	1.26
Gain (To)	279.33	469.46	595.83	3.38	1,286.49	1,557.63	49.57	346.15	1,001.99	6.25	5,596.08

# Gain and Loss Tables: Estimated Change in Phase 6 Land Uses: 2013/14 – 2017/18

		CRP	FOR	INR	IR	MO	PAS	TCI	TCT	TG	WAT
Augusta	LOSS	70	1,715	152	17	2,764	126	74	441	237	1
	GAIN	279	469	596	3	1,286	1,558	50	346	1,002	6
	NET	210	(1,246)	444	(13)	(1,477)	1,432	(24)	(95)	765	5
Baltimore	LOSS	64	133	303	51	1,887	52	42	339	1,897	0
	GAIN	29	299	1,964	90	320	79	10	764	1,213	3
	NET	(36)	166	1,661	39	(1,567)	26	(32)	425	(684)	2
Berkeley	LOSS	104	657	310	12	4,273	180	26	554	774	10
	GAIN	612	3,358	719	39	287	291	36	124	1,431	3
	NET	508	2,701	408	26	(3,986)	111	11	(429)	657	(7)
Bradford	LOSS	53	1,529	299	7	3,451	241	45	220	178	6
	GAIN	312	529	649	24	111	2,091	16	185	2,102	12
	NET	259	(1,000)	350	16	(3,340)	1,849	(29)	(35)	1,924	7
Chenango	LOSS	17	471	67	16	2,851	98	28	117	433	4
	GAIN	44	486	189	0	58	1,119	26	481	1,690	10
	NET	27	16	121	(16)	(2,793)	1,020	(2)	364	1,258	7
Clearfield	LOSS	47	4,846	194	7	5,309	137	63	600	402	3
	GAIN	887	827	819	2	4,143	3,668	20	585	651	7
	NET	840	(4,019)	625	(5)	(1,166)	3,531	(44)	(16)	249	4
Cumberland	LOSS	1,223	7,564	547	10	1,673	838	154	1,495	2,915	1
	GAIN	1,133	4,670	5,482	116	511	486	64	752	3,207	2
	NET	(90)	(2,895)	4,935	105	(1,162)	(353)	(90)	(743)	292	0

**CRP = cropland**  
**FOR = forest**  
**INR = imperv non-road**  
**IR = impervious road**  
**MO = mixed open**  
**PAS = pasture**  
**TCI = tree canopy over impervious**  
**TCT = tree canopy over turf grass**  
**TG = turf gras**  
**WAT = water**

Units in Acres

# Gain and Loss Tables: Estimated Change in Phase 6 Land Uses: 2013/14 – 2017/18

		CRP	FOR	INR	IR	MO	PAS	TCI	TCT	TG	WAT
Gloucester	LOSS	26	3,408	61	2	2,708	1	20	653	64	1
	GAIN	591	1,867	114	6	289	103	8	88	3,876	0
	NET	565	(1,541)	53	3	(2,418)	103	(12)	(565)	3,813	(1)
Hardy	LOSS	3	1,308	16	0	1,028	27	36	334	99	0
	GAIN	110	182	160	0	886	966	2	143	400	3
	NET	107	(1,126)	144	(0)	(142)	939	(34)	(192)	300	3
Lancaster	LOSS	840	953	175	9	3,140	255	76	616	687	4
	GAIN	844	285	2,680	38	163	182	56	385	2,118	6
	NET	3	(668)	2,506	29	(2,977)	(74)	(20)	(231)	1,431	2
Loudoun	LOSS	52	1,898	438	54	9,168	55	95	1,816	783	2
	GAIN	345	390	2,846	505	661	1,429	153	552	7,463	19
	NET	293	(1,509)	2,408	451	(8,507)	1,374	57	(1,264)	6,680	17
Queen Anne's	LOSS	489	394	29	3	1,212	95	15	135	328	1
	GAIN	446	667	637	64	78	101	13	175	517	2
	NET	(43)	273	609	61	(1,134)	5	(2)	41	189	1
Sussex	LOSS	1,113	5,149	92	16	7,096	133	123	1,606	897	4
	GAIN	3,285	2,530	3,985	269	2,617	561	50	601	2,316	14
	NET	2,172	(2,618)	3,894	254	(4,479)	429	(74)	(1,005)	1,418	10
Wicomico	LOSS	582	1,597	91	5	3,709	50	52	319	568	8
	GAIN	1,677	3,121	639	19	53	89	0	555	825	3
	NET	1,094	1,524	549	15	(3,656)	39	(52)	236	257	(6)

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**WAT = water**

Units in Acres

## Augusta County, Virginia: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	-	25.06	41.12	-	1.05	0.80	-	1.01	0.62	-	69.65
Forest	193.59	0.04	96.23	0.01	1,027.52	284.38	-	0.02	113.24	-	1,714.98
Impervious Non-Roads	7.93	0.94	55.20	2.38	35.61	29.84	33.24	3.01	39.24	-	152.20
Impervious Roads	-	0.04	-	-	-	-	16.19	0.48	-	-	16.71
Mixed Open	62.94	402.74	214.37	0.75	1,017.51	1,206.11	0.15	138.76	731.54	6.25	2,763.61
Pasture	0.30	39.58	82.23	-	1.12	-	-	1.22	1.52	-	125.97
Tree Canopy Over Impervious	1.23	0.05	44.54	-	16.58	2.78	-	-	8.36	-	73.54
Tree Canopy over Turf Grass	13.34	0.05	86.59	-	199.77	33.59	-	-	107.47	-	440.81
Turf Grass	-	0.77	30.75	0.24	4.85	0.13	-	200.62	-	-	237.35
Water	-	0.23	-	-	-	-	-	1.02	-	-	1.26
Gain (To)	279.33	469.46	595.83	3.38	1,286.49	1,557.63	49.57	346.15	1,001.99	6.25	5,596.08

## Baltimore County, Maryland: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	0.18	35.86	23.68	1.84	0.45	0.13	-	0.89	1.22	0.01	64.08
Forest	19.02	2.64	18.93	0.26	31.68	14.84	-	2.36	46.01	0.19	133.29
Impervious Non-Roads	2.30	2.05	5.82	1.21	7.92	6.45	9.45	121.84	151.70	0.04	302.98
Impervious Roads	0.00	1.67	18.37	-	0.02	-	0.35	30.65	0.10	-	51.16
Mixed Open	2.73	183.45	804.26	63.99	135.04	53.27	0.00	66.52	710.42	1.88	1,886.54
Pasture	1.75	10.03	35.58	1.41	0.39	-	-	0.13	2.98	0.00	52.28
Tree Canopy Over Impervious	0.14	1.93	9.78	1.81	5.40	0.26	-	-	22.95	0.01	42.27
Tree Canopy over Turf Grass	1.95	31.88	6.57	0.65	17.07	3.27	-	-	277.46	0.20	339.04
Turf Grass	0.63	32.26	1,046.76	18.98	256.66	0.38	0.00	540.97	-	0.38	1,897.03
Water	-	0.03	-	-	-	-	-	0.36	-	-	0.39
Gain (To)	28.52	299.17	1,963.94	90.17	319.60	78.62	9.81	763.71	1,212.84	2.70	4,769.06



## Berkeley County, West Virginia: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	-	57.80	30.90	6.92	8.39	-	0.00	0.07	0.00	-	104.08
Forest	230.34	657.02	53.27	4.88	26.72	33.21	-	0.01	308.58	-	657.01
Impervious Non-Roads	16.34	175.53	40.09	4.14	8.63	2.37	31.99	0.91	70.49	-	310.40
Impervious Roads	-	6.37	0.88	-	0.01	-	4.28	0.04	0.64	-	12.22
Mixed Open	330.86	2,334.03	410.01	12.23	134.13	252.17	0.04	28.94	901.72	2.55	4,272.55
Pasture	16.98	98.04	17.91	2.19	44.71	-	-	0.16	-	-	179.99
Tree Canopy Over Impervious	0.63	12.83	3.40	0.08	0.86	0.03	-	-	7.82	-	25.67
Tree Canopy over Turf Grass	11.33	276.78	65.98	3.52	50.84	3.09	-	-	141.99	-	553.55
Turf Grass	5.57	389.07	136.38	4.54	146.71	-	0.00	92.20	-	-	774.47
Water	-	7.69	-	-	-	-	-	1.94	-	-	9.62
Gain (To)	612.06	3,358.11	718.74	38.51	286.87	290.88	36.31	124.27	1,431.25	2.55	6,899.54

## Bradford County, Pennsylvania: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	0.00	11.36	27.48	0.06	2.98	8.07	-	0.16	3.19	0.09	53.39
Forest	71.83	5.71	154.29	5.95	53.96	304.12	-	1.82	936.55	0.37	1,528.89
Impervious Non-Roads	32.45	1.85	19.08	2.26	12.64	159.28	8.73	0.09	81.87	0.14	299.32
Impervious Roads	0.00	0.18	0.00	-	0.00	0.00	6.90	0.15	0.00	-	7.24
Mixed Open	186.88	461.57	173.44	4.24	137.69	1,590.51	0.03	72.55	950.10	11.31	3,450.63
Pasture	15.57	45.74	157.87	5.97	1.40	-	0.00	1.66	13.11	0.15	241.46
Tree Canopy Over Impervious	0.32	0.31	2.85	2.87	23.76	1.82	-	-	13.21	0.00	45.14
Tree Canopy over Turf Grass	4.72	4.79	65.15	2.00	13.21	25.53	-	-	104.08	0.22	219.70
Turf Grass	0.14	1.95	68.34	0.36	2.55	1.48	0.00	103.41	-	0.04	178.27
Water	0.00	0.83	0.01	0.00	0.00	0.01	-	4.76	0.01	-	5.63
Gain (To)	311.92	528.60	649.42	23.71	110.50	2,090.83	15.67	184.59	2,102.12	12.32	6,029.68

## Chenango County, New York: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	-	13.00	3.20	-	0.02	-	-	0.14	0.74	-	17.09
Forest	5.26	0.01	20.97	-	25.37	65.25	-	0.00	353.77	-	470.62
Impervious Non-Roads	1.33	0.09	14.72	-	2.83	12.07	11.30	0.21	39.32	-	67.15
Impervious Roads	-	0.38	-	-	-	0.46	14.43	1.15	-	-	16.41
Mixed Open	36.06	405.14	57.90	0.00	8.79	1,023.61	0.04	107.80	1,210.45	10.33	2,851.34
Pasture	-	60.84	35.14	-	1.62	-	-	0.37	0.35	-	98.31
Tree Canopy Over Impervious	0.34	0.03	0.75	-	15.11	0.93	-	-	10.70	-	27.86
Tree Canopy over Turf Grass	0.71	0.02	21.81	-	3.33	16.10	-	-	75.10	-	117.06
Turf Grass	0.01	5.85	48.79	0.00	9.61	0.21	-	368.37	-	-	432.84
Water	-	1.01	-	-	-	-	-	2.74	-	-	3.75
Gain (To)	43.71	486.35	188.56	0.00	57.89	1,118.62	25.77	480.78	1,690.42	10.33	4,102.43

## Clearfield County, Pennsylvania: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	-	3.16	37.80	-	4.15	1.57	-	0.19	0.18	-	47.05
Forest	108.31	4.81	269.48	0.50	3,644.44	704.83	-	0.04	118.34	-	4,845.94
Impervious Non-Roads	1.95	1.07	16.61	0.37	143.33	19.37	12.99	0.18	14.97	-	194.25
Impervious Roads	-	0.55	0.22	-	0.04	-	6.49	0.19	-	-	7.49
Mixed Open	759.30	808.81	186.42	0.25	1,126.05	2,841.91	0.10	297.45	407.99	7.14	5,309.38
Pasture	0.41	9.58	100.50	1.02	24.40	-	-	0.42	0.28	-	136.61
Tree Canopy Over Impervious	0.49	0.30	2.90	0.00	36.67	1.07	-	-	21.93	-	63.36
Tree Canopy over Turf Grass	15.56	2.29	121.83	0.00	279.15	94.72	-	-	86.93	-	600.48
Turf Grass	1.14	1.01	100.11	0.00	11.19	4.60	-	283.90	-	-	401.95
Water	-	0.50	-	-	-	-	0.00	2.39	-	-	2.89
Gain (To)	887.17	827.27	819.25	2.14	4,143.37	3,668.07	19.58	584.76	650.63	7.14	11,609.39

## Cumberland County, Pennsylvania: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	0.96	646.17	522.58	4.91	24.65	13.11	-	0.54	11.22	0.07	1,223.26
Forest	946.58	8,027.39	2,866.83	58.26	345.88	409.03	31.82	376.61	2,528.42	1.02	7,564.46
Impervious Non-Roads	34.24	277.65	2.43	5.39	20.80	27.52	27.00	10.36	143.70	0.02	546.68
Impervious Roads	-	5.23	-	-	0.00	-	4.82	0.08	-	-	10.13
Mixed Open	30.89	991.35	473.04	24.67	23.86	5.74	0.00	13.14	133.80	0.29	1,672.92
Pasture	46.29	453.26	312.76	4.23	13.85	-	-	0.40	7.51	0.05	838.33
Tree Canopy Over Impervious	2.60	77.41	43.56	1.67	8.03	1.40	-	-	19.23	0.00	153.89
Tree Canopy over Turf Grass	56.22	753.30	241.70	2.49	51.10	27.37	-	-	363.04	0.18	1,495.40
Turf Grass	16.61	1,464.62	1,021.07	13.89	46.25	1.40	-	350.78	-	0.10	2,914.72
Water	0.00	0.85	0.03	-	-	0.00	-	0.53	0.00	-	1.42
Gain (To)	1,133.44	4,669.84	5,481.57	115.51	510.56	485.58	63.64	752.44	3,206.90	1.73	16,421.22

## Gloucester County, Virginia: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	-	15.88	9.97	-	0.06	-	-	0.23	-	-	26.13
Forest	490.79	0.26	28.84	0.14	207.70	101.78	0.00	0.02	2,578.38	-	3,407.64
Impervious Non-Roads	2.50	4.21	14.38	0.78	3.34	0.25	6.86	1.02	42.01	-	60.96
Impervious Roads	-	0.54	-	-	-	-	1.17	0.51	-	-	2.22
Mixed Open	92.64	1,843.39	27.36	0.96	6.18	1.00	0.03	44.89	697.37	0.00	2,707.66
Pasture	-	0.08	0.51	-	-	-	-	-	-	-	0.59
Tree Canopy Over Impervious	0.90	0.06	5.66	0.03	2.55	0.39	-	-	10.75	-	20.35
Tree Canopy over Turf Grass	4.43	0.00	23.67	3.56	73.00	0.00	-	-	547.92	-	652.58
Turf Grass	-	2.30	17.99	0.03	2.69	-	-	40.50	-	-	63.51
Water	-	0.09	-	-	-	-	-	0.86	-	-	0.96
Gain (To)	591.26	1,866.54	113.99	5.51	289.34	103.42	8.06	88.04	3,876.42	0.00	6,942.58

## Hardy County, West Virginia: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	-	1.96	0.81	-	-	-	-	0.04	-	-	2.81
Forest	67.09	0.30	21.64	-	667.63	444.60	-	-	107.35	0.00	1,308.31
Impervious Non-Roads	0.26	0.05	5.56	-	6.14	1.85	1.94	1.30	4.68	-	16.22
Impervious Roads	-	0.00	-	-	-	-	0.00	0.01	-	-	0.01
Mixed Open	36.88	165.35	94.35	0.00	658.62	476.00	0.00	52.45	199.90	2.93	1,027.87
Pasture	0.76	13.96	11.81	-	0.34	-	-	0.27	0.01	-	27.15
Tree Canopy Over Impervious	0.39	0.03	1.51	0.00	26.44	1.83	-	-	5.40	-	35.60
Tree Canopy over Turf Grass	4.51	0.16	21.61	0.00	184.18	41.68	-	-	82.25	-	334.39
Turf Grass	-	0.97	8.52	-	1.33	-	-	88.50	-	-	99.31
Water	-	0.00	-	-	-	-	-	0.00	-	-	0.01
Gain (To)	109.89	182.48	160.25	0.00	886.05	965.96	1.94	142.56	399.60	2.93	2,851.67

## Lancaster County, Pennsylvania: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	1.05	109.59	697.80	2.16	4.33	6.83	-	10.23	9.37	0.00	840.31
Forest	369.60	8.39	155.93	1.13	104.90	69.65	-	6.19	245.46	0.00	952.85
Impervious Non-Roads	33.68	0.16	194.24	9.32	7.39	7.51	48.91	2.83	65.06	0.00	174.85
Impervious Roads	-	1.03	-	-	-	-	6.99	0.76	-	-	8.78
Mixed Open	391.20	141.04	889.52	20.81	135.90	90.81	0.07	97.33	1,503.66	5.71	3,140.16
Pasture	3.59	28.26	219.07	0.00	1.47	-	-	1.92	1.03	-	255.33
Tree Canopy Over Impervious	3.29	0.03	50.04	0.11	8.49	0.55	-	-	13.69	-	76.20
Tree Canopy over Turf Grass	41.28	0.24	257.29	1.08	30.58	6.25	-	-	279.46	0.00	616.18
Turf Grass	0.90	2.38	410.77	3.41	5.77	0.13	-	263.84	-	0.00	687.21
Water	-	1.91	-	-	-	-	-	2.04	-	-	3.96
Gain (To)	843.53	284.64	2,680.40	38.01	162.93	#####	55.96	385.14	2,117.73	5.72	6,755.80

## Loudoun County, Virginia: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	1.44	4.63	20.17	1.07	23.37	0.09	-	0.45	1.73	0.09	51.58
Forest	78.73	1.97	417.37	71.00	238.01	121.97	-	0.00	970.86	0.28	1,898.22
Impervious Non-Roads	1.41	1.21	163.09	110.90	20.75	6.03	106.52	2.34	188.55	0.04	437.74
Impervious Roads	-	0.13	3.11	-	0.62	0.00	45.75	4.10	0.37	-	54.08
Mixed Open	247.86	351.15	1,394.38	200.08	398.87	1,275.89	0.28	277.79	5,402.42	18.09	9,167.94
Pasture	0.07	10.23	35.18	1.88	3.45	-	-	0.73	3.64	0.02	55.20
Tree Canopy Over Impervious	0.56	1.35	45.30	3.15	14.50	0.99	-	-	29.64	0.00	95.49
Tree Canopy over Turf Grass	12.72	16.25	633.43	52.08	212.13	23.77	-	-	865.92	0.16	1,816.44
Turf Grass	3.37	4.32	297.16	64.77	147.96	0.47	-	265.11	-	0.05	783.21
Water	0.00	0.34	0.01	-	0.00	0.00	-	1.47	0.01	-	1.84
Gain (To)	344.73	389.60	2,846.09	504.92	660.78	1,429.21	152.56	551.98	7,463.13	18.73	14,361.74

## Queen Anne's County, Maryland: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	0.07	303.13	164.59	3.46	3.05	1.44	0.00	5.19	7.45	0.26	488.58
Forest	203.00	26.26	41.42	3.17	6.42	18.80	-	21.00	100.17	0.23	394.21
Impervious Non-Roads	2.69	0.67	1.28	6.47	0.57	1.05	11.54	0.67	5.25	0.00	28.91
Impervious Roads	0.00	0.15	0.38	-	0.61	-	1.55	0.23	0.17	-	3.08
Mixed Open	230.64	314.31	187.36	45.72	18.61	78.24	0.01	21.99	332.56	1.37	1,212.19
Pasture	1.01	34.23	51.08	0.30	4.02	-	-	4.24	0.56	0.02	95.46
Tree Canopy Over Impervious	0.99	0.51	8.50	0.14	0.97	0.10	-	-	3.59	-	14.80
Tree Canopy over Turf Grass	5.70	6.78	43.14	1.68	9.41	0.88	-	-	67.00	0.01	134.59
Turf Grass	1.73	7.14	140.99	3.47	52.86	0.28	-	121.30	-	0.06	327.82
Water	0.00	0.34	0.00	-	-	0.00	-	0.63	-	-	0.98
Gain (To)	445.76	667.27	637.46	64.40	77.91	100.80	13.09	175.24	516.75	1.96	2,700.63

## Sussex County, Delaware: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	3.89	131.93	881.53	41.80	17.94	21.45	0.00	2.00	15.97	0.18	1,112.80
Forest	2,136.32	92.49	321.96	17.62	2,148.33	303.18	-	4.91	215.66	0.80	5,148.78
Impervious Non-Roads	3.57	2.10	2.44	15.20	2.19	2.92	39.07	2.71	23.96	0.02	91.73
Impervious Roads	0.15	0.68	2.73	-	0.05	0.00	10.44	0.68	0.87	-	15.60
Mixed Open	1,021.23	2,324.53	1,551.84	118.57	223.52	169.62	0.03	278.62	1,618.44	12.72	7,095.60
Pasture	9.70	17.58	84.25	1.27	16.72	-	0.00	1.01	1.95	0.03	132.50
Tree Canopy Over Impervious	3.80	1.21	55.83	1.76	10.44	8.77	-	-	41.55	0.01	123.37
Tree Canopy over Turf Grass	89.64	39.97	591.11	48.61	388.56	50.60	-	-	397.19	0.23	1,605.91
Turf Grass	20.56	11.70	496.11	24.31	32.73	4.55	0.00	307.14	-	0.31	897.42
Water	0.01	0.75	0.00	0.00	0.00	0.00	-	3.66	0.00	-	4.43
Gain (To)	3,284.97	2,530.45	3,985.38	269.15	2,616.96	561.08	49.53	600.73	2,315.59	14.29	16,228.13

## Wicomico County, Maryland: 2013/14 – 2017/18

2013/14 Land Use	Cropland	Forest	Impervious Non-Roads	Impervious Roads	Mixed Open	Pasture	Tree Canopy Over Impervious	Tree Canopy over Turf Grass	Turf Grass	Water	Loss (from)
Cropland	0.02	383.11	179.24	2.50	2.59	0.04	-	10.12	4.77	0.04	582.41
Forest	1,216.91	63.15	52.51	0.30	13.50	77.42	-	0.59	235.31	0.09	1,596.64
Impervious Non-Roads	21.70	4.13	1.02	1.96	0.75	0.41	0.14	21.46	39.91	0.07	90.53
Impervious Roads	0.00	0.65	0.01	-	0.00	-	0.04	3.97	0.00	0.00	4.67
Mixed Open	413.29	2,656.90	182.74	12.05	61.29	10.43	0.01	65.26	365.97	2.25	3,708.90
Pasture	0.04	38.69	11.32	0.05	0.03	-	-	0.21	0.08	0.00	50.43
Tree Canopy Over Impervious	1.91	0.58	35.48	1.65	3.46	0.12	-	-	9.08	0.00	52.28
Tree Canopy over Turf Grass	21.05	15.20	87.06	0.08	24.88	0.61	-	-	170.20	0.08	319.16
Turf Grass	1.91	16.81	90.69	0.89	7.88	0.02	-	449.90	-	0.11	568.20
Water	0.00	4.64	0.00	-	-	0.00	-	3.69	0.00	-	8.35
Gain (To)	1,676.83	3,120.70	639.05	19.48	53.10	89.05	0.19	555.20	825.33	2.64	6,981.55