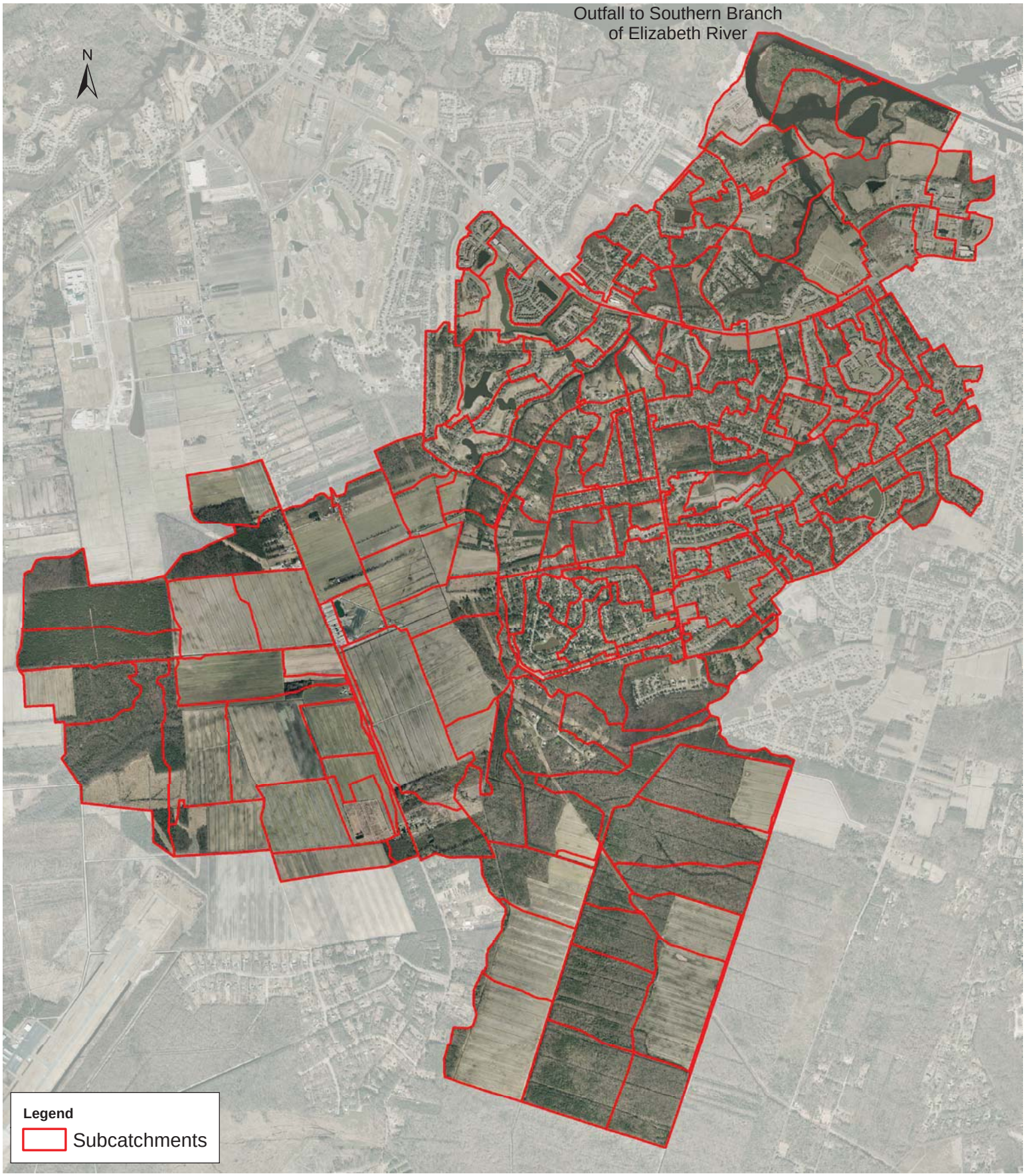

0 1,500 3,000
Feet

Aerial Imagery @ 2007 Commonwealth of Virginia.

See GIS for Complete Details

Figure 1. Bells Mill Creek Watershed MDPU Map

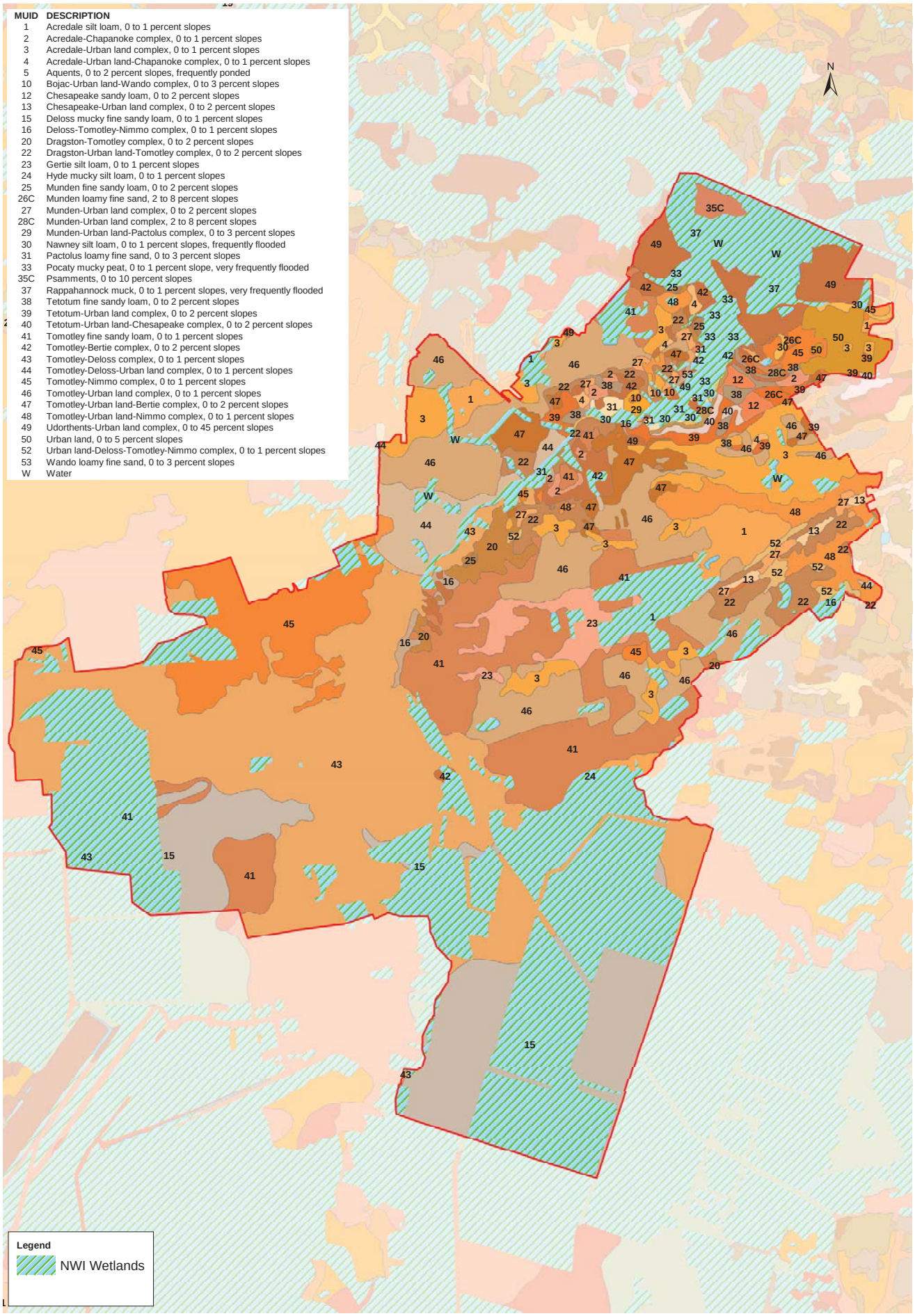

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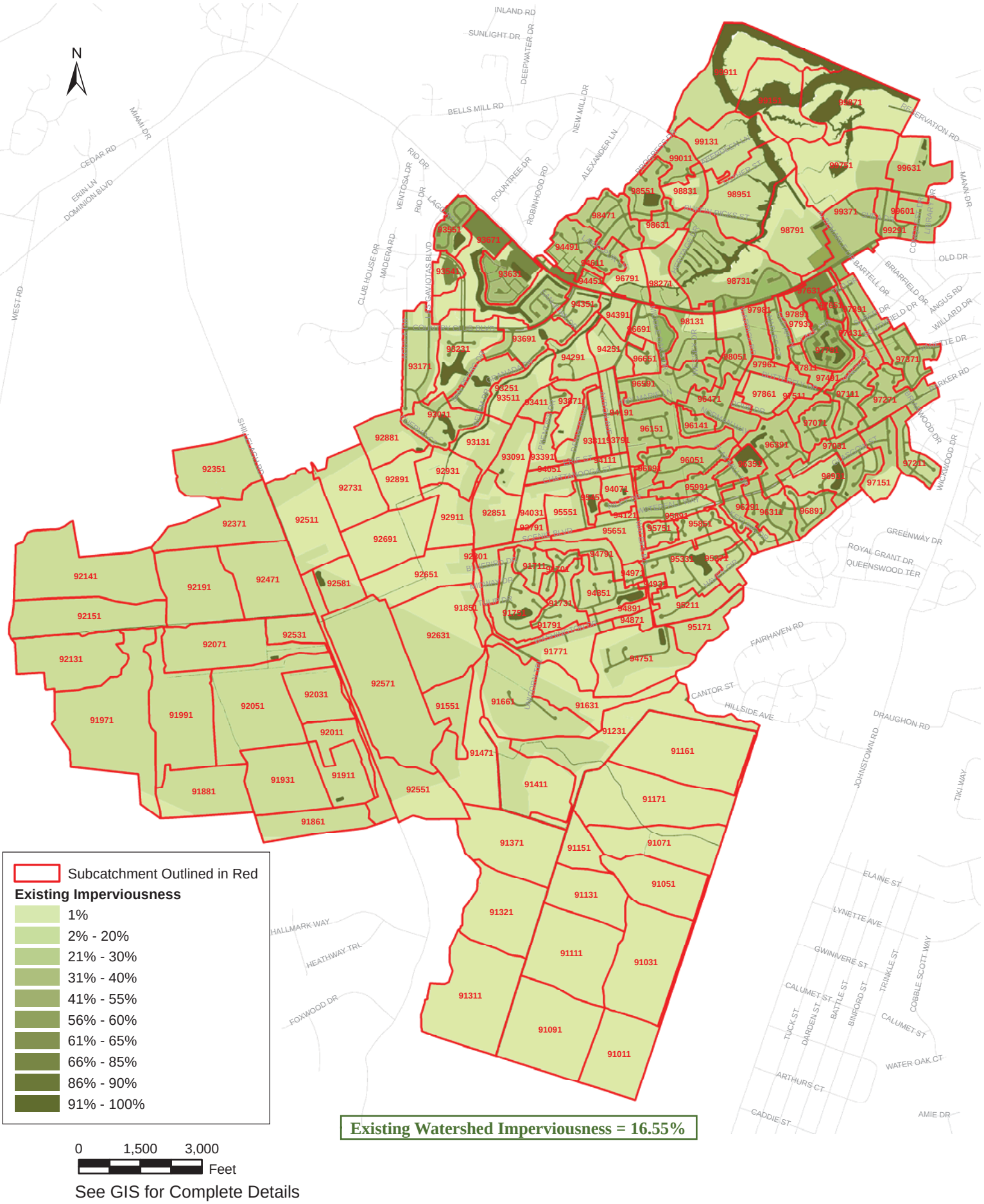
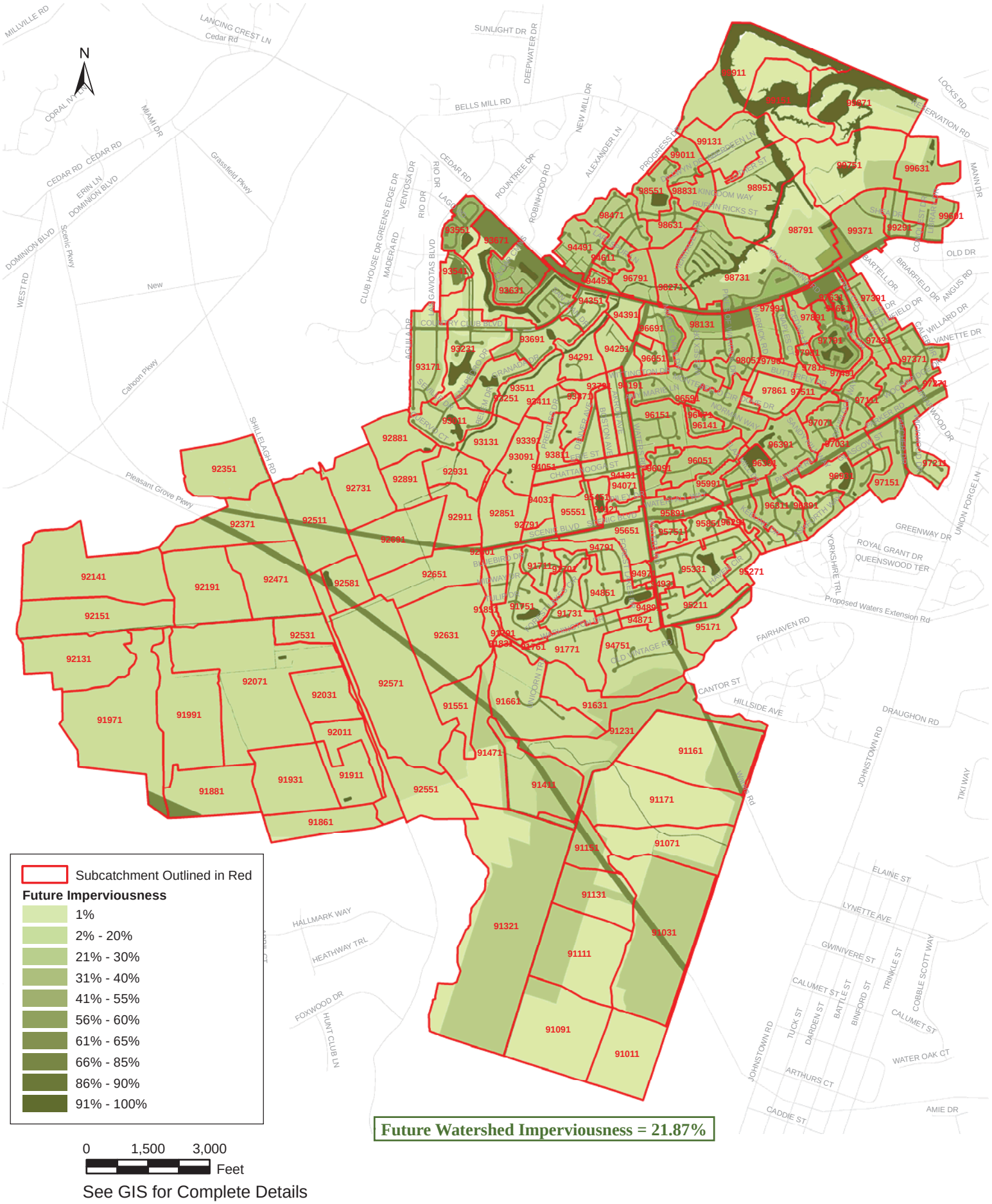
Figure 2. Soils with Wetlands Overlay



See GIS for Complete Details

Figure 3. Existing Conditions Subcatchments with Shaded Imperviousness



See GIS for Complete Details

Figure 4. Future Conditions Subcatchments with Shaded Imperviousness

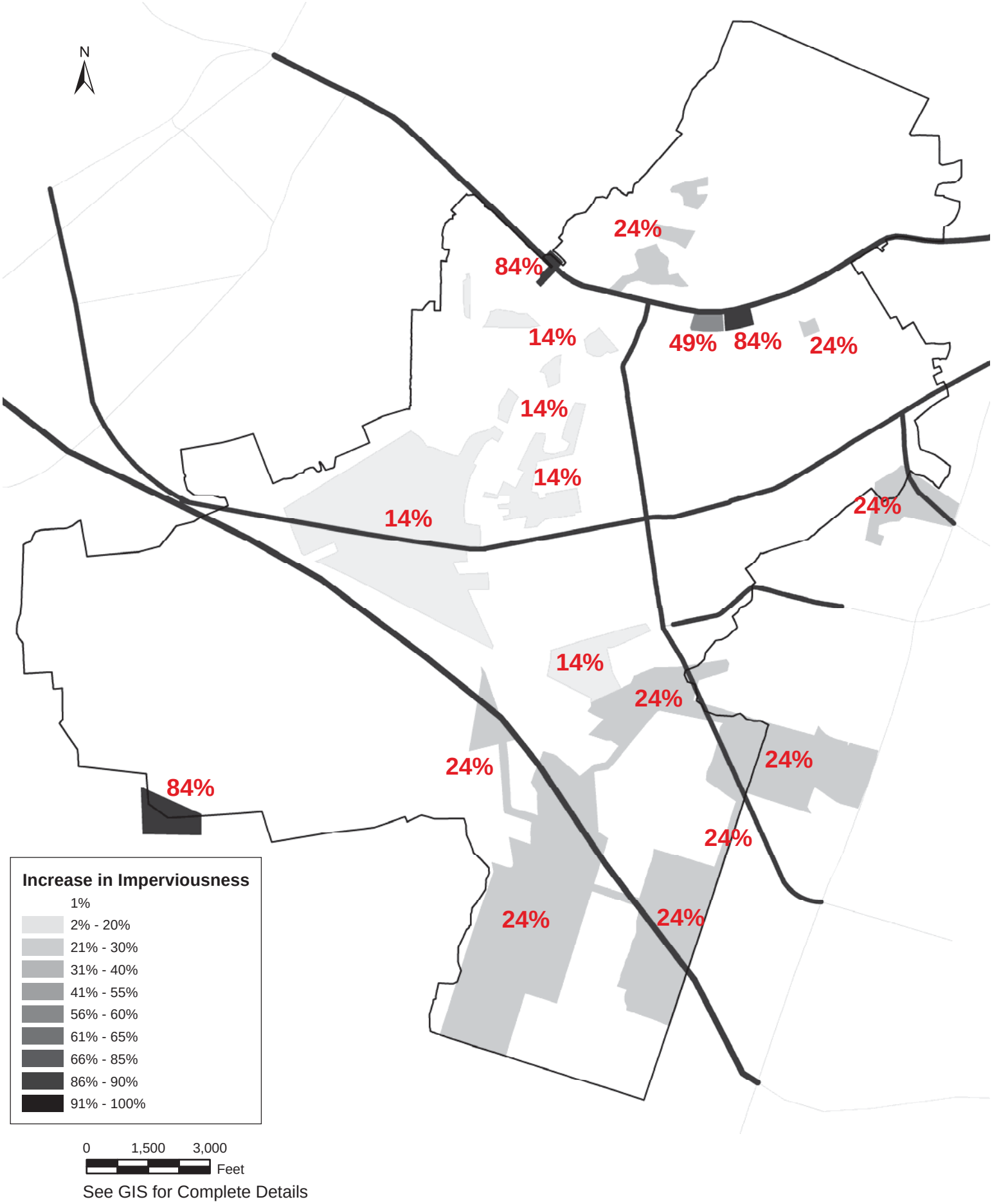


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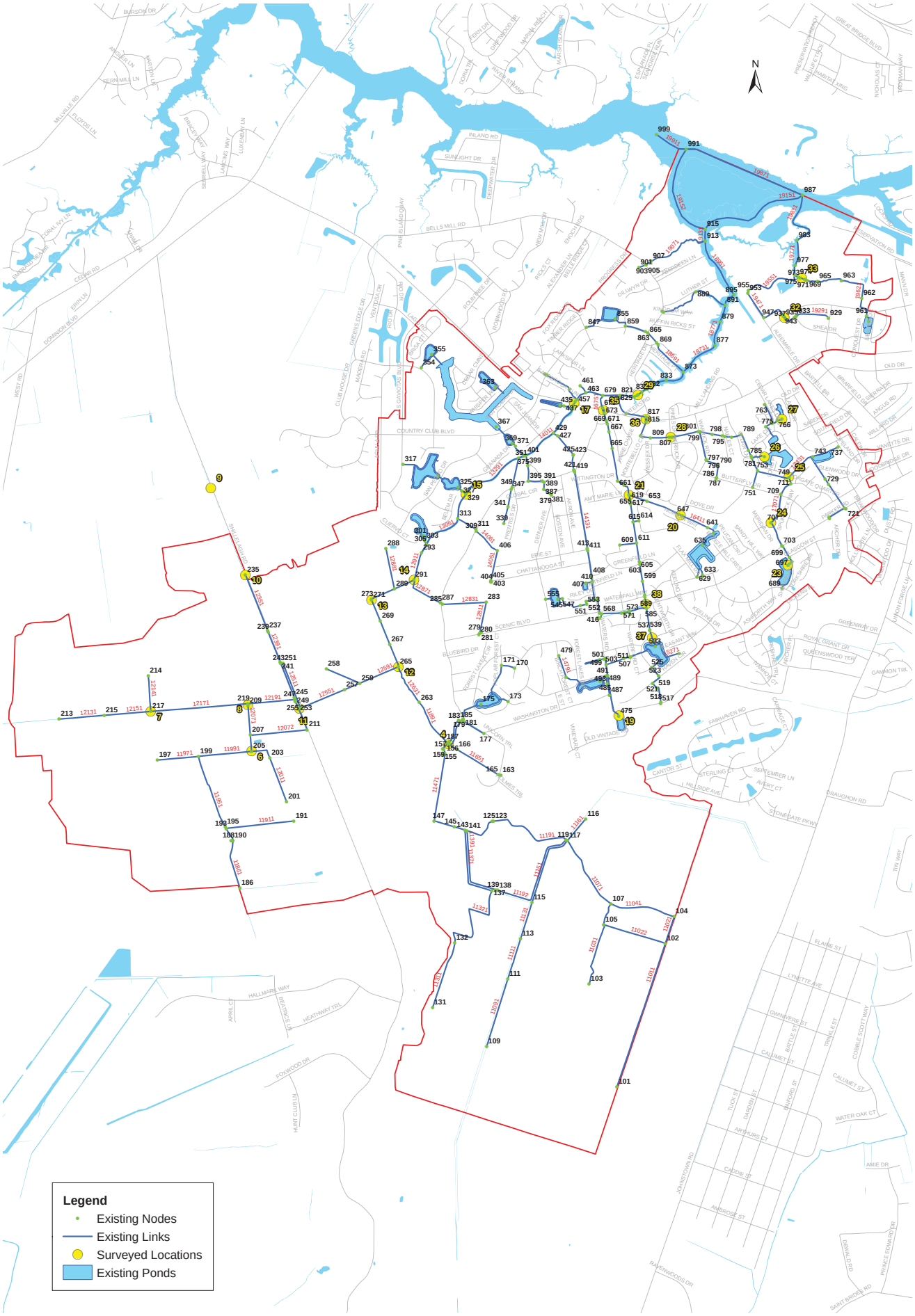
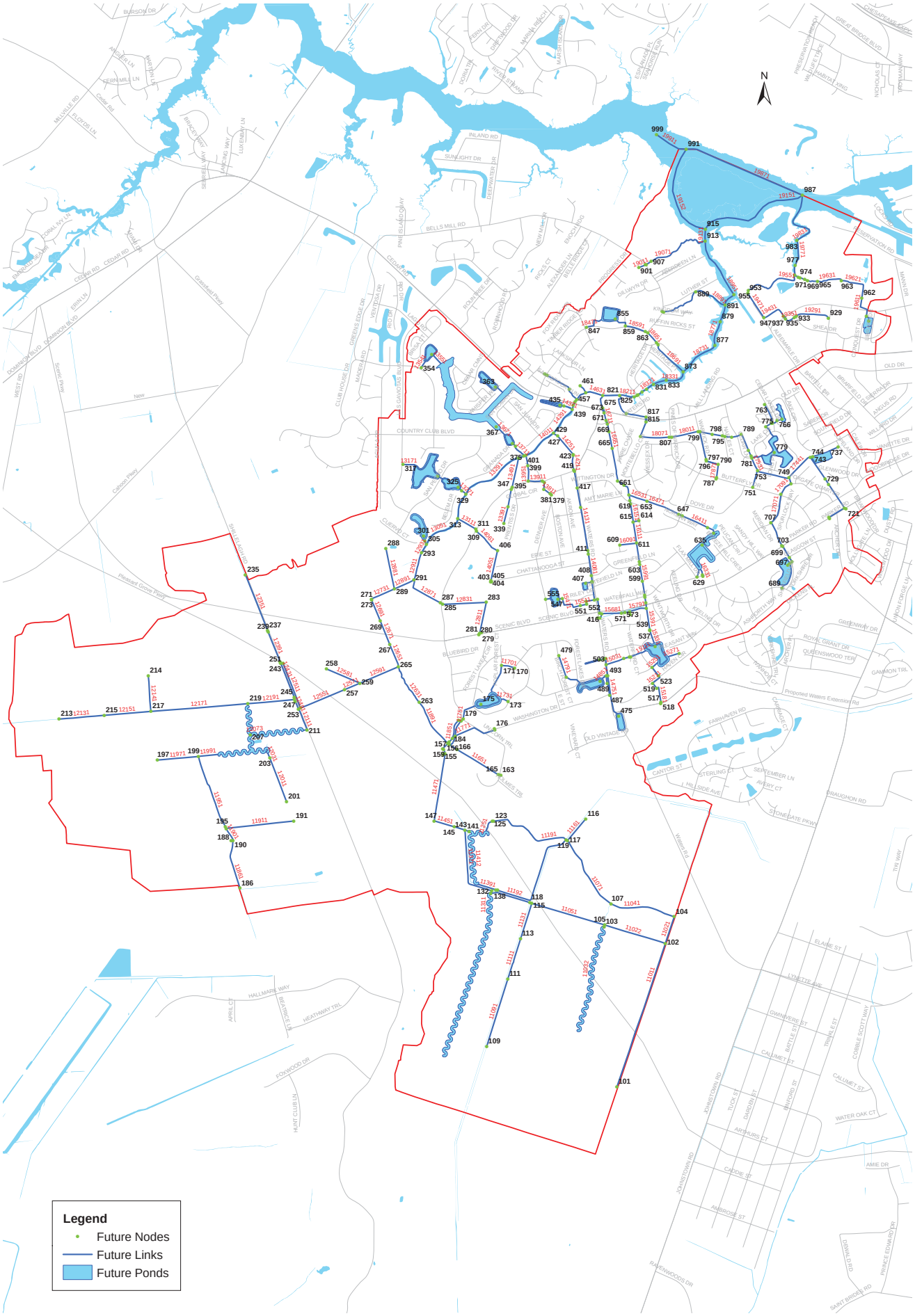
Figure 5. Potential Increase In Imperviousness



See GIS for Complete Details

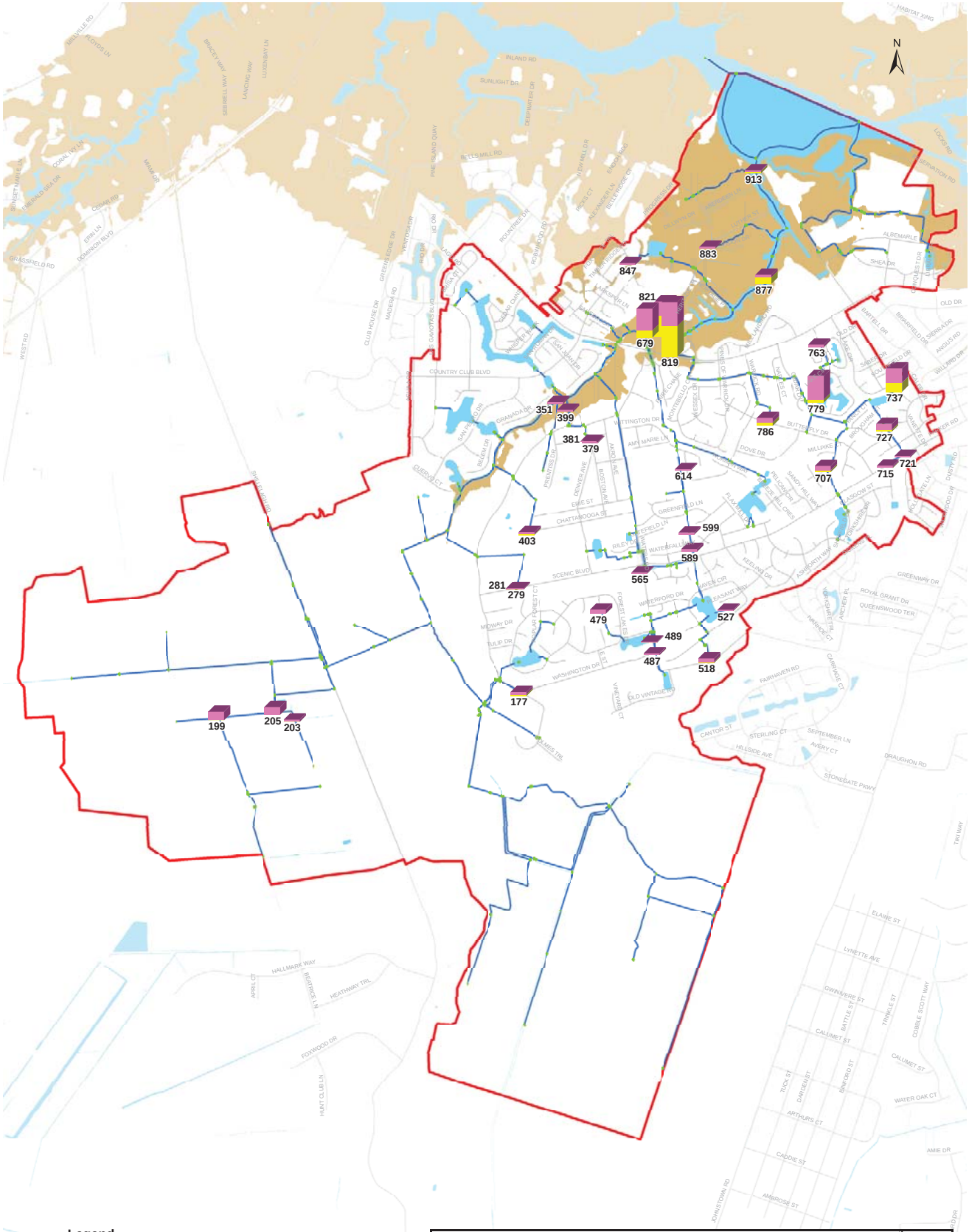
Figure 6. Link-Node Diagram - Existing Conditions and Surveyed Locations



0 1,125 2,250 4,500 Feet

See GIS for Complete Details

Figure 7. Link-Node Diagram - Future Conditions



Legend

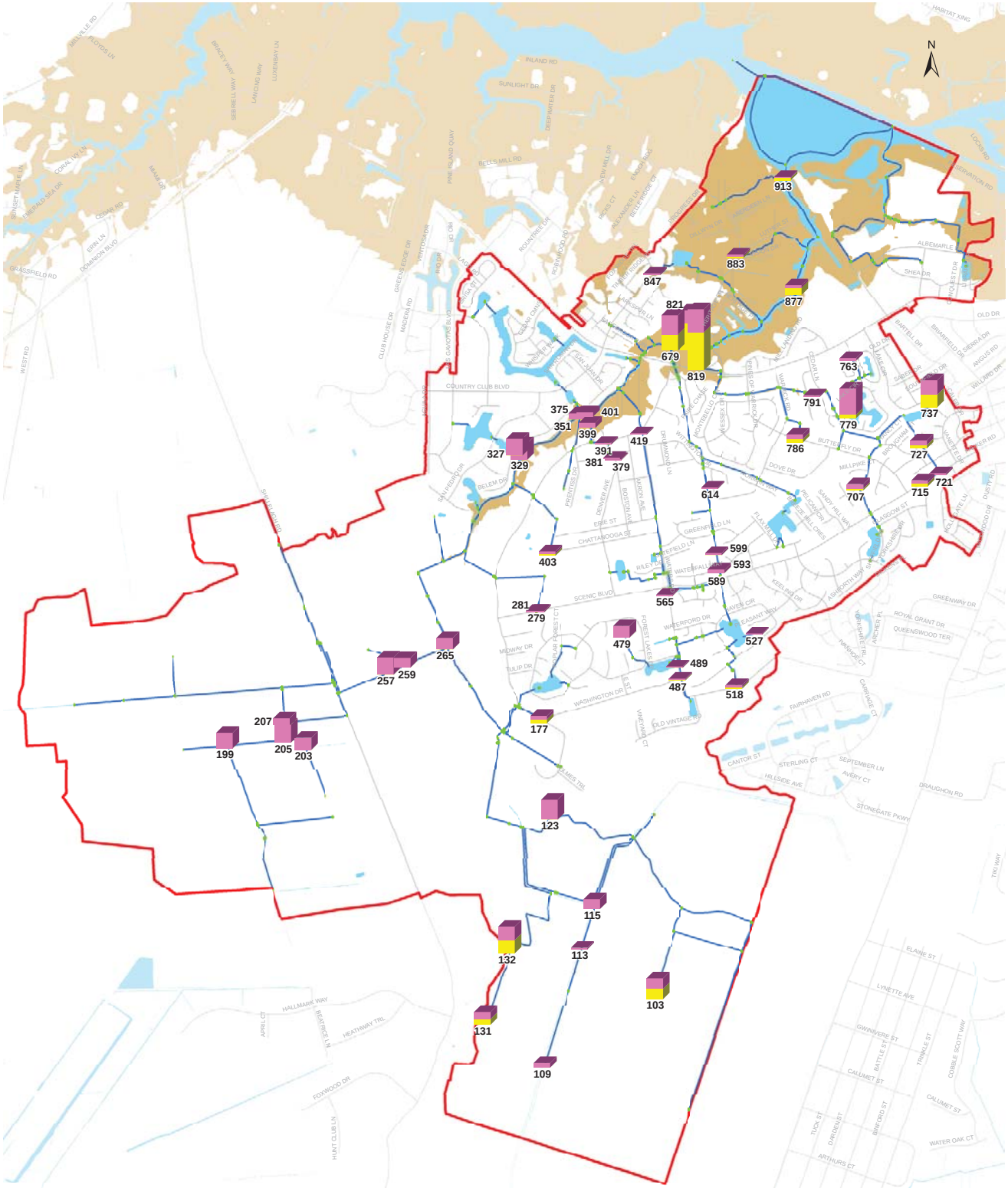
- Existing Nodes
- Existing Links
- Relative Volume
- 50-year Adtl. Flood Vol., cf
- 10-year Flood Vol., cf
- Low Topography

0 1,125 2,250 4,500 Feet

See GIS for Complete Details

Nodal Flooding Volumes for Existing Drainage / Existing Hydrology, ft^3								
Node #	10-year	50-year	Node #	10-year	50-year	Node #	10-year	50-year
177	24,000	59,000	487	-	24,000	727	28,000	111,000
199	-	122,000	489	-	13,000	737	131,000	337,000
203	-	31,000	518	12,000	66,000	763	-	34,000
205	-	110,000	527	-	15,000	779	44,000	380,000
279	-	15,000	565	-	14,000	786	49,000	114,000
281	-	19,000	589	-	36,000	819	437,000	778,000
351	-	24,000	599	-	26,000	821	301,000	509,000
379	-	10,000	614	-	16,000	847	-	24,000
381	-	10,000	679	99,000	412,000	877	94,000	131,000
399	-	29,000	707	24,000	88,000	883	-	23,000
403	12,000	43,000	715	10,000	35,000	913	31,000	44,000
479	-	57,000	721	-	20,000			

Figure 8. Flooding for 10-Yr and 50-Yr Storms: Existing Hydrology, Existing Drainage (Scenario 1)



Nodal Flooding Volumes for Existing Drainage / Future Hydrology, ft^3								
Node #	10-year	50-year	Node #	10-year	50-year	Node #	10-year	50-year
103	144,000	293,000	329	-	230,000	599	-	29,000
109	-	63,000	351	-	85,000	614	-	16,000
113	-	20,000	375	-	68,000	679	224,000	497,000
115	-	137,000	379	-	11,000	707	25,000	89,000
123	-	278,000	381	-	15,000	715	41,000	83,000
131	80,000	179,000	391	-	21,000	721	-	27,000
132	187,000	377,000	399	-	71,000	727	47,000	114,000
177	52,000	103,000	401	-	61,000	737	177,000	380,000
199	-	217,000	403	28,000	62,000	763	-	34,000
203	-	170,000	419	-	16,000	779	50,000	420,000
205	-	253,000	479	-	161,000	786	49,000	114,000
207	-	92,000	487	11,000	27,000	791	-	17,000
257	-	241,000	489	-	16,000	819	536,000	861,000
259	-	135,000	518	23,000	53,000	821	379,000	559,000
265	-	161,000	527	-	15,000	847	-	24,000
279	-	21,000	565	-	14,000	877	101,000	137,000
281	10,000	26,000	589	-	40,000	883	24,000	49,000
327	-	232,000	593	-	12,000	913	32,000	45,000

Legend

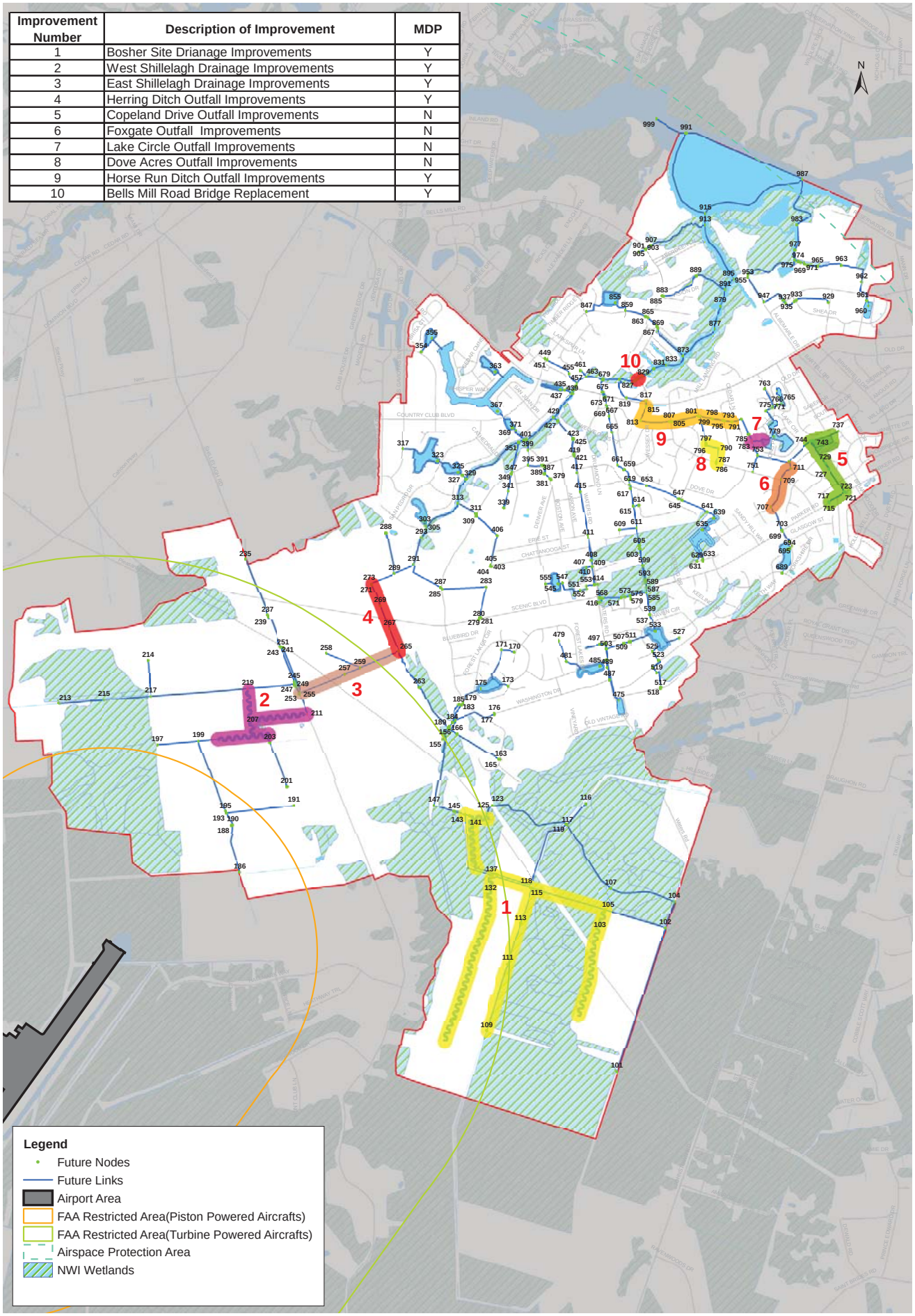
- Existing Nodes
- Existing Links
- Relative Volume
- 50-year Adtl. Flood Vol., cf
- 10-year Flood Vol., cf
- Low Topography

0 1,125 2,250 4,500 Feet

See GIS for Complete Details

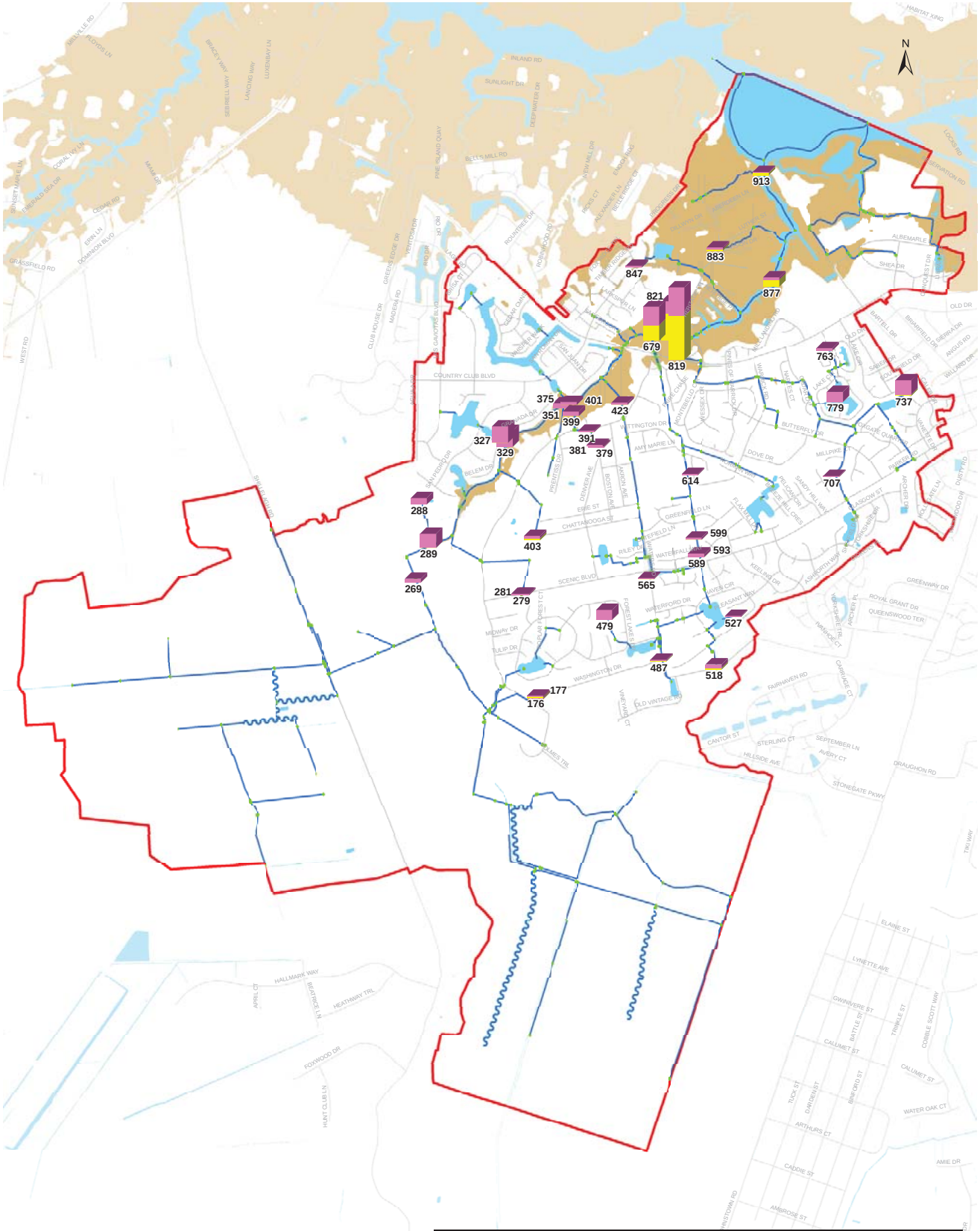
Figure 9. Flooding for 10-Yr and 50-Yr Storms: Future Hydrology, Existing Drainage (Scenario 2)

Improvement Number	Description of Improvement	MDP
1	Bosher Site Drianage Improvements	Y
2	West Shillelagh Drainage Improvements	Y
3	East Shillelagh Drainage Improvements	Y
4	Herring Ditch Outfall Improvements	Y
5	Copeland Drive Outfall Improvements	N
6	Foxgate Outfall Improvements	N
7	Lake Circle Outfall Improvements	N
8	Dove Acres Outfall Improvements	N
9	Horse Run Ditch Outfall Improvements	Y
10	Bells Mill Road Bridge Replacement	Y



See GIS for Complete Details

Figure 10. Future Improvements with Wetlands Underlay



Legend

- Future Nodes
- Future Links
- Relative Volume
- 50-year Adtl. Flood Vol., cf
- 10-year Flood Vol., cf
- Low Topography

0 1,125 2,250 4,500 Feet

See GIS for Complete Details

Nodal Flooding Volumes for Future Drainage / Future Hydrology, ft^3								
Node #	10-year	50-year	Node #	10-year	50-year	Node #	10-year	50-year
176	14,000	30,000	391	-	20,000	614	-	16,000
177	11,000	35,000	399	-	64,000	679	224,000	494,000
269	-	54,000	401	-	42,000	707	-	12,000
279	-	21,000	403	28,000	65,000	737	20,000	226,000
281	10,000	26,000	423	-	30,000	763	-	33,000
288	-	91,000	479	-	142,000	779	-	145,000
289	-	204,000	487	11,000	27,000	819	635,000	1,051,000
327	-	235,000	518	23,000	76,000	821	386,000	566,000
329	-	230,000	527	-	15,000	847	-	24,000
351	-	65,000	565	-	15,000	877	100,000	136,000
375	-	49,000	589	-	39,000	883	24,000	49,000
379	-	12,000	593	-	12,000	913	32,000	45,000
381	-	17,000	599	-	29,000			

Figure 11. Flooding for 10-Yr and 50-Yr Storms: Future Hydrology, Future Drainage (Scenario 3)