

Blues
Stinnett
Gorton
Farmer
Martin
Henson
Lane

A G E N D A

Special Environmental Quality Committee

June 21, 2011

11:00 A.M.

1. Remedial Measures Plan/Design Storm (Level of Service)
Recommendation (1-28)
2. Schedule Special Committee Meeting:
Tuesday August 23, 2011 11:00AM
3. Other Business

"Environmental Quality Committee, to which shall be referred matters relating to the Department of Environmental Quality and its divisions, and any related partner agencies."

-Council Rules & Procedures, Section 2.102(1)
Effective January 1, 2011. Adopted by Urban County Council October 14, 2010

Committee Schedule 3:00 PM except noted

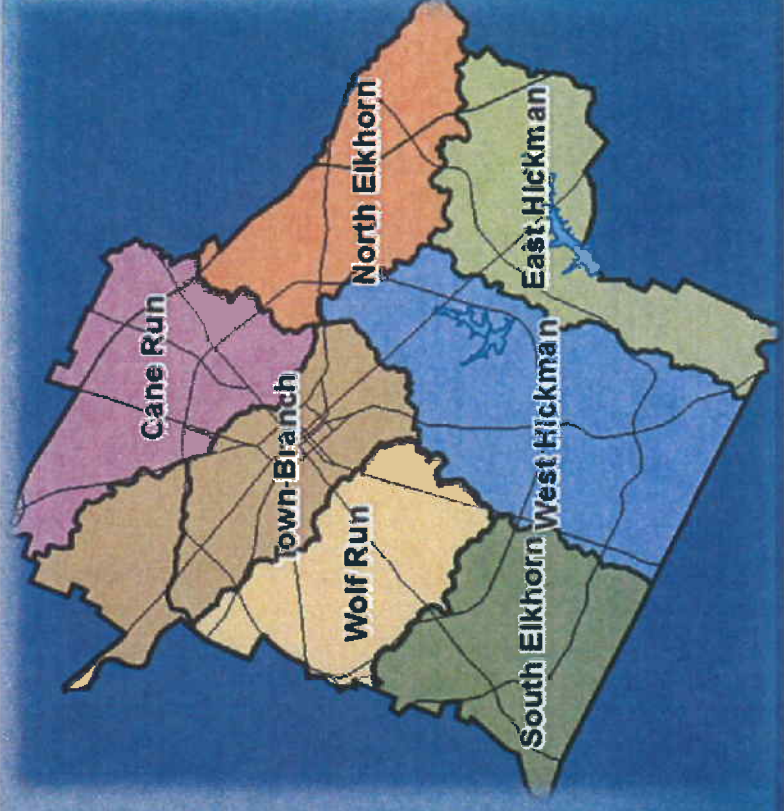
September 20
November 29

Remedial Measures Plans Response to EQC Questions



Presentation to Lexington-Fayette Urban County Government Environmental Quality Committee

June 21, 2011



Agenda



- Preliminary cost estimate details
- Potential penalties for non-compliance and post-RMP SSOs
- Precedents from other communities
- Resolution of high-profile problem areas
- Construction management – internal vs. external
- Issues previously addressed
- Critical issues yet to be addressed

Background Information



- RMP being developed per CD requirements
- Group 1 RMP due October 2011
- Critical Issue -- selection of Level of Service (Design Storm)
- Potential costs - \$500+ to \$800+ million
- EPA likely to require at least a 2-yr design storm (matches Capacity Assurance criteria and precedents)

Monthly Rate Impacts (20-yr Loan)



Storm	Rainfall	Estimated Cost	Rate Impacts
2-Year	3.2"	\$540 million	\$28.25
5-Year	3.8"	\$718 million	\$37.57
10-Year	4.3"	\$814 million	\$42.59

Potential monthly rate increases are based on financing capital improvements for 20 years at 3%, spread to 106,000 customer accounts.

Rate increases would be implemented over 10 years.

Monthly Rate Impacts (30-yr Loan)



Storm	Rainfall	Estimated Cost	Rate Impacts
2-Year	3.2"	\$540 million	\$21.48
5-Year	3.8"	\$718 million	\$28.56
10-Year	4.3"	\$814 million	\$32.38

Potential monthly rate increases are based on financing capital improvements for 30 years at 3%, spread to 106,000 customer accounts.

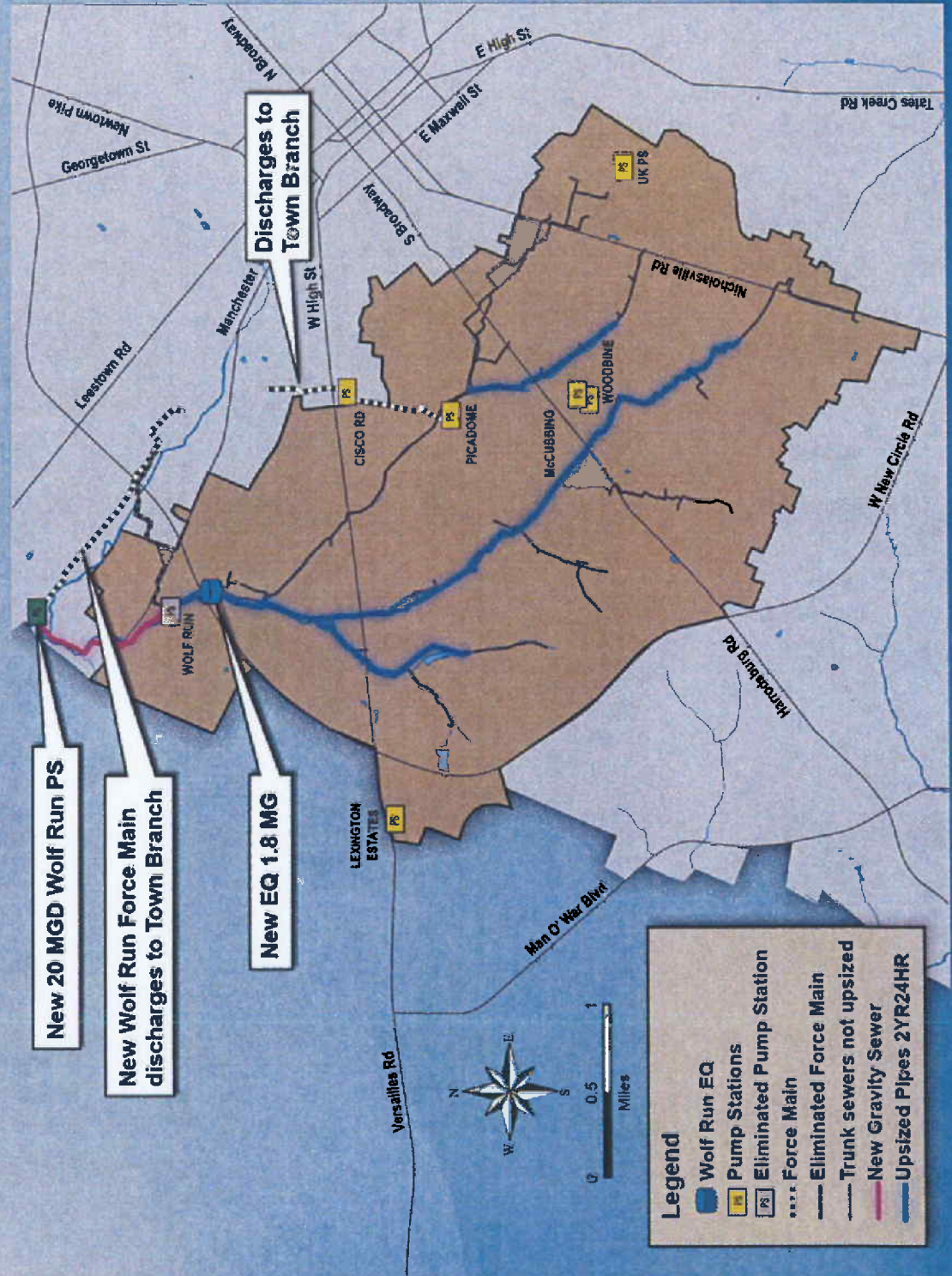
Rate increases would be implemented over 10 years.

Cost Estimate Details

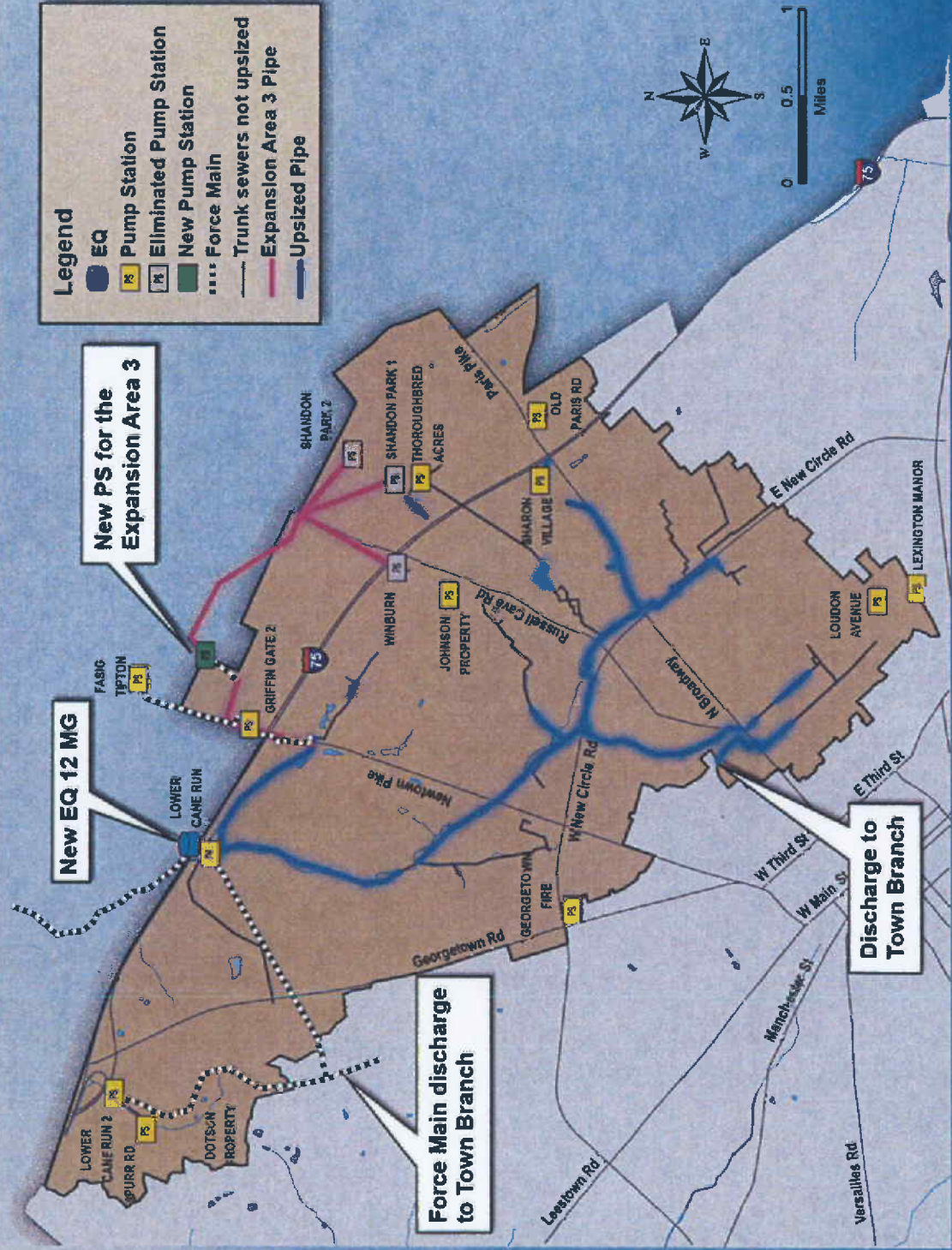


- Maps of 2-yr storm upgrades (7 watersheds)
- Map of 5-yr storm upgrades (for representative West Hickman watershed)
- Map of 10-yr storm upgrades (for representative West Hickman watershed)
- Table of 2-yr, 5-yr, 10-yr system costs (pipes, EQ, WWTPs)
- Initial estimates assume no I&I reduction
- Improvements shown are for initial concept – final solutions will vary (i.e. including rehab, etc.)

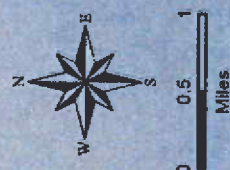
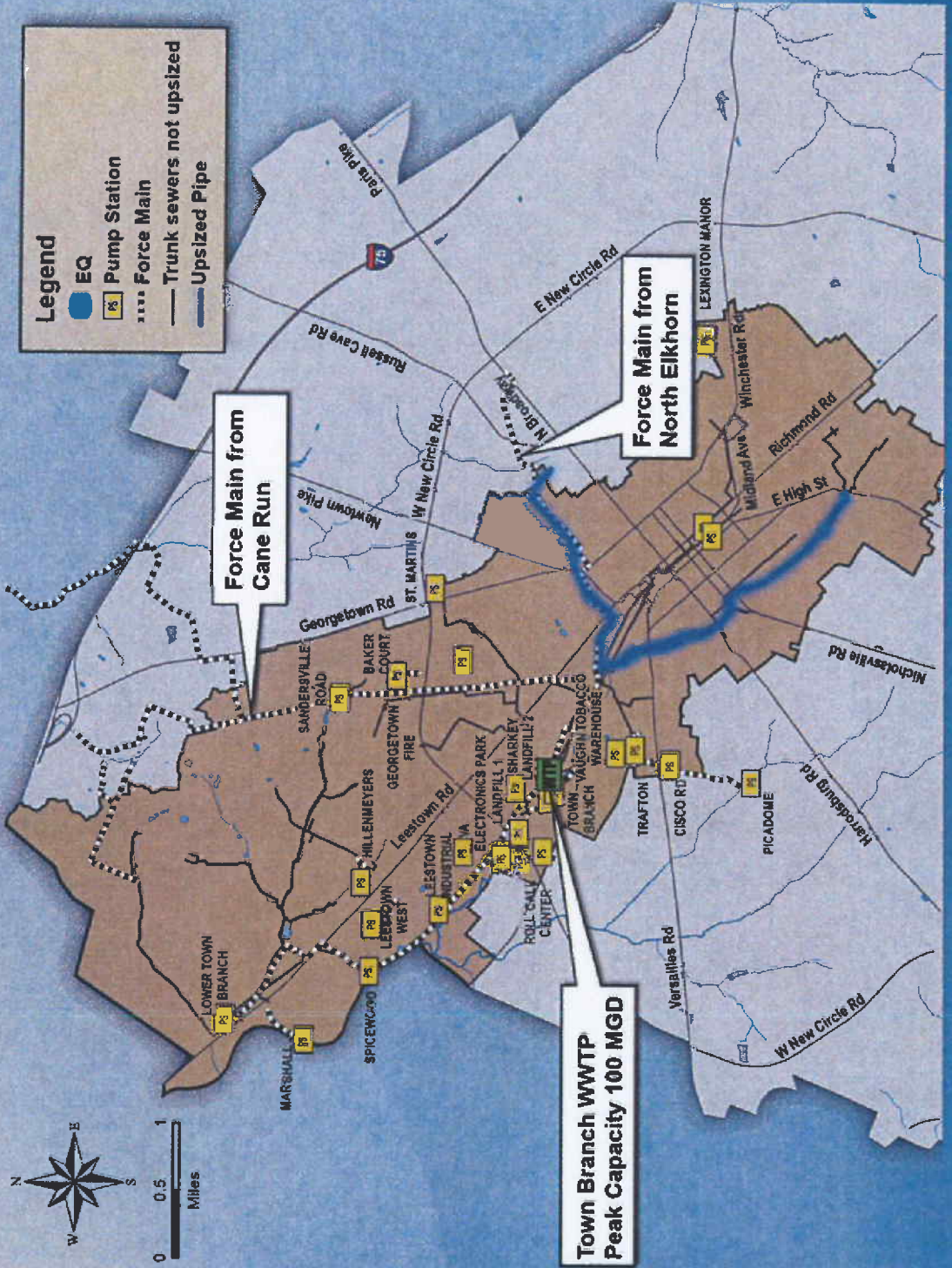
Wolf Run Improvements: 2-Year LOS



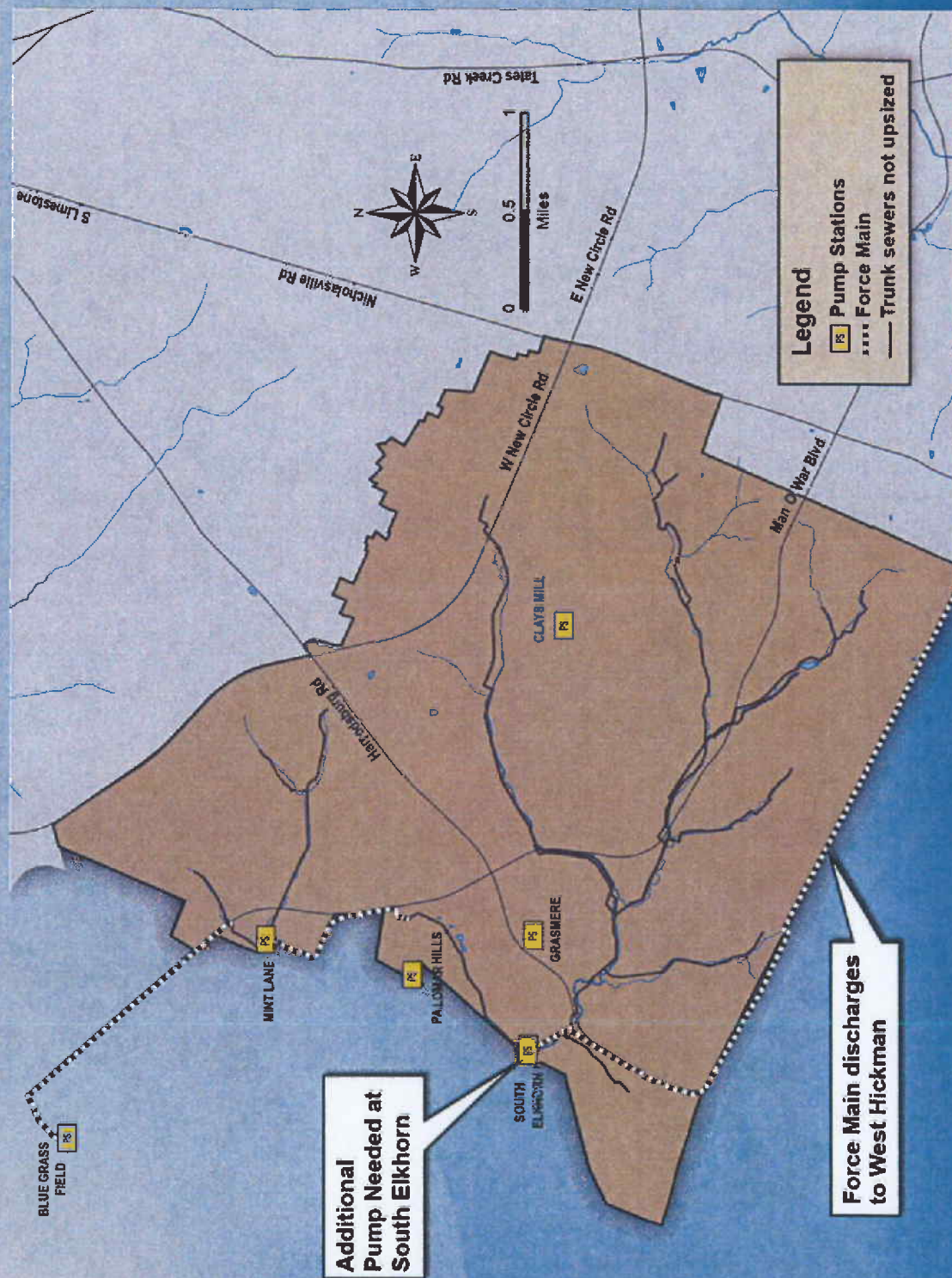
Cane Run Improvements: 2-Year LOS



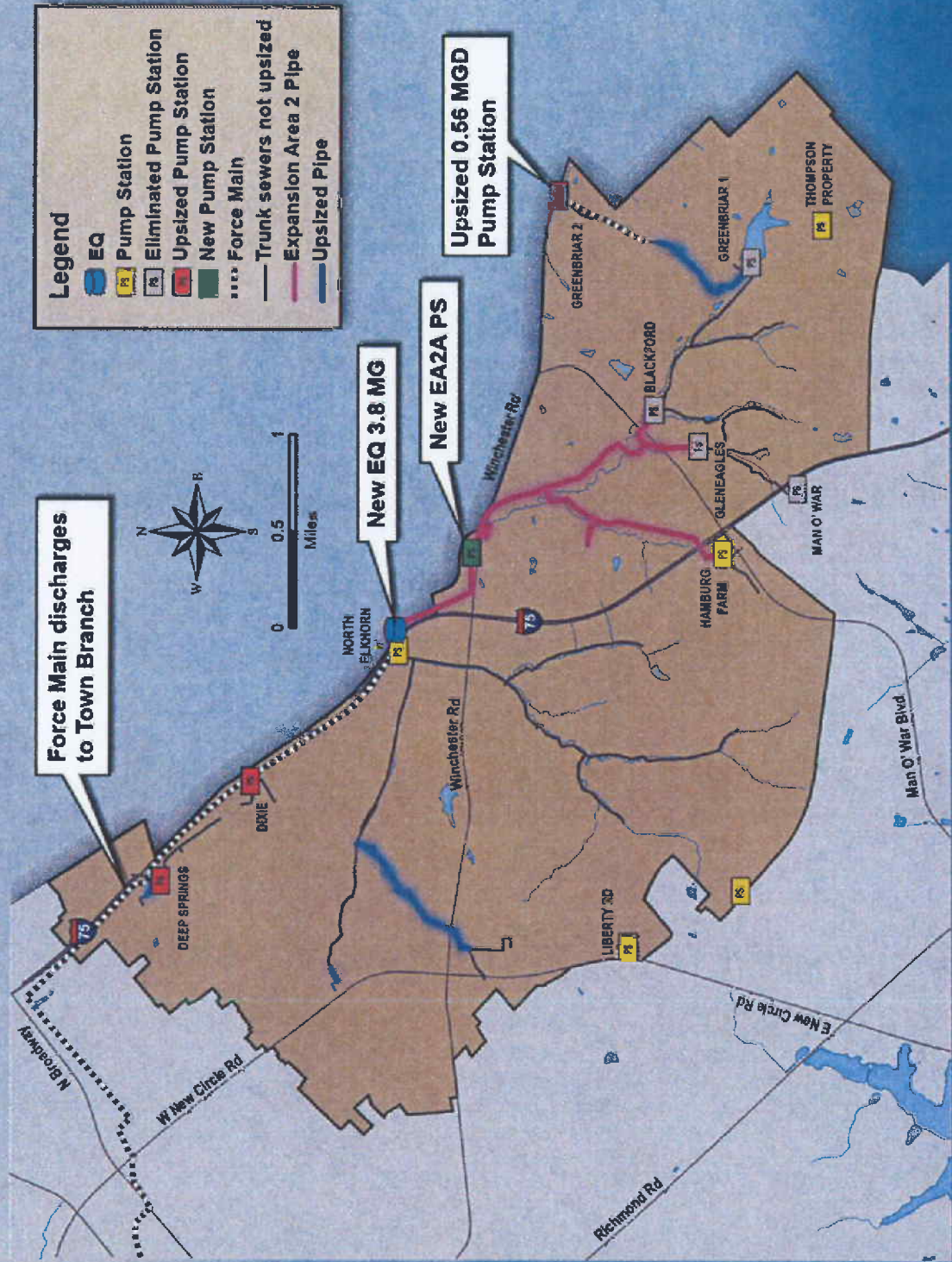
Town Branch Improvements: 2-Year LOS



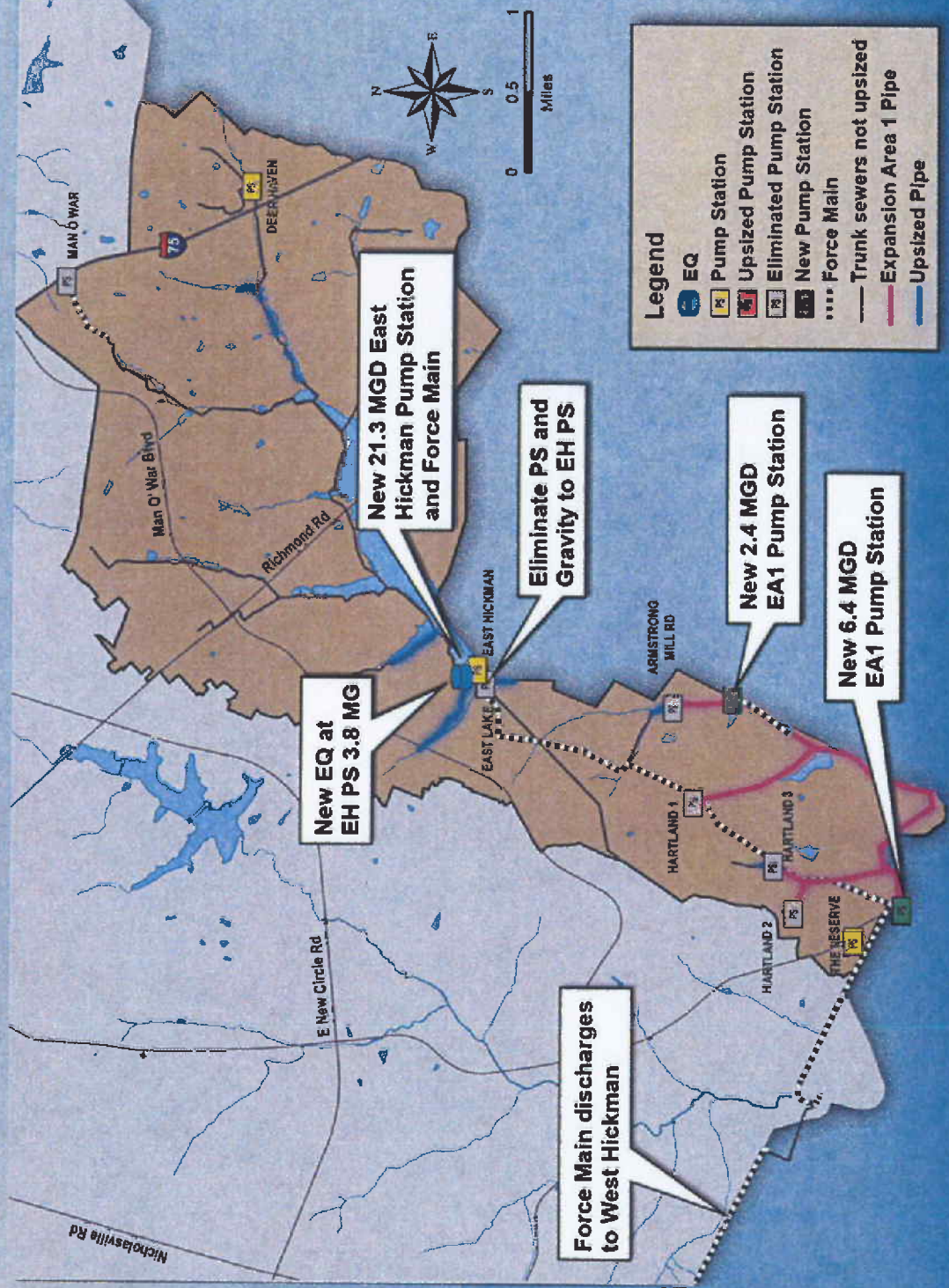
South Elkhorn Improvements: 2-Year LOS



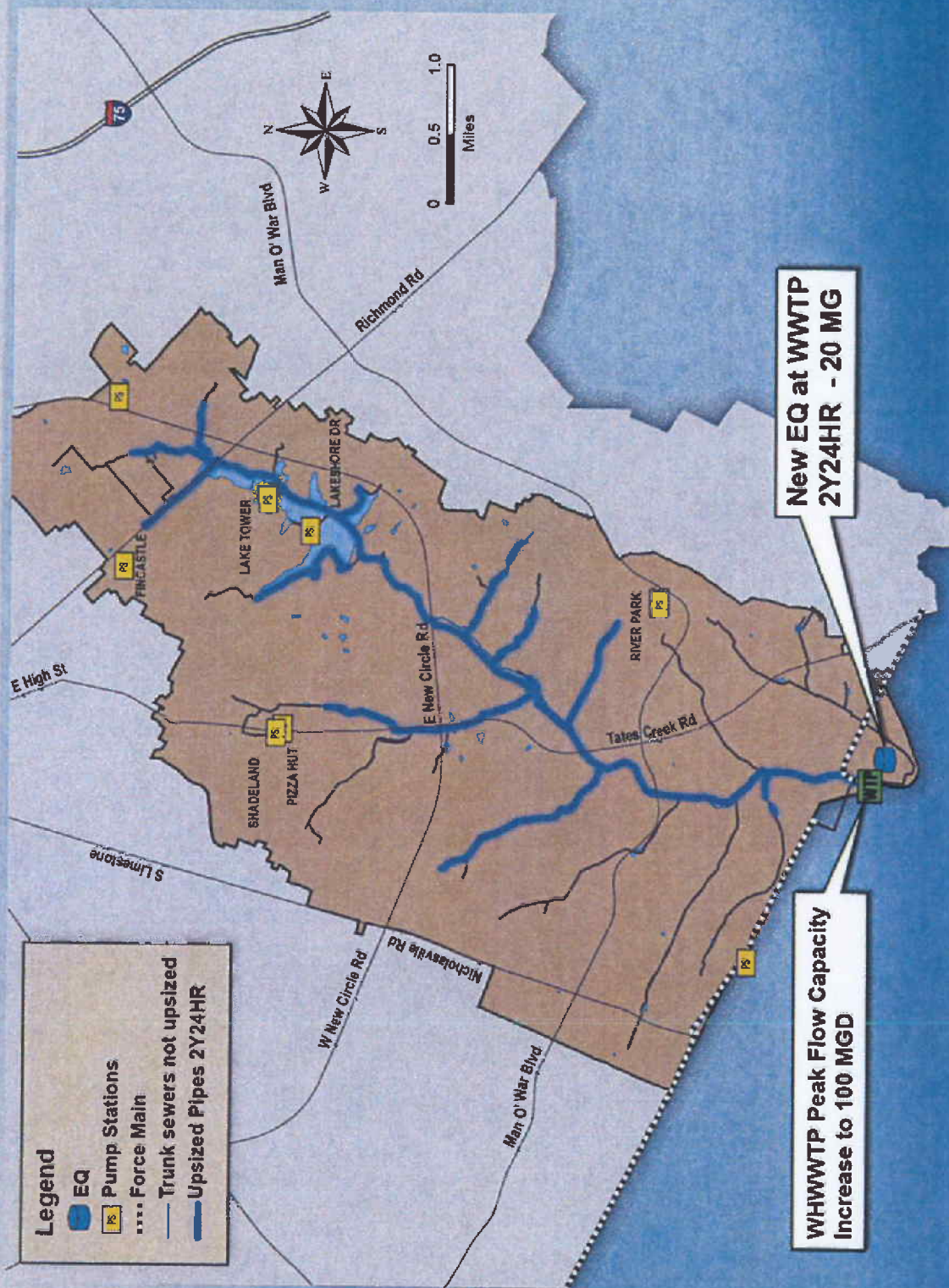
North Elkhorn Improvements: 2-Year LOS



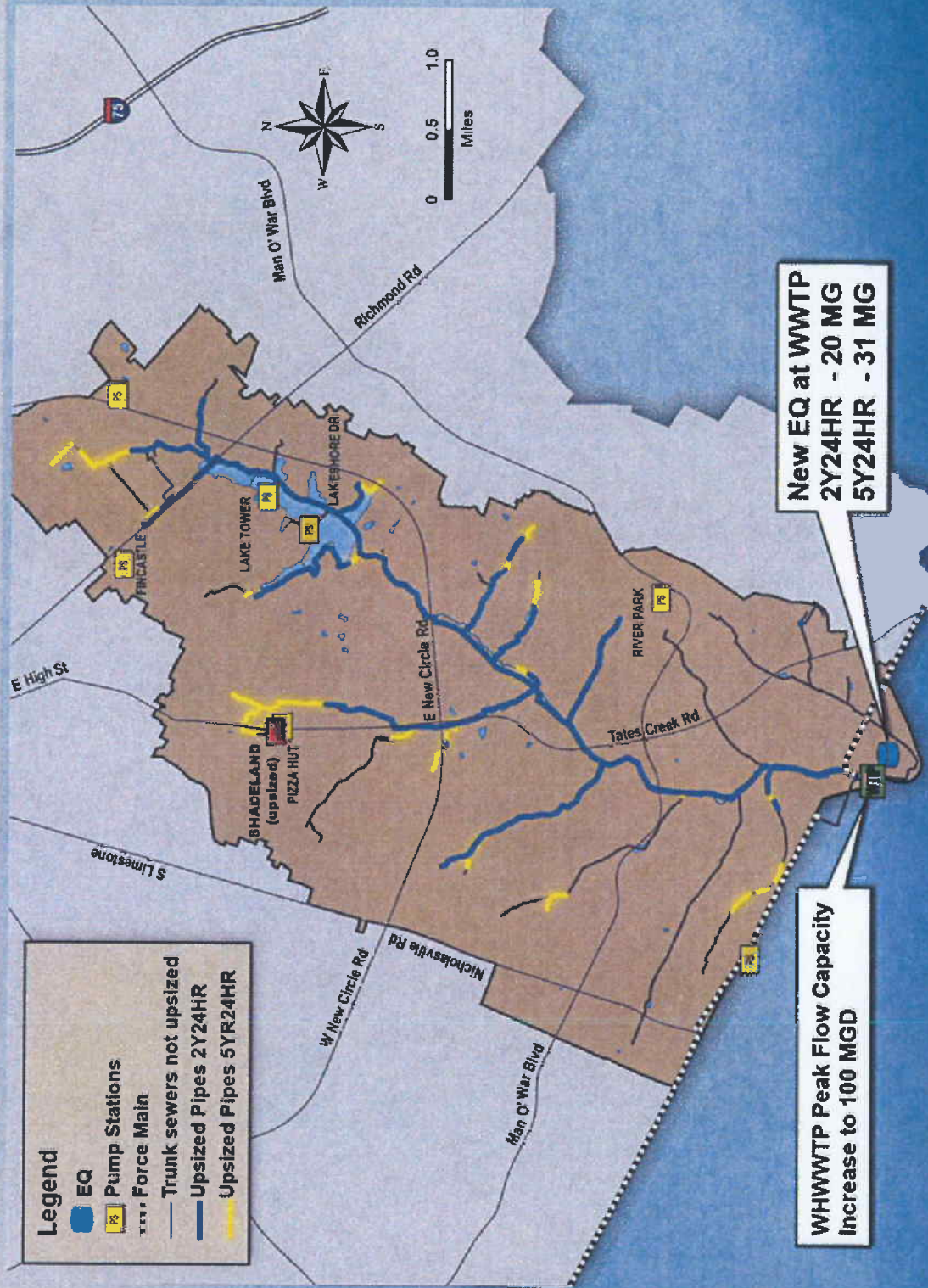
East Hickman Improvements: 2-Year LOS



West Hickman Improvements: 2-Year LOS



West Hickman Improvements: 5-Year LOS



West Hickman Improvements: 10-Year LOS

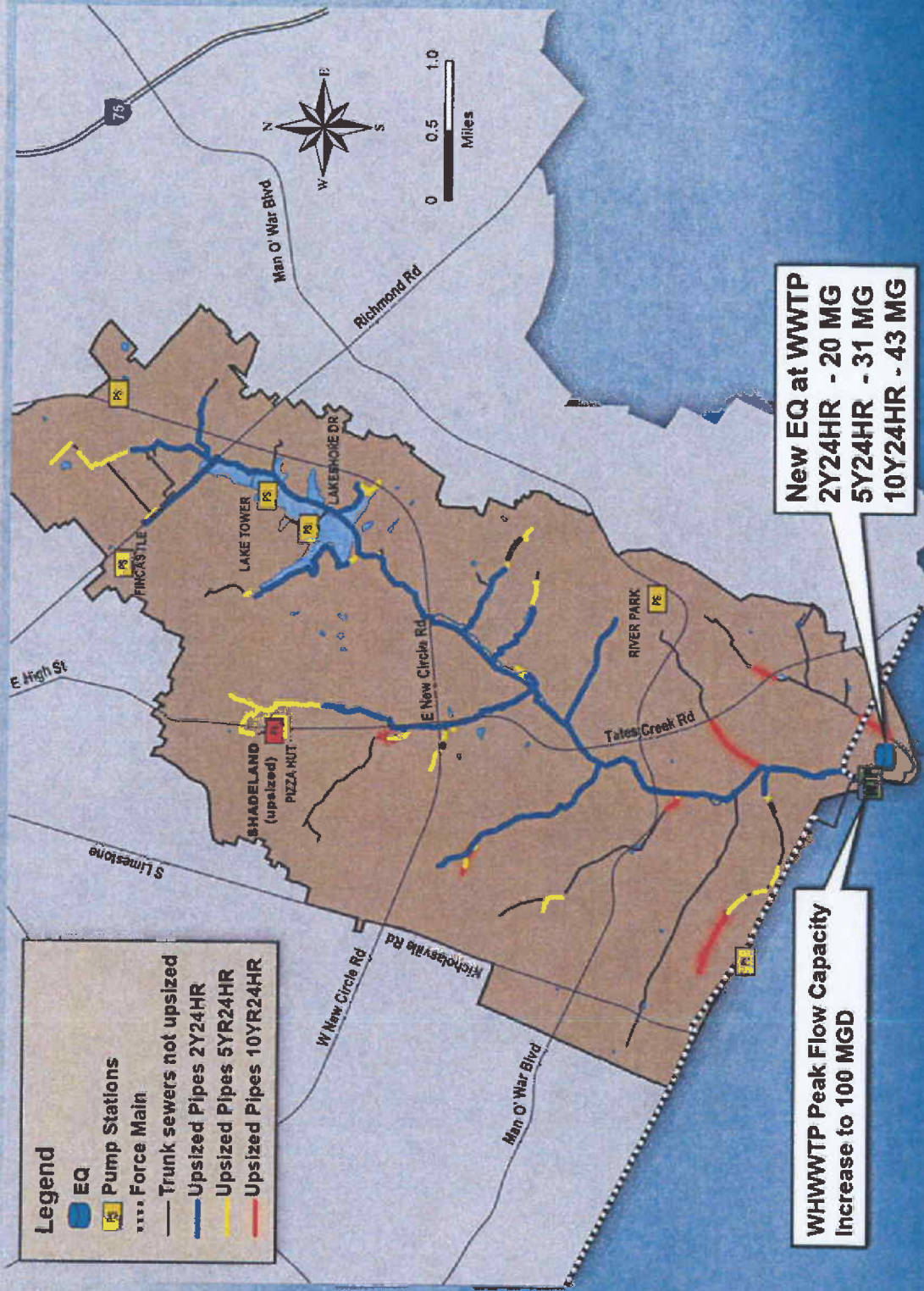




Table of 2, 5, 10-yr Storm Costs

RMP Preliminary Capital Cost vs LOS				
	2Yr 24HR	5Yr 24HR	10Yr 24HR	
Item	Quantity	Quantity	Quantity	
≤15" (ft)	57,300	60,200	57,700	
18"-24" (ft)	115,600	131,000	134,400	
27"-36" (ft)	31,000	53,500	62,000	
42"-54" (ft)	26,000	26,700	30,400	
60"-72" (ft)	13,500	23,500	22,800	
>72" (ft)	-	5,900	6,600	
Force Main (ft)	37,600	37,600	37,600	
Subtotal Pipe (ft)	281,000	338,400	351,500	
PS Improvements (MGD)	40	42	44	
EQ (MGAL)	40	64	99	
WWTP Improvements (ea)	2	2	2	
Total Capital Cost (\$M)	\$ 540	\$ 718	\$ 826	

Potential Regulatory Penalties



- Fines
 - Any SSO after its elimination deadline
 - \$1000 to \$5000 depending on volume
- Frame of reference: 2008-2010
 - Average 480 SSOs per year
 - Financial penalties would have ranged from \$480,000 to \$2,400,000 per year

Related Design Storm Issues



- 2-year storm is likely the smallest storm EPA would consider
- Selection of 2-year storm would result in lowest cost and lowest rate increases
- Selection of larger storm event would have higher costs, but would have less SSOs, less residential impacts, and less regulatory fines
 - Building improvements for the 2-year storm would result in an estimated 13 SSOs during a 5-year storm, and 53 SSOs during a 10-year storm

Precedents – Design Storm



- Louisville MSD: 2-year
- Knoxville: 2-year
- Nashville: 2-year
- Northern KY SD1: 2-year
- Atlanta, GA: 2-year
- Greenville, SC: 2-year
- Winchester: 5-year
- Birmingham, AL: 10-year
- Richmond, VA: 2- and 10-year (TBD)
- Pittsburgh, PA: 2- and 10-year (TBD)

Precedents – Cost Recovery

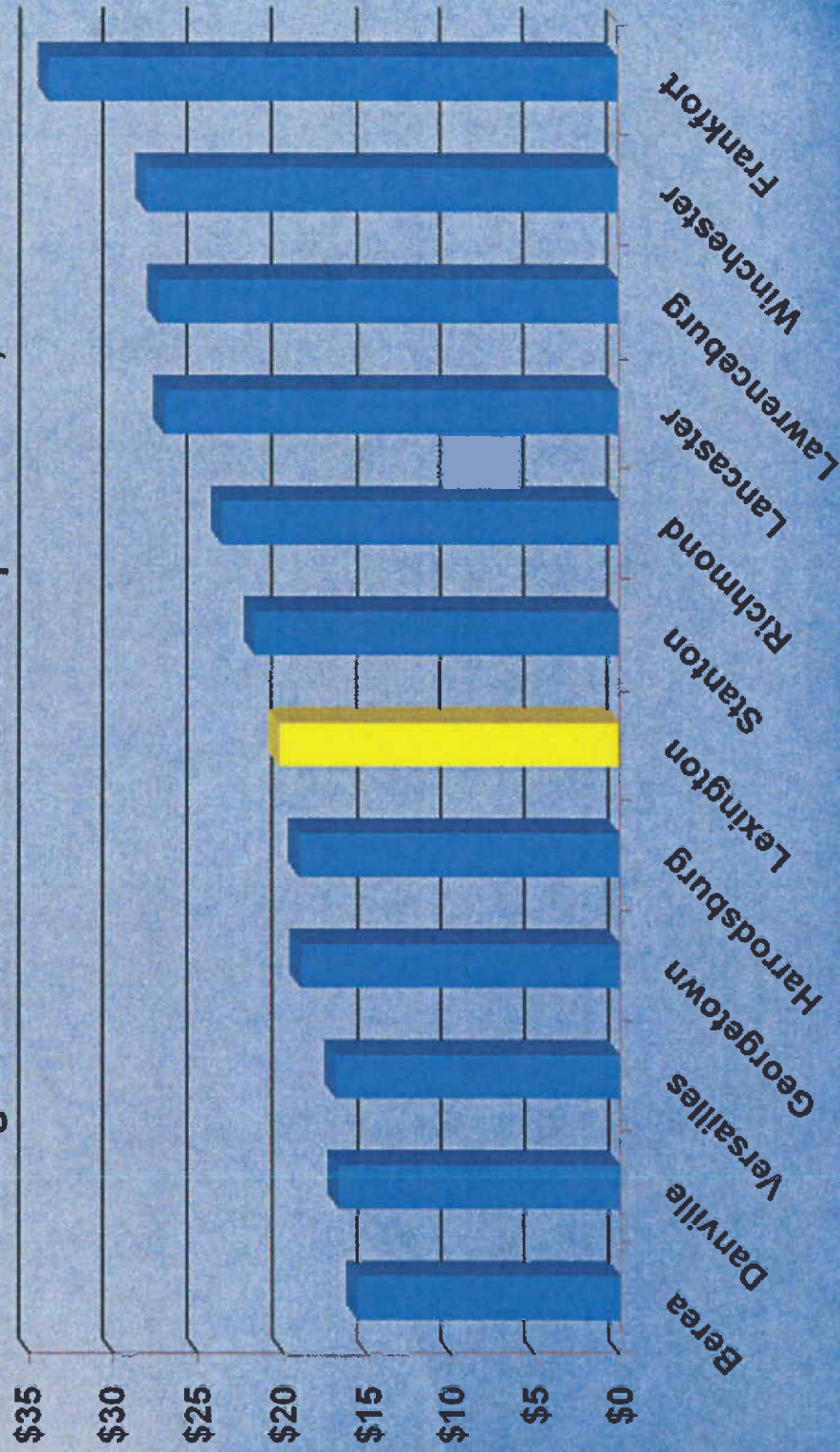


- Louisville MSD: Water usage + surcharge
- Northern KY SD1 : Water usage
- Knoxville: Water usage
- Nashville: Water usage
- Winchester: Water usage
- Richmond: Water usage
- Frankfort: Water usage

Other Current Sewer Rates - BGADD

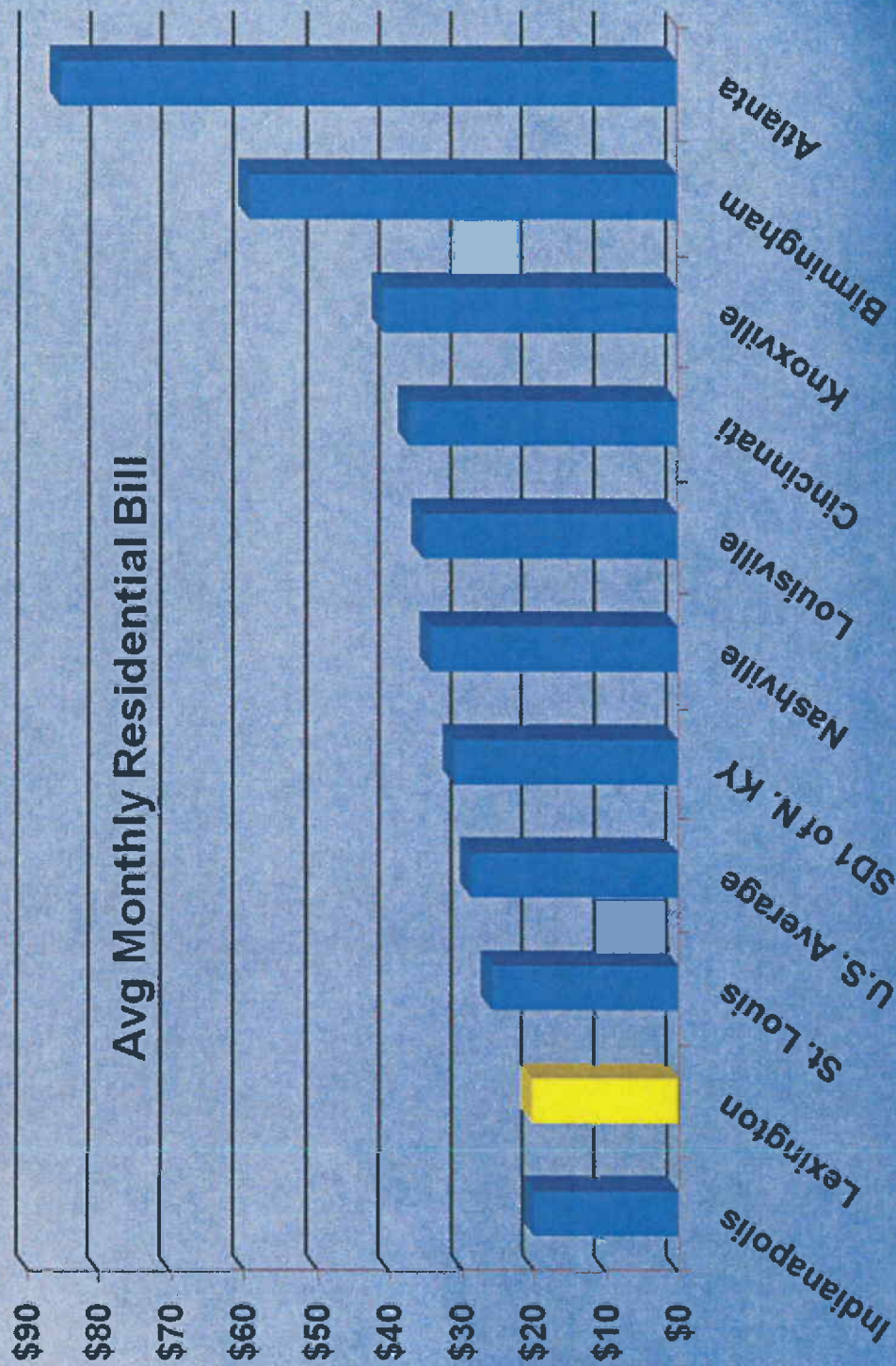


Bluegrass Area Cities Over Population 8,500



Based on 4000 gallons/month usage

Other Current Sewer Rates – Other Cities



High-profile Problem Areas to be Resolved (Group 1)



- Richmond Road / Idle Hour Neighborhood
- Woods Lane / Barrow Wood Lane
- Tates Creek Road at Malabu and Kirklevington
- Montavesta Dr / Lansdowne Merrick Park
- Bob O' Link Road
- Valley Park near Deauville Drive
- Normandy Road / Gardenside Park
- East Hickman Pump Station
- Wolf Run Pump Station
- WWTP bypasses
- Other areas to be addressed through continued funding of major I&I reduction work



Issues Already Addressed

- North Elkhorn Pump Station & Force Main
- South Elkhorn PS
- Dixie and Deep Springs (current)
- Bluegrass Airport Pump Station (current)
- Four cross connection eliminations
- Numerous collection system repairs
 - Sump pump disconnections – voluntary
 - Downspout redirections

Near-Future Work



- Wolf Run Pump Station
- Expansion Area 2A Pump Station
- Blue Sky Parkway
- Town Branch Pump Station
- Pump station eliminations
- FY12 collection system rehab

Construction Management Options



- Status Quo: DWQ Construction Manager
- Current average: \$12 million/yr (+/-)
- Potential projects: \$54 million/yr (+/-)
- Potential CM costs are included in estimates (*Inspection by design engineer*); program management by RMP consultant
- Immediate Issue – streamlining procurement for design, property acquisition, and construction

Critical Decisions Needed



- Level of Service
 - Design Storm (2-year, 5-year, 10-year)
- Initiate Private Property Policy Task Force





Questions?

