

Public Hearing

VILLAGE WASTEWATER FACILITY PLAN

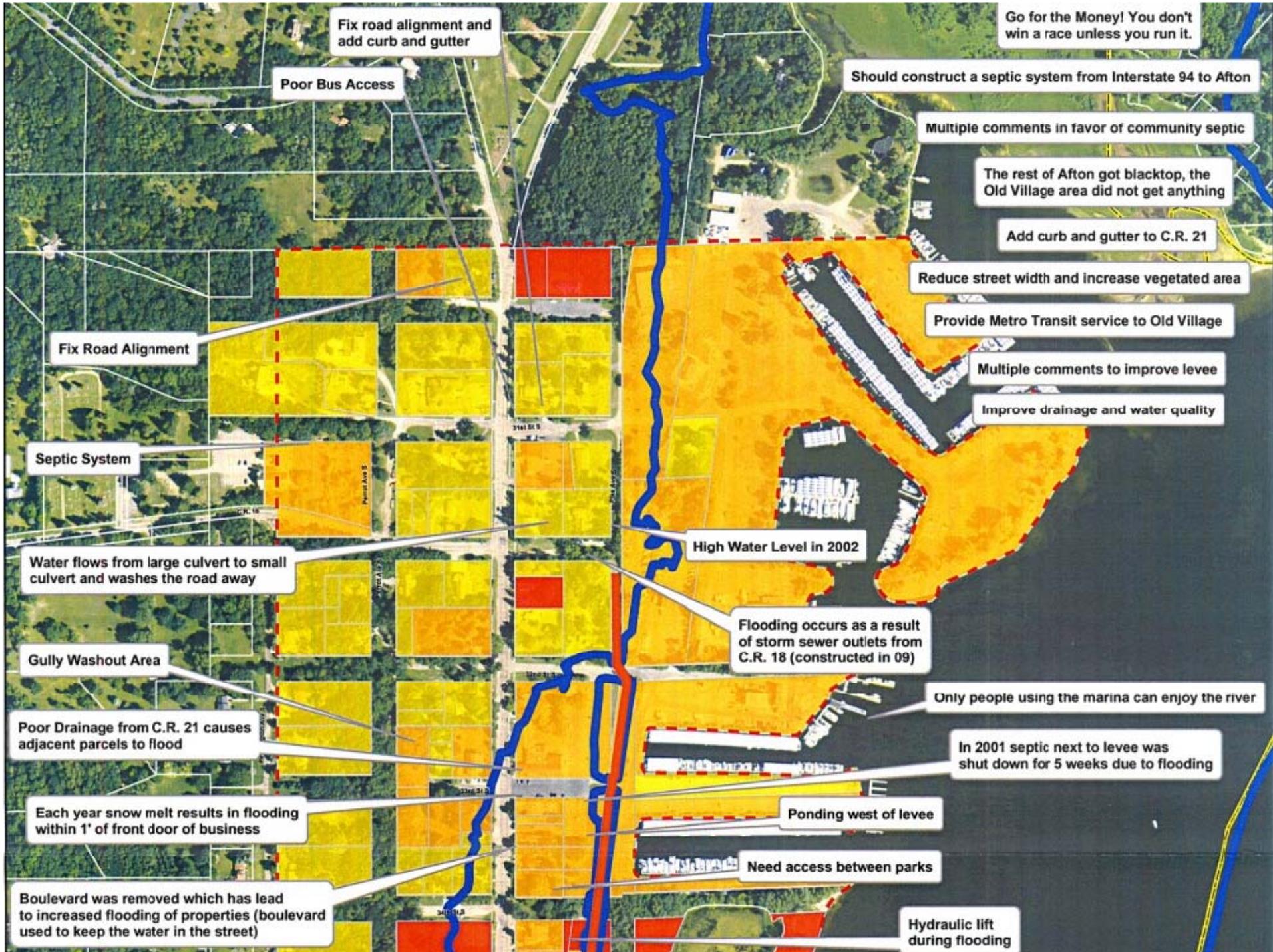
MAY 6, 2013

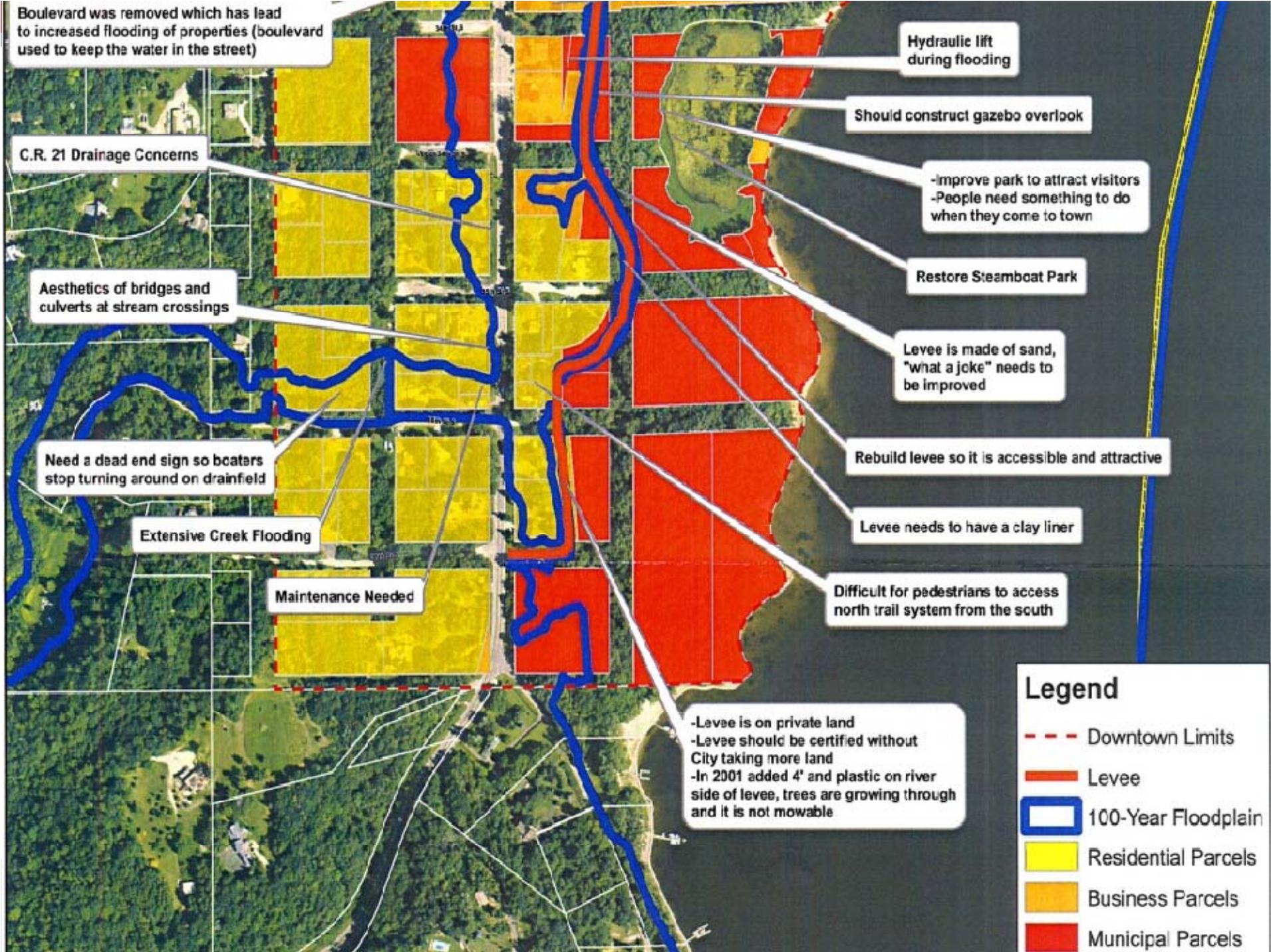
History

- Levee
 - USACOE and Accreditation
 - Seepage
 - 2001 compounded flooding issues
- Individual septic's
 - Locations
 - 1998 study
 - Density Example
- Lake St. Croix TMDL
 - Surface water

Background

- 2010 Public Process
 - Identify Issues and Needs
 - Flooding
 - Individual Subsurface Sewage Treatment System (ISTS) limitations
 - Drainage
 - Pedestrian Access
 - Parking
- 2012 Community Assessment Report completed
 - Public Facility Authority Grant
 - Evaluated existing systems





Legend

- - - Downtown Limits
- Levee
- 100-Year Floodplain
- Residential Parcels
- Business Parcels
- Municipal Parcels

Background Continued

- City came together as Community and Pursued Outside Funding
 - DNR Flood Hazard Mitigation
 - BWSR Clean Water Legacy
 - Public Facility Authority for St. Croix TMDL
 - Sanitary
 - Storm Water Quality
 - VBWD for Kelle's Creek and or BMP's
 - Washington County for CR 21
 - Other Funding Sources Applied for - Limited by MHI

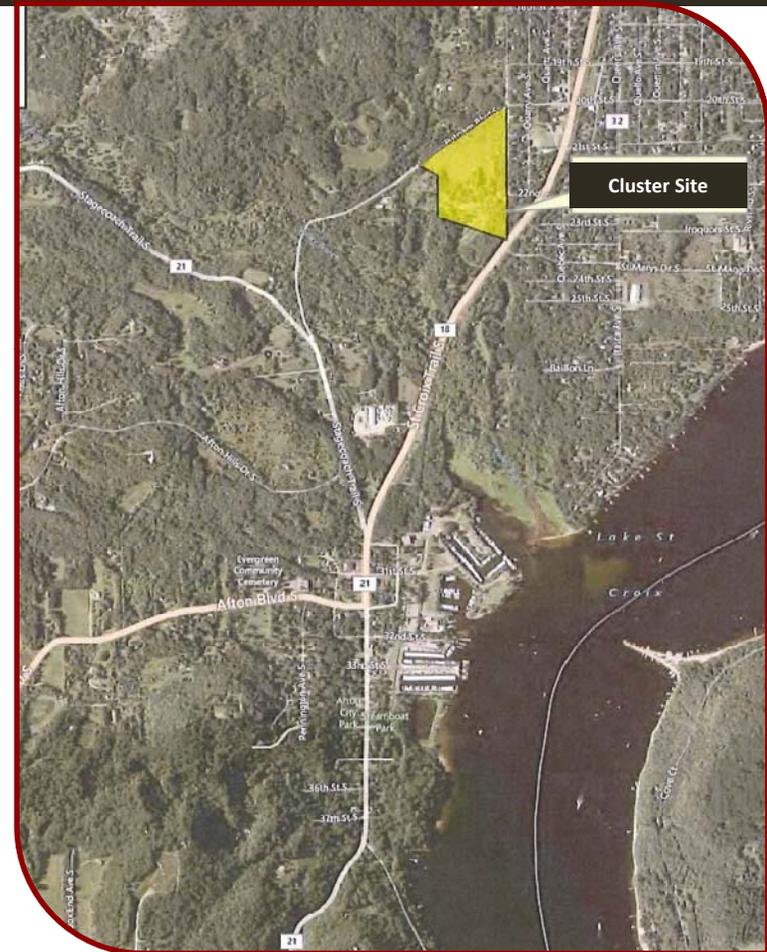
Process

- Three Public Process' in the next Year
 - Overall Project Feasibility Report
 - Proposed Improvements
 - Overall project costs and funding
 - Assessments
 - Washington County CR 21
 - Design Review Committee
 - Wastewater Facility Plan
 - Land Purchase Timing
 - Required for state grant funding through PFA
 - Due by June 1st



Community Assessment Report

- Site Evaluation
 - Outside the St. Croix Bluff Land
 - Elevation challenge— Cost to pump up Bluff to other sites
 - Visually similar to 201
 - MPCA approval of plan
- Existing Systems
 - 50% with limitations
 - 30% of the systems were non-compliant
 - Groundwater ➡ Wells
 - 20% limited lot size



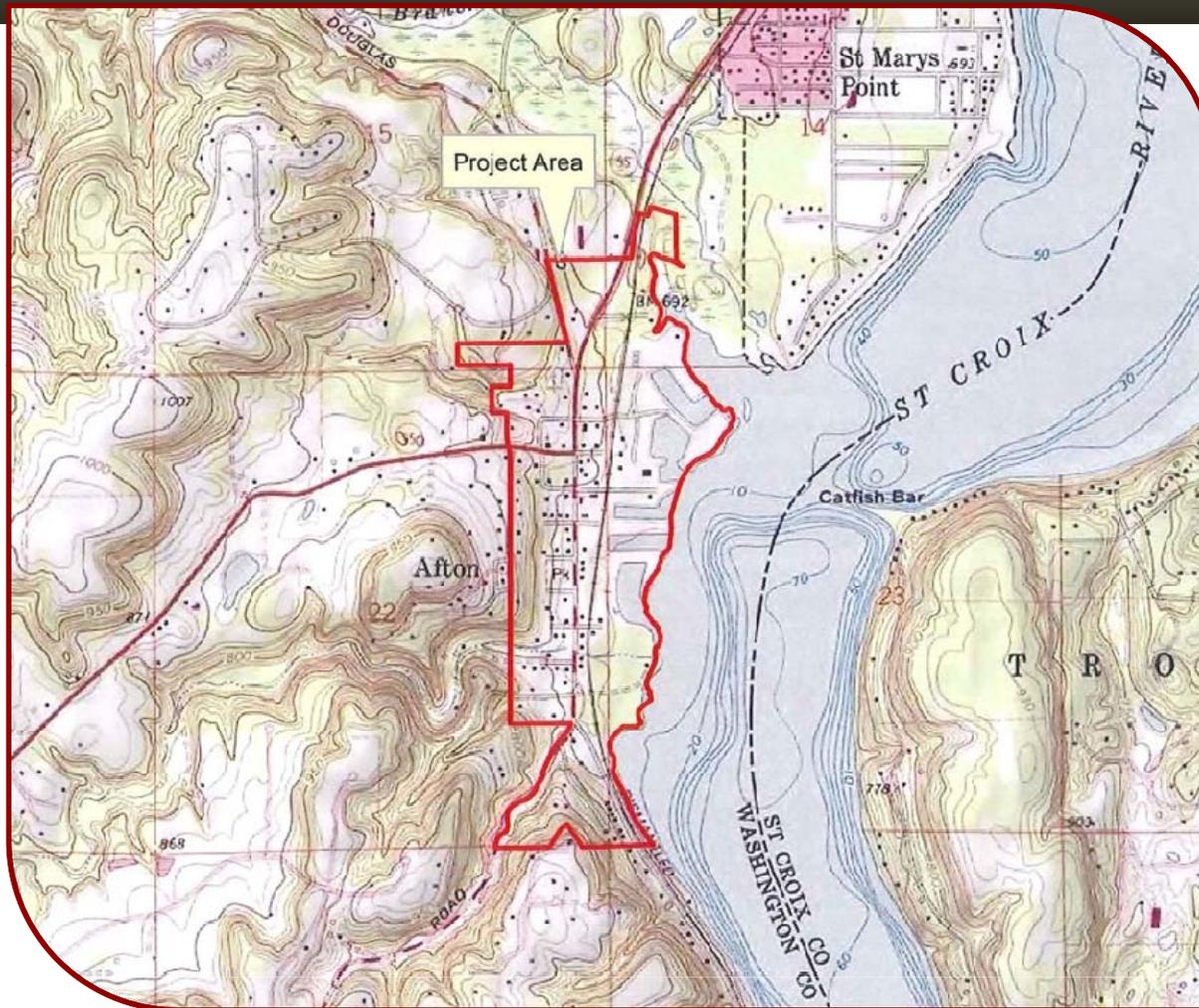
Wastewater Facility Plan

- Long-term Solutions
- Required for funding
- Impacts the viability of the entire project
- Levee tied to Septic's
- 201 System within Flood Plain

- System Capacity

Project Location/Service Area

Does not include
Pennington Avenue



Collection System Alternatives

- Gravity Collection
 - 8 inch trunk line
 - 4 to 6 inch services to R/W
 - Lift Station
 - Forcemain
 - Marina's - on site Lift Stations
- Low Pressure Forcemain
 - Additional cost and maintenance

Figure updated April, 2013



Treatment Alternatives

- No Action
- Existing homes install compliant ISTS
- Cluster LSTS for the Village
 - Recirculating Gravel Filter
 - Aerobic Treatment Unit-Attached Growth
 - Submerged Attached Growth Bioreactor
 - Anoxic Denitrification Filter
- Regionalization to MCES

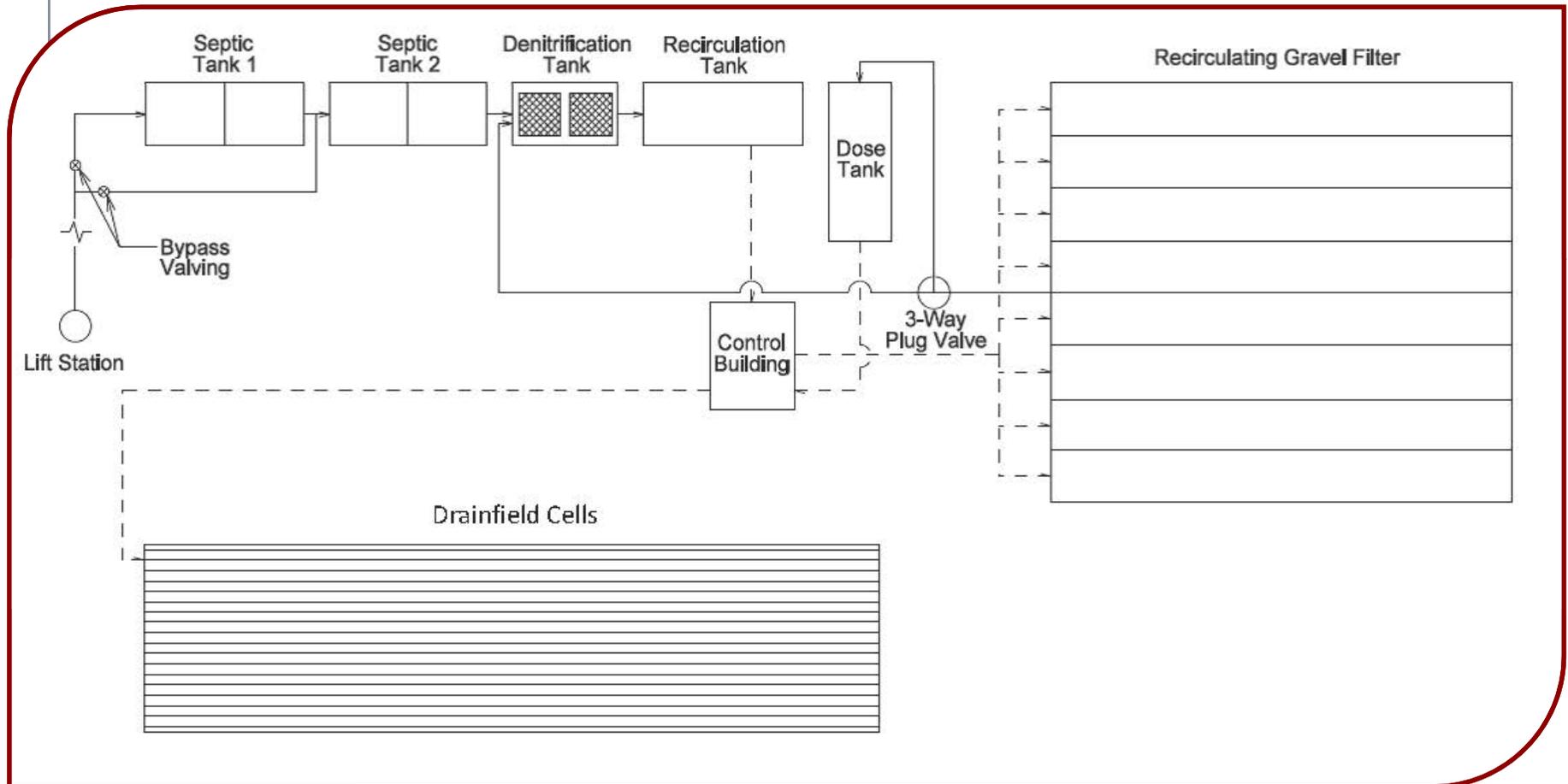


Treatment Alternatives

- Recirculating Gravel Filter
 - Recirculation tank
 - Media Filter
 - Pumps
 - Controls
 - Water circulated through gravel media
 - Existing site provides a natural buffer



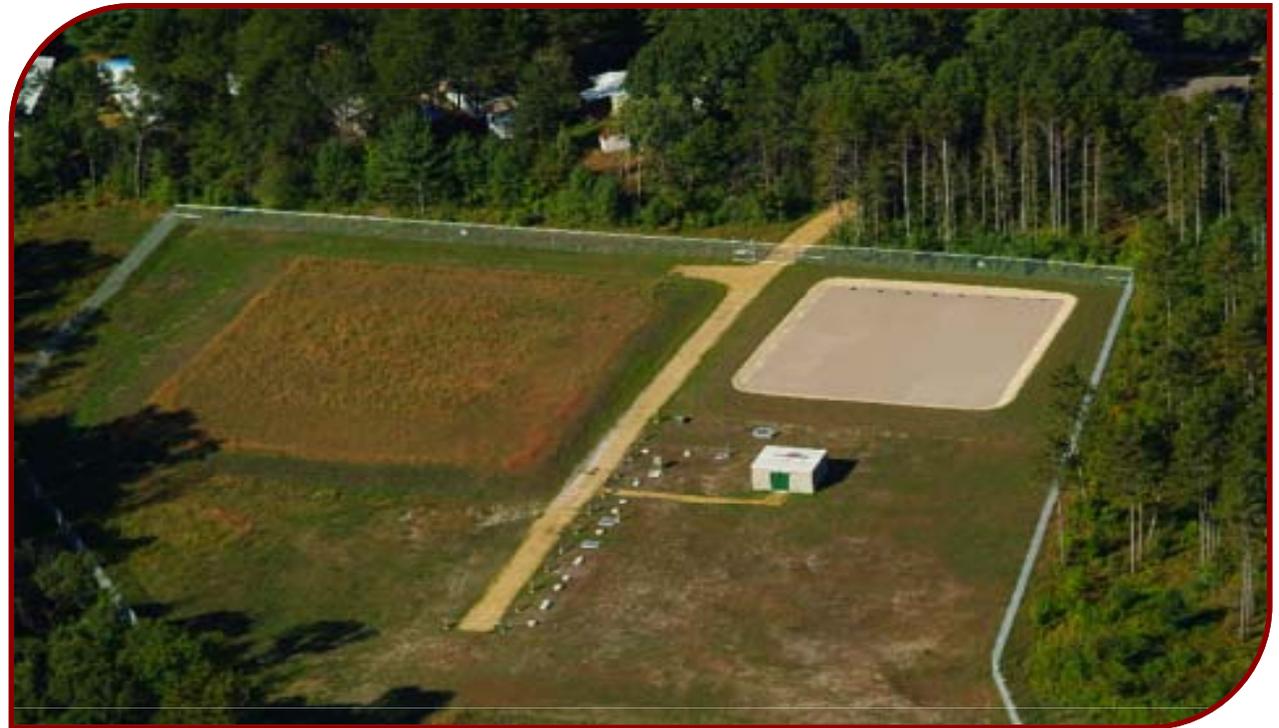
Recirculating Gravel Filter With Denitrification and Drainfield





Environmental Information Worksheet

- MPCA Permitting Process
- Phase 1 and Phase 2 Environmental Site Assessment of the Treatment Site



Project Costs and Funding

PROJECT COST	<u>\$4,000,000</u>
DNR	\$1,000,000
BWSR	\$ 250,000
PFA	\$1,500,000
ASSESSMENTS	\$1,250,000

Assessments

- Assessment amounts determined through the 429 process (State Statue) → Feasibility Report
- Can only assess benefit
- Wastewater Policy
 - Hook Up Requirement
- Per Equivalent Sewer Unit
- Grant Funding for NON-compliant meeting Income Criteria
 - 2 people = \$52,000
 - 4 people = \$65,000