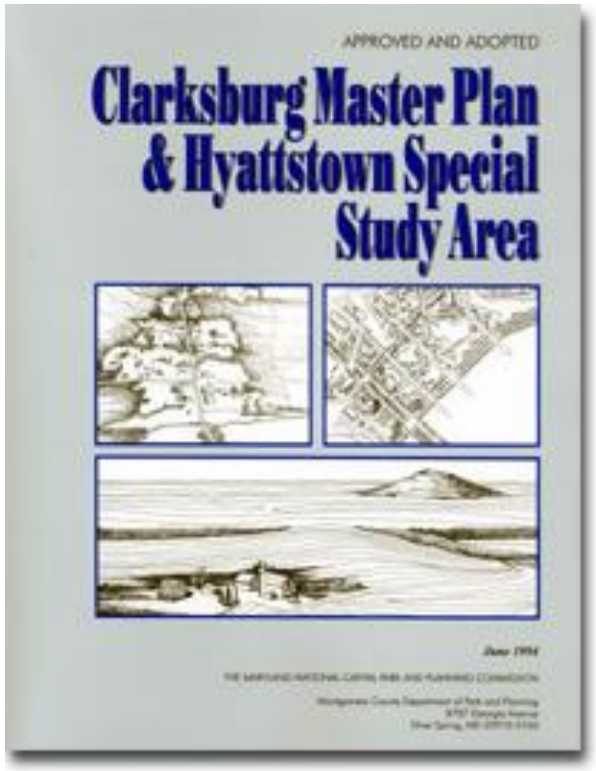
10 Mile Creek Area
Limited Amendment

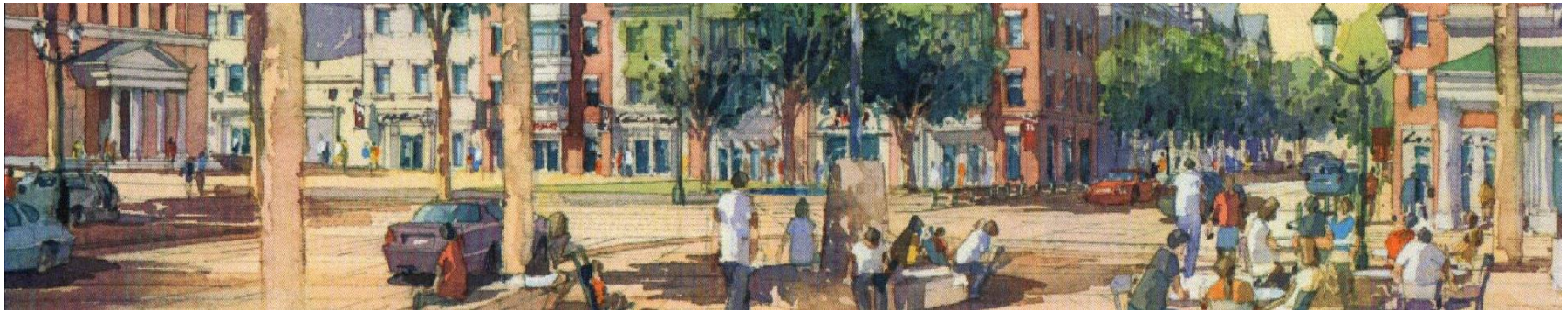


Clarksburg Limited Master Plan
Planning Board Worksession
June 20, 2013

10 Mile Creek Area Limited Amendment

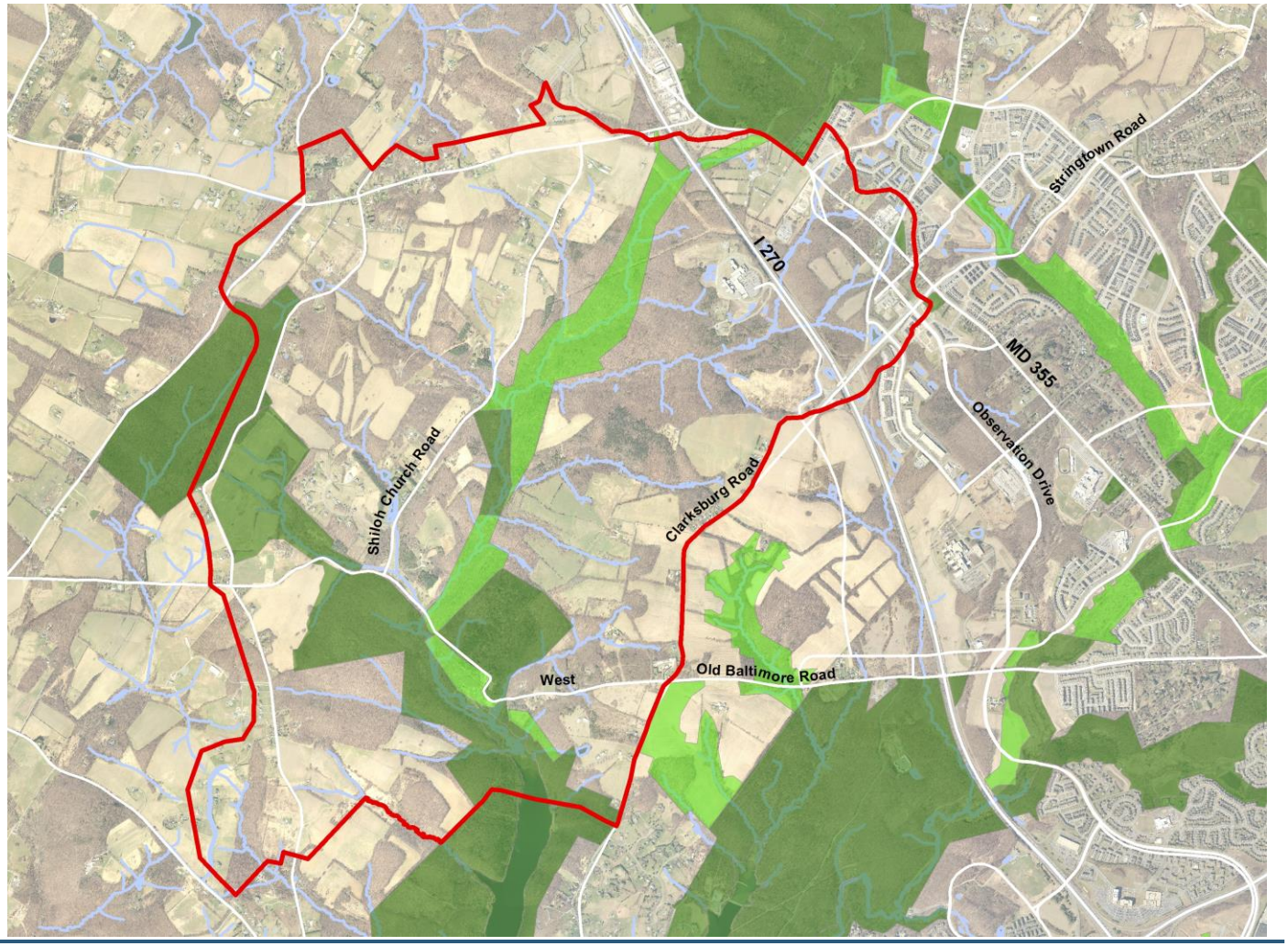
Agenda

- Findings of Scenarios Analysis
- Guiding Concepts for Recomendations
- Preliminary Recommendations
- Discussion



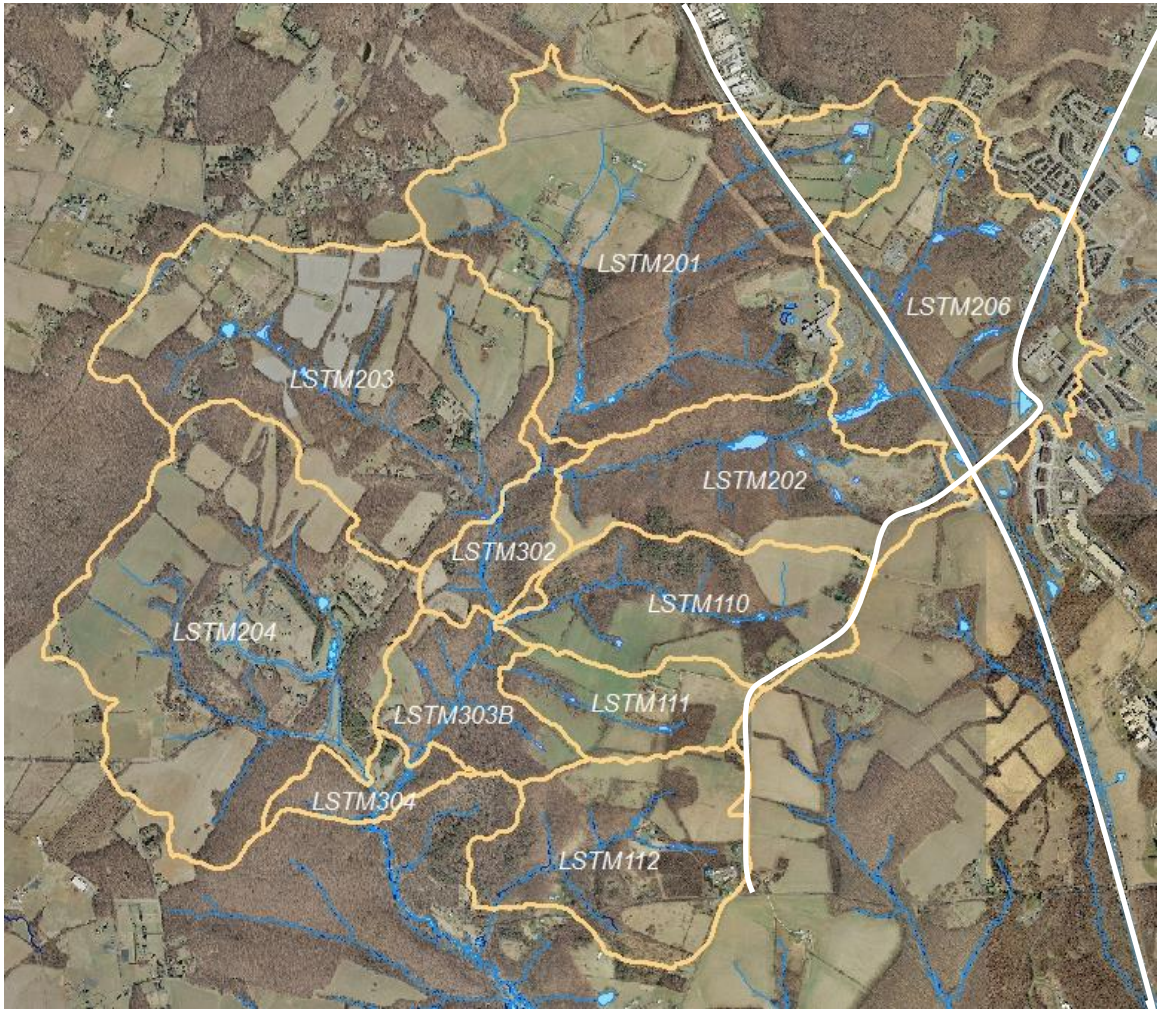
10 Mile Creek Area Limited Amendment

Orientation



10 Mile Creek Area Limited Amendment

Sub Watersheds



10 Mile Creek Area Limited Amendment

Scenarios Under Evaluation

2. **1994 Plan** - The 1994 Clarksburg Master Plan recommendations for density and land use in Stage 4, assuming full ESD
3. **1994 Plan - Reduced Footprint, Same Yield** - The same as Scenario 2, but with a reduced development footprint for the Pulte properties. Assumes approximately the same number of units permitted by the 1994 plan, but on less land.
4. **1994 Plan - Reduced Footprint, Lower Yield** - The same as Scenario 2, but with the same residential mix for the Pulte property recommended in the 1994 Plan resulting in fewer units.
5. **7% Watershed Imperviousness** – The same as Scenario 3, but a reduced yield on Miles/Coppola, Egan, and the County properties, with slightly less development on the Pulte property.

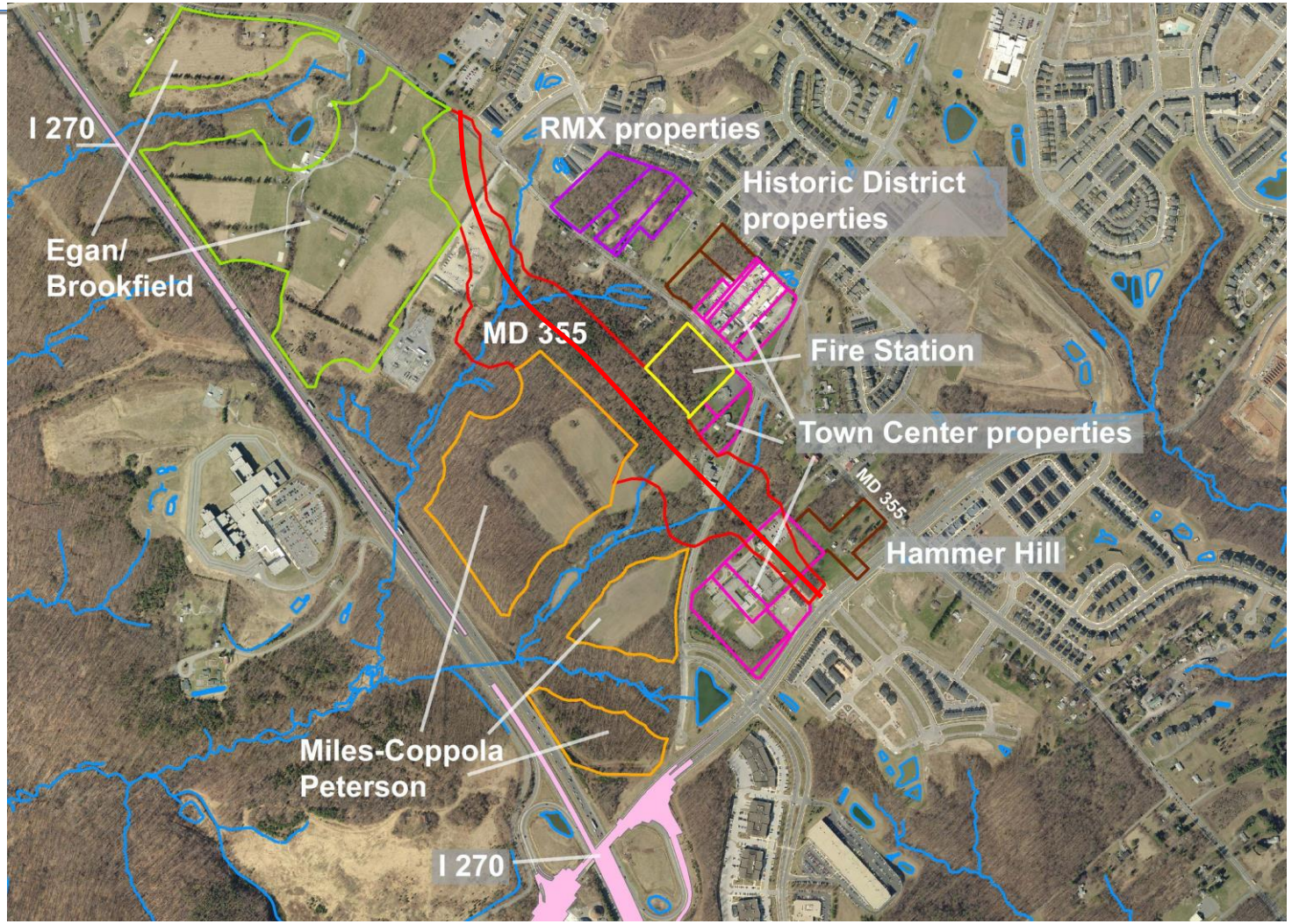
10 Mile Creek Area Limited Amendment

Scenarios Also Suggested by the Save Ten Mile Creek Coalition

6. **Maintain 6% imperviousness –** Change land west of I270 to RDT, maintain 6% imperviousness by limiting development east of I270
   - Transfer all development rights to other parts of Clarksburg
   - Establish forest cover minimums
   - This alternative was not modeled
   - Planned improvements and small properties development would likely exceed 6%
7. **Maintain 4% imperviousness –** This would not allow any development and would reflect the Existing Conditions.
   - Delay any development under Stage 4
   - RDT west of I270
   - Transfer all development rights to other parts of Clarksburg
   - Purchase large tracts
   - Existing imperviousness exceeds 4%

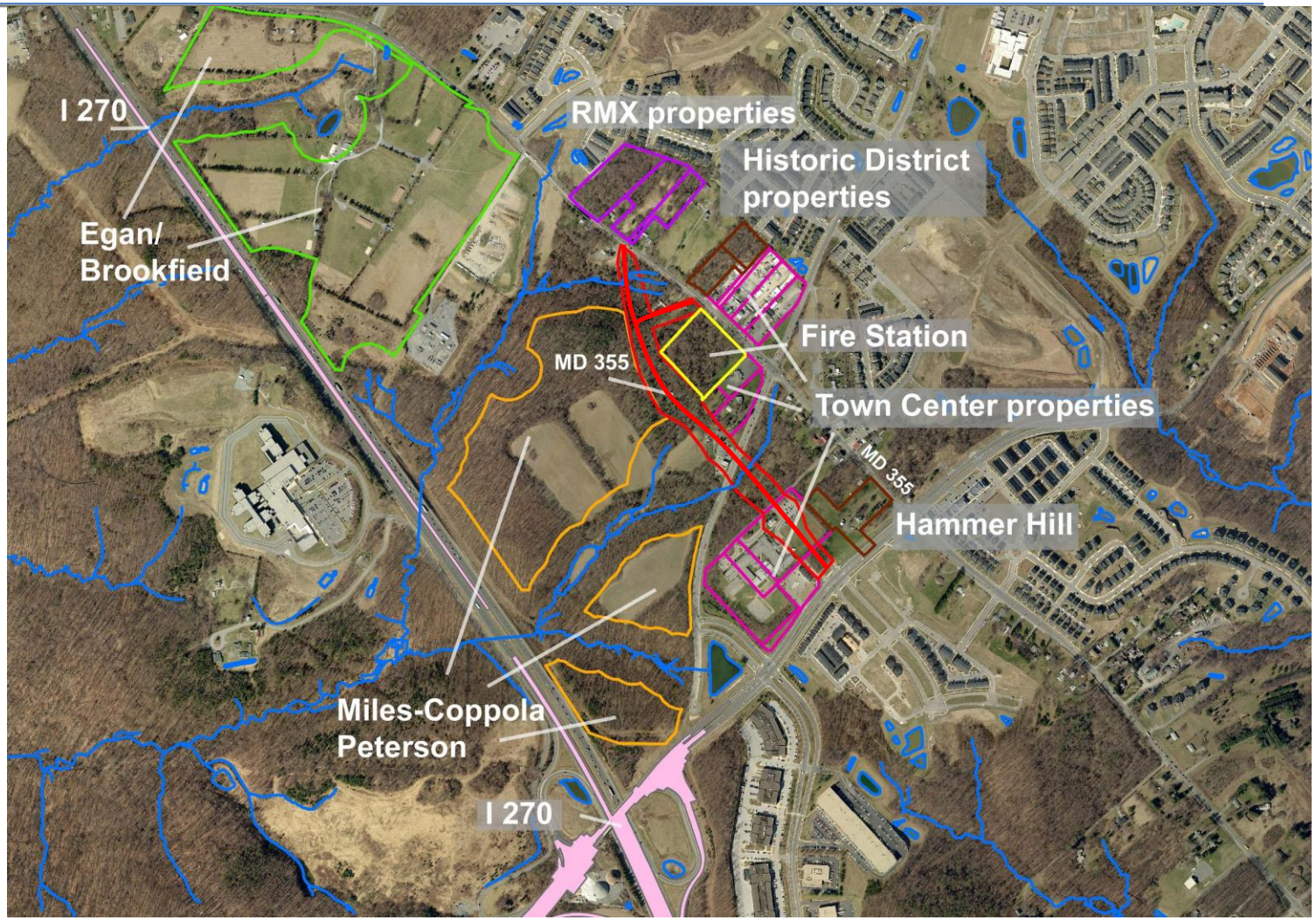
10 Mile Creek Area Limited Amendment

East Side I270 - Scenario 2



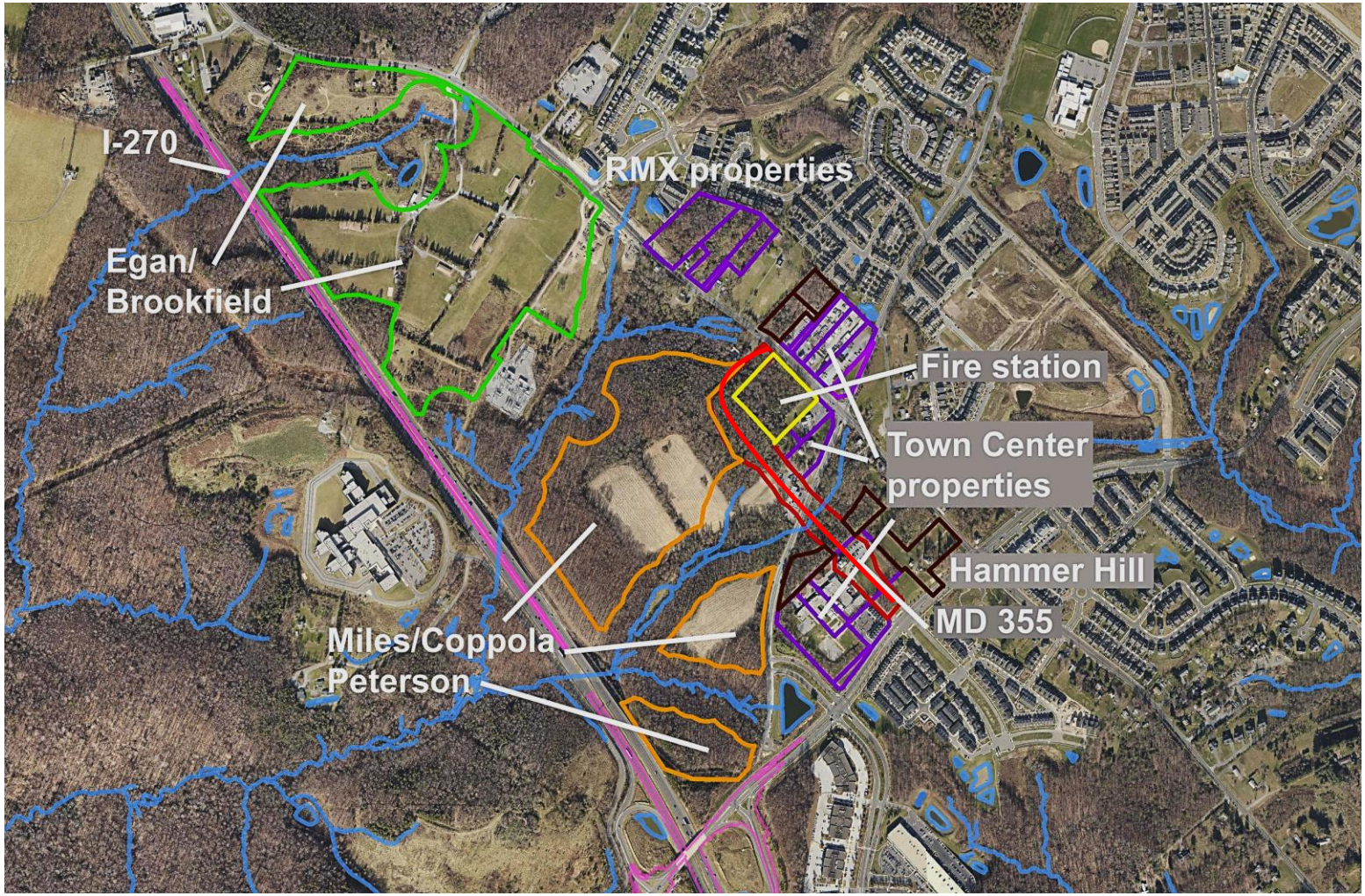
10 Mile Creek Area Limited Amendment

East Side I270 - Scenarios 3 and 4



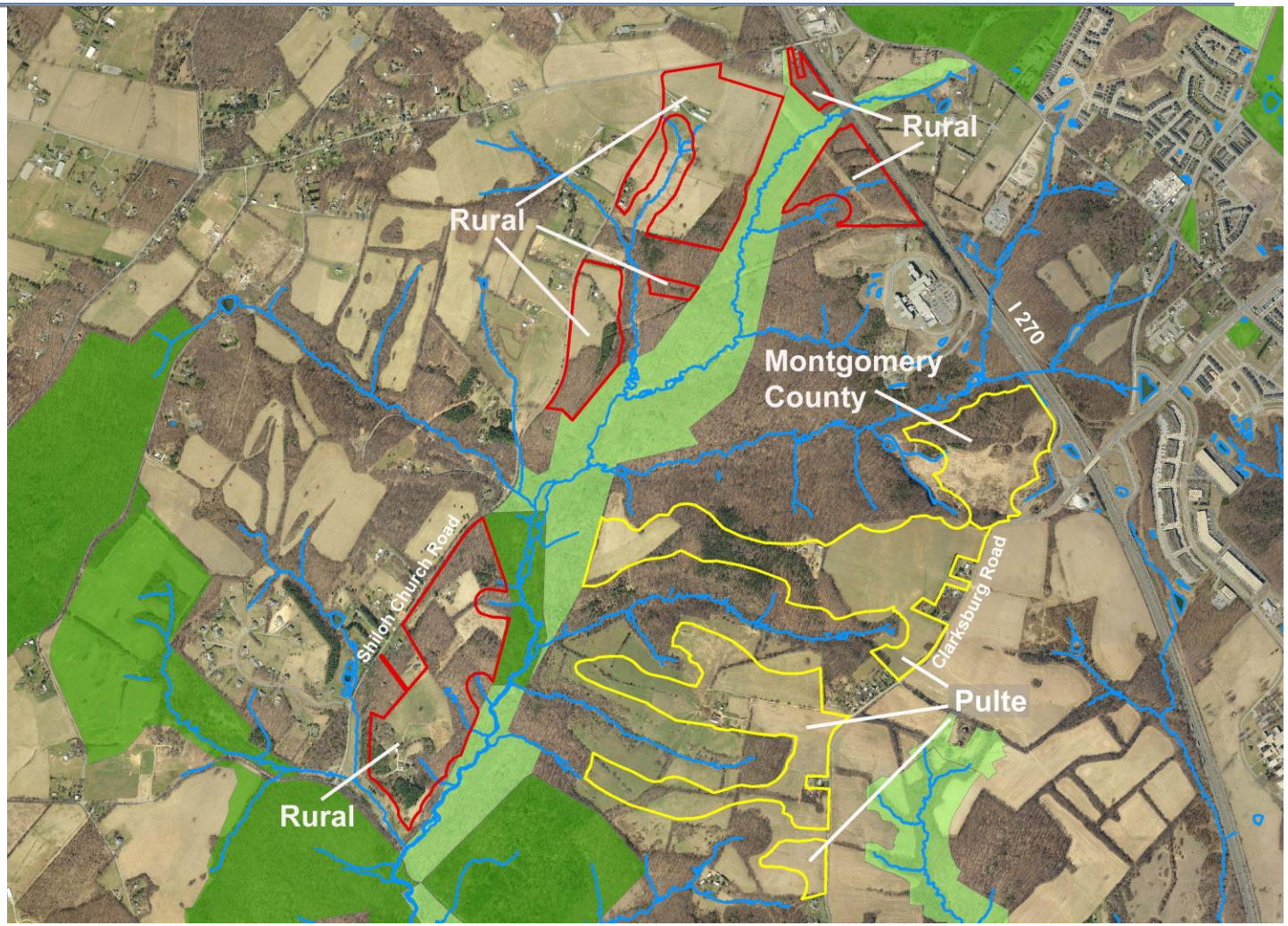
10 Mile Creek Area Limited Amendment

Scenario 5



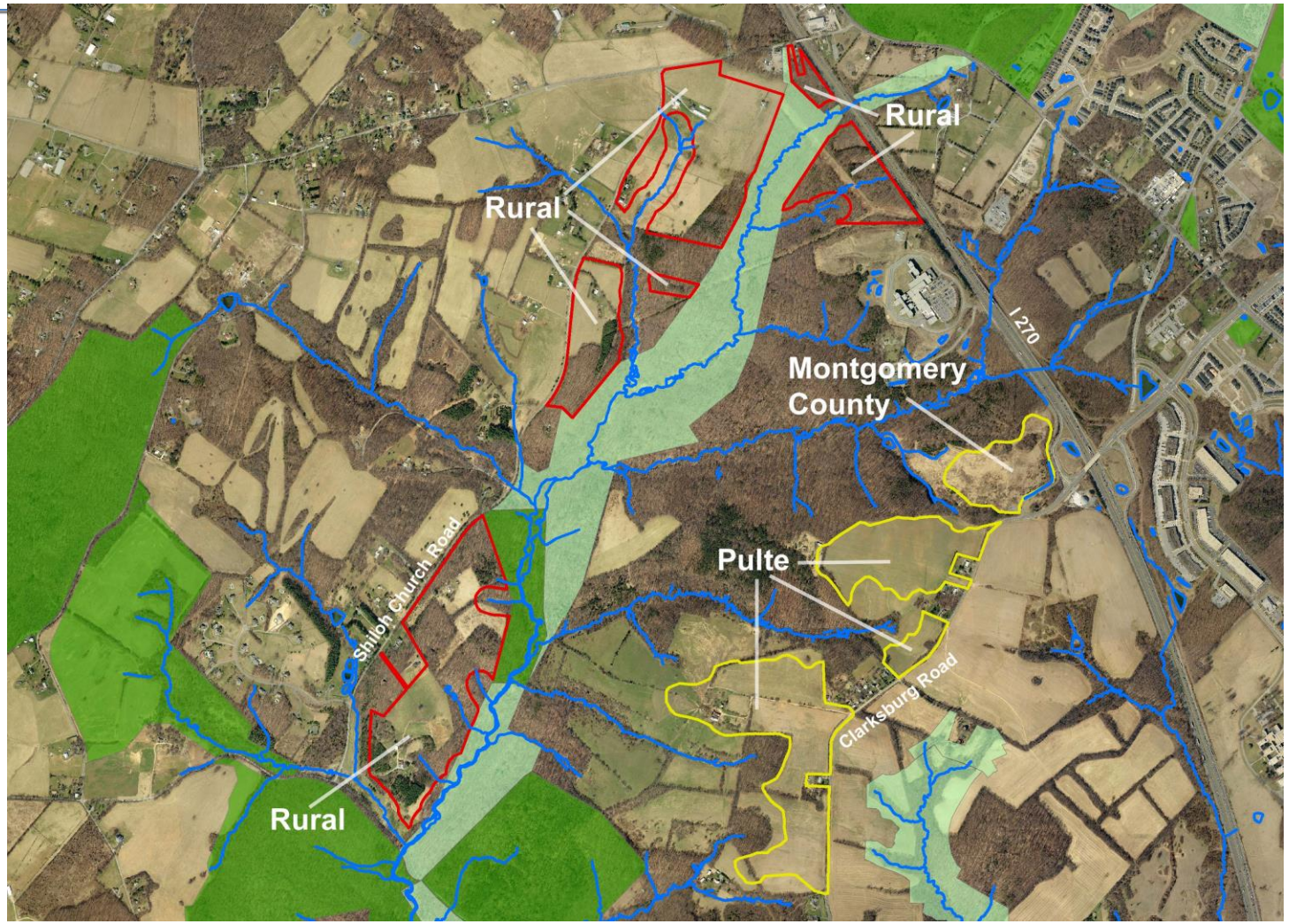
10 Mile Creek Area Limited Amendment

West Side I270 - Scenario 2



10 Mile Creek Area Limited Amendment

West Side I270 - Scenarios 3, 4 and 5

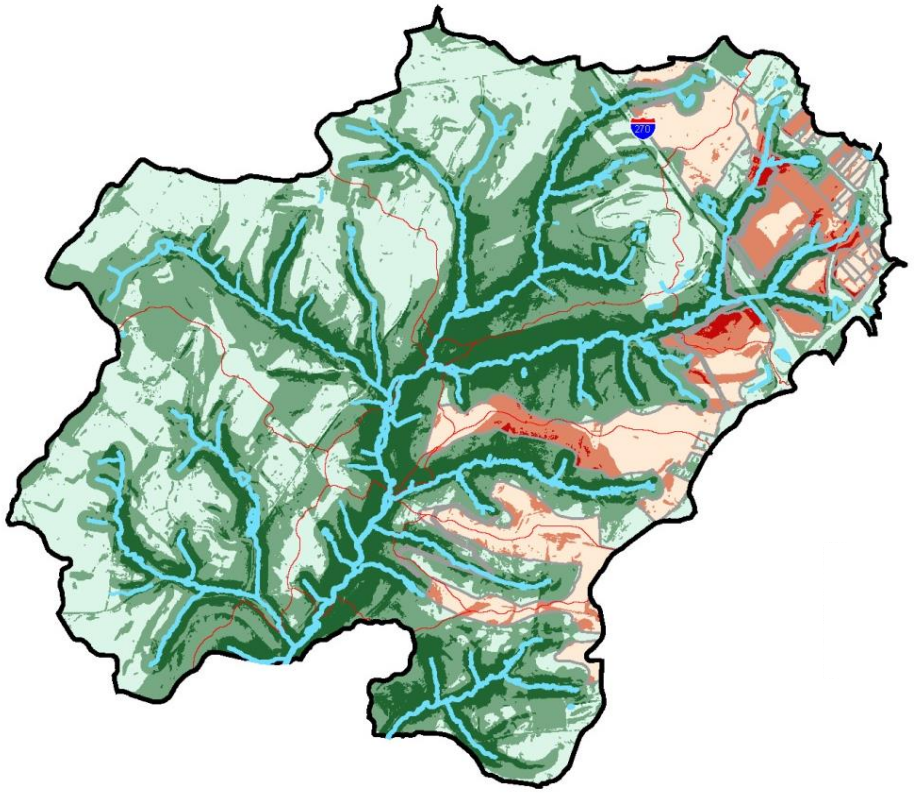


10 Mile Creek Area Limited Amendment

Environmental Analysis Conclusions

Scenario 2

- Greatest direct impact to Ten Mile Creek
  - will disturb approximately 420 acres
  - loss of forest, forest interior, streams , wetlands
  - infrastructure impacts
- Most disturbance in four subwatersheds
  - 46% of LSTM 111
  - 42% of LSTM 110
  - 43% of LSTM 206
  - 25% of LSTM 202
- Largest increases in volume of runoff and stream flow
- Nutrient and sediment load increases during construction



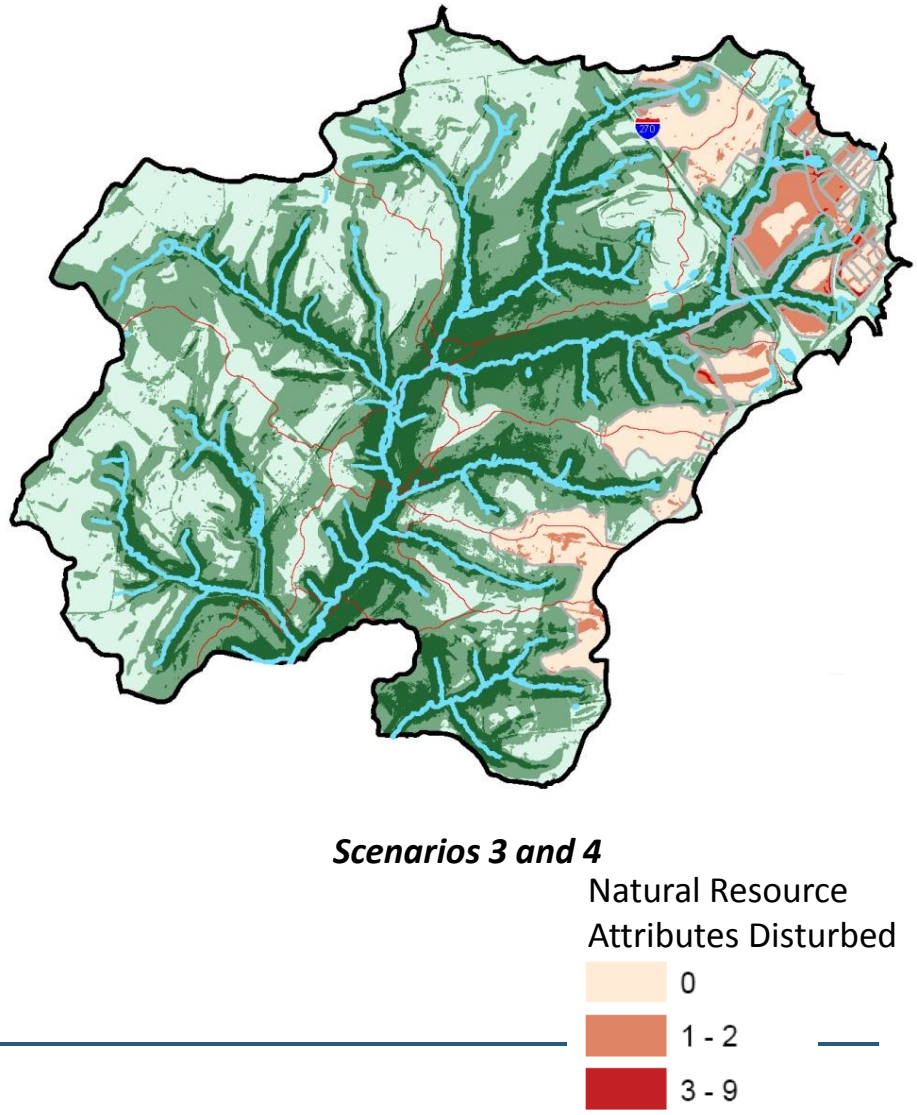
Scenario 2

10 Mile Creek Area Limited Amendment

Environmental Analysis Conclusions

Scenarios 3, 4 and 5

- Fewer impacts than Scenario 2
  - Reduced footprints and imperviousness
  - Fewer direct impacts due to new infrastructure
- Appreciable difference in impacts not uniformly noted across Scenarios 3, 4, 5
- Scenario 5 – MD355 Bypass realignment reduces most wetland impacts and stream impacts by 400 feet
- ESD will not fully mitigate the impacts of development on hydrology
  - No significant hydrologic differences between Scenarios 3 and 4
  - Scenario 5 shows lowest increase over existing conditions

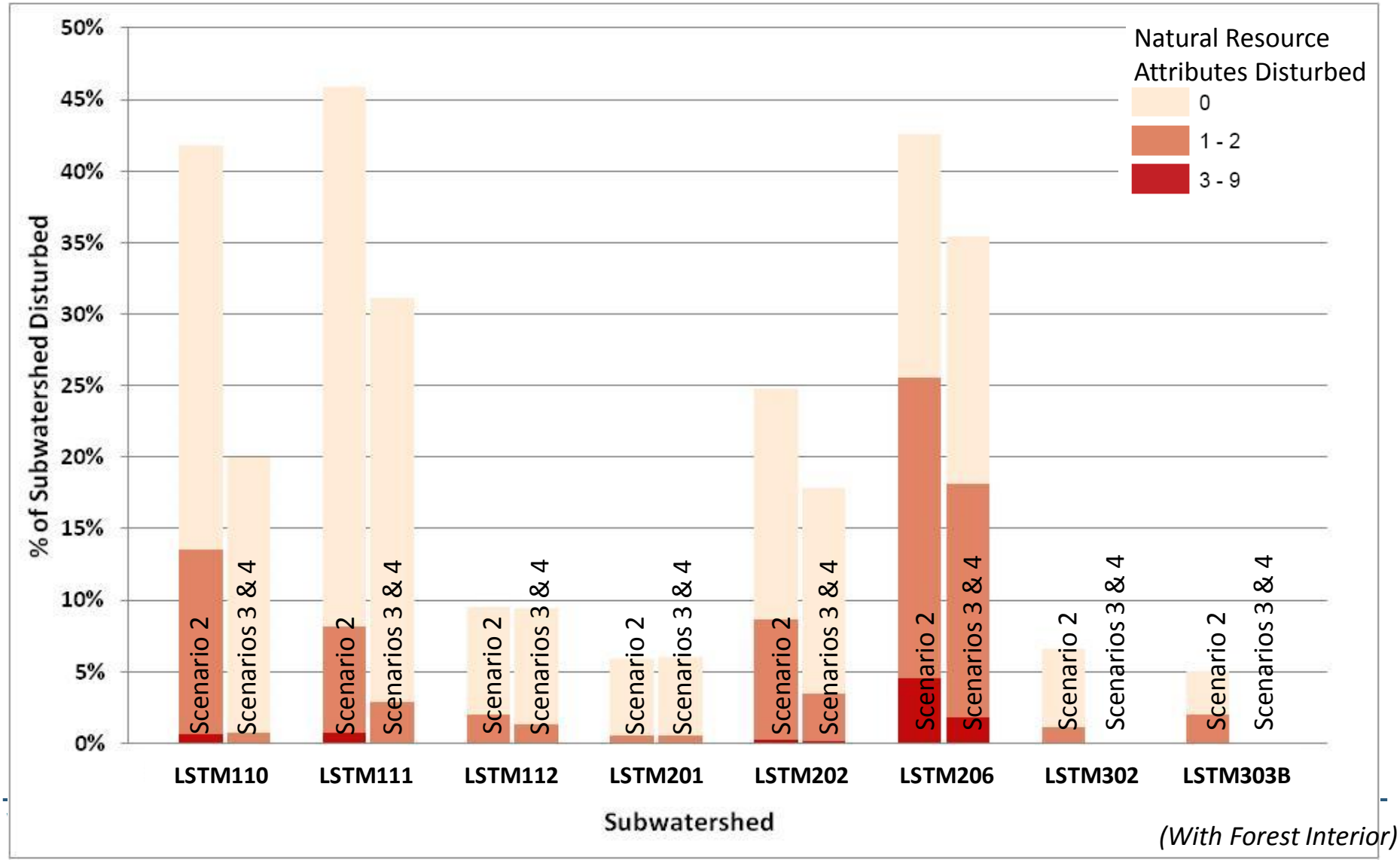


Scenarios 3 and 4

10 Mile Creek Area Limited Amendment

Environmental Analysis Conclusions

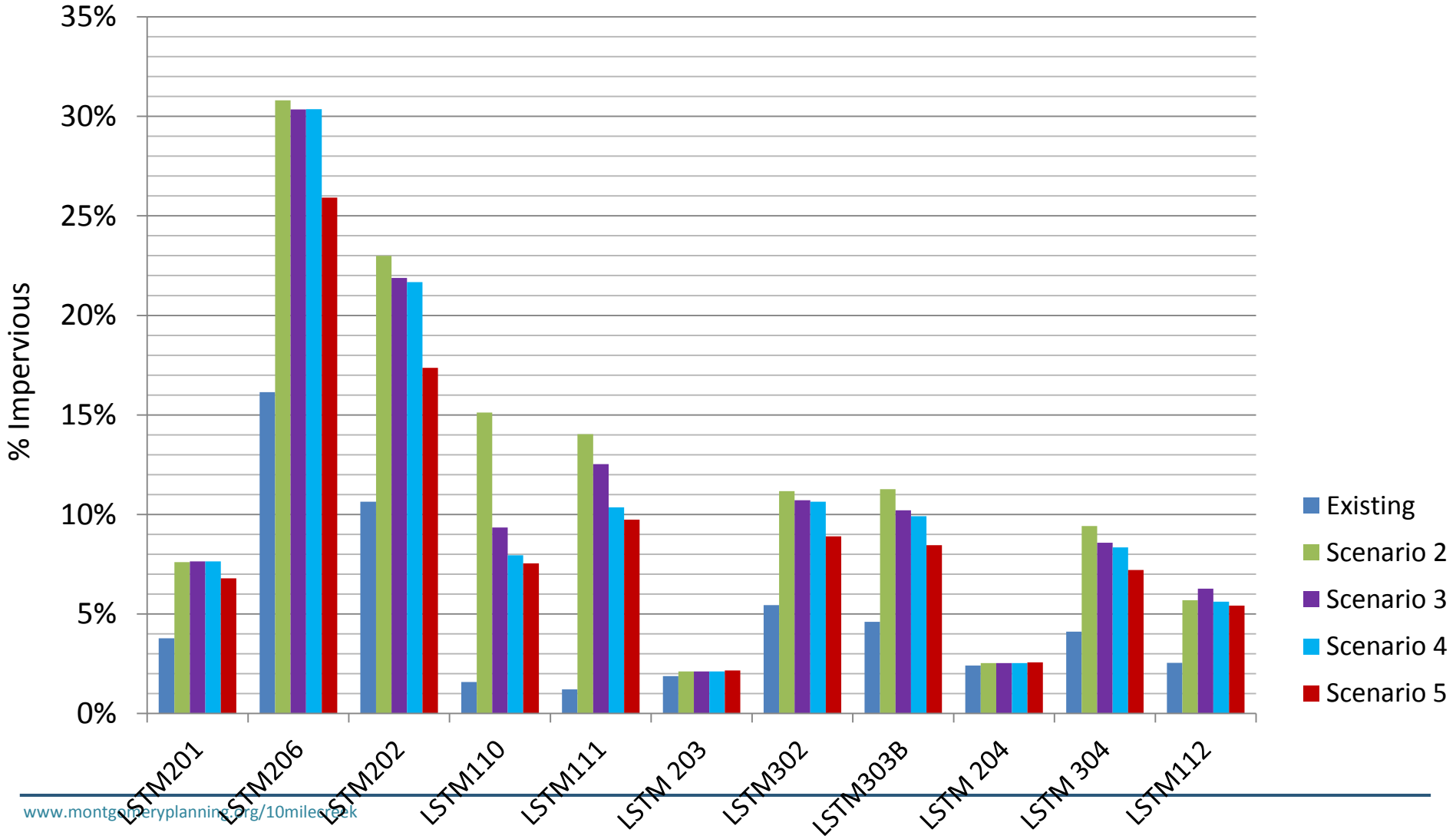
Natural Resource Impacts & Watershed Disturbance



(With Forest Interior)

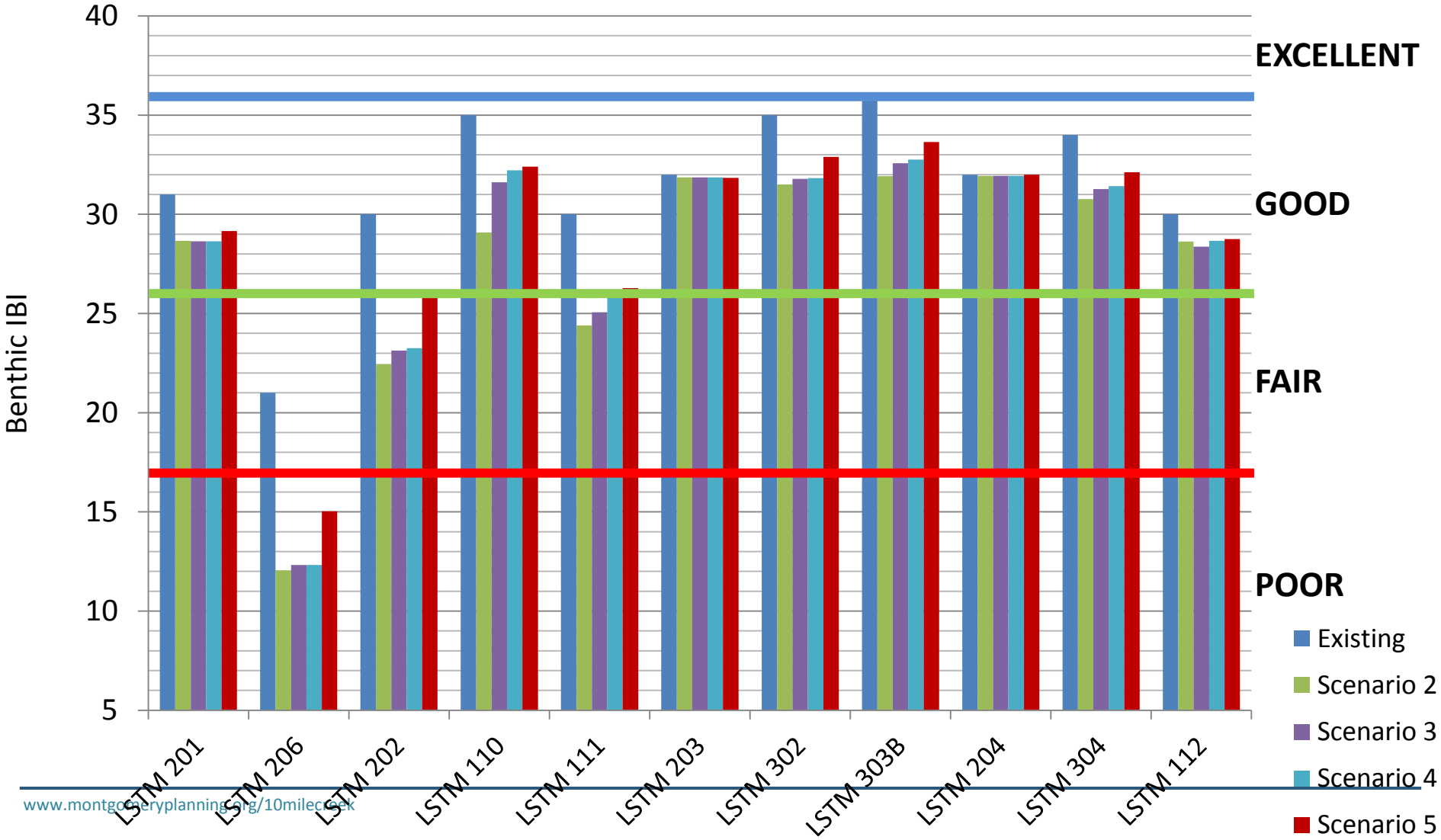
10 Mile Creek Area Limited Amendment

Approximate Imperviousness of Proposed Scenarios



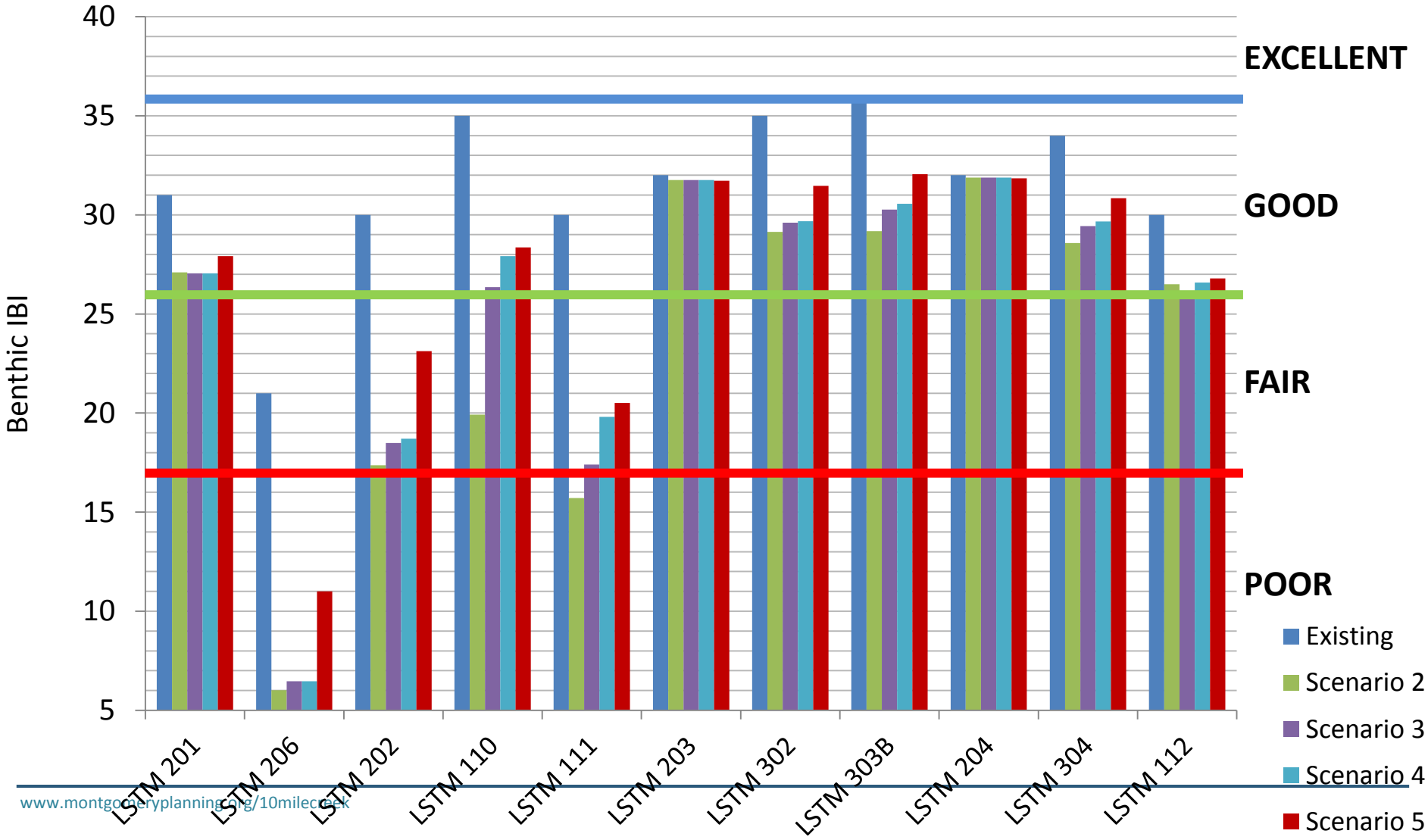
10 Mile Creek Area Limited Amendment

Comparison of Existing Benthic IBI with Estimated Post-Development IBI



10 Mile Creek Area Limited Amendment

Comparison of Existing Benthic IBI with Estimated Post-Development IBI

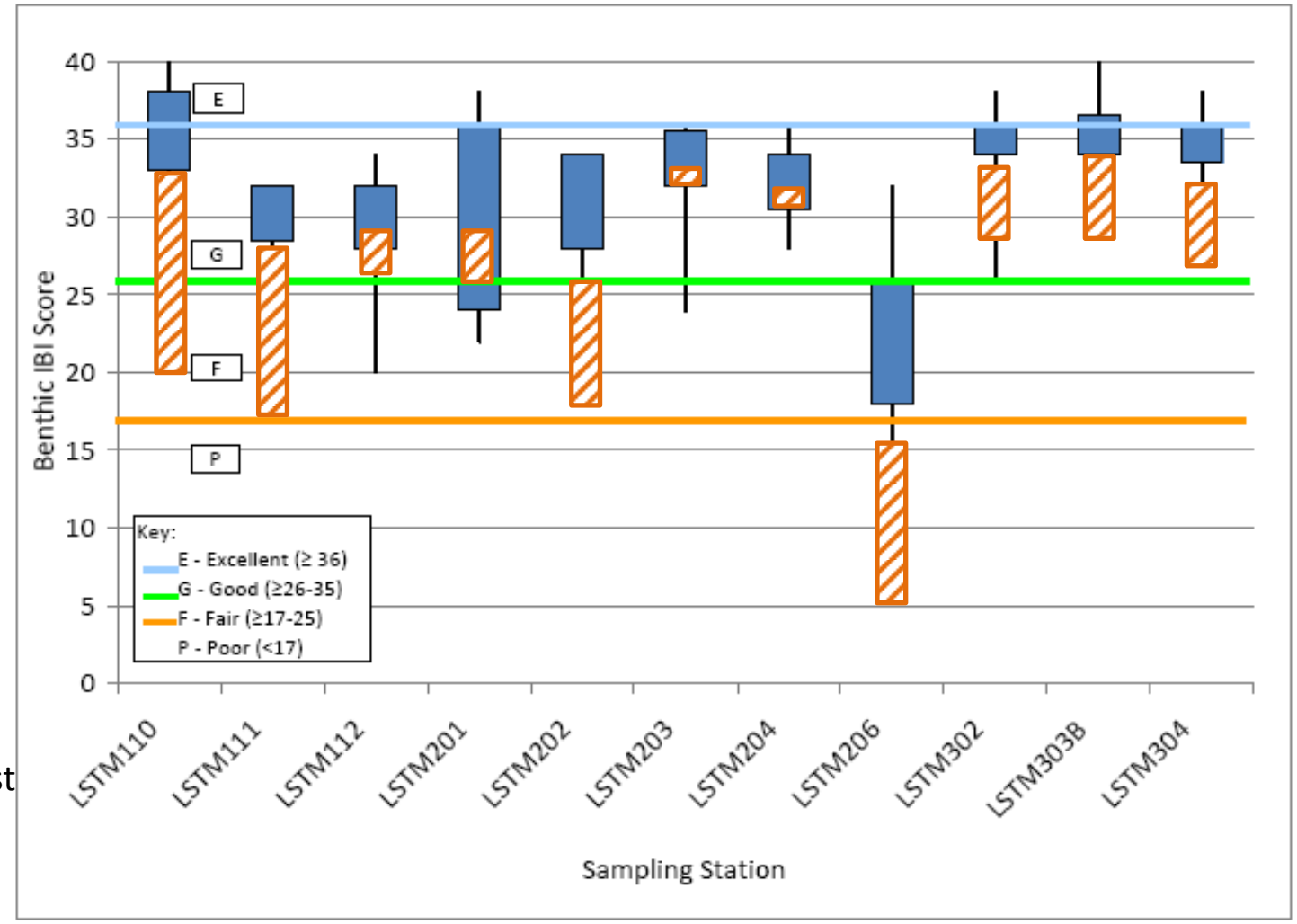


10 Mile Creek Area Limited Amendment

Comparison: Existing Benthic IBI with Estimated Post-Development IBI

1994 Benthic IBI Average

Estimated range of Benthic IBI Post Development



10 Mile Creek Area Limited Amendment

Environmental Analysis Conclusions

- East of I270 has highest levels of existing impervious cover and fair stream conditions
- West of I270 dominated by small, high quality tributaries, forest cover and rural land uses
- Increases in stormwater runoff in all development scenarios despite application of ESD practices
- ESD represents the state of the practice
- Rigorous and comprehensive implementation across or within watersheds has not occurred nor been monitored
- It may not be prudent to gain watershed-based knowledge on the efficacy of ESD in high quality watersheds

10 Mile Creek Area Limited Amendment

Environmental Analysis Conclusions

Measures Needed to Reduce Impacts to Ten Mile Creek

- Minimize disturbance of natural resources
- Reduce development west of I-270
  - Reduce impacts to upland forested areas and steep slopes.
  - Preserve existing conditions in high quality headwater subwatersheds LSTM110 (King Spring) and LSTM111
  - In LSTM 202, reduce the extent of development on County-owned property to retain existing forest
- If development occurs in LSTM110 and LSTM111, apply reduced limits of disturbance
- Focus and prioritize development east of I-270
- Establish buffers around ephemeral streams not currently regulated
- Minimize impacts to natural resources associated with new infrastructure (MD 355 Bypass and sanitary sewer extension)

10 Mile Creek Area Limited Amendment

Environmental Analysis Conclusions

Measures Needed to Reduce Impacts to Ten Mile Creek

- Reduce impervious levels in the headwater areas
- Employ site planning techniques as the first measure of Environmental Site Design
  - prioritize preservation and protection of natural resources
  - conserve natural drainage patterns
  - minimize impervious areas
  - cluster of development
  - limit soil disturbance, mass grading and compaction
- Design outfalls to reduce impacts associated with large flows

10 Mile Creek Area Limited Amendment

Transportation Analysis - Roadways

- Two Land Use Assumptions Analyzed, each with and without a Bypass
- Without the 355 Bypass with the 1994 land use, the following intersections fail the CLV test
  - MD 355 & Stringtown Road
  - MD 121 & MD 355
- Added turn lanes can result in acceptable levels of service for these two intersections.
  - A minimum three lanes are needed on MD 355 to avoid the Bypass,
    - reversible-flow center lane during the peak periods
    - turn lanes at the intersections
    - added facilities for bikes and pedestrians along MD 355
- Replacing retail with office creates additional traffic demands on MD 355.

10 Mile Creek Area Limited Amendment

Transportation Analysis - Roadways

- With the Bypass many of the same intersections fail
  - Added turn lanes can result in acceptable levels of service
  - Fewer impacts to the historic district.
  - Widening MD 355 beyond added turn lanes avoided
  - The Bypass would be a complete street, with bike lanes and pedestrian facilities.
  - Provides needed to access to the Miles/Coppola property
  - The Bypass could go from either MD 121 or Stringtown Road and tie in north of the current MD 121 & MD 355 intersection.

10 Mile Creek Area Limited Amendment

Transportation Analysis - Transit

- Densities north of Father Hurley Boulevard are generally not supportive of transit in a dedicated lane
- MTA Corridor Cities Transitway (CCT) concept planning and alternatives analysis work assumes a northern terminus at COMSAT
- The mean travel time for work trips for Montgomery County residents is about 34 minutes
- 40-50 minutes is where travel time begins to influence the selection of the location of the residence and/or job
- The total potential transit market is not large

10 Mile Creek Area Limited Amendment

Transportation Analysis - Transit

- Limited number of travel corridors with right-of-way constraints and congested travel conditions.
- Relatively high percentage of peak travel flow in north-south direction.
- The origin/destination pairs with highest percentages of work trips:
  - Trips to/from City of Gaithersburg – 16%
  - Trips Remaining Within Clarksburg – 13%
  - Trips to/from Germantown East – 10%
  - Trips to/from City of Rockville – 10%
  - Trips to/from Germantown West – 8%
  - Trips to/from R&D Village – 6%
  - Trips to/from DC – 6%
  - Trips to/from Frederick County – 6%

10 Mile Creek Area Limited Amendment

Public Comment

- Comments from development interests disputing assumptions and modeling already discussed with Planning Board
- Report from Save Ten Mile Creek Coalition stating their position and recommending significant environmental protection measures
- Livable Clarksburg Coalition citing environmental and traffic concerns
- Individuals Comments including:
  - Delay implementation of Stage 4
  - Protect the water supply (lake and wells)
  - Protect the creek
  - Don’t allow additional development
  - Improve roadways and transit to reduce congestion

10 Mile Creek Area Limited Amendment

Recommendations

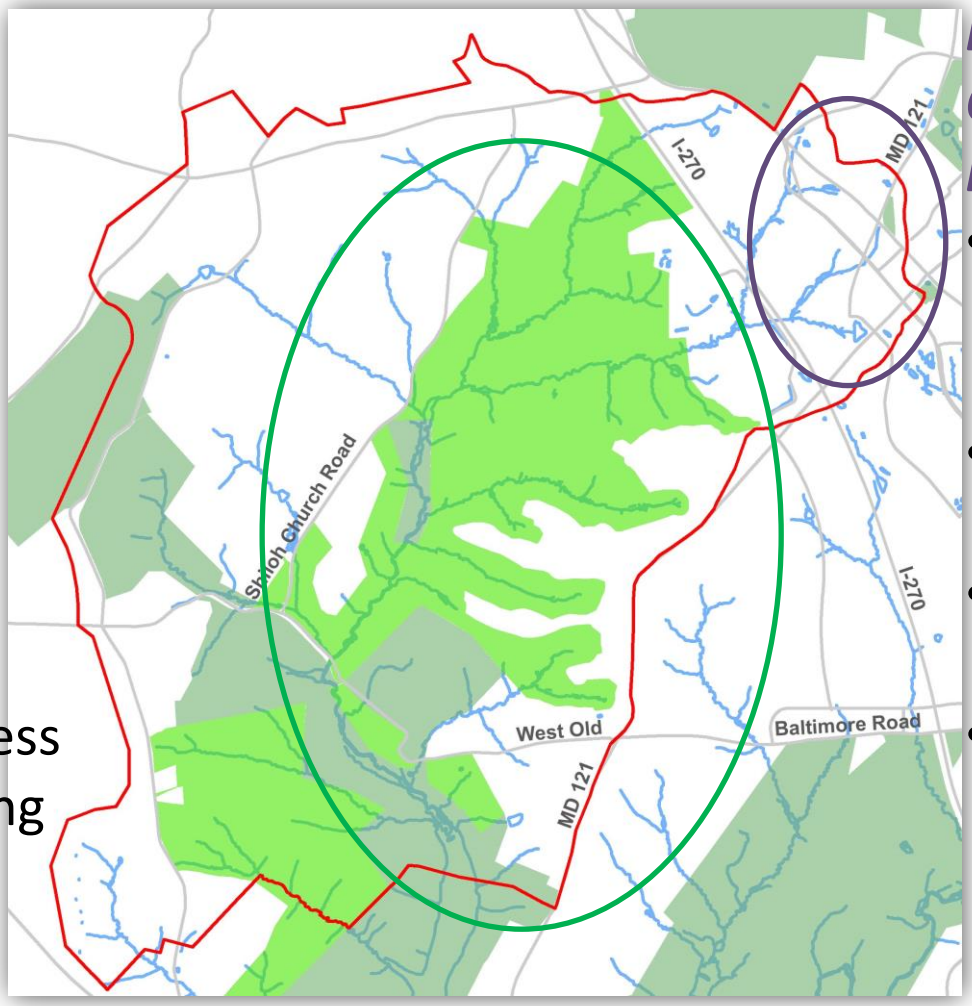
- Recommended Concept for Ten Mile Creek
- Environmental, Parks and Transportation Recommendations
- Land Use Recommendations

10 Mile Creek Area Limited Amendment

Recommended Concept

Emphasize Environmental Protection

- Preserve Natural Resources
- Maximize undeveloped open space
- Minimize Imperviousness
- Retain Housing Resource



Emphasize Community Building

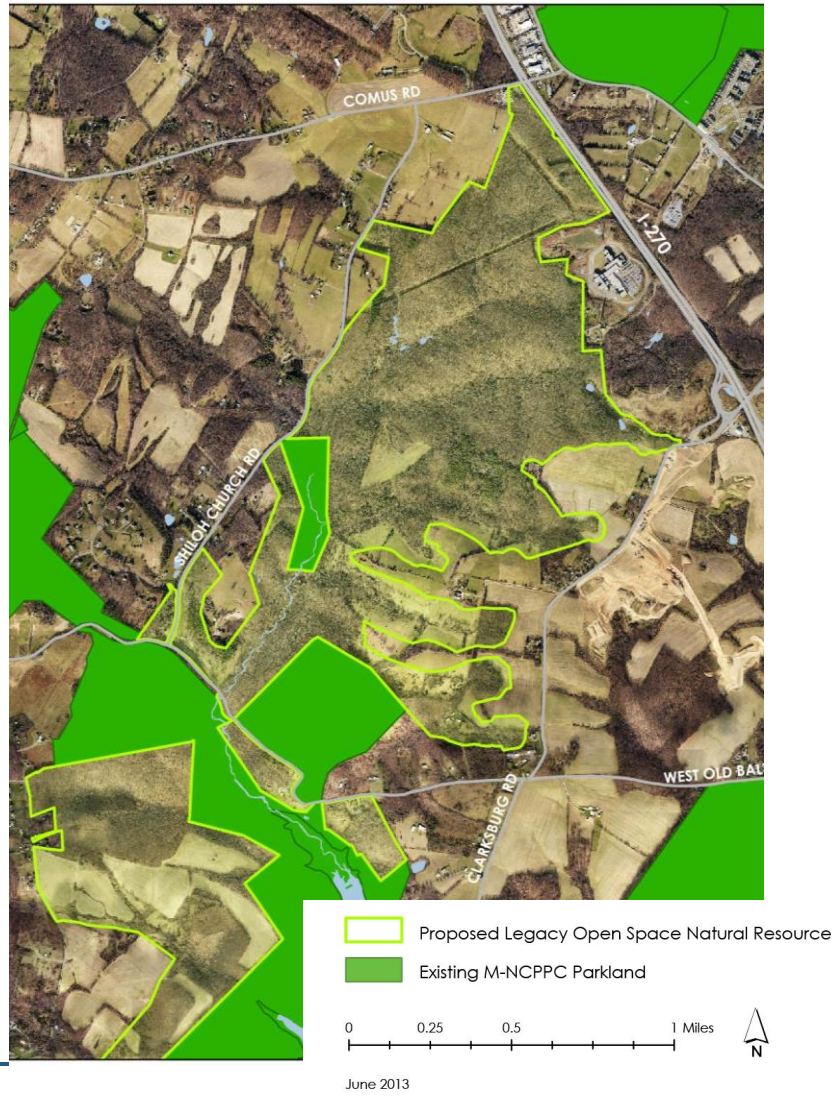
- Complement approved Town Center
- Strengthen Historic District
- Balance Mixed Use
- Improve Transportation

10 Mile Creek Area Limited Amendment

Preliminary Master Plan Recommendations

Legacy Open Space

- Designate the high quality, critical forest and open habitats as a Legacy Open Space Natural Resource site
- Protect the designated Natural Resource on an individual property basis using a variety of tools

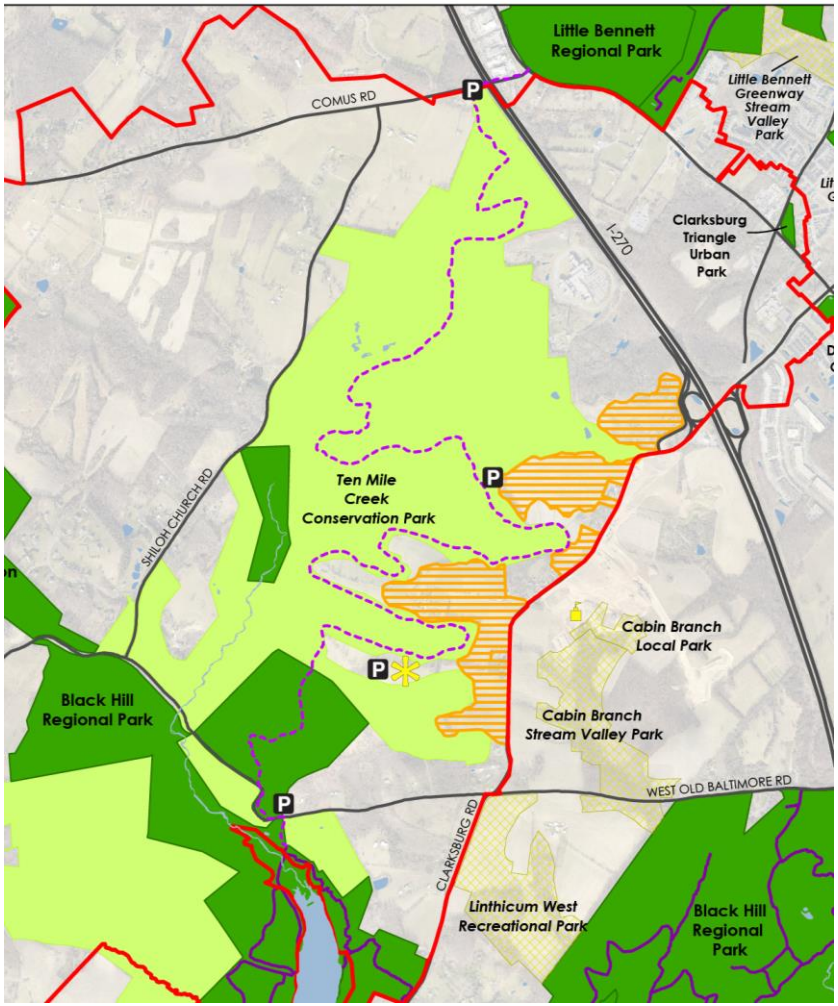


10 Mile Creek Area Limited Amendment

Preliminary Master Plan Recommendations

Parks and Trails

- Provide a countywide natural surface trail linking Little Bennett Regional Park and Black Hill Regional Park
- Provide five trailheads for access to the Ten Mile Creek trail
- Provide a new natural resource-based Neighborhood Park of at least 10 acres



10 Mile Creek Area Limited Amendment

Preliminary Master Plan Recommendations

Transportation

- Retain the 355 Bypass, but realign to connect via a T intersection with MD 355 close to the proposed location of the fire station.
- Provide additional turn lanes to achieve acceptable conditions
- Retain the CCT designation for potential future study.
- Consider relocation of the transit station to 121/355 intersection

10 Mile Creek Area Limited Amendment

Preliminary Master Plan Recommendations

Transportation

Future MCDOT operational planning might consider the feasibility of enhanced transit service comprised of one or more of the following components:

- Express non-stop service from Clarksburg to:
  - Shady Grove Red Line Metrorail Station
  - Germantown Town Center/Germantown MARC
- Limited stop Ride-On service Clarksburg to:
  - Milestone (and planned CCT stop)
  - Lakeforest/Gaithersburg MARC
- Internal Clarksburg circulator service to connect activity centers east and west of I-270 with the Town Center

10 Mile Creek Area Limited Amendment

Preliminary Master Plan Recommendations

Clarksburg's Evolution

1964 General Plan

- Clarksburg identified as potential fourth corridor city—"after the Year 2000" (p 26)

1968 Clarksburg Plan

- Plan focuses on light industrial and industrial park uses—very little land recommended for commercial development—and assumes broad provision of public water and sewer service

1994 Clarksburg Plan

- Plan reduces scale of development and attempts balance between environmental protection and transit supportable development; retains high-tech corridor but reduces scale

10 Mile Creek Area Limited Amendment

Preliminary Master Plan Recommendations

Policy Approach

Amendment Objectives

- East of I-270, land uses should make significant contribution to 1994 Plan's policy goals—town scale of development with transit supporting densities between I-270 and existing MD 355; focused neighborhood commercial uses east of historic district in Town Center
- West of I-270, maximizing undeveloped open space to reduce imperviousness and limit environmental damage, while continuing to provide housing and accommodate TDRs

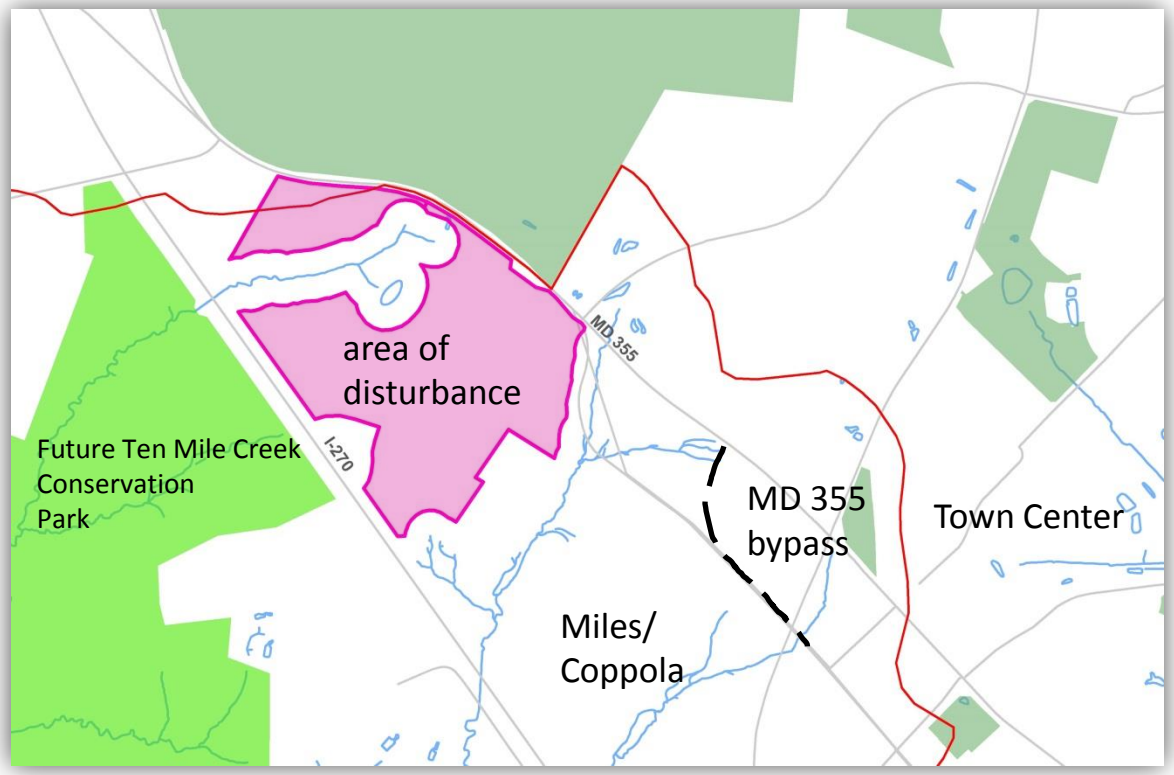
10 Mile Creek Area Limited Amendment

Master Plan Policies and Recommendations

Land Use and Zoning

Egan-Mattlyn

- Retain residential recommendation, using cluster development to reduce impervious surfaces
- Existing R-200 zone or floating zone



10 Mile Creek Area Limited Amendment

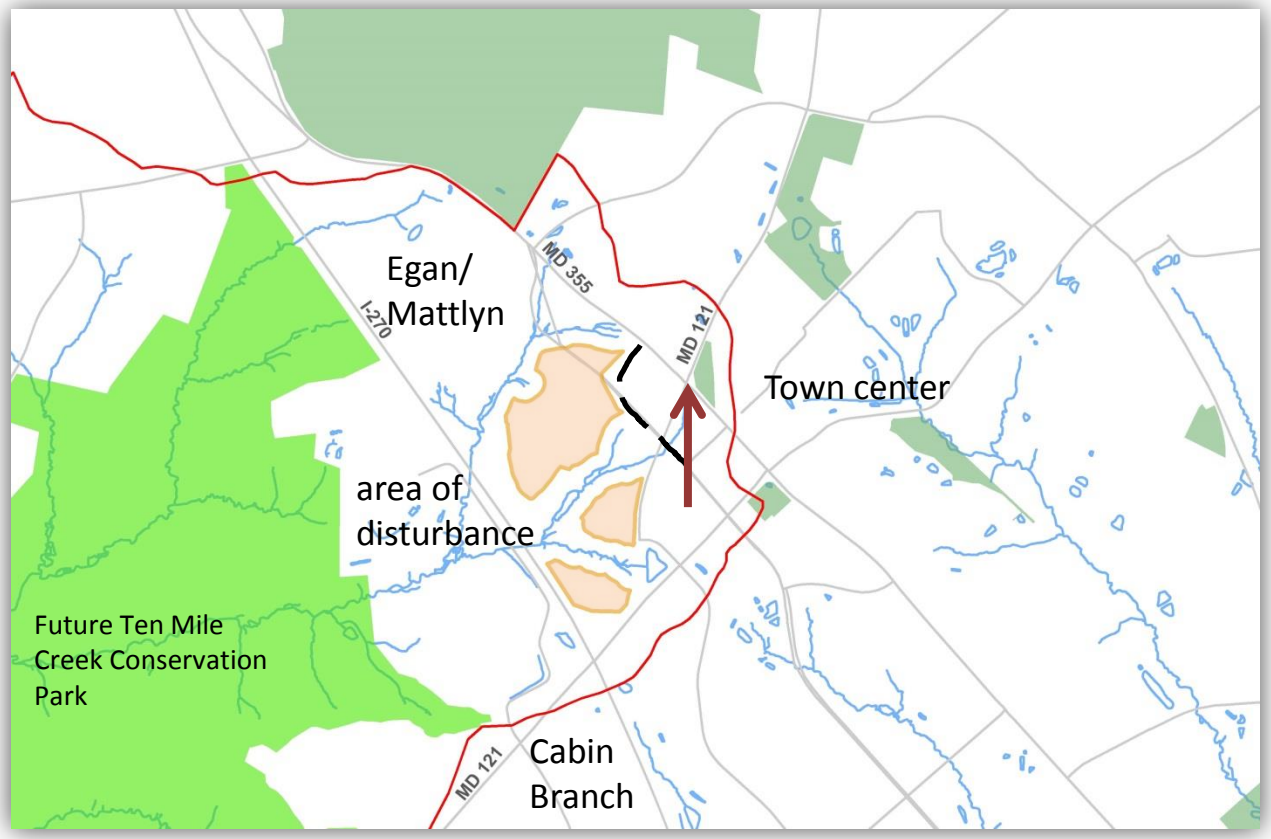
Preliminary Master Plan Recommendations

Land Use and Zoning

Miles/Coppola

Option 1

- Integrated mix of retail, office, housing that complements, but does not compete with Town Center
- CR zones allow evaluation in detail



10 Mile Creek Area Limited Amendment

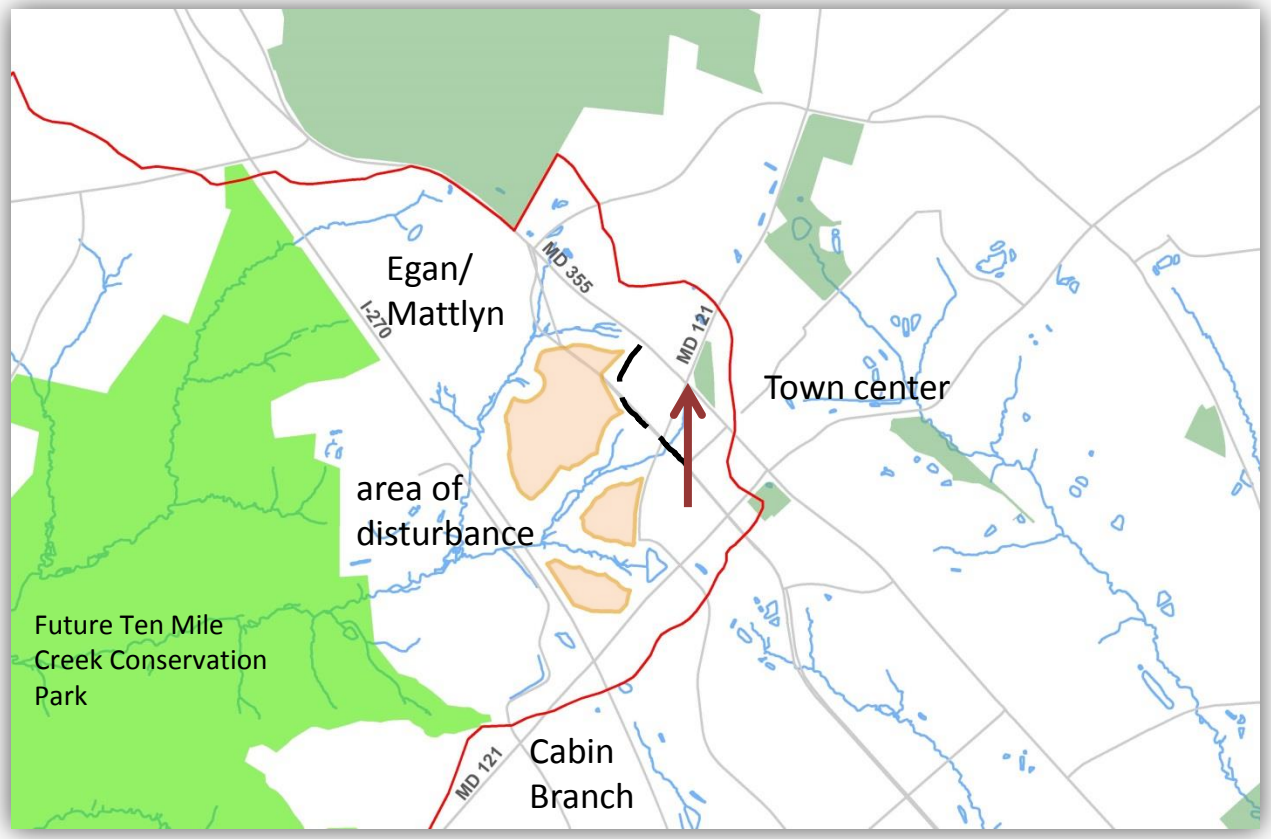
Preliminary Master Plan Recommendations

Land Use and Zoning

Miles/Coppola

Option 2

- Mixed-use with residential focus would bring more households to support Town Center
- Floating zones allow 25 percent commercial space



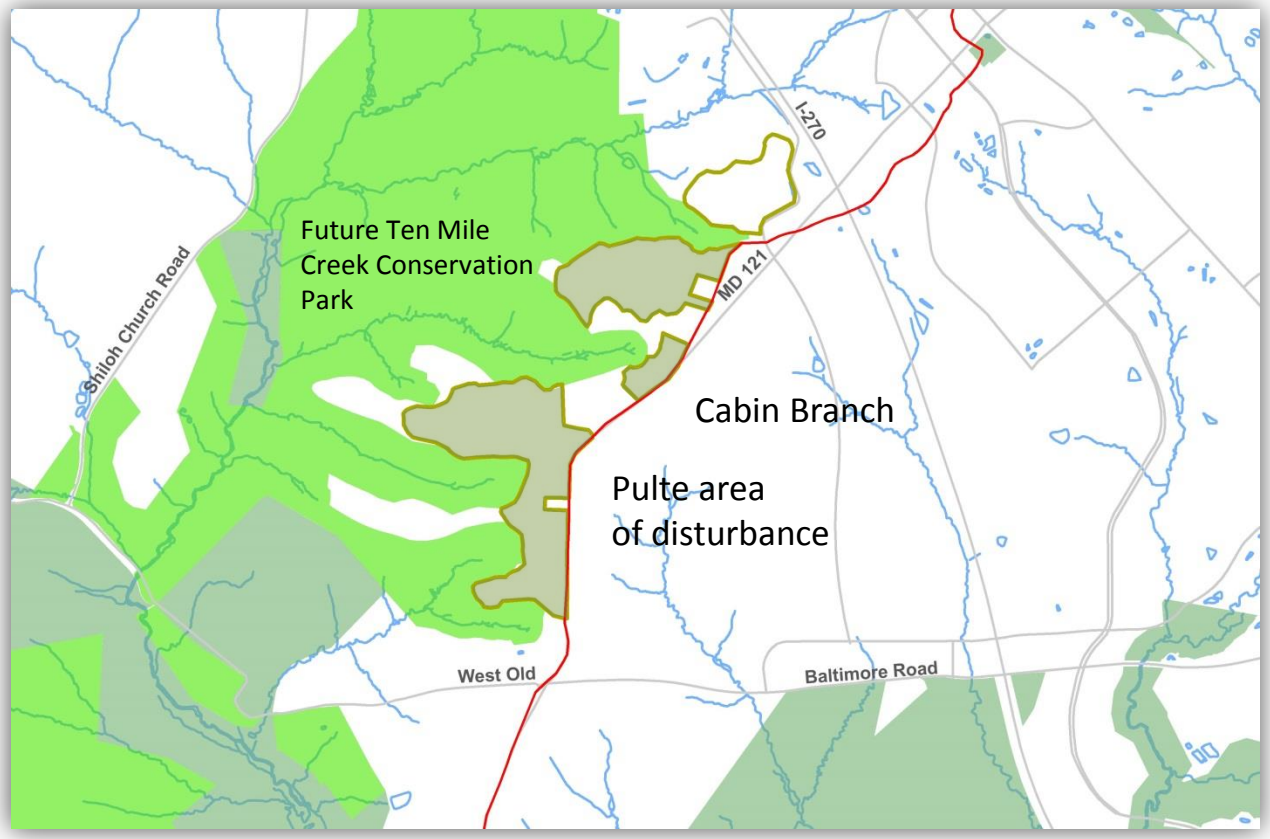
10 Mile Creek Area Limited Amendment

Preliminary Master Plan Recommendations

Land Use and Zoning

Pulte and King

- Reduce densities and cluster development to increase open space
- RNC at 0.4 to 1 du/acre with TDRs; up to 85 percent open space with design guidelines



10 Mile Creek Area Limited Amendment

Preliminary Master Plan Recommendations

Land Use and Zoning

Montgomery County

- Protect forest through Legacy Open Space
- Minimal development preferred outcome
- Retain impervious cap on 94 acres at MD 121/I-270