

# Proposed water quality metrics for Greater Washington 2050

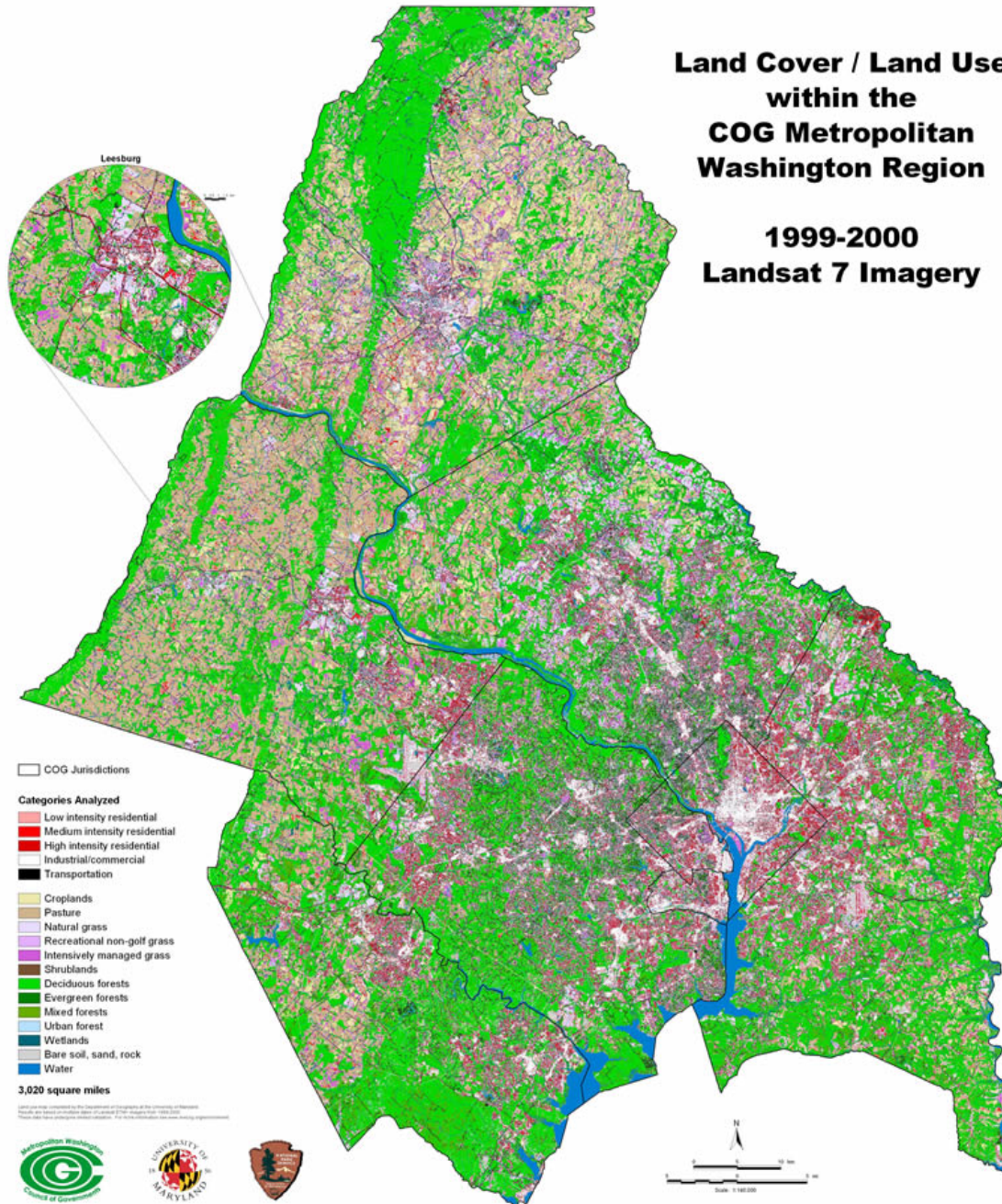
Staff presentation to Chesapeake  
Bay and Water Resources Policy  
Committee meeting of 5/16/08

# Proposed Metrics

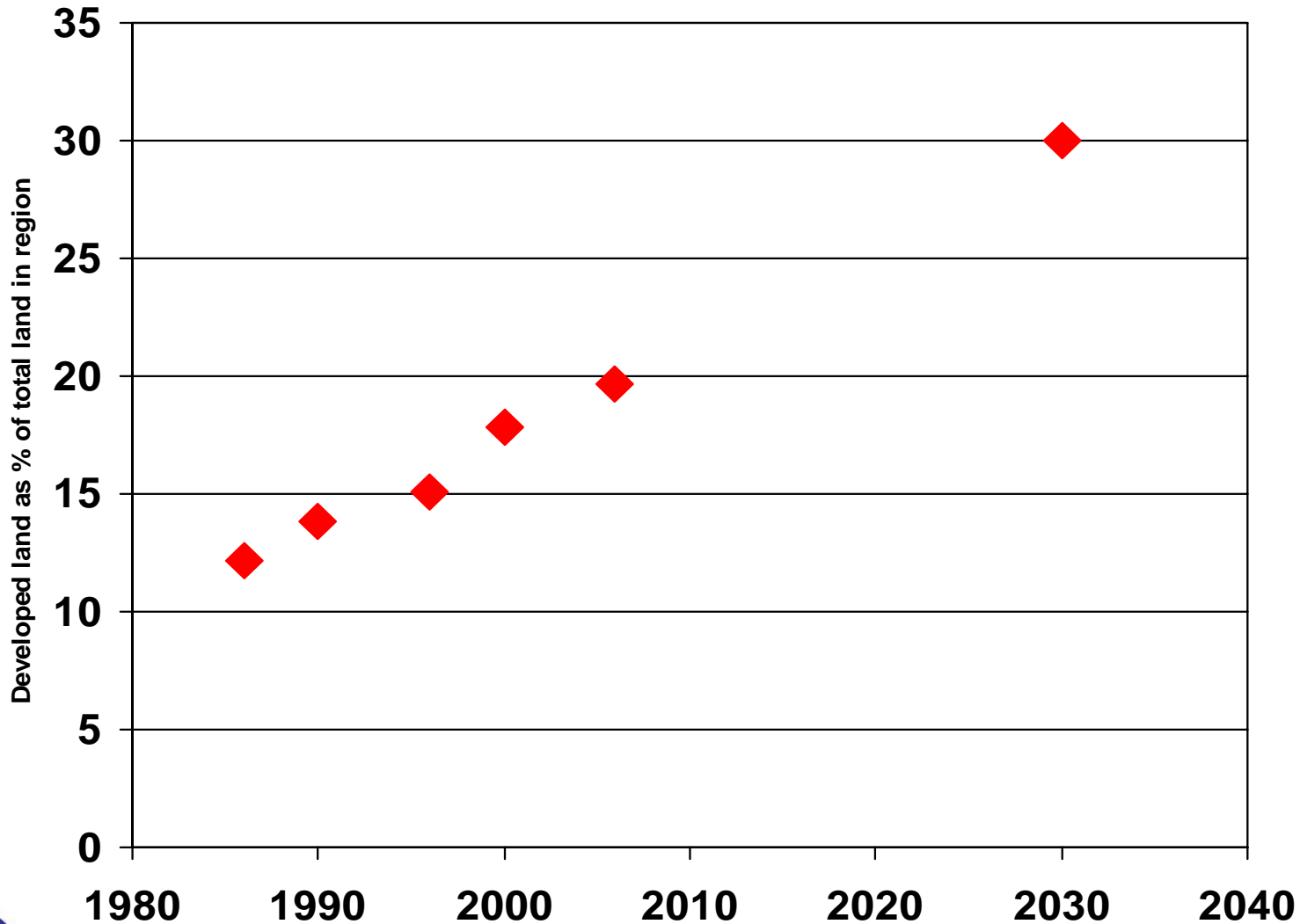
- Stream health (using macroinvertebrate index)
- Forest patch size (areas of contiguous forest greater than 75 acres)
- Water supply reliability
- Wastewater capacity

# Land Cover / Land Use within the COG Metropolitan Washington Region

1999-2000  
Landsat 7 Imagery



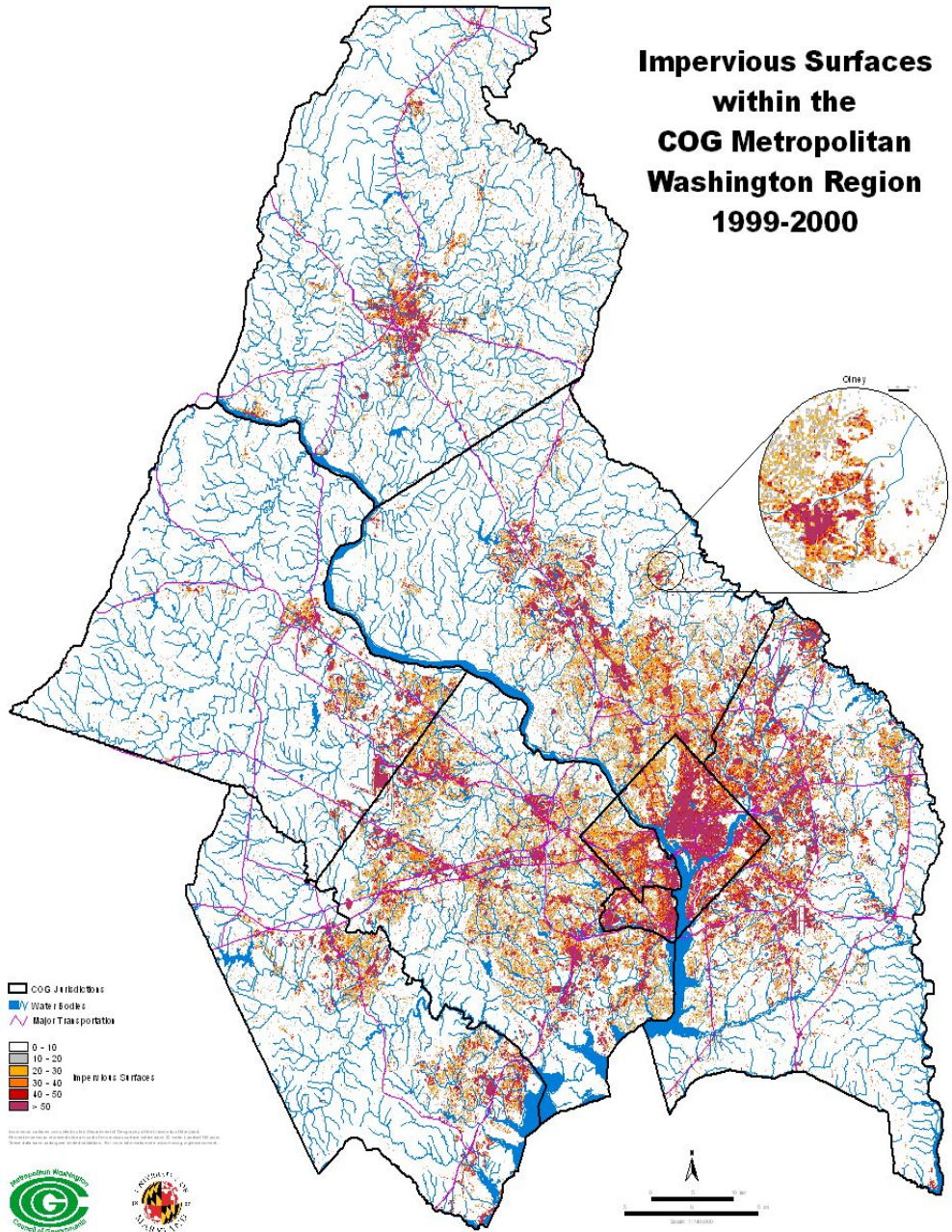
# Increase in Developed Land within the COG Region



(1986 -2006 land use derived from GIS analysis of Land sat imagery)

(extrapolated data)

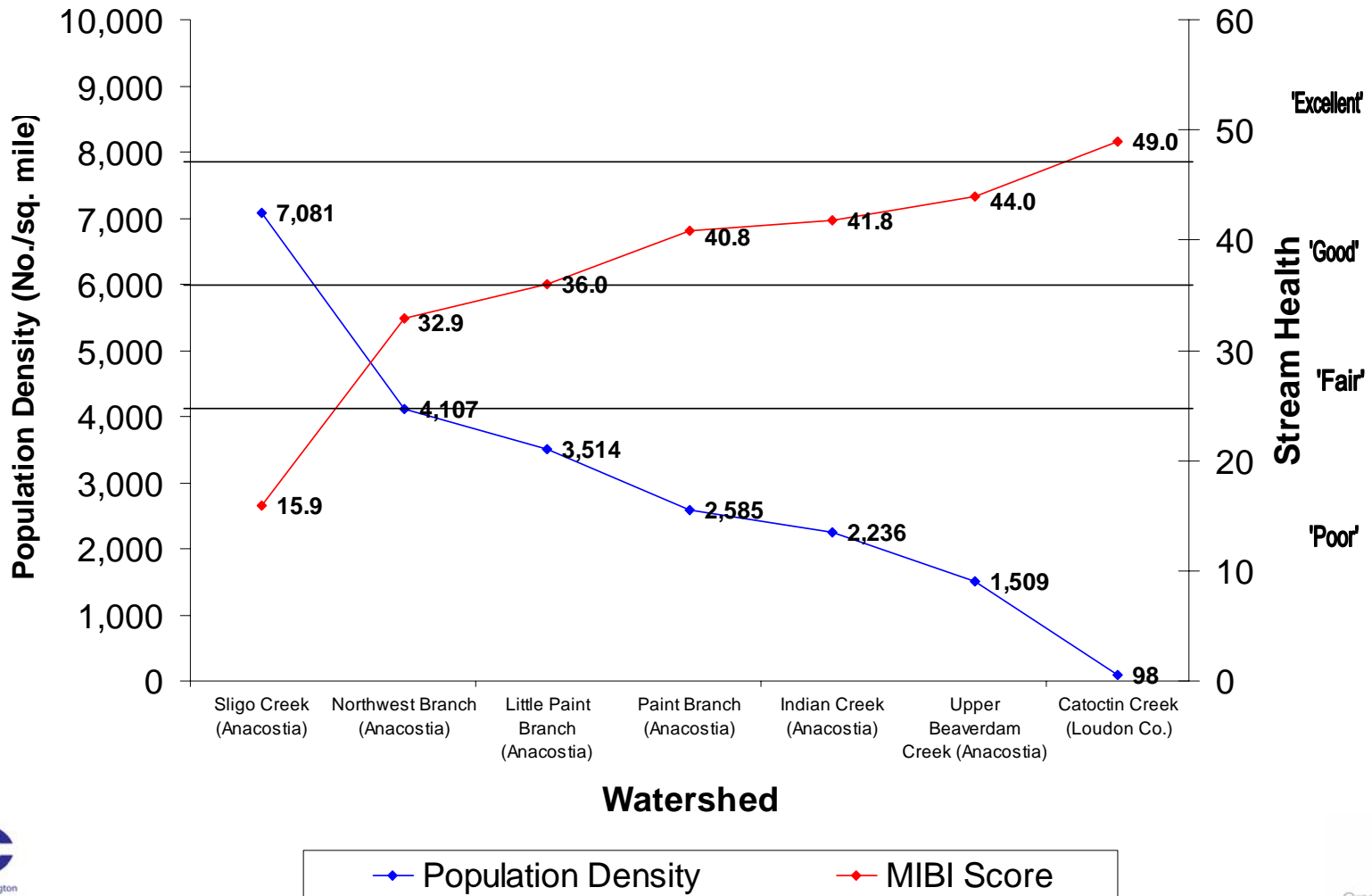
# Impervious Surfaces within the COG Metropolitan Washington Region 1999-2000



# Potential Metric: Stream Health

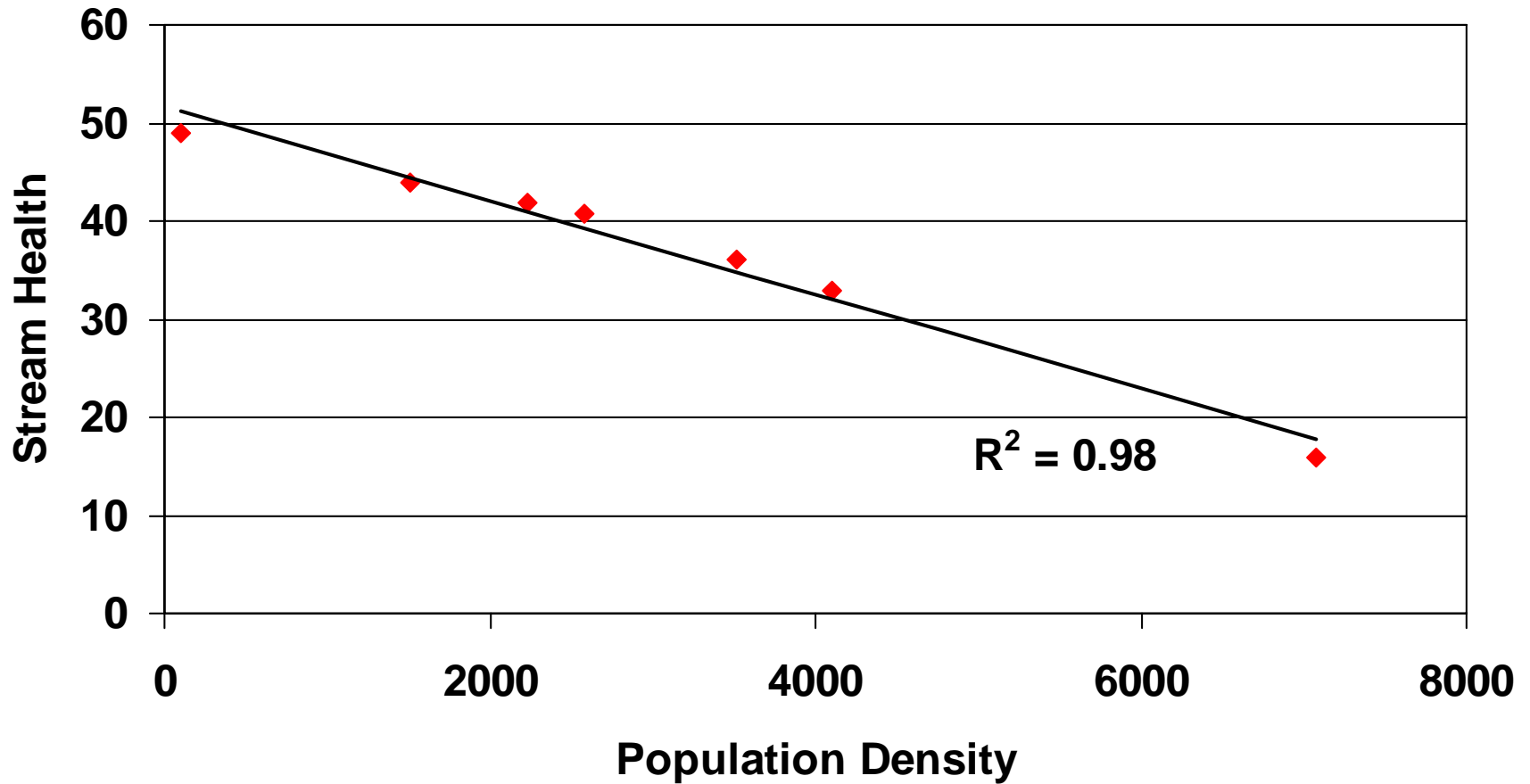
(Stream health score based on measurements of macro-invertebrate population, diversity)

## Population density vs. stream health, preliminary data



# Population Density vs. Stream Health

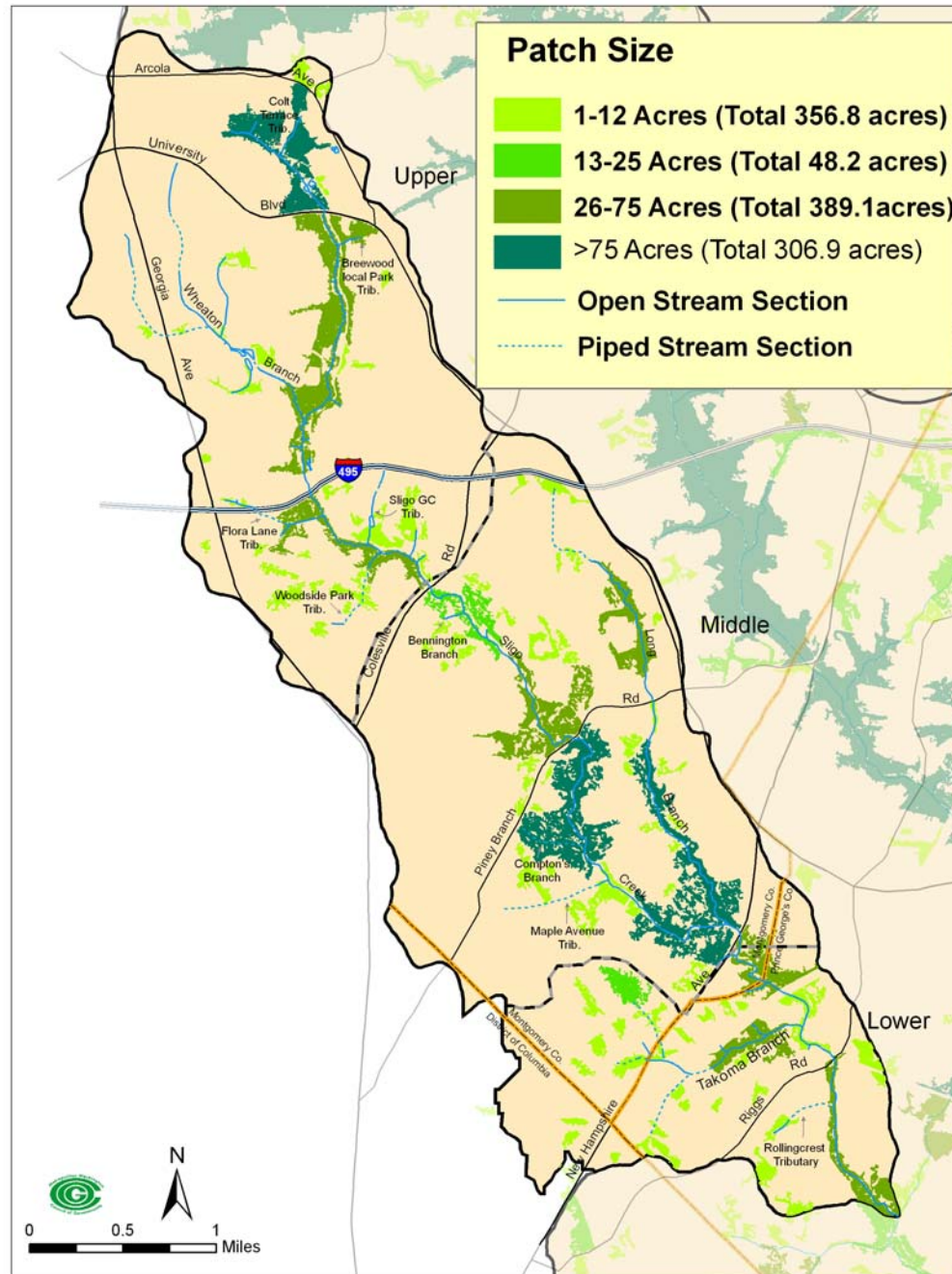
(statistical correlation)



# Potential Metric: Forest Patch Size

Data for Sligo Creek  
based on 2000 fine  
satellite imagery  
(Ikonos)

Larger patch sizes  
important for  
maintaining  
environmental  
diversity






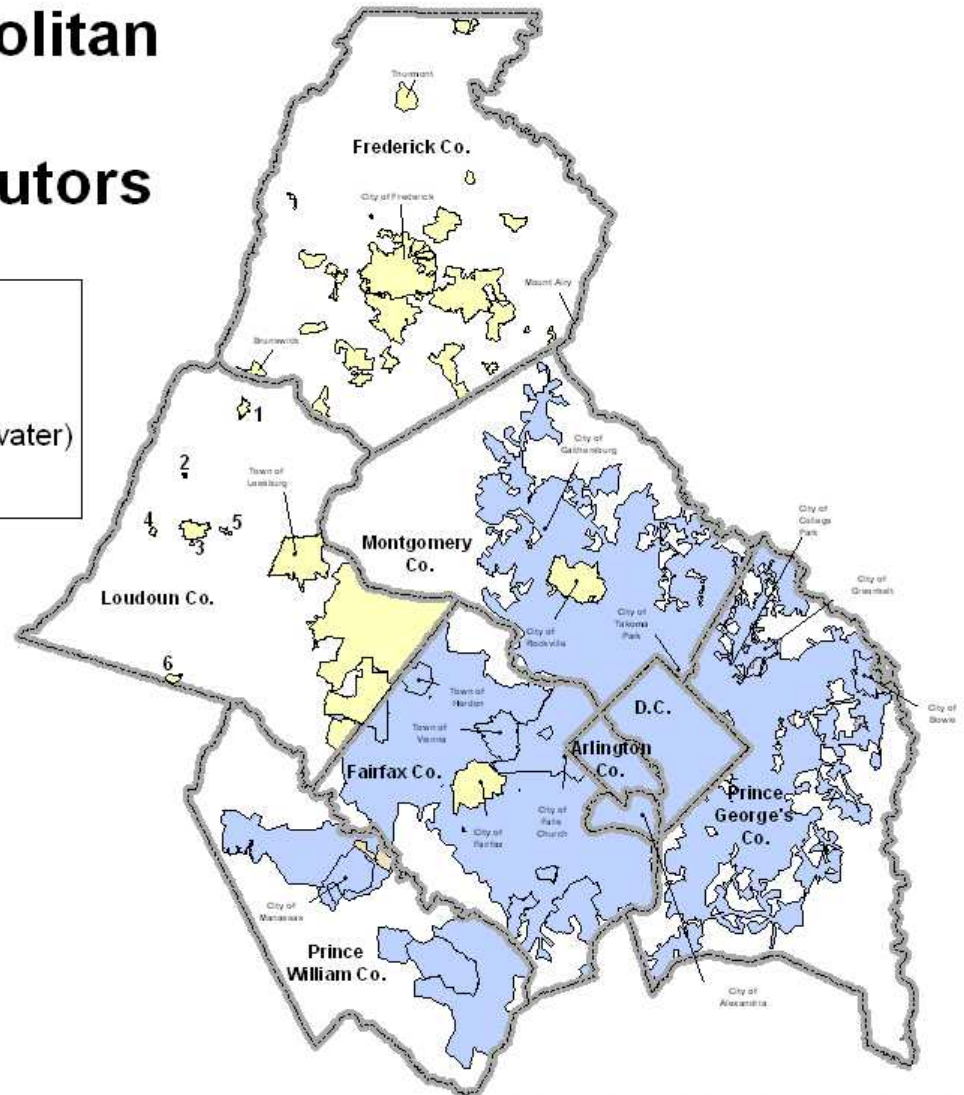
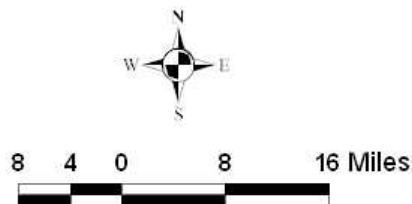


# Potential Metric: Reliability of Water Supply

## Service Areas for Washington Metropolitan Region Water Suppliers & Distributors

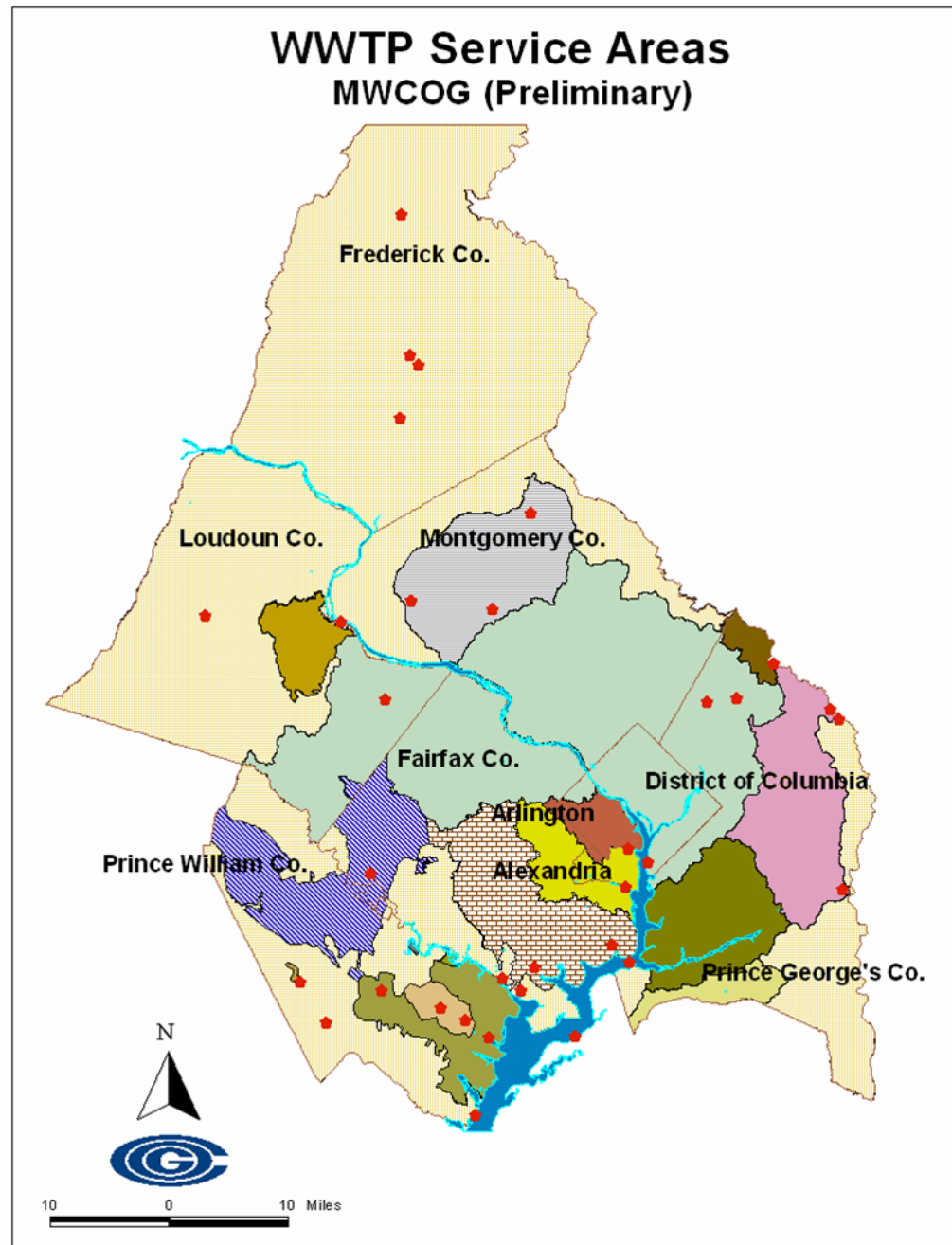
### Legend

-  CO-OP (most reliable)
-  Mixed (Surface Water and Groundwater)
-  Groundwater (least reliable)



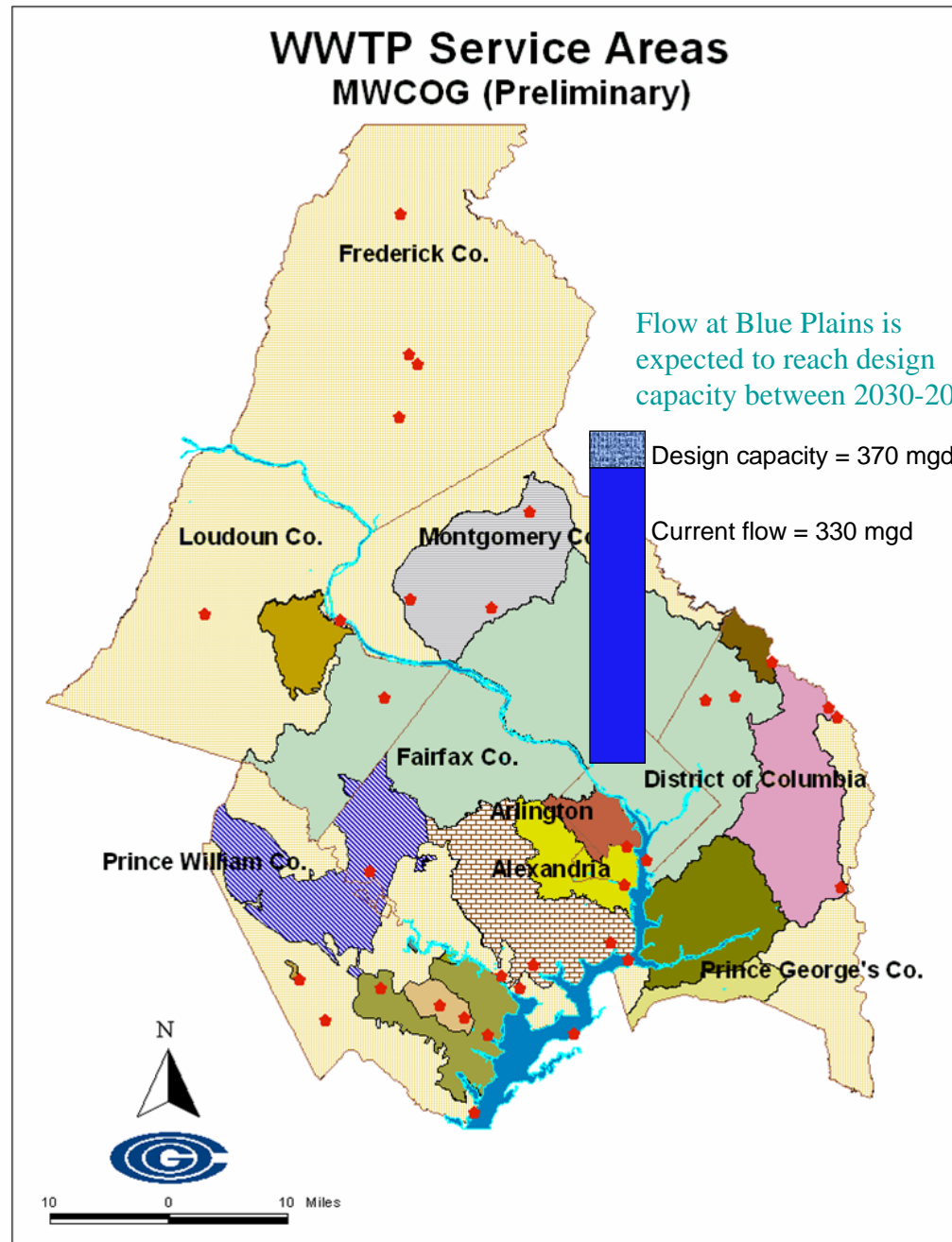
Potential metric :  
wastewater  
capacity

Final metric will  
when individual  
sewersheds/WW  
are expected to  
capacity for des  
flow and nutrient  
based on popul  
growth



# Potential Metric : Wastewater Capacity

Final metric will show when individual sewersheds/WWTPs are expected to reach capacity for design flow and nutrients based on population growth



Environmental analysis should take account of more than COG region

# MWCOG Member Jurisdictions and Surrounding Counties

- MWCOG Member Jurisdiction
- Surrounding County

