

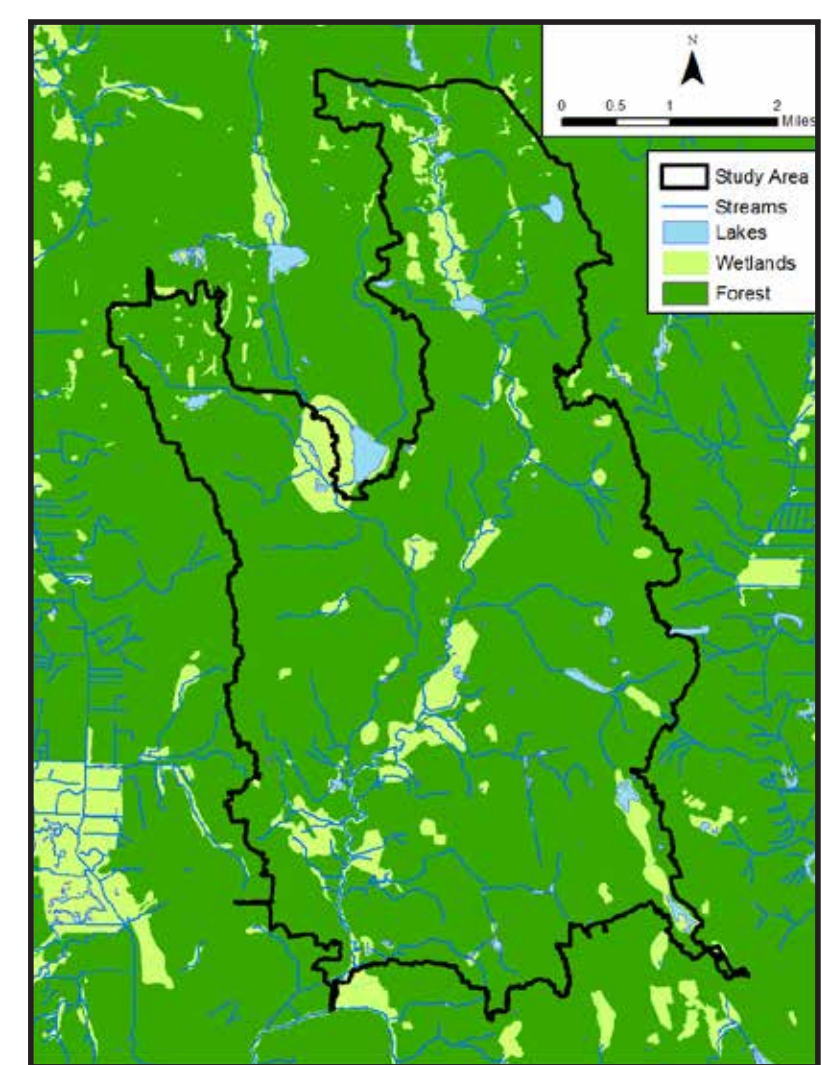
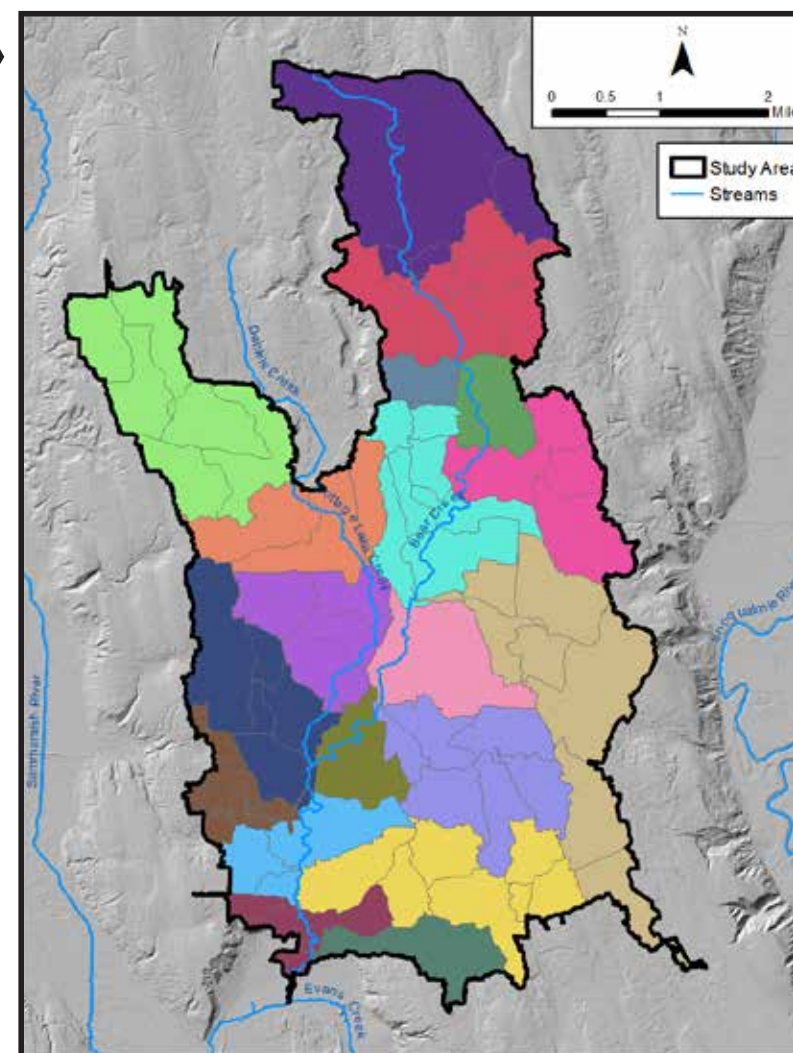
# HSPF and SUSTAIN Watershed Modeling



King County, Department of Natural Resources and Parks, Water and Land Resources Division · February 25, 2016

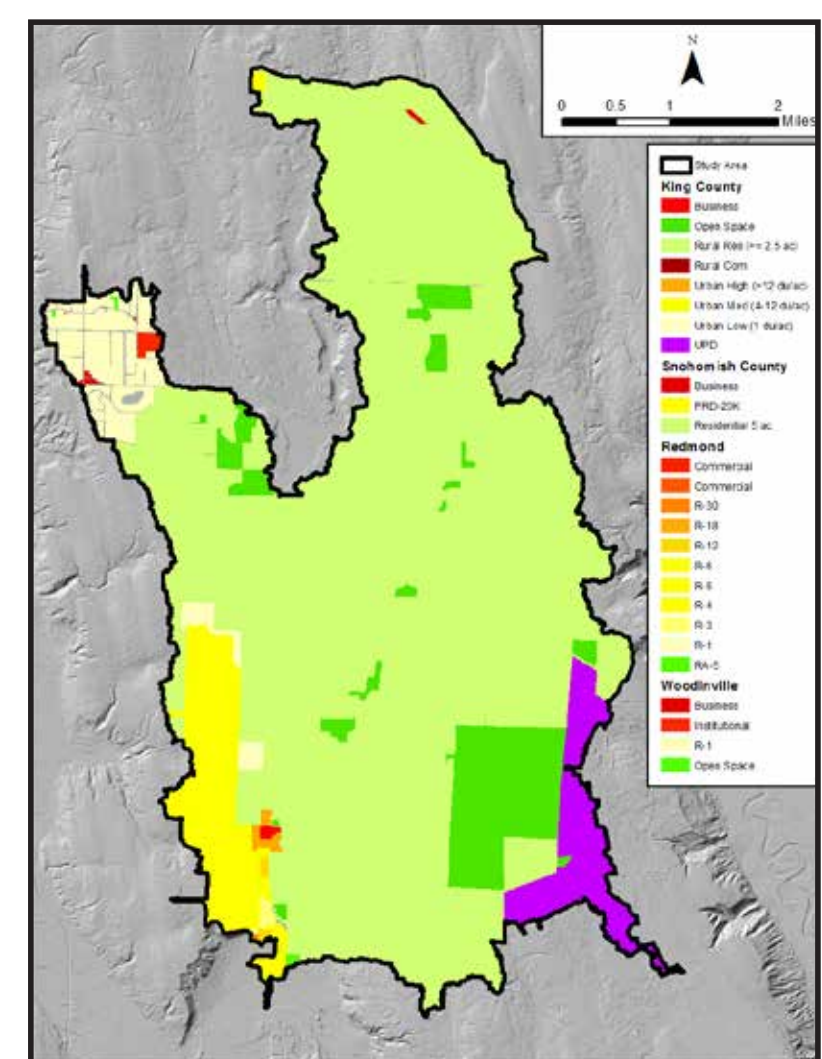
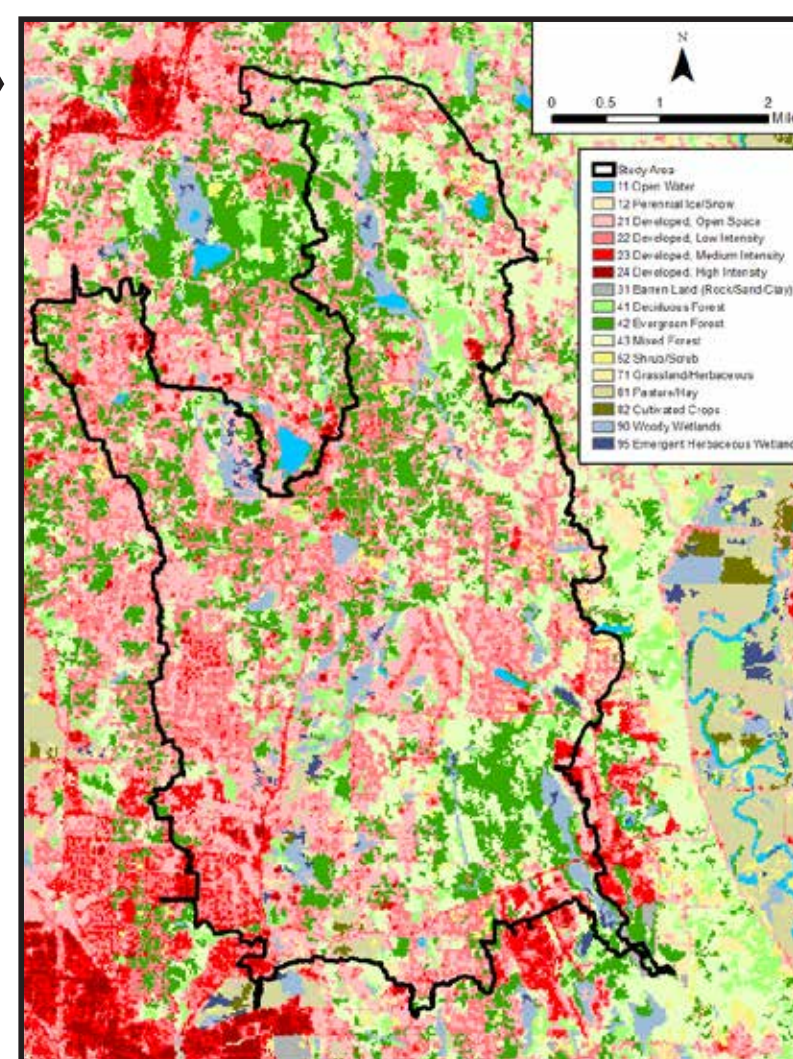
## MODELING INPUT EXAMPLES

**Model Domains**  
Study area includes Bear Creek and lands that drain to Bear Creek above the confluence with Evans Creek, excluding the Cottage Lake drainages.

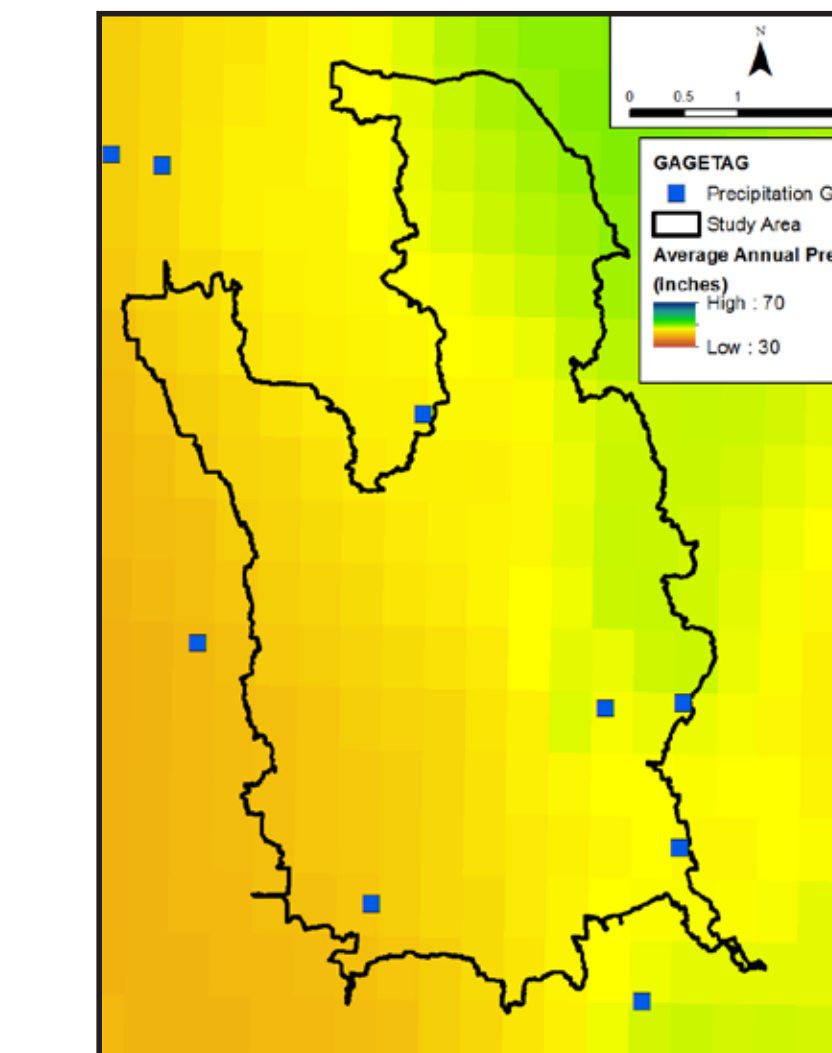


**Forested**  
Total forest cover with known existing wetlands used to characterize pre-development conditions representing idealized state of the watersheds.

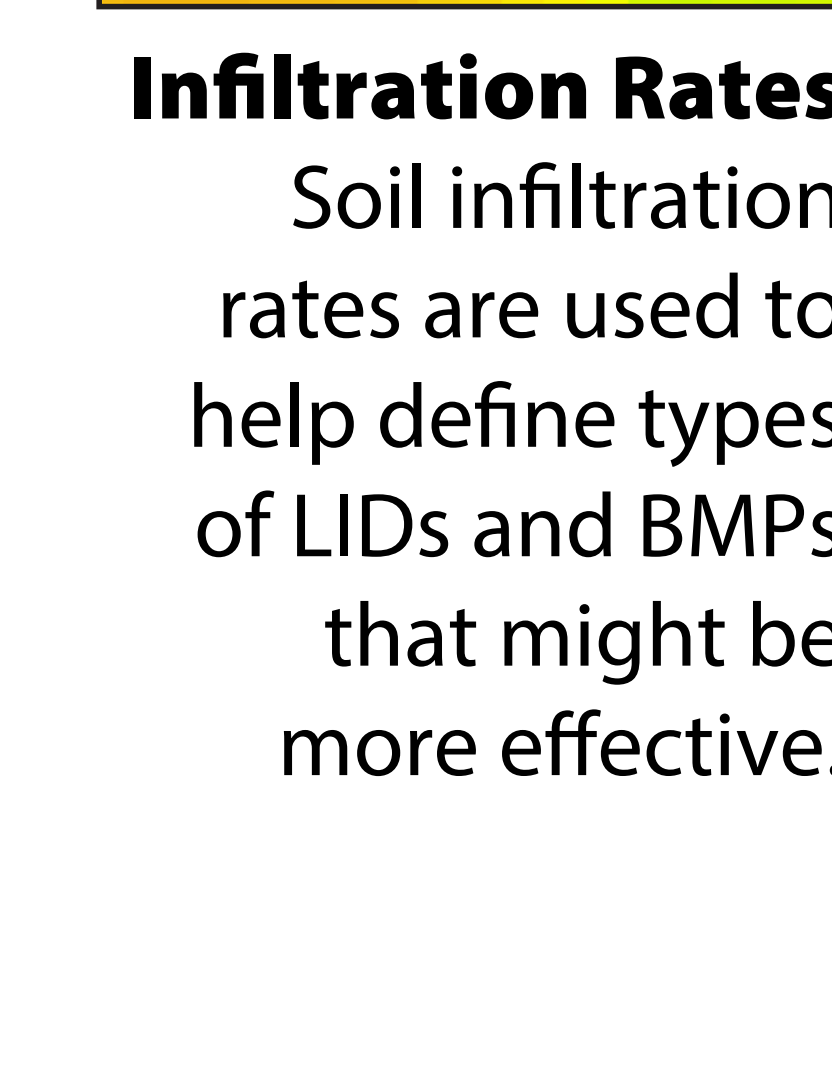
**Existing Land Use**  
2011 National Land Cover Database classified into 16 land cover categories used to represent current conditions.



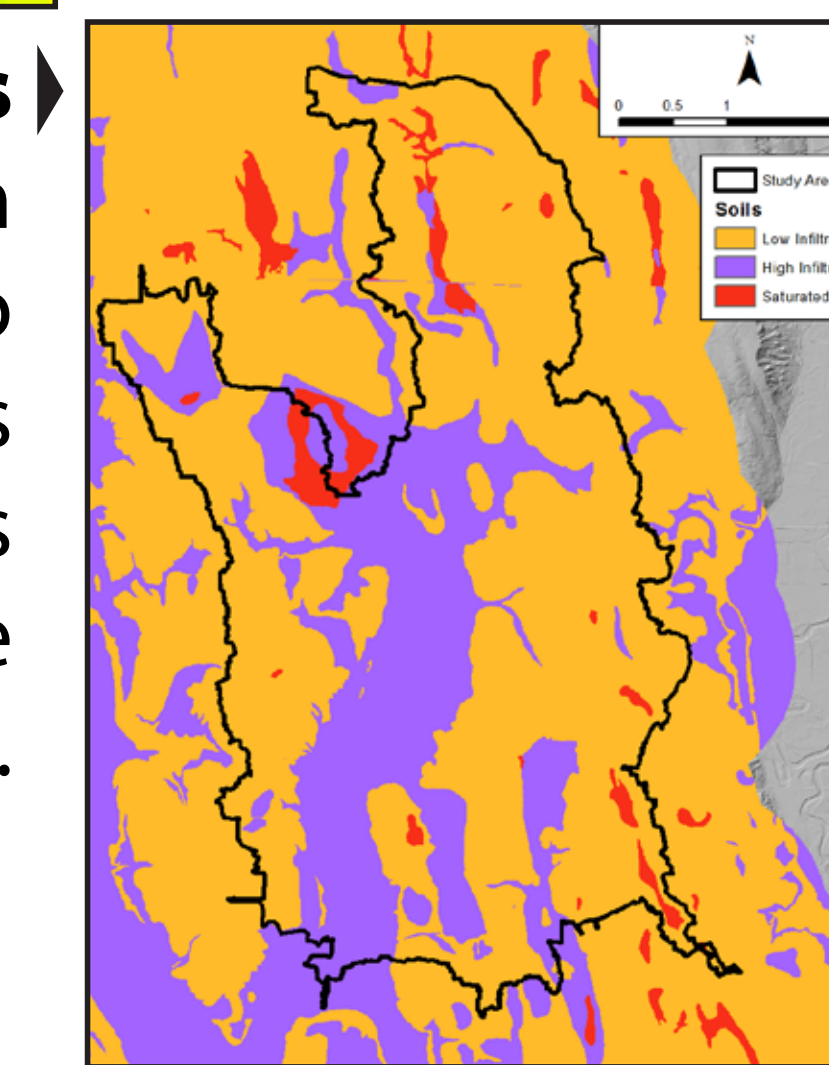
**Future Land Use**  
Future Land use (2040) will be derived from King County, Snohomish County, City of Redmond, and City of Woodinville Comprehensive Plans



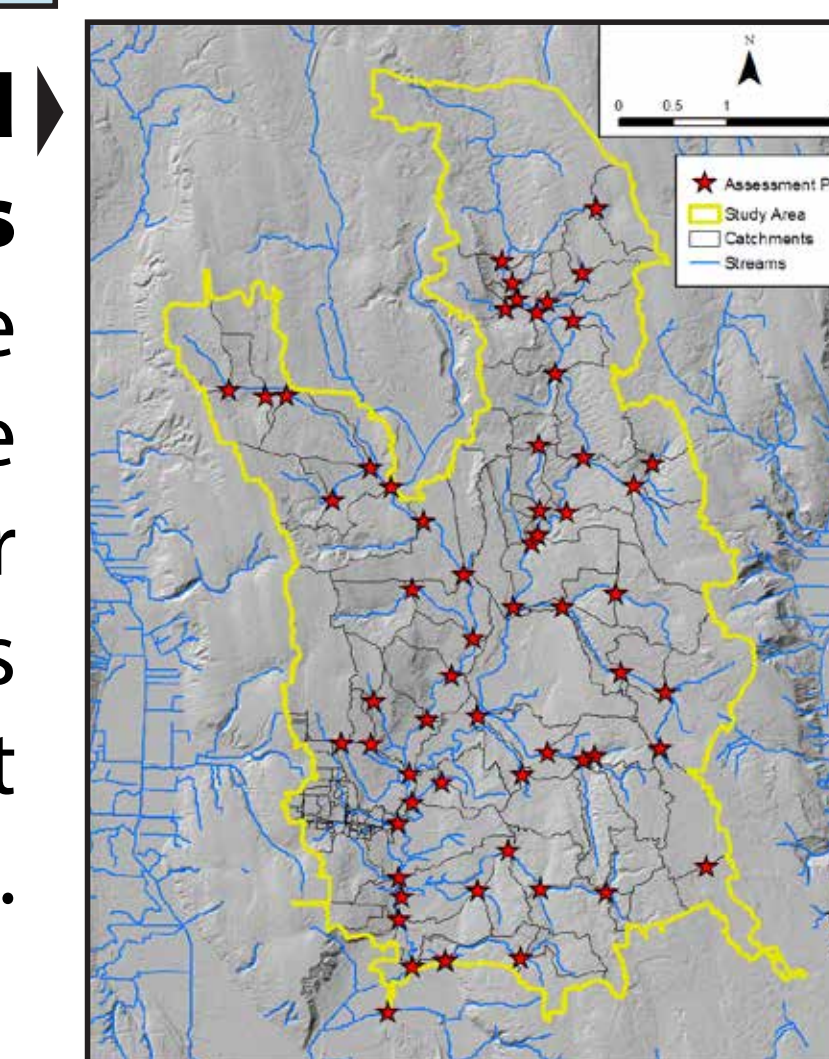
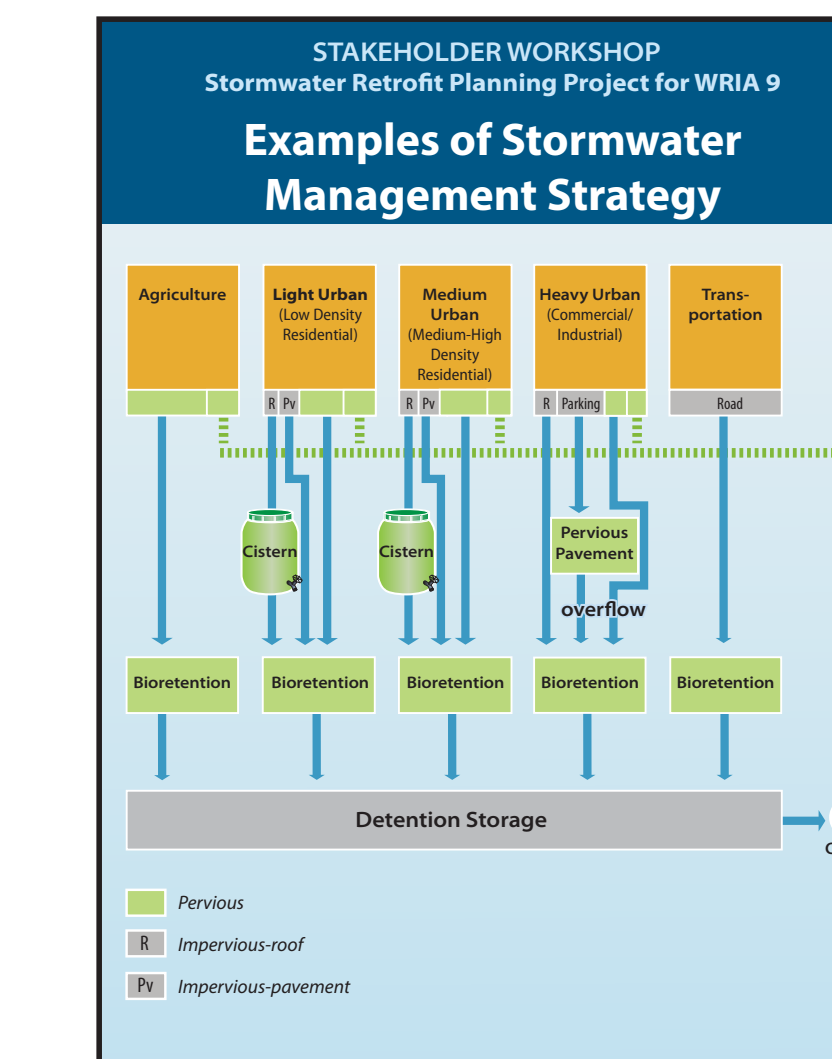
**Atmospheric**  
Observed precipitation representing current rainfall patterns.



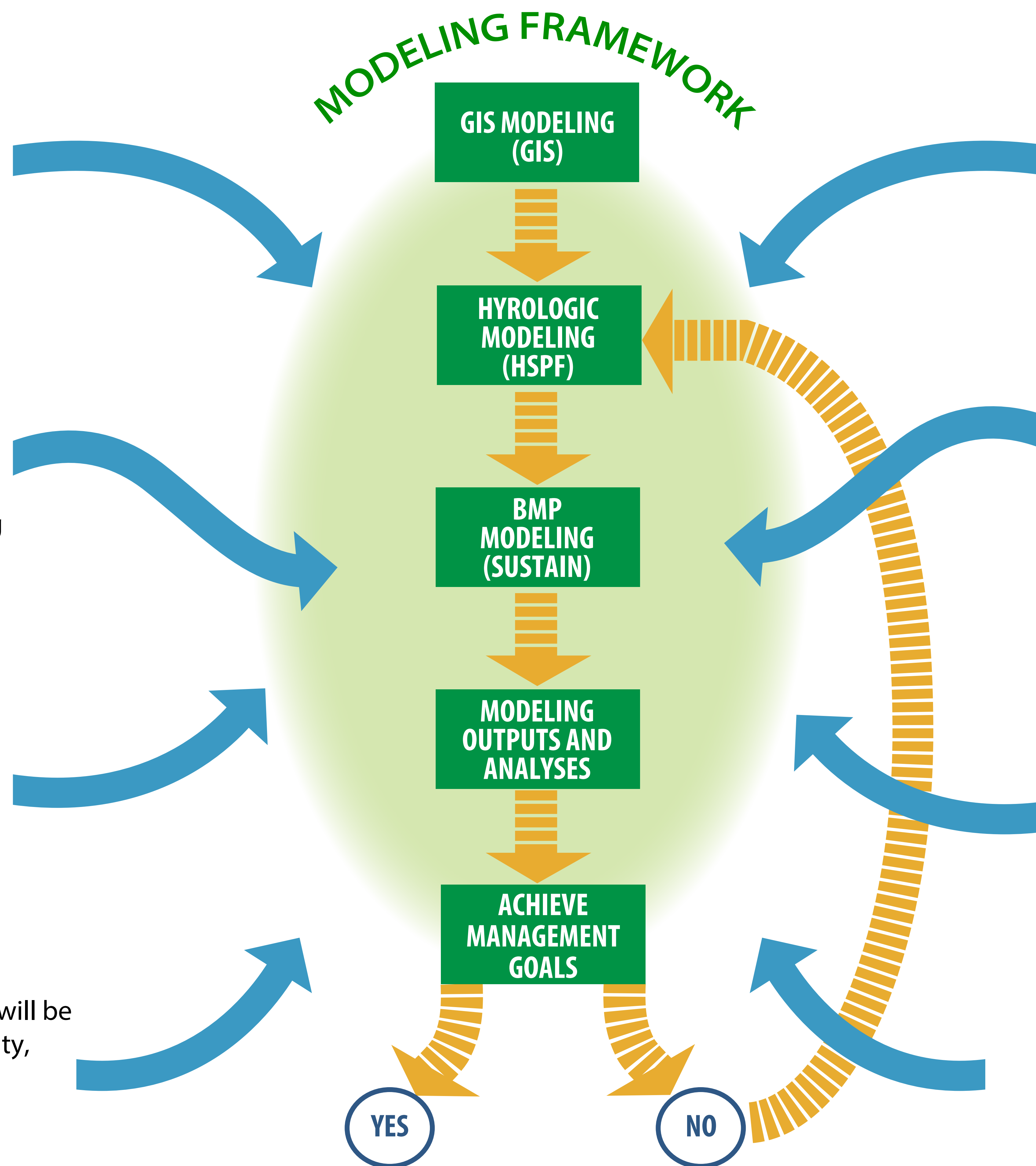
**Infiltration Rates**  
Soil infiltration rates are used to help define types of LIDs and BMPs that might be more effective.



**Stormwater Management Strategies**  
Strategies are developed to identify what BMPs should be considered for the implementation plan. The strategies include BMP types, BMP designs, and how generated runoff is routed in the basin.

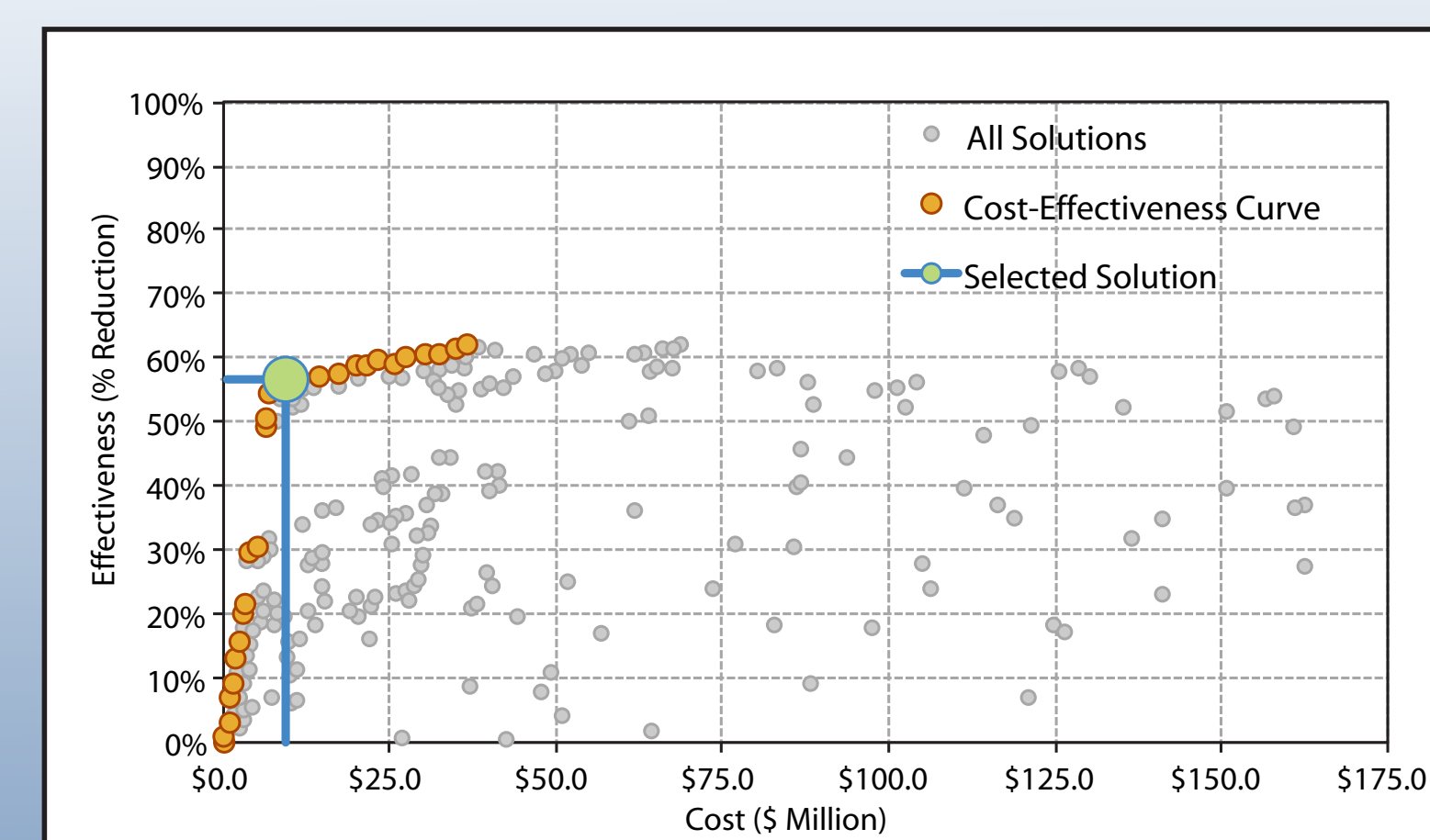


**Assessment Points and Optimization Goals**  
Assessment points are identified where stormwater management strategies will be evaluated to meet watershed goals.

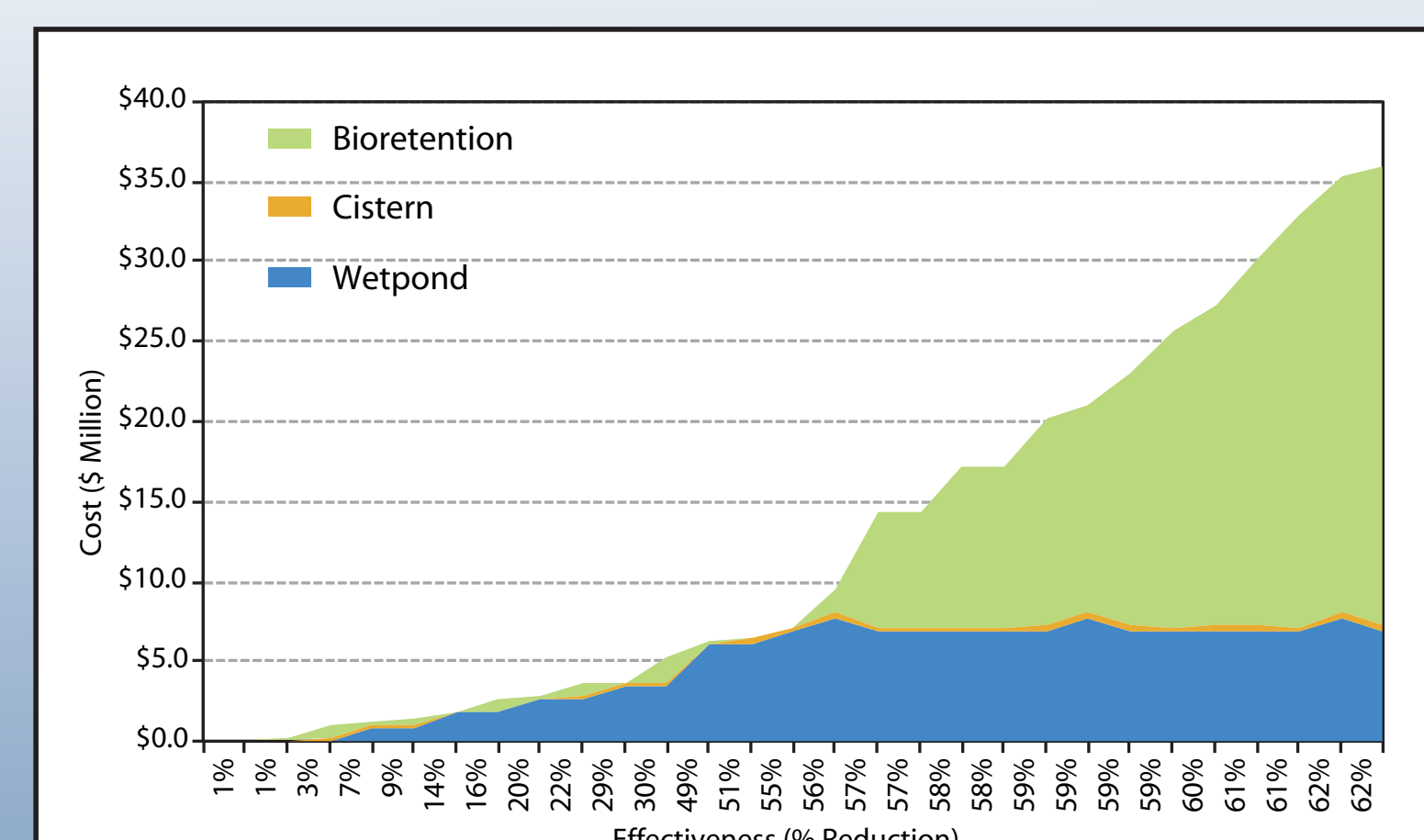


## MODELING OUTPUTS & ANALYSES EXAMPLES

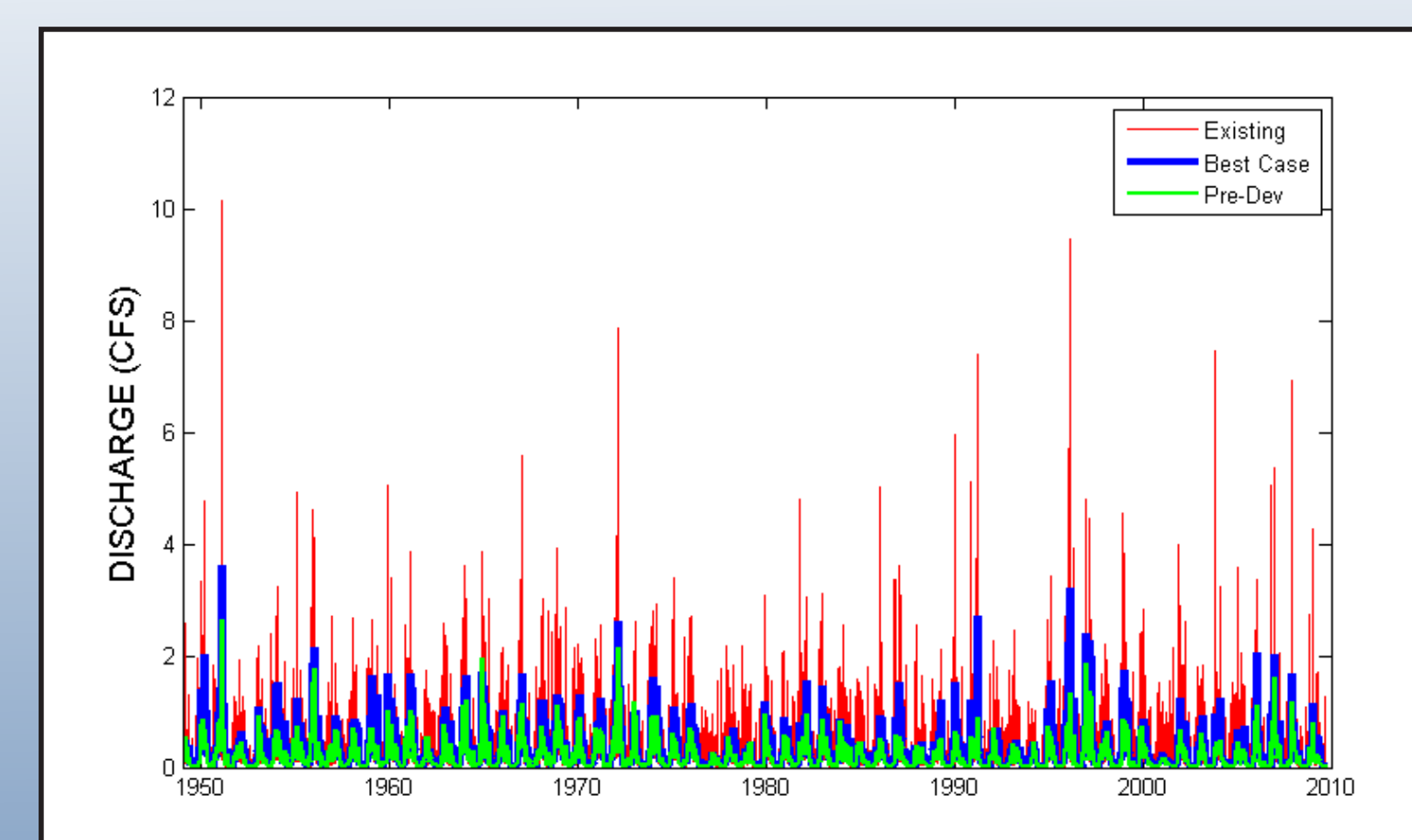
**Cost-Effectiveness Curve**



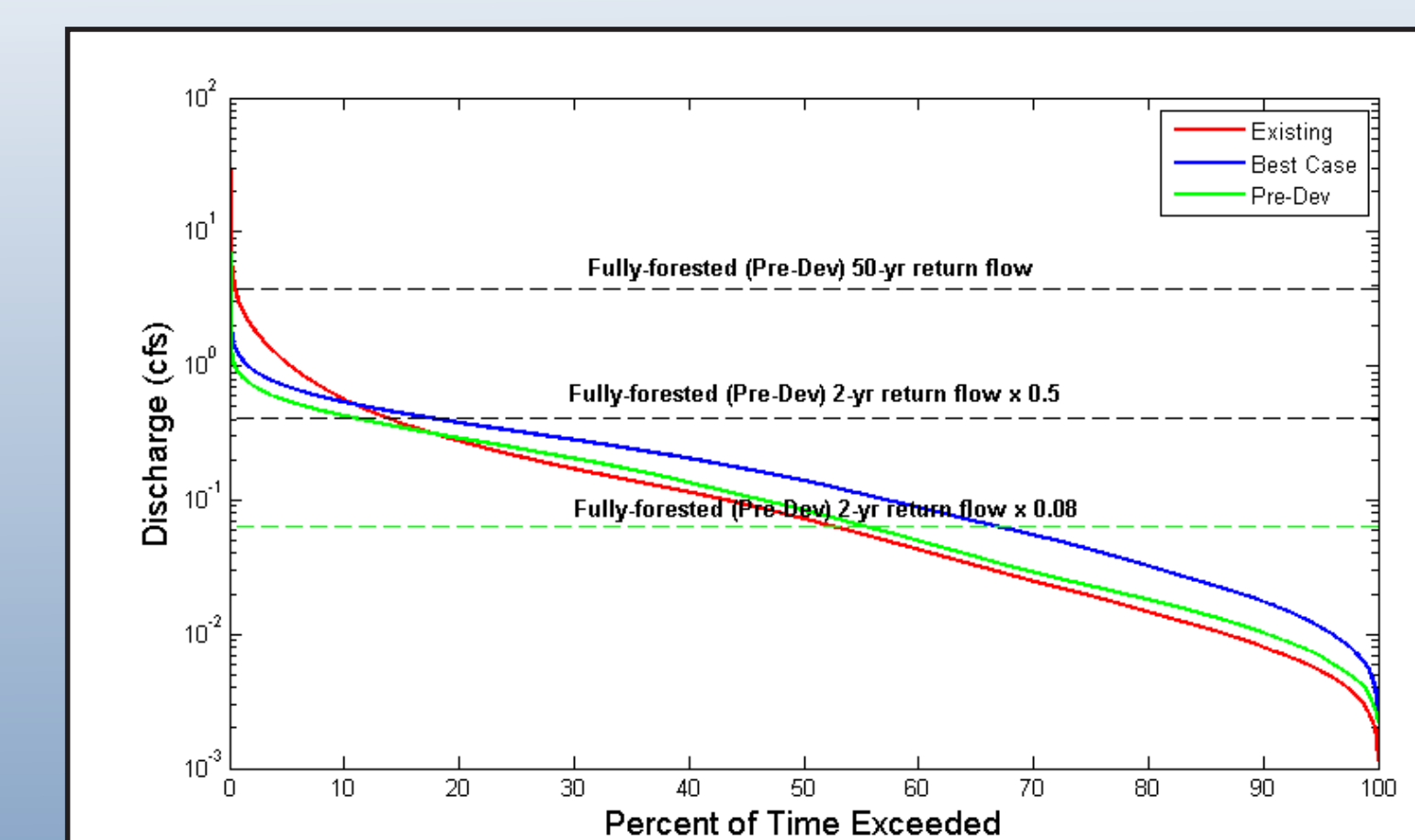
**BMP Cost-Distribution Curve**



**Flow Rates**



**Flow Duration Curve**



**High Pulse Count**

