Upstream Propagation of MFLs Using A Reach-Based Methodology

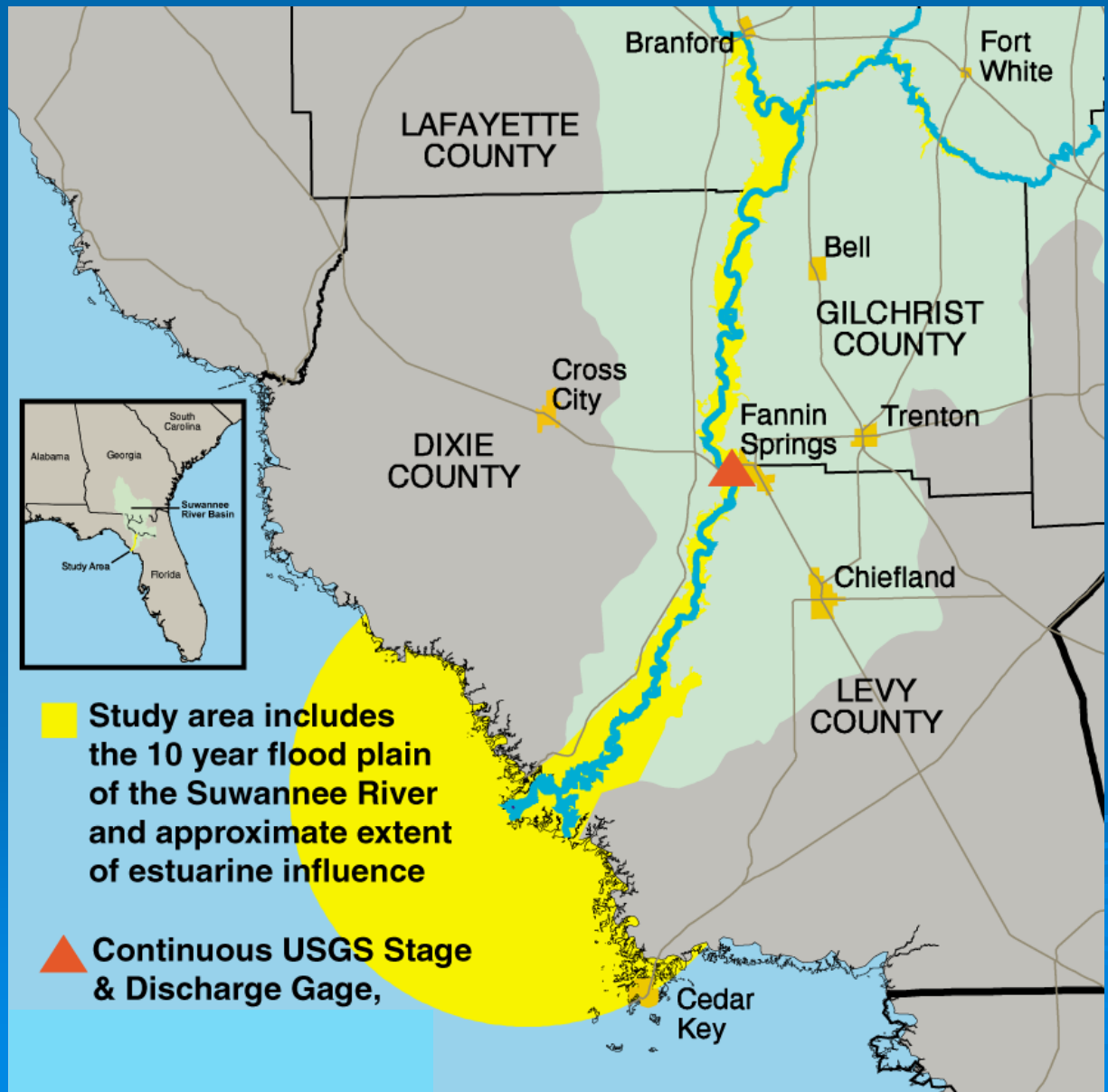
John Good

&

Rob Mattson

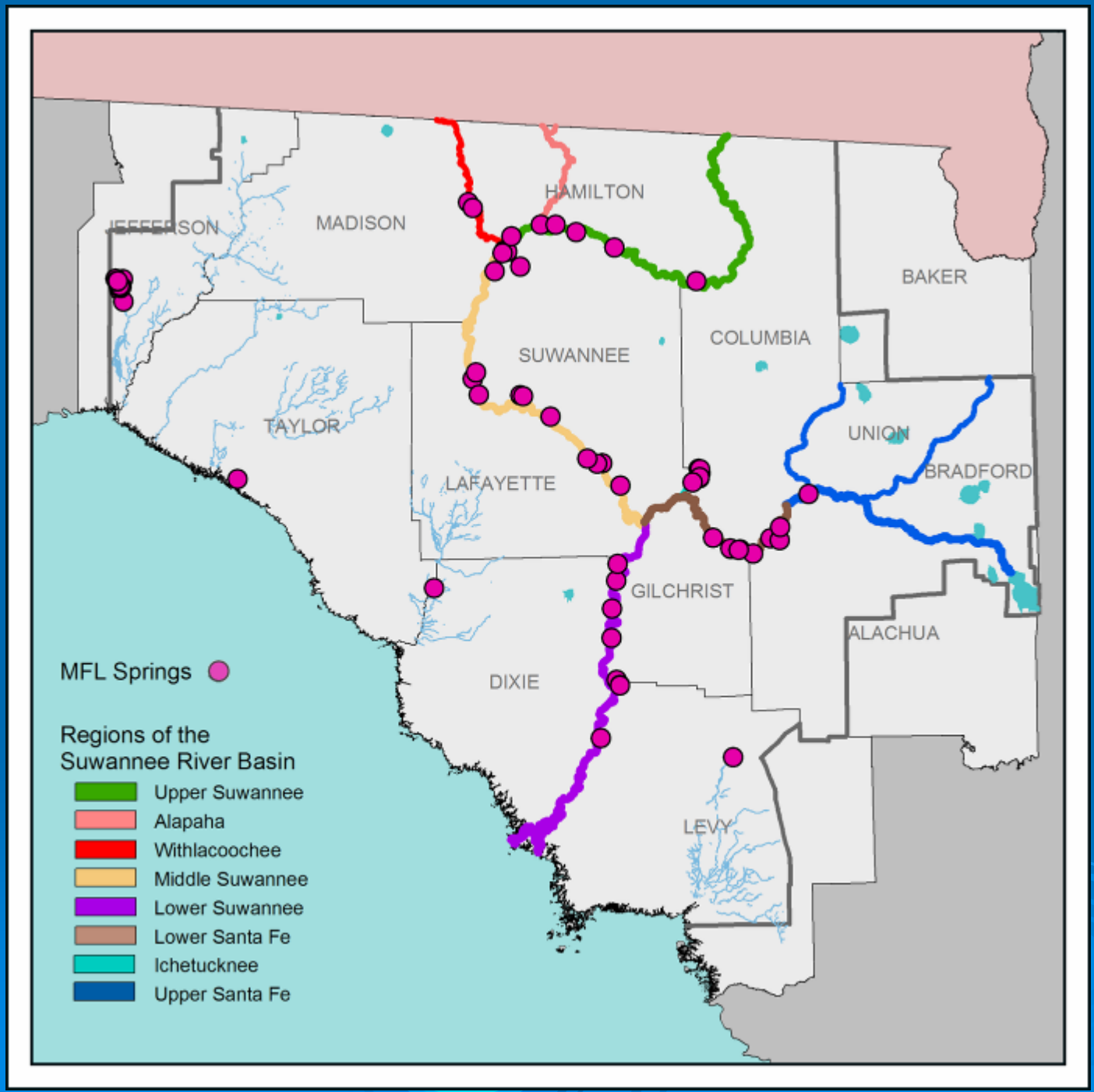
SUWANNEE RIVER WATER MANAGEMENT DISTRICT

Lower Suwannee River MFL

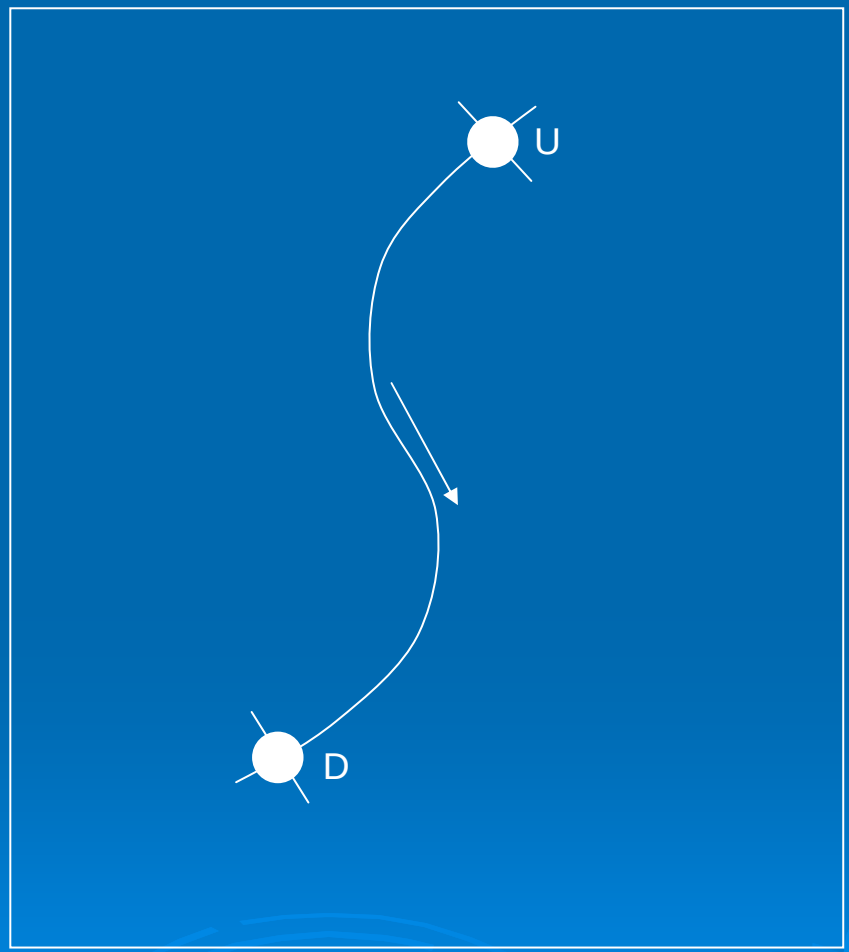


Charge to District Staff

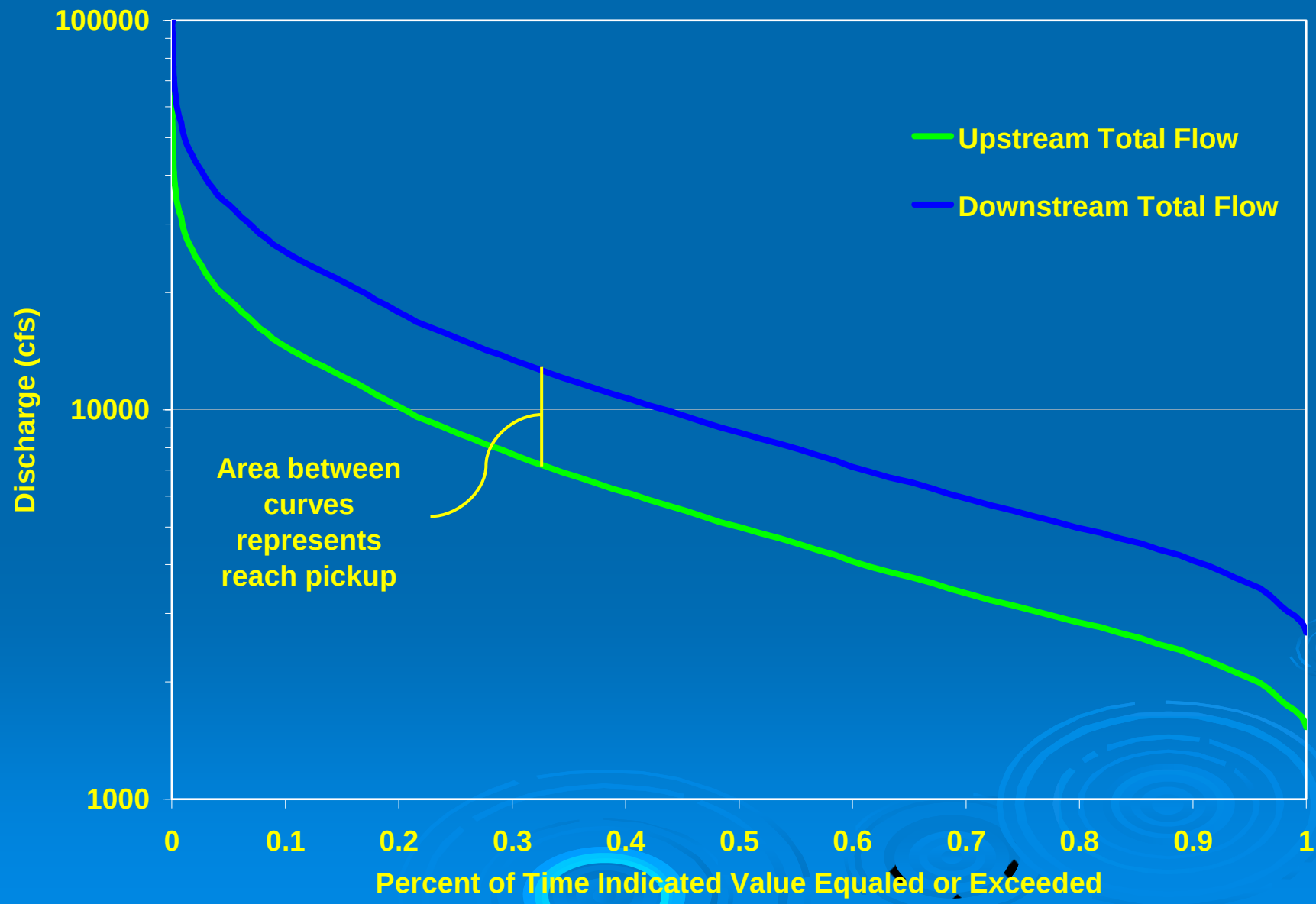
- Establish MFLs District-wide for priority water bodies
- ± 5 year time-frame
- Best available data
- Focus initially on the Suwannee River
- Including springs


HAMILTON
MADISON
BAKER
SUWANNEE
COLUMBIA
TAYLOR
UNION
BRADFORD
LAFAYETTE
GILCHRIST
ALACHUA
DIXIE
LEVY
MFL Springs
Regions of the
Suwannee River Basin
Upper Suwannee
Alapaha
Withlacoochee
Middle Suwannee
Lower Suwannee
Lower Santa Fe
Ichetucknee
Upper Santa Fe

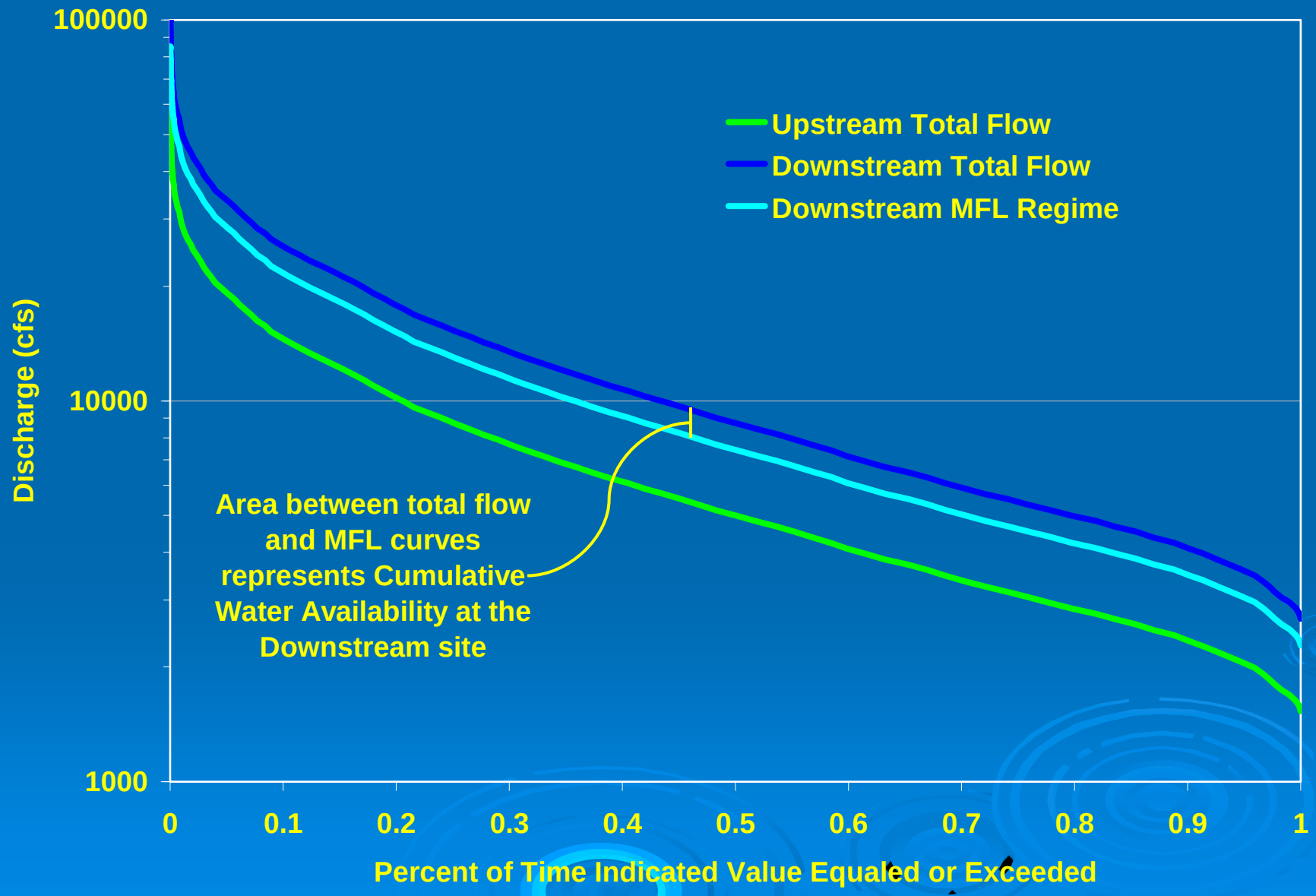
Reach Schematic: Single Reach



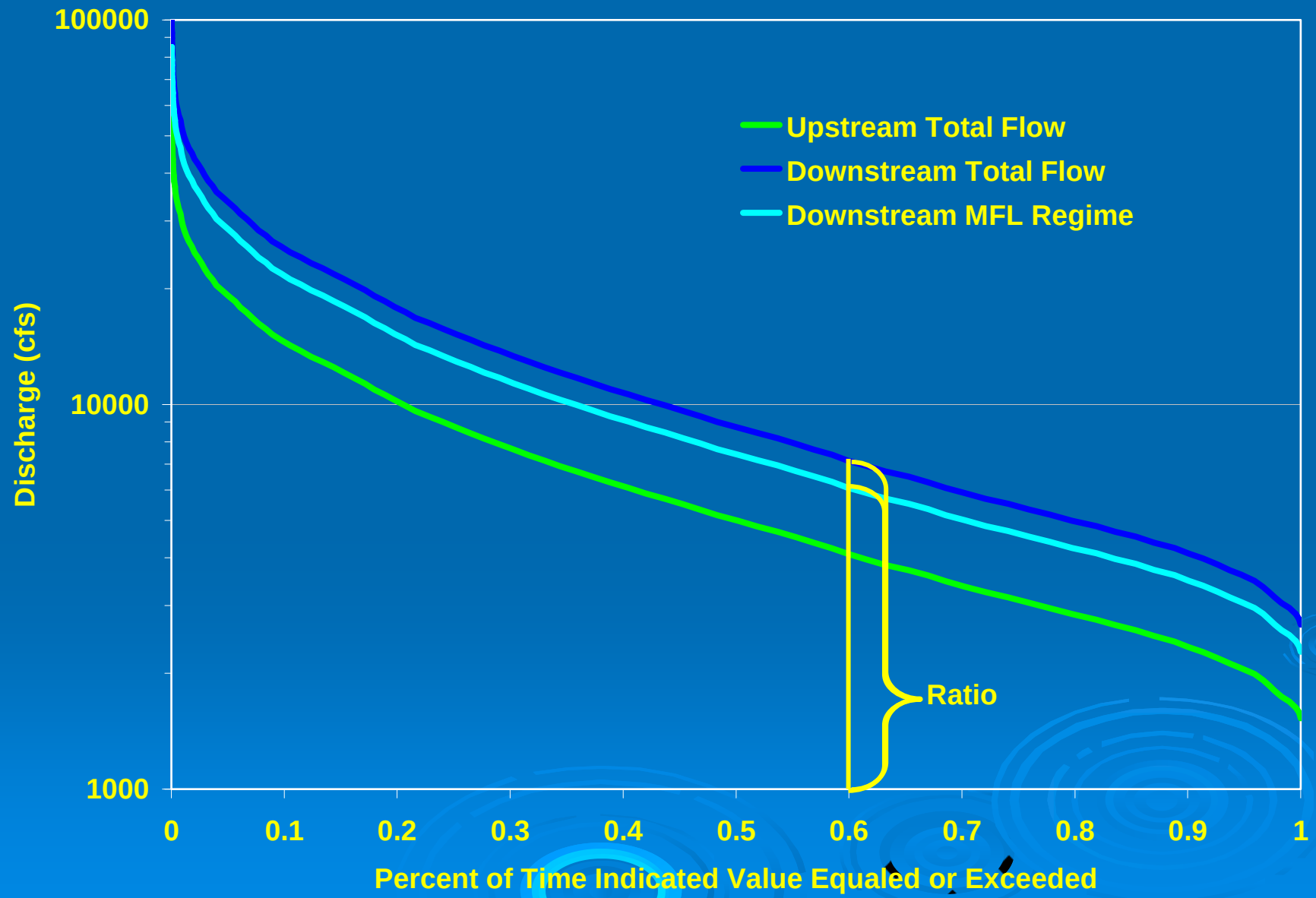
FDCs Up- & Downstream



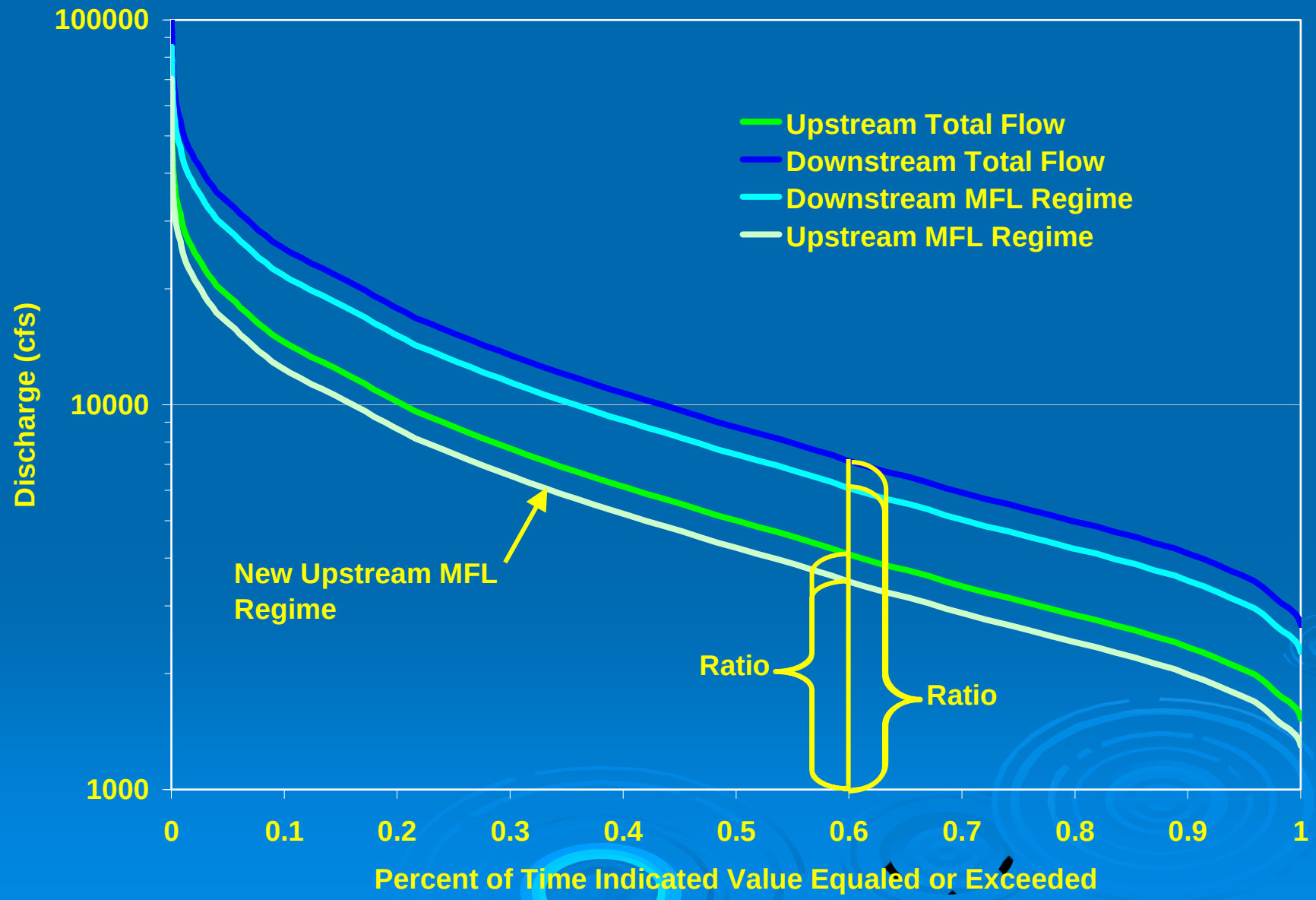
Water Availability



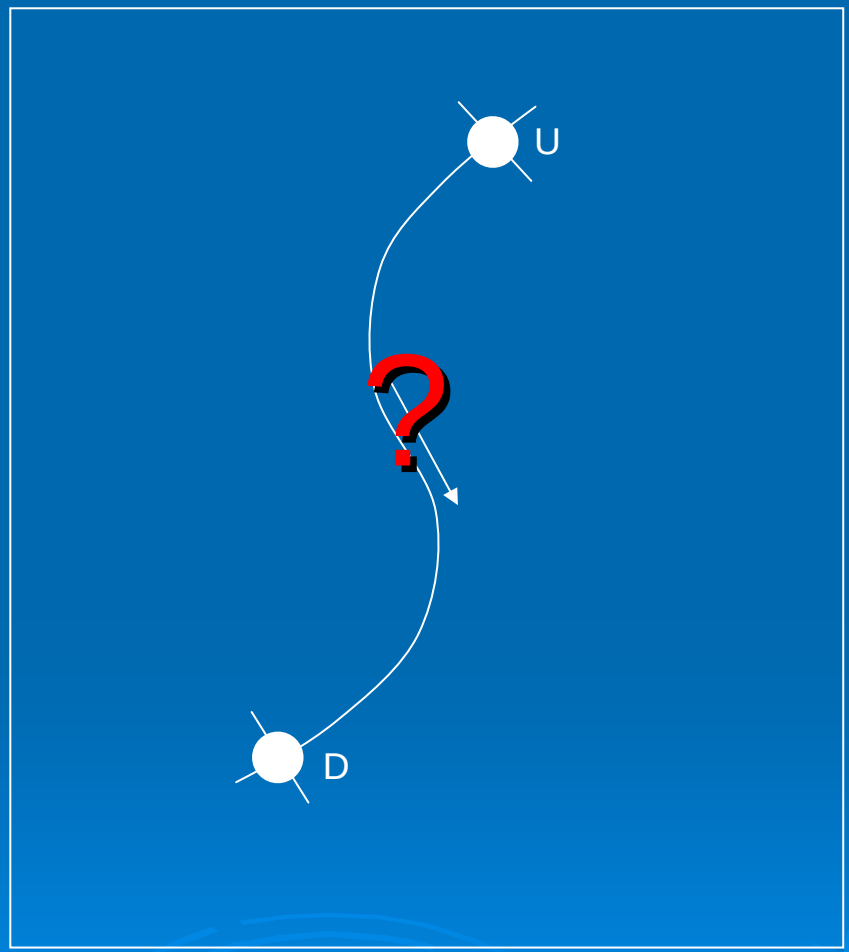
Ratio Process



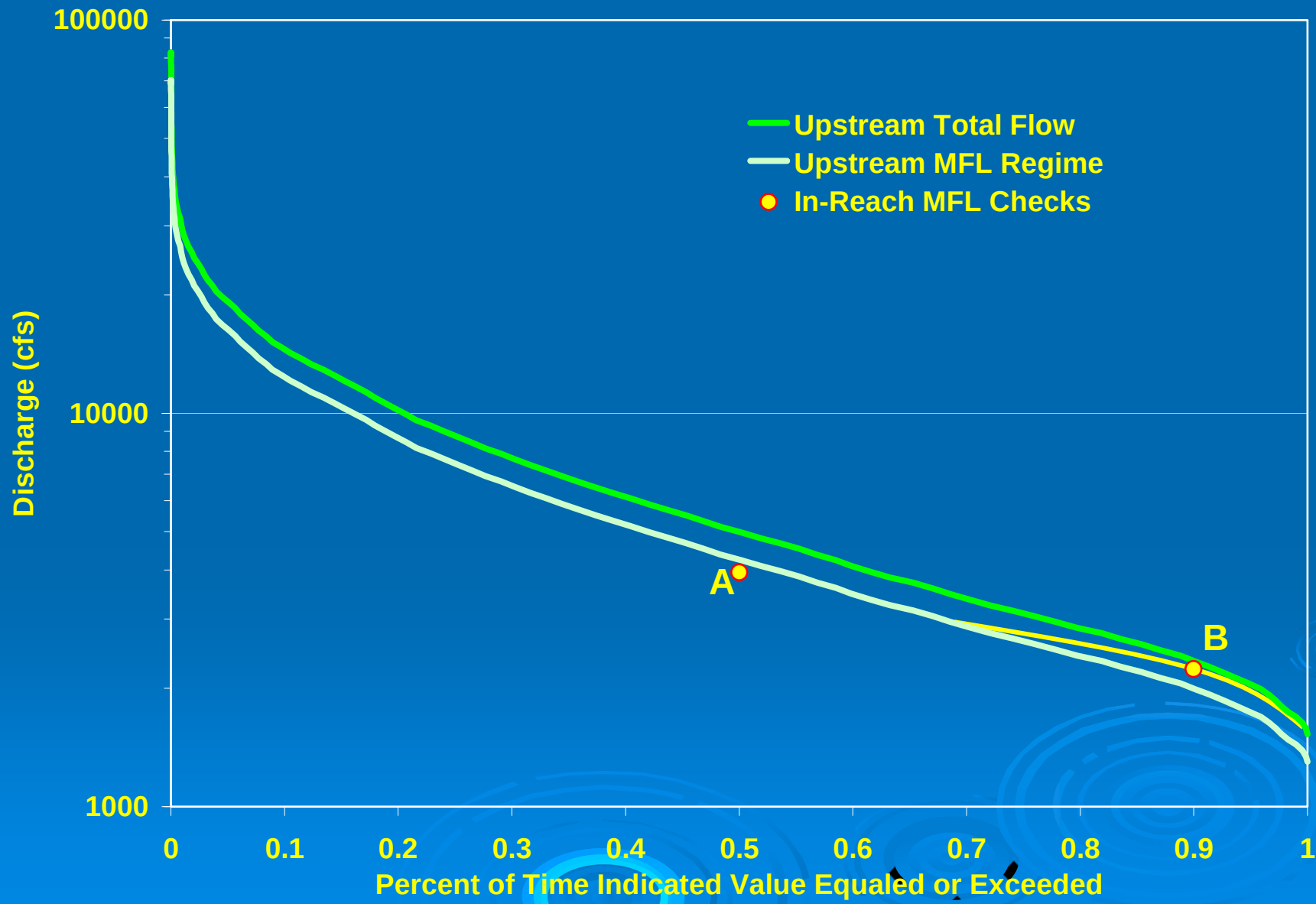
“Initial” Upstream MFL



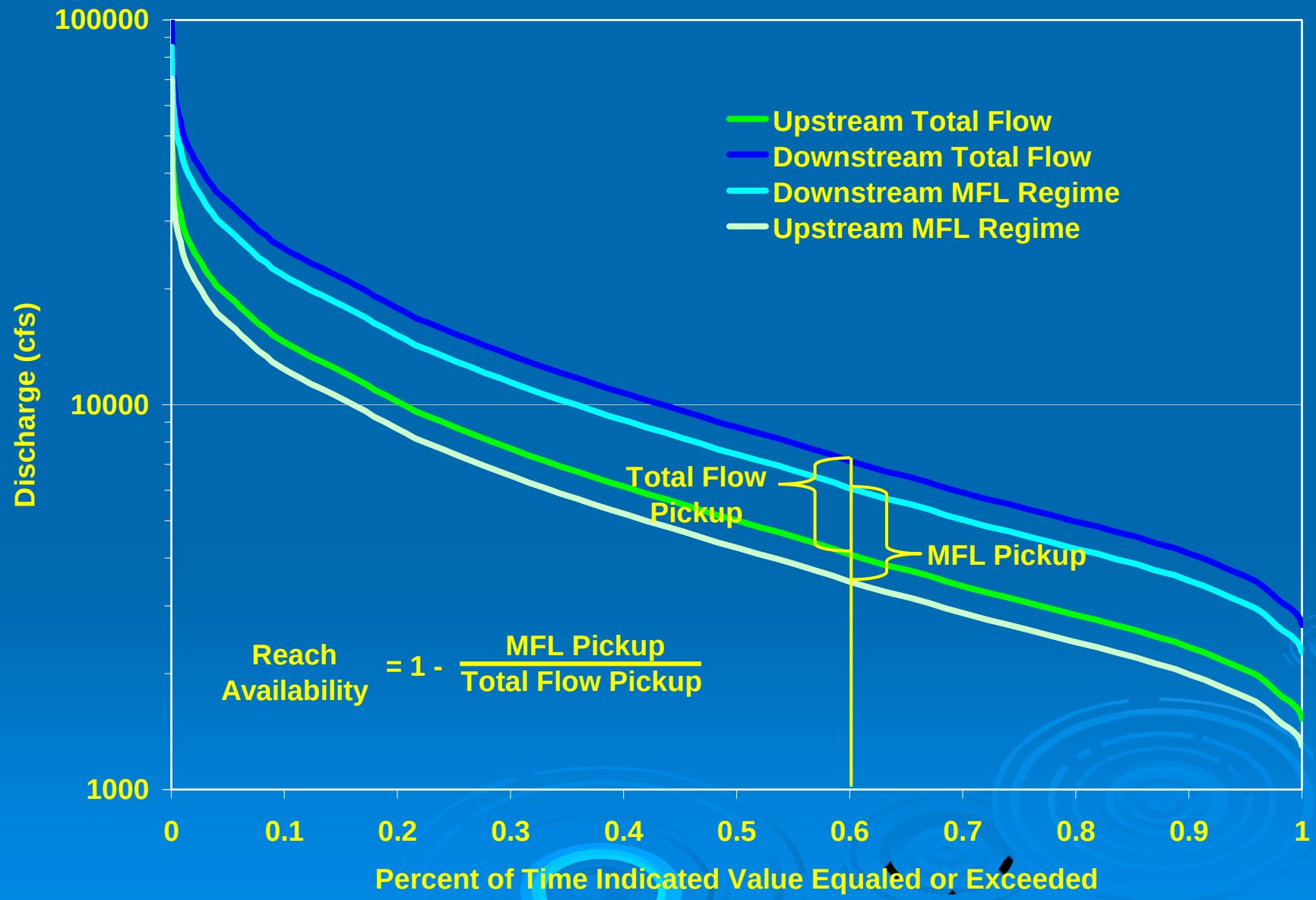
Reach Schematic: Single Reach



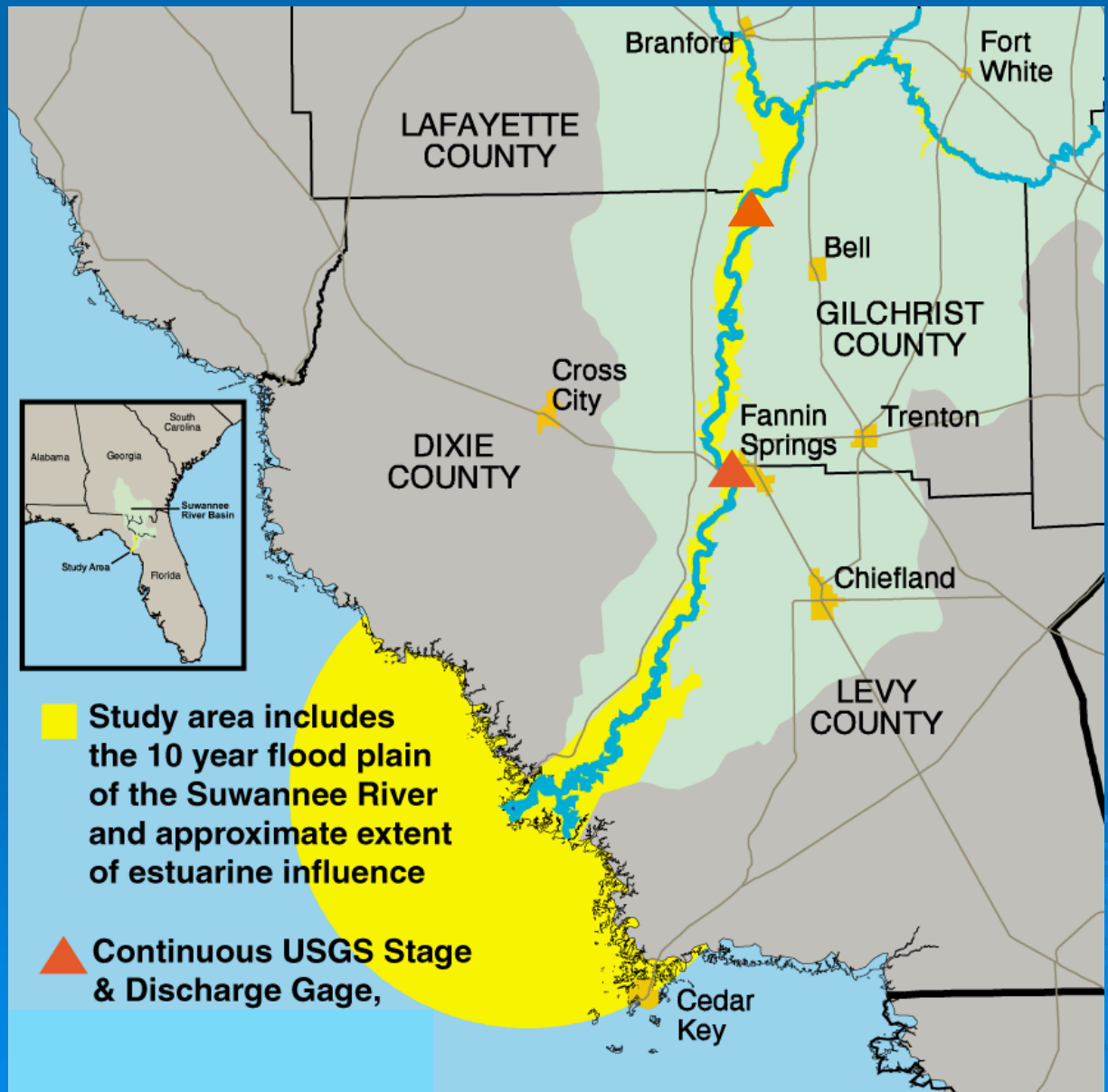
Adequacy of Upstream MFL



Reach Yield Calculations



Lower Suwannee River MFL

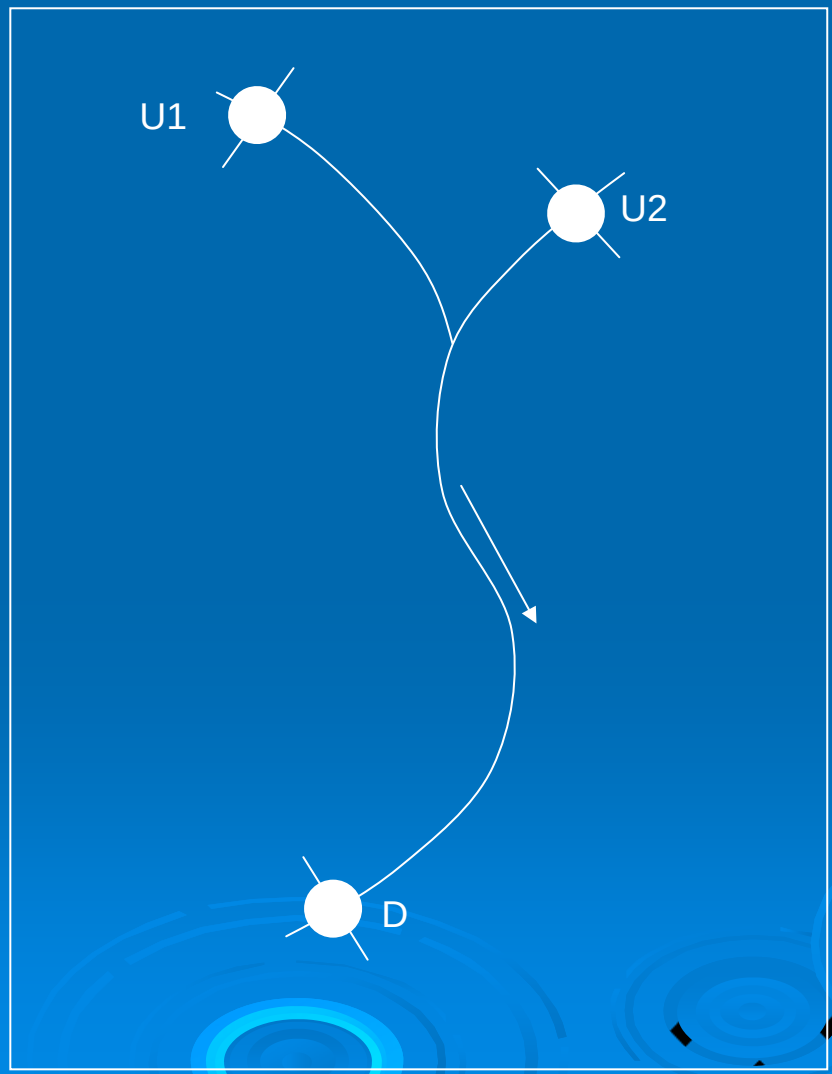


The Issue

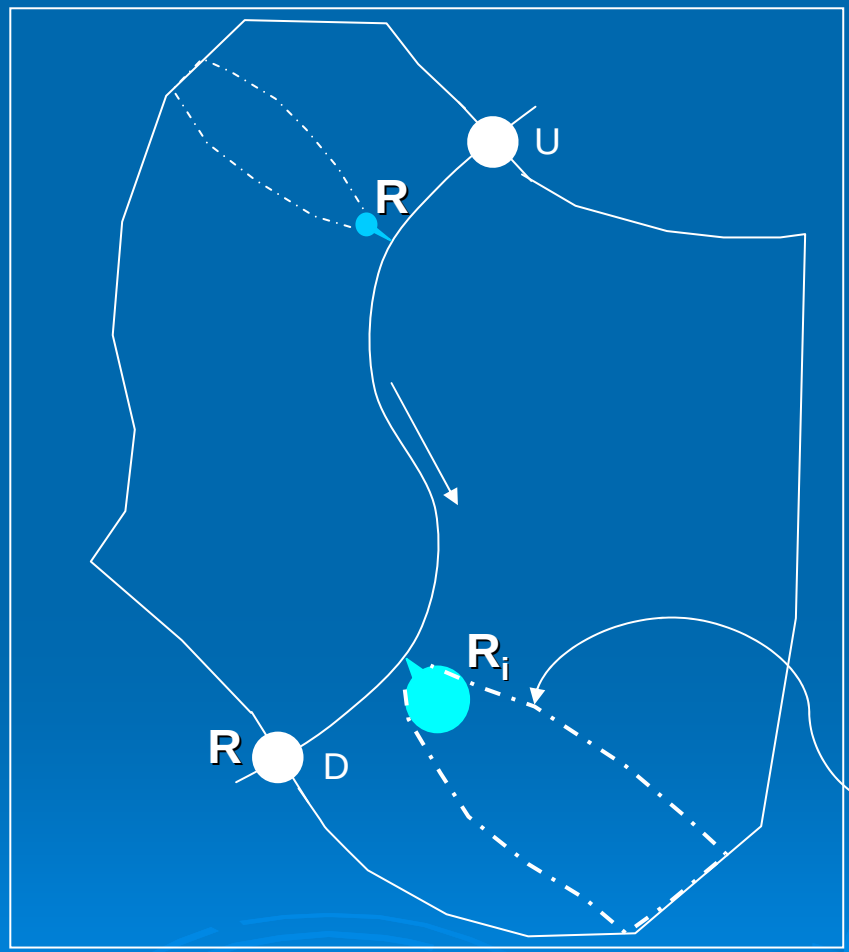
- Loss of time-sequence by use of FDC
- Testing underway using HEC-RAS dynamic model to examine routing/channel storage/pickup effects

- Jennifer Jacobs (UNH)
- Patrick Tara (Intera, Inc.)

Stream Reach Schematic: Branching Stream



Reach Application to Springs



Eg.:

- Mad Blue
- Troy
- Ichtucknee
- Fan/Man

- Sam Upchurch (SDII, Inc.)

More Issues

- Further development of how to characterize reach MFL
- GW and springs
- Branching
- Santa Fe land bridge
- Existing biological information

Questions?