



Small Community Nutrient Permitting

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Agenda

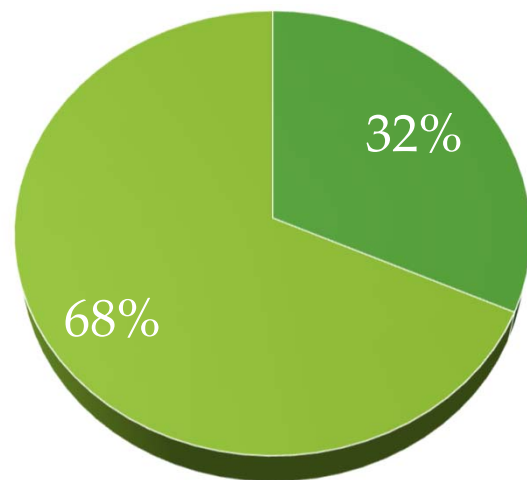
- Background/Issues
- Possible Resolution Options
- Discussion

Background/Issues

- Discussion raised in Boise last December
 - Increasing pressure to adopt Numeric Nutrient Criteria (NNC)
 - This may disproportionately affect POTWs, particularly small POTWs
 - The majority of POTWs serve a population (e.g. <3000) where construction and O&M of nutrient reduction technologies may be unaffordable
 - Large number of dischargers, small fraction of the permitted discharge flow
 - Nutrient reduction strategies remain a high priority for ACWA, states, EPA, environmental NGOs, and municipalities
 - Are variances for perhaps half or more of POTWs a reasonable solution?
 - How can the NPDES program best accommodate nutrient reduction?
- The small group that brought up issue in Boise has met informally
 - Debated the issue a little more/kicked around some ideas

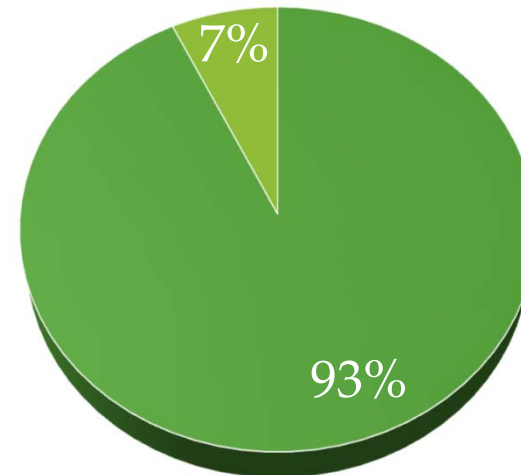
Large and Small Communities

Percentage of US Cities by
Population



■ Pop >3000 ■ Pop ≤3000

Percentage of US Population by
City Size

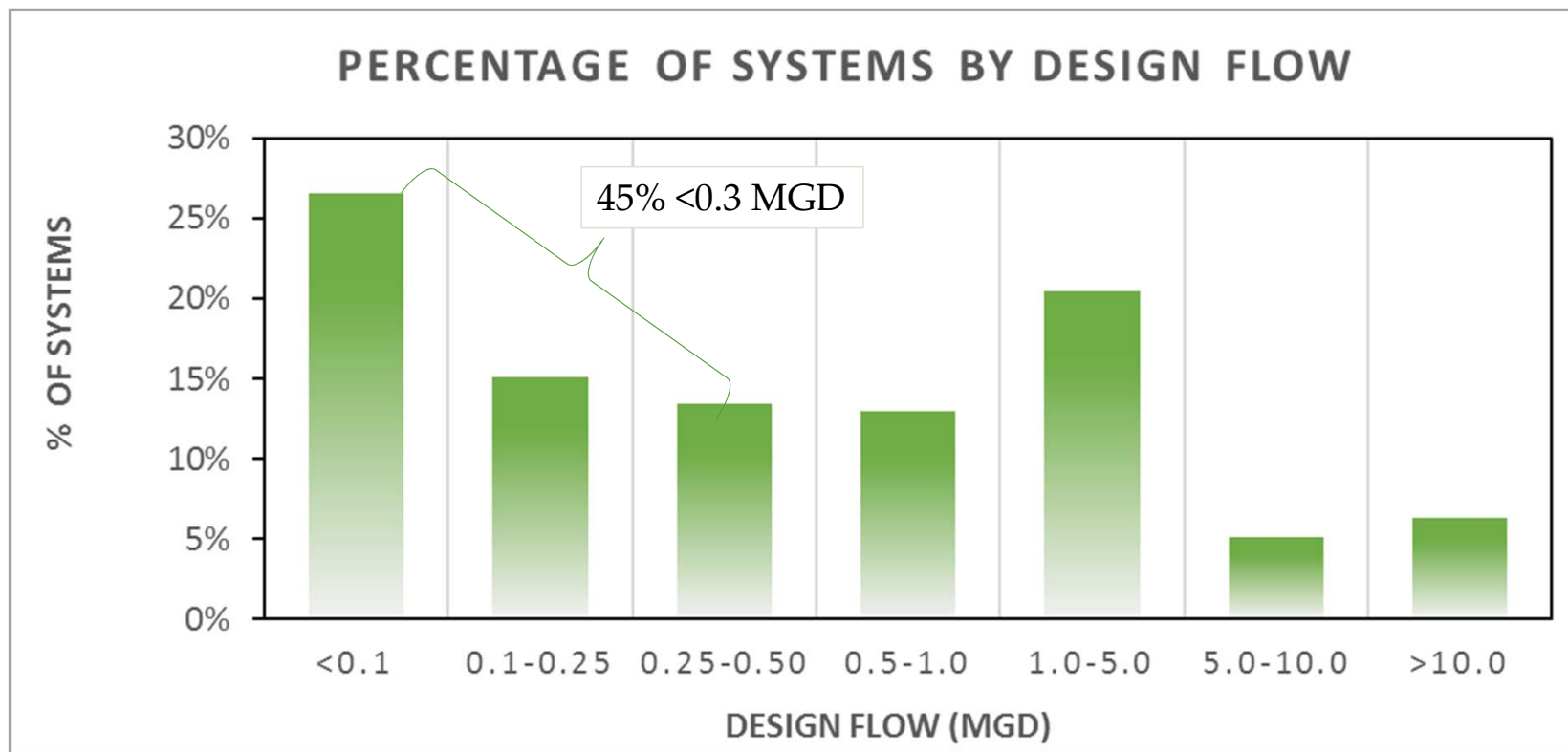


■ Pop >3000 ■ Pop ≤3000

Based on 2010
Census Data

7% of US Population Lives in 2/3 of our Communities

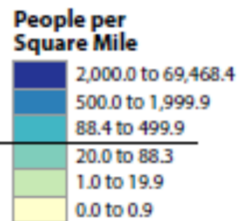
Large and Small POTWs



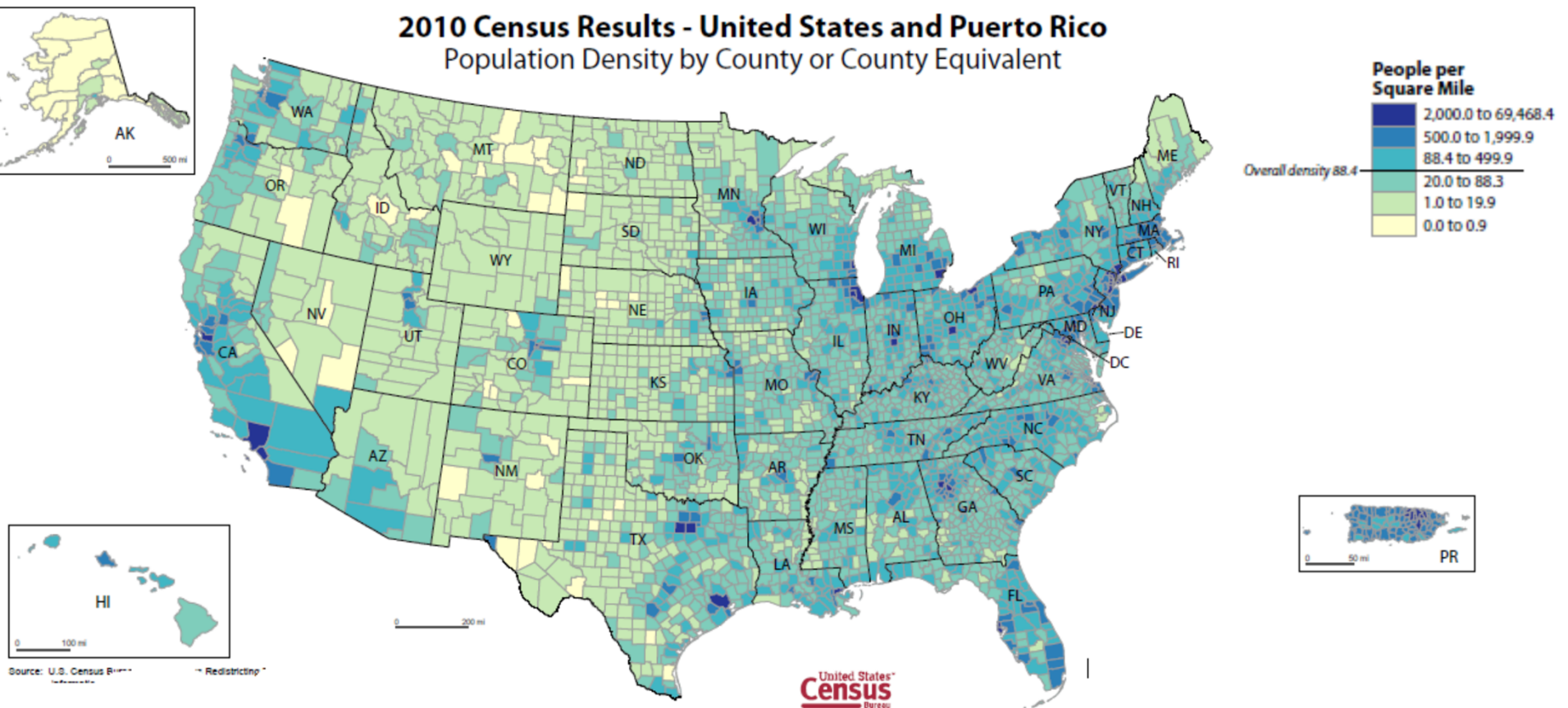
Based on
ICIS Data

Large and Small Communities

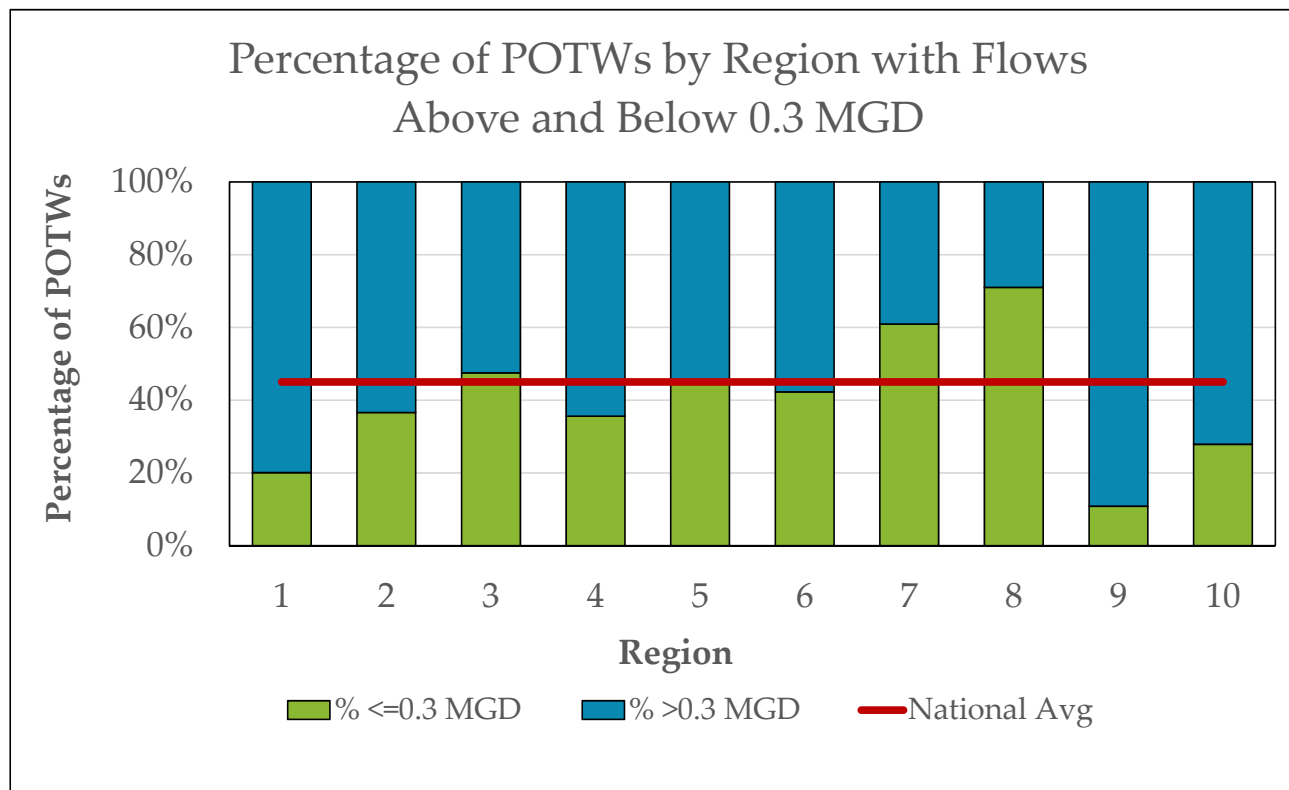
2010 Census Results - United States and Puerto Rico
Population Density by County or County Equivalent



Overall density 88.4

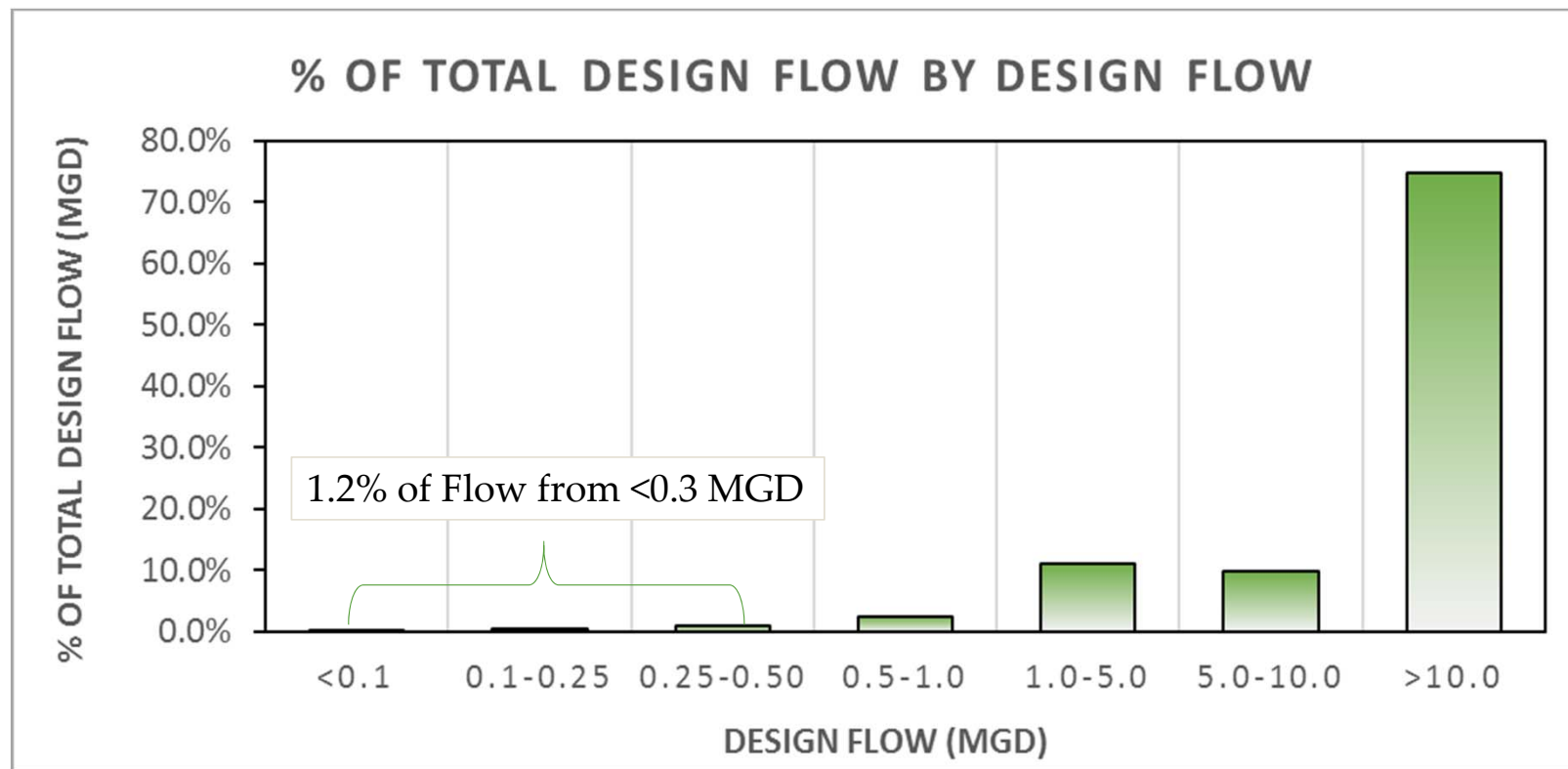


Large and Small POTWs



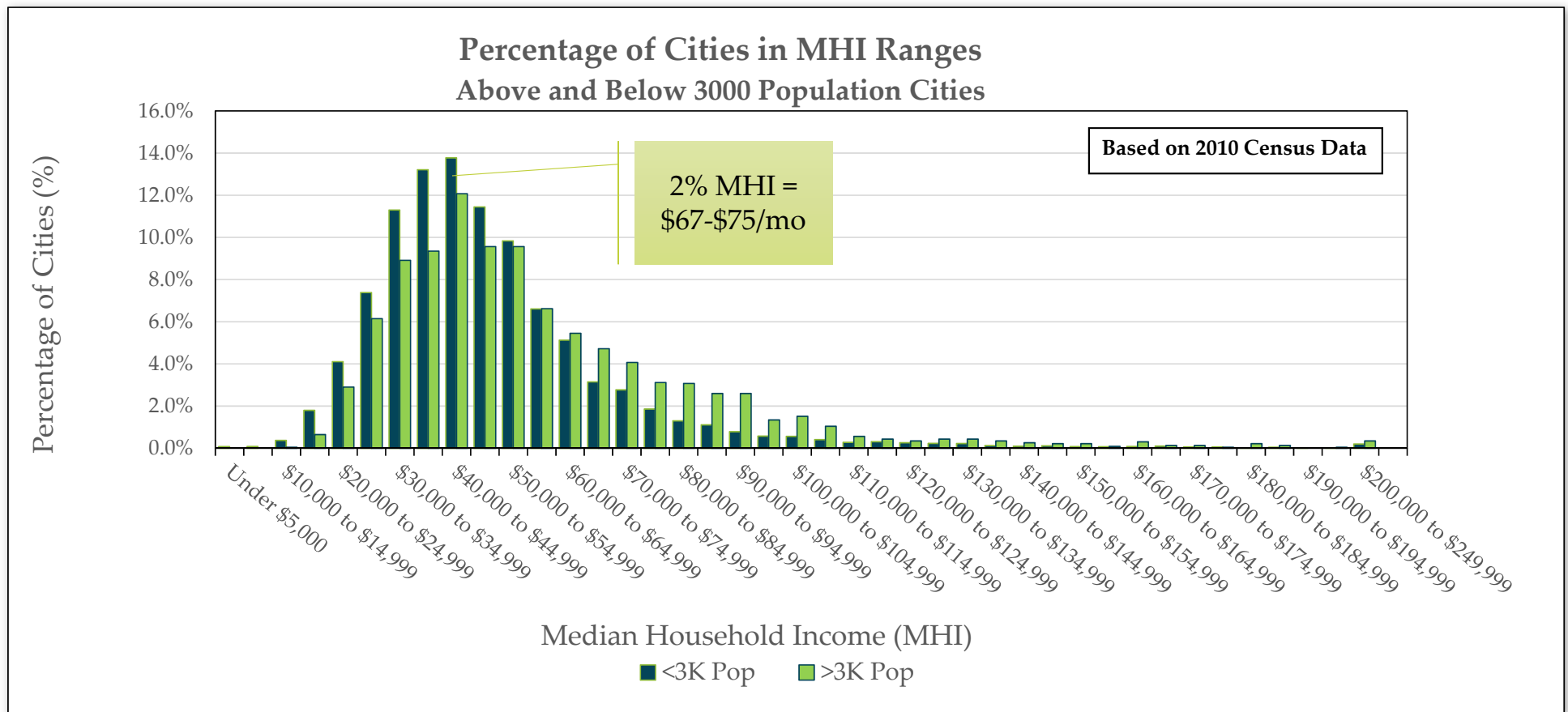
Based on
ICIS Data

Large and Small POTWs



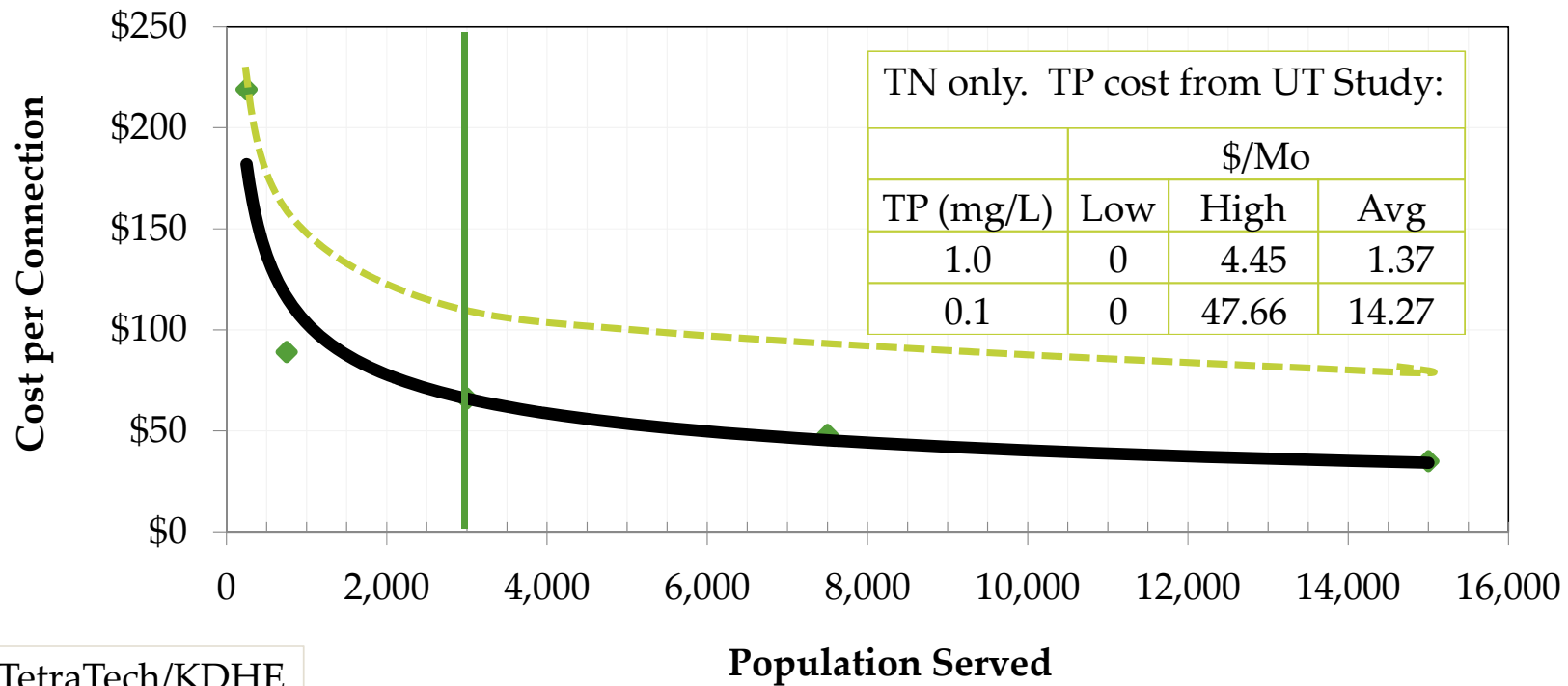
**Based on
ICIS Data**

Income and Small Communities

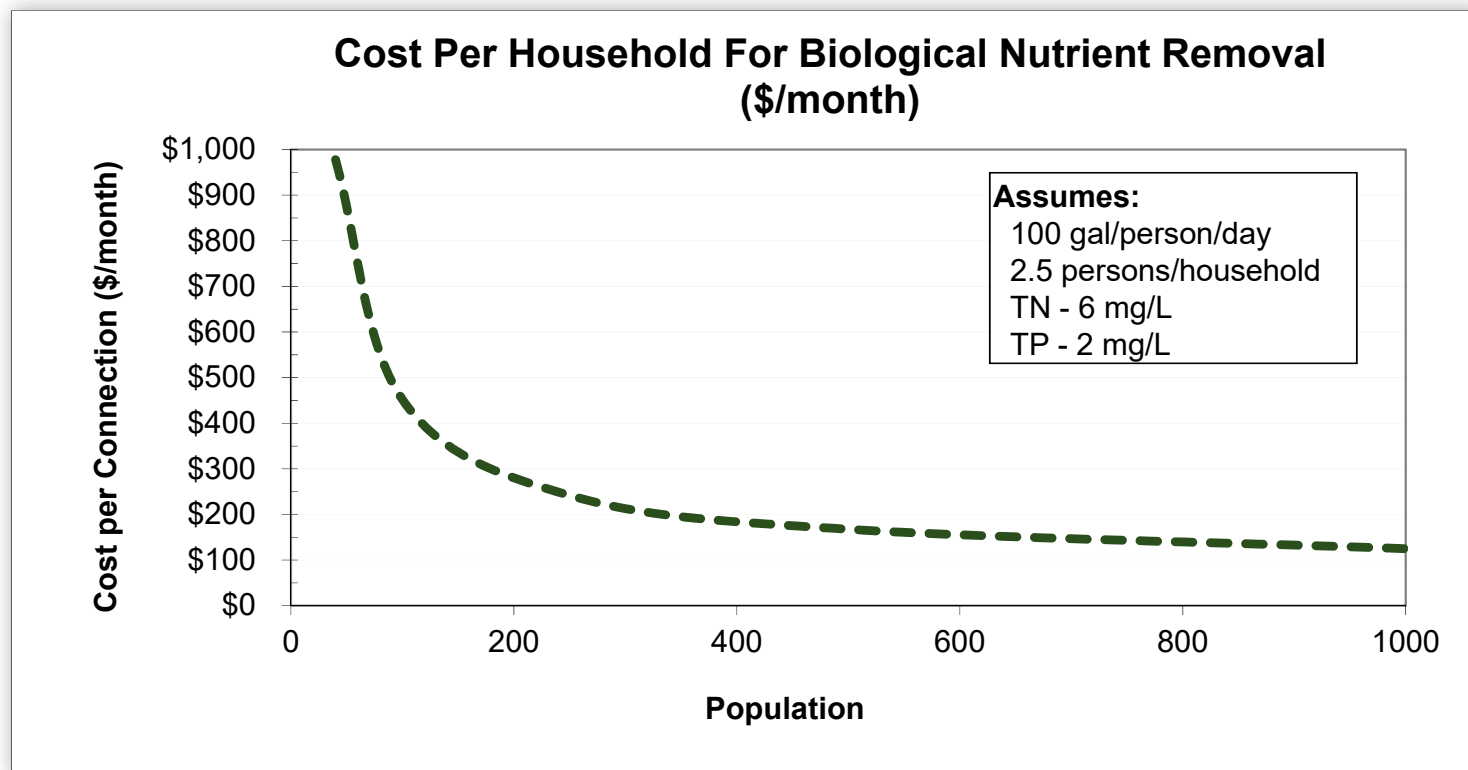


Costs and Small Communities

Cost for Mechanical Treatment to Reduce NH_3/NO_3



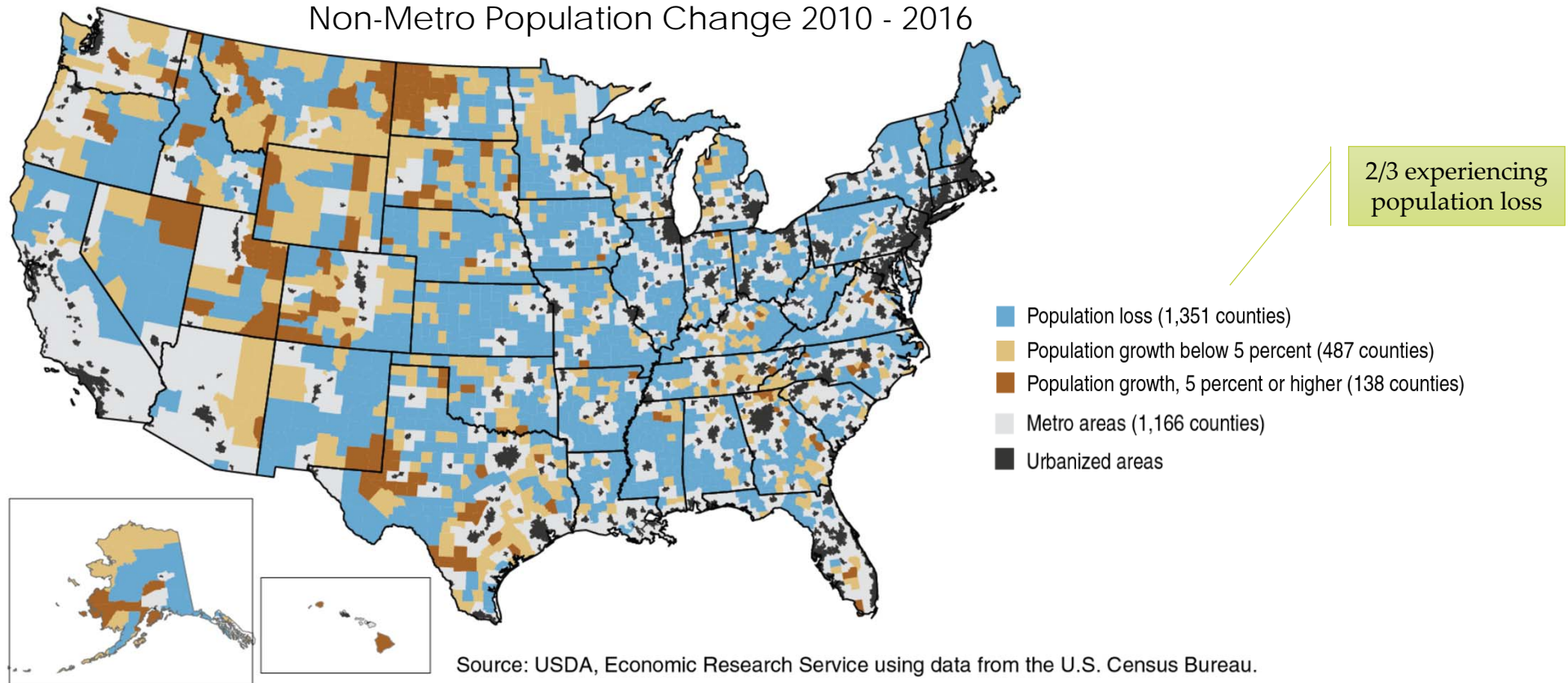
Costs and Small Communities



FWPCA (inflation adjusted)

Rural/Metro Demographics

Non-Metro Population Change 2010 - 2016





Are Small Systems an Issue?

- Is there enough of a potential issue here to pursue further?
 - If not - we are done. Next speaker!
 - If so, what do we need to look at?
- Group came up with five general options for further consideration...



Option 1

- States continue to develop nutrient translators as appropriate
 - Permitting authority develops permit with technology and/or water quality based limits
 - Limits may be extremely difficult, if not impossible, to meet
 - Expensive for the permittee to comply
- Worst Case Outcome:
 - Translators likely challenged by permittee
 - Permittee violates permits, compliance order/enforcement
 - Return to compliance may not be possible
 - Permittees may never achieve necessary reductions to comply



Option 2

- State develops variances for small POTWs
 - Administratively expensive and time consuming
 - Process needs to be periodically repeated
 - Permitting authority develop permits with limits that may initially be easier to achieve but could get significantly more stringent over time
- Worst Case Outcome:
 - State variance process time consuming and likely challenged
 - State permits likely challenged by NGOs
 - Uncertain future for the permittee



Option 3

- Encourage states to consider tiered thresholds in their small POTW permits associated with treatment technology or affordability
 - Use TMDL or other mechanism to establish water quality or technology based limits as appropriate
 - Encourage/require optimization and long term nutrient reduction plans (LNRPs).
- Worst Case Outcome:
 - Inconsistent implementation nationally
 - Two similarly situated facilities in neighboring states treated differently
 - NGO litigation still viewed as a possibility
 - Uncertain future for permittee

Option 4

- Develop **national technology** based approach (ELG) only for **major** POTWs with appropriate thresholds considering affordability and cost of technology
 - Addresses the large gap in major POTWs that do not remove nutrients vs. those that do
 - Allow LNRPs
 - Supplements current state efforts (permitting, NNC, trading, variances, etc.)
 - Unaffordability documented for small facilities as a part of rule making. State discretion in how to address these facilities (e.g., a national optimization program informed by POTW survey)
 - Manageable administratively speaking due to smaller universe of facilities
- Worst Case Outcome:
 - National rule will take a long time and will likely get challenged
 - Minor permittees are voluntary
 - ELG costs for major POTWs may still be viewed as too high
 - Inconsistent implementation nationally for small communities

Option 5

- Develop **national technology** based approach (ELG) for small POTWs (size to be determined) with tiered thresholds looking at affordability and cost of technology similar to Option 3
 - Could piggyback off of EPA's national 2ndary treatment study
 - Incorporate limits and LNRPs into the permits
 - Supplement current state efforts (permitting, trading, variances, etc.)
 - Larger facilities could still have a WQBEL/TBL they would need to meet
- Worst Case Outcome:
 - National rule will take a long time and will likely get challenged
 - Costs for facilities may still be viewed as too high
 - Less nutrient reduction might occur

Coffee Talk with Martha

I'm getting a little *verklemt*!

Don't worry. It'll pass....

I'll give you a topic....

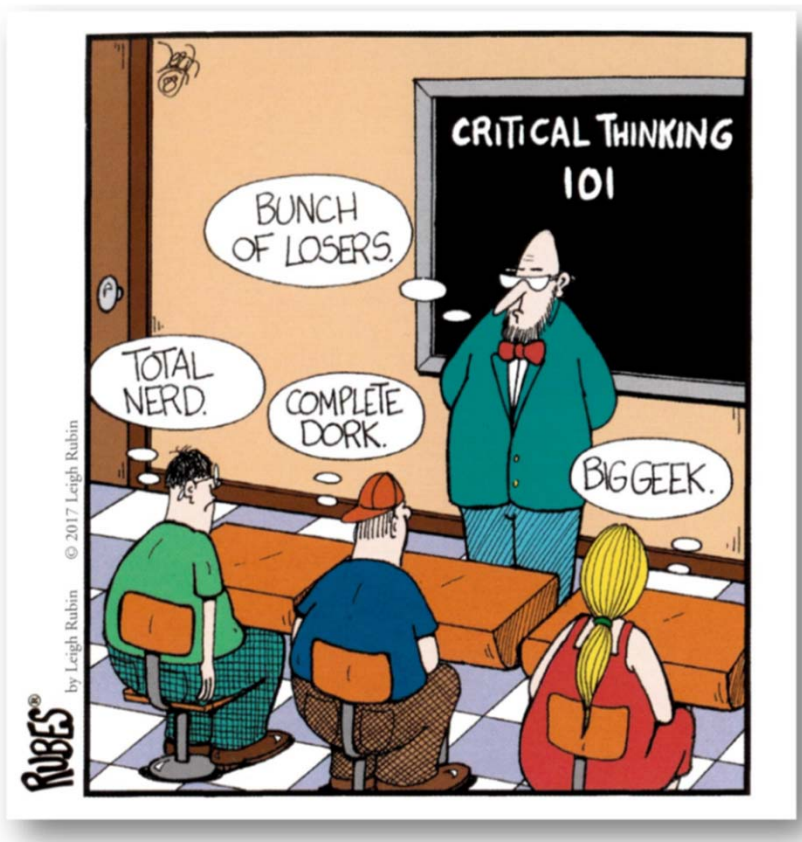
**Nutrient permitting options at
small POTWs**

Discuss amongst yourselves!



Linda Richman

Lets Think Critically About Small Communities



Critical – [krit-i-kuh 1]

Adjective

- ~~1. inclined to find fault or to judge with severity, often too readily.~~
2. involving skillful judgment as to truth, merit, etc.; judicial:
a critical analysis.



Each Table Should

- Discuss whether there is a potential problem/challenge to be addressed
- Evaluate the 5 options presented
- Develop any other options
- Discuss whether ACWA/EPA should continue to pursue any of the options or other ways to address the problem/challenge

Options Review

Feature	Options				
	1	2	3	4	5
Voluntary – All			⊙		
Voluntary - Minor				⊙	
Narrative Translator Limits	⊙				
TMDL-Driven Goals			⊙		
Variance		⊙			
Long term Nutrient Reduction Plan (LNRP)				⊙	⊙
ELG - Major				⊙	
ELG - Small					⊙
WQBEL/TBL - Large					⊙
WQBEL/TBL - All	⊙	⊙			

Feel Free to Mix and Match Parts

