Ecosystem Marketplace
A FOREST TRENDS INITIATIVE

WILLAMETTE PARTNERSHIP

Webinar: Advancing Water Quality Trading

Thursday, 21 February 2019

Ecosystem Marketplace
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WILLAMETTE PARTNERSHIP

Agenda

- Introductions and Housekeeping (5 min)
- Remarks from Anna Wildeman, Principal Deputy Assistant Administrator of the EPA Office of Water, about the EPA's recent memo (5 min)
- Background on Demand Assessment (5 min)
- Lessons Learned on Demand and Mapping Potential Demand (15 min)
- Results of the Demand Assessment and Next Steps (15 min)
- Q&A (15 min)

Ecosystem Marketplace
A FOREST TRENDS INITIATIVE

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Melissa Gallant

Associate, Ecosystem Marketplace

Kristiana Teige Witherill

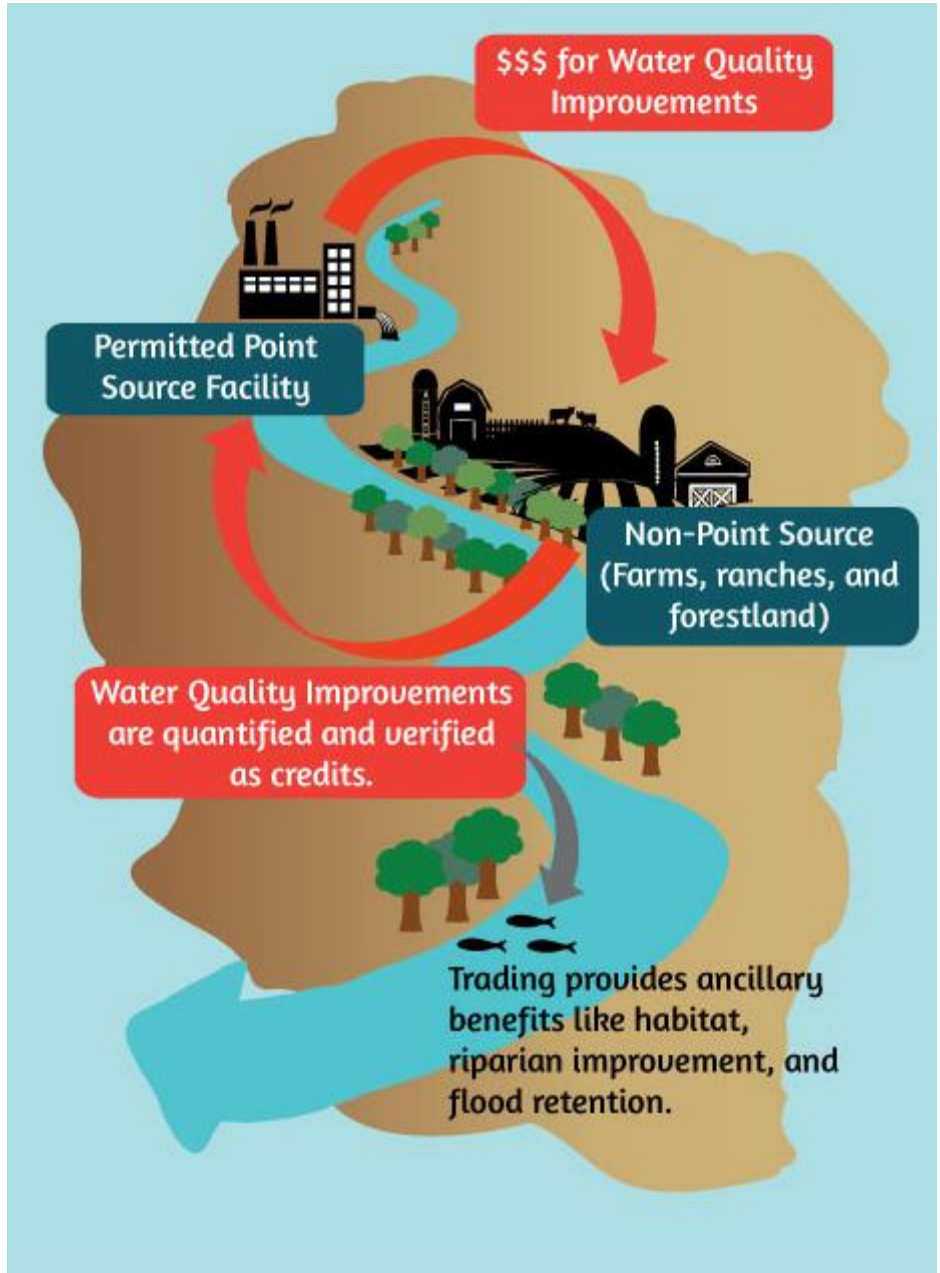
Clean Water Project Manager, Willamette Partnership

Breaking Down Barriers: Priority Actions for Advancing Water Quality Trading

Kristiana Teige Witherill
Willamette Partnership
February 21, 2019

WILLAMETTE PARTNERSHIP

LAYING THE GROUNDWORK FOR MORE EFFECTIVE CONSERVATION.


$$$ for Water Quality Improvements
Permitted Point Source Facility
Non-Point Source (Farms, ranches, and forestland)
Water Quality Improvements are quantified and verified as credits.
Trading provides ancillary benefits like habitat, riparian improvement, and flood retention.

National Network on Water Quality Trading

Steering Committee

American Farmland Trust

The Freshwater Trust

Maryland Department of Agriculture

NACWA

Association of Clean Water Administrators ACWA The Voice of States & Interstates est. 1961

nmpf National Milk Producers Federation

EPRI Electric Power Research Institute

Environmental Incentives

Kieser & Associates Environmental Science & Engineering

Troutman Sanders

Ohio Farm Bureau

World Resources Institute

Technical Advisor

USDA

Coordinator

Willamette Partnership

Observer

United States Environmental Protection Agency

Funding support provided by USDA

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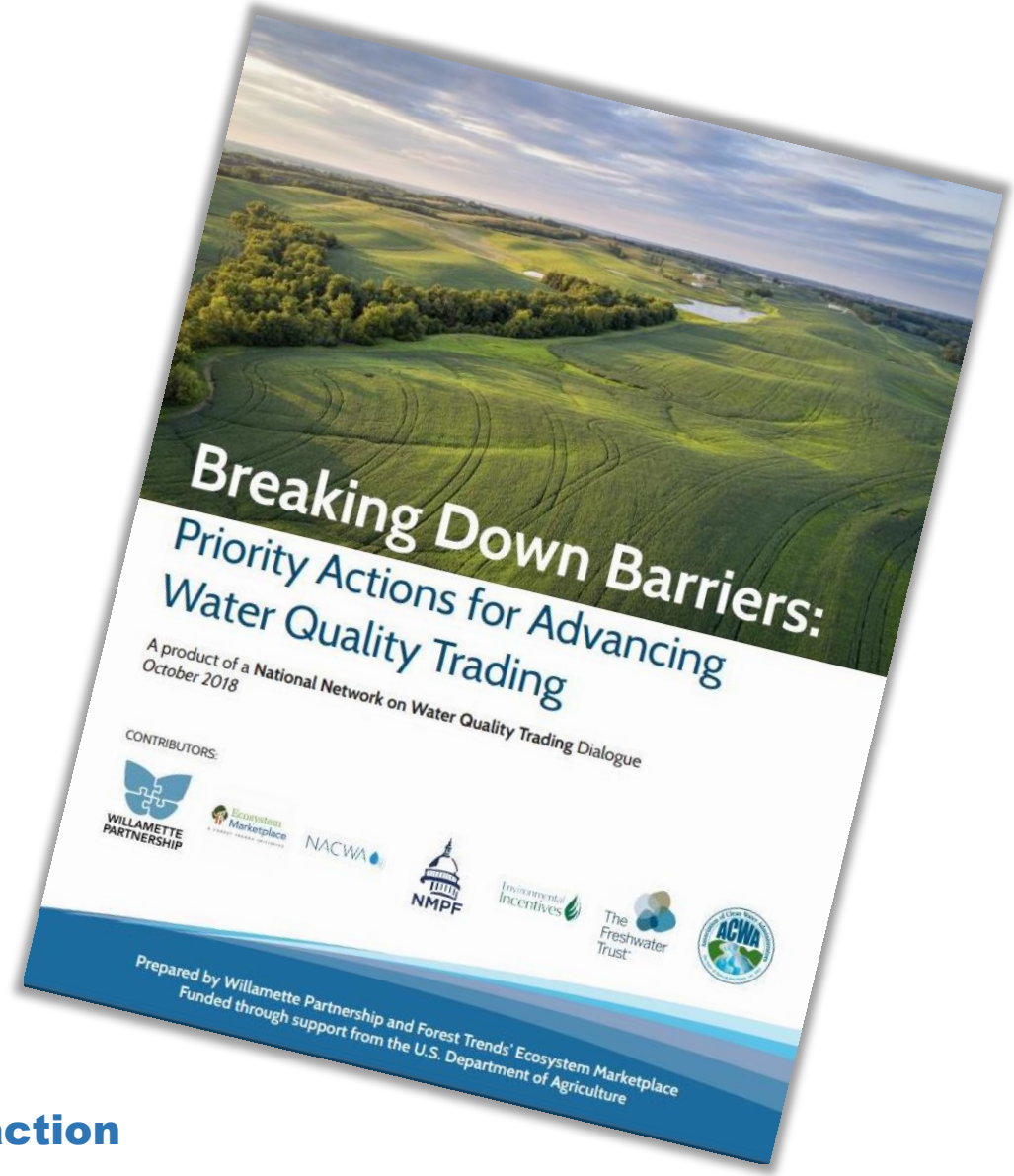
Water Quality Trading Demand Assessment

- Stakeholder interviews
- Lessons learned from other markets
- Spatial analysis
- Decision making processes and key actors
- Action agenda



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Anna Wildeman

Principal Deputy Assistant Administrator,

U.S. EPA Office of Water

Interviews

Interviews

Who We Spoke With

- 22 state regulatory agency staff
- 12 utilities/municipalities
- 3 multi-city advocates
- 2 DOT staff
- 1 consulting engineer
- 1 ag intermediary
- National Network Steering Committee

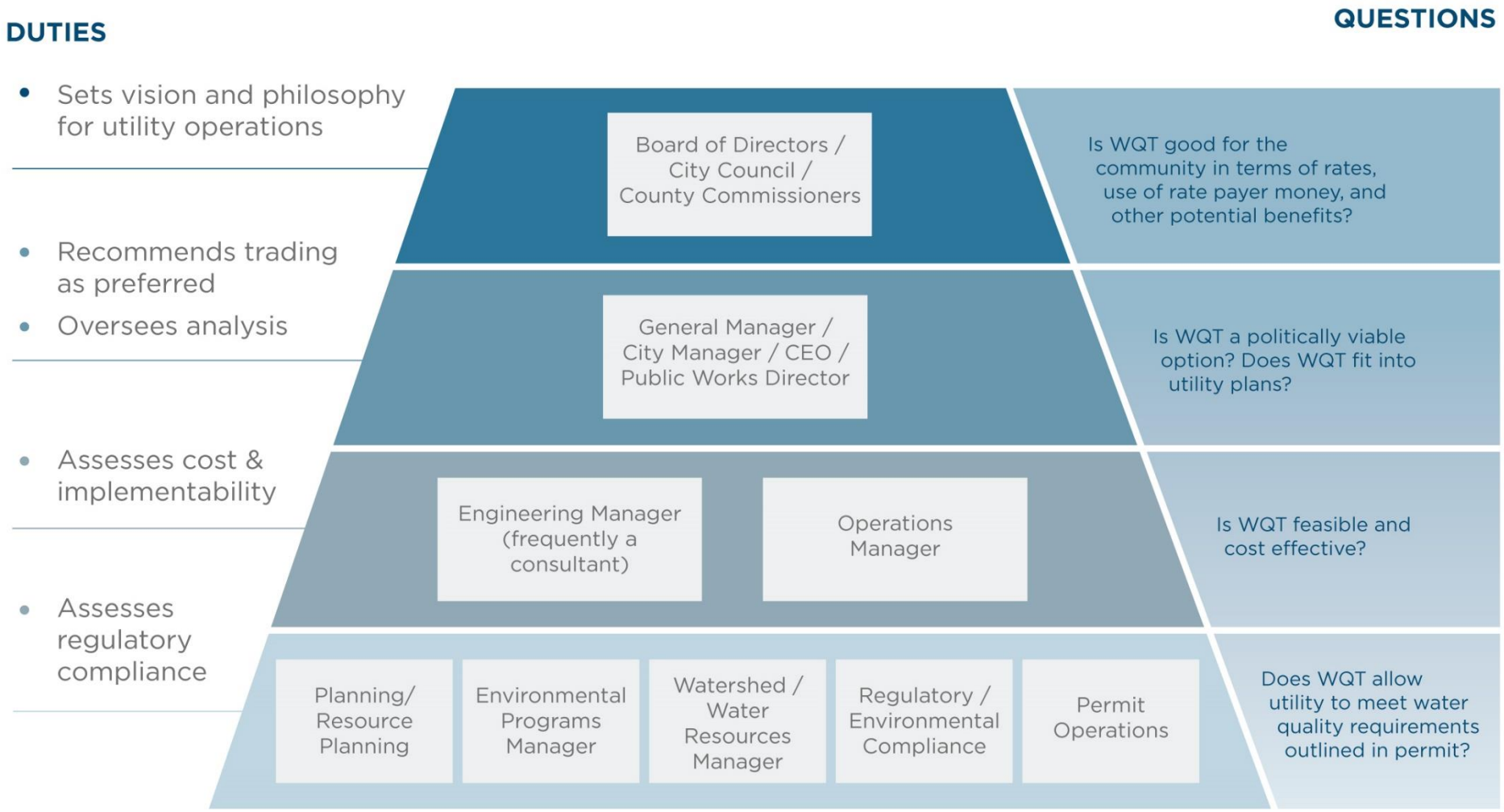
Interviews

What We Heard

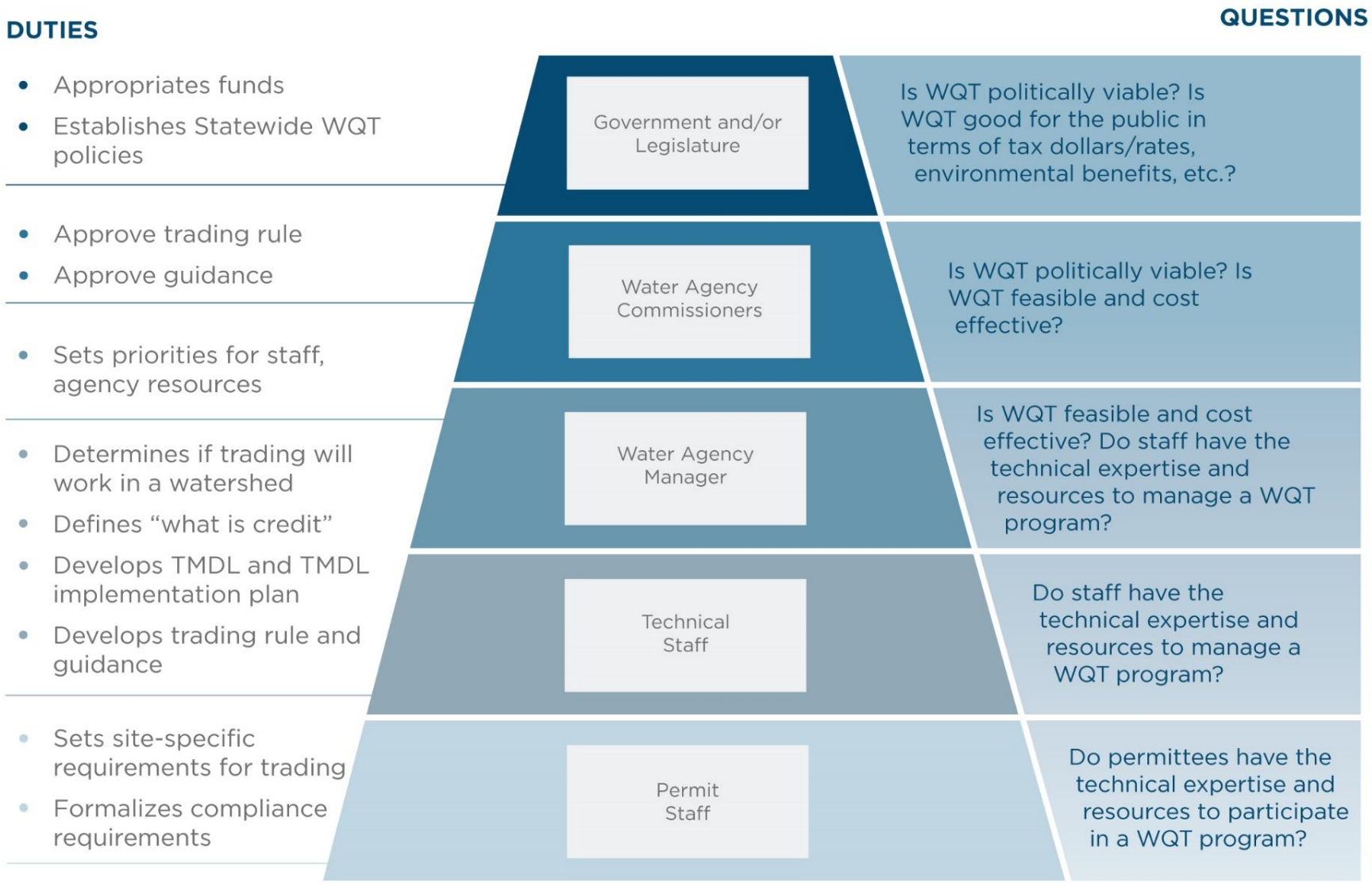
- Optimism about WQT
  - Regulatory compliance tool
  - Impact on watershed health
- Struggling to implement it

Decision Making Models

Decision Making Structure at Large Clean Water Utility



Decision Making Structure at State Clean Water Agency



NPDES PERMIT PROCESS

01

Utility submits application for NPDES permit/ permit renewal to State or other permitting authority

- Ensure state enabling policies are in place well before permit process begins; Ensure utility has economic justification, program design, and trading plan approved internally. Engage stakeholders early to identify concerns and potential challenges. (see utility capital improvement process).

02

State drafts permit

- Permit writers unfamiliar or uncomfortable with trading – turnover rates affect institutional knowledge of trading
- Utility focused on traditional engineered solutions

03

State issues public notice of draft permit

- Lack of stakeholder involvement causes unnecessary miscommunication

04

State responds to comments, revises permit if necessary

- Stakeholder opposition prompts permittee or agency to remove or reduce trading options
- Ensure permit language is flexible and enforceable
- Engage with positive stakeholders to rally support for trading
- Provide state agency with feedback on how draft permit language supports or hinders trading

05

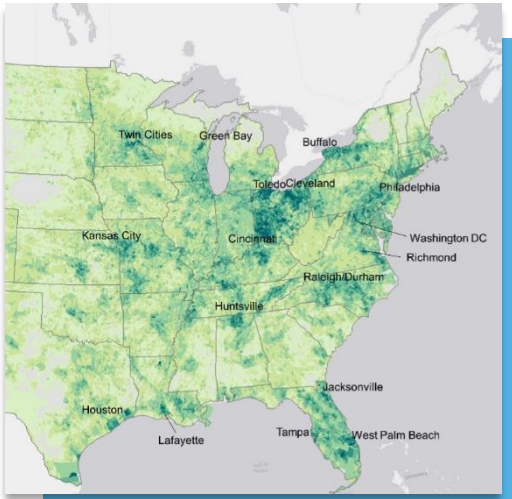
State issues permit

- Lawsuits in state or federal court to challenge administrative procedure or higher order laws

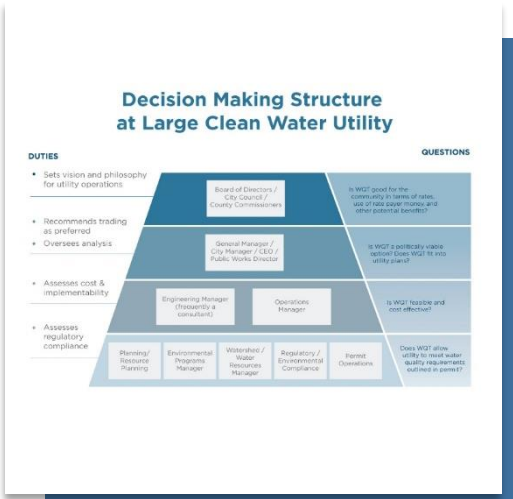
Water Quality Trading Demand Assessment

Stakeholder Interviews

Lessons Learned from Other Environmental Markets



Geography of Demand



Decision-Making Roles and Processes

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Decision Criteria

- Broad scope of applicability
- Leverage diversity of stakeholder power and roles
- Cover multiple action areas

Top Barriers to Advancing Water Quality Trading

1. Trading program design and application is too complicated
2. State agency capacity and resource constraints
3. Stakeholders are uncertain about the new administration's/ EPA's position on trading
4. Risk and liability for buyers
5. Risk of litigation
6. There is no guidance on trading for MS4 permittees and only a handful of examples to look to
7. Lack of stakeholder relationships and trust

Priority Actions for ~~Top Barriers to Advancing~~ Water Quality Trading

1. Simplify water quality trading program design and application
2. Ensure state regulatory agencies have adequate capacity and resources to engage on water quality trading
3. Clarify each administration's and the U.S. EPA's position on water quality trading
4. Actively address real and perceived risks for buyers
5. Identify and address risks of litigation
6. Create guidance on trading for stormwater
7. Build stakeholder relationships and trust

Stakeholders

- Utilities/Permittees
- State Regulatory Agencies
- NGOs
- Funders
- Law Firms
- US E.P.A

Lessons Learned on Demand:
Demand Dynamics of Ecosystem Markets in the US

About the study

Scope

Voluntary market for carbon offsets

Compliance markets for forest and land-use carbon offsets

Compliance markets for wetland/stream credits

Compliance & voluntary markets for species/habitat mitigation credits

US-Focused

Methods

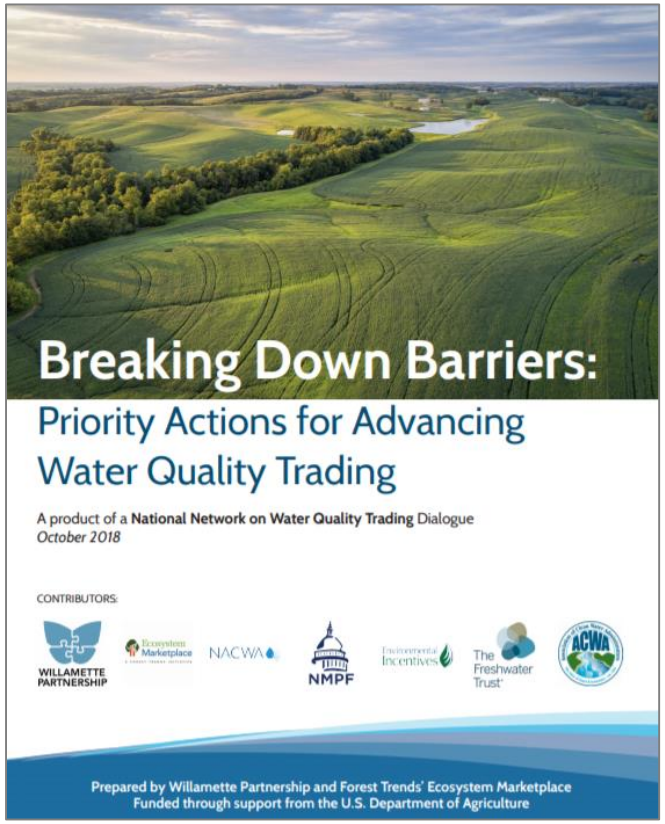
- Targeted rapid review of US environmental markets
- Academic and grey literature and Ecosystem Marketplace's historical published markets analysis and internal data
- Emphasis on case studies and synthesis of real-world evidence

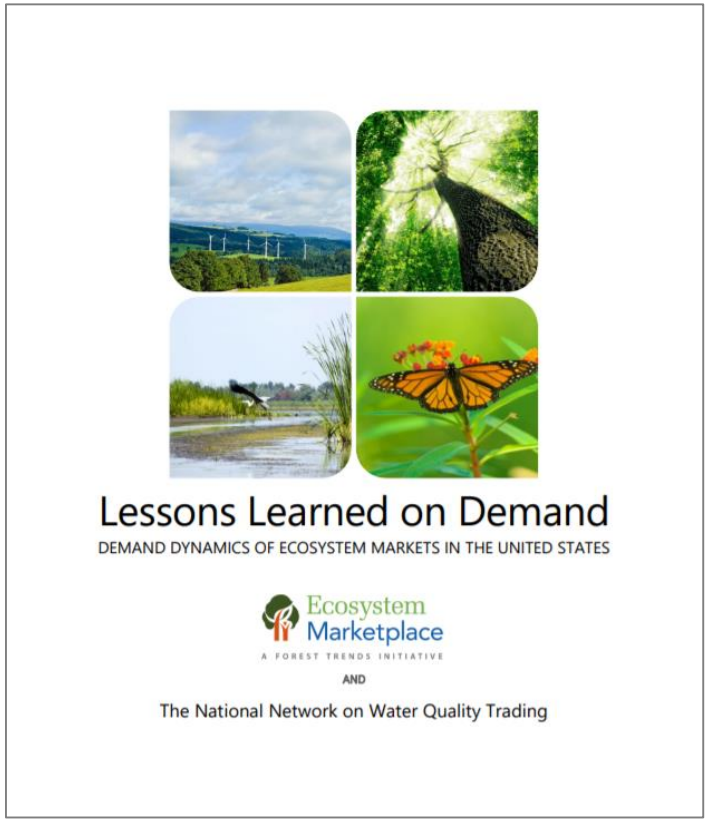
Highlights

- Compliance demand requires:

- Regulators are the gatekeepers to demand, in terms of market design and implementation of market rules
- Early on, virtually all markets struggle with buyer perceptions of risk
- Regulatory uncertainty can be tenacious
- Compliance buyers consider predictability and simplicity along with cost

For more…



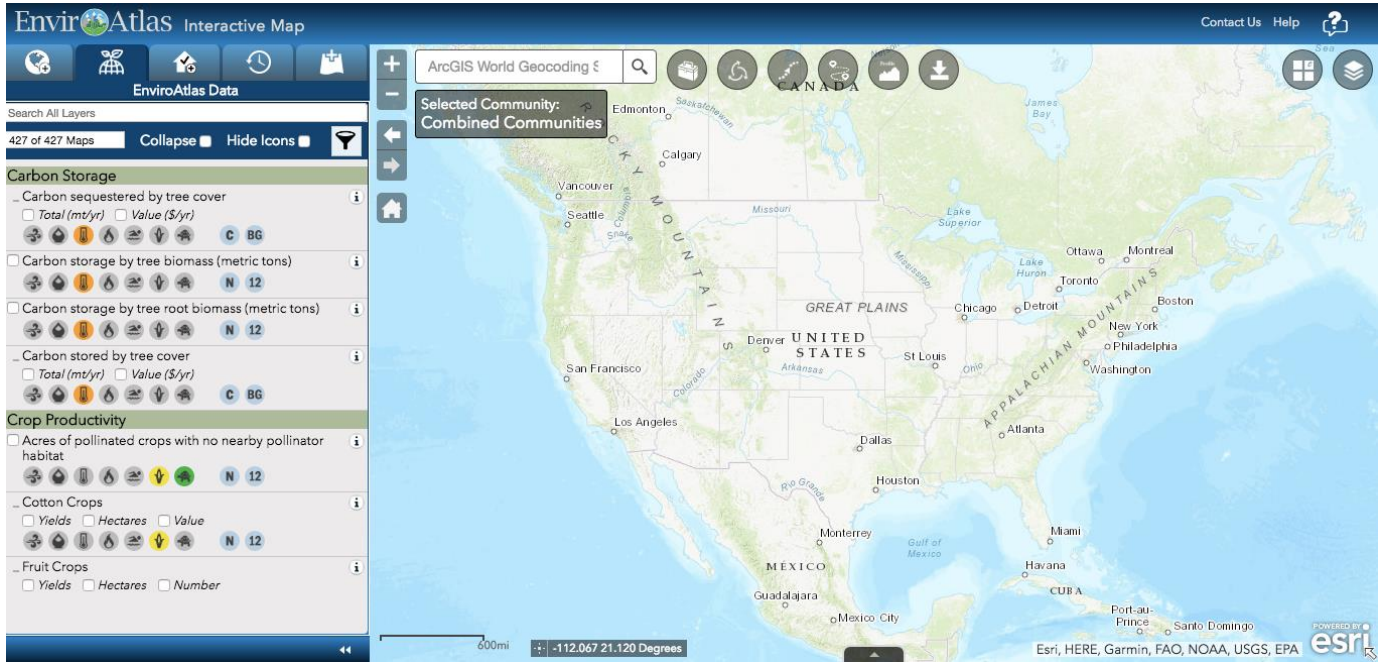


www.forest-trends.org/ecosystem-marketplace

Mapping Potential Demand for Water Quality Trading in the United States

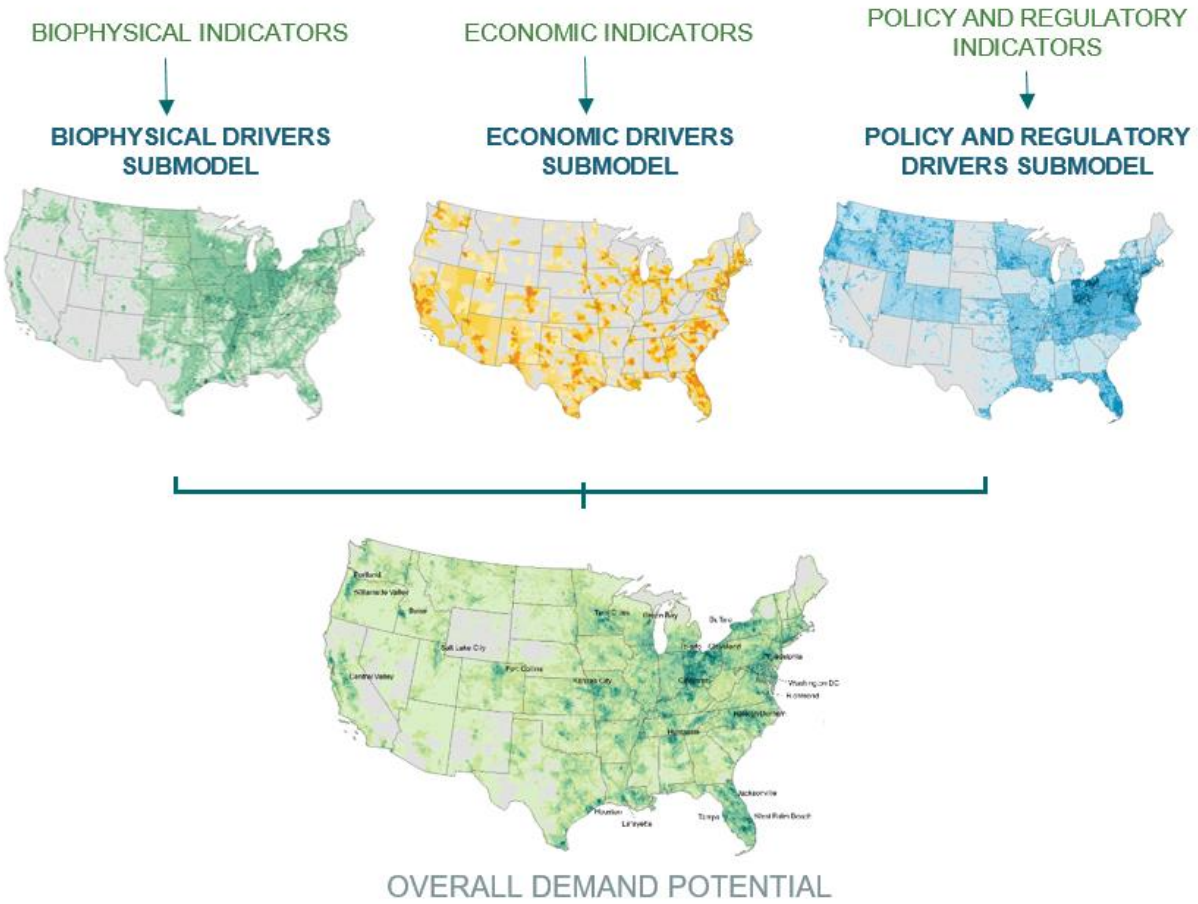
About

- EnviroAtlas Use Case
- Two suitability analyses: potential demand for agricultural water quality credit trading and stormwater trading

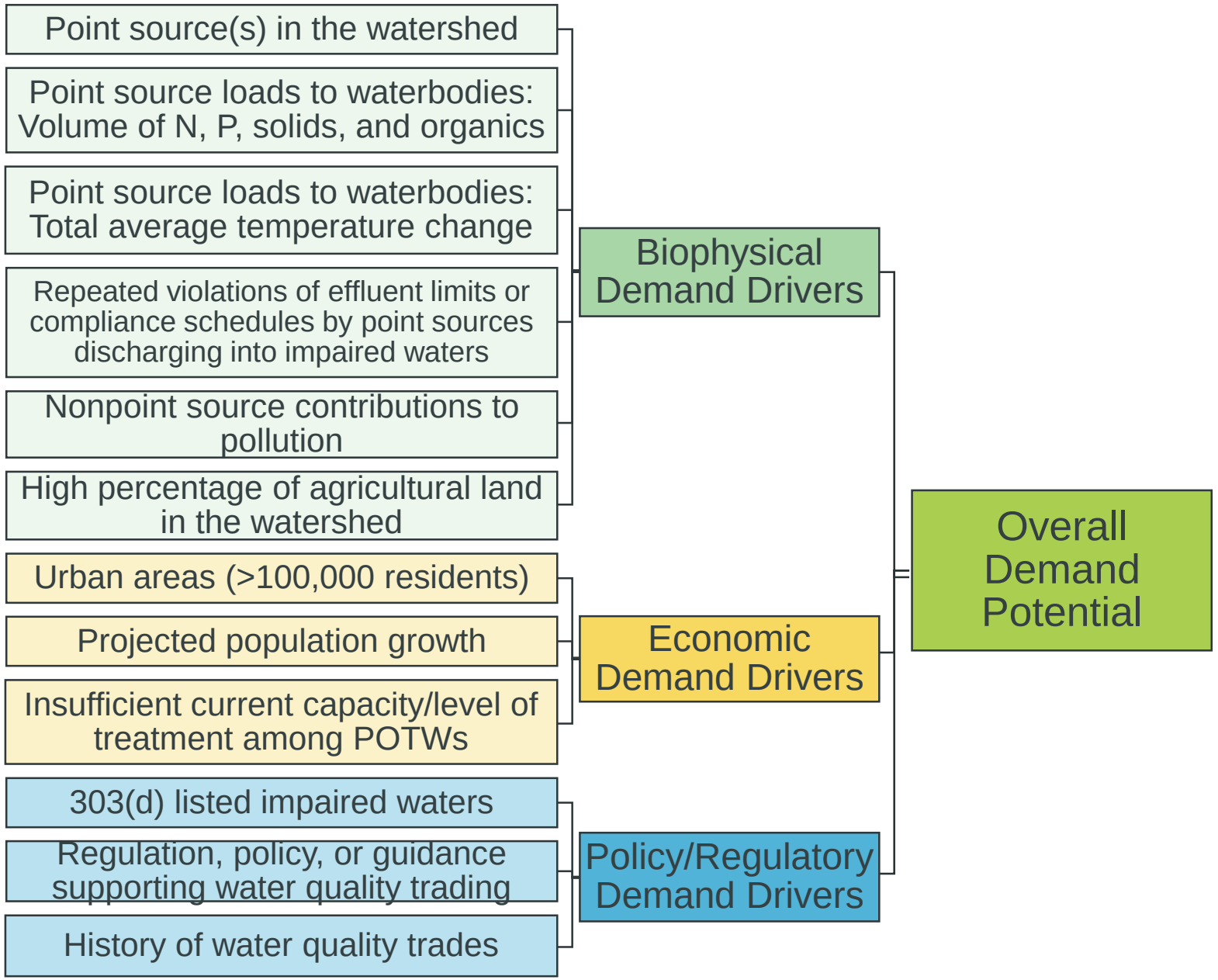


Enviroatlas.epa.gov

Research Model



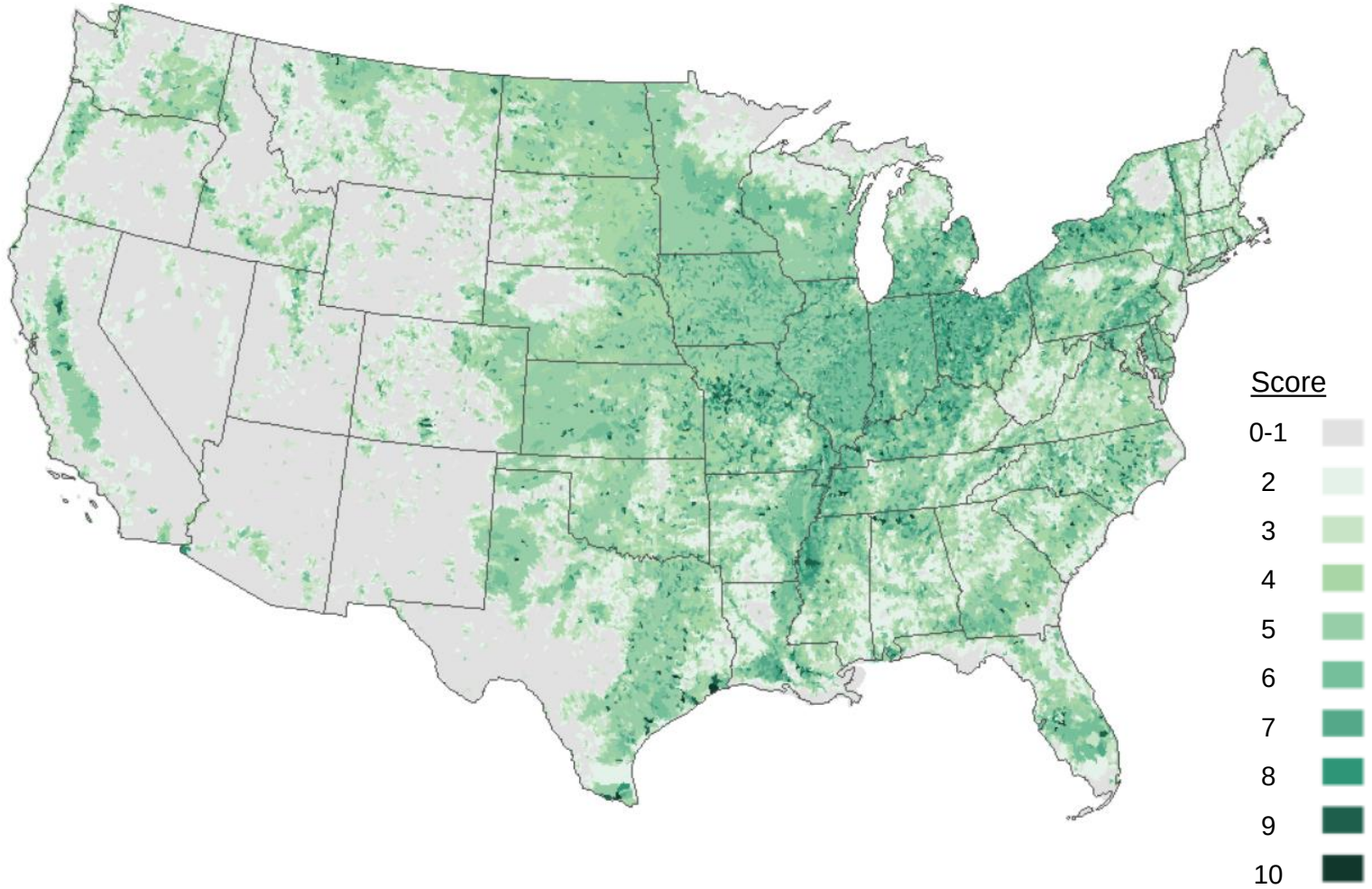
Agricultural Water Quality Trading


Point source(s) in the watershed
Point source loads to waterbodies: Volume of N, P, solids, and organics
Point source loads to waterbodies: Total average temperature change
Repeated violations of effluent limits or compliance schedules by point sources discharging into impaired waters
Nonpoint source contributions to pollution
High percentage of agricultural land in the watershed
Urban areas (>100,000 residents)
Projected population growth
Insufficient current capacity/level of treatment among POTWs
303(d) listed impaired waters
Regulation, policy, or guidance supporting water quality trading
History of water quality trades
Biophysical Demand Drivers
Economic Demand Drivers
Policy/Regulatory Demand Drivers
Overall Demand Potential

Biophysical Demand Drivers

Indicators:

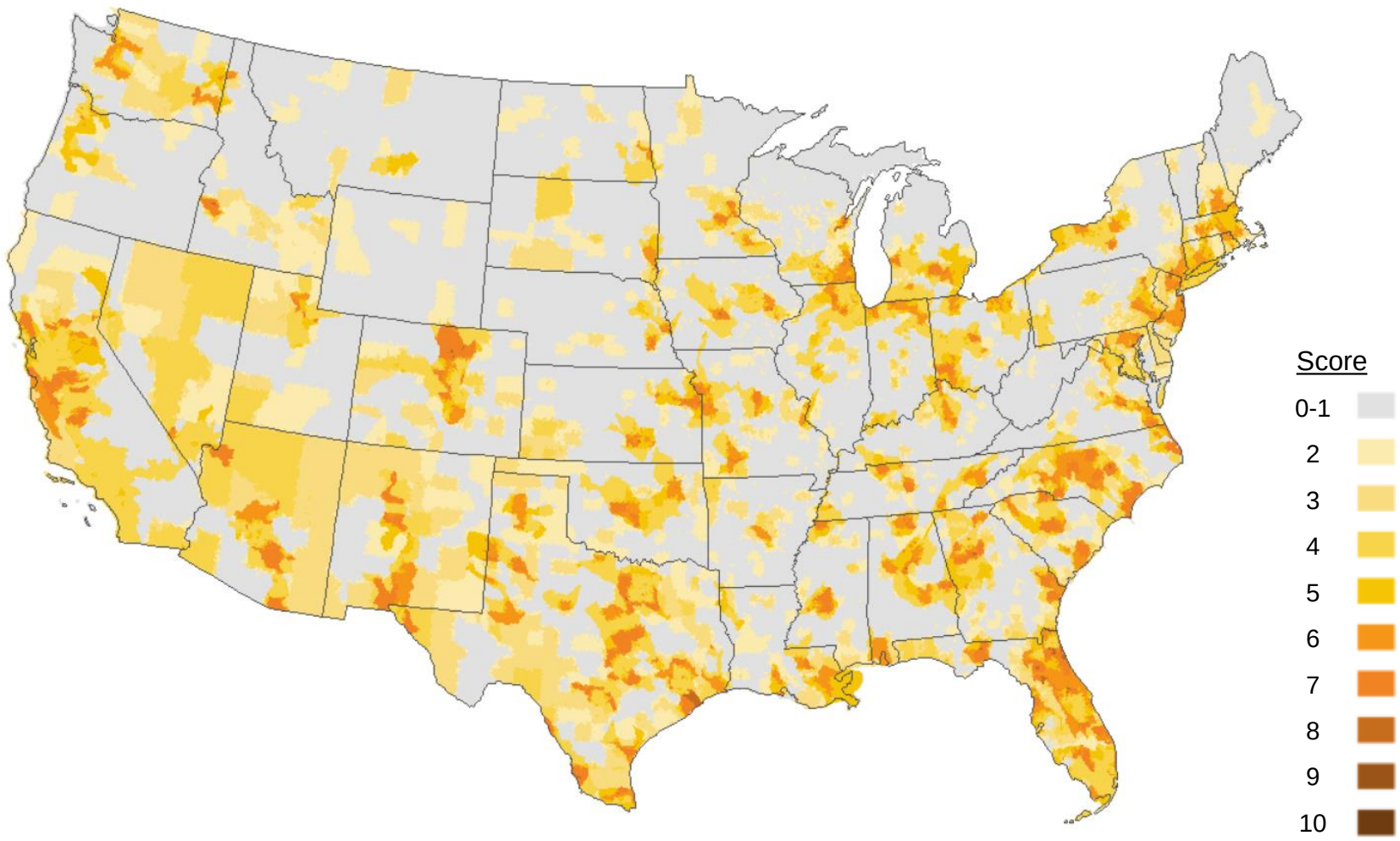
1. PS(s) in the watershed
2. PS loads to waterbodies: Volume of N, P, solids, and organics
3. PS loads to waterbodies: Total average temperature change
4. Repeated violations of effluent limits or compliance schedules by point sources discharging into impaired waters
5. NPS contributions to pollution
6. High % of agricultural land in the watershed



Economic Demand Drivers

Indicators:

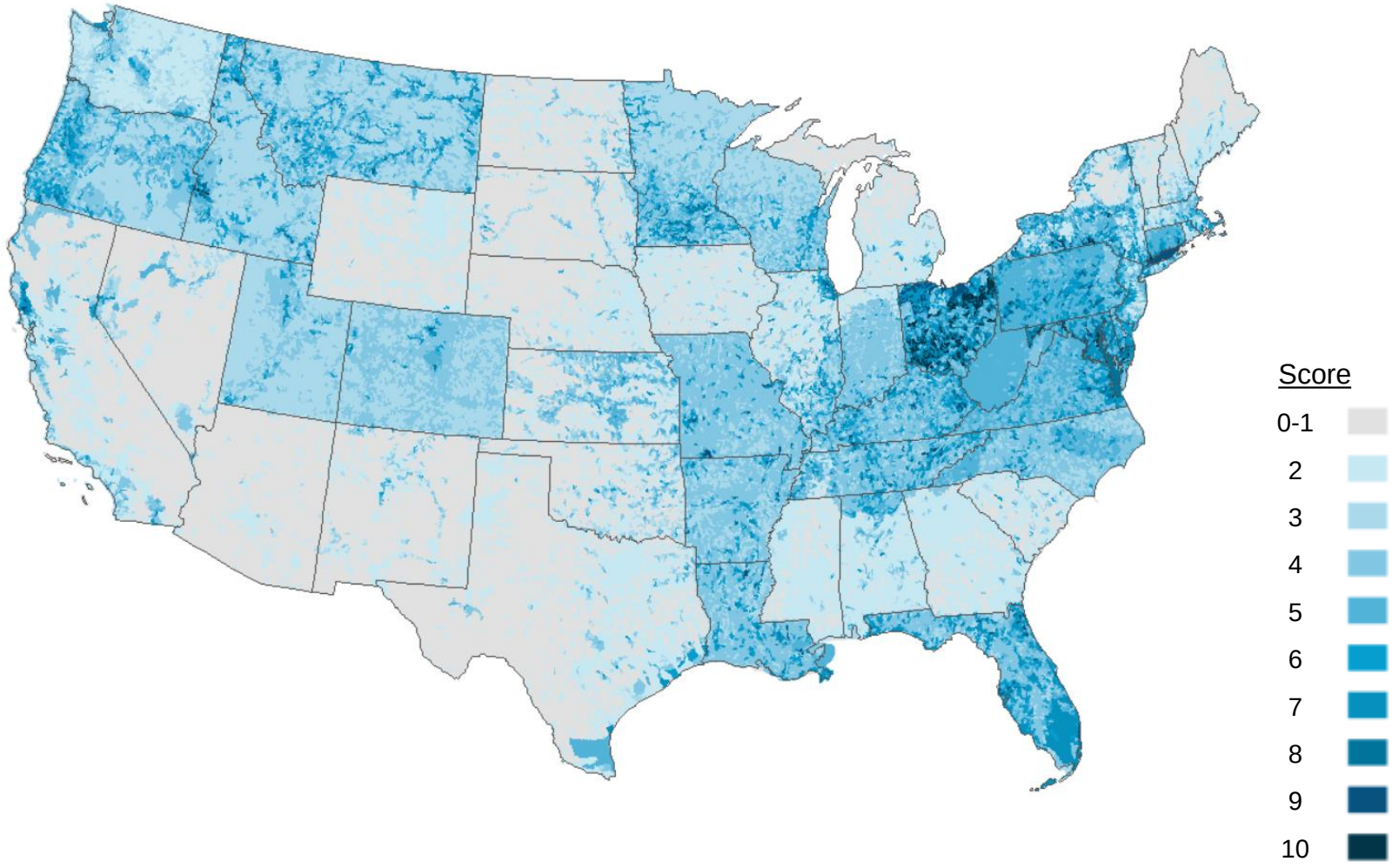
1. Urban areas (>100,000 residents)
2. Projected population growth
3. Insufficient current capacity/level of treatment among POTWs



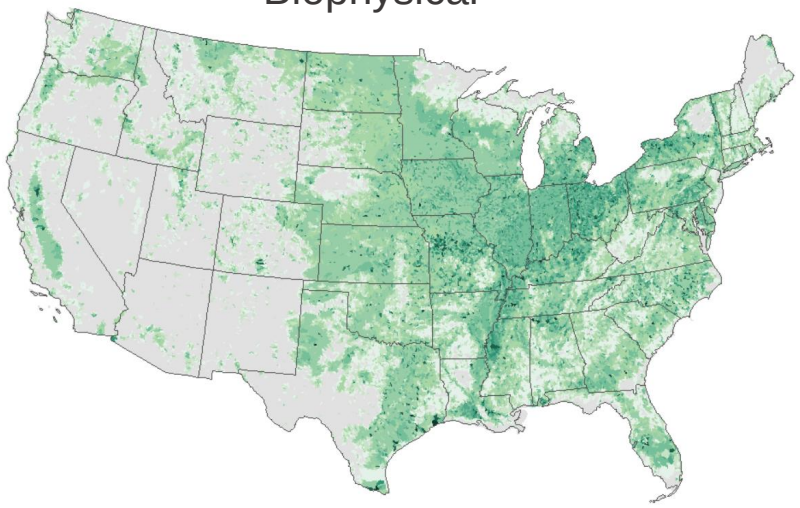
Policy/Regulatory Demand Drivers

Indicators:

1. 303(d) listed impaired waters
2. Regulation, policy, or guidance supporting water quality trading
3. History of water quality trades



Biophysical



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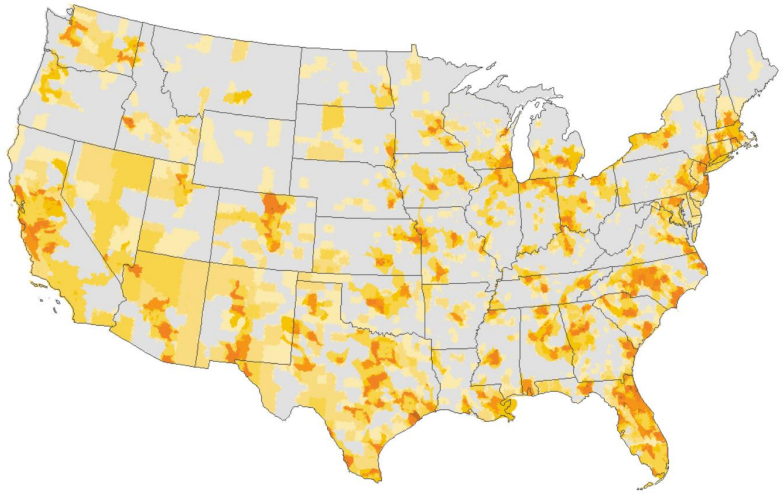
Economic



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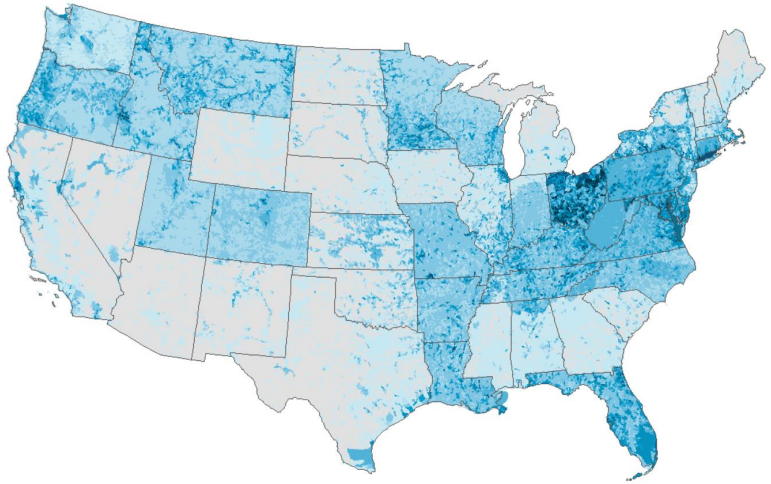
Policy/Regulatory



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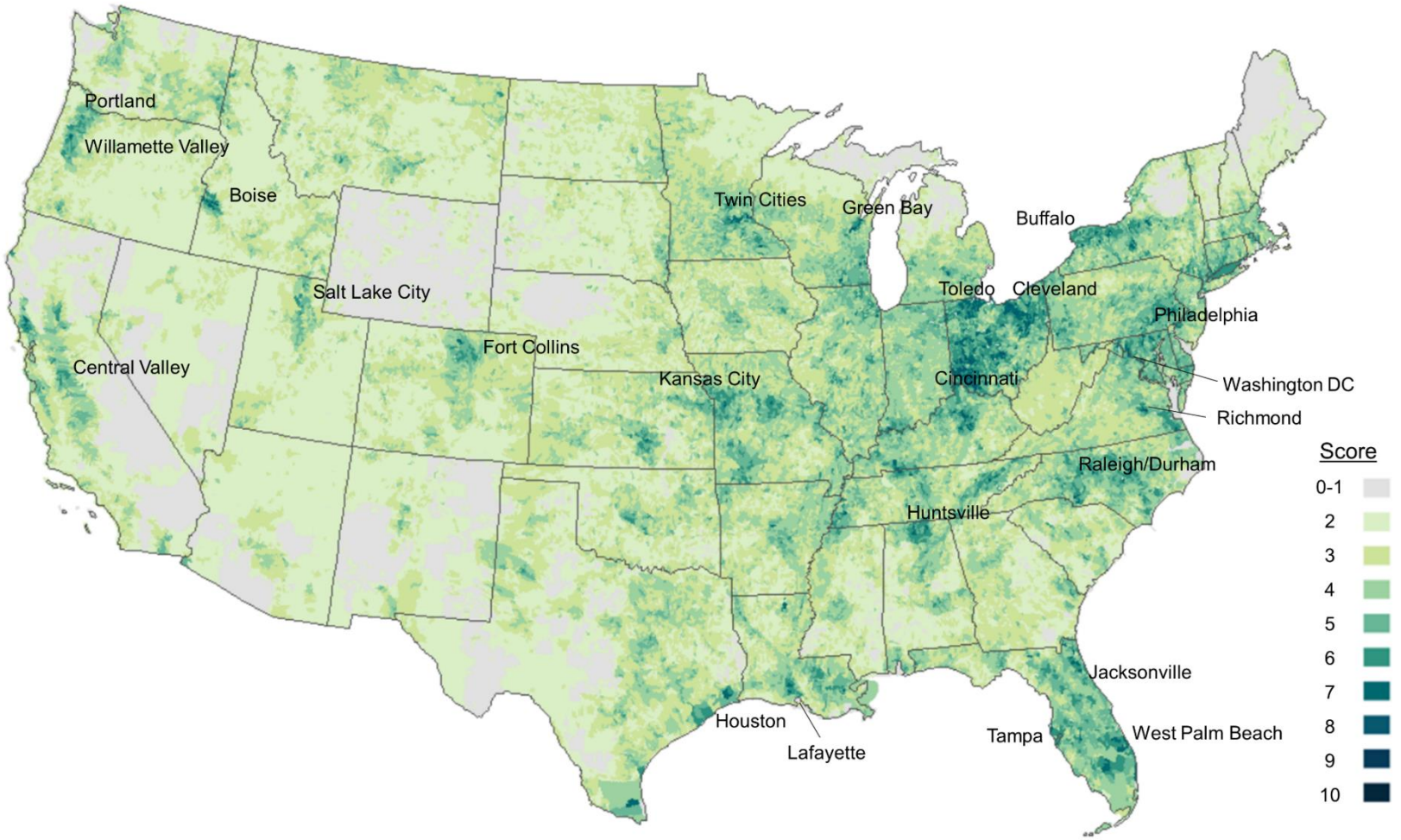
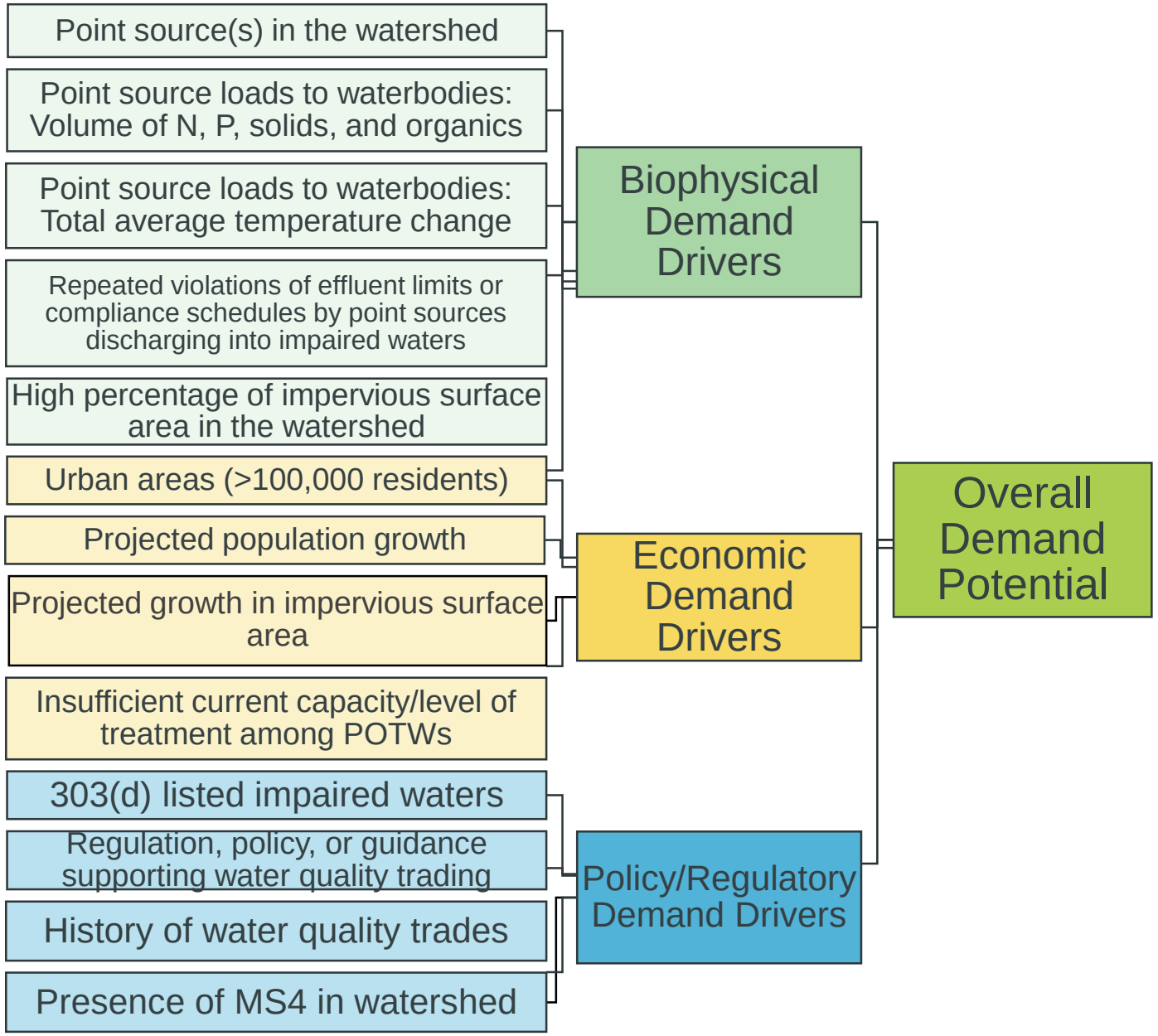
Overall Demand Potential Score

Overall Score: Agriculture



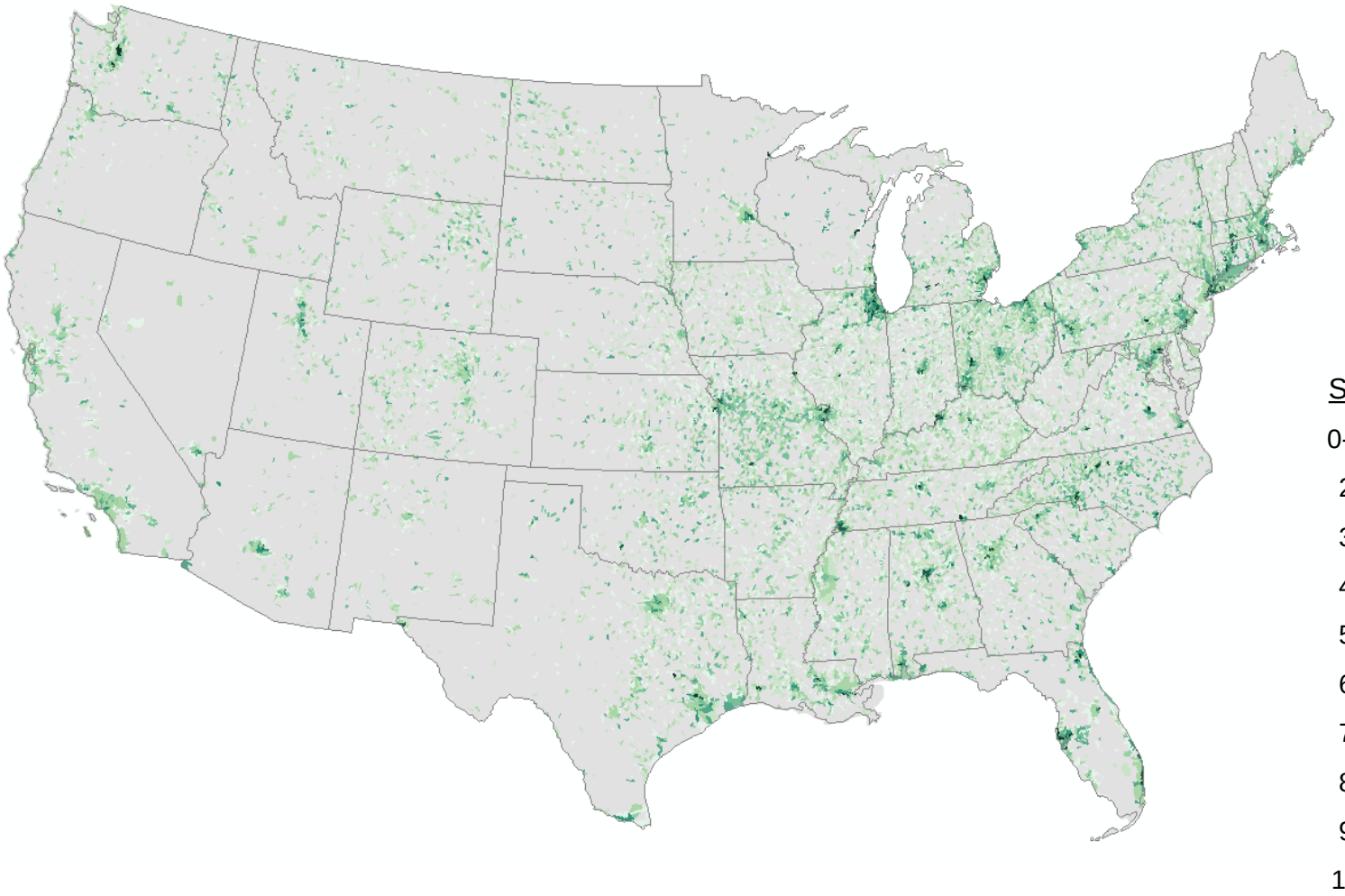
Storm Water Credit Trading


Point source(s) in the watershed
Point source loads to waterbodies: Volume of N, P, solids, and organics
Point source loads to waterbodies: Total average temperature change
Repeated violations of effluent limits or compliance schedules by point sources discharging into impaired waters
High percentage of impervious surface area in the watershed
Urban areas (>100,000 residents)
Projected population growth
Projected growth in impervious surface area
Insufficient current capacity/level of treatment among POTWs
303(d) listed impaired waters
Regulation, policy, or guidance supporting water quality trading
History of water quality trades
Presence of MS4 in watershed
Biophysical Demand Drivers
Economic Demand Drivers
Policy/Regulatory Demand Drivers
Overall Demand Potential

Biophysical Demand Drivers

Drivers:

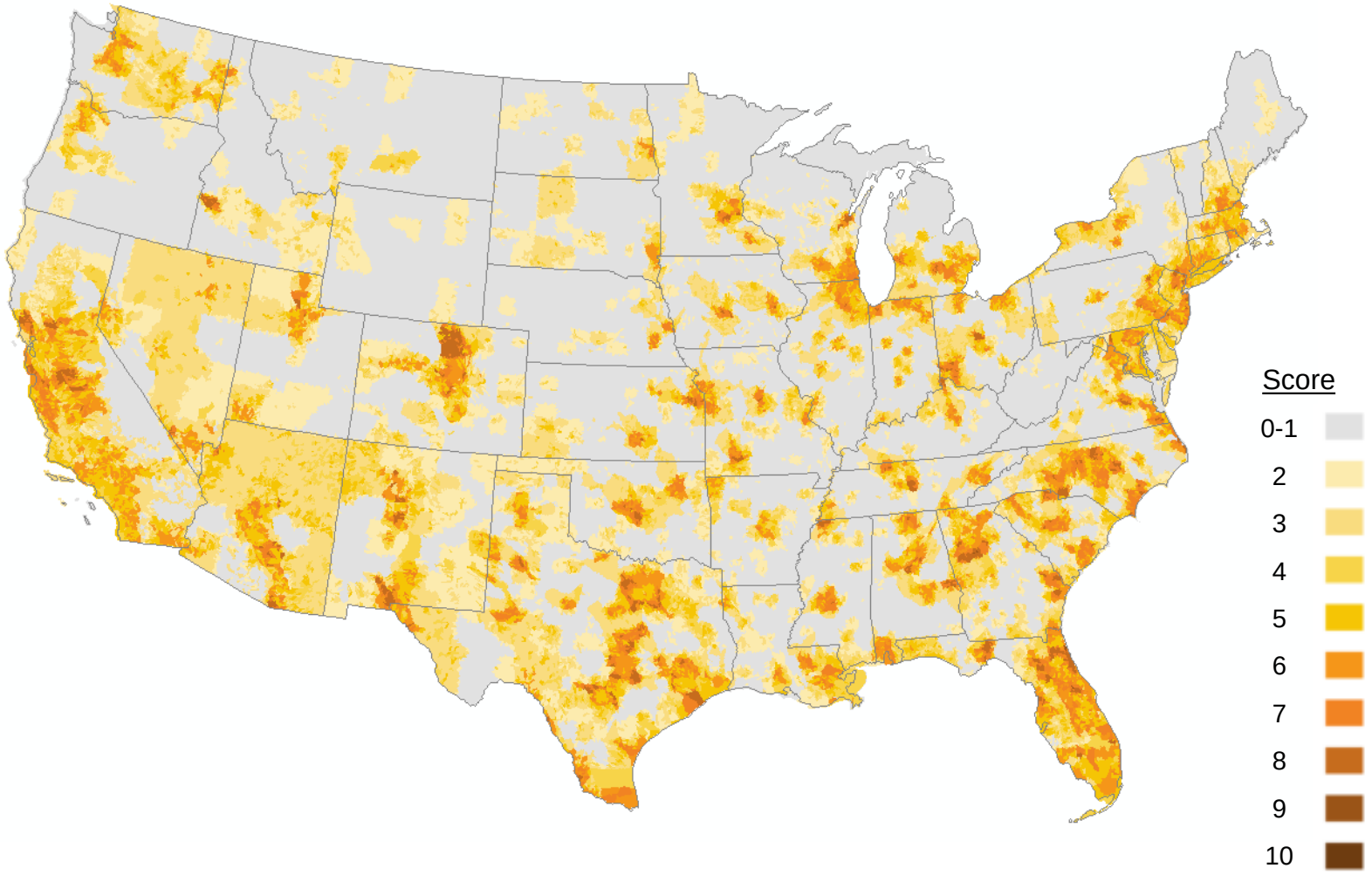
1. PS(s) in the watershed
2. PS loads to waterbodies: Volume of N, P, solids, and organics
3. PS loads to waterbodies: Total average temperature change
4. Repeated violations of effluent limits or compliance schedules by point sources discharging into impaired waters
5. High % of impervious surface area in the watershed



Economic Demand Drivers

Drivers:

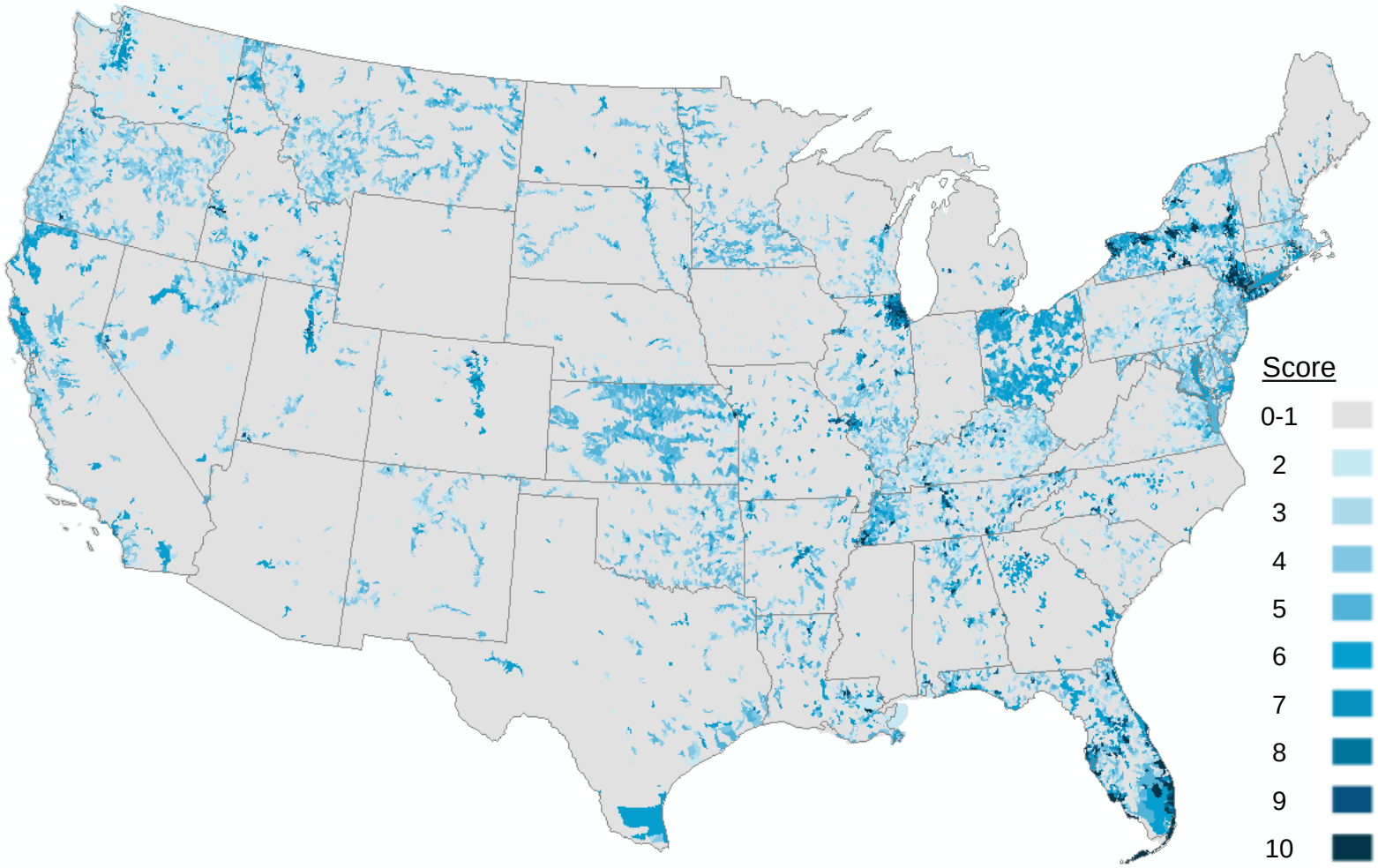
1. Urban areas (>100,000) residents
2. Projected population growth
3. Projected growth in impervious surface area
4. Insufficient current capacity/level of treatment among POTWs



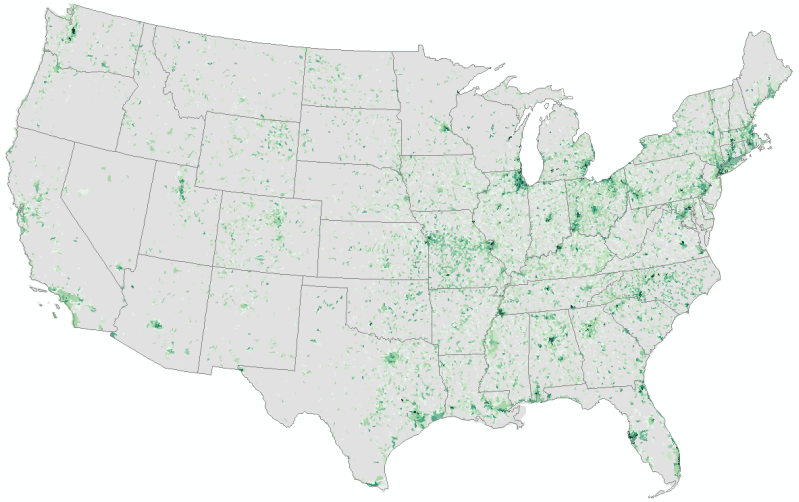
Policy/Regulatory Demand Drivers

Drivers:

1. 303(d) listed impaired waters
2. Regulation, policy, or guidance supporting water quality trading
3. History of water quality trades
4. MS4 in the watershed



Biophysical



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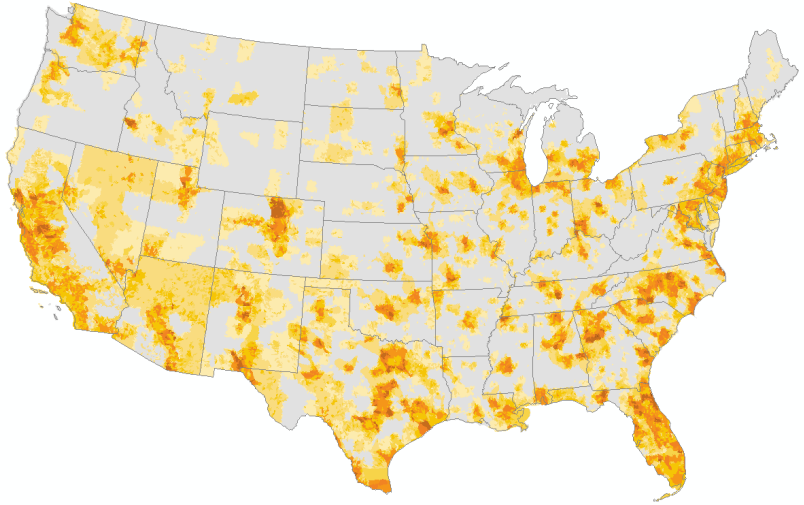
Economic



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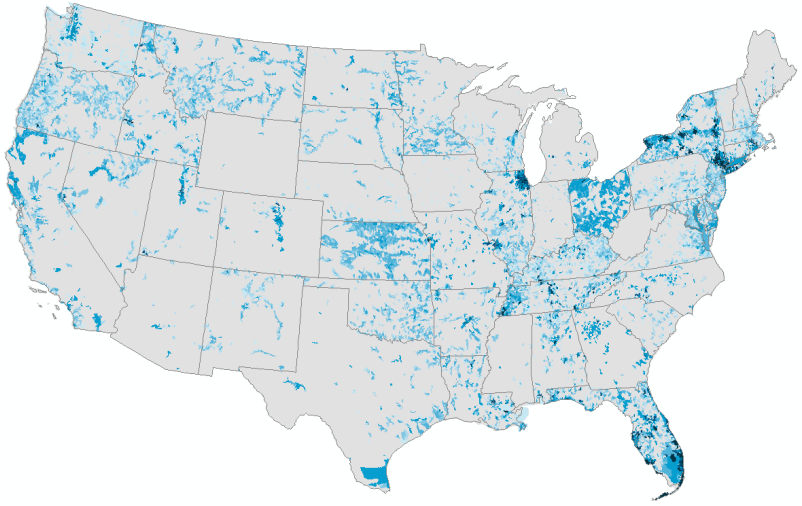
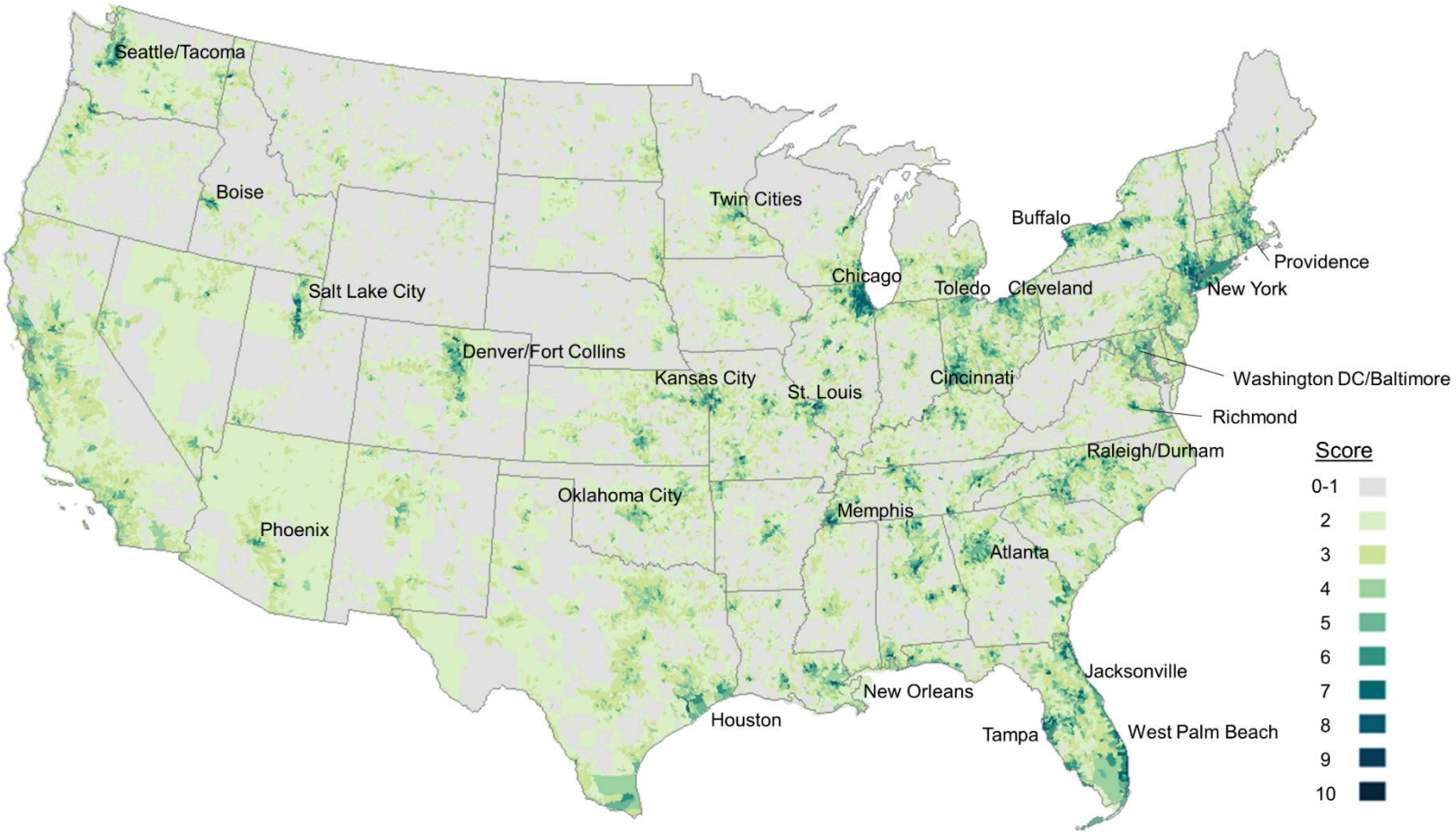
Policy/Regulatory



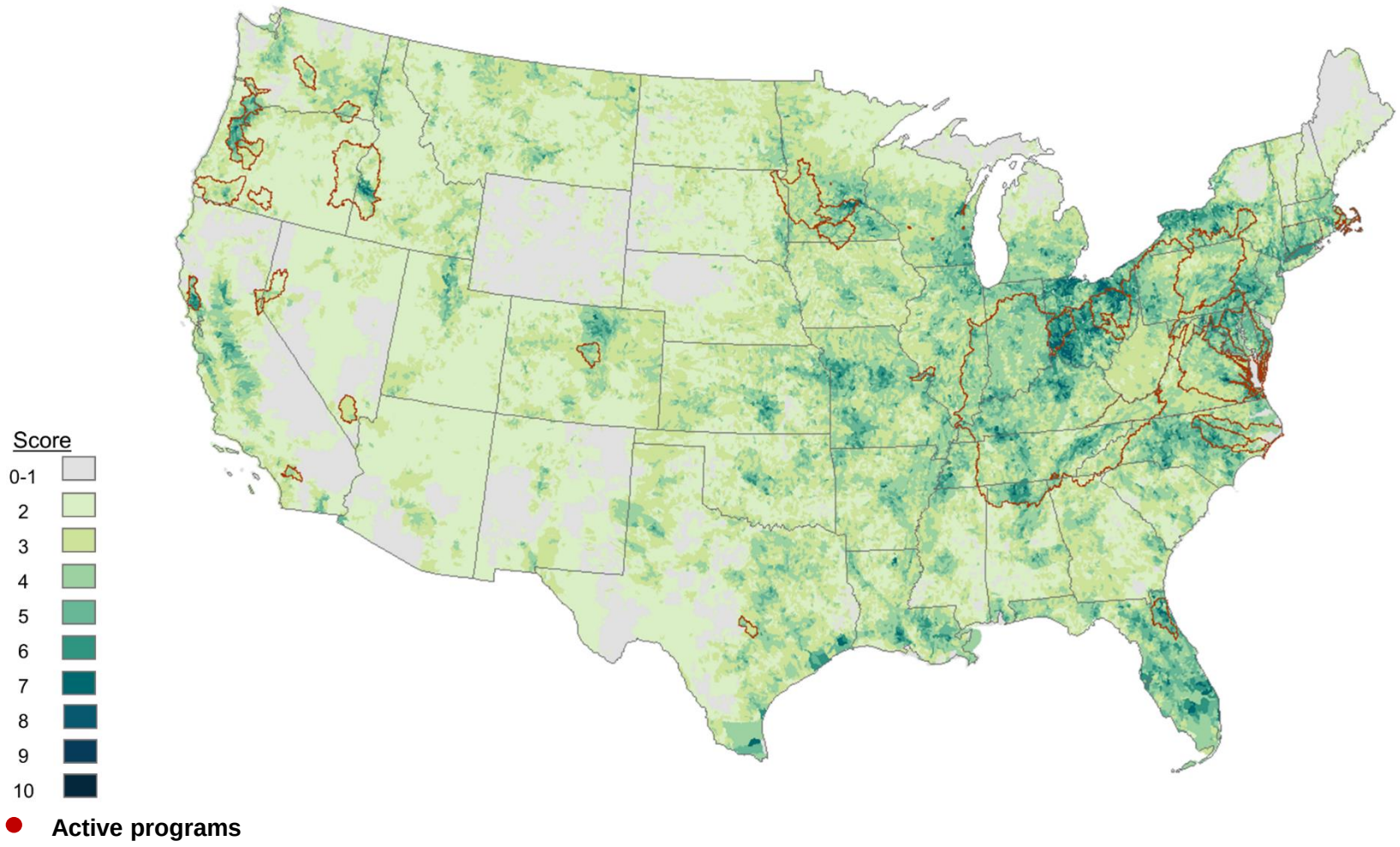
34%

Overall Demand Potential Score

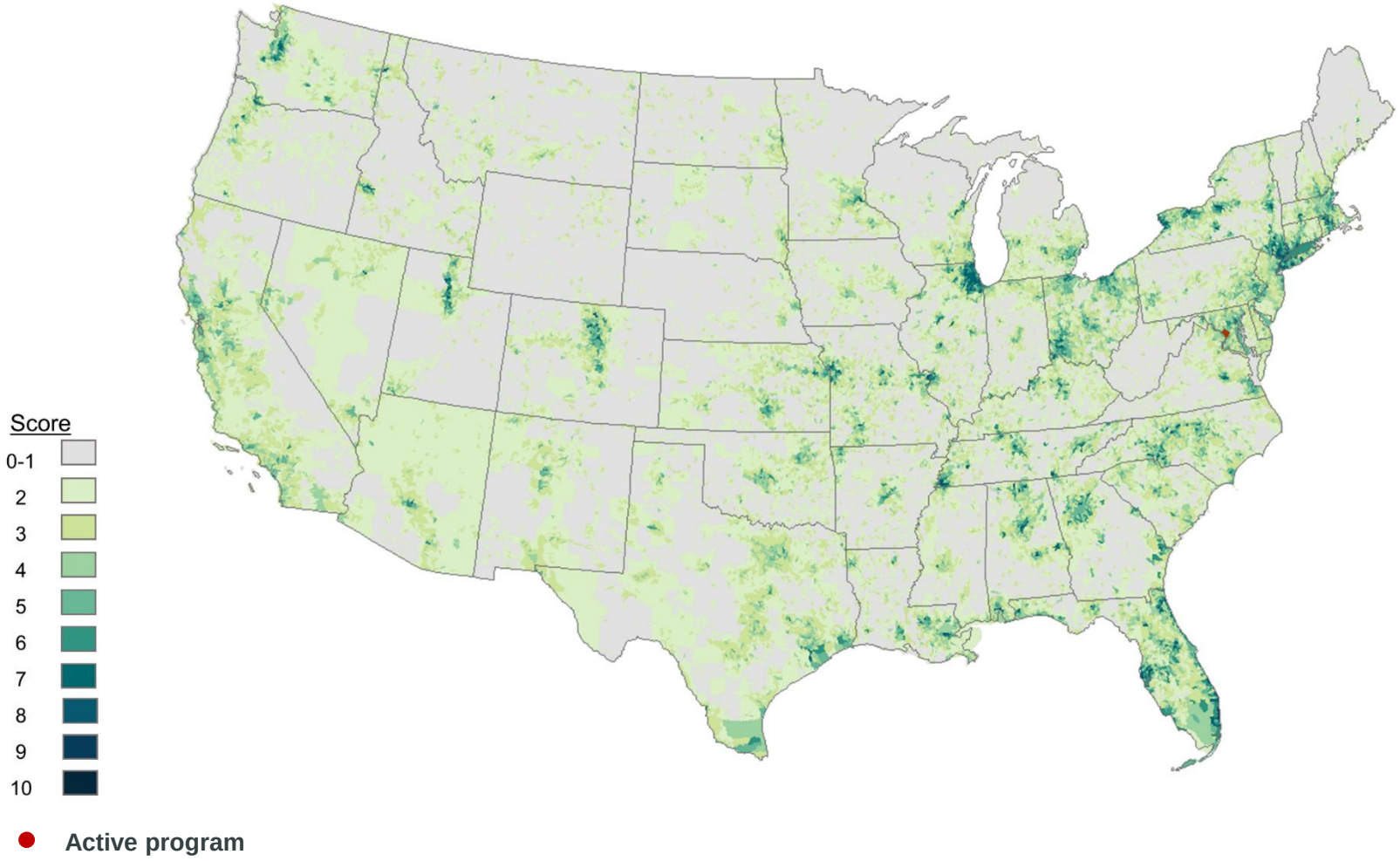
Overall Score: Stormwater



Policy Implications

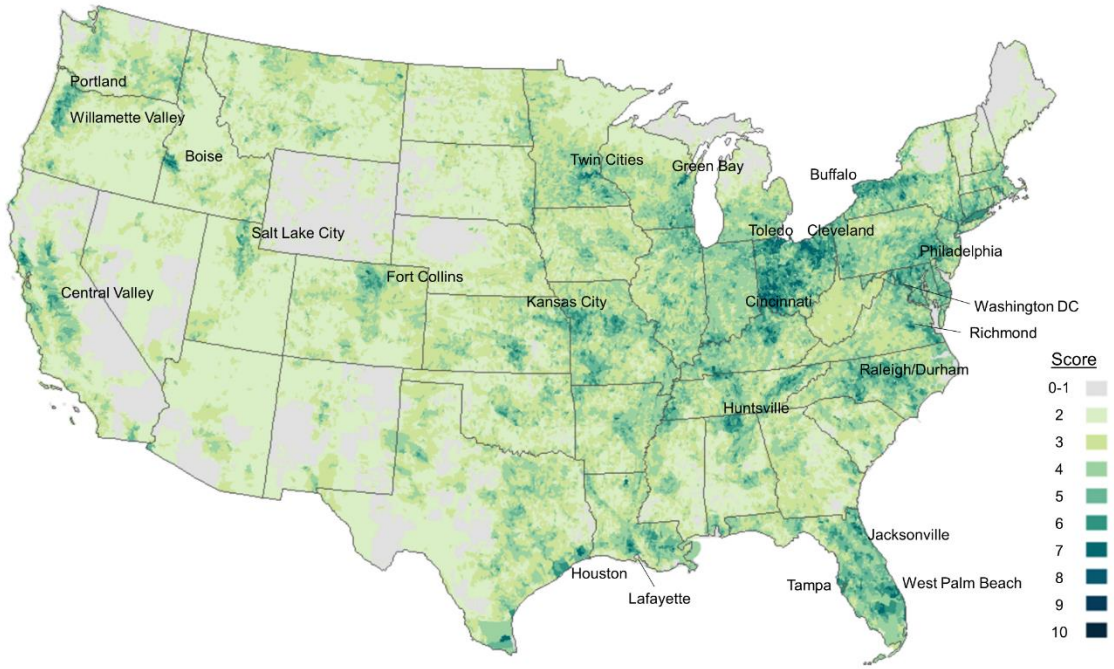


Policy Implications

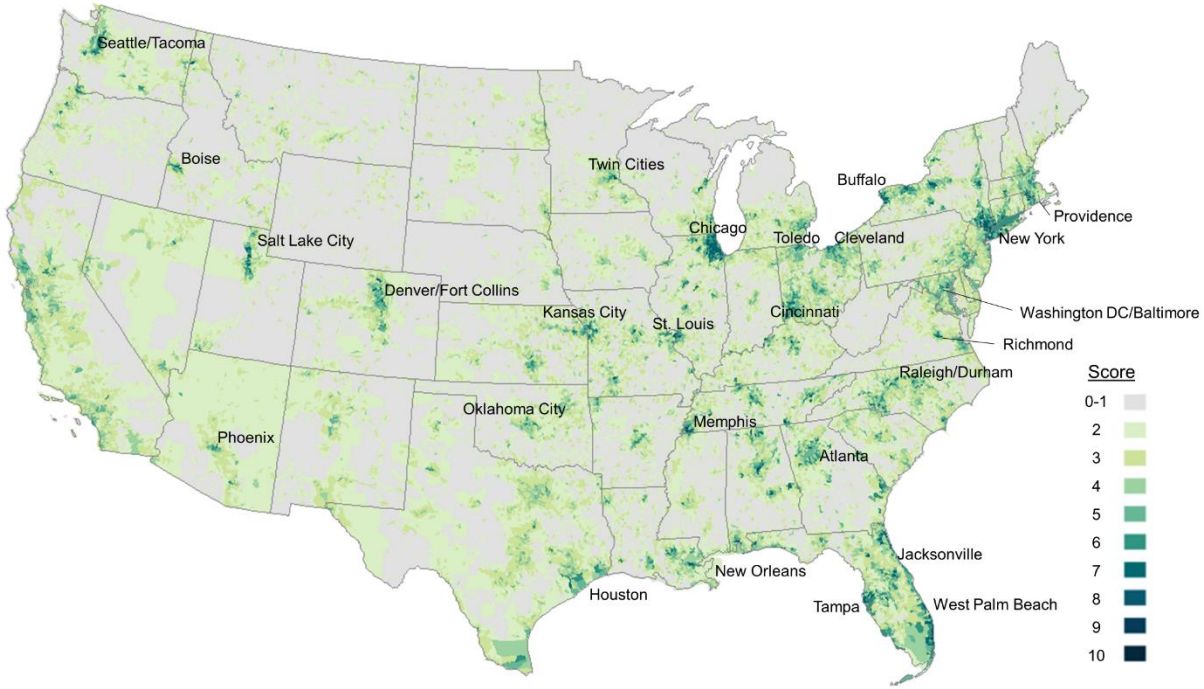


Overall Scores

Agriculture



Stormwater



For more information

7 Priority Actions for Advancing Water Quality Trading

National Network on Water Quality Trading

1. Simplify water quality trading program design and application

Utilities/Permittees

Publish lessons learned

U.S. EPA

Clarify approach to evaluating quantification methods

State Regulatory Agencies

Consider alternative partnership models

2. Ensure state regulatory agencies have adequate capacity and resources to engage on water quality trading

Utilities/Permittees

Advocate for funding long-term WQT staff positions at state regulatory agency

NGOs

Develop resources for states to train new permit writers

3. Clarify each administration's and the U.S. EPA's position on water quality trading

U.S. EPA

Release statement of support for trading

Clarify role of memos, guidance, and other documents on trading

3. Clarify each administration's and the U.S. EPA's position on water quality trading

U.S. EPA

- Release statement of support for trading
- Clarify role of memos, guidance, and other documents on trading

4. Actively address real and perceived risks for buyers

State Regulatory Agencies

Consider programmatic mechanisms to address commonly cited risks

NGOs

Educate potential buyers on sources of risk and risk-related misperceptions

Funders

Incentivize watershed approaches

5. Identify and address risks of litigation

Law Firms

Become familiar with risks of litigation and communicate responses to permittee clients

NGOs

Expand application of WQT principles beyond regulatory compliance context

6. Create guidance on trading for stormwater

NGOs

Develop guidance to explain how stormwater trading works

U.S. EPA

Issue MS4 trading/ alternative compliance policy statement

7. Invest more in stakeholder relationships and trust

Funders

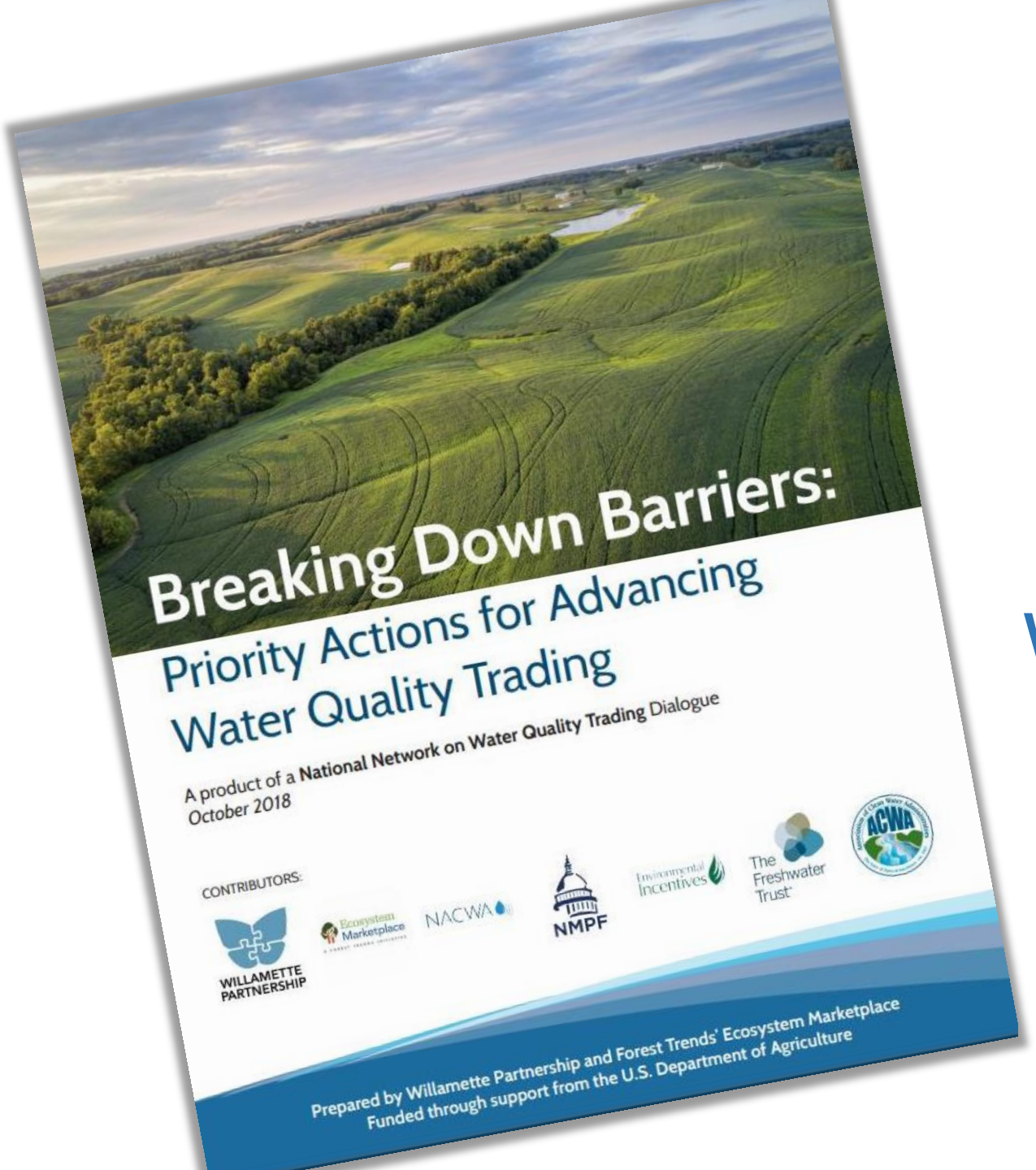
Provide small grants to get partnerships up and running

Utilities/Permittees

Map out critical relationships

All

Reframe how we talk about water quality trading



Download the report:
www.nnwqt.org/action

nnwqt@willamettepartnership.org

What's next for the National Network?

National Network on Water Quality Trading

Thank you!

Kristiana Teige Witherill
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