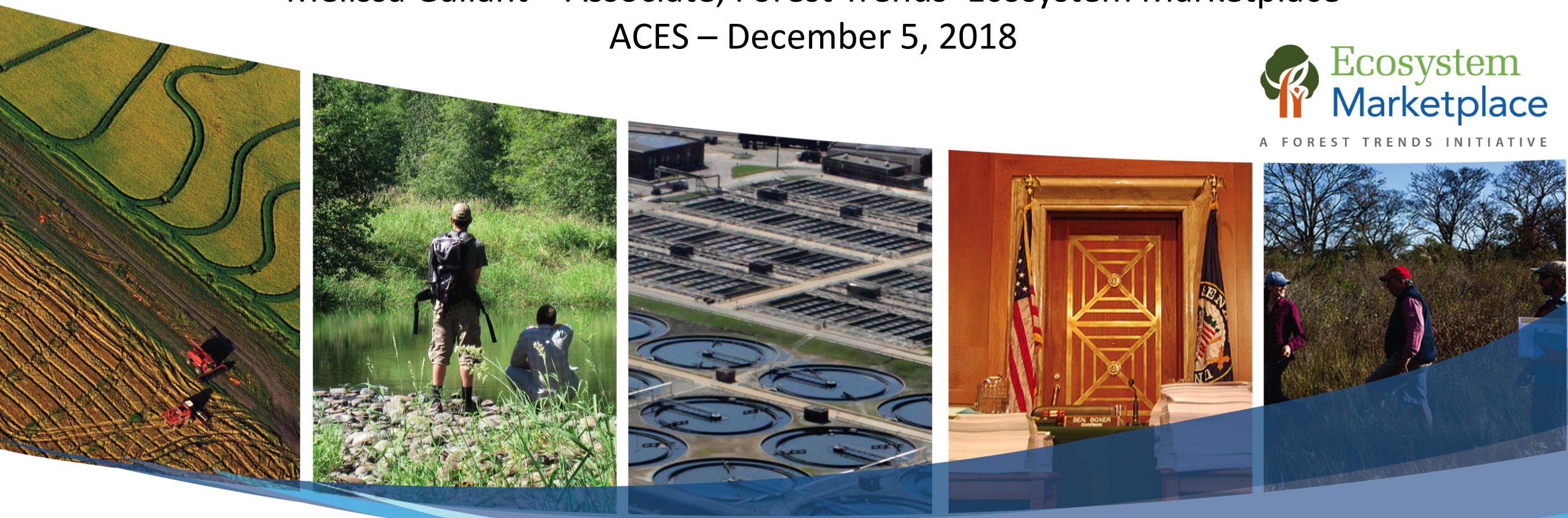
Mapping Potential Demand for Water Quality Trading in the United States

Melissa Gallant – Associate, Forest Trends' Ecosystem Marketplace

ACES – December 5, 2018



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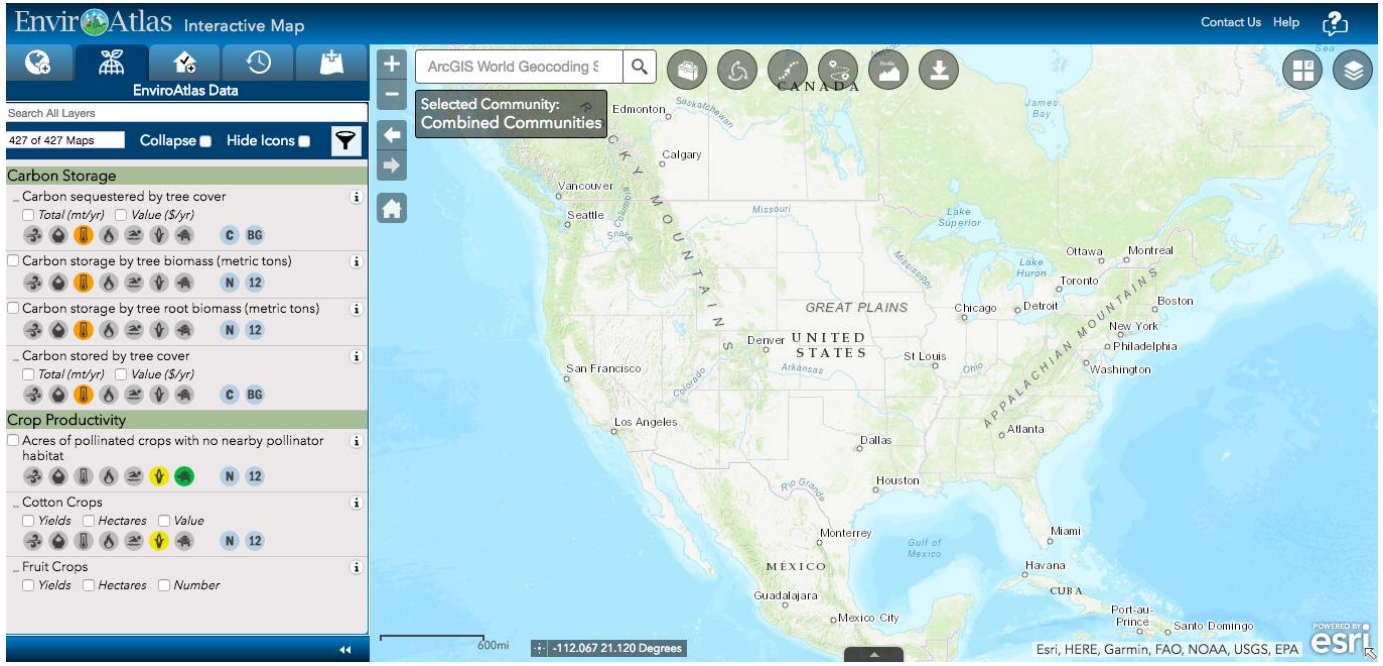
National Network on Water Quality Trading

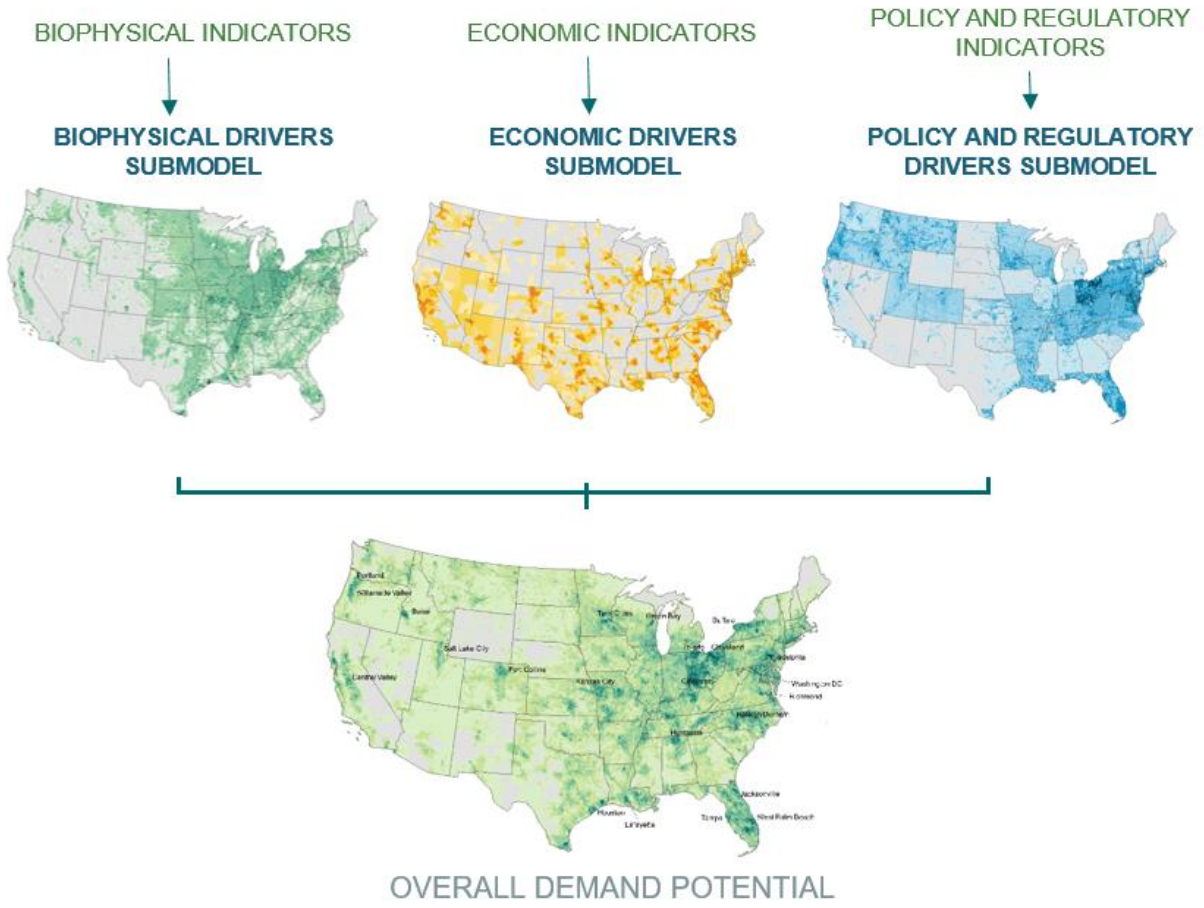
About

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



Enviroatlas.epa.gov

Research Model



Potential Demand for Agricultural Water Quality Credit Trading

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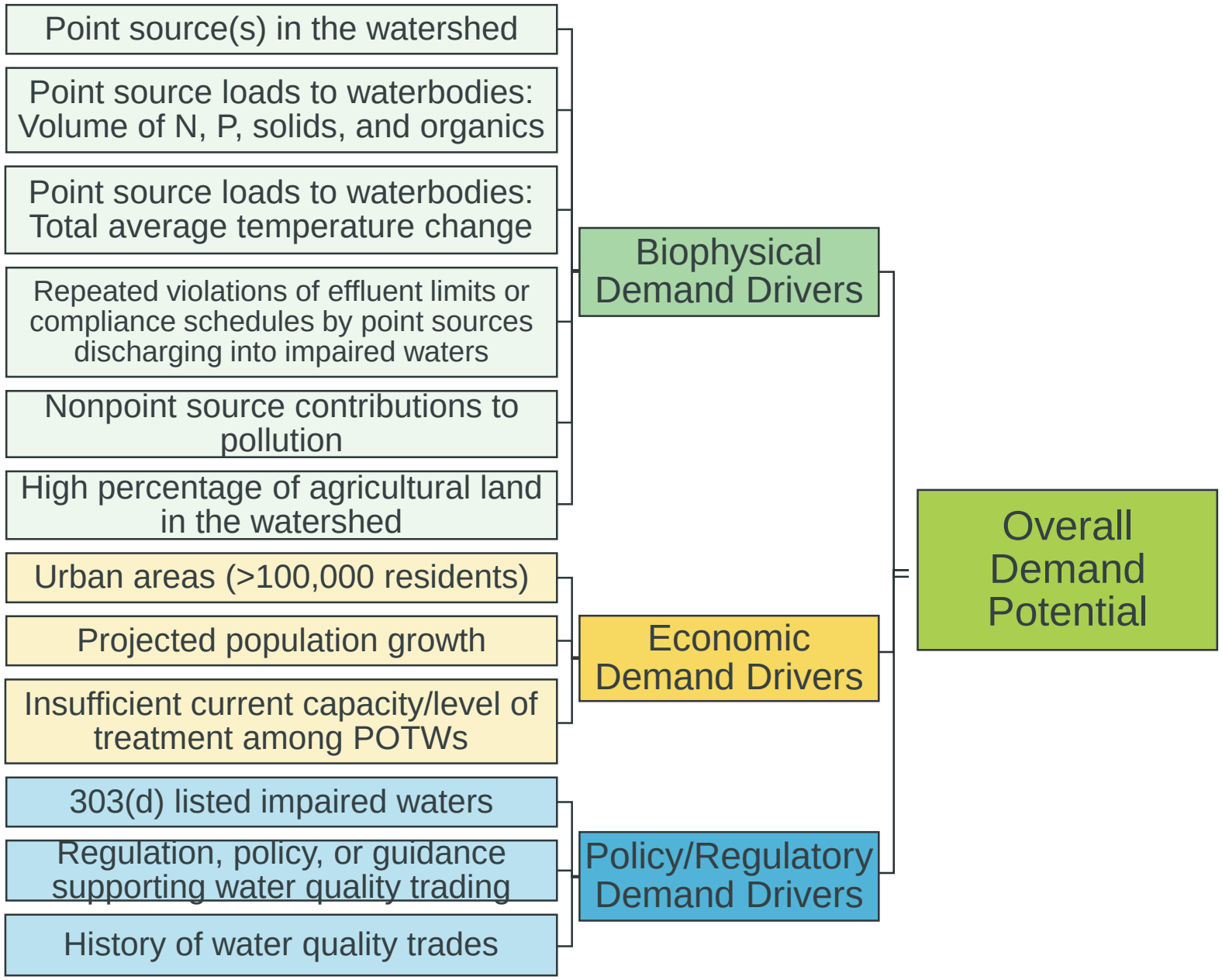
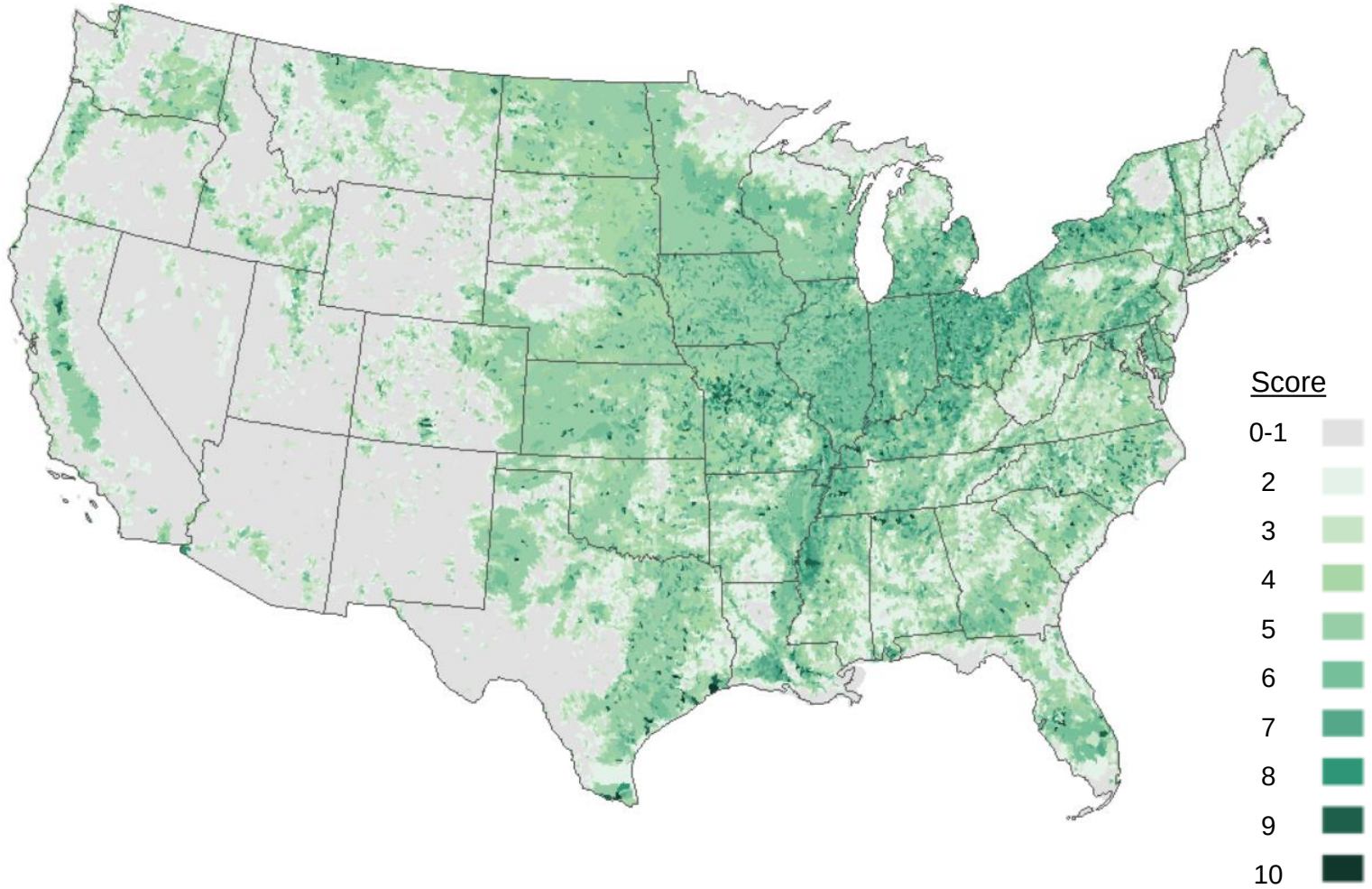

Point source(s) in the watershed
Point source loads to waterbodies: Volume of N, P, solids, and organics
Point source loads to waterbodies: Total average temperature change
Repeated violations of effluent limits or compliance schedules by point sources discharging into impaired waters
Nonpoint source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

Biophysical Demand Drivers

Indicators:

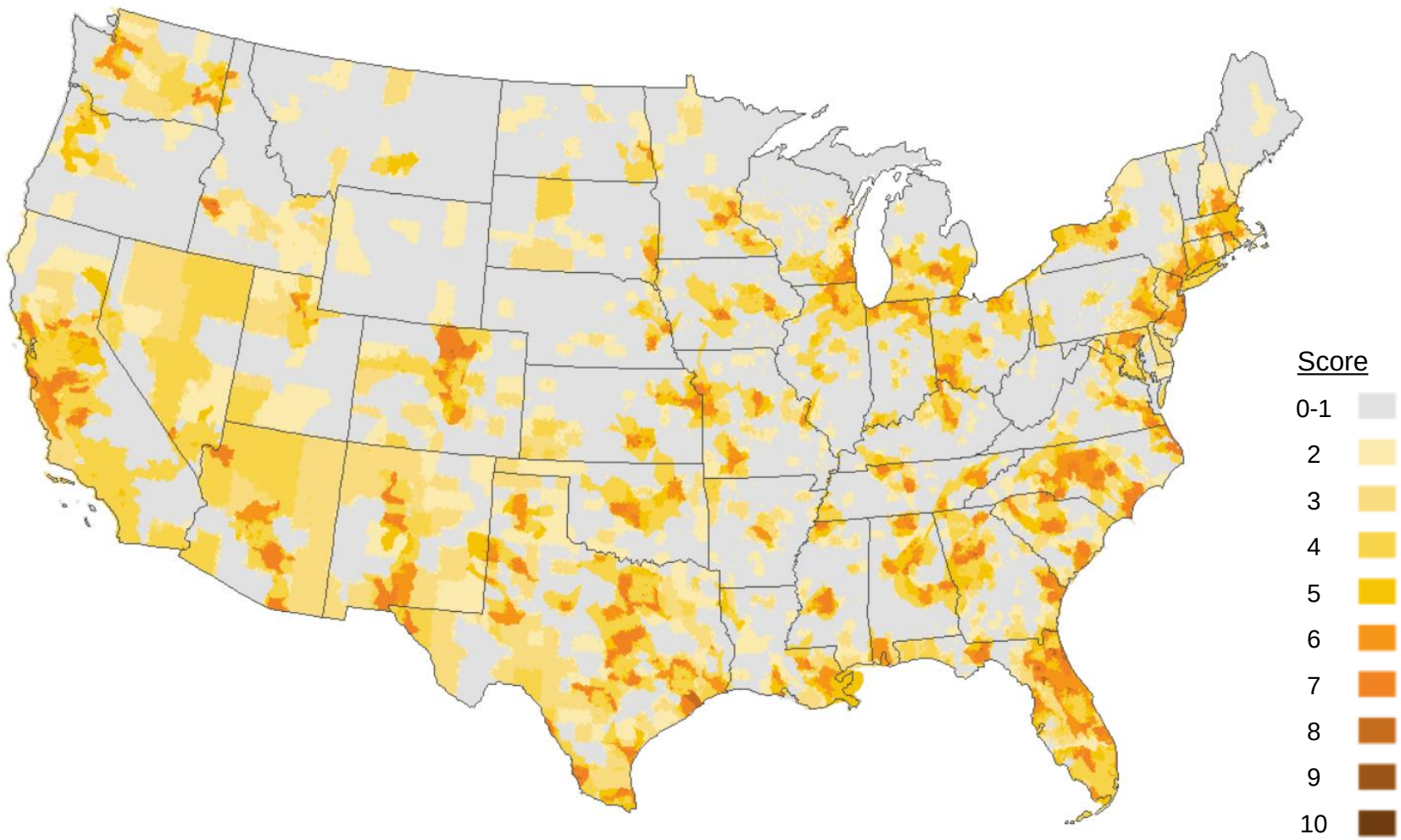
1. PS(s) in the watershed
2. PS loads to waterbodies: Volume of N, P, solids, and organics
3. PS loads to waterbodies: Total average temperature change
4. Repeated violations of effluent limits or compliance schedules by point sources discharging into impaired waters
5. NPS contributions to pollution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



Economic Demand Drivers

Indicators:

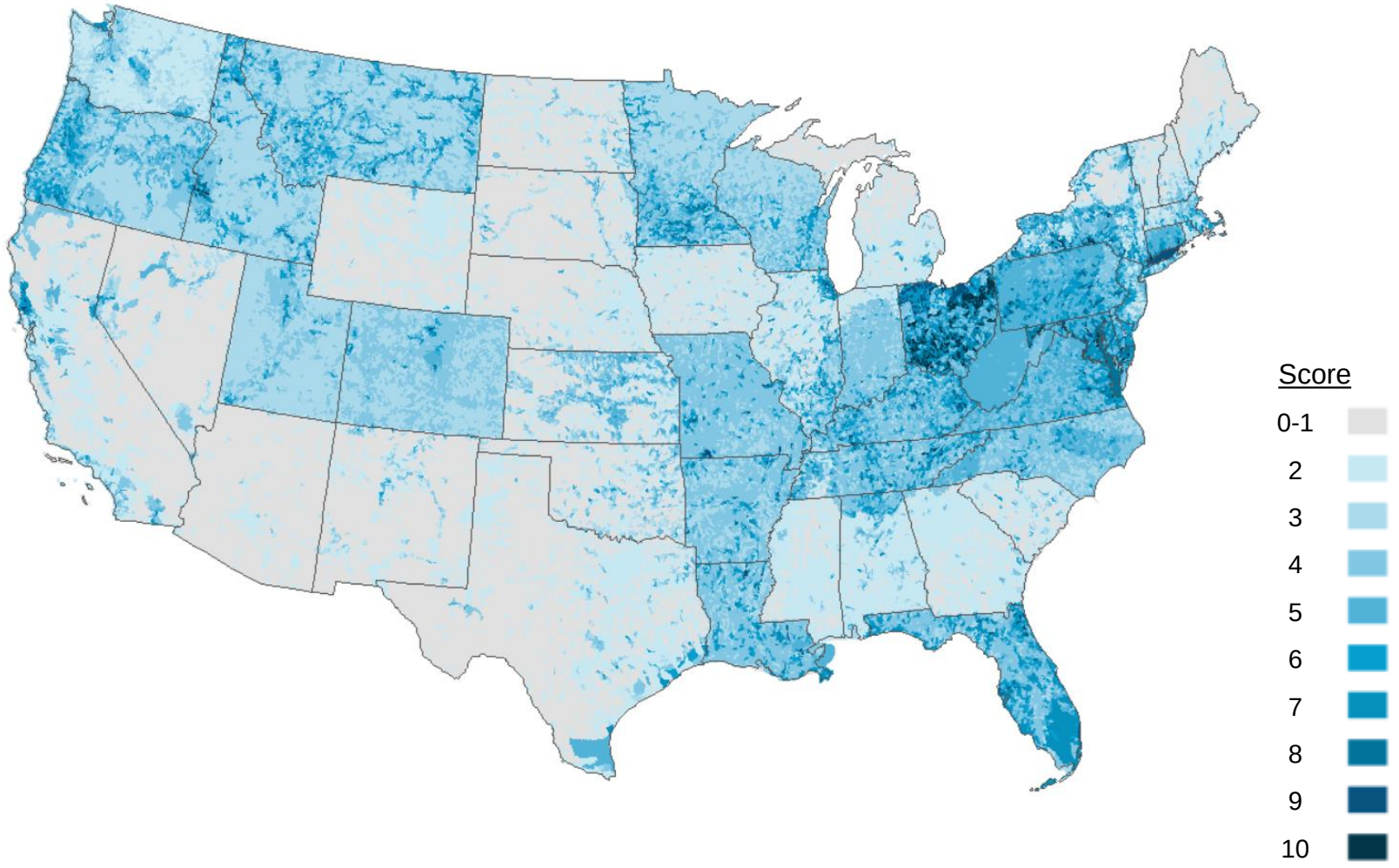
1. Urban areas (>100,000 residents)
2. Projected population growth
3. Insufficient current capacity/level of treatment among POTWs



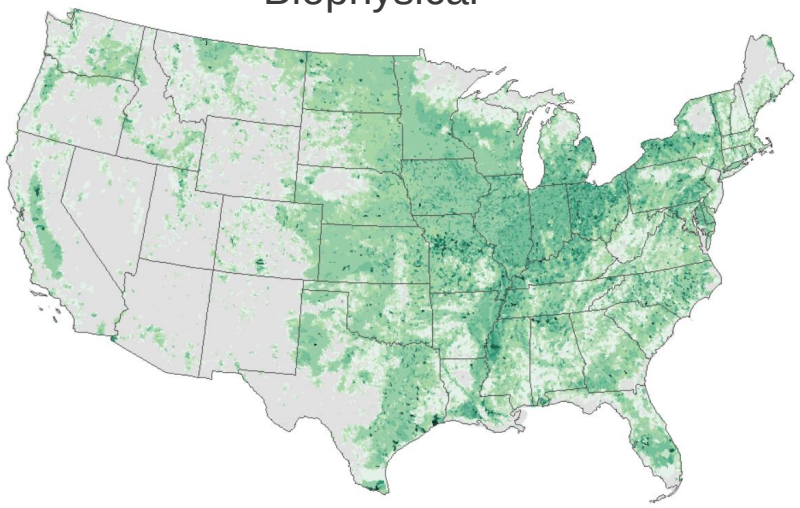
Policy/Regulatory Demand Drivers

Indicators:

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

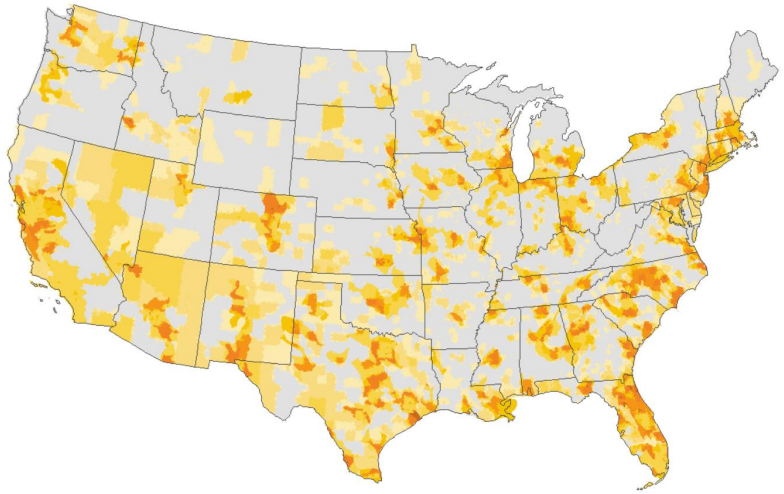


Biophysical



33%

Economic



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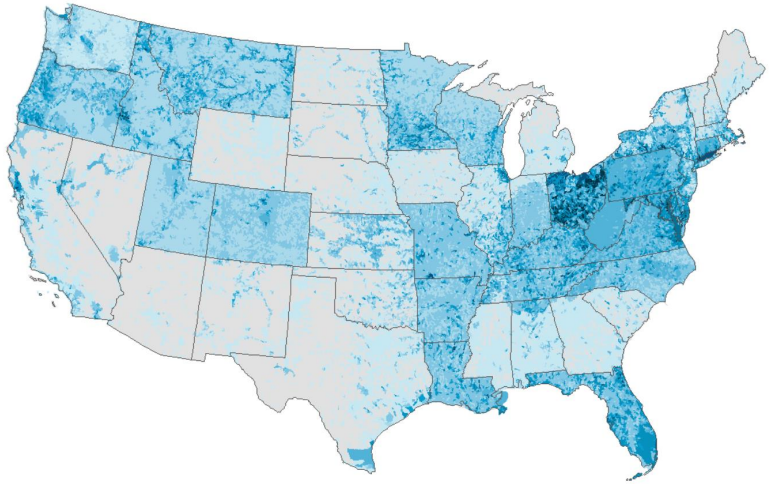
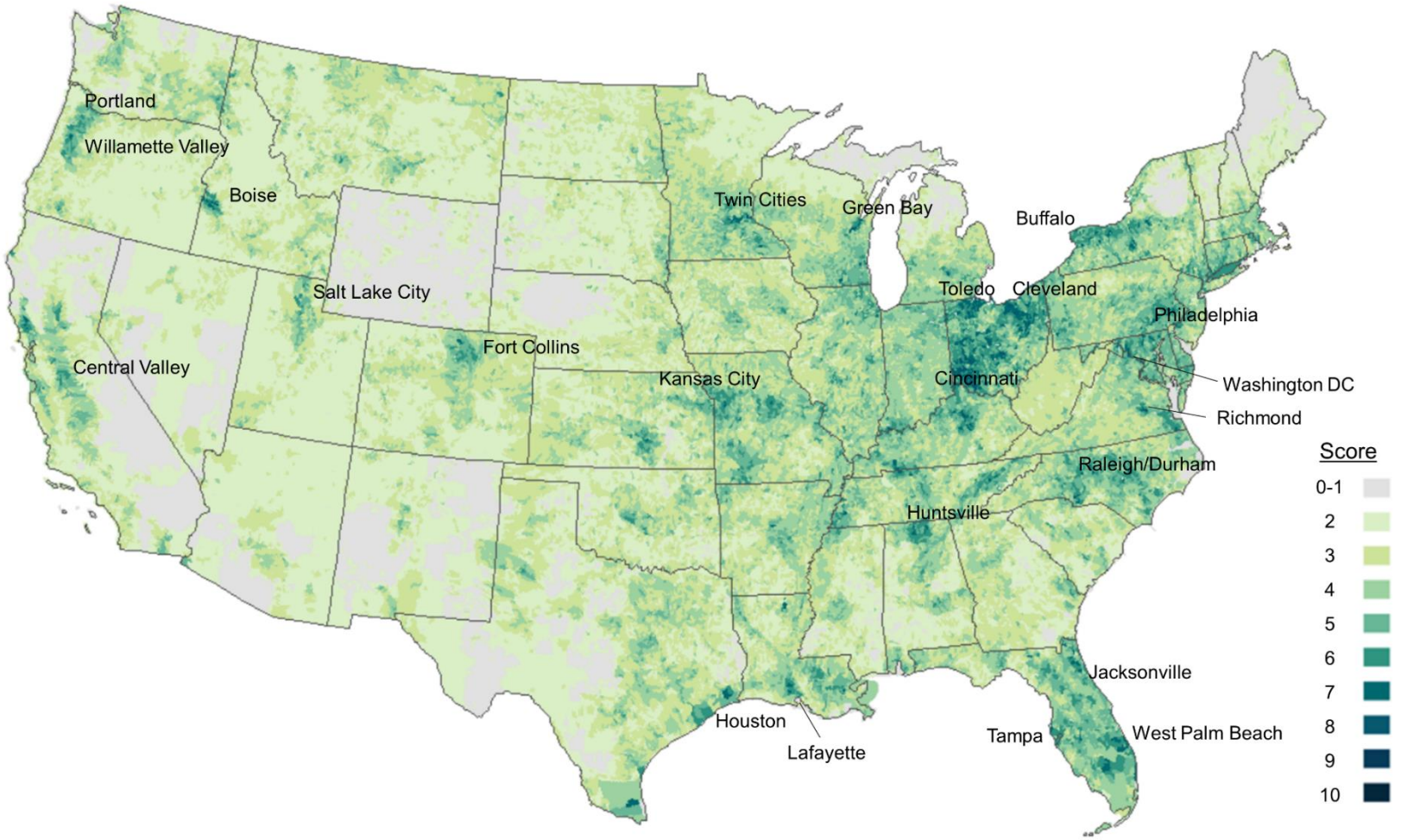
Policy/Regulatory



34%

Overall Demand Potential Score

Overall Score: Agriculture



Potential Demand for Stormwater Quality Credit Trading

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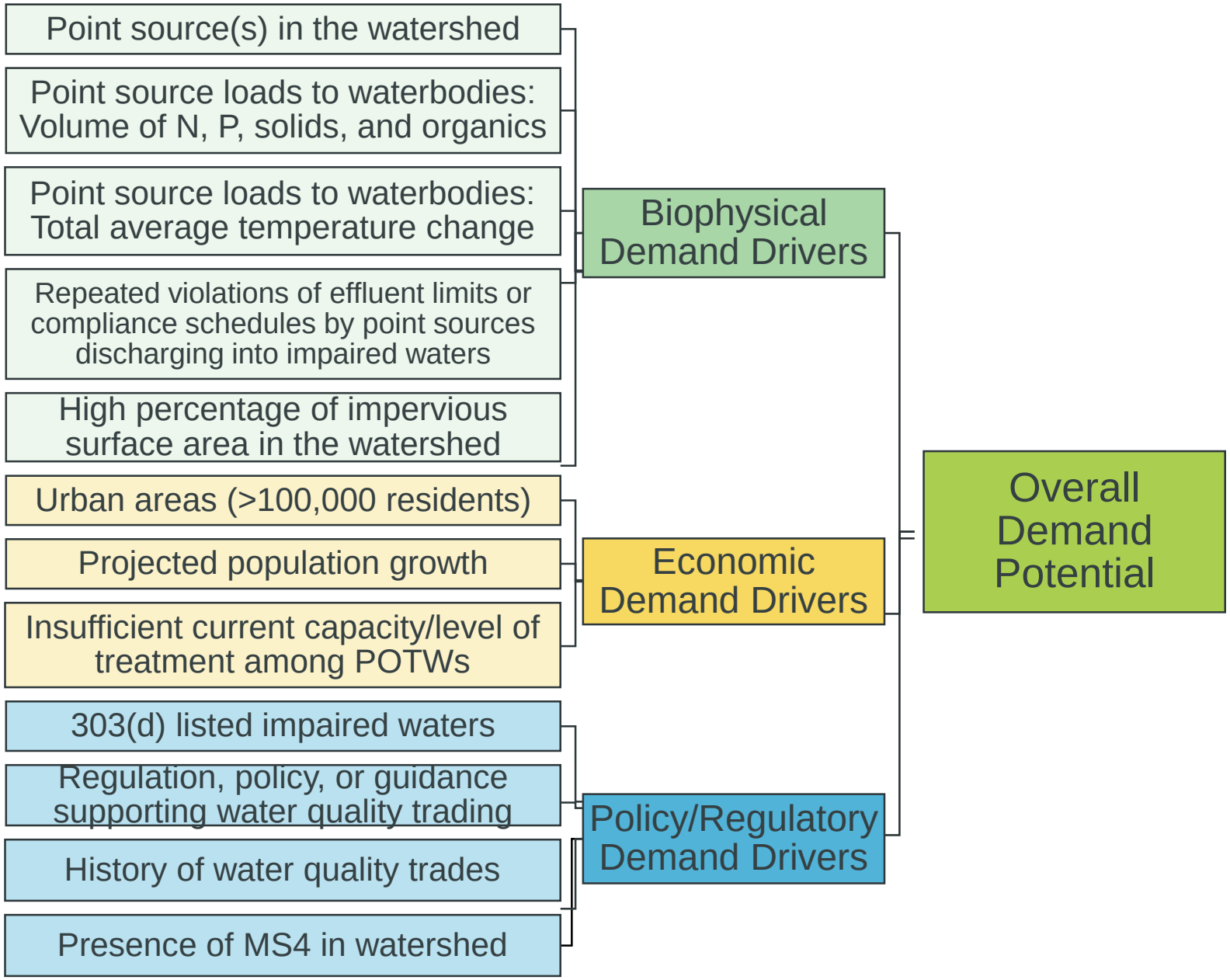
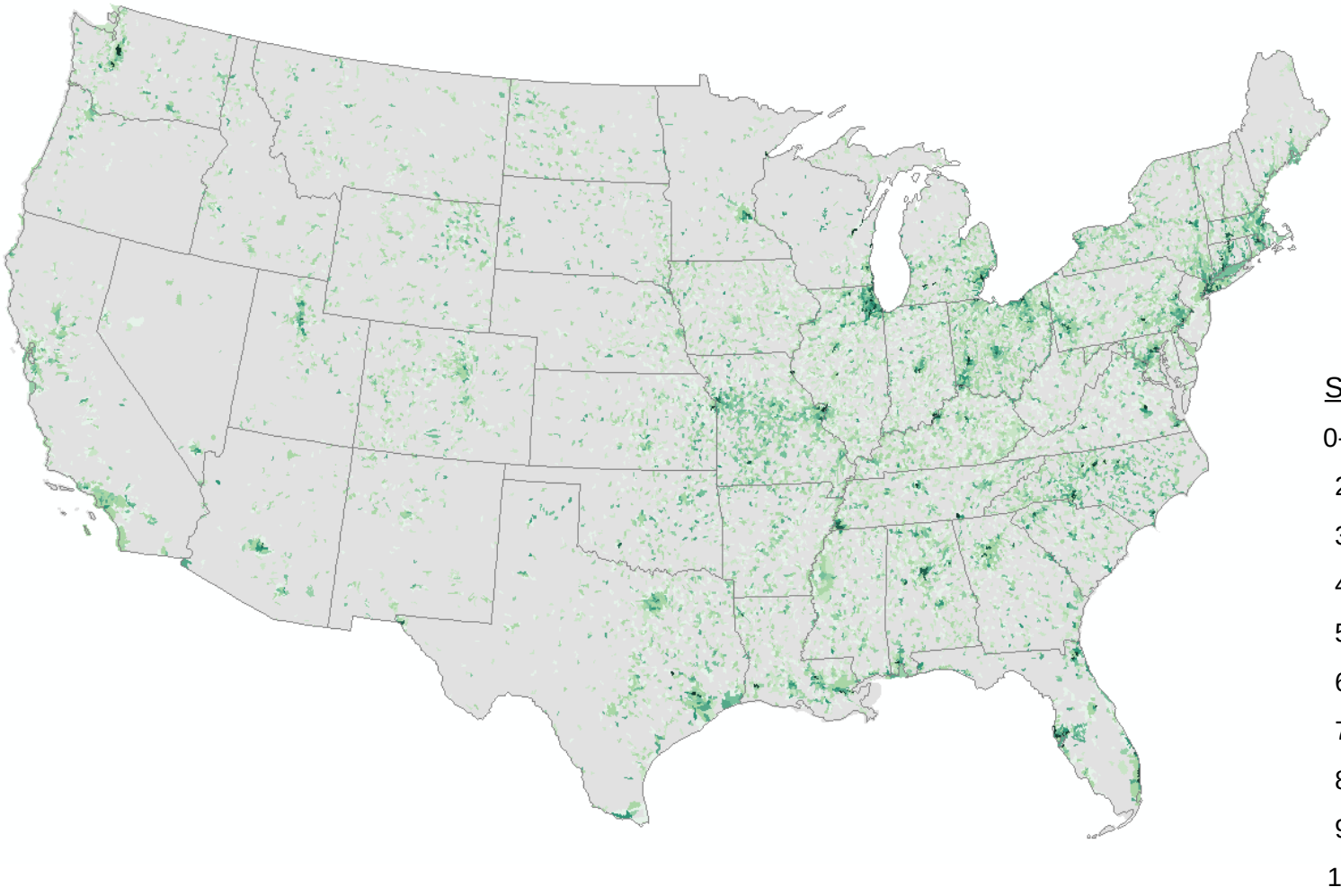

Point source(s) in the watershed
Point source loads to waterbodies: Volume of N, P, solids, and organics
Point source loads to waterbodies: Total average temperature change
Repeated violations of effluent limits or compliance schedules by point sources discharging into impaired waters
High percentage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

Biophysical Demand Drivers

Drivers:

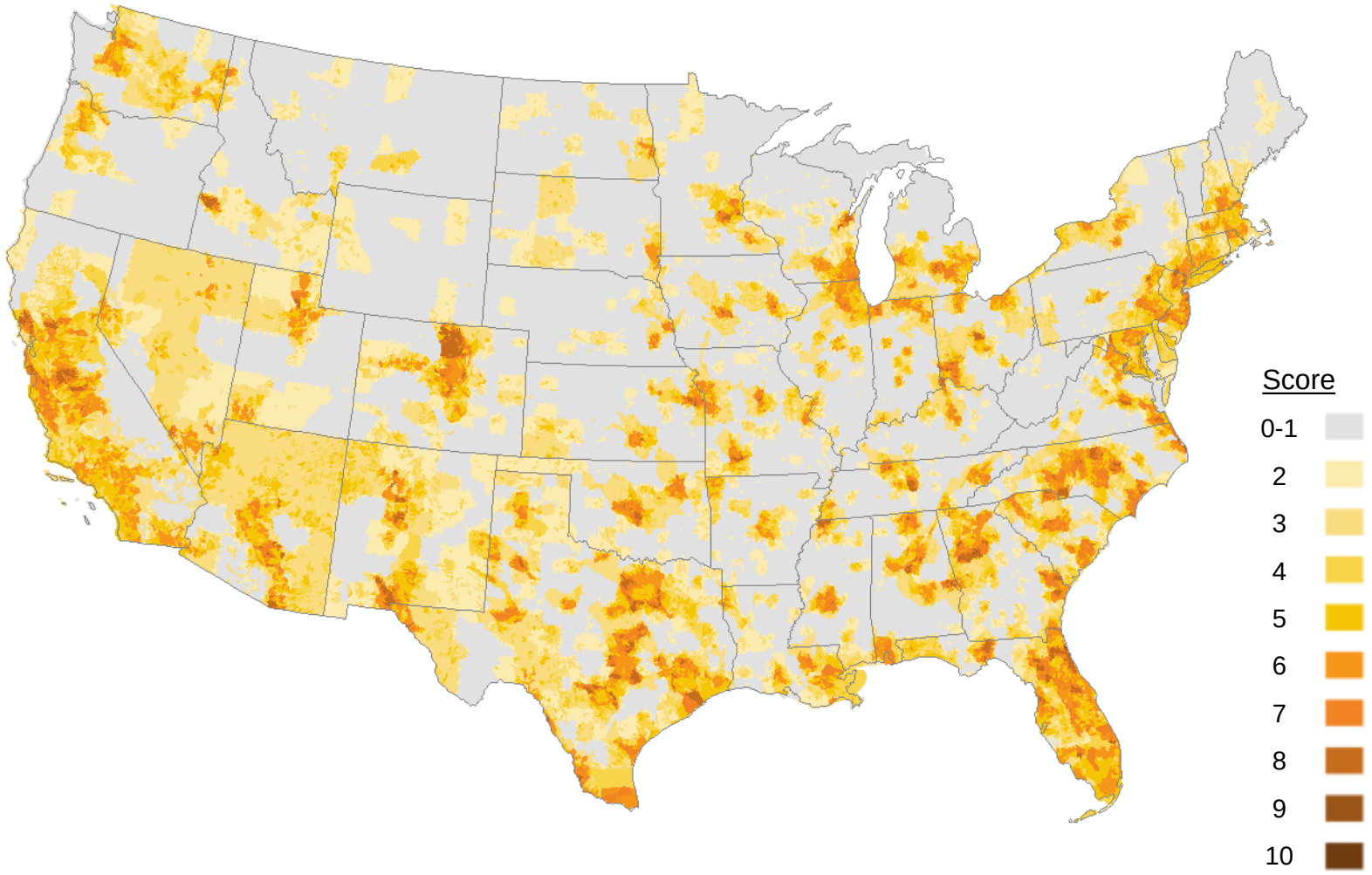
1. PS(s) in the watershed
2. PS loads to waterbodies: Volume of N, P, solids, and organics
3. PS loads to waterbodies: Total average temperature change
4. Repeated violations of effluent limits or compliance schedules by point sources discharging into impaired waters
5. High % of impervious surface area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



Economic Demand Drivers

Drivers:

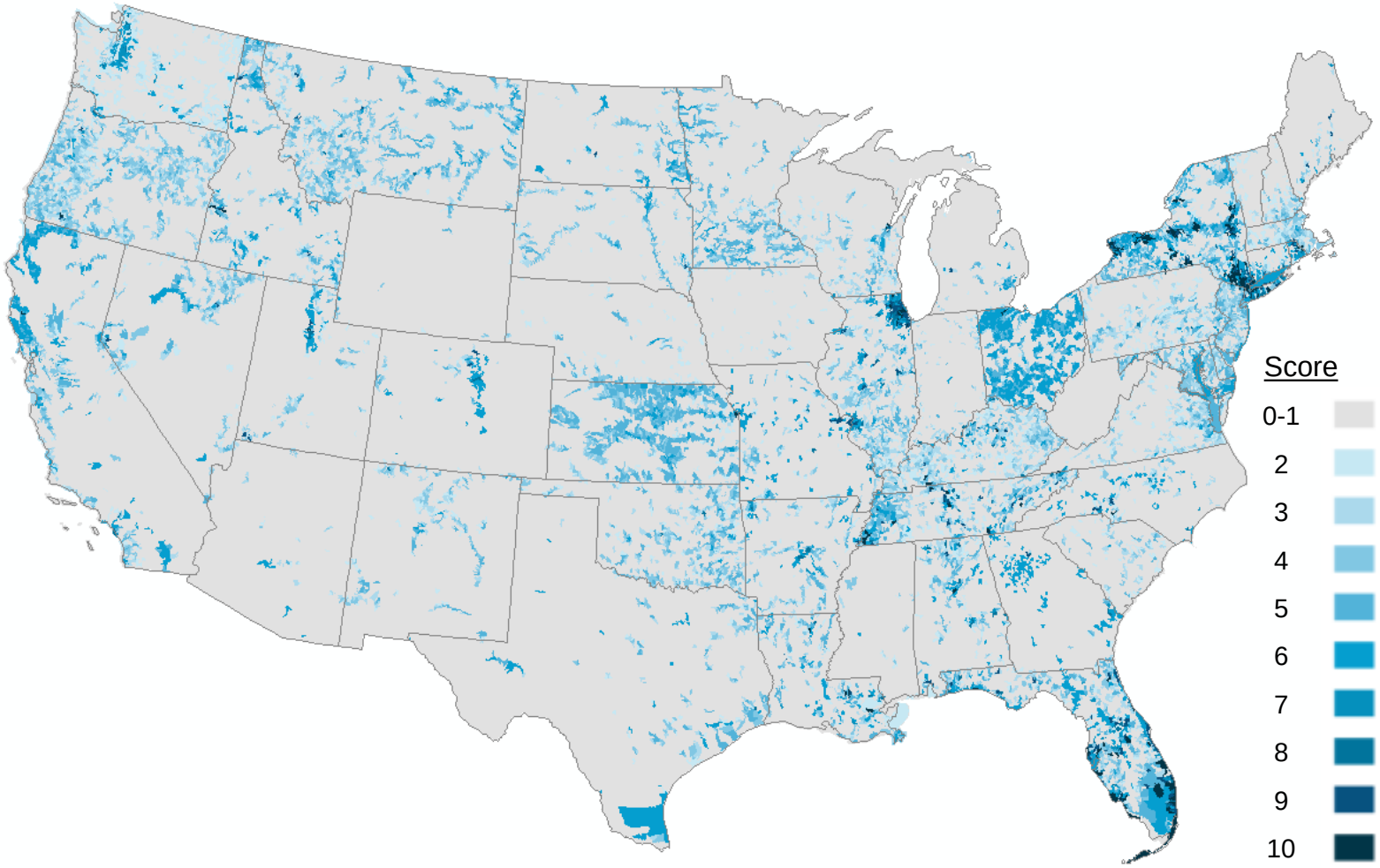
1. Urban areas (>100,000 residents
2. Projected population growth
3. Projected growth in impervious surface area
4. Insufficient current capacity/level of treatment among POTWs



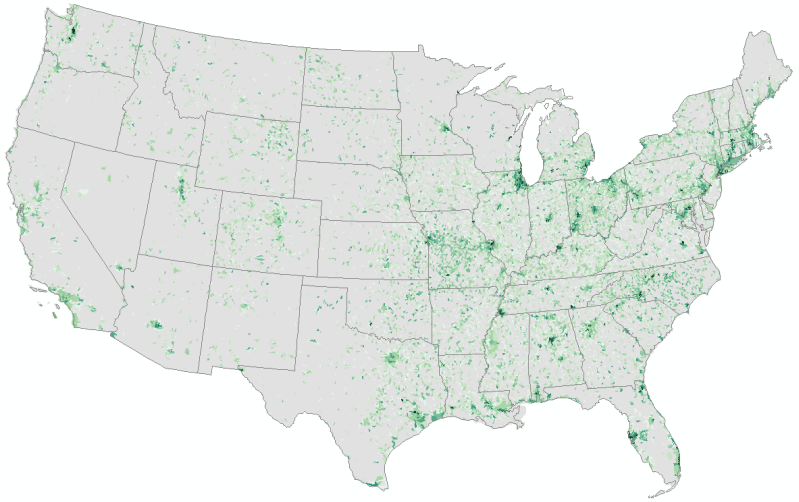
Policy/Regulatory Demand Drivers

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

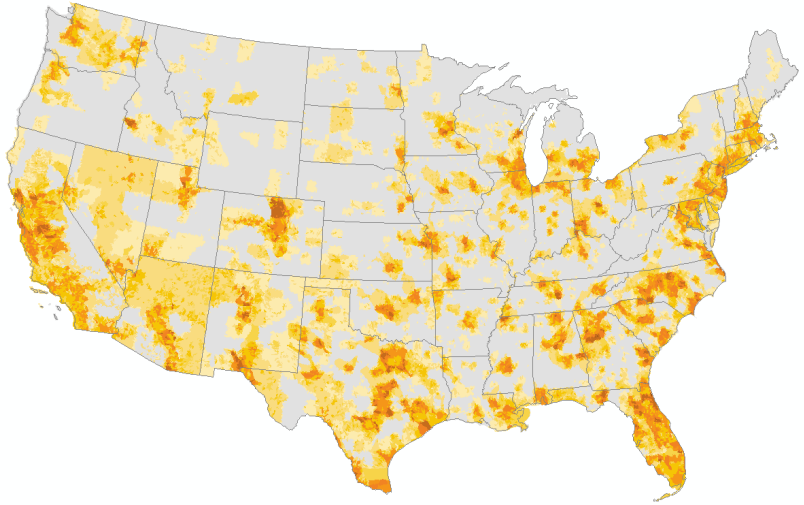


Biophysical



33%

Economic



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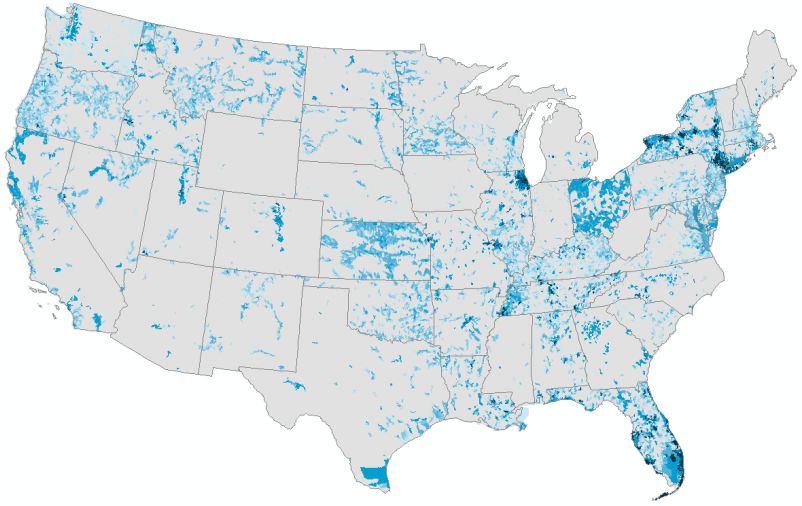
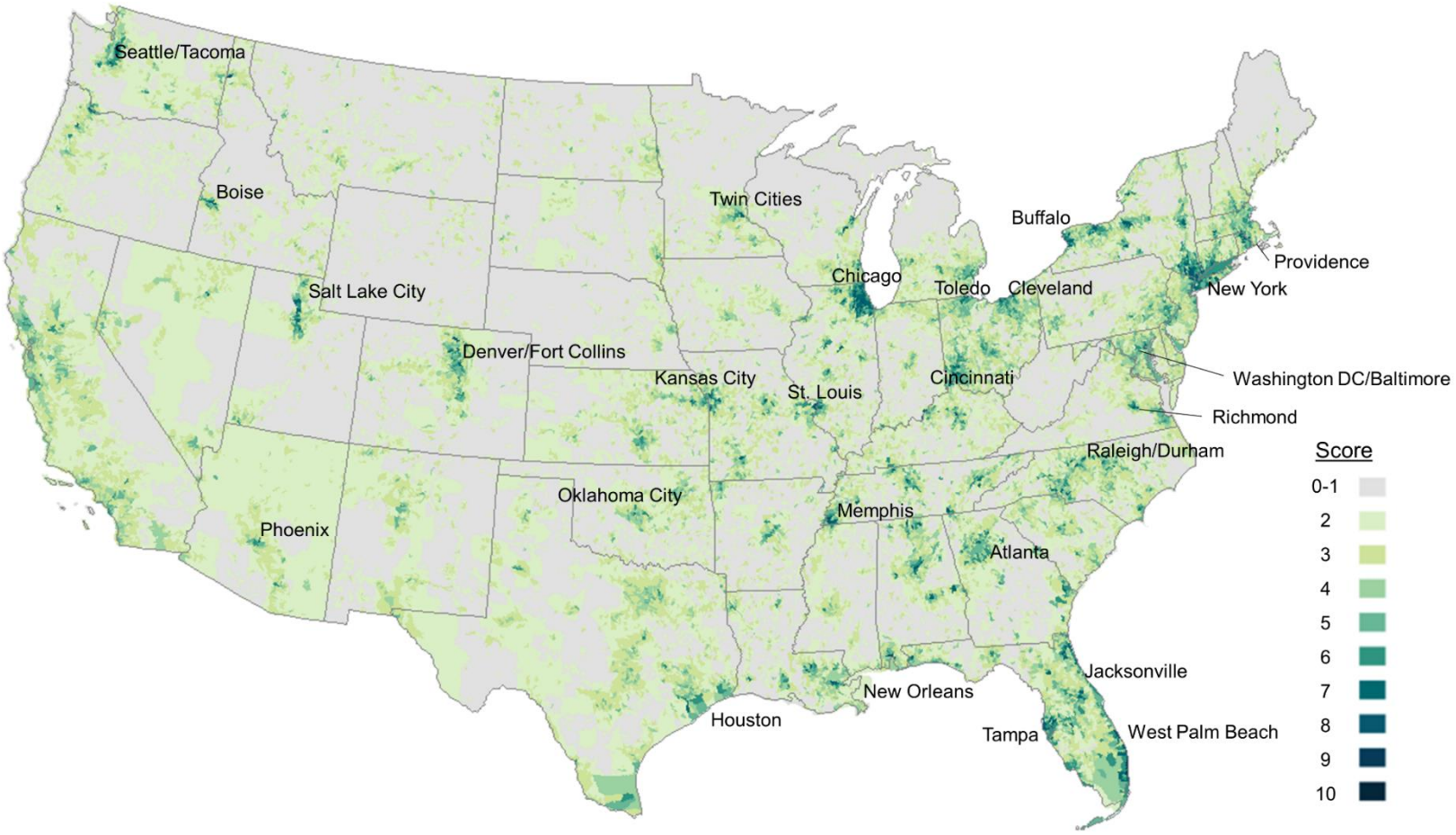
Policy/Regulatory



34%

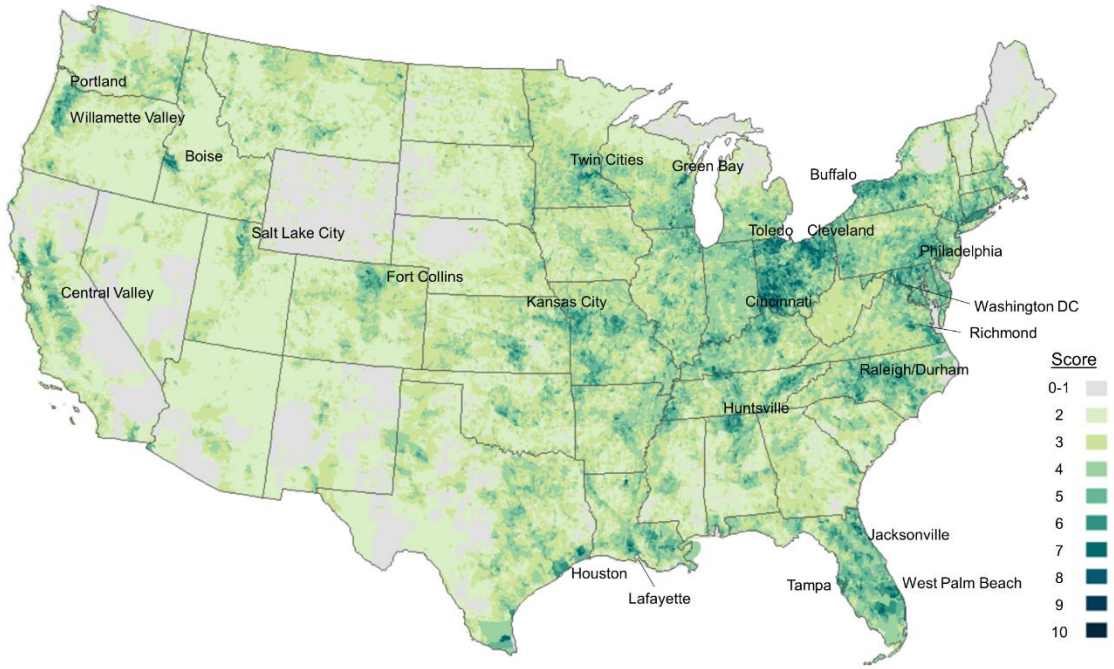
Overall Demand Potential Score

Overall Score: Stormwater

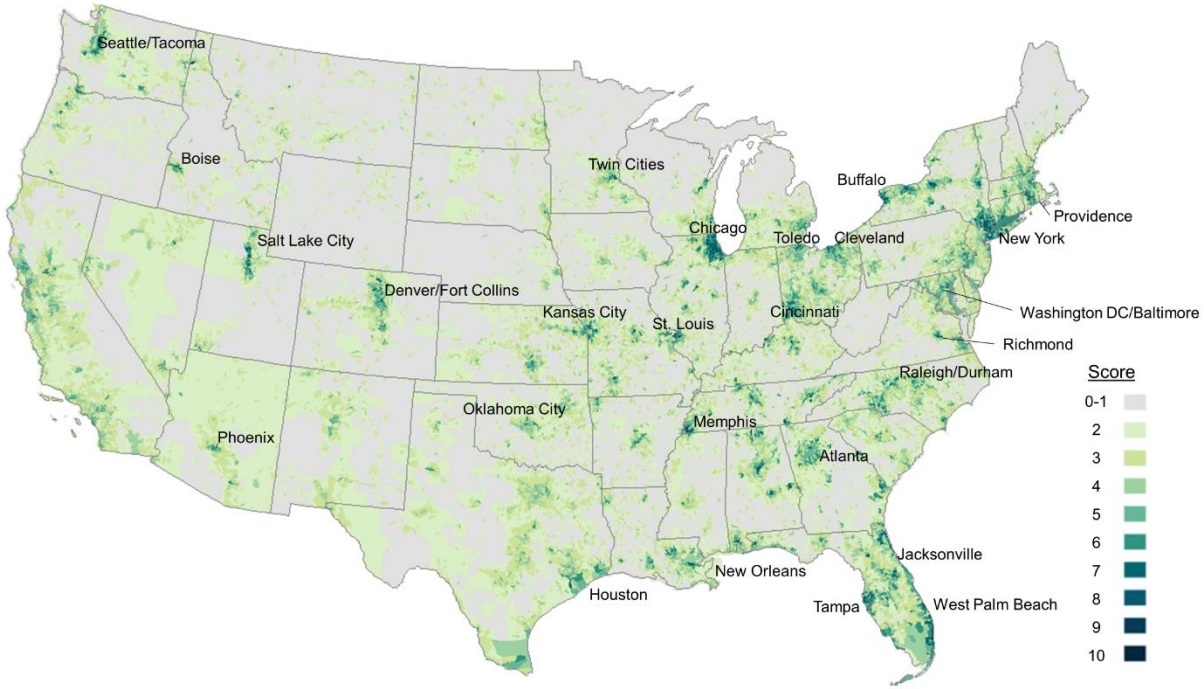


Overall Scores

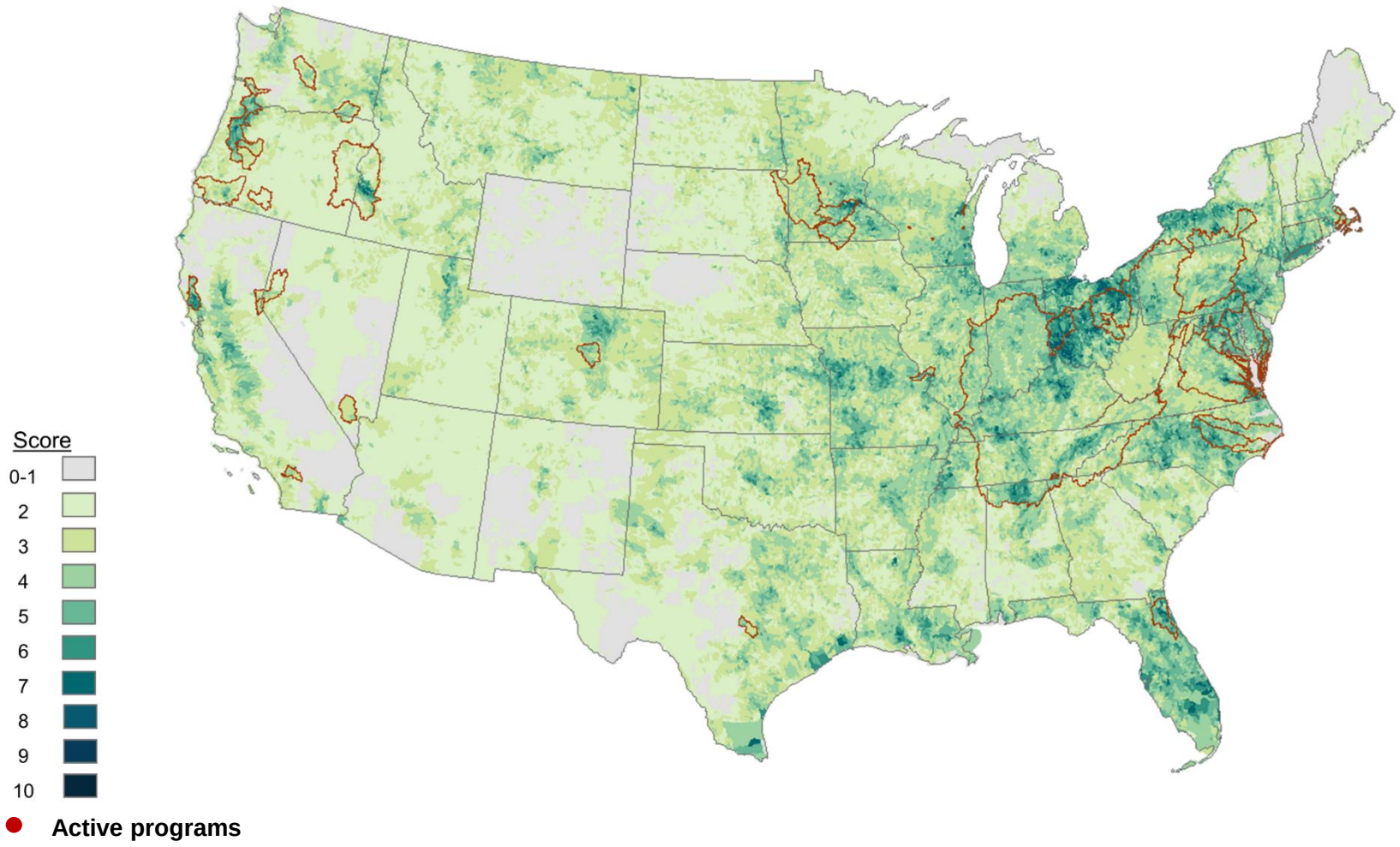
Agriculture



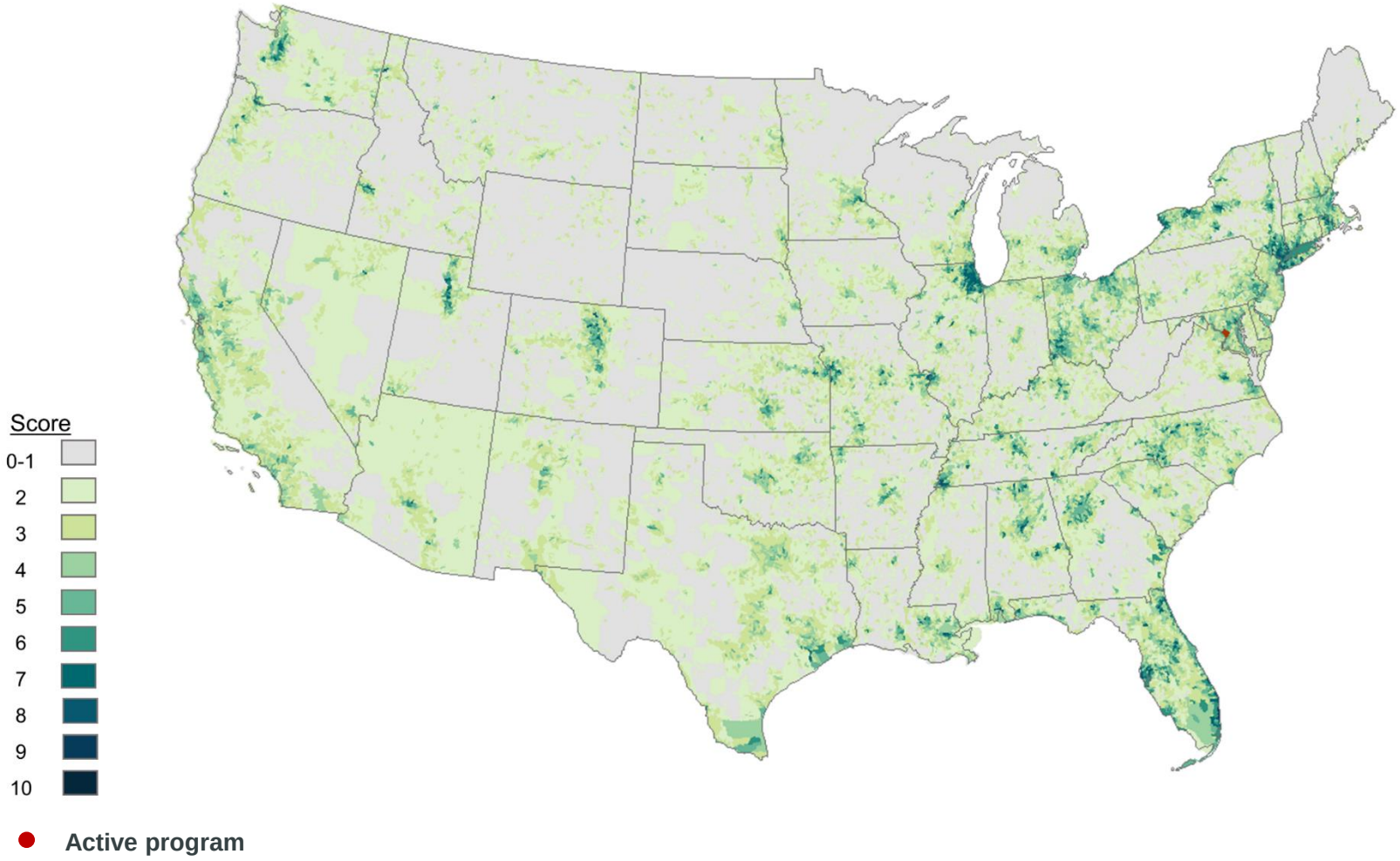
Stormwater



Policy Implications



Policy Implications

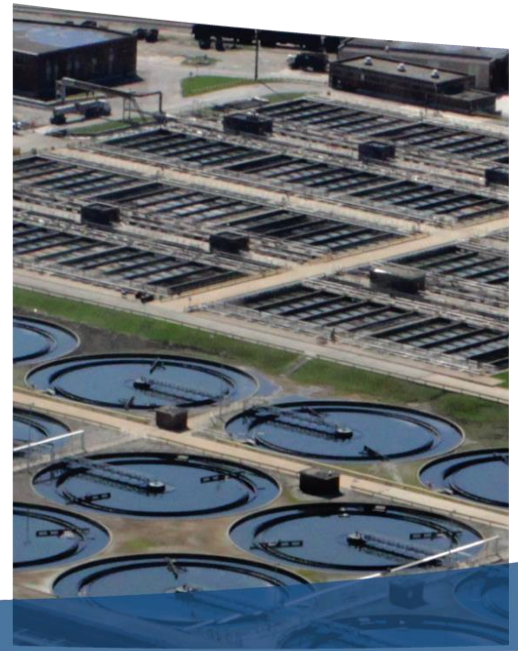


For more information

Thank you

Questions?





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