

Challenges and Opportunities for Green Infrastructure, Stormwater, and Resilience Funding in Rhode Island



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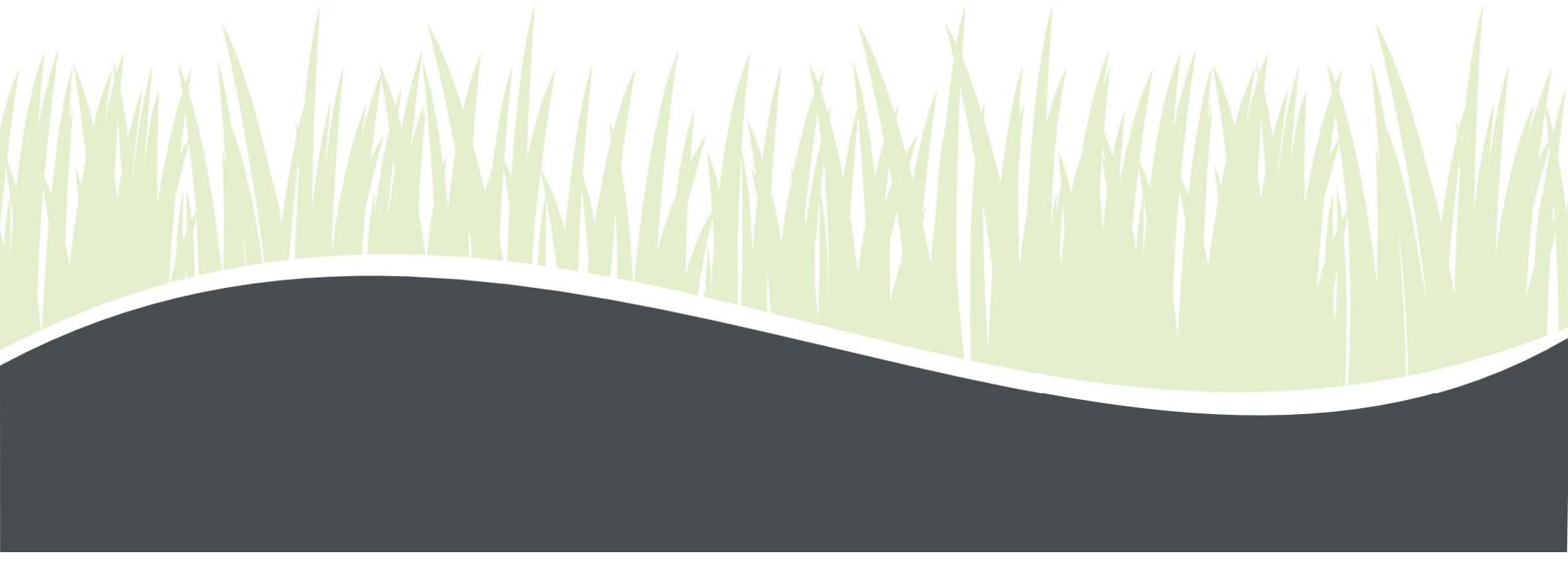


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Our Approach



Research Questions



- What are the dominant mechanisms used to finance green infrastructure, stormwater infrastructure, and resilience infrastructure in Rhode Island?
- How are the various mechanisms viewed by those occupying the green infrastructure, stormwater, and resilience network in the field?
- How do network participants view the costs/benefits of localism and what is the ideal structure for managing stormwater?

Methodology



- One-hour long interviews with local, state, and federal actors from non-profits, the public sector, and the private sector via Snowball Sampling (n=41)
- 17 Public Sector Interviews, 11 Private Sector Interviews, and 10 Non-profit Sector Interviews.
- Transcribed and inductively coded 38 confidential interviews.



Dominant Funding Mechanisms



Familiar Financing Instruments



We began our interviews by asking participants an open ended question about which financing instruments first come to mind.

Most Familiar Funding Mechanism

Grants (21)
Stormwater Utility (11)
Rhode Island Infrastructure Bank (6)
Stormwater Project Accelerator (2)
Revolving Loan Fund (1)
Bonds (4)
RIDOT (2)
Capital Budget (1)
Incentives (1)

Grants



- 21 participants described grants as being the dominant way of funding infrastructure projects.
- A variety of competitive state and federal grant funding opportunities are available.
- Large variability in match requirements.

Grants: Challenges/Benefits



Besides having access to **more capital** as the key benefit of grants, participants also described **networking and education** opportunities.

The most frequently described challenges included **capacity** and **grant requirements**.

Grants	Description
Benefit (24)	Networking and education (6) More capital (5) Good for specific projects (4) Leverage (2) Co-benefits (1) Federal prevailing wage (1) Forces planning (1) Greater administrative control (1) No fundraising (1) Small firms can compete (1) Workforce development (1)
Challenge (35)	Grant requirements (7) Capacity (6) Uncertainty (4) Match requirements (4) Politics (3) Short timelines (3) Not sustainable (2) Opportunity costs (2) DPW opposition (1) Grant management (1) Reimbursement (1) Slower (1)

Grants: Challenges/Benefits



Non-profit Participant:

You know, everyone's excited about receiving a grant, but as you talk to any municipality, you can't apply for all these grants and and I can see with the infrastructure funding coming through, it's a lot of administration of the funding that takes a huge amount of capacity as well. So until we really have, ...more staff at the local level whose responsibility it is to maintain stormwater, I think these efforts are...laudable and we're doing the best with what we can, but it's not a comprehensive approach.

Bonds



- Nearly all of our participants had knowledge of bonding as a funding mechanism.
- Fixed-income securities that mature over time
- Sold by private and public entities to raise capital
- Green bonds are issued specifically for climate related projects, and are issued at both the state and local level.

Bonds: Challenges/Benefits



Participants described the **influx of funding** as one of the key benefits of bonding, as well as the potential of using bond money as **leverage** for other funding sources.

The most discussed challenges included **executing ballot campaigns, servicing debt, and the lack of sustainability** of bonding as an approach.

Bonding	Description
Benefit (31)	Instant capital (13) Leverage (5) Broad public support (4) Can happen through Stormwater Utility (3) Low Rates (3) Public Participation Legitimizes (2) Equity (1) Transparency (1)
Challenge (57)	Ballot Campaign Execution (13) Debt Service (7) Not Sustainable (6) Municipal Debt Limit (4) Bond Counsel (3) Bond Ratings (3) Issue Competition (3) Can't be used for maintenance (3) Politics (3) Stringent Requirements (3) Capacity (2) Inefficient Administration (2) Labor Intensive (2) Delayed Payment (1) Timelines (1) Underpay Contractors (1)

Bonding Challenges/Benefits



Non-Profit Participant:

I think that the financing costs associated with the bonds is something that's like rarely ever discussed, it seems. And what is it like 30 percent of the bonds cost is on financing, something like that? I mean, it's a pretty I think it's a pretty significant number...But I've always thought like, why the heck are - Why are we bonding when we could be doing a revenue stream?

Tax Increment Financing (TIF)



- A little over $\frac{1}{2}$ of our participants had knowledge of TIF districts as a financing instrument
- TIF districts are established by municipalities for development, which may include infrastructure upgrades
- Future increases in property taxes are earmarked as repayment for development
- [Enabling Legislation: RIGL § 45-33.2](#)

TIF: Challenges/Benefits



The most frequently cited benefit of TIF financing was the ability to finance development without raising taxes.

The biggest hurdle described by our participants was the difficulty of educating the public about TIF districts.

Tax Increment Financing	Description
Benefit (13)	No tax increases (2) Comprehensive infrastructure improvements (2) Attracts quality developers (2) Potential for major environmental improvement (1) Ease of administration for contractor (1) Grant match (1) No voter approval (1) Potential with other instruments (1) Predictable revenue (1) Trade density for improvements (1)
Challenge (23)	Public education (5) Bond rates higher (2) Logistically difficult (2) Only benefits developers (2) Stakeholder involvement (2) Messaging Discipline (2) Difficult to direct geographically (1) Distrust of government (1) Enabling legislation required (1) Gentrification (1) Hard to reimburse staff time (1) Inaccurate revenue projections (1) Local advocates needed (1) Public opposition (1)

TIF: Challenges/Benefits

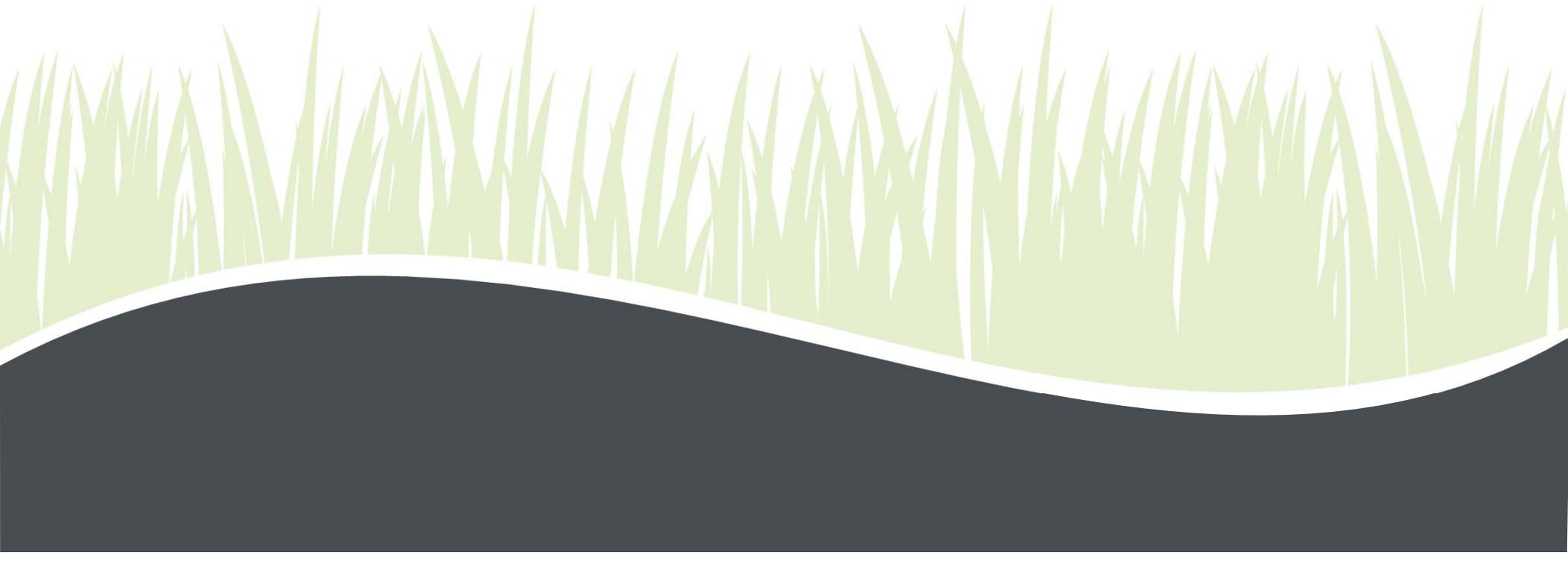


Private Sector Participant:

You have a lot of people oftentimes who don't know what it is and hear “tax” as the first word and have a Pavlovian response against it to say, “wait a minute, you're going to...?” So you need a great advocacy campaign to lead in about and you need a really good, disciplined political body to say what the money is going to be used for.



Potential Opportunities



Stormwater Utility Fees



- All but two of our study participants had knowledge of the stormwater utility fee as a funding model (11 indicated most familiar).
- A district that is drawn and assesses charges based on a property's impact to the stormwater system
- [Enabling Legislation: RIGL § 45-61](#)

Fees: Challenges/Benefits



Participants described the key benefits as being the **incentives** that are generated and its **sustainable funding model**.

The key challenges were described as being **opposition to fees and politics**.

Stormwater Utility Fees	
Fees	Description
Benefit (65)	Sustainable revenue stream (29) Incentives (11) Equity (8) Dedicates revenue (6) Immediate solution (4) Spending flexibility (3) Adds capacity (2) Planning benefits (2) Co-benefits (1) Leverage (1)
Challenge (99)	Politics (27) Opposition to fees (27) Local administrative capacity (12) Public understanding (11) Public pushback (6) Efficacy (5) Home rule (5) Community engagement (3) Issue attention (2) Budgeting control (1) Discourages development (1) Already general funds (1) Government distrust (1) Grants available (1) Large projects hard to fund (1) PUC jurisdiction (1)

Fees: Challenges/Benefits



Private Sector Participant:

You've got to overcome the political hurdles, which is enormous because, you know, it's slandered with this...the rain tax right and makes it automatically sound ridiculous, but it's very easy to brand it that way. You know, and people want to hear it branded that way and it's like, "Oh, this is so stupid. Like why this rain tax? Like, I can't believe they're taxing us on the rain."

Public Private Partnerships (P3s)

- Twenty-six (26) participants had knowledge of P3s as a funding mechanism, though many used a broad definition of the public-private partnership.
- These include performance-based contract between the public and private sectors
- Financing, implementation, and maintenance
- Firms responsible for all project aspects

P3s: Challenges/Benefits



When asked about the benefits of P3's most participants with knowledge about them cited **mutual benefit** between the public and private sector.

One of the key challenges of this instrument was described by two participants as **lack of enforcement**.

Public-Private Partnerships	Description
Benefit (8)	Mutual benefit (3) Shifting risk (2) Attracts development (1) Economies of scale (1) Long-term maintenance (1)
Challenge (12)	Lack of regulatory enforcement (3) Scaling (2) Being transparent (1) Bidding (1) Determining priorities (1) Educating landowners (1) Pay-for-success legislation needed (1) Political (1) Tying stormwater to performance (1)

P3: Challenges/Benefits



Non-Profit Participant:

I've heard about [P3's] in presentations about Maryland and other places, and it's all a lovely idea... [W]hat's missing here is the regulatory urgency and requirement to take action and, lacking that...I have never heard a presentation like, oh, I can see how that would work here...there's nothing forcing the communities to do this work, and without that, I just don't know how the [P3's] work.

Special Tax Assessments



- Only 25% of our participants were familiar with the special tax assessment as a funding model.
- Benefiter-pays model where a special district is drawn and property owners are assessed an additional tax to finance a public investment.
- By forming a special tax assessment for stormwater improvements, the Town of Middletown required enabling legislation ([RIGL § 45-63](#)).

Special Tax Assessments



Those with knowledge of special tax assessments described the **benefiter-pays** model as being its greatest strength.

The key challenges with this approach included **property owner opposition, equity, and drawing tax boundaries.**

Special Tax Assessments	Description
Benefit (4)	Benefiter pays (2) Captures cost upfront (1) Long-run benefits (1)
Challenge (13)	Public opposition (4) Equity (3) Drawing boundaries (2) Applies only to public infrastructure (2) Administrative burden (1)

Special Tax Assessments



Non-profit Participant:

...the municipality has a sewer authority that has that special, enabling legislation to assess those fees. And again, there's a public health and safety issue there, because without that, you're in Warwick discharging raw sewage, untreated sewage. It was impacting, you know, health as well as water quality. So there was a clean nexus there. And even then, it can be challenging...because it was a low income area DEM and the sewer authority at the time was reticent to force people to tie in. So they were still discharging untreated sewage into the Cove and Warwick. It was outrageous. So we tried to get some grant money to help low income folks tie in. And then even when we did that, there was a state rep who said, "Well, this neighborhood is so low income they don't want to tie in because now they're going to be assessed an annual sewer fee where now they don't pay anything, they're just illegally discharged into the cove."

Tax Exemptions



- We asked our participants about what it would entail to create a residential-scale green infrastructure property tax exemption.
- Property owners would be rewarded for doing the “right thing” on their properties, which could facilitate the transition to a more robust funding model and allow municipalities to act now.
- Potential to partner with private industry to market green infrastructure landscaping options.



Franklin St

114

Seymour St

136

Fatima Dr

Sherman Ave

Tupelo St

Broadcommon Rd

Kickemuit Ave

Barton Ave

Touisset Rd

Kickemuit River Shellfish Management Area

Audubon Touisset Marsh Wildlife Refuge

MASSACHUSETTS RHODE ISLAND

Stop & Shop

MA

Tax Exemptions: Challenges/Benefits



Participants overwhelmingly cited **financial incentives** as being the key benefit of an approach designed on tax exemptions.

Participants identified **revenue loss** and **administrative burden** as the two most cited challenges associated with this model.

Tax Exemptions	Description
Benefit (13)	Financial incentives (8) Efficacious (1) Flood mitigation (1) Incrementalism (1) Limited opposition (1) Tax stabilization opportunities (1)
Challenge (25)	Revenue loss (8) Education (4) Limited impact (3) Administrative burden (3) Fraud (2) Insignificant revenue (2) Benefits wealthy property owners (1) Educating lawmakers (1) Limited tax stabilization applications (1)

Tax Exemptions: Challenges/Benefits

Municipal Employee:

I think there was a [state] bill this session...that would give tax exemptions to anyone who does improvements on their property for climate resilience. And I saw that circulate among our tax assessors like what kind of impact would this have on our taxable income? More so our concern for the city's financial health and less so it's we want people to invest in climate resilience. So I can't see that being a super popular one.



Structure



Localism in Rhode Island



- We asked participants to share their views about the costs and benefits of local decision-making in Rhode Island.
- The most cited benefit of local decision-making was the **local knowledge** that municipalities have over projects in their jurisdiction.
- The most cited challenge of local decision-making was the **capacity** of municipalities to complete these projects.



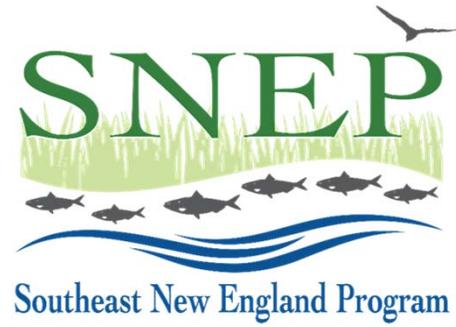
Localism Benefits	Localism Challenges
<ul style="list-style-type: none">· Local knowledge and control (13)· Responsiveness (3)· Able to exceed minimum state standards (2)· Local support (2)· Can partner with the state (2)· Policy innovation (1)	<ul style="list-style-type: none">· Incapacity (9)· Cross-border pollution (7)· Maintenance (6)· Foregone cost savings (6)· Funding (5)· Scale (4)· Siloes (2)· Less predictability (2)· Gaining stakeholder support (1)· Different reporting systems (1)

What does change look like?

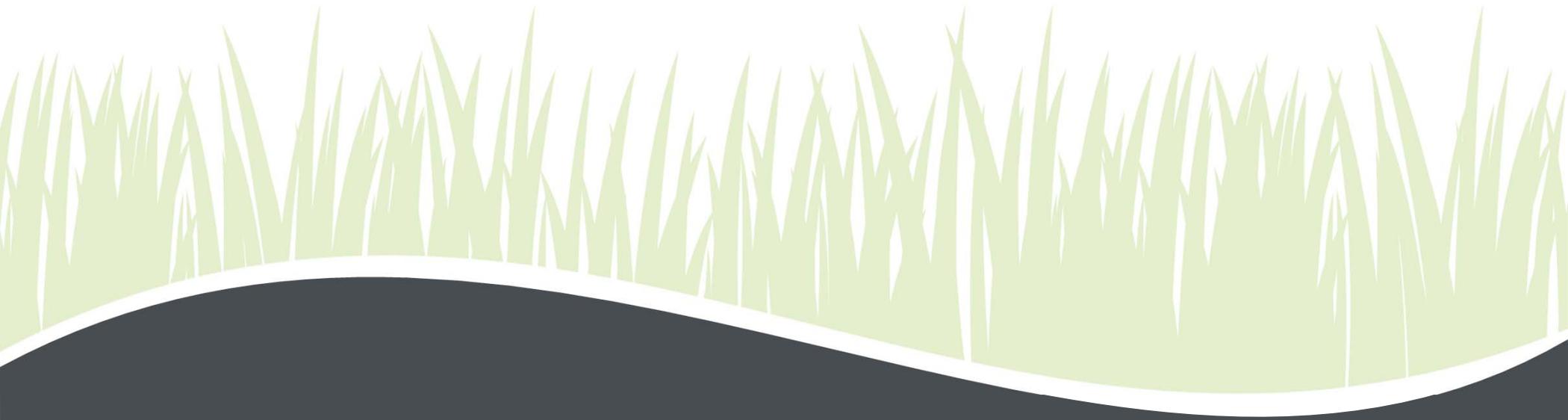


We asked participants, “If you could wave a magic wand, what types of changes would you make?”

Concept	Specific Change
Jurisdiction (40)	Municipal (13) Regional (13) Statewide (11) Hybrid (1)
Maintenance (5)	Continuous maintenance (2) Enforce maintenance on private sites (2) Deputy DPW Director of Stormwater (1)
Enforcement (4)	Stricter state enforcement (3) Individual responsibility (1)
Engagement (4)	Better stakeholder and community engagement (1) Neighborhood-level demonstration projects (1) Better private sector stakeholder integration (1) Place-based resilience coordinator (1)
Finance (3)	Capture externalities up-front (1) Expand Municipal Resilience Program (1) Tie funding source to impact (1)
Procurement (2)	Procurement/bidding reform (2)
Resource (2)	Integrated water management (2)



Recommendations



Recommendations



- Participants described public education as a persistent challenge for almost all financing mechanisms and so consider tailoring the level of stakeholder engagement efforts to the public's knowledge gap.
- For those financing mechanisms that pose political challenges (e.g., stormwater utility), consider adopting incremental financing instruments that reward property owners for doing the “right thing” on their properties.

Recommendations (cont.)



- Begin developing regional capacity by identifying opportunities to work with other municipalities on watershed-level problems.
- The financing instruments studied are made for projects that designed, permitted, and ready to receive financing and so support efforts being made to build an inventory of projects that can be developed as concepts.



Questions?

