ACEC INDIANA BOTTLED WATER FEE INITIATIVE: FROM CONCEPT TO REALITY

Environmental Business & Funding Sources Conference
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Overview

• Water & Wastewater Funding Needs
• Dam & Flood Control Funding Needs
• Once City Example-Multiple Water Funding Needs
• Indiana Infrastructure Spending-ARRA 2010
• It’s a Drop in the Bucket” Funding Concept
• New Indiana Revenue
• How Indiana Could Implement New Funding Concept
• Gaining State Legislative Approval
• New Revenue Allocation Examples
• The Future Without Additional Revenue for Water
• Sources
• Contact Us
Indiana Water, Wastewater & Storm water Needs

• Drinking Water: $6.64 B
• Combined Sewer Overflows: $3.63 B
• Wastewater Conveyance/Treatment: $3.62 B
• Septic Needs: $1.03 B
• Storm water: $786 M
• Total Need: $15.72 B

(Costs are shown in 2014 dollars and represent a twenty year period from 2015 – 2034 upcoming: Water & Wastewater Financial Needs Interim Report, Indiana Public Policy Institute: Indianapolis.)
Indiana Dam Rehabilitation Need

- Dams: $180 M Rehabilitation Costs
- $10.8 M Annual O&M
- 1,088 registered dams
- 57% considered conditionally poor or worse
- Average cost of $750,000 per dam
- Not considering downstream loss associated with failure.
Indiana Levees

• 270 miles of federally regulated levees
• 1,530 miles of locally owned levees
• $1.8 B to repair and rehabilitate
• ~$1 M rehabilitation cost/ levee mile

• Not considering flood loss associated with failure.
One City: Muncie

*Water Infrastructure Funding Challenges*

- Combined Sewer Overflow Long Term Control Plan Implementation
  (next 15 years) = $160 M

- Downtown & Neighborhood Flood Control Projects
  (next 5 years) = $15 M

- New Drinking Water Treatment Plant
  (Under Construction) = $14 M

- Regulatory Driven Plant Upgrades at Sewage Treatment Plant
  (next 15 years) = $10 M

- Re-Certify and Upgrade Existing Levee System along the White River
  (next 5 years) = TBD
Muncie
<table>
<thead>
<tr>
<th>44 CFR 65.10 Criteria</th>
<th>Criteria Met?</th>
<th>Deficiencies</th>
<th>Recommended Actions/Improvements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Freeboard 65.10 (b.1)</td>
<td>No</td>
<td>Approximately 4,150 feet of freeboard-deficient levee from upstream of Broadway Avenue to upstream terminus for effective FIS profile. Approximately 7,600 feet of freeboard-deficient levee from Norfolk Southern RR (3rd crossing) to upstream terminus for revised FIS profile. Gap in the line of protection at Norfolk Southern RR.</td>
<td>Raise levee crest elevation to a maximum of about 5 feet for effective FIS profile. Raise levee crest elevation up to a maximum of about 5.5 feet for the revised FIS profile. Construct tie-back levee near Macedonia Avenue (in lieu of constructing levee segment connecting Phillips Lake Floodwall to existing earthen levee downstream of Jackson Street).</td>
</tr>
<tr>
<td>Closures 65.10 (b.2)</td>
<td>No</td>
<td>Phillips Lake Closure sill is in poor condition and not watertight. Aluminum stoplogs are stored offsite.</td>
<td>Construct tie-back levee to avoid this area. Make provisions for temporary closure to reduce the risk of flooding to SR 32.</td>
</tr>
<tr>
<td>Embankment Protection 65.10 (b.3)</td>
<td>No</td>
<td>Erosion observed in several locations.</td>
<td>Install armoring.</td>
</tr>
<tr>
<td>Embankment and Foundation Stability 65.10 (b.4)</td>
<td>No</td>
<td>Inadequate factors of safety at 3 critical cross-sections. High exit gradient at Station 2342+76. Strength criteria for flexure not met for East End Bikeway, Phillips Lake, and Pottery Works floodwalls.</td>
<td>Construct improvements to increase factors of safety and reduce potential for piping. Construct tie-back levee in lieu of repairing/replacing East End Bikeway and Phillips Lake floodwalls. Remove Pottery Works floodwall and replace with earthen levee. Reevaluate settlement if levee crest is raised.</td>
</tr>
<tr>
<td>Settlement 65.10 (b.5)</td>
<td>Yes</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>Interior Drainage 65.10 (b.6)</td>
<td>No</td>
<td>Conduit video inspections not performed. No sluice gate on 36-inch outfall at Station 2373+00. Inoperable sluice gate on 36-inch outfall at Station 2447+90. Numerous pump station deficiencies.</td>
<td>Perform conduit video inspections. Install gatewell and sluice gate at Station 2373+00. Replace sluice gate at Station 2447+90. Evaluate need for repairs to pump stations and gates.</td>
</tr>
<tr>
<td>O&amp;M Criteria 65.10 (c)</td>
<td>No</td>
<td>O&amp;M Manual is outdated. Ownership of the levee and/or easements have not been verified. Inappropriate vegetative growth, encroachments, animal burrows, and other surficial deficiencies.</td>
<td>Update/replace O&amp;M Manual. Verify that MSD owns or has easements to access, operate, and maintain the entire levee system. Repair surficial deficiencies and remove encroachments as warranted.</td>
</tr>
</tbody>
</table>
Muncie Decision: $4 M vs. $1.5 M?
Number of DW & WW Projects Completed in Indiana
2010 vs. 2014

- SRF (DW and WW)
- RD (DW and WW)

2010 (ARRA):
- SRF: 100
- RD: 27

2014:
- SRF: 23
- RD: 10
Assistance Provided for DW & WW Projects
Completed in Indiana
2010 vs. 2014

- SRF (DW and WW)
- RD (DW and WW)

<table>
<thead>
<tr>
<th>Year</th>
<th>SRF</th>
<th>RD</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>$458,802,902</td>
<td></td>
</tr>
<tr>
<td></td>
<td>$79,204,385</td>
<td>$29,329,500</td>
</tr>
<tr>
<td>2014</td>
<td>$103,640,801</td>
<td></td>
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</tbody>
</table>
ACEC Indiana – Water Funding Initiative

• Bottled Water Fee
  – Flush Fee or Clean Water Fee

• Revenue collected dedicated to funding water related infrastructure
  – Water, Wastewater, Stormwater

• Administered efficiently through IFA/SRF program
ACEC Indiana Initiative

- Indiana Finance Authority is already set up to collect, manage, and allocate more funding to infrastructure projects across Indiana.
- Potential new revenue source of $100-$150 million annually by creating a modest fee on bottled water sales will help close the funding gap.
- Significant need for more funding for water, wastewater & stormwater infrastructure for Indiana Communities & Utilities.
- State and Federal Agencies & Communities can do more with additional funding.
# State Sales Taxes on Bottled Water

(1) As of January 1, 2014

(2) Mississippi

(3) Mississippi

<table>
<thead>
<tr>
<th>Summary Information</th>
<th>Food Stores</th>
<th>Vending Machines</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of states with water sales tax</td>
<td>17</td>
<td>34</td>
</tr>
<tr>
<td>Average tax (for those states that tax water sales)</td>
<td>3.949%</td>
<td>5.035%</td>
</tr>
<tr>
<td>Maximum bottled water sales tax</td>
<td>7.000%</td>
<td>8.000%</td>
</tr>
<tr>
<td>Indiana</td>
<td>0.000%</td>
<td>7.000%</td>
</tr>
</tbody>
</table>
Non-Sales Tax/Fee on Bottled Water

• 10 States have container deposit legislation
  – Focus is to encourage recycling and reduce roadside litter

• Bottled water fee dedicated to fund water infrastructure needs
  – Virtually non-existent in U.S.
  – Closest example is City of Chicago (5 cents per bottle sold retail)
Bottled Water Consumption Trends

• Per capita consumption has increased nearly 50% over past 10 years
• Sales expected to overtake carbonated beverage sales by end of decade
• Increases despite efforts to curb sales at some public entities (colleges, city governments)
• Flint, MI impact?

<table>
<thead>
<tr>
<th>Year</th>
<th>Gallons Per Capita</th>
<th>Annual % Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>23.2</td>
<td>7.5%</td>
</tr>
<tr>
<td>2005</td>
<td>25.4</td>
<td>9.7%</td>
</tr>
<tr>
<td>2006</td>
<td>27.6</td>
<td>8.4%</td>
</tr>
<tr>
<td>2007</td>
<td>29.0</td>
<td>5.3%</td>
</tr>
<tr>
<td>2008</td>
<td>28.5</td>
<td>-1.8%</td>
</tr>
<tr>
<td>2009</td>
<td>27.6</td>
<td>-3.2%</td>
</tr>
<tr>
<td>2010</td>
<td>28.3</td>
<td>2.7%</td>
</tr>
<tr>
<td>2011</td>
<td>29.2</td>
<td>3.1%</td>
</tr>
<tr>
<td>2012</td>
<td>30.8</td>
<td>5.5%</td>
</tr>
<tr>
<td>2013</td>
<td>32.0</td>
<td>4.0%</td>
</tr>
<tr>
<td>2014</td>
<td>34.0</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

Source: Beverage Marketing Corporation
Bottled Water Sales by Market

2014 BOTTLED WATER VOLUME SHARE BY SEGMENT

- 66.52% Domestic Retail Premium Pet
- 11.81% HOD
- 9.51% Retail 1-2.5 Gallon
- 7.92% Vending
- 3.12% Domestic Sparkling
- 1.12% Imported

Source: Beverage Marketing Corporation, 2014
Consumers Retail Sales Breakdown

Source: Beverage Marketing Corporation, 2014

- Mass merchandisers, "club" stores: 33.2%
- Grocery stores: 25.6%
- Convenience stores: 4.5%
- Drug stores: 2.5%
- Vending, food service, schools, stadiums: 34.2%
Cost of Bottled Water Varies Widely

• Local convenience store or vending machine
  – $1.00 to $1.50 typical for convenience store
  – $1.20 national average

• Costco (Michigan Rd. Indianapolis)
  – $2.99 case of 40, 16.9 oz. bottles (Kirkland brand)
  – Equates to $0.075 per bottle

• Kroger (W. 71st St. Indianapolis)
  – $2.50 Case of 24, 16.9 oz. bottles (Kroger brand)
  – Equates to $0.104 per bottle
Impact of Per Bottle Fee ($0.10)

• Retail (convenience store)
  – $1.50 to $1.60 per bottle
  – 6.7% cost increase to consumer

• Wholesale (club store-Costco, Sam’s Club)
  – $0.075 per bottle cost increases to $0.175
  – Case of 40 bottles increases from $2.99 to $6.99
  – 233% increase to consumer

• Grocery store Kroger (W. 71st St. Indianapolis)
  – $0.104 per bottle cost increases to $0.204 per bottle
  – Case of 24 bottles goes from $2.50 to $4.90
  – 196% increase to consumer
Arguments for Bottled Water Fee

• Recover bottled water’s environmental, social, and ethical costs
  – Change consumer behavior (discourage consumption of bottled water)
  – Studies showed 6.4% decrease in consumption following bottled water tax
  – Reduce waste to landfills
  – Environmental cost of producing plastic bottles
  – Bottled water costs between 240 and 10,000 times more than tap water; cities should get back some of what’s taken
Arguments for Bottled Water Fee

- Re-invest fee/tax revenue in public water infrastructure
  - Water and sewer rates becoming unaffordable particularly in lower income communities with other regulatory burdens
  - Need to supplement with other broader sources
Potential Advocates and Opposition

• Advocates?
  – Professional organizations (IWEA, INAWWA, ACEC, INASFMA, others)
  – Cities and Towns with unfunded water infrastructure needs

• Opposition?
  – Beverage industry
  – Bottled water retailers
  – No new tax advocates
Fund Uses

- Supplemental Grants (for water, stormwater, wastewater projects)
- Water Re-Use Initiatives
- Lead Abatement
- Dams and Levees
Supplemental Drinking Water and Wastewater Assistance Fund

• Supplemental Drinking Water and Wastewater Assistance Fund (IC-13-18-21-21)
  – Established in 1999
  – Started with a portion of leftover Build Indiana Funds

• Indiana Finance Authority (IC 4-4-11)
  – Administers, holds, and manages the Supplemental Fund
Supplemental Drinking Water and Wastewater Assistance Fund

Purpose:

• Provide money for grants, loans, and other financial assistance for...
• Planning, designing, acquisition, construction, renovation, improvement or expansion of...
• Public water systems, wastewater or stormwater collection and treatment systems and...
• Other activities necessary or convenient to complete these tasks, whether or not those other activates are permitted by the Clean Water Act or the Safe Drinking Water Act;
• Other planning and administrative activities as described at IC 13-18-21-23.

Bottom line: Can fund Water, Wastewater and Stormwater needs
Supplemental Drinking Water and Wastewater Assistance Fund

Details:

• General Assembly may directly appropriate to the Supplemental Fund.
• Repayments of loans from the Supplemental Fund are deposited back into Supplemental Fund.
• The IFA may invest Supplemental Fund money in the same manner as other public money. Earning from the investment shall be deposited in the Supplemental Fund.
• All money accruing to the Supplemental Fund is appropriated continuously for the purposes described.
• Money in the Supplemental Fund does not revert to the state general fund at the end of a state fiscal year.

**Bottom line: A stable fund already exists**
What next?

• Economic impacts
  
  Stagnation/decline or economic development?

• Public health/environment impacts
  
  At risk or thrive in future?

• Local impacts
  
  SRF/RD/OCRA fully used now
  
  Demand far outpaces Funds
  
  Rate payers have done as much as they can do
Summary

- Water funding needs dwarf available revenue
- Buried infrastructure needs often take back seat to more visible needs (road and bridges)
- Begin to raise awareness with State and Federal legislators
- Follow in foot steps of current road/bridge funding initiatives
Sources

• http://www.infrastructurereportcard.org/indiana/indiana-overview/

• http://www.infrastructurereportcard.org/a/#p/levees/conditions-and-capacity


Contact Us!

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