



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
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- Not considering downstream loss associated with failure.

Indiana Levees

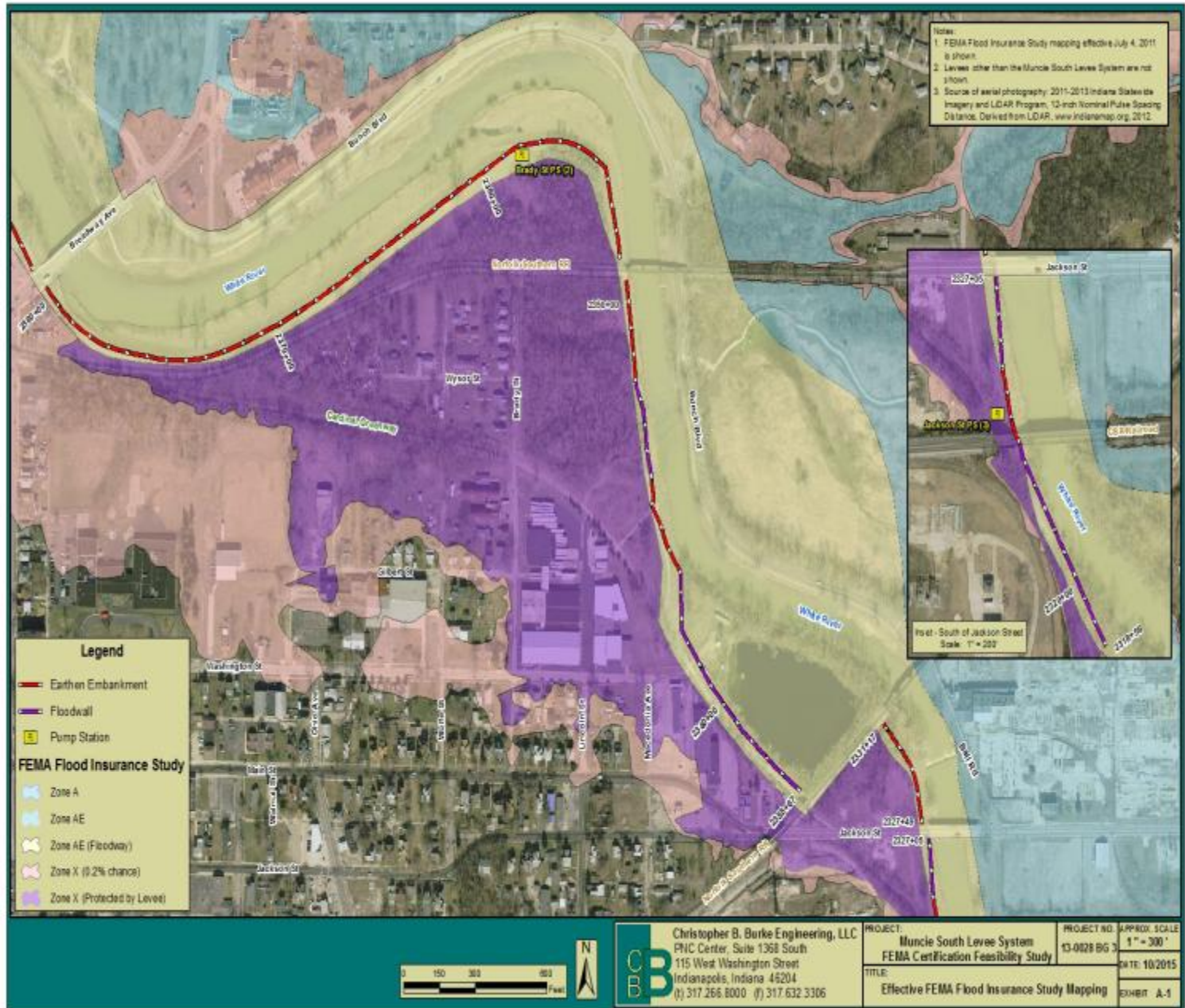
- 270 miles of federally regulated levees
 - 1,530 miles of locally owned levees
 - \$1.8 B to repair and rehabilitate
 - ~\$1 M rehabilitation cost/ levee mile
-
- Not considering flood loss associated with failure.

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

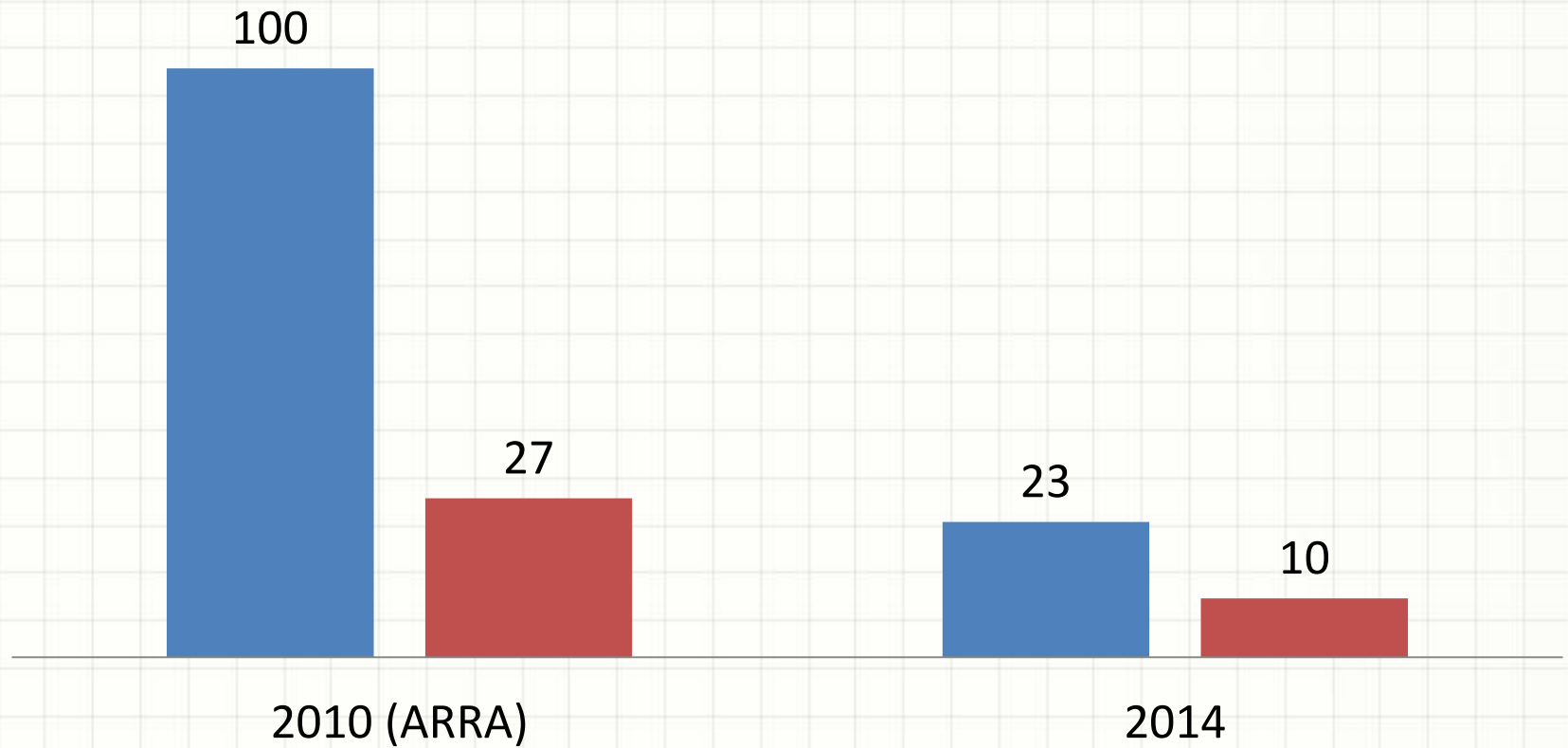


Muncie

44 CFR 65.10 Criteria	Criteria Met?	Deficiencies	Recommended Actions/Improvements
Freeboard 65.10 (b.1)	No	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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)
Closures 65.10 (b.2)	No	<ul style="list-style-type: none"> Phillips Lake Closure sill is in poor condition and not watertight Aluminum stoplogs are stored offsite 	<ul style="list-style-type: none"> Construct tie-back levee to avoid this area Make provisions for temporary closure to reduce the risk of flooding to SR 32
Embankment Protection 65.10 (b.3)	No	<ul style="list-style-type: none"> Erosion observed in several locations 	<ul style="list-style-type: none"> Install armoring
Embankment and Foundation Stability 65.10 (b.4)	No	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> 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
Settlement 65.10 (b.5)	Yes	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Reevaluate settlement if levee crest is raised
Interior Drainage 65.10 (b.6)	No	<ul style="list-style-type: none"> 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 	<ul style="list-style-type: none"> Perform conduit video inspections Install gateway and sluice gate at Station 2373+00 Replace sluice gate at Station 2447+90 Evaluate need for repairs to pump stations and gates
O&M Criteria 65.10 (c)	No	<ul style="list-style-type: none"> O&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 	<ul style="list-style-type: none"> Update/replace O&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

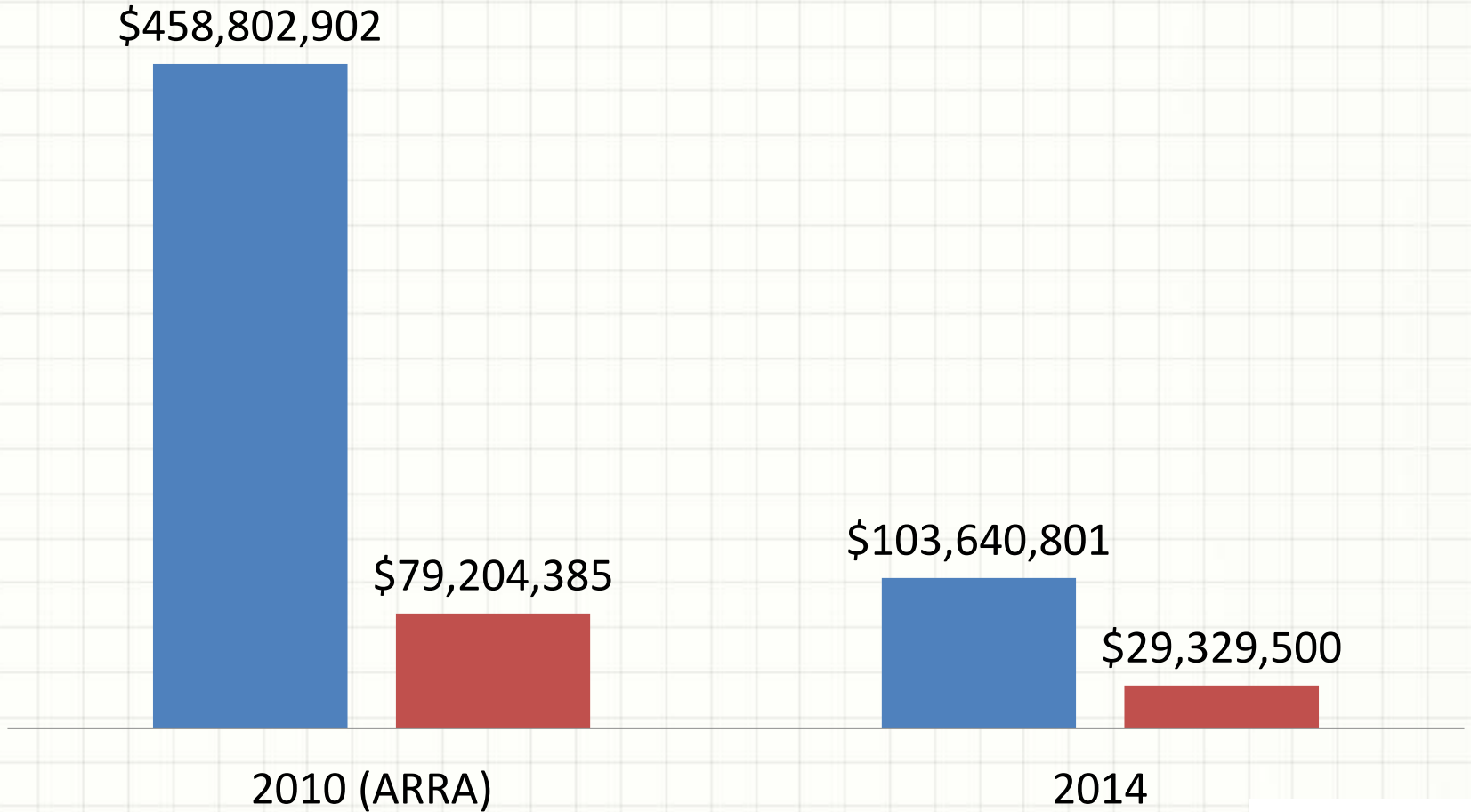
Number of DW & WW Projects Completed in Indiana 2010 vs. 2014

■ SRF (DW and WW) ■ RD (DW and WW)



Assistance Provided for DW & WW Projects Completed in Indiana 2010 vs. 2014

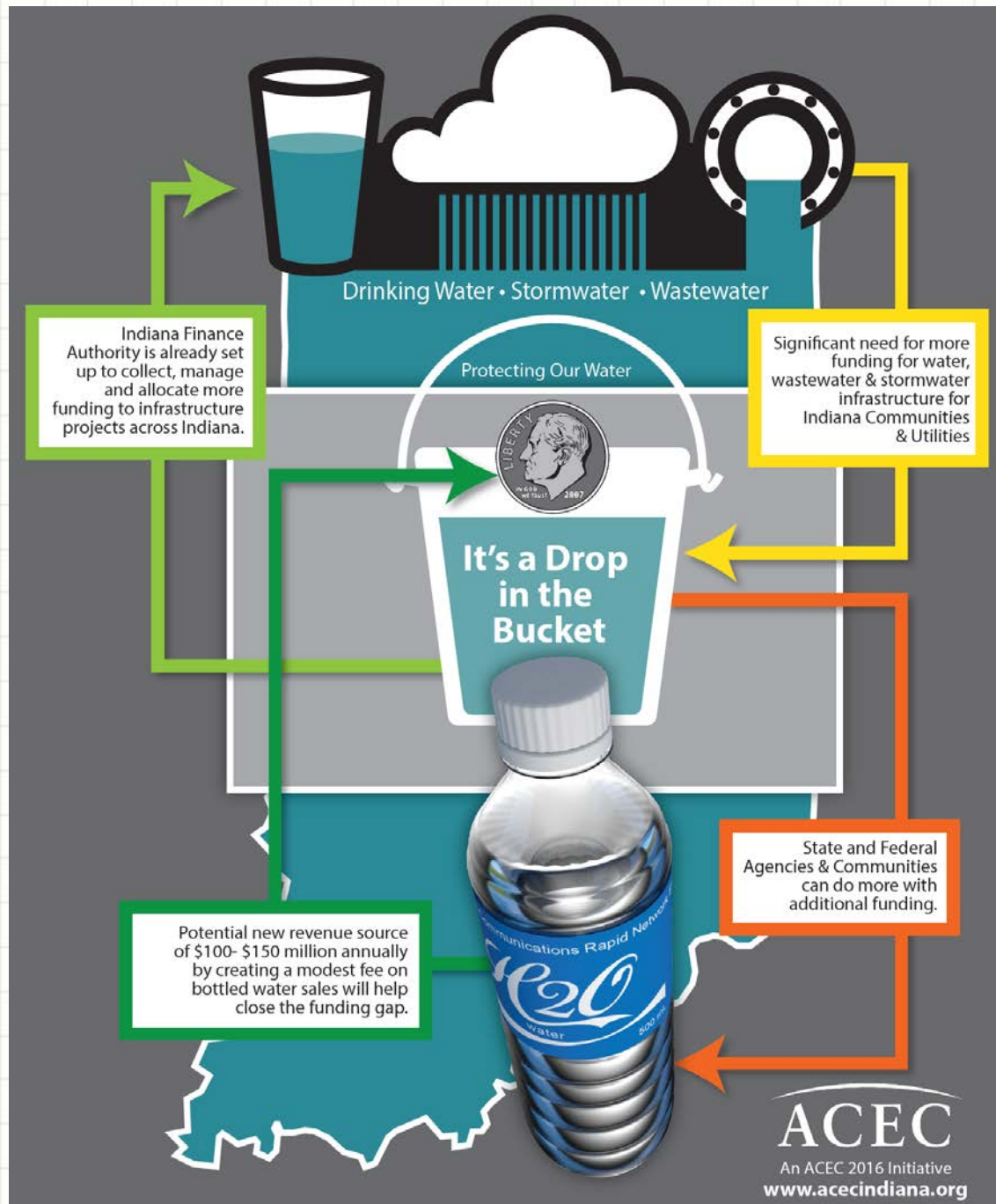
■ SRF (DW and WW) ■ RD (DW and WW)



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



State Sales Taxes on Bottled Water⁽¹⁾

Summary Information	Food Stores	Vending Machines
Number of states with water sales tax	17	34
Average tax (for those states that tax water sales)	3.949%	5.035%
Maximum bottled water sales tax	7.000% ⁽²⁾	8.000% ⁽³⁾
Indiana	0.000%	7.000%

(1) As of January 1, 2014

(2) Mississippi

(3) Mississippi

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

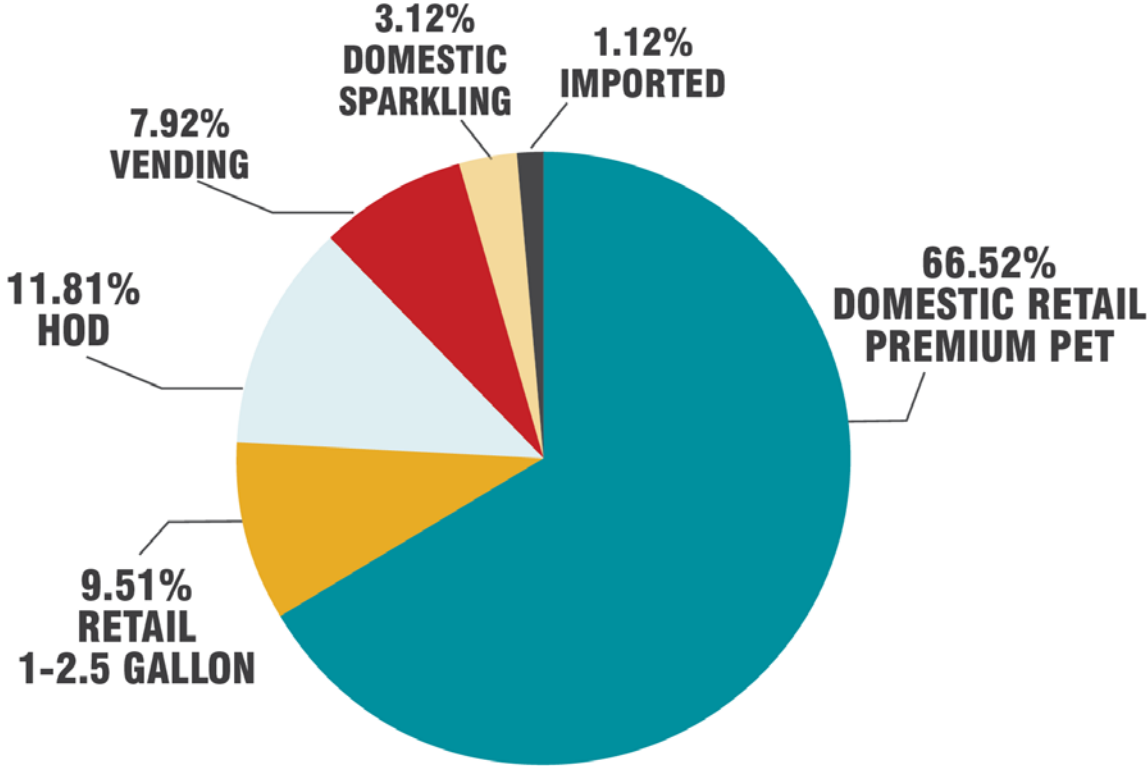
- Per capita consumption has increased nearly 50% over past 10 years
- Sales expected to overtake carbonated beverage sales by end of decade
- Increases despite efforts to curb sales at some public entities (colleges, city governments)
- Flint, MI impact?

U.S. BOTTLED WATER MARKET		
Per Capita Consumption 2004 – 2014		
Year	Gallons Per Capita	Annual % Change
2004	23.2	7.5%
2005	25.4	9.7%
2006	27.6	8.4%
2007	29.0	5.3%
2008	28.5	-1.8%
2009	27.6	-3.2%
2010	28.3	2.7%
2011	29.2	3.1%
2012	30.8	5.5%
2013	32.0	4.0%
2014	34.0	6.2%

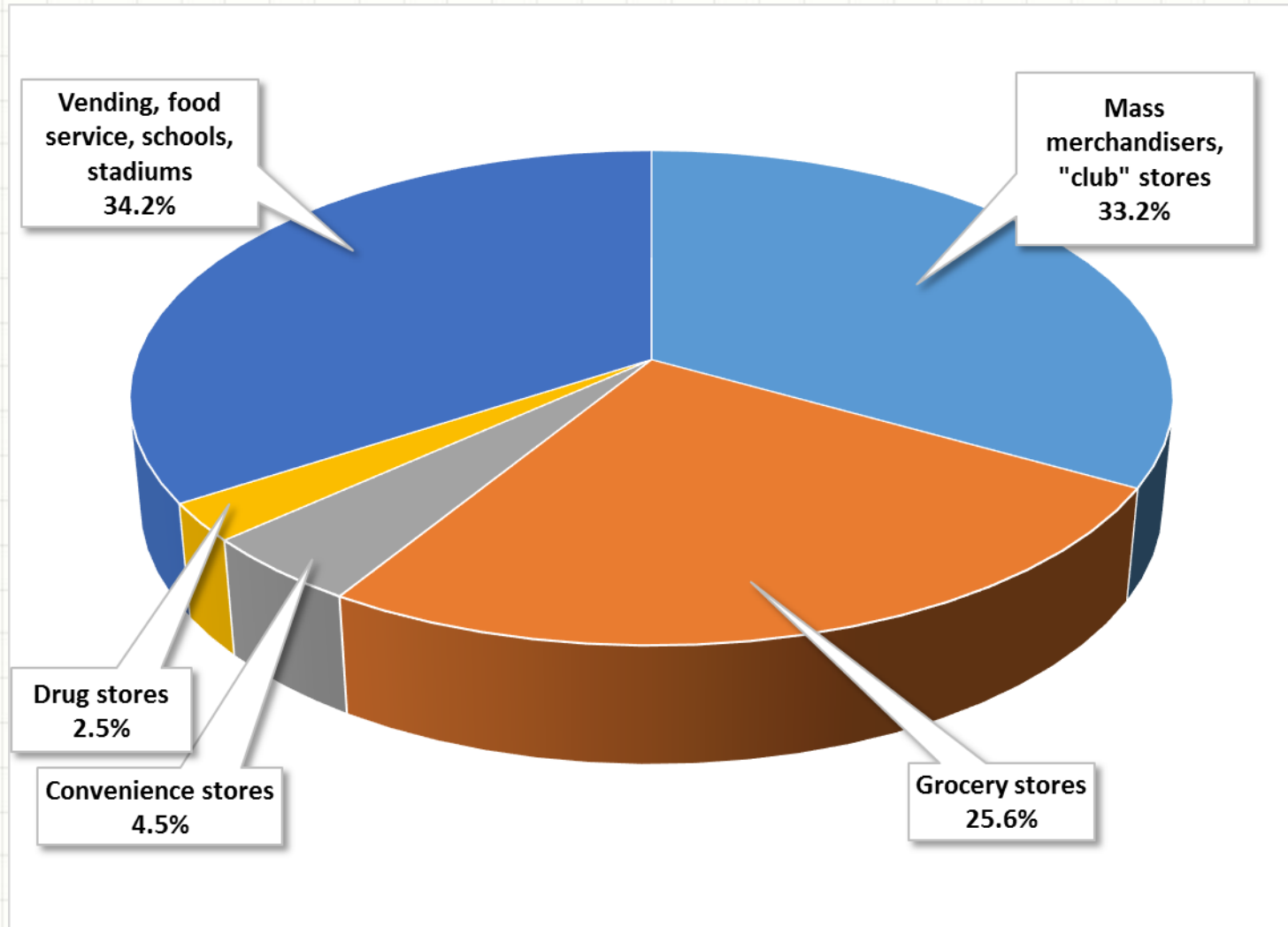
Source: Beverage Marketing Corporation

Bottled Water Sales by Market

2014 BOTTLED WATER VOLUME SHARE BY SEGMENT



Consumers Retail Sales Breakdown



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 activities 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>
- <http://www.inasce.org/images/Report%20Card%20Final.pdf>
- <http://www.usace.army.mil/Missions/CivilWorks/LeveeSafetyProgram/NationalLeveeDatabase.aspx>

Contact Us!

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The logo for ACEC (American Council of Engineering Companies) of Indiana. It features the acronym "ACEC" in a large, bold, serif font. Above the letters is a thin, curved line that arches over the top of the text. Below the acronym, the full name "AMERICAN COUNCIL OF ENGINEERING COMPANIES" is written in a smaller, all-caps, sans-serif font. At the bottom, the words "of Indiana" are written in a stylized, italicized serif font.

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