

Prepared for
City of South Bend,
Indiana

CSO LTCP Re-evaluation Council Committee Update

21 July 2015



MWH

BUILDING A BETTER WORLD

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STRUCTUREPOINT
INC.

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LimnoTech 

Agenda

- Introductions and Objectives
- Financial Capability Assessment Background
- Financial Capability Assessment Update
- Long-term Control Plan Look Ahead

LTCP Re-evaluation

Engineering Analysis

Improved
Technical
Solution



Reduced
Overall Cost of
Compliance

Affordability Analysis

Affordability
Level
Established



Sustainable
Budget

Integrated Planning

Overall
CIP/O&M
Needs

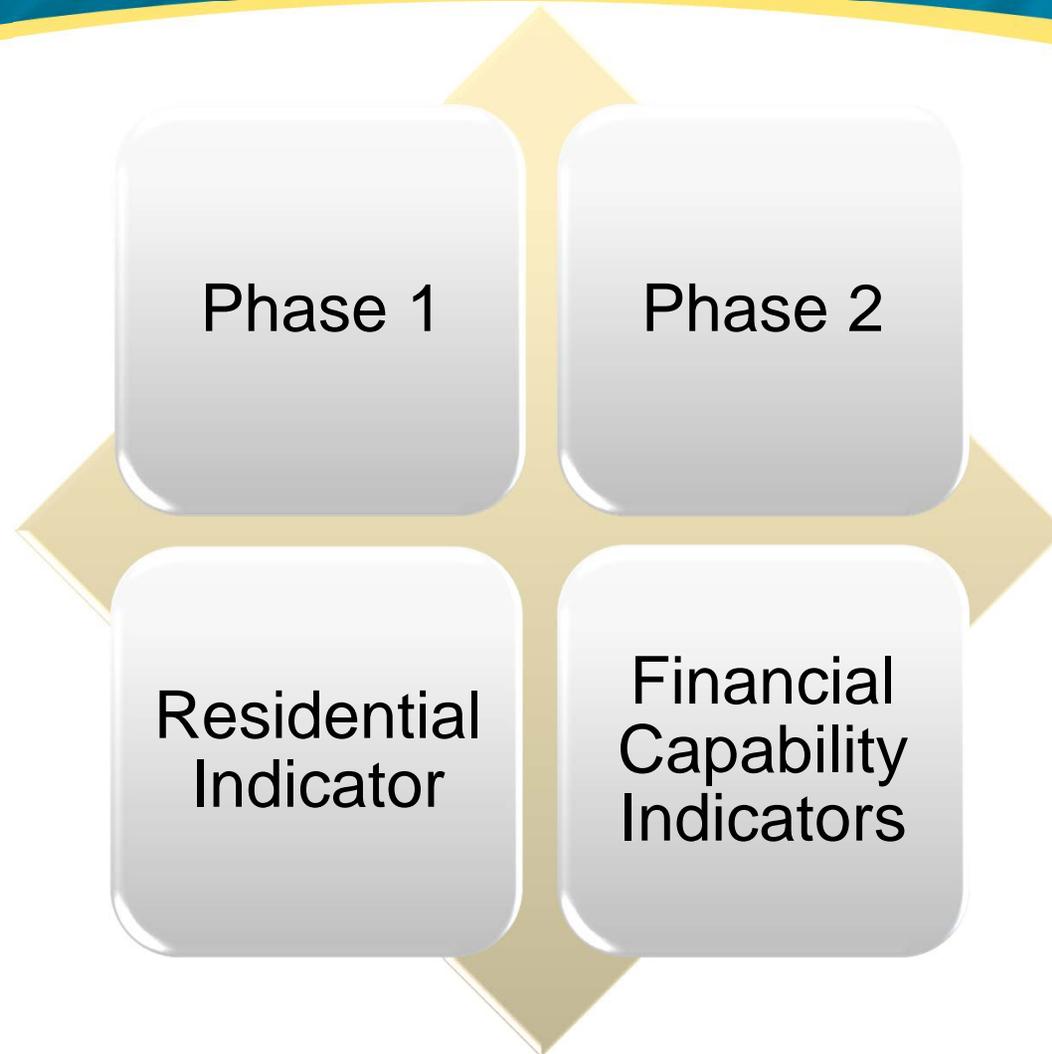


Prioritized
Schedule of
Improvements

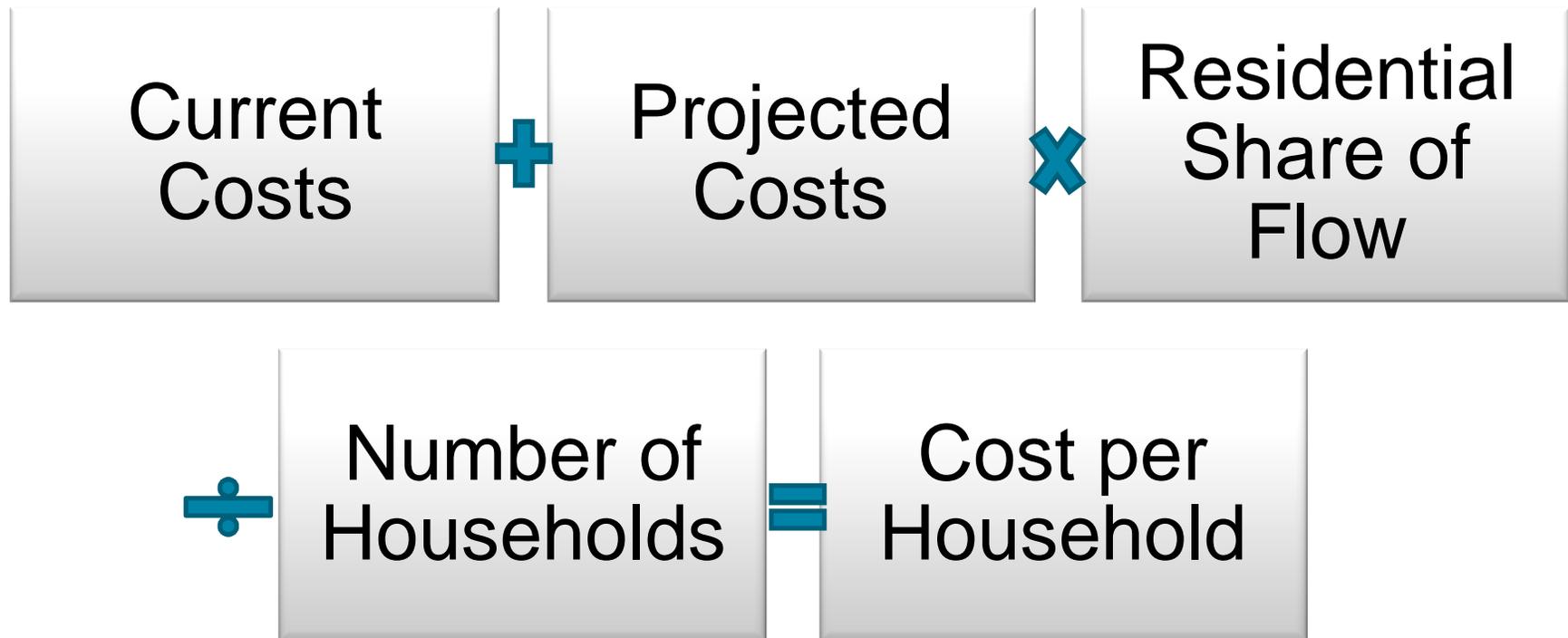
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Financial Capability Assessment Background

1997 EPA Financial Capability Assessment (FCA) Guidance



Phase 1: Residential Indicator – Cost per Household



Phase 1: Residential Indicator – Cost per Household as a % of MHI

Median Household Income (MHI)



Adjustment Factor



Adjusted MHI

Cost per Household



Adjusted MHI



Residential Indicator

Phase 2: Financial Capability Indicator Benchmarks

Indicator	Strong (3)	Mid-Range (2)	Weak (1)
Bond Rating	AAA-A (S&P) or Aaa-A (MIS)	BBB (S&P) or Baa (MIS)	BB-D (S&P) or Ba-C (MIS)
Net Debt/Property Value	Below 2%	2% - 5%	Above 5%
Unemployment Rate	>1% below National Avg.	±1% of National Avg.	>1% above National Avg.
Median Household Income	>25% above adj. Nat'l MHI	±25% of adj. Nat'l MHI	>25% below adj. Nat'l MHI
Prop. Tax/Property Value	Below 2%	2% - 4%	Above 4%
Prop. Tax Collection Rate	Above 98%	94% - 98%	Below 94%

Phase 2: Financial Capability Indicator Scoring

Indicator	<i>Ex. Score</i>
Bond Rating	3
Net Debt/Property Value	1
Unemployment Rate	1
Median Household Income	1
Prop. Tax/Property Value	2
Prop. Tax Collection Rate	3
Total Score	11.00
Average Score	1.83



Mid-Range

1997 EPA Guidance Financial Capability Matrix

PHASE 2: Financial Capability Indicators	PHASE 1 : Residential Indicator (Cost per Household as % of MHI)		
	Low (below 1.0 %)	Mid-Range (between 1.0 and 2.0 %)	High (greater than 2.0 %)
Weak (Below 1.5)	Medium Burden	High Burden	High Burden
Mid-Range (Between 1.5 and 2.5)	Low Burden	Medium Burden	High Burden
Strong (Above 2.5)	Low Burden	Low Burden	Medium Burden

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Financial Capability Assessment Update

Key Assumptions

Current O&M of \$21.3 M

Does not include any stormwater costs

Annual Capital of \$15.1 M

Existing debt service of \$9.7 M, annual capital outlay of \$5.4 M

Total Remaining CIP of \$491 M (in 2015 dollars)

\$627.2 M of total consent decree costs, less \$136.2 M already spent

Future O&M Increase of \$6 M

Additional O&M assumed to be 1.23% of LTCP

Key Assumptions

Funding aims to finance 100% of LTCP

Financing at 4.5% for 20 years

Projected financing based on historical index

Residential Share of 62.3%

Residential share based on flow, I&I allocated based on accounts and flow

Households at 44,028

Includes households from the City of South Bend, Town of New Carlisle, Town of Roseland, and customers served residing within St. Joseph County

MHI of \$37,063

Weighted to include all customers and adjusted to 2015 dollars

Phase 1: Residential Indicator

O&M, Capital, and Debt Service¹

Current Costs	\$ 36,389,943
<u>Projected Costs</u>	<u>43,786,949</u>
Total Costs	\$ 80,176,891

Residential Share \$ 49,947,870

Number of Households 44,028

Cost Per Household \$ 1,134

Weighted & Adjusted MHI \$ 37,063

Residential Indicator 3.1%

¹ Current LTCP

High Financial Impact

Phase 2: Financial Capability Indicators

Bond Rating	AA-	Strong
Net Debt/Property Value	10.3%	Weak
Unemployment Rate (Relative to National Average)	+ 1.5%	Weak
Median Household Income (Relative to National Average)	- 32.8%	Weak
Property Tax/Market Value	2.0%	Mid-Range
Property Tax Collection	98.4%	Strong
Total Score		Mid-Range

Updated Results: High Burden

PHASE 2: Economic Indicators	PHASE 1 : Residential Indicator		
	Low (below 1.0 %)	Mid-Range (between 1.0 and 2.0 %)	High (greater than 2.0 %)
Weak (Below 1.5)	Medium Burden	High Burden	High Burden
Mid-Range (Between 1.5 and 2.5)	Low Burden	Medium Burden	High Burden
Strong (Above 2.5)	Low Burden	Low Burden	Medium Burden

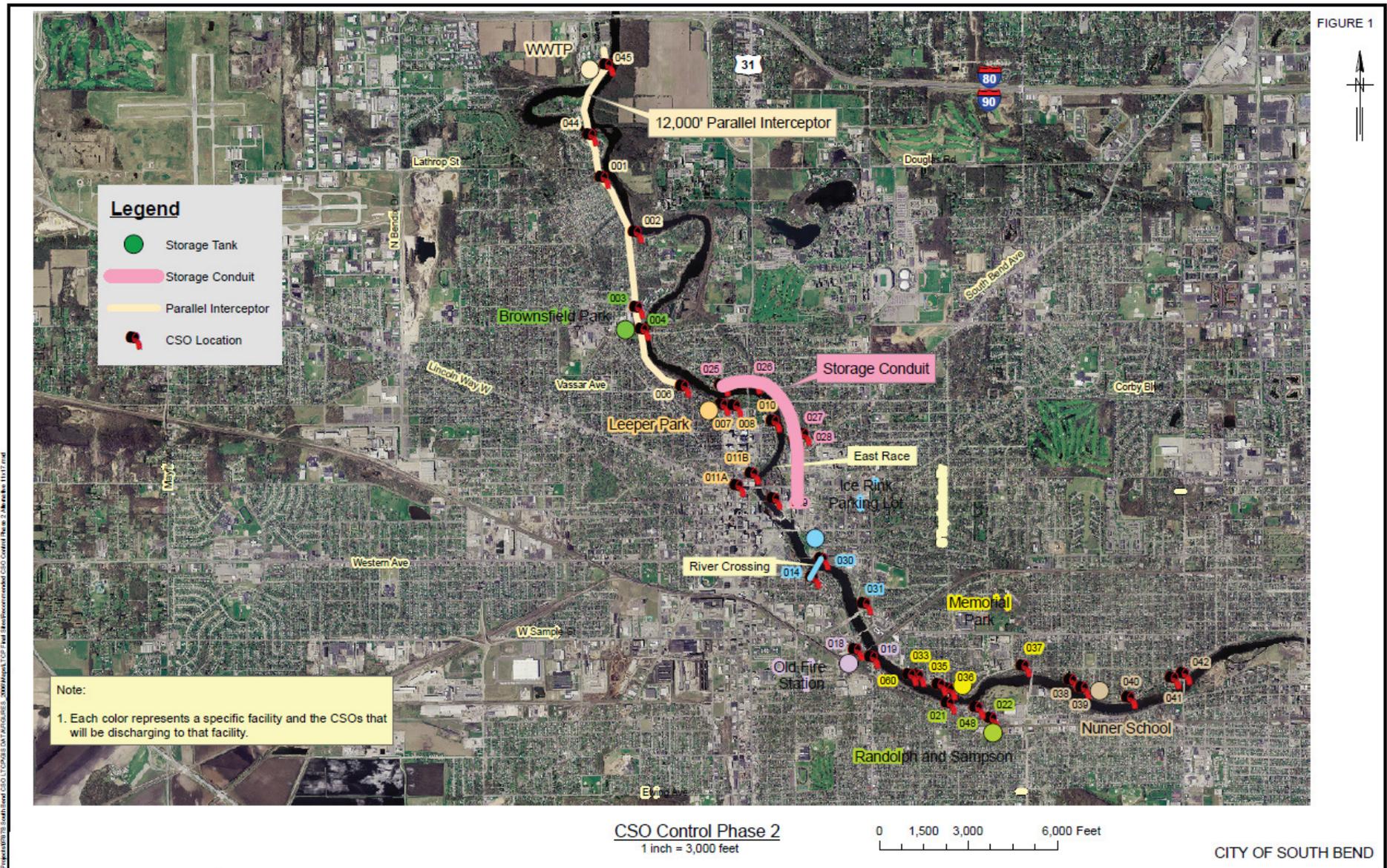
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**Long Term Control Plan
Look Ahead**

LTCP Program – Consent Decree Costs

Project Category	Major Element	LTCP Budget (2015 Dollars)	Implementation Deadline
Wastewater Treatment Plant Upgrades	Upgrades to achieve peak capacity of 100 mgd	\$64,530,000	2012 – 2027
Phase 1 CSO Collection System Controls	Separation and Green Infrastructure Projects (including projects completed before 2012)	\$109,996,000	2004 – 2017
Other Collection System Projects	Extensions, Replacements, River Crossing #5, Engineering	\$91,383,000	2012 – 2031
Phase 2 – CSO Controls U/S of East Race	Five Storage Tanks – 8.0 MG (minimum) with disinfection of overflows (incl. eng, legal, admin)	\$133,285,000	2014 – 2025
Phase 2 – Leeper Park CSO Storage Tank	5.2 MG (minimum) Storage Tank with disinfection of overflows (incl. eng, legal, admin)	\$72,324,000	2017 – 2023
Phase 2 – Other CSO Controls D/S of East Race	Brownsfield Tank (0.6 MG), Storage Conduit, Parallel Interceptor (incl. eng, legal, admin)	\$155,685,000	2023 – 2031
Total		\$627,203,000	

LTCP Program – Phase 2 CSO Controls



LTCP Program – Projects Completed to Date

Project Category	LTCP Budget (2015 Dollars)	Spent to Date (2015 Dollars)
Wastewater Treatment Plant Upgrades	\$64,530,000	\$22,369,000
Phase 1 CSO Collection System Controls	\$201,379,000	\$113,817,000
Other Collection System Projects		
Phase 2 – CSO Controls U/S of East Race	\$133,285,000	\$0
Phase 2 – Leeper Park CSO Storage Tank	\$72,324,000	\$0
Phase 2 – Other CSO Controls D/S of East Race	\$155,685,000	\$0
Total	\$627,203,000	\$136,186,000

LTCP Program – Remaining Projects

Factors with Potential to Impact Costs

- Wastewater Treatment Plant Upgrades
 - Increased costs of equipment; Higher costs of construction
 - Floodplain impacts
- Phase 1 Collection System Controls
 - Higher costs of construction
- Phase 2 Controls: Storage Tanks
 - Additional costs for local sewers, solids handling, disinfection
- Phase 2 Controls: Parallel Interceptor, Linear Storage
 - Higher costs of construction

Updated analysis suggests that costs for remaining projects could significantly increase the overall current LTCP

LTCP Program – Potential for Savings

Project Category	LTCP Budget (2015 Dollars)	Spent to Date (2015 Dollars)	Remaining Budget (2015 Dollars)
Wastewater Treatment Plant Upgrades	\$64,530,000	\$22,369,000	\$42,161,000
Phase 1 CSO Collection System Controls	\$201,379,000	\$113,817,000	\$87,562,000
Other Collection System Projects			
Phase 2 – CSO Controls U/S of East Race	\$133,285,000	\$0	\$133,285,000
Phase 2 – Leeper Park CSO Storage Tank	\$72,324,000	\$0	\$72,324,000
Phase 2 – Other CSO Controls D/S of East Race	\$155,685,000	\$0	\$155,685,000
Total	\$627,203,000	\$136,186,000	\$491,017,000

LTCP Program – Potential for Savings

Project Category	Remaining Budget (2015 Dollars)	Separation, GSI, Flow Control	System Optimization	WWTP Enhancements
Wastewater Treatment Plant Upgrades	\$42,161,000	Yes	Yes	Yes
Phase 1 CSO Collection System Controls	\$87,562,000	Neutral	Neutral	No
Other Collection System Projects				
Phase 2 – CSO Controls U/S of East Race	\$133,285,000	Yes	Yes	No
Phase 2 – Leeper Park CSO Storage Tank	\$72,324,000	Yes	Yes	No
Phase 2 – Other CSO Controls D/S of East Race	\$155,685,000	Yes	Yes	No

Take-aways

- The Long Term Control Plan (LTCP) as developed represents a very high burden on the City of South Bend and its wastewater customers.
- Experience to date and reviews of remaining projects suggests that actual implementation costs for the current LTCP are likely to be higher than currently estimated. Without significant refinements, the burden will likely increase.
- The MWH Team is currently working to refine/calibrate the collection system, treatment plant, and receiving stream models and evaluate options for reducing the infrastructure needed to meet the LTCP objectives.

Thank You!

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