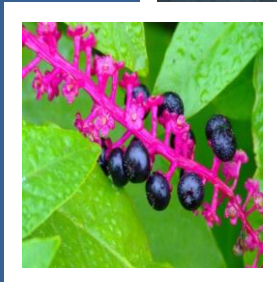
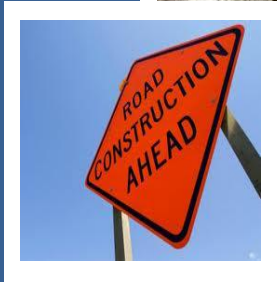
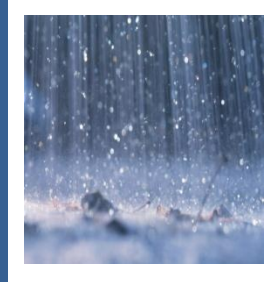


# Lower Mill Creek Partial Remedy

Hamilton County  
Board of County  
Commissioners  
Public Hearing

*September 26, 2012*



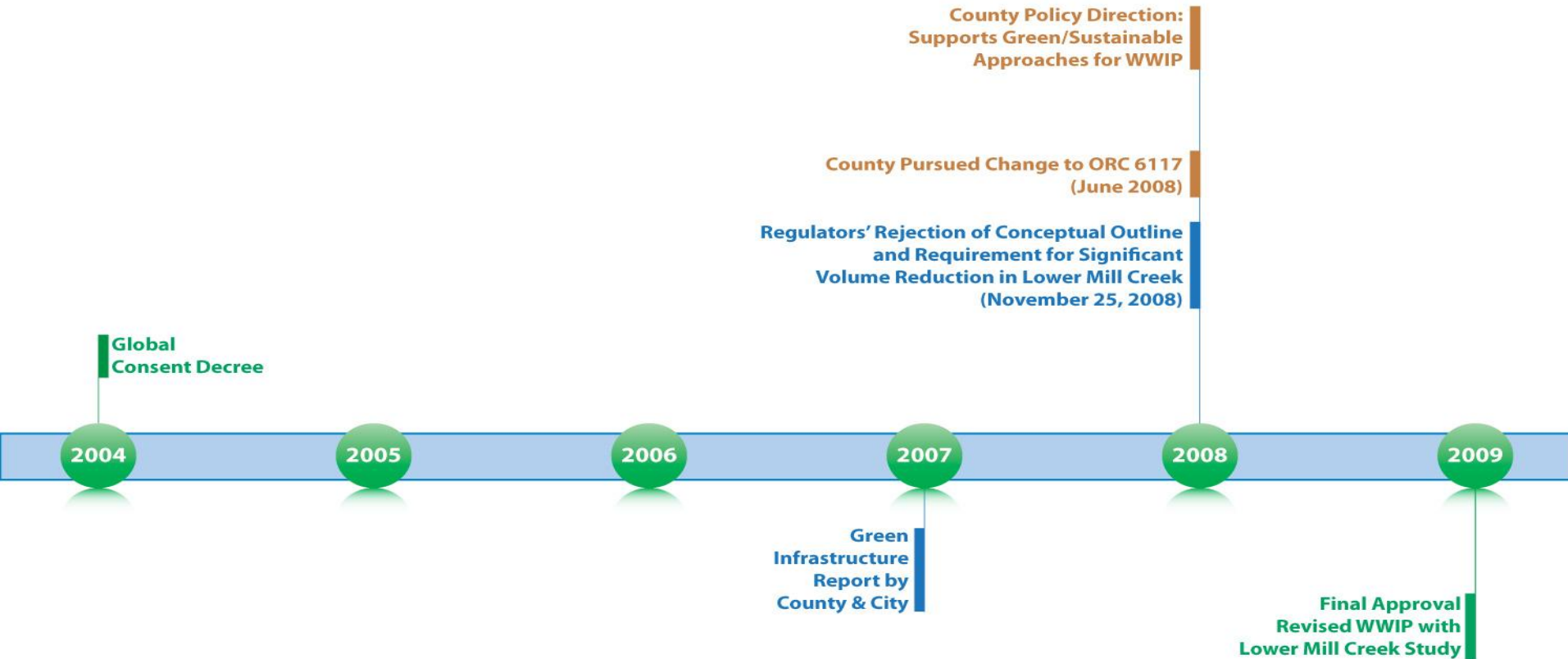
# Today's Agenda

- Why we are here today
- Lower Mill Creek Study
- MSD's Recommendation
- Relevant Criteria
- Next Steps

# LMCPR Alternatives

- These alternatives must conform first and foremost with EPA requirements, because the Regulators must approve any alternative. If an alternative does not meet those requirements, the Regulators can not approve it.
- MSD recognizes that there are related issues associated with each alternative, under the WWIP and otherwise, and will continue to assist the City and County to address them with the Regulators and others.

# Why we are here today



## LEGEND

- Consent Decree Benchmarks
- Lower Mill Creek (LMC) SI
- Lick Run Watershed SI
- Tunnel / Grey Alternative
- Overall Analysis

2004-2009

# Lower Mill Creek Study

**3-Year Study**

Grey Alternative	Sustainable Alternative
<ul style="list-style-type: none"> <li>▪ <b>Real-time control</b> <i>(four total)</i></li> <li>▪ <b>West Fork Channel grate modifications</b></li> <li>▪ <b>Deep tunnel</b> <i>(25 feet in diameter, 15,300 feet in length vs. 7,600 feet)</i></li> <li>▪ <b>Consolidation sewers</b> <i>(varying diameter, 10,400 feet in length vs. 5,000 feet)</i></li> <li>▪ <b>Deep tunnel pump station</b> <i>(84 million gallons per day)</i></li> <li>▪ <b>Enhanced high-rate treatment facility</b> <i>(84 mgd)</i></li> </ul>	<ul style="list-style-type: none"> <li>▪ <b>Real-time control</b> <i>(five total)</i></li> <li>▪ <b>West Fork Channel grate modifications</b></li> <li>▪ <b>New Storm Sewers</b> <i>(varying diameter, 104,400 feet in length in West Fork, Kings Run, Lick Run)</i></li> <li>▪ <b>Relocated combined sewers</b> <i>(varying diameter, 21,500 feet in length)</i></li> <li>▪ <b>Naturalized channels</b> <i>(5,500 feet in length)</i></li> <li>▪ <b>Valley conveyance system</b> <i>(8,100 feet in length)</i></li> <li>▪ <b>Stream separation</b> <i>(20,000 feet in length)</i></li> <li>▪ <b>Stormwater detention basins</b> <i>(80 acre-feet)</i></li> <li>▪ <b>Storage tanks</b> <i>(6.5 million gallons)</i></li> </ul>
<p><b>\$537,409,000</b></p>	<p><b>\$316,069,000</b></p>

*MSD's recommendation today is grounded by the policy direction received from the Commission's July 18<sup>th</sup> Resolution regarding cost control within WWIP estimates.*

*The Sustainable Alternative achieves the 2 BG CSO reduction at a cost much closer to the \$244M WWIP estimate.*

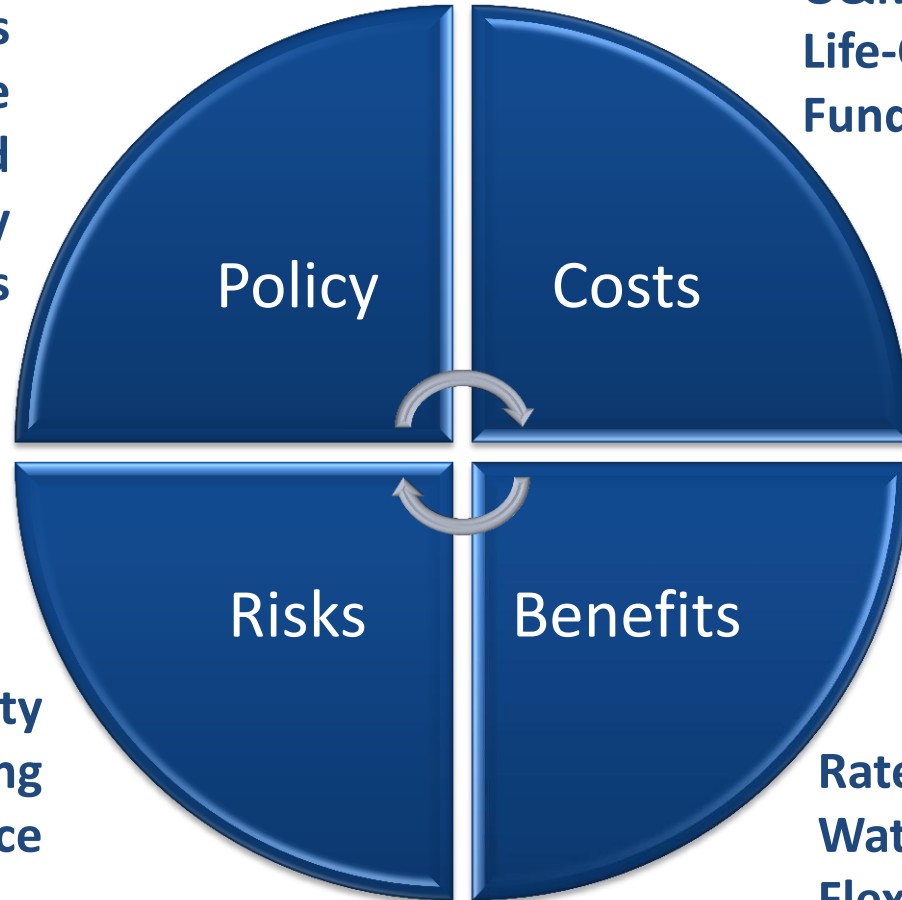
# Relevant Criteria

*Applied to LMC Study Alternatives*

## Compliance & Conformance

Final WWIP  
State & Federal Laws  
USEPA's Sustainable Guidance  
Document & Integrated  
Planning Framework Policy  
County Policy Directions

Capital  
O&M  
Life-Cycle  
Funding Sources



Level of Certainty  
Flooding  
Maintenance

Ratepayers  
Water Quality  
Flexibility

# MSD's Recommendation

MSD has provided its official recommendation in the “*Lower Mill Creek Partial Remedy MSD's Recommendation to the Co-Defendants of LM CPR Alternative*”.

## Lower Mill Creek Partial Remedy

MSD's  
Recommendation  
to the Co-  
Defendants of  
LM CPR  
Alternative

September 25, 2012



# Recommended Alternative

Sub-Basin	MG CSO Reduction	Capital Cost (2006\$)	Cost/Gallon	No. of CSOs	CSOs
Lick Run	726	\$200,492,000	\$0.28	1	5
Wooden Shoe	156	\$ 27,534,000	\$0.17	2	217, 483
West Fork	299	\$73,971,000	\$0.25	12	117,123,125,126,127, 128,130,203,527,528, 529,530
Bloody Run	93	\$10,651,000	\$0.04	1	181
CSO 488 Storage	47	\$3,421,000	\$0.23	1	488
4 RTCs	737	--	--	2	5,125,482,485
<b>Total</b>	<b>2,058</b>	<b>\$316,069,000</b>		<b>19</b>	



# What a Sustainable Solution Accomplishes

*Developing a solution that brings our historical water wealth normally below ground to the surface to create a benefit the community can see.*

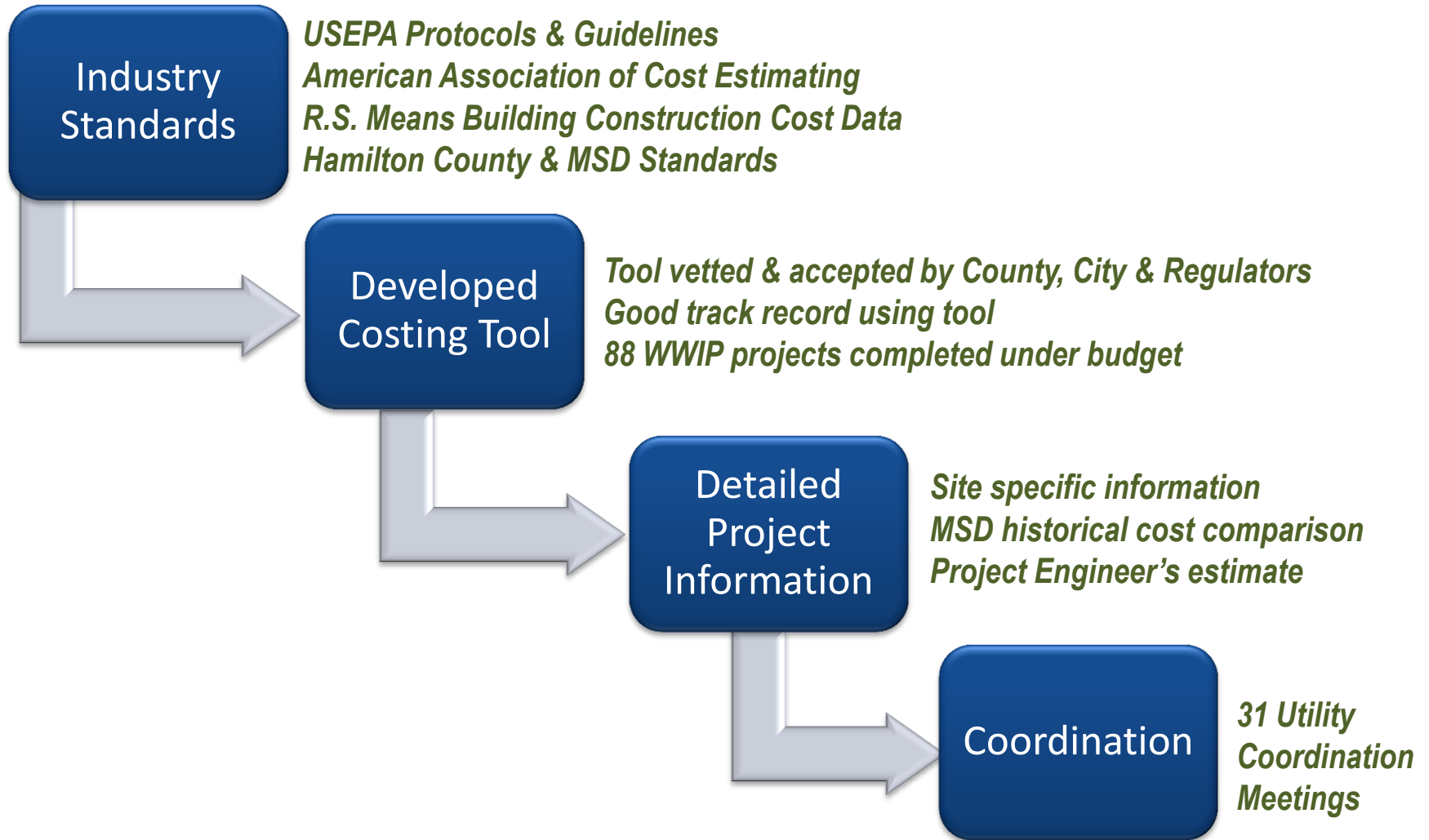
- ✓ Complies with 2 BG Consent Decree target
- ✓ Provides lowest cost solution
- ✓ Utilizes stormwater as a resource = sustainable
- ✓ Creates new class of green jobs
- ✓ Improves water quality
- ✓ Offers potential to leverage private side actions

# Relevant Criteria = Policy

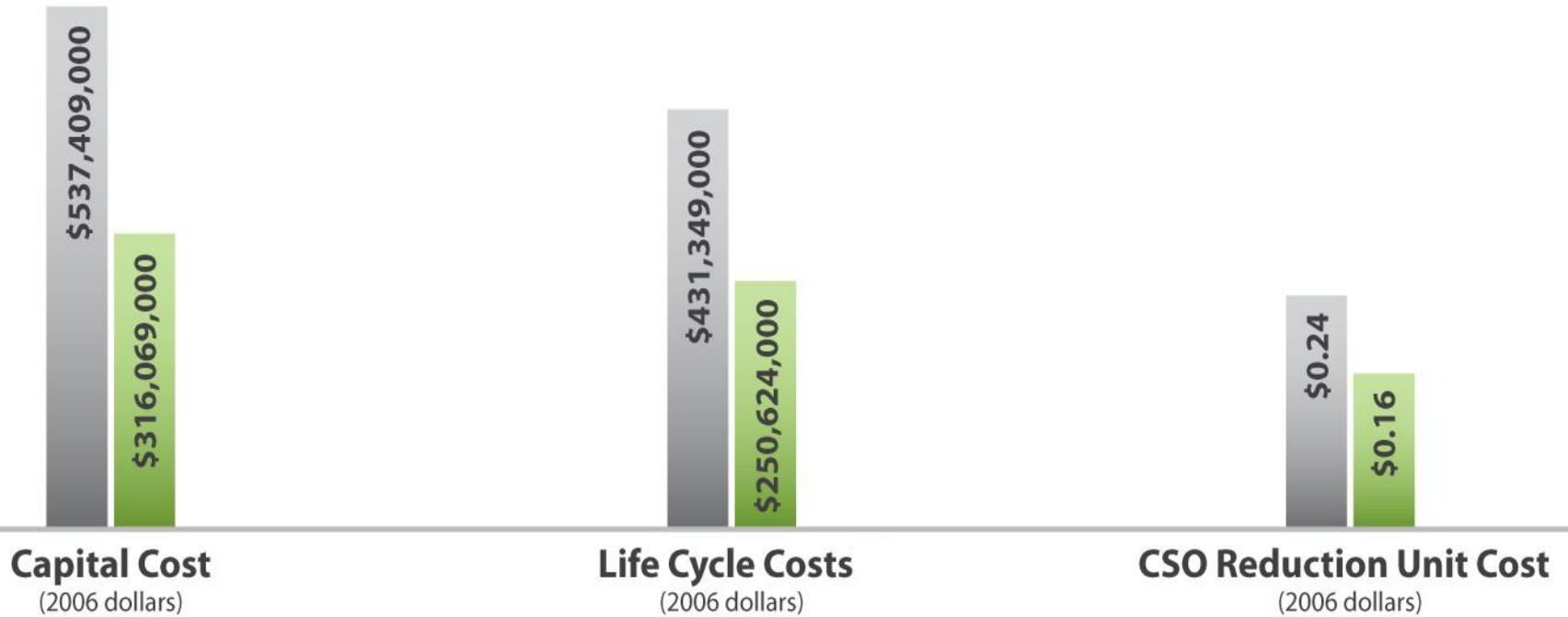
***MSD's Recommendation complies with all applicable policies.***

- ✓ 2 BG CSO reduction target of the WWIP
- ✓ USEPA guidance for development of a LMCPR alternative
- ✓ Hamilton County's July 18<sup>th</sup> resolution regarding cost control
- ✓ State and federal laws regarding stormwater management and flood control
- ✓ USEPA integration & sustainable policies

# Costs – How they were developed



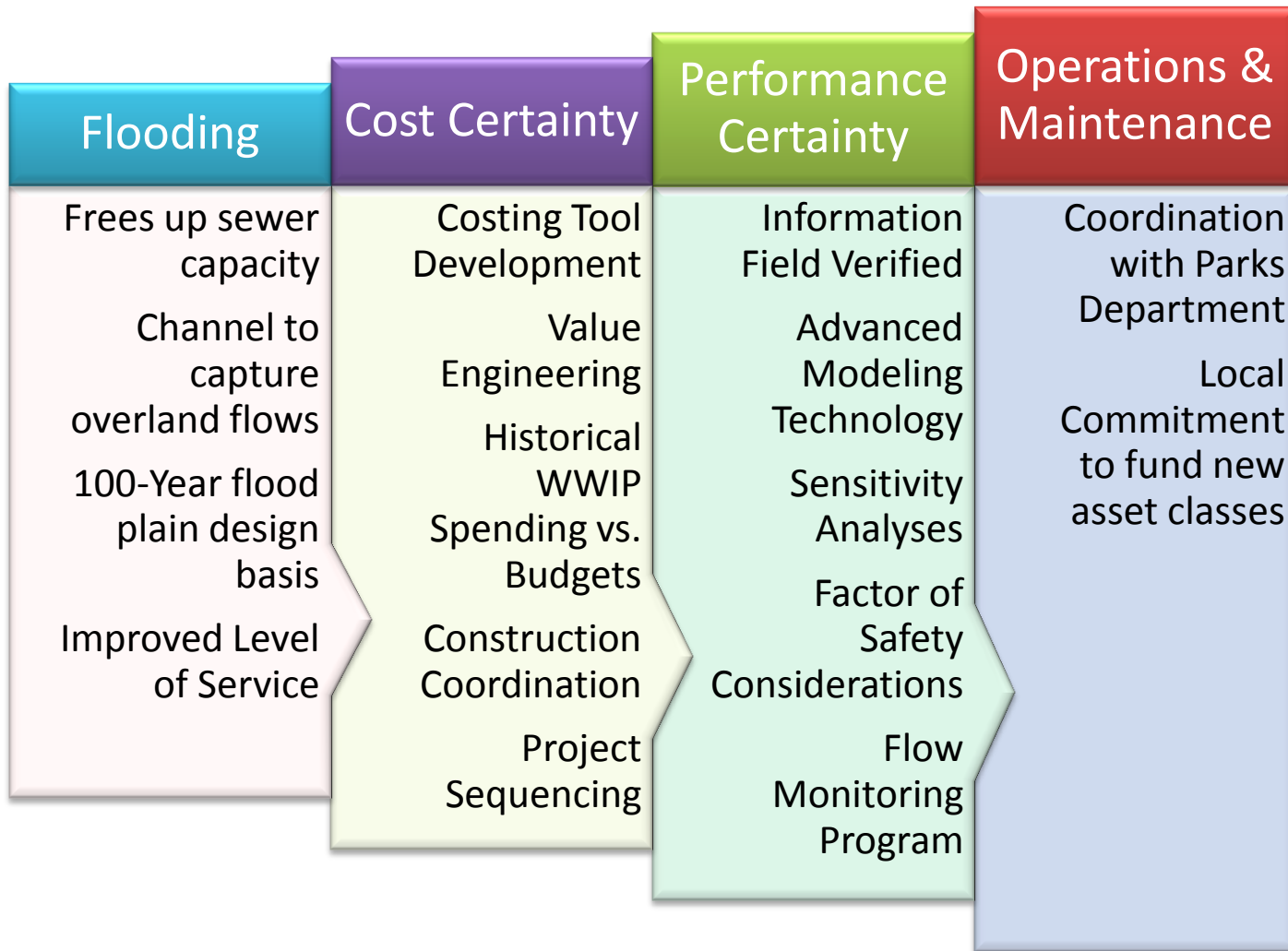
# Relevant Criteria = Costs



Grey Alternative

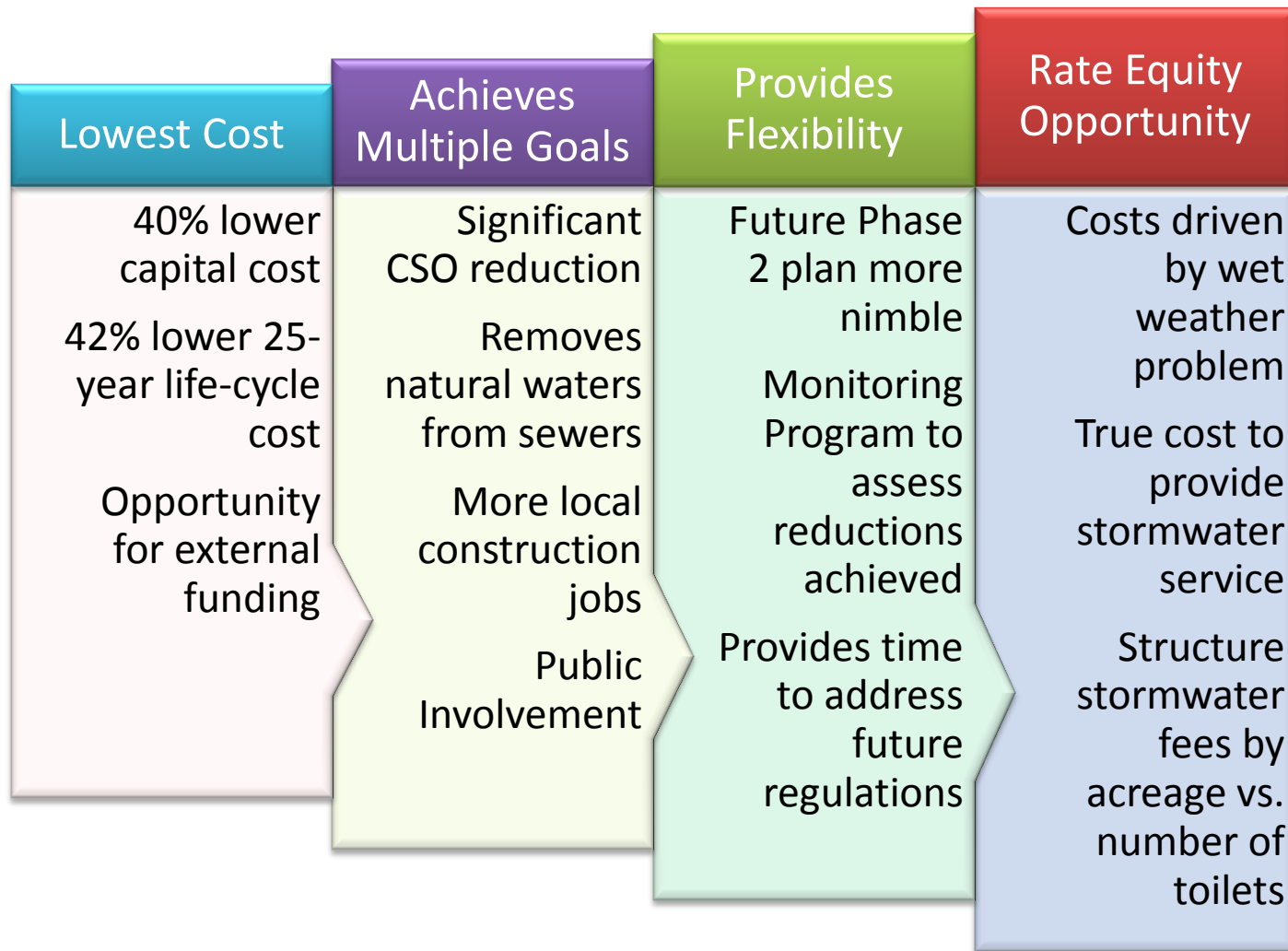
Sustainable Alternative

# Risks – Identification & Mitigation



*All of these risks are discussed in MSD's Recommendation Report.*

# Benefits – Best Case for Ratepayers



***All of these benefits are discussed in MSD's Recommendation Report.***

# Conclusions

- ✓ Lowest cost & lowest risk
- ✓ Supported & vetted with the Regulators
- ✓ Opportunities for external funding partners
- ✓ Similar approach used by others
- ✓ Increases base flow to tributaries and streams
- ✓ Flexibility to adapt to future conditions
- ✓ Best solution to achieve relevant criteria

# Next Steps - 2012

- Receive Public Comments – August thru October
- Decision by Co-Defendants – October
- **Co-Defendants to continue legal discussions with Regulators - October**
- Draft LMCPR Report developed by MSD – November
- MSD's CIP submitted for approval – November
- LMCPR submittal to Regulators by December 31<sup>st</sup>
- Continue Flow Monitoring Program





Questions?