



Stakeholder Advisory Committee Meeting Five Summary

OVERVIEW

The fifth meeting of the Clean Rivers Healthy Communities Stakeholder Advisory Committee (SAC) was held on Thursday, December 4, 2008. Seven committee members and ten Clean Rivers' staff and consultants attended the two-hour session. Additionally, Art Spratlin and Jodi Bruno from the US EPA, Region 7 and Carol Ishida from the Missouri Coalition for the Environment observed the presentation. *Note: MSD presented the same information to two other SAC members on December 5, 2008.*

The meeting objectives were:

- Summarize the SAC's participation and progress over the past year;
- Learn about possible control options for each waterway;
- Review and rank level of control scenarios; and
- Provide input regarding the control scenarios.

Jeff Theerman, MSD's executive director, led the presentation and discussion; and Rebeccah, an MSD public engagement consultant, facilitated a discussion about issues, challenges and concerns relating to the control scenarios.

PRESENTATION

Slide 2 – SAC Progress

Beginning in January 2008, the SAC has met five times to review, discuss and help shape MSD's CSO reduction efforts. Initially, at meeting one, the SAC learned about the region's existing sewer conditions and the Clean Rivers Healthy Communities Initiative. At meeting two, the members toured several MSD treatment plants and CSO locations to learn about the District's unique challenges and its key waterways. Meeting three was dedicated to existing water quality conditions and regulations. The fourth meeting provided a cost/benefit analysis of reducing overflows on each waterway.

Slide 3 – SAC Waterway Priorities

During meeting four, SAC members rated each receiving stream based on the overflows' impact on human and aquatic health. Using a Likert scale, from one to five, the members voiced their level of concern (with one being a very low level of concern and five being a very high level of concern). As detailed in the table, the River Des Peres and its tributaries received the highest ratings. Two major considerations were voiced relative to the River Des Peres' high priority rating – one, the river and its tributaries are located closely to neighborhoods and community gathering areas; and two, the CSO volumes relative to the overall stream flow is higher as compared to other waterways, such as Maline Creek and the Mississippi River.

Slide 4 – LTCP Controls – Upper River Des Peres

For each waterway, MSD developed a menu of controls to reduce CSOs. For the Upper River Des Peres, MSD has constructed an express sewer for separate sanitary sewer areas and may consider separating smaller combined sewers. MSD continues its source control activities, such as litter control and street sweeping. New controls would consider underground storage and green infrastructure.

Slide 5 – LTCP Controls – Lower & Middle River Des Peres

For this waterway, MSD eliminated the impact of high river stage and expanded the Lemay Plant's wet weather treatment capacity. Like the Upper River Des Peres, new controls would consider underground storage for wet weather conditions and green infrastructure to reduce wet weather flows.

Slide 6 – LTCP Controls – River Des Peres Tributaries

MSD is currently separating some combined sewers along the tributaries and it continues to conduct source controls. Like the other portions of the River Des Peres, new controls would consider underground storage for wet weather conditions and green infrastructure to reduce wet weather flows.

Slide 7 – LTCP Controls – Gingras Creek

For Gingras Creek, with only one outfall, the possible control options are to separate three large storm sewers connected to the combined system and eliminate the CSO by extending the sewer to the Baden Trunk Sewer.

Slide 8 – LTCP Controls – Maline Creek

For Maline Creek, MSD eliminated the impact of high river stage and recently completed the separation of two small combined sewers. New controls would consider local treatment for wet weather flows and green infrastructure to reduce wet weather flows.

Slide 9 – LTCP Controls – Mississippi River

All controls implemented and planned upstream (River Des Peres, Gingras Creek, and Maline Creek) can help to improve the Mississippi River's water quality. MSD has implemented several controls, such as expanding the wet weather capacity of the Bissell Point Treatment Plant and optimizing the Bissell Point

Pump Station. Two possible new controls would be constructing an underground tunnel and implementing green practices to reduce wet weather flows.

Slide 10 – Encouraging Green Infrastructure

MSD is considering the use of green infrastructure to reduce the flow of stormwater. By working with municipalities, developers and homeowners, MSD can encourage environmentally sustainable practices, such as rain gardens, green roofs and rain gardens.

Environmental Representative

Comment: *With residential development, especially in Clayton with double lots, I don't see an emphasis on green infrastructure.*

Response: *There is a "push-pull" relationship with municipalities. MSD can suggest, but we can't enforce zoning changes.*

Environmental Representative

Question: *What is MSD's level of authority for creating a green ordinance?*

Response: *We are a co-permittee with municipalities and we are involved with flow problems. However, we can't intercede with land use issues.*

Regional Representative

Question: *University City has a green committee, is there someone with MSD that can work with municipalities?*

Response: *Yes, we have an environmental compliance representative who currently works with the municipalities. Additionally, with developers, MSD can provide an option of green infrastructure choices.*

Regional Representative

Question: *Is there a graduated approach to green structure implementation, especially in the redevelopment community?*

Response: *Yes, I realize, that implementation is a long-term proposition. We must demonstrate the long-term payoffs for developers.*

Regional Representative

Question: *Also, could someone share the investment, like Chicago has done with the green alley program?*

Response: *Certainly, we can partner with another entity. But remember, funding is coming from the same source, the public.*

Environmental Representative

Question: *Is there someone to call about rain gardens?*

Response: *Yes, you can check the CRHC website or we can provide that information after the meeting.*

Slide 11 – Current Wet Weather Overflow Conditions

As MSD and the St. Louis community evaluate the effectiveness of controls, we must consider the current condition of overflows for each waterway. St. Louis experiences approximately 260 overflows annually, as indicated on the slide.

Slide 12 – Level of Control Scenarios – Wet Weather

At the last SAC meeting, the technical team presented three control scenarios – complete elimination, uniform minimum control and “knee of the curve” control. At the meeting’s conclusion, SAC members requested the technical team to present additional options for treating overflows on the Mississippi, especially when faced with extensive investment of building a \$1 billion tunnel to reduce CSOs. In response to this request, the technical team added two scenarios, “knee of the curve” with green infrastructure and graduated control on urban streams with “green infrastructure on the Mississippi.

Slide 13 – LOC Cost Benefit Curves – 1

This chart compares the cost benefit curves for the five scenarios discussed on the previous slide. Along the horizontal axis is % wet weather capture and along the vertical axis is cost (current day 2009 inflation adjusted). For reference, the \$8.5 billion investment to eliminate all CSOs through full separation was adjusted to \$9.1 billion to reflect inflation.

Currently, with MSD’s \$.6 million investment, 65% of wet weather capture receives primary treatment and disinfection (see blue dot along the horizontal axis). This represents a baseline for comparison.

The chart clearly shows that moving to a minimum uniform level of control everywhere (18 overflows per year) is actually more expensive and has less holistic benefit than going to a high level of control (knee) on the urban streams alone. The benefit to the urban streams is significantly less at 18 overflows per year.

The “knee of curve” on urban streams scenario and the “graduated level of control” on urban streams scenario (both coupled with “green” for the Mississippi) are quite comparable in costs and benefits.

Constructing a Mississippi River tunnel instead of promoting green adds over a billion dollars in costs.

Slide 14 – LOC Monthly Rate Impact Factors

As stated in early meetings, reducing combined sewer overflows will require a multi-million dollar investment over multiple decades. The public will bear the majority of this investment. However, many factors affect the rates born by the public. For example, regulators have established the number of expected annual overflows that each municipality must attempt to achieve. That, coupled with the implementation period allowed by the regulators, will influence MSD’s rates to its

customers. Additionally, MSD must consider its existing projects, such as separate sewer overflows, system renewals and plant upgrades.

Regional Representative

Comment: *We need to set money aside for green infrastructure research because at this point, we don't know what is achievable.*

Response: *Good point. This is not a finite program, but a forever program. Regulators will want to know the success of various options.*

Slide 15 – LOC Monthly Rate Impact Estimate – Select Scenarios

On average, a single family is paying \$29 monthly. Depending on the scenario selected, rates can increase by almost 300% (graduated with green infrastructure on the Mississippi) to almost 900% (complete elimination).

Community Representative

Question: *At what point is the community going to rebel with these rates?*

Response: *Honestly, we don't know. We know that everyone is concerned about water quality, but we all don't have the same ability to pay, even at \$29/month.*

Regional Representative

Question: *How is funding balanced between public and private entities?*

Response: *The EPA has an idea of what is reasonable and the public has an idea. So, that is a point of discussion for us when we meet with the EPA and the public. Bonding can ease some of the burden, but we may need to tap into other funds to partially pay for this.*

Environmental Representative

Comment: *People must see a benefit for the increased rates. Since they can't really see improved water quality, MSD will need to publicize changes in water quality.*

Response: *You are right. This project costs eight times, what it is costing for the I-64 rebuild and people will not really see the changes.*

Regional Representative

Question: *Are there ways for people to receive assistance with their sewer bill?*

Response: *Yes, MSD has a low-income assistance program and the bill can be reduced by 50% for the ratepayer.*

Regional Representative

Comment: *Over the past decade, our region has grown at a slower pace and other areas are growing at faster rates, but it seems like we are being asked to assume this expense like a city that is growing faster.*

Response: *MSD's customer base is increasing at about 1% annually. Unfortunately, we have an extensive system. Recall that we have the 4th largest sewer system in the 20th largest metropolitan area.*

Slide 16 – LOC Scenario Discussion

In determining their LOC preferences, SAC members reviewed the benefit/cost data for each of the six scenarios presented by the CRHC team. They, then, identified the scenarios that they believed would be best to implement as well as the scenarios that they thought would be worst to implement. For ease of reference, the scenarios are summarized below.

Most Appealing Scenarios

SAC members were split in their decision on which level of control would be most beneficial for the District given its cost to ratepayers. The majority (4) preferred the “Knee-of-Curve” on urban streams with green infrastructure on the Mississippi River. Two selected “Graduated Control” on urban streams with green infrastructure on the Mississippi River. In addition, one member preferred a Uniform Minimum level of control everywhere. In addition, two members stated that they could not identify a preferred scenario because they did not have enough information on water quality impacts.

	LEVEL OF CONTROL SCENARIOS – WET WEATHER				
	Complete Elimination	Uniform Minimum LOC Everywhere	“Knee-of-Curve” Everywhere	“Knee-of-Curve” on Urban Streams + Green on Miss.	Graduated Control on Urban Streams + Green on Miss.
Mississippi River	0/yr	18/yr	6/yr	50/yr	50/yr
River Des Peres	0/yr	18/yr	4/yr	4/yr	8/yr
Upper RDP	0/yr	18/yr	4/yr	4/yr	4/yr
RDP Tributaries	0/yr	18/yr	4/yr	4/yr	4/yr
Maline Creek	0/yr	18/yr	4/yr	4/yr	4/yr
Gingras Creek	0/yr	0/yr	0/yr	0/yr	0/yr
Capital Cost	\$9.6+ billion	\$2.2 billion	\$3.2 billion	\$1.9 billion	\$1.8 billion

“Knee-of-Curve” on Urban Streams + Green on Mississippi River

Deciding Factors

This option:

- Is among the least costly, though it still represents a significant burden to ratepayers. It also provides the most impact per dollar invested and per customer payment;
- Imposes sufficient overflow limitations;

- Implies voluntary changes that may have other benefits ex. green infrastructure;
- Necessitates ongoing citizen participation and education around “green” behaviors and policies;
- Requires research on the evaluation of “green” practices and will likely result in the identification of practices that achieve the best results; and
- May be the easiest to “sell” to the public as best for a large urban area.

“Graduated Control” on Urban Streams + Green on Mississippi River

Deciding Factors

This option:

- Is least costly while still providing results;
- Reduces yearly overflow events; and
- Requires community participation in reaching goals with green strategies.

Uniform Minimum LOC Everywhere

Deciding Factors

This option:

- Represents a middle of the road choice and is the most equitable distribution of benefit/cost.

Least Appealing Scenarios

SAC members were unanimous in their selection of Complete Elimination via sewer separation as the least desirable scenario to implement. Their reasons were as follows:

This option:

- Is desirable, but will impose too much of a financial burden on ratepayers in the short-term (30 years);
- Will not give ratepayers value improvements for the cost required;
- Ignores voluntary changes that might have other benefits ex. green infrastructure;
- Would result in ratepayer rebellion; and
- Could possibly be achieved in the future through different means and technologies.

Additional Recommendations for MSD

Following the discussion of LOC scenarios, SAC members discussed additional actions that MSD and the community at-large could undertake to enhance the effectiveness of the LTCP. They recommended that the District:

- Involve the public (property owners, developers, municipalities etc.) in the process of improving water quality through the adoption of green/sustainable practices. This can only be accomplished through intensive education and engagement over time. In addition, the District needs to create a formal “green” program that supports and/or subsidizes sustainable landscape and development practices.
- Build value-added benefits into the LTCP (Long-Term Control Plan) so that the public sees positive, tangible changes along the affected waterways. Changes in water quality are difficult for the public to recognize and assess. They must, therefore, be accompanied by constructed projects that make the waterways more aesthetically pleasing and/or user-friendly.
- Spend some LTCP implementation money on research studying the impacts of green practices.
- Work more closely with municipalities to establish stricter ordinances and greater adherence to green development practices.
- Intensify and strengthen partnerships with other impacted stakeholders, especially local environmental interests (ex. Sierra Club’s Cool Cities program), to advance positive change more comprehensively.

Slide 17 – Common Community Concerns

While cost is the major concern for all communities, additional concerns, including neighborhood disruption, noise, safety and security and truck traffic should also be considered with the LTCP.

Slides 19, 20 & 21 – Public Open Houses

Starting in February 2009, MSD will begin to conduct open houses. The goals are to:

- Educate public about MSD’s LTCP efforts to keep untreated sewage out of waterways; and
- Ascertain public’s preferences regarding MSD’s establishment of waterway priorities and selection of wet weather overflow controls.

Eleven public open houses will take place. Three will be held in the City of St. Louis and eight will be conducted in St. Louis County.

Residents will provide input in several areas, including:

- Values to guide MSD's decision-making;
- Receiving stream prioritization for CSO reduction;
- Desired levels of control for each receiving stream;
- Community concerns relative to implementation; and
- Suggested public actions to improve water quality in St. Louis' waterways and streams.

To generate interest and participation, the technical team will:

- Make presentations to subdivision, neighborhood and community groups throughout the District;
- Conduct a media campaign with limited advertising (print and radio spots);
- Organize a mass mailing to more than 5,000 public officials, subdivisions, civic interests, and neighborhood / environmental and business groups in its database; and
- Co-sponsor open houses with local officials and community groups.

Slides 22 – Additional Outreach (and LTCP Effectiveness) Suggestions

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Club's Cool Cities program), to advance positive change more comprehensively.

Appendix – SAC Meeting Five Attendees

SAC Members

- Todd Antoine
- Mike Bardot (12/5/08)
- Dianne Benjamin
- Mary Burrows
- Donald Jeffries
- Chris King
- Marjorie Melton (12/5/08)
- Michael Nelson
- David Wilson

Clean Rivers Project Team Members

- Rebeccah Bennett
- John Bergenthal
- Deborah Johnson
- Lance LeComb
- Gary Moore
- Susan Myers
- Jessica Perkins
- Leann Smart
- Jeff Theerman
- Rich Unverferth

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