



March 20, 2019

## Madison Metropolitan Sewerage District Customer and Community Meeting Summary

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### PARTICIPATION AND ENGAGEMENT

#### Attendance

Attendees included a total of 47 registrants with participation by 16 district customer communities including: City of Fitchburg; City of Madison; City of Middleton; City of Monona; Dane County; Kegonsa Sanitary District; Pleasant Springs Sanitary District; Town of Dunn; Town of Verona; Town of Westport; Village of Cottage Grove; Village of Dane; Village of Maple Bluff; Village of McFarland and Village of Waunakee and Village of Windsor.

Representatives from other organizations included: American Family Insurance sustainability team members; Capital Area Regional Planning Commission; Clean Lakes Alliance; Electronic Theater Controls; Home Savings Bank; Madison Metropolitan Sewerage District Commission members; retired commission members; two prospective Madison City Council members; Shilling Law; Strand Associates; and WPPI Energy.

#### Invitation process

To drive attendance, five emails and two news releases were sent over a five week period. The formal invitation list included elected officials, chief community administrators and clerks, public works directors, sanitary district contacts and lead engineers. Personal phone calls were extended to contacts from customer communities who did not respond to the invitation. The news releases also were sent to more than 1,200 subscribers on the district's GovDelivery list.

#### Media coverage

WKOW Channel 27 news covered the event and posted a very positive story:

<https://wkow.com/news/top-stories/2019/03/20/extreme-weather-prompts-discussion-of-new-sewer-ideas/>. The event also was recorded by the City of Madison's Cable Channel team and will be embedded on the district's web site: <https://www.madsewer.org/customerandcommunitymeetings>.

#### Survey tool

The invitations and news releases included a link to an online survey designed to gauge knowledge and attitudes regarding key infrastructure, pollution prevention and affordability issues among those most engaged with one water concepts and sustainability concerns. The majority of questions were designed to mirror previous national and statewide scientific surveys to provide context. Seventy respondents completed the survey.

## Meeting format

The two hour meeting included a presentation by district Chief Engineer and Director Michael Mucha. Following the presentations, an “open space” process allowed participants to form working groups to address priority topics.

A summary of the working groups’ notes follows. After the formal meeting concluded, approximately a dozen participants stayed for a tour of the Nine Springs Wastewater Treatment Plant.

## GROUP SUMMARIES

### Topic: Inflow and Infiltration Section I

Notes: Bruce Borelli

#### Summary

The group would like to develop a partnership between communities and the district to look at:

- **Funding**
  - What potential funding sources exist for I/I reduction?
  - Are grants available (federal, etc.) for sewer lining, manhole rehab, etc.?
- **Technical expertise**
  - Formation of a technical team/group to advance I/I awareness
  - What technologies exist to address I/I? How effective are they?
    - Example: Village of Maple Bluff tried grouting of manhole(s) but it did not work; I/I continued.
- **Policy issues**

How do you address I/I on private property?

  - How can a community and/or property owner afford to address this?
  - Can public municipalities work (and fund work) on private property?
  - How can a combined effort work to involve land owners, municipalities and the district?
- **Roles and responsibilities**
  - The district is the “big player.” What can the district do to broker the education, the technical expertise, the engineering and the potential funding sources to lead I/I reduction efforts?

A regional partnership to address I/I would create shared benefits:

- If we can reduce I/I, it will reduce volume, which will reduce annual bills.
- Addressing I/I will avoid the need for increased size of pump stations, interceptors, etc.
- A partnership effort could help advance education and outreach on I/I, which will be important in gaining support from the general public, boards, council, etc., when it comes to potential costs, technical and policy solutions.

### Topic: Inflow and Infiltration Section II

Notes: Todd Gebert

#### Summary

The discussion included a variety of perspectives from the point of view of several customer communities:

- City of Monona has significant areas of I/I.
  - Sump pumps are of particular concern.
  - City doesn’t have enough resources to enforce control of fats, oils and grease to public sewer system.

- City struggles to offer special programs and incentives that bigger cities like Madison can offer for things like I/I and FOG. They don't have enough resources and staff.
- Replacement of private laterals is the responsibility of home owner.
- Like Monona, the Village of Waunakee sees illicit sump pump discharges to public sanitary sewer system as a significant problem.
  - The village notes that there is a large disparity between the volume of water that the village sells to users and the amount that is billed by the district as wastewater. This gap could be as large as 45 percent.
- The City of Madison knows that sump pump discharges to sanitary sewer occur throughout the city and are a problem.
  - Other known I/I sources include things such as flooding of parking garages, which are connected to sanitary sewer. This was observed in the last flooding event on August 20-21, 2018.
  - City has made substantial progress in reducing sewer back-ups by cleaning sewer mains every two years, on average.
  - In the 1980's there were approximately 150 backups per year.
  - Presently there are fewer than 20 backups per year under normal weather conditions.
  - City is providing education through newsletters in monthly billing statements. One topic has focused on instructing residents about the proper operation of sump pumps.
  - City has operated a lateral replacement program for the last 20 years or so. Under this program the city will pay for 75 percent of the cost to replace the lateral between the main and the property line on projects where the street is being reconstructed. The property owner pays the remaining 25 percent of the cost.
  - Participation rate in program at this time is nearly 100 percent.
  - Of those who participate, though, almost no one continues the replacement from the property line to the house at their own expense.
  - City does a significant amount of sewer main lining, particularly for pipes constructed in the 1960s or earlier.
  - City is developing a new program to further reduce sewer backups by cost sharing with home owners on the installation of backwater valves.
    - City will pay 75 percent of cost and home owner remaining 25 percent.
    - Approximate cost of program is \$250,000 (annual?).
    - Offer would be limited to street reconstruction projects or on demand.
- Town of Dunn has four sanitary districts that operate independently.
  - The districts are aware of known defects in laterals where large amounts of inflow are getting into the sanitary system. It is believed that there are five laterals that contribute to much of the problem.
  - Town had large increase in tax bills in 2018 to cover district service charges. The increase was approximately \$400 per house in 2018.
  - The town believes it does not have sufficient authority to direct repairs to defective laterals.

From Madison Metropolitan Sewerage District's point of view:

- Overall the district considers the rate of I/I to be moderate by industry standards.
- The district is currently preparing for \$16 million of upgrades to the treatment plant to provide additional capacity, with more phases to come in the next 10 years. The district would like to minimize the need for any future work, if possible.

- The district sees opportunities for reduction in I/I on private property. Historically this I/I source has received little attention since most laterals are owned by individual property owners and due to the associated problems with working on private property.

The Capital Area Regional Planning Commission's focus is on green infrastructure. This allows storm water to infiltrate more easily at its source rather than run off to drainage systems. Examples of this infrastructure include:

- Wetland restoration
- Prairie restoration
- Rain gardens
- Porous pavement

From the perspective of Grant Foster, aldermanic candidate:

- I/I could be better controlled by proper management of storm water. This includes infiltrating storm water and controlling lake levels.
- Why don't we have a regional authority for managing storm water (like MMSD for sanitary service)? Results would be better if one entity could coordinate and oversee all work.
- Need to adopt a watershed perspective for problems such as these.
- Need to investigate and find new possibilities for funding of storm water management such as green infrastructure.

Possible strategies:

- Sewer lateral rehabilitation
- In all communities (except Madison), the homeowner rarely participates in lateral replacement.
- Incentives are needed to encourage homeowners to replace their laterals.
- Lining laterals is expensive.

Next steps:

- Education
- Focus on sump pumps and roof drains?
- Education materials in billing statements can be effective.
- District should continue to provide information, as it does for pollution prevention.
- Funding.
- Rebate program for I/I work.
- Organize contractors to make work easier for smaller and less experienced communities.
- The district could play a role in this as the regional provider.

## Topic: Education

Notes: Catherine Harris

### Summary

The group hypothesized that most residents know very little about the sanitary sewer system and that policy makers also know very little. Possible antidotes offered by the group centered on information sharing efforts such as:

- Coordinated messaging with other area groups;
- Making a simple list of do's and don'ts; and
- Developing a short presentation to give to various groups and to educate youth.

The people participating in the conversation felt strongly about the district's role in the community as an educator. Reaching out and engaging with stakeholders proactively represents a good investment of district funds because it will help community members better understand the need for district expenditures on infrastructure and equipment repair and replacement.

## Topic: Chloride reduction

Notes: Emily Jones

### Summary

- Education is not enough to motivate people to update their softeners. Alternative motivators include monetary incentives for homeowners and getting developers and landlords/property owners to focus on high-efficiency softeners.
  - Suggestion: make the potential cost of chloride removal technology real by breaking it down to individual homes and businesses and compare the cost of technology with the cost of prevention.
  - The group questioned what softening and salt alternatives exist.
  - One tactic that the district could prioritize for salt reduction is I/I reduction. However, this is a very individualized approach, as this would keep salt out of the sewer but not reduce it in the environment at large.
  - It's still important to ramp up I/I reduction efforts to lessen peaks.
- Chloride regulation is inevitable: there will be a TMDL for chloride for Lake Wingra eventually.
- On the home softening side, the group could see someone taking an optimization before a replacement due to the lower cost. However, convenience/access can be a barrier even if cost isn't. An example was given of a municipal lateral replacement program. It was free, but an inconvenience to people who didn't want to stay home for the service person to come. There is a need to determine the actual barriers and motivations to home softener improvements.
  - Suggestion: Municipalities could establish a deed restriction for all annexed properties mandating installation of a high-efficiency softener. This option would require coordination with building/plumbing inspectors.
- There are three strategies that the district can take to reduce chloride:
  - Educate
  - Incentivize
  - Regulate
- It is difficult to forecast hypothetical long-term possibilities and adequately message this.
- Should this issue move from local to state scale? For example, will necessary changes here require changes to the state plumbing code or Uniform Building Code?

- Changes could also be accomplished through ordinance revision, with creation of exemption opportunities based on need.
- The district could create an enforceable rule requiring HE softeners. This rule would be relatively easy for building inspectors to enforce.
- It's difficult for the district to reach individual homeowners, particularly those not already engaged.
- The economics of home softening could make a mandate challenging (i.e., cost-prohibitive)
- Summary: use district authority to require more efficient softening.

### Topic: Infrastructure Economics and Equity

Notes: Bill Walker

#### Summary

The discussion covered a wide range of topics including costs associated with different development patterns, the challenges associated with effective affordability programs for low income households and funding for asset renewal.

The group agreed that there is benefit in having end users pay for services as opposed to funding services from general tax revenue. Having end users pay helps demonstrate the value of the services and helps align incentives for use.

Other key themes included:

- Different rate structures have various incentive effects that should be considered.
- There are tradeoffs and issues to discuss regarding development density, cost of service to distant areas and scale economies.
- There are tradeoffs and issues to discuss regarding use of rates to incent behavior and potentially inequitable cross-subsidization among users.
- Regarding wastewater, assistance to low-income households is best done not through rates but through other social service groups.
- Planning for long-term, lifecycle costs of infrastructure is a challenge for human nature but important to control costs and ensure service.

### Topic: Industrial pretreatment

Notes: Stacey Koch

#### Summary

What issues and opportunities should customer communities and the district work together on and what are potential next steps?

How do we deal with industries and verify what they are discharging?

- There have been cases where companies sometimes exceed pollutant limits but change their process when the district comes to monitor. In one instance, when the district came to monitor, plastics were found in the sample.
- In another example, upstream sampling was used to track down high chlorine loading.

What types of customers should be monitored in communities?

- District knows of industrial users, dental clinics.
- What other customers could have problems or pollutants (funeral homes, etc.).

- Communities would find it helpful to have more resources and education around the possible types of facilities to look out for.

When do the communities hear about new industries or facilities moving to their area?

- The city gets the architectural design reviews for a facility.
- It would be helpful for the city to have a list of customers and types of industries to look out for.
  - It would then be possible to set up meetings with them.
- Plats/CSMs come through for dividing the land/lots.
- The community will receive a community development plan if a company is growing or expanding.
- These efforts may need to start higher up at the economic development department.

How else can companies reduce their impact?

- Permittee perspective – some companies know what they are discharging but wonder what else they can do to be forward thinking. How can companies be better stewards and reduce their impact further?

Manufacturing education:

- Could various similar industries meet and discuss processes and best practices?

[Topic: Resiliency and Communications](#)

[Notes: Jeff Brochtrup](#)

[Summary](#)

The challenges of extreme weather raise a variety of issues with respect to infrastructure resiliency and communications. The upside is that when communication efforts are deployed strategically via appropriate channels, it is possible to be proactive, manage expectations and build support for the investment needed to improve infrastructure resiliency.

Hallmarks of effective communications include:

- Dissemination of messages with actionable information.
- Use of effective channels such as social media, the Nextdoor blog and YouTube.
- Identification of overlapping concerns and shared messages by communities and the district.
- Education – when properly informed, people are more likely to take action.
- Develop trusted messengers and deploy them to engage with external groups.
- Use of influencers who may have their own channels to amplify a message.
- Partnerships with other groups ranging from developers to local units of government – the Yahara WINS model works well.

The topic of infrastructure resiliency covered a number of questions and challenges:

- Flooding is going to happen. Is there a better way to manage it or better direct the damage?
- The force main to Badfish Creek is limiting.
- There will be occasional deviations from desired results for extreme events. It may not be possible to prevent these deviations but it may be possible to better anticipate and mitigate the consequences.
- It is particularly hard for small communities to plan for resiliency.
- Extreme rain events and drought cycles are likely to continue.

## Topic: Phosphorus and adaptive management

Notes: Martye Griffin

### Summary

The discussion covered a wide range of themes:

- Manure treatment – dairy manure – manure digesters.
- Treatment cooperation. Cooperate on treatment of manure. Treatment of manure at a community level is essential.
- Individual producer may not be able to bear cost.
- Dairy is not going away. We will always consume dairy products.
- Community effort needed for solution.
- Do we have more capacity for manure digesters?
- There is potential for areas of concentration of farmers to make it profitable.
- Look to strategically acquire lands (rural) to be used for phosphorus capture and stormwater infiltration.

Yahara area is just one area.

- There are other areas that also are doing trading that require county resources. Need to expand watershed to whole county - whole county is a watershed. Cross plains - adaptive management project.
- Dane Iowa treatment plant - AM plan - impacts other areas of the county.

Dredging. Rivers.

- Expand dredging expanded to lakes?

Municipalities – many are working on stormwater.

- Use of confluence ponds to slow down sediment and nutrients and infiltrate water Stormwater regulations - more infiltration can help.
- City of Middleton - Idea to purchase farm land to be used for infiltration. Phosphorus control, and stormwater capacity. Stormwater focus. Phosphorus numbers are good, infiltration numbers are OK. Is the focus stormwater or phosphorus? Do those have to compete? We can accomplish both.
- City of Madison - southwest area - Tiedeman pond area. Stormwater focus but will also have phosphorus reduction to lakes?

Goals

- More participants in adaptive management. (Some voluntary participants). But once some municipalities meet their goal, they may want to cut back. As they make improvements, they can claim credit, to reduce payment amount and less total money for adaptive management project.
- Should municipalities, since they agreed to be a part of the solution, wouldn't they keep their payment amount. Keep effort.
- Difference between bare minimum regulator obligation vs. real work goals to achieve the water quality changes that the public expects.
- Concern that regulatory obligation may be met, but may not be possible to physically see changes in water quality.
- To motivate participation with no regulatory hook, municipalities should lead toward the goal. Get recognized and keep it up for the greater good.

- What to do when we see municipalities take small credit adjustments vs. communities who have met regulatory obligation but still want to pay in.
- There may be some misunderstandings about how the IGAs work.
- Need to potentially close the gap between what we are required to do by permit and what needs to be done to reach water quality goals.
- Develop new markets for organic (leaves, food waste, FOG, etc.).

#### Nutrients:

- Nutrient concentration should be a focus.
- Recognize that we need and want the nutrients. Just applied and distributed appropriately.
- Concentrate and transport to areas that need them. In lieu of commercial fertilizer.
- Current model is manure, nutrients are on one area and expensive to move. Heavy application near source, farther away,, less manure and importing nutrients.
- Better distribute manure that is produced, may not have excess and off set import of fertilizer. Phosphorus is a needed resource.

#### Look at business model of Ostara/Crystal green.

- Are there companies that distribute fertilizer in the state? Direct consumer vs. straight to farmers.
- Way to distribute needed nutrient where it is needed.

Compost with municipal sludge. Product for farmers to pick up. How to make a product available that farmers want, and that they can get. How to use food waste in this nutrient cycle. Reduce food waste early on – Wisconsin Academy having a seminar on it. Composting food waste can be challenging. Hard to site. Planning should identify where things like these can be sited. As we become more urbanized more challenges to do this. Area near landfill? Less urbanized.

#### Topic: Bigger population and less open rural land

Notes: Eric Dundee

#### Summary

Dane County and the region served by Madison Metropolitan Sewerage District faces numerous challenges due to growth. Specifically, 75 percent of the state's population growth last year was in Dane County. This creates a paradigm in which policy makers may help incent choices between sprawl and redevelopment.

#### When population grows, some things go up:

- Runoff;
- Water usage;
- Infrastructure; and
- Biosolids volume.

#### When population grows, some things go down:

- Natural infiltration of precipitation;
- Aquifer levels;
- Capacity; and
- Land to spread biosolids.



Higher use of water will lead to water scarcity (draining aquifers). There will be a need to look for alternate sources of water including lakes and/or a gray water system.

This leads to important questions:

- What is the value of lakes?
- What is the value of property?
- What is the value of open land, our ability to produce farm to table food and how does this affect the cost of “clean” water.

