



**GREELEY AND HANSEN**

**Ann Arbor WWTP  
March 14, 2006**

**Community Meeting:  
Public Engagement for Odor  
Control Management**

# Agenda

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- Welcome and Introduction
- Project Overviews
  - Facilities Renovation Project
  - Residuals Handling Improvements Project
- Odor Control Study
- Public Forum
- Next Steps

# Facilities Renovations Project

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- Purpose is to design the upgrade or replacement of facilities to meet future flow, loading and regulatory requirements
- Develop detailed designs for improvements to the existing East Plant as well as demolition and reconstruction of the West Plant
- Design duration April 2005 through August 2007

# Residuals Handling Project

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- Purpose is to upgrade, rehabilitate or replace aging residual solids handling facilities
- Design new residuals handling facilities to increase operating efficiency
- Perform Odor Control Study
- Design duration September 2005 through September 2007

# Odor Control Study

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- Various odor complaints from neighbors
- Major capital improvement projects provide opportunity for reducing odors
- Plant-wide comprehensive look at odors
- Objective is to reduce odor sources identified as most likely to impact neighbors and plant staff

# Odor Control Study Activities

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- **Reviewed existing data**
  - Odor control studies, reports and facility odor information, odor complaints received
- **Performed odor sampling and testing**
- **Characterized odor sources at the WWTP**
- **Ranked odor sources based on perceived potential to impact neighbors and plant staff**

# Odor Control Study Activities

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- Engage neighbors in public forum
  - Odor problems properly identified and characterized
  - Odor Control Study addresses public concerns and needs
- Evaluate technologies that reduce identified odors
- Recommend odor control alternative
- Meet with neighbors to review plant-wide odor control alternative

# Odor Sampling and Testing

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- Sampled and tested 18 sources of odor plant-wide
- Odors ranked regarding perceived potential to impact neighbors and plant staff
  - High - 5
  - Moderate to high - 5
  - Moderate - 3
  - Low to moderate - 5

# Odor Sampling Locations



# Odor Potential

SAMPLING LOCATION		ODOR POTENTIAL
1	Manhole at Plant Entrance on Dixboro Road	High
2	Overflow Structure at Plant Entrance Bridge	Moderate to High
3	Influent Screw Pumps – Headspace	Moderate
4	Screen and Grit Building	High
5	Flow Splitting Structure	Moderate
6	Retention Basin	Low to Moderate
7	Equalization Basin	Low to Moderate
8	East Plant Primary Tank – Effluent Trough	Moderate to High
9	East Plant Flow Splitting Structure	Moderate

# Odor Potential – Continued

SAMPLING LOCATION		ODOR POTENTIAL
10	Gravity Thickening Tank – Effluent Trough	Medium to High
11	East Plant Primary Scum Well	Medium to High
12	Liquid Sludge Holding Tank # 1 (Without Lime)	High
13	Liquid Sludge Holding Tank #3 (With Lime)	High
14	Cake Storage Hoppers	High
15	Truck Loading Area – Liquid Sludge	Low to Moderate
16	Truck Loading Area – Dewatered Sludge Cake	Low to Moderate
17	Residuals Handling Building - Thickening/Dewatering Equipment Vent Air	Moderate to High
18	Residuals Handling Building – Room Air	Low to Moderate

# Odor Characterization

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- **Odor source composition**
  - Primarily Hydrogen Sulfide ( $H_2S$ )
  - Other Sulfur species
  - Volatile organic compounds (VOCs)
- **Concentrations of odors**
  - $H_2S$  and other Sulfur species at concentrations normally expected at a wastewater treatment plant
  - VOCs at concentrations normally expected at a wastewater treatment plant

# Odor Control Technologies

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- **Proven technologies available**
  - Chemical scrubbers
  - Activated carbon
  - Biological type filters or scrubbers
  - Ozone
- **Recommended alternative will incorporate one or more technologies based on results of evaluation**

# Public Forum

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- From your perspective:
  - Have we adequately identified the odor problems?
  - Have we adequately characterized the odor problems?
  - Does the Odor Control Study address your concerns and needs?
- Other thoughts, questions or considerations?

# Next Steps

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- Evaluate technologies that reduce identified odors
- Recommend odor control alternative
- Meet with neighbors to review plant-wide odor control alternative
- Prepare Plant-wide Odor Control Report

# Information Sources

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- Webpage on City of Ann Arbor website to be online soon
- Your contact during this process:

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