



# Marinette Manufactured Gas Plant Site – Sediment Clean Up

*Presented by:*

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*Presented to:*

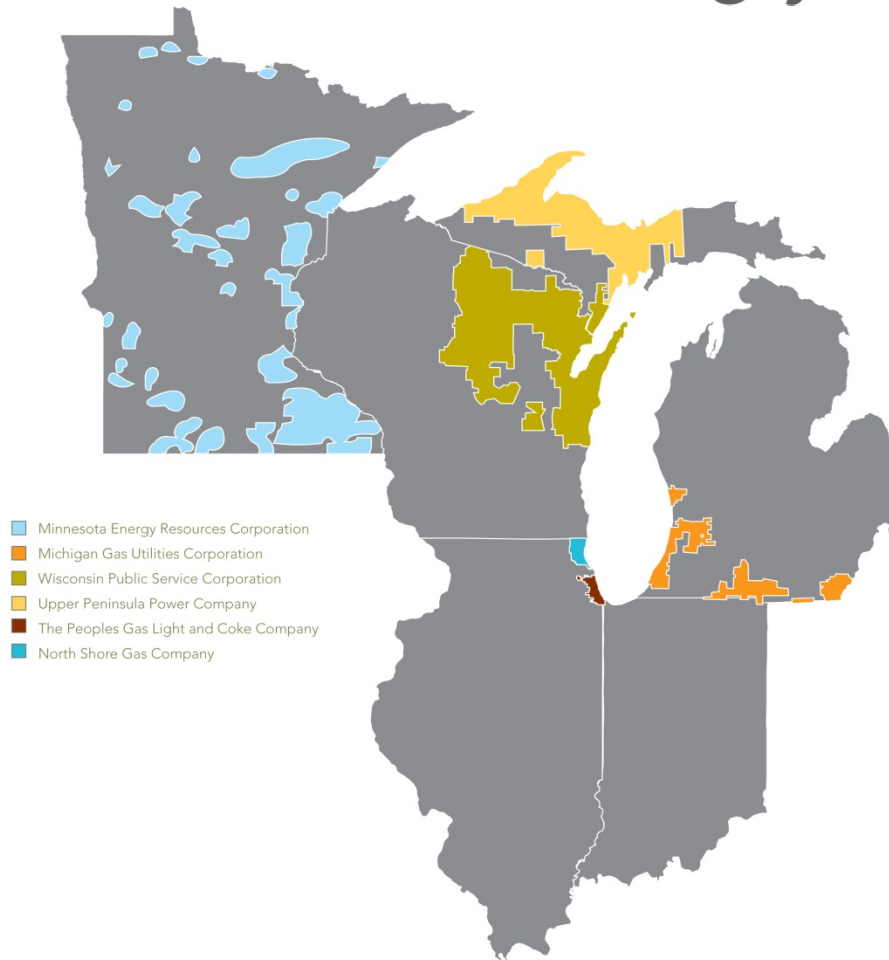
**Lower Menominee River Area of Concern  
Citizens Advisory Committee Meeting**

**July 19, 2012**



# Integrys Regulated Operations

## At-A-Glance Regulated Operations



- Minnesota Energy Resources Corporation
- Michigan Gas Utilities Corporation
- Wisconsin Public Service Corporation
- Upper Peninsula Power Company
- The Peoples Gas Light and Coke Company
- North Shore Gas Company

# WPS In the Community

# Manufactured Gas Plant (MGP) History

- Industrial facilities that produced gas from coal, oil and other feedstock
- Operated in the United States in the early 1800s through mid 1900s
  - Coal heated in airtight chamber
  - Decompose into gas, tar and coke
  - Gas purified before distribution
- Gas initially used for street lighting, then for cooking, then heating

# MGP Byproducts

- Byproducts: coke, coal tar, ammonia, light oils, wood chips
- Coke was used in iron smelting and metallurgical industries
- Coal tar was used in wood preservatives, road finishes, dyes, drugs, fertilizers, roofing material, etc.
- Some were disposed on property and potentially impact soil, groundwater, and sediment

# Marinette MGP History

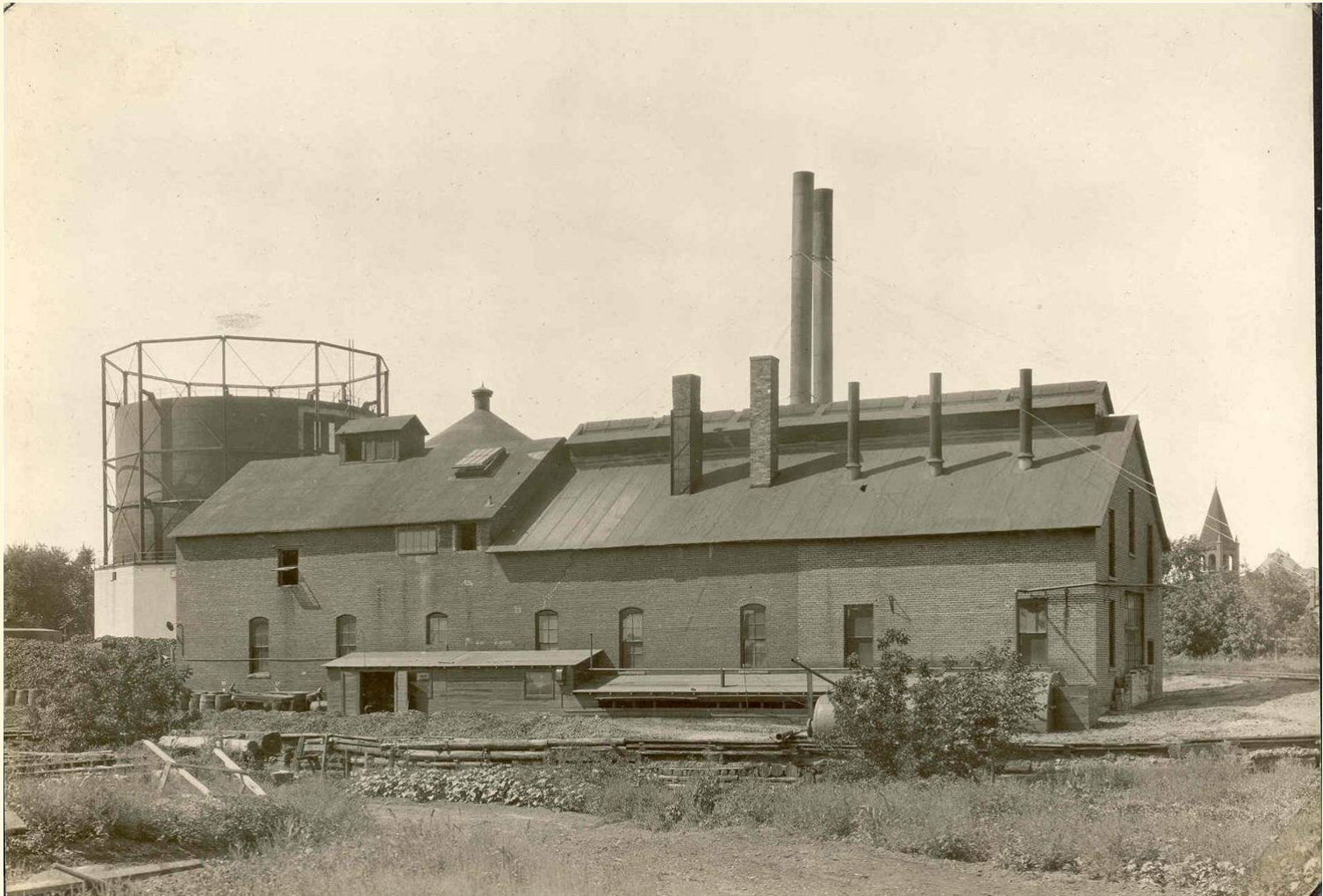
- Constructed 1901-1910; operated through 1960
- Operated by Marinette Lighting Company and Menominee and Marinette Light and Traction Company
- City of Marinette purchased the property in 1962
- Structures were removed during the wastewater treatment plant expansion
- Former slough used as a logging slip and run filled in 1945 through 1960

# Former Marinette MGP - Site Location





# Former Marinette MGP





# Upland Areas

- Site investigations for soil and groundwater in progress
- MGP-residuals were removed and disposed as part of the WWTP expansion in 1960 and sewer expansion in 2004
- Additional investigations to be completed July-August 2012 to evaluate the potential risk and determine if cleanup is required

# River Areas

- MGP residuals observed on the Menominee River in the vicinity of the mouth of the former slough
- Sediment sampling has been performed to assess the extent of MGP residuals, evaluate potential risks, and to support remedial design

# Sediment Investigation



# Sediment Investigation Findings

- Contaminants of Concern for the MGP are primarily organic compounds known as polycyclic aromatic hydrocarbons (PAHs)
- MGP residuals in the form of tar-like material were identified in the vicinity of the mouth of the former slough
- MGP residuals in the form of PAH concentrations above generic sediment screening values were also identified in this area

# Sediment Cleanup Options

- Monitored natural recovery, capping, dredging, or a combination
- Proposed Sediment Remediation Option
  - Remove sediment with NAPL
  - Remove adjacent sediment with PAH concentrations above the generic screening levels
  - Place a sand cover over dredged areas
- USEPA selects the final sediment remediation option with public input gathered in a 30 day public notice

# Example Sediment Cleanup WPS Sheboygan Site



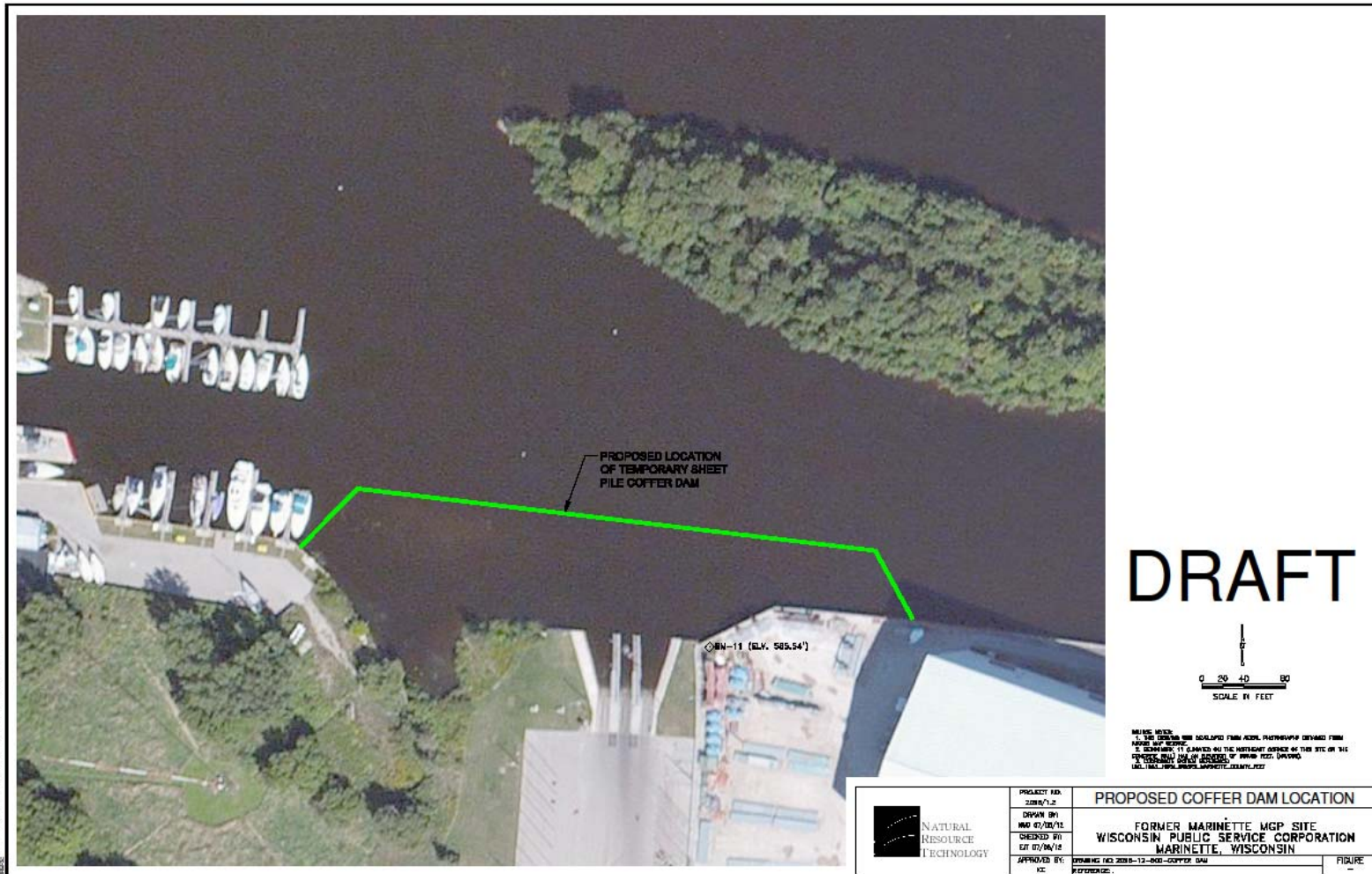


# Sediment Cleanup Details (Proposed)

- Wet excavation with steel sheet pile wall known as a cofferdam will be installed from the edge of Nestegg Marine to Marinette Marine
- Contaminated material will be removed with backhoes, mixed on-site with additives to dewater the material and transported to a landfill
- On-site water treatment and discharge to river
- Perimeter air monitoring



# Proposed Sediment Cleanup Area



# Review and Decision Process

- Agreement established between USEPA and IBS for removal action - draft in progress
- Work Planning - in progress, summer 2012
- Approvals and project start targeted for fall 2012

# Tentative Access Schedule

- The Boom Landing boat launch will be closed to the public throughout the duration of the project
- The cleanup crews are anticipated to begin mobilizing in September
- The project is planned to be complete in December
- Restoration of the upland staging areas, if necessary, will be completed in May 2013

