

# PORT OF MILWAUKEE PRESENTATION TO CAPITAL IMPROVEMENTS COMMITTEE 4-12-2012



SLIDE NUMBER 1



# The Port of Milwaukee

**The Port of Milwaukee is a critical  
transportation and distribution  
link to Southeastern Wisconsin's  
Economy**

# **The Commercial Port's** **Mission**

The Mission of the Port is to enhance the overall economic and social environment of our region by stimulating trade, business and employment.

Consistent with the Port's water-related location, the Port shall strive to be a premier provider of transportation and distribution services for its commercial customers and support public recreation, leisure and other uses the Port deems to be in the public interest.

**Shipping through the Port of Milwaukee saves area consumers over \$58 million annually on transportation costs.**



# PORT OF MILWAUKEE PRESENTATION TO CAPITAL IMPROVEMENTS COMMITTEE 4-12-2012

## OVERVIEW

- ⚓ WATERWAYS
- ⚓ DOCKWALLS
- ⚓ DREDGING
- ⚓ SHIP APRONS & ROADS
- ⚓ PIERS & TERMINALS
- ⚓ PIPELINES
- ⚓ SEWERS
- ⚓ WATER LINES
- ⚓ ELECTRIC SERVICES
- ⚓ GAS LINES
- ⚓ RAILROAD TRACK
- ⚓ BUILDINGS
- ⚓ EQUIPMENT
- ⚓ ENVIRONMENTAL REMEDIATION
- ⚓ GRANTS

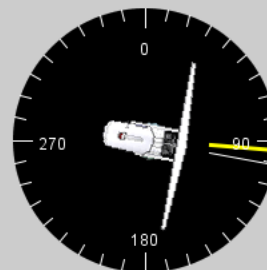
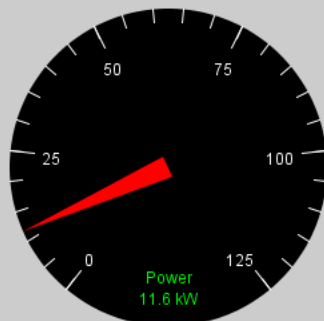
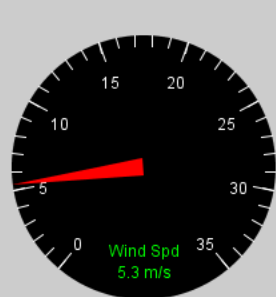
# PORT OF MILWAUKEE PRESENTATION TO CAPITAL IMPROVEMENTS COMMITTEE 4-12-2012

⚓ GRANTS

SLIDE NUMBER 6



WTG1 Overview Trends



Rotor Speed **44.2** RPM

1 min. Wind Speed **5.2** m/s  
10 min. Wind Speed **5.0** m/s

Total Energy Produced **26076** kWh  
Time Available **1081** Hr

Yaw Position **100.5** deg  
Yaw Turns **0.3**

Wind Turbine Controls

Run Stop Service

Enabled

Dispatch Enabled

Base Switch Run

Nacelle Switch Run

Yaw OK

Wind Turbine Status

Turbine State **Running**

Inverter State **Active**

Warnings **No Warnings**

Faults **No Faults**

Fault Reset

Operating Conditions

Wind Speed OK

Temperature OK

External Conditions OK

Grid OK

Ambient Temp



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**Northern**  
POWER SYSTEMS

## The Port of Milwaukee



MILWAUKEE  
OFFICE OF  
ENVIRONMENTAL  
SUSTAINABILITY




THE PORT OF  
MILWAUKEE

Overview




Current Status

Links

The City of Milwaukee's Office of Environmental Sustainability and the Port of Milwaukee partnered to install a Northern Power 100 wind turbine at the Port's Administration building near the shore of Lake Michigan. The turbine provides more than 100% of the electricity needs of the Administration building. According to Mayor Barrett, "This turbine is a demonstration of the city's commitment to clean energy. It is the first wind energy system powering a city building with clean, renewable electricity. This installation will benefit both the environment and taxpayers of Milwaukee."



Performance Since February 27, 2012:

Total Energy	Environmental Equivalent	Pollutant Offsets
 <p style="font-size: 24px; font-weight: bold;">26,076 kWh</p> <p style="font-size: 12px;">Total energy generated by system since installation</p>	 <p style="font-size: 24px; font-weight: bold;">28 houses</p> <p style="font-size: 12px;">The total amount of energy generated is enough to power this many houses for one year</p>	 <p style="font-size: 24px; font-weight: bold;">86 lbs</p> <p style="font-size: 12px;">The total amount of SOx avoided since installation</p>

11:39 AM  
4/12/2012


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**Northern**  
POWER SYSTEMS

## The Port of Milwaukee



MILWAUKEE  
OFFICE OF  
ENVIRONMENTAL  
SUSTAINABILITY



**THE PORT OF  
MILWAUKEE**




Overview


Current Status

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**Performance Since February 27, 2012:**

Cost Savings	Environmental Equivalent	Pollutant Offsets
 <p style="font-size: 24px; font-weight: bold;">\$3,390</p> <p style="font-size: 12px;">Estimated avoided electricity cost based on \$0.13/kWh</p>	 <p style="font-size: 24px; font-weight: bold;">38,072 miles</p> <p style="font-size: 12px;">The total amount of CO2 avoided is equal to this many miles driven in a family car</p>	 <p style="font-size: 24px; font-weight: bold;">33 lbs</p> <p style="font-size: 12px;">The total amount of NOx avoided since installation</p>



Cost Savings

\$3,390

Estimated avoided electricity cost based on \$0.13/kWh

Environmental Equivalent

38,072 miles

The total amount of CO2 avoided is equal to this many miles driven in a family car

Pollutant Offsets

33 lbs

The total amount of NOx avoided since installation

11:41 AM  
4/12/2012



JOEY D

# PORT OF MILWAUKEE PRESENTATION TO CAPITAL IMPROVEMENTS COMMITTEE 4-12-2012

⚓ SHIP APRONS & ROADS

SLIDE NUMBER 14

# Type of Dock loading





IRYDA

LIMASSOL





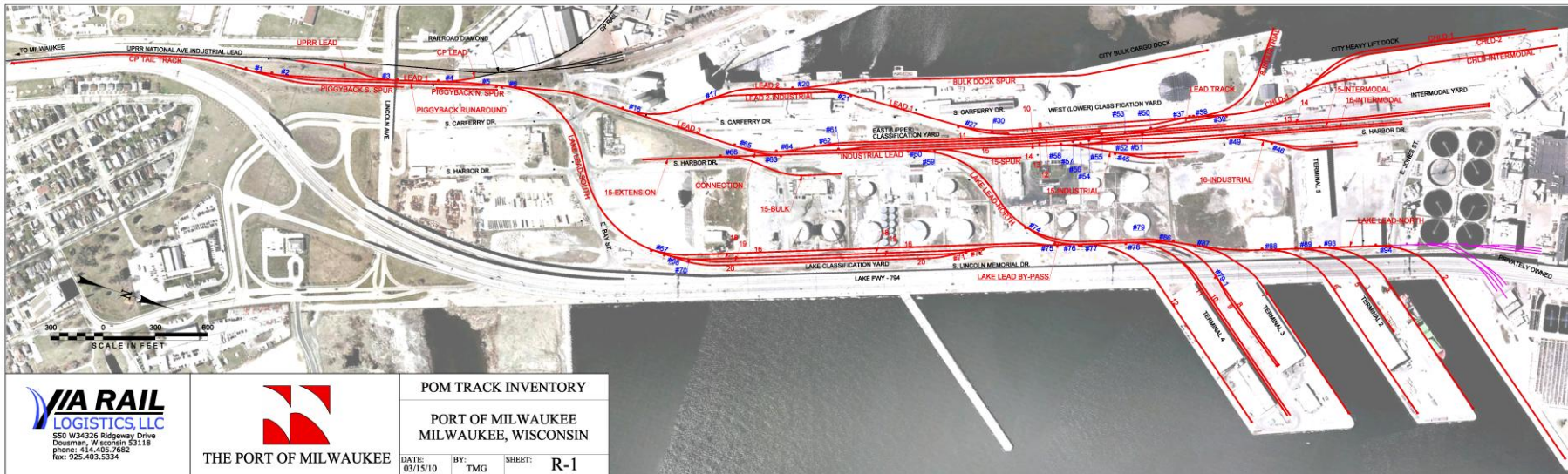




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 RAILROAD TRACK

# PORT OF MILWAUKEE PRESENTATION TO CAPITAL IMPROVEMENTS COMMITTEE 4-12-2012



# Type of Dock Loading





UTLX 672559

CRDX



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Containers are available at the Port on the sixth morning after the train leaves Vancouver, and on the third morning after leaving Montreal.

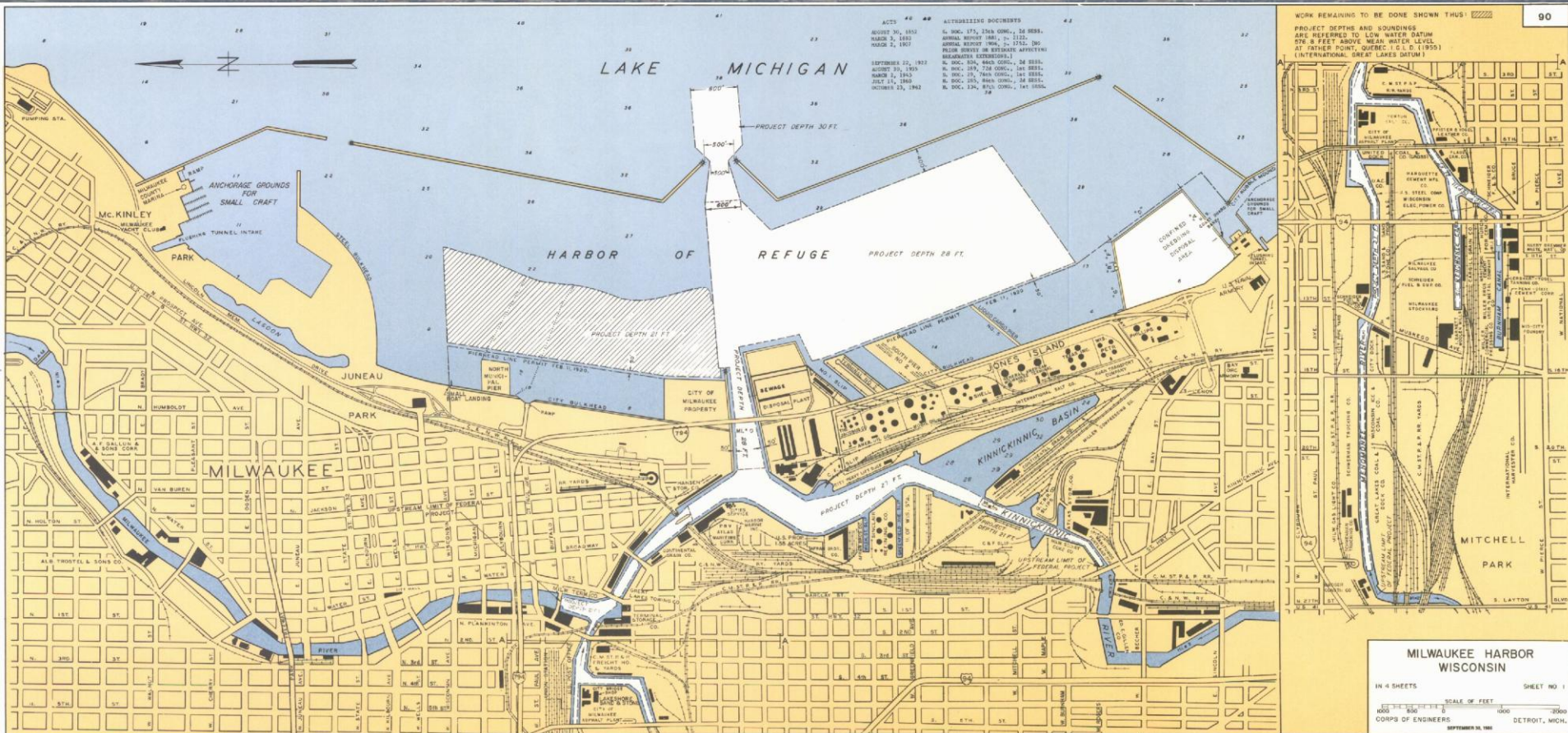


Customers can pick up their container within minutes of unloading the train with virtually no waiting time to load trucks.



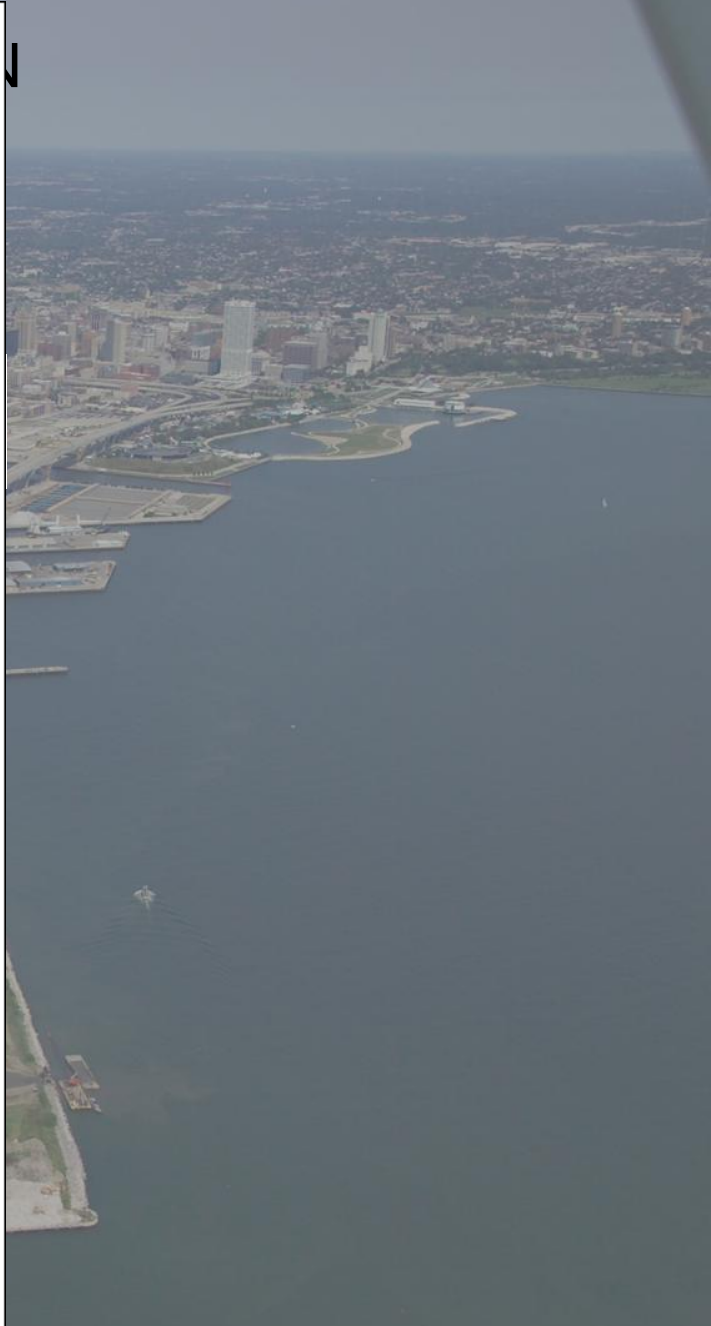
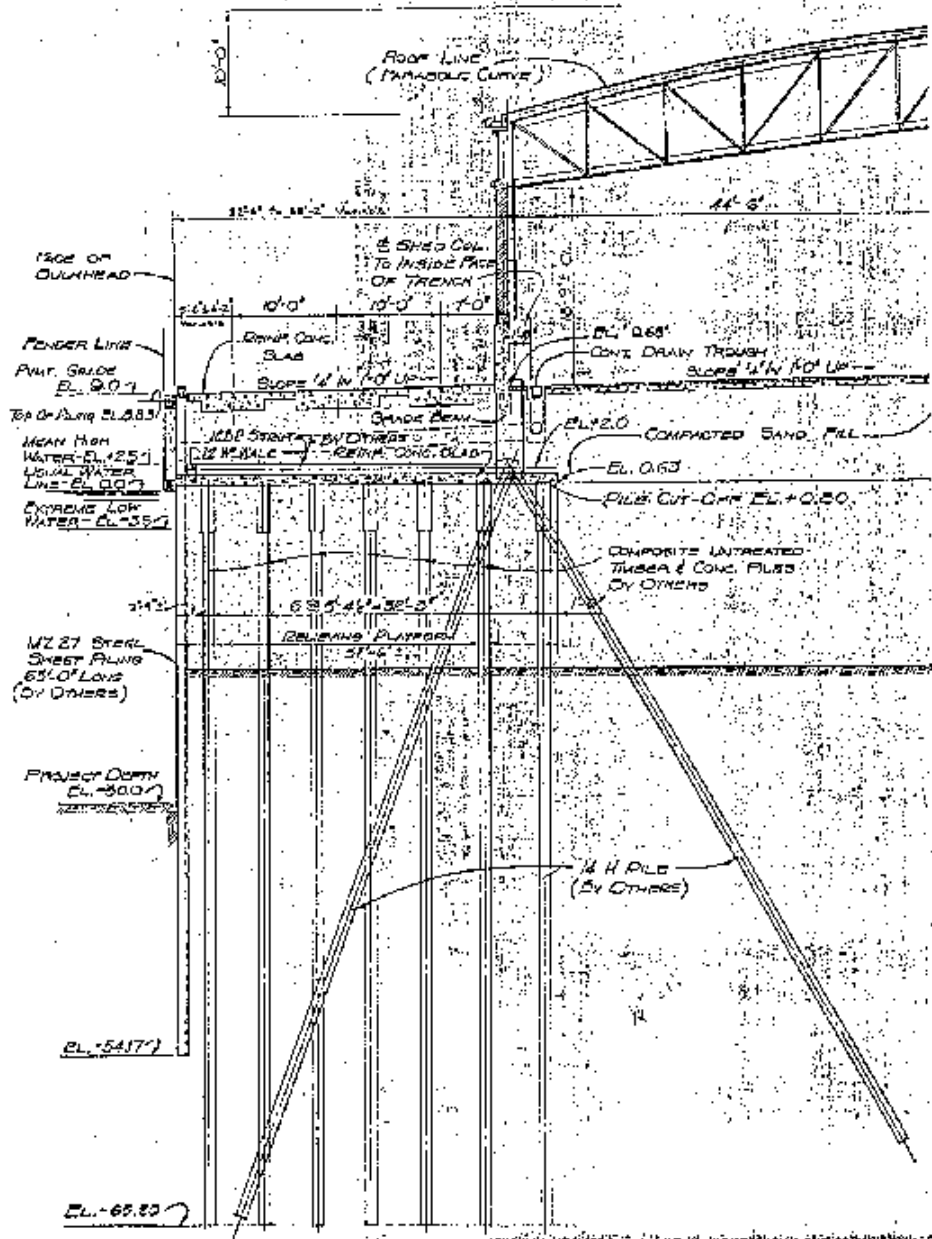


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# PORT OF MILWAUKEE PRESENTATION TO CAPITAL IMPROVEMENTS COMMITTEE 4-12-2012

## ⚓ DOCKWALLS







# PORT OF MILWAUKEE PRESENTATION TO CAPITAL IMPROVEMENTS COMMITTEE 4-12-2012

## ⚓ PIERs & TERMINALS



International and domestic cruise ship business began in 1997 with the c. Columbus.





# Discovery World at Pier Wisconsin

- new cruise ship dock



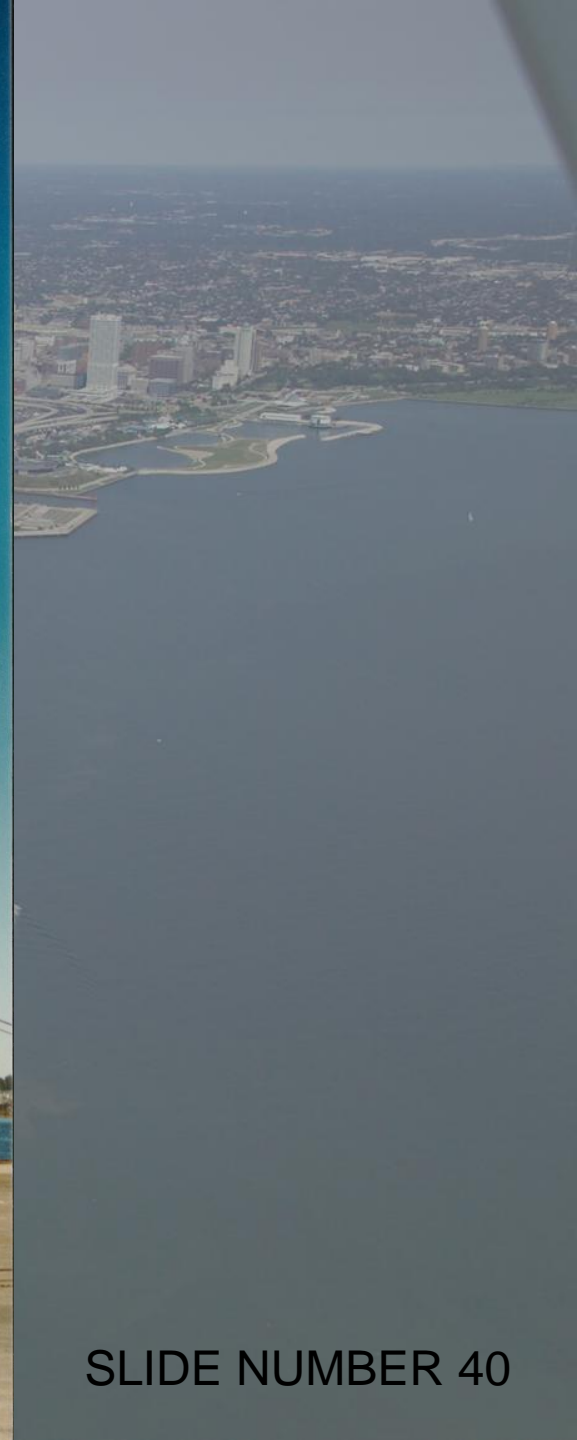
Small ships like the Grand Mariner make 4 to 5 trips each year to the new cruise ship dock at Pier Wisconsin.





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⚓ EQUIPMENT



# PORT OF MILWAUKEE PRESENTATION





BIG HENRY

PORT OF  
MILWAUKEE  
CRAN NO. 17

PO

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⚓ SEWERS

SLIDE NUMBER 43

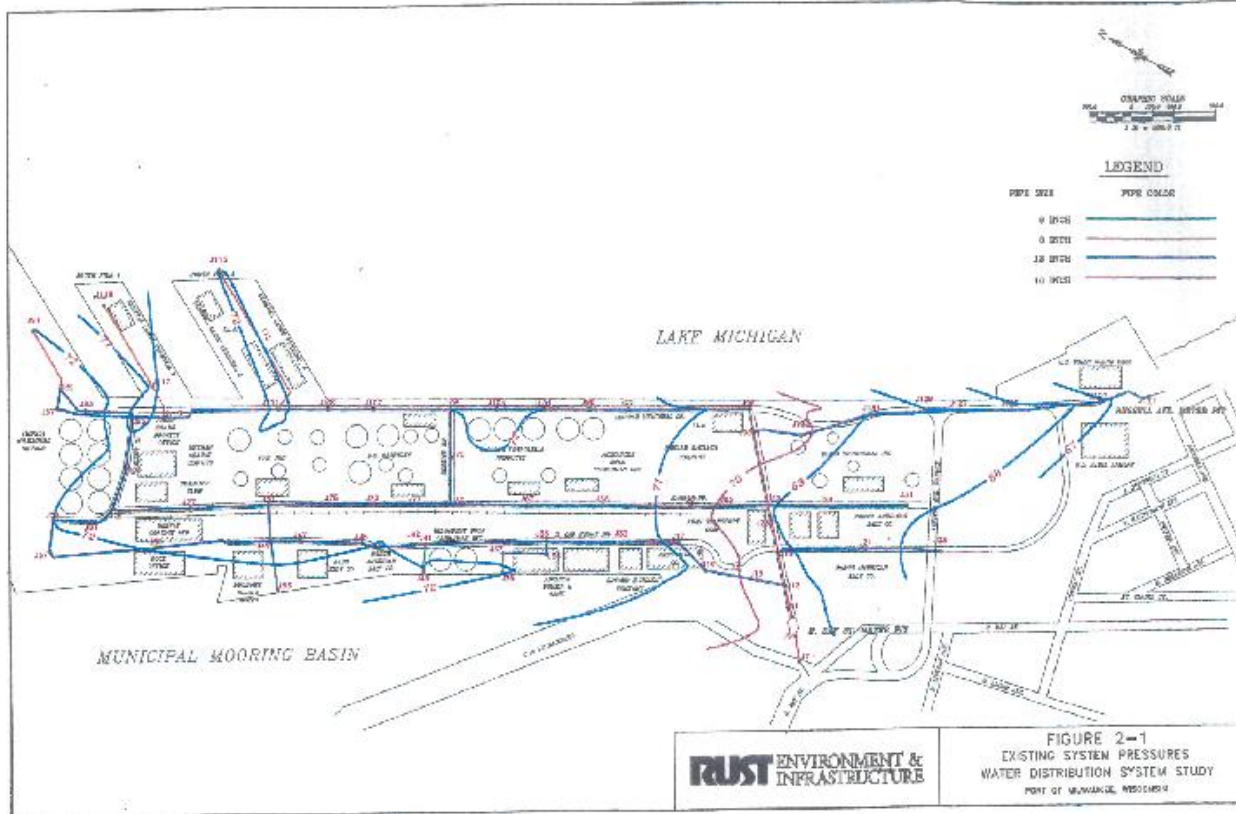


# PORT OF MILWAUKEE PRESENTATION TO CAPITAL IMPROVEMENTS COMMITTEE 4-12-2012

⚓ WATER LINES

SLIDE NUMBER 44

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# PORT OF MILWAUKEE PRESENTATION TO CAPITAL IMPROVEMENTS COMMITTEE 4-12-2012

An aerial photograph of the Port of Milwaukee waterfront. The image shows a large body of water on the right, with a multi-lane highway running parallel to the shore. Various industrial buildings, parking lots, and green spaces are visible along the waterfront. A white rectangular box is overlaid on the image, containing the text 'ELECTRIC SERVICES' with an anchor icon to its left.

⚓ ELECTRIC SERVICES

# PORT OF MILWAUKEE PRESENTATION TO CAPITAL IMPROVEMENTS COMMITTEE 4-12-2012

📍 BUILDINGS

# PORT OF MILWAU GENERAL CARGO TERMINA



**FEDERAL  
MARINE  
TERMINALS, INC.**





LAKE ONTARIO  
MAJURO

PORT OF MILWAUKEE  
GENERAL CARGO TERMINAL 2

DANGER  
No Smoking  
No Open Fire

# PORT OF MILWAUKEE PRESENTATION TO CAPITAL IMPROVEMENTS COMMITTEE 4-12-2012





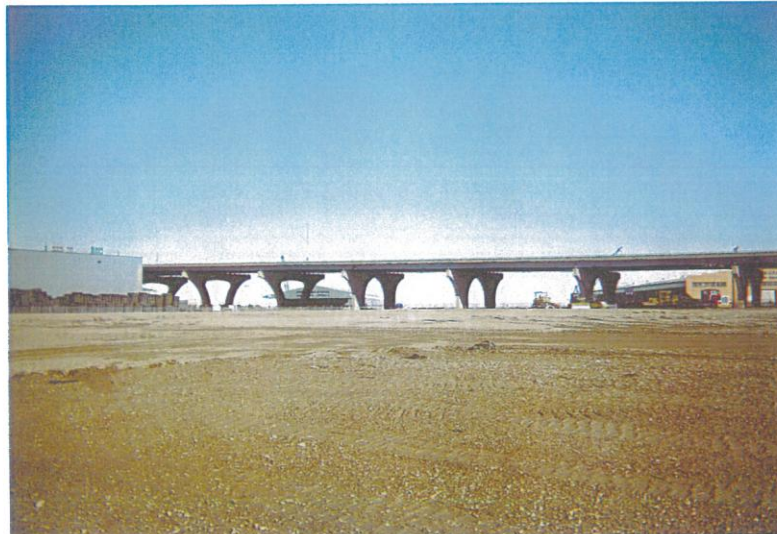


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## ⚓ ENVIRONMENTAL REMEDIATION



View Looking Southeast Across the Completed Final Cover Over the Former PTW, Inc. Site (12/26/2011)



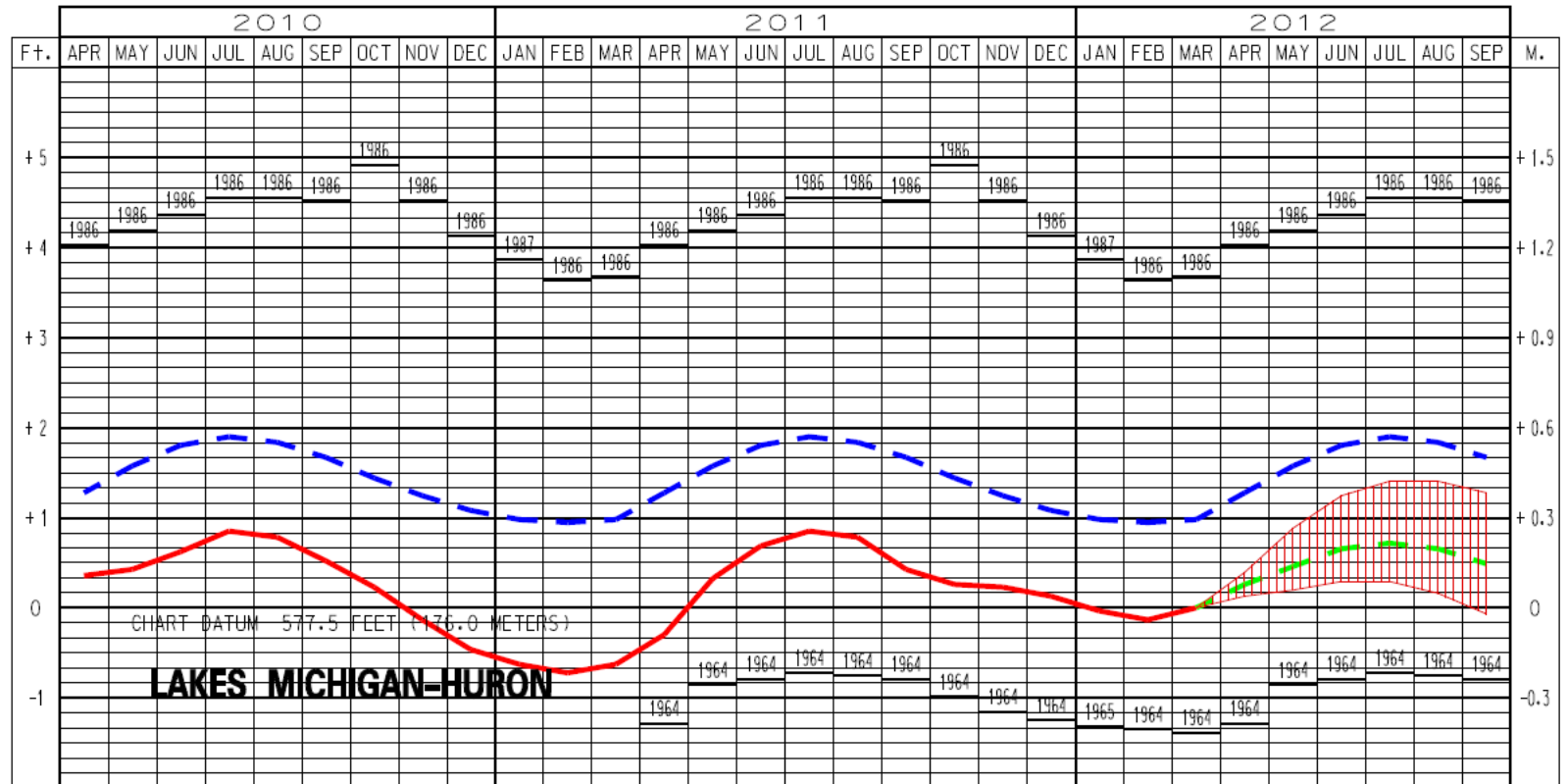
View Looking Northeast Across the Completed Final Cover Over the Former PTW, Inc. Site. Final touch up Grading and Compacting Completed During the Week of 12/26 through 12/30/2011 (12/26/2011)

# PORT OF MILWAUKEE PRESENTATION TO CAPITAL IMPROVEMENTS COMMITTEE 4-12-2012

⚓ DREDGING

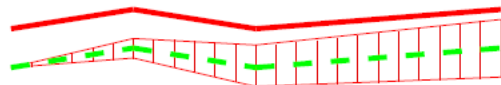
SLIDE NUMBER 56

## LAKES MICHIGAN-HURON WATER LEVELS - APRIL 2012



**LEGEND**  
LAKE LEVELS

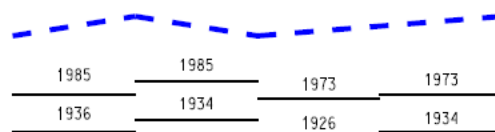
RECORDED  
PROJECTED



AVERAGE \*\*

MAXIMUM \*\*

MINIMUM \*\*



\*\* Average, Maximum and Minimum for period 1918-2011

Like snow that fall on roads, material that settles out in the shipping channel needs to be removed to kept the ships moving.



The material is dredged and placed in a dredge material management facility creating new usable land over time.



An aerial photograph of Milwaukee, Wisconsin, showing the city skyline, the harbor, and the Port of Milwaukee. The image captures a wide view of the city, including residential areas, commercial buildings, and industrial zones. The Port of Milwaukee is a prominent feature, with its extensive pier system extending into the water. The text is overlaid on the top left and center of the image.

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COMMITTEE 4-12-2012

QUESTIONS ?  
THANKS YOU !