

A photograph of the Mackinac Bridge spanning Lake Michigan, with the sun setting behind the clouds, creating a warm glow. The bridge's two large towers and suspension cables are prominent. A dark blue semi-transparent banner is overlaid across the middle of the image, containing the title and speaker information.

# Mackinac Bridge Authority Straits Tunnel Proposal

Keith Creagh, Director, Michigan Department of Natural Resources

Dr. Michael Mooney, state technical expert

Valerie Brader, attorney for the administration

# Enbridge Oil Spill

- Line 6B spill in Marshall, Michigan
- 21,000 barrels of heavy crude oil spill in a tributary of the Kalamazoo River
- Clean up costs more than \$1 billion
- Increased attention on potential ecological and economic damage that could result from Line 5 failure in the Straits of Mackinac



# Increased Focus on Pipelines

## Michigan Petroleum Pipeline Safety Task Force recommendations:

- Prohibit heavy crude oil from moving through the Straits pipeline
- Independent risk analysis, adequate financial insurance
- Independent alternatives analysis
- Additional information from Enbridge

# Increased Focus on Pipelines

## Task Force recommendations:

- Mapping of existing pipelines
- Emergency planning and spill response collaboration
- Emergency response training and drills
- Regular consultation with PHMSA
- Legislation on spill response plans, spill reporting, civil fines
- Evaluate hazardous state liquid pipelines safety program
- Legislation or rule making for siting future pipelines
- Create an advisory committee on pipeline safety
- Create a petroleum pipelines information website

# Creation of the Pipeline Safety Advisory Board

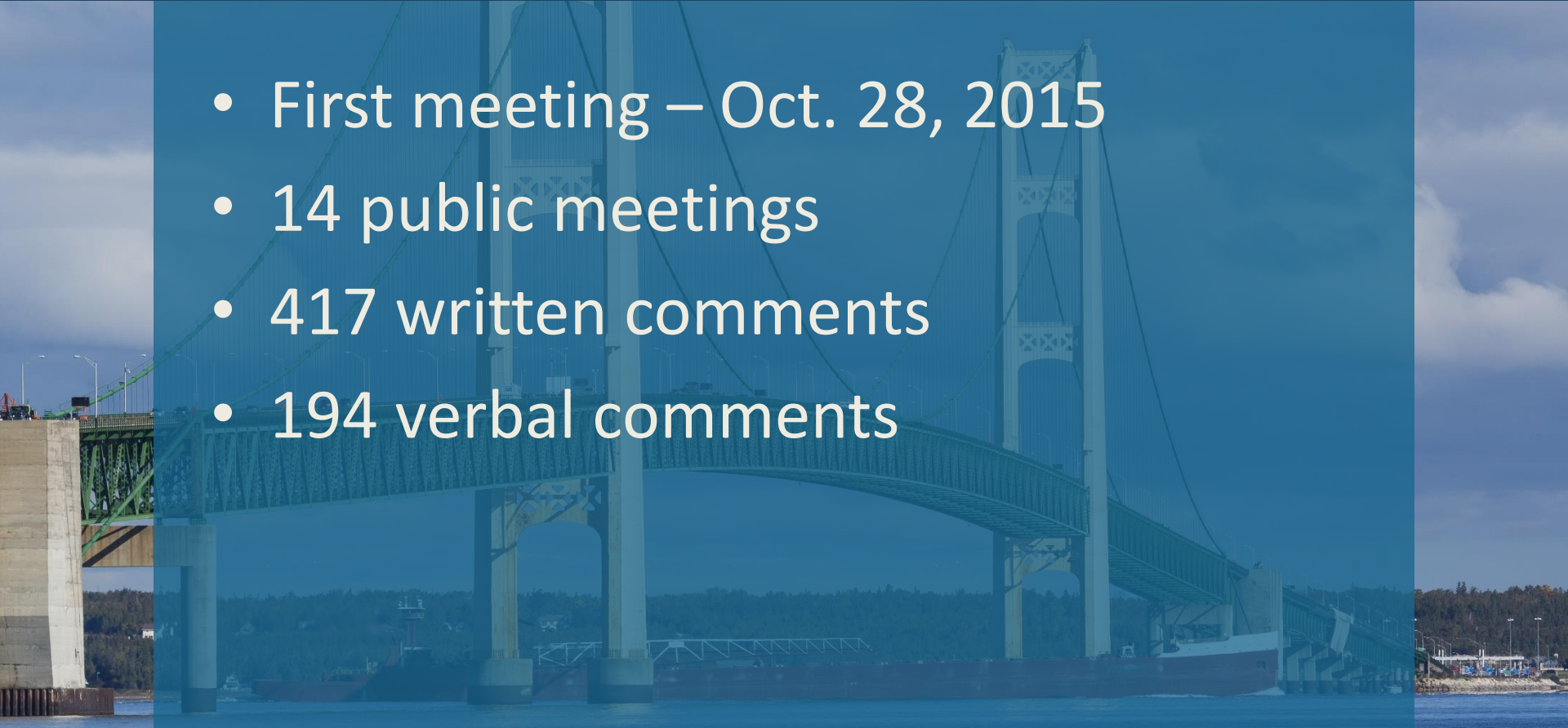
Charged with:

- Recommendations for implementation of the Michigan Petroleum Pipeline Task Force Report
- Identifying best practice in pipeline safety and siting across the United States
- Recommendations on pipeline emergency response and planning
- Recommendations on state policies and procedures regarding pipeline siting
- Reviewing information submitted to the state in response to the Michigan Petroleum Pipeline Task Force Report.
- Recommendations to increase transparency and public engagement on pipelines



# PSAB Public Engagement

- First meeting – Oct. 28, 2015
- 14 public meetings
- 417 written comments
- 194 verbal comments



# Independent Reports

- Independent Alternatives Analysis for the Straits Pipeline
- Independent Risk Analysis for the Straits Pipeline
- Seven public feedback sessions regarding Alternatives and Risk analyses

# Key Developments

Enforcement of terms of 1953 easement related to:

- Gaps in protective coating on the pipeline
- Pipeline support anchors



# Key Developments

- June 2017 – hydrotest in June 2016, monitored by state experts; positive result
- August 2017 -- gaps discovered in coating of Line 5, at least one dinner-plate sized; cathodic protection still operating.

# First Agreement

- November 2017
- Demands specific actions of Enbridge with hard deadlines
- Immediate safety improvements
- Increased transparency, oversight for Line 5
- Contemplates second agreement



# Feasibility Analysis

- Could you build a tunnel providing secondary containment?
- Dr. Michael Mooney, head of Colorado School of Mines underground construction department, hired as a part-time state employee
- Result: tunnel a feasible alternative



# Anchor Strike

- April 2018
- ATC transmission circuit severed, dielectric fluid spilled
- Damage to abandoned Consumers Energy lines
- Small dents to Line 5
- DNR issues emergency “no anchor” rule

# Second Agreement

- Oct. 3, 2018
- Further Protects Line 5 across Michigan through increased stewardship
- Requires accelerated actions at 13 sensitive Line 5 water crossings other than the Straits, with future actions at 68 other crossings

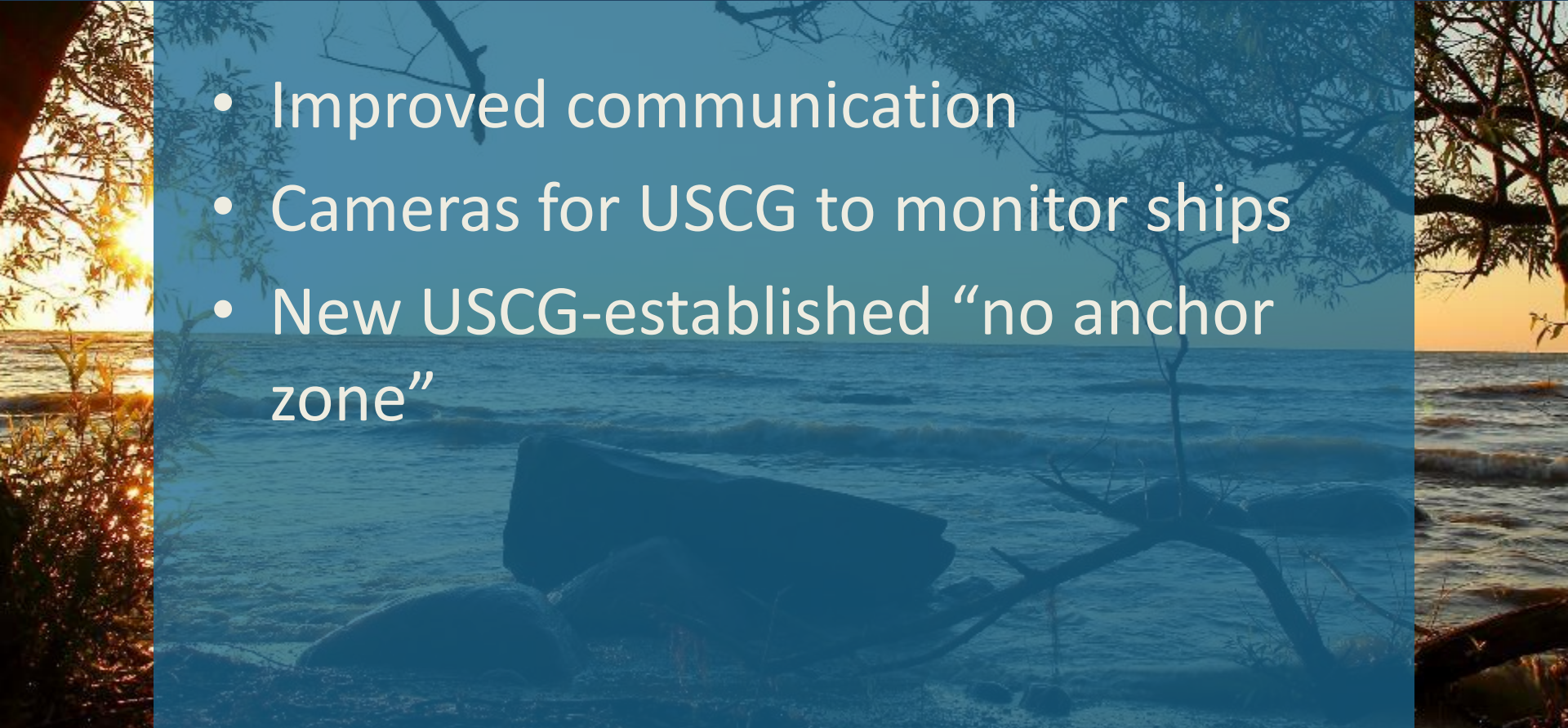
# Second Agreement

- Requires \$1.8 billion financial assurance by Enbridge in event of a spill
- Pipeline shutdown at 8' waves for one hour
- Staff available 24 hours a day to be onsite within 15 minutes at 6.5' waves
- New radar system to monitor wave height



# Second Agreement

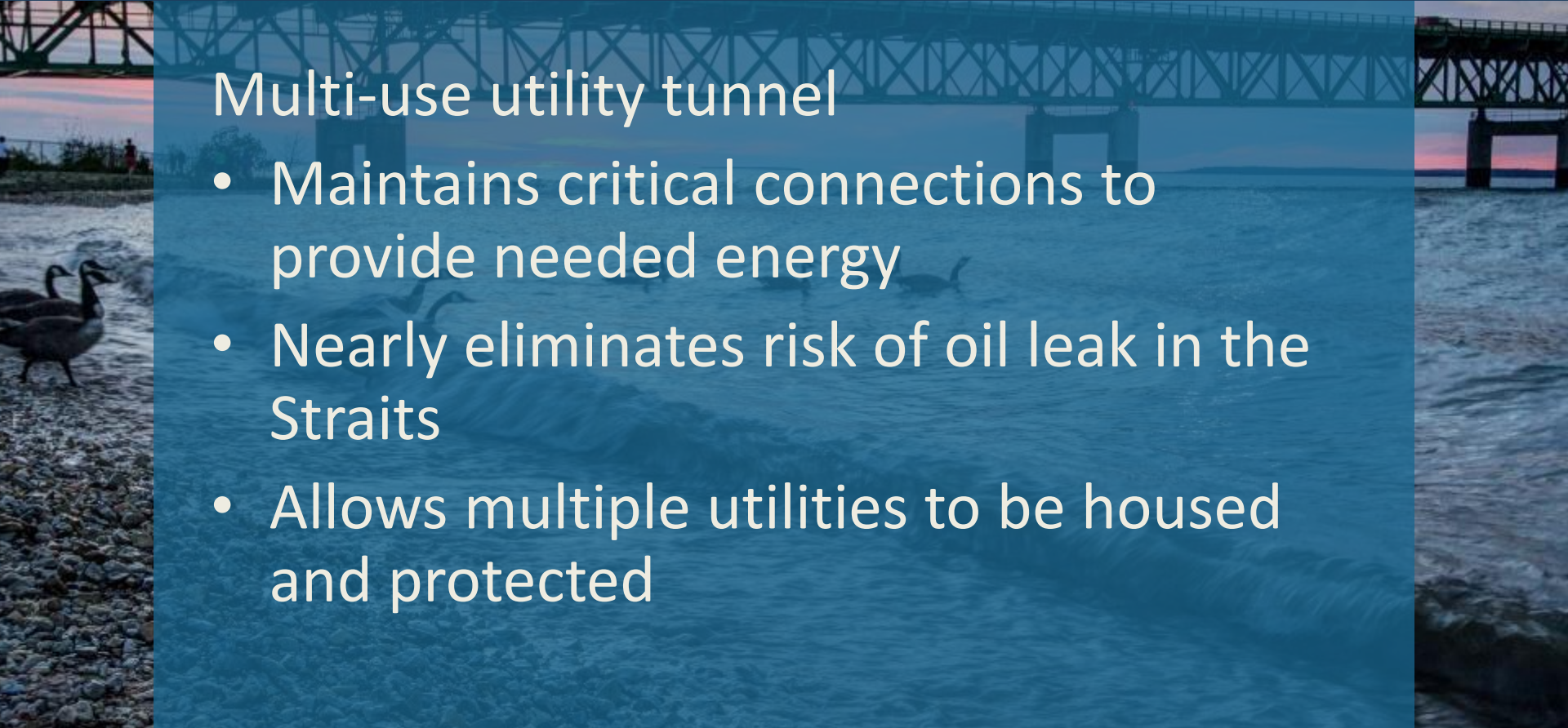
- Improved communication
- Cameras for USCG to monitor ships
- New USCG-established “no anchor zone”



# Second Agreement

## Multi-use utility tunnel

- Maintains critical connections to provide needed energy
- Nearly eliminates risk of oil leak in the Straits
- Allows multiple utilities to be housed and protected





# Second Agreement

## Multi-use utility tunnel

- Supports economic development
- Enbridge will invest an estimated \$350 to \$500 million
- Design, construction, operation and maintenance 100% funded by Enbridge



# Second Agreement

## Multi-use utility tunnel

- Other infrastructure owners' lease payments will offset operations and maintenance expenses
- Project would take 7-10 years to complete

# Technical feasibility

Dr. Michael Mooney  
Colorado School of Mines

# 1953 Easement

- Granted by Department of Conservation to Lakeland Pipe Line Company and its successors
- No termination date
- Deactivation





# Role of the MBA

- Construction of tunnel decided in October 2018 agreement
- MBA asked to oversee the tunnel on behalf of the people of the state

# Why the MBA?

- Decades of experience and expertise managing the Mackinac Bridge
- Solid record of success and bipartisan action
- Would own and oversee tunnel operation; Enbridge would lease space



# Potential MBA, Enbridge Agreement

- Seeking MBA feedback on possible terms to further shape the agreement based on comments
- Draft outline of terms sent to members reflects current thinking on structure, etc., for discussion

# Potential MBA, Enbridge Agreement

Principles reflected in draft:

- Bridge revenues protected
- Enbridge would pay for construction, operation and maintenance with clear milestones, visibility for MBA
- Enbridge would own tunnel from construction to completion and indemnify MBA
- MBA not required to accept tunnel if tunnel fails to meet agreed-upon technical specs



# Potential MBA, Enbridge Agreement

- Upon completion and acceptance, MBA would give Enbridge a 99-year lease to operate a pipeline in the tunnel
- Enbridge lease paid for by performing operation and maintenance
- Third parties can lease space; their lease revenues offset operation and maintenance
- MBA would help secure permits, provide use of state lands, joint defense

# Potential MBA, Enbridge Agreement

- Enbridge would be responsible for decommissioning
- MBA would have no liability or responsibility for pipeline operation
- Third parties would be responsible for operation of their own infrastructure



# Potential MBA, Enbridge Agreement

- Indemnity would survive termination for impossibility, etc.
- If Enbridge causes termination, the company reimburses MBA for any staff time, etc.
- If MBA causes termination, Enbridge keeps the tunnel and right to construct, operate



# Anticipated Third Agreement with State

- End date on use of dual pipelines in Straits: Dec. 31, 2028
  - Date can be extended based on permitting, litigation delays for tunnel construction
- Clear plans to remedy current known conditions (coatings)
- Increased inspection regime, visibility

A photograph of a large suspension bridge, likely the Mackinac Island Bridge, spanning a body of water. The bridge features two tall, brown steel towers with arched openings and numerous vertical suspension cables. The sky is filled with soft, white and grey clouds, suggesting a bright but slightly overcast day. The water in the foreground is a deep blue with some whitecaps. A dark blue horizontal band is superimposed across the middle of the image, containing the text "Thank you. Questions?".

**Thank you. Questions?**