



Timely Preservation Performed Today...

Better Bridge Infrastructure Tomorrow.

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PRESERVATION

Identify

- What
- Where


Quantify

- How bad is bad?
- Future progression & effects


Solve

- Cost-effective solutions
- Exceed design life

What is Preservation?

- 
- All activities that help to realize or exceed design life
 - Question: what is the difference between maintenance and preservation?
 - Maintenance: proactive & reactive; Preservation: proactive, both are necessary
 - Patching – reactive / Washing – proactive

What is Preservation?

- 
- Preservation is not...
 - Reactive (emergency repair)
 - Structural (structural improvement)
 - Operational (widening)
 - **Philosophical shift**
 - From “reactive putting out fires” to “proactive planning for tomorrow’s problems”

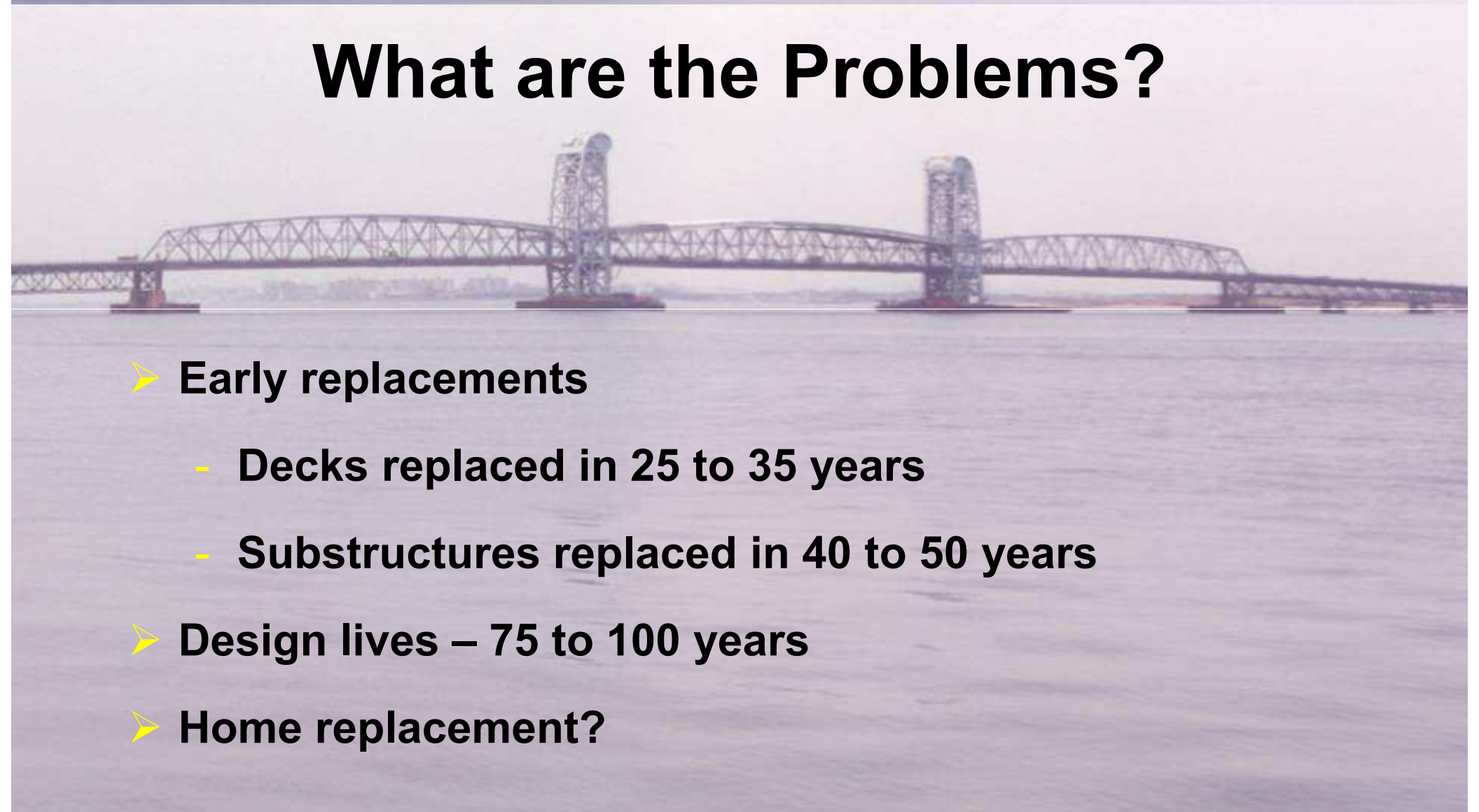
RESULTS



- Owner did not change oil in a very long time...
- A \$100 savings turned into a \$3,500 loss
- Initial outlays would have been greater, long-term cost would have decreased
- Results: significant cost savings, longer service lives


PROBLEMS

What are the Problems?

- 
- **Early replacements**
 - Decks replaced in 25 to 35 years
 - Substructures replaced in 40 to 50 years
 - **Design lives – 75 to 100 years**
 - **Home replacement?**


PROBLEMS

What are the Problems?

- 
- **Rust never rests – even during economic downturn / funding decrease**
 - **Structures built in 1950's and 1960's will need increasing attention**
 - ***We have to do more with less***

FUTURE PROBLEMS

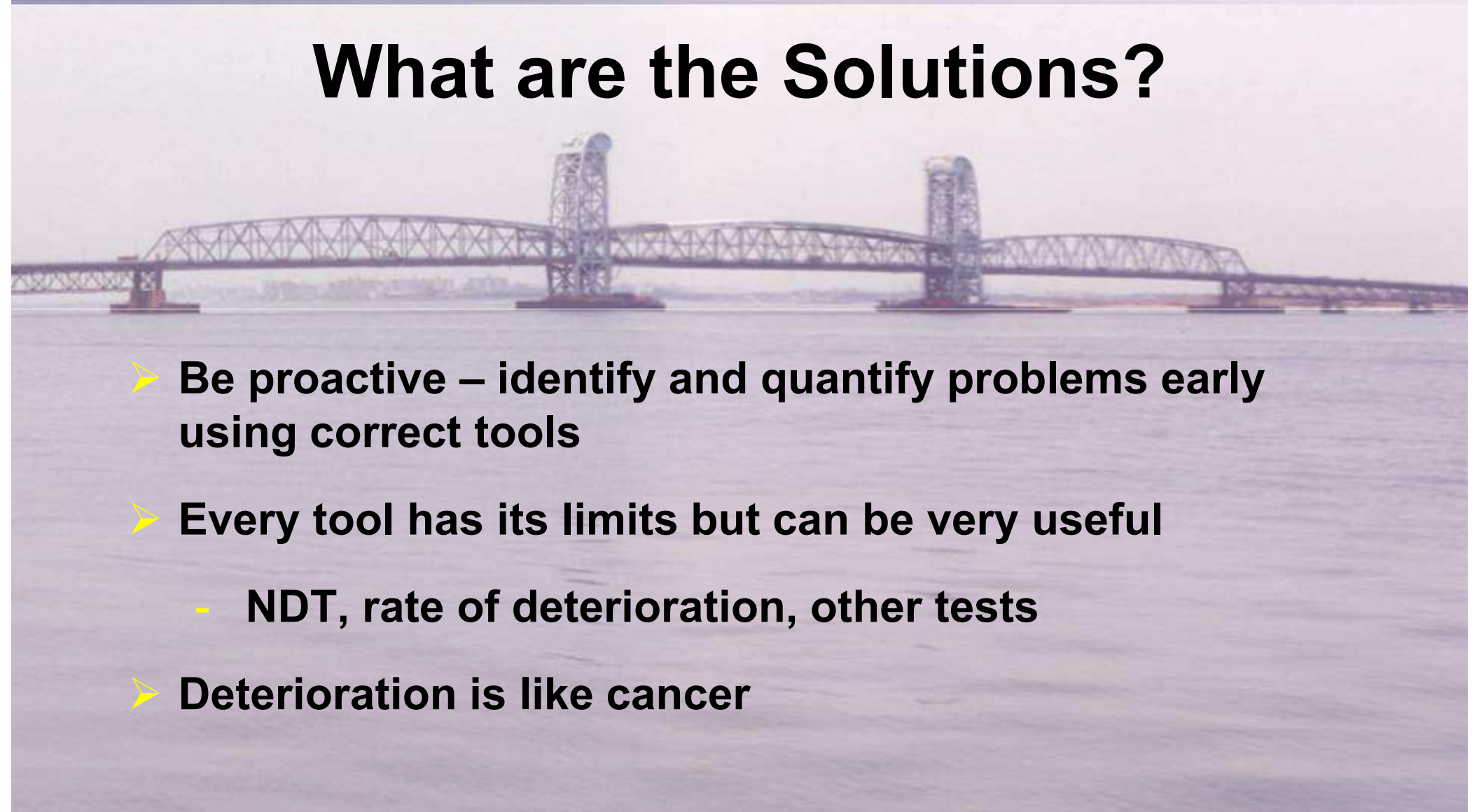
What will we face?

- 
- **Currently – very expensive to replace**
 - **Currently achieving only 50% of design life, thus doubling the cost**
 - **Structure conditions going from bad to worse**
 - **Increasing future tax burden due to the increasing number of assets to manage**




SOLUTIONS

What are the Solutions?

- 
- Be proactive – identify and quantify problems early using correct tools
 - Every tool has its limits but can be very useful
 - NDT, rate of deterioration, other tests
 - Deterioration is like cancer


SOLUTIONS

What are the Solutions?

- 
- The earlier we quantify the problem, the easier it is to solve
 - Once problems are understood, our resources help you make decisions
 - There is no “one size fits all” evaluation methodology or solution

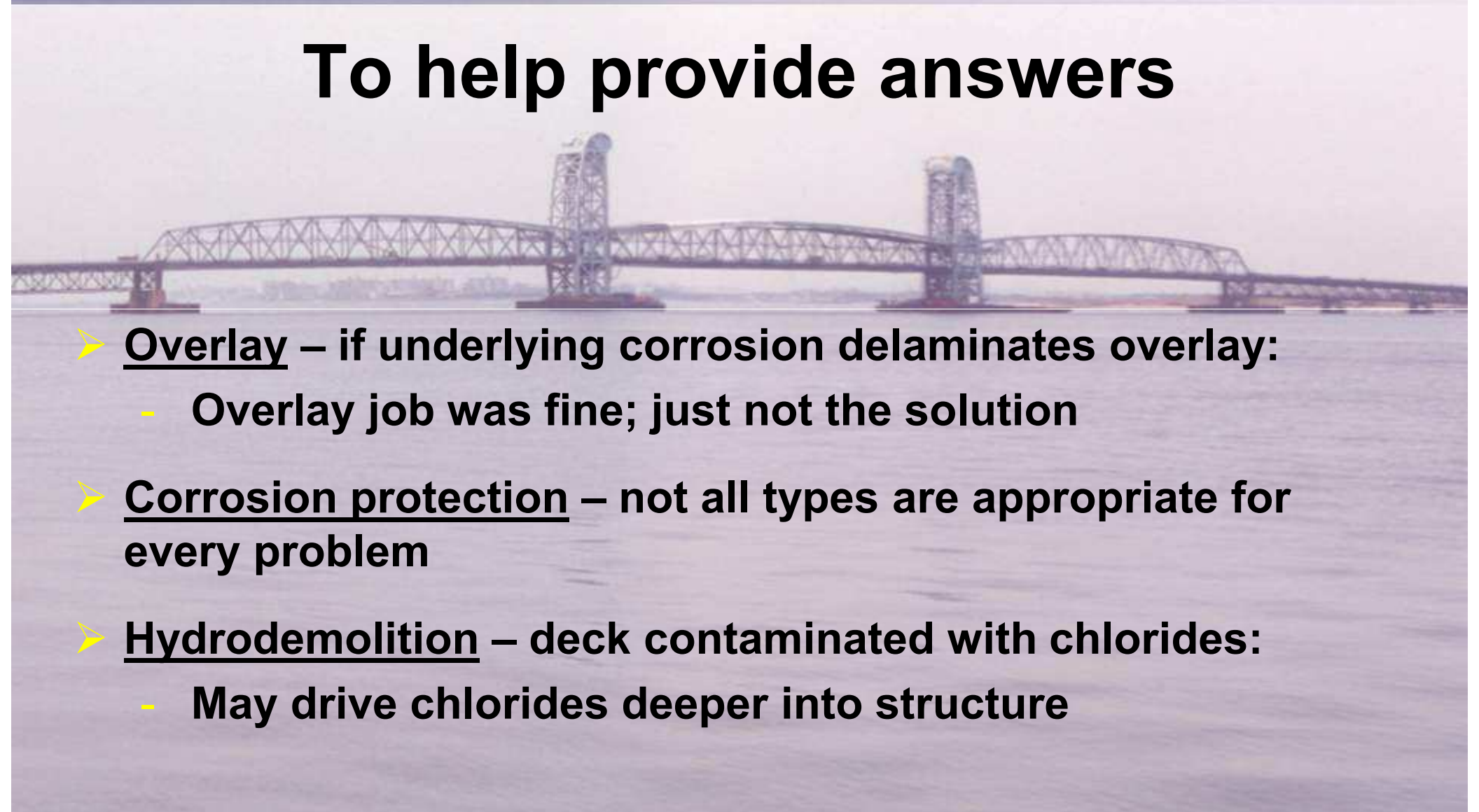
SOLUTIONS

What are the Solutions?

- 
- Power washing
 - Membranes
 - Sealers
 - Overlays
 - Inhibitors
 - Corrosion protection
 - Concrete coatings
 - Steel coatings
 - Joint repair
 - Deck repair
 - Seismic


OBJECTIVES

To help provide answers

- 
- **Overlay** – if underlying corrosion delaminates overlay:
 - Overlay job was fine; just not the solution
 - **Corrosion protection** – not all types are appropriate for every problem
 - **Hydrodemolition** – deck contaminated with chlorides:
 - May drive chlorides deeper into structure

OBJECTIVES

What Do We Promote?

- 
- **Exceeding design life (increased service life)**
 - **Tools necessary to quantify and solve given problems**
 - **Documented evidence to promote best practices**
 - **Life Cycle cost savings outweigh initial investments = Preservation**

OBJECTIVES

What Do We Promote?

- 
- Education relating to preservation – best practices
 - Doing more with less time, less funding
 - \$2M repair or \$10M replacement?
 - Repair = \$8M savings
 - Over 20 years at 5%= **\$21M savings** (more than pays for repair)

WHY BPA?

The BPA exists to:

- Provide a knowledge bank and **forum for best practices, materials, and tools**
- Seek active members to contribute and learn
- Develop best practices – what has worked, where, when, and how

WHY BPA?


The BPA exists to:

- Provide resources to advance knowledge for preservation
- We are not an authority – instead, we partner with you
- Support research/education in economic, safety, and performance advantages of preservation

What is the History of BPA?

- 
- **Concept: St. Louis (April, 2007)**
 - **Roundtable: TRB 2008**
 - FHWA
 - NCPP
 - FP²
 - Agencies (VDOT, NCDOT, LA DOTD, Caltrans, NYSDOT)

What is the History of BPA?

- 
- Steering Committee (February 2008)
 - AASHTO & FHWA (May 2008)
 - AASHTO Monterey - rollout (July 2008) Official Corporation Formation (Dec. 2008)
 - Supported AASHTO TSP2 Development (2009)
 - NHI Webinar w/ FHWA, AASHTO, & BPA (Jan. 2010)



EXECUTIVE COMMITTEE

Name	Representing	Specialty
Mike Stenko	Transpo	Polymer concrete & overlays
Siva Venugopalan	SCS	Corrosion, NDT, materials, life extension
Lorella Angelini	BASF	Materials, chemicals, & products
Art Dinitz	Transpo	Polymer concrete & overlays
Ben Witter	SCS	Corrosion, NDT, materials, life extension
Sam Knaster	Ammann & Whitney	Architectural & engineering services

PROSPECTIVE MEMBERS

Seeking More Experts


- 
- A wide-angle photograph of a large, multi-span bridge with two prominent towers, likely a cable-stayed bridge, spanning a body of water under a hazy sky.
- **Industry Representatives**
 - **Consulting Engineers**
 - **Bridge Owners**
 - **Contractors**
 - **Academia**

DIVISION SUBCOMMITTEES

Seeking Owners, Experts, and Leaders


- 
- Foundations
 - Super Structure
 - Bearings
 - Joints
 - Drainage
 - Steel Coatings
 - Concrete Coatings
 - Corrosion Protection
 - Surfaces/Waterproofing
 - Deck Repair
 - Seismic

Future Webinar Topics:

- 
- ***Proactive NDT Assessment Prevents Sudden Failures or Costly Replacements***
 - ***Thin Overlays: Proper Material Selection & Detailed Specifications Assure Desired Results***
 - ***Can Severely Deteriorated Substructures be Cost Effectively Rehabilitated?***
 - ***Does Bridge Management Need a More Consistent & Concise Rating & Reporting System?***


GOALS

In 2010...

- 
- A wide-angle photograph of a large, multi-span bridge with two prominent towers, likely a cantilever bridge, spanning a body of water under an overcast sky.
- **Facilitate the exchange of information**
 - **Increase the awareness of preservation benefits**
 - **Improve the quality and understanding of bridge preservation technologies**
 - **Inspire the creation of new ideas**


GOALS

In 2010...

- 
- **Jointly sponsor and undertake workshops, seminars, and webinars – focus on bridge preservation and maintenance**
 - **Cooperate with other associations, agencies, and groups on issues of common concern**

CLOSING

Where the BPA is Going...

- 
- **Preservation → Owner Equity → Liquidity → Launch new projects**
 - **Stay on the cutting edge of the industry**
 - **We welcome new experts and members!**



CONTACT INFORMATION

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