

GLMRIS BRANDON ROAD STUDY PUBLIC MEETING

September 2017

The graphic features the acronym 'GLMRIS' in large, green, outlined letters at the top. Below it, the text 'GREAT LAKES AND MISSISSIPPI RIVER INTERBASIN STUDY' is written in a smaller, blue, sans-serif font. Underneath that, the words 'BRANDON ROAD' are displayed in the same large, green, outlined font. At the bottom of the graphic, there are six square icons with rounded corners, each containing a different scene: a shell and a fish, a lake with a boat, a barge on a river, a person fishing, a house with water rising around it, and a factory with water rising around it. Below each icon is a label: 'AQUATIC NUISANCE SPECIES', 'ECOSYSTEM', 'NAVIGATION', 'RECREATION', 'WATER USE', and 'FLOOD RISK MANAGEMENT'.

GLMRIS
GREAT LAKES AND MISSISSIPPI RIVER INTERBASIN STUDY
BRANDON ROAD

AQUATIC NUISANCE SPECIES
ECOSYSTEM
NAVIGATION
RECREATION
WATER USE
FLOOD RISK MANAGEMENT

“The views, opinions and findings contained in this report are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision, unless so designated by other official documentation.”



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STUDY SCOPE

2014 GLMRIS Report provided basis for this study

GLMRIS-BR Study Goal

- Reduce the risk of one-way aquatic nuisance species transfer to Great Lakes Basin
- Minimize impacts to multiple waterway users



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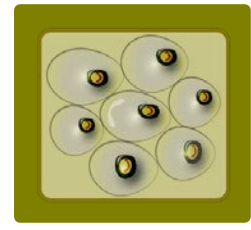
AQUATIC NUISANCE SPECIES

Alternatives adaptable for future species

Modes of Transport:



Swimming



Floating



Hitchhiking

GLMRIS-BR

– Bighead and Silver Carp



– *Fresh Water Crustacean (Apocorophium lacustre)*



WHY BRANDON ROAD?

❑ Effective

- ~ 34 foot high dam
- Upstream movement through lock
- Avoids flood bypass via Upper Des Plaines

❑ Relevant

- Identified in 3 of 6 structural alternatives (GLMRIS Report)

❑ Responsive

- Stakeholder input
- Upstream of leading edge of Asian Carp population

❑ Valuable

- Enhance effectiveness of existing technologies

❑ Minimizes Impacts

- Location seeks to minimize impacts to current waterway uses.



LEVERAGED EXPERTISE & SHARED RESPONSIBILITY



Executive Steering Committee
 USACE • USFWS • USCG • NOAA • USEPA • USDOT

- Great Lakes Commission
- International Joint Commission
- Great Lakes Fisheries Commission
- Metro WRD of Greater Chicago
- State DNRs

Senior Executive Review Group
 USACE HQ • LRD • MVD • SERG Co-chairs
 LRD & MVD CGs, SES
 Chicago & Rock Island Commanders & DPMs
 Regional Integration Team Deputies
 Laboratory and CX Leadership

Stakeholders

NEPA Scoping Interest Groups:
 Navigation & Environmental Communities

Non-Governmental Organizations
 (CAWS Advisory Committee)

Brandon Road Work Group

Congressional Engagements

GLMRIS Program Management LRC

Brandon Road Project Management MVR

Planning MVP/MVR LRC

Real Estate MVR

Communications MVR, LRC

Economics LRC, PCXIN

Nat Res & NEPA MVR, LRC

ANS Risk & Tech Eco-PCX, LRC, MVR, ERDC

Engineering Inland Navigation Design Center & LRC



SAFEGUARDING NATION'S ECONOMIC INTERESTS IN THE GREAT LAKES BASIN AND NATION'S INLAND WATERWAYS

Brandon Road Lock

- Highly utilized for commercial navigation
- 11.3M tons of cargo transit each year
- \$319M in annual transportation benefits
- Link between Great Lakes and Gulf of Mexico

Great Lakes Basin

- 63M recreational fishing trips annually with about \$1.3B in net economic value
- Commercial fishing generates about \$20M in revenue



WHAT ARE WE TRYING TO PROTECT?

- ❑ 20% of the world's fresh water resource
- ❑ Over 5,000 Great Lakes tributaries
- ❑ 41% Great Lakes Basin is governed by Canada

- ❑ >60 fish species are special status
- ❑ 10 Threatened & endangered mussel species

- ❑ ~ **\$1.8B** GLRI & Great Lakes Legacy Act (2010-present)



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CONSEQUENCES OF ANS ESTABLISHMENT

Bighead and Silver Carp

NOAA modeling – Lake Erie

- Asian Carp biomass could range 10% to 34%

Great Lakes Consequences:

- Substantial economic impacts
- Management actions would be in multiple locations
- Perception of quality decreased
- Safety



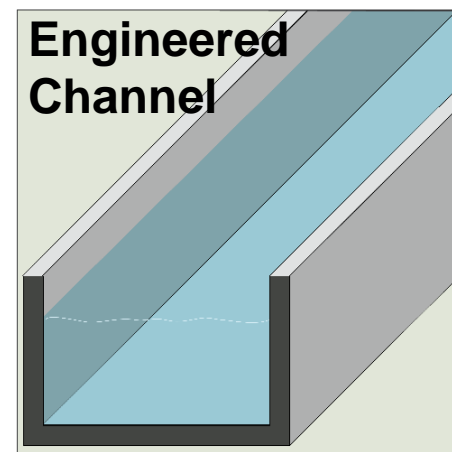
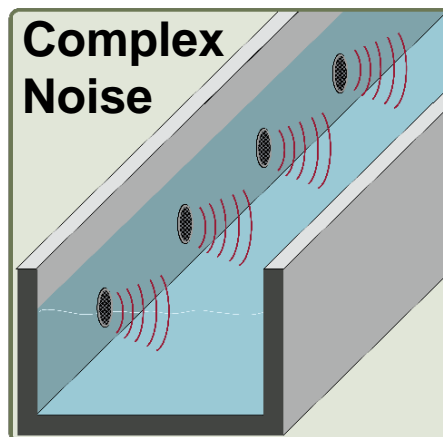
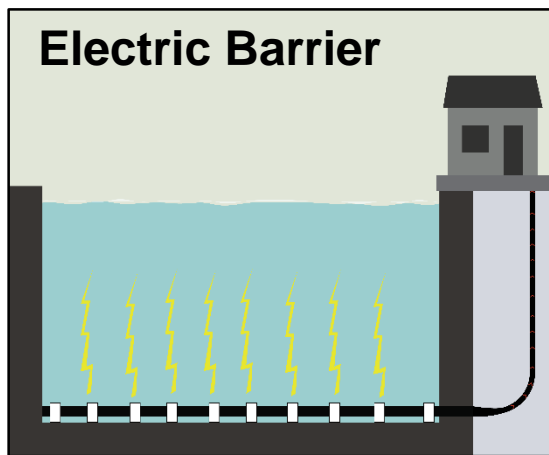
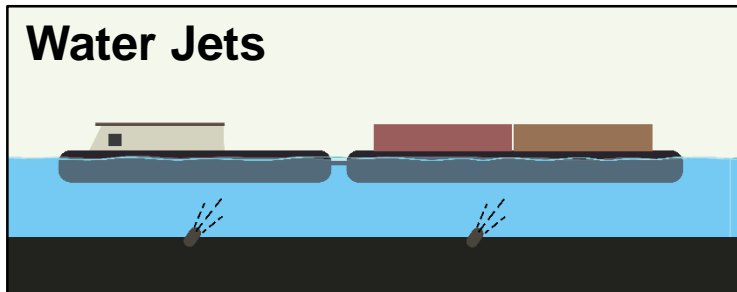
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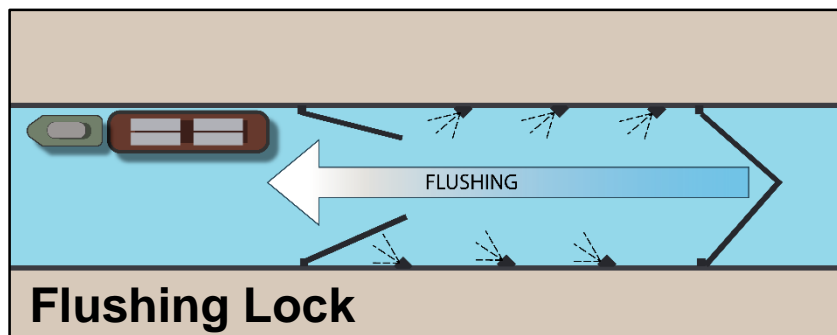
ANS CONTROLS

Modes of Transport:










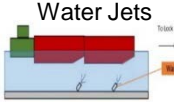
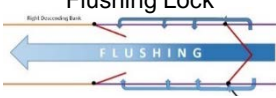
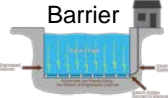





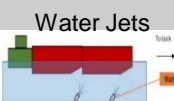
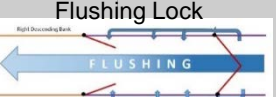



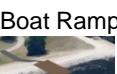




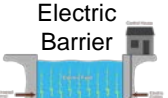
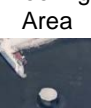




- Swimmers
- Floaters
- Hitchhikers



Nonstructural Measures



ALTERNATIVES

<u>Alternative</u>	<u>ANS Control Measures/Features</u>									
<p>No New Action (No Action)</p>	<p>FWOP </p>	 <p>Public Education and Outreach Monitoring Overfishing/Removal</p>								
<p>Nonstructural Alternative</p>	<p>FWOP </p>	<p>Nonstructural </p>	<p>Boat Ramp </p>							
<p>Technology Alternative – Electric Barrier</p>	<p>FWOP </p>	<p>Nonstructural </p>	<p>Boat Ramp </p>	<p>Engineered Channel </p>	<p>Water Jets </p>	<p>Flushing Lock </p>	<p>Electric Barrier </p>	<p>Mooring Area </p>		
<p>Technology Alternative – Complex Noise</p>	<p>FWOP </p>	<p>Nonstructural </p>	<p>Boat Ramp </p>	<p>Engineered Channel </p>	<p>Water Jets </p>	<p>Flushing Lock </p>	<p>Complex Noise </p>			
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<p>Lock Closure</p>	<p>FWOP </p>	<p>Nonstructural </p>	<p>Boat Ramp </p>	<p>Lock Closure </p>						

EVALUATION CRITERIA

- Effectiveness
- Relative Life Safety
- Impacts to Navigation (NED Costs)
- Costs
 - Construction
 - Operation, and Maintenance, Rehabilitation,
 - Repair and Replacement
 - Mitigation
- Ability to cycle in new
 - Nonstructural ANS Controls
 - Structural ANS Controls
- Number of Structural Control Points in the CAWS
- Modes of Transport



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TENTATIVELY SELECTED PLAN (TSP)

12

Overview:

- ❑ Reduces risk of Mississippi River Basin ANS establishment in Great Lakes Basin
- ❑ Allows for continued navigation
- ❑ Nonstructural measures
- ❑ Mitigation required to address impacts to connectivity



Estimated Cost to Construct: **\$275.4M**

Estimated Cost to Operate and Maintain: **\$8.2M/yr**

Estimated Nonstructural Measures: **\$11.3M/yr**

Estimated Time to Construct: **5 yr**

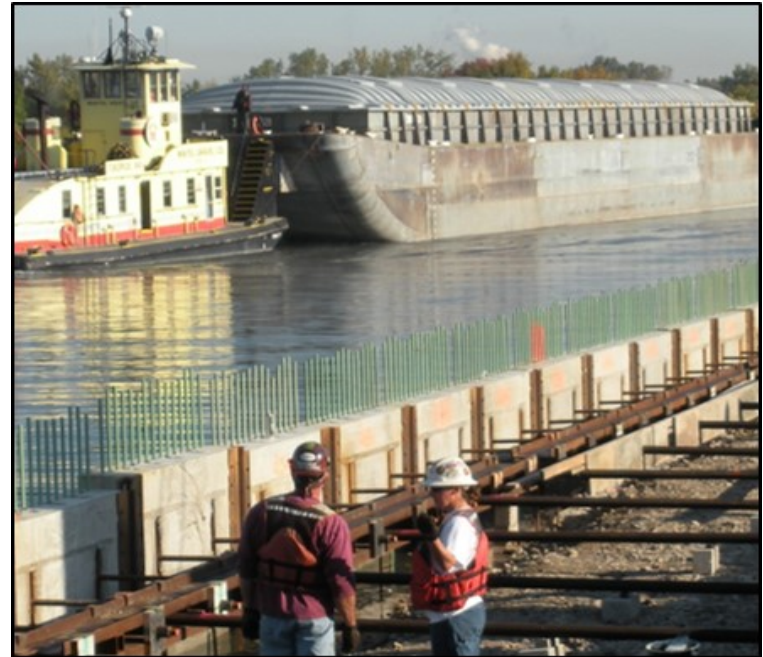


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TSP IMPLEMENTATION

- ❑ Life safety primary consideration
- ❑ Safety evaluation of constructed project
 - USCG, USACE and Navigation Community
- ❑ Assumed Operations:
 - Electric Barrier: When **no** vessels are immediately downstream of barrier, within channel or lock
 - Complex noise on when electric barrier off
- ❑ Seek to operate as effectively as possible within acceptable safety parameters
- ❑ Nonstructural measures begin as soon as project funded



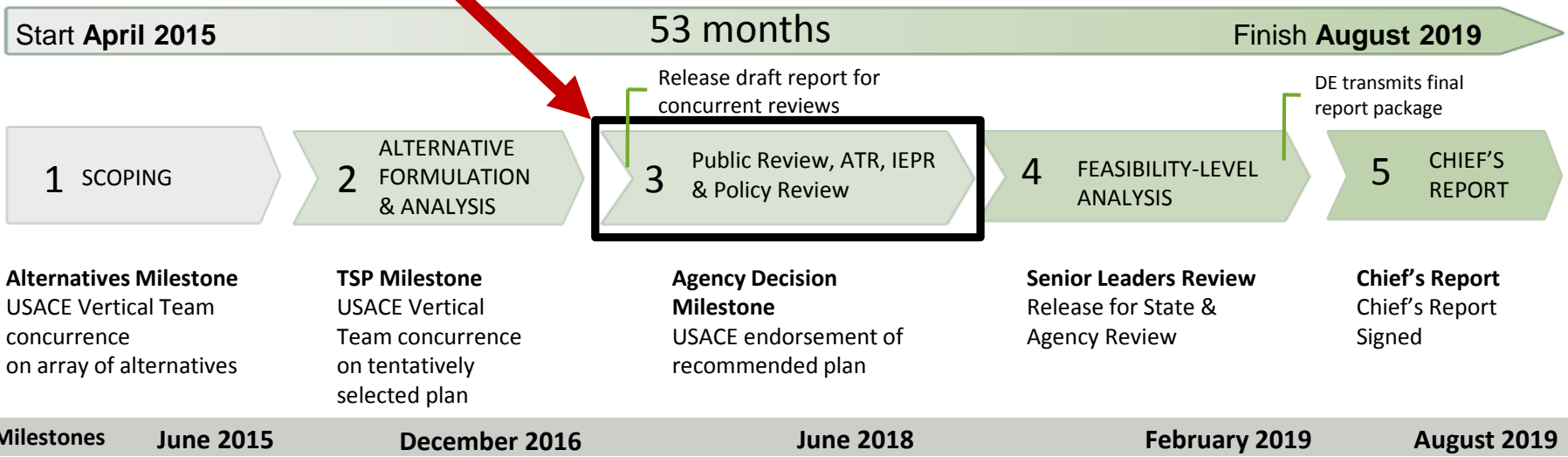
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STUDY SCHEDULE

Current Phase

SMART Feasibility Study Process

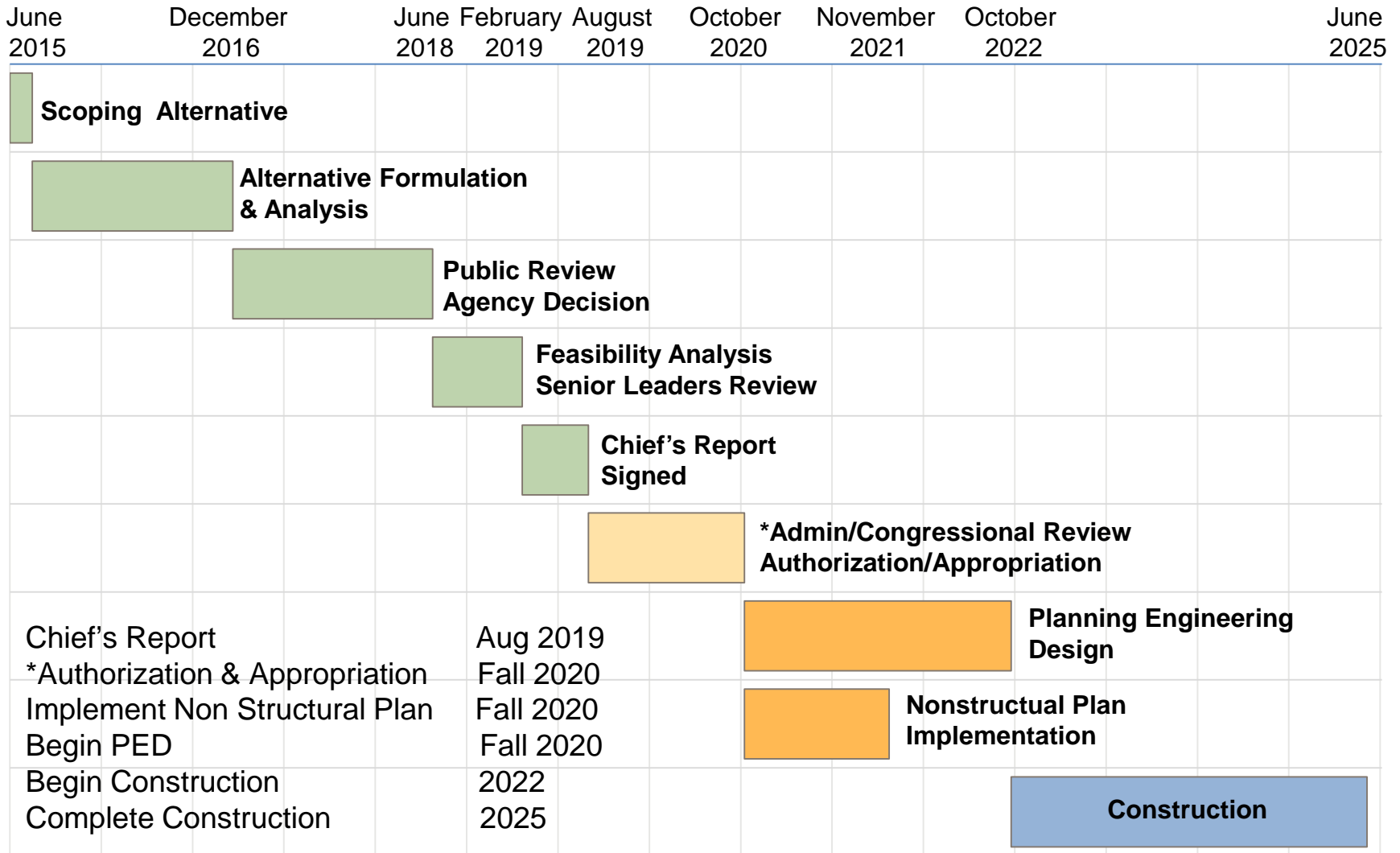


Public Comment Period Ends
Agency Decision Milestone
Chief's Report

November 16, 2017
June 2018
August 2019



PROJECT SCHEDULE



*Assumes Authorization & Appropriation by Fall 2020



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- Brandon Road Study Area
- Public Meetings
- Submit Comments on the Draft GLMRIS-BR Report
- 2014 NEPA Scoping

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GLMRIS – Brandon Road

The GLMRIS Report, released in January 2014, describes alternatives to prevent aquatic interbasin transfer of [aquatic nuisance species](#) (ANS) between the Great Lakes and Mississippi River watersheds. Based on an agency assessment informed by public input following release of the GLMRIS Report, the Assistant Secretary of the Army (Civil Works) concluded that a formal evaluation of potential control options and technologies near Brandon Road Lock and Dam to prevent the movement of ANS from the Mississippi River Basin to the Great Lakes Basin was an appropriate next step.

[Download PDF Map](#) 3.4 MB

The Great Lakes and Mississippi River Interbasin Study – Brandon Road Draft Integrated Feasibility Study and Environmental Impact Statement – Will County, IL (Draft GLMRIS-BR Report) evaluates options and technologies near the Brandon Road Lock and Dam site in Will County, Illinois near Joliet, to prevent the upstream transfer of ANS from the Mississippi River Basin into the Great Lakes Basin, while minimizing impacts to existing waterway uses and users.

Tentatively Selected Plan

Six alternatives were formulated and evaluated. Each alternative is described in detail in the draft report documents. The tentatively selected plan is the alternative that reduces the risk of Mississippi River Basin ANS establishment in the Great Lakes Basin to the maximum extent possible while minimizing impacts to waterway uses and users.

Based on the results of the evaluation and comparison of the alternatives, the tentatively selected plan is the Technology Alternative – Complex Noise with Electric Barrier, which includes the following measures:



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