



Bridge Management Overview

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Inventory & Appraisal Data

- Identification
 - Location & Map
 - Classification
 - Construction
 - Geometry
 - Appraisal
 - Railings & Transitions
- Design
 - Superstructure Sets
 - Substructure Sets
 - Structure Units
- Features
 - Highways, Railroads, Waterways, Relief for Waterways, Pathways, Urban Features, Dry Terrain or Side Slopes

The screenshot displays the 'Identification' section of the AASHTOWare Bridge Management software. At the top, there is a breadcrumb trail: 'Bridges > Inventory & Appraisal > Identification'. Below this, three fields are visible: 'Bridge ID' with the value '111', 'Feature Intersected' with the value 'Monongahela River', and 'Facility Carried' with the value 'I-376'. The main section is titled 'Identification' and contains a 'Details' subsection. This subsection includes several input fields: 'Bridge Number (B.ID.01)' with '111', 'Agency Bridge ID' with '111', 'Bridge Name (B.ID.02)' with 'Test Bridge 1', 'Bridge Nickname' with 'Test Bridge 1', 'Bridge Facility Carried' with 'I-376', 'Bridge Feature Intersected' with 'Monongahela River', 'Bridge Status' with a dropdown menu showing '3 Active', 'Bridge Life Cycle Phase' with a dropdown menu showing '1 Service', a checkbox for 'Report Bridge to FHWA' which is checked, and a checkbox for 'Report Elements to FHWA' which is also checked. There is also a 'Bridge Notes' field containing the text 'First Test Bridge'. Below the 'Details' section is a 'Past and Future Bridges' section, which includes fields for 'Past Bridge ID (B.ID.03)' and 'Future Bridge ID'.

Inspection Data

- Condition
 - General Condition Ratings
 - Element, Protective System, Defect condition ratings
- Schedule
 - Inspection Types Being Performed
 - Agency-defined inspection types
 - Upcoming Inspections
- Inspection Plan
 - Equipment
 - Procedures

Element Conditions

Quantity/Percentage: Structure Unit: Environment:

Quantity: All All

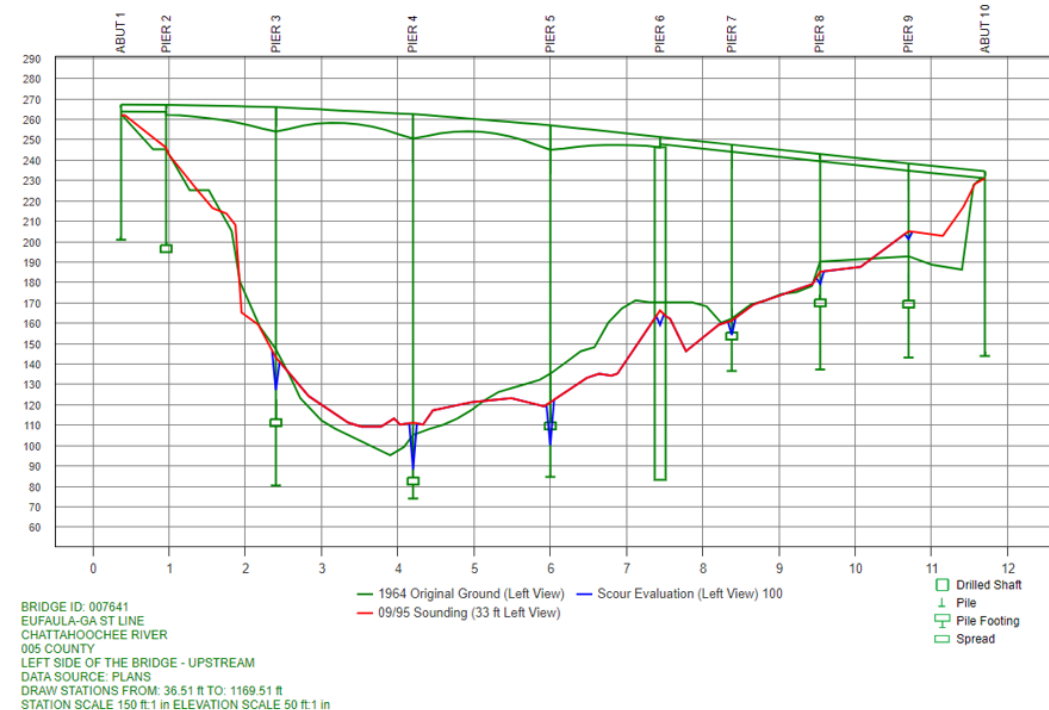
Search:

Expand All Add New

Inspected	T1	ID	T1	Name	T1	Structure Unit	T1	Type	Environment	T1	Total Quantity	Units	T1	CS 1 Qty	CS 2 Qty	CS 3 Qty	
✓		241		Re Conc Culvert		1		Element			900	ft	892	8	0		⚠️🔍🗑️
▼		510		Wearing Surfaces		1		Protective System / Wearing Surface			5000	sq.ft	5000	0	0		⚠️🔍🗑️
		3220		Crack (Wearing Surface)		1		Defect			8	sq.ft	8	0	0		🔍🗑️
		1080		Delamination/Spall/Patched Area		1		Defect			8	ft	0	8	0		🔍🗑️
		1090		Exposed Rebar		1		Defect			3	ft	3	0	0		🔍🗑️
		1120		Efflorescence/Rust Staining		1		Defect			16	ft	16	0	0		🔍🗑️
✓		242		Timber Culvert		1		Element			21	ft	21	0	0		⚠️🔍🗑️

Cross Sections

- Streambed Cross Sections
- Scour Potential Evaluation
- Structure Detail
- Original Streambed Evaluation
- Scour Resistant Layer
- Graphing



Inspection Assignment

Management

- Configure which inspection types are appropriate for assignment (ex: routine vs damage)
- Assign to Groups or to individual BrM users
- Reassign unassigned inspection needs
- Track completion of inspection events & reviews

Inspectors

- View list of items assigned to logged in user
- Begin new inspection events

Multimedia

- Bridge-level and inspection event-level folders
- Categorization
- File linking to track an issue throughout multiple inspections
- Ability to sketch either start from template or from specific image file, Mark up file and save as copy

Work Events & Work Candidates

- Work Events
 - Reportable work performed on bridge
- Work Candidates
 - Potential work to be performed on bridge

Work Events for Bridge

Q Search Report Add New

Year Performed ↑	Work Performed ↑	Description ↑	
2024	W1 Widened	description for widening improvement	 
2022	T1 Replaced	description for replaced deck joints	 

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Work Candidate

Filter Source

Open ▼ All ▼

Q Search Report Add New

Name ↑	Action ↑	Date Recommended ↑	Target Year ↑	Estimated Cost ↑	Status ↑	Work Assignment ↑	Priority ↑	Structure Unit ↑	Date Completed ↑	Source ↑
Work Candidate 1	Paint Sub - Network	6/16/2014	2024		Contractor	High				Inspector Recommendation  
Work Candidate 2	Paint Super - Network	6/14/2024	2024		Contractor	High				Inspector Recommendation  

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Critical Findings

- Approval workflow
- Optional email to configured FHWA contacts
- Reminder emails for open critical findings

Bridges > Inspection > Critical Findings

Bridge ID ⓘ
111

Critical Finding ID ⓘ
111-05202025

Feature Intersected ⓘ
Monongahela River

Facility Carried ⓘ
I-376

Edit Bridge Critical Finding

Critical Finding Status

Status Pending Level 1 Review	Current Priority Level Serious	Sent to FHWA False	Send to FHWA Not a Critical Finding
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Critical Finding Data

Reporter ⓘ User, Pontis	Reporter Phone ⓘ	Reporter Email ⓘ Pontis@Mayvue.com
Date/Time of Finding * ⓘ 05/20/2025 10:18	Discovered During Inspection ⓘ 05/20/2025 (MHUV)	Category * ⓘ C - Collision (bridge hit/impact)
Initial Priority * ⓘ Serious	Initial Action Taken * ⓘ Close Lane(s)	Bridge Owner Contacted Date/Time * ⓘ 05/20/2025 10:18
Contacted Name ⓘ	Contacted Phone ⓘ	
Description * ⓘ bridge hit		

Inspection Review

Management

- Define review steps (office review, field review)
- Define conditions for review group for each step
- Include user validation in workflow of the inspection review module

Reviewers

- Inspections that logged in user is eligible to review
- Inspections that logged in user is currently reviewing
- See an overview of all reviews in progress

Load Rating & Postings

Load Rating

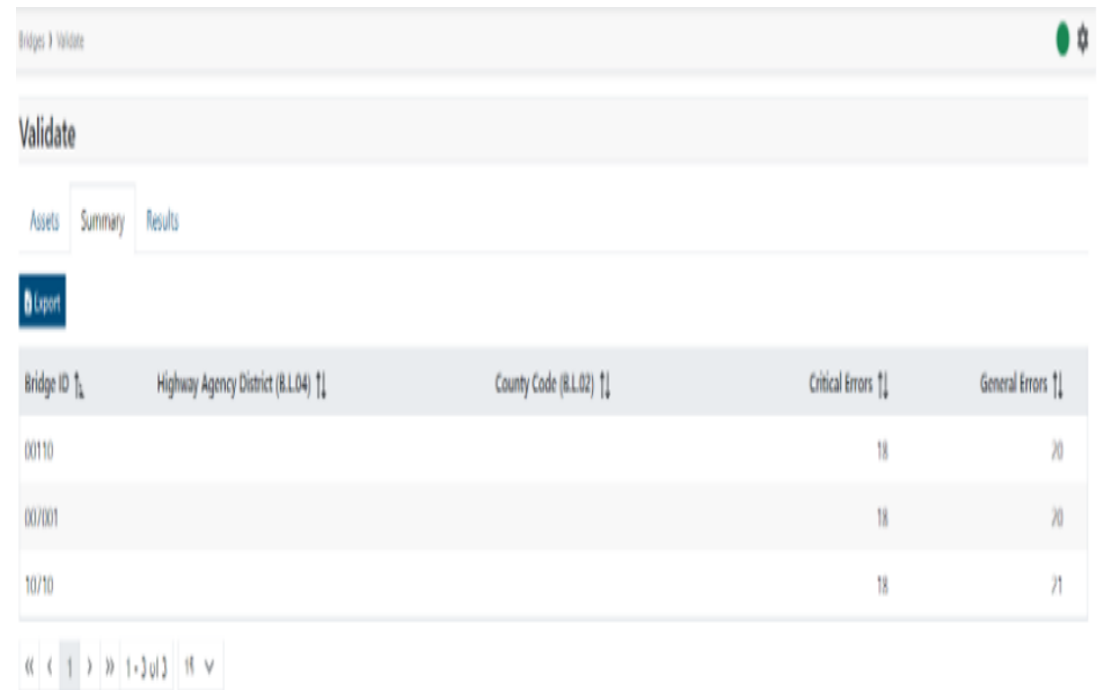
- Reportable event indicator
- Agency-defined vehicles

Load Posting

- Map Vehicle Types to Sign Types
- Uses reportable Load Rating event

Validation & Submittal

- Validation
 - Select specific bridges or run for all reportable bridges in database
 - Summary & results of all SNBI Data Validations
- Submittal
 - Select specific bridges or run for all reportable bridges in database
 - Creates json file for submittal to FHWA



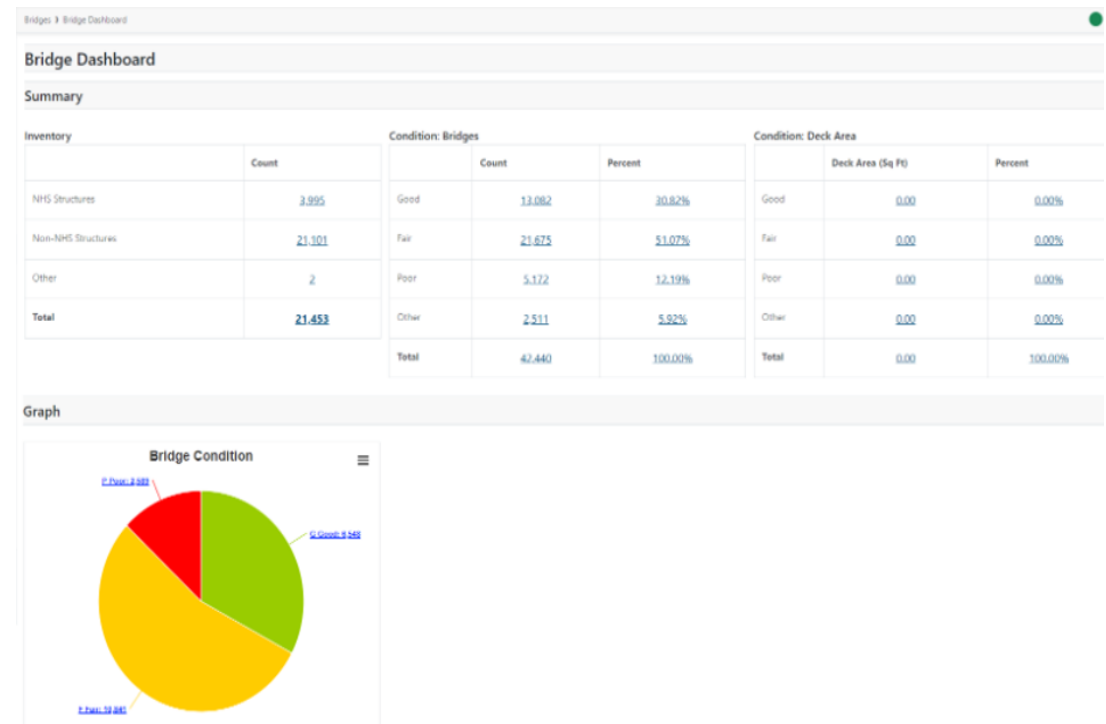
The screenshot shows the 'Bridges 3 Validate' interface. At the top, there's a 'Validate' button and a settings icon. Below it are tabs for 'Assets', 'Summary', and 'Results', with 'Summary' currently selected. An 'Export' button is also visible. The main area displays a table with the following data:

Bridge ID ↑	Highway Agency District (B.L04) ↑	County Code (B.L02) ↑	Critical Errors ↑	General Errors ↑
00110			18	20
00/001			18	20
10/10			18	21

At the bottom, there is a pagination control showing '1' of 1 results.

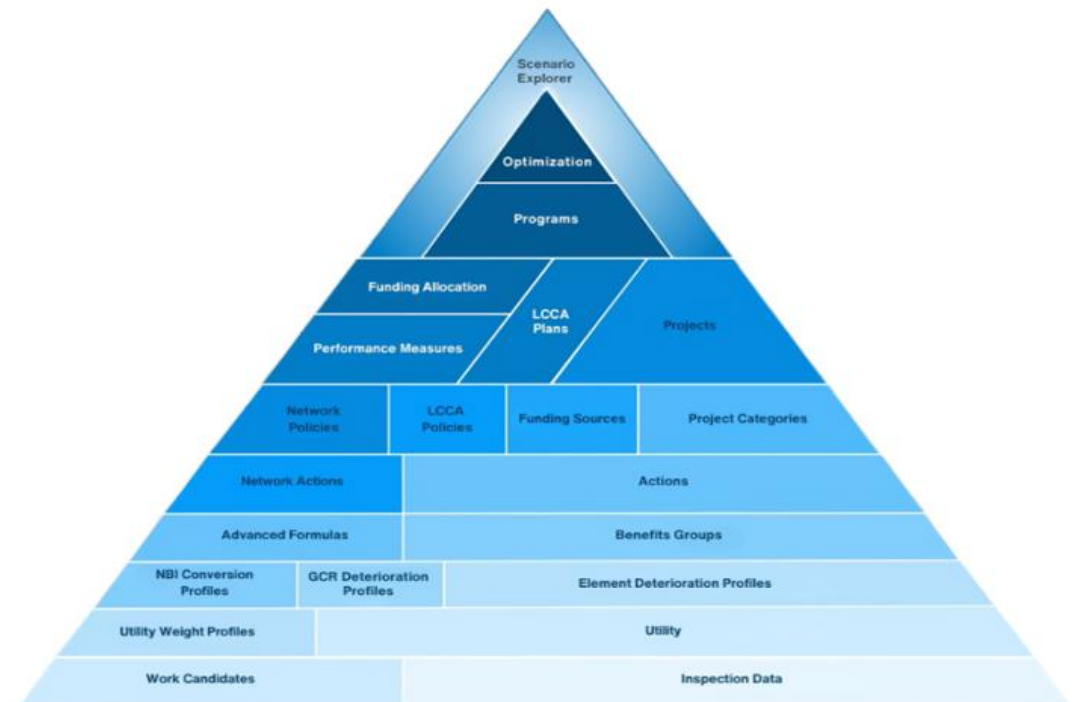
Configuration for Agency Processes

- Use Page Builder to create
 - Form pages (bridge, bridge inspection)
 - Dashboards (overview of data for all bridges)
- Reports
 - Run standard reports
 - Can create configured agency-specific reports



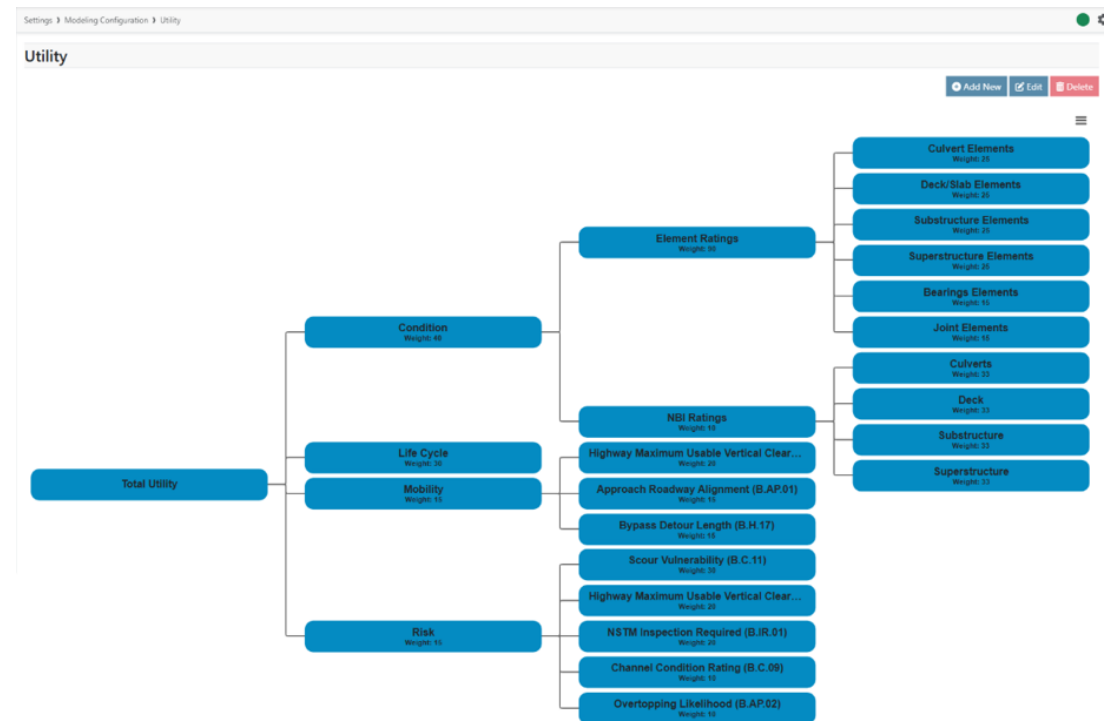
Program Planning – Modeling Configuration

- Follow BrM pyramid to complete modeling configuration settings to run program optimizations



Program Planning – Utility Tree

- Define weights of each node of tree to determine utility calculation
- Can create one overall tree but many Weight Profile variations



Program Planning – Actions & Benefits

- Benefits
 - Define the effects on a bridge
 - Tie into utility tree so that benefits affect utility calculation
- Actions
 - Define potential work for a bridge
 - Link back to benefits
- Network Actions
 - Create action decision tree for related actions

Settings > Modeling Configuration > Actions

Actions

Asset Type: Bridge Filter: Active

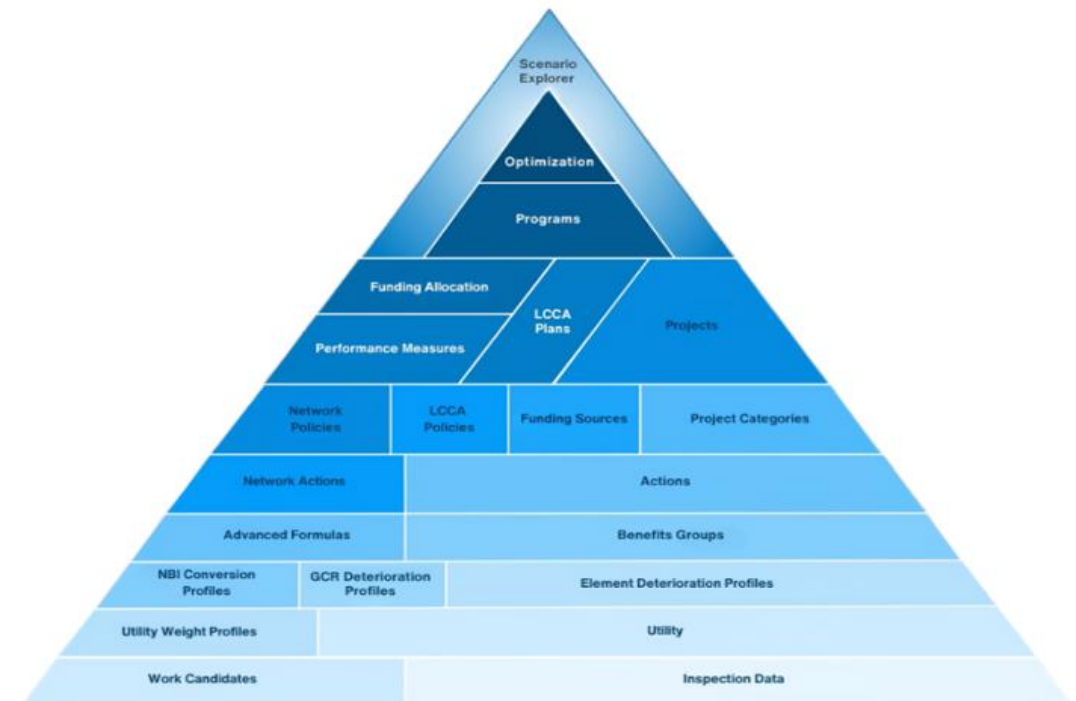
Search Export Add New

Order	Name	Action Type	Description	Notes	Required Minimum Cost	Network Level	Replacement	Active	Standard	
999	Repaint Super/Sub - Network	Network	Repair Paint			True	False	True	True	 
999	Rehab Deck - Network	Network	Repair deck, joints and parapets			True	False	True	True	 
999	Rehab Super - Network	Network	Repair beams, paint and bearings			True	False	True	True	 
999	Rehab Sub - Network	Network	Repair Columns, Piers, Abutments, Piles, Walls			True	False	True	True	 
999	Replace Deck - Network	Network	Replace Deck			True	False	True	True	 
999	Rehab Culvert - Network	Network	Rehab culvert, parapets, approaches			True	False	True	True	 
999	Replace Super - Network	Network	Replace Super Elements			True	False	True	True	 
999	Replace Structure - Network	Network	Replace Structure			True	True	True	True	 
999	Paint Sub - Network	Network	First Painting			True	False	True	True	 
999	Preserve Deck - Network	Network	Thin-Bonded / Repair Joints			True	False	True	True	 
999	Place Wearing Surface - Network	Network	First Wearing Surface			True	False	True	True	 
999	Paint Super - Network	Network	First Painting			True	False	True	True	 

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Program Planning – Deterioration

- GCR Deterioration Profiles
 - Indicate how general condition ratings deteriorate over time
 - Define overall for program or assign to individual bridges
- NBI Conversion Profiles
 - Indicate how element condition data is converted to overall condition ratings
 - Define overall for program or assign to individual bridges
- Element Deterioration Profiles
 - Indicate how element condition states deteriorate over time
 - Define overall for program & make alternates to see effects



Program Planning

Projects

- Include bridges & the work being done to each bridge
- Can track project status through completion
- Can respect existing projects & their benefits when considering future work

Programs

- Define program conditions (modeling configuration settings)
- Assign existing projects to program

Program Planning – Funding Allocation

- Define funding sources
- Take into account allocated funds
- Subdivide funding

Programs > Funding Allocation

Funding Allocation

Program: Program 1 Scenario: Default

Funding Source

Name: [Add New](#)

No records to display.

« < > » 0 - 0 of 0 15 ▾

Budget Distribution

Total Budget: \$0.00

Total Allocated Funds: \$0.00 [Override Additional Funds](#)

	2025	2026	2027	2028	2029	2030	2031	2032	2033
Funding Source Funds	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Additional Funds	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total Annual Budget	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Allocated Funds	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Available Funds	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

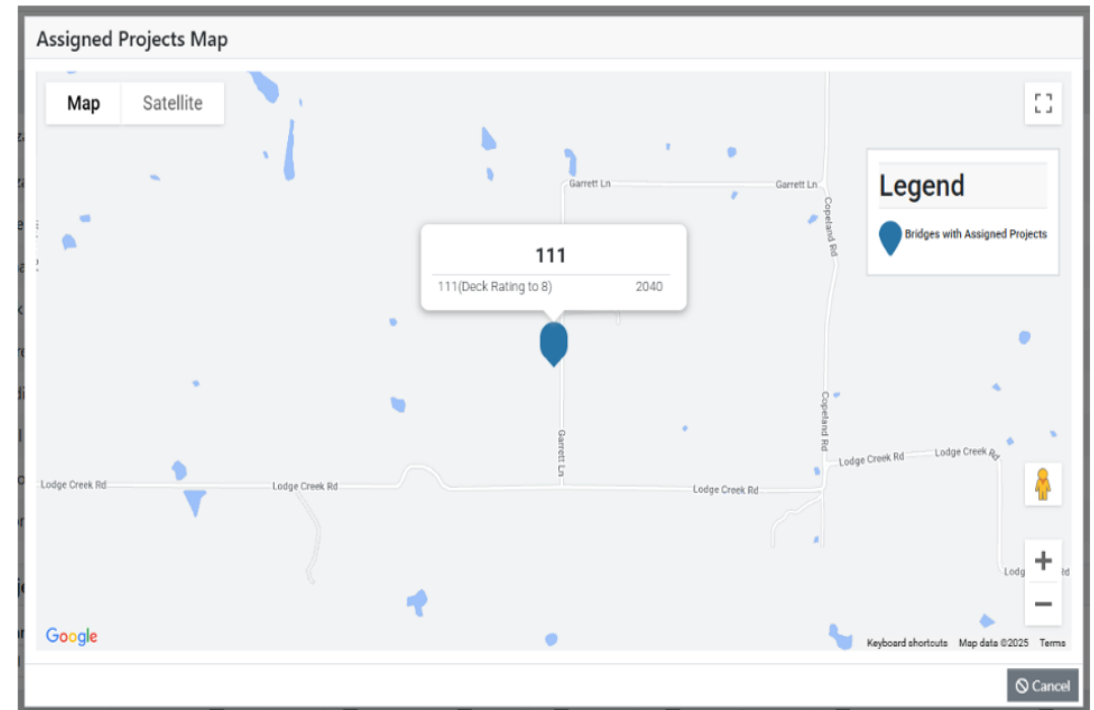
☐ Subdivide by Project Category

Input Method: [Get Performances](#) [Distribute by Performance](#)

Subdivision	Health Index	Utility	Total Budget per Subdivision	% Overall Budget	2025	2026	2027	2028	2029	2030
All			\$0.00	NaN %	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
Total			\$0.00		\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

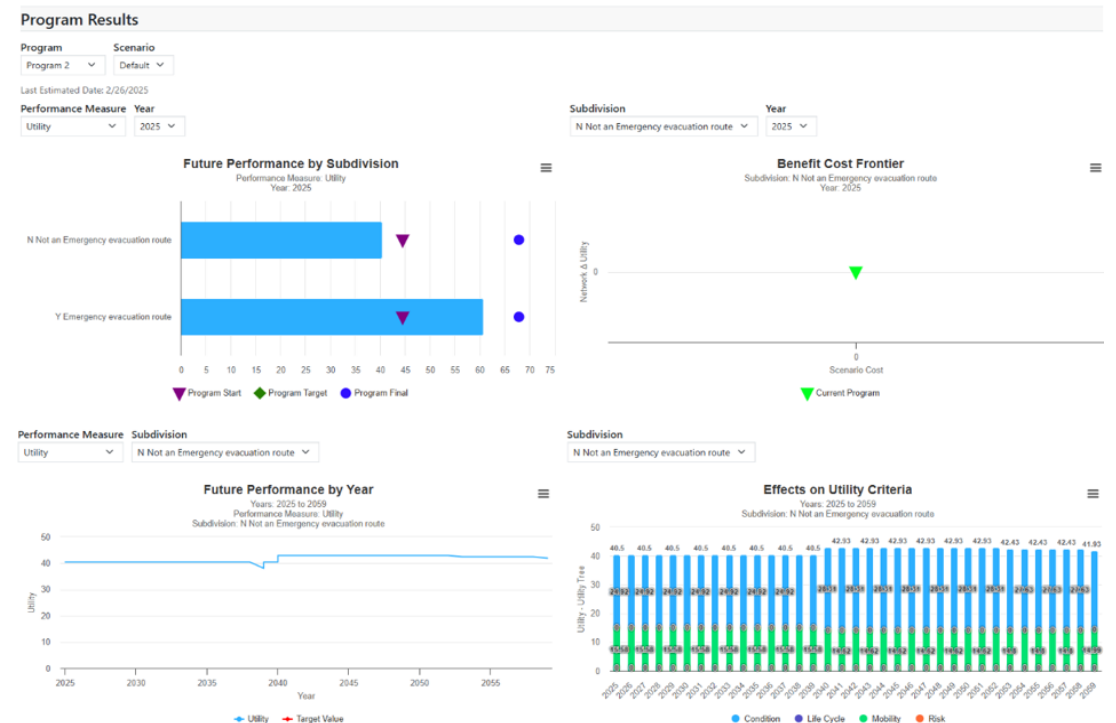
Program Planning – Optimization

- Returns a list of recommended projects / bridges to meet specified goals
- Can be viewed on map



Program Planning – Results

- Review graphs based on performance measures
- Agency can configure additional graphs
- Compare different scenarios for same program
 - Funding
 - Existing projects
 - Performance measures
 - Deterioration type
 - Compare recommended work for two programs
- Compare recommended work for two programs



Questions?

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