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Transportation



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Mission Statement

This *Water Operations and Maintenance Bulletin* is published quarterly through the Asset Management Division of the Dam Safety and Infrastructure Directorate. It serves as a medium to connect personnel who operate and maintain Bureau of Reclamation water supply systems.

History

The *Water Operations and Maintenance Bulletin* has been published quarterly since 1952. Past issues may be read and downloaded at [Water Operations and Maintenance Bulletins](#), where you can also search the entire Bulletin database by subject.

Contact

We welcome suggestions for future issue topics, contributing authors, and comments on the Bulletin. Please direct all inquiries to drowateroandm@usbr.gov.

Cover photo: East Portal Road, Colorado (Bureau of Reclamation).

Editor's Note

Phrases like *inside baseball* or *how the sausage is made* in publishing suggest pulling back the curtain to give a behind-the-scenes perspective on what went into a final product. Sometimes readers don't want that curtain pulled back, but we hope you'll indulge us this time. We pivoted late on this issue's primary topic, and with that switch, we relied on a couple of the Bureau of Reclamation's (Reclamation) extraordinary people to help us (a lot). Daniel Staton, the Asset Management Division's (AMD) Transportation Program Manager, contributed four articles! He also reviewed all other transportation-related content for this issue. And Katie Bartojay, Director of the Technical Service Center, took time out of her busy schedule to work with us around holiday breaks to do our Q&A interview.

In addition to Staton's articles on developing a Reclamation-wide road inventory, the Federal Lands Transportation Program, Reclamation's new Bridge Management System, and conducting winter bridge inspections, this Transportation issue features Micah Smidt on "U.S. Department of Transportation Grant Opportunities" and Dakota Gutierrez on "Specifications for the National Bridge Inventory." With six articles on aspects of the Transportation Program, we hope you enjoy learning about this essential component of Reclamation operations and maintenance (O&M).

We would be remiss if we didn't also mention the efforts of the AMD O&M Branch and Columbia-Pacific Northwest Region Illustration to bring this issue to the finish line. It is simply remarkable to have such dedicated and skilled staff supporting each issue. Happy new year!

Darion Mayhorn, P.E.

Supervisor, Operations and Maintenance
Asset Management Division

Andrew Daigle, Ph.D.

Writer-Editor
Dam Safety and Infrastructure

Around O&M

2024 Reclamation Building Inspection Training

- AMD facilitated the first Reclamation Building Inspection Training, November 5–8, 2024, at the Denver Federal Center. Staff from across the regions braved a fall snowstorm to attend the training administered by the Certified Commercial Property Inspectors Association.
- The event featured lectures, discussions, and a field day mock inspection of the Building 67 facilities. The training will assist in developing requirements and future trainings, inspection tools, resources, and guidance related to Reclamation's building asset portfolio.

Enterprise Asset Registry

- Pumping Plants, Buildings, and Water Treatment Asset Classes were moved to active management in October 2024.
- The Fish Structures Asset Class subject matter expert (SME) review began on December 12, 2024.
- The SME review of the Spillways Asset Class layer began in November 2024.
- Conveyance Points, Wells, Land Management, and Recreation Phase II (Amenities) are in development.

2025 Review of Operation and Maintenance Workshop

- The 2025 Review of Operation and Maintenance (RO&M) Workshop will be held April 15–17, 2025, in Dallas, Texas.
- The annual three-day seminar is for Reclamation O&M staff and inspectors. The first two days consist of classroom training and discussion and the third day is a site visit to Waco Dam. The workshop fulfills professional development required to lead facility inspections under the RO&M Program.
- Registration is required for Reclamation staff: <https://doitalent.ibt.doi.gov/course/view.php?id=25911>.



Inspection demonstration at the 2024 Building Inspection Training.



Road Inventory Program

Daniel Staton, P.E.
Transportation Program Manager,
Operations and Maintenance
Branch, Asset Management Division

*Needles-Big Bend Recreation Area Road,
Mohave Valley Area, from the Yuma Area
Office Cycle 1 Road Inventory Report (top).*

*Blythe-Bankline Road, Palo Verde Division
- California F from the Yuma Area Office
Cycle 1 RIP Report (right).*



The Bureau of Reclamation (Reclamation) receives annual Federal Lands Transportation Program (FLTP) funding from the Federal Highway Administration (FHWA) to rehabilitate and improve public transportation facilities owned by Reclamation. One of the requirements of FLTP is for Reclamation to maintain a public road inventory with road condition data. This requirement led to the creation of the Road Inventory Program (RIP) Cycle 1 process. RIP Cycle 1 began in fiscal year (FY) 2018 when Reclamation started a five-year process to comprehensively inventory all Reclamation-owned roads (public and non-public) and perform road condition assessments on all Reclamation-surfaced roads (asphalt or gravel surface) open to the public. Reclamation has partnered with FHWA to perform the RIP process. The road condition data contained in each RIP Report can be used to generate potential FLTP projects that could be funded through this partnership.

Partnership Agreements

A large portion of Reclamation's road network is maintained by other entities either through a transferred works agreement or through a managing partner agreement. If these agreements expired or were canceled, then Reclamation would end up being responsible for operating and maintaining the road. Reclamation needs to maintain stewardship and oversight of all Reclamation owned assets by performing routine inspections and writing recommendations, similar to other water operations and maintenance (O&M) assets. Therefore, Reclamation needs to inventory all Reclamation owned roads and condition assess all public Reclamation owned roads, even if Reclamation is not directly responsible for the road's O&M.

Cycle 1 Reports

The Cycle 1 Reports – each typically longer than 500 pages – extensively detail hundreds of miles of roads and require storage in Reclamation's Enterprise Content System (ECS). Reclamation personnel may download the report from ECS, while those outside of the Bureau should work with their contacts at regional or area offices to gain access. In addition, each area office's road data is uploaded to Reclamation's geospatial [Road and Parking Lot Inventory](#). This Reclamation employee resource shows the location of all Reclamation roads and parking lots and color codes the asset based on condition (when available). This feature provides a quick view of road and parking lot conditions. A corresponding dashboard can be filtered on region or area office to summarize roads and parking lots information.

Road Inventory Program Reports

RIP reports are typically organized for each area office. They provide a high-level summary of the roads and parking lots in each area office, including miles of roads and maintenance needs. At the request of the regional transportation coordinators, completed RIP reports are sent to area managers and senior leadership in each area office (or field office) to increase awareness and distribution. The RIP Cycle 1 project ultimately produced 25 reports and was completed in October 2023, signaling that initial condition assessments had been performed on all of Reclamation's public roads.

The RIP Cycle consists of four main phases for each area office: routeID verification meetings, performing road condition assessments, processing the data, and finalizing the report and other deliverables. During routeID meetings, FHWA leads discussions with staff from the local area office to review the existing inventory, make updates, and add or remove assets as needed. This sequence of meetings often spans over several months. Then FHWA performs condition assessments on all surfaced roads (paved or gravel) that are open to the public. FHWA uses a 0-100 Pavement Condition Rating for paved roads and a 1-5 Pavement Surface Evaluation and Rating for unpaved roads. After collection, FHWA processes the data back in the office. Finally, the area office deliverable – consisting of a report, GIS data, and photos – is transmitted to Reclamation.



Montana Area Office
Cycle 1 RIP Report.

Over 67 percent of Reclamation-owned public roads are maintained by other agencies, including transferred works operating entities and recreation managing partners. Sharing the RIP Cycle 1 Reports with partners to identify mutual needs can lead to the development of an FLTP or Federal Lands Access Program project proposal for construction funding.

The RIP Cycle 2 kicked off in FY 2024 with the Lower Colorado Basin (LCB) Region. In Cycle 2, the routeID meetings and the majority of the field collections for the LCB Region have been completed. In addition, two of the four area offices in the Upper Colorado Basin Region have completed their routeID meetings. Cycle 2 of the RIP is scheduled to be completed at the end of FY 2028.

Condition assessment of Caballo Lake -
Riverside Park Road from the Albuquerque
Area Office Cycle 1 RIP Report.

Project Name: CABALLO LAKE
ROUTE 0023-0564: CABALLO LAKE - RIVERSIDE PARK ROAD

| Maintenance Entity | FLTP | Inspection Date | Access | Surface | Func Class | Length (mi) |
|--------------------|------|-----------------|--------|---------|------------|-------------|
| NMEMNRD | Yes | 2/26/2019 | Public | Asphalt | 1 | 1.2 |



Condition Summary Table for 0023-0564

| Beg MP | End MP | Section Length | Route Length | # of Lanes | Lane Width | Road Width | Treatment Recommendation | Cost | Pavement Condition Rating (PCR) | Alligator Crack Index | Longitudinal Cracking Index | Transverse Cracking Index | Patch / Pothole Index | Routing Index |
|-------------------------|--------|----------------|--------------|------------|------------|------------|-----------------------------|------------------|---------------------------------|-----------------------|-----------------------------|---------------------------|-----------------------|---------------|
| 0.000 | 0.502 | 0.502 | 1.200 | 2 | 18 | 36 | Heavy Rehabilitation | \$337,363 | 53 | 53 | 73 | 73 | 90 | 97 |
| 0.502 | 1.200 | 0.698 | 1.200 | 2 | 16 | 32 | Heavy Rehabilitation | \$416,962 | 53 | 53 | 73 | 73 | 90 | 97 |
| Route Level Data | | | 1.200 | 2 | 17 | 34 | Heavy Rehabilitation | \$754,325 | 53 | 53 | 73 | 73 | 90 | 97 |

Route Treatment Description: Asphalt overlay >= 2.5 inch total thickness, milling existing asphalt with asphalt overlay >= 2.5 inch total thickness, cold-in-place recycling with asphalt overlay or full depth reclamation (pulverize) with AC overlay

Federal Lands Transportation Program Projects and Funding

Daniel Staton, P.E.

Transportation Program Manager, Operations and Maintenance Branch,
Asset Management Division

All Federal Land Management Agencies (FLMAs) within the Federal Lands Transportation Program (FLTP) are required to submit an annual FLTP Accomplishment Report to Federal Lands Highway (FLH) by April 1 of each year. The report is an opportunity to provide the Bureau of Reclamation's (Reclamation) FLTP accomplishments for each year to the Federal Highway Administration (FHWA). Regional offices submit ranked proposals for projects to be considered for FLTP funding. FLTP-eligible projects include work on Reclamation-owned roads, bridges, trails, boat ramps, parking lots, electric vehicle service equipment, and other transportation facilities open to the public. Reserved works, transferred works, and managing partner-maintained assets owned by Reclamation and open to the public are eligible for funding.



In Fiscal Year (FY) 2023, Reclamation funded 9 new projects with project estimates totaling \$20.5 million in FLTP funding. In addition, Reclamation continued work on 20 prior year FLTP projects with project estimates totaling \$26.2 million in FLTP funding. Eight of these projects were completed in FY 2023.

Reclamation uses multiple delivery agencies for constructing FLTP projects based on the most efficient use of funds. The delivery agency is the agency responsible for designing the project and administering the construction contract. Of Reclamation's 29 transportation projects that had work performed in FY 2023, 21 are being delivered by Central Federal Lands Highway Division (CFLHD), 5 by Western Federal Lands Highway Division, 2 by Reclamation, and 1 by the Nebraska Department of Transportation.



This project is a great example of Reclamation working together with its partners to achieve a common objective.

Completed Elephant Butte Reservoir Lakeshore Road Site 3 Bridge, New Mexico.

One of the more notable projects for Reclamation in FY 2023 was the Elephant Butte Reservoir Lakeshore Road Structure Replacements. This project started in 2017 when Reclamation performed a feasibility study to evaluate replacing undersized culverts along the road that caused flows to overtop the roadway. At the time, costs were estimated to be about \$10 million, which exceeded Reclamation’s annual FLTP allotment. Since the area is owned by Reclamation but managed by New Mexico State Parks (NMSP), Reclamation developed a funding strategy to leverage FLTP and NMSP funds to apply for a Federal Lands Access Program (FLAP) grant. Reclamation worked jointly with NMSP on the FLAP application, and the project was selected for FLAP in 2019. CFLHD then worked on planning and design for the next several years.

The construction contract was awarded in 2023, and a groundbreaking event was held in September 2023. The total project cost ended up being \$16.6 million, including \$13.8 million from FLAP, \$1.4 million from FLTP, \$1.2 million from NMSP, and \$150,000 from Reclamation appropriations. In the FY 2023 FLTP Annual Accomplishment Report, Reclamation included 10 FLAP projects. All 10 FLAP projects are improving or rehabilitating Reclamation-owned transportation assets maintained by our non-Federal partners. Five of the projects include FLTP funds as a match and the other five had the FLAP match funded by our partners. The total FLAP funding for these projects is \$59.5 million with an overall total project funding of \$79.0 million. This highlights one of Reclamation’s Long Range Transportation Plan (LRTP) goals of leveraging FLTP funds with other funding sources. This allows Reclamation to decrease the gap between annual transportation needs and annual FLTP funding.

In FY 2023, \$46.6 million in FLTP funds were leveraged with \$113.7 million in non-FLTP funds for a total of \$160.3 million going towards Reclamation transportation projects. This includes \$26.2 million in Reclamation appropriations, \$28.0 million in partner funds, and \$59.5 million in FLAP funds. For transportation projects that had work performed in FY 2023, 71 percent of the total project funding came from funds other than FLTP.

By coordinating with our partners early in the transportation planning process, Reclamation was able to incorporate needs and funding from partner agencies into FLTP projects. Eleven FY 2023 FLTP projects involved partner agencies contributing funds to the project, including local, state, and other Federal agencies. This was another focus area in the LRTP that is starting to pay dividends.

The FY 2024 FLTP Annual Accomplishment Report will be completed in March 2025. In FY 2024, work was performed on 22 transportation projects using FLTP funds. The largest FLTP obligation in FY 2024 was \$4.5 million for the Elephant Butte Historic District Road Rehabilitation. The project was originally combined with the Lakeshore Road Structures Replacement project but needed to be separated due to a utility project occurring at the Historic District. This project used a combination of FLTP and Aging Infrastructure funds for a total project budget of \$8.8 million. The project will be constructed in FY 2025. In addition, 7 projects involving FLAP funds progressed at various stages in FY 2024.

**Reclamation is built
on partnerships,
and this is true for
transportation as well.**

*Elephant Butte Reservoir Lakeshore Road Site 4
bridge construction, New Mexico.*



The FY 2025 Budget Review Committee authorized a new Transportation Construction Program (TCP) budget line item in Reclamation's FY 2025 appropriations based on recommendations from the LRTP. The goal of TCP funding is to provide additional Reclamation funds to supplement FLTP projects. While TCP funding is unknown past FY 2025, Reclamation needs to plan for the possibility of receiving funds in FYs 2026 and 2027 to maintain appropriate three-year transportation project planning cycles. Reclamation will receive \$110,000 in TCP funds in FY 2025, with FYs 2026 and 2027 each projected to receive \$2.4 million. Transportation project funding for FYs 2025-2027 was announced in March 2024.

Notable FY 2023 Transportation Projects

Hayden Arch Bridge Replacement, Cody, Wyoming

Hayden Arch Bridge was constructed in 1924 and is located 2.5 miles west of Cody, Wyoming. The bridge is an open spandrel, double arch, reinforced concrete bridge that spans the Shoshone River downstream of Buffalo Bill Dam. The bridge serves as the primary access to the Buffalo Bill and Shoshone Powerplants. The bridge also provides recreational access to the Shoshone River and an alternate route to the Buffalo Bill Visitor Center. The bridge is approximately 150 feet in span with the roadbed 28 feet above the water level. Additionally, the bridge is listed on the United States National Register of Historic Places and was part of the original route to access Yellowstone National Park out of Cody, Wyoming.

Previous bridge inspections performed by Reclamation and FHWA identified several areas of significant spalling on the structure and substantial corrosion on all exposed reinforcing steel. Numerous cracks were noted on the structure, and previous patching repairs were separating and delaminating. The repair project includes two phases: (1) the rehabilitation of the existing Hayden Arch Bridge for historic preservation, and (2) the construction of a new **bridge** located immediately downstream of the existing Hayden Arch Bridge. The original project estimate was \$8.6 million including \$4.5 million in FLTP funding. However, the cost estimate in the 30% design package from CFLHD went up to \$17 million due to additional rock excavation, adding a mechanically stabilized earth wall, and changing from a concrete to a steel superstructure to support a longer bridge length. The project team is currently searching for additional funding (see U.S. Department of Transportation Grant Opportunities article).



*Existing Hayden Arch Bridge,
Cody, Wyoming.*

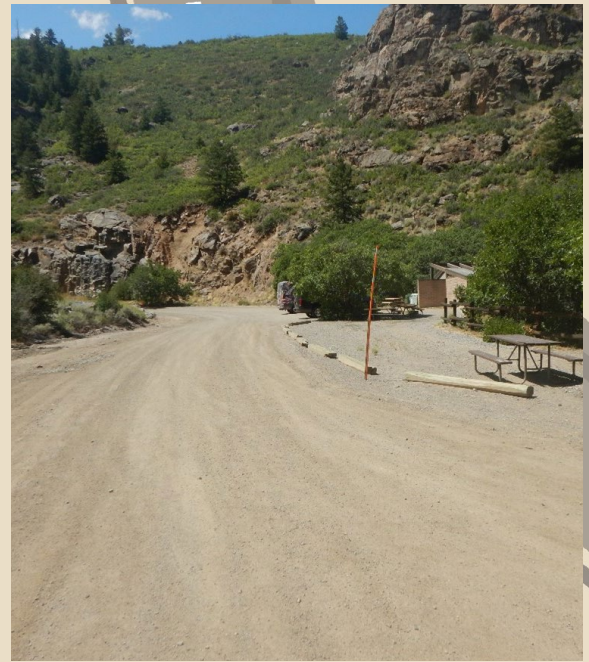
Blue Mesa Dam Access Road, Montrose, Colorado

The Blue Mesa Dam Access Road is owned by Reclamation for year-round access to Blue Mesa Powerplant. This is also the primary access to the Pine Creek Trailhead, the Morrow Point Boat Tours, and this portion of the Curecanti National Recreation Area. These features draw the public and fishing enthusiasts from across the country for touring Morrow Point Reservoir, fishing on the Gunnison River, and the unique canyon environment found only in this part of the Black Canyon. Pine Creek Trail Road is unpaved and does not meet current road safety standards. The \$5.8 million project, including \$2.7 million in FLTP and \$1.8 million in TCP funding, is to pave the public access roads and parking areas and make road alterations to meet current safety standards. CFLHD started project scoping in FY 2023 and identified a higher cost than originally anticipated. With additional funds secured, the project is scheduled for construction in FY 2027.

Hoffer Lake Access Road Rehabilitation, McClusky, North Dakota

Sheridan County intends to improve the recreation opportunities and enhance the experience for those visiting Hoffer Lake Park. The County Park Board has made improvements to the park over the years that have increased visitation and usage of facilities. The project aims to improve access and enhance experience by paving and widening 1.5 miles of road leading into the main park entrance and then through the park terminating at the west end of the park. Depending on funding, the project will also re-gravel the main parking area as well as two recreation loops, 0.2 miles, in the modern camping areas.

CFLHD is delivering this project under a combination of \$3.3 million in FLAP funds and \$0.8 million in FLTP funds for total project funding of \$4.1 million. In FY 2023, scoping was completed after meeting with the partners and conducting site visits. The 100% Design Plans and Specs are anticipated by end of calendar year 2024 when the project will be shelved. The project is anticipated to be advertised and awarded in FY 2026.



Existing Pine Creek Trailhead parking area, Montrose, Colorado.



Eastern entrance road to Hoffer Lake, McClusky, North Dakota.

U.S. Department of Transportation Grant Opportunities

Micah Smidt, P.E.

Civil Engineer, Operations and Maintenance Branch, Asset Management Division

Do you have a bridge to nowhere because of inadequate funding? Do you think there is no way your transportation project (on Federal land) won't fall flat? Well, not so fast. You should consider grant opportunities from the U.S. Department of Transportation (DOT) because they could help pay for your amazing project! Intrigued? Read on and know that federally funded grant opportunities are available through fiscal year (FY) 2026. The Operations and Maintenance (O&M) Branch of the Asset Management Division (AMD) has already helped three such projects submit grant applications in FY 2025 in addition to one in FY 2024. Your bridge or Federal transportation project could be next!



When starting to look at Federal grant opportunities, the various acronyms are overwhelming: NSFLTP, NOFO, BIP, BIL, FHWA, FLTP, FLMA, FAST, FLAP, FLPP, DOT... Here is a primer. DOT strives to improve our Nation's transportation system by making it safer, more reliable, etc. The Federal Highway Administration (FHWA) is an agency within DOT that supports state and local governments in the design, construction, and maintenance of our Nation's highway system. The FHWA is to DOT as the Bureau of Reclamation (Reclamation) is to the Department of the Interior. The FHWA administers the Notice of Funding Opportunities (NOFO), which are the grant applications.

The Fixing America's Surface Transportation (FAST) Act was signed into Federal law in December 2015 by President Obama. This law provided funding for surface transportation and included FYs 2016 through 2020. The FAST Act established the Nationally Significant Federal Lands and Tribal Projects (NSFLTP) Program, which provides funding of projects within, adjacent to, or accessing Federal lands. Once the FAST Act and its provisions ended in FY 2020, the Bipartisan Infrastructure Law (BIL) provided new funding opportunities. BIL was signed into Federal law in November 2021 by President Biden. BIL made key changes to the NSFLTP and established the Bridge Investment Program (BIP). With this legal background established, it's now important to understand how NSFLTP differs from BIP, relevant provisions of BIL, and key NOFO information.

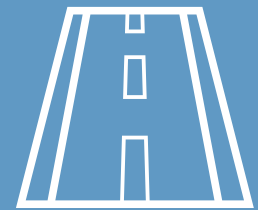
BIL authorized many grant opportunities in addition to BIP and NSFLTP. BIP and NSFLTP opportunities are unique because they include Federal Land Management Agencies (FLMAs) as eligible entities, like Reclamation. Eligible entities for NSFLTP funds include FLMAs, Tribal governments, and non-Federal agencies when sponsored by an FLMA or a Tribal government. BIP is open to a wider range of agencies from special purpose districts to states and FLMAs. For BIP, maintaining geographic diversity among grant recipients and balancing rural and urban communities is a statutory requirement.

How are NSFLTP and BIP distinct? Under the FAST Act, projects eligible for NSFLTP funding must be a Federal Lands transportation facility or provide access to such a transportation facility. The FAST Act defines transportation facilities as "public highways, roads, bridges, trails, or transit systems." Meanwhile, BIP is for bridges in the National Bridge Inventory (NBI). Specifically, it focuses on reducing the number of person miles on bridges that are in poor condition, at risk of falling into poor condition within three years, do not meet geometric design standards, or do not meet the regional transportation network load and traffic requirements. BIP funding is separated into three categories: large bridge projects, bridge projects, and bridge planning projects. Bridge and Large Bridge Project grants are available for replacement, rehabilitation, preservation, and protection work with total eligible costs of less than and greater than \$100 million, respectively. BIP funds are awarded to projects based on bridge condition, cost effectiveness, project readiness, and other considerations. Ideally, the project can begin within 18 months after BIP funds are obligated and preliminary engineering has been completed. Eligible activities for BIP planning grants include planning, feasibility analysis, and revenue forecasting to develop a project that would be subsequently eligible for a Bridge or Large Bridge grant. The table below summarizes key differences and details for NSFLTP and BIP.

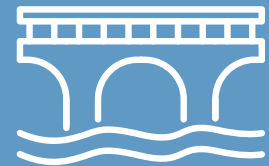
The FAST Act defines transportation facilities as:



Public highways



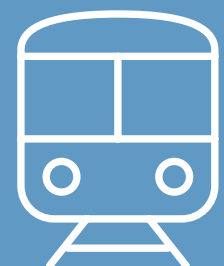
Roads



Bridges



Trails



Transit systems

Key differences and details of NSFLTP and BIP

| Item | NSFLTP | BIP |
|--------------------------|--|--|
| Amount awarded (FY 2026) | \$55 million (50% allocated to Tribes) (at least one NPS project) | \$2,480 million (50% allocated to large bridge projects) |
| Eligible Agencies | FLMAs, Tribal entities, and non-Federal entities sponsored by FLMAs or Tribal entities | Wide range including FLMAs |
| Eligible Projects | Single, continuous transportation project | NBI Bridges and bridge bundles (Poor condition or fair moving to poor) |
| Eligible Costs | Construction, reconstruction, or rehabilitation (no design) | Development phase activities, property acquisition, design, and construction |
| NEPA | Must be completed | Details/discussion provided in application |
| Minimum Dollar Amount | Construction cost ≥ \$12.5 million | Project Cost ≥ \$100 million (large bridge) ≥ \$2.5 million (bridge) No minimum for planning projects |
| Maximum Grant Amount | 90% eligible construction costs | 50% eligible project cost (large bridge) 80% eligible project cost (bridge) 80-90% (project dependent) |
| Matching Funding Source | Federal funds acceptable for FLMA | Federal funds acceptable for FLMA |
| Deadlines | FY 2025 deadline: August 1, 2025 FY 2026 deadline: August 1, 2026 | Last opportunity in BIL closes August through November 2025 (depending on category) |

The table below shows Reclamation’s NSFLTP and BIP grant submissions. Causey Reservoir Road Rehabilitation and Bridge Replacement was submitted for NSFLTP funds. This project will replace Causey Dam Spillway Bridge and reconstruct approximately three miles of oft-congested roadway along a set of three roadways that form a single, continuous transportation project. Hayden Arch Bridge, Canyon Ferry Bridge, and Sumner Spillway Bridge were individually submitted for BIP funds.

Summary of DOT Grant Applications

| Project | Grant | Total Project Cost (million) | Grant Eligible Cost (million) | Requested (million) | Percent of total | Date Submitted | Status |
|---|--------------|------------------------------|-------------------------------|---------------------|------------------|----------------|--------------|
| Causey Reservoir Road Rehabilitation and Bridge Replacement | NSFLTP | \$27.5 | \$25.3 | \$13.0 | 51.5% | October 2024 | Under Review |
| Hayden Arch Bridge | BIP – Bridge | \$17.0 | \$17.0 | \$10.4 | 61.0% | October 2024 | Under Review |
| Canyon Ferry Bridge | BIP – Bridge | \$10.8 | \$10.8 | \$8.6 | 80.0% | October 2024 | Under Review |
| Sumner Spillway Bridge | BIP – Bridge | \$39.7 | \$39.7 | \$31.7 | 80.0% | March 2024 | Not Funded |



Hayden Arch Bridge, Wyoming.

Hayden Arch Bridge crosses the Shoshone River downstream of Buffalo Bill Dam in Wyoming. It was constructed in 1924 as part of the original route to Yellowstone National Park. It is in poor condition. The project will install a new bridge and rehabilitate the existing historic bridge for exclusive use by non-motorized modes of transportation. Canyon Ferry Bridge is located near Helena, Montana, and carries travelers across the Canyon Ferry Dam spillway, which is on the Missouri River. The bridge is integral to the operation of the dam and powerplant. In the last few decades, there has been widespread deterioration of the bridge's superstructure, substructure, and deck in the form of spalling, delamination, corrosion, and cracking, among other structural deficiencies. This bridge is in good condition but is at risk of falling into poor condition in the next three years. Sumner Spillway Bridge is located near Fort Sumner, New Mexico, and carries State Highway 203 across the Sumner Dam spillway. The existing bridge is a one-lane bridge posted for a 15-ton weight limit. The proposed alternative is to reroute the highway downstream off the dam crest and build a new bridge across the Pecos River. Project costs and grant amounts are summarized in the same table above. Our October 2024 submissions are currently under review. Unfortunately, the March 2024 application for Sumner Spillway Bridge was not funded. However, if our application were to be rated "recommended" or "highly recommended" by DOT, it would be carried forward for consideration under the next FY of BIP funding (with an opportunity to adjust scope, schedule, budget, etc.). This benefit is unique to BIP. We have an upcoming debrief with DOT to learn if this will apply to the Sumner Spillway Bridge application.

Submitting Grant Applications

What does it take to submit a grant application? The application requirements are detailed and can be confusing. This is in part because the authorizing legislation (BIL and FAST Act) translates into statutory requirements but also because bridge and transportation requirements are multi-faceted and involve numerous interested parties. The application details are presented in the NOFOs. In 2024, the NSFLTP NOFO was about 50 pages long, and the BIP NOFO was about 90 pages long. Criteria in the NSFLTP includes nine primary merit criteria, four secondary merit criteria, and a project readiness rating. Criteria in the BIP includes six merit criteria, an economic (cost-benefit) analysis rating, and a project readiness rating. There is overlap in the criteria but there are also nuanced distinctions.

The first step when preparing a DOT grant application is to look at the big problems within your inventory of transportation facilities that seem insurmountable from a budgeting perspective and think about them under the lens of one of these grants. Ask yourself if it falls approximately within the funding ranges. Ask yourself if it meets the intent of the grant program. Then, reach out to AMD's O&M Branch to talk about the project and available grant opportunities. We partner with the regions and work with consultants to help develop the application and gather the necessary information and appendices. Act FAST because there is NOFO time like the present, and a BIP or NSFLTP grant could help pay your BILs!

Sumner Spillway Bridge, New Mexico.





Specifications for the National Bridge Inventory

Dakota Gutierrez

Intern, Operations and Maintenance Branch,
Asset Management Division

*McClusky Canal Bridge,
McClusky, North Dakota.*

Key Steps for Updating Bridge Data:

1

Understand specifications set by the SNBI.

2

Research specifications and technical aspects.

3

Analyze data and ensure accuracy.

The Bureau of Reclamation (Reclamation) currently inventories all bridges based on the 1995 Recording and Coding Guide for the Structure Inventory and Appraisal of the Nation's Bridges (Coding Guide) produced by the Federal Highway Administration (FHWA). This document specifies over 100 data fields that Reclamation must collect information on for every public bridge. In 2022, FHWA released a new data format called the Specifications for the National Bridge Inventory (SNBI) and mandated that the bridge data for all 600,000 public bridges in America be converted to the SNBI by 2026. SNBI maintains many data fields from the old Coding Guide, but it also introduces new data fields that Reclamation has not previously collected information on. Improving Reclamation's bridge data involves not only updating the data format but also improving the overall quality and reliability of the information collected. This article focuses on Reclamation's efforts to capture the additional data fields that are required in the SNBI.

The approach to updating Reclamation's bridge data has involved several key steps. The initial step was to better understand the specifications set by the SNBI. This was achieved through extensive research, using resources such as the SNBI documentation and the Bridge Inspector's Reference Manual (BIRM). These resources provide detailed commentary on the specifications and technical aspects of bridge inspection and inventorying. The BIRM describes essentially all structural components that may be found on a bridge. This was helpful to visualize superstructure and substructure components such as abutment types, span types, and materials used.

Bridge Data Analysis

Once the preliminary research was completed, the analysis phase began. Primary resources included inspection reports and civil drawings of the bridges. These documents provided critical information about the structures and allow for a comprehensive inventory of Reclamation's Type 1 bridges (Reclamation-owned bridges open to public vehicles, longer than 20 feet). The process involved cross-referencing data from inspection reports and drawings to ensure accuracy. In instances where data was ambiguous or missing, inductive reasoning was used based on available information, and accompanying notes were made to verify these determinations in the future.

One of the primary changes with the new SNBI is the introduction of additional specifications that better define bridge components, materials, and neighboring features. For instance, the McClusky Canal Bridge R4-1 in McClusky, North Dakota, has three spans, each with four prestressed pretensioned concrete box beams. Additionally, this bridge has two stub abutments and two piers both made of reinforced concrete bearing on timber piling. As also defined in the updated inventory, this bridge carries McClusky's 5th Avenue, and the McClusky Canal runs below the structure. This update not only improves the quality of data reported on Reclamation bridges, but it also better facilitates the asset management processes. By aligning with the SNBI, Reclamation ensures that its bridge inventory is consistent with national standards.

Arkansas River Bridge downstream of Pueblo Dam, Colorado.

The analysis of Type 1 bridges found that:

80%

of the bridges were generic or standard

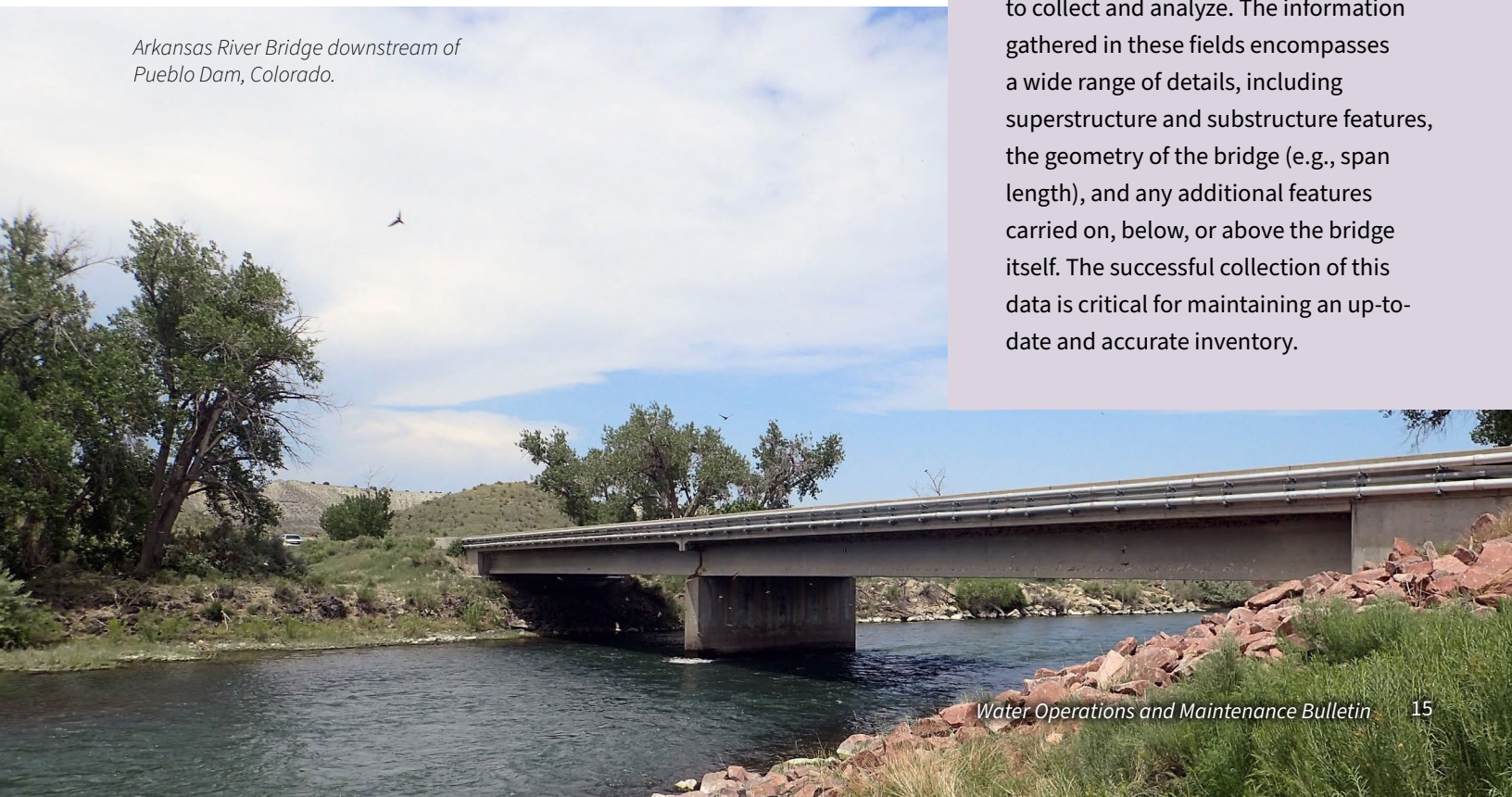
15%

were culverts

5%

were complex structures such as trusses or arches

Each bridge is inventoried based on 19 data fields, resulting in substantial data to collect and analyze. The information gathered in these fields encompasses a wide range of details, including superstructure and substructure features, the geometry of the bridge (e.g., span length), and any additional features carried on, below, or above the bridge itself. The successful collection of this data is critical for maintaining an up-to-date and accurate inventory.



Of the current 390 Type 1 bridges in our inventory, just over 300 have been updated to meet the new SNBI. This work provides insight into the details and characteristics of these structures. Moving forward, our efforts will focus on conducting a similar comprehensive inventory analysis for the remaining Reclamation-owned bridges, ensuring consistency and adherence to the new SNBI.

As a case study, in the current inventory, both the aforementioned McClusky Canal Bridge R4-1 and Green Mountain Spillway Bridge (below) are classified as structurally similar. Both bridges have three spans, are made of prestressed concrete, and are simply supported. At a glance, and according to the Coding Guide, they have some common elements, but these are clearly very different structures. That uniqueness is what the updated RBI is trying to capture. Additionally, the SNBI reports more in depth on superstructure elements such as deck and wearing surface materials, as well as substructure components and foundation types. The SNBI also includes new data elements on span length and intersecting features such as roadways, waterways, pedestrian crossings, and more. While there are some similarities between bridges such as these, the updated data format now possesses much more available data to differentiate and better define Reclamation bridge assets.

The 19 data fields defined in this analysis are static data fields that do not typically change throughout the life of a bridge. The new data fields were populated from the office based on available information. During the next inspection of each bridge, the new SNBI data will be verified to ensure the field conditions match the information available from the office. The main objective of this project is to develop a dynamic inventory system that not only complies with SNBI standards but also enhances the safety and longevity of Reclamation's bridges.



Green Mountain Spillway Bridge, Heeney, Colorado.

New Bridge Management System

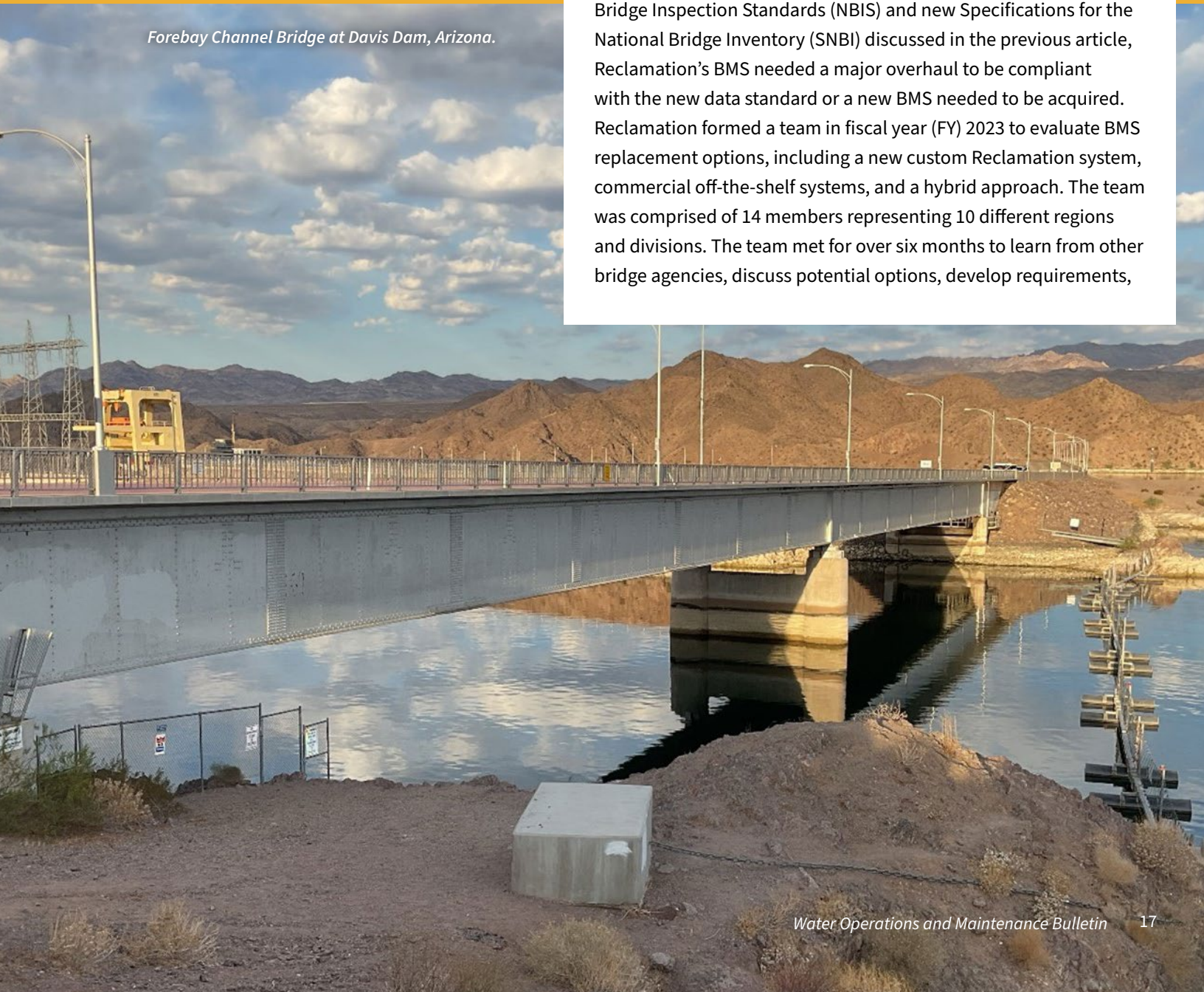
Daniel Staton, P.E.

Transportation Program Manager,
Operations and Maintenance Branch,
Asset Management Division

Forebay Channel Bridge at Davis Dam, Arizona.

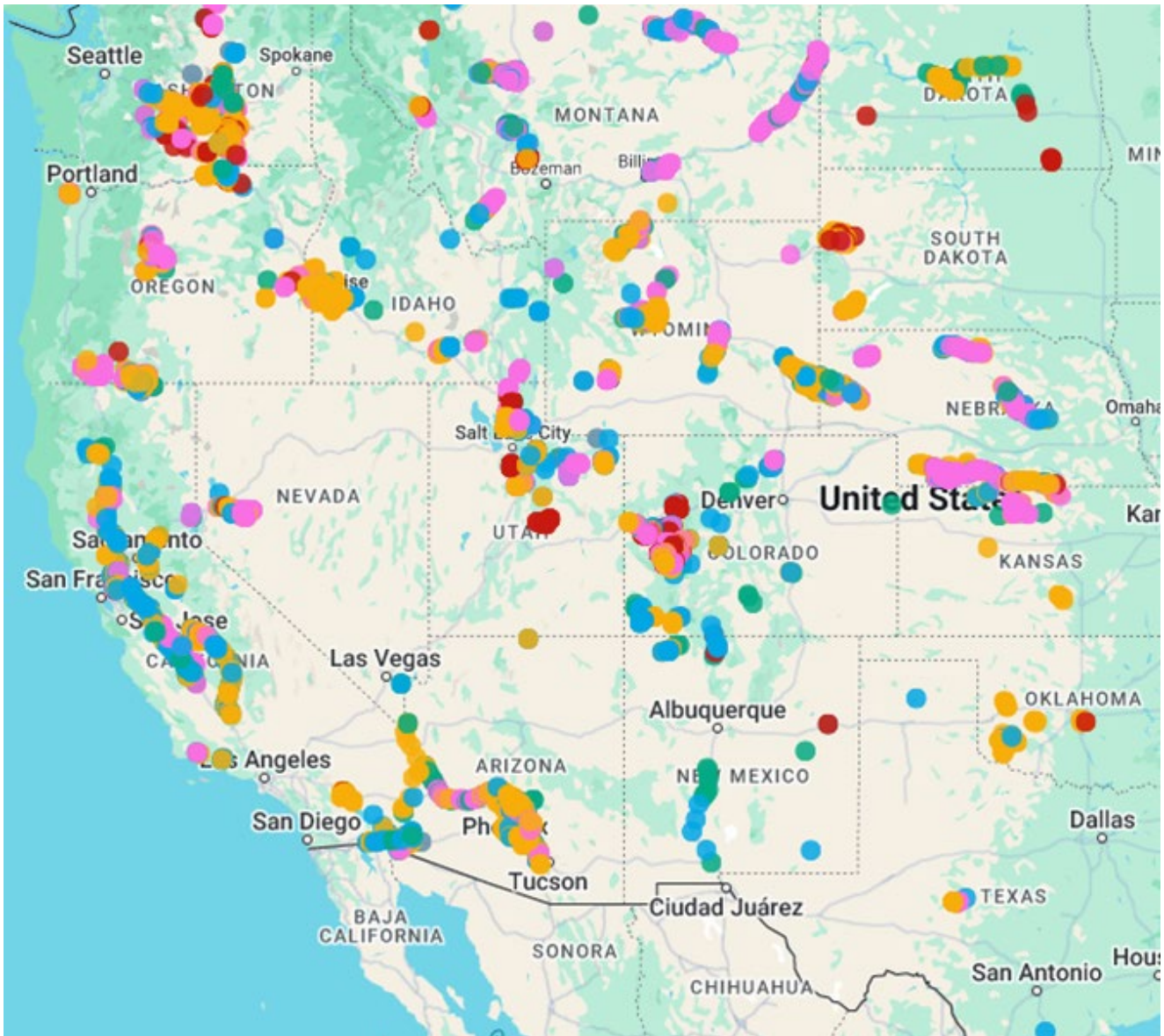
The Bureau of Reclamation's (Reclamation) existing Bridge Management System (BMS) was developed about 10 years ago by a Geographic Information System (GIS) specialist. It was initially developed and deployed solely for the Lower Colorado Basin Region. In 2018, Reclamation's bridge program decided to move forward with the custom Reclamation BMS for all of Reclamation. The system is called the Reclamation Bridge Inventory (RBI). The RBI greatly improved the data management of all Reclamation bridges. Prior to the RBI, focus was primarily devoted to the approximately 300 Reclamation-owned bridges open to the public (Type 1 Bridges), but it was difficult to track and manage Reclamation-owned, non-public bridges (Type 2 Bridges) and non-Reclamation-owned bridges that cross Reclamation facilities (Type 3 Bridges). There are currently over 7,900 structures tracked in the RBI.

Due to the Federal Highway Administration's (FHWA) new National Bridge Inspection Standards (NBIS) and new Specifications for the National Bridge Inventory (SNBI) discussed in the previous article, Reclamation's BMS needed a major overhaul to be compliant with the new data standard or a new BMS needed to be acquired. Reclamation formed a team in fiscal year (FY) 2023 to evaluate BMS replacement options, including a new custom Reclamation system, commercial off-the-shelf systems, and a hybrid approach. The team was comprised of 14 members representing 10 different regions and divisions. The team met for over six months to learn from other bridge agencies, discuss potential options, develop requirements,

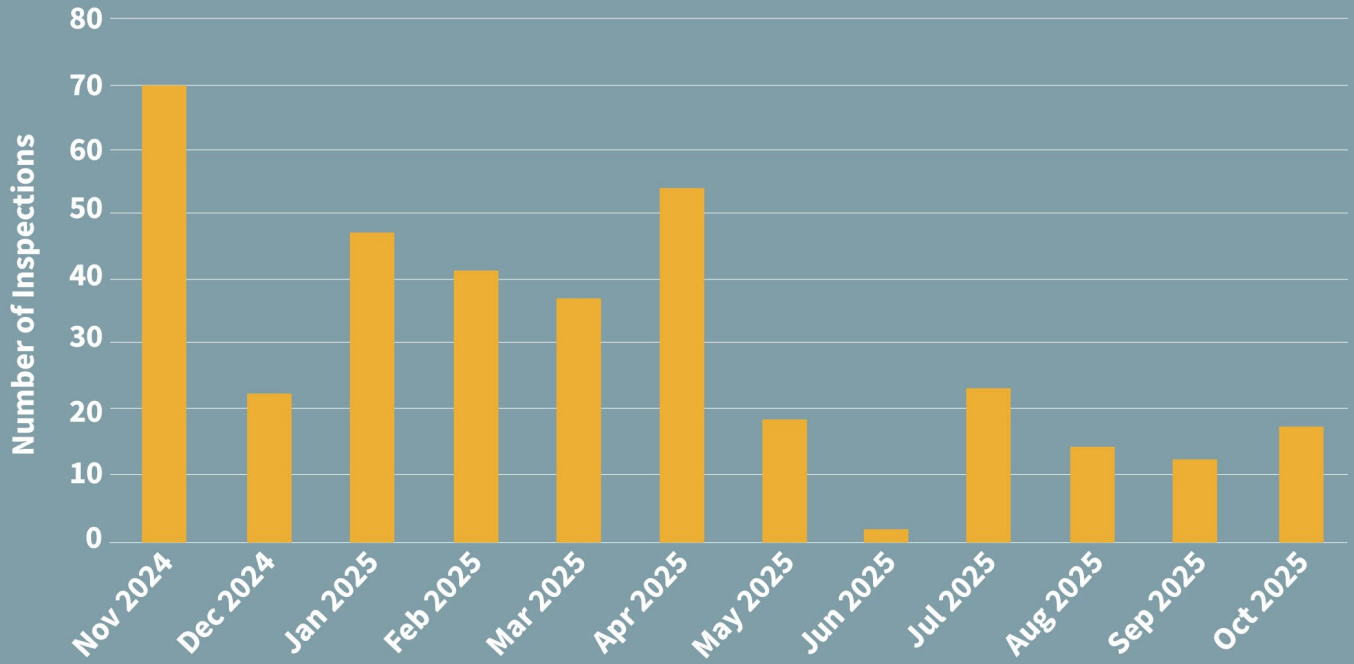


and determine evaluation factors. This culminated in a two-day meeting in Denver, Colorado, August 22-23, 2023, where the team heard presentations from five different BMS service providers and evaluated each option. Each system was evaluated on seven weighted metrics: customer reviews, information technology (IT) operations, cost, bridge program functions, support/maintenance, SNBI capabilities, and system integration/interoperability. The team unanimously recommended acquiring AssetIntel inspectX (inspectX). Both the quantitative ratings and the qualitative descriptions from each team member supported moving forward with inspectX. InspectX is currently used by over 10 different state Departments of Transportation. In addition, the U.S. Army Corps of Engineers and the U.S. Forest Service recently completed similar bridge system evaluations, and both agencies selected inspectX and are moving forward with acquiring the software.

inspectX Map view of the over 7,900 bridges in Reclamation's bridge inventory.

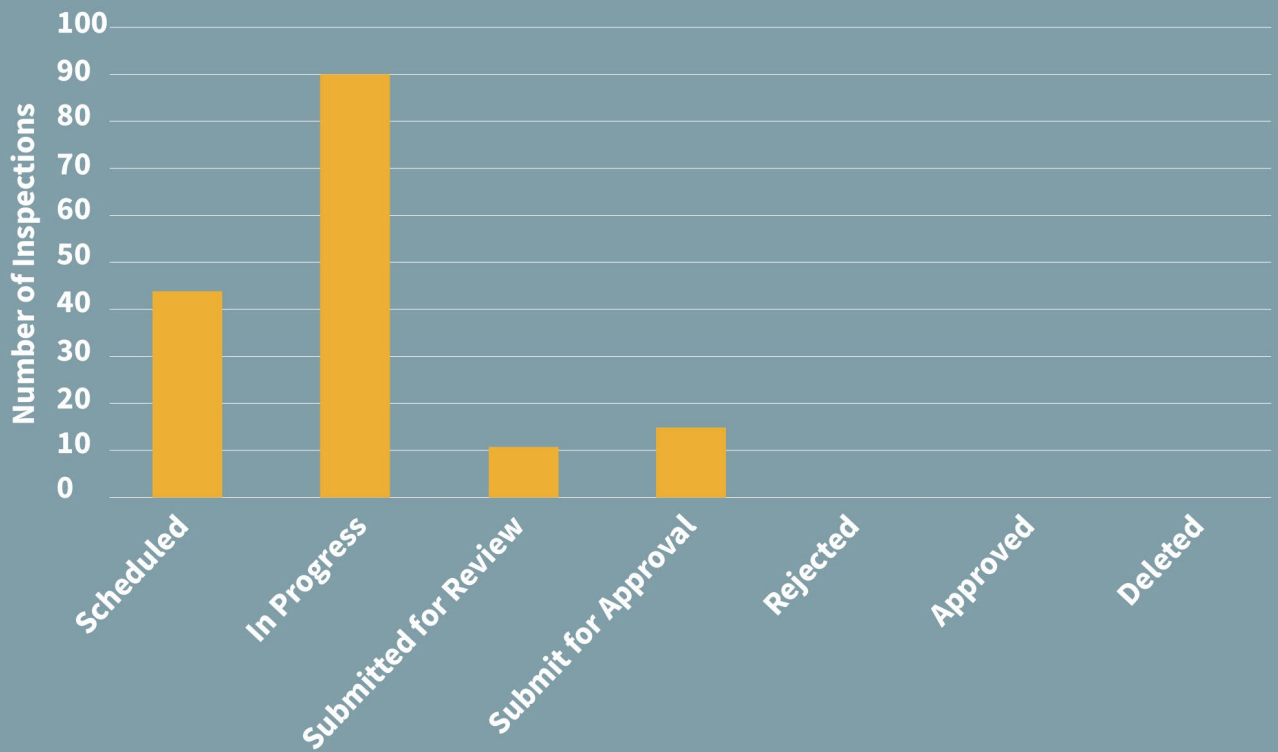


Upcoming Inspections



Upcoming Inspections chart from inspectX.

Number of Inspections Per Status



Inspection Report Status chart from inspectX.

Bridge Management System Implementation

In FY 2024, Reclamation initiated acquisition of the new BMS. A contract was awarded to AssetIntel in May 2024 for a base year and four option years. Reclamation formed an implementation team consisting of bridge experts from each region to help implement and test inspectX. Since June 2024, the team has met regularly with AssetIntel to discuss and initiate various tasks including data migration, inspection report templates, system integration, IT security, and functionality. In September 2024, a test version of Reclamation’s inspectX environment was released. Reclamation then held its first inspectX training October 22-24, 2024, in Helena, Montana.

The team is also making progress with the system integration between inspectX and the Enterprise Asset Registry. A process is being tested to pull inspectX bridge data into the Enterprise Asset Registry so bridge data can be viewed and used alongside other Reclamation assets. In addition, an information system security officer was assigned to the project in FY 2025 and is helping to complete the necessary requirements to obtain an Authority to Operate (ATO). The conditional ATO is anticipated to be completed in December 2024 and Reclamation will go live in the Production environment in January 2025. A second inspectX training is planned for spring 2025, where all remaining inspectors and bridge personnel will get trained in the new system. In addition, AssetIntel will provide monthly webinars for the next year to deliver micro-training sessions on a different aspect of the software each month.

In addition to bringing Reclamation into compliance with the new SNBI data requirement, inspectX will provide many new capabilities that will greatly improve our asset management of bridges and could also be used as a test case for other Reclamation assets. The inspectX inventory module provides great data analytics capabilities that enable data queries, chart representations, dashboards, and bridge summary information to all users. One of the new capabilities is the inspection scheduling and workload planning module. This allows Reclamation to identify upcoming inspections and easily assign them to individual team members. Various charts and lists provide workload summaries so inspection work can be balanced across a region or office.

| # | Image | Date | Description | Report | Primary Photo | Photo Assignment | Actions |
|---|-------|------------|---|--------|---------------|---|---------|
| 1 | | 11/15/2024 | Heavy rot at end of beam in span one, end of beam from span two | On | Off | 59 - Superstructure | |
| 2 | | 11/15/2024 | Bridge bearing at right abutment | On | Off | B.C.07 Bridge Bearings Condition Rating | |
| 3 | | 11/15/2024 | Downstream side of left abutment, minor erosion around back wall | On | Off | Approach Erosion | |
| 4 | | 11/15/2024 | Timber back wall at upstream side of abutment one left abutment | On | Off | 60 - Substructure | |
| 5 | | 11/15/2024 | Heavy crushing of beam two and span two | On | Off | 59 - Superstructure | |
| 6 | | 11/15/2024 | Heavy rot an end of beam five from span one looking at it from span two | On | Off | 59 - Superstructure | |

Photo Log from inspectX.

Once inspections are assigned and scheduled, the inspector can download the inspection form to their tablet for offline use in the field through the inspectX app. All photos, notes, condition ratings, and summaries are recorded in the field on the tablet. Tools such as talk-to-text, air dropping photos from another device to the tablet, and navigation to each bridge from within the app help with field efficiencies. Once the inspector is back to the office or hotel, the offline inspection report can be uploaded back to the server. Then the inspector can finalize the report from their desktop. From there, the inspector can submit the report for review, and the assigned reviewer will get an automated message saying a report is ready for their review. The reviewer performs the review using inspectX and can enter review comments directly in the system that are conveyed back to the inspector for action. Once all review comments have been addressed, the report is finalized in inspectX, and all data gets updated in the system automatically.

The new mobile inspection process with streamlined reviews is estimated to save Reclamation 4-8 hours of labor per bridge, as many reports can get bogged down in the offline review process. The new review process is projected to allow us to finalize reports within 1-2 months of the inspection date instead of up to 12 months in some cases. Reclamation is greatly looking forward to realizing these benefits starting in FY 2025.



Primary areas of inspectX additional benefits are:



data management



inspection scheduling



mobile inspections



built-in photo log



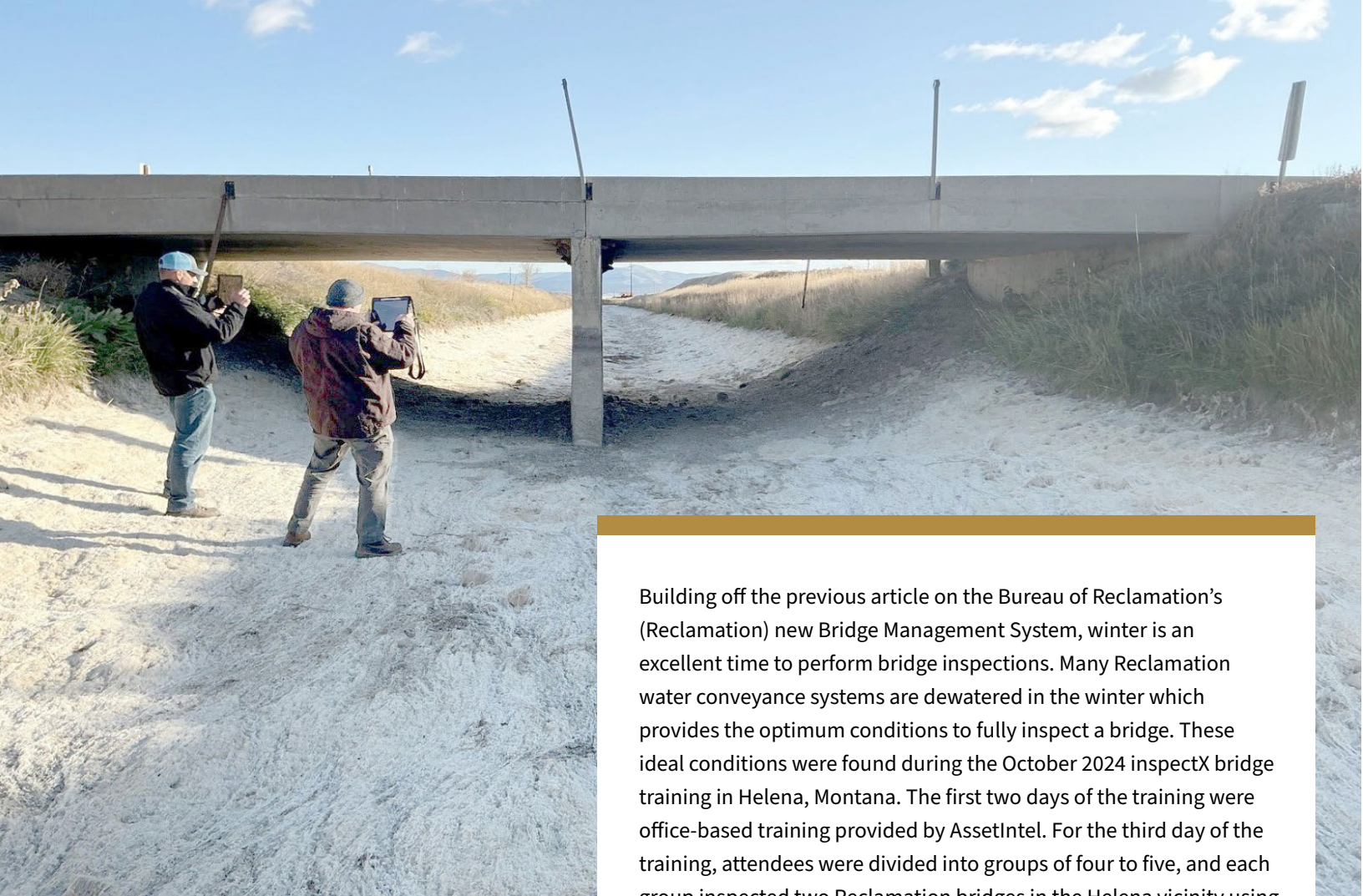
inspection report review



automated inspection report to database update



critical finding management



Inspectors using inspectX on tablets to inspect a Reclamation bridge during the October 2024 training (above and opposite).

Winter Bridge Inspections

Daniel Staton, P.E.

Transportation Program Manager, Operations and Maintenance Branch, Asset Management Division

Building off the previous article on the Bureau of Reclamation's (Reclamation) new Bridge Management System, winter is an excellent time to perform bridge inspections. Many Reclamation water conveyance systems are dewatered in the winter which provides the optimum conditions to fully inspect a bridge. These ideal conditions were found during the October 2024 inspectX bridge training in Helena, Montana. The first two days of the training were office-based training provided by AssetIntel. For the third day of the training, attendees were divided into groups of four to five, and each group inspected two Reclamation bridges in the Helena vicinity using inspectX on tablets.

Each inspector fully inspected each bridge individually to become familiar with the system and the mobile inspection process. One of the helpful inspection workflow tools that inspectors used was color coding of the inspection form based on if information was changed (yellow), added (green), or deleted (red). This is demonstrated in the inspectX inspection form shown below. The data from the last inspection report forms the start of the next inspection report. For example, if the deck were previously rated in 7-Good Condition, this value would display in the inspection report. If conditions have deteriorated and the rating is updated to 6-Satisfactory, this change would be highlighted yellow in the inspection form. This is very helpful to both the inspector and reviewer to quickly see what changed from the last inspection.

In addition, the current process that most inspectors use involves taking photos on a digital camera or phone and then handwriting captions into a printed photo log. Once back in the office, the inspector would have to download photos and attempt to match photos to captions. This can sometimes be very challenging since

bridge components can look very similar (e.g., was that photo of beam 3 or beam 4?). In inspectX, inspectors can take photos directly from the tablet. Each photo can then be associated with a component of the bridge like deck or superstructure and a caption can be added to each photo. All of this information is stored in the digital photo log to be searched, filtered, and sorted depending on need.

Another capability inspectors tested out was writing maintenance recommendations in the field directly on the tablet. Various recommendation information including category, cost range, description, and estimated completion was filled out in the field with the added benefit of associating photos directly with the recommendation. This allows the printed version of the report to show the recommendation text with associated photos together in the same section which helps greatly with clarity. Reclamation is also working on a system integration process between inspectX and Reclamation’s new Recommendation Enterprise Management Information System (REMIS). This would allow recommendations to be written in inspectX and then synced to REMIS once the report is finalized, ensuring that bridge recommendations are viewed and managed using the same process as all other recommendations.



Our inspectors look forward to working with our partners in the field and demonstrating this new bridge inspection process.

inspectX GPMT0257 Routine TEST Inventory Inspection Elements Sketch Files Photo Log

Deck

SNBI Bridge Joints

| SNBI Bridge Joints | Value | Note |
|---------------------------------------|---|------|
| B.C.08 Bridge Joints Condition Rating | POOR - Widespread moderate or isolated major defects. | |

Deck

| Deck | Value | Note |
|-----------------------------------|---|------|
| 58 - Deck | 7 - GOOD CONDITION - some minor problems. | |
| Deck Components | Good (7-9) | |
| Deck Expansion Joints | Poor (0-4) | |
| Deck Wearing Surface | Not Applicable | |
| Deck Rideability | Good (7-9) | |
| Deck Curbs, Sidewalks, and Median | Good (7-9) | |
| Deck Parapets and/or Railing | Good (7-9) | |
| Deck Drains and Drainage | Not Applicable | |
| Deck Utilities | Not Applicable | |
| Deck Deflection and/or Vibration | Good (7-9) | |

inspectX inspection form showing deck condition information.



Q&A Katie Bartojay, P.E.

Director, Technical Service Center

Katie Bartojay was named Director of the Technical Service Center (TSC) on July 25, 2024. She joined the Bureau of Reclamation (Reclamation) in August 2005 in what is now the Concrete and Structural Laboratory. She was Reclamation's 2011 Engineer of the Year and managed the Concrete and Structural Laboratory and then Client Support Services Office (CSSO) before becoming TSC Director. She caught up with us to talk about her career path, present and future challenges for the TSC, and her passions away from work.

What initially interested you about pursuing a career in water management?

I grew up around water. I was born in South Jersey and then lived by the Three Rivers in Pittsburgh. But when I moved to Colorado after I graduated from college, I got a much better appreciation for arid lands. I fell in love with the desert. I worked in the private sector for six-and-a-half years on large building and civil infrastructure work, connecting with Reclamation through my engineering peers. The mission of Reclamation resonated with me, along with seeing its water distribution system and how that connected to the people and agriculture. My first mentor had been a Reclamation employee, and that's how I got to know Reclamation better.

Can you provide a high-level summary of your different roles since joining Reclamation in 2005?

I started in the concrete laboratory as part of the Materials Engineering and Research Laboratory. It was a smaller group at the time, which benefitted me because I got to be involved in a lot of different types of work. I worked on design projects and construction specification sections. I did a lot of work as a junior engineer working my way up through that group. I got a chance to work on all types of projects and be a design lead on concrete modification projects when

other civil engineering groups were overloaded with work. That gave me the opportunity to work on bigger projects. I also led research projects and slowly worked my way up to become the Technical Specialist for the group. And then in 2019, I became the manager. That was a big transition to move to management. I think I was able to bring positive change to the group in the way we budgeted and operated, cleaning up the laboratories, and getting us in a position to work towards the modernization projects we're undergoing now.

I then had the opportunity in 2023 to take a detail to work directly with Dick LaFond, the previous TSC Director, as the CSSO Manager. Budget had always been a huge part of working in the laboratories because there are so many added expenses. I was cognizant over my career of the TSC Business Plan and our costs and revenues. The CSSO houses both our budget staff and our senior level project managers. It was a great opportunity to better learn the business side of the TSC. I started as the CSSO manager in January 2024 and got to spend six months working with Dick before he retired, which was hugely beneficial for my move to TSC Director in late July 2024. I've had my fingers in lots of different parts of the TSC over my career.

Who have been your mentors and what have you learned from them?

I've had a lot of mentors both professionally and technically. My first mentor was Bud Werner, the technical mentor in the private sector who used to be a Reclamation employee. A lot of what I learned early on as a professional engineer in the concrete field were methods and techniques that were from Reclamation. He was a big influence for me. And then Lowell Pimley was influential in my career as well. He was always very inclusive, and I worked on several projects with him before he was the director and after. He showed me a bit of the Reclamation Washington, D.C. Office and introduced me to things I would have missed if I didn't have a good working relationship with him.

I worked on the Warren H. Brock Reservoir, which Reclamation designed and built from 2007 to 2015. Dave Palumbo, currently Reclamation Deputy Director of Operations, was the regional Project Manager for that project. I learned more about being a good project manager from Dave than I could ever learn from a book. He is by far one of the best collaborators and role models in Reclamation. A lot of peer support helped me get to where I am today.



Bartojay family at 2011 Reclamation Engineer of the Year ceremony.

I think one thing we overlook when we hear “mentor” is our peers. They’re the mentors in our day-to-day life who make the biggest impact and always support each other.



Bartojay and Ed Frazar, Division Chief, Civil Engineering Services, TSC, at Buffalo Bill Powerplant (downstream from the original Shoshone Powerplant and Buffalo Bill Dam), Wyoming (2015).

How did previous roles and responsibilities help prepare you to lead the TSC?

In 2011, I received the Reclamation Engineer of the Year award. I think that publicized my work efforts and opened doors, from a name recognition perspective, so I could have better relationships with people in the regions and TSC clients. It was mutually beneficial exposure. It's awkward because you don't ask for those types of recognition when they happen. I hope our newer Engineers of the Year have similar opportunities and make the most of them.

What are the greatest challenges you have encountered so far as Director of the TSC?

We need to keep our technical staff trained and get them the experience and expertise to be successful. We have a lot of vacancies. Trying to fill them is an ongoing process. That's an industry-wide challenge right now. I've said this several times in the last few months: we need to be more agile in how we staff and address our workload challenges. Whether that's moving people around internally project-by-project or gaining additional expertise in areas we haven't traditionally featured. Our clients are coming to us with new needs, and they are looking for us to be the technical leader to innovatively solve their new issues. We need to be ready and have those skillsets developed. Planning is another thing we're working hard on. Looking at out years to see what types of projects are coming and when, so we can staff up, train up, and start learning new and novel science and engineering crucial to succeeding in those projects.

How does the work of your staff intersect with the operations and maintenance (O&M) of Reclamation facilities?

O&M is a big piece of what we support. Examples would be our electrical divisions that go out and work in the powerplants. The concrete group does evaluations and repairs at projects. Multiple people in our design groups are ready to help with emergency response when something fails. And other groups, like Materials and Corrosion, work a lot on O&M. We also have people on the ropes access and dive teams that do inspections. We use uncrewed aerial systems (UAS) to do bridge inspections. And we put on a lot of classes and workshops. A big part of what we do is testing in our laboratories, especially with the aging infrastructure we have. It's rewarding to go out and help with very specific needs. And as we work with asset management more, we can collaborate on good ideas for applied research programs and projects that will help solve issues occurring in multiple facilities.

It's about connecting our amazing scientific and engineering staff to the value they bring.

What is extraordinary about working at the TSC?

The scale of Reclamation projects is so unique. And the TSC particularly has always been such a mecca for all these highly technical people. So much expertise under one roof that you can pull together in one meeting! It's fascinating how many experts we have here! And it's not just what our staff learned in school that makes them so amazing. It's the history we have with all these projects.

How do you envision the TSC's future?

The TSC has had to change over the years based on circumstances. In the early 2000s, we went through Managing for Excellence, which pared down what we did to just critical projects and expertise. We became very lean. But we're at a point now where we've got the projects. The project workload forecast is high, and that isn't going away. Improving planning will help us keep a better pulse on changes so we can shift in advance. How can we be more efficient? Streamline practices and become more agile between groups? Better serve our clients? What does that look like? We need to get to where we're running operationally smooth and employee engagement is high. What we don't do well yet is giving TSC staff a deep understanding of the end goal of our projects. Where is the water going? Who is it serving? How are we helping the Nation?

What advice can you share for those just starting careers in Reclamation?

I would say "Welcome!" and that this is a great place to make a career. Reclamation has so much variety in our projects from year to year and decade to decade. If you embrace it, the work does not become stale. And there are advantages to being in an agency that's big enough that you have room to grow, but also small enough that you can feel like you're part of a family. That's something you can't get in the private sector.

What do you like to do when you're not at work?

Over the last 15 years, I've put a lot of time into serving my local community in Conifer. That's been really rewarding. And it helps me be better at my job here. I've learned a lot of skills through volunteer work. I helped our school build a \$1.5 million stadium in multiple phases. We had a \$500,000 phase where we put in stadium lights, locker rooms, and the concession stand. And then we excavated the hillside and put in bleachers. The last piece was a press box. When we started, there was just a field and a track. Now we have 1,500 to 2,000 people at games.



Conifer High School Capital Improvement Project.

I have a son about to graduate high school. We've always been an outdoor adventuring family. We love to go four-wheeling through the desert and camping. We visit a lot of Reclamation facilities, even camping on the beaches of our reservoirs! We take road trips all around the West.



Bartojay family camping trip to Lake Powell (2020).



Updates & Due Dates

2025 Water Management Workshop

Please join us for the 2025 Water Management Workshop (WMW) to be held Tuesday, February 11, through Thursday, February 13, at the Denver Federal Center. Registration is now open. Please see below for further guidance. For Bureau of Reclamation (Reclamation) employees, this workshop will count for annual training requirements.

Background

The WMW is a seminar for supervisors, managers, water masters, and others responsible for or associated with the operations and maintenance of water systems. It is held when field activities are generally at a minimum for the convenience of operating personnel. The Reclamation-sponsored workshop has been held since 1961. Participants will spend their time attending multiple educational sessions with opportunities for discussion and collaboration. The objective of the workshop is the self-improvement of personnel who are directly responsible for the technical details of operating and maintaining water systems.

Proposed Topics

- Drainage of Irrigated Lands
- Design, Installation, and Maintenance of Pipe Systems
- Vegetation Management and Pest Control
- Water Measurement
- WaterSMART

Additional Topics Under Consideration

- Uncrewed Aerial System (UAS) Simulator and Drone Collision Avoidance Demonstration
- Materials and Corrosion Lab
- Geotechnical Lab and Field Support
- Reservoir Sedimentation and Management
- Hydraulic Investigation and Lab Services
- Electrical Safety



Catherine Lucero, from the Technical Service Center's Concrete and Structural Laboratory, presents at the 2024 WMW.



2024 WMW Attendees participate in a hands-on lab session.

Registration

Please email Dave Folsom at dfolsom@usbr.gov for additional workshop information and the required registration form, which needs to be approved and submitted by your regional lead no later than Wednesday, January 15, 2025. There is no tuition fee for this workshop.

Next Steps

The 2025 WMW agenda and other materials for the three-day event will be emailed to attendees soon after registration closes on January 15.

We look forward to seeing you there!

