BUREAU OF RECLAMATION

Reclamation's Deferred Maintenance

Asset Leadership Network
National Academy of Sciences
January 10, 2024

Agenda

- Reclamation Background
- Deferred Maintenance
- Reclamation Deferred Maintenance
- Moving Forward
- Questions

Mission Statement

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

Infrastructure

294 Reservoirs and 591 Dams

77 Hydroelectric Plants

10,956 Miles of Canals

$1.4B in Hydropower Economic Contribution

$23.2B in Irrigation Economic Contribution

Hydropower

- Second Largest Hydroelectric Producer in the U.S.A.
- Fifth Largest Electric Utility In The 17 Western States
- Produce 40B kwh Annually
- 192 Generating Units
- Enough power for 3.97 million households

Irrigation

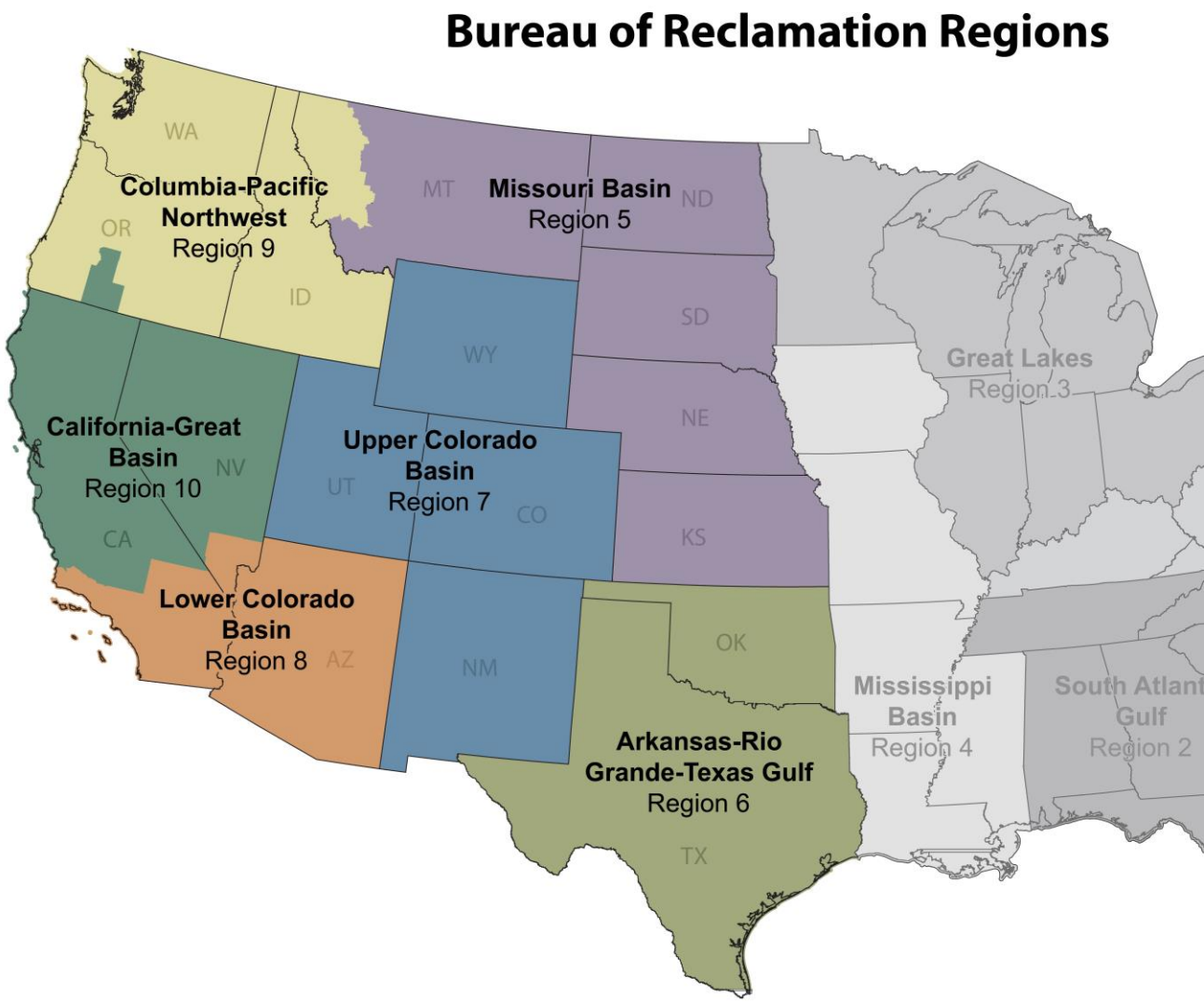
- Provides irrigation water to 20% of U.S. Western farmers (10M acres)
- Reclamation Projects enable farmers to produce 60% of the nation's vegetables and 25% of the nation's fruit and nut crops
- Supports more than 362,000 jobs.

Recreation

- 235 recreation areas
- 590 campgrounds
- 1391 miles of trails
- 514 boat ramps
- $3.2 billion economic contribution in 2021
- 38,000 jobs supported

Bureau of Reclamation

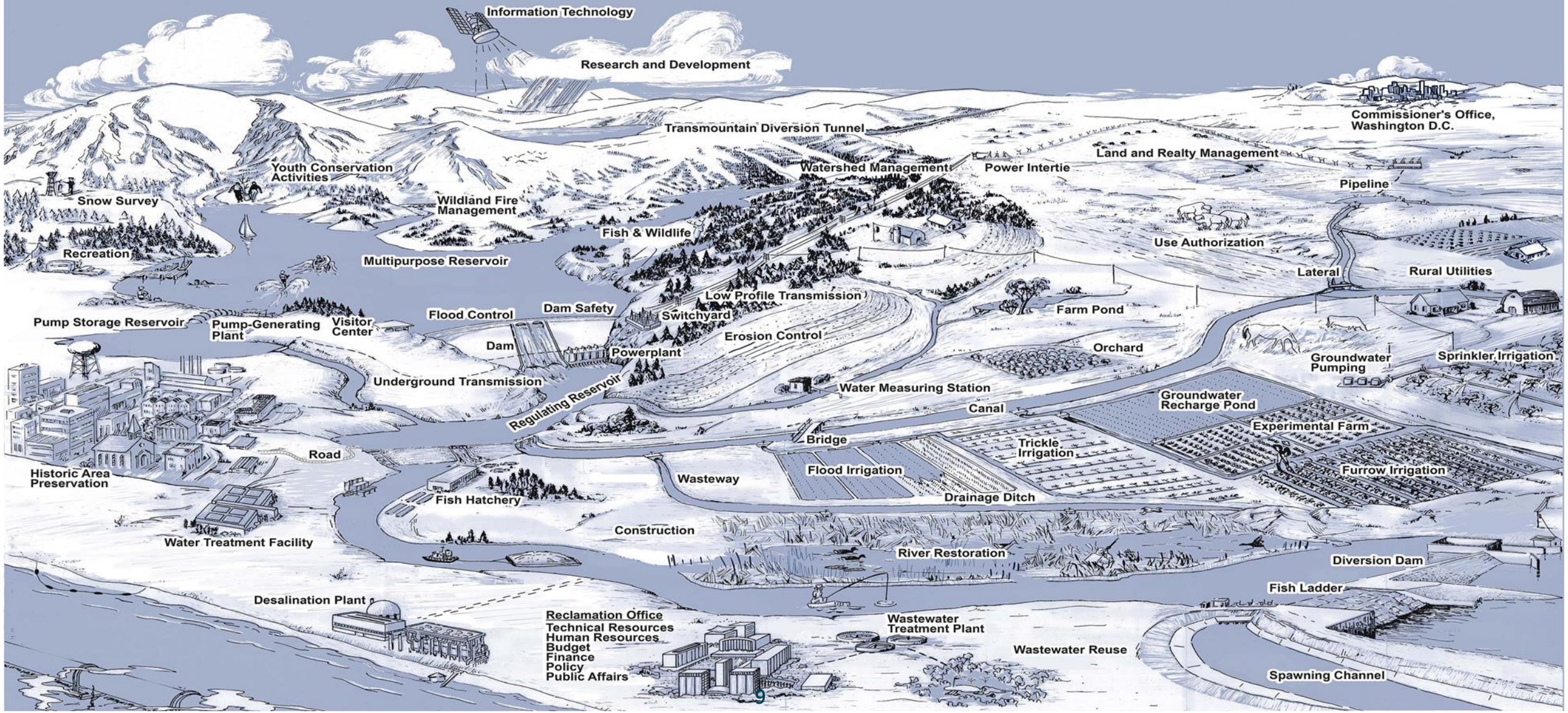
- Missouri Basin and Arkansas-Rio Grande-Texas Gulf
- Lower Colorado Basin
- California-Great Basin
- Columbia-Pacific Northwest
- Upper Colorado Basin



Bureau of Reclamation Asset Management

The coordinated activity of an organization to realize value from assets.

(International Organization for Standardization, ISO 55000 Asset Management, (Clause 3.3.1))



Deferred Maintenance (DM)

"Maintenance and repairs that were not performed when they should have been or were schedule to be and which are put off or delayed to a future period" (*Statement of Federal Financial Accounting Standards (SFFAS) 42: Deferred Maintenance and Repairs*)

Reclamation DM Requirements

- SFFAS 6 Accounting for Property, Plant, and Equipment
  - Established the standards for disclosing DM associated with Federally funded and constructed assets
- SFFAS 42 Deferred Maintenance and Repairs
  - Amended SFFAS 6 Required Supplemental Information (RSI) requirement to improve the measurement of deferred maintenance and repairs (DM&R)
- DOI-AAAP-0031, Changes to Deferred Maintenance and Repairs Reporting by the Statement of Federal Financial Accounting Standards 42
  - The purpose of this joint policy memorandum is to implement the SFFAS 42: Deferred Maintenance and Repairs; amending SSFFAS 6, 14, 29, and 32
- Reclamation Manual (RM) FAC 01-09, Reporting Deferred Maintenance and Repairs (DM) of the Bureau of Reclamation's Reserved Works Assets
  - Directive and Standard on reporting Reserved Works DM amounts to the Department of Interior (DOI) consolidated Agency Financial Report (AFR), RSI

Reclamation DM Sources

- DM can come from various sources
  - *Sources should be auditable*

- DM is reported out of the Capital Investment and Repair Needs (CIRN) application

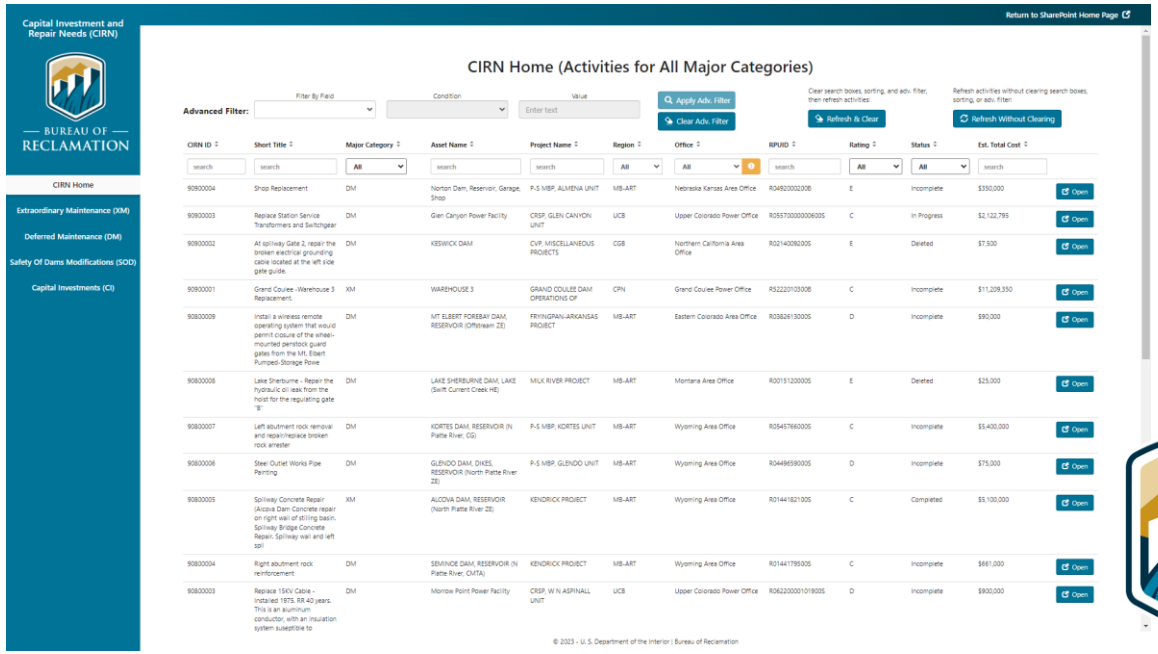


Figure: Screenshot of CIRN Homepage

Reclamation Reasons for DM

Facility Restrictions

Operating restrictions may be in place and impact the ability to complete work

Insufficient Expertise

Specialized or Experienced staff may be unavailable in the regional, area, or field offices

Funding Constraints

Lack of available funding to complete the work

Lack of Priority

Worsening conditions on other projects needing immediate attention, administration and/or regional priorities change, or other work takes priority

Weather

Weather conditions may impede the ability to accomplish work (climate change, drought, flooding, fire)

Other Reasons

Inaccessible equipment, labor, supply chain issues, inflation, etc.

Reclamation DM Process

Identification

Preventative and/or Corrective Maintenance/Repair has been identified

Documentation

Asset is scheduled for maintenance

Deferment

Action meets DM definition

Tracking

DM is entered into CIRN and tracked until completion

Reporting

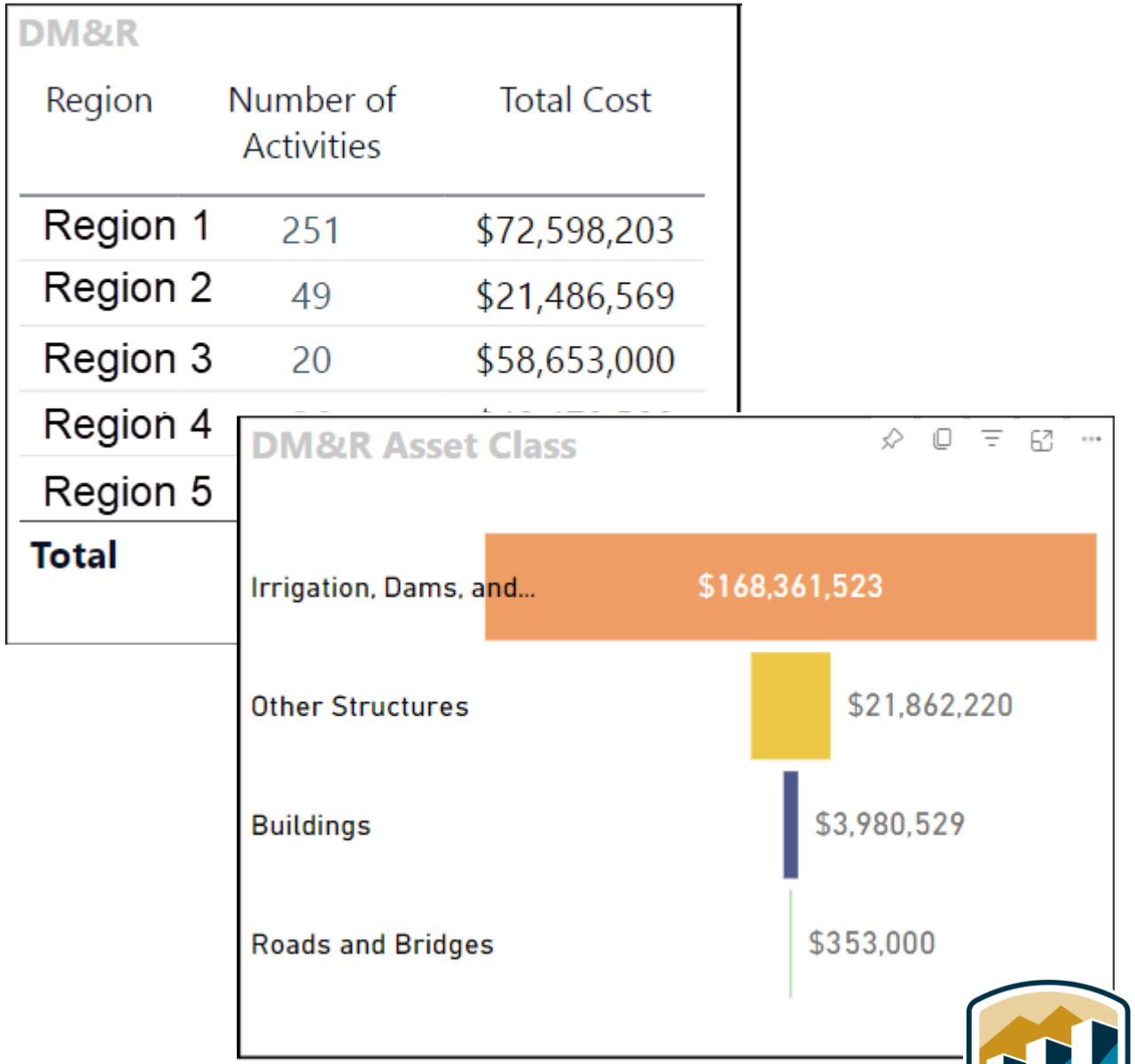
DM included in annual MR&R reporting, Annual budget development, and quarterly DM reporting

Completion

DM is addressed and confirmed

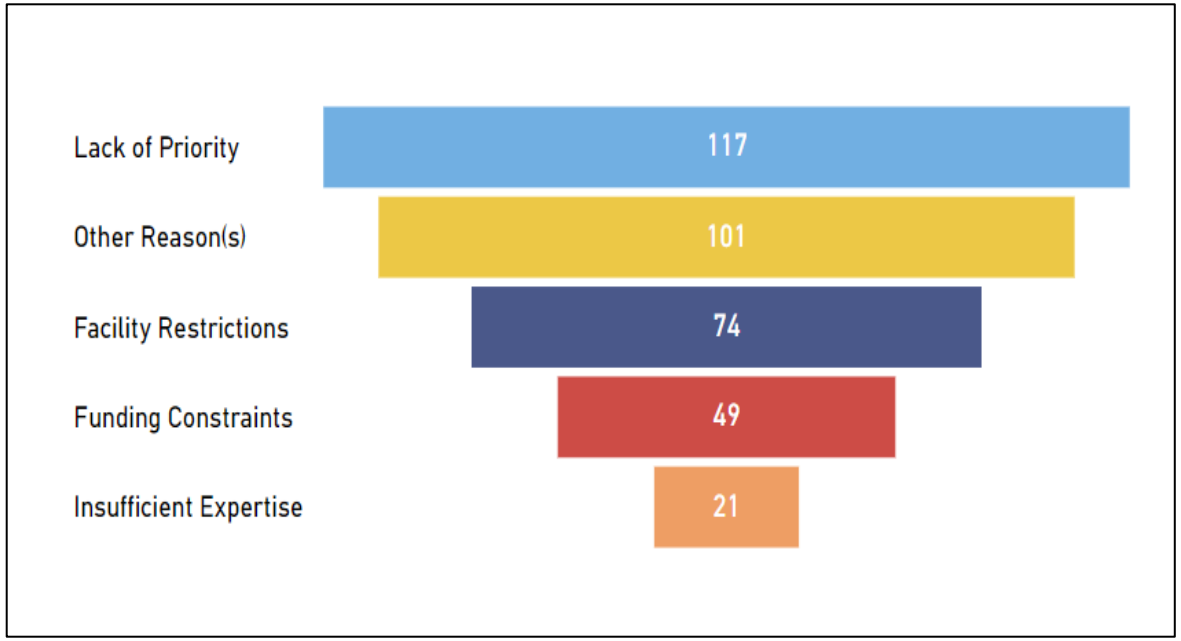
Dashboards

- Uses Power BI to export DM data from CIRN for reporting and analysis
  - Ability to filter by region, area office, or by asset name
  - Ability to export data to excel, csv, or PDF
  - Ability to subscribe to the report or share with others
- Can customize visuals based on requirements or programmatic needs/analysis



Figures: DM&R Dashboard for AFR, RSI Reporting

Data Analytics



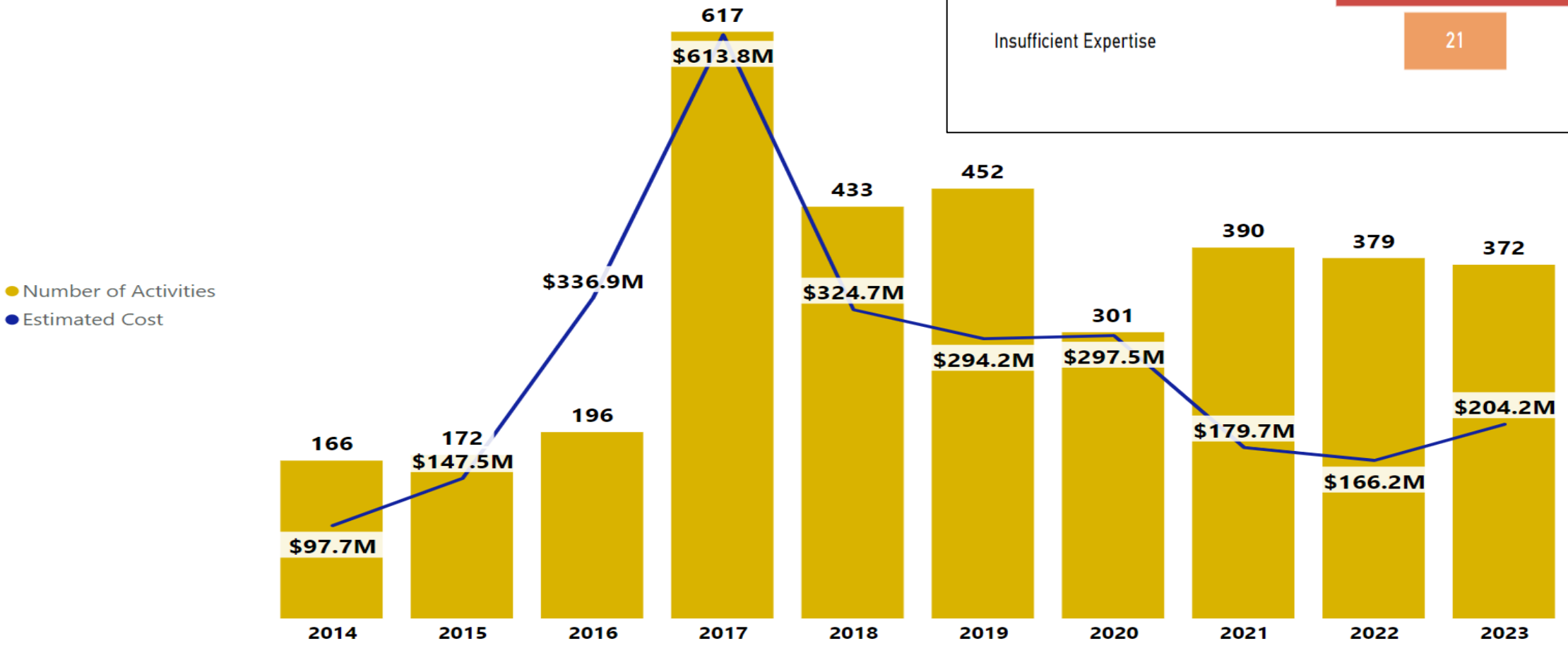
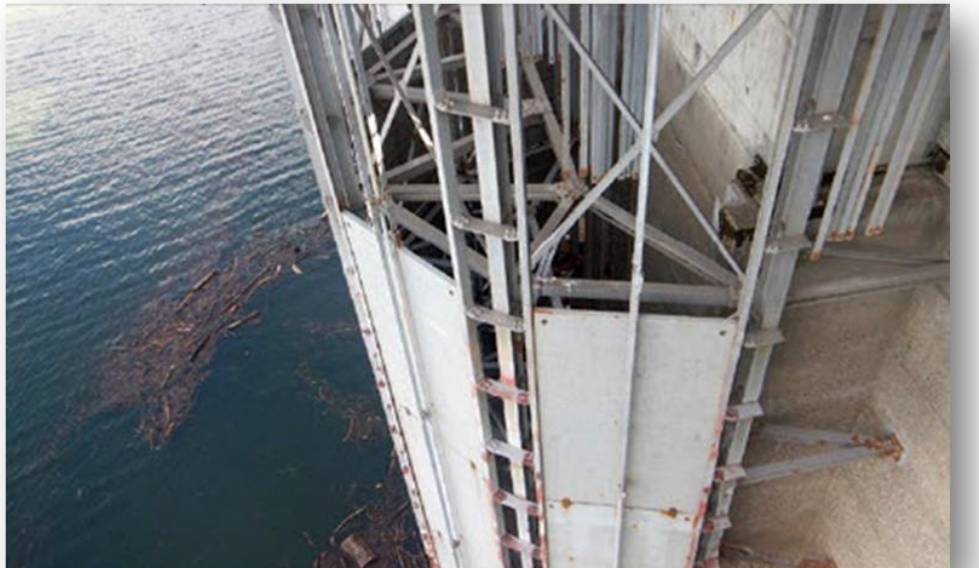


Figure: Reported DM&R for AFR, RSI Reporting (FY 14 – FY 23)

Good Reasons for DM

- Folsom Temperature Control Device (TCD)
  - Reason for Deferment: The planned replacement of the structure (Dam Raise Project in coordination with the U.S. Army Corps of Engineers). The decision to wait and incorporate it with the larger replacement was supported by having a Category D rating (prioritization rating), which would indicate its lower risk, lower priority.
  - Current Estimated Cost: $5 million
  - Original Schedule Completion Date: 2006



Good Reasons for DM

- Hoover Drum Gates
  - Reason for Deferment: Water levels in the Lake Mead reservoir behind the dam had decreased enough that the facility would be unlikely to use them for the foreseeable future.
  - Current Estimated Cost: $20.9 million
  - Original Schedule Completion Date: 2007

Summary, Reclamation Deferred Maintenance

- A healthy maintenance program should always consider deferred maintenance as an alternative to scheduled maintenance
- All maintenance budgets should include deferred maintenance projects
- Deferred maintenance is not always a bad practice
- Risk should be incorporated into decision making
- Money does not solely solve a deferred maintenance backlog
- Moving from scheduled based maintenance to reliability centered maintenance will result in less deferred maintenance and more reliable and resilient operations

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