

# CORPS OF ENGINEERS: The Status of Construction Project Environmental Mitigation Has Not Been Reported and Tracked as Required

GAO-24-106929

Report to Congressional Committees

September 18, 2024

## Why This Matters

The U.S. Army Corps of Engineers, an agency within the Department of Defense, develops civil works projects primarily to improve navigable channels, reduce flood and storm damage, and restore aquatic ecosystems. Congress authorizes and provides appropriations for proposed projects based on Corps feasibility studies. The studies are statutorily required to include a specific plan to mitigate damage to ecological resources and fish and wildlife losses created by the project, unless it is determined that the project will have negligible adverse impacts. Mitigation generally involves avoiding and minimizing impacts or undertaking compensatory mitigation for unavoidable impacts by replacing or providing substitutes to restore, establish, enhance, and preserve resources.

Section 2036(b) of the Water Resources Development Act (WRDA) of 2007, as amended, requires the Corps to report to relevant congressional committees each fiscal year, concurrent with its request for appropriations, on the status of construction of projects requiring mitigation. The Corps is to report the status of such mitigation and make the information in the report available to the public, including on the internet. Section 2036(b), as amended, also requires the Corps to use a uniform methodology to determine the status of all projects included in the report and to report on statutorily required consultations with appropriate federal agencies and states to determine whether a mitigation plan is successful. The annual reports inform the budget process to help ensure projects are adequately funded to meet their mitigation needs.

The Water Resources Development Act of 2022 includes a provision for GAO to, among other things, review the Corps' annual reports and activities to mitigate fish and wildlife losses resulting from the construction, operation, and maintenance of water resources development projects. (Pub. L. No. 117-263, div. H, tit. LXXXI, § 8236(d)(1)(A), (B)(iv), 136 Stat. 2395, 3770-3771). This report describes how the Corps reports and tracks such mitigation activities, the extent of environmental restoration from these activities reported by the Corps, the extent to which mitigation is undertaken prior to—or concurrently with—construction, and other information on the Corps' mitigation activities in fiscal years 2008 through 2020.

## Key Takeaways

- After fiscal year 2020, the Corps did not deliver annual reports on the status of construction of projects requiring mitigation to congressional committees as required by statute. The fiscal year 2021 report is in the Corps' approval process, and the fiscal year 2022 report is being drafted, according to Corps

officials. The Corps does not have documented policies and procedures for uniform data collection and timely reporting.

- The Corps' fiscal year 2020 annual report states that since fiscal year 2008, 47 projects had successfully completed required mitigation as of fiscal year 2020.
- The Corps' annual reports for fiscal years 2008 through 2020 indicate that mitigation and construction generally progressed concurrently. But data from those reports indicate that for many projects, project construction outpaced mitigation construction.
- Our review of information presented in the Corps' annual reports identified consistent challenges with data quality. This limited the ability to draw reliable conclusions about the timing, extent, and impact of reported mitigation.
- The Corps stopped reporting information on the extent of mitigation activities for the operation and maintenance of projects in fiscal year 2019 because it is not statutorily required.
- We recommend that the Assistant Secretary of the Army for Civil Works establish agencywide policy and procedures documenting a uniform methodology to track and report the status of construction of water resources development projects requiring mitigation.

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**To what extent has the Corps consistently reported annually on the status of construction for authorized water resources development projects that require mitigation?**

The Corps did not deliver annual reports on the status of construction projects requiring mitigation to relevant congressional committees as required by WRDA 2007, as amended, after fiscal year 2020 and does not have documented policies and procedures for uniform data collection and timely reporting. The Corps delivered reports for fiscal years 2008 through 2019 to congressional committees generally concurrently with its request for appropriations, as required. However,

- the fiscal year 2020 report was approved for submission to congressional committees in December 2021, after the Corps' May 2021 request for appropriations rather than concurrently, and it was not posted online as required until 2024;
- according to Corps officials, as of July 2024, the fiscal year 2021 report was drafted but had not been approved by the Assistant Secretary of the Army for Civil Works for submission to congressional committees; and
- according to Corps officials, as of July 2024, the fiscal year 2022 report was being drafted for approval by the Assistant Secretary of the Army for Civil Works and had not been submitted to congressional committees.

The Corps headquarters and Army officials who are responsible for collecting the information and drafting the reports told us that the report delivery delays occurred because other work priorities superseded report preparation and because of the lengthy review and approval process.

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**To what extent has the Corps consistently provided the required information in its annual reports on the status of construction for authorized water resources development projects that require mitigation?**

The Corps has not consistently included the project information required by WRDA 2007, as amended, in its annual reports. The reports are required to include the status of all projects

- (1) under construction as of the date of the report;
- (2) for which the President requests funding for the next fiscal year; and
- (3) that have undergone or completed construction but have not completed the mitigation required.<sup>1</sup>

According to the Corps' January 2019 10-year review of its mitigation reporting, the agency did not report all the projects under construction as of the date of the report until its fiscal year 2017 report. Instead, the Corps included those in its budget requests.<sup>2</sup> The Corps made a change for the fiscal year 2017 report to start including projects with active construction even if not included in the fiscal year budget request, as required by WRDA 2007, as amended.

In addition, WRDA 2007 requires the Corps' annual reports to provide the results of statutorily required consultations with appropriate federal agencies and states to determine whether mitigation plans for water resource development projects were successful.<sup>3</sup> WRDA 2007, as amended, also requires the annual reports to provide specific dates for participation in those consultations.<sup>4</sup> Our review of the annual reports for fiscal years 2008 through 2020 found that the Corps did not consistently provide this information. Specifically, the Corps

- did not include any information on consultation in three reports (fiscal years 2008, 2009, and 2016);
- included the required information for successfully completed projects but not ongoing projects in three other reports (fiscal years 2017, 2018, and 2019); and
- did not always include the specific dates of consultation.

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**To what extent has the Corps consistently used a uniform methodology to determine the status of construction for authorized water resources development projects that require mitigation?**

The Corps has not used a uniform methodology to determine the status of projects for the annual reports, as required by WRDA 2007, as amended.<sup>5</sup> The Corps' fiscal year 2010 report stated that the Corps had implemented a database to collect mitigation status information, which Corps officials told us they used through fiscal year 2019. In its 2019 10-year review, the Corps reported that its annual reports contained duplicate and inaccurate data and that database enhancements were needed to help officials in division and district offices provide accurate and consistent mitigation information.

Corps officials told us that the Corps did not use the database to collect data after fiscal year 2019 because of software issues that resulted in unreliable data. Instead, for fiscal years 2020 through 2022, the Corps used a spreadsheet to collect mitigation status information from project officials, which contributed to reporting delays. Officials told us the Corps upgraded the database in 2023, including by adding user prompts with input examples to help address inconsistencies in data entry. They also said that, going forward, the database would start retaining annual status information from each year to compile a complete record of mitigation for every project, rather than overwriting each year's data with updated information as it did in the past. The officials told us the Corps would use the database in 2024 to collect information for the fiscal year 2023 annual report.

Corps officials told us that the agency does not have documented policies and procedures for uniform tracking and timely reporting of mitigation information and that it has been challenging for them to obtain consistent information from project

officials and verify its accuracy. In a January 2017 memorandum to improve the quality of the annual reports, the Assistant Secretary of the Army for Civil Works directed the Corps to develop and document a consistent approach for the timely delivery of mitigation information for the annual reports and to inform the budget process.<sup>6</sup> According to Corps officials, they have provided a variety of assistance tools and guidance for data collection, such as help text in the database, a database user guide, and informal guidance to the field with updated reporting instructions based on feedback from the prior year. The guidance does not include other steps of the reporting process, such as quality assurance and report development and approval.

*Standards for Internal Control in the Government* provides a framework for managers to establish effective policies and procedures for key objectives, such as reporting timely and reliable information for internal and external use.<sup>7</sup> Establishing policies and procedures based on these standards could help the Corps meet the statutory requirements and deadlines for submitting its annual reports to relevant congressional committees.

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**What has the Corps reported about mitigation activities for water resources development projects, and to what extent is this information complete and accurate?**

**Completion of mitigation activities**

The Corps' annual reports for fiscal years 2008 through 2020 present qualitative and quantitative information about completed and ongoing mitigation activities. However, we found that inconsistent or incomplete information in these reports often makes it difficult to draw reliable conclusions about the extent of mitigation activities and their effects, such as on restoring natural hydrological conditions and native vegetation and otherwise supporting native fish and wildlife species. For example, the Corps' fiscal year 2020 report states that from fiscal year 2008 through fiscal year 2020, a total of 47 projects successfully met compensatory mitigation requirements.<sup>8</sup> However, Corps headquarters officials told us that the agency does not maintain a list of projects with completed mitigation with which to verify this total.

As a result, we attempted to develop a comprehensive list of successfully mitigated projects through fiscal year 2020 by reviewing information in prior Corps reports. In comparing information within and across these reports, we identified some inconsistencies. For example, the fiscal year 2010 report indicates that eight projects successfully completed mitigation in 2009, but the Corps' 10-year review indicates that 10 projects were successfully completed that year. In addition, though both sources indicate that the Columbia River Channel project completed mitigation activities in fiscal year 2017, the annual report for that year counts these activities as one project, while the 10-year review counts them as two projects.

The limited quality of project-specific mitigation data also makes it difficult to evaluate these activities' ecological effects. In the absence of comprehensive records on successfully mitigated projects, we reviewed project-specific mitigation information (typically presented in two tables) from the Corps' annual reports in the years before a project's completion.

Without an electronic database with complete historical information, individual users must independently identify each project by name and search for corresponding data on that project. Because each annual report typically has three tables and a narrative section, comparing quantitative and qualitative information for individual projects across years can be complicated and time-consuming. More broadly, the need to track projects individually inhibits the ability of the Corps—or other users—to analyze high-level, aggregated information on the effects of mitigation activities.

## Timing of mitigation activities

The Corps' annual reports for fiscal years 2010 through 2020 include statements indicating that compensatory mitigation and construction activities were "generally progressing concurrently." But data from those reports' tables suggest that, for many projects, the rate of project construction outpaced the rate of mitigation construction.<sup>9</sup> Section 906 of WRDA 1986 requires that any mitigation of fish and wildlife losses be undertaken prior to—or concurrent with—project construction.<sup>10</sup> Since fiscal year 2009, the Corps' annual reports have included data on the progress of project and mitigation construction (both measured by "percent completed").<sup>11</sup>

Our analysis of these data suggests that for each fiscal year from 2009 through 2020, between 49 and 64 percent of projects met the statutory requirement—that is, the percent of mitigation construction completed exceeded (or was equivalent to) the percent of project construction completed. For the remaining projects, progress toward project completion exceeded progress toward mitigation completion.<sup>12</sup>

## Additional data quality limitations

The Corps' annual reports for fiscal years 2008 through 2020 provide information about completed and ongoing mitigation activities, but our review found significant and consistent challenges with the completeness and consistency of included information.

- **Missing or incomplete information.** Upon reviewing information for projects that the Corps considers successfully completed, we identified instances of missing or incomplete information. For example, WRDA 2007, as amended, requires the Corps' annual reports to provide specific dates for the consultations to determine whether mitigation plans were successful, but the table containing this information was missing from three of the 13 annual reports we reviewed. Moreover, 17 of 47 successfully completed projects did not have a corresponding documented consultation.<sup>13</sup> The Assistant Secretary's January 2017 memo identified several areas of improvement, including ensuring that consultations are completed "in a timely manner" and recorded, but we found that challenges remain.
- **Inconsistent information.** We also found inconsistencies in reported mitigation data, which raises questions about the accuracy of these data and complicates efforts to assess the overall environmental effects of the mitigation in restoring natural hydrologic conditions and supporting native species. For example, we identified instances in which the description of a project's mitigation requirements changed significantly from one year to the next, but the corresponding quantitative measures—such as how many acres of wetlands were involved—remained unchanged.
- Similarly, in some annual reports, the qualitative information provided about a project—such as its ecological success to date—was inconsistent with the quantitative data provided, such as the percent of mitigation completed. According to Corps headquarters officials, the agency does not assign a unique identifier to projects requiring mitigation, which—in addition to the lack of an electronic database with complete historical information—makes it difficult to track projects over time and identify possible information gaps or inconsistencies. For example, the Corps provided three distinct mitigation acreage totals for the same project in different areas of its fiscal year 2017 report.<sup>14</sup>

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## To what extent has the Corps taken action to mitigate impacts from the operation and maintenance of projects?

The Corps stopped reporting information on the extent of mitigation activities for the operation and maintenance of projects after its fiscal year 2019 report. From fiscal year 2008 through fiscal year 2019, the Corps included the status of mitigation for some operations and maintenance projects in its annual reports, along with the statutorily required information on mitigation for construction projects. The fiscal year 2020 report states that the Corps is not statutorily required to include information about the status of mitigation for the operation and maintenance of projects, and therefore Corps officials excluded mitigation information for eight such projects.

Corps officials stated that the Corps would not track mitigation information for such projects going forward. The officials also told us the Corps does not conduct periodic reviews of mitigation requirements for the operation and maintenance of projects.<sup>15</sup> Therefore, according to the officials, there is no comprehensive information available on the status of mitigation for the operation and maintenance of projects.

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## Conclusions

The Corps has not consistently reported information on the status of construction of water resources development projects requiring mitigation and has not met the statutory requirement to use a uniform methodology to determine the status of the projects. To develop timely and reliable annual reports that satisfy these requirements, it is important for the agency to document a uniform methodology in policies and procedures to govern the process.

According to *Standards for Internal Control in the Federal Government*, such policies and procedures should define responsibilities, assign key roles, and delegate authority to collect project status information in an effective and efficient manner and to reliably report high-quality information for timely delivery. Documentation of the process also provides a means to retain organizational knowledge and mitigate the risk of having that knowledge limited to a few personnel, and to communicate that knowledge as needed to external parties, such as members of Congress and external auditors. Having documented policies and procedures could help the Corps meet statutory requirements and reporting deadlines for submitting its annual reports to relevant congressional committees.

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## Recommendation for Executive Action

We are making the following recommendation to the Department of Defense:

The Assistant Secretary of the Army for Civil Works should direct the Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers to establish agencywide policy and procedures documenting a uniform methodology to track and report the status of construction of water resources development projects requiring mitigation. (Recommendation 1)

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## Agency Comments

We provided a draft of this report to the Department of Defense for review and comment. In its comments, reproduced in appendix I, the department concurred with our recommendation, noting that it will direct agencywide policy and procedures documenting a uniform methodology to track and report the status of construction of water resources development projects requiring mitigation.

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## How GAO Did This Study

We reviewed Corps documentation, including its annual reports for fiscal years 2008 through 2020 required by section 2036(b) of WRDA 2007, as amended.<sup>16</sup> We also reviewed the Corps' 2019 10-year review of its annual reports to determine how it reported on mitigation and the extent to which mitigation actions had been implemented.

To evaluate the data in these reports, we first created a central repository for the data, with a separate spreadsheet for Tables 2 and 3 of each fiscal year, when available. (Table 1 does not include mitigation data and was therefore not evaluated.) We then reviewed these data for (1) completeness, such as by identifying any instances where tables were omitted or table entries were incomplete, and (2) consistency, such as by reviewing a project's mitigation data across multiple years' reports, comparing qualitative and quantitative mitigation information provided for a given project. We also conducted summary analyses of the data, where possible, and evaluated these results alongside information that the Corps provided. We interviewed Corps headquarters officials regarding the Corps' tracking and reporting of mitigation activities for its projects.

We conducted this performance audit from June 2023 to September 2024 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

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## List of Addressees

The Honorable Tom Carper  
Chairman  
The Honorable Shelley Moore Capito  
Ranking Member  
Committee on Environment and Public Works  
United States Senate

The Honorable Sam Graves  
Chairman  
The Honorable Rick Larsen  
Ranking Member  
Committee on Transportation and Infrastructure  
House of Representatives

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense, the Assistant Secretary of the Army for Civil Works, the Chief of Engineers and Commanding General of the U.S. Army Corps of Engineers, and other interested parties. In addition, the report is available at no charge on the GAO website at <https://www.gao.gov>.

**Appendix I: Comments  
from the Department of  
Defense**



DEPARTMENT OF THE ARMY  
OFFICE OF THE ASSISTANT SECRETARY  
CIVIL WORKS  
108 ARMY PENTAGON  
WASHINGTON, DC 20310-0108

August 29, 2024

Mr. Cardell Johnson  
Director, Natural Resources and Environment  
U. S. Government Accountability Office  
Washington, DC 20548

Dear Mr. Cardell:

On behalf of the US Army Civil Works program, I am providing our response on the GAO Draft Report, GAO-24-106929, "CORPS OF Engineers: The Status of Construction Project Environmental Mitigation Has Not Been Reported and Tracked as Required", dated August 5, 2024 (GAO Code 106929).

We welcome this opportunity to review and comment on the draft report. We further value the GAO staff's professionalism, collaboration, and insights during this project. A copy of the draft comments is enclosed.

Thank you for your consideration of our response. My point of contact is Christina M Baysinger, PAO at 571-733-0053.

Sincerely,

A handwritten signature in black ink, appearing to read "Michael L. Connor".

Michael L. Connor  
Assistant Secretary of the Army  
(Civil Works)

Enclosure



**ENCLOSURE 1**

**GAO Draft Report**

**Dated August 05, 2024**

**GAO-24-106929 (GAO CODE 106929)**

**“CORPS OF Engineers: The Status of Construction Project Environmental Mitigation Has Not Been Reported and Tracked as Required”**

**US ARMY CIVIL WORKS COMMENTS**

**TO THE GAO RECOMMENDATION**

**RECOMMENDATION 1:** The Assistant Secretary of the Army for Civil Works should direct the Chief of Engineers and the Commanding General of the U.S. Army Corps of Engineers to establish agencywide policy and procedures documenting a uniform methodology to track and report the status of construction of water resources development projects requiring mitigation. This would help the agency meet statutory requirements and reporting deadlines.

**US ARMY CW RESPONSE:** Army CW concurs with the GAO recommendation and will direct such agencywide policy and procedures.

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## GAO Contact Information

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**Staff Acknowledgments:** Vondalee R. Hunt (Assistant Director), Brad C. Dobbins (Analyst in Charge), Micheal W. Armes, Cindy K. Gilbert, Jessica A. Lemke, Matthew C. McLaughlin, and Jeanette M. Soares.

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## Endnotes

<sup>1</sup>33 U.S.C. § 2283a(2).

<sup>2</sup>U.S. Army Corps of Engineers, Planning & Policy Division, *10-Year Review: U.S. Army Corps of Engineers Annual Mitigation Reporting* (January 2019).

<sup>3</sup>33 U.S.C. § 2283a(1). WRDA 2007, as amended, requires the Corps to consult annually with the appropriate federal agencies and states to determine whether the statutorily required mitigation plan for water resource development projects is successful. 33 U.S.C. § 2283(d)(4)(B). The consultation is required to address at least the ecological success of the mitigation as of the date on which the report is submitted, the likelihood that the mitigation will achieve ecological success as defined in the mitigation plan, the projected timeline for achieving that success, and any recommendations for improving the likelihood of success. 33 U.S.C. § 2283(d)(4)(B).

<sup>4</sup>33 U.S.C. § 2283a(3)(C).

<sup>5</sup>33 U.S.C. § 2283a(3)(A). This reporting requirement was established by the Water Resources Reform and Development Act of 2014.

<sup>6</sup>U.S. Army Corps of Engineers, Assistant Secretary of the Army (Civil Works), *Subject: Quality Control Improvements to the Annual Mitigation Report to Congress, 18 January 2017*, memorandum to the Deputy Commanding General for Civil and Emergency Operations.

<sup>7</sup>GAO, *Standards for Internal Control for the Federal Government*, GAO-14-704G (Washington, D.C.: September 2014).

<sup>8</sup>Mitigation is considered complete and “successful” by the Corps when the Major Subordinate Command/Division Commander determines the mitigation is successful based on monitoring results and the outcomes of consultations with appropriate federal agencies and states regarding mitigation success, as required by section 906(d)(4)(B) of WRDA 1986, as amended.

<sup>9</sup>Specifically, each annual report’s introduction includes the following statement (or similar): “Based on the percentage of mitigation completed and the percentage of construction completed data in Table 2, mitigation and construction activities are generally progressing concurrently, in accordance with Section 906 of WRDA 1986, as amended.” The annual reports for fiscal years 2008 and 2009 do not include any such statement.

<sup>10</sup>33 U.S.C. § 2283(a)(1). In addition, Corps officials told us that it is Corps policy to perform mitigation as construction impacts occur. The Corps’ revised guidance for fiscal year 2019 reiterated the requirement that the Corps budget for and implement environmental mitigation concurrent with or prior to construction of a project.

<sup>11</sup>These data are provided for all “projects with ongoing mitigation requirements,” as represented in Table 2 of the annual reports. According to the Corps, these include projects with mitigation activities that a) are not yet under way, or b) are under way, but necessary monitoring to confirm mitigation success has not yet been completed.

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<sup>12</sup>Some annual reports included a general explanatory statement describing circumstances under which project construction outpaced mitigation. For example, the Corps' fiscal year 2016 report stated that "some mitigation features reported are being managed programmatically, over the geographic scope of the system, and from a system-wide perspective the mitigation is progressing concurrently with construction." The Corps does not have criteria or documentation describing how and when a program should be managed programmatically, but the fiscal year 2020 annual report offers two examples of projects with programmatic management. According to a Corps official, certain unique or complex projects may be described as programs to improve transparency and clarity, such as projects that span three districts where the extent of mitigation completed varies in each district, but in aggregate mitigation is on track with construction. In addition, the fiscal year 2018 report states, "For the projects with compensatory mitigation trailing physical project construction, the NEPA decision documents for the majority of these actions required mitigation to occur post-construction after a determination of actual project impacts." However, the Corps did not provide an example of an applicable NEPA decision document or other supporting documentation.

<sup>13</sup>Because the Corps was unable to provide a current list of projects that had completed mitigation, we compiled a list of such projects through fiscal year 2020 using the Corps' 10-year review, which provides information on projects through fiscal year 2017. For the remaining years—fiscal years 2018 through 2020—we relied on information in those years' annual reports. (We were unable to rely on annual reports for the entire 13-year period due to incomplete data, particularly with respect to the reports for fiscal years 2008 and 2009.) In compiling this list, we made certain assumptions in cases of missing or inconsistent information. For example, to identify the projects that completed mitigation in fiscal year 2009, we relied on the 10-year review (which reported 10 projects), rather than the annual report (which reported eight), because the former provided the projects' names.

<sup>14</sup>Specifically, the fiscal year 2017 report provided different figures for the number of acres affected by mitigation at the Cottonwood site of the Columbia River Channel Improvement project in the (1) report introduction (110.8 acres), (2) Table 2 description of Mitigation Requirements (130 acres), and (3) Table 2 numerical data entry (190 acres).

<sup>15</sup>Corps officials told us that if there are changes in operations and maintenance of a project sufficient to warrant reevaluation under the National Environmental Policy Act of 1969, as amended, mitigation would be a consideration but only for the changes.

<sup>16</sup>This report specifically responds to section 8236(d)(1)(A), (1)(B)(i)(II)-(V), (1)(B)(iv) of the Water Resources Development Act of 2022. Future work will respond to the remainder of section 8236(d)(1)(B).