

STATE OF NEW HAMPSHIRE
 Department of Environmental Services
 Water Division – Dam Bureau Performance Audit
 AUDIT FINDING Corrective Action Plan

Completion Status:

- Open •
- Partially Resolved ••
- Substantially Resolved •••
- Fully Resolved ••••

Status as of October 1, 2016

Obs #	Observation Title	Recommendation	Action Item	Due Date	Completion Status	Comments
1	<i>Project Management Approach Needed</i>	DES should use a formal project management approach for its construction and reconstruction projects.	Develop a project management plan, including a detailed project schedule and cost estimate for new projects.	11/15	••••	A project management plan template for the Dam Bureau’s Dam Repair and Reconstruction Projects has been developed and is currently being implemented on the Mendums Dam Reconstruction Project. The Plan includes a detailed cost estimate and schedule, which are updated as conditions require. Similar Project Management Plans, consistent with the template with cost estimates and schedules, will be completed on all future projects
2	<i>Adequate Project Monitoring Needed</i>	Monitor and document dam construction and reconstruction	Implement procedures for management to	11/15	••••	Weekly planning and progress meetings are

		progress and ensure management at all levels is aware of the progress of each project.	closely monitor construction quality and progress.			now held on-site with Project Manager and Construction Superintendent and are documented in the Daily Field Report for that day. Monthly scheduling and progress meeting are also held on-site with Dam Bureau Administrator, Engineering and Construction Section Administrator, Project Manager and Construction Superintendent to review and document progress and schedule to ensure that budgets and milestones are met. Daily Field Reports are submitted by the Project Manager within 5 working days for review and documented approval by the Section Administrator.
3	<i>Plans and Specifications Review Needed</i>	Ensure plans and specifications are reviewed by the Engineering & Construction Section Administrator prior to project approval and construction.	Establish and implement procedures to review and approve plans and specifications prior to submittal for permitting.	11/15	••••	Design Phase Project Management Plan developed. Implementation underway. Plan specifies that the

						Administrator of the Engineering and Construction Section shall review and approve the Draft Preliminary Design Report, the Final Design Report, the Dam Safety Permit Application with the plans and specifications and all calculations, and the draft and final cost estimate and construction schedule for the project. The Dam Bureau Administrator will also review and approve the Final Design Report, the Dam Safety Permit Application with the plans, all calculations, and the final cost estimate and constructions schedule.
4	<i>Formal Cost-Benefit Analyses Should be Performed</i>	Periodically perform formal cost-benefit analyses to ensure state resources are being used in the most cost effective manner.	Perform periodic cost-benefit analyses of reconstruction projects on a force account basis or by using outside contractors.	5/17	•••	The Engineering and Constructions Section is performing cost-benefit analyses of aspects of the Mendums Dam Reconstruction Project and contracting out work that can be

						performed more efficiently and cost-effectively by contractors rather than in-house forces. The next available project to which a cost-benefit analysis can be performed on the complete final design will be available next spring.
5	<i>Dam Files Should be Centrally Located</i>	Develop and implement policies and procedures to fully document and retain all project documents in a central location, including a policy describing required documents and standard file organization.	Establish centralized electronic and paper file systems for dam reconstruction projects.	12/16	••	Progress has been made in centralizing the paper files for dam reconstruction projects. Work on centralizing the electronic files is underway.
6	<i>Dam Deficiencies Should be Resolved</i>	Take steps to ensure known deficiencies at state-owned dams are resolved in a timely manner.	Contract out and acquire resources to correct identified deficiencies.	12/17	•••	Using state contracts, the Dam Bureau has contracted for tree removal at state-owned dam sites and has retained the services of a hydro-seeding contractor to improve the vegetative cover on state-owned dams. In addition, the Dam Bureau has recently acquired a mini-excavator, which the Dam Operators are using to fill sinkholes

						<p>and regrade dam crests and embankments, as necessary; has recently acquired equipment, to use to seal cracks in the concrete of state-owned dams; and has recently acquired a brush cutter to cut brush from the embankments and abutments of the state-owned dams – all of which are correcting identified deficiencies on state-owned dams. In addition, DES is hiring a Part-Time Dam Operator to be tasked with correcting identified deficiencies. Nearly 30% of the identified deficiencies are for updates needed to O&M and Response Plans, as well as updating and testing of Emergency Action Plans (Items 7 and 8, below). During this reporting period, and additional four Plans and eight Emergency Action Plans have been updated.</p>
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7	<i>Operations and Maintenance Plans Should be Updated</i>	Develop policies and procedures to ensure updates are documented and addressed timely as well as periodically reviewing Operations & Maintenance Plans for state-owned dams.	Ensure that all Operation, Maintenance and Response Plans for state-owned dams are up to date.	12/17	●●	During this reporting period, four Operation, Maintenance and Response Plans have been updated.
8	<i>Emergency Action Plan Policies and Procedures Needed</i>	Create policies and procedures for updating, distributing, testing and annual reviews of EAPs for state owned dams. Also formally assign responsibly for EAPs.	Ensure that all Emergency Action Plans are up to date, distributed to the proper parties and annually tested.	12/17	●●●	During this reporting period, eight Emergency Action Plans have been updated, including the EAP for Murphy Dam, the state-owned dam that poses the highest risk to public safety.
9	<i>Need Better Internal Control of State Assets</i>	Perform periodic inventories of materials, report consumable materials to Bureau of Financial Reporting and improve storage of on-site materials.	Improve storage of materials and develop a method to track and report consumables.	7/17	●●●	Much of the material stored at the time of the audit has been used or installed at the state-owned dams for which they were purchased. Storage of on-site materials has improved, and funding is being sought through the Capital Budget to construct a new facility. The Dam Bureau now orders consumables as needed for specific projects and is reducing inventories of supplies.
10	<i>Administrative Rules Should</i>	Promulgate administrative rules	Establish and implement	12/17	●●●	Rules have been

	<i>Be Written For Dam Maintenance Revolving Loan Fund</i>	per statute and begin making loans available.	rules for the dam maintenance revolving loan fund for private and municipally-owned dams.			drafted and have been reviewed by NHDES Legal Unit. Currently undergoing further technical review.
11	<i>Dam Safety Should Meet Inspection Requirements and Complete Written Reports</i>	Complete required inspections and document all results of inspections performed on state owned dams.	Complete scheduled inspections of state-owned dams, and prepare reports of those inspections.	12/16	●●●	Inspections of all state owned dams that were due for inspection in 2015 have been completed. Currently, reports on all but 4 have been completed, and the remainder will be completed by December 2016. Inspections of state-owned dams scheduled for 2016 are underway and on schedule.
12	<i>Password Policy For Automated Gate Controls Needed</i>	Develop and implement a strong password policy aligned with current best practices for its automated gate controls.	Password-protect all automated gate control systems with strong passwords consistent with current cybersecurity standards.	10/15	●●●●	Completed. All gate control systems now operate with credentials that follow a rigid IT industry standard for password strength and a 90-day change schedule, consistent with current cybersecurity standards for future automated gate control systems.