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NEWS RELEASE

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FOR RELEASE October 16, 2018

Auditor of State Mary Mosiman today released a report on a review of the Department of Natural Resources' (DNR) monitoring and reporting of the Lake Restoration Program (LRP) for the period July 1, 2012 through June 30, 2017. The review was conducted to determine if DNR's administration of the LRP was in compliance with the *Code of Iowa,* Iowa Administrative Code, DNR policies and procedures, and contract, and to determine if DNR sufficiently monitors and reports the LRP projects.

DNR is authorized by the *Code of Iowa* to enter into contracts for construction of projects under the LRP. In fiscal years 2013 through 2017, DNR spent approximately $36.5 million for the LRP program. Approximately $31.6 million of the $36.5 million (86.6%) was spent for 48 projects at 35 different lakes. The remaining $4.9 million (13.3%) was spent for LRP administration, shallow lakes water quality improvement, lake assessments, minor projects, feasibility studies, and design and engineering consulting services. Examples of projects include inlet dredging, containment dikes, sediment containment dams, shoreline stabilization, silt pond renovation, spillway fish barrier, and lake dredging.

Mosiman reported for 15 projects tested DNR's project database did not contain sufficient documentation of the project status over the life of the project. For 3 of these 15 projects, Mosiman reported DNR did not maintain sufficient documentation to ensure inspections were completed while the construction was in progress and at project completion.

Mosiman also reported DNR maintains different portions of the project monitoring documentation in multiple locations. Various aspects of project monitoring records are maintained in the project database, project files in the Des Moines office, and the inspectors' project files in the district offices. In addition, the quality and frequency of project status notes recorded in the project database is not consistent from project to project, the inspection process is informal, there is no standard format used for documenting performance of the inspections, and inspectors typically do not provide results of inspections to DNR management unless deficiencies are identified. As a result, DNR management does not have assurance the inspection procedures are consistently performed and sufficiently documented to ensure the contractor completed the work according to the contract.

In addition, Mosiman reported the Natural Resources Commission (NRC) reported to the Governor and the Legislature the number of approved LRP project contracts as 17 for 2015 and 12 for 2016, but did not report the correlating cumulative amounts of $12,144,799 in 2015 and $8,635,257 in 2016 for the approved contracts.

Mosiman recommended DNR officials implement procedures to ensure inspectors timely and consistently perform construction inspections and document results in the project database. DNR officials should also implement procedures to ensure all significant construction inspection and other monitoring documents are maintained in project files to ensure the contractor completed the project in accordance with the construction contract.

Mosiman also recommended DNR implement a documented project inspection process including standard procedures and a detailed inspection form to help improve project monitoring efficiency and effectiveness, maintain monitoring documents in the project database, and consider requiring inspectors to timely scan and upload monitoring documents to the project database to facilitate availability of project inspection and monitoring records for management oversight.

In addition, Mosiman recommended DNR consistently maintain detailed supporting documentation to support the amounts reported by the NRC, and in conjunction with the NRC, clearly define the intent and types of information the NRC desires to present in the annual report, including consideration of reporting the total dollar amounts of the approved contracts in each year.

A copy of the report is available for review in the Office of Auditor of State and on the Auditor of State's web site at https://www.auditor.iowa.gov/reports/audit-reports/.

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REPORT ON A REVIEW OF THE MONITORING AND REPORTING OF LAKE RESTORATION PROGRAM PROJECTS ADMINISTERED BY THE DEPARTMENT OF NATURAL RESOURCES

FOR THE PERIOD
JULY 1, 2012 THROUGH JUNE 30, 2017

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Auditor's Transmittal Letter

To the Governor, Members of the General Assembly,
Members of the Natural Resource Commission,
and the Director of the Department of Natural Resources:

In conjunction with our audit of the financial statements of the State of Iowa and in accordance with Chapter 11 of the *Code of Iowa*, we have conducted a review of the Department of Natural Resources' (DNR) monitoring and reporting of the Lake Restoration Program (LRP) for the period July 1, 2012 through June 30, 2017. We reviewed the LRP to determine compliance with applicable sections of the *Code of Iowa*, the Iowa Administrative Code (Administrative Rules), DNR policies and procedures, and contract.

In addition, we reviewed whether DNR maintains a prioritized projects plan as required by section 456A.33B of the *Code of Iowa*, and whether information reported to the Legislative Services Agency, the Iowa Department of Management, the Governor and the General Assembly as part of DNR's annual report is sufficiently supported. In conducting our review, we performed the following procedures:

(1) Reviewed applicable sections of the *Code of Iowa*, Administrative Rules, and DNR policies and procedures for the LRP to gain an understanding of how the LRP is administered, monitored, and reported.

(2) Evaluated internal controls to determine whether adequate policies and procedures were in place and operating effectively.

(3) Determined if DNR complied with funding or allocation requirements established by the *Code of Iowa* for the LRP.

(4) Tested selected LRP projects for the period July 1, 2012 through June 30, 2017 to determine if LRP projects complied with applicable sections of the *Code of Iowa*, Administrative Rules, DNR policies and procedures, and contracts, including the award process, inspections, monitoring, and reporting.

(5) Visited several of the selected LRP projects to verify existence and evaluate the reasonableness of in-progress or completed projects compared to the contracted work.

(6) Assessed DNR's monitoring procedures for LRP projects and tested selected LRP projects to determine if monitoring was performed in accordance with DNR's policies and procedures.

(7) Examined reports completed by DNR and the NRC for the LRP to determine compliance with applicable sections of the *Code of Iowa* and to determine whether reports are sufficiently supported.

(8) Evaluated the efficiency and effectiveness of DNR's LRP project monitoring and summarized findings and recommendations based on the results of performing the above procedures.

Based on these procedures, we determined DNR spent approximately $36.5 million for the LRP in fiscal years 2013 through 2017. Approximately $31.6 million of the $36.5 million (86.6%) was spent for 48 projects at 35 different lakes. The remaining $4.9 million (13.4%) was spent for LRP administration, shallow lakes water quality improvement, lake assessments, minor projects, feasibility studies, and design and engineering consulting services.

We determined for 15 projects tested DNR's project database did not contain sufficient documentation of the project status over the life of the project. For 3 of these 15 projects lacking documentation of project status, DNR did not maintain sufficient documentation demonstrating performance of inspections while the construction was in progress and at completion.

We also determined DNR does not maintain project monitoring documentation in a centralized location. Various aspects of project monitoring records are maintained in the project database, project files in the Des Moines office, and the inspector project files in the district offices. We also determined the quality and frequency of project status notes recorded in the project database are not consistent from project to project, the inspection process is informal, there is no standard inspection form, and inspectors do not routinely provide inspection results to DNR management unless deficiencies are identified. As a result, there is no assurance the inspection procedures are consistently performed and sufficiently documented to ensure the contractor completed the work according to the contract.

In addition, we identified the NRC reported to the Governor and the Legislature the number of approved LRP project contracts as 17 for 2015 and 12 for 2016, but did not report the correlating cumulative amounts of $12,144,799 in 2015 and $8,635,257 in 2016 for the approved contracts.

Based on these procedures, we identified findings regarding LRP monitoring and reporting we believe should be considered by the Department of Natural Resources, members of the Natural Resources Commission, the Governor, and the General Assembly. The procedures described above do not constitute an audit of financial statements conducted in accordance with U.S. generally accepted auditing standards.

We extend our appreciation to the personnel of the Department of Natural Resources for the courtesy, cooperation, and assistance provided to us during our review.

Mary Mosiman

MARY MOSIMAN, CPA
Auditor of State

August 28, 2018

Introduction

The Legislature has provided appropriations to the Department of Natural Resources (DNR) for lake dredging for several years. For example, during fiscal years 1999 through 2006, the funding for dredging ranged from $350,000 to $4.2 million per year, totaling approximately $12.9 million. Prior to fiscal year 2006, 4 lake restoration projects were completed by DNR at Lake Ahquabi, Little Wall Lake, Swan Lake, and Union Grove Lake in addition to dredging projects completed at several other lakes. According to the 2006 Lake Restoration Program (LRP) Annual Report and Plan issued by DNR, the experiences at the 4 lakes show that significant improvement in water quality can be expected following lake restoration.

According to DNR's 2016 LRP annual report and 2017 plan, Iowans value water quality and desire healthy lakes that provide a full complement of aesthetic, ecological, and recreational benefits. The report further states many Iowa lakes are impaired and suffer from excessive algae growth and sedimentation due to nutrient loading and soil loss. According to the LRP Coordinator and as discussed later, the goal of the LRP is to develop and implement comprehensive and sustainable projects with multiple benefits such as improved water quality leading to increased public use, while taking into account feasibility of restoration.

In 2006, the Legislature passed House File 2782 to increase the focus of improving the water quality of Iowa's lakes, including an $8.6 million appropriation to the DNR from the endowment for Iowa's health account for fiscal year 2007. In addition, the legislation established a process and criteria for completing successful LRP projects (projects) and directs DNR to report annually its plans and recommendations for LRP funding, as well as progress and results from projects funded by this legislation. DNR was also required to use the appropriated funds for implementation of LRP projects that have established watershed improvement initiatives and community support in accordance with the DNR's annual LRP plan and report.

In accordance with section 456A.33B(2)(a) of the *Code of Iowa (Code)*, DNR must submit to the Joint Appropriations Subcommittee on Transportation, Infrastructure, and Capitals (the Subcommittee) and the Legislative Services Agency (LSA) the annual LRP plan and report by no later than January 1 of each year. The plan and report must include the DNR's plans and recommendations for projects to receive funding consistent with the process and criteria provided in section 456A.33B(3) of the *Code*, and must include the DNR's assessment of the progress and results of projects funded with the appropriated funds.

In addition, the Legislature established project goals as defined in section 456A.33B(2)(b) of the *Code*. The goals are as follows.

- Ensure a cost effective, positive return on investment for the citizens of Iowa.
- Ensure local community commitment to lake and watershed protection.
- Ensure significant improvement in water clarity, safety, and quality of Iowa lakes.
- Provide for a sustainable, healthy, functioning lake system.
- Result in the removal of the lake from the impaired waters list.
- When restored, will contribute to the DNR's fish and wildlife conservation plans.

The DNR, with input from stakeholders, maintains a list of 35 significant publicly owned lakes and 5 publicly-owned shallow lake/wetlands prioritized for funding based on the feasibility of each lake for restoration and the use or potential use of the lake, if restored. The DNR recommends to the Legislature the list of projects as a priority for funding so long as progress toward completion of the projects remained consistent with the goals of the LRP. Examples of projects include inlet dredging, containment dikes, sediment containment dams, shoreline stabilization, silt pond renovation, spillway fish barrier, and lake dredging. The Legislature has continued providing support for the projects included in the LRP report and plan by authorizing State appropriations from the Rebuild Iowa Infrastructure Fund (RIIF). For example, the

Legislature appropriated a total of $6 million in 2013, $8.6 million in 2014, and $9.6 million for each fiscal year from 2015 through 2017. Although the appropriated RIIF funds are the primary source of funds used for the projects, DNR uses additional appropriate funding sources such as local funds and federal grants for some of the projects.

In accordance with section 26.3 of the *Code*, if the estimated total cost of a public improvement exceeds the threshold of $100,000, or the adjusted competitive bid threshold established in section 314.1B ($135,000 in fiscal year 2017), a competitive sealed bid process must be used for the award of a construction contract. In administering the projects, DNR also follows the requirements of Chapter 573 of the *Code* regarding labor and material on public improvements. In addition, DNR established procedures in 561 Iowa Administrative Code Chapter 8 (Administrative Rules) which apply to all contracts for public improvements (improvement project rules). The improvement project rules require projects which exceed $100,000 to utilize the competitive bid process and projects in excess of $50,000 must be approved by the NRC.

Although the competitive bid threshold required by the *Code* is $100,000, to be conservative, DNR established in its guidelines a competitive bid threshold for projects with an estimated total cost above $85,000. The DNR guidelines classify projects with an estimated total cost above $85,000 as major projects and projects estimated at $85,000 or less as mini projects. In addition, DNR guidelines require contracts for major projects are awarded using the competitive sealed bid process prescribed by the *Code*. DNR may utilize either a competitive quotation process or the competitive bid process for mini projects. Depending on the amount of the accepted bid, mini projects may or may not require NRC approval. All projects in excess of $50,000 must be approved by the NRC.

Major projects require a full set of plans and specifications as part of the contract. The contract form used by DNR for mini projects is a simplified form of the contract used for major projects. The plans and specifications for a mini project may be less formal than what is documented for a major project. Plans for a mini project do not have to accompany the contract as long as the scope of work is defined in the contract specifications.

Timelines for many of the projects fall within a 3 to 5 year period. However, dredging or major construction projects may take longer. Contractors face substantial costs to mobilize and set up lake improvement operations requiring multiple year commitments to secure contactors and to develop cost-share agreements with local stakeholders and community groups. As such, the most practical and efficient way to complete these undertakings are as continuous projects.

The LRP staff, the Engineering Services Bureau (Engineering Bureau), and the Budget and Finance Bureau (Finance Bureau) of DNR are responsible for the planning, administering, and monitoring of the projects. The construction oversight roles and responsibilities of each bureau are summarized as follows.

- The LRP staff is responsible for oversight of the LRP plan for the projects, the prioritization of the projects, and periodic updates to the prioritized LRP project list. In addition, LRP staff monitors contracts entered into by DNR with other entities, such as a City, a county conservation board, or a lake improvement commission. For contracts with other entities, DNR enters into contracts with the other entities for projects approved by the NRC. The other entities enter into contracts to complete the approved projects.

- The Engineering Bureau is responsible for the administration and monitoring of the projects including planning and development, engineering surveys, professional engineering and architectural design services, contract administration, project management and monitoring, construction inspection, and project reporting. The Engineering Services Bureau designs most projects in house, but occasionally enters into a contract for design and engineering consulting services.

- The Finance Bureau provides accounting and budgeting support to DNR staff involved in managing and monitoring the projects.

The focus of this report is on DNR's administration, monitoring, and reporting of the projects.

Objectives, Scope and Methodology

Our review was conducted to determine whether:

- DNR has implemented sufficient policies and procedures to ensure effective project monitoring and reporting.
- DNR maintains and periodically updates a prioritized projects plan.
- DNR sufficiently monitors projects to ensure contractors complete the projects according to contract, the project plan, and relevant laws, Administrative Rules, and DNR guidelines.
- The information reported by DNR to the Legislative Services Agency and the Iowa Department of Management in the Infrastructure Funds Status Report and reported by the Natural Resource Commission (NRC) to the Governor and the Legislature as part of DNR's annual report is sufficiently supported by LRP records.

To gain an understanding of DNR monitoring and reporting of the LRP projects, we:

- Reviewed applicable sections of the *Code of Iowa*, Administrative Rules, and DNR policies and procedures to gain an understanding of how the projects are administered, monitored, and reported.
- Evaluated internal controls to determine whether adequate policies and procedures were in place and operating effectively.
- Determined if DNR complied with funding or allocation requirements established by the *Code of Iowa* for the projects.
- Tested selected LRP projects for the period July 1, 2012 through June 30, 2017 to determine if the projects complied with applicable sections of the *Code of Iowa*, Administrative Rules, DNR policies and procedures, and contracts, including the contract award process, inspections, monitoring, and reporting.
- Visited selected projects to verify existence and evaluate the reasonableness of the in-progress or completed projects compared to the contracted work.
- Assessed DNR's monitoring procedures for the LRP projects and tested selected projects to determine if monitoring was performed in accordance with DNR's policies and procedures.
- Examined reports completed by DNR and the NRC for the LRP to determine compliance with applicable sections of the *Code of Iowa* and to determine whether the reports are sufficiently supported.
- Evaluated the efficiency and effectiveness of DNR's LRP monitoring, and summarized findings and recommendations based on the results of performing the above procedures.

Project Administration

As previously stated, in 2006, the Legislature passed House File 2782 to increase the focus of improving the water quality of Iowa's lakes. In addition, the legislation established a process and criteria for completing successful LRP projects and directs DNR to report annually its plans and recommendations for LRP funding, as well as the progress and the results from projects funded by this legislation. DNR is also required to use the appropriated funds for implementation of projects that have established watershed improvement initiatives and community support according to the DNR's annual LRP plan and report.

The DNR's annual LRP plan and report for fiscal years 2013 through 2017 were submitted to the Subcommittee and the LSA in accordance with section 456A.33B(2)(a) of the *Code*. The LRP plan and report includes DNR's plans and recommendations for project funding consistent with the process and criteria provided in section 456A.33B(3) of the *Code*, and includes the DNR's assessment of the progress and results of projects funded with the appropriated funds.

The DNR evaluates the success of the projects and the LRP overall to determine whether the previously stated goals of section 456A.33B(2)(b) of the *Code* are met. The DNR actively monitors changes in water quality, habitat quality, recreational use, and overall public benefit as it completes individual projects. Because each project is unique, DNR relies on a variety of evidence such as reports and observations, and scientific data to evaluate the success of a project. For example, DNR monitors the success of a project by comparing the overall plan for the lake with what was achieved throughout the project.

In addition, the DNR considers the original goals for a project when evaluating its success. One way DNR frequently evaluates LRP success is to examine all water quality data DNR has on a lake both before and after a project. Because water quality data is only collected periodically, DNR also relies on observations and comments from the public, project stakeholders, park managers and biologists to determine the overall success of a project.

To monitor Iowa's publicly owned lakes, DNR collects data 3 times each year, once in early summer/late spring, once in mid-summer, and once in late summer/early fall to better understand water quality at Iowa's Lakes. The Ambient Lake Monitoring Program was created in 2000 based on lake surveys in the late 1970s and early 1990s. The LRP has served as a partner in the Ambient Lake Monitoring Program since its inception. Currently the Ambient Lake Monitoring Program includes approximately 135 lakes which are monitored for chemical, physical, and biological parameters. Data is used to inform stakeholders of water quality, determine the impairment status of lakes in the State, establish water quality trends, and prioritize lakes for restoration.

According to a representative of DNR, all monitoring data collected through the Ambient Lake Monitoring Program is publicly available through an information request to the DNR Water Monitoring and Assessment staff. Although some types of data collected by DNR are only available through an information request, most data collected through the Ambient Lake Monitoring Program is available on line at https://programs.iowadnr.gov/aquia/.

Water quality data collected through the Ambient Lake Monitoring Program is also used in conjunction with survey data completed by the Center for Agricultural and Rural Development located at Iowa State University to determine how Iowans value/perceive water quality and how water quality influences lake visitation and spending rates. More information on the survey and data collected through the survey by Center for Agricultural and Rural Development (CARD) is available at http://www.card.iastate.edu/lakes/. In addition, data collected as a part of the Ambient Lake Monitoring Program is currently being used to inform restoration decisions and feed the water quality portion of the lake restoration prioritization process. The data is used by DNR to evaluate the success of past restoration projects.

In accordance with section 456A.33B(3) of the *Code,* DNR utilizes the following process and criteria to recommend funding for the projects.

- DNR, with input from stakeholders, must maintain an annual list of 35 significant publicly owned lakes and 5 publicly-owned shallow lake/wetlands prioritized for funding based on the feasibility of each lake (water body) for restoration and the use or potential use of the lake, if restored. The DNR recommends these lake projects as a priority for funding so long as progress toward completion of the projects remained consistent with the goals of the LRP.
- DNR must meet with stakeholders and representatives of communities where prioritized lakes are located to provide an initial lake restoration assessment and to explain the process and criteria for receiving lake restoration funding. The DNR works with stakeholders and representatives of each community to develop a joint lake restoration action plan.
- Each joint lake restoration plan must comply with the guidelines specified in section 456A.33B(3)(c) of the *Code* regarding:
    - Biologic controls utilized to maximum extent possible,
    - Dredging of at least a mean depth of 8 feet,
    - Costs must include maintenance of improvements to the lake,
    - Delivery of phosphorus and sediment from the watershed must be controlled and in place before lake restoration begins. Loads of phosphorus and sediment, in conjunction with in-lake management, must meet or exceed established water quality targets.
- The DNR must evaluate the joint action plans and prioritize the plans based on the criteria required in this section. The DNR's annual LRP plan and report must include the prioritized list and the amounts of State and other funding the DNR recommends for each project. The DNR must also seek public comment on its recommendations prior to submitting the plan and report to the Legislature.

DNR's LRP, Engineering Service Bureau and Finance Bureau staff are responsible for the planning, administering, and monitoring of the projects. The project oversight roles and responsibilities of the DNR staff are as follows.

The LRP staff, consisting of a coordinator and an environmental specialist, is responsible for oversight of the plan for the projects, the prioritization of the projects, and periodic updates to the prioritized project plan. As previously stated, DNR, with input from stakeholders, maintains a list of 35 significant publicly owned lakes and 5 publicly-owned shallow lake/wetlands prioritized for funding based on the feasibility of each lake (water body) for restoration and the use or potential use of the lake, if restored. The DNR recommends to the Legislature the list of projects as a priority for funding so long as progress toward completion of the projects remained consistent with the goals of the LRP.

As previously stated, the LRP staff is also responsible for monitoring project contracts entered into with other entities, such as a City, a county conservation board, or a lake improvement commission. For contracts with other entities, DNR awards contracts to the other entities for projects approved by the NRC. The other entities enter into contracts to complete the approved projects.

The Engineering Bureau is responsible for the administration and monitoring of the construction contracts including planning and development, engineering surveys, professional engineering and architectural design services, contract administration, project management and monitoring, construction inspection and project reporting. The Engineering Services Bureau staff employs a Bureau Chief, an Engineering supervisor, 5 civil engineers, 1 licensed architect, 1 design technician/surveyor, and an engineer in each of DNR's 6 districts. Engineering designs most projects but occasionally enters into a contract for design and engineering consulting services.

DNR limits contracting with outside engineers and surveyors to expertise beyond the qualifications of the Engineering Services Bureau staff.

In addition, the Engineering Bureau implemented project management guidelines which include definitions of project management roles and responsibilities and procedures which must be followed by staff responsible for the administration, project management, and construction oversight of the projects as follows:

- design procedure,
- bidding process,
- managing and monitoring the projects,
- executing and approving contracts and change orders,
- approval and tracking of actual compared to budgeted contractor payments,
- project construction inspections, and
- project close-out procedures.

The 6 Engineering inspectors represent DNR in the inspection of all materials and work done under each contract. The inspectors periodically visit projects in progress and when completed to inspect the work of the contractors. The purpose of the inspection is to determine whether the work is completed in accordance with the contract. The inspectors are supposed to document in the Engineering's online project database (project database) and the district project files their construction monitoring and inspection results each time they visit a project site. In addition, the inspectors must keep Engineering management informed of each project's status. The amount and quality of work completed by the contractor must be verified by the inspector prior to submitting payment requests to Engineering management for approval.

The Finance Bureau provides accounting and budgeting support to DNR staff involved in managing and monitoring contracts, as follows.

- Determines whether and what funding is available for projects.
- Reviews and verifies all payment requests to ensure the request is appropriate for the project and is reconciled by comparing all payments requested to the actual payments made under the projects.
- Creates and provides to Engineering the Capitals report which tracks project budgets and expenditures by funding source, appropriation unit, and cost center. In addition, Finance Bureau staff includes in the Capitals report comments to record the project number(s) as related to the expenditures recorded to each cost center and records in comments the date the project(s) was approved by the NRC.

Funding – As previously stated, the Legislature annually appropriates RIIF funding to the DNR for the LRP. Although the projects are primarily funded by State appropriations from the RIIF, DNR is authorized by relevant sections of the *Code* and federal regulations to use additional funds as needed, such as federal grants, local funds, and contributions from other entities.

In accordance with section 8.57(5)(h) of the *Code*, on or before January 15 of each year, a State agency that received an appropriation from the RIIF must report to the Legislative Services Agency (LSA) and the DOM the status of all projects completed or in progress. The report must include a description of the project, the progress of work completed, the total estimated cost of the project, a list of all revenue sources being used to fund the project, the amount expended, the amount of funds obligated, and the date the project was completed or an estimated completion date of the project, where applicable.

Because DNR receives an annual appropriation from the RIIF for LRP projects, DNR submits to LSA and DOM an infrastructure funds status report. DNR's report includes the status of the use of RIIF appropriations received in multiple fiscal years and additional funds recorded in the Iowa Infrastructure account of the State's financial system as of December 31st. The funds expended amount in the report is based on the amount of the appropriation used, including carry-forward amounts from prior years. We reviewed information recorded in the State's financial system and verified DNR's reconciliation of the amounts in the infrastructure funds status report to the appropriation balance recorded in the State's financial system as of December 31, 2016.

According to the infrastructure funds status report guidance provided by LSA to DNR, agencies receiving a RIIF appropriation may report the status for each project or appropriation. DNR chose to report the status of the use of the RIIF appropriation, which is called "Lake Water Quality Improvement" in the report.

DNR does not include in the infrastructure funds status report a list of all revenue sources being used to fund the project. Rather, DNR reports the total additional funding used for the project based on the amounts recorded in the Iowa Infrastructure account in the State's financial system as of December 31. According to a representative of DNR, DOM and LSA have not provided feedback they want the other revenue sources comprising the additional funding in the report broken down. In addition, the representative of DNR stated a copy of the Capitals report is provided to DOM and LSA each month, which provides the information on the use of other revenue sources for all projects.

Table 1 summarizes the LRP appropriation amounts reported by DNR to LSA and DOM in its December 31, 2016 annual infrastructure funds status report.

Table 1

Appropriated For Fiscal Year	State Appropriations	Additional Funding	Funds Expended	Funds Obligated	Estimated Completion Date
2013	$ 6,000,000	713,077	6,713,077	-	Complete
2014	8,600,000	451,031	9,051,031	-	Complete
2015	9,600,000	144,228	9,744,228	-	June 2018
2016	9,600,000	-	9,600,000	-	June 2019
2017*	9,600,000	-	712,790	8,887,210	June 2020
Total	$ 43,400,000	1,308,336	35,821,126	8,887,210	

***** As of December 31, 2016.

The **Table** demonstrates, as of December 31, 2016, DNR used or planned to use all of the State funds appropriated from the RIIF for fiscal years 2013 through 2017 and additional funding for the projects. The reported amounts summarized in the **Table** only include the activity recorded by DNR in the Iowa Infrastructure account in the State's financial system. The $8,887,210 of funds obligated relates to the fiscal year 2017 appropriation in the **Table**, and the amount of funds obligated agrees with the unexpended appropriation balance recorded in the State's financial system as of December 31, 2016. The sources of the additional funding recorded to the Iowa Infrastructure account are primarily from federal grants and other sources of funds such as local funds and contributions from other entities.

In addition to the funding summarized in **Table 1**, the Legislature appropriated to DNR a total of $5 million, consisting of $2.5 million in fiscal year 2013 and $2.5 million in fiscal year 2014 for the restoration and reconstruction of the Lake Delhi dam. The Lake Delhi dam project is not typical of DNR's current lake restoration process. DNR's role in the project, as directed by the Legislature, was administration and oversight of the funds granted to the Lake Delhi Combined Recreational and Water Quality District for the Lake Delhi dam project, including architectural and engineering design costs, and all related surveys; acquisition of real estate and property rights; construction management costs; and construction labor and material costs.

When additional funds are needed to pay for projects, DNR identifies appropriate and available funds and records by funding source in its Capitals reports the amount of additional funds used for the projects. To identify and summarize the total amount spent for the projects, we reviewed expenditures recorded in the fiscal years 2013 through 2017 Capitals reports. **Table 2** summarizes by fiscal year by funding source the total amount spent on the projects as recorded by DNR in the State's financial system for fiscal years 2013 through 2017.

Table 2

Funding Source	Fiscal Year Ended June 30, 2013	2014	2015	2016	2017	Total
State appropriations*	$ 3,104,709	6,091,747	5,088,657	7,856,258	12,817,271	34,958,642
Intra-State transfers	499,537	-	-	-	-	499,537
Refunds & reimbursements	213,540	324,268	25,027	139,869	116,723	819,427
Federal grants	-	-	101,736	4,360	91,764	197,860
Total	$ 3,817,786	6,416,015	5,215,420	8,000,487	13,025,758	36,475,466

***** The total State appropriations spent do not agree with the total funds expended amount in **Table 1** because the annual infrastructure funds status report includes information as of December 31, 2016 while amounts in this **Table** are as of June 30 of each fiscal year.

As shown by the **Table**, DNR spent approximately $36.5 million for the LRP in fiscal years 2013 through 2017. Of the approximately $36.5 million spent, approximately $35.0 million (95.9%) is from State appropriations, approximately $0.5 million (1.4%) is from transfers from other State agencies, approximately $0.8 million (2.2%) is from refunds and reimbursements such as local funds and contributions from other entities, and approximately $0.2 million (.5%) is from federal grants. Approximately $31.6 million of the $36.5 million (86.6%) was spent for 48 projects at 35 different lakes. The remaining $4.9 million (13.4%) was spent for LRP administration, shallow lakes water quality improvement, lake assessments, minor projects, feasibility studies, and design and engineering consulting services. Most of the projects extend over multiple fiscal years. **Schedule 1** summarizes by project the total amount spent by DNR in fiscal years 2013 through 2017.

Project planning, award, and approval process – The process and criteria DNR uses to recommend funding for projects is summarized below.

The LRP staff maintains 2 lists of lakes, an active list of qualified lakes eligible for the LRP and prioritized project list. Lakes are identified in the following ways:

- Identified by local resource managers and through information which is collected, analyzed, and reported by DNR for the Ambient Lake Monitoring Program.
- Communities may petition the DNR Director for a preliminary assessment of the lake for inclusion in the LRP.

The DNR meets with representatives of communities with a lake being considered for a project to provide an initial lake restoration assessment and to explain the process and criteria for inclusion on the prioritized project list. DNR may initiate this process or, in some cases, the local community contacts the DNR about their concerns and potential involvement in the LRP. The DNR ranking process, along with community interest and commitment to lake restoration, provides the basis for project prioritization for LRP funding (10-year plan).

The planning phase of the process focuses on determining what types of work, both in the watershed and in the lake, will be most effective for improving water quality. The LRP partners, stakeholders, and the community complete, or use already completed, watershed improvement plans to target watershed best management practices (BMPs). If needed, additional assessment work is completed through a diagnostic and feasibility study. The result of all initial planning is tentative watershed BMPs design and placement, as well as conceptual cost estimates for restoration activities. Final planning includes developing a project budget and more

comprehensive engineering design and contracting for construction of watershed work. An important component of this part of the plan is continuous outreach with land owners and the community to engage those around the lake with the project.

According to a representative of DNR, the internal project planning process is initiated through communications between LRP staff and the Engineering Bureau. The Engineering management staff frequently communicate with and provide services to LRP staff throughout the planning and execution of projects. For example, Engineering works with the LRP staff to gain an understanding of the project goals for the purpose of preparing a project plan that meets the construction goals and requirements. As projects begin the design phase, Engineering works with the LRP staff and the Finance Bureau to develop the most effective project plan within the current fiscal constraints. Once the project plan is finalized and initially approved for funding, DNR plans and executes a competitive process to select a contractor for the project.

The project budget is 30% higher than the estimated construction cost to provide for a 10% contingency as well as to provide 20% to cover DNR overhead costs. According to a representative of DNR, for a construction project estimated to cost $100,000, the total project budget would be $130,000, consisting of the $100,000 estimated construction cost, 20% or $20,000 for DNR overhead costs, and 10% or $10,000 for construction contingencies. The construction project bidding is based on the $100,000 estimated construction costs which must be publicly advertised. The $20,000 for overhead costs does not impact the bid, but is budgeted by DNR for the Engineering Bureau's staff salaries and operating costs. The $10,000 is budgeted for the contingency fund to ensure enough funds are available for construction costs in case the winning bid is up to 10% more than the estimated construction cost. We requested supporting documentation for the 20% budgeted for overhead costs. Based on a review of DNR's calculations of the fiscal year 2017 percentages of time spent by Engineering staff on projects, the 20% budgeted for overhead costs appears to be reasonable.

Major projects are publicly advertised by DNR and the bids are opened publicly. The Engineering supervisor subsequently reviews all project bids submitted by contractors for reasonableness. If the low bid exceeds the engineer's estimate by a significant amount, the Finance Bureau staff is consulted to ensure funding is available to cover the increased expenses. If the low bid is significantly less than the engineer's estimate, DNR contacts the contractor to ensure they understand the full scope of the project and have submitted an accurate bid.

In addition to the projects administered by Engineering in conjunction with LRP staff, DNR occasionally enters into contracts with other entities, such as a city, a county conservation board, or a lake improvement commission. The contracts with other entities typically include cost sharing where DNR provides a portion of the total funding and the other entity provides the remainder of funding for the project, such as a 50/50 split. The administration of the contracts with other entities differs from the construction contracts entered into by DNR directly with contractors. The other entities DNR contracts with are primarily responsible for the planning and administration of the projects rather than DNR. The LRP staff is responsible for the oversight of the contracts with other entities.

During the next scheduled NRC meeting, Engineering seeks from the NRC approval of the use of the contractors having the winning bids for work on major projects. In addition, LRP staff seeks NRC approval of the proposed award of contracts to other entities for projects. Once approved by the NRC, the Engineering and LRP management staff approves the final project plans and executes the contract with the NRC approved contractor. As previously stated, DNR may use a competitive quotation process or a competitive bid process to select a contractor for a mini project. The contract award for mini projects which are bid at more than $50,000 through $85,000 must be approved by the NRC. Projects bid at $50,000 or less may be contracted immediately following the selection of the contractor having the low quote or bid, and are presented to the NRC at the next scheduled meeting as an information item only. For contracts with other entities, the city, county conservation board, or other entity must provide DNR evidence of the use of competitive process used to select their construction contractor.

In addition to the public construction bidding requirements of Chapter 26 of the *Code,* DNR follows the requirements of Chapter 573 of the *Code* regarding labor and material on public improvements. DNR also implemented improvement project rules for contracts in Chapter 571-8 of the Administrative Rules and contracting guidelines. In addition, DNR requires staff responsible for administering the projects to follow the relevant procedures established by the Department of Administrative Services in Chapters 11-117, 11-118, and 11-119 of the Administrative Rules regarding procurement of goods and services of general use, purchasing standards and uniform terms and conditions for service contracts.

Contracting – For projects administered by Engineering, DNR enters into an agreement with the contractor selected to complete or assist with the project. Several documents are made a part of and collectively evidence and constitute the construction contract entered into by DNR with a contractor, including the following.

- Notice and instructions to bidders,
- Specifications and drawings,
- Contractor's proposal,
- Proposal guarantee bond,
- Performance bond,
- Detailed project manual, and
- Any modifications or change orders.

Examples of requirements included in project construction contracts are as follows.

- DNR and contractor contact information,
- Project title, contract purpose, award amount, duration, scope of work, control of work, control of materials, measurement and basis of payment, project completion date, and project budget.
- Quality control and inspection requirements,
- Required tests by an independent testing laboratory,
- Required inspections by DNR, and
- Closeout procedures.

In addition, examples of requirements included in engineering and surveyor consultant contracts are as follows.

- DNR and contractor contact information,
- Contract purpose, duration, statement of work, and compensation,
- Monitoring and review, including task milestone dates, monthly review meetings to discuss progress, and status reports,
- Specific construction oversight and inspection responsibilities of DNR and the engineering consultant, and
- A project schedule and line item budget.

As previously stated, the LRP staff also administer the contracts entered into with other entities. Examples of information and requirements included in contracts with other entities are as follows.

- Project background and DNR's purpose in entering into the cooperative agreement. For example, to reimburse a county conservation board or city for construction of restoration and improvements to the lake, such as targeted dredging, shoreline restoration, construction of sedimentation basins, and drainage way improvements,
- Contract purpose, duration, statement of work, and compensation,

- Monitoring and review, including task milestone dates, monthly review meetings to discuss progress, and status reports, and
- DNR's right to review and observe the project.

In accordance with DNR contracting procedures, the contract must be signed by all parties prior to the start of work. Once approved, an entire original contract is maintained in Engineering's and LRP's project files, and copies are provided to the inspector and the contractor.

DNR holds a pre-construction conference with the contractor prior to commencement of project construction. The purpose of the conference is to provide a general review of the plans, specifications, construction schedules, site conditions, work forces, and working relationships of the contractor and DNR staff. DNR also meets with other entities and engineering consultants to discuss project responsibilities and expectations prior to any work being started under the contracts. Both Engineering and LRP staff typically attend project meetings held with the contractor.

Project Monitoring – For purposes of project oversight, the Engineering management staff uses a combination of information, including project database records, Engineering project files, project records received from the inspectors, and financial records received from the Finance Bureau. In addition, the Engineering management staff interacts with LRP staff, inspectors, and contractors through occasional project site visits, meetings, emails, phone calls, texts, and written correspondence as needed. The contract includes requirements for monitoring and inspection of projects.

In accordance with the contract, the inspector is the direct representative of DNR at the project location with the authority to verify compliance with the provisions of the entire contract. The inspectors are required to perform periodic detailed inspections of all portions of the work and materials included in the work while construction is in process to ensure the project is completed in accordance with the contract. The performance of inspections is the primary method used by DNR to evaluate the contractor's performance under the contract.

The contractor must furnish the inspector with every reasonable facility for ascertaining whether the work is being performed in conformance with the contract documents. Work done without the inspector having been afforded ample opportunity to provide suitable inspection, or unauthorized work, may be ordered removed and replaced at the contractor's expenses or may be excluded from the quantities measured for payment.

The contract also requires a final project inspection be completed by the inspector as part of the project closeout process. The contractor's work is not considered ready for final inspection until all work has been completed and the contractor has certified all items are properly operating and in strict compliance with the contract documents. Upon completion of the project, the contractor must request a final inspection in writing from the inspector. Upon notification by the contractor that the work is completed, the inspector must make prompt final inspection of each item of work included in the contract. The contractor must be present at the job site during the final inspection.

According to representatives of Engineering, if deficiencies in the contractor's work are identified, the inspector takes pictures of the deficiencies, creates a list of the deficiencies which must be corrected to bring the contractor into compliance, and shares the list of the deficiencies with the Engineering management staff and the contractor. In accordance with the contract, the list of deficiencies must be confirmed by the contractor in writing and all items listed must be made acceptable before final payment. If work is suspended, it is documented by the inspector using a written notice of suspension of work which is given to the Engineering supervisor and the contractor. If the contractor does not sufficiently or timely complete the list of the deficiencies, DNR may issue a Notice of Default letter to the contractor and collect liquidated damages from the contractor.

The inspectors typically document their on-site visits and inspections of projects in writing using notepads to summarize by date the work in progress and the work completed under the contract. In addition, the inspectors take pictures of the project while construction is in progress and when completed to document the status of the project and whether the materials used by the contractor are appropriate under the contract. The inspector's project records are primarily maintained in paper project files in the district offices and are not routinely shared with Engineering management unless deficiencies are identified by the inspector, or if requested.

The project database includes an electronic form which, according to the Engineering management staff, should be used by the inspectors to document the project status over the life of the project. When information is entered into the project database, the Engineering and other DNR staff involved in the project review and approval process are automatically notified via email of the project status.

Engineering management staff review all contractor payment requests received from the inspectors to ensure the amounts requested do not exceed the contract budget, are for items specified in the contract, and are supported by invoices and additional supporting documentation. The Finance Bureau staff also reviews and approves all payment requests and maintains a complete list of all payments made to the contractor. Finance records all project expenditures in the State financial system and the Capitals report by funding source, and provides the monthly Capitals report to Engineering. In addition, Finance provides the Engineering management staff the comprehensive listing of all payments made to the contractor when the project is closed out. The payment listing and all other project information received from the inspectors is supposed to be maintained in Engineering's project files.

For contracts with other entities and consultant contracts, the LRP staff and inspectors perform oversight procedures to ensure the contractors comply with the contracts. The contract activity is monitored using the task milestone dates, reviewing the status reports, and conducting quarterly review meetings to discuss project progress, as required by the contract. In addition, to ensure the DNR funds are spent appropriately, LRP staff requires the other entities and consultants provide invoices and detailed supporting documentation demonstrating specifically what the funds were used for.

The inspectors, and sometimes LRP staff, visit each project site before approving invoice payments. DNR staff also visits the lakes throughout the project, starting with the project kick-off meeting, and typically visit the project to see any major construction underway or completed. The LRP staff takes photos while visiting projects. In addition, the inspectors provide LRP staff with email updates and photos to document project progress.

Project Files – As previously stated, Engineering maintains project records in the project database and in paper project files in the Des Moines office. In addition, project files including paper and/or electronic records are maintained by the inspectors in the district offices for all projects to demonstrate contractor compliance with the requirements of the contract and DNR's monitoring of the project.

The project database includes records such as:

- Project status notes,
- Construction specifications and plans,
- Published construction list for bidding purposes,
- Draft change orders and extensions,
- Listing of planned funding sources,
- List of and draft copies of the payment requests, and
- Draft project completion report.

The project files maintained in the Des Moines office and the district offices contain the approved contracts, change orders, and extensions, and other records such as:

- Project request and bid proposals;
- Selection and contract award process;
- Notice of contract award;
- Construction specifications and plans;
- Project budget, contractor expense documentation, and approved payment requests;
- Monitoring documents, such as evidence of review and approval of payment requests, including verification of supporting documentation for all expenses incurred by the contractor for the project;
- Project photos, notes from site visits to inspect the project, correspondence with the contractor;
- List of deficiencies and related documents such as a notice of default, follow-up correspondence, and resolution of identified deficiencies;
- Approved project completion report; and
- A contract closeout summary which lists all payments made to the contractor including the date paid, State financial system transaction number, warrant number, and funding source(s).

The project files maintained by LRP staff for contracts entered into with other entities and consultant contracts contain documentation such as:

- Approved contracts and amendments,
- Correspondence and project journal which summarizes significant project activity and site visits,
- Site visit documentation such as project photos taken by the LRP staff and the inspectors to document project progress and completion,
- Project planning and update meeting agendas and minutes, which often involve project partners such as technical experts in water quality, land best management practices, and fisheries experts. Partners often include DNR Engineering, Fisheries, Wildlife, and/or Parks staff, Iowa Department of Agriculture and Land Stewardship staff, Soil and Water Conservation District staff, local lake commission or protective association representatives, city government officials, county conservation board staff, and NRC staff, and
- Invoices and supporting documentation for payments made.

Project File Testing – We selected from Engineering's fiscal years 2013 through 2017 listing of contracted projects maintained in the project database 35 projects for contract monitoring testing. The projects were contracted by Engineering and administered in conjunction with the LRP staff. We reviewed the Engineering's project records maintained in the project database, paper copy project files in the Engineering office and, in several instances, the paper copy and some electronic files maintained by the inspectors in DNR's district offices to determine whether DNR sufficiently monitored the contract, accounted for the project activity, and evaluated the contractor's performance. As a result of our testing, we identified the following concerns.

- For 15 of the 35 tested projects, we determined the project database does not contain sufficient documentation of the project status over the life of the project. DNR implemented a comments section in the project database which is to be used by the inspectors to record project status notes at least monthly, depending on project duration and size. Project status notes recorded in the project database is one of the methods DNR Engineering management relies on for project oversight. However, the

inspectors' project status notes recorded in the database for the 15 projects vary from none to only a few. In addition, the quality of the project status notes varies. For example, some of the project status notes periodically report the percentage of work completed while others do not and some indicate when the work was completed and when the final inspection was completed while others do not.

- For 3 of the previously stated 15 projects lacking sufficient project status documentation, we also identified construction inspection documentation is deficient, as follows.
    - 2 project files maintained by DNR inspectors do not include sufficient documentation demonstrating performance of inspections while construction was in progress and when completed to ensure the contractors completed the work in accordance with the contract. In addition, because of the lack of inspection documentation for the 2 project files there is no evidence of the evaluation of the contractor's performance.
    - For 1 of the 3 projects, there is no project file available from the DNR inspector. According to a representative of DNR Engineering, the project file was destroyed in a flood. Therefore, DNR did not maintain documentation demonstrating inspections of the project construction to ensure the project was completed in accordance with the contract and there is no evidence of the evaluation of the contractor's performance under the contract.

See **Finding A**.

In addition, we selected 15 contracts entered into by DNR with other entities and engineering consultants for testing. The projects were selected from the fiscal years 2013 through 2017 listing of contracted projects maintained by the LRP staff. We reviewed the selected project files to determine whether DNR sufficiently monitored the contract, accounted for the project activity, and evaluated the contractor's performance. As a result, we determined DNR maintained sufficient monitoring documentation to demonstrate performance of procedures to ensure the contractor sufficiently performed as required by the contract.

In conjunction with project file testing, we evaluated the efficiency and effectiveness of DNR's project monitoring practices. As a result, we identified additional opportunities for improvement.

DNR does not maintain project monitoring documentation in a centralized location. Various aspects of project monitoring records are maintained in the project database, project files in the Des Moines office, and the inspectors' project files in the district offices. To determine whether DNR's monitoring of the selected projects was sufficiently performed, it was necessary to review, in several instances, a combination of project monitoring records maintained in the various locations. The internal comments section of the project database is to be used by the inspectors to document the project status, including but not limited to, a summary of monitoring performed while the construction is in progress and when completed. However, we identified the quality and frequency of project status notes recorded by inspectors in the project database is not consistent from project to project.

For example, some of the project status notes recorded by inspectors in the project database include a reasonable summary of the project status as related to the contract requirements over the life of the project while others include only a few status notes or none. Also, for projects having status notes recorded in the database, the frequency of the notes vary from weekly to monthly, or there are no status updates for several months or at all during the construction and completion phases of the project. The representatives of Engineering we spoke with agree the frequency and quality of project status notes recorded in the project database for monitoring purposes is not consistent among the 6 inspectors.

Although the inspectors do not consistently document status notes in the project database, they typically maintain project file records such as project status notes, inspection results, payment requests and supporting documentation, project photos, lists of construction deficiencies, notices of default, and significant correspondence in the district office. As previously stated, the project files are usually maintained in paper format and are not routinely shared with Engineering management unless deficiencies or other issues, such as construction delays, are identified by the inspectors, or if requested. Lists of construction deficiencies, notice of default, and significant correspondence are examples of records provided by the inspectors to the Engineering management staff when deficiencies are identified.

It is important that status notes recorded to the project database are sufficient in quality and frequency to better allow the Engineering management staff to perform their oversight functions. In addition, the efficiency and effectiveness of Engineering's oversight of the projects would be enhanced if the inspectors were required to upload to the project database, and/or email to Engineering scanned copies of significant monitoring documents, such as:

- Project inspection notes over the life of the project,
- Summary of project delays and reasons for project extensions,
- Lists of construction deficiencies and related resolution,
- Notices of default, and
- Any additional significant correspondence or documents demonstrating the project was sufficiently completed in accordance with the contract.

According to representatives of Engineering, the current inspection process is informal, there is no standard format used for documenting the performance of the inspections, and inspectors typically do not provide results of inspections to DNR management unless deficiencies are identified. As a result, DNR management does not have assurance the inspection procedures performed are consistent and sufficiently documented by the inspectors to demonstrate the contractor completed the work in accordance with the contract.

It would be beneficial for DNR to implement a more formal inspection process for Engineering administered projects including standard procedures and an inspection form to help ensure inspections are consistently performed and documented. In addition, the efficiency and effectiveness of project oversight would be improved if the inspectors were required to consistently provide to Engineering management staff copies of the results of inspections, regardless of whether deficiencies were identified. See **Finding B**.

Reporting – As previously stated, in accordance with section 456A.33B(2)(a) of the *Code*, DNR must submit to the Subcommittee and the LSA the annual LRP plan and report by no later than January 1 of each year. The plan and report must include the DNR's plans and recommendations for projects to receive funding consistent with the process and criteria provided in section 456A.33B(3) of the *Code*, and must include the DNR's assessment of the progress and results of projects funded with the appropriated funds.

We performed a detailed review of the LRP 2016 report and 2017 plan, and a limited review of the fiscal years 2013, 2014, and 2015 LRP reports and the related fiscal years 2014, 2015, and 2016 plans to determine compliance with the *Code*. As a result, we determined DNR submitted the LRP reports and plans in compliance with the *Code*.

As previously stated, in accordance with section 8.57 of the *Code*, DNR must submit to the LSA and the DOM an annual report summarizing the State appropriations, additional funding, funds expended, funds obligated, and the estimated completion date for the projects. A summary of the amounts reported by DNR in the December 31, 2016 annual infrastructure funds status report (infrastructure status report) is previously shown in **Table 1**. We reviewed DNR's December 31, 2016 infrastructure fund status report for compliance with the *Code* requirement and to determine if the reported information is sufficiently supported. The type of information reported complies with the requirement.

In addition, the NRC submits an annual report to the Governor and the Legislature as part of DNR's annual report in accordance with section 455A.4(1)(d) of the *Code*. For example, the NRC submitted an annual report and recommendations to the Governor and the Legislature for 2013 through 2016, including a brief summary of the number of the projects for different lakes. The NRC report also includes the number of projects in progress and in initial evaluation or planning stages throughout the State.

We reviewed the NRC's 2015 and 2016 annual reports for compliance with the requirement and to determine if the reported information is sufficiently supported. The NRC chooses what they would like to report each year and requested from the LRP staff the number of 2015 and 2016 approved project contracts administered by the LRP and by the Engineering Bureau. In addition, the NRC provides in their request flexibility to the DNR staff regarding whether the information is on a calendar year, State fiscal year, or Federal fiscal year basis.

The LRP staff submitted to the NRC a summary of the number of projects approved in calendar years 2015 and 2016, but a copy of the summary was not available when requested. According to LRP staff, the detailed support related to the totals of approved projects provided to the NRC for its reports may be found by searching the NRC minutes for meetings held in 2015 and 2016.

We reviewed the minutes for NRC meetings held during calendar years 2015 and 2016 to identify the specific NRC approved projects. We summarized the specific information obtained from the NRC meeting minutes, and compared the total number of NRC approved projects to the amounts reported by the NRC. As a result, we identified the project contracts approved by the NRC in calendar years 2015 and 2016 meeting minutes agree with the number of approved project contracts reported by the NRC.

However, the NRC only reported the number of approved project contracts for 2015 and 2016, but did not report the related cumulative amounts for the approved contracts, as follows. The NRC did not report the cumulative amounts of $12,144,799 correlating to the reported 17 approved contracts for 2015 and $8,635,257 for the reported 12 approved contracts for 2016.

As previously stated, the Legislature appropriates to DNR each year a significant amount of RIIF funds for the LRP. To enhance transparency and accountability, it would be beneficial for DNR to provide to the NRC for consideration in reporting to the Governor and the Legislature the cumulative amounts correlating to the reported number of approved project contracts. See **Finding C**.

Findings and Recommendations

We reviewed DNR's monitoring and reporting of the Lake Restoration Program projects administered by DNR to determine whether DNR administers the projects in compliance with the applicable sections of the *Code of Iowa*, Administrative Rules, and DNR policies and procedures. We also determined whether DNR sufficiently monitored and reported the projects. As a result, we identified certain findings and recommendations regarding the monitoring and reporting of the projects which should be considered by the Governor, the Members of the General Assembly, the Natural Resources Commission, and the Department of Natural Resources.

FINDING A – Contract Monitoring

We tested 35 projects from the Engineering Services Bureau's fiscal years 2013 through 2017 listing of contracted projects. We reviewed records maintained in the project database, the Des Moines office, and in the district offices to determine whether DNR sufficiently monitored the contract, accounted for the project activity, and evaluated the contractor's performance. As a result, we identified the following concerns.

- For 15 of the 35 projects tested, we determined the project database does not contain sufficient documentation of the project status over the life of the project. Project status notes recorded in the project database is one of the methods DNR relies on for project oversight. However, the inspectors' project status notes recorded in the database for the 15 projects vary from none to only a few. In addition, the quality of the project status notes varies.
- For 3 of the previously stated 15 projects, we also identified construction inspection documentation is deficient, as follows.
    - 2 of the 3 projects files maintained by DNR inspectors do not include sufficient documentation demonstrating performance of inspections while construction was in progress and when completed to ensure the contractors completed the work in accordance with the contract. In addition, because of the lack of inspection documentation for the 2 project files there is no evidence of the evaluation of the contractor's performance under the contract.
    - For 1 of the 3 projects, there is no project file available from the DNR inspector. According to a representative of the Engineering Services Bureau, the project file was destroyed in a flood. Therefore, DNR did not maintain documentation demonstrating inspections of the project construction to ensure the project was completed according to the contract.

Recommendation – DNR should implement procedures to ensure:

- Inspectors timely and consistently perform construction inspections, and document results in the project database. It is important to consistently document project status including a description of actual work completed, percentage of construction completed, lists of deficiencies identified, inspection follow-up and resolution, and project completion.

  The frequency of project database status updates such as construction inspections and project construction progress should be appropriate to the size and duration of the project, as follows. Monthly reporting of project status and on-site inspections may be sufficient for large projects which take months or years to complete. The status and inspection results for small projects, which may be completed more quickly, should be updated more frequently, such as weekly or in some instances daily.
- All project files should be maintained to demonstrate the contractor completed the project according to the contract.

Response – The engineering database was not intended as a management tool for reporting project progress. It was instead a way to keep other bureaus informed of bidding/contract letting progress. Pay estimates generated by DNR engineering staff are the official record of progress for each engineering project. The pay estimates are generated by the Department then signed by the contractor before being sent on to the Bureau chief for signature and payment. Final pay estimates are held for 30 days after work completion to ensure all requirements put to the contractor are met prior to payment issuance. The Department has methods in place such as liquidated damages to ensure contractor performance.

The Department has multiple on-going projects throughout the year each overseen by a Department inspector. The Department's 6 full time inspectors each cover 15 to 17 counties. The requirement of daily project updates for small projects is not practical or value added.

Department project files are maintained in perpetuity. The project file that was not readily available for auditor review was lost during a flash flood in Chickasaw County.

Conclusion – Response acknowledged. Based on discussions with the Engineering Services Bureau staff, the information recorded in the engineering database over the life of the project, including the project status notes, is one of the methods management of the Engineering Services Bureau relies on for project oversight. The finding regarding the 15 projects is intended to demonstrate inconsistencies in project status notes recorded to the database and the need for improvement in timely and consistent communication of project status for management oversight and contractor evaluation.

For projects we identified in which construction inspection documentation is deficient, a DNR staff we spoke with agreed documentation could be better. Although pay estimates are an essential part of the progress reporting process, it is also important for DNR to implement procedures to ensure inspections and related results are consistently documented and readily available to Engineering management for review. For example, it is important to ensure the project status including actual work completed, percentage of construction completed, lists of deficiencies identified, inspection follow-up and resolution, and project completion are sufficiently documented and readily available to the Engineering Services Bureau management for project oversight.

FINDING B – Efficiency and Effectiveness of Monitoring

In conjunction with project file testing, we evaluated the efficiency and effectiveness of DNR's project monitoring practices. As a result, we identified additional opportunities for improvement.

DNR maintains project monitoring documentation in multiple locations. For example, various project monitoring records are maintained in the project database, in the Des Moines office, and in inspectors' project files in the district offices. To determine whether DNR's monitoring of projects is sufficient it is necessary to review project monitoring records in various locations. In addition, we identified the quality and frequency of project status notes recorded by inspectors in the project database for monitoring purposes is not consistent from project to project.

The inspectors' project files, which typically include documentation of project monitoring and inspections, are primarily maintained in paper format in district offices and are not routinely shared with Engineering Services Bureau management unless deficiencies, delays, or other issues are identified by the inspectors, or as requested. It is important status notes recorded to the project database are sufficient in quality and frequency to better allow management to perform their oversight responsibilities. In addition, the efficiency and effectiveness of project oversight would be enhanced if the inspectors were required to upload scanned copies of monitoring documents to the project database.

Representatives of the Engineering Services Bureau we spoke with agree the frequency and quality of project status notes in the project database is not consistent among the 6 inspectors. According to representatives of the Engineering Services Bureau, the current inspection process is informal, there is no standard format used for documenting the performance of the inspections,

and inspectors typically do not provide results of inspections to DNR management unless deficiencies are identified. As a result, DNR management does not have assurance the inspection procedures performed are consistent and sufficiently documented by the inspectors to demonstrate the contractor completed the work according to the contract. The efficiency and effectiveness of Engineering's oversight of projects would also be enhanced by implementing a documented process including standard procedures and a detailed inspection form.

Recommendation – DNR should:

- Implement a documented project inspection process including standard procedures and a detailed inspection form to help improve project monitoring efficiency and effectiveness. The project inspection procedures and form should include definitions and guidance to help ensure inspections are consistently performed, documented, and communicated by the inspectors to Engineering Service Bureau management.
- Maintain in the project database significant monitoring documents, project inspections and results, lists of construction deficiencies, notices of default, resolution of deficiencies, project photos, and additional significant correspondence or documents demonstrating the project was sufficiently completed in accordance with the contract.
- Consider requiring inspectors to timely scan and upload monitoring documents to the project database to facilitate project inspection and monitoring records. This would allow comprehensive project monitoring documents to be immediately available in the project database to the Engineering Services Bureau management and LRP staff for project oversight.

Response – The Department is working to implement a comprehensive inspection process with standardized criteria. However, during the discovery period of the audit, when discussing inspection procedures, DNR identified that we reference the Iowa Department of Transportation Construction Manual for training and proper inspection techniques. This manual does not recognize that electronic web-based inspection records are required. Instead, it requires an inspection diary to be maintained. The inspection notes located within the project folders represent the inspector's diary.

Conclusion – Response acknowledged. Implementation of a comprehensive inspection process with standardized criteria is an important first step in ensuring consistency in documentation of inspections. The DNR is commended for working on a comprehensive process. The method in which DNR makes inspection documentation more readily available to management is a DNR management decision. The finding is intended to demonstrate inspection documentation should be readily available in a centralized location for DNR oversight of the projects to enhance efficiency and effectiveness of the process. Use of an electronic database would aid in backup and recovery in the event of a natural disaster, such as a flood.

FINDING C – Reporting

We reviewed the NRC's 2015 and 2016 annual reports for compliance with the DNR's annual reporting requirement and to determine if the reported information is sufficiently supported. The NRC requested from DNR staff the number of 2015 and 2016 approved project contracts administered by the LRP and by the Engineering Services Bureau. The NRC provides in their request flexibility to the DNR staff regarding whether the information is on a calendar year, State fiscal year, or Federal fiscal year basis. The LRP staff submitted to the NRC a summary of the number of projects approved in calendar years 2015 and 2016, but a copy of the summary was not available when requested. According to LRP staff, the support for the number of approved projects provided to the NRC for their annual report is available in the monthly NRC meeting minutes.

Therefore, we reviewed the NRC meeting minutes to identify and summarize the projects approved by the NRC in the meetings held during calendar years 2015 and 2016. As a result, we identified the project contracts approved by the NRC in calendar years 2015 and 2016 meeting minutes agree with the number of approved project contracts reported by the NRC.

However, the NRC only reported the number of approved project contracts for 2015 and 2016, but did not report the related cumulative amounts for the approved contracts, as follows. The NRC did not report the cumulative amounts of $12,144,799 correlating to the reported 17 approved contracts for 2015 and $8,635,257 for the reported 12 approved contracts for 2016.

Recommendation – DNR should:

- Maintain detailed documentation which supports the amounts reported by the NRC.
- In conjunction with the NRC, clearly define the intent and types of information the NRC desires to present in their report. For example, in addition to the number of approved contracts, provide to the NRC the total dollar amounts of the approved contracts in each year for consideration in reporting to the Governor and the Legislature.

Response – The Natural Resources Commission (NRC) requested the number of 2015 and 2016 approved project contracts administered by the Lakes Restoration Program. The NRC did not request the dollar amounts for the approved contracts. Staff provided the requested information to the NRC in an accurate and timely manner.

Conclusion – Response acknowledged. The Legislature appropriates a significant amount of RIIF funds for the LRP to DNR each year. To enhance transparency and accountability, it is important for DNR to provide to the NRC the cumulative amounts correlating to the reported number of approved project contracts for consideration in reporting to the Governor and the Legislature.

Schedule

Report on a Review of the
Monitoring and Reporting of Lake Restoration Program Projects
Administered by the Department of Natural Resources

Summary of Lake Restoration Program Project Expenditures by Fiscal Year by Project
Fiscal Years Ended June 30, 2013 through June 30, 2017

	Fiscal Year	
Project Name / Description	**2013**	**2014**
Badger Creek Lake - Watershed Improvement	$ -	-
Big Creek Lake Grade Stabilization	-	-
Big Creek Lake Watershed Improvement / Best Management Practices	-	-
Black Hawk Lake - Feasibility Study/Watershed Improvement	327,526	-
Black Hawk Lake - Watershed Improvement	-	130,336
Blue Lake Fish Barrier/Restoration	-	12,920
Carter Lake Engineering/Construction	801,471	210,542
Center Lake - Rock Fish Barriers	-	-
Central Park Lake - Watershed Improvement, in-lake restoration	-	-
Clear Lake - Containment Site Restoration	-	87,460
Clear Lake - Tile Repair/Ventura Marsh/Shoreline	48,361	-
Diamond Lake - Spillway Repair/Modification	-	-
Easter Lake Water Quality Improvement	29,362	37,496
Feasibility Studies - Restoration Plans/Monitoring	-	140,398
Five Island Lake Dredging	-	340,716
Green Valley Containment Site/Sediment	56,787	-
Green Valley West Silt Dike	-	-
Hawthorn Lake Sediment Ponds, Phase 2	-	-
Hawthorn Lake Watershed Structures/Stream Mitigation	-	2,850
Hickory Grove Feasibility Study	17,629	-
Hickory Grove Lake Shoreline Stabilization/Watershed	-	18,500
Hickory Grove Lake Improvements	-	-
Iowa Great Lakes Watershed Protection	21,173	223,511
Kent Park Lake Watershed Improvement	-	-
Lake Assessment - Restoration Action Plans	41,314	-
Lake Assessments - Monitoring & Economic Analysis	-	-
Lake Darling - Dredge/Land/Dike/Dam	11,472	-
Lake Darling - Dredging	-	2,514,847

Ended June 30,			
2015	**2016**	**2017**	**Total**
15,499	-	82,048	97,547
-	1,911	8,040	9,951
109,985	116,113	-	226,098
-	-	-	327,526
315,650	526,876	759,390	1,732,252
35,796	269,443	108,429	426,588
17,325	35,700	-	1,065,038
-	72,836	386,439	459,275
38,603	18,137	8,112	64,852
3,286	17,283	4,720	112,749
-	-	-	48,361
-	127,500	-	127,500
368,961	171,686	3,327,687	3,935,192
-	-	-	140,398
96,966	65,462	-	503,144
-	-	-	56,787
-	-	168,757	168,757
47,867	38,499	173,174	259,540
-	-	-	2,850
-	-	-	17,629
-	-	-	18,500
-	171,055	11,790	182,845
587,259	34,443	159,566	1,025,952
-	-	236,433	236,433
-	-	-	41,314
255,446	96,725	90,086	442,257
-	-	-	11,472
51,353	-	-	2,566,200

Report on a Review of the
Monitoring and Reporting of Lake Restoration Program Projects
Administered by the Department of Natural Resources

Summary of Lake Restoration Program Project Expenditures by Fiscal Year by Project
Fiscal Years Ended June 30, 2013 through June 30, 2017

	Fiscal Year	
Project Name / Description	**2013**	**2014**
Lake Darling - Near Shore Modifications	-	-
Lake Geode Watershed/Shoreline/Dredging	-	275
Lake Icaria Wetland Repair	376,836	-
Lake Icaria - Wetland Repair/Improvement	-	46,922
Lake Keomah Watershed Assessment & Improvement	-	-
Lake Manawa Water Quality Improvement/Pilot Dredge	3,125	-
Lake Miami Watershed Ponds	-	-
Little River Lake - In-lake Restoration/Shoreline	476,140	-
Lost Grove - Road Risers, Utica Ridge Road	65,948	-
Lost Island Fish Barrier Construction/Restoration	24,385	-
Lost Island Lake Electric Fish Barrier	-	323,573
Mariposa Lake Watershed Assessment & Improvement	-	-
Minor Projects	90,751	249,252
Outside Design & Engineering Services	39,283	7,902
Pleasant Creek Lake Shoreline/Watershed Evaluation	-	-
Prairie Rose - Dredging/Watershed Structure	-	563,566
Prairie Rose - Grade Stabilization Structure	-	-
Prairie Rose - In lake Dredge/Sedimentation Removal	146,810	-
Rathbun Lake Watershed Improvement	-	-
Shallow Lakes Water Quality Improvement	44,690	6,425
Silver Lake Feasibility Study, Watershed	-	-
Storm Lake Dredging	670,231	835,312
Three Mile Lake	-	-
Transfer to Operations for Administration	524,492	558,985
Twelve Mile Lake Wetland Construction	-	104,227
Twin Lakes - Feasibility Study	-	-
Union Grove Lake Improvements	-	-
Total	$ 3,817,786	6,416,015

Ended June 30,			
2015	**2016**	**2017**	**Total**
-	-	11,400	11,400
186,245	7,183	136,741	330,444
-	-	19,000	395,836
-	-	-	46,922
15,135	-	-	15,135
397,150	2,900,470	1,564,815	4,865,560
-	8,247	129,439	137,686
-	-	-	476,140
-	-	-	65,948
-	-	-	24,385
-	-	-	323,573
25,078	17,107	29,773	71,958
97,717	52,874	39,394	529,988
134	7,122	42,438	96,879
1,595	83,370	1,823,267	1,908,232
-	-	-	563,566
1,204,513	573,466	46,430	1,824,409
-	-	-	146,810
-	200,000	34,944	234,944
30,256	277,471	147,153	505,995
111,406	33,789	64,891	210,086
271,830	448,336	837,032	3,062,741
-	-	358,011	358,011
533,106	744,659	741,165	3,102,407
297,796	-	-	402,023
92,348	117,506	7,350	217,204
7,115	765,218	1,467,844	2,240,177
5,215,420	8,000,487	13,025,758	36,475,466

Report on a Review of the
Monitoring and Reporting of Lake Restoration Program Projects
Administered by the Department of Natural Resources

Staff

This review was conducted by:

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