

# CSI - Ohio

The Common Sense Initiative

## Business Impact Analysis

Agency Name: Ohio Department of Natural Resources

Regulation/Package Title: Division of Water Resources – 2017 Package, Dam Safety Program rules

Rule Number(s): 1501:21-1-01, 1501:21-1-02, 1501:21-1-03, 1501:21-1-04, 1501:21-3-01, 1501:21-3-02, 1501:21-5-01, 1501:21-5-02, 1501:21-5-03, 1501:21-5-04, 1501:21-5-05, 1501:21-5-06, 1501:21-5-07, 1501:21-7-01, 1501:21-7-02, 1501:21-7-03, 1501:21-9-01, 1501:21-11-01, 1501:21-11-02, 1501:21-11-03, 1501:21-11-05, 1501:21-13-01, 1501:21-13-02, 1501:21-13-03, 1501:21-13-04, 1501:21-13-05, 1501:21-13-06, 1501:21-13-07, 1501:21-13-08, 1501:21-13-09, 1501:21-13-10, 1501:21-13-11, 1501:21-13-12, 1501:21-13-13, 1501:21-13-14, 1501:21-15-01, 1501:21-15-02, 1501:21-15-04, 1501:21-15-05, 1501:21-15-06, 1501:21-15-07, 1501:21-17-01, 1501:21-17-02, 1501:21-17-03, 1501:21-17-04, 1501:21-19-01, 1501:21-19-02, 1501:21-21-01, 1501:21-21-02, 1501:21-21-03, 1501:21-21-04, 1501:21-21-05, 1501:21-22-01, 1501:21-22-02, 1501:21-22-03, 1501:21-23-01, 1501:21-24-01, 1501:21-24-02.

Date: December 1, 2017

**Rule Type:**

New

☒ 5-Year Review

☒ Amended

Rescinded

The Common Sense Initiative was established by Executive Order 2011-01K and placed within the Office of the Lieutenant Governor. Under the CSI Initiative, agencies should balance the critical objectives of all regulations with the costs of compliance by the

77 SOUTH HIGH STREET | 30TH FLOOR | COLUMBUS, OHIO 43215-6117

[CSIOhio@governor.ohio.gov](mailto:CSIOhio@governor.ohio.gov)

**regulated parties. Agencies should promote transparency, consistency, predictability, and flexibility in regulatory activities. Agencies should prioritize compliance over punishment, and to that end, should utilize plain language in the development of regulations.**

### **Regulatory Intent**

**1. Please briefly describe the draft regulation in plain language.**

*Please include the key provisions of the regulation as well as any proposed amendments.*

The Division of Water Resources (DWR) is submitting fifty-eight rules that regulate dam safety to the Common Sense Initiative pursuant to Ohio Revised Code (ORC) section 107.52. DWR proposes to continue thirty-five of these rules with no changes and amend twenty-three rules as follows:

- Three rules need revisions to remain consistent with the Division name change in the Ohio Revised Code;
- Six rules are revised to eliminate low-risk Class IV levees and remove low-risk Class III levees from regulation;
- Two rules are revised to increase the construction permit filing fee and the annual fee for the first time since 2010;
- Two rules need revision to simplify and clarify requirement for owners to maintain their compliant dam discount for the annual fee;
- One rule needs revision to modify the construction permit exemption requirements;
- One rule needs revision to modify and clarify inspection exemption requirements;
- Eight rules need revision to provide clarification.

All fifty-eight rules have been reviewed by DWR pursuant to section 106.03; thus, the JCARR filing will indicate that they have undergone their five-year-review. The following is a list of the rules, their key provisions, and the significant changes proposed for them. (Note: the attachment to this BIA contains all the rules as they will be submitted to JCARR. Each of the twenty-three rules with proposed amendments is accompanied by a summary containing a complete list of every change proposed for the rule. The rules that will be continued with no changes are included at the end of the attachment.)

- **1501:21-1-01 Notice of public hearing to adopt, amend, or rescind rules.** This rule contains the requirements for public notice of hearings to adopt, amend, or rescind rules related to dam safety. The proposed change relates to changes made by HB 64: effective 1/1/2016, the Division of Soil and Water Resources was renamed the Division of Water Resources.

**77 SOUTH HIGH STREET | 30TH FLOOR | COLUMBUS, OHIO 43215-6117**

**[CSIOhio@governor.ohio.gov](mailto:CSIOhio@governor.ohio.gov)**

- **1501:21-1-02 Authority for rules.** This rule provides authority to the Chief of the Division of Water Resources to issue construction permits, perform periodic inspections, collect annual fees, and exempt certain dams and levees. The proposed change relates to changes made by HB 64: effective 1/1/2016, the Division of Soil and Water Resources was renamed the Division of Water Resources.
- **1501:21-3-01 Definitions.** This rule contains definitions that are specific to dam safety. The proposed changes include adding the definition for “breach”, clarifying the definition of “freeboard”, removing outdated definitions, and changing the Division name to the Division of Water Resources.
- **1501:21-5-02 Preliminary design report.** This rule outlines what items must be submitted in the preliminary design report as the first step in obtaining a construction permit to build a new dam or levee. The proposed changes include removing the requirements for low-risk Class IV levees and modifying the requirements for low-risk Class III levees.
- **1501:21-5-07 The filing fee.** This rule provides the schedule for the filing fee associated with obtaining a construction permit for building a new dam or levee. The proposed change increases the filing fee. The filing fee has not been increased since 2010.
- **1501:21-11-02 Foundation investigation.** This rule specifies what testing and analysis must be performed on the dam and levee foundation materials. The proposed changes clarify the requirements to include stability, settlement and seepage analyses.
- **1501:21-11-03 On-site construction materials.** This rule specifies what testing and analysis must be performed on the dam or levee construction materials. The proposed changes include removing the words “on-site” to include all construction materials and clarifying the requirements to include stability, settlement and seepage analyses.
- **1501:21-11-05 Hydrologic and hydraulic investigations.** This rule specifies which methodologies for performing hydrologic and hydraulic analyses are acceptable. The proposed change relates to changes made by HB 64: effective 1/1/2016, the Division of Soil and Water Resources was renamed the Division of Water Resources.
- **1501:21-13-02 Design flood for dams and determination of critical flood.** This rule specifies the minimum design flood for each class of dam and how the selection of the critical flood is determined. The proposed change gives the Chief discretion to not require supporting calculations for the determination of the critical flood. This will save dam owners on engineering and construction costs when upgrading certain dams that meet the critical flood design criteria.
- **1501:21-13-05 Pipe conduit spillways, special requirements.** This rule specifies the material requirements that a pipe must have to safely function as a spillway for a dam. The rule is proposed for revision to eliminate the use of corrugated plastic pipe for spillway pipes. This type of pipe does not support external loads adequately without leakage. In addition, it

77 SOUTH HIGH STREET | 30TH FLOOR | COLUMBUS, OHIO 43215-6117

[CSIOhio@governor.ohio.gov](mailto:CSIOhio@governor.ohio.gov)

is difficult to compact around the pipe to obtain a water tight seal. Pipe leakage within a dam can easily cause dam failure.

- **1501:21-13-06 Requirements for drains and other pipe conduits.** This rule specifies the requirements for lake drain pipes and other conduits through dams. The proposed changes include giving the Chief discretion to exempt the requirement to include a lake drain, and to require the lake drain inlet elevation to be high enough to account for sedimentation in the reservoir so that operability is maintained.
- **1501:21-13-09 Classification of levees.** This rule contains the requirements for determining the classification of levees. The proposed changes include removing the requirements for low-risk Class IV levees and modifying the requirements for low-risk Class III levees.
- **1501:21-13-13 Freeboard requirements for levees.** This rule specifies the required freeboard or the elevation from the top of levee to the maximum elevation of the water during passage of the design flood. The proposed change removes the requirements for low-risk Class III levees.
- **1501:21-13-14 Additional design requirements for levees.** This rule provides additional design requirements for levees such as factors of safety, design references, and the use of inspection devices. The proposed change requires the applicant to demonstrate that all applicable state and local floodplain regulations and requirements are met. This was added to be consistent with the requirements for dams.
- **1501:21-15-06 Operation, maintenance, and inspection manual.** This rule specifies the required items that must be included in an operation, maintenance and inspection manual for dams and levees. The proposed change removes the requirements for low-risk Class III levees.
- **1501:21-15-07 Emergency action plan.** This rule specifies the required items that must be included in an emergency action plan for dams and levees. The proposed change removes the requirements for low-risk Class III levees.
- **1501:21-19-01 Permit exemptions.** This rule specifies which classes of dams and levees are exempt for the construction permit requirements of Sections 1521.06 and 1521.061 of the Revised Code. The proposed changes include adding the exemption for low-risk Class III levees and removing the exemption of Section 1521.06 of the Revised Code for dams and levees constructed by the Ohio Department of Natural Resources.
- **1501:21-19-02 Inspection exemptions for dams.** This rule specifies the inspection exemption requirements of a dam and procedures that a dam owner must perform to be considered for an inspection exemption under Section 1521.064 of the Revised Code. The proposed changes include exempting dams and levees constructed or inspected by the United States Army Corps of Engineers, exempting low-risk Class III levees, exempting Class III

dams that have no downstream hazard, and requiring that the dam owner maintain the dam or levee in good condition if they seek exemption under ORC Section 1521.064.

- **1501:21-21-01 Periodic inspection of existing dams and levees.** This rule specifies the requirements for conducting periodic inspections for existing dams and levees. The proposed changes include removing the requirements for low-risk Class IV levees and modifying the requirements for low-risk Class III levees.
- **1501:21-21-04 Owner's responsibilities in the operation, maintenance, and inspection of dams and levees.** This rule discusses the owner's responsibilities to operate and use the dam and levee so it does not constitute a hazard to life, health, or property which includes having a written operation, maintenance and inspection manual (OMI) and emergency action plan (EAP). The proposed change simplifies the EAP update requirements.
- **1501:21-21-05 Removal or correction of unsafe dams, and levees.** This rule specifies the procedures for the Division of Water Resources to remove an unsafe dam or levee if the owner fails to perform repairs within the required time period. The rule is proposed for revision to clarify the procedures for when an owner is unable to be identified for an unsafe dam or levee.
- **1501:21-24-01 The annual fee.** This rule provides the schedule for the annual fee for Class I, II, and III dams. The proposed changes increase the annual fee. The annual fee has not been increased since 2010.
- **1501:21-24-02 Compliant Dam Discount.** This rule contains the procedures for obtaining the compliant dam discount which provides up to 25% off the annual fee. The proposed changes include removing the requirement for an up-to-date OMI and revising the due date for updates to match when the annual fee is due (simplifying the requirements to receive the discount).

**Rules in Division 1501:21 proposed to be continued with no changes:**

- 1501:21-1-03 Applicability of the construction permit requirements for dams and levees.
- 1501:21-1-04 Severability.
- 1501:21-3-02 Registered professional engineer requirement.
- 1501:21-5-01 Application procedures, general.
- 1501:21-5-03 The final design submittal.
- 1501:21-5-04 The final design report.
- 1501:21-5-05 The plans.
- 1501:21-5-06 The specifications.
- 1501:21-7-01 The surety bond.
- 1501:21-7-02 Release of the surety bond.
- 1501:21-7-03 Forfeiture of the surety bond.
- 1501:21-9-01 The construction permit.

77 SOUTH HIGH STREET | 30TH FLOOR | COLUMBUS, OHIO 43215-6117

[CSIOhio@governor.ohio.gov](mailto:CSIOhio@governor.ohio.gov)

- 1501:21-11-01 Investigations, general requirements.
- 1501:21-13-01 Classification of dams.
- 1501:21-13-03 Spillway design, general requirements.
- 1501:21-13-04 Pipe conduit spillways, general requirements.
- 1501:21-13-07 Freeboard requirements for dams.
- 1501:21-13-08 Additional design requirements for dams.
- 1501:21-13-10 Levees, general requirements.
- 1501:21-13-11 Levees, special requirements.
- 1501:21-13-12 Design flood for levees.
- 1501:21-15-01 Construction Requirements.
- 1501:21-15-02 Approval of changes in design, plans, or specifications.
- 1501:21-15-04 As-built plans.
- 1501:21-15-05 Engineer's certification.
- 1501:21-17-01 Inspection procedure.
- 1501:21-17-02 Notice, order, and revocation for noncompliance.
- 1501:21-17-03 Approval of construction by the chief.
- 1501:21-17-04 Final inspection and approval by the chief.
- 1501:21-21-02 Periodic inspection procedures.
- 1501:21-21-03 Owner's responsibilities in correcting deficient dams and levees.
- 1501:21-22-01 Inspection procedure.
- 1501:21-22-02 Notice, order, and revocation for noncompliance.
- 1501:21-22-03 Approval of construction by the chief.
- 1501:21-23-01 Orders of the chief.

**2. Please list the Ohio statute authorizing the Agency to adopt this regulation.**

ORC 1521.06, 1521.061, 1521.062, 1521.063, 1521.064, 1521.07, and 1521.99

**3. Does the regulation implement a federal requirement? Is the proposed regulation being adopted or amended to enable the state to obtain or maintain approval to administer and enforce a federal law or to participate in a federal program?  
*If yes, please briefly explain the source and substance of the federal requirement.***

No

**4. If the regulation includes provisions not specifically required by the federal government, please explain the rationale for exceeding the federal requirement.**

Not applicable

**5. What is the public purpose for this regulation (i.e., why does the Agency feel that there needs to be any regulation in this area at all)?**

The public purpose of OAC Division 1501:21 is to ensure that human life, health, and property are protected from dam failures. Conducting periodic safety inspections, issuing

77 SOUTH HIGH STREET | 30TH FLOOR | COLUMBUS, OHIO 43215-6117

[CSIOhio@governor.ohio.gov](mailto:CSIOhio@governor.ohio.gov)

construction permits, and working with dam owners to maintain and improve the overall condition of Ohio dams are vital aspects of achieving this purpose.

**6. How will the Agency measure the success of this regulation in terms of outputs and/or outcome?**

DWR will measure the success of the Dam Safety Program rules by improved safety of dams by maintaining the current level of periodic inspection, reviewing plans and specifications for repair of existing dams and levees and construction of new dams and levees, observing the construction process, proceeding with enforcement action against dam owners that refuse to comply with the dam safety laws, and providing emergency response.

**Development of the Regulation**

**7. Please list the stakeholders included by the Agency in the development or initial review of the draft regulation.**

The following stakeholders comprise a list of dam owners, emergency responders, and other organizations that have an interest in Ohio dam safety. A letter was sent to each stakeholder giving them access to the proposed rules changes through our website or upon request and asking that they submit comments to the Division.

- Conservancy Districts:
  - Miami CD
  - Muskingum Watershed CD
    - Chippewa CD
  - Hunters Run CD
  - Rush Creek CD
  - Hocking CD
- Municipalities that own:
  - Waste water treatment lagoons
  - Upground water supply reservoirs
  - Flood control dams
- Private water companies that own reservoirs such as:
  - Del-Co Water Company
  - Aqua Ohio
- Power Generators with waste storage ponds, etc.
  - AEP
  - Dayton Power and Light
  - Duke Energy
  - Dynegy
  - GenOn Power Midwest
- Homeowner associations
- Private dam owners
- ODNR Dam-Owning Divisions (Parks, Wildlife, Forestry)

**77 SOUTH HIGH STREET | 30TH FLOOR | COLUMBUS, OHIO 43215-6117**

**[CSIOhio@governor.ohio.gov](mailto:CSIOhio@governor.ohio.gov)**



- Ohio Lake Communities Association
- County and local park districts
- Civil and Environmental Engineering consultants
- Ohio Dam Safety Organization
- Association of State Dam Safety Officials
- American Society of Civil Engineers – Columbus Chapter
- Ohio Society of Professional Engineers
- 88 County Emergency Management Agencies
- Ohio Farm Bureau
- Capital Consulting Group, Inc.

**8. What input was provided by the stakeholders, and how did that input affect the draft regulation being proposed by the Agency?**

A few general questions on the specific amount of increase in annual fee for their dams were received. One dam owner had concerns about restricting the use of corrugated plastic pipe and having to potentially replace their newly installed spillway pipe. Their current spillway is a PVC pipe, an acceptable type of plastic pipe. The dam owner was assured that their current spillway would not need to be replaced. Another dam owner indicated that a 15% increase was too high especially since they worked hard to maintain their dam properly. They felt that dams that are not maintained properly should pay more to fund the dam safety program. This already exists in the current regulations through the compliant dam discount for the annual fee. Another dam owner complained about increasing the fee once again and that larger dams will pay more of the increase. They indicated that it seemed to be discriminatory based on dam size. The program spends more resources inspecting and regulating larger, high hazard dams. The Miami Conservancy District (MCD) also opposed the fee increases; however, they own 8 regulated dams, five of which are very large high hazard structures. The division closely evaluated all input and determined no changes to the draft regulations were to be made.

**9. What scientific data was used to develop the rule or the measurable outcomes of the rule? How does this data support the regulation being proposed?**

The rules in this package are administrative in nature; therefore, limited scientific data was used in development of these rules; however, eliminating the use of corrugated plastic pipe is based on its historical inability to be watertight and withstand significant weight loading and on past failures of this type of pipe. When proposing changes to the annual fee schedule for dams, the relative size of the dam and the public safety hazard it poses were considered.

**10. What alternative regulations (or specific provisions within the regulation) did the Agency consider, and why did it determine that these alternatives were not appropriate? If none, why didn't the Agency consider regulatory alternatives?**

77 SOUTH HIGH STREET | 30TH FLOOR | COLUMBUS, OHIO 43215-6117

[CSIOhio@governor.ohio.gov](mailto:CSIOhio@governor.ohio.gov)



No alternative regulations were considered; ORC Chapter 1521 does not allow for alternative means of compliance with these rules. Specific design requirements for dams and levees is critical to preventing dam and levee failures and, therefore, the protection of the asset and human life, health and property located downstream.

**11. Did the Agency specifically consider a performance-based regulation? Please explain.**

*Performance-based regulations define the required outcome, but don't dictate the process the regulated stakeholders must use to achieve compliance.*

Yes. The dam safety regulations do provide flexibility for the dam owner in determining alternative methods, designs, and options to bring regulated dams and levees into compliance. Dams and levees can be modified to remove or eliminate some or all of the design and regulatory requirements.

**12. What measures did the Agency take to ensure that this regulation does not duplicate an existing Ohio regulation?**

Under Chapter 1521 of the Revised Code, the Chief of the Division of Water Resources is charged with administering dam safety laws in Ohio. A review of existing ODNR rules was completed, and no duplication was found. However, regulations were removed that were redundant with the United States Army Corps of Engineers construction and inspection of levees.

**13. Please describe the Agency's plan for implementation of the regulation, including any measures to ensure that the regulation is applied consistently and predictably for the regulated community.**

The Dam Safety Program's construction permitting and inspection processes ensure that any new requirements are applied consistently across Ohio. The dam safety program staff perform periodic safety inspections of all regulated dams once every five years and provides a report that includes the required remedial measures the dam owner must perform to improve the safety of their dam. Senior dam safety staff and managers assist in the review of each regulated dam and levee project to ensure regulations and requirements are applied consistently and predictably. Many design requirements are specifically listed in Administrative Code.

Every year the annual fee is sent out in the month of May which provides ample opportunity for dam owners to submit payment by June 30<sup>th</sup>.

**Adverse Impact to Business**

**14. Provide a summary of the estimated cost of compliance with the rule. Specifically, please do the following:**

**a. Identify the scope of the impacted business community;**

**77 SOUTH HIGH STREET | 30TH FLOOR | COLUMBUS, OHIO 43215-6117**

**[CSIOhio@governor.ohio.gov](mailto:CSIOhio@governor.ohio.gov)**

Businesses that own regulated dams will be impacted, but of the 1489 dams that are currently regulated by the DWR, only about 9% are owned by the business community.

**b. Identify the nature of the adverse impact (e.g., license fees, fines, employer time for compliance); and**

The adverse impact of the proposed rule changes will include increasing both the annual fee for currently regulated dams and the construction permit filing fee for new dams and levees.

**c. Quantify the expected adverse impact from the regulation.**

*The adverse impact can be quantified in terms of dollars, hours to comply, or other factors; and may be estimated for the entire regulated population or for a “representative business.” Please include the source for your information/estimated impact.*

The proposed increase in the annual fee includes increasing the cost per foot of length of the dam from \$0.05 to \$0.08, increasing the cost per acre-foot of storage volume from \$0.05 to \$0.08, and increasing the storage volume cap from 3,000 acre-feet to 7,000 acre-feet. This fee increase constitutes an average increase of 15%; however, it is weighted to be a higher increase for large dams and a lower increase for smaller dams. The construction permit filing fee is determined using the cost estimated for construction and a graded formula; therefore, the proposed increase varies due to the cost of each specific project with a maximum increase of about 12%.

**15. Why did the Agency determine that the regulatory intent justifies the adverse impact to the regulated business community?**

The proposed fee increases are approximately a 2% average annual increase over the past 8 years (the time since the last fee increase), which is approximately the same as the Consumer Price Index for the same period of time. In addition, staffing costs continue to increase for adequate regulation of dams to protect downstream human life, health and property.

**Regulatory Flexibility**

**16. Does the regulation provide any exemptions or alternative means of compliance for small businesses? Please explain.**

There is a Compliant Dam Discount that provides dam owners a 25% discount on the annual fee if the dam is properly maintained and there is an approved and up-to-date emergency action plan.

**17. How will the agency apply Ohio Revised Code section 119.14 (waiver of fines and penalties for paperwork violations and first-time offenders) into implementation of the regulation?**

77 SOUTH HIGH STREET | 30TH FLOOR | COLUMBUS, OHIO 43215-6117

[CSIOhio@governor.ohio.gov](mailto:CSIOhio@governor.ohio.gov)

These proposed rules do not contain administrative fines or civil penalties for paperwork violations.

**18. What resources are available to assist small businesses with compliance of the regulation?**

Division of Water Resources staff work with dam and levee owners and their engineers to bring dams and levees into compliance through repairs, modifications, or removal. Once construction plans are approved by the Chief of the DWR, the owner can apply with the Ohio Water Development Authority's Dam Safety Linked Deposit Program to receive a low-interest loan for dam repairs, modifications, or removal.