

The Engineer's Role in Protecting Public Health and the Environment

Idaho Code Title 39 – Chapter 1



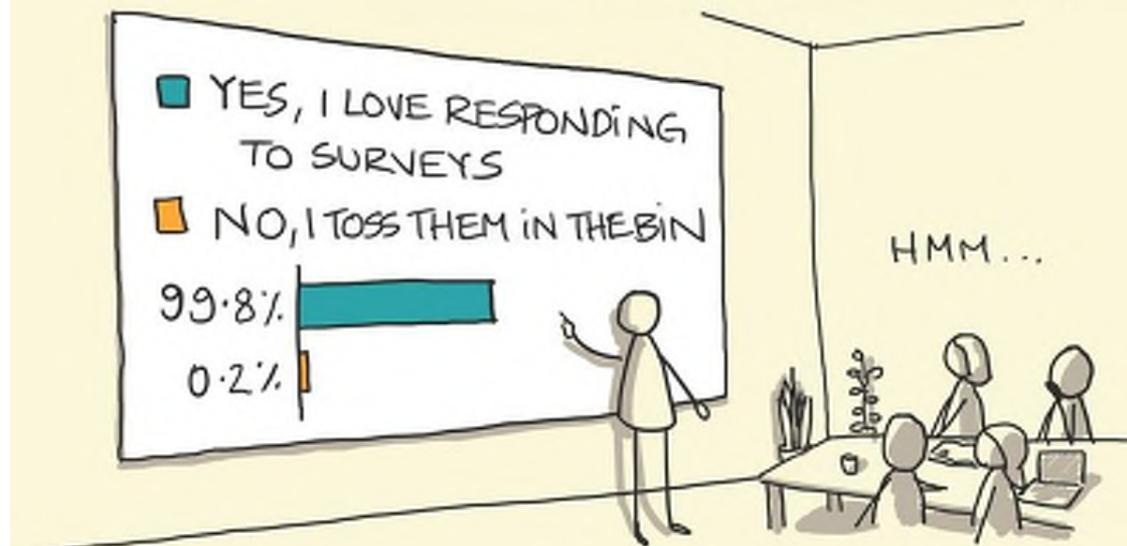
STATE OF IDAHO
DEPARTMENT OF
ENVIRONMENTAL QUALITY

Dan McCracken, P.E.
Regional Administrator

Overview

- Overview of DEQ
- How and Why DEQ Works with Engineers
- Engineer Responsibilities within DEQ Programs
- Hopefully not Boring
- Smattering of Interactive Polling and Interesting Tidbits

SAMPLING BIAS



"WE RECEIVED 500 RESPONSES AND FOUND THAT PEOPLE LOVE RESPONDING TO SURVEYS"

sketchplanations

Interactive Survey



Interactive Survey

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Idaho Environmental Protection and Health Act (1972)

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- It is hereby recognized by the legislature that the protection of the environment and the promotion of personal health are vital concerns and are therefore of great importance to the future welfare of this state. It is therefore declared to be the policy of the state to provide for the protection of the environment and the promotion of personal health and to thereby protect and promote the health, safety and general welfare of the people of this state.*

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Shared Goal

- DEQ – Idaho Code 39 Chapter 1
 - Protect and promote the health, safety and general welfare of the people of this state.
- NSPE – Code of Ethics
 - Engineers shall hold paramount the safety, health, and welfare of the public

Are Engineers Included in the Statute?



Are Engineers Included in the Statute?

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Idaho Environmental Protection and Health Act – Idaho Code 39 Chapter 1

- Engineers are mentioned 16 Times in DEQ's founding Statute.
 - 39-118 - REVIEW OF PLANS (12 times)
 - 39-118A – ORE PROCESSING BY CYANIDATION (1 time)
 - 39-176E – CONSTRUCTION REQUIREMENTS FOR PHOSPHOGYPSUM STACKS (3 times)

Idaho Environmental Protection and Health Act – Idaho Code 39 Chapter 1

- Other Professions Mentioned in the Act:
 - DEQ Director (140)
 - Operator (22)
 - Attorney General (10)
 - Governor (8)

- Not Mentioned:
 - Doctor/Physician (0)
 - Scientist (0)
 - Geologist (0)
 - Architect (0)

Idaho Environmental Protection and Health Act – Idaho Code 39 Chapter 1

- The Act generally lists Engineers in two contexts:
 - Items required to be prepared by a licensed engineer
 - Providing for DEQ review of plans and specifications (prepared by engineers)

Review of Plans (39-118)

- Plans and Specifications shall be submitted to DEQ and approved by director before construction may begin for:
 - New construction or Material Modifications to:
 - Sewage Systems
 - Sewage Treatment Plants or Systems
 - Other waste treatment or disposal facilities
 - Public water supply systems
 - Public water treatment systems

Review of Plans (39-118)

- Pre-construction approval not required for:
 - Dairy systems pursuant to Idaho Code 37-401
 - Plans developed for storm water BMPs
 - Plans for routine maintenance and in-kind equipment replacement
 - Sewer, Water, Storm Drain main extensions for publicly owned facilities when such facility provides for the review by a qualified licensed professional engineer. (transmitted to DEQ at time of construction)



Plans & Specifications

- *All plans and specifications submitted to satisfy the requirements of subsection (1) of this section and all plans approved pursuant to subsection (2)(d) of this section shall be in compliance with applicable facility and design standards and conform in style and quality to regularly accepted engineering standards. The department shall review plans to determine compliance with applicable facility standards and engineering standards of care.*

Engineer's Responsibility

- Prepare Plans and Specifications that:
 - Are in compliance with applicable facility and design standards
 - Conform in style and quality to regularly accepted engineering standards

DEQ Responsibility

- Review Plans to determine compliance
 - with applicable facility standards
 - engineering standard of care
- *As long as the plans and specifications comply with applicable facility and design standards, the department shall not substitute its judgment for that of the owner's design engineer concerning the manner of compliance with design standards.*

Applicable Facility and Design Standards

- Established through Administrative Rules (IDAPA)
 - IDAPA 58.01.08 Rules Public Drinking Water Systems
 - IDAPA 58.01.16 Wastewater Rules
- Define necessary details and requires Professional Engineer to prepare Facility Plans, PER, Plans & Specifications
- Public Process through the Administrative Procedures Act

Style and Quality

- *All plans and specifications submitted... shall... conform in style and quality to regularly accepted engineering standards.*
- Not clearly defined
- Generally established by the engineering community by our quality of work
- Can change over time

Standard of Care

- The engineering standard of care refers to the level of skill and diligence that a professional engineer is expected to exercise in their work. It is defined as the care and skill ordinarily used by members of the profession practicing under similar circumstances at the same time and in the same locality.
 - From EJCDC

What items would you expect to see in a set of engineering documents to demonstrate regularly accepted standard of care?



Items demonstrating Standard of Care

[Display Poll Results](#)

Working Together

- DEQ and Engineers are working toward same goal
- Best Examples of Successful Projects have Collaboration Early
- Even late collaboration is more productive than never
- Contact Regional DEQ Engineering Staff to coordinate

Q&A and Feedback

Conclusion

- DEQ and Engineers have shared interest in protecting health, safety, and welfare of the public
- We also have an ongoing responsibility to establish and maintain the professional standard of care
- Let's keep up the good work!



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