



NATIONAL SOCIETY OF
PROFESSIONAL ENGINEERS

BOARD of ETHICAL REVIEW

CASE REVIEW

Balancing Client Directives and Public Welfare: Stormwater Management Dilemma

Case No. 24-1

NSPE.ORG



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Facts

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Engineer L, a licensed professional engineer, has many years of experience in stormwater control design. Engineer L is contracted by Client X, a private development entity, to design a stormwater management system for a large residential and commercial development near a small community. This community relies on a nearby surface water watershed as a primary drinking water source. Part of Engineer L's scope of work for Client X includes ensuring that stormwater from the new development will not impact this primary drinking water source for the community. During the preliminary design phase, Engineer L becomes concerned that the risk of impact to the community drinking water source will potentially increase, as the likelihood of heavy stormwater flows will increase over time. But before Engineer L can quantify the increased risk, Client X encounters unexpected financial setbacks and requests that Engineer L suspend work identified in the original contract. In their communications about the suspension, Engineer L does not mention to Client X the potential increased risk of impact to the community drinking water source.

Several months later, Client X's financial situation improves and Engineer L is asked to resume work on the stormwater management system. About this same time, an historic heavy rainfall in the region leads to increased stormwater accumulation on-site, raising the risk of runoff into the watershed. Engineer L conducts additional studies and qualitatively estimates the risk that heavy rainfall could lead to stormwater runoff from the development reaching the nearby watershed and community drinking water source. Engineer L notifies Client X of this risk, advising that additional protective measures should be considered, especially as local environmental standards require steps to safeguard public water sources. However, Client X is hesitant to invest in additional protective measures, citing continuing budget limitations. Despite Engineer L's concerns, Client X insists on proceeding without added safeguards, stating that Client X will address any compliance issues later, if needed.

Questions

1. Was it ethical for Engineer L to cease work when requested by Client X, without voicing concern about increased risk?
2. Would it be ethical for Engineer L to continue working on Client X's project when Client X refuses to invest in the protective measures identified by Engineer L?

Code of Ethics References:

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| <p>I.1 Hold paramount the safety, health and welfare of the public.</p> <p>I.4 Act for each employer or client as faithful agents or trustees.</p> <p>II.1.a If engineers' judgment is overruled under circumstances that endanger life or property, they shall notify their employer or client and such other authority as may be appropriate.</p> <p>II.3.a Engineers shall be objective and truthful in professional reports, statements, or testimony. They shall include all relevant and pertinent information in such reports, statements, or testimony, which should bear the date indicating when it was current.</p> <p>II.3.b Engineers may express publicly technical opinions that are founded upon knowledge of the facts and competence in the subject matter.</p> | <p>III.1.b Engineers shall advise their clients or employers when they believe a project will not be successful.</p> <p>III.3.a Engineers shall avoid the use of statements containing a material misrepresentation of fact or omitting a material fact.</p> |
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BER CASE REFERENCES:

[BER Case 67-10](#); [BER Case 76-4](#); [BER Case 84-5](#); [BER Case 89-7](#); [BER Case 99-8](#); [BER Case 04-8](#); [BER Case 07-6](#); [BER Case 18-9](#); [BER Case 20-4](#); [BER Case 21-2](#); [BER Case 22-5](#)

Discussion

The Board of Ethical Review (BER) has a rich history of cases dealing with environmental issues like the one Engineer L faces. Several recent cases, including [BER Case 22-5](#) and [BER Case 20-4](#), emphasize an engineer's primary responsibility to public health, safety and welfare with an emphasis on safe drinking water.

[BER Case 76-4](#) provides a foundation that other BER cases have built upon, and it is appropriate to review the facts and conclusions of that case as we start our analysis.

[BER Case 76-4](#) stated that XYZ Corporation was advised by a State Pollution Control Authority of a need to apply for a permit to discharge manufacturing waste into a receiving body of water, and they hired Engineer Doe to perform consulting engineering services and submit a detailed report. Engineer Doe verbally reported to XYZ that their discharge will lower the water quality in the receiving body of water below standards. XYZ instructed Engineer Doe not to complete a written report and paid Engineer Doe the agreed upon fee. Engineer Doe later learned that the Pollution Control Authority would be holding a public hearing and that XYZ Corporation would present data to show their discharge meets minimum standards.

The BER noted an engineer's obligation is to act for each client or employer as a faithful agent or trustee. The case goes on to state "Upon learning of the hearing, he is squarely confronted with his

obligations to the public concerning its safety, health, and welfare. Section 2(a) requires that his duty to the public be paramount." Section 2(a) of the NSPE Code of Ethics (the Code) at that time read "He will regard his duty to the public welfare as paramount." In [BER Case 76-4](#), the BER concluded that Doe had an obligation to report his findings to the Pollution Control Authority, and they quoted [BER Case 67-10](#) which stated, "[i]t is basic to the entire concept of a profession that its members will devote their interests to the public welfare, as is made abundantly clear in [Section] 2 and [Section] 2(a) of the [C]ode."

Within this environmental framework, the present case illustrates a conflict between Fundamental Canon 1.1, the engineer's obligation to hold paramount the safety, health and welfare of the public; and Canon 1.4, the engineer's obligation to act for each employer or client as a faithful agent or trustee. Beyond this basic ethical dilemma, the case invites consideration of ethical disclosure, and how the engineer should best handle the conflict. The BER has considered cases of this type in every decade since its founding in 1958.

A classic example of "the disclosure question" forms the crux of [BER Case 07-6](#). In [BER Case 07-6](#), Engineer A was a principal in an environmental engineering firm and was requested by a developer client to prepare an analysis of a piece of property adjacent to a wetlands area for

potential development as a residential condominium. During the firm’s analysis, one of the engineering firm’s biologists reported to Engineer A that in his opinion, the condominium project could threaten a bird species that inhabited the adjacent protected wetlands area. The bird species was not an “endangered species,” but it was considered a “threatened species” by federal and state environmental regulators. In subsequent discussions with the developer client, Engineer A verbally mentioned the concern, but Engineer A did not include the information in a written report that will be submitted to a public authority that is considering the developer’s proposal. The BER concluded that it was unethical for Engineer A to not include the information about the threat to the bird species in a written report that will be submitted to a public authority. The BER noted that Engineer A was obligated under Code section II.3.a to be objective and truthful in professional reports, statements, or testimony and include all relevant and pertinent information in such reports.

The key point of [BER Case 07-6](#) is that information about the threat to the bird species is a “fact” of the case. Similar facts requiring disclosure appear in [BER Case 89-7](#) (safety violations confided by the Client); [BER Case 99-8](#) (incomplete drawings and specifications); [BER Case 04-8](#) (violation of federal and state laws and regulations); [BER Case 18-9](#) (public safety risk of future surge level rise); and [BER Case 21-2](#) (effects of sea level rise and changes in precipitation intensities and recurrence intervals effected by on-going climate change.)

In contrast to these prior cases, the present case states that Engineer L is concerned about increased risk over time, but has not developed their work to a point where they can assess risks

of potential stormwater runoff resulting from the new development. Thus, Engineer L’s “concern” does not rise to the technical or moral level of “fact,” and per Code section II.3.b, engineers may express publicly technical opinions that are founded upon *knowledge of the facts*. Beyond the fact limitation, under Fundamental Canon I.4, Engineer L has an affirmative obligation to act as the client’s faithful agent or trustee. When asked in good faith to stop the design work, in the absence of facts to the contrary, there is no reason for Engineer L not to respect the client’s request. The BER’s view is that, while it might be prudent for Engineer L to inform Client X of their concerns, such disclosure is not required under the Code.

Turning to the second part of the case, Engineer L is later asked to resume design, and during this phase of the project, additional studies identify a potential risk that heavy rainfall could lead to stormwater runoff from the development reaching the nearby watershed. Although it does not appear Engineer L has completed a professional report per se, Engineer L’s identification of runoff risk is now “fact.” Consistent with Code sections I.4, II.3.a, II.3.b, III.1.b, and III.3.a, Engineer L notified Client X of this risk.

Client X’s insistence on moving forward with the project without adequate safeguards creates an ethical dilemma for Engineer L. Code section III.1.b requires that engineers advise their clients or employers when they believe a project will be unsuccessful. Although many BER cases reference this provision, there are relatively few which deal with it directly. [BER Case 84-5](#) is one such case.

[BER Case 84-5](#) included a situation where a client hired Engineer A to furnish complete engineering services for a project.

Engineer A recommended the client hire a full-time, on-site project representative for the project because of the potentially dangerous nature of implementing the design during the construction phase. The client indicated that hiring the representative would be too costly, and Engineer A continues to work on the project.

The BER noted that the issue presented went to the “the heart of the Code of Ethics.” Further stating, “a code of ethics is of course a statement of commitment from a particular profession to assist its members in the protection of the public health and safety. There is probably no better or more valuable purpose for a code of ethics. Engineers, like all other licensed professionals, recognize that the reason for regulation and licensure is the protection of the public health and safety. However, engineers have the desire and commitment to ‘go the extra mile,’ and voluntarily commit themselves to a higher standard of conduct. It is for that reason that the NSPE Code of Ethics was developed and continues to develop as a force in engineering ethics.”

[BER Case 84-5](#) noted that, “section III.1.b. clearly requires the engineer to inform a client when the engineer believes that a project will not be

successful. The term ‘successful’ includes not merely the structural and economic success of a project but also the success of the project from a safety standpoint. It is clear from the facts that Engineer A did notify the client of the need to hire a full-time, on-site project representative for the construction phase of the project. Therefore, Engineer A did act in accordance with Code section III.1.b.”

The problematic behavior in [BER Case 84-5](#) was that, when cost concerns were raised by the client, Engineer A “abandoned the ethical duty [to the public] and proceeded to work on the project.” The BER, in discussing [BER Case 84-5](#), felt that “Engineer A acted in a manner that suggests the primary obligation was not the public, but the client’s economic concerns. For that reason, Engineer A was in violation of Code section II.1.a.” We note a direct parallel between the 1984 case and the facts under consideration.

In summary, consistent with BER case precedent and the facts of the instant case, Engineer L cannot ethically acquiesce to Client X’s insistence to continue work on the project when Client X refuses to invest in the protective measures identified by Engineer L.

Conclusions:

1. It was not unethical for Engineer L to cease work when requested by Client X, without voicing concern about unquantified increased risk. Later, Engineer L did comply with Code provisions that require engineers to notify their employers or clients if a project will not be successful.
2. It would not be ethical for Engineer L to continue working on Client X’s project when Client X refuses to invest in the protective measures identified by Engineer L. Continuing to work on the project after concerns about runoff were quantified would in effect mean Engineer L was placing the clients’ financial interest above the engineer’s paramount obligation to the public health, safety, and welfare. This, the engineer cannot ethically do.



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