



Dam Safety Fact Sheet

Hiring an Engineer

STATE OF WISCONSIN • DEPARTMENT OF NATURAL RESOURCES • BUREAU OF WATERSHED MANAGEMENT

Note: This fact sheet is not intended to provide any advice, counsel or directive to dam owners, nor should it be construed as advocating or requiring that a certain course of action be taken with respect to hiring an engineer.

Why should I hire an engineer?

Ch. 31 of the Wisconsin State Statutes was revised in July, 2009. The changes give dam owners greater responsibility for inspection of their dams. Under ch. 31.19 (2)(ag), owners of low-hazard large dams are required to have a professional engineer licensed in Wisconsin perform a detailed dam once every ten (10) years. Owners of significant- and high-hazard large dams will be required to have a professional engineer licensed in Wisconsin perform a detailed dam safety inspection every 2-4 years, depending on the assigned hazard rating.

The DNR Dam Safety Database (<http://dnr.wi.gov/topic/Dams/damSearch.html>) includes inspection schedules for state regulated large dams. A search can be done in various ways such as by using the dam's common name, key sequence number or field file number. If dam specific information is unavailable or a broader search is needed, a search can be done by county.

Because most dam owners in Wisconsin have not regularly hired consultants for inspections, this fact sheet provides owners with helpful information on contacting, interviewing, reviewing references and experience, and hiring a consulting engineer to perform a dam safety inspection.

Why kind of engineer should I hire?

As a dam owner, you will need to hire a professional engineer who is licensed to practice in the State of Wisconsin, has experience with dams and dam safety, inspection of existing dams, the deficiencies common to the type of dams in the state and knowledge of the rules and regulations governing dams in Wisconsin. In addition, you will want someone who can provide a written report for you to submit to the Department with recommendations for repair, monitoring or reconstruction, and if you choose not to do your own, who can develop an Inspection, Operation and Maintenance Plan (IOM) and an Emergency Action Plan (EAP) specific to your dam.

How do I hire an engineer?

While the process of hiring an engineer is similar to hiring other contractors, using a Qualification Based (QB) selection strategy is the recommended by the Wisconsin DNR Dam Safety Program. A QB selection means that the knowledge, experience and ingenuity of the engineer are the determining factors in making the selection rather than just the fee. When a QB selection is used, the dam owner solicits several engineering firms to submit their technical qualifications, experience with similar projects, references and other factors related to the proposed project. Based on the submittals, the owner then selects the three most qualified firms to make brief presentations for the project. Based on the presentations, the owner then chooses the most qualified firm to develop a scope of work and negotiates the fee. During the selection process there are a few key elements that you may wish to pay particular attention to:

- Contacting an engineer: Wisconsin DNR Dam Safety maintains a directory of consulting engineers on its website <http://dnr.wi.gov/topic/Dams/documents/consultants.pdf>. It is a limited listing of credible engineers/contractors for dam inspections, maintenance and repairs, and hydrology and hydraulic analyses.

The listed firms have provided a Consultant Background Information Form to DNR. The consultants' background information is also available on the website. The directory is not all-inclusive and does not represent DNR recommendations of engineering firms.

In addition to the DNR directory, the American Council of Engineering Companies, Wisconsin branch (ACECWI) maintains a website (www.ACECWI.org) with information about Qualifications-Based Selection of engineering consultants.

Also, the Association of State Dam Safety Officials (ASDSO) has an extensive online library of resources, including a downloadable document on procuring the services of a registered professional engineer, available to the public at www.damsafety.org.

- **Interviewing an engineer:** Once you have contacted an engineer or firm, you should meet and talk with the engineer prior to hiring. The engineer can and should provide a list of references for work that he or she has done with other dam owners and the types of services (inspection, plan preparation, construction oversight, etc.) provided to the owners. You can inquire if the firm has submitted a qualifications document (Consultant Background Information Form) to the Department or request a copy of that form from the firm.
- **Checking references:** This is an important step in the process. Call other dam owners and communities with which the engineer has worked. Ask if they had any issues working with the individual. Ask if they completed the work on time, within budget and according to the approved plans. References are also part of the qualifications (Consultant Background Information Form) that firms can submit to the Department.
- **Hire your engineer:** After you have contacted an engineer and checked references, the next step is to get a written estimate for the required work. If you are satisfied with this engineer, you may hire him or her; if not, you can of course "seek a second opinion" and discuss your needs with another engineer or firm, check references, and obtain a written estimate. **Note:** *If you have an engineer on staff that has dam inspection experience, you may be able to forego the hiring process. Please contact the Wisconsin DNR Dam Safety staff to verify the qualifications.*

If you have questions about the ch. 31.19 requirements or need further assistance – contact the Water Management Engineer (WME) for the county in which your dam is located. A list of WMEs by county can be found at <http://dnr.wi.gov/topic/dams/regionalcontacts.html>.

For more information on dam safety either go to the [WDNR Dam Safety Program](http://dnr.wi.gov/topic/dams/) website: <http://dnr.wi.gov/topic/dams/> or write to:

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