

DEPARTMENT OF ECOLOGY  
Water Resources Program / Dam Safety Office  
PO Box 47600, Olympia, WA 98504-7600

April 5, 2012

To: Dam owners  
From: Marty Walther, Dam Safety Engineer  
Subject: Advice for selecting consultants with dam safety experience/expertise

Esteemed colleague:

As part of Dam Safety's technical assistance to dam owners, we offer the following advice about selecting an engineering consultant. This advice is intended primarily for dam owners who use outside engineering expertise on an infrequent basis. It is not meant to supersede any policies or procedures your organization already has in place for procuring outside engineering services.

On the following pages, we offer some general advice about selecting an engineering consultant for your dam, some suggested topics for interview questions to use during the selection process, and some ideas for how to identify prospective engineering consultants to interview.

We hope this information is helpful to you. At any time during or following the selection process, if you or any of your prospective consultants have any questions or need more information, please do not hesitate to contact us. Early and open communication helps all of us.

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## Advice about Selecting a Dam Safety Consultant

Our intent in this guidance is to help dam owners select engineers to serve their needs, but to leave the final selection with the dam owner. Dam Safety's technical assistance efforts cannot include making specific recommendations for or against a specific engineer or engineering firm.

Please also note that the dam owner and the consultant retain full responsibility for the contractual relationship between client and consultant. The State of Washington, the Department of Ecology, and Ecology staff are not authorized to accept any of the dam owner's or consulting engineer's legal responsibility and/or potential liability in this regard.

Selection based on qualifications. Shopping for the lowest cost is not the best way to choose an engineer. We recommend using a qualifications-based selection (QBS) system where you interview several engineers interested in your project and select the engineer most qualified. You then negotiate the scope of work and contract fee to best meet your needs and budget. This procedure is also described in the attached ASDSO pamphlet, *Procuring the Services of a Professional Engineer*.

Consultant teams. In many cases, dam projects will use two engineering firms – one project manager with either hydrology and hydraulics (H/H) or geotechnical expertise, who teams with another firm (sub-consultant) to provide the other expertise that your project needs. As a practical matter, once you identify a prospective engineer for your project, they are likely to have contacts with other engineering firms with the additional expertise your project needs.

Interviews and scope of work. Early and open communication is key to the success of dam safety projects. During the interview process with the various engineering firms, be sure to ask lots of detailed questions. Some suggested topics to include in your interview questions are listed on the next page. You may wish to use the first few questions to narrow your investigation to two or three firms for more lengthy and detailed follow-up interviews. Also, feel free to contact Dam Safety before you start interviewing firms to help identify the specific needs of your project to include in the scope of work for the consultant contract.

As part of the selection process, be sure to ask for references, preferably other dam owners with dams of similar size and/or complexity as yours. Knowing other clients' experiences in dealing with that specific firm can help you make your final selection.

Areas of dam safety expertise. The specific needs for your dam will need to be reflected in the scope of work for the consultant contract, so be sure to ask about the consultant's expertise in the specific subject areas relevant to your project. Typically, the specific needs for your dam will fall into one or more of the following subject areas:

- Dam failure analyses and inundation mapping
- Geotechnical analysis and design
- Hydrologic analysis and dam safety inflow design flood
- Spillway hydraulics and design details
- Emergency Action Plan preparation
- Conduit rehabilitation and repair
- Concrete structures – physical condition, structural analysis and design
- Other dam safety expertise unique to your dam

## **Suggested Interview Questions for Dam Safety Consultants**

- Is the firm or team licensed to practice engineering in Washington State?
- Is the firm or team familiar with Washington State dam safety requirements?
- What are the firm's or team's qualifications and experience in the areas of dam safety expertise relevant to your project?
- What experience does the firm or team have with dams of similar size and/or complexity as yours?
- Which sections of the Dam Safety Guidelines, Technical Notes and other technical assistance materials does the firm believe to be most applicable to your project? Which sections of the Guidelines and Technical Notes do they expect Dam Safety staff will focus on during the engineering review of the submittals to Dam Safety?
- Who specifically (which engineering or other technical staff) will be assigned to your project and what are their qualifications, expertise and experience?
- What procedures and protocols do they use for project management and communication, including communication between the engineer and dam owner, and with the Dam Safety Office and other government agencies?
- What procedures do they use for project billing and for tracking interim deliverables or milestones? How do they track progress and billing to make sure the budget lasts as long as the project?
- What construction management and construction inspection expertise and experience does the firm or team have, especially with dams of similar size and/or complexity as yours?
- What is the firm's or team's schedule and availability to work on your project compared to other projects and commitments they are working on?
- What experience do they have dealing with environmental agencies, especially dealing with environmental agencies on dam-related projects? What permit conditions or other requirements do they expect these agencies will require for your project? Dam projects often involve and/or require permits from:
  - Washington Dept of Fish and Wildlife (WDFW), Hydraulic Project Approval (HPA) permit.
  - Wetlands Section of Ecology's Shorelands (SEA) Program.
  - Ecology's Water Quality Program.
  - SEPA checklist and SEPA review, Determination of Non-Significance (DNS) or Mitigated DNS.

## Finding Prospective Dam Safety Consultants

These are the best sources that we are currently aware of for identifying prospective consultants to interview for your dam project. You may wish to use just one or any combination of these three approaches to identify prospective candidates. Once identified, you may wish to search on-line to see if a company web site can provide more information about the company and the types of services they provide. You should then call them to ask questions relevant to your specific project.

### 1. Phone book Yellow Pages, local or nearby metropolitan area

In the phone book Yellow Pages for your local area or for a nearby metropolitan area, look under the categories of Engineers-Civil, Engineers-Consulting, Engineers-Geotechnical.

Comments: Firms located nearby are probably the most familiar with conditions in your local area. Depending on the service area for your phone book, local firms may have limited experience with dam projects. However, as a practical matter, most engineers are able to make use of our Dam Safety Guidelines and other technical assistance from the Dam Safety Office to get up to speed fairly quickly on the dam safety requirements for most dams.

### 2. Web site for American Council of Engineering Companies (ACEC), Washington chapter

ACEC's web site has a membership directory that can be searched for engineering firms in Washington State that consider dams to be within the market they serve. As of this writing, there are two ways to get there:

- a) ACEC Washington Chapter web site is: [www.acec-wa.org](http://www.acec-wa.org). Top center of page, click on **Membership**. Left column, about 1/3 down the page (just above "What Our Members Say"), click on **ACEC Member Directory Search (ACEC National)**.
- b) ACEC (national) web site is: [www.acec.org](http://www.acec.org). Top center of page, click on **Membership**. Left top of page, click on **Membership Directory**.

For a general search within Washington State, in the State/Territory box, select **Washington**, and in the Markets Served box, select **Dams (earth, rock), Dikes, Levees**. [See the first picture on the next page of this guidance.] The "Go" (search) button is at the bottom of the page.

For a broader search, in the Markets Served box, also select **Stormwater Handling & Facilities** and/or **Water Resources, Hydrology, Groundwater**.

For a more focused search for geotechnical consultants, select **Geotechnical** in the Disciplines Offered box. [See the second picture on the next page of this guidance.]

Comment: Only ACEC members are listed; not all engineering firms are ACEC members.

ACEC Organization Directory - Microsoft Internet Explorer provided by Dept of Ecology

https://netforum.acec.org/EWEB/DynamicPage.aspx?Site=ACEC&WebKey=3d5141d-69b0-428-8ae7-cb132823557

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ADVANCED SEARCH

Search the Member Directory

Please use the fields below to enter your search criteria.

**HINT:** If you are searching on Firm Name and you are uncertain of the exact phrase to search, i.e., The H. J. Ajax Engineering Co., The Ajax Company, H.J. Ajax, etc., use "%\* as a "wild card" in front of the main part of your search name: %Ajax.

Firm Name: [ ]  
City: [ ]  
State/Territory: Virginia  
Washington  
West Virginia  
Wisconsin  
Wyoming  
Disciplines Offered: Agricultural/Biological Engineering  
Architectural  
Chemical  
Civil - General  
Markets Served: D.O.T. Procedures & Training Plans  
Dams (concrete, arch)  
Dams (earth, rock), Dikes, Levees  
Desalination (process & facilities)  
Design Build Applications  
Business Classification: Certified Small Business  
Disadvantaged Business Enterprise  
Emerging Small Business  
Minority Business Enterprise  
Number of Employees: Small firms (1-30)  
Medium (31-75)  
Medium Large (76-150)  
Large (151-499)  
Peer Reviewed: [ ]  
Countries where firm is working: AFGHANISTAN  
ALBANIA  
ALGERIA  
AMERICAN SAMOA  
Go

AMERICAN COUNCIL OF ENGINEERING COMPANIES  
1015 15th Street, 8th Floor, NW, Washington DC 20005-2605  
P: 202.347.7474 - F: 202.898.0068 - E-mail: [acec@acec.org](mailto:acec@acec.org)

https://netforum.acec.org/eweb/site-acec\_store

ACEC Organization Directory - Microsoft Internet Explorer provided by Dept of Ecology

https://netforum.acec.org/eweb/DynamicPage.aspx?webcode=OrganizationDir

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Firm Name: [ ]  
City: [ ]  
State/Territory: Virginia  
Washington  
West Virginia  
Wisconsin  
Wyoming  
Disciplines Offered: Fire/Earthquake/Hazards/Safety  
Forensic  
Geotechnical  
Hydrology  
Industrial  
Markets Served: D.O.T. Procedures & Training Plans  
Dams (concrete, arch)  
Dams (earth, rock), Dikes, Levees  
Desalination (process & facilities)  
Design Build Applications  
Business Classification: Certified Small Business  
Disadvantaged Business Enterprise  
Emerging Small Business  
Minority Business Enterprise  
Number of Employees: Small firms (1-30)  
Medium (31-75)  
Medium Large (76-150)  
Large (151-499)  
Peer Reviewed: [ ]  
Countries where firm is working: AFGHANISTAN  
ALBANIA  
ALGERIA  
AMERICAN SAMOA  
Go

AMERICAN COUNCIL OF ENGINEERING COMPANIES  
1015 15th Street, 8th Floor, NW, Washington DC 20005-2605  
P: 202.347.7474 - F: 202.898.0068 - E-mail: [acec@acec.org](mailto:acec@acec.org)

http://www.acec.org/jobbank/index.cfm

## Finding Prospective Dam Safety Consultants

### 3. Washington State members of the Association of State Dam Safety Officials (ASDSO)

The 2010 and 2011 ASDSO membership directories list Washington State members in the following companies:

Eastern Washington		
Chelan	Kim de Rubertis	Cashmere
Kittitas County	Alpha Callender Consultants	Ellensburg
	Ground Effect Inc.	Ellensburg
Spokane County	Golder Associates	Spokane
Yakima County	Gray & Osborne	Yakima
Western Washington		
Clark County	Alan Murray Engineering	Camas
	Mead & Hunt	Vancouver
	Northwest Underwater Construction	Vancouver
Island County	Robin Charlwood & Associates	Freeland
	Deere & Ault Consultants	Oak Harbor
	Franklin DeFazio Inc.	Camano Island
King County	AMEC Earth & Environmental	Bothell
	CDM Engineers	Bellevue
	Duane McClelland	Sammamish
	FM Global	Auburn
	GeoEngineers	Redmond
	Global Diving & Salvage	Seattle
	Golder Associates	Redmond
	Hatch Acres Corp.	Seattle
	Hayward Baker	Tukwila
	HDR Engineering	Issaquah
	INCA Engineers	Bellevue
	Jacobs Engineering	Bellevue
	Kleinfelder	Redmond
MWH Americas	Bellevue	

Western Washington, continued		
King County, continued	Northwest Linings	Kent
	Ryan Maw	Redmond
	Shannon & Wilson	Seattle
	SubTerra Inc.	North Bend
	Surecrete Inc.	Seattle
	Tetra Tech	Seattle
	URS Corporation	Seattle & Bellevue
	Washington Group International	Bellevue
	WEST Consultants	Bellevue
Kitsap County	Aspect Consulting	Bainbridge Island
	De Neef Construction Chemicals	Kingston
Pierce County	Layne GeoConstruction	Puyallup
Skagit County	Donald Bowes, P.E.	Anacortes
Snohomish County	Durham Geo Slope Indicator	Mukilteo
	Geo-Instruments	Lynnwood
Thurston County	MGS Engineering	Olympia

Comments: The Dam Safety Office has not screened these firms in any manner, and inclusion here should not be considered endorsement. Many of these are engineering firms, although some appear to be construction companies or equipment suppliers. All of these folks are interested in dam safety, although some of them may specialize in larger dams such as the hydropower dams on the Columbia River.

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Concluding comments: We hope this information is helpful to you. At any time during or following the selection process, if you or any of your prospective consultants have any questions or need more information, please do not hesitate to contact us. Early and open communication helps all of us.

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