

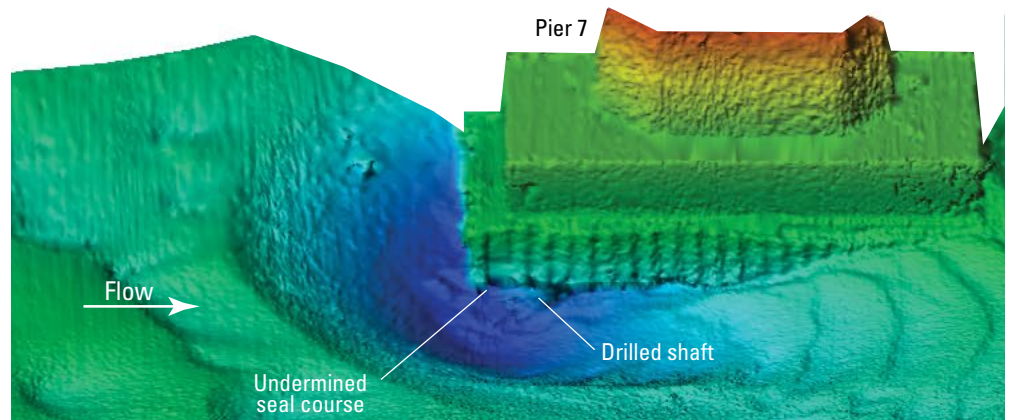
Board Offers Opinion on Bathymetric Surveying

Authored by:
Tim Fassbender, PLS, CWRE, Board Member

Periodically, the Board is asked whether bathymetric surveying is the practice of land surveying, requiring a Professional Land Surveyor's license or Professional Engineer's license. Using bathymetry is not, in and of itself, the practice of a licensed profession. Instead, bathymetric mapping is a tool, which can be used for activities that require licensure, and for activities that do not require licensure. Whether the surveying done with bathymetry requires OSBEELS depends on whether it falls within the statutes defining the practices of licensed surveying, and whether it then falls within a statutory exemption from licensure.

The National Oceanic and Atmospheric Administration may explain it best:

Bathymetry is the study of the "beds" or "floors" of water bodies, including the ocean, rivers, streams, and lakes. The term "bathymetry"...has [generally] come to mean "submarine topography," or the depths and shapes of underwater terrain. In the same way that topographic maps represent the three-dimensional features (or relief) of overland terrain, bathymetric maps illustrate the land that lies underwater.



Surveying under PE Registration

Under OSBEELS's laws, using bathymetry to perform surveying:

- To determine area or topography;
- To establish lines, grades or elevations, or to determine or estimate quantities of materials¹ required, removed or in place; or
- Required for design and construction layout of engineering and architectural infrastructure,

all requires the individual surveying to be a licensed Professional Engineer (see ORS 672.005(1)(c) to (f)).

¹ Note: the OSBEELS has not yet formally addressed the question of whether water is a "material" within the meaning of this section of law.

Surveying under PLS Registration

Subsection (2) of the law, ORS 672.005, also describes the type of bathymetric surveying work which only a licensed Professional Land Surveyor may undertake, which includes:

(2) "Practice of land surveying" means doing any of the following

(a) Providing or offering to provide for others professional services that...involve:

(A) The making of geometric measurements and gathering of related information pertaining to:

(i) The physical or legal features of the earth;

continued on page 6

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Mission

The mission of the Oregon State Board of Examiners for Engineering & Land Surveying (OSBEELS) is to regulate the practice of engineering, land surveying, photogrammetric mapping, and water right certification in the state as they relate to the welfare of the public in safeguarding life, health and property.



Providing good customer service is a core value of mine. It doesn't matter where we work, what we do, or who we serve, we all should treat each other with respect and kindness. A key aspect of customer service is understanding what matters most to your customers, and then doing what you can to provide them those services while delivering an enjoyable experience. At the OSBEELS, customer service is a focal point for all of our staff.

With that in mind, this year we sent our annual Customer Service Survey to all of our licensees asking for feedback on how well we are serving you, and what else we could do to provide better service. We asked participants to rate their experiences interacting with the Board and staff members in several areas of service provided by the agency on a scale of 1-4, in which "1" did not meet their expectations and "4" was exceptional. We received over 3,050 responses and were very pleased to gather such valuable feedback from you, our customers.

While the 1 to 4 ratings are important to provide a high-level overview of customer satisfaction, it is the individual written

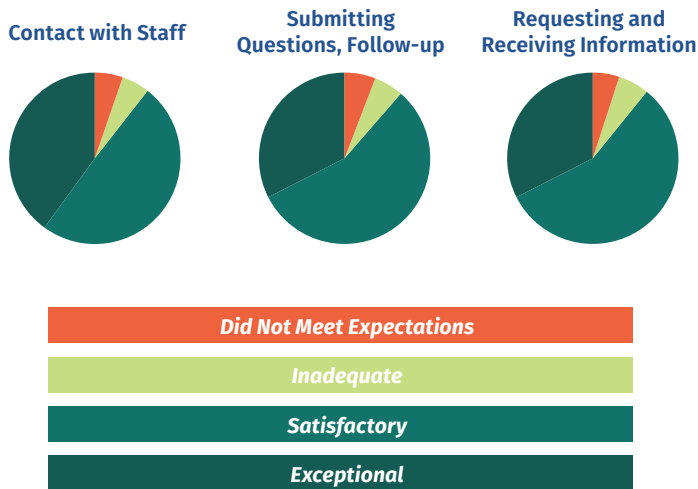
responses submitted by our licensees that provide us the most valuable insights as to what we can be doing better. A number of us, including myself, read every comment submitted to gather information about our customer's experiences beyond what is captured within the rating scales. From those comments, a single theme rose to the top, which was asking us to modernize our systems from paper-based processes to offer online services.

I'm happy to say that we've heard your concerns and are excited to share that electronic services will be a primary function of our new system, MyOSBEELS, which will convert our existing paper-based processes to a purely online system. Scheduled to launch this summer, we're looking forward to sharing more details about the new system with our customers in this issue of the Oregon Examiner and on our agency website.

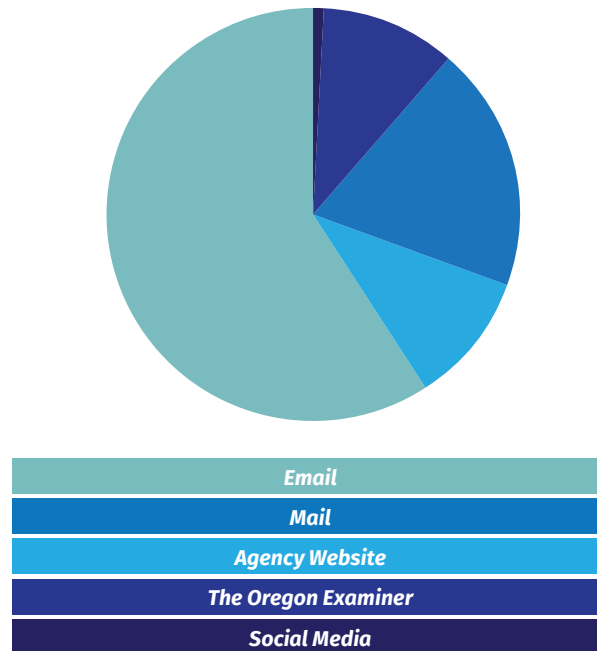
Some results of our annual Customer Service Survey are included below.

Administrator's Corner

Experience with OSBEELS Customer Service



Preferred Method of Communication





RE:imagine

2021 OSBEELS Symposium

Topics

Hayward Field Renovation

Astoria Boardwalk Renovation

North Salem High School Renovations

Tualatin Interceptor and Siphon Improvement

PDX Expansion Project

Sofi Stadium - LA

Engineering Behind "Failure Analysis"

Micro-hydropower Energy Project

Developing Master-plan Communities

BLM - Cadastral Program and OR/WA Related Projects

September 23 & 24

Online registration begins August 1
Stay tuned on oregon.gov/osbeels for updates

Rule Updates

The following rules have completed the rulemaking process and been approved for permanent rulemaking by the Board at recent meetings. The purpose of sharing these updates is to ensure registrants are aware of updated rules and practicing in a lawful manner. Visit the OSBEELS website for more information on the Board's rulemaking process and the statutes and rules within the Board's jurisdiction.

More detailed discussions on these rule changes can be found within the minutes of recent Board and Committee meetings.

OAR 820-010-1010

The purpose of the revisions to OAR 820-010-1010 were to clarify how to apply for the Forest Engineering examination and also to allow the Board to change or cancel an Oregon specific engineering examination administration due to a natural disaster, an emergency declaration, or at the Board's discretion.

OAR 820-010-1020

Amendments to OAR 820-010-1020, education and experience requirements for registration as a professional engineer, were included within subsections (1), (5), and (6). Within subsection (1), amendments pertain to including a baccalaureate of engineering degree from a program recognized under the Bilateral Agreement between Engineers Canada and the Accreditation Board for Engineering and Technology (ABET) as qualifying education. The proposed changes to subsection (5) updates the language regarding the NCEES Education Standard and allows an applicant, who possesses a non-ABET accredited degree and had a NCEES Credentials Evaluation that was determined to be equivalent, to qualify with four years of experience. The proposed changes to subsection (6) allows applicants, who possess a non-ABET accredited degree and who had a NCEES Credential Evaluation that was determined to not be equivalent, to substitute professional experience when they are lacking the minimal education qualifications.

OAR 820-020-0045

The purpose of revisions to OAR 820-020-0045, obligation to not to engage in unprofessional behavior, was to provide additional definitions and clarifications of professional conduct for professional registrants. Amendments includes the addition of “, or any other person with whom the registrant interacts in a professional capacity” within subsections (1) and (2).

OAR 820-050-0010

Amendments to OAR 820-050-0010, Certified Water Right Examiner continuing professional development requirements, eliminate the “grace period” language within the rule because it is no longer offered to registrants. The amendments remove subsection (2) & (3) from the rule.

MyOSBEELS

Coming Summer 2021

The OSBEELS is excited to announce the upcoming launch of the agency's new, online application and licensing system – MyOSBEELS.

The system will have a significant positive impact on how the OSBEELS interacts with members of the public, applicants, and licensed professionals in a more efficient manner with paperless processes, secure online payments, and automated functions.

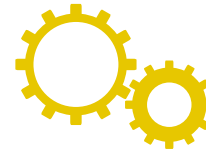
In the coming months, as the launch nears, keep an eye out for direct communications from the OSBEELS via email and on the Board website sharing more details about enrolling in the new system and other impactful changes to our current processes.



Online Registrant Portal accessible via computer, phone, and tablet



Secure Online Payments



Enhanced Licensee Data tools

Law Enforcement Cases

The following list contains law enforcement cases that resulted in disciplinary actions and became finalized.

X0073 – Daniel Roseman

The Board issued a Final Order against Daniel Roseman assessing a \$2,000 civil penalty for 19 violations of Oregon Revised Statutes (ORS) 672.045(3) and ORS 672.045(5) for applying the seal of another individual and falsely impersonating a registrant of a different name within a submitted set of engineering plans. The OSBEELS's Law Enforcement Committee (LEC) met with Mr. Roseman in an informal conference to discuss a settlement. Following this conference, the Board and Mr. Roseman entered into a Settlement Agreement regarding the violations above, where by Mr. Roseman accepted the \$2,000 civil penalty and was granted a payment plan.

X0077 – Brian Smith

The Board issued a Final Order against Brian Smith, PE, assessing a \$500 civil penalty for failing to notify the Board office of license discipline received in another jurisdiction within 45-days of the final order being issued, violating Oregon Administrative Rule (OAR) 820-020-0045(4). Ninety-seven (97) days elapsed from the time the final order from the other jurisdiction was issued and when Mr. Smith reported it to the Board office.

X0061 – James Wright

The Board issued a Final Order against James Wright assessing a \$5,000 civil penalty for five (5) violations of OAR 820-010-0730(3)(c) and ORS 672.020(1), performing unlicensed engineering work on five (5) different projects in Oregon while his license was delinquent. The unlicensed engineering work occurred during a period of 3 months when his license was not active due to failing to submit a timely renewal of registration. The OSBEELS's LEC met with Mr. Wright in an informal conference to discuss a settlement. Following this conference, the Board and Mr. Wright entered into a Settlement Agreement regarding the above violations, whereby Mr. Wright accepted a \$1,250 civil penalty.

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- (ii) Improvements on the earth; or
- (iii) The space above or below the earth; or
- (B) The development of measurements and information described in subparagraph (A) of this paragraph into graphics, data, maps, plans, reports, descriptions, projects or other survey products.
- (b) Performing geodetic surveys [marine geodesy] for others.
- (c) Establishing, reestablishing or replacing boundaries or geodetic control monuments or reference points.
- (d) Locating, relocating, establishing, reestablishing or retracing any property lines or boundaries for any tract of [underwater] land... or ["bed or bank"] easement.
- (e) Making any survey for the division or subdivision of a tract of land or for the consolidation of tracts of land.
- (f) Locating and laying out for others alignments, positions or elevations for the construction of fixed works.
- (g) Performing or offering to perform for others any investigation, interpretation or evaluation of, or any consultation about, any of the services described in paragraphs (a) to (f) of this subsection.
- (h) Collecting, preparing, manipulating or modifying data related to activities described in paragraphs (a) to (f) of this subsection for others, other than acting as a scrivener.
- ...
- (j) Making surveys that involve horizontal or vertical mapping control or geodetic control.

Exemptions

However, even if someone is using bathymetry to engage in one of the activities listed above, those activities will not require OSBEELS licensure if they fall under one of the below 18 subsections contained within ORS 672.060, activities not requiring registration.

- ORS 672.060(1)
- ORS 672.060(2)
- ORS 672.060(3)
- ORS 672.060(4)
- ORS 672.060(5)
- ORS 672.060(10)
- ORS 672.060(11)
- ORS 672.060(12)
- ORS 672.060(13)
- ORS 672.060(14)
- ORS 672.060(16)
- ORS 672.060(17)
- ORS 672.060(18)
- ORS 672.060(19)
- ORS 672.060(20)
- ORS 672.060(21)
- ORS 672.060(22)
- ORS 672.060(23)

Discussion Examples

One example previously discussed by the Board of how licensed surveying and exempted surveying can connect in the world of bathymetry was that of using bathymetric surveying to find underwater marine craft or sunken treasure. The Board members opined that, if bathymetric surveying was used to find a sunken ship or sunken treasure, it appeared to fall under the "depicting the distribution of natural or cultural resources, features or phenomena" exemption of ORS 672.060(18), and no OSBEELS license would be required. However, if bathymetric surveying was used to determine who owned the seabed, riverbed, or lake-bed property on which the ship or treasure rested, the exemption would not apply, and the law likely requires a PLS license.

Similarly, if a Professional Land Surveyor and a Professional Engineer were in a boat crossing a river and taking soundings to find the deepest part of the river for the best fishing spot, then their activity may fall under the exemption of ORS 672.060, and it would seem likely neither of them would need to be licensed to locate that spot

in the river. However, if the Professional Engineer used bathymetry to gather information on the riverbed topography to design a bridge for a municipal client, then no exemption appears to apply. And it is likely the Professional Engineer would need to stamp the bathymetric topo map they produced. If the Professional Land Surveyor used bathymetry to determine the thread of the river, itself used to determine the boundary location between the two land owners of both sides of the river then – again – no statutory exemption appears to apply and the Professional Land Surveyor would need to prepare a map showing the information and location, stamped by the Professional Land Surveyor.

Conclusion

In conclusion, the activities surrounding Bathymetry can be confusing to the lay person and a point of argument between Professional Engineers and Professional Land Surveyors. The Oregon Revised Statutes defining the gathering and use of information for either engineering or land surveying are clear. The confusion comes when separating bathymetric mapping activity from the purpose or use of that bathymetry. It is not bathymetry itself that requires licensure. Instead, licensure is required when the use or purpose of the bathymetric mapping requires professional registration, and determines which type of registration that is (e.g., if used for determining the location of any type of property boundaries or ownership -- then the law typically requires the gathering, mapping and determination to be performed by, or under the direct supervision of, a licensed Professional Land Surveyor).

Land Surveying Best Practices: The “Approximate Corner”

Authored by: Tim Fassbender, PLS, CWRE, Board Member

For the purpose of these best practice recommendations, an “approximate corner” is an unofficial property marker set by a Professional Land Surveyor. Approximate corners are sometimes used for things like estimating construction of utilities during subdivision development or when a property owner wants to know how much room they have for landscaping purposes, etc. While land surveyors may have a good reason for setting these approximate corners, it can be confusing and damaging to property owners. This issue has been discussed in the land surveying community for decades. However, the public is not educated on the guidelines and laws that govern land surveying, and often do not understand just how “off-the-record” approximate corners are.

Best Practice Recommendation

A best practice is for Professional Land Surveyors to approach the setting of approximate corners the same way you set true corners. Take all the actions involved in making a survey that establishes a boundary corner.

The Good

Typically, when property owners hire a land surveyor to find their property corner, they depend on the land surveyor to do the necessary work to correctly locate the corner.

The Bad

However, sometimes property owners hire a land surveyor and then tell that land surveyor to simply “look for our corners so we know where they are.” This is often when an approximate corner is set. Under this second scenario, perhaps the land surveyor does not find a monument in the search location, and inserts a lath or hangs flagging at the location, for the property owner to see where the search area was and where their property corner was preliminarily located. The property owner may then decide not to pay the costs of a survey to complete the work and officially set the corners. At that point, the work stops, but the landowner believes that what the land surveyor left behind (the marker that says, “approximate corner,” flag, hub, etc.) is or has matured into their property corner.

The Ugly

Even when a land surveyor is locating approximate corners for good reasons (e.g., to prepare for construction that will ultimately destroy any monuments set, estimating for subdivision utilities, etc.) leaving behind a marker for the approximate corner can lead the landowner to believe their corner has been established. Then the situation comes to OSBEELS attention because a neighbor hires a land surveyor to execute a true boundary survey and finds the approximate corner in gross error, resulting in a heated discussion with the neighbor, litigation, and sometimes law enforcement or worse.

To avoid the “ugly” side of surveying, and to avoid the possibility of an OSBEELS investigation, it is best to practice diligently and prudently, and avoid the trap of the “approximate corner.”

Renewal Reminder Notice

If your **last name begins with G-K**, your license expires on **June 30** and it’s time to renew your registration. Download and print the Renewal Form and CPD Organizational Form on the OSBEELS website. If you have any questions, contact the Board office: osbeels.renewals@oregon.gov

OSBEELS Emails Changing

In the next few months all of the email addresses for OSBEELS will be changing:

name@oregon.gov to **name@osbeels.oregon.gov**

If you use our old emails after this change, they will be forwarded to the new ones for a limited time. Stay tuned for when exactly this change will occur via our website.



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oregon.gov/osbeels

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Registrant Information

First name	Middle name or initial	Last name
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Email Address	Registration or certificate number, if applicable
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