

WSR 21-15-127  
PROPOSED RULES  
DEPARTMENT OF  
NATURAL RESOURCES

[Filed July 21, 2021, 11:30 a.m.]

Original Notice.

Preproposal statement of inquiry was filed as WSR 21-11-091.

Title of Rule and Other Identifying Information: WAC 332-130-020, 332-130-050, 332-130-060, and 332-130-080, amending current land boundary survey standards, updating the definition and use of error analysis and relative accuracy as they relate to land boundary surveys positioning. Removing the graphic depiction requirement of auditor indexing information for records of survey.

Hearing Location(s): On August 26, 2021, at 2:00 p.m., at DNR PLSO Office, 801 88th Avenue S.E., Tumwater, WA 98501-7019. In-person at the PLSO Conference Room, and online access with M365 Teams.

Date of Intended Adoption: September 1, 2021.

Submit Written Comments to: Patrick J. Beehler, PLS, CFedS, 1111 Washington Street S.E., Olympia, WA 98504-7030, email pat.beehler@dnr.wa.gov, fax 360-902-1778, 360-902-1181, by August 26, 2021.

Purpose of the Proposal and Its Anticipated Effects, Including Any Changes in Existing Rules: The proposed changes and additions update existing language and clarify definitions and procedures in the practice of professional land surveying.

Reasons Supporting Proposal: These proposed changes to update and clarify chapter 332-130 WAC should have little to no effect on the practice of professional land surveying. The profession has already adopted field and office procedures that comply with most of the proposed changes.

Statutory Authority for Adoption: RCW 58.24.040(1).

Statute Being Implemented: RCW 58.24.040(1).

Rule is not necessitated by federal law, federal or state court decision.

Name of Proponent: Department of natural resources, governmental.

Name of Agency Personnel Responsible for Drafting: Patrick J. Beehler, PLS, 1111 Washington Street S.E., Olympia, WA 98504, 360-902-1181; Implementation: Bob R. Knuth, PLS, 801 88th Avenue S.E., Tumwater, WA 98501-7019, 360-902-1190; and Enforcement: Board of Registration, PE and LS, P.O. Box 9025, Olympia, WA 98507-9025, 360-664-1571.

A school district fiscal impact statement is not required under RCW 28A.305.135.

A cost-benefit analysis is not required under RCW 34.05.328. There is little or no additional cost to the professional land surveyor. The profession has already adopted field and office procedures to comply with the proposed changes.

The proposed rule does not impose more-than-minor costs on businesses. Following is a summary of the agency's analysis showing how costs were calculated. The proposed revisions provide clarification and guidance on land survey professional practice. Little or no additional cost is projected due to these updates.

July 20, 2021  
Angus Brodie  
Deputy Supervisor  
State Uplands

OTS-3079.2

AMENDATORY SECTION (Amending WSR 20-23-021, filed 11/6/20, effective 12/7/20)

**WAC 332-130-020 Definitions.** The following definitions shall apply to this chapter:

(1) **Local geodetic control surveys:** Surveys for the specific purpose of establishing control points for extending the National Geodetic Survey horizontal and vertical control nets, also known as the National Spatial Reference System (NSRS), but not submitted to the National Geodetic Survey for inclusion in the NSRS.

(2) **GLO and BLM:** The General Land Office and its successor, the Bureau of Land Management.

(3) **Land boundary surveys:** All surveys, whether made by individuals, entities or public bodies of whatever nature, for the specific purpose of establishing, reestablishing, laying out, subdividing, defining, locating and/or monumenting the vertical or horizontal boundary of any easement, right of way, lot, tract, or parcel of real property or which reestablishes or restores General Land Office or Bureau of Land Management survey corners.

(4) **Land corner record:** The record of corner information form as prescribed by the department of natural resources in WAC 332-130-025.

(5) **Land description:** A description of real property or of rights associated with real property.

(6) **Land surveyor:** Any person authorized to practice the profession of land surveying under the provisions of chapter 18.43 RCW.

(7) **Redundant measurements:** Independent observations of a quantity that are collected under different conditions. Horizontal angles measured to a point from multiple backsights, observing reciprocal zenith angles and backsight distances, "closing the horizon," and GNSS positions for a point that are computed using different satellite constellations are examples of redundant measurements.

(8) **Parcel:** A part or portion of real property including but not limited to GLO and BLM segregations, easements, rights of way, aliquot parts of sections or tracts.

(9) **Survey Recording Act:** The law as established and designated in chapter 58.09 RCW.

(10) **Washington plane coordinate system:** The system of plane coordinates as established and designated by chapter 58.20 RCW.

(11) **Intelligent interpretation:** A land boundary survey capable of intelligent interpretation will provide, either on the face of the document or by reference to other pertinent surveys of record, information that is sufficient in kind and quality to explain the rationale for the boundary locations shown thereon and to allow for the accurate and unambiguous retracement or re-creation thereof without requiring oral testimony for clarification. Includes, but is not limited to, information required in RCW 58.09.060(1) and WAC 332-130-050.

(12) **Relative accuracy:** Relative accuracy is the theoretical uncertainty in the horizontal position of any subordinate point or corner with respect to other controlling points or corners, whether set, found, reestablished, or established. Relative accuracy is not related to uncertainties due to differences between measured values and record values (~~(or uncertainties in the geodetic position)~~).

(13) **Relative precision:** An expression of linear misclosure, e.g., 1 part in 5000, in a closed traverse. Relative precision is com-

puted after azimuths in a traverse have been adjusted. Relative precision is not a reliable predictor of relative accuracy.

(14) **Controlling point or corner:** Those points, whose horizontal positions are used to compute, establish or reestablish the horizontal positions of other subordinate points or corners. Subordinate points or corners are therefore dependent upon the positions of controlling points or corners.

(15) **GNSS:** Global navigation satellite system.

(16) **Signature:** A handwritten identification, or a scanned image of a handwritten identification, that represents the act of signing the person's name on a document to attest to its validity. This must be made with black ink on the document being certified; applied to the document by the identified person; and under the exclusive control of the person.

[Statutory Authority: RCW 58.24.030, 58.24.040, 58.09.050, and 58.17.160. WSR 20-23-021, § 332-130-020, filed 11/6/20, effective 12/7/20. Statutory Authority: RCW 58.24.040(1). WSR 19-01-045, § 332-130-020, filed 12/13/18, effective 1/13/19. Statutory Authority: RCW 58.24.030, 58.24.040, 58.09.050, and 58.17.160. WSR 09-03-084, § 332-130-020, filed 1/20/09, effective 7/1/09. Statutory Authority: Chapter 58.24 RCW. WSR 05-13-104, § 332-130-020, filed 6/17/05, effective 7/18/05. Statutory Authority: RCW 58.09.050 and 58.24.040(1). WSR 92-03-007 (Order 597), § 332-130-020, filed 1/3/92, effective 2/3/92. Statutory Authority: RCW 58.24.040(1). WSR 91-19-013 (Order 581), § 332-130-020, filed 9/9/91, effective 10/10/91; WSR 89-11-028 (Order 561), § 332-130-020, filed 5/11/89; Order 275, § 332-130-020, filed 5/2/77.]

AMENDATORY SECTION (Amending WSR 20-23-021, filed 11/6/20, effective 12/7/20)

**WAC 332-130-050 Survey map requirements.** The following requirements apply to land boundary survey maps and plans, records of surveys, plats, short plats, boundary line adjustments, and binding site plans required by law to be filed or recorded with the county.

(1) All such documents filed or recorded shall conform to the following:

(a) They shall display a county recording official's information block which shall be located along the bottom or right edge of the document unless there is a local requirement specifying this information in a different format. The county recording official's information block shall contain:

(i) The title block, which shall be on all sheets of maps, plats or plans, and shall identify the business name of the firm and/or land surveyor that performed the survey. For documents not requiring ((a)) the surveyor's certificate ((and seal)) required by RCW 58.09.080, the title block shall show the name and business address of the preparer and the date prepared. Every sheet of multiple sheets shall have a sheet identification number, such as "sheet 1 of 5";

(ii) The auditor's certificate, where applicable, which shall be on the first sheet of multiple sheets; however, the county recording official shall enter the appropriate volume and page and/or the auditor's file number on each sheet of multiple sheets;

(iii) The surveyor's certificate, where applicable, which shall be on the first sheet of multiple sheets and shall show the name, license number, signed seal of the land surveyor who had responsible charge of the survey portrayed, and the date the land surveyor approved the map or plat. Every sheet of multiple sheets shall have the signed seal of the land surveyor and the date signed;

(iv) The following indexing information on the first sheet of multiple sheets:

(A) The section-township-range and quarter-quarter(s) of the section in which the surveyed parcel lies, except that if the parcel lies in a portion of the section officially identified by terminology other than aliquot parts, such as government lot, donation land claim, homestead entry survey, townsite, tract, and Indian or military reservation, then also identify that official subdivisional tract and call out the corresponding approximate quarter-quarter(s) based on projections of the aliquot parts. Where the section is incapable of being described by projected aliquot parts, such as the Port Angeles townsite, or elongated sections with excess tiers of government lots, then it is acceptable to provide only the official GLO designation (~~A graphic representation of the section divided into quarter-quarters must also be used with the quarter-quarter(s) in which the surveyed parcel lies clearly marked~~);

(B) Additionally, if appropriate, the lot(s) and block(s) and the name and/or number of the filed or recorded subdivision plat or short plat with the related recording data;

(b) They shall contain:

(i) A north arrow;

(ii) The vertical datum when topography or elevations are shown;

(iii) The basis for bearings, angle relationships or azimuths shown. The description of the directional reference system, along with the method and location of obtaining it, shall be clearly given (such as "North by Polaris observation at the SE corner of section 6"; "Grid north from azimuth mark at station Kellogg"; "North by compass using twenty-one degrees variation"; "None"; or "Assumed bearing based on..."). If the basis of direction differs from record title, that difference should be noted;

(iv) Bearings, angles, or azimuths in degrees, minutes and seconds;

(v) Distances in feet and decimals of feet;

(vi) Curve data showing the controlling elements.

(c) They shall show the scale for all portions of the map, plat, or plan provided that detail not drawn to scale shall be so identified. A graphic scale for the main body of the drawing, shown in feet, shall be included. The scale of the main body of the drawing and any enlargement detail shall be large enough to clearly portray all of the drafting detail, both on the original and reproductions;

(d) The document filed or recorded and all copies required to be submitted with the filed or recorded document shall, for legibility purposes:

(i) Have a uniform contrast suitable for scanning or microfilming;

(ii) Be without any form of cross-hatching, shading, or any other highlighting technique that to any degree diminishes the legibility of the drafting detail or text;

(iii) Contain dimensioning and lettering no smaller than 0.08 inches, vertically, and line widths not less than 0.008 inches (equiva-

lent to pen tip 000). This provision does not apply to vicinity maps, land surveyors' seals and certificates.

(e) They shall not have any adhesive material affixed to the surface;

(f) For the intelligent interpretation of the various items shown, including the location of points, lines and areas, they shall:

(i) Reference record survey documents that identify different corner positions;

(ii) Show deed calls that are at variance with the measured distances and directions of the surveyed parcel;

(iii) Identify all corners used to control the survey whether they were calculated from a previous survey of record or found, established, or reestablished;

(iv) Give the physical description of any monuments shown, found, established or reestablished, including type, size, and date visited;

(v) Show the record land description of the parcel or boundary surveyed or a reference to an instrument of record;

(vi) Identify any ambiguities, hiatuses, and/or overlapping boundaries;

(vii) Give the location and identification of any visible physical appurtenances such as fences or structures which may indicate encroachment, lines of possession, or conflict of title.

(2) All signatures and writing shall be made with permanent black ink.

(3) The following criteria shall be adhered to when altering, amending, changing, or correcting survey information on previously filed or recorded maps, plats, or plans:

(a) Such maps, plats, or plans filed or recorded shall comply with the applicable local requirements and/or the recording statute under which the original map, plat, or plan was filed or recorded;

(b) Alterations, amendments, changes, or corrections to a previously filed or recorded map, plat, or plan shall only be made by filing or recording a new map, plat, or plan;

(c) All such maps, plats, or plans filed or recorded shall contain the following information:

(i) A title or heading identifying the map, plat, or plan as an alteration, amendment, change, or correction to a previously filed or recorded map, plat, or plan along with, when applicable, a cross-reference to the volume and page and auditor's file number of the altered map, plat, or plan;

(ii) Indexing data as required by subsection (1)(a)(iv) of this section;

(iii) A prominent note itemizing the change(s) to the original map, plat, or plan. Each item shall explicitly state what the change is and where the change is located on the original;

(d) The county recording official shall file, index, and cross-reference all such maps, plats, or plans received in a manner sufficient to provide adequate notice of the existence of the new map, plat, or plan to anyone researching the county records for survey information;

(e) The county recording official shall send to the department of natural resources, as per RCW 58.09.050(3), a legible copy of any map, plat, or plan filed or recorded which alters, amends, changes, or corrects survey information on any map, plat, or plan that has been previously filed or recorded pursuant to the Survey Recording Act.

(4) Survey maps, plats and plans filed with the county shall be an original that is legibly drawn in black ink and is suitable for

producing legible prints through scanning, microfilming or other standard copying procedures. The following are allowable formats for the original that may be used in lieu of the format stipulated above:

(a) Any standard material as long as the format is compatible with the auditor's recording process and records storage system. Provided, that records of survey filed pursuant to chapter 58.09 RCW are subject to the restrictions stipulated in RCW 58.09.110(5);

(b) An electronic version of the original if the county has the capability to accept a digital signature issued by a licensed certification authority under chapter 19.34 RCW or a certification authority under the rules adopted by the Washington state board of registration for professional engineers and land surveyors, and can import electronic files into an imaging system. The electronic version shall be a standard raster file format acceptable to the county.

(5) The following checklist is the only checklist that may be used to determine the recordability of records of survey filed pursuant to chapter 58.09 RCW. There are other requirements to meet legal standards. This checklist also applies to maps filed pursuant to the other survey map recording statutes, but for these maps there may be additional sources for determining recordability.

**CHECKLIST FOR SURVEY MAPS BEING RECORDED**

(Adopted in WAC 332-130)

The following checklist applies to land boundary survey maps and plans, records of surveys, plats, short plats, boundary line adjustments, and binding site plans required by law to be filed or recorded with the county. There are other requirements to meet legal standards. Records of survey filed pursuant to chapter 58.09 RCW, that comply with this checklist, shall be recorded; no other checklist is authorized for determining their recordability.

**ACCEPTABLE MEDIA:**

- Acceptable media are:
  - [ ] Any standard material compatible with county processes; or, an electronic version of the original.
  - [ ] All signatures must be made with black ink.
  - [ ] The media submitted for filing must not have any material on it that is affixed by adhesive.

**LEGIBILITY:**

- [ ] The documents submitted, including paper copies, must have a uniform contrast throughout the document.
- [ ] The documents submitted must be legible and reproducible by the auditor's recording system regardless of media used for recording.
- [ ] No information, on either the original or the copies, should be obscured or illegible due to cross-hatching, shading, or as a result of poor drafting technique such as lines drawn through text or improper pen size selection (letters or number filled in such that 3's, 6's or 8's are indistinguishable).
- [ ] Signatures, date, and seals must be legible on the prints or the party placing the seal must be otherwise identified.
- [ ] Text must be 0.08 inches or larger; line widths shall not be less than 0.008 inches (vicinity maps, land surveyor's seals and certificates are excluded).

**INDEXING:**

- [ ] The recording officer's information block must be on the bottom or right edge of the map.
- [ ] A title block (shows the name of the preparer and is on each sheet of multiple sheets).
- [ ] An auditor's certificate (on the first sheet of multiple sheets, although Vol./Pg. and/or AF# must be entered by the recording officer on each sheet).
- [ ] A surveyor's certificate (on the first sheet of multiple sheets; seal, date, and signature on multiple sheets).
- The map filed must provide the following indexing data:
  - [ ] S-T-R and the quarter-quarter(s) or approximate quarter-quarter(s) of the section in which the surveyed parcel lies (~~(r and a graphic representation of the section divided into quarter-quarters in which the surveyed parcel lies are clearly marked)~~).

**MISCELLANEOUS:**

- If the function of the document submitted is to change a previously filed record, it must also have:
  - [ ] A title identifying it as a correction, amendment, alteration or change to a previously filed record.
  - [ ] A note itemizing the changes.
- For records of survey:
  - [ ] The sheet size must be 18" x 24".
  - [ ] The margins must be 2" on the left and 1/2" for the others, when viewed in landscape orientation.
  - [ ] In addition to the map being filed there must be two prints included in the submittal; except that, in counties using imaging systems fewer prints, as determined by the auditor, may be allowed.

[Statutory Authority: RCW 58.24.030, 58.24.040, 58.09.050, and 58.17.160. WSR 20-23-021, § 332-130-050, filed 11/6/20, effective 12/7/20. Statutory Authority: RCW 58.24.040(1). WSR 19-01-045, § 332-130-050, filed 12/13/18, effective 1/13/19. Statutory Authority: RCW 58.24.040(1) and 58.09.110. WSR 00-17-063 (Order 704), § 332-130-050, filed 8/9/00, effective 9/9/00. Statutory Authority: RCW 58.24.040(1). WSR 89-11-028 (Order 561), § 332-130-050, filed 5/11/89; Order 275, § 332-130-050, filed 5/2/77.]

**Reviser's note:** The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency.

**Reviser's note:** The brackets and enclosed material in the text of the above section occurred in the copy filed by the agency and appear in the Register pursuant to the requirements of RCW 34.08.040.

AMENDATORY SECTION (Amending WSR 19-01-045, filed 12/13/18, effective 1/13/19)

**WAC 332-130-060 Local geodetic control survey standards.** The following standards shall apply to local geodetic control surveys:  
 The datum for the horizontal control network in Washington shall be as officially adjusted and published by the National Geodetic Survey of the United States Department of Commerce as established in accordance with chapter 58.20 RCW. (~~The datum tag and coordinate epoch~~

~~date shall be reported on all documents prepared, which show local geodetic control.)~~ All documents listing WPCS coordinates must report the values of the ninety-five percent confidence level relative to fixed control. Metadata as defined in RCW 58.20.111(1) shall be reported on all documents which show geodetic control, and shall include an equipment and procedures statement as described in WAC 332-130-100. Such metadata shall also be reported if other geodetic reference systems as described in RCW 58.20.205 are used for the survey.

[Statutory Authority: RCW 58.24.040(1). WSR 19-01-045, § 332-130-060, filed 12/13/18, effective 1/13/19. Statutory Authority: Chapter 58.24 RCW. WSR 05-13-104, § 332-130-060, filed 6/17/05, effective 7/18/05. Statutory Authority: RCW 58.24.040(1). WSR 91-19-013 (Order 581), § 332-130-060, filed 9/9/91, effective 10/10/91; WSR 89-11-028 (Order 561), § 332-130-060, filed 5/11/89; Order 275, § 332-130-060, filed 5/2/77.]

AMENDATORY SECTION (Amending WSR 90-06-028, filed 3/1/90, effective 4/1/90)

**WAC 332-130-080 Relative accuracy—Principles.** The following principles of relative accuracy are provided to guide those who may be analyzing their work by these procedures.

(1) Relative accuracy means the theoretical uncertainty in the location of any point or corner relative to other points or corners set, found, reestablished, or established. A standard of relative accuracy can be achieved by using appropriate equipment and implementing field and office procedures that will result in a ninety-five percent probability of achieving the accuracy required.

(2) ~~((Relative accuracy is not related to uncertainties due to differences between measured values and record values or uncertainties in the geodetic position.~~

~~(3))~~ In the application of a relative accuracy standard, the surveyor must consider the established land use patterns, land values of and in the vicinity of the surveyed parcel, and the client's intended use of the property. Higher levels of precision are expected to be used in situations necessitating higher accuracy.

~~((4))~~ (3) Each land boundary survey should contain a statement identifying the method of mathematical analysis used in achieving a stated relative accuracy.

[Statutory Authority: RCW 58.24.040(1). WSR 90-06-028 (Order 568), § 332-130-080, filed 3/1/90, effective 4/1/90; WSR 89-11-028 (Order 561), § 332-130-080, filed 5/11/89; Order 275, § 332-130-080, filed 5/2/77.]