Guide to Resource Land Capability Challenges

DLCD – June 2012

This Guide summarizes statutory and rule requirements that apply when more detailed soils data than that in the U.S. Natural Resources Conservation Service (NRCS) Internet soil survey are used to argue that land is not agricultural or forest land. Different requirements apply to challenges on agricultural land, forest land and high-value farmland, as described below. The Guide is intended for use by soils professionals, foresters and county planning staff. It answers common questions from the perspective of the Department of Land Conservation and Development, which has oversight over the implementation of applicable statute and rules, but is not intended to provide legal advice or to be a substitute for rulemaking.

1. Agricultural Land Capability Challenges

This is when more detailed soils data is used to challenge the accuracy of a property's NRCS land capability class assignment in determining whether it is agricultural land. This may be to support a rezoning proposal or nonfarm dwelling approval. A new process was adopted when the Legislature passed HB 3647 in 2010, which is codified at ORS 215.211 and implemented through rules at OAR 660-033-0030 and -0045. The new process and applicable forms are found here: Oregon Department of Land Conservation and Development Agricultural Soils Capability Assessment. Soils professionals or applicants who have acquired professional soil services submit onsite soils assessments to DLCD, which reviews and forwards them to the counties for decisions.

2. Forest Land Capability Challenges

This is when data on forest land capability (cubic feet per acre per year) is unavailable or is challenged under OAR 660-006-0010(3). The Oregon Department of Forestry has prioritized alternative data sources that may be used in its updated Land Use Planning Notes and Attachment A tables, which may be found here: Oregon Department of Forestry Forest Resources Planning. Professional foresters or applicants who have acquired professional forester services submit onsite capability assessments directly to counties for decisions.

3. High-Value Farmland Soils Challenges for Lot-Of-Record (LORs)

This is when high-value farm soils are challenged in the review of lot-of-record dwellings under ORS 215.705 and OAR 660-033-0030(7). Soils professionals or applicants who have acquired professional soil services submit these onsite soils assessments to the Oregon Department of Agriculture for its review and decision.

4. High-Value Farmland Soils Challenges for Other Uses

This is when high-value farm soils are challenged in an application for permitted uses under OAR 660-033-0030(8). This section requires soil classes and ratings on high-value farmland to be those of the NRCS Internet soil survey, meaning that they may not be challenged. However, high-value farm soils may be challenged to show that they are not agricultural land under option #1 above. Soils professionals or applicants who have acquired professional soil services submit these soils assessments directly to counties for decisions.

Soil Capability Challenges

Two of the above options for soil capability challenges (#s 1 and 2) are described in more detail in the attached Table 1, which compares the two different processes. Table 2 describes the specific circumstances under which all four options for soil capability challenges may or may not be used.

In developing this guide and tables, the Oregon NRCS State Soil Scientist and the Oregon Department of Forestry were consulted in March of 2012 and recommendations solicited. Those recommendations together with those of DLCD are reflected in the guide and tables.

Q & A

Q: What is the status of Natural Resources Conservation Service (NRCS) soil mapping in Oregon Counties?

A: The soils information via the Internet on Web Soil Survey *(http://websoilsurvey.nrcs.usda.gov)is the official source of NRCS soil mapping, data and interpretations. It is NRCS policy that the soils information at this source be deemed the official soil survey information and NOT the maps and information in the hard copy (paper or CD) soil survey reports. However, soil survey information in the hard copy soil survey reports is still good reference information and, depending on the age of the survey, much of the information may still be appropriate. A majority of the changes to the maps have been to improve the "joins" along boundaries between the surveys. In addition to the changes to the maps, other changes may include new and updated data for soils in the survey and occasionally changes to land capability class assignments. Changes have also been made to standardize all forest productivity data to a uniform 50-year King curve for Douglas fir. Some older hard copy soil survey reports display Douglas fir productivity using a 100-year McArdle Curve, however, the Internet soil survey information now displays 50-year King Curve productivity. The NRCS continues to periodically update soil survey information as staff resources permit. This updated information is reposted to Web Soil Survey on the Internet, typically in September and October.*

Q: When may soil capability be challenged?

A: Soil capability may be challenged when NRCS data are not available, when data of comparable quality to NRCS data are not available (forest lands only) and when NRCS or comparable data are determined to be inaccurate, as permitted by law. A soils challenge requires the services of either a soils professional or a professional forester, or sometimes both (in the case of a rezoning to a nonresource use based on nonresource land). NRCS soils mapping and associated data and interpretations are generally conducted at a scale of 1:24,000. Soils challenges must be conducted at a mapping scale finer than 1:24,000.

Q: Can it be argued that the line between two soil types is inaccurate?

A: Yes, if the scale of revised mapping is at a significantly more detailed scale than the NRCS mapping, which is typically 1:24,000. For instance, the new agricultural soils onsite investigation or assessment report requires revised mapping be at a scale of 1:5,000 or finer.

Q: Can inclusions of surface rock fragments and other significant differences in soil characteristics identified during onsite investigation or assessment of soil mapping be used to challenge the soil mapping and land capability class assignment?

A: Maybe. The NRCS recognizes the legitimacy of more intensive soil investigations, depending on the needs of the user. These investigations and subsequent interpretations must stand on their own merit. They are considered a more detailed level of mapping at a "finer" mapping scale. This does not change the NRCS mapping, data and interpretations, such as the land capability class assignment as contained in the official soil survey. This is because the interpretations of the NRCS mapping for any particular map unit encompass all polygons or areas of that particular map unit and are not based on one or more site specific areas. A more intensive investigation on forest land can, however, "supersede" the NRCS mapping, data and interpretations for a specific area, when a professional forester performs direct tree measurements to show that on-site forest capability is lower than the NRCS Internet soil survey shows. Where such a finding is made, counties should seek additional verification, such as from an examination of similar areas or polygons of the same map units. (See also answer to following question)

Q: Can site productivity data (crop yields or tree measurements) be used to challenge soils capability?

A: Maybe. The use of site productivity data such as crop yields or other productivity information may be a relevant consideration in determining whether class V-VIII/VII-VIII soils are "suitable" for farm use, "necessary" to permit farm practices or "intermingled" with farmland under OAR 660-033-0020(1)(a)(B), (C) and (b). However, this information cannot be used to show that the land is a different soil type or has a land capability class assignment different from the NRCS official soil survey information.

The use of direct tree measurements to determine forest land productivity is only appropriate if there are no NRCS or comparable data or if these sources are shown to be inaccurate (OAR 660-006-0010(3)). This is because differing landowner management practices can influence forest land productivity. NRCS productivity ratings for forest lands are based on natural stands. Thin tree cover or openings in tree cover are normal for some soil types and this factor is included in the NRCS forest productivity rating. Any direct tree measurements must be made from dominant and not suppressed trees, either on-site or on an adjacent site, following ODF's updated Land Use Planning Notes.

Q: Can an argument be made that soils as identified during onsite investigation or assessments are different from NRCS soils mapping or classifications?

A: Maybe. This is a more difficult assertion to justify and depends on the expertise of the soils professional and the basis of the justification. Drastic deviations from NRCS mapping or classifications, such as a finding that soils are shallow instead of deep or class VI instead of class III should be viewed with caution. Where such an assertion is made, counties should seek additional verification, such as from an examination of similar areas or polygons of the same map units.

Q: Can an argument be made that a particular soil type is not high-value, class I-IV/I-VI or of a cubic foot rating as published?

A: No. There is no authorization in statute or rule for challenging the identification of specific soil types as falling into these capability categories.

Q: Can high-value farm soils be challenged?

A: Yes and no. They may be challenged where lot-of-record dwellings are proposed (OAR 660-033-0030(7). However, for other proposed uses, high-value farm soils may not be challenged for the purpose of showing only that land is not high-value, if it is otherwise agricultural land. But because neither HB 3647 nor implementing OARs differentiate between high-value and non high-value farmland, both types of farmland may be challenged if the purpose is to show that they are not agricultural land.

Q: If the Internet NRCS soil survey already identifies a property as having a predominance of soils that are not I-IV in western Oregon or I-VI soils in eastern Oregon, would a soils assessment still have to go through the new DLCD review process?

Yes. This is because HB 3647 applies when "more detailed soils information" is provided that "would assist a county" to make a better determination of whether land is agricultural. Presumably, any such soils information would be intended to influence such a county determination. Such information could be used to argue that class V-VIII soils are "unsuitable"for farm use or are not necessary to permit adjacent farm practices, or are not

intermingled with higher-class soils.

Q: How can the Department of Forestry's updated Land Use Planning Notes be used to challenge forest land capability?

A: In April of 2010, the ODF updated an earlier version of Land Use Planning Notes, after which DLCD updated OAR 660-006-0010 to reflect this change and to clarify the requirement that the Notes be used when challenging forest land capability. The Notes provide excellent guidance for foresters, soils professionals and counties, and prioritize alternative data sources that may be used when NRCS or other specified comparable data are not available or are shown to be inaccurate. When direct tree measurements are made, specific tables as identified in the Notes must be used for the predominant on-site tree species. These include tables A, B or C in Attachment A, which employ growth curves that are consistent with the curves used in the NRCS Internet soil survey.

Table 1: Two Processes for Challenging Agricultural and Forest Land Capability

How Does It Work?	Agricultural Land Capability OAR 660-033-0030 & 0045	Forest Land Capability OAR 660-006-0010
When does the process apply?	• When NRCS class I-IV/I-VI soils are challenged	• When NRCS cubic foot ratings are challenged (no specific threshold)
What does the process apply to?	• Rezonings & most nonfarm dwellings	• Rezonings & some template dwellings
Who submits the onsite investigation or assessment?	• Applicant chooses a certified soils classifier or equivalent professional from DLCD list of soils professionals	• Applicant chooses a professional forester
How is resource capability determined?	• Onsite assessment of soils at a more detailed scale than the NRCS scale of mapping	• Using ODF prioritized alternative data sources (soils testing last priority)
Where is the onsite investigation or assessment submitted?	• DLCD, which forwards it to county after completeness check & sometimes professional review & field verification	• County
Who determines acceptability of the onsite investigation or assessment?	• County	• County
Is ODA or DOF involved?	No	No
Can DLCD de-list professionals?	Yes	No
When are two professionals needed?	In a rezoning to nonresource use when direct tree measurements are made	
Is there additional information?	Oregon Department of Land Conservation and Development Agricultural Soils Capability Assessment	Oregon Department of Forestry Forest Resources Planning

Table 2: When Can Soil Capability Be Challenged?

Circumstance	Yes/No/ Maybe	Where	Applicability
1. When NRCS data are not available	Yes	Farm or forest land	- Consult NRCS Web Soil Survey for new or updated data. If no data, then for: - Farmland: conduct onsite soil assessment - Forest land: consult Oregon Department of Forestry Forest Resources Planning Land Use Planning Notes (Updated) for prioritized alternative data sources [i]
2. When data of comparable quality to NRCS data are not available	Yes	Forest land	- Consult Oregon Department of Forestry Forest Resources Planning Land Use Planning Notes (Updated) for prioritized alternative data sources
3. When NRCS or comparable data are challenged to be inaccurate based on:	See below	Farm or forest land	- Farmland: Goal 3 states: "More detailed soil data to define agricultural land may be utilized by local governments if such data permits achievement of this goal."[ii] - HV farmland LORs: soil classes or ratings may be challenged; OAR 660-033-0030(7) - HV farmland otherwise: soils classes or ratings may be challenged only to show that land is not agricultural; OAR 660-033-030(8) - Forest land: consult Oregon Department of Forestry Forest Resources Planning Land Use Planning Notes (Updated) for prioritized alternative data sources
A. Inaccurate placement of line between soil types	Yes	"	- If scale of revised maps is 1:5,000 or finer & otherwise justified
B. Inclusions of surface rock fragments or other significant differences in soil characteristics and mapping not identified in the NRCS mapping, data and interpretations	Maybe	"	- A finding of inclusions or significant differences in soil characteristics does not change the mapping, data or interpretations of the map unit such as the NRCS land capability class assignment. The map unit information is based on all polygons or areas of the map unit, not on one or more onsite investigations
C. Actual site productivity data using crop yields or tree measurements	Maybe		- Farmland: Not to imply that land is a different soil type or has a land capability assignment that is different from the NRCS rating - Forest land: only if no NRCS or comparable data are available or are inaccurate
D. A belief that onsite soils are different from the NRCS soils mapping or classifications	Maybe	"	- Only if well documented by soils professionals or foresters and onsite findings are reasonable when compared to similar areas or polygons of the same map unit
E. A belief that a particular soil type is not HV, class I-IV/I-VI or of cubic foot rating as published	No	"	- No authorization in statute or rule

[i] OAR 660-006-0010(3)

[ii] OAR 660-015; related provisions are in OAR 660-033-0030(5)(a): "More detailed data on soil capability than is contained in the [NRCS] soil maps and surveys may be used to define agricultural land. However, the more detailed soils data shall be related to the NRCS land capability classification system" and Oregon Laws 2010, chapter 44, S. 1, which permits the submittal of "more detailed soils information than that contained in the Internet [NRCS] soil survey…"