1	BEFORE THE LAND USE BOARD OF APPEALS
2	OF THE STATE OF OREGON
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4 5	PROTECT GRAND ISLAND FARMS, Petitioner,
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7	VS.
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9	YAMHILL COUNTY,
10	Respondent,
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12	and
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14	BAKER ROCK RESOURCES,
15	Intervenor-Respondent.
16	•
17	LUBA No. 2011-035
18	
19	FINAL OPINION
20	AND ORDER
21	
22	Appeal from Yamhill County.
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24	Courtney Johnson, Portland, filed the petition for review and argued on behalf of
25	petitioner. With her on the brief were Ralph Bloemers and Crag Law Center.
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27	No appearance by respondent.
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29	Todd S. Sadlo, Portland, filed the response brief and argued on behalf of intervenor-
30	respondent.
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32	RYAN, Board Chair; BASSHAM, Board Member; HOLSTUN, Board Member,
33	participated in the decision.
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35	AFFIRMED 09/28/2011
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37	You are entitled to judicial review of this Order. Judicial review is governed by the
38	provisions of ORS 197.850.

NATURE OF THE DECISION

Petitioner appeals a decision by the county amending its comprehensive plan to add a 224.5-acre site to the county's inventory of significant mineral and aggregate resource sites under Statewide Planning Goal 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces).

MOTION TO INTERVENE

Baker Rock Resources, Inc. (intervenor), the applicant below, moves to intervene on the side of the county. There is no opposition to the motion and it is allowed.

FACTS

Intervenor applied for, and the county approved, an amendment to the Yamhill County Comprehensive Plan to add a 224.5-acre property to the county's inventory of significant mineral and aggregate resource sites. The property is zoned Exclusive Farm Use and is comprised entirely of Class II agricultural soils. It is located on the southern end of Grand Island, an island in the Willamette River, and is surrounded by farms, forest land, and by a portion of Willamette Mission State Park. Intervenor proposes to mine approximately 175 acres of the site for aggregate over an estimated 30 years.

As part of its application, intervenor submitted a geologist's report that details the location of the aggregate within the proposed mining area. That report describes the location of the aggregate in relevant part as:

"The borehole data revealed that between 2 and 14.5 feet of subsoil overlies the sand and gravel resource, with an average thickness across the site of five feet. * * *

¹ Intervenor initially also applied to amend the comprehensive plan designation for the site from Agriculture Forestry Large Holding to Quarry, for a zone change from Exclusive Farm Use to Mineral Resource, and for a Willamette River Greenway Permit. The county postponed decisions on those applications to a later date and those decisions are not before us in this appeal.

"The sand and gravel resource exists in two distinct horizons beneath the subsoil. The upper horizon has a two foot to 10 foot thick fine grained sand unit underlain by 1 to 30 feet of sandy gravel. Across the site, this upper sand and gravel horizon averages 23 feet in thickness.

"The lower horizon ranges from 13 feet thick to as much as 52 feet thick in the central portion of the property where it appears the depositional channel had deepened considerably. * * * Across the property, the lower horizon averages 21 feet in thickness." Record 2012.

Between the two "horizons" that are described in the portion of the geologist's report quoted above lies a clay deposit that averages approximately 9 feet thick across the property. The presence of that clay in the mining area and its legal significance, if any, plays a central role in the parties' dispute about the county's decision to add the property to its inventory of significant mineral and aggregate sites.

SECOND ASSIGNMENT OF ERROR

Mineral and aggregate resources are among the natural resources that Statewide Planning Goal 5 (Natural Resources, Scenic and Historic Areas, and Open Spaces) requires local governments to inventory and protect. OAR 660-023-0180 is the administrative rule that the Land Conservation and Development Commission (LCDC) adopted to provide standards regarding how local governments perform their Goal 5 planning obligations concerning mineral and aggregate resources. Under OAR 660-023-0180(3), in considering a post-acknowledgement plan amendment to add a site to the county's Goal 5 inventory of mineral and aggregate resources, a local government must first determine whether a proposed aggregate resource site is "significant." A proposed aggregate resource site is "significant" if it meets any one of the criteria at subsections (a) through (c) of OAR 660-023-0180(3). The text of OAR 660-023-0180(3)(a) through (c) is set out below in the margin. The text of

² OAR 660-023-0180(3) provides in part:

[&]quot;An aggregate resource site shall be considered significant if adequate information regarding the quantity, quality, and location of the resource demonstrates that the site meets any one of

OAR 660-023-0180(3)(d), which in some circumstances disqualifies sites that would otherwise qualify as significant under OAR 660-023-0180(3)(a) or (b), is set out in part at n 6 and discussed later in this opinion.

A prerequisite for a finding that aggregate resources on a proposed site are significant under OAR 660-023-0180(3)(a) is a "representative set of samples of aggregate material in the deposit on the site" that show in relevant part that "the site meets applicable Oregon Department of Transportation (ODOT) specifications for base rock for air degradation, abrasion, and soundness, and the estimated amount of material is more than 2,000,000 tons in the Willamette Valley[.]" *See* n 2. Intervenor's geologist, Lidstone, drilled nine boreholes on the property and tested materials from four of the boreholes for air degradation, abrasion and soundness. Based on that sampling and testing, Lidstone concluded that the mineable aggregate in the mining area totals approximately 23.6 million tons, more than ten times the minimum amount required to meet the "significance" threshold for quantity set out in OAR 660-023-0180(3)(a). Record 96. The county concluded that Lidstone had provided a "representative set of samples" as required by OAR 660-023-0180(3)(a) and that based on the set of samples provided by Lidstone, the aggregate resources on the proposed site are "significant" under OAR 660-023-0180(3)(a). Record 11-12.

ORS 197.835(9)(a)(C) provides that LUBA shall reverse or remand a decision that is not supported by substantial evidence in the whole record. In its second assignment of error,

the criteria in subsections (a) through (c) of this section, except as provided in subsection (d) of this section:

- "(a) A representative set of samples of aggregate material in the deposit on the site meets applicable Oregon Department of Transportation (ODOT) specifications for base rock for air degradation, abrasion, and soundness, and the estimated amount of material is more than 2,000,000 tons in the Willamette Valley, or more than 500,000 tons outside the Willamette Valley;
- "(b) The material meets local government standards establishing a lower threshold for significance than subsection (a) of this section; or
- "(c) The aggregate site was on an inventory of significant aggregate sites in an acknowledged plan on September 1, 1996."

petitioner argues that the county's conclusion of significance under OAR 660-023-0180(3)(a) is not supported by substantial evidence in the whole record. Petitioner argues that Lidstone's samples are not a "representative set of samples" as required by OAR 660-023-0180(3)(a).³ See n 2. Petitioner's arguments are difficult to follow, but we summarize them here as we understand them. First, we understand petitioner to argue, Lidstone's sampling methods did not conform to standards for aggregate testing adopted by the American Society for Testing and Materials (ASTM), the US Army Corps of Engineers (ACOE), and the American Association of State Highway and Transportation Officials (AASHTO). According to petitioner's geologist, Reed, those standards require that where visual inspection indicates that there is variation in the material, such as clay, sand and gravel, further testing of samples from different depths should be done. Petitioner argues that Lidstone's samples are not vertically "representative" samples under industry standards because there is no indication that samples from different depths were collected and tested or if so, at what depths samples were collected and tested. Second, we understand petitioner to argue that the samples are not a horizontal "representative set of samples" because the locations of the boreholes are not uniformly distributed across the entire property. Petitioner argues that there are few boreholes drilled in the center and western portions of the property. Intervenor first responds by pointing to testimony in the record that rebutted Reed's testimony and that confirmed that materials from different depths were collected and tested based on ODOT standards for determining base rock quality. Record 98, 2012-13, 2065-68. Further, intervenor cites to testimony that the number and horizontal distribution of

boreholes was adequate to determine the representative quality and quantity of aggregate on the site. Accordingly, intervenor argues, the county correctly concluded that "a

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³ Petitioner also argues in a portion of the second assignment of error that the county misconstrued applicable law in finding that intervenor provided a representative set of samples, but does not further develop that argument, and we do not consider it. Petition for Review 20.

representative set of samples" demonstrated that the quality and quantity of aggregate present on the site qualify the site as "significant."

We agree with intervenor that Lidstone provided a "representative set of samples" as required by OAR 660-023-0180(3)(a) and that substantial evidence supports the county's conclusion of significance.⁴ First, petitioner does not point to anything in the Goal 5 rule or elsewhere to support its argument that any particular standards govern the requirement to provide "a representative set of samples" in order to determine whether the OAR 660-023-0180(3)(a) thresholds for significance as to the quantity of aggregate are met. And even if the ASTM, ACOE and AASHTO standards do apply, petitioner does not explain why Lidstone's methodology does not conform to the standards. And although petitioner argues, correctly, that ODOT has adopted ASTM and AASHTO standards for testing of aggregate quality for soundness, abrasion, and other qualities, petitioner does not argue that Lidstone's samples do not accurately represent the quality of aggregate present on the site. Evidence in the record supports Lidstone's position that it tested the samples according to ODOT's testing standards for aggregate quality. Record 2065-68; Supplemental Record 2411. Absent any argument that Lidstone's sampling methodologies were not methodologies that a reasonable professional geologist would employ to determine the quantity of aggregate present on the site, we agree with intervenor that petitioner has not demonstrated that Lidstone's samples were not a "representative set of samples" for purposes of determining the estimated quantity of aggregate present on the site, and that Lidstone's report constitutes

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⁴ The county found in relevant part:

[&]quot;The Goal 5 Rule does not dictate ASTM, AASHTO, [ACOE] or any other sampling methodology. These referenced sampling methodologies are not considered an established standard within the aggregate industry, and are not necessary or appropriate for identifying significant aggregate resources. The applicant's experts used appropriate methodologies in this case designed to correctly identify a significant aggregate resource under Oregon law." Record 11.

- substantial evidence to support the county's decision that the site is "significant" under OAR 2 660-023-0180(3)(a).
- 3 Intervenor further argues, and we agree, that the county was entitled to choose to rely on Lidstone's evidence and testimony over Reed's evidence and testimony.⁵ Record 94-100; 4
- 5 Supplemental Record 2410-2412. LUBA reverses or remands the challenged decision if it is
- 6 "not supported by substantial evidence in the whole record." ORS 197.835(9)(a)(C). In
- 7 reviewing the evidence, however, we may not substitute our judgment for that of the local

"The Goal 5 rule dictates that the quality of the rock available must meet or exceed [ODOT] base rock standards. The Harney aggregate greatly exceeds the ODOT base rock quality standards and the [Lidstone] report provides conclusive data in support of this statement.

"There is also no legal requirement or industry standard for the number of boreholes. The number of boreholes required is the number necessary for a professional geologist to make observations on location and depth, grain size, roundness, mineralogy, petrology, rock hardness and quality. The geologist must use his or her site observations, review of available literature and professional judgment, to determine where to drill first. The initial drilling provides direct evidence to determine where the next borehole should be completed, and so on. A geologist who has collected enough data to arrive at a conclusion regarding the resource does not continue (mindlessly) to drill additional holes, all likely to identify the same resource.

"The * * * geologist who completed the * * * site evaluation * * * reviewed the drilling progress; logged nearly 600 feet of drilling footage; and collected samples from nine locations on five-foot intervals across 170 acres of property. He found that the sand and gravel in the upper 60 +/- feet was similar in composition, quality, age, and stratigraphic definition. His sampling and testing strategy reflected his professional judgment. The literature (US Geologic Survey Professional Paper 1424-A by Gannett and Caldwell, 1998) clearly maps the upper 60 feet of the Harney sands, silts and gravels as Holocene Age floodplain deposits of the Willamette River and supports the * * * geologist's field determination.

"Reed suggests that the * * * geologist did not identify his composites and may have skewed * * * * his sample results. In making this statement, it is apparent that Reed did not review Appendix B, where the samples that were tested were clearly identified as single drill hole composites. These samples represent a spatial and vertical distribution of the entire resource,

"Based on his logs, the * * * geologist determined on a site-specific basis how to composite the material from each hole to prepare a representative sample. The * * * geologist reviewed each set of drill hole samples and made a determination that four samples tested for quality were representative of the site as a whole. When one reviews the testing results, it is apparent that the quality of the Harney site material greatly exceeds ODOT base rock standards, and that none of the gravel in the deposit is of poor quality." Record 97-98 (underlining in original).

⁵ In response to Reed's testimony, Lidstone explained:

decision maker. Rather, we must consider and weigh all the evidence in the record to which we are directed, and determine whether, based on that evidence, the local decision maker's conclusion is supported by substantial evidence. Younger v. City of Portland, 305 Or 346, 358-60, 752 P2d 262 (1988); 1000 Friends of Oregon v. Marion County, 116 Or App 584, 588, 842 P2d 441 (1992). In choosing to rely on Lidstone's evidence and explanations, we understand the county to have found intervenor's expert's evidence to be more credible than the expert evidence introduced by petitioner. That choice is supported by substantial evidence in the record where questions or issues raised by Reed are adequately rebutted by Lidstone, and accordingly, the second assignment of error provides no basis for reversal or remand of the decision. Wal-Mart Stores, Inc. v. City of Bend, 52 Or LUBA 261, 276 (2006) ("the critical issue for the local decision maker will generally be whether any expert or lay testimony offered by * * * opponents raises questions or issues that undermine or call into question the conclusions and supporting documentation that are presented by the applicant's experts and, if so, whether any such questions or issues are adequately rebutted by the applicant's experts").

The second assignment of error is denied.

FIRST ASSIGNMENT OF ERROR

Under OAR 660-023-0180(3), even if an aggregate resource site is found to be "significant" under OAR 660-023-0180(3)(a), OAR 660-023-0180(3)(d) dictates that such aggregate resource sites are not "significant," within the meaning of OAR 660-023-0180(3), if more than 35 percent of the proposed mining area is made up of soil "classified as Class II, or of a combination of Class II and Class I." All of the soils present on the proposed site are

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⁶ As relevant here, OAR 660-023-0180(3)(d) provides:

[&]quot;Notwithstanding subsections (a) and (b) of $[OAR\ 660-023-0180(3)]$, * * * an aggregate site is not significant if the criteria in either paragraphs (A) or (B) of this subsection apply:

^{**}****

- 1 Class II. In that circumstance, in Yamhill County, the aggregate resource is not "significant"
- within the meaning of OAR 660-023-0180(3) unless "the average thickness of the aggregate
- 3 layer within the mining area exceeds 25 feet." OAR 660-023-0180(3)(d)(B)(ii). See n 6.
- 4 OAR 660-023-0180(1)(1) defines "[t]hickness of the aggregate layer" to mean "the depth of
- 5 the water-lain deposit of sand, stones, and pebbles of sand-sized fraction or larger, minus the
- 6 depth of the topsoil and nonaggregate overburden."

A. First Subassignment of Error (Thickness of the Aggregate Layer)

As explained above, the aggregate resource (sand and gravel) deposit on the site is interlain with clay beginning approximately 23 feet below the surface. The clay averages approximately 9 feet thick across the property. Sand and gravel are also located below that clay. The county determined that the "average thickness of the aggregate layer" on the site is approximately 44 feet. Record 14. In so determining, we understand the county to have added together the thickness of the sand and gravel located above the clay (averaging 23 feet) and the thickness of the sand and gravel located below the clay (averaging 21 feet), and to have concluded that the clay above the lower deposit of sand and gravel can be considered "nonaggregate overburden" as to the portion of the aggregate that is located below it.⁷

"(B) More than 35 percent of the proposed mining area consists of soil classified as Class II, or of a combination of Class II and Class I or Unique soil, on NRCS maps available on June 11, 2004, unless the average thickness of the aggregate layer within the mining area exceeds:

"(ii) 25 feet in Polk, Yamhill, and Clackamas counties; * * *."

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⁷ The county concluded in relevant part:

[&]quot;The applicant has described the aggregate layer present at the site, in terms of quantity, quality and location, sufficient to demonstrate that the resource exceeds all of the applicable significance thresholds. * * * The applicant has described the approximate location of both the top and the bottom of the deposit. The identified, high quality 'water-lain deposit of sand, stones, and pebbles of sand-sized fraction or larger' has been located and quantified by the applicant. The depth from ground surface to the resource has been sufficiently described, as have the presence of non-aggregate layers, seams, tongues, and/or interbedding, of generally non-commercial clay/silt materials, within the deposit. [OAR 660-023-0180(3)(b)(D)(ii)]

The county concluded in relevant part that nothing in the language of OAR 660-023-0180(3)(b)(D)(ii) precludes the county from considering aggregate that is located beneath the clay in determining the "thickness of the aggregate layer" in the mining area. In support of its interpretation, the county considered the definitions of words that are used in the operative terms of the rule, and in particular the definitions of the words "aggregate resources" and "deposit," in the rule. As additional support for its interpretation of the rule, the county relied in part on a letter from a Department of Land Conservation and Development (DLCD) planner. That letter takes the position that DLCD understands that the "thickness of the aggregate layer" is determined "by averaging the vertical depth of the aggregate planned to be excavated within the mining area." Record 14; Supplemental Record 2413. Finally, the county also relied on its understanding of the competing interests that LCDC attempted to balance in adopting the rule:

"[t]he intent of the Goal 5 rule's layer thickness, base rock specifications, and two million ton requirements, is to strike a balance between farmland protection and the need for local supplies of aggregate. Not all deposits of aggregate located under high-value farmland can be mined under the rule-only if the deposit of sand and gravel at the site is thick enough to justify the change in use." Record 17.

does not require or allow the [county], when making a significance determination, to ignore a portion of mineable alluvial aggregate deposit solely due to the presence of non-commercial overburden above or within the deposit.

"The rule does not require or allow the County to exclude a portion of the aggregate layer from the calculation of thickness – it requires the exclusion of 'topsoil and nonaggregate overburden' from that calculation. In accordance with the requirements of the rule, the applicant described and subtracted 'the depth of the topsoil and nonaggregate overburden' from its calculation of [']the average depth of the water-lain deposit.['] On doing so, the applicant correctly applied the equation in the Goal 5 rule * * * in its conclusion that the site contains an estimated quantity of 23.6 million tons of water-lain aggregate, and that the average thickness of the aggregate layer within the mining area exceeds 25 feet." Record 19-20.

⁸ The county quoted OAR 660-023-0180(1)(a), which defines "aggregate resources" as "naturally occurring concentrations of stone, rock, sand, gravel, decomposed granite, limestone, pumice, cinders, and other naturally occurring solid materials commonly used in road building or other construction." The county also quoted *Webster's Third New International Dictionary*, 3rd Ed, unabridged, 1993 at 605, which defines "deposit" as "a natural accumulation." Record 19.

ORS 197.835(9)(a)(D) requires that LUBA reverse or remand a decision that "[i]mproperly construed the applicable law[.]" In its first assignment of error, petitioner argues that the county misconstrued OAR 660-023-0180(3)(d)(B)(ii) by considering all of the aggregate that the applicant plans to mine on the site in determining the "average thickness of the aggregate layer," where the aggregate that is to be mined is separated by a clay layer The crux of petitioner's argument is that, as a matter of law, only the aggregate layer found closest to the surface of the mining area can be considered to determine the "thickness of the aggregate layer" under the rule if that layer is separated from a deeper layer by a nonaggregate layer. According to petitioner, the county's interpretation of the rule is inconsistent with OAR 660-023-0180(3)(d) and the definition of "thickness of the aggregate layer" found at OAR 660-023-0180(1)(1), where the controlling rule and the definition refer to "aggregate layer" in the singular. Also according to petitioner, the clay is not "topsoil," and it is not "nonaggregate overburden" according to the definition of "overburden" found at ORS 517.750(9) because it lies *below* the upper 23 feet of aggregate closest to the surface, and the county erred in merely subtracting the approximately 9 feet of clay from the total 52 foot deep "water-lain deposit of sand, stones, and pebbles of sand-sized fraction or larger."

OAR 660-023-0180 implements Goal 5, and the county's interpretation of OAR 660-023-0180 is owed no particular deference. *Kenagy v. Benton County*, 112 Or App 17, 20 n 2, 826 P2d 1047 (1992). Nothing in the language of the rule definitively addresses the question presented in this appeal, and it is probable that the rule drafters simply did not anticipate the circumstances present in this appeal when drafting the rule. However, we agree with the county that it is not inconsistent with the text or purpose of the rule to consider the intervening clay layer to constitute "overburden" for purposes of mining the lower aggregate deposit as proposed. Certainly once the upper deposit is mined as proposed, the clay layer lying over the lower deposit could only be described as overburden.

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In addition, it is undisputed that aggregate that is present both above and below the clay layer is of nearly identical quality. It is also undisputed that intervenor plans to mine all of the aggregate present at the mining site, and that it is apparently no more difficult or expensive to mine the aggregate that is below the clay than it is to mine the aggregate that is above the clay. Finally, it is undisputed that mining the aggregate below the clay will result in no greater area of high value soils being removed from farm use than would already be removed to mine the aggregate located above the clay. Under those circumstances, we think the county's understanding of the rule is correct, and its consideration of the thickness of the entire aggregate deposit to be mined while subtracting the intervening clay layer is consistent with the rule. As the county and the parties correctly note, OAR 660-023-0180(3)(d) strikes a balance between protecting from mining and development high value soils that are located above aggregate deposits, except in circumstances where the quality and quantity of the aggregate proposed for mining are significant enough to justify the loss of those high value soils. Assuming that is the policy behind the rule, the county's reading of that rule as allowing it to consider all of the aggregate that is present in the mining area that is proposed to be mined in determining the "average thickness of the aggregate layer" is consistent with that policy.

We also do not agree with petitioner that such an interpretation would necessarily lead to the result that almost every property with Class II or better agricultural soils in the county could meet the 25 foot threshold set out in OAR 660-023-0180(3)(b)(D)(ii), if vertically discontinuous deposits of aggregate at unlimited depths can be used to determine the "average thickness of the aggregate layer." The critical undisputed fact here is that the applicant proposes to mine both the upper and lower vertically discontinuous deposits of aggregate, and petitioner does not contend that the lower layer cannot be mined or that it will not be mined. We therefore have no occasion to consider whether a vertically discontinuous layer of gravel could be considered in addressing the OAR 660-023-0180(3)(b)(D)(ii) 25-

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- 1 foot threshold if the applicant did not propose to mine the lower layer or there was any
- 2 reason to question whether the lower layer would actually be mined.
- 3 The first subassignment of error is denied.

B. Second Subassignment of Error (Layer Means "Geologic Epoch")

In the decision, the county adopted an independent theory for determining the thickness of the aggregate layer. The county concluded that the "layer" to which the rule refers means all similar deposits during the same geologic epoch that produced the aggregate. The county then determined that all of the aggregate at the mining site was deposited during the Holocene Epoch and that it is thus a single "layer" under the rule. We understand the county to have concluded that only if the upper and lower deposits were created in two different geological epochs can they be considered different "layers" for purposes of the rule. Petitioner challenges that theory, arguing that nothing in the rule suggests that all deposits lain down within a single geological epoch constitute a single deposit or "layer." However, because we conclude above that the county did not err in determining that the average thickness of the aggregate layer is 44 feet, we need not determine whether the county's alternative theory was correct. We do not reach the second subassignment of error.

- The first assignment of error is denied.
- The county's decision is affirmed.