WAC 365-195-905 Criteria for determining which information is
the "best available science." (1) This section provides assessment
criteria to assist counties and cities in determining whether informa-
tion obtained during development of critical areas policies and regu-
lations constitutes the "best available science."

(2) Counties and cities may use information that local, state or
federal natural resource agencies have determined represents the best
available science consistent with criteria set out in WAC 365-195-900
through 365-195-925. The department will make available a list of re-
sources that state agencies have identified as meeting the criteria
for best available science pursuant to this chapter. Such information
should be reviewed for local applicability.

(3) The responsibility for including the best available science
in the development and implementation of critical areas policies or
regulations rests with the legislative authority of the county or
city. However, when feasible, counties and cities should consult with
a qualified scientific expert or team of qualified scientific experts
to identify scientific information, determine the best available sci-
ence, and assess its applicability to the relevant critical areas. The
scientific expert or experts may rely on their professional judgment
based on experience and training, but they should use the criteria set
out in WAC 365-195-900 through 365-195-925 and any technical guidance
provided by the department. Use of these criteria also should guide
counties and cities that lack the assistance of a qualified expert or
experts, but these criteria are not intended to be a substitute for an
assessment and recommendation by a qualified scientific expert or team
of experts.

(4) Whether a person is a qualified scientific expert with exper-
tise appropriate to the relevant critical areas is determined by the
person's professional credentials and/or certification, any advanced
degrees earned in the pertinent scientific discipline from a recog-
nized university, the number of years of experience in the pertinent
scientific discipline, recognized leadership in the discipline of in-
terest, formal training in the specific area of expertise, and field
and/or laboratory experience with evidence of the ability to produce
peer-reviewed publications or other professional literature. No one
factor is determinative in deciding whether a person is a qualified
scientific expert. Where pertinent scientific information implicates
multiple scientific disciplines, counties and cities are encouraged to
consult a team of qualified scientific experts representing the vari-
ous disciplines to ensure the identification and inclusion of the best
available science.

(5) Scientific information can be produced only through a valid
scientific process. To ensure that the best available science is being
included, a county or city should consider the following:

(a) Characteristics of a valid scientific process. In the context
of critical areas protection, a valid scientific process is one that
produces reliable information useful in understanding the consequences
of a local government's regulatory decisions and in developing criti-
cal areas policies and development regulations that will be effective
in protecting the functions and values of critical areas. To determine
whether information received during the public participation process
is reliable scientific information, a county or city should determine
whether the source of the information displays the characteristics of
a valid scientific process. The characteristics generally to be expec-
ted in a valid scientific process are as follows:
1. **Peer review.** The information has been critically reviewed by other persons who are qualified scientific experts in that scientific discipline. The criticism of the peer reviewers has been addressed by the proponents of the information. Publication in a refereed scientific journal usually indicates that the information has been appropriately peer-reviewed.

2. **Methods.** The methods that were used to obtain the information are clearly stated and able to be replicated. The methods are standardized in the pertinent scientific discipline or, if not, the methods have been appropriately peer-reviewed to assure their reliability and validity.

3. **Logical conclusions and reasonable inferences.** The conclusions presented are based on reasonable assumptions supported by other studies and consistent with the general theory underlying the assumptions. The conclusions are logically and reasonably derived from the assumptions and supported by the data presented. Any gaps in information and inconsistencies with other pertinent scientific information are adequately explained.

4. **Quantitative analysis.** The data have been analyzed using appropriate statistical or quantitative methods.

5. **Context.** The information is placed in proper context. The assumptions, analytical techniques, data, and conclusions are appropriately framed with respect to the prevailing body of pertinent scientific knowledge.

6. **References.** The assumptions, analytical techniques, and conclusions are well referenced with citations to relevant, credible literature and other pertinent existing information.

(b) **Common sources of scientific information.** Some sources of information routinely exhibit all or some of the characteristics listed in (a) of this subsection. Information derived from one of the following sources may be considered scientific information if the source possesses the characteristics in Table 1. A county or city may consider information to be scientifically valid if the source possesses the characteristics listed in (a) of this subsection. The information found in Table 1 provides a general indication of the characteristics of a valid scientific process typically associated with common sources of scientific information.

<table>
<thead>
<tr>
<th>SOURCES OF SCIENTIFIC INFORMATION</th>
<th>CHARACTERISTICS</th>
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<tr>
<td></td>
<td>Peer review</td>
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<tr>
<td>A. Research. Research data collected and analyzed as part of a controlled experiment (or other appropriate methodology) to test a specific hypothesis.</td>
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<tr>
<td>B. Monitoring. Monitoring data collected periodically over time to determine a resource trend or evaluate a management program.</td>
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<tr>
<td>C. Inventory. Inventory data collected from an entire population or population segment (e.g., individuals in a plant or animal species) or an entire ecosystem or ecosystem segment (e.g., the species in a particular wetland).</td>
<td>X</td>
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<tr>
<td>D. Survey. Survey data collected from a statistical sample from a population or ecosystem.</td>
<td>X</td>
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<tr>
<td>E. Modeling. Mathematical or symbolic simulation or representation of a natural system. Models generally are used to understand and explain occurrences that cannot be directly observed.</td>
<td>X</td>
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</table>
(c) **Common sources of nonscientific information.** Many sources of information usually do not produce scientific information because they do not exhibit the necessary characteristics for scientific validity and reliability. Information from these sources may provide valuable information to supplement scientific information, but it is not an adequate substitute for scientific information. Nonscientific information should not be used as a substitute for valid and available scientific information. Common sources of nonscientific information include the following:

(i) **Anecdotal information.** One or more observations which are not part of an organized scientific effort (for example, "I saw a grizzly bear in that area while I was hiking").

(ii) **Nonexpert opinion.** Opinion of a person who is not a qualified scientific expert in a pertinent scientific discipline (for example, "I do not believe there are grizzly bears in that area").

(iii) **Hearsay.** Information repeated from communication with others (for example, "At a lecture last week, Dr. Smith said there were no grizzly bears in that area").

(6) Counties and cities are encouraged to monitor and evaluate their efforts in critical areas protection and incorporate new scientific information, as it becomes available.

[Statutory Authority: RCW 36.70A.190 (4)(b). WSR 00-16-064, § 365-195-905, filed 7/27/00, effective 8/27/00.]