

NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD

WELL WATER TESTING

(No.)

CODE 355

DEFINITION

Testing for physical, biological, and chemical characteristics of groundwater in wells or spring developments.

PURPOSE

This practice may be applied as part of a conservation management system to determine the quality of a groundwater supply for the following intended uses: irrigation, livestock, fish and wildlife habitat, aquaculture enterprises, or other agricultural uses.

CONDITIONS WHERE PRACTICE APPLIES

This standard applies to water supplies that are used or have potential to be used on farms or ranches.

This practice does not apply to groundwater for human consumption, nor wells for monitoring groundwater hydrology or contamination associated with animal waste storage or treatment installations.

CRITERIA

The specific use of the water and the water quality concerns shall be identified.

Documentation stating existing or intended purpose of the well and flow capacity requirement (gallons per minute) to meet this purpose is required

Wells tested under this standard must be initially installed under Ohio water well standards

The required tests and applicable standards shall be determined based on the planned use of the water.

Water samples shall be collected and analyzed in accordance with established procedures. Specific parameters, sampling procedures, and laboratory analyses may be specifically required by local, State, Tribal, or Federal laws and regulations. Contact the testing entity for specific guidance.

Interpretation of test results and recommendations for remedial actions, as necessary, shall be obtained from a source knowledgeable of the testing procedures and objectives.

Testing will be completed by a laboratory certified under Ohio EPA's Laboratory Certification program

CONSIDERATIONS

The following items should be considered in planning water supply testing:

- Location and depth of supply, aquifer characteristics, geology, and history of site in relationship to sources of potential contamination, such as surface water, septic systems, chemical storage facilities, landfills, roads, animal waste storage or treatment facilities, or naturally occurring sources of contamination
- Water supply construction practices used such as dug, drilled, or cased well, or spring development
- Using a computerized total farm record keeping system for ease of data input, analysis, and retrieval

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PLANS AND SPECIFICATIONS

Plans and specifications for water testing shall be consistent with this standard to achieve the desired results.

Plans and specifications shall include a description of processes for collecting, storing, transporting, and testing samples; and reporting test results.

OPERATION AND MAINTENANCE

Water testing records that shall be maintained will include:

- Sample site, location, and depth
- Well construction log as described in section 1525.05 of the Ohio Revised Code. Well log reports are generally available from ODNR, Division of Soil and Water Resources.
- Remotely-sensed or in-situ records of water quality conditions within the well (pH, conductivity, turbidity, etc.)
- Date and time water sample taken
- Name and title of person who collected sample
- Type of sampler and sample taken
- Standard collection procedure followed
- Water test analysis date
- Laboratory performing the analysis
- Tested Contaminants
- Schedule of additional testing at required frequency according to applicable standard
- Records to evaluate trends and the effects of any remedial actions to produce water of sufficient quality for the intended purpose
- Rainfall data
- Observations on well condition
- Interpretation of test results stating suitability of well for its intended purpose at the required flow capacity
- Other records as required

REFERENCES

Ohio water well standards (OAC 3745-9) and well construction log rules (ORC 1521.05):
http://www.dnr.state.oh.us/water/waterobs/orclaw/groundwater_law_main.shtml

Well log reports (from ODNR, Division of Soil and Water Resources):
<http://www.dnr.state.oh.us/water/maptechs/wellogs/appNEW/>

Ohio State University Extension Factsheet AEX-314-93: <http://ohioline.osu.edu/aex-fact/0314.html>

Division of Drinking and Ground Waters Certified Laboratories:
<http://www.epa.ohio.gov/ddagw/labs.aspx>