

**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.

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 **and according to the engineering general information document, Permits,**

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Regulations and Laws Applicable to WV Engineering Conservation Practice Standards (WVENG_GI_Permits).

THE LANDOWNER/OPERATOR SHALL OBTAIN ALL REQUIRED PERMITS BEFORE STARTING CONSTRUCTION.

Contact the testing entity for specific guidance.

Testing for compatibility with use shall be tied to resource concern and testing may be needed for crops irrigated with well water.

Testing Level Recommendations

- ***Basic; PH, alkalinity and dissolved solids.***
- ***Specialty; Tests listed above, plus contaminants, volatile organic compounds (VOC), pesticides and heavy metals.***
- ***Full Spectrum; Test listed above, plus coliform.***

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

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

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Conservation practice standards are reviewed periodically, and updated if needed. To obtain the current version of this standard contact your Natural Resources Conservation Service [State Office](#) or download it from the [Field Office Technical Guide](#) for your state. ***Bold italicized indicate information added or changes made to the National Conservation Practice Standard by WV.***

- 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
- Using a State certified laboratory

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
- 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
- Other records as required

REFERENCES

National Engineering Handbook, Part 631, Chapter 33, Investigations for Ground Water Resources Development.

WV-64 CSR 19-Title 64; Interpretive Rule; Dept. of Health; Series 19 Water Well Regulations

WV-64 CSR 46-Title 64; Interpretive Rule; Dept. of Health; Series 46 Water Well Water Well Design Standards.

WV Dept. of Health and Human Resource Request for Water Analysis (SW-253 Rev 2004)http://www.wvdhhr.org/phs/forms/SW-253_Water_Sample_Request.pdf