



West Virginia DEPARTMENT OF
EDUCATION

NOCTI

State Customized
Credential Blueprint



Natural Resources Management (WV)

Code: 8993 / Version: 01
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General Assessment Information

Blueprint Contents

General Assessment Information
Written Assessment Information

Specific Competencies Covered in the Test
Sample Written Items

Test Type: The Natural Resources Management assessment was developed based standards used in the State of West Virginia and contains a knowledge-based component. This assessment is meant to measure technical skills at the occupational level and includes items which gauge factual and theoretical knowledge.

Revision Team: The assessment content is based on input from West Virginia educators who teach in career and technical education programs.



03.9999 – Natural Resources and
Conservation, Other



Career Cluster 1 - Agriculture, Food
& Natural Resources



11-9121.00 Natural
Sciences Managers

Written Assessment

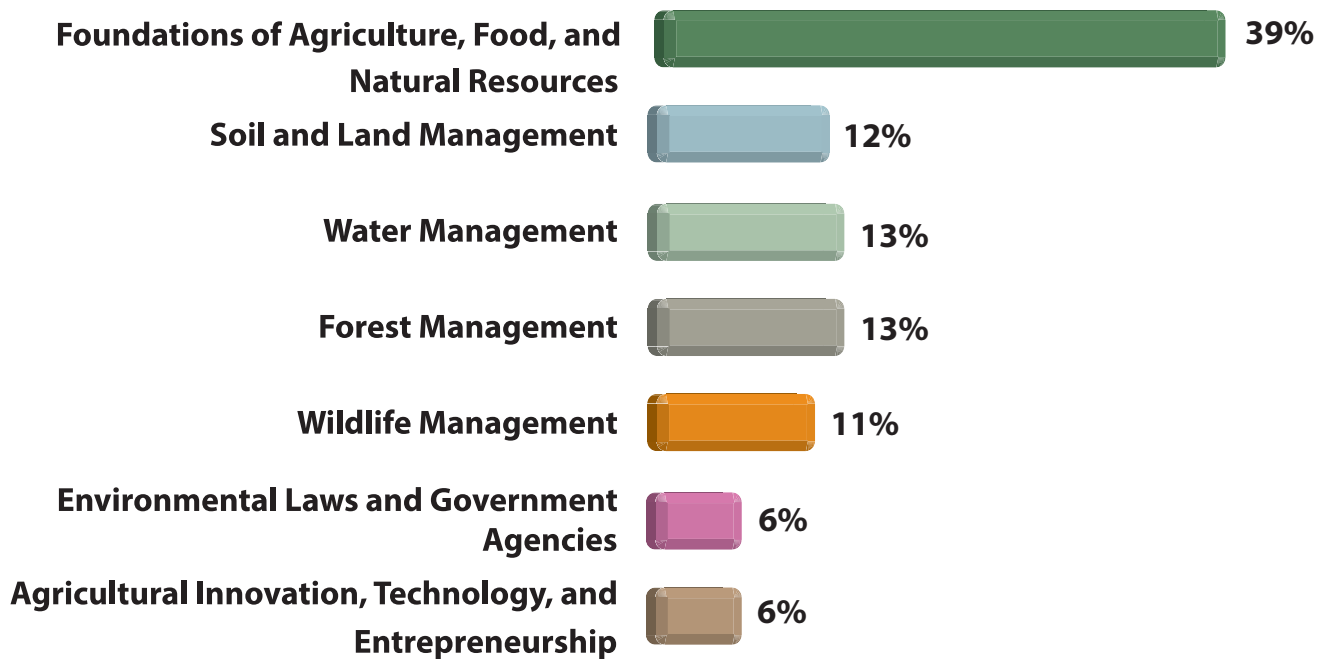
This written assessment consists of questions to measure an individual’s factual theoretical knowledge.

Administration Time: 2 hours

Number of Questions: 102

Number of Sessions: This assessment may be administered in one, two, or three sessions.

Areas Covered



Specific Standards and Competencies Included in this Assessment

Foundations of Agriculture, Food, and Natural Resources

- Demonstrate understanding of agribusiness (e.g., SAE, expenses)
- Demonstrate understanding of animal systems (e.g., breeds of livestock, anatomy)
- Demonstrate understanding of agriculture innovation and technology
- Demonstrate understanding of food products and processing (e.g., protein sources, food preservation)
- Demonstrate understanding of natural resources (e.g., renewable resources)
- Demonstrate understanding of plant systems (e.g., plant parts, processes, soil)
- Demonstrate understanding of power, structural, and technical systems (e.g., measurement)
- Demonstrate knowledge of leadership development through FFA (e.g., motto, parliamentary procedure, official dress)

Soil and Land Management

- Demonstrate understanding of soil erosion and conservation (e.g., horizon, contour planting)
- Exhibit knowledge of spatial tools such as Geographic Information Systems (GIS) and Global Positioning
- Systems (GPS) and their use in resource management (e.g., satellite links, waypoint)
- Display knowledge of topographic and aerial maps, soil surveys, and soil test results (e.g., benchmark elevation, pH, slope)

Water Management

- Demonstrate understanding of the hydrologic cycle (e.g., water holding capacity, acid rain)
- Exhibit knowledge of watersheds and aquatic ecosystems, (i.e., wetlands, ponds, streams) including wetland functions (e.g., eutrophication, Clean Water Act, water quality)
- Recognize aspects of aquifers and groundwater protection (e.g., soil drainage, manure nutrients)
- Identify point and non-point source pollution (e.g., riparian buffers)

(Continued on the following page)

Forest Management

- Define basic forestry concepts (e.g., site index, tree biology, forest measurements tolerant tree species)
- Display knowledge of dendrology (e.g., simple and compound leaves, samara)
- Recognize and define best management practices in forestry and state BMP regulations (e.g., prescribed burns)

Wildlife Management

- Demonstrate understanding of wildlife management practices (e.g., border cutting, wetland habitat, fall mast production)

Environmental Laws and Government Agencies

- Exhibit knowledge of environmental regulations and laws (e.g., timber management, protection of imperiled species)

Agricultural Innovation, Technology, and Entrepreneurship

- Define and recognize aspects of sustainability (e.g., biodiesel)
- Identify aspects of the impact of international agriculture on U.S. and global natural resources (e.g., cost and availability, entrance of new species into country)



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Sample Questions

Agricultural innovations have allowed farmers to

- A. eliminate the use of chemical fertilizers
- B. increase the use of chemical fertilizers
- C. produce more crops on less land
- D. produce fewer crops on more land

FFA business meetings are run using an established set of rules known as

- A. Business Rules
- B. Meeting Rules
- C. Parliamentary Procedures
- D. Business Procedures

Which kind of erosion removes a thin layer of soil?

- A. splash
- B. sheet
- C. rill
- D. gully

Forest wetlands are particularly important habitats for which of the following?

- A. fish
- B. reptiles
- C. amphibians
- D. mussels

Biodiesel is an alternative fuel usually made from animal fats or

- A. biomass
- B. simple sugars
- C. vegetable oils
- D. starches