



**Ecology Conservation &
Management Certification
Study Guide**

CERTIFICATION OVERVIEW

The Ducks Unlimited Ecology Conservation & Management Certification verifies individuals have obtained exceptional knowledge and skills in the areas of ecological principles and wildlife management, as well as habitat, forest, grasslands, wetlands and waterfowl conservation and management.

EXAM OVERVIEW

The Ducks Unlimited Ecology Conservation & Management Certification is hosted on the iCEV testing platform. The certification exam is a 100-question, randomized assessment. Exam questions are in the format of multiple choice, sort order, diagramming, matching, labeling and other question types meant to fully evaluate an individual's competency of the industry standards. The certification exam should be proctored within a controlled environment. The proctor of the exam must review and verify all exam procedures and provide electronic documentation through the exam platform.

More information about the certification exam and testing platform, including optional preparation materials offered by iCEV, can be found at <https://www.icevonline.com/ecology>.

ABOUT DUCKS UNLIMITED

Ducks Unlimited Inc. is the world's largest nonprofit organization dedicated to conserving North America's continually disappearing waterfowl habitats. Established in 1937, Ducks Unlimited has conserved more than 14 million acres thanks to contributions from more than a million supporters across the continent. Guided by science and dedicated to program efficiency, DU works toward the vision of wetlands sufficient to fill the skies with waterfowl today, tomorrow and forever. Learn more at <https://www.ducks.org/certification>.

INDUSTRY STANDARDS

The certification exam assesses knowledge and skills from the following weighted industry standards set by Ducks Unlimited:



ECOLOGICAL PRINCIPLES- 20%

Ecological Systems
Ecological Succession
Monitoring & Sustaining Ecosystems



SPECIES IDENTIFICATION- 10%

Non-Game Animals
Predator & Furbearers
Game & Upland Birds
Waterfowl



WILDLIFE CONSERVATION & MANAGEMENT- 30%

North American Model of Wildlife Conservation
Population Ecology
Management Plans



HABITAT CONSERVATION & MANAGEMENT- 50%

Types of Habitats
History of Conservation
Importance of Conservation
Benefits, Threats, Legislation & Conservation & Management of the Following Habitats:
-Forests
-Grasslands
-Wetlands

Industry Standard Overview

To pass the Ducks Unlimited Ecology Conservation & Management Certification exam, certification candidates must have adequate knowledge of the industry standards. The following outlines an in-depth overview of the industry standards and sub-standards:

Industry Standard: Ecological Principles



- Ecology & Ecological Levels
 - Aquatic Biome
 - Forests Biome
 - Grasslands Biome
 - Wetlands
- Photosynthesis
- Niches
- Ecological Interaction Between Organisms
 - Mutualism
 - Commensalism
 - Competition
 - Predation
- Nutrient Flow
- Water Cycle
- Oxygen Cycle
- Carbon Cycle
- Nitrogen Cycle
- Phosphorus Cycle
- Energy Flow
- Ecological Succession
 - Primary
 - Secondary

Industry Standard: Species Identification



- Game & Upland Bird Identification
- Predator & Furbearer Identification
- Non-Game Animal Identification
- Waterfowl Identification
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Industry Standard: Wildlife Conservation & Management



- Wildlife Populations
- Changes in Abundance
- Rates

- Birth
- Immigration
- Death
- Emigration
- Measuring Populations
- Wildlife Population Dynamics
- Density Dependent & Independent Factors
- Biotic & Abiotic Factors
- Pollution
- Predation
- Parasitism
- History of Wildlife Management
 - 1885
 - 1933
 - 1935
 - 1937
 - 1940
- Wildlife Management Agencies
- Legal Regulation & Protections
- Species
 - Vulnerable Species
 - Endangered
 - Critically Endangered
 - Over-Abundant Species
- Monitoring Wildlife Populations & Methods
- Waterfowl
 - Ducks
 - Geese
 - Swans
- Plumage & Plumage Cycle
- Migration
- Take-Off Methods
- Incubation
- Nest Success
- Winter
- Waterfowl Habitats
- Legislation for Waterfowl Management
- Methods of Waterfowl Conservation
- Waterfowl Populations
- Parts Survey
- Banding
- Radio & Satellite Tracking
- Changes in Waterfowl Population

- Wildlife Conservation
- Fair Chase
- Sports Hunters
- The North American Model of Wildlife Conservation
- Managing Species & Habitats
- Federal Agencies
 - National Marine Fisheries Service
 - U.S. Fish and Wildlife Service
 - United States Forest Service
 - Bureau of Land Management
 - National Park Service
- Federal Conservation Law

Industry Standard: Habitat Conservation & Management



- Ecosystem Management
 - Air
 - Water
 - Soil
 - Wildlife
 - Fisheries
 - Timber
- U.S. Fish and Wildlife Services
- Fisheries
- Sustainability
- Habitats
 - Provisional Services
 - Cultural Services
 - Regulating Services
 - Supporting Services
- Habitat Loss
- Types of Habitats
 - Marine
 - Freshwater
 - Terrestrial
- Conservation & Management Timeline
 - 1872
 - 1903
 - 1905
 - 1916
 - 1933
- Methods of Conservation
- Forests

- Air Quality
- Water Quality
- Soil Erosion
- Deforestation
- Types of Forests
- Threats to Forests
- Unsustainable Logging Methods
- Urban Sprawl
- Invasive Species
- Pests
- Managing Forests
- Monitoring Burn Conditions
- Reforestation
- Agroforestry
- Sustainable Forest Use
- Laws Affecting Forest Management & Conservation
- Grasslands
 - Temperate Grasslands
 - Savannas
- Carbon Storage
- Fragmentation
- Conservation Bills
- Invasive Species
- Grassland Farming
- Wetlands
 - Marshes
 - Swamps
 - Bogs
 - Fens
- Wetland Threats
- Wetland Conversion
- Wetland Degradation
- Invasive Species
- Conservation of Wetlands
- Wetland Conservation Methods
- Protection
- Restoration
- Management
- Wetland Hydrology
- Wetland Plants
- Groundwater Recharge
- Baseflow Contribution
- Biological Uptake

- Habitat Provisions
- Wetlands Habitats
- Provisional Services
- Wetlands in the United States
- Government Programs
- Carbon Markets

Optional Preparation Materials Overview

The preparation materials offered by iCEV for the Ducks Unlimited Ecology Conservation & Management Certification was specifically created to prepare candidates for the certification exam. While it is not required to complete the preparatory materials before accessing the certification exam, Ducks Unlimited recommends certification candidates complete some form of training. The following outlines the lessons scope and objectives:

Lesson 1: Ecological Principles

1. To define ecosystems.
2. To define ecological succession.
3. To evaluate methods of monitoring and sustaining ecosystems.

Lesson 2: Principles of Habitat Conservation & Management

1. To define habitats.
2. To identify the types of habitats.
3. To explain the importance of managing land and resources.
4. To explain the importance of conservation.

Lesson 3: Forests: Conservation & Management

1. To explore the ecology of forests.
2. To explain the importance of forest habitats to North America and the earth.
3. To assess threats to forest habitats.
4. To demonstrate knowledge of managing and conserving forest habitats.

Lesson 4: Grasslands: Conservation & Management

1. To explore the ecology of grasslands.
2. To explain the importance of grassland habitats to North America and the earth.
3. To assess threats to grassland habitats.
4. To demonstrate knowledge of managing and conserving grassland habitats.

Lesson 5: Wetlands: Conservation & Management

1. To explore the ecology of wetlands.
2. To explain the importance of wetland habitats to North America and the earth.
3. To assess threats to wetland habitats.
4. To demonstrate knowledge of managing and conserving wetland habitats.

Lesson 6: Wetlands: Ecosystems Goods & Services

1. To identify physical, biological and ecological characteristics of wetland ecosystems.
2. To link physical, biological and ecological wetland characteristics to the goods and services wetlands provide for the benefit of society.
3. To consider how wetland goods and services can support wetland protection and restoration.

Lesson 7: Wildlife Population Ecology

1. To understand characteristics of wildlife populations.
2. To analyze factors which affect wildlife populations.

Lesson 8: Wildlife Management

1. To discuss the benefits of wildlife management.
2. To define habitat components necessary for thriving wildlife populations.
3. To identify techniques of wildlife management.

Lesson 9: Game & Upland Bird Identification

1. To identify various game and upland birds.
2. To describe the average size of various game and upland birds.
3. To identify the locations of various game and upland birds.
4. To describe the basic life history of game animals and upland birds.

Lesson 10: Predator & Furbearer Identification

1. To identify various predators and furbearers.
2. To describe life history traits of various predators and furbearers.
3. To identify the range of various predators and furbearers.

Lesson 11: Non-Game Animal Identification

1. To identify various non-game animals such as amphibians and reptiles, small mammals and common birds.
2. To describe various non-game animals such as amphibians and reptiles, small mammals and common birds.
3. To identify the range of various non-game animals such as amphibians and reptiles, small mammals and common birds.

Lesson 12: Waterfowl Identification

1. To identify the commonly encountered male waterfowl of North America.
2. To understand distribution of commonly encountered waterfowl in North America.
3. To learn basic life history traits of waterfowl in North America.

Lesson 13: Waterfowl Ecology

1. To understand the basic biology of waterfowl.
2. To learn basic taxonomy of waterfowl.
3. To learn basic morphology and plumages of waterfowl.
4. To distinguish between ducks, geese and swans.
5. To understand the basic life cycle of waterfowl.

6.

Lesson 14: Waterfowl: Conservation & Management

1. To explore the ecology of waterfowl.
2. To explain the importance of waterfowl to North America and the earth.
3. To assess threats to waterfowl.
4. To demonstrate knowledge of managing and conserving waterfowl populations and habitats.

Lesson 15: The North American Model of Wildlife Conservation

1. To analyze the importance of wildlife conservation.
2. To understand The North American Model of Wildlife Conservation.
3. To identify various agencies and laws pertaining to wildlife conservation.