The following is the blueprint for the National Pesticide Applicator Core Exam. This blueprint is the result of a job analysis that was conducted by the U.S. EPA and represents the key skills, knowledge and abilities required of certified pesticide applicators. This blueprint will be used to assess whether or not a potential applicant applying for reasonable accommodations under the Americans with Disabilities Act (ADA) meets the definition of a qualified applicant.

NATIONAL CORE EXAM BLUEPRINT

Chapter 1 - PEST MANAGEMENT

- Recognize the main groups of common pests and their basic biology
- Use pest control references and resources to help identify pests and recognize symptoms and damage
- Define various pest control methods (for example: biological, cultural, mechanical, sanitation, chemical controls).
- Define integrated pest management (IPM) (for example: prevention, avoidance, suppression, management)
- Describe how pest population thresholds trigger control procedures
- Recognize relevant environmental variables that influence pest populations (for example: weather, geographic barriers, cultural practices, nutrient supply)
- Describe errors that result in ineffective pest control (for example: pest misidentification, wrong dosage, incorrect application timing, product choice, or resistance)
- Describe how pesticide resistance develops and strategies to delay resistance
- Explain the importance of the mode of action and its role in managing pesticide resistance.

Chapter 2 – FEDERAL PESTICIDE LAWS

- Describe laws and regulations related to pesticide use (for example: FIFRA, FFDCA, registration, recordkeeping)

Chapter 3 – PESTICIDE LABELING

- Identify the types information found on an EPA registered pesticide product label
- Identify the common, chemical, and brand or trade names of pesticides on their labels
- Identify the active ingredient and its percentage in a formulation
- Determine who may use a pesticide and how it may be used on the basis of its use classification (restricted, unclassified)
- Differentiate between relative hazard levels associated with pesticides whose labels contain the following signal words: DANGER-POISON, DANGER, WARNING, and CAUTION

- Read and apply label instructions including, but not limited to:
    - A directions for use, warnings, terms, symbols, restrictions, and precaution
    - personal protective equipment statements and practical treatment/first-aid statements
    - environmental, physical, or chemical hazards and follow necessary precautions
    - mixing and loading, storage, and disposal statements
    - restricted-entry statements, early-entry exceptions, preharvest intervals, and plantback/recropping limitations

- Describe the information on material safety data sheets (MSDS)
- Describe the difference between a pesticide label and MSDS

Chapter 4 – PESTICIDE FORMULATIONS

- Define a pesticide formulation
- Define common abbreviations used to describe formulations (for example: WP, DF, EC, RTU, S, G, ULV)
- List advantages and disadvantages of common formulation types (for example: dusts, granules, wettable powders, dry flowables, microencapsulated, aerosols)
- Define the types of adjuvants (for example: buffers, stickers, spreaders)

Chapter 5 – PESTICIDE HAZARDS AND FIRST AID

- Describe the relationship between hazard, toxicity and exposure
- Identify and distinguish between acute, delayed, allergic, and chronic effects associated with pesticide exposure
- List common ways that pesticide applicators are exposed to pesticides
- Describe symptoms of acute pesticide exposure
- Describe typical symptoms of heat stress
- Identify first aid responses to pesticide exposure

Chapter 6 – PERSONAL PROTECTIVE EQUIPMENT

- Define personal protective equipment (PPE)
- Describe proper use of PPE
- Identify situations where PPE beyond the label minimum would be beneficial
- List the proper PPE for protection of skin, eyes, and respiratory tract and based on the activity and the label (for example: mixing and loading, equipment repair)
- Recognize wear and tear, damage, or other failures to PPE that may lead to exposure
- Explain how to clean and maintain PPE according to manufacturers' recommendations
- Explain when and how to store and/or dispose of used PPE

Chapter 7 – PESTICIDES IN THE ENVIRONMENT

- Describe how pesticides move in air, soil and water (such as drift, leaching, runoff, volatility)
- List site characteristics that influence pesticides movement in the environment (such as – types of terrain, drainage patterns, soil, presence of non-target organisms and endangered species, drift, weather, groundwater and surface water)
- List the chemical and physical characteristics of pesticides that influence their movement in the environment (such as absorption, adsorption, volatility, persistence, solubility)
- Explain how to prevent off-target pesticide movement
- Describe how pesticides can impact nontarget organisms including endangered species
- Recognize potentially sensitive areas that could be adversely affected by pesticide related activities (including application, mixing and loading, storage, disposal, and equipment washing)
- List procedures to prevent contamination associated with mixing and loading and equipment washing

Chapter 8 – TRANSPORTATION, STORAGE, AND SECURITY

- Explain the importance of pesticide security
- Identify the components of a pesticide storage area (such as secured, ventilated, posted)
- Describe label direction for pesticide storage
- Explain how inventory control methods can be used to prevent excess pesticide storage
- Describe how to check pesticide container integrity (such as labels, damage, containers closed, residue and expired products)
- Explain how to prepare for potential spills (including spill kits and accessible material safety data sheets)
- Describe how to dispose of pesticide wastes
- Describe how to restrict access to pesticides by unauthorized personnel during transportation
- Outline how to transport pesticides safely and securely
- Describe intent of SARA Title III

Chapter 9 – EMERGENCY OR INCIDENT RESPONSE

- Define emergency response procedures and how to execute an emergency response plan (such as contact agencies, administer first aid, clean up spills)
- Describe how pesticide leaks, spills, and fires can have harmful effects on humans and the environment
- Explain how to cleanup pesticide spills
- Explain how to properly dispose of contaminated materials from pesticide spills
- Identify components of emergency response equipment (such as:spill kit, first-aid kit, personal protective equipment)

Chapter 10 – PLANNING THE PESTICIDE APPLICATION

- Identify how to select appropriate pesticides and additives
- Review pesticide label information and understand the legal restrictions pertaining to an application, including avoiding non-target organisms and surfaces
- Determine if pesticides may be tank mixed (compatibility, legality)
- Describe how to prevent contamination of water by pesticides during mixing, loading, and cleaning
- Identify PPE to wear during mixing, loading, and cleaning
- Explain how to safely open pesticide containers and accurately measure pesticides using the proper measuring devices
- Describe how to rinse and dispose of pesticide containers properly
- Explain how to clean and properly store application equipment after use

Chapter 11 – PESTICIDE APPLICATION

- Identify the application procedure, equipment, pesticide and formulation appropriate to the situation
- Describe when to use additional pesticide safety systems (such as: closed-system, enclosed cab, pesticide containment)
- Explain the factors that affect calibration (such as: nozzles, volumes, pressures)
- Explain the importance of calibrating application equipment
- Explain the principles of equipment calibration
- Calculate the size of the application area
- Determine the pesticide application rate
- Calculate the amount of pesticide concentrate and diluent to use
- Identify drift reduction practices

Chapter 12 – PROFESSIONAL CONDUCT

- Understand the importance of keeping records of pesticide training for uncertified individuals
- Assure that individuals you supervise can understand and follow application procedures
- List the laws and regulation that apply to you
- Describe communication procedures with others (neighbors, customers) about pesticide applications (such as: pesticide sensitivity registries, restricted-entry instructions, post-application requirements, harvest intervals)
- Provide notification and signage required by laws and regulations
- Explain ways to address or refer public inquiries about pests and pesticide applications