

Agriculture, Food, and Natural Resources: Natural Resource Technology

Utilize data and resources - the student will be able to: CTE.NRT.21.0

- A** Utilize word processing, databases, computer graphics, statistics programs, spreadsheets, Internet, and GIS. CTE.NRT.21.01

- B** Locate and interpret reference materials. CTE.NRT.21.02

- C** Maintain necessary/required record keeping practices and procedures. CTE.NRT.21.03

- D** Discuss Federal and state requirements for (TMDL) Total Maximum daily loads and minimum flows and levels. CTE.NRT.21.04

- E** Describe the establishment and implementation of TMDL in Florida. CTE.NRT.21.05

- F** Identify potential sources of point and non-point pollution. CTE.NRT.21.06

- G** Identify the five water management districts in Florida. CTE.NRT.21.07

- H** Define minimum flows and levels for a water management district. CTE.NRT.21.08

Determine the quality and quantity of water resources – the student will be able to CTE.NRT.22.0

- A** Understand pretreatment, primary, secondary, and tertiary treatment processes of wastewater. CTE.NRT.22.01

- B** Describe wastewater disposal options. CTE.NRT.22.02

- C** Identify septic tanks types and functions. CTE.NRT.22.03

- D** Determine water quality of groundwater, rivers, lakes, and spring water. CTE.NRT.22.04

- E** Determine stream flow. CTE.NRT.22.05

- F** Collect, store and label water samples from a representative test site. CTE.NRT.22.06

- G** Determine the quality of water samples by measuring for pH, turbidity, dissolved solids and dissolved oxygen. CTE.NRT.22.07

H Investigate water shed boundaries and drainage patterns. CTE.NRT.22.08

I Monitor water levels of rivers, streams, ponds and lakes. CTE.NRT.22.09

Describe stormwater systems – the student will be able

to: CTE.NRT.23.0

A Demonstrate knowledge of runoff through use of terminology CTE.NRT.23.01

B Recognize soil types and land cover as related to runoff. CTE.NRT.23.02

C Recognize erosion, non-point source pollution and erosion control methods. CTE.NRT.23.03

D Define topography and groundcover and its effects on stormwater. CTE.NRT.23.04

Develop map reading skills – the student will be able to:

CTE.NRT.24.0

A Review aerial maps. CTE.NRT.24.01

B Interpret topographical and flood plain maps. CTE.NRT.24.02

C Interpret legal land descriptions. CTE.NRT.24.03

D Interpret current and historical aerial photography for land cover and land use applications. CTE.NRT.24.04

F Explain topographic map symbols and legends. CTE.NRT.24.05

G Measure acreage on maps. CTE.NRT.24.06

H Determine location and other information from maps, using technology such as Global Positioning System (GPS) and/or compass. CTE.NRT.24.07

Use Geographic Informational (GIS) and Global Positioning (GPS) Systems – the student will be able

to: CTE.NRT.25.0

A Define GIS and its function. CTE.NRT.25.01

B Use GIS software. CTE.NRT.25.02

C Learn GIS applications. CTE.NRT.25.03

D Define GPS and its function. CTE.NRT.25.04

E Collect GPS data and load on GIS. CTE.NRT.25.05

F Identify other remote sensing tools. CTE.NRT.25.06

Describe procedures for managing hazardous materials – the student will be able

to: CTE.NRT.26.0

A Describe flow and life cycles of materials. CTE.NRT.26.01

B Identify proper chemical handling and storage guidelines. CTE.NRT.26.02

C Describe material management procedures. CTE.NRT.26.03

D Identify waste minimization, pollution prevention and alternatives to disposal. CTE.NRT.26.04

E Describe shipping and transportation procedures for hazardous materials. CTE.NRT.26.05

F Identify principles of toxicology. CTE.NRT.26.06

G Identify routes of exposure. CTE.NRT.26.07

H Discuss common chemical compatibility. CTE.NRT.26.08

Prepare a plan for a mock disaster activity – the student will be able to: CTE.NRT.27.0

A Describe the need for and types of pre-planning. CTE.NRT.27.01

B Identify and select necessary agency involvement for the type of disaster. CTE.NRT.27.02

C Identify possible areas and types of impacts CTE.NRT.27.03

D Write and evaluate contingency plans. CTE.NRT.27.04

E Create a plan for a disaster clean up including needed materials and equipment. CTE.NRT.27.05

Identify career opportunities and organizational dynamics – the student will be able to: CTE.NRT.28.0

A Identify careers and opportunities in the following fields: agriculture, Surface/stormwater, drinking water, wastewater, groundwater, land resources, air quality, solid waste, and HAZMAT. CTE.NRT.28.01

B Identify the opportunities for leadership development available through an appropriate student and/or professional organization. CTE.NRT.28.02