



# WATERSHED 360°

EPISODE 5 | "LIFEBLOOD" (5:06)

## NE Social Studies and/or Science Standards Addressed

### Geography-Location and Place

SS 4.3.1 Explore where (spatial) and why people, places, and environments are organized in the state and around the world.

SS 4.3.1.a Use local and state maps and atlases to locate physical and human features in Nebraska.

### Geography-Human-Environment Interaction

SS 4.3.3 Explain how human and natural forces have modified different environments in Nebraska and how humans have adapted.

SS 4.3.3.b Identify examples of ecosystems in Nebraska and describe related environmental issues.

SS 4.3.3.d Describe how humans have adapted to Nebraska's physical environment and use available natural resources.

### Geography-Geospatial Skills and Geo-literacy

SS 4.3.5 Use geographic skills to make connections to issues and events.

SS 4.3.5.b Explain the interrelationships of human or physical geographic characteristics of places in Nebraska.

### Geography-Location and Place

SS 5.3.1 Explore where (spatial) and why people, places and environments are organized in the United States.

SS 5.3.1.a Use maps and atlases to locate major human and physical features in the United States.

*(continues next page)*

**Each episode of Watershed 360° begins with the same two questions. "Who cares about a watershed? And why?"**

**Each episode ends with the question, "Do you know your watershed?"**

Tell students that they should be able to answer these questions after viewing most or all of the episodes. However, the first two questions have many different answers.

[Watershed\\_questionsposters.pdf](#)



## OBJECTIVE(S)

Students will explain the purposes and methods of managing water.

Students will explain the benefits of irrigation in western Nebraska.

## VOCABULARY

**acre:** a unit of land that is 43,560 square feet (or roughly the size of a football field without the end zones)

**arid:** dry

**irrigation:** watering land, usually for agriculture, by artificial means  
<https://www.nationalgeographic.org/glossary/?term=irrigation>

**irrigation canal:** channel dug between a source of water and crops. Also called an irrigation ditch.

<https://www.nationalgeographic.org/glossary/?term=canal>

## CAPTIONS

Farmers Irrigation District manages water diverted from the river into the Tri-State Canal System. 0:53

This canal system sends water downstream to 60,000 acres of farmland in western Nebraska. 1:34

These small check dams are constructed of wooden board called "needles." 2:22

Nebraska leads the nation in total irrigated acres. 2:51

Irrigation makes agriculture possible on millions of acres of arid land. 3:03

A series of check dams constructed along the canal manage water flow velocity. 3:18

Colorado, Wyoming, and Nebraska manage flows to create and maintain wildlife habitat. 4:24



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GRADES 4-8

## Geography-Regions

SS 5.3.2 Compare the characteristics of places and regions and draw conclusions on their impact on human decisions.

SS 5.3.2.a Identify criteria used to define regions within the United States.

SS 5.3.2.b Identify and classify regions and places within the United States using physical and human features.

## SC.5.13 Earth's Systems

SC.5.13.4 Gather and analyze data to communicate understanding of Earth's systems.

SC.5.13.4.A Develop a model using an example to describe ways the geosphere, biosphere, hydrosphere, and/or atmosphere interact.

SC.5.13.4.B Describe and graph the amounts of salt water and fresh water in various reservoirs to provide evidence about the distribution of water on Earth.

SC.5.13.4.C Obtain and combine information about ways individual communities use science ideas to protect the Earth's resources and environment.

## LOCATION

North Platte River (1 mile inside of Wyoming state line)

## QUESTIONS

1. What does it mean to "manage" water? (*The amount of water available in the West varies so capturing, releasing, and diverting water helps users. Water can be stored in reservoirs or rerouted through dams so it reaches users when and where they need it most.*) Note: This question also appears in the Episode 4 viewer's guide.

2. How much farmland is irrigated by the canal system in western Nebraska? (*60,000 acres*) How much water are farmers allowed each year? (*about 14-18 inches*)

Refer to the "Average Annual Precipitation" map on page 9 of the Student Atlas of Nebraska by Dr. Randy Bertolas (*see resource note #2 below*). About how many inches of precipitation does most of western Nebraska receive each year? (*16-21 inches or less*) When combined with the amount of irrigation water farmers are allowed each year, what is the approximate total? (*30-39 inches*) How does this compare to the annual amount of precipitation in eastern Nebraska? (*Eastern Nebraska receives 25-30+ inches each year so it is a similar amount*) [<https://ne150.org/education>]

3. What types of crops do farmers grow in western Nebraska? (*potatoes, sugar beets, corn, alfalfa, edible beans*)

4. Refer to the *Student Atlas of Nebraska* by Dr. Randy Bertolas. Use the maps on pp. 37-40 to examine the types of crops grown in Nebraska. Compare the western and eastern parts of the state. Students should see that more crops are grown in the eastern part due to the higher amounts of precipitation. Use the precipitation map on page 9 to help students draw this conclusion (also based on information in the video). Which crops seem to grow well in western Nebraska? (*sugar beets, dry edible beans*) [<https://ne150.org/education>]

5. What else is the water used for? (*It is released to provide water for endangered species. It is also released into the lowlands for cranes so they can feed. The water cleans and rebuilds the sandbars so the cranes can nest.*)

6. "Who cares about a watershed? And why?" *Farmers need water to irrigate crops in the dry west. Wildlife need water for habitat and feeding. "Water is irreplaceable. And we need to watch it, preserve, take care of it for future generations."* - Kevin Adams

