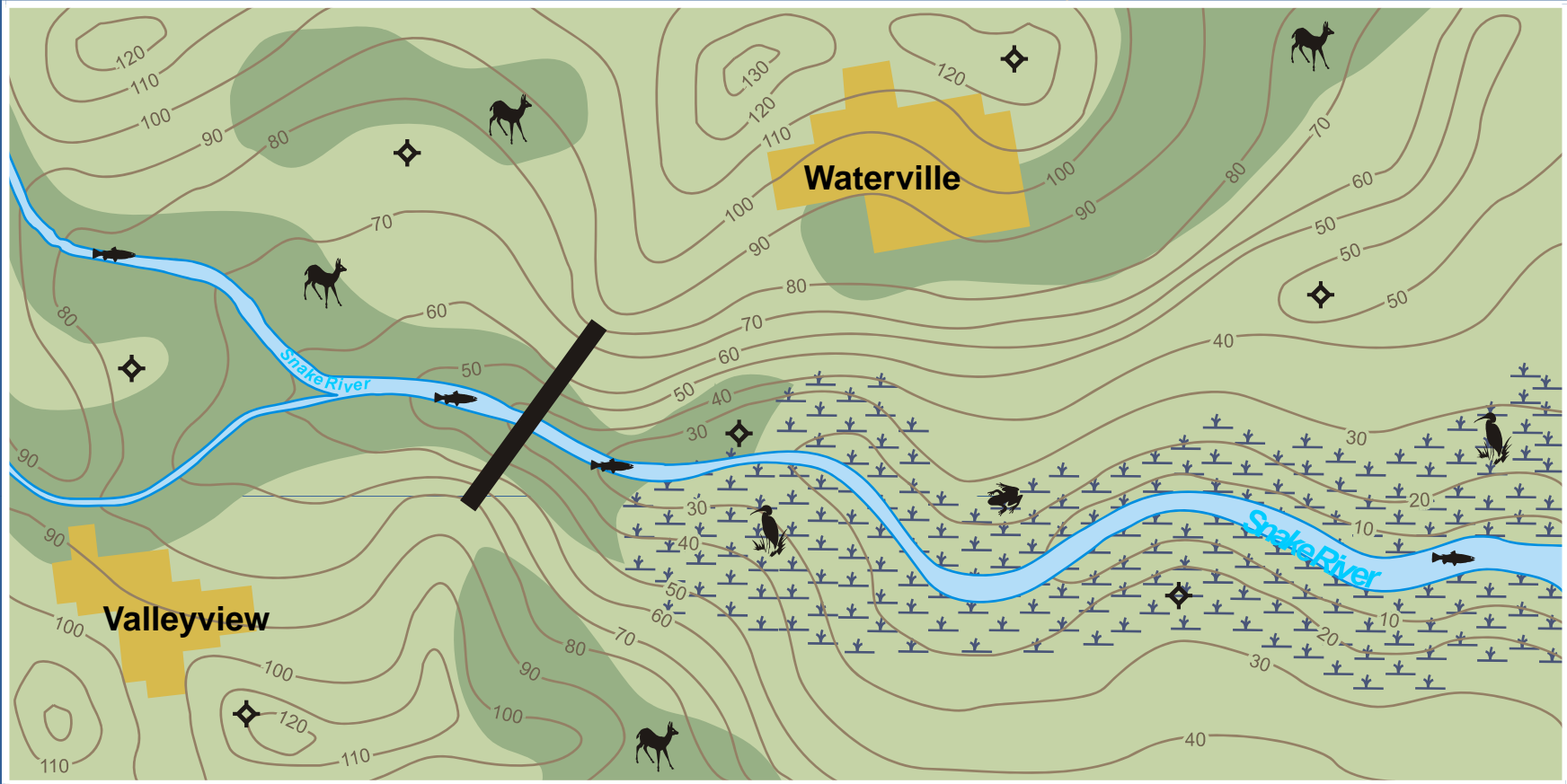


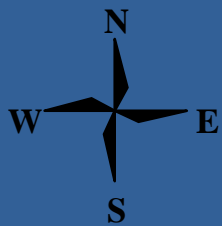
Geographic Thinking Exercise: Building a Dam

Charlie Fitzpatrick, GIS in Schools Program Manager
Dr. Joseph Kerski, ESRI Curriculum Development Manager








Contour interval = 10 feet







Cultural Features

-  Dam
-  City
-  Archaeological Site

Vegetation Zones

-  Grassland
-  Swamp
-  Forest

Wildlife

-  Deer
-  Cranes
-  Fish
-  Frogs








Snake River

Building a Dam: What Will Happen If We Construct It?

Task:

A dam is going to be built on the Snake River. When it is finished, a lake with a maximum depth of about 40 feet will be formed. What are some of the impacts of this action? Use the Snake River map to answer the questions below.

Questions:

1. What direction is the Snake River flowing? Circle one: North to South East to West West to East
2. Color the LOWEST elevation area on the map in **YELLOW** or a diagonal line pattern.
3. Color the HIGHEST elevation area on the map in **RED** or a solid black pattern.
4. With the information about which direction the river is flowing, you can figure out on which side of the dam the lake will form. Draw in the lake on the map in **BLUE** or a cross-hatch pattern. (Remember that the lake will have a maximum depth of about 40 feet).
5. What vegetation will be underwater after the dam is built? Circle one or more:   
6. How many deer sites can you find on the map? Circle one: 2 3 4 6
7. What wildlife will the new lake affect? Circle one or more:    
8. Will there be any archaeological sites affected? If yes, which ones? Circle one: YES NO
9. Which city is closest to the new lake? Circle one: Waterville Valleyview

What will happen when we build this dam?





Building a Dam: What Will Happen If We Construct It?

Answer Slide

Task:

A dam is going to be built on the Snake River. When it is finished, a lake with a maximum depth of about 40 feet will be formed. What are some of the impacts of this action? Use the Snake River map to answer the questions below.

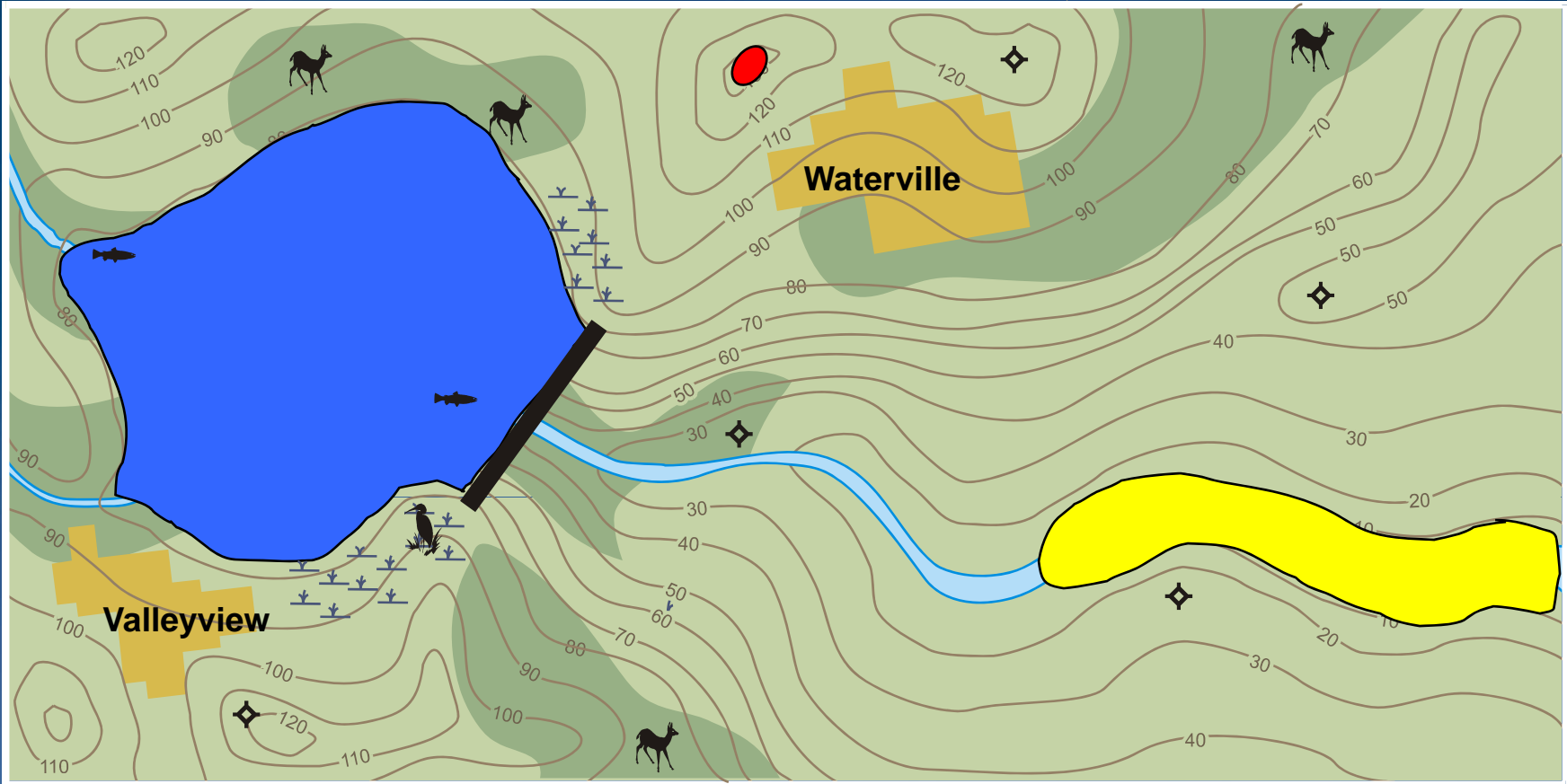
Questions:

1. What direction is the Snake River flowing? Circle one: North to South East to West **West to East**
2. Color the LOWEST elevation area on the map in **YELLOW** or a diagonal line pattern.
3. Color the HIGHEST elevation area on the map in **RED** or a solid black pattern.
4. With the information about which direction the river is flowing, you can figure out on which side of the dam the lake will form. Draw in the lake on the map in **BLUE** or a cross-hatch pattern. (Remember that the lake will have a maximum depth of about 40 feet).
5. What vegetation will be underwater after the dam is built? Circle one or more: 
6. How many deer sites can you find on the map? Circle one: 2 3 **4** 6
7. What wildlife will the new lake affect? Circle one or more: 
8. Will there be any archaeological sites affected? Circle one: **YES** NO
If yes, which ones?

Two sites behind the dam will be submerged when the lake forms.

Two sites in the swamp area will probably dry out as stream flow will change.

9. Which city is closest to the new lake? Circle one: Waterville **Valleyview**






Contour interval = 10 feet







Cultural Features

-  Dam
-  City
-  Archaeological Site

Vegetation Zones

-  Grassland
-  Swamp
-  Forest

Wildlife

-  Deer
-  Cranes
-  Fish
-  Frogs

Answer Slide

Snake River