



## Considering Flood Risk

**ABOUT THIS ANSWER KEY** ► Use these answers to help grade student work. Ensure that student answers consider both what they find on the floodplain map as well as the decision that the individuals in the scenarios are trying to make and whether they are vulnerable to flooding.

1. Jane Higgins, a land developer, is planning to build a new shopping center. She is trying to decide on a location and has it narrowed down to two locations on 28th Street.
  - One location is just north of Pearl Street on 28th St.
  - The other is just south of Arapahoe Ave on 28th St.

She wants to know whether there is a risk of flooding at either location. *Is one location more prone to flooding? If so, why?*

► **Student answers should indicate that the location at Pearl Street is in the 500 year floodplain while the location at Arapahoe is in the 100 year floodplain. This means that a flood is more likely at Arapahoe than Pearl.**

2. Max Washington lives in a house just west of Boulder Reservoir. Because he can see the water in the reservoir from his living room windows, he is wondering whether buying flood insurance would be a good idea. *What can you tell max about the risk that his home could flood?*

► **Student answers should indicate that his house west of Boulder Reservoir is not in the floodplain. Even though he can see the water, it is unlikely to flood towards his house.**

3. Juan and Marsha Martinez live near Four Mile Canyon Creek and Broadway. They are planning to renovate the basement to make a family room with carpet and couches and a big screen TV. Their basement flooded last year, so Marsha thinks it will be safe from floods for the next 99 years if it is in the floodplain. *Do you agree with her? Why or why not?*

► **Student answers should indicate that the area is in the 100 year floodplain which has a 1% chance of flooding each year. Marsha is wrong; it does not flood every 100 years. Their basement would be at risk of flooding.**

4. Boulder Birders, a local birdwatching group, has always wanted to preserve natural land for a bird sanctuary. Thanks to a big donation, they are now able to buy land to make this dream a reality. They are looking at land that is for sale at south of Jay Road along Boulder Creek on the east side of town. One of the birders asked the rest of the group whether this land is at risk of flooding. *Is the land at risk of flooding? And if so, how would this impact their project?*

► **Student answers should include that the area is in the floodplain and is, thus, prone to flooding. Answers should also include that floods are a natural part of this environment so if they are trying to preserve natural land, flooding shouldn't be a problem.**