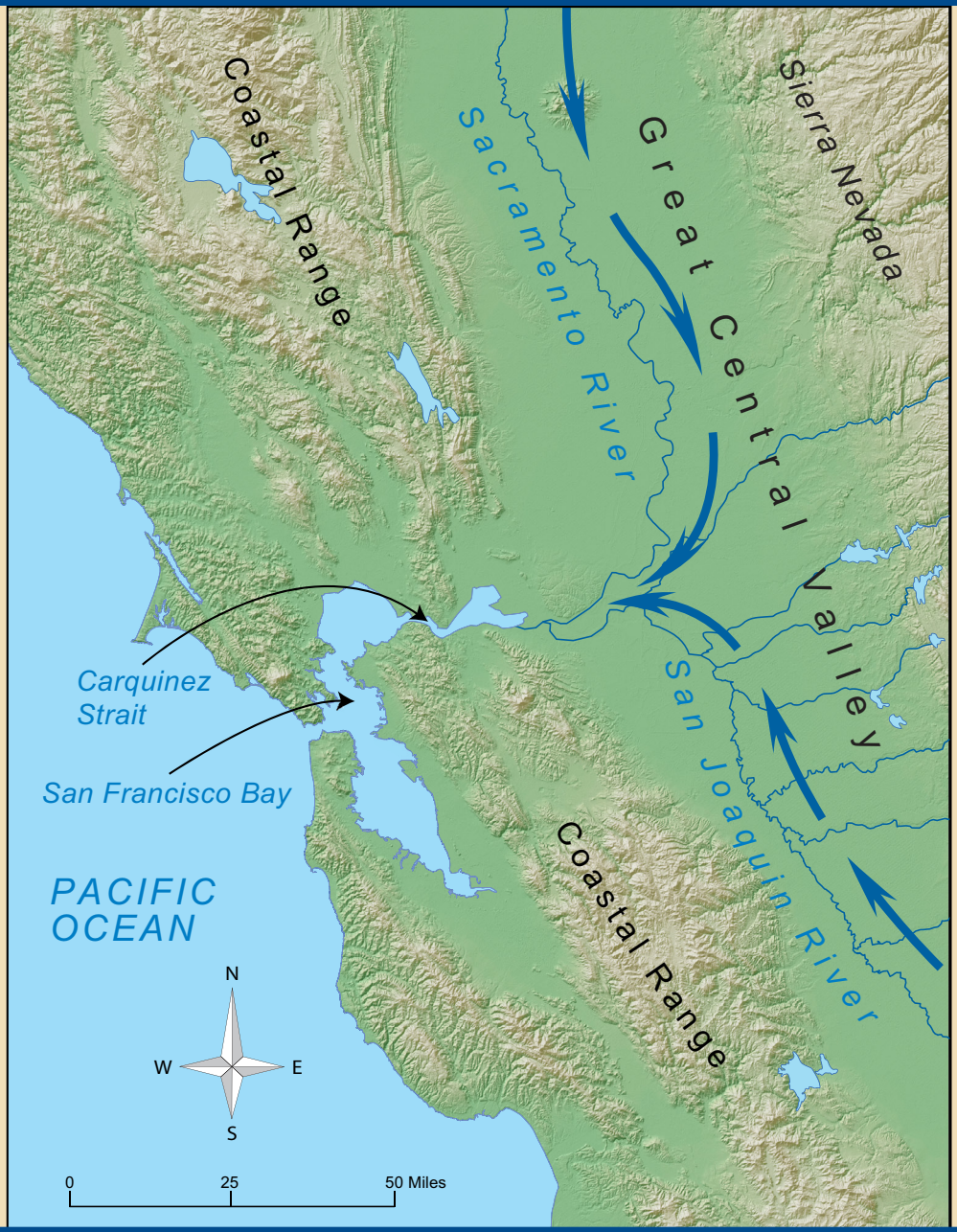
# VA #1 The Sacramento-San Joaquin River Delta



# VA #2 Mountain Stream

# VA #3 Delta Slough

# VA #4 The Benefits of Rivers: Irrigation

# VA #5 The Benefits of Rivers: Recreation

# VA #6 The Benefits of Rivers: Soil Renewal

# VA #7 The Benefits of Rivers: Power Generation

# VA #8 The Benefits of Rivers: Transportation

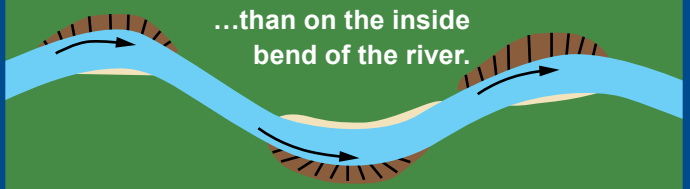
# VA #9 The Benefits of Rivers: Fish and Wildlife

# VA #10 The Benefits of Rivers: Drinking Water

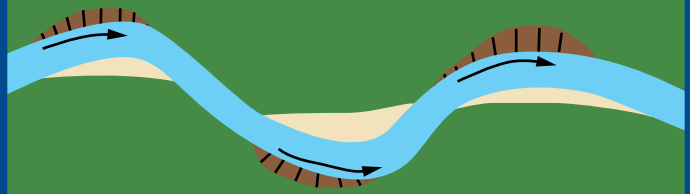
# VA #11 Meandering River

# VA #12 Erosion and Deposition

The water in a river channel flows faster round the outside bend of a river…

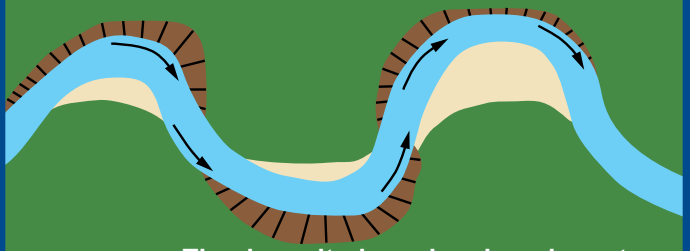



Faster flowing water on the outside bend erodes the river bank.



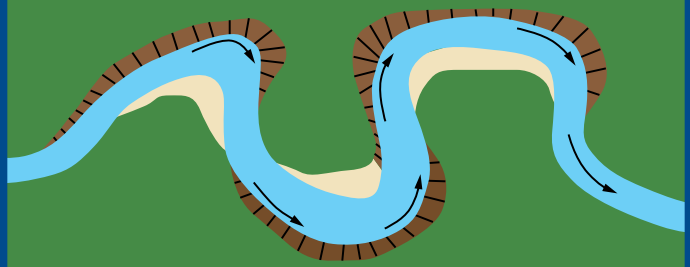
Slow moving water deposits sand and mud on the inside bend.

Where the river bank is being eroded, a steep river cliff is created.

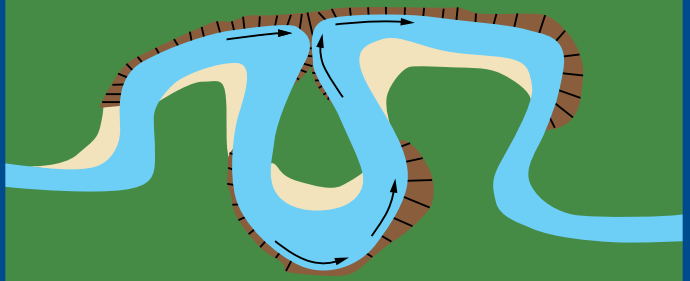


The deposited sand and mud creates a river beach or slip-off slope.

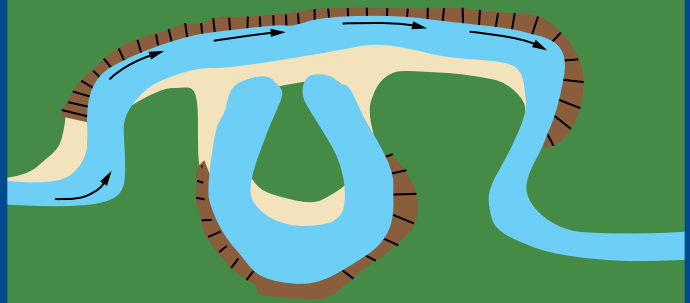
The river continues to erode and deposit material. Eventually the curves of the river channel become very close.



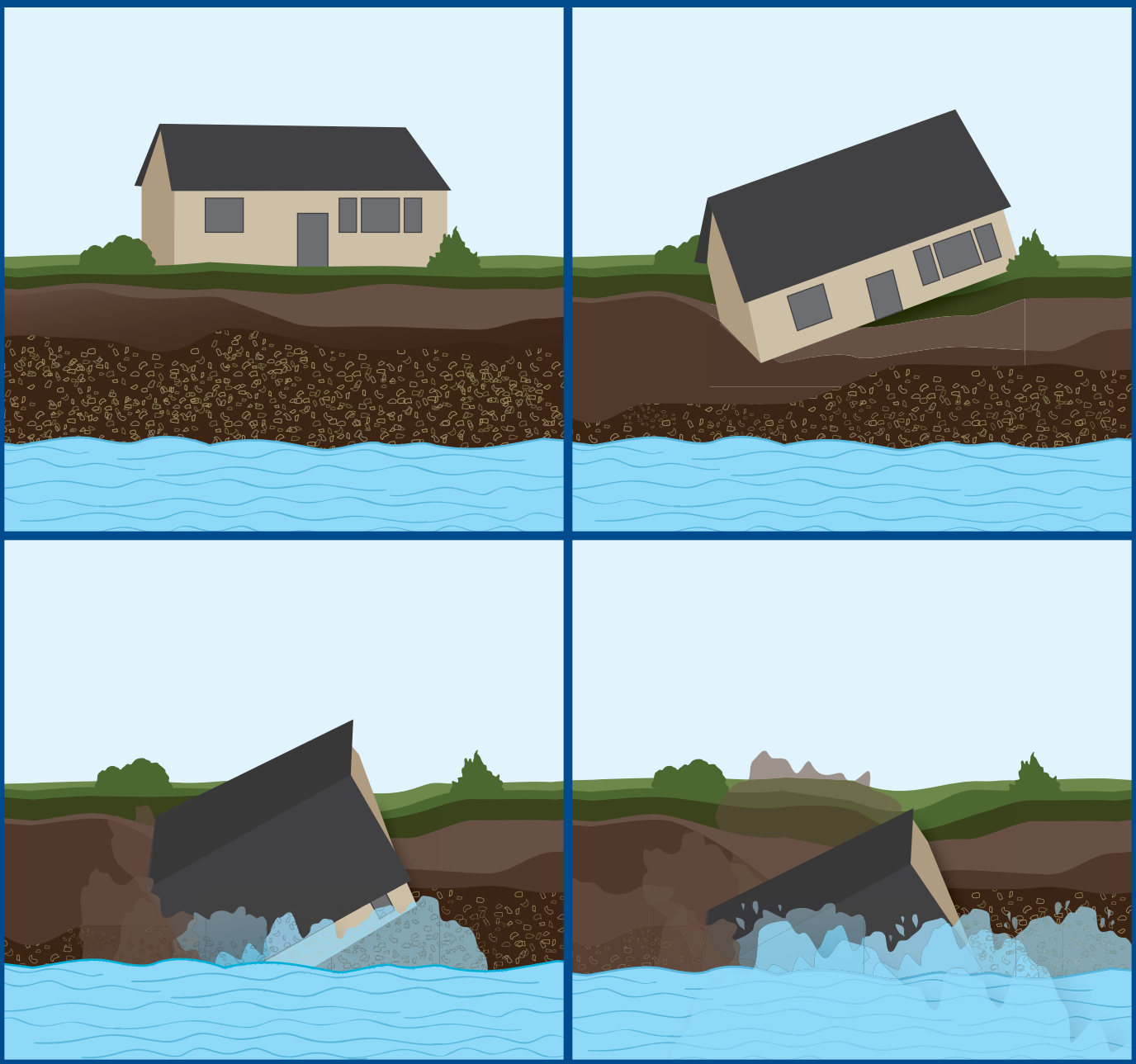
The river breaks through this thin barrier. The water no longer flows round the meander but straight along the new channel.



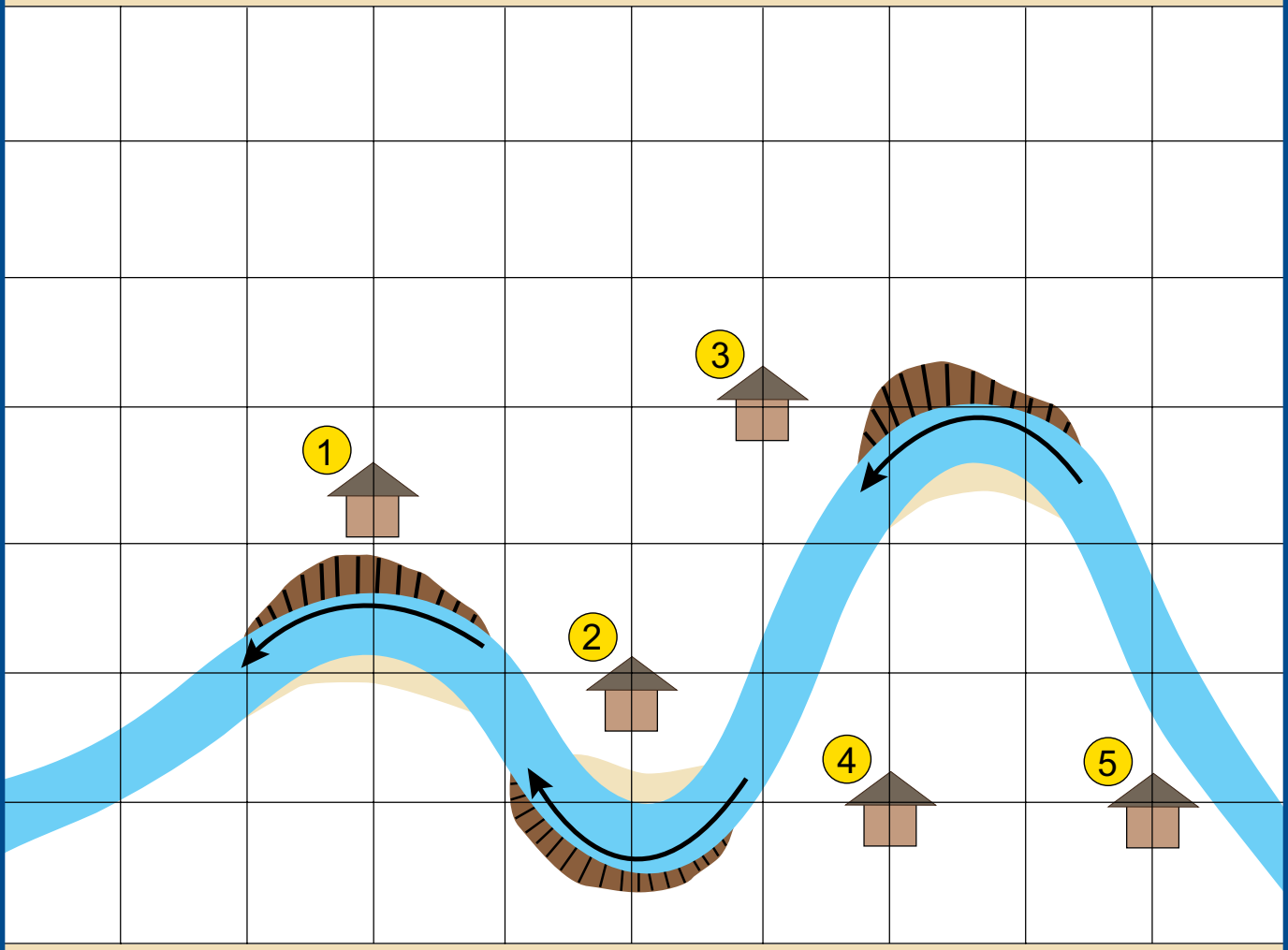
The old course of the river channel becomes an oxbow lake. This lake soon dries out.



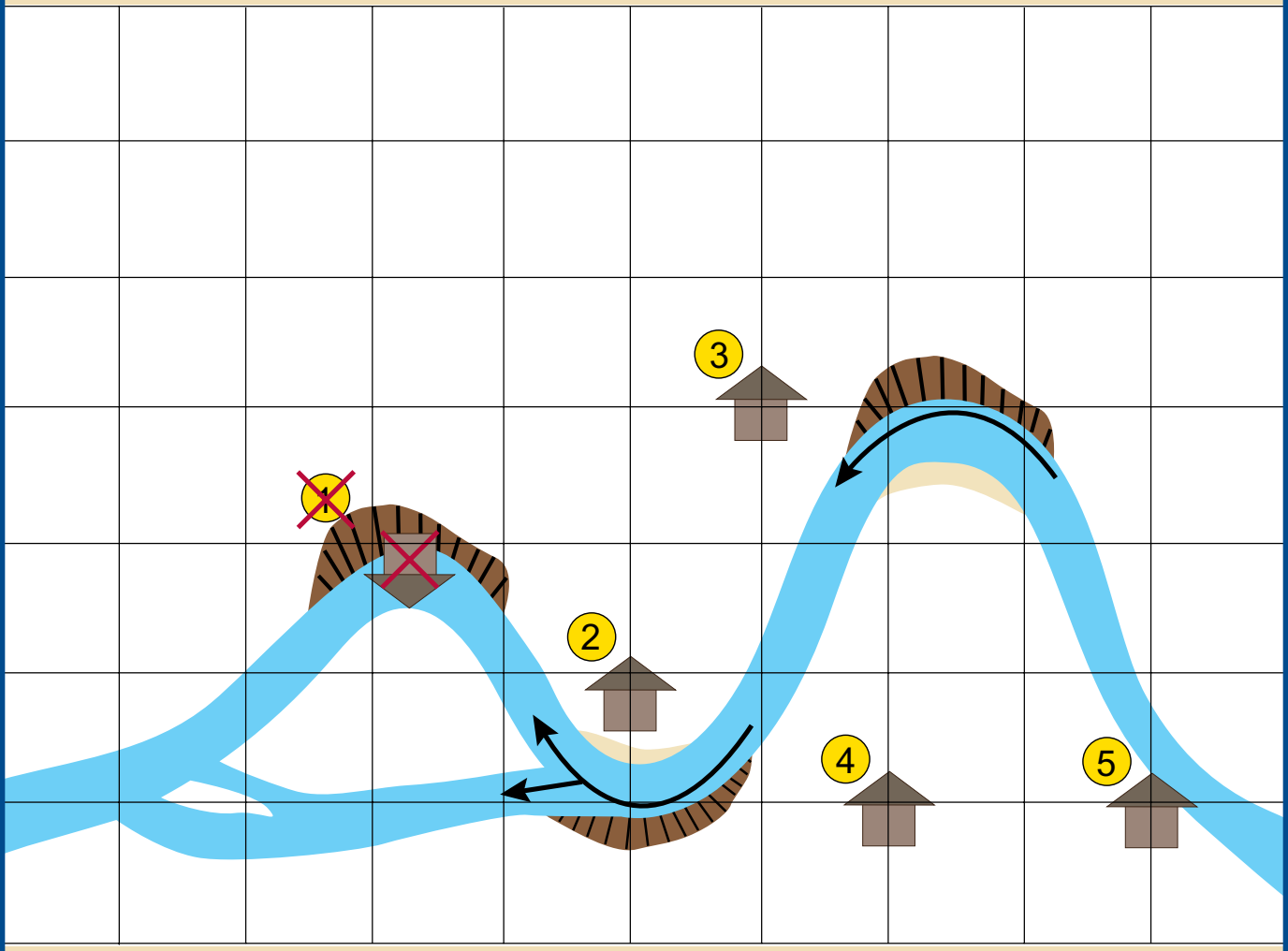
# VA #13 House Falling into a River



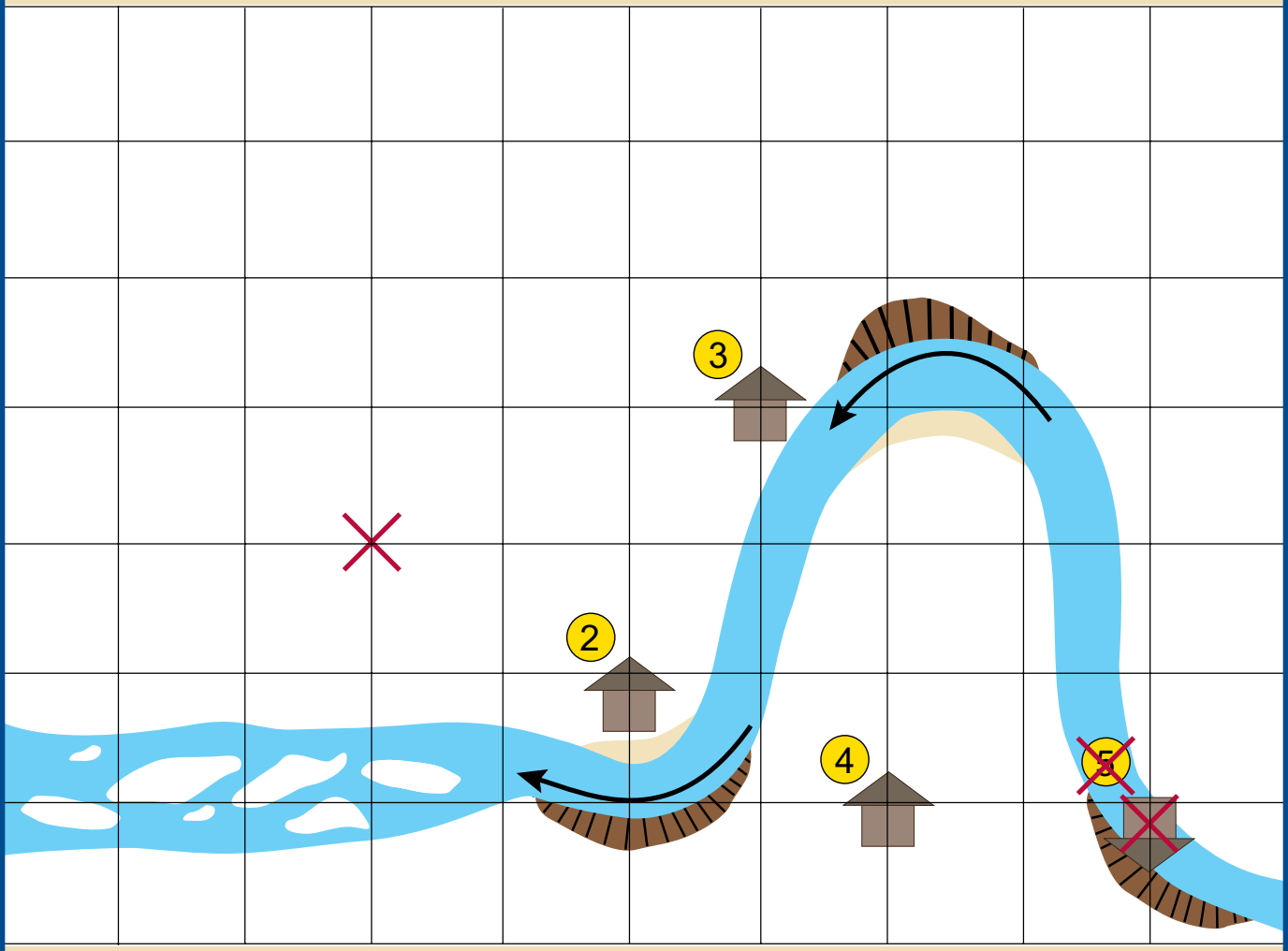
# VA #14 Houses on the Floodplain: 1960



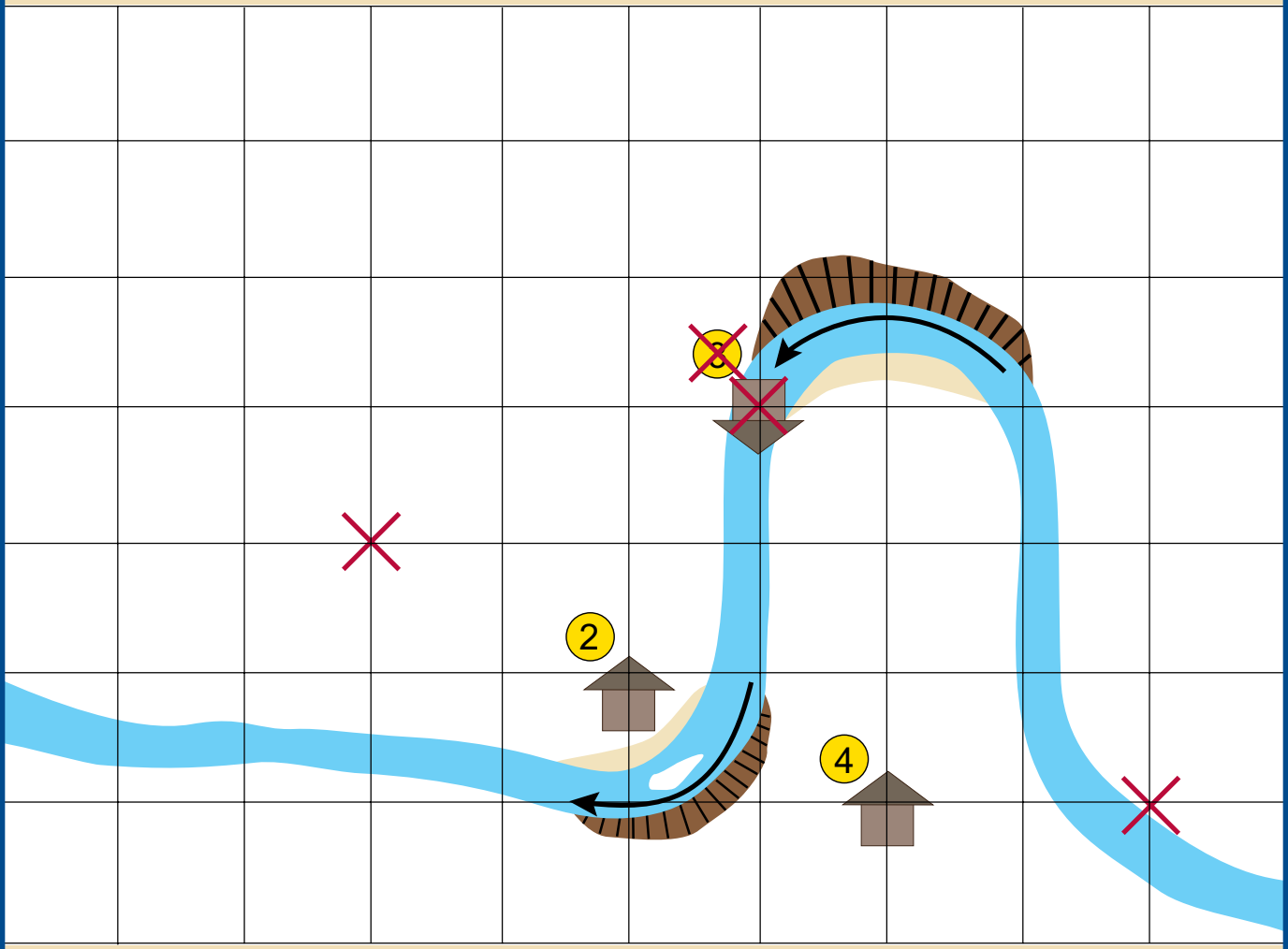
# VA #15 Houses on the Floodplain: 1965



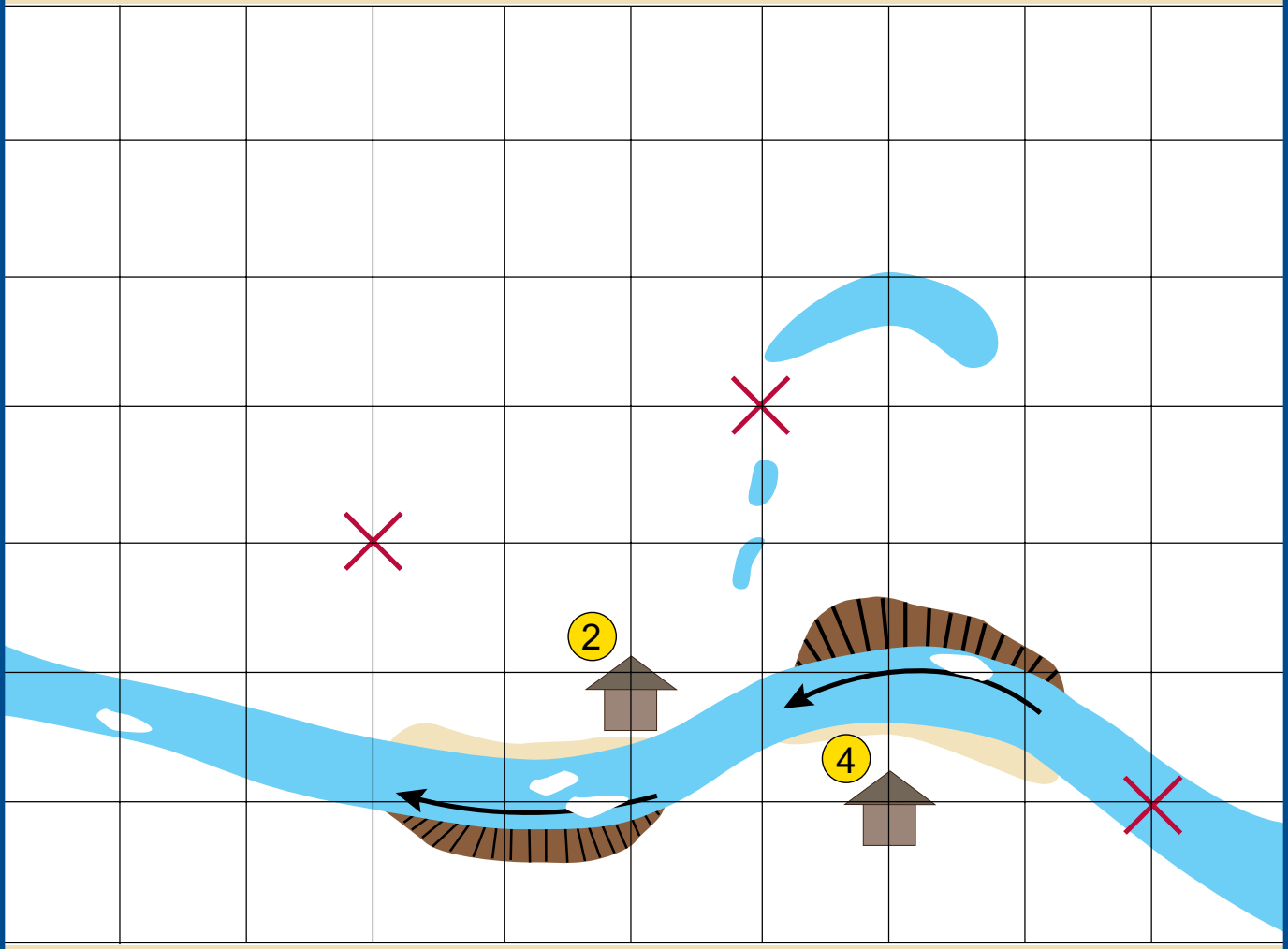
# VA #16 Houses on the Floodplain: 1970



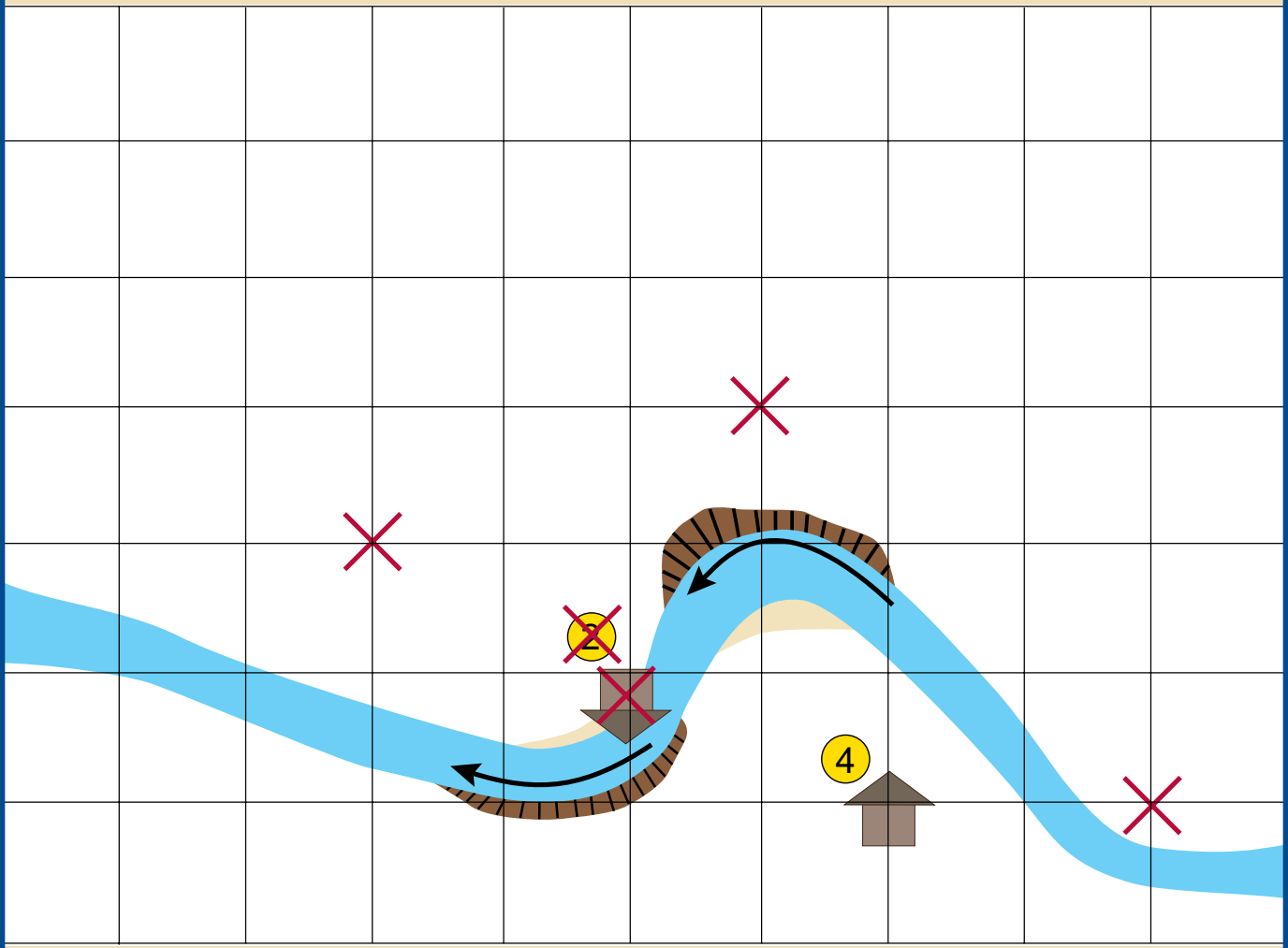
# VA #17 Houses on the Floodplain: 1975



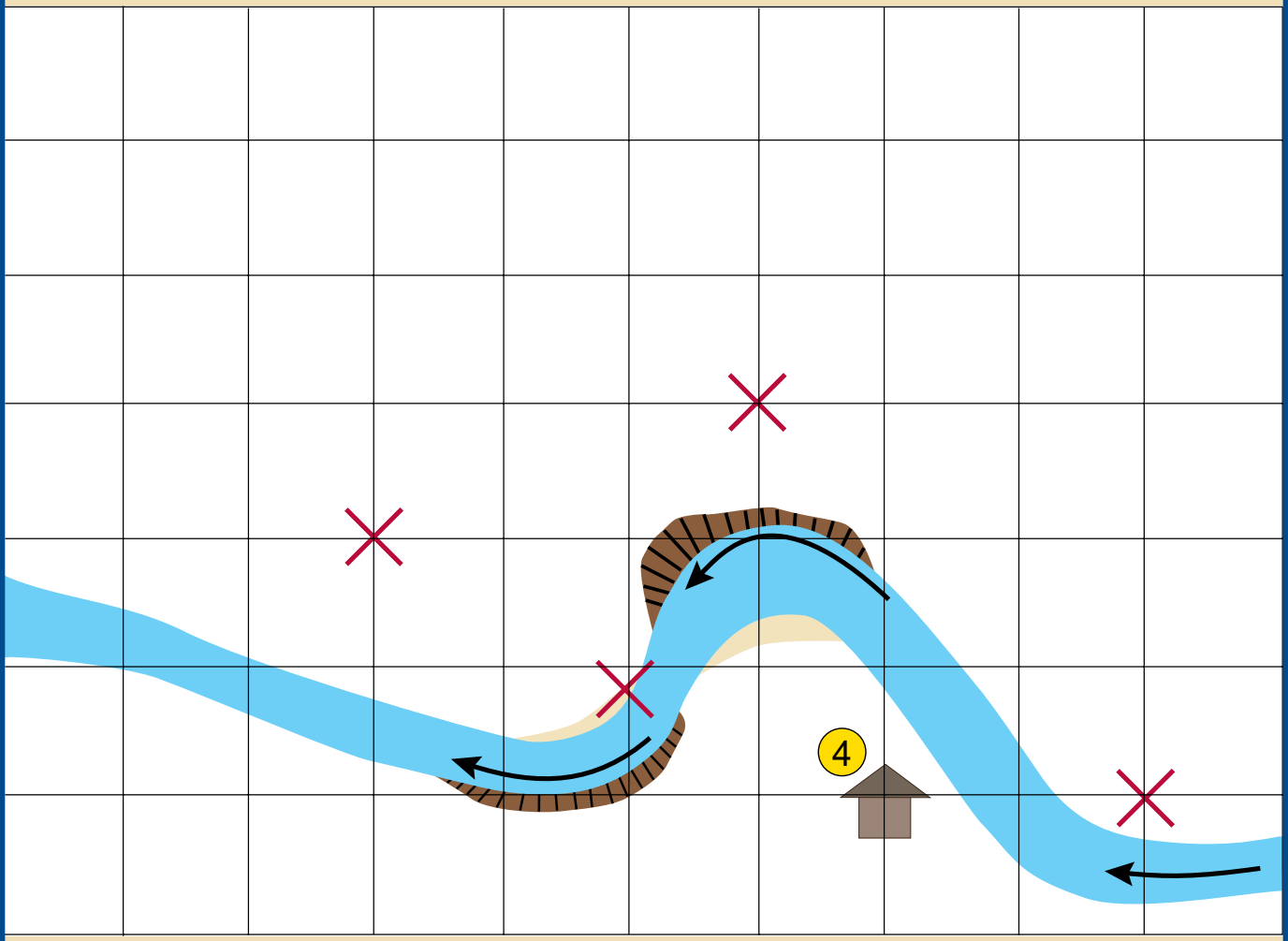
# VA #18 Houses on the Floodplain: 1980



# VA #19 Houses on the Floodplain: 1985



# VA #20 Houses on the Floodplain: 1990

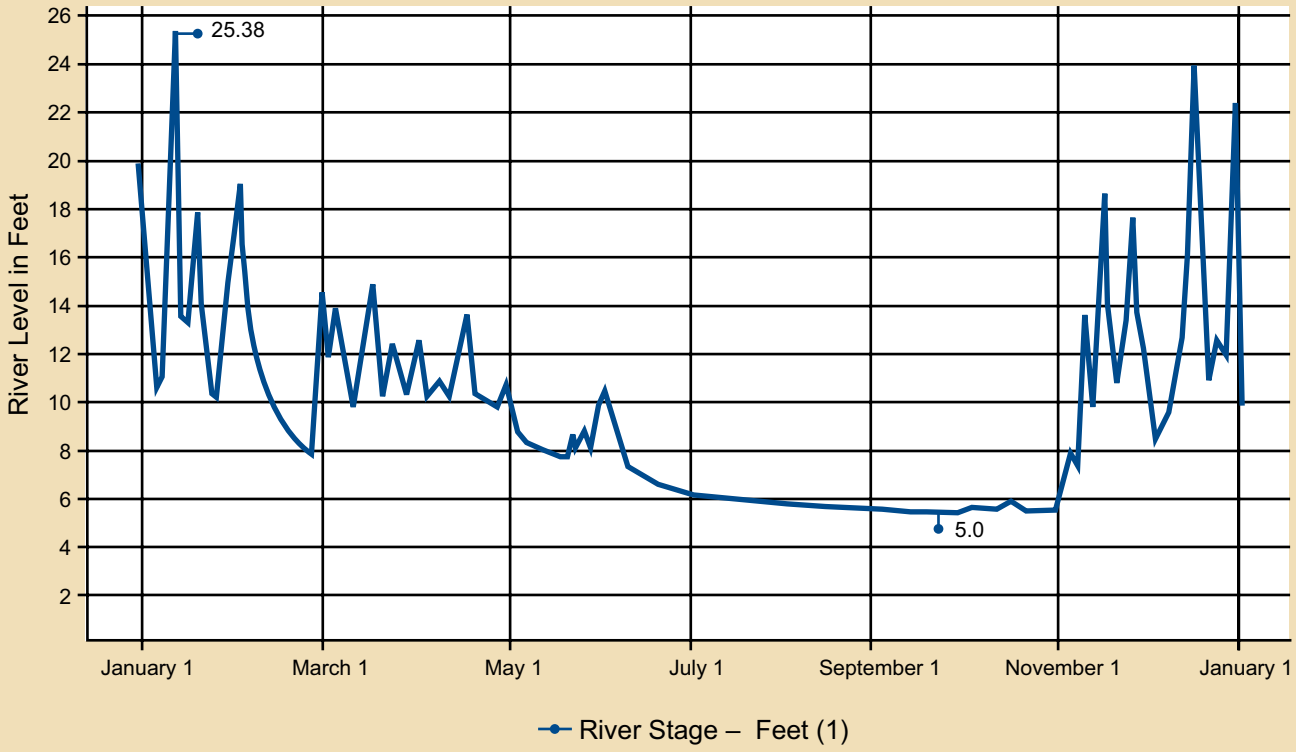


# VA #21 Flow in Two California Rivers: Smith Data

## Smith River near Crescent City

Data from January 1, 2006, through January 1, 2007. Duration: 366 days

Max. of period: (Jan. 11, 2006, 00:45, 25.38 feet) Min. of period: (Sept. 17, 2006, 16:00, 5.0 feet)

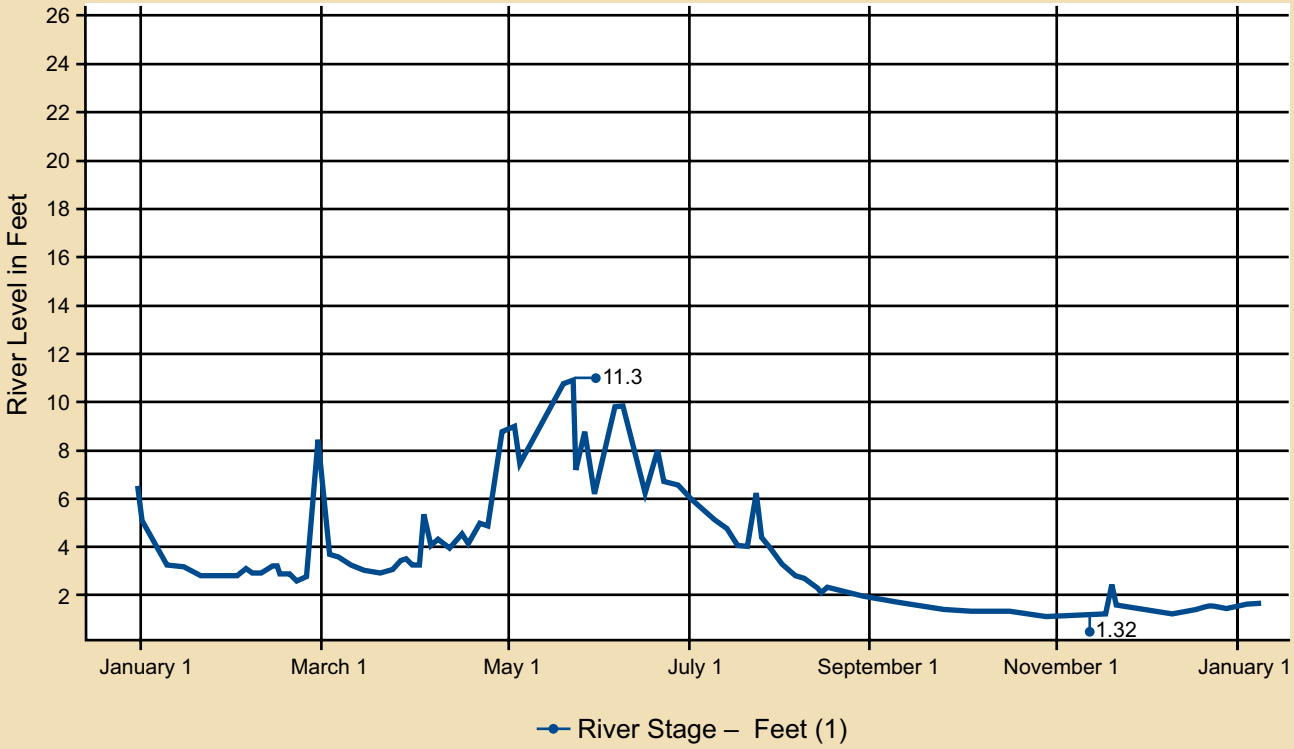


# VA #22 Flow in Two California Rivers: Merced Data

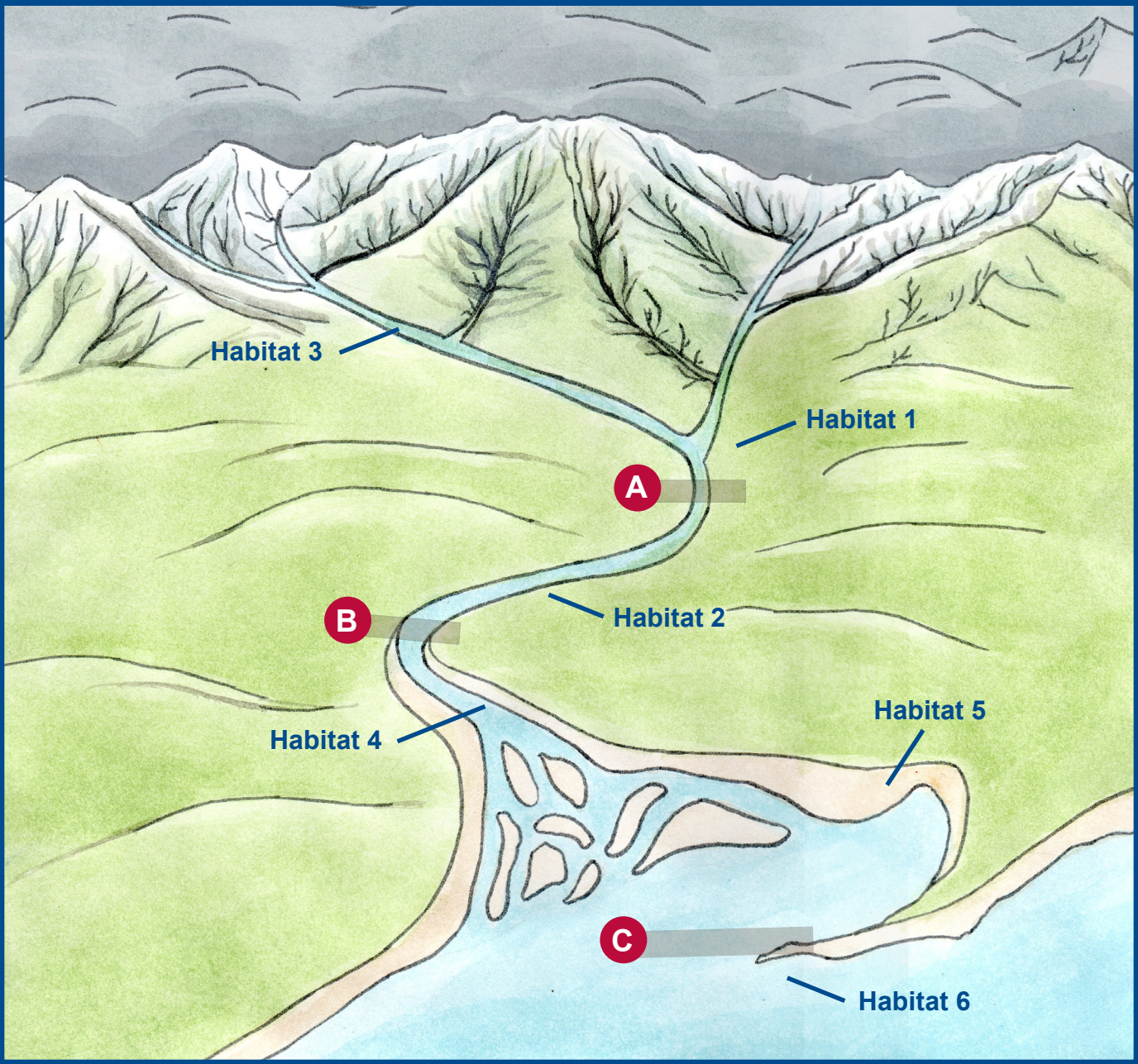
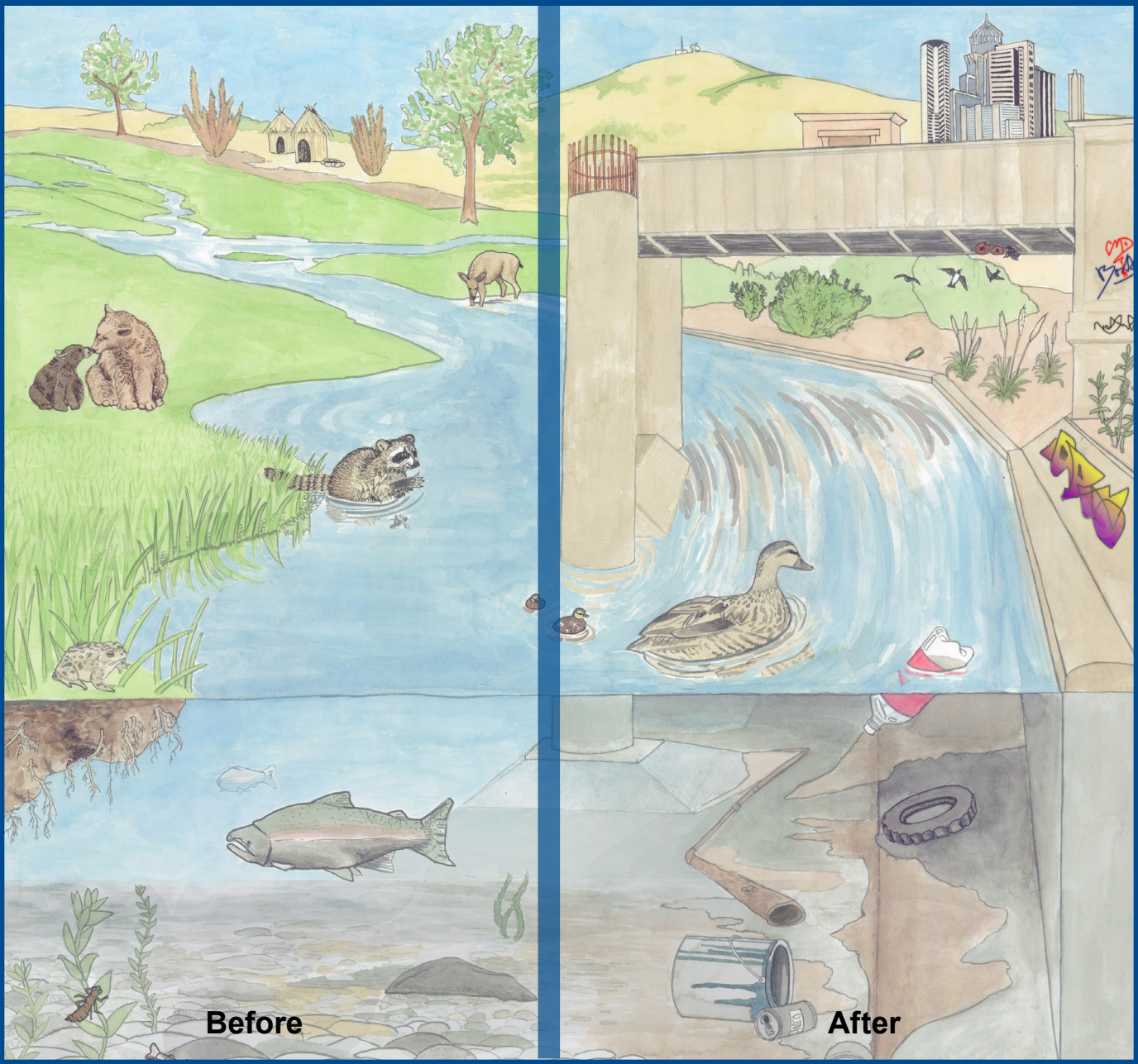
## Merced River at Pohono Bridge

Data from January 1, 2006, through January 1, 2007. Duration: 366 days

Max. of period: (May 17, 2006, 12:16, 11.3 feet )  Min. of period: (Nov. 7, 2006, 8:15, 1.32 feet)



# VA #23 River Map



# VA #24 The Los Angeles River Before and After