

#34: Rivers II

name:

MILLTOWN DAM NEAR MISSOULA

Go back to <http://formontana.net> and then click on picture # 27.

1. Use your Montana highway Map to find the place shown in the photo (about 10 miles east of Missoula). What two highways join there?
2. Where did the sediments in the reservoir behind the dam come from, and why are they dangerous?
3. Explain what happened in 1908, and tell how this made the problem worse?
4. **Click on the Hot Link titled “*More about the Milltown Dam”.** Explain what happened in 1996 and tell why it killed so many fish.
5. Go back to picture #27. Explain what has caused the sediments to contaminate groundwater in the area.
6. Explain what the EPA decided to do (is doing) to fix the problem.
7. Look at the photo at the bottom of the web site. What becomes of the contaminated sediment that is put on the train cars?
8. Watch the 4-minute video, and then explain what was shown happening in the video. Tell why this had to be done.

9. What does ARCO stand for, and why do they have to pay for the cleanup?

OXBOW LAKES

Go back to <http://formontana.net> and then click on picture # 30.

10. Find Zurich on your Montana Highway Map. The Milk River flows past Zurich toward North Dakota. Follow the river's path as it flows eastward. For what reservation is the Milk River the northern boundary?

11. The headwaters of the Milk River are in Glacier Park. What are "headwaters"?

12. Why do rivers cause more erosion on the outside of a meander (curve in its path)?

13. What happens to a meander once the river takes a shortcut?

14. Why are they called "oxbow lakes"?

15. How many oxbow lakes can be seen on the bottom photograph?

16. **Click on the link titled "this animation"** (third paragraph) and play the animation to watch thousands of years go by in a matter of seconds. What effect does erosion caused by this river have on its floodplain (valley)?

17. **Click on the inset to watch the second animation (play).** In the space below sketch the path of the river before and after, include the oxbow.

SNOTEL SITES

Go back to <http://formontana.net> and then click on picture # 58.

18. Why are most of the SNOTEL Sites located in western Montana?
19. Explain how the SNOTEL sensors are able to determine how much snow is on the ground.
20. How does this data get to the scientists?
21. What major advantage does the SNOTEL sensors have over the old way of determining how much snow is in the mountains?
22. Why was so much water let through Canyon Ferry Dam in April of 1996?
23. How is a reservoir different from a lake?
24. Explain what the “snow pillow” consists of.