

Impact of Dams Discussion Questions

Based on Glennon, Chapter 6

1. List some of the environmental impacts of dams.

Fish kills (pp. 114-115) Path to spawning blocked (p. 117)

Contamination from reservoir leakage getting into groundwater (pp. 116-117)

Alter water temperature (p. 117)

Nutrients trapped in reservoir don't flow downstream (p. 117)

Reservoir water is oxygen depleted. Kills fish when released. (p. 117)

Alters landscape.

2. What distinguishes past solutions to water shortages from future solutions? (p. 105)
3. How many rivers in the United States are still free-flowing? What does this mean? What are some examples of not-free flowing? I don't know how many rivers there are in the USA (too many to count according to wikianswers.com), but according to World atlas.com there are over 800. According to EnchantedLearning.com, there are over 250,000. So how reliable a source of information is the www? (p.107)
4. What are the key uses of dams?

Flood control, navigation (creating waterways), power generation

5. How many dams are in the US? How many large dams would have to be built each day since 1776? Don't use the number in the book. Do your own math. (p. 108)
6. Why does the California governor want to build new dams? (pp. 109-110)

To counteract water supply problems cause by global warming. Others?

7. Why are so few dams being built today? (pp.111-112)

Land costs and environmental mitigation costs exceed the cost of the dam.

Lack of good locations.

Planning and permits can take decades.

8. What does Idaho's governor want to do, and what is the problem? Give details. (pp.114-115)
9. What has been happening to the country's dams since 1999? What is driving this trend? (pp.118-119)

Deconstruction due to failure to re-license.

10. What water rights doctrines survive from the 19th century? Why are they outdated? (pp. 122-123) Do property rights imply use rights? (pp. 128-129) How did the Bexar Metropolitan Water District employ the reasonable use doctrine? (p. 129)

“Right of capture” and the “doctrine of reasonable use”. They have not kept up with the times because hydrological technology have permitted people to remove all the water under their ground, which causes neighbors to go dry as the water table redistributes.

11. What are some examples of Eastern rivers that have dried up? (p. 129) What are some examples of Midwestern water table depletions?
12. What are the consequences of excessive ground water pumping? See Figures 6.4 and 6.5. (This doesn't have to do with dams, but it is the other topic in Chapter 6.)

Water table drops by several hundred feet

earth fissures

land subsidence

saltwater intrusion (p. 133)