

FINAL EXAMINATION

WATER LAW

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Friday, May 9, 1997

8:30 AM - 11:00 AM

THIS IS A TWO AND ONE-HALF (2½) HOUR EXAMINATION.

THIS EXAMINATION CONTAINS FIVE (5) PAGES.

THIS EXAMINATION CONTAINS THREE (3) QUESTIONS.

I = 60 min. II = 60 min. III = 30 min.

FILL IN YOUR EXAMINATION NUMBER ON THE BLUEBOOK STICKER.

Instructions:

1. These questions will be graded on the basis of the times indicated with each questions. The indicated time for the questions total 2 hours. You will be given 2 hours to write the examination. Budget your time carefully or you may not finish.
2. Be sure to state a result whenever a question asks for one. Merely stating the arguments on both sides of a legal issue will result in only partial credit because you will not have completed the analysis required by that type of question.
3. If you find it necessary to make factual assumptions in order to answer a question, be sure to state the assumption.
4. Do not assume additional facts for the purpose of avoiding a legal issue or making its resolution easier.
5. Comment briefly on each legal issue reasonably raised by the questions and on each reason for your answer, even when you decide that one legal issue or reason controls the result.
6. The difference between triumph and disaster may lie in a **careful** reading of the questions.

I.
(60 min.)

In the new era of the deregulated electric power industry just beginning, new electric power plants may be built by electricity producing companies for sale to retail distributing companies located hundreds of miles away. Probably this will mean that power plants will be located conveniently close to coal sources or bulk transportation corridors rather than close to consumers.

Show-Me Power Consortium, Inc., proposes to build a very large 1,500 Mw power plant abutting the shore of the Missouri River opposite Rocheport, Missouri. It has acquired a 1000-acre tract of floodplain downstream from I-70 and across the river from McBaine and the Eagle Bluff Conservation Area (Missouri Department of Conservation). The plant will be located there for several reasons. First, it has access to coal barges on the river, unit coal trains on the Union Pacific (formerly Missouri Pacific) Railroad running along the south bank of the river, and Interstate 70. Second, it is half way between the large power markets of St. Louis and Kansas City. Third, it has access to both the Missouri River and to an adjacent large groundwater aquifer for supplies of cooling water for the plant's cooling towers and of boiler water (in relatively small quantities).

Although it is protected by a low agricultural levee, the land floods during 25-year floods (those which occur on the average once every 25 years); the land, of course, flooded during the 1973, 1986, 1993, and 1995 floods. There is plenty of room on the floodplain for construction of the plant, with its associated smokestacks, cooling towers, barge & train unloading facilities, coal storage piles, cooling water storage ponds, transformer and electrical switching yard, and transmission line terminals. The plant will have three 500-foot smokestacks, six 400-foot cooling towers (as at the Callaway nuclear power plant), and three transmission lines crossing the river on 150-foot tall towers (similar to those crossing I-70 northeast of the Callaway plant). The vertical clearance required above the ordinary high water level is 55 feet. (The transmission cables, of course, droop between the towers.) The barge unloading facility will involve constructing a floating pier in a 1000-foot long notch in the bank of the river.

The plant and all associated facilities will be surrounded by a levee 25 feet above ordinary high-water elevation (that will make the levee taller than the 1993 record flood level). That levee will cause a constriction in flood flows during major floods like those of 1973, 1986, 1993, and 1995. The levee will cause floodwaters during such major floods to rise 2 feet higher than at present and thus will flood farther laterally on the edges of the floodplain (such as at Rocheport) and up the tributaries and will rise higher into existing structures located on the floodplain (such as at Rocheport). Certainly it will cause more extensive inundation of the State-owned M-K-T Trail, Boone County-owned Katy Trail (leading to Columbia), will require heightening of the levees around the Columbia water plant and sewage treatment lagoons along Perche Creek, further elevation of the pump motors on the City of Columbia wells, and will flood Boone Cave (presently privately-owned and not open to the public). It will not require elevation of the I-70 bridge causeway.

Coal barges will bring low-sulphur coal from the eastern Kentucky coal fields via the Kentucky, Ohio, Mississippi, and Missouri Rivers, and high sulphur coal from Illinois via the Mississippi and Missouri Rivers. Unit coal trains will bring low-sulphur western coal from Wyoming. About three unit coal trains of 10,000 tons each will come to the plant each week.

In addition, five 2,000 coal barges will come each week. This will significantly increase the amount of barge traffic on the Missouri River between the plant and St. Louis. Except for the barge unloading facility itself and associated turning basin, no additional dredging of the barge channel in the river will be required. The facility will include widening the river at the plant to accommodate stored barges and the docks. The scenic ambiance for recreational boaters on the river will be adversely affected at the barge unloading site, but should not affect the ability of recreational boaters to use the river any more than now when they encounter barge tows on the river.

Water for cooling and the boilers ordinarily will be taken from the river. While the amount is large, it is not expected to lower the river level more than an inch or two. The plant's pumping from the river may affect how much water the Missouri Department of Conservation can pump from the river to maintain its artificial wetlands at the Eagle Bluffs Conservation Area abutting the Missouri River, which is habitat for geese year round and for migratory waterfowl in the spring and fall. There are five irrigators located in the floodplain below the plant site. Three have tracts abutting the river and two divert water through easements to their nonabutting tracts.

During low flow periods, as at the end of the summer and during the winter, the plant may have to take water from a field of 10 wells to be located in the floodplain surrounding the plant. That will avoid a further lowering of the river's level at those times. At those times, the water table under the floodplain will be lowered up to 5 feet. The irrigators immediately upstream and downstream from the plant will have to dig their water wells that additional 5 feet. (They use groundwater for supplemental irrigation and domestic purposes.) At present, their wells are about 25 feet deep. It will cost about \$2000 to lower each well, which is about 10% of the original cost of each well. The plant's wellfield will preclude using the groundwater on the west side of the river for Columbia's water supply at some time in the future. (The city does not presently own any land on the west side of the river.) Pumping from the plant's wells will not affect the present City of Columbia's wellfield on the east side of the river at McBaine.

You are an attorney with Ever & Faithful, the law firm representing Show-Me Power. You must determine what water law aspects are involved in this project.

(1) What federal and state permits are required for construction of this project? [Do not discuss any requirements under the National Environmental Policy Act, the Endangered Species Act, or the Clean Water Act.]

(2) Is Show-Me likely to be liable in damages or be subject to injunction under any applicable state case law doctrines?

(3) What might be done to avoid such liabilities?

II.
(60 minutes)

Assume the power plant project in Question I will be constructed on the Jefferson River in the State of Jefferson, a typical state in the West.

Assume that no flooding will be caused by construction of the plant.

Assume that adjacent landowners have been using both the flow of the river and water in the aquifer for at least 20 years for irrigation, stock-watering, and domestic purposes. Cumulatively they are using 90% of the river's flow. The power plant's diversion will be 98% for cooling purposes and 2% for boiler water. Eighty percent (80%) of the cooling water will be returned to a tributary of the river on the opposite side of the plant; the remainder will be evaporated in the cooling towers. All of the boiler water will be consumed.

There are three abutting and two nonabutting irrigators who divert water between the plant and the mouth of the tributary where it debouches back into the main river. The five irrigators' diversions are entirely consumptive. The river flows to them will be reduced significantly, and there will be insufficient water left for their existing diversions. One of the six affected water users is the Jefferson Department of Conservation which diverts water for maintaining water levels in its artificial wetlands; those wetlands are used by geese and migratory waterfowl. DOC will not be able to keep its wetlands full during low flow periods. DOC's diversion is about one-half (1/2) the size of that proposed for the power plant. Water users located upstream from the plant and downstream from the tributary's mouth will not be affected physically by the plant's diversion. See the table below which indicates the locations and sizes of the various diversions.

<u>Table of Water Users</u>			
Present	ac.ft./yr.	Proposed	ac.ft./yr.
upstream river flow	10,000	upstream river flow	10,000
users upstream from plant	2,500	users upstream from plant	2,500
DOC wetlands	2,500	power plant	5,000
irrigator #1 (abutting)	500	DOC wetlands	2,500
irrigator #2 (nonabutting)	500	irrigator #1 (abutting)	500
irrigator #3 (abutting)	500	irrigator #2 (nonabutting)	500
irrigator #4 (nonabutting)	500	irrigator #3 (abutting)	500
irrigator #5 (abutting)	500	irrigator #4 (nonabutting)	500
500		irrigator #5 (abutting)	
		(flow deficit below plant	

-2,500)

river flow at tributary mouth	2,500		river flow at tributary mouth
		0	
flow from tributary	500	f	low from tributary
		4,500	
river flow below tributary mouth	3,000		river flow below tributary mouth
		4,500	
users downstream of tributary mouth	2,000		users downstream of tributary mouth
		2,000	

Assume that when the plant withdraws groundwater (because the river level is too low), the several groundwater users who are irrigating cropland and pasture (they are nearby nonabutting neighbors) will find the water table dropping precipitously and that some of their wells may prove to be too shallow (the wells average 200 feet in depth, about 25 feet below the average depth of the water table).

Assume that the river is too small for barge traffic, but is be used by medium-size power boats and smaller craft. (All coal will be brought in by rail.) Assume that the reduction in flow in the river will prevent the largest of those recreational boats from using the river between the plant and the river/tributary junction.

You are an attorney with Ever & Faithful, the law firm representing Show-Me Power. You must determine what water law aspects are involved in this project.

(1) What federal and state law permits might be required for the project. [Do not discuss any requirements under the National Environmental Policy Act, the Endangered Species Act, or the Clean Water Act.]

(2) Is Show-Me likely to be liable in damages or be subject to injunction under any applicable state case law doctrines?

(3) What might be done to avoid such liabilities?

III.
(30 min.)

Briefly define the following terms:

- (1) reserved rights
- (2) equitable apportionment
- (3) civil law rule
- (4) salvaged water
- (5) absolute ownership rule
- (6) source of title test
- (7) adjudication
- (8) diligence
- (9) prescription
- (10) purpresture

WATER LAW
(Winter 1997)

I. (60 min.)

(1) Federal & state permits (omit NEPA, ESA, CWA):

- no state permits
- R&HA § 10 permit for bank cut, barge dock, channel dredging, power lines
 - Mo. River is nav. water of US
 - definition: waters which are or have been commercially navigated in interstate commerce or could be so made navigable with reasonable improvements (*Appalachian Elec. Power*)
 - Mo. River is presently used for nav. in fact

(2) Common law liability theories:

- flooding (from levees)
 - reasonable use rule recently adopted in Mo. for d.s.w. (*Heins*); applied to floodwaters (*Kueffel*)
 - flood will be elevated; will have cost impacts on neighbors
 - heighten levees & pump motors
 - unreasonable?
- groundwater rights
 - reasonable use rule in Mo. (*Higday*)
 - coequality
 - farmers will have to deepen present shallow wells by a few feet -- unreasonable?
- riparian rights
 - only riparians are entitled to take water
 - nonabutting diverters have no right to take water (*Anaheim*)
 - but, under *Stratton*, they are not liable until riparians are adversely affected
 - here, no riparians are adversely affected
 - nonriparians have no cause of action for reduction in flow (*Kennebunk*)
 - some irrigators are riparians; have a cause of action
 - other irrigators are nonriparians; do not have a cause of action
 - but the drop in river level probably is too small to be actionable (unlike in *Harris*)
 - reasonable use rule (*Tyler, Harris, Bollinger*)
 - coequality, no time priority
 - limited to abutting land owners
 - use limited to riparian land
 - no use preference problem here; both are artificial uses
 - no violation: conserv. area & power plant both on abutting tracts & within watershed
 - factors
 - river level not affected much, but may affect diversion to conserv. area
- public rights
 - floatable waters test in Mo. (*Elder*)
 - riparian cannot block stream
 - no blockage proposed

- riparian has a right to wharf out
- here, there is no adverse effect on navigation or public floatage right
- anchoring of floating pier in bed is a trespass on state's bed ownership
 - hence, state's permission is required
- public trust doctrine
 - state has obligation to protect public rights of navigation and fishery
 - perhaps applies in Mo. (*Longfellow*)
 - state can enjoin significant interferences with pub. right of nav.
 - no significant interference here
 - enforceable by benefitted members of public

(3) Avoiding liabilities

- agree to pay costs of levee & pump motor elevations
 - federal preemption by R&HA § 10 permit
- since river water users are not adversely affected, Show-Me need not attempt to acquire their water rights
 - in any event, it need not acquire any rights from nonriparian irrigators, since they have no right to divert or to sue
- attempt to purchase groundwater rights of adjacent irrigators (assuming the lowering of the water table is unreasonable)
- seek declaratory judgment defining the respective riparian and groundwater rights of plant and affected water users

II. (60 min.)

(1) Federal and state permits (omit NEPA, ESA, CWA):

- no federal permits
 - definition of federal navigability (*see* above)
 - Jefferson River not navigable in fact
 - susceptible of navigation?
- western states require prior appropriation permits for diversions of surface water
 - time priority ("first in time, first in right") (*Irwin*)
 - Show-Me must obtain one
- water can be used anywhere, both on abutting and nonabutting lands
- other water users have superior time priorities
- if all claims are valid, there is no unappropriated water available
- Show-Me cannot divert water which reduces their diversions
- but DOC diversion is for maintaining wetlands water levels
 - such appropriation must be from unappropriated water
 - that is not a valid purpose for an appropriation
 - hence, the DOC appropriation is invalid
 - unless Jefferson has statute authorizing state to appropriate water for recreational or ecological purposes -- non mentioned
 - that leaves enough unappropriated water for Show-Me's diversion
- western states require prior appropriation permits for groundwater diversions
 - Show-Me must obtain one
- other groundwater users have superior time priorities
- Show-Me cannot divert groundwater which reduces their withdrawals
- senior appropriators are not entitled to maintenance of water table

- but their wells cannot be dried up
 - unless their wells are unreasonably shallow (under current standards of efficiency)
- here, there will be a precipitous lowering of water table
- (2) Common law liabilities
 - river and groundwater rights defined by prior appropriation statute
 - public rights
 - river not obstructed
 - public rights cases do not involve protection of flow needed for recreational boating
 - public trust doctrine (*Illinois Central*)
 - state has obligation to protect public rights of navigation and fishery
 - enforceable by state and by benefitted members of public
 - under *Mono Lake*, state must protect minimum flow for aquatic habitat and for public's right to recreational boating
 - here, river would be completely dried up below plant
 - appropriations are subject to paramount public trust
 - both plant and irrigators would have to cut back some to accommodate minimum stream flow
 - *but* public trust does not extend to artificial wetlands
 - so DOC's diversion could not be authorized by public trust
- (3) Avoiding liabilities
 - purchase conflicting appropriative rights
 - most states allow transfers if no appropriators are adversely affected
 - this would be very expensive
 - return cooling water directly to mainstream, rather than to tributary

III. (30 min.)

- (1) reserved rights: water implied reserved for purposes of federal reservation of public domain lands
- (2) equitable apportionment: each state is entitled to a fair share of interstate waters
- (3) civil law rule: applies to drainage water -- natural drainage pattern cannot be altered
- (4) salvaged water: prior appropriation -- water in watershed made available by efficiency improvements; inures to benefit of junior or new appropriators, not to benefit of appropriator making the improvements
- (5) absolute ownership rule: groundwater -- can use as much as landowner wishes for any nonmalicious purpose without liability for consequential injuries
- (6) source of title test: riparian rights -- abutting tracts or tracts contiguous thereto which have never been severed
- (7) adjudication: prior appropriation -- judicial or administrative process for proving up prior appropriation rights
- (8) diligence: prior appropriation -- water must be diverted & applied to intended use within a reasonable time after filing in order to perfect prior appropriation rights
- (9) prescription: water acquired adversely to established water rights (riparian or prior appropriation) by continuous, open, notorious & adverse use

(10)

purpresture: private enclosure of public water surface