

MEMORANDUM

TO: JONES COUNTY CONSERVATION BOARD

FROM: FRIENDS OF THE DAM

DATE: August 24, 2017

RE: EFFECT OF REDUCTION IN RIVER LEVEL ON NEARBY PONDS, WELLS AND WETLANDS. FRIENDS OF THE DAM.

Many residents of the Monticello area have observed that water levels in wetlands and ponds near the Maquoketa River go down when water levels in the river go down. While, the JCCB's Conservation Director has suggested both that Option A will "slightly increase" and "decrease by a few inches" the upstream water level of the river, it appears that it is more likely than not that the water levels will decrease.

In the Friends of the Dam memorandum presented to the federal and state agencies on August 24th, we noted the evidence indicating the level of the river will be substantially lowered:

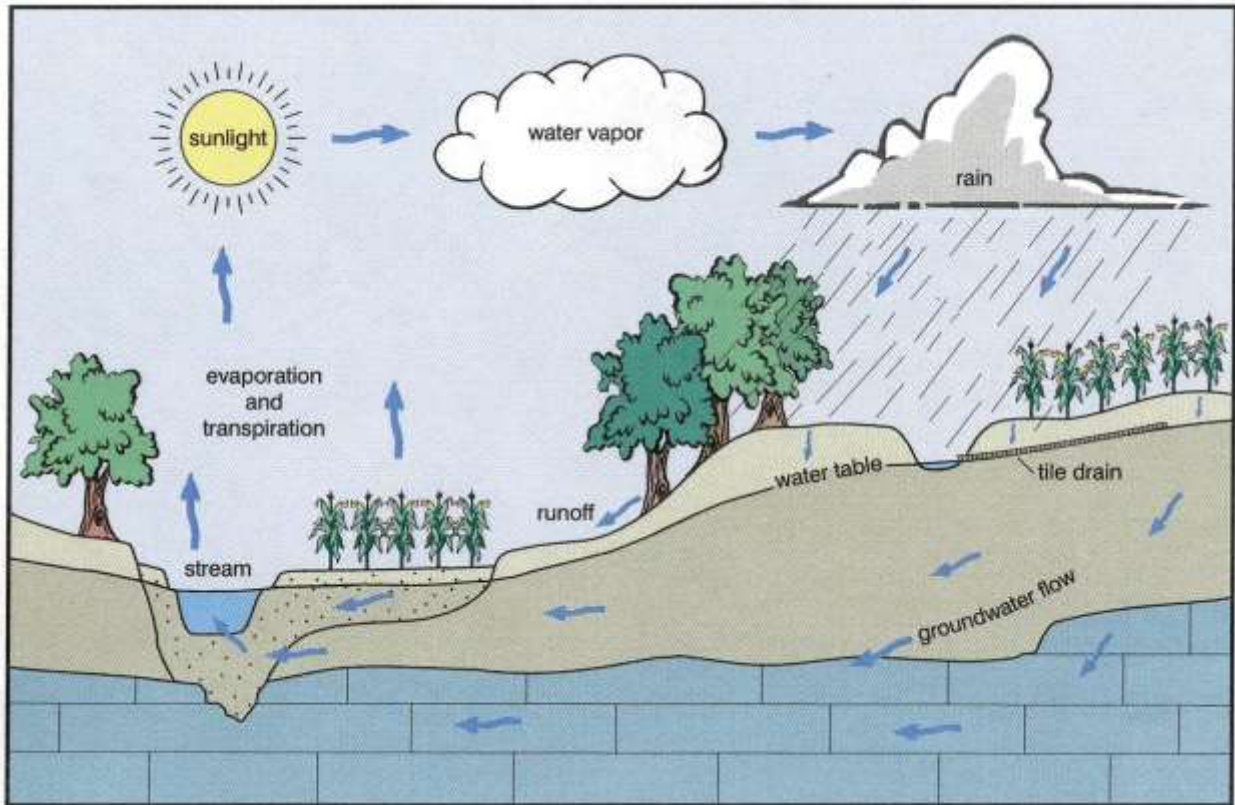
The TAP application indicates that the boat ramp will have to be extended because the channel will be narrowed and the water level will be lower. The application also indicates that the Kitty Creek water level will be lowered in response to the removal of the dam. The application admits that "some bed scouring will occur in the river channel requiring the addition of rock to minimize impact on the piers [of the Business Highway 151 bridge]". Thus, the TAP application indicates the water level will be lowered to such a degree that monies will have to be expended to resolve dangerous hydraulics created at Kitty Creek and to provide rock armoring to prevent damage to the bridge. Request for Transportation Alternatives Program Funds (TAP)(March 30, 2016) at 12.

The soil along the river is Type 315, which does not hold water. Is it unreasonable to expect that, when the dam is removed, and the river cuts a new channel, the water level will drop in all wetlands, sand point wells, and irrigation ponds along the river?

MEMORANDUM AT 16.

The conservation director has tried to reassure the public that Riverside Gardens and other wetlands, ponds and wells by the river will not be affected by lowering the river level because the current surface level of these ponds and wetlands is already above the surface level of the river. See Mormann, Brad, "Riverside Gardens and Golf Course Water Level Elevations" (Data collected August 12, 2017).

It is however, normal for the water table on higher ground to be above the surface level of the river, as illustrated below:



Libra, Bob, "Iowa Water Resources" (Iowa Geological Survey-DNR) at 10.
www.iowadnr.gov/water/quantity.html

The problem is, however, that: **"Water levels in wells near lakes and streams fluctuate in response to changes in surface-water stages."** Russell, R.R., "Ground Water Levels in Illinois Through 1961" 12 (1963). **Thus, as the water level of the river recedes, so does the water level in wetlands.** This is demonstrated by the chart below, showing the effect of different river stages on nearby wells:

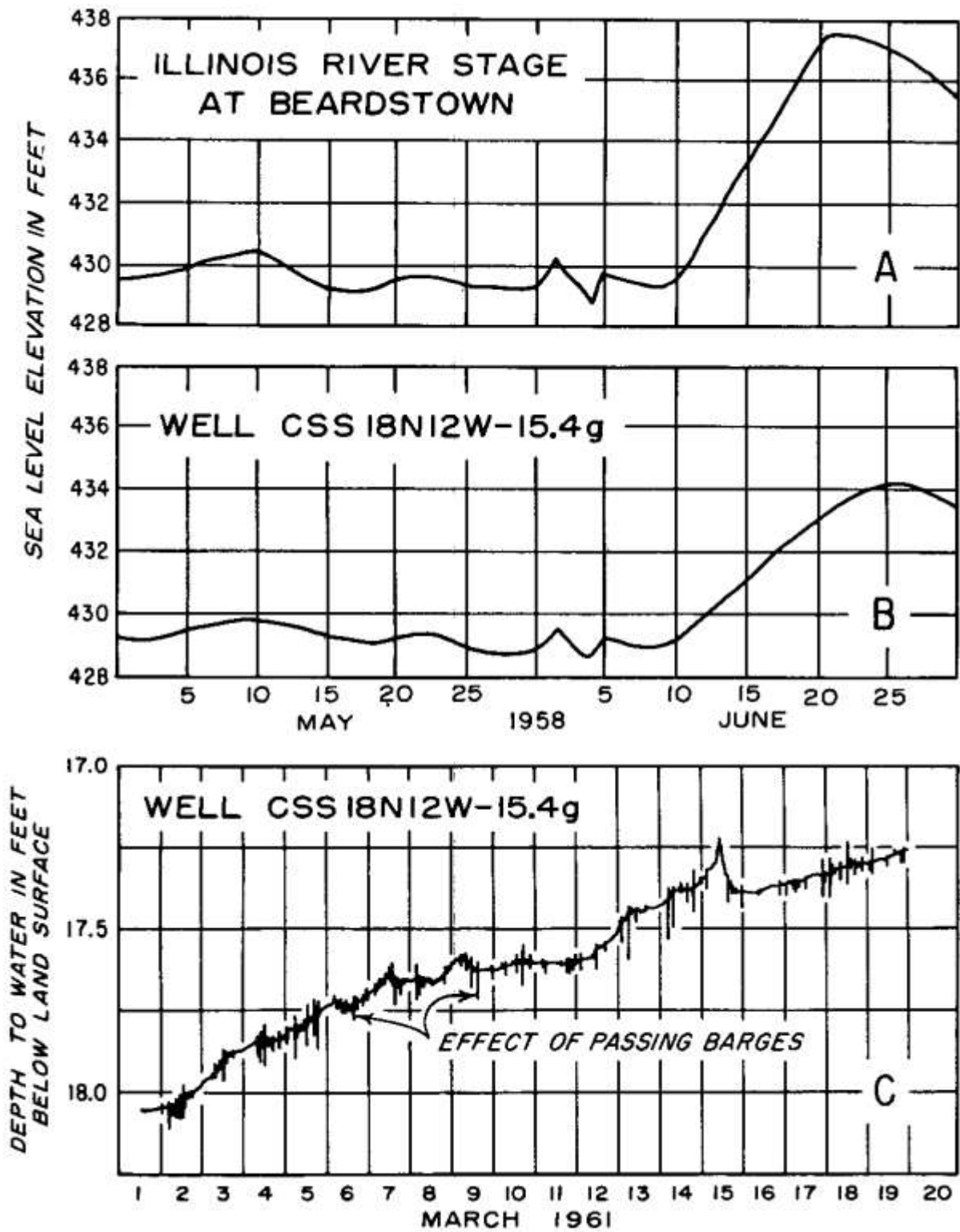


Figure 12. Fluctuations caused by river stage changes. Russell, R.R., "Ground Water Levels in Illinois Through 1961" 12 (1963).