

Regular Session, 2014

HOUSE CONCURRENT RESOLUTION NO. 89 (Substitute for House Concurrent Resolution No. 52 by Representative Foil)

BY REPRESENTATIVE FOIL

WATER/RESOURCES: Provides relative to the management regime for the Southern Hills Aquifer System

1 A CONCURRENT RESOLUTION

2 To urge and request the commissioner of conservation to continue monitoring the health and
3 sustainability of the Southern Hills Aquifer System and to use the results of
4 simulations conducted by the U.S. Geological Survey on the fifteen hundred foot
5 sand and the two thousand foot sand to develop management regimes for the health
6 and sustainability of the Southern Hills Aquifer System.

7 WHEREAS, the Southern Hills Aquifer System is a system of several aquifers
8 underlying the parishes of East and West Baton Rouge, Pointe Coupee, and East and West
9 Feliciana with ten of those north of a fault line that bisects East Baton Rouge Parish; and

10 WHEREAS, the Southern Hills Aquifer System is the major source of drinking water
11 for the Capital Area Region and there are numerous industrial facilities that withdraw
12 potable water from the aquifer system for their industrial processes; and

13 WHEREAS, there has long been concern about the viability, sustainability, and
14 health of the Southern Hills Aquifer System; even as long ago as the early 1960s there were
15 concerns about saltwater being drawn from the southern portions of the system below the
16 fault line into the freshwater portions of the aquifer north of the fault line; and

17 WHEREAS, the concern about the sustainability of the aquifer system has been
18 growing recently and has resulted in many activities, discussions, studies, and public
19 hearings culminating in the July, 2013, release by the U.S. Geological Survey (USGS) of
20 their "Simulation of Groundwater Flow in the '1,500-foot' Sand and the '2,000-foot' Sand and

1 Movement of Saltwater in the '2,000-foot' Sand of the Baton Rouge Area, Louisiana" report
2 (USGS report); and

3 WHEREAS, according to the abstract of that report, "Groundwater withdrawals have
4 caused saltwater to encroach into freshwater-bearing aquifers beneath Baton Rouge,
5 Louisiana. Groundwater investigations in the 1960s identified a freshwater-saltwater
6 interface located at the Baton Rouge Fault, across which abrupt changes in water levels
7 occur."; and

8 WHEREAS, the same abstract also states, "Groundwater withdrawals from an aquifer
9 that is 2,000-feet (ft) deep in East Baton Rouge Parish (the "2,000-foot" sand of the Baton
10 Rouge area) have caused water-level drawdown up to 356 ft and induced saltwater
11 movement northward across the fault. Saltwater withdrawals from the "2,000-foot" sand
12 averaged 23.9 Mgal/d 2010. Saltwater encroachment threatens wells that are located about
13 3 miles north of the fault, where industrial withdrawals account for about 66 percent of the
14 water withdrawn from the "2,000-foot" sand in East Baton Rouge Parish."; and

15 WHEREAS, the USGS presented five hypothetical scenarios simulating the effects
16 of different groundwater withdrawal options on the water levels in the "1,500-foot" sand and
17 the "2,000-foot" sand with the first scenario simulating a continuation of the 2007
18 withdrawals being used as the base for comparison; and

19 WHEREAS, the findings of these simulations indicate that scenario 2, ". . .
20 discontinuation of withdrawals from seven selected industrial wells located in the northwest
21 corner of East Baton Rouge Parish, and water levels within the "1,500-foot" sand were
22 predicted to be about 15 to 20 ft higher under this withdrawal scenario than under scenario
23 1." (USGS report) and scenario 3 which simulated ". . . the effects of a scavenger well,
24 which withdraws water from the base of the "2,000-foot" sand at a rate of 2 Mgal/d, at two
25 possible locations on water levels and concentrations within the "2,000-foot" sand." finding
26 that ". . . operation of the scavenger well in the locations specified in scenario 3 reduces the
27 chloride concentrations at all existing chloride-observation well locations." (USGS report);
28 and

29 WHEREAS, scenario 4 simulated a 3.6 Mgal/d reduction in total groundwater
30 withdrawals from selected wells in the "2,000-foot" sand resulting in ". . . the median and

1 mean plume concentrations are slightly lower than scenario 1." (USGS report), and scenario
2 5 simulated the effect of ". . . total cessation of groundwater withdrawals from the "2,000-
3 foot" sand in the industrial district." finding that ". . . the chloride-concentration distribution
4 in scenario 5 reflects the change in groundwater flow direction. Although some saltwater
5 would continue to cross the Baton Rouge Fault and encroach toward municipal supply wells,
6 further encroachment toward the industrial district would be abated."; and

7 WHEREAS, in a letter dated November 27, 2013, from Commissioner of
8 Conservation James H. Welsh to the chairman-elect and the director of the Capital Area
9 Groundwater Conservation Commission (letter to the CAGCC), the commissioner states
10 that the USGS ". . . scenarios for the 2,000-foot sand indicate that simply reducing or
11 ceasing the industrial area pumping center's withdrawals from that sand would lessen
12 saltwater encroachment between that pumping center and the fault to the south, but at the
13 same time likely would result in accelerated saltwater encroachment at greater
14 concentrations toward the public supply wells further south and east . . ." in the two thousand
15 foot sand ". . . due to their closer proximity to the saltwater source."; and

16 WHEREAS, in the same letter, the commissioner acknowledges that ". . . modeling
17 of potential scavenger well impacts . . . indicates that this protection would likely come at
18 the expense of accelerated encroachment toward wells between the scavenger well and the
19 fault to the south."; and

20 WHEREAS, management of the Southern Hills Aquifer System to ensure the health
21 and sustainability of the aquifer must be based in science and any decisions by the
22 commissioner of conservation that apply to withdrawal rates, placement of wells and
23 scavenger wells, and saltwater encroachment mitigation projects must be carefully
24 considered for their impact on the entire region and such decisions must have a scientific
25 basis.

26 THEREFORE, BE IT RESOLVED that the Legislature of Louisiana does hereby
27 urge and request the commissioner of conservation to continue monitoring the health and
28 sustainability of the Southern Hills Aquifer System and to use the results of simulations
29 conducted by the U.S. Geological Survey on the fifteen hundred foot sand and the two

1 thousand foot sand to develop management regimes for the health and sustainability of the
2 Southern Hills Aquifer System.

3 BE IT FURTHER RESOLVED that a copy of this Resolution be forwarded to the
4 commissioner of conservation.

DIGEST

The digest printed below was prepared by House Legislative Services. It constitutes no part of the legislative instrument. The keyword, one-liner, abstract, and digest do not constitute part of the law or proof or indicia of legislative intent. [R.S. 1:13(B) and 24:177(E)]

Foil

HCR No.

Requests the commissioner of conservation to continue monitoring the health and sustainability of the Southern Hills Aquifer System and to use the results of simulations conducted by the U.S. Geological Survey on the fifteen hundred foot sand and the two thousand foot sand to develop management regimes for the health and sustainability of the Southern Hills Aquifer System.