From: Folk, Kevin
To: Ford, William
Cc: TurkeyPoint34SLR Resource
Subject: RE: TURKEY POINT: "more favorable climatic conditions"
Date: Tuesday, September 10, 2019 8:57:00 AM

There is where it was hiding! Thanks for correcting me on that. I agree that the statement in the SEIS expresses the same thought. I also note that in the 2018 annual monitoring report, it states "In spite of the increase in salinity during late 2017 and early 2018, the continued addition of UFA water will help to reduce CCS salinity to 34 PSU as conditions in the CCS return to those that constitute average conditions."

So, I think maybe we would want to say "more average meteorological conditions" instead of "favorable" and add the 2018 report as a reference (FPL 2018o) to the modified statement?

Kevin

From: Ford, William
Sent: Monday, September 09, 2019 5:50 PM
To: Folk, Kevin <Kevin.Folk@nrc.gov>
Cc: TurkeyPoint34SLR Resource <TurkeyPoint34SLR.Resource@nrc.gov>
Subject: TURKEY POINT: "more favorable climatic conditions"
Importance: High

Hi Kevin,

I believe the sentence in the DSEIS *"The modelers 35 anticipate that under more favorable climatic conditions (e.g., less severe dry seasons), the 36 addition of Upper Floridan aquifer water should help to reduce CCS water salinities to 34 PSU 37 (FPL 2017a, FPL 2017b)*" came from FPL 2017a.

I believe that it is a plain language rewrite of the statement on page 5-11 of FPL 2017a. Here it is stated that "*The continued addition of UFA water, combined with less significant disparities between evaporation and precipitation, should help reduce CCS salinity to 34 PSS-78*".

Perhaps, we should use the words favorable *meteorological conditions* instead?

For context the full discussion from page 5-11 is as follows.

Perhaps the most important element of the simulated CCS balance during the 24-month timeframe is the continuous addition of UFA water between November 2016 and May 2017. Earlier predictive modeling concluded that, under normal conditions, the addition of 14 mgd of UFA water would eventually reduce CCS salinity to 34 PSS-78. Because this has not yet occurred, it is important to analyze model results in order to better understand what is driving the changes in salinity.

Two key elements of the CCS water and salt balance model that influence the temporal change in CCS salinity are precipitation inflows (the addition of freshwater to the CCS) and

evaporative
outflows (the removal of freshwater from the CCS). Precipitation-based inflows help to reduce and/or moderate CCS salinity; evaporative losses cause increases in salinity. Monthly evaporative flow rates are generally greater than precipitation flow rates. As such, the difference between monthly precipitation and evaporation (precipitation minus evaporation) is usually negative. During months when this difference is near-zero or positive, CCS salinity will generally decrease. This is evident from September 2015 through January 2016, when positive and near-zero differences between precipitation and evaporation (Figure 5.2-6) helped to produce a reduction in salinity from 79 PSS-78 to 35 PSS-78. Note, FPL also added L-31E canal water through November 2015, which also helped to reduce CCS salinity.

In the months that followed (February through July 2016), monthly evaporation was consistently and significantly greater than monthly precipitation (Figure 5.2-6). Accordingly, the average CCS salinity increased from 35 PSS-78 to 70 PSS-78. Much of this increase occurred by the end of May 2016. During the same 4-month period (February through May) in 2017, the monthly differences between evaporation and precipitation were even more negative than in 2016 (except in March). Whereas salinity increased by 20 PSS-78 between February and May 2016, salinity during the same four months in 2017 has remained relatively stable (increase from 65 PSS-78 to 67 PSS-78). The reason for the stability in salinity in spite of the adverse imbalance between evaporation and precipitation is the addition of UFA water. These additions of low salinity water help to offset the disparity between evaporation and precipitation and, in so doing, help moderate salinity. The continued addition of UFA water, combined with less significant disparities between evaporation and precipitation, should help reduce CCS salinity to 34 PSS-78.

Thanks,

Bill Ford
301-415-1263

Reference

[FPL] Florida Power & Light Company. 2017a. “Turkey Point Plant Annual Monitoring Report, 12 September 2017.” Prepared by Ecology and Environment, Inc., Lancaster, New York. September 2017. 414 p. Available at <http://prodenv.dep.state.fl.us/DepNexus/public/electronic-documents#> (search facility/site ID: 15 FL0001562, document date: 9/28/2017) (accessed July 7, 2018).