

MEMORANDUM

TO: Delaware Water Supply Coordinating Council

FROM: Gerald Kauffman (UDWRC) *Gerald J. Kauffman*

DATE: May 27, 2021

SUBJECT: Drought Advisory Guidelines Subcommittee

Over last 20 years, the Governor declared drought watch in 2007 and drought emergency in 2002 and we had close calls in 2016-18 and 2005. <https://www.wrc.udel.edu/public-service/water-supply-coordinating-council/wsccl-meetings-and-reporting/>. The last drought watch deliberations by WSCC were in 2016, 2017, and 2018 (see 13th Report) but then it rained. The last drought watch declaration (10th Report) was by Gov. Minner in Oct 2007 and lasted 6 months. We had a fortuitous test of the 3 phase drought operating guidelines during the summer of 2005 (8th Report) after the new 3 phase DAG were unveiled in June 2005 (7th Report). The 5th Report covered the drought emergency of 2002 and recommended updating the DAG from the 2-phase bowling chart to the 3 phase DAG we have now.

The Drought Advisory Guidelines Subcommittee has met in 2021 and examined drought indicators for the state (New Castle, Kent, and Sussex counties) and offers the following findings for consideration at the May 27, 2021 WSCC meeting:

1. **Early Notice of Drought:** As climatic indicators approach drought watch, WSCC recommends DNREC Secretary and DDA Secretary issues joint press release stating water conditions are declining and conserving water is important but note that water supplies are adequate.
2. **Northern Delaware Drought Advisory Guidelines:** For northern NCC, DGS adds 1-, 6-, 12-month P-ET and US Drought Severity and Spatial Index.
3. **Southern New Castle, Kent, and Sussex counties:** DGS develops one page charts for each county with streamflow, groundwater, precipitation, 1-, 6-, 12-month P-ET, US Drought Severity Index, and chlorides.
4. **Water Conditions Index (WCI):** DGS, CEMA, and UDWRC examined the 1982 WCI report and find it works and no need to change and will host a June meeting with the Green Industry to discuss further.
5. **Drought Indicators:** Separate into two categories: (a) water supply and (b) climatic conditions (P-ET; precipitation, soil moisture, US Drought Severity Index, etc.). May need to redefine as Water Availability Guidelines (WAG).
6. **Real-time Reporting:** Create online tool to monitor water quantity variables across the state including WCI, P-ET, well levels, streamflow with up-to-date information on water supply (reservoir levels, water usage,).
7. **Web-accessible Decision Support Tool:** The WSCC supports funding for DGS, CEMA, and UDWRC to develop a real-time water quantity tool for statewide decision-makers. Organize site to distinguish between climate indicators (P-ET, precipitation) and water supply indicators (reservoir levels) and add 3rd section that show CPC seasonal forecast information and other "homegrown" products like anticipated demand from the environment and human consumption.