A-NPDC
ACCOMACK-NORTHAMPTON PLANNING DISTRICT COMMISSION
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1. **Call to Order**
   Vice Chairman Washington called the meeting to order at 10:00 a.m.

2. **Public Participation**
   There was no public participation at the meeting.

3. **Work Session**
   This meeting was used as a Work Session to develop a priority project list for the Eastern Shore of Virginia Ground Water Committee. Sam Caldwell, John Jastron, Jason Pope, and Greg Connock, from the United States Geological Survey, attended the meeting to discuss items they could assist with completing.

   Committee members were provided with a listing of research needs identified in the 2013 Ground Water Plan with the top seven needs identified as follows:

   1. Form, hydraulic function, and distribution of paleochannels that bisect the Yorktown-Eastover confining unit.
   2. Vertical and horizontal location, thickness, and movement of the freshwater/saltwater transition zone.
   3. Hydraulic characteristics, variation in thickness, and leakance through the confining units.
   4. Occurrence, yield, and water quality for aquifers underlying the Yorktown-Eastoveer aquifer. In particular, aquifers that are hydraulically connected to the mainland.
   5. Occurrence, distribution, and age of existing conventional contaminants.
   6. Occurrence and potential future impacts of emerging contaminants.
   7. Impact of climate change on the Shore's water resources.

   GWC Britt McMillan, from Arcadis, shared a document which was updated in 2021 from the 2013 Groundwater Plan which included cost estimates for the listed research needs/projects. Several committee members stated they would like to review the document prior to prioritizing projects.They also wanted cost estimates, if possible.

   John Jastron, from USGS, shared that USGS was working on an update to the 2019 Report and Data Release now.

   USGS can help guide choices and has three ideas to share with the committee. Their suggested ideas:

   1. **Study of the surficial salt water transition.**
      This would require creating electromagnetic (EM) bulk resistivity logs. The equipment can penetrate 80 meters and can image most potable groundwater along both the Bay and Sea sides of the shore, but would be limited along the spine. This type of study requires homeowner cooperation, and the survey may not show changes which occur over time with small samples. A

larger (1 acre) space would be better for sampling over several years. It is suggested that one targeted area would be selected to demonstrate.

Member Chesser suggested using the Persimmon Point paleochannel for testing, close to either the Bay or Seaside edges. This could be coordinated with the existing 12 production wells on the Shore. The best site should be identified and then address the amount of tests needed. If the pilot location works it could be expanded to other test areas.

John Jastron (USGS) noted that Denmark pioneered aerial testing of water depth which provided more information. Member Meil questioned if drones could be used for aerial testing. USGS advised a good starting point would be state observation wells, and there should be ongoing, annual testing for comparisons to get the best data results for water level changes and trends in groundwater levels.

2. **Available water quality data**
Water quality residential tests currently have a limited tie to well hydrogeology. USGS suggested that they could tie wells tests to well construction logs. Currently only 10% - 15% of wells have data. Only 5% - 10% of wells are screened in the surficial aquifer.

Data could be matched and linked to the Health Department records for both residential and irrigation wells. Currently water quality data is not available from those wells and the Dept. of Health does not tie sample results to a specific location. VA Tech has a listing of addresses which may include zip+4 locations.

It was suggested that an Intern could scan VDH paper records and submit the scanned copies to USGS to compile the domestic well quality data. Britt McMillan has data from the well samples that were done in 2001 and 2005. Digitizing the paper records would pull all sources of data together so we would have a unified picture of water quality and can identify any well samples that are of concern.

Member Mastyl noted that we should be providing information to educate and inform the public. She suggested that we need to develop materials we can put on our website, such as "Did You Know" announcements. Website updates are needed. USGS has educational communications staff that can help summarize and understand data. One suggestion included choosing a groundwater week to which USGS responded there is one. Discussion ensued on various options. The Committee could look at ten "hotspots" across the Shore for specific concerns.

Member Lajoie stated that a ESCC sustainability program might be offered annually.

Discussion ensued. Member Mastyl requested the education and website project be added to the list for consideration.

3. **Land Subsidence**

Land subsidence is occurring on the Eastern Shore at a rate of 2 - 4 mm per year, with southern Northampton County exhibiting the most rapid subsidence. The area outside of Exmore is subsiding at a rate of approximately 2mm per year and northern Accomack County at 4mm/yr.

Land elevation is a component when measuring groundwater. Continuous monitoring sites are located in Newport News, Norfolk, Suffolk, Virginia Beach and West Point. It is proposed that a GNSS Station with continuous monitoring and corner reflector be located at the Kiptopeke tide gauge. There are costs involved, equipment costs as well as ongoing maintenance costs. A GNSS Station (approximately $50K) and corner reflector (approximately $15K) could be installed in as little as 2 weeks and run parallel to other work USGS is doing. An extensometer well is the best way to measure subsidence but these wells cost $2 million.

A question was raised about the effect of the crater. Discussion ensued.

Greg Connock (USGS) stated that the crater is very old and its settlement should have already occurred.

NSAR satellite data shows a hot spot over southern Northampton County which is 2 to 4 times higher than measured background subsidence. Why this is so remains an unanswered question. Additional information can be found at the National Geodetic Laboratory Station page,which contains information on stations across the country, including eight on the Eastern Shore.

Member Leatherbury expressed a concern that this project does not match the mission of the Committee well.

Member Lajoie suggested letters be sent to NOAA and other Federal agencies to seek other agency funds to address this issue. Member Mastyl suggested A-NPDC could apply for a grant under the Climate Resiliency Fund for construction and the Ground Water Committee could fund the maintenance.

USGS provided tools information which can be found at va.water.usgs.gov/webmap/groundwater-wells-es/

Today's working meeting was the first stage of the process to identify project(s) for the coming year. Britt McMillan will send out the updated information from 2021 with cost estimates for

committee review. The committee will review the 2021 list as well as the one submitted at today's meeting for further evaluation and discussion.

The next step is to identify and quantify the most relevant potential projects that would help meet the identified research needs. The A-NPDC will tabulate and create a short list from the Committees choices for discussion of which projects should be advanced, and then define a measurable outcome for these projects. The Committee will draft a prioritization list which will be provided for a vote, and allow questions that arise to be answered and allow for public scrutiny.

These next steps will require additional work from the Committee and may require another Committee working session to accomplish.

4. **Attachments**

5. **Other Matters**
   - Member Mastyl requested that the regular Agenda be posted to the website.
   - Member Chesser requested that we include only the long-term strategy
   - The A-NPDC will make contact with the Paul Mulhey family to see when and how we may make the presentation of the annual Groundwater Award to them in Paul's name.

6. **Scheduled Next Meeting**
   The next scheduled meeting for the Ground Water Committee will be held on Tuesday, March 17, 2026, at 10:00 a.m. - 12:00 p.m. The meeting will be held at the Eastern Shore Chamber of Commerce's Boardroom in Melfa, Virginia.

7. **Adjournment**
   Member Grossman made the motion to adjourn. It was seconded by Member Hershey, the motion was carried by unanimous vote.

   The meeting adjourned at 12:16 p.m.

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Calvin Washington, Chairman

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Elaine K. N. Meil, Secretary/Treasurer