

**Source Water Protection Citizen Technical Advisory Committee (CTAC)**  
**Source Water Assessment Plan Update - Subcommittee Meeting**

January 31, 2019

Final Meeting Minutes

Meeting Location: Tidewater Utilities Conference Room

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**WELCOME & INTRODUCTIONS - Douglas E. Rambo, P.G., DNREC, Division of Water**

Mr. Rambo called the meeting to order at 10:07 a.m. and welcomed everyone. Introductions were made around the room. The attendance list is included at the end of the meeting minutes.

**REVIEW AND APPROVAL OF NOVEMBER 29, 2018 DRAFT MEETING MINUTES**

Prior to the meeting, Mrs. Laura Mensch's edits were incorporated into the minutes as follows:

- Page 4 – third line – ‘then’ to ‘than’
- Page 5 – second paragraph – second line – remove hyphen from ‘setup’
- Page 8 – ninth line – capitalize ‘Readability Index’
- Page 8 – eleventh line – replace ‘big words’ with ‘unnecessary, long technical terminology’
- Page 8 – eleventh line – ‘grade level’ – Mrs. Mensch asked to have a comment added to confirm the grade level by Ms. Sheila Shannon. Mr. Rambo to look into.

Mr. Keith Mensch asked to edit the following:

- Page 6 – middle paragraph – second line – ‘than’ to ‘then’
- Page 10 – last paragraph – sixth line – ‘wait’ to ‘weight’ in two places

Mrs. Anita Beckel asked to edit the following:

- Page 10 – third paragraph – ‘220/200’ to ‘20 to 200’
- Page 13 – first line add ‘contaminants’ after ‘emerging’

Mr. Paul Cartanza, Sr. asked to edit the following:

- Page 14 – attendees list – change ‘Jr.’ to ‘Sr.’ on his name

Final meeting minutes are posted online at <https://publicmeetings.delaware.gov/Meeting/60721> .

**CONTINUATION OF PREVIOUS DISCUSSION ON CHAPTER 4: CONTAMINANT SOURCE INVENTORY & WATER QUALITY DATA – Douglas E. Rambo, P.G., DNREC, Division of Water**

Mr. Rambo said, “The past two months we’ve been discussing Chapter 4: Contaminant Source Inventory and also the Water Quality Data component of that. A lot of the discussion has centered around the Consumer Confidence Report (CCR) and the source water language that is required to be inserted into the CCR’s. I’ve asked the water companies present today to bring along some copies of their CCR’s. (Ms. Shannon and Ms. Virginia Eisenbrey brought copies to

CTAC Subcommittee Final Meeting Minutes  
January 31, 2019

the meeting.) Ms. Eisenbrey's copies were distributed to the Committee and Ms. Shannon's was brought up online and displayed on the screen. While waiting for internet access, the following was discussed:

Mr. Mensch mentioned the reason he brought Mr. Keith Harrison with him to the meeting today is because he is their CCR coordinator and Mr. Mensch said, "To me he is the authority in the State on CCR's. He can answer any questions that we would have. He is our liaison with EPA."

Mr. Rambo said, "While we're waiting for internet access, some discussions have come up regarding 'Missing Potential Sources of Contamination' of the sources that were listed in Chapter 4." Mr. Rambo continued, "One of these discussions from when the previous Plan was being put together was whether or not to include cemeteries. That was a pretty drug out discussion which was eclipsed by whether or not to include farmsteads. Farmsteads won out over cemeteries and I think the main reason was that there's no real accurate accounting of cemeteries in Delaware at the time. The Division of Historic and Cultural Affairs here in Delaware has been collecting that data and is about to put a cemeteries coverage up on the First Map webpage through the State of Delaware. This would be an opportune time for us to make use of that data set if we chose to do so. A second request for consideration for something that's been on the list are Stormwater Management Facilities and Mr. Scott Andres with the Delaware Geological Survey sent that in. He and I have been doing a little bit of work around one significant Stormwater Management Pond up in New Castle County." Mr. Rambo asked Mr. Andres to continue the discussion.

Mr. Andres said, "I've been doing a lot more than just a little bit of work at one facility in the past year on stormwater facilities including basic research, review of literature, both in published and consultant reports, etc. and it's obvious that the current stormwater practices in Delaware can be summed up as infiltrate everything or clean it up later. It was a process driven largely by the need to clean up streams, which is a worthy goal, but in the process of meeting that goal, a lot of input from groups like this, Source Water Protection or people that do hydrogeology, was not considered. And as a result, we've allowed construction of many infiltration facilities, some of which are in wellhead protection areas for wells that are in the shallowest aquifer. The reason this is a concern is the stormwater infiltration facility collects water from a large area, focuses it on to one small spot, and forces it into the ground at a high rate. That makes a lot of the assumptions that we use for source water protection inaccurate. The flow velocities that we assume are in effect around pumping wells or in natural conditions don't occur anymore. The flow velocities are increased by two or three orders of magnitude, there is no control on soluble pollutants for the most part going into these facilities or coming out of them. The focus is on nitrate, suspended solids, a little bit on phosphorus and that's it. There's no consideration on what might happen from catastrophic release of almost any chemical compound that's going down the roadway or being released from a factory that has a Stormwater Management System. So, as a result, I thought that it would be wise for us to start that process. Where are all our Stormwater Management Facilities and what kinds are there? How close are they to our water sources? Because at some point in the near future, and I think it's already happened, we are now dealing with impacts on public water systems from Stormwater Management Facilities." Mr. Andres continued to say how he has several hours of presentation material to go through if anyone would be interested in seeing it. Mr. Andres said, "It's one of those things we have a lot

of resources available to do this.” “DelDOT has an excellent GIS dataset on this topic”. He continued, “The Counties are supposed to be keeping track of these things within their development plans. So we can make some progress on dealing with this issue in the near future and it’s something we’re going to have to grow into as a Source Water Protection Committee if we want to deal with the problems that will arise in the next ten to twenty years.”

Mr. Rambo thanked Mr. Andres and asked for discussion from the Committee. Mrs. Beckel said, “I would agree that they both should be included, cemeteries and Stormwater Management Ponds. Stormwater Management Ponds, large and small. Every parcel that gets redeveloped now a days gets a stormwater collection area designated in it. And a lot of them are parking lot run-off which sometimes includes gas, oil, etc.” Mr. Ross Elliott added, “On that note we have been seeing a lot of rain tank installations at facilities including our gas station redevelopments where there is the push from the County level for infiltration. Newer technology is to install a rain tank system with underground chambers.” Mr. Elliott continued to discuss. Mrs. Beckel asked Mr. Elliott, “Do Stormwater Management Ponds and filling (gas) stations have some type of carbon filtration?” Mr. Elliott replied, “No, that was a discussion we had. For a facility to have this installed we asked them to take some soil samples.” He continued to discuss and said, “If it has a previous release at a facility, we say ‘you can’t put it in this location’. He continued to discuss and said, “At this point in time, the Tank Management Section is in the process of updating our regs, we’re trying to put it in the regs that you can’t have a rain tank infiltration system at a gas station. We’re expecting some kick back on it.” Mr. Rambo said, “Probably the main kick back on that is basically the size of the facility and the inability to put a regular infiltration BMP out there.” Mr. Elliott continued to comment.

Mr. Cartanza said, “With the situation now, have we stepped up to consider where wellheads are, where public drinking water is? Do you see gas stations and all kinds of things going on and being built upon still being created, have those extra steps been taken to make sure that the surrounding areas are protected?” Mr. Andres said, “In New Castle County there is some attention paid to it. They have ordinances in place to try to segregate polluting activities from infiltration facilities. But not always. As the landscape fills in with more and more development, there’s less room to put these things so there’s more pressure to cut corners and it’s starting to happen. In Kent and Sussex there’s virtually no effort to do it.” Mr. Cartanza replied, “So really we’re just putting a band aid. Why are we sitting here trying to decide on these different things if we’re just putting band aids over top of band aids. I know there’s a lot of technology and there’s a lot of information from all the different groups but it just seems to me that you’re trying to set standards for farmers and when we can do things and these things are happening and there’s no control of what’s happening. Everybody wants to come down on the farmer and says you’ve got to stay so far away from this and do that, you can’t do this or do that, etc. but yet we’re working with all the development.” Mr. Andres said, “I can say I don’t work for a regulatory group.” Mr. Cartanza said, “I’m just asking questions.” Mr. Andres replied, “What I would say is a common theme is that every regulated community has your opinion. Why me? It’s a logical and it’s a realistic question and as a regulator, regulators should be able to justify why they are asking for somebody to spend the money on restricted use of property. That’s always a legitimate question and you’re right, we are putting band aids over band aids on each and every one of these things, current stormwater practices, our response to severely degraded creeks and ponds and rivers. We didn’t manage stormwater properly.

Severe erosion, we had loss of habitat, impaired surface water use for drinking water, and we ruined a lot of stuff. So they had to address that. In the process, it's very complicated, but we are now learning that the band aids didn't get put on quite the right way."

Ms. Eisenbrey said, "I will say that Artesian participates actively in stormwater processes. Whether it's a developer or New Castle County, we show up to the table." Mr. Cartanza continued to discuss and stated how sometimes people are looking for scapegoats and sometimes the farmers are the easiest targets. He continued, "There's a lot out here that's going on and we're trying to get a handle on it. But we're not going to get a handle on it very fast, as fast as developments have. Wawa and Royal Farms and all these places are popping up. We got more people coming in from other states, etc." Ms. Sharon Duca said, "I can say that the City of Dover has a Source Water Protection Ordinance which restricts the types of uses that are within the area of our well sites. So we don't allow gas stations and those types of things near our wells." Mr. Cartanza said, "I'm new to this so I'm just making sure I'm asking questions." Ms. Duca continued, "I'm just saying something because you said there's nothing in Kent and Sussex County but there are municipalities that have enacted these regulations." Mr. Andres said, "I apologize for lumping you into Kent County but at the County level there's not a whole lot at this point." Ms. Beckel said, "I agree with Scott (Mr. Andres) and I'm not real sure but I think some of the City of Dover wells are outside your municipal boundaries and then it's going to be up to the County to protect them. That was true in Sussex County when a new filling (gas) station comes in near a municipality and you look at the County regulations and it says that no filling (gas) station will be installed in a Source Water Protection Area and you keep reading and at the very bottom it says 'unless it's in compliance with all other existing underground storage tank regulations'. So even though on the surface it looks like you get a lot of protection, when you go to apply it you don't have any additional protection." Mr. Andres said, "Filling (gas) stations are a perfect example. It has very strict regulations about the tanks and the conveyance system from the tank to the public." Ms. Duca said, "Kent County, if you're going to compare it correctly, you also need to compare the growth zone and restrictions and that nature that are going to overlap and cause other limitations as well. It's not just a singular ordinance that you're going to be looking at." Mr. Andres replied, "You're right. It's a very complicated system and if I was a builder, I would be scratching my head and saying 'why do I try'. That would be a logical conclusion. We argue with ourselves about what we do." Ms. Nicole Minni addressed Mr. Andres and said, "I think it would be really good to see a more detailed presentation, Scott." Mr. Andres replied, "I would be glad to."

Mr. Andres said he would discuss what he and Mr. Rambo did two years ago in response to the New Castle County Resource Protection Area Committee and how there's been a lot more information added since then. Mr. Andres also said he could discuss how he has been working with DelDOT on groundwater quality with respect to roadway deicing. Mr. Andres continued to discuss.

Mr. Grabowski added, "I spent some time in the Stormwater Program. I don't disagree with anything that Scott's (Mr. Andres) saying overall. I just had a question to follow-up about the GIS layer. Who has the information on this?" Mr. Andres replied, "Until very recently it was only available through one other consultant firm, KCI. Apparently they just put it up on one of their map services and should be available to all state agencies and in the near future to the

public.” Mr. Grabowski replied, “And that’s unique to DelDOT, though. I believe New Castle County has some level of GIS inventory of their stormwater facilities but the other delegated agencies I don’t believe have it so there will need to be some effort in getting those mapped. At least I know the DNREC inventory is not mapped because we started to do that months ago.” Mr. Grabowski and Mr. Andres continued to discuss and Mr. Grabowski added that the DelDOT layer is good. Ms. Minni said, “Aren’t the conservation districts also mapping the stormwater ponds?” Mr. Grabowski said, “I don’t want to speak for them. There’s just an overwhelming workload that they’re doing and their focus is in getting the plans out and trying to inspect in compliance for the most part. I think the administrative stuff is just a lack of time in some cases.” Mr. Cartanza said, “Thank you.”

Mr. Rambo stated this will be worthwhile for us to pursue with the Counties and the Conservation Districts to see if we can assemble that data. He said, “Like Matt (Mr. Grabowski), I’ve had access to the DelDOT BMP coverage for a couple of years and it is very comprehensive because not only do they have the infiltration ponds, the wet ponds, the dry ponds, they also have every filter strip and swale that they’ve constructed in GIS. It’s a big data set to work through. It would be nice to see if we can get something – it doesn’t need to be as comprehensive, but something along those lines from the Counties and Conservation Districts. I’ll reach out to them. I’ve also reached out to our Waste & Hazardous Substance Programs to see about getting updates to the contaminant source inventories for their Programs, Solid Waste Landfills, Super Fund sites, and Underground Storage Tank Sites, we have on a live link data base connected with those Programs so there’s no major issues there. We are getting ready to discuss with the Nonpoint Source Program regarding updates to the CAFO coverage that we have. We can get somewhat regular updates to pesticides from Laura (Mrs. Mensch).” He continued, “We are trying to look at bringing our data sets up to as current as possible. Just to get a consensus, I can tell from the discussion in the room that adding Stormwater Infiltration Facilities to the Program would be a beneficial upgrade. Was there any further discussion on cemetery issues or do we want to come back at that at some point?” Mr. Andres said, “I would ask that if it’s going to be considered and we do have the GIS coverage, the metadata associated with that are critical. For example, what is the age of this cemetery? It then becomes a very important consideration of whether it’s a risk or not.” Mr. Rambo said, “Going back to the data set from Historical and Cultural Affairs, it is not just the public cemeteries that are on the list. It is the family plots that are on private parcels that the families are letting the Division know that are out there. The Historical and Cultural Affairs has a lot of the timeline data associated with those.” Mr. Andres added, “The details are very important.” Mr. Rambo showed a printout of their database that’s tied to County tax parcels. He said, “A pretty detailed listing is going to be put up on the First Map site hopefully within this quarter.”

Mr. Cartanza asked, “Where are you trying to go with the cemeteries? Back in the early days you were buried in a pine box and went back to earth. Are you trying to get when they started embalming, I mean how far back are you trying to go with the cemetery to really understand if the cemetery has an issue?” Mr. Rambo said, “One of the biggest problems we have when reviewing public wells and even domestic wells that pop up in very close proximity to churches with cemeteries is ‘what’s the water quality’ and because it’s a cemetery a lot of times we’re requiring the facility or the person or the company that’s requesting the well to go confined. So we’re putting an added expense to what could generally be an unconfined well for a typical

resident just because you're looking at the release of embalming fluids, potentially metals such as arsenic that were used in the wraps for the bodies prior to using embalming fluids. We want to be cautious. We're looking at protecting public health. The more details we can give people as to what is inside their wellhead protection area the better everyone is for knowing what potentially could be affecting drinking water. The more you know the better. If it's a public utility where they're getting their water from, what treatment methods they're using. For a long time, we've been requiring confinement for wells near cemeteries. Back in 1998/1999, this was a very hot topic. I wasn't on the Committee at that point but I know Sheila (Ms. Shannon) was." Mr. Rambo asked Mrs. Beckel if she was and she replied, "I don't remember the cemetery discussion." Mr. Rambo said, "Ed (Mr. Hallock) may have been on it." Mr. Rambo and Mr. Cartanza discussed.

Ms. Samantha Smith asked if funeral homes were included, too. Mr. Rambo replied, "I don't know if the State has an accurate listing of, outside of the Division of Professional Regulation, I don't know who would maintain that coverage." Mr. Grabowski said, "I think that would be a hard one to generate." Mr. Cartanza said, "Can you test around the cemeteries within a certain amount of distance to see what is there because there's a lot of cemeteries and a lot of houses surrounding those cemeteries that have independent well systems." Mr. Cartanza continued to discuss.

Mr. Rambo said, "Going back to the funeral homes there is a possibility that they could be under the hazardous waste generators in Waste & Hazardous Substances. It depends on the quantity of fluid of materials that they would have for that process on their premises." Mr. Grabowski said, "It's probably worth following up on." Mr. Andres said, "I guess the next thing that's related to that is funeral home facilities that are outside certified sewers?" Mr. Andres continued to discuss and brought up 'how are we regulating wastewater?' Mr. Andres added veterinary hospitals are the same to be considered. He said, "I think the Water Supply Section's concern and practice of recommending wells in confined aquifers is a wonderful idea." Mr. Andres continued to discuss and Mr. Cartanza asked if hospitals were also included and also regulated. Mr. Andres said, "Some of them are, especially the bigger ones." Mr. Andres and Mr. Cartanza continued to discuss. Mr. Rambo replied, "I do believe they fall on the hazardous waste generators and that they're inspected regularly under that Program." The Committee discussed.

Mr. Rambo returned to the Consumer Confidence Report discussion. He said, "A lot of the questions that came in over the last couple of meetings was 'what's required language in the CCR and the fact that it's taken from the susceptibility materials in the CCR's taken from the Source Water Assessments for the individual water systems. Sheila (Ms. Shannon) has provided a couple of copies of Tidewater's CCR, a very comprehensive single document for 'how many water system's is this, Sheila (Ms. Shannon)?" Ms. Shannon responded, "50 PWS ID's." Mr. Rambo said, "Probably about 120 wells across the spectrum." Mr. Shannon said, "About that." Mr. Rambo continued, "What they've done for the individual districts that they serve they have a report of what has been detected from their sources and at the bottom of that they have a summary of the system table from the Source Water Assessment for their susceptibility." Mr. Rambo discussed examples as shown on the screen off the internet.

Mr. Rambo asked Mr. Harrison, “You review pretty much all of the CCR’s that come in from the PWS’s.” Mr. Harrison said, “Yes.” Mr. Rambo asked Mr. Harrison if he wanted to say anything on the requirements of the CCR’s and how the two Programs are tied together, the raw water susceptibility versus the treated water and how the CCR bridges the gap. Mr. Harrison said, “The CCR is a water quality report of the finished water. That’s what the primary purpose of the CCR is. It includes information about the Source Water as well and specifically what the EPA asks for is a brief summary of the susceptibility of contamination to the source. And that’s it. They want a brief summary. What a lot of systems do is pull the summary out of their Source Water Assessment if they have one and simply use that summary. My opinion is that’s a little problematic because that summary is specific to that whole assessment. In other words, it’s a summary of that Source Water Assessment not necessarily of the susceptibility of that system. The report talks about susceptibility to contamination but it’s the way it’s worded. It’s in reference to the report. Without the context of reading the entire report, if you just read the summary, then it seems worse than it is. Because what the CCR will often say is it exceeds metals, for example, and if the only metal exceeded was iron in one well, for example, the assessment will say that it exceeds because it’s looking at it from that perspective of the entire system combining all the wells but if one exceeds for iron they’re putting that on the whole system because potentially it does exceed for iron. However, it may only be one well. The point is is that a water system can write their own summary and they could take the information in the Source Water Assessment and word it such that they could say we have an issue with iron in one well, we mix our water or whatever, they could say that in their summary. But a lot of the systems just pull the summary right out of the Source Water Assessment as it’s written in the assessment.” Ms. Shannon asked Mr. Harrison, “Are you saying that you would accept something as an alternative to the summary or in addition to the summary?” Mr. Harrison replied, “I’ve been encouraging systems to write their own summary for years.” Ms. Shannon said, “In a situation where iron is detected and if it’s treated, we can mention that it’s treated, we don’t have to put that table down?” Mr. Harrison replied, “No, and let me just read this one sentence out of EPA’s guidance for the State. It says, ‘If the community water system has an assessment that was provided by the State, the CCR must include a brief summary of the system’s susceptibility to potential source of the contamination using language provided by the State or written by the water operation.’ So they’re only asking for a summary. Summary of the potential sources of contamination.” Ms. Shannon said, “We thought we had to provide that table so would you be able to put that in writing?” Mr. Mensch replied, “It’s already in writing in the EPA guidelines.” Mr. Harrison added, “And it’s in writing in the checklist that I have provided for years to the water systems and everybody has a checklist on how do you do a CCR.” Mr. Harrison and Ms. Shannon continued to discuss and Mr. Harrison told Ms. Shannon if she provides a summary taken out of the Source Water Assessment she can take the table out. Ms. Shannon said, “And I can include additional information that may clarify what’s written in that summary.” Mr. Harrison said, “Another example would be, there may be underground storage tanks within a particular well zone and so the susceptibility to contamination is there because what if that underground storage tank leaks and this particular well is in a shallow aquifer there’s a potential source but is it an actual source that’s occurring at this point in time? No, it isn’t. And so if you put in there that we are highly susceptible to VOC’s because there are underground storage tanks in a well zone, that could be a little bit misleading.” Mr. Rambo said, “I would have to disagree with that, Keith (Mr. Harrison). Because the way the Source Water Assessment Plan was written in 1999 was that the only way you would get a ‘high’ for VOC’s is

if there was a detect of a petroleum hydro-carbon or avolatile organic compound in the raw water and that automatically put you at 'high'. If you exceeded the MCL for that VOC then that puts you at 'exceeded standards'. So to just say that we are putting a system at high just based upon the existence of an underground storage tank in the wellhead protection area for a water system that's misleading." Mr. Harrison discussed a random 2002 Seaford Source Water Assessment that he pulled before coming to the meeting and said the assessment didn't really give any data to indicate that there was anything detected in the source water. Mr. Harrison stated that's what's difficult for water systems to interpret that to try to put that in their summary. Mr. Rambo said, "As part of that assessment, there was a table of water quality at the back of that document for all the individual wells in the City of Seaford that had all the different contaminant categories that we look at in the Source Water Program." Mr. Rambo continued to discuss. Mr. Harrison said, "In that case, the fault is mine on this one because what I review, I review the Source Water Assessments. I review it as the public sees it because the Source Water Assessment information is included in the CCR so that the public can go view the Source Water Assessments and all that information has been redacted from the report. I'm looking at it from what the public sees and how they might judge their CCR based on what the water system is saying and reporting in the CCR and also to what the water assessment says as well. I understand. There's a little bit of difference there." Mrs. Beckel said, "I think that just the maps are redacted from the assessments. The water quality data is still available online." Mr. Rambo said, "Yes."

Mr. Cartanza told Ms. Shannon, "Keep doing what you're doing and don't take it out." Ms. Shannon asked, "Why?" Mr. Cartanza replied, "It just seems to make it more vulnerable for different discussions." Ms. Shannon said, "It's got to be replaced with something else." Mr. Andres said, "Amplified." Ms. Shannon said, "And clarified. I'm taking it out." Ms. Shannon continued to discuss with Mr. Harrison.

Mrs. Beckel said, "In the Source Water Assessment handbook, guidance, document they have a whole Appendix D related to the information on Source Water Assessments and CCR's and conservations." Mrs. Beckel said EPA gives six different examples. Ms. Shannon said she will talk to Alexis (Mrs. Virdin-Gede) and investigate. Mr. Rambo thanked Mr. Harrison for giving clarity to Tidewater on what they can include in their CCR.

Mr. Rambo said, "At the last meeting I mentioned to everyone that one of the major tables in our Source Water Assessment Plan is Table 4.2. I mentioned if there was better ways for this table to be presented to offer them to the Committee for review." He said that Mr. Todd Keyser suggested adding a column for the EPA analytical method. Mr. Rambo said, "For most of them, it's going to be 524 but for some of the VOC's and other immolating contaminants they may not fall under the 524. They might fall under other EPA methods. Tables for VOC's and others need to be updated. Especially the unregulated contaminants. These were just the ones that were included from the Super Fund and Tank Management Sections." Mr. Rambo addressed Mrs. Mensch and said, "I'm sure there are probably some pesticides that could be added to the list." Mr. Rambo asked the Committee to look at the list and see what needs to be updated and if there's a better way to present it to let him know.

Mrs. Mensch asked Mr. Rambo if this is the Section that the 'weighting' would come in to play and Mr. Rambo said it's Chapter 5. Mrs. Mensch said, "Would we want to change the layout in

this table to assist with the weighting that occurs in Chapter 5? Would we want to break out the compounds in another format in order to show that weighting?” Mr. Rambo said, “If we want to separate out the primary and secondary MCL’s, unregulated contaminants but also try to keep them in the format for the Program where we have the different contaminant categories. So if there’s unregulated metal, then we’ll probably want to separate it out of the unregulated compounds and break them down into our different contaminant categories as well.” Mrs. Beckel said, “I think that would help with the sodium issue that it wouldn’t be in with the trace metals that it would be in with the secondary’s. In our guidance document we reference the State of Delaware regulations governing public drinking water systems of March 31, 1991, and there have been many many revisions since then so I would suggest that we just say ‘the current version of the State of Delaware regulations governing public drinking water’. We did have the foresight to say that ‘any change in EPA or State MCL’s would be included in the Source Water Assessment.” Mrs. Beckel added there have been many contaminants added and MCL’s changed. She said, “I think grouping them in consideration of how we’re going to weight the them later I think that is very important.” Mrs. Beckel continued, “And with the methods, I understand what Todd (Mr. Keyser) is trying to get to to maybe know the detection limit at the time but I don’t even think the State of Delaware regulations they don’t include them because they change so often. They just reference the EPA standard methods so to list that in a document that is to be revised every couple of years. I mean I see the value of Todd (Mr. Keyser) wanting to know that it is which EPA standard methods was done maybe when the water was tested but it’s really going to complicate your table.” Mrs. Mensch said, “I know in my Program I note the method that I’ve achieved results on seeing compounds using S150, 8141, and 525. You want to make a note of it but you can achieve the results in some cases through different methods.”

Mr. Rambo said, “I think that’s what Todd (Mr. Keyser) was getting at. There’s a lot of similarity between 524 and 8260. There’s just different detection levels for 8260 versus 524. The 524 base is drinking water based but 8260 does not have to be drinking water. It can be any groundwater, surface water ...” Mrs. Mensch said, “So the Source Water Assessment is going by exceedances of MCL’s. So as long as the test used can detect at or below the MCL then it wouldn’t matter as much about the detection limit, correct?” Mr. Rambo replied, “What I think is we move forward - I know for PFAS it’s not going to be covered under 524 it’s under 537.” Mr. Rambo continued to discuss and said he believes Mr. Keyser just wanted some way of capturing that. Not one method covers everything for drinking water.”

Mrs. Mensch said, “I agree with Anita (Mrs. Beckel). If there’s a way to capture it in a different location that can be updated more frequently, that would be helpful. I don’t know what your plans are to update the table. If you would be interested in updating it frequently then it wouldn’t matter.” Mrs. Mensch continued to discuss.

Mr. Andres agrees with Mrs. Beckel and Mrs. Mensch. He added, “I think I know where Todd (Mr. Keyser) was trying to go. It’s incumbent on your Program to maintain an accurate and up to date list of methods that’s associated with all the different regulated, unregulated, etc. compounds and you should be able to produce it at any time. It doesn’t have to be in a static document that it’s updated once every twenty years. The guidance from the Program is what’s really important.” Mr. Andres continued to discuss.

Mr. Rambo stated that he will clean up the text in Chapter 4 and if anyone is interested in assisting with updating the table and if the Office of Drinking Water could make sure that the primary and secondary MCL's are accurate within the table that would be a big help. Mr. Mensch replied, "Sure." Mrs. Mensch stated that she will look and see if any of the compounds in the pesticides lists should be updated and she will let Mr. Rambo know.

Mr. Rambo said, "The main thing I wanted to cover in Chapter 3. I sent out an e-mail asking about Delineation Methods and whether we should break out the Surface Water Delineation Methods versus the Groundwater Delineation Methods. It would make going to the methods for each different water system type easier to get to." He asked the Committee if he could get a consensus of the group on separating out the delineation types for Surface Water versus Groundwater. Eliminate that chapter and make two easier flowing chapters. Mrs. Mensch and Ms. Shannon agreed.

Mr. Rambo stated he wants to begin discussing Chapter 5: Susceptibility Assessment. Mr. Andres asked before beginning that discussion if he could discuss his RIB comments. Mr. Rambo said, "Scott (Mr. Andres) brought up under Chapter 4 comments regarding the contaminant source inventory for groundwater should include Stormwater Management Facilities as we discussed." He said Mr. Andres gave some very good discussion as to why they should be included and they are posted on the Group.IO site and asked for everyone to read and send e-mails with comments. Mr. Rambo brought up Mr. Andres' comments on the screen and they were discussed with the Committee.

Mr. Rambo began discussing Chapter 5. He started to discuss the Vulnerability Determination Process and said he will rescan and e-mail this to everyone because it wasn't clear. He stated, "It goes through the different steps that we look at for vulnerability for a well or for a Surface Water intake. If it's a Surface Water source it has a 'high' vulnerability. If it's an unconfined aquifer well or it's a shallow unconfined, meaning less than 100 feet, it generally has a 'high' vulnerability. If it's great than 100 feet, it typically has a 'medium' vulnerability. If it's a confined aquifer well, it has a 'low' vulnerability." What it really breaks down to is the vulnerability source and the contaminant potential of either the land use or the point source within the wellhead protection area and depending upon the contaminant level of the source within the wellhead protection area that's how your susceptibilities break out." Mr. Rambo continued to discuss and said this is how they've been looking at the weighting of the difficult sources within the wellhead protection area. Mr. Rambo continued to discuss the susceptibility flow chart with the Committee while up on the screen.

Mr. Rambo said, "We don't have too many groundwater under direct influence sources here in the State." Ms. Shannon said, "I don't think we have any." Mr. Rambo said, "One could argue that the Cockeysville aquifer in Hockessin is under direct influence." Mr. Rambo continued to discuss with the Committee. Mr. Rambo stated the flow chart has worked out well for the Source Water Program and he doesn't anticipate any changes.

Mr. Rambo then discussed the determination of contaminant potential from discreet sources. These would be the point sources of contamination. He mentioned how for sites that are

CTAC Subcommittee Final Meeting Minutes  
January 31, 2019

underground storage tank sites, how Ross's (Mr. Elliott) Program ranks them. Mr. Rambo continued to discuss the Chapter with the Committee.

Mrs. Mensch asked Mr. Rambo if she could discuss the 'Pesticide Enforcement Matrix' (attached). Mrs. Mensch said, "At the last meeting I mentioned that the Pesticide Section uses a 'Pesticide Enforcement Matrix'. If there was a potential violation from a regulated entity, then we'd go through and actually rank different facets of the potential violation. Part of the ranking includes the criteria that's listed." Mrs. Mensch discussed the matrix to the Committee.

Mr. Rambo said he wanted to add to the Susceptibility Ranking that the water quality data trumps everything. He said, "Observed data is basically what we have for water quality. We have detection versus exceeds." Mr. Rambo continued to discuss the rankings.

Mr. Rambo said, "We need to start looking at the weighting of the metals, the unregulated compounds, and things of that nature, to see how we can better alleviate the concerns being brought up related to the non-MCL list that were using for the Program."

Mr. Rambo stated we will revisit Chapter 5 at the next meeting on February 28, 2019.

**ADJOURN – Douglas E. Rambo, P.G., DNREC, Division of Water**

Meeting adjourned at 11:50 a.m.

These minutes are not intended to be a detailed record. They are for the use of the Source Water Assessment and Protection Program, Source Water Assessment Plan Subcommittee members in supplementing their personal notes and recall of Committee discussions and presentations and to provide information to Committee members unable to attend. Minutes recorded and submitted by Kimberly Burris.

Attendees are listed below alphabetically, last name first:

Andres, A. Scott – Delaware Geological Survey  
Beckel, Anita – Delaware Rural Water Association  
Burris, Kimberly – DNREC, Division of Water, Water Supply Section (Administration)  
Cartanza, Sr., Paul – Delaware Farm Bureau  
Cohen, Shelly - Public  
Duca, Sharon – City of Dover Public Works  
Eisenbrey, Virginia – Artesian Water Company  
Elliott, Ross – DNREC, Division of Waste & Hazardous Substances, Tank Management Branch  
Gordon, Darrin – Lewes Board of Public Works  
Grabowski, Matthew – DNREC, Division of Water, Water Supply Section Manager  
Harrison, Keith - Division of Public Health, Office of Drinking Water  
Magliocchetti, Cathy – U.S. EPA Region 3  
Mensch, Keith – Division of Public Health, Office of Drinking Water  
Mensch, Laura – Department of Agriculture

CTAC Subcommittee Final Meeting Minutes  
January 31, 2019

Minni, Nicole – Water Resources Agency

Rambo, Douglas – DNREC, Division of Water, Source Water Protection Program

Shannon, Sheila – Tidewater Utilities

Smith, Samantha – DNREC, Division of Water, Source Water Protection Program