



## Department of Environmental Services

Robert R. Scott, Commissioner

**RFP Questions and Answers  
Cyanobacteria Monitoring and Sampling of Public Water System Surface Sources  
NHDES RFP 2024-09**

### Virtual Meeting – 10/16/2023

Q1.1 So under the umbrella of continuing something that's already underway, I'm sure with other systems I happen to be working with Manchester Water Works for this year, so we already have some data. But I am just interested in knowing if you have a vision for what the continuation of monitoring may look like. Knowing that there may be a change in the composition of the cyanobacteria present in anybody's particular water system.

**A1.1 So you're asking me if I have any vision of how monitoring may change in a particular water system or water systems over the course of the season or over the course of two years?**

Q1.2 Yeah, over the course of two years because uh, you know, I mean, you may have system that historically had. One particular cyanobacteria and then change to something else.

**A1.2 Right. No, I mean I think that's kind of the underlying understanding is that we don't believe one year of monitoring is sufficient to characterize baseline conditions or changing conditions over time. If they do change, we don't know. I don't know if they change and the only way to know is to monitor so the value in here is to better define conditions over time, which is why we're continuing to fund this and at the same time, you know we have about 10:00 or so 10 or 11 water system sources that are actively experiencing blooms. So, this extends last year's effort to different potentially different water systems, different water supplies.**

Q1.3 Within the purview of what you guys are doing with all of your water, existing watershed plans and source water assessments and things like that. If it's been established that there have been times when there's a concern about the sign of bacteria in the system, are you, is this something where there's you're trying to sort of tie into the whole TMDL concept is nutrient data? More important, because of that, you know, I'm just wondering if there's some type of a hierarchy it just looked a little different to me in terms of what you were asking for the parameters and why that might be within the whole process?

**A1.3 I don't think so. The proposal didn't change in terms of; but to double check, I mean, we do have a section that talks about monitoring. We did include sampling that would include nutrients because of the connection to blooms. So total phosphorus is seemingly important but not necessarily a foundational piece. By accelerating or expanding blooms it is seeming it is a factor in many cases, so we're asking for that information. If you know of or there have been previous plans and work to monitor that show elevated phosphorus or other related compounds that are accelerating or contributing to our potentially contributing to blooms, then certainly this is the time to continue to capture that data. You know, there are water bodies where there may be continuing nutrient monitoring going on in the background of trying to figure out either a TMDL or execute a monitoring a watershed plan that's going reduce that. Those are all informational pieces that could go into a proposal, but the focus with, with the focus to include certain nutrient nutrients like phosphorus being monitored as part of the baseline conditions. You know, because that's the next step could be with some of this information for a watershed plan to be or TMDL to be developed and then implement it. So having that information, if it doesn't**

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already exist, or if it's pretty limited, would be good. The simple answer is nutrients are clearly a factor for some of our sources to you know like in parts of our state we have highly developed watersheds where there may be a lot the whole edge of the water might be lined with septic systems and a varying degrees of ability to you know to actually function properly. Yeah, we did add a bit more detail to that section too. In the proposal we are being slightly more prescriptive on the frequency and the type of data we were looking for, which is consistent with and the way the monitoring would take place, which is consistent with a lot of guidance that we've read and some of the experiences we've been having here at DES monitoring systems that we're doing. And I think if I didn't say it clearly enough before, I think the idea here is we're built, we're asking for those proposals to consider. The information that's available and if, including whether there is a defined cyanobacteria monitoring plan and whether there is a risk assessment and those things being foundations of the proposal, the proposal could include just monitoring or include updating or improving a monitoring plan or it could include, you know, creating a new plan and creating a new risk assessment. So those are all variations on essentially the same theme of what we're hoping to have in place for or uh for this year. I think if it isn't clearly expressed in the RFP, I mean the "risk" is kind of a squishy word. I think if there are questions about what we mean by posing a risk to a water supply, we're less concerned, if blooms occur in other (distant) portion of a lake or reservoir. We're clearly more interested in the potential of standard toxins to be making their way in whatever form, into a water systems intake and into its treatment plant and whether that will make its way into distribution or an ad, or what the risks of those that is, that's where the focus is.

Q1.4 Within this proposal, is there any opportunity to provide some type of operator training or interpretation of all of this data, because if indeed we go into the second year and some changes have been made and there's, you know, information that's been provided that can help them go through the risk assessment and you know basically have an updated decision matrix, how do they institutionalize that now? Once they have that information, is that allowable to do something like that under this proposal, or is that something completely different that would have to be undertaken by the water supplier themselves or some other education or outreach opportunity?

**A1.4 If it is training, I think your question is, is there training or an ability to use funding under this proposal to complete a training piece. there would be some assuming your question is more related to operators. So water system operators, can they be part of the training? A training venture. As part of this and I think that is what you're getting at is can operators be part of the training?**

Q1.5 I'm just wondering if you're providing them all of this information in there, you know, looking at everything that's been collected as data from sondes, whether they're in the lake or in line or you know, integrated into a SCADA system or whatever it is.

**A1.5 No, no, no, that that would be part of the monitoring plan. So the details of how to collect the information once the plan is determined based on the risks and the longer-term view of the water body versus a short term type of response plan where monitoring would be guiding what they would be doing in real time. Those are all details for the response. In terms of the proposal and all work, so that's where I would say in terms of training you know the there is a sustainability language in this proposal that is to try to look at how to keep continuing on with a program monitoring program with the water system being involved. That's really again detail that would have to be worked out between the you know the proposed the work under the proposal if it was funded and the water system directly because they vary so greatly in terms of their capacities. So, the level of their effort to continue monitoring should be part of the monitoring plan that would come out of this work and spell it out in the plan-- the water system's going to sample and other actions take raw and finished water**

**samples on a particular basis and then they'll do XY and Z with those. Again, it would come back to the water systems capacity to voluntarily do that.**

Q1.6 So what I'm what I'm hearing, what you're saying is that yeah, there is because they have to figure out how to institutionalize it and keep their operators. Basically, implementing the entire plan, right?

**A1.6 Well, yeah.**

Q1.7 So they have to have some type of training to do that.

**A1.6 Yeah. This training wasn't a core focus of this RFP, and it was it was, but it certainly could be in terms of recommendations coming out of the either the risk assessment or I suppose the monitoring plan where there be recommendations to establish training to continue to go again, to share the responsibilities of the plan. So, the plan would articulate the different roles based on what was possible or feasible or sustainable training. We do have a grant program for directly for training so that both purchase of equipment and operator training can be funded under a different grant. So if for instance, as this process was to play out under this proposal, there is a determination as to the need and the different types of things water systems could perform, but they would need to continue to complete training on a regular basis. They could come to us at any time . There is actually a rolling deadline to seek funding, to develop a training program or to have that training done. The max 10,000. So that's for equipment and or training purposes.**

Q1.8 Is that for, under this proposal you're working with two different water suppliers, so they could come in and ask for that from you for to train their staff. Is that the vision?

**A1.8 Well, it would be for paid training. So, say they wanted to be trained, by somebody at UNH, like Amanda McQuade. Just to be clear, someone can apply to conduct training services. They don't have to have an existing training program necessarily, but they could apply and ask us to help pay for training. Sort of on-the-job type of training like I'm going to do a cell count, and this is how you identify the top ten genera that are toxin producers. I don't think we've defined very strictly what has to happen and as conditions for putting together a training program. We haven't defined strict training objectives.**

Q1.9 That's kind of what I'm wondering, because once you get to the place where you have all this data, you know, the question is how you then institutionalize this within the water plant itself with your operators and all of that.

**A1.9 We have some training examples in the region for cyanobacteria. Certain states have engaged in that, so it's not like that hasn't happened before.**

Q1.10 Well, Liz, maybe I can follow up with you on that later just to see where that's at?

**A1.10 Yes.**

Q1.11 Under the list of deliverables you asked in the proposal One is a risk evaluation, one is the monitoring and monitoring plan and the other is the QAPP. In answering some of the other questions, It kind of sounded like a risk evaluation wasn't necessary. For example, if one had already been conducted for a utility, and so I just want to clarify if this list of deliverables are all required, or if in fact the risk evaluation, for example, is optional.

**A1.11 So we want to know, if there isn't a previous risk assessment or evaluation of any kind, we want to know how the monitoring plan is going to be designed to address risk. So, risk of exposure, I don't think there's a water system that doesn't have a monitoring plan, does not have any risk assessment of any kind, even**

outlining what the potential risks are. You can't basically say, well, OK, I'm going to do a monitoring plan, but we're not really going to engage in determining or having a risk evaluation that goes with that. We're giving you references to some of the guidance that talks a lot about risk assessment and some of the EPA and WHO guidance. Those are guidance documents to consider when thinking about designing a monitoring plan. But if your question is, are they independent, if there is no risk evaluation of any kind, the answer is they need to have that type of assessment that would go in hand with the monitoring. I mean, they're literally the other side of the of the coin, monitoring plan and a risk assessment.

Q1.12 If they, do have a risk evaluation, actually is more, I think closer to my question, if they already have one then...

A1.12 If they have one, you can certainly submit that, and if we feel that that's an asset, we will look at that assessment in relation to the proposal for the monitoring. So, if your question is do you have to just include a risk evaluation, if there is one already done, no, the answer is you do not need to have that as part of the proposal. I think it says it in the if there is a published risk evaluation, protocols should refer to that evaluation and make a technical case for updating or improving the evaluation. So strictly speaking, we wrote that you could reference it. And you, if you were to make the case that there are improvements to that, you could do that. If there is a risk evaluation that you feel is sufficient, you don't need to factor that into your proposal. You just need to cite it and tell us this is what you're saying. So you can just simply say we have a risk assessment, it was done last year, it already outlines the risks. It looks at these different factors, risk factors and we don't believe you could just simply say this is what we're going to go with because that's what the risk is or you could make the case that this really needs to be more fully vetted and defined in terms of whatever risks you believe there are and then you need to just talk about that.

Q1.13 And in terms of trying to understand the risk for the drinking water systems, some of these water sources are impacted. For example, in the summer when the water source isn't actually used as a drinking water source, do you have a desire to monitor during off use at all or you really want to focus monitoring when it's being used as a drinking water source?

A1.13 So you can look at it two different ways. So, it's not a risk in the sense that the water's being delivered to customers, so they're not at risk during the summer when the water's not flowing through the water system. We're not saying you have to include off-season data when you know when the system is offline. However, this has a baseline component in the sense that what is the information in terms of the dynamics is telling you - that would inform risk. I mean, generally speaking, I would say we're less interested in monitoring when the source is offline. Focusing on the time when a system is not using the source, the clear risks and the sort of transitions that occur in terms of seasonal system starting up and to some degree shutting down, are important to know in terms of what's going on. What tends to go on in that water, around the time when they're about to bring it online my guess is you could say well, one year is not going to be a problem for the PWS, but if you continue to monitor according to a plan, I would think over time you would start to have a better sense of what those dynamics look like and what the water system would need to do to address potential risks around the time, for instance for startup. So that's a long way of just saying.

I think the focus could certainly be to build a better understanding of the dynamics and I'll leave it to the experts to define that, to understand conditions in a water body over a longer period of time than say six months with water system is using that water body for six months. How much longer and what additional data you can capture, but when it's not in use may be important to understand dynamics as you lead into using the

**water bodies, your transition to water in the using the water body in the fall or shutting down the when to shut down in the spring. We've had water systems shut down prematurely because of a bloom, so what conditions that we're changing that they didn't realize until they saw that balloon visually. There are risk factors associated with blooms that aren't necessarily showing you a bloom.**

Q1.14 Do you mind if we hop on with some questions? So, our question is twofold. The first is we are comparing and contrasting the 2023 RFP to this year's, and we noticed that the requirement for the frequency of grab sampling is now much more defined. So we are wondering if the available budget for last year's similar to this year?

**A1.14 As far as I know, it's the same level as it was last year. We have an intended use plan with EPA that allocates funds for different things, so monitoring and planning. We're included in this RFP and this in our intended use plan with EPA and I don't believe those numbers changed. So, to answer your question, it's the same amount of money. We did define a schedule that is consistent with uh, you know, EPA guidance and examples that we are familiar with around the region and nationally in terms of how frequently on lake or on reservoir monitoring should be taking place.**

Q1.15 Thanks and following up with that, we were wondering because you seem pretty set on the weekly grab sampling regardless of a bloom is present or not. So, we were wondering, is that flexible at all if our proposed methodology can justify a different a slightly different approach?

**A1.15 So you're asking since we've stated the frequency and duration of sample collection should weekly sampling at the raw water intake location. So that first condition is saying we're looking for weekly sampling right in and around the intake and including the parameters that are listed underneath that section. So if you're planned is to monitor other places outside of the intake area, because that's and the deep spot, which are both mentioned, that condition of weekly, I would say that level weekly sampling is limited to the area that we just stated in the RFP intake area and deep spot.**

Q1.16 So it's so it's mandatory for those two locations.

**A1.16 Right. So, if you're monitoring away from those areas. I don't think the intention was for you to do everything weekly. Like for instance, you know profiling or other types of activities that were somewhere else in the water body. But you know, this RFP isn't really a monitoring plan. It was a baseline of the frequency and the type of monitoring that we wanted. I would say put in what you think is the best approach to monitoring and...I wouldn't necessarily say we're going to disqualify a proposal because you've offered us a modification to the listing of parameters or frequency. The top of that section, it says it should consider so should is not shall. I mean, if there are some deviations from that, I wouldn't get hung up too much, but the emphasis in the section is on frequency of monitoring. The place where the intake is and at the deep spot and to follow that type of approach with collection of information, and a listing of the specific parameters that we think are relevant.**

Q1.17 I'm I was curious if you had, if DES had a preference for expanding programs to new utilities. To continue focusing the funds on continuing or expanding programs at existing at utilities with the existing monitoring plans.

**A1.17 No, no, I don't think there's a preference, Clifton, between going and working with a system that hasn't had any monitoring done versus one that is monitoring. You know our preference will be looking at the value of either type of proposal in terms of what we think is being gained. So, we do have one or two systems that are new to the list this year. As far as we know and we're not sure they have a monitoring plan at this point. I don't**

think we've written this with and the scoring or the evaluation, the proposals will be looked at from. There is some monitoring and there is a plan in place, but if the proposal is strong in terms of what we think it gains in terms of getting to the question -- because the question may not be fully answered and even if they have a monitoring plan and risk assessment, for instance, we would consider what the proposal brings in terms of gaining ground on answering the question, the primary questions, primary objectives of the RFP. So, it's not necessary if there's a plan or risk assessment that exists or something that will exist under the proposal, it's how much ground it gains in terms of answering the questions that we have in here in the objectives.

Q1.18 Can a single proposal do both in terms of or should it focus really on a single utility?

**A1.18 No, we I think it says in the RFP that you can do one or more -- so proposals can involve one or more sources which would typically mean one or more systems. Although it's not always necessarily the case, but no, you can propose to do one thing in one source and another thing and another source. Given the funding that you have that we have to play with. So, I mean, if you've looked at the evaluation criteria too, you should look at what the general kind of statements are about. How we are evaluating these, you know, and what the criteria is because those are considerations that we look at. We look at each one of those and give points associated with that. So that includes the price, but that's not a determining factor.**

Q1.19 When, when coming up with the monitoring plan approach design, I'm wondering how much you prefer or is thinking around and monitoring for as an early warning system verse monitoring to simply understand the dynamics of the water body or of bloom forming conditions within the water body. Those may be diametrically opposed to one another, or one may not necessarily consider the other focusing on sort of an early warning system might lead you to design it in one way versus focusing on simply understanding the causes or the overall dynamics might lead you to design it in a different way.

**A1.19 So I think that proposal does speak for itself in terms of establishing the risk, which has to do with exposure and treatment plant operations. So if you were to ask me what's more important, it is the ability or the presence of toxins in a portion or an area of a reservoir that is potentially going to be the source water is going to make its way into a plant and then the plant is going to have to respond ---understanding those dynamics are more important than understanding the dynamics in other places and in in a way that is more I guess background to what's going on at the intake, so those two concepts can be connected. I mean the background information maybe informing what's going to happen in an area of the reservoir that is of greater concern. But conceptually, most water systems are not, for instance measuring blooms far away from their intake, they're most concerned with the area around the intake that they are familiar with. They may be having recurring blooms, but you know this gets into a nuance that, I can't define in terms of, I don't think it's definable in terms of what you need to know. You know when your background information and its level of importance to the primary question of potential exposure at the intake, those are really questions that have to be answered on a site-specific case. I mean, I think the RFP speaks for itself in terms of what the priority questions are, the level of importance in terms of other information, whether it's phosphorus, whether its cell counts across a water body is really a question that has to be defined through much more site-specific data and information that would be articulated through a monitoring plan. I think the primary questions here are around the risk to water, to water supplies, to public water systems and to the degree to which toxins are going to be present in an area where that water will be used as a as a public as part of a public water supply, as delivery of drinking water. And you know, we have blooms in other parts of reservoirs I, but there's no real answer I can give you in**

**terms of. Exactly how important that information is to the questions that are primary to this RFP thumb are potentially important and some may not be.**

Q1.20 Are there any systems that do not have monitoring plans that maybe sort of more willing to participate or have a desired or sort of support in this?

**A1.20 I would encourage you to use the contact list at the in the appendix, and that's a question I would leave to you. I don't think it's my role to navigate that, but I can say that generally speaking, I'm sure there are a few systems who are very interested and there are some that are less interested. On the short list that's out there, I would guarantee there's some interest in continuing to do this work, particularly because the water system, most water systems are pretty concerned with, with few exceptions about this issue. They see their mission very, seriously. I think by and large they there would be a high level of interest in continuing or designing, developing better ways to understand how cyanobacteria might affect their operations in public health.**

Q1.21 I was curious your take on the issue of turnaround time and how quickly you would want data back? Obviously, it varies by lab also it can drastically affect the price of various analysis and then there's toxin analysis. Then there's all the other parameters, some of which are lab based, I could picture collecting data to understand risks to do an evaluation, to write up a report later, which has less dependence on a quick turnaround time. Then there's collecting data to really inform response for the utility and obviously in an ideal world, we'd want it as quickly as possible and do both. But for this, the way you wrote it up, I'm wondering if one was heavier in your mind in terms of how quickly you want these data for some of these parameters back.

**A1.21 So you're right on in terms of how ties back to the objectives that trying to establish the monitoring. So, in the systems that we work with and that across the country they need that information in as quickly as possible when there's a risk of toxic exposure, or they feel like they need to know that information to make a health advisory to know what the levels of toxin are. For instance, at the intake or in the raw water, and then there are certain types of information that may be less time sensitive. Those are just something I think you can read in the literature as to where that would break out. My perspective on that generally speaking I would say there's some information that is a very timely and you would want to be looking at an expedited result. So, if you have a major bloom at an intake, you'd want the water system and we would want to know what the genus was, for example (toxin producing) ...cell counts we can tell from just looking at it or that from a lab. and toxin analysis as quickly as possible. If it's on the other side of the waterbody, if it's a mile away and nothing else appears to be going on it's not clearly a risk. Potentially affecting water quality at the intake then, do you need to expedite that? You could argue that it really doesn't need to be expedited, but that's something you need to figure out as part of an approach. So, if you're asking my perspective, if you know we have water systems like Paugus Bay, where there's a bloom that's couple miles away from the intake and they're not expediting toxin samples. In fact, they're not taking toxins samples at this point. So it's really a question for them and for us, risk of exposure. We've put into this proposal language about understanding dynamics, understanding the way the water bodies react over seasons over years so if we strictly wanted to do a plan, one could just take finished and raw water samples at the plant. We didn't actually say that because we were looking for a broader understanding of what's going on in the water body, not just OK, let's wait and see what happens at the intake.**