

## **Things that Worked (Conlon 2022).**

- **All 24 EPA QA/R-5 Elements were addressed.**
- **The overall problem statement was bolded and each subsequent section led back to why this additional data will help understand the systems.**
- **The literature searches (existing or secondary data) activities were clearly connected to the primary data collection/experiments**
- **For the Quality Objectives and the PARCSS parameters, you separated the objectives for each of the primary data collection activities and then the secondary data which made it easy to see the goals for data quality and how it would be assessed for each step.**
- **The procedures for all sampling and analyses were included in very straightforward steps. We don't need fancy formatted SOPs, we just need to understand what it going to be done.**

## How did I get there.

- 1) **Big Picture – The QAPP is useful for answering: How am I going to generate these data? How good is it and how will I know? What specifically am I going to use it for? Will it answer the questions I am posing? Products vs Outcomes. On the downside – it exposes gaps in your thinking when writing the proposal. On the upside – it can help you cull the herd of necessary measurements.**
- 2) **Find a good example. Use it. Change the wallpaper and furniture but there is probably no need to tear down walls.**
- 3) **Use your proposal. Its already written! Its got the context, the relevance, and objectives. The objectives are the most important segue into the QAPP. The objectives dictate the scope of work. The QAPP is in part a reality check on this – for you and the reviewer. The QAPP also is the chance to really figure out the details of what you said you were going to do in the proposal but the page limit wouldn't accommodate.**
- 4) **First describe the scope of work from 30,000 ft before digging into the details. Summarize tasks and how they fit together. Then divide into each task (e.g. existing lit review, field tasks, lab tasks etc.) Each task is its own complete bite.**
- 5) **Describe the tasks as if you are going to hand the document to your new bright technician or grad student so they can execute while you go to Acapulco and wish not to be disturbed.**
- 6) **Related to #5 – Good time to finish those SOPs. Colleagues are a good place to start.**
- 7) **Less is more. Satisfy the questions in #1. Satisfy the specific QAPP criteria (slide 1). Approach it as if you have to pay for each word.**
- 8) **Did I mention – find a good example.**