1/5/2023

I am manually copying all content from the previous Bookdown vesion of this publication to this new Quarto Book. Completed today

Tasks:

- Review and accept edits on EPA QAPP revisions, resubmit to EPA

- Integrate changes from EPA in to current QAPP draft [use MS word merge docs?]

- Choose 2023 sample dates (done)

- Review 2023 budget & sources

- Complete review of 2021 data & submit to ADEC

- Use EPA water quality tool to look at list of past dates/tides to help determine current one (online wqx portal) (done)

- Send out save the date(s)

1/6/2023

Continuing work on QAPP updates

1/10/2023

Create graphic of timing to choose 2023 dates

Visualize

- Calendar date

- Tide height

Created table of tide data, working on visualization and summary.

Decided on Tentative 2023 dates

May 2, 2023

July 18, 2023

1/11/2023

Tasks

- Follow up w/ Justin Nelson at SGS for QAPP inquiries

- Adjust data submission checklist quetsions ot new ADEC guidelines

- Finalize flow/format for 2021 data

- Adjust flow chart to match new ADEC expectations

1/16/2023

Sent QAPP revisions to Katherine Brown at EPA.

Next priority: get 2021 data at least functional -- even if not fully ready to upload to EPA WQX -- so that we can make some basic charts and graphs as in previous report example (Guerron Orejuela 2016)

mini-steps:

- Get csv/list of MonitoringLocationID numbers; feed this into dataRetrieval vignette.

- Modify data flow figure to update to ADEC expectations

1/17/2023

1/20/2023

- Edited text in main report, updating refs from 2016 pub

- Decided that fo the moment, the dataRetrieval package may not be fully cooperative for our needs. Very large dataset, easier to keep as a csv downloaded from EPA WQX, kept on local drive and not GitHub vis using .gitignore file

1/23/2023

Working to reinitiate data submission project for 2021 observations. Re-orient for submission directly to EPA rather than though DEC, per request of Soldotna DEC office.

1/27/2023

See notes in ReadMe file for QAPP development for other days work this week.

Working on creating task list for annual, biannual, etc tasks; designate responsible parties.

2/15/2023

See notes in ReadMe file for QAPP development for other days work this week.

Since last notes taken here:

- Sent full QAPP to Alaska Dept of Environmental COnservation for review

- Reexamined appendix A

Plan for next steps:

1.) work on code to re-run results for at least one parameter for 2000 - 2014 data

2.) complete 2021 data uplift

3.) complete uplift for other missing years

\* Spent an hour today diagnosing an odd error. When running this repo on my personal PC, the "acknowledgements.html" file is being rendered outside the "docs" folder, resulting in a "this file already exists" error/ Delet this file, and the rwender works fine for both html and docx.

2/17/2023

Took a break from working on data uplift for a day or two to instead focus on data visualization. Organzinig and executing scripts for data uplifty continues to be a challenge.

- Created a function to generate a general boxplot figure and download associated data table, successfully

created chapters for arsenic and benzene so far. Next big step with visualization and analysis is to incorporate regulatory limits.

- Reg limits: We will want to show reg limits as a horizontal line, and ideally also identify which observations exceed limits in the data tables. Start w/ updating/ adapting "toxicsbook.xls" from ADEC website, last updated 2010.

To do: see and resolve "notes.txt" file

2/20/23

Working at bottom of "parameters" script

Began adapting toxicsbooks.xls downlaod from ADEC

Plan: get functional example of applying hline and to boxplots, then return back to fiishing 2021 uplift

Issue: html render does not include new mods to boxplot function

Solution: clear cache (see other/notes.txt)

2/27/2023

Rationale for how to plot data in context of regulatory limits:

Make stand alone plot of regulatory limits for each parameter, jitter dodge style w/ facet wrap; maybe show in each stand alone parameter page

1.) calculate where values exceed ALL reg limits, indicate in columns in download files

2.) show only most conservative hline per parameter ... more than 3 types would be too much

3.) do trial run for arsenic

4.) start buy just doing hlines for drinking, stockwater, irrigation

--> for all parameters that are hardness dependent, we won't be able to show a simple horizontal line. Show instead as differentiated point symbols by size & shape

--> suggest performing hardness calculations in a seperate script, export table, then rejoin table to overall dat to ID which points are hardness-based excesses

--> working on how to set up exccedance ID witin boxplot function

Consider this post on multiple hlines: https://stackoverflow.com/questions/61896730/how-can-i-add-legend-to-multiple-hlines-in-ggplot2

--> next session: return to complete QAPP, and complete 2021 data uplift

2/28/2022

Left off working at line 909 in appendix A. Confirming that export file is structured as it needs to be for EPA WQX upload

3/16/2023

Working at line 1476 in appendix A. Working on 2021 dat evaluation in prep for upload to EPA WQX. This line is critical, as it is evaluating if observations are above LOD and LOQ minimum requirements

10/31/2024

Worked today on “reg\_limits.qmd”. Having an issue trying to join hardness values to overall data table. The join is successful for only some parameters and not others for unclear reasons. Critical piece. Continue diagnosing.

New routine: make journal entry any tiem prior to using command line to stage all commits.

Terminal command to stage all commits:

git add -A && git commit -m 'staging all files'

11/1/2024

Able now to calculate threshold values for hardness-dependent metals.

Next: work to evaluate all results against ADEC or other regulatory thresholds, then export tables to other/output/analysis\_format. This is where data is sourced from for the boxplot and table downloads.

11/5/2024

Spent time working to add static threshold lines for additional parameters beyond metals. Added values for pH to the boxplot dataset, but they are not rendering yet. Need to diagnose why.