

PAROC Oversight Resolution

Background and Draft Update

March 18th, 2022

James River UIC Permit Application Contents

Attachments

- A – Maps and Area of Review
- B – Geologic and Geochemical Information
- C – Well Construction Information
- D – Injection Operation and Monitoring Program
- E – Plugging and Abandonment Plan
- F – Financial Assurance
- G – Site Security
- H – Aquifer Exemptions
- I – Existing EPA Permits
- J – Description of Business
- K – Optional Additional Project Information

Appendices

- A – Water Quality Targets
- B – Aquifer Monitoring and Contingency Plan
- C – Identification of Analytical Parameters and Summary of Methods, Containers, Preservation, and Holding Times
- D – Geochemical Evaluation and Recommended Measures Report by Jacobs

UIC language allows for flexibility and calls for PAROC review

“Adaptive Management”

2.4 Future SWIFT Facility Considerations

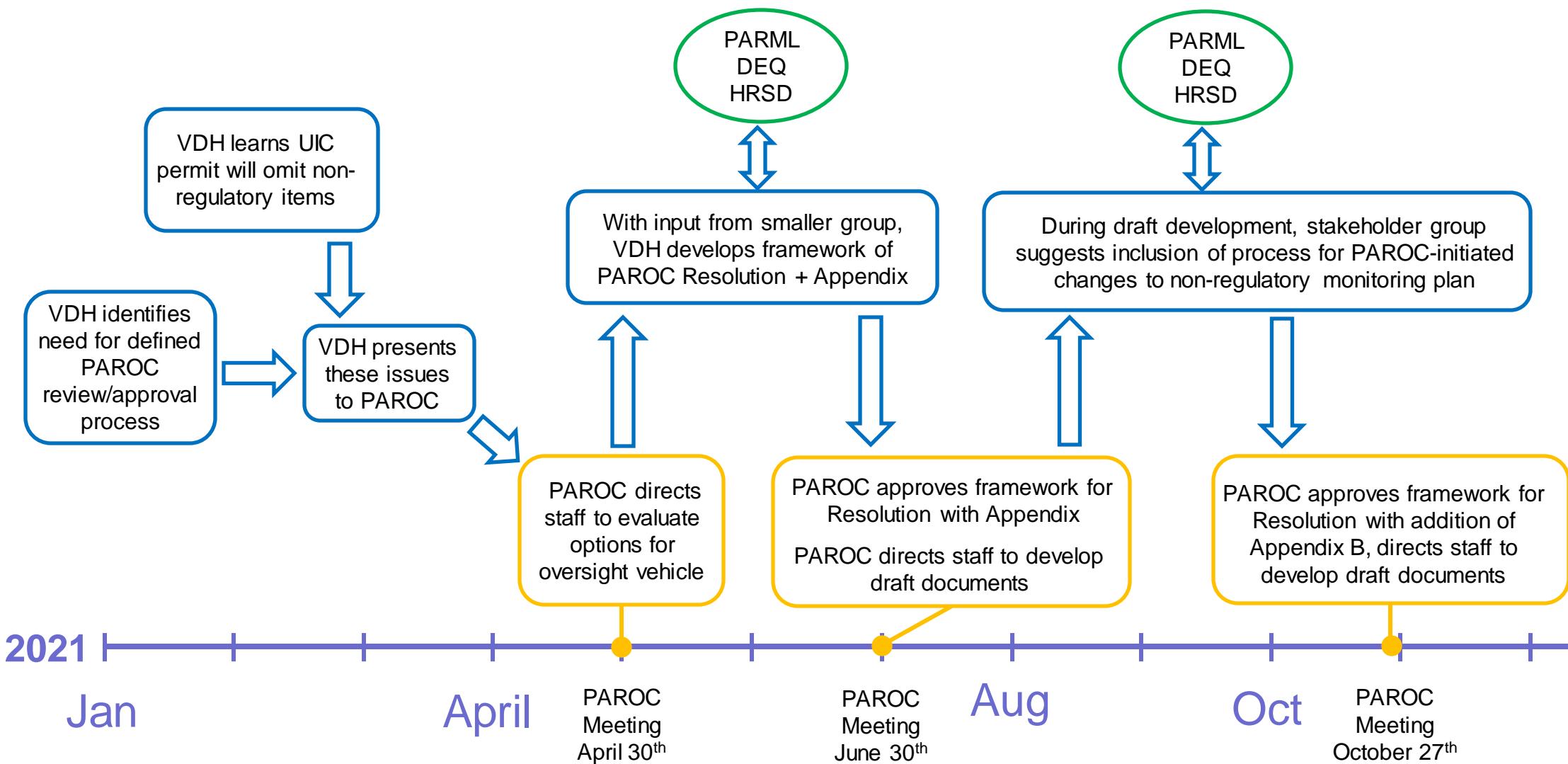
The SRC and the soil column testing will continue to provide significant operational data on the performance of the advanced treatment processes while JR SWIFT is being designed and constructed. Prior to design of other full-scale facilities and prior to operation of JR SWIFT, AWT design and operational parameters will be reevaluated. For example, if significant reduction of organics is demonstrated at the SRC monitoring wells or by soil column testing, HRSD may seek credit for Total Organic Carbon (TOC) reduction through SAT and modify the SWIFT Water TOC regulatory limit accordingly. It is intended that all water quality targets will be treated with this adaptive management approach.

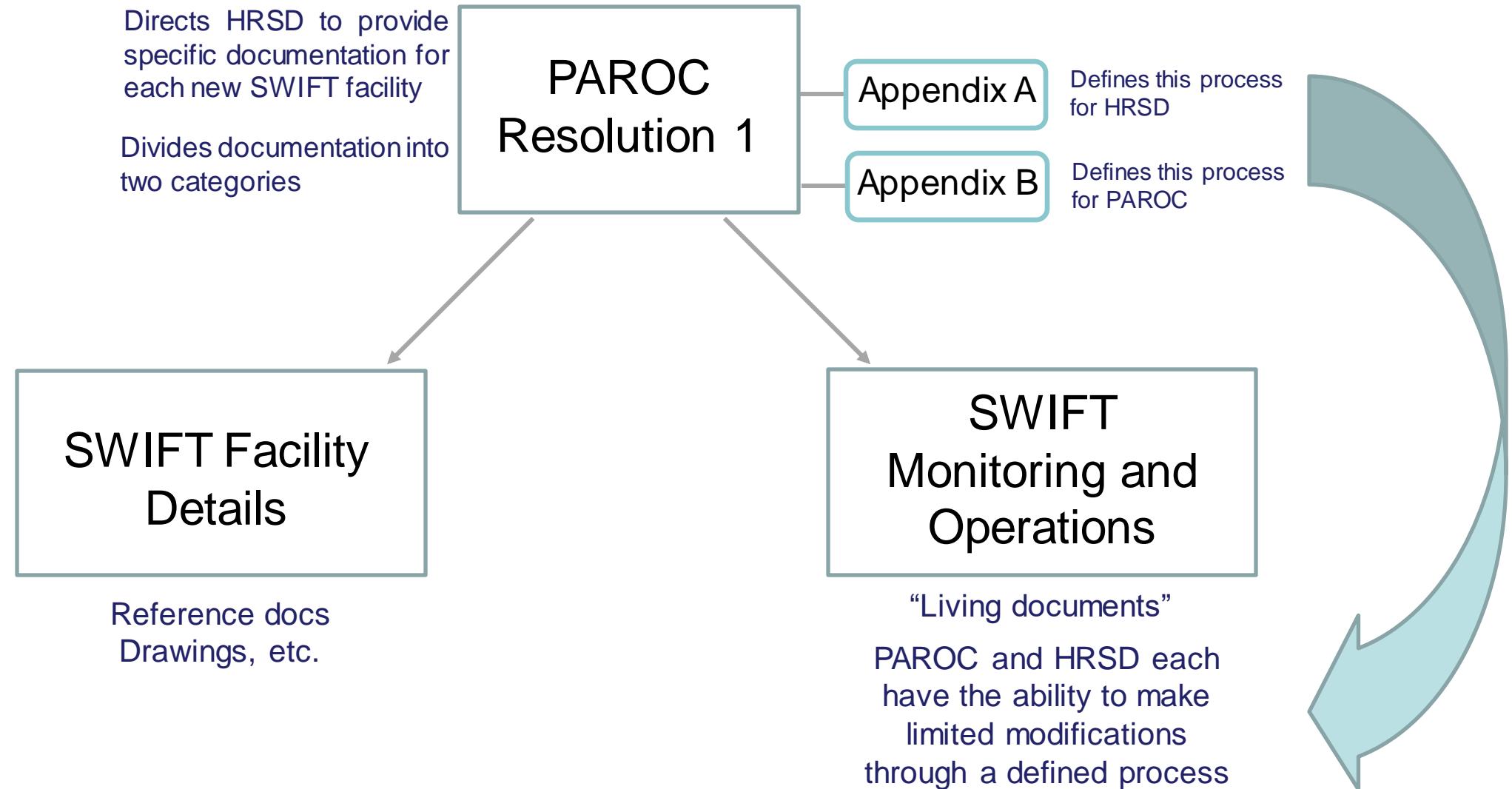
Phased Reduction of NDMA FP Monitoring Schedule

⁹ In addition to monitoring NDMA concentration, NDMA Formation Potential (FP) tests will be as follows:

- when monochloramine is being added following UV disinfection the frequency shall be monthly for one year. NDMA FP frequency will be reduced in years 2 – 3 to quarterly, followed by annual testing for the duration of the permit, provided the contingencies for phased reduction continue to be met. Phased reduction is contingent upon (i) NDMA concentrations under agreed-upon conditions in FP testing remaining < 10 ng/L, and (ii) NDMA concentrations in the monitoring wells remaining < 10 ng/L. Exceedance of either of these conditions will “reset” the phased reduction schedule.
- when free chlorine is being added following UV disinfection, NDMA FP testing will be conducted monthly for three months and will be ceased if (i) NDMA concentrations under agreed-upon conditions in FP testing remain < 10 ng/L, and (ii) NDMA concentrations in the monitoring wells remain < 10 ng/L. NDMA FP is expected to be minimal when using free chlorine post-UV and HRSD will further mitigate this risk by incorporating ammonia monitoring of the GAC combined effluent with a CCP for SWIFT Water diversion (Table D.5).
- All NDMA FP data will be evaluated by PARML and PAROC to ensure concurrence with phased reductions.

Recap of PAROC Resolution Timeline





Resolution Specifies Contents of Each Document Pack

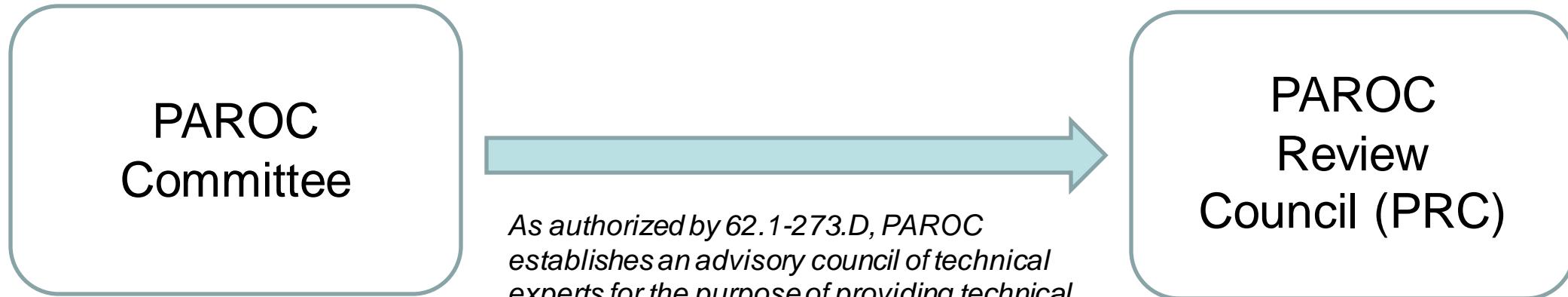
SWIFT Facility Details

- Existing wells in project area
- Geologic description of project area
- Native groundwater data
- Well construction
- Facility construction
- Process descriptions
- Design parameters
- Process flow diagram
- Final UIC permit (Draft – update as issued)
- Mechanism/responsibility for updating as documents are updated (by outside parties, ex. Record drawings, change orders, etc)

SWIFT Monitoring and Operations

- SWIFT Treatment
 - CEC and performance indicator monitoring plan
 - Critical control points
 - Chemical addition schedule
 - Pathogen LRV credit
- Groundwater monitoring plan

Appendix A – Creation of PAROC Review Council

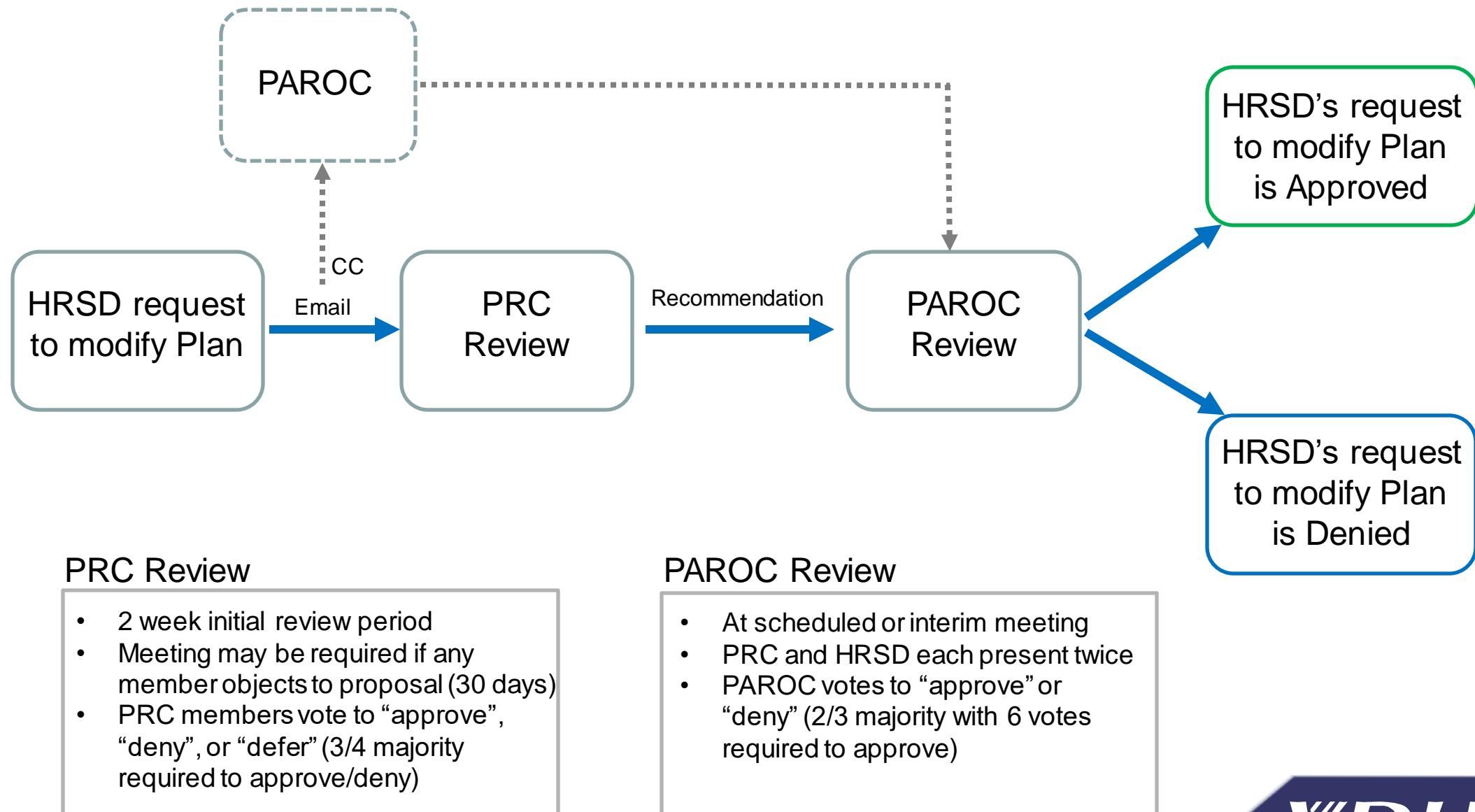


PAROC
Review
Council (PRC)

Technical experts from

- VDH
- DEQ
- PARML

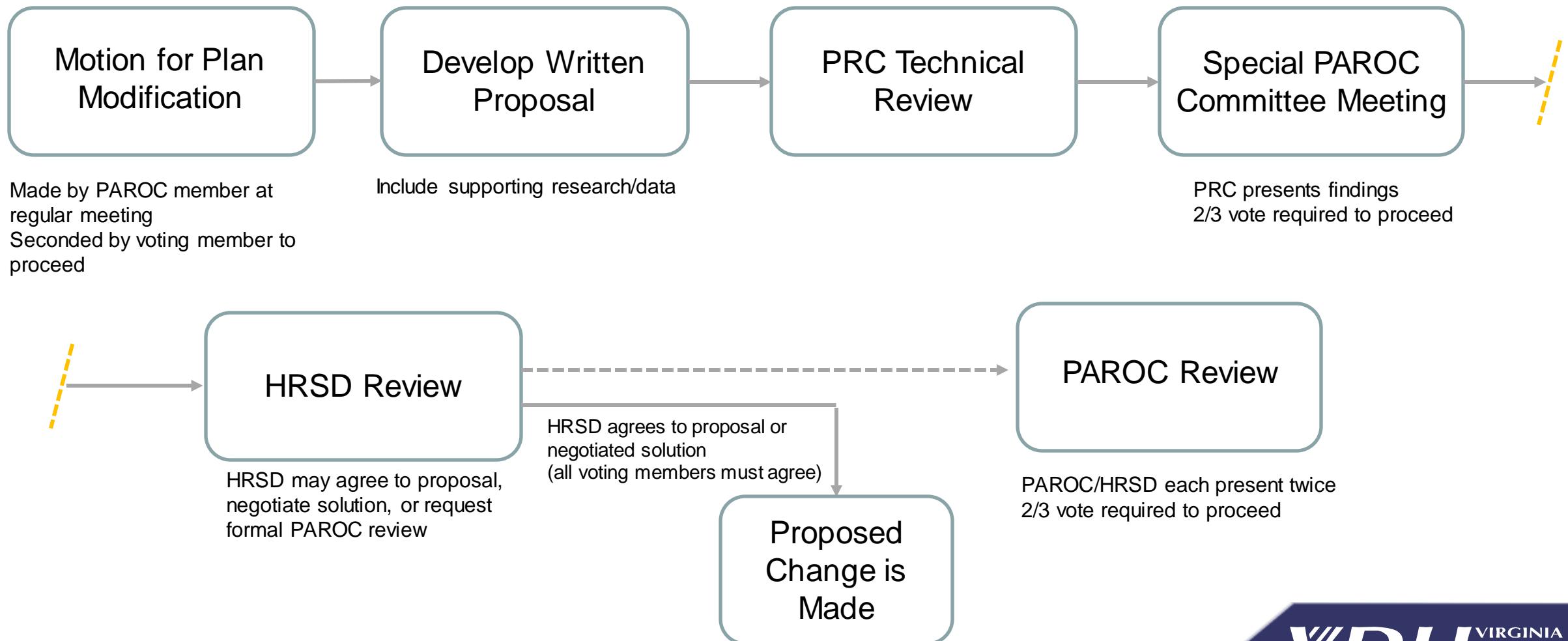
Appendix A: HRSD Modifications to SWIFT Monitoring and Operations Plan



Appendix B: PAROC Modifications to SWIFT Monitoring and Operations Plan

Limited to details of CEC/performance indicator/aquifer monitoring plans

No direct modifications to the SWIFT process or operational procedures



Questions?

Please send me comments by April 8th (3 weeks)

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