Recomputation of Ambient Water Quality in the Santa Ana River Watershed

BMPTF: March 24, 2020

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Ambient Water Quality Phases

1: Data Gathering

- ✓ Data Compilation
- ✓ QA/QC, Process, and Upload recent data

2: Point Statistics

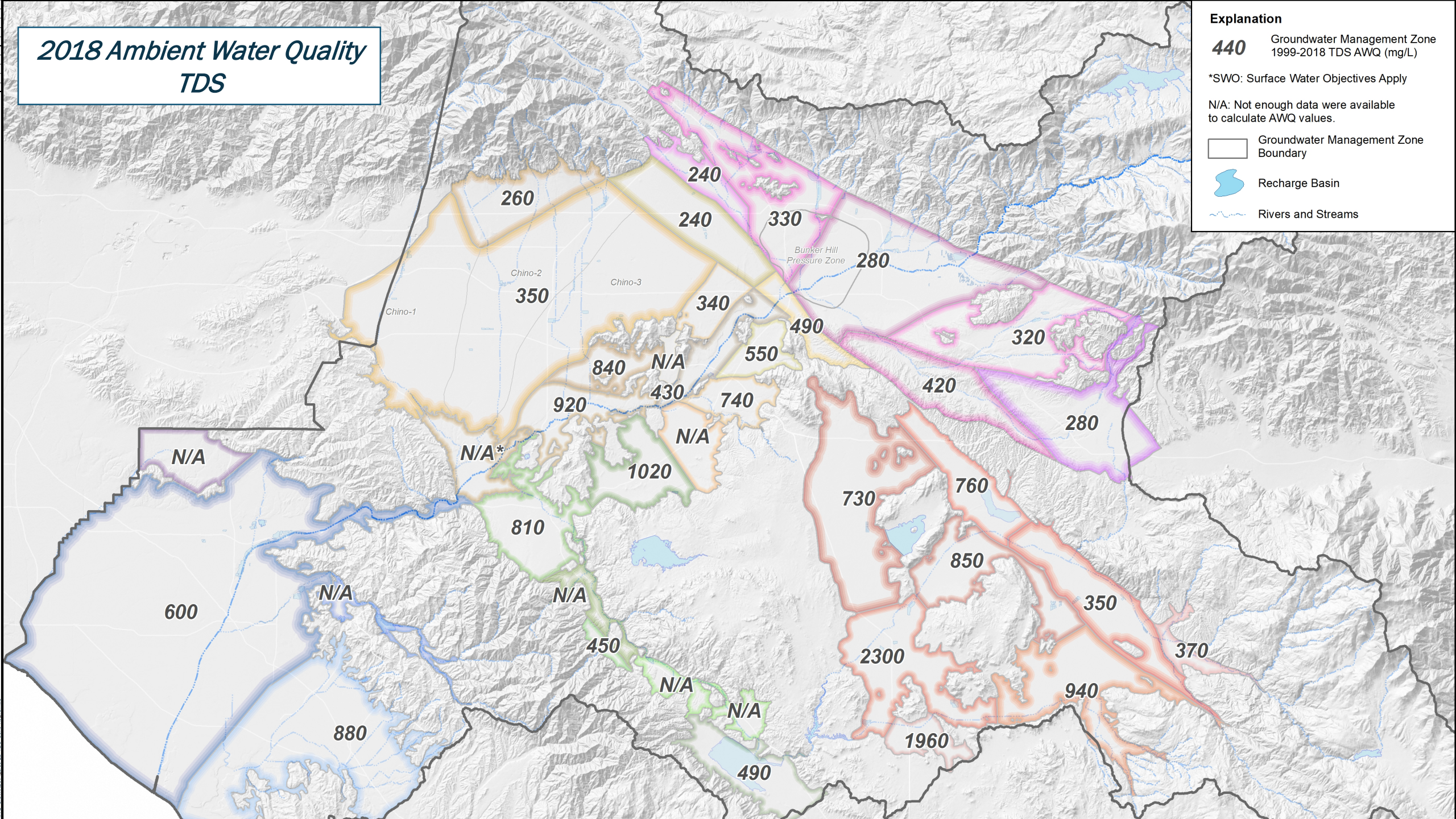
- ✓ Calculate Water Quality Point Statistics
- ✓ Shapiro-Wilk Test for Normality

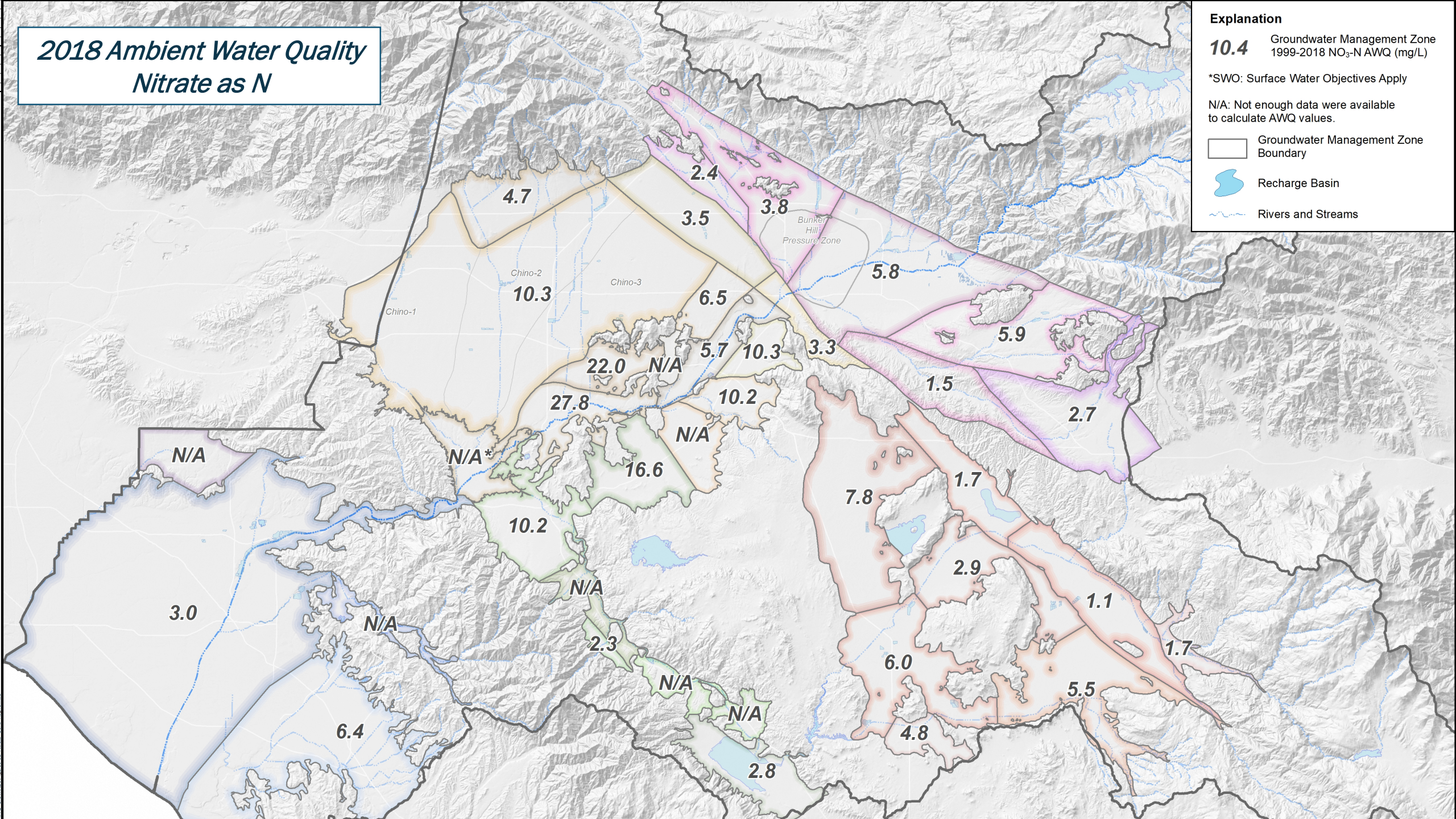
3: Computations

- ✓ Groundwater Elevation Contours
- ✓ Nitrate, TDS Concentrations
- ✓ Compute ambient water quality for GMZ's

4: Interpretive Tools

- ✓ Innovative Interpretive Tools


2018 Ambient Water Quality
TDS
Explanation
440
Groundwater Management Zone
1999-2018 TDS AWQ (mg/L)
*SWO: Surface Water Objectives Apply
N/A: Not enough data were available
to calculate AWQ values.
Groundwater Management Zone
Boundary
Recharge Basin
Rivers and Streams
Chino-1
Chino-2
Chino-3
Bunker Hill
Pressure Zone
240
260
240
330
280
350
340
490
320
840
N/A
550
420
920
430
740
280
N/A
N/A*
1020
730
760
810
850
600
N/A
N/A
350
450
2300
370
N/A
940
N/A
880
1960
490


2018 Ambient Water Quality
Nitrate as N
Explanation
10.4
Groundwater Management Zone
1999-2018 NO3-N AWQ (mg/L)
*SWO: Surface Water Objectives Apply
N/A: Not enough data were available to calculate AWQ values.
Groundwater Management Zone Boundary
Recharge Basin
Rivers and Streams
Chino-1
Chino-2
Chino-3
Bunker Hill Pressure Zone
4.7
10.3
2.4
3.8
3.5
6.5
5.8
5.9
3.3
5.7
10.3
22.0
N/A
27.8
10.2
1.5
2.7
N/A
N/A*
16.6
N/A
7.8
1.7
10.2
2.9
N/A
1.1
3.0
N/A
2.3
1.7
6.0
N/A
5.5
N/A
6.4
4.8
2.8

Interpretive Tools
Well Attrition

- AWQ Draft TDS Nitrate Data Loss Risk – Two slides
  - Nitrate Data Loss Risk
  - TDS Data Loss Risk

- AWQ Draft TDS and Nitrate Well Attrition Analysis –13 slides
  - Nitrate Well Attrition Analysis
  - TDS Well Attrition Analysis

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Interpretive Tools
Well Trends

- AWQ Draft Nitrate Key Well Trends – one slide: key wells symbolized by trend in Nitrate over the computation period.
- AWQ Draft TDS Key Well Trends – one slide: key wells symbolized by trend in TDS over the computation period.
- AWQ Draft Nitrate Well Trends – one slide: All wells symbolized by trend in nitrate over the computation period.
- AWQ Draft TDS Well Trends – one slide: All wells symbolized by trend in TDS over the computation period
- AWQ Draft Point Statistics Percent Rank – four slides:
  - Nitrate Point Statistics and Averages
  - TDS Point Statistics and
  - Nitrate Point Statistics and Averages Percent Difference from 2015 – 2018
  - TDS Point Statistics and Averages Percent Difference from 2015 – 2018

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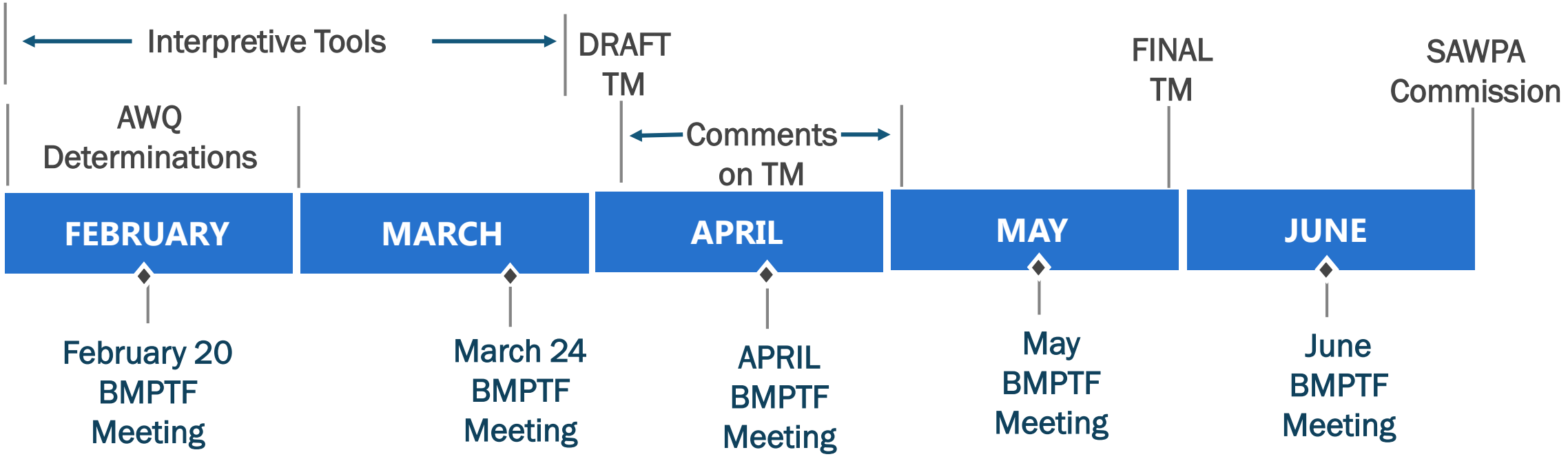
Proposed Near-Term Schedule



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