Westlands Water District

Groundwater Sustainability Plan Workshop

April 6, 2018

23050 W. Mt Whitney Five Points, CA 93624

Workshop Outline

- **Presentation**
  - **SGMA Overview**
    - **GSA**
  - **Article 5 GSP Content**
    - **Administration Information**
    - **Basin Settings**
      - **Hydrogeological Conceptual Model**
      - **Groundwater Conditions**
      - **Water Budget**
      - **Management Area**
    - **Sustainable Management Criteria**
- **Public GSP input & ideas**

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Sustainable Groundwater Management Act (SGMA)

- **Local Management of the Groundwater Basin**
- **Requires subbasins to be sustainably managed by 2040**
  - **Avoiding undesirable results**

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Agency Responsibility

- Groundwater Sustainability Agency (GSA)
  - Westlands Water District
- Fresno and Kings Counties
- DWR
  - Implements regulations
  - Provides technical assistance
  - Evaluate plans
- SWRCB
  - Intervenes if basin not managed sustainably

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GSA Responsibility and Authority

- Develop
  - Groundwater Sustainability Plan (GSP)
    - ✓ Achieve sustainability by 2040
  - Water Budget
  - Groundwater Model
- Adopt rules, regulations, monitor network and report to the State
- Coordinate with adjacent subbasins
- GSA Authority
  - Impose Fees
  - Well Inspections
  - Monitor Wells
- Outreach

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Affected Parties

- **Beneficial Users of Groundwater**
- **Communities**

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ARTICLE 5 GSP CONTENT

- Presentation
  - SGMA Overview
    - GSA
  - Article 5 GSP Content
    - Administration Information
    - Basin Settings
      - Hydrogeological Conceptual Model
      - Groundwater Conditions
      - Water Budget
      - Management Area
    - Sustainable Management Criteria
- Public GSP input & ideas

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Article 5: GSP Content

SUBARTICLES

1. Administrative Information
2. Basin Settings
3. Sustainable Management Criteria
4. Monitoring Network
5. Projects and Management Actions

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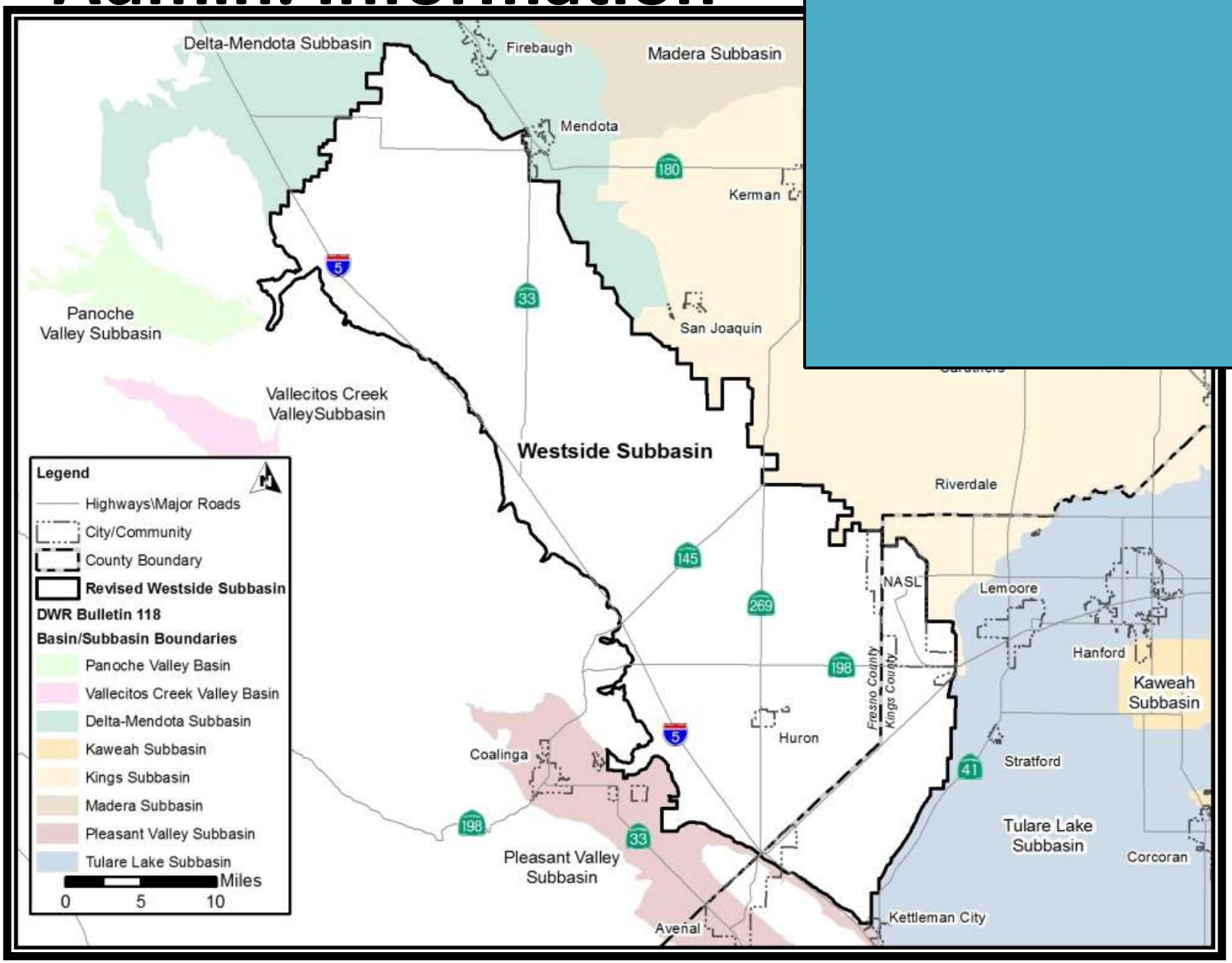
Admin. Information



Administrative Information
Public Input

Submit comments to sgma@westlandswater.org

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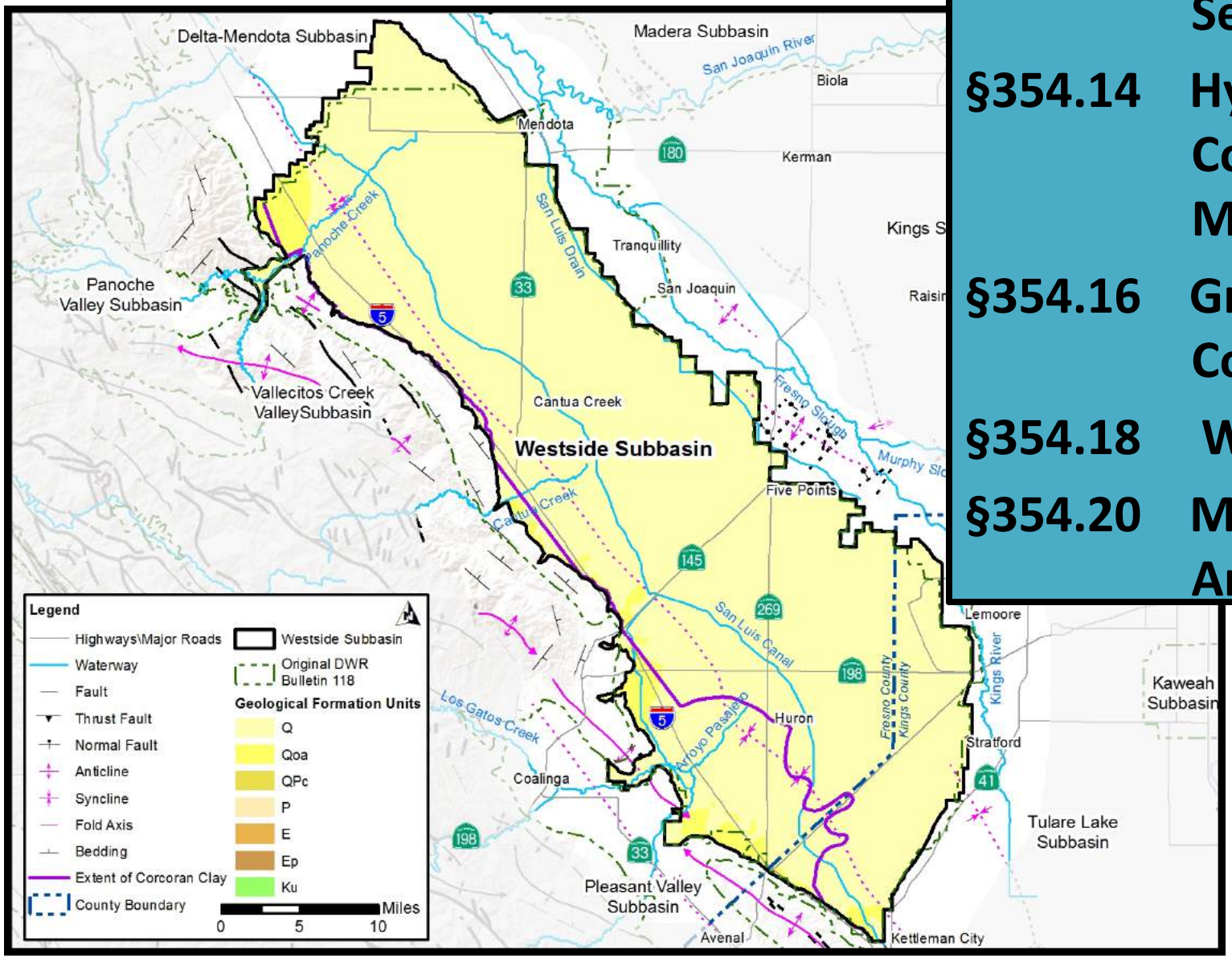
Basin Settings



§354.12	Introduction of Basin Settings
§354.14	Hydrogeologic Conceptual Model
§354.16	Groundwater Conditions
§354.18	Water Budget
§354.20	Management Areas

Hydrogeology- Westside Subbasin

- Located in the Western Area of the San Joaquin Groundwater Basin
- Topography varies by 800 feet west to east and 50 feet north to south (ground surface)
- Base of Fresh Water ranges from 800 feet to 3,500 feet (below ground surface)

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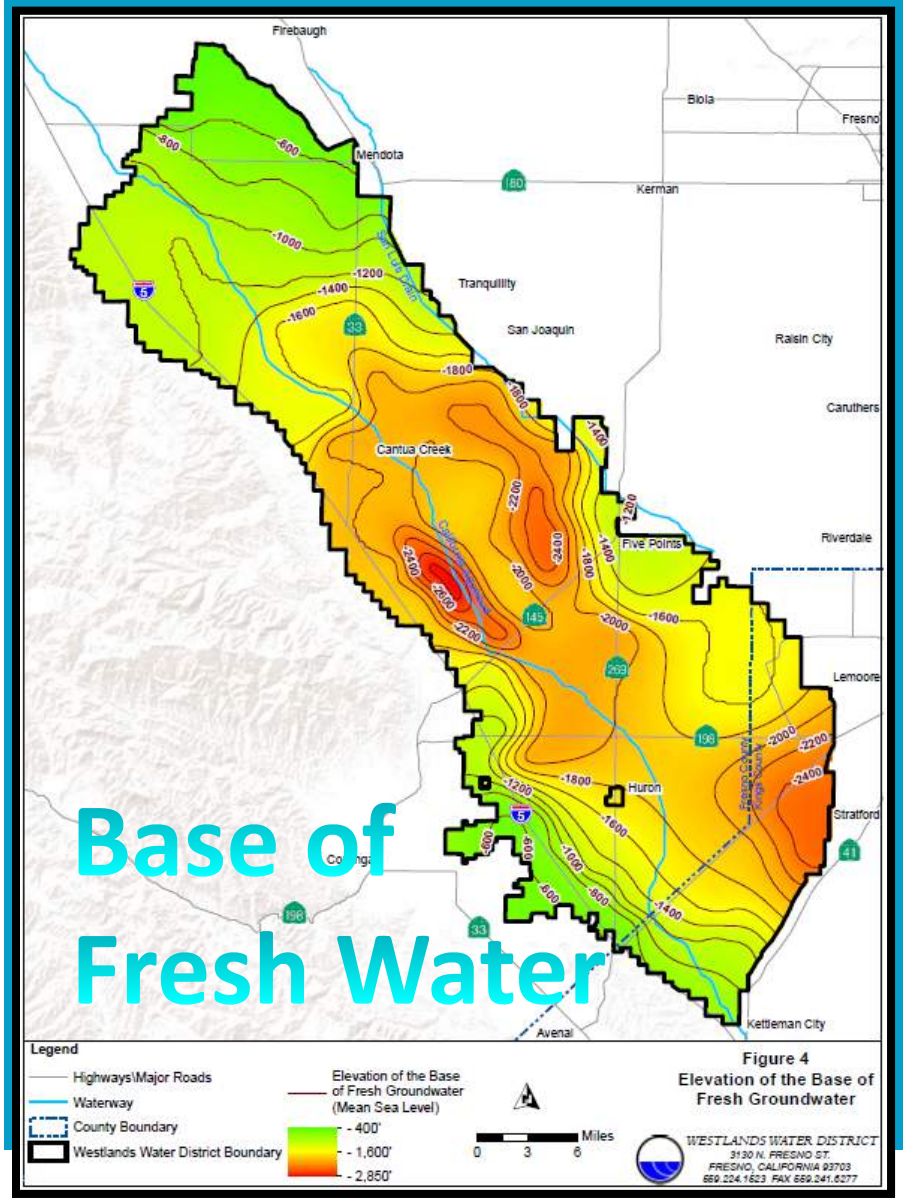
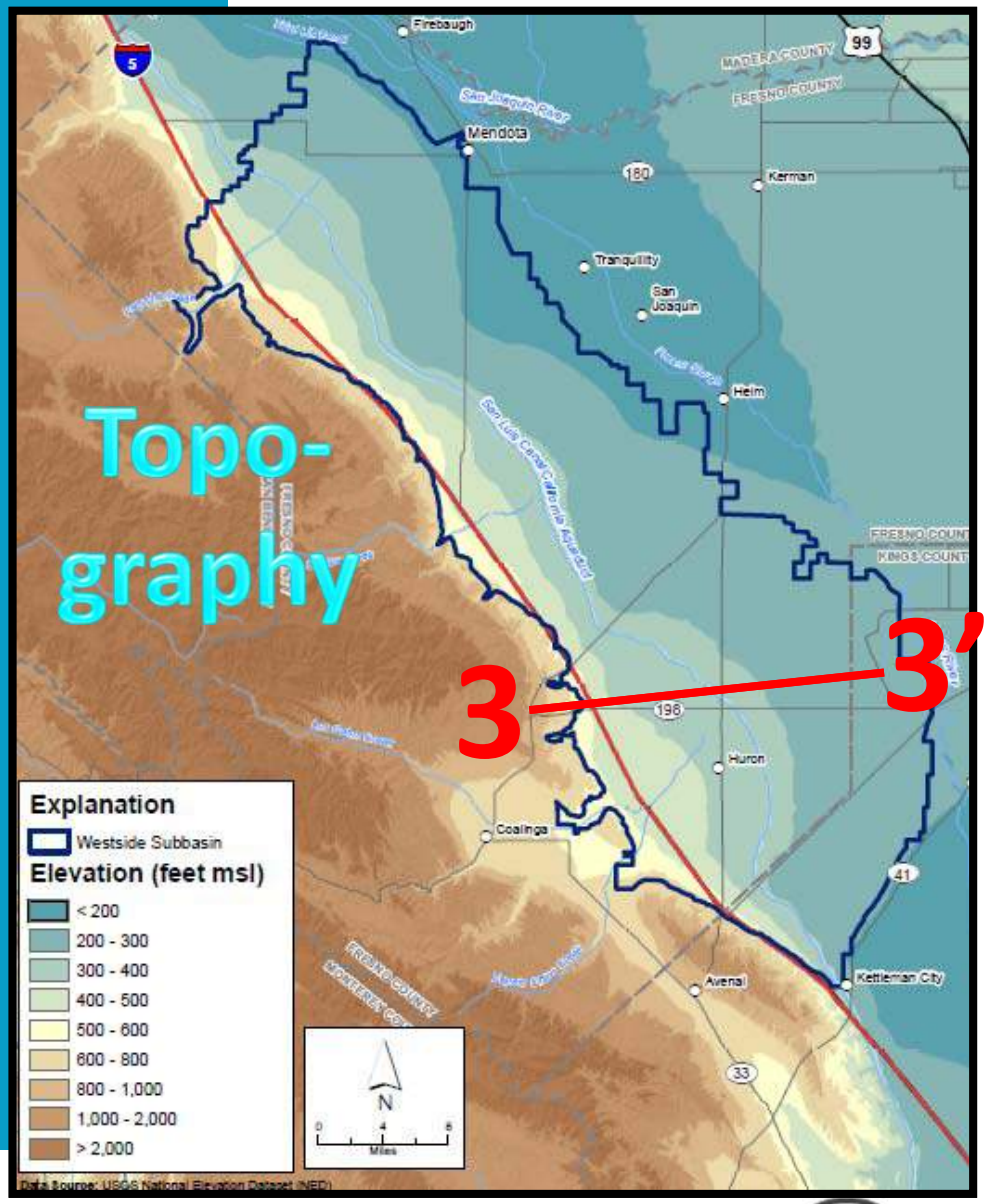

Base of Fresh Water
Firebaugh
Biola
Fresno
Mendota
Kerman
Tranquillity
San Joaquin
Raisin City
Caruthers
Cantua Creek
Five Points
Riverdale
Lemoore
Huron
Stratford
Avenal
Kettleman City
Legend
Highways\Major Roads
Waterway
County Boundary
Westlands Water District Boundary
Elevation of the Base of Fresh Groundwater (Mean Sea Level)
- 400'
- 1,600'
- 2,850'
Miles
0 3 6
Figure 4
Elevation of the Base of Fresh Groundwater
WESTLANDS WATER DISTRICT
3130 N. FRESNO ST.
FRESNO, CALIFORNIA 93703
559.224.1523 FAX 559.241.6277


Topo-graphy
3
3'
Firebaugh
Mendota
Kerman
Tranquillity
San Joaquin
Helm
Huron
Coalinga
Avenal
Kettleman City
MADERA COUNTY
FRESNO COUNTY
KINGS COUNTY
Explanation
Westside Subbasin
Elevation (feet msl)
< 200
200 - 300
300 - 400
400 - 500
500 - 600
600 - 800
800 - 1,000
1,000 - 2,000
> 2,000
N
0 4 8
Miles
Data Source: USGS National Elevation Dataset (NED)

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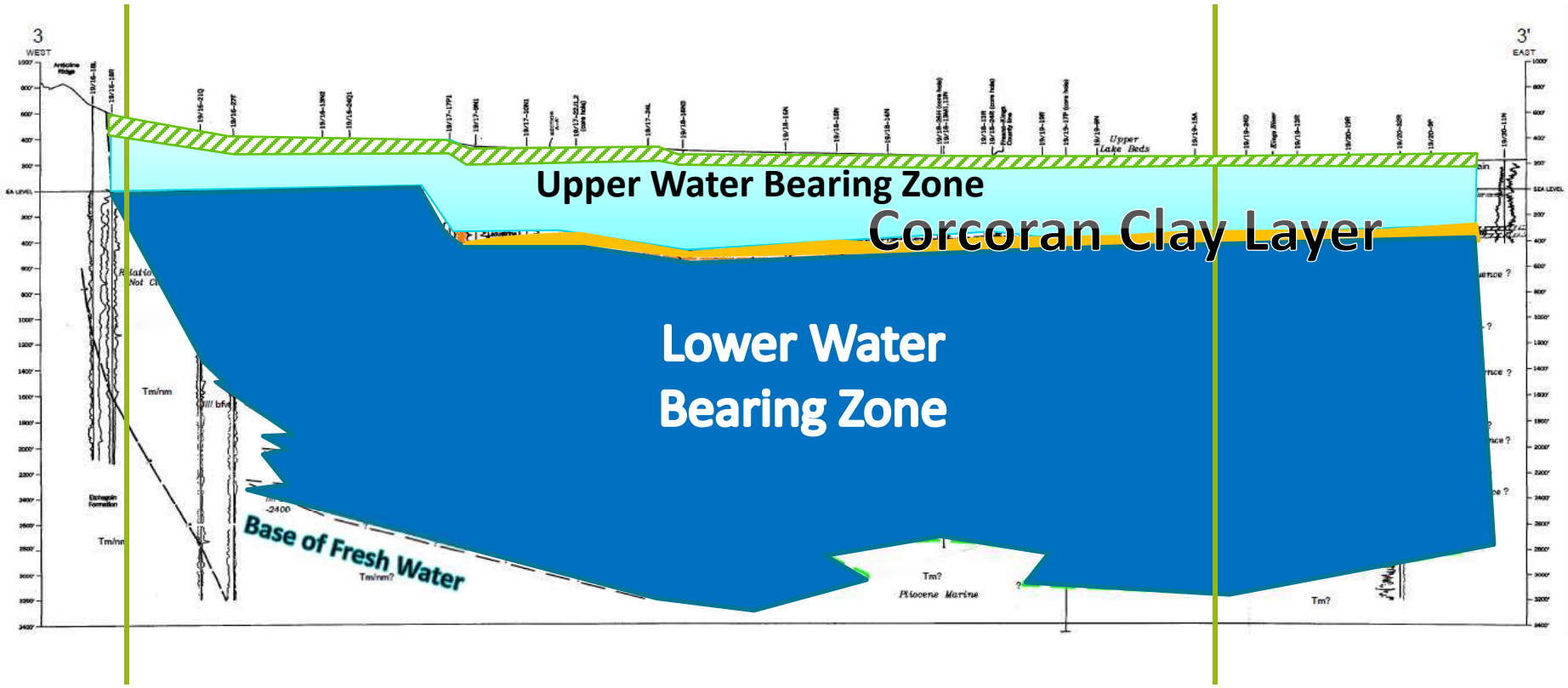
Cross Section



Westside
Subbasin
Boundary

Westside
Subbasin
Boundary

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Groundwater Conditions

§354.16

Historical and Current Conditions

- Groundwater Elevation
- Subsidence
- Groundwater Storage
- Groundwater Quality
- ~~Seawater Intrusion~~
- ~~Interconnection Surface Water~~
- ~~Groundwater Dependent Ecosystems~~

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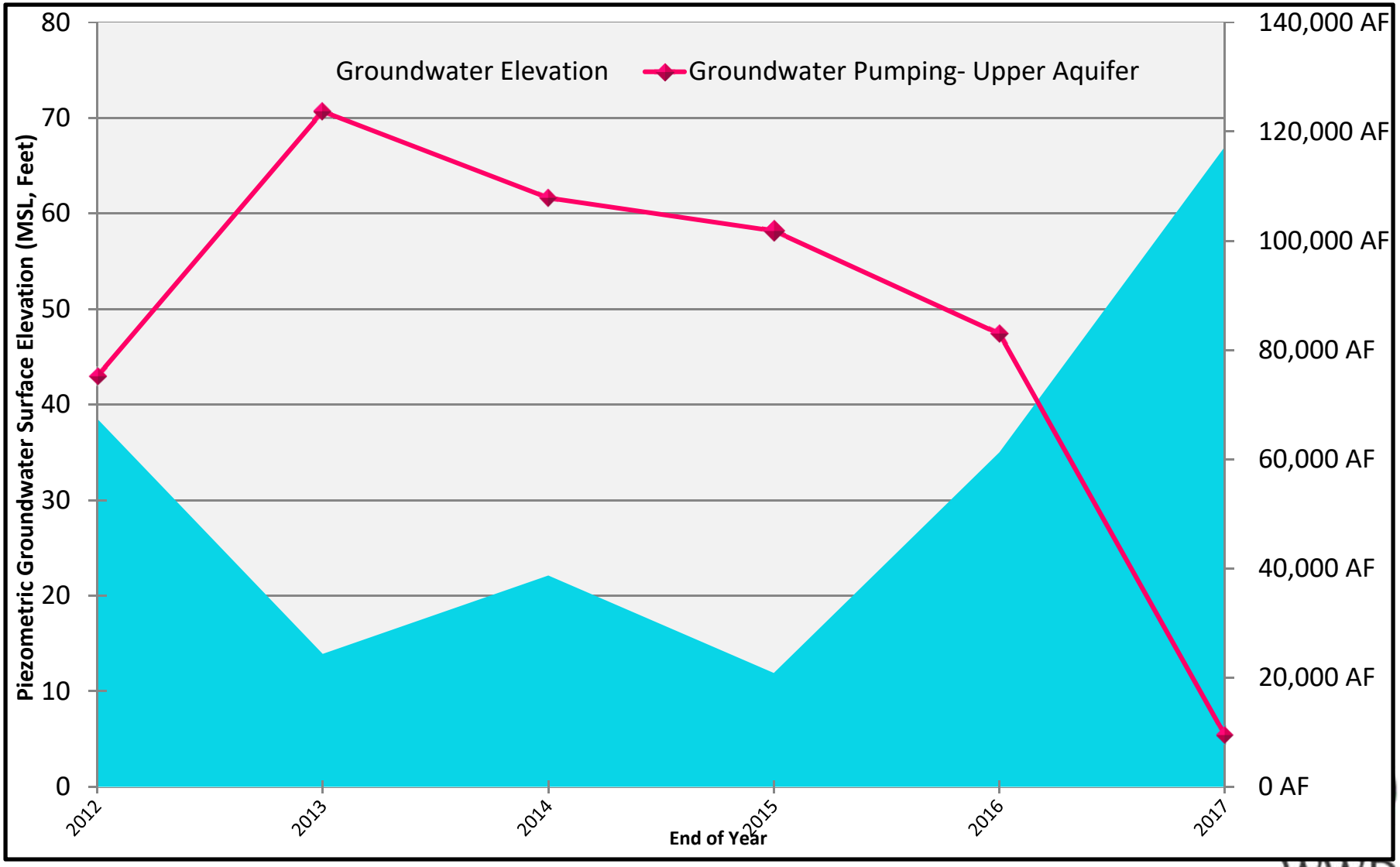
Groundwater Conditions- Upper Aquifer

§354.16 (a)



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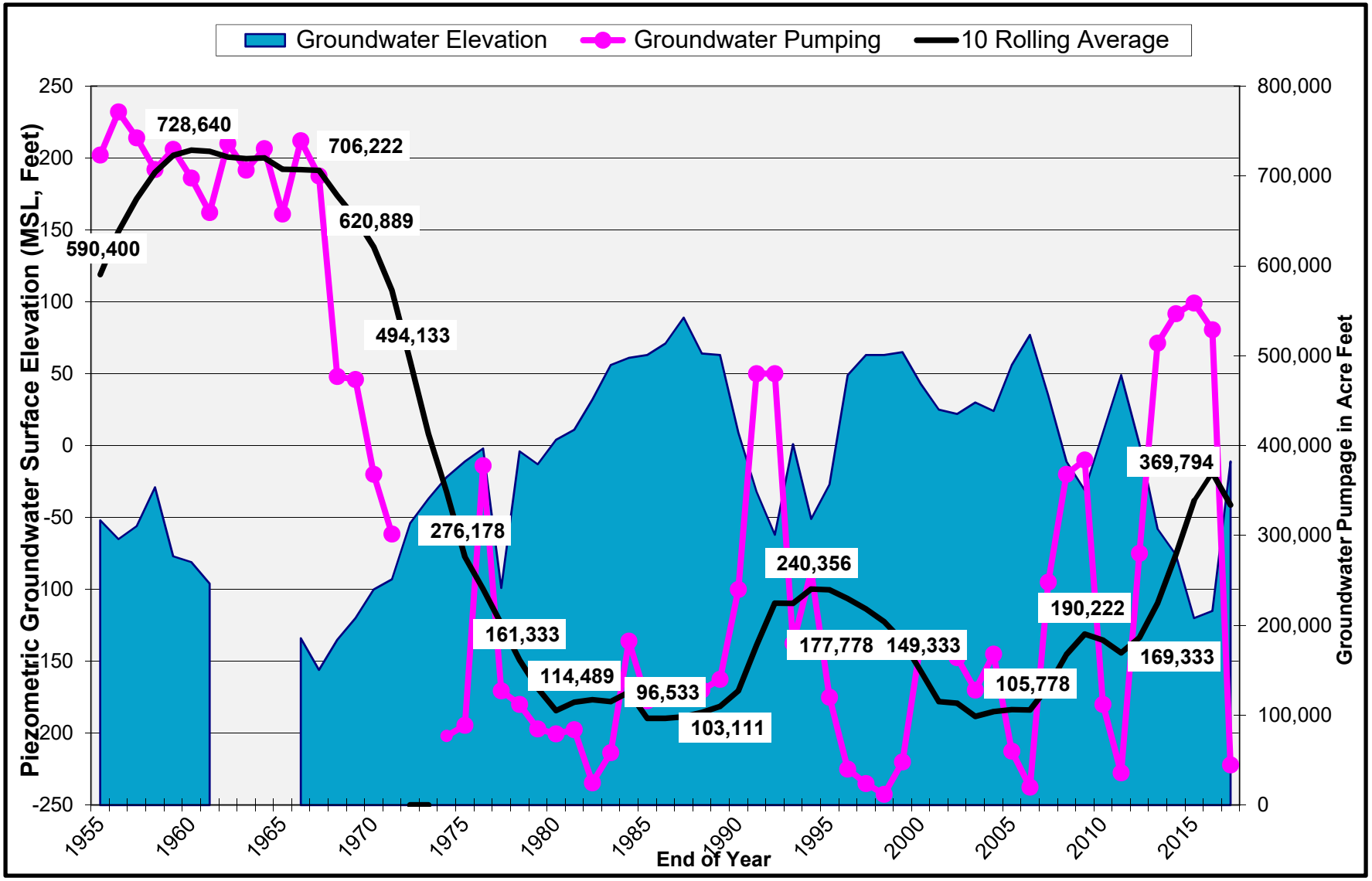
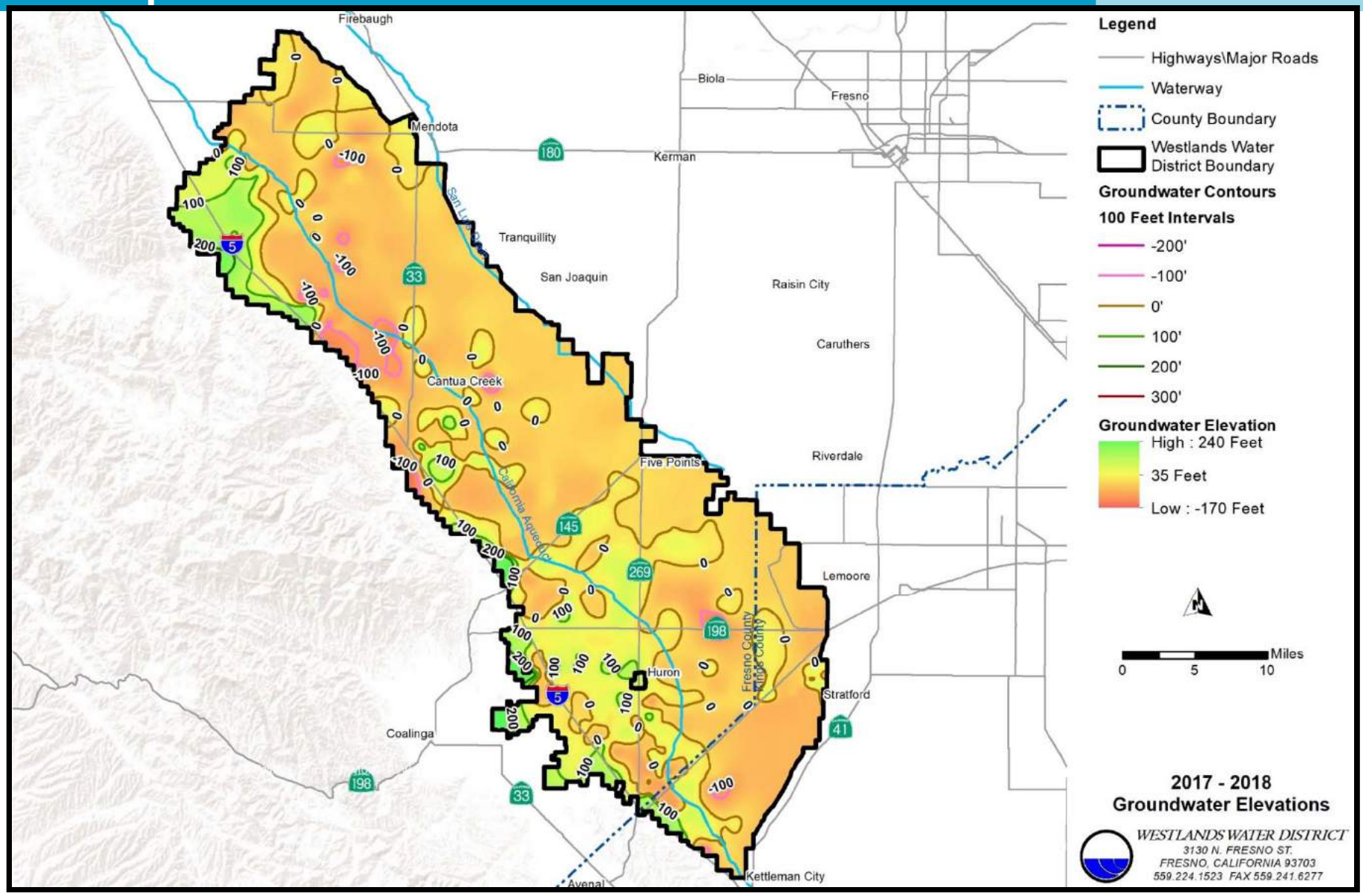
Groundwater Conditions- Lower Aquifer

§354.16 (a)



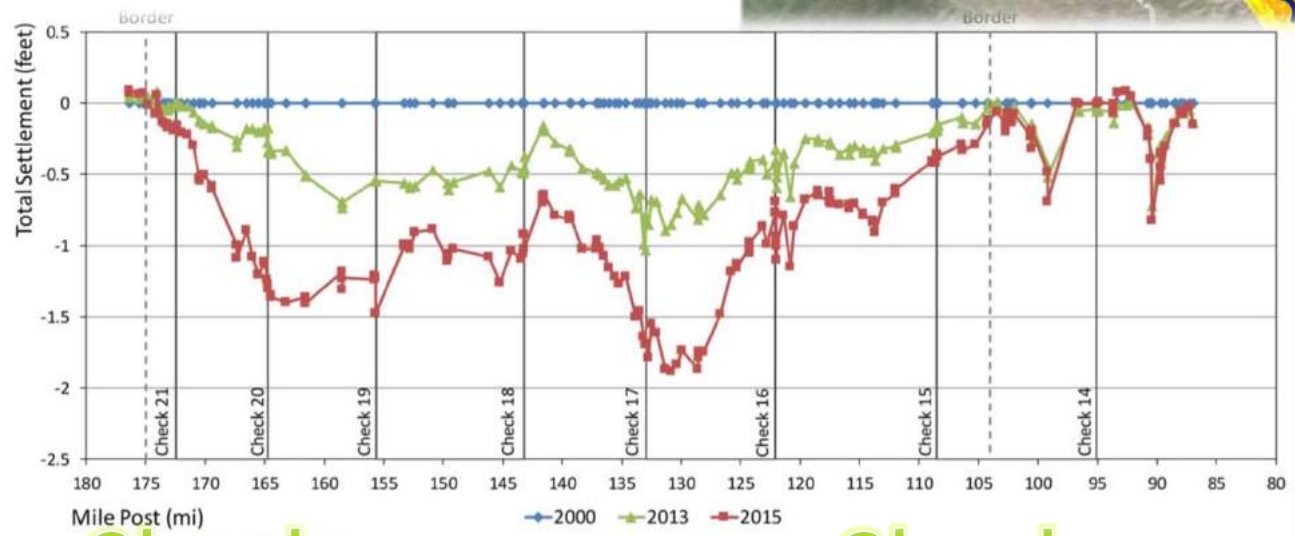
Groundwater Elevation 2017-2018

Lower Aquifer



Subsidence

§354.16 (e)

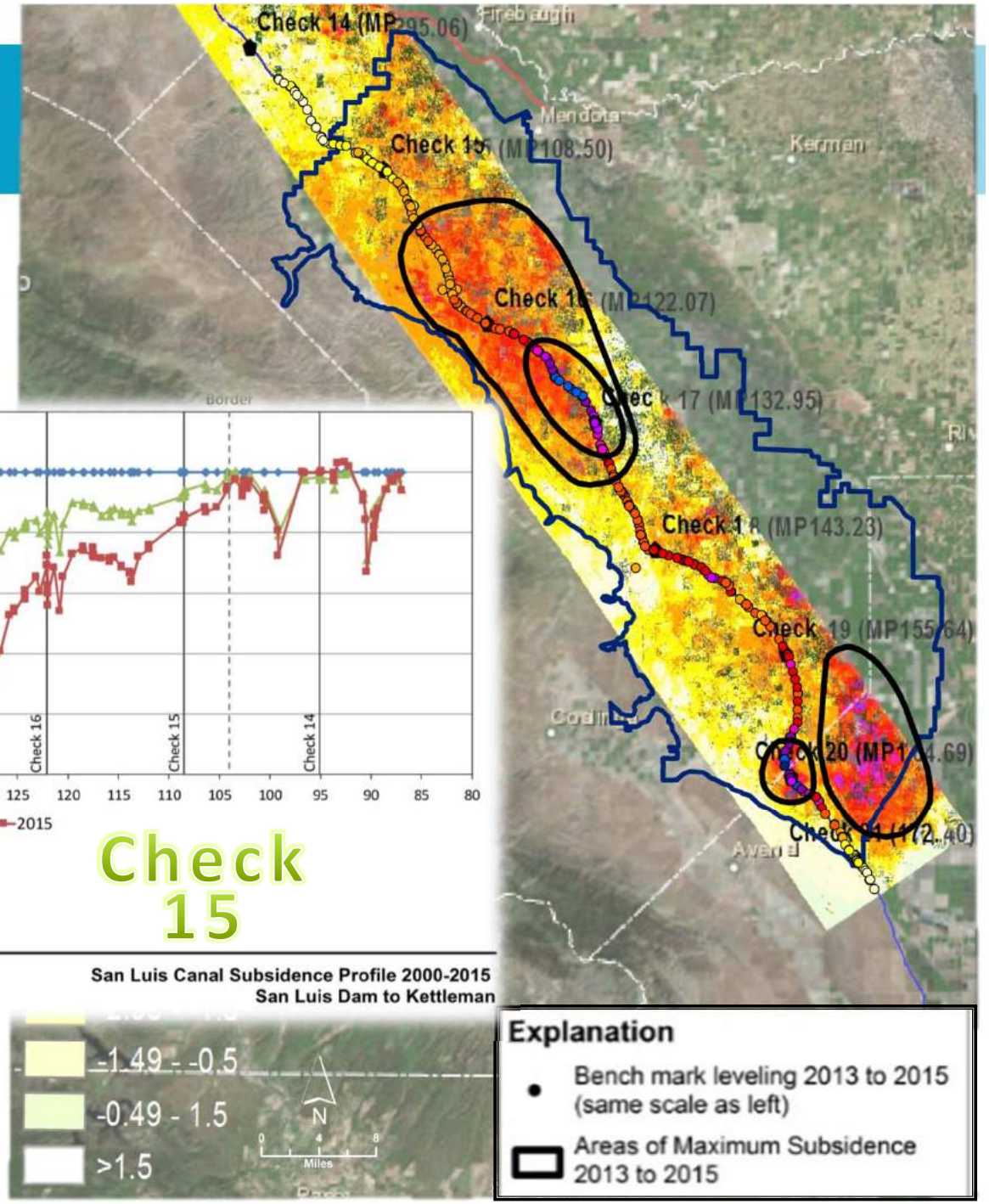


Check 21

Check 15

LUHDORFF & SCALMANINI CONSULTING ENGINEERS

San Luis Canal Subsidence Profile 2000-2015
San Luis Dam to Kettleman



Water Budget

§354.18

INFLOW

- Precipitation
- Infiltration from water application
- Infiltration from surface water system
- Groundwater Inflow

OUTFLOW

- Evaporation
- Groundwater Extractions
- Groundwater Discharge to a surface water system
- Subsurface Flow

RESULTS

- ✓ Annual Groundwater Storage
- ✓ Overdraft Conditions
- ✓ Sustainable Yields

Article 5: GSP Content

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Sustainable Management Criteria §354.22

- Sustainability Goal
- Sustainable Groundwater Management
- Minimum Thresholds
- Measureable Objectives

- All Determined by the GSA & its interested parties
- GSA's do not have to address Subbasin Conditions prior to Jan 2015

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Management Actions

§354.44

- Management Actions designed to optimize the Subbasin's conjunctive use
  - Achieve Sustainability
- Potential Management Actions:
  - Supply Enhancement
  - Conjunctive Use
  - In Lieu Recharge
  - **PUBLIC INPUT**

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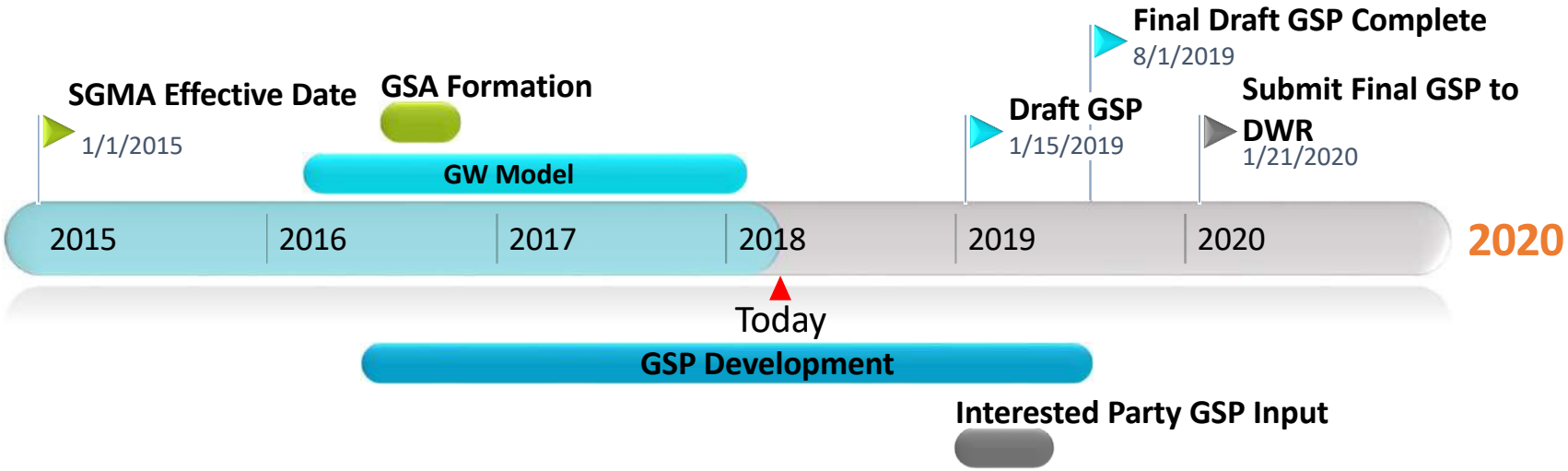
SGMA Implementation Timeline



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PUBLIC INPUT

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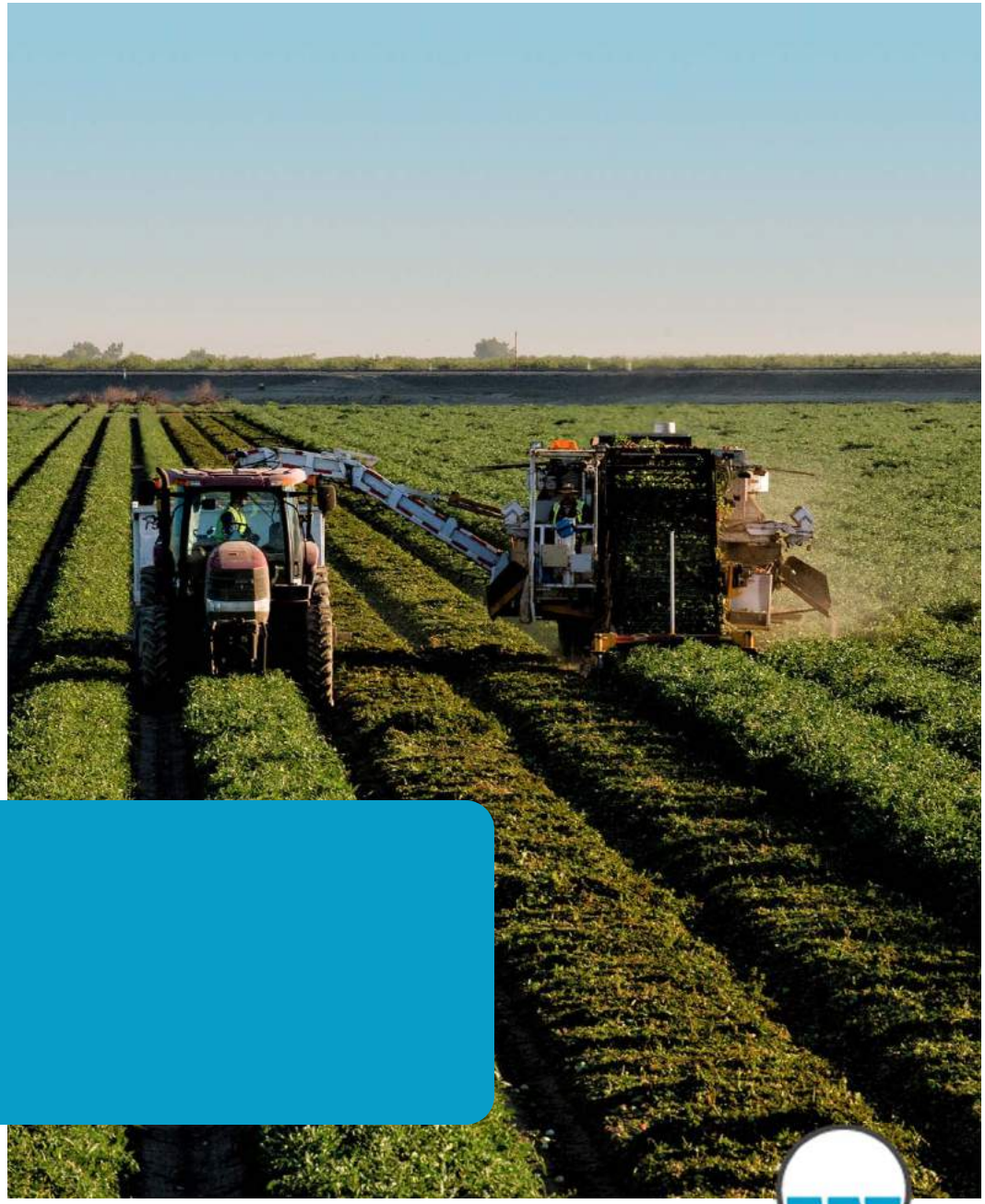

QUESTIONS

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