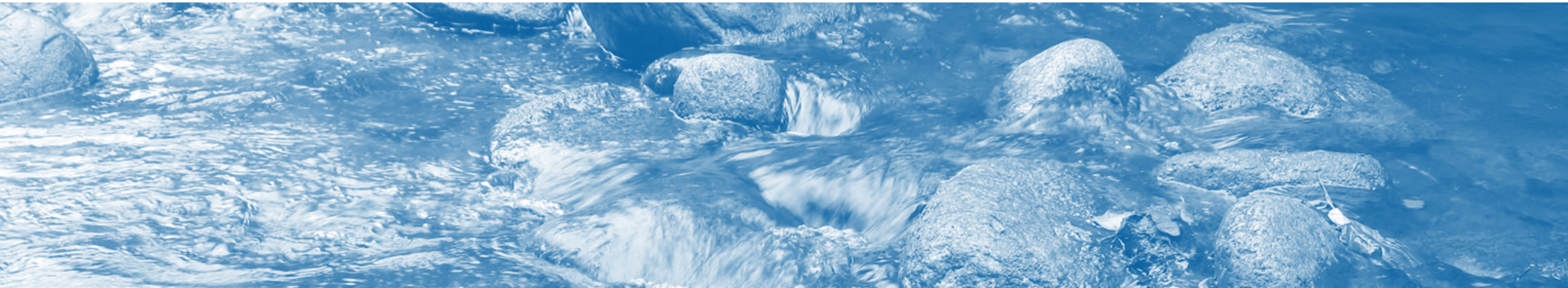
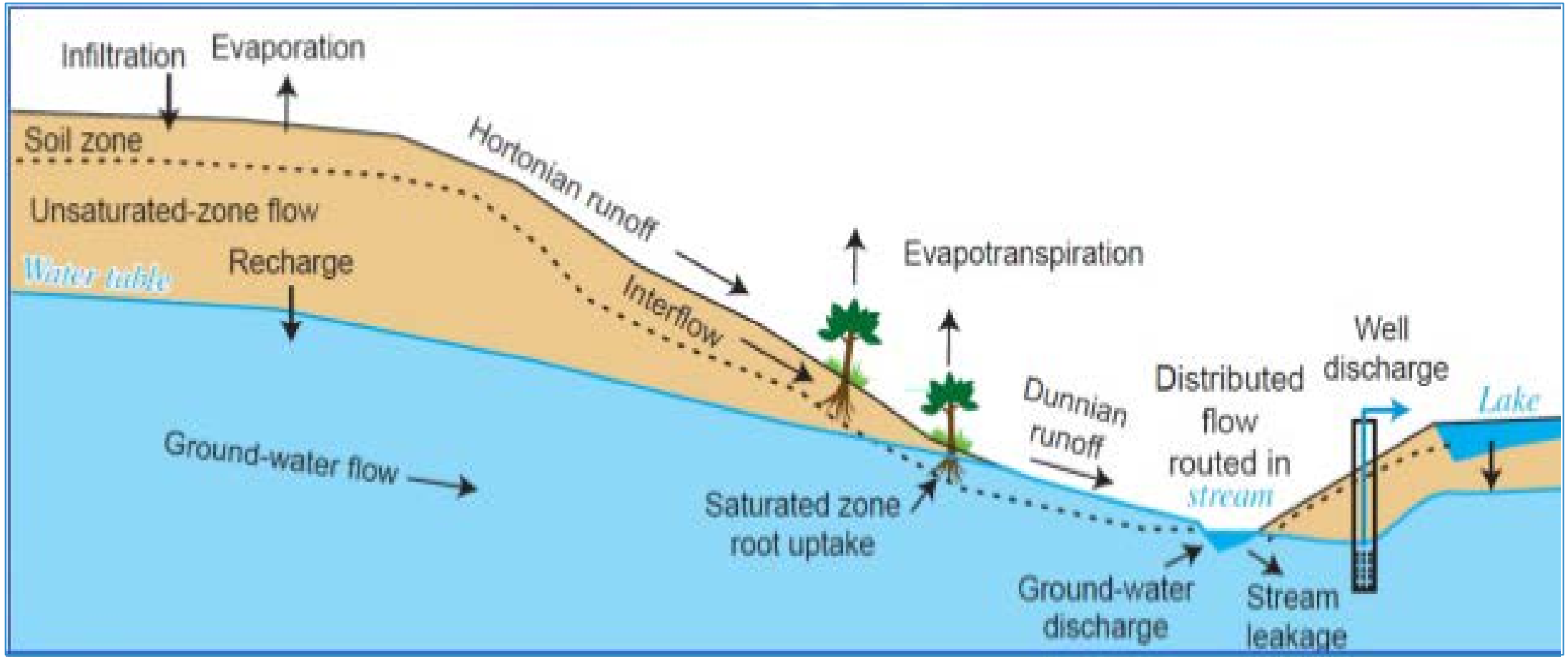
Surface Water and the Sustainable Groundwater Management Act

AUGUST 22, 2019

Why are we considering surface water in a groundwater management plan?



Surface water/ Groundwater Interface



Two Groundwater Sustainability Indicators Related to Surface Water

Sustainability under SGMA is guided by 6 indicators

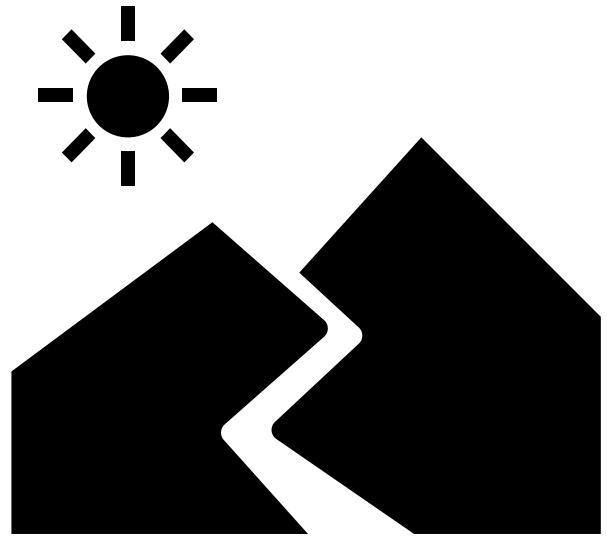
Two of these indicators relate to surface water:

- Depletion of Interconnected Surface Water (reduced streamflow)
- Chronic Lowering of Groundwater Levels (reduced water levels in ponds/wetlands)

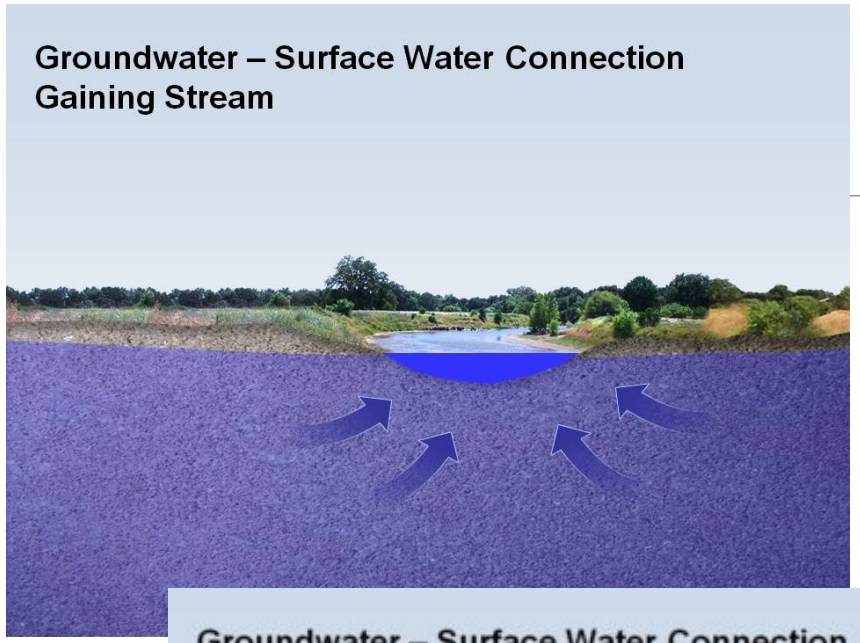
DWR SGMA Regulations § 354.16.

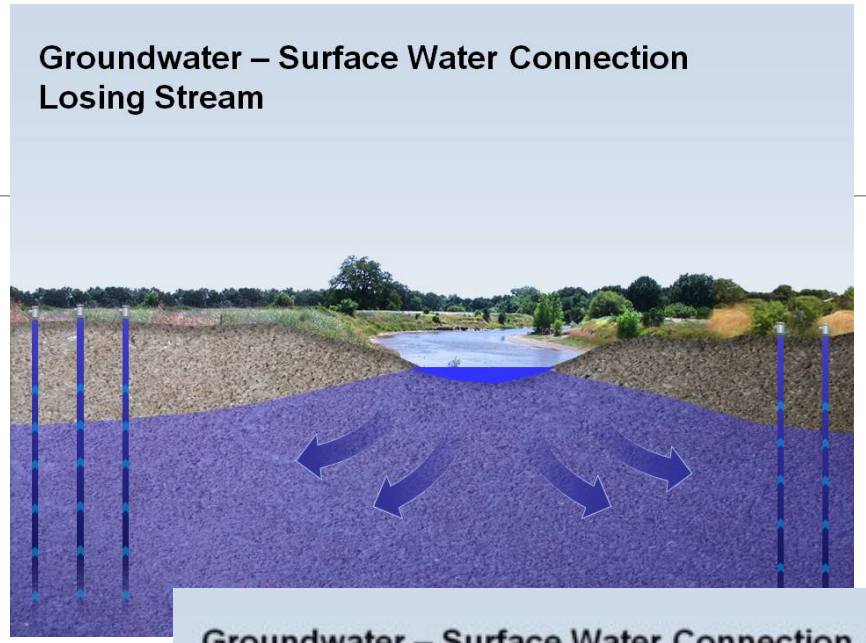
(f) **Identification of interconnected surface** water systems within the basin and an estimate of the quantity and timing of depletions of those systems.

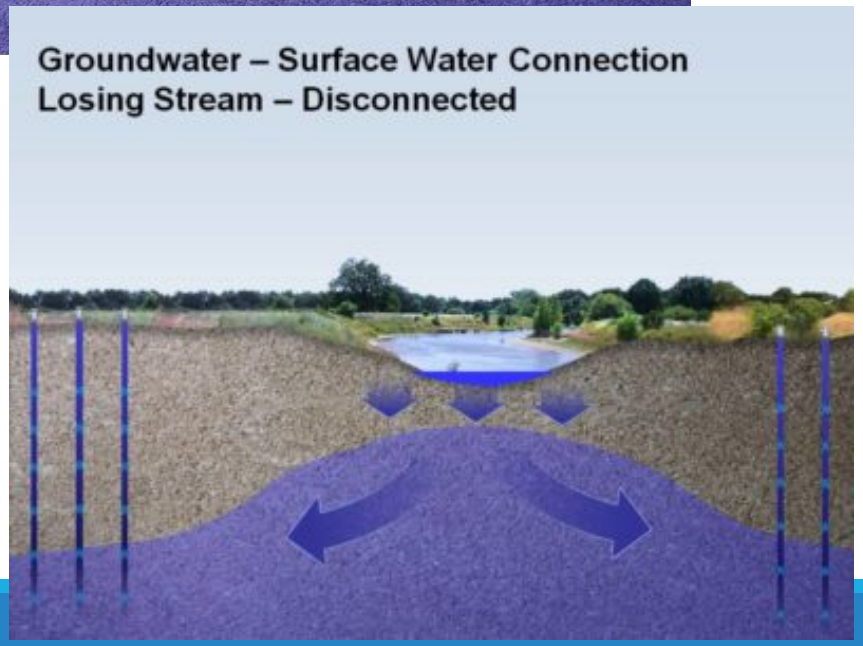
(g) **Identification of groundwater dependent ecosystems** within the basin.

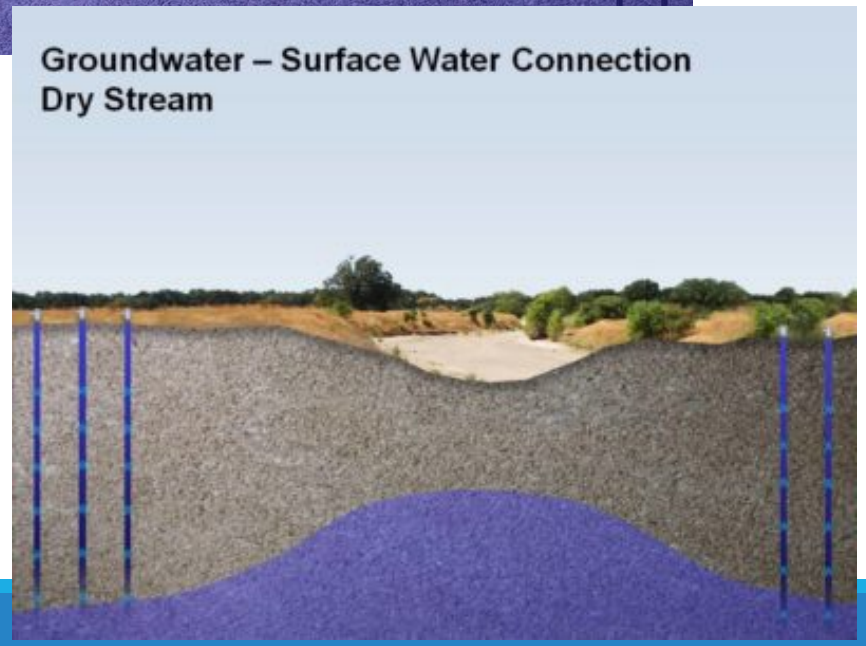


Pumping wells can draw down the aquifer, impacting surface water









Images from Maven's Notebook, originally used by Maurice Hall

DWR SGMA Regulations § 354.28. (c)(6)

Identify:

- The rate or volume of surface water depletions …
  - caused by **groundwater use** …
    - that has adverse impacts on **beneficial uses** of the surface water …
      - and may lead to **undesirable results**.

DWR SGMA Regulations § 354.28. (c)(6)

The minimum threshold established for depletions of interconnected surface water shall be supported by the following:

(A) The location, quantity, and timing of depletions of interconnected surface water.

(B) A description of the groundwater and surface water model used to quantify surface water depletion…

DWR SGMA Regulations § 354.34 (c) (6)

Monitor surface water and groundwater, where interconnected surface water conditions exist…**to calculate depletions of surface water caused by groundwater extractions**.

What influences Stream Flow?

- Rainfall/Runoff from Watershed
  - Land use/connected impervious surfaces
  - Watershed size
- Surface Water Management
  - Diversions
  - Bypass flows
  - Releases from Reservoirs
- Evapotranspiration
- Impacts From Previous Rain Years
- Subsurface Geology
- **Groundwater Extraction/Levels**

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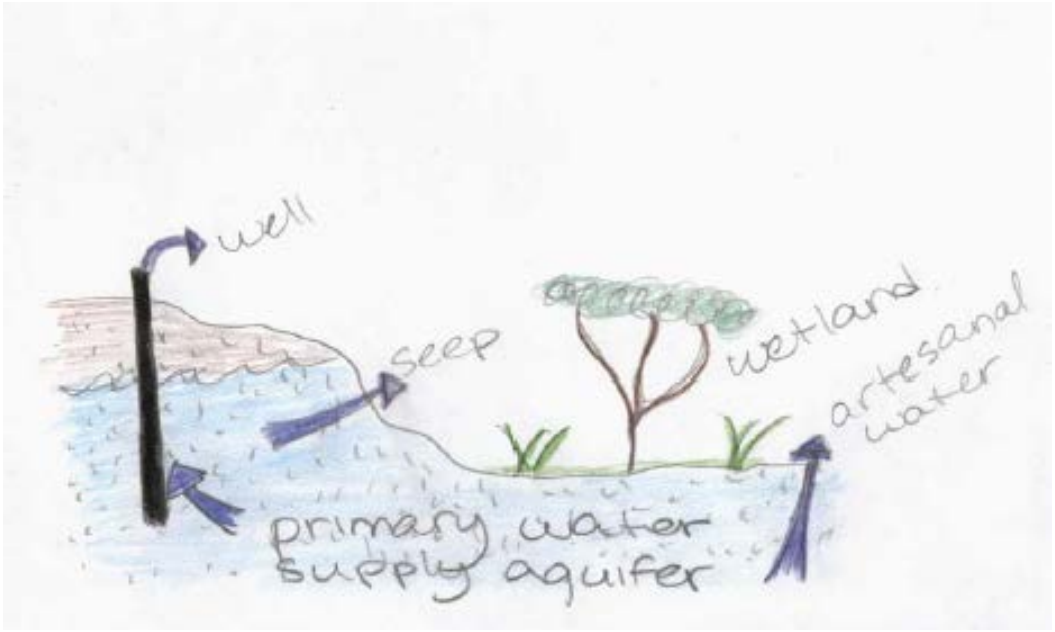
No Groundwater Extraction

Not Subject to SGMA

Groundwater Extraction



Subject to SGMA

Impacts to other GDEs

Summary of Considerations under SGMA

- Locations with interconnected with groundwater
- Impacts due to groundwater extraction
- Consider impacts to all surface water users
  - People
  - Environment
- Results in reduced stream flow
- Impacts water level in GDEs