DFC to Protect Groundwater Discharges to Colorado River and Tributaries

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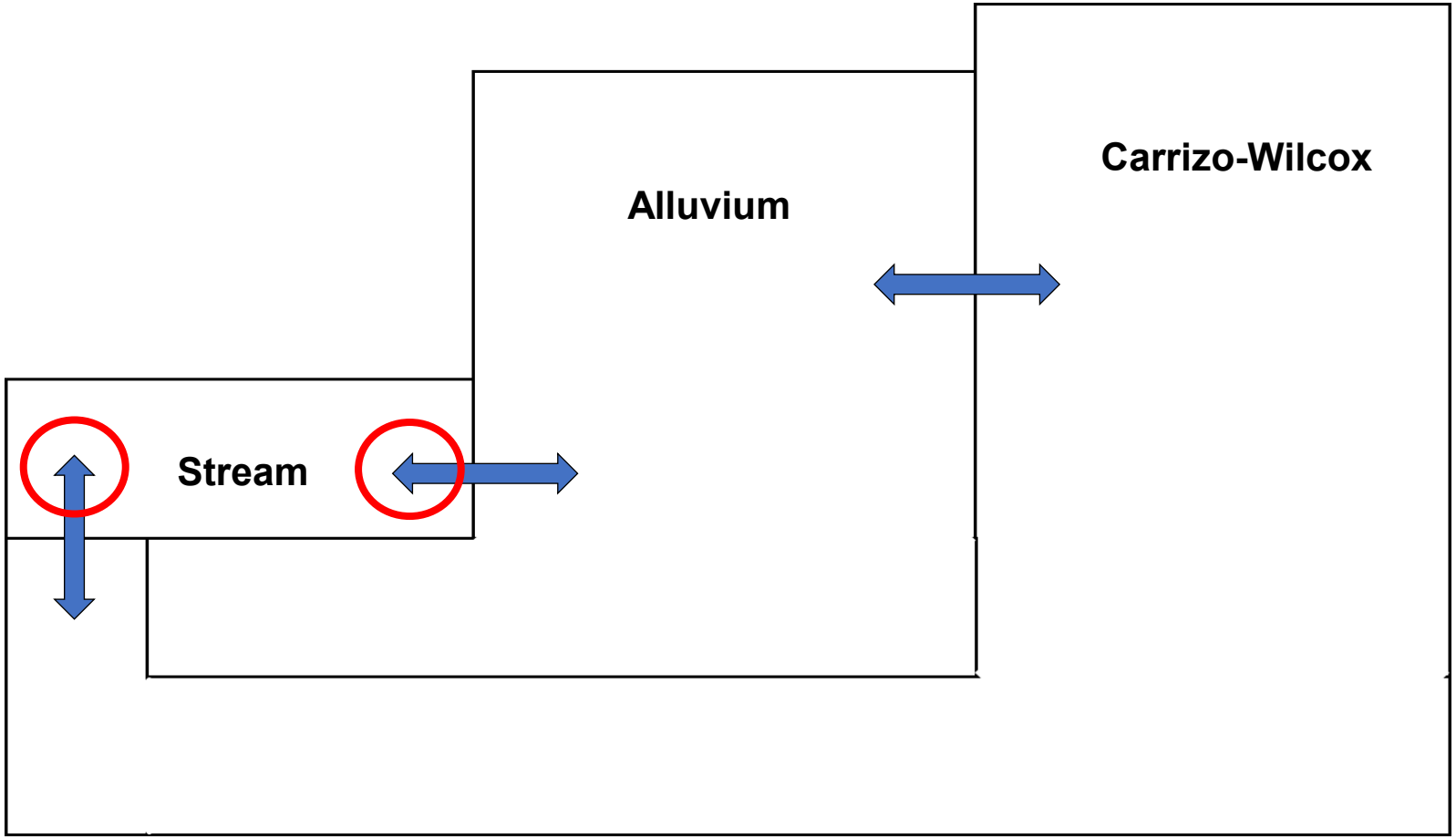
Presentation to GMA-12
April 20, 2021

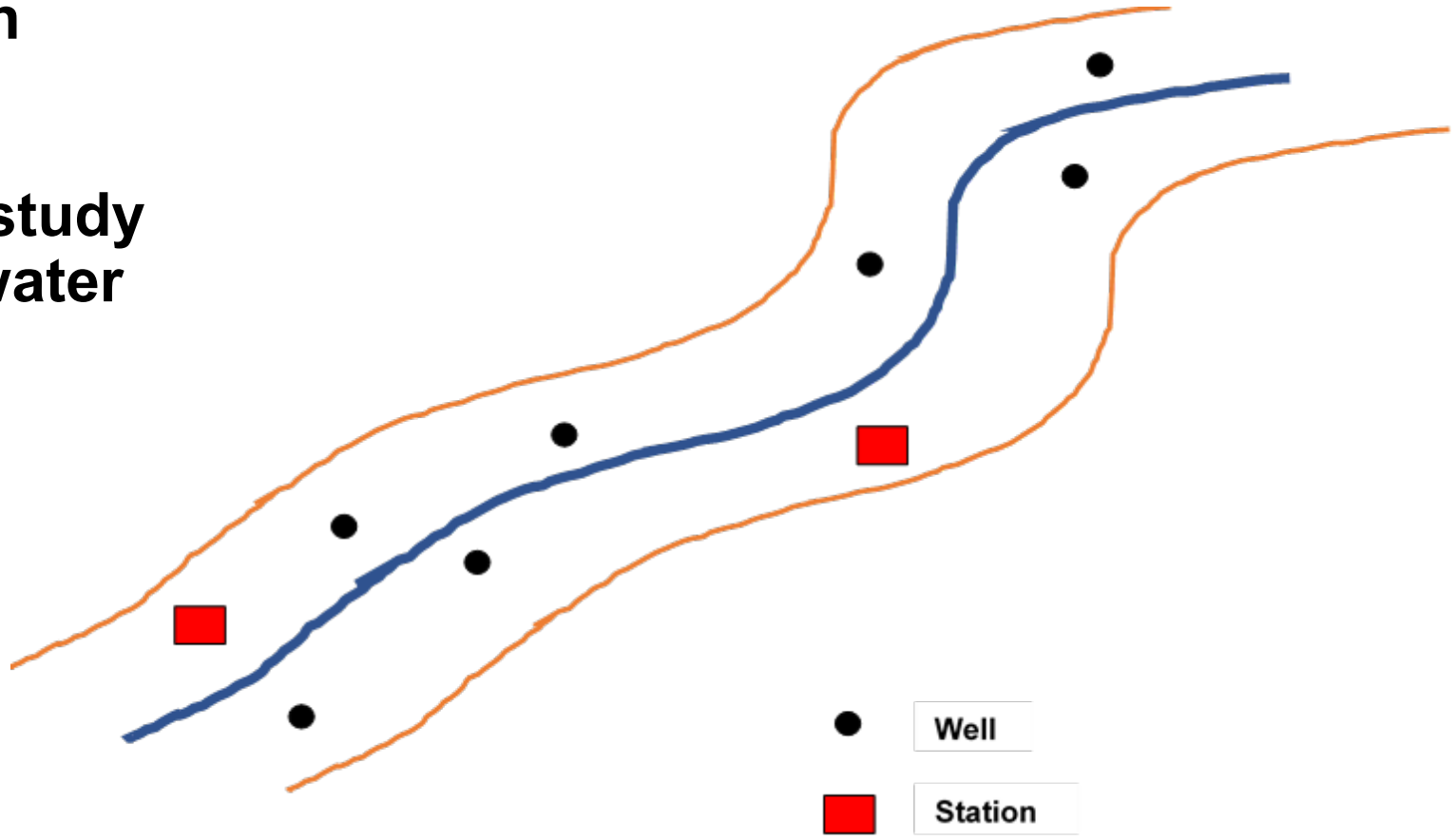
Schematic Cross-Section



- **Problem - cannot directly measure groundwater discharge to streams**
- **Proxy – water levels in alluvium (and other aquifers?)**

Proposal

- **Monitor well network in alluvium**
- **Additional stations to study groundwater/surface water interaction**

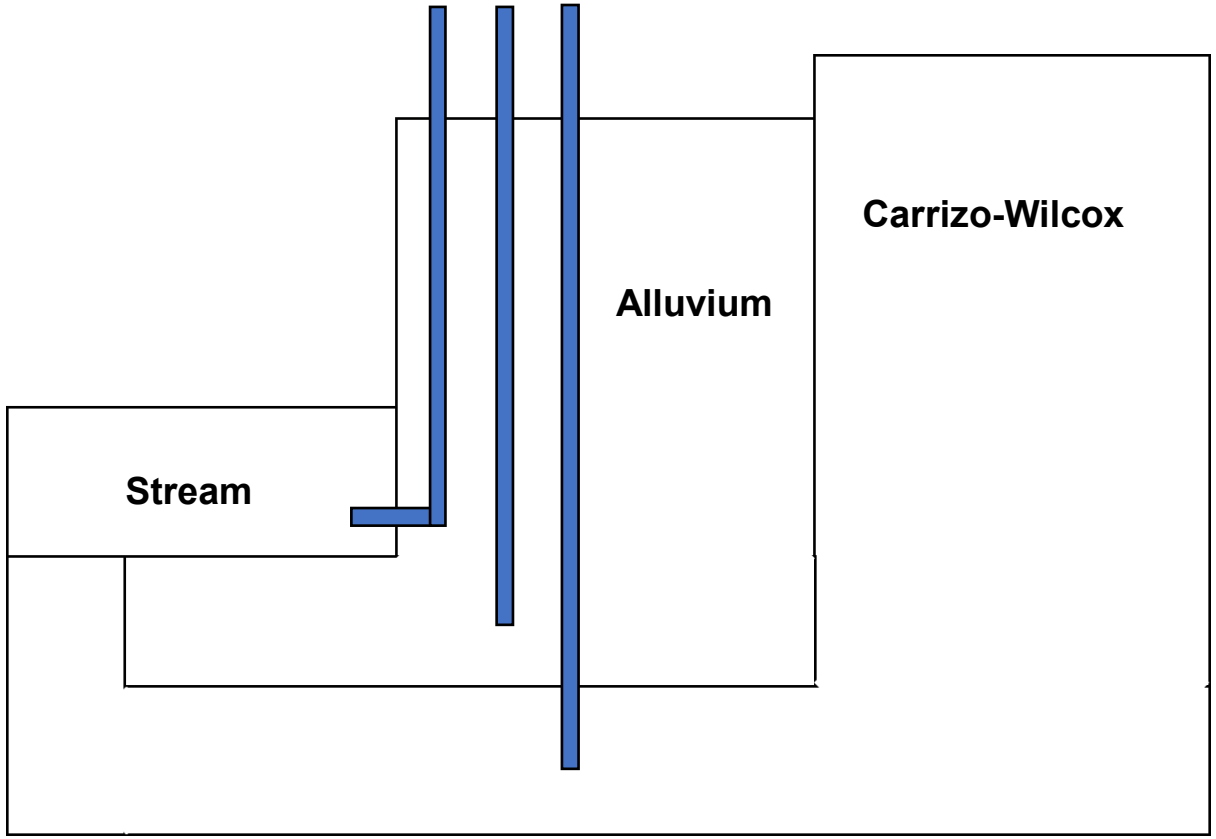


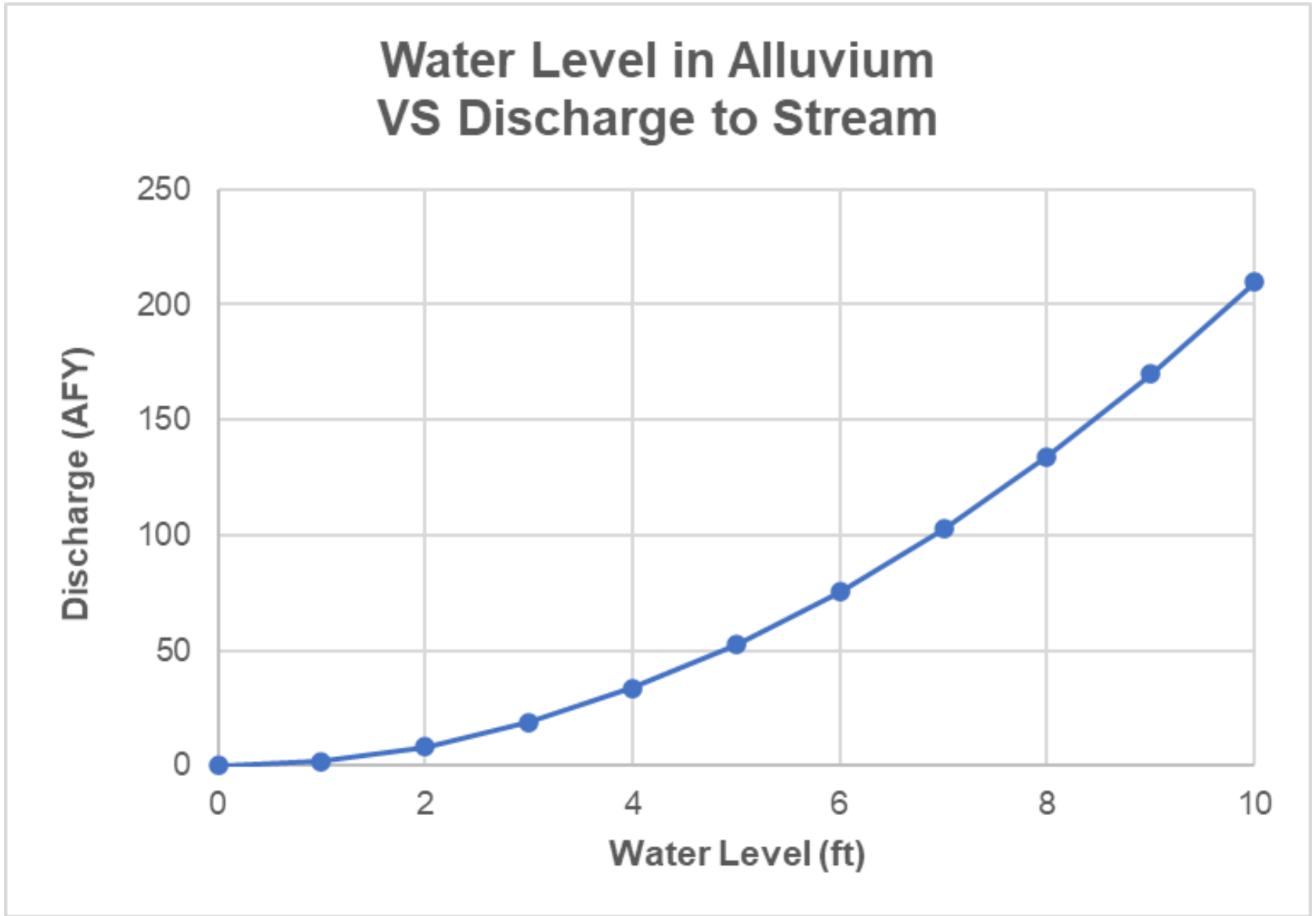
Network in Alluvium

- Colorado River and tributaries
- Baseline water levels, trends
- Other measurements if practical, e.g., aquifer properties, water quality

Groundwater/Surface Water Interaction Stations

- Similar to Vista site
- Water levels in stream and aquifers
- Aquifer properties, water quality
- Calculate groundwater discharge to stream



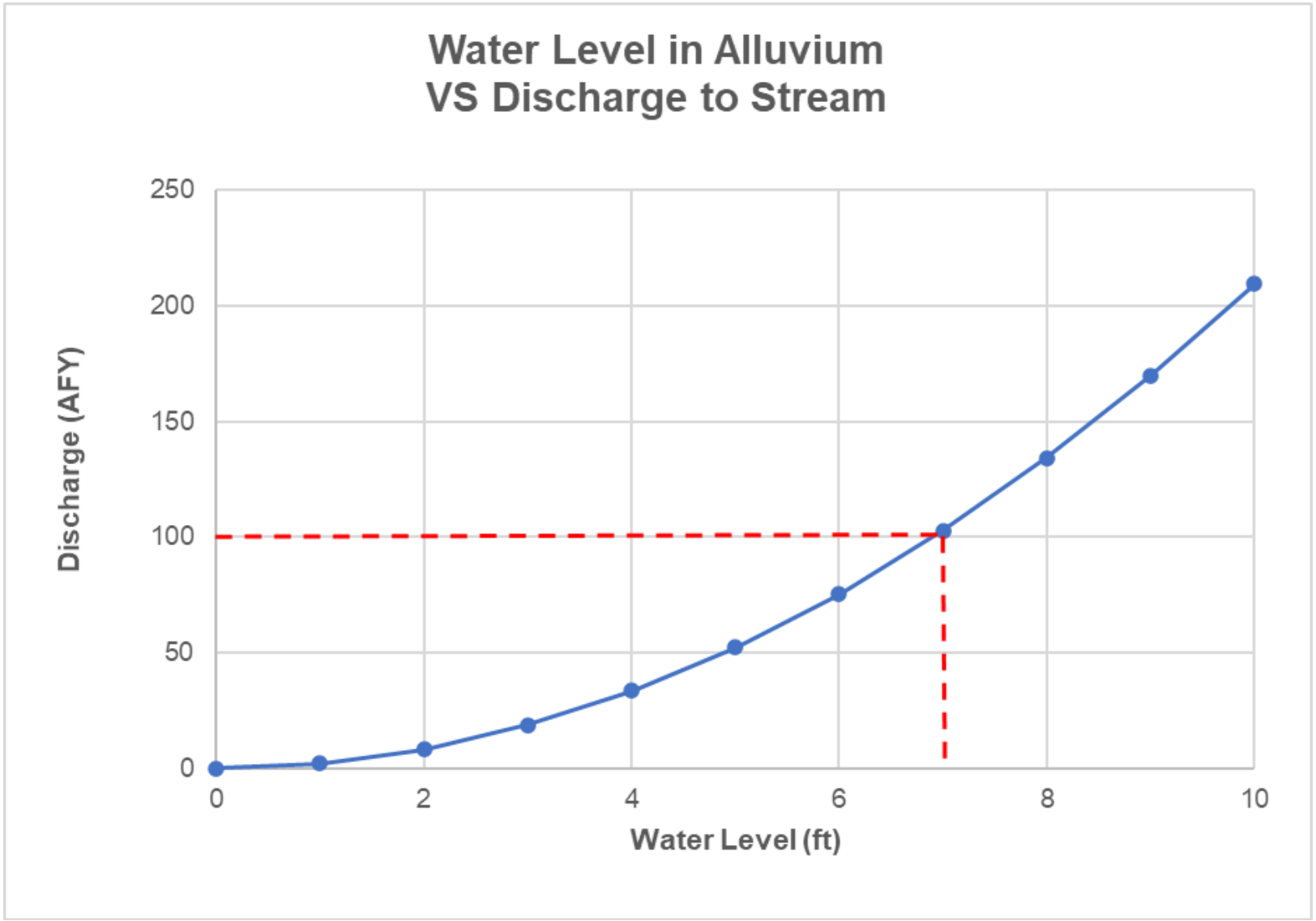

Water Level in Alluvium
VS Discharge to Stream
Discharge (AFY)
250
200
150
100
50
0
0
2
4
6
8
10
Water Level (ft)

To Establish DFC

1) Determine relationship between water levels in alluvium and discharge of groundwater to streams

2) Agree on minimum acceptable discharge rate

3) Set DFC for water levels in alluvium corresponding to minimum discharge rate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