Does a Facility Need a Clean Water Act AZPDES Permit?

NWPR Screening Toolkit
9/15/2020

ADEQ
Arizona Department of Environmental Quality

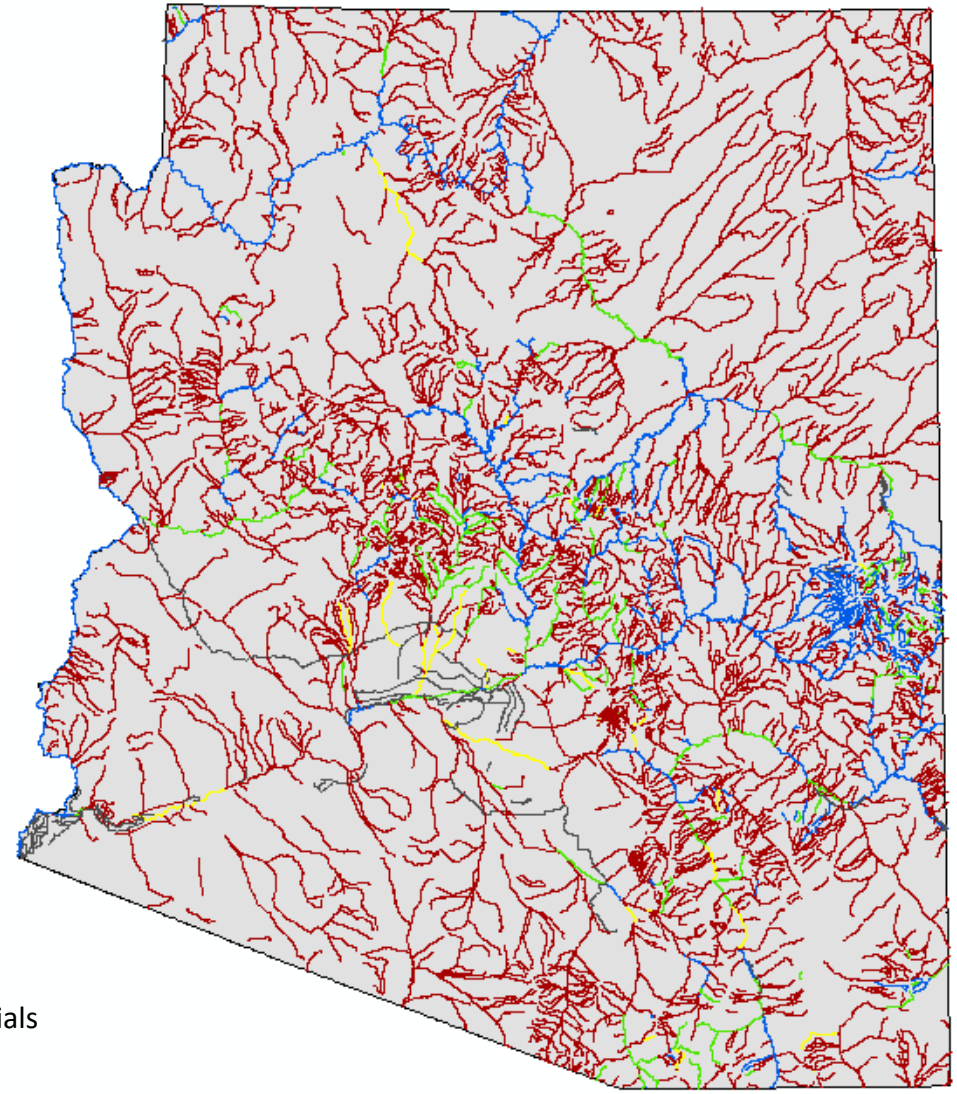
What do we want to get accomplished today?

- Understand the importance of flow regime to the NWPR
- Why do we need a NWPR screening toolkit?
- Explain how the toolkit works
- Q & A

Flow Regime Maps

80%

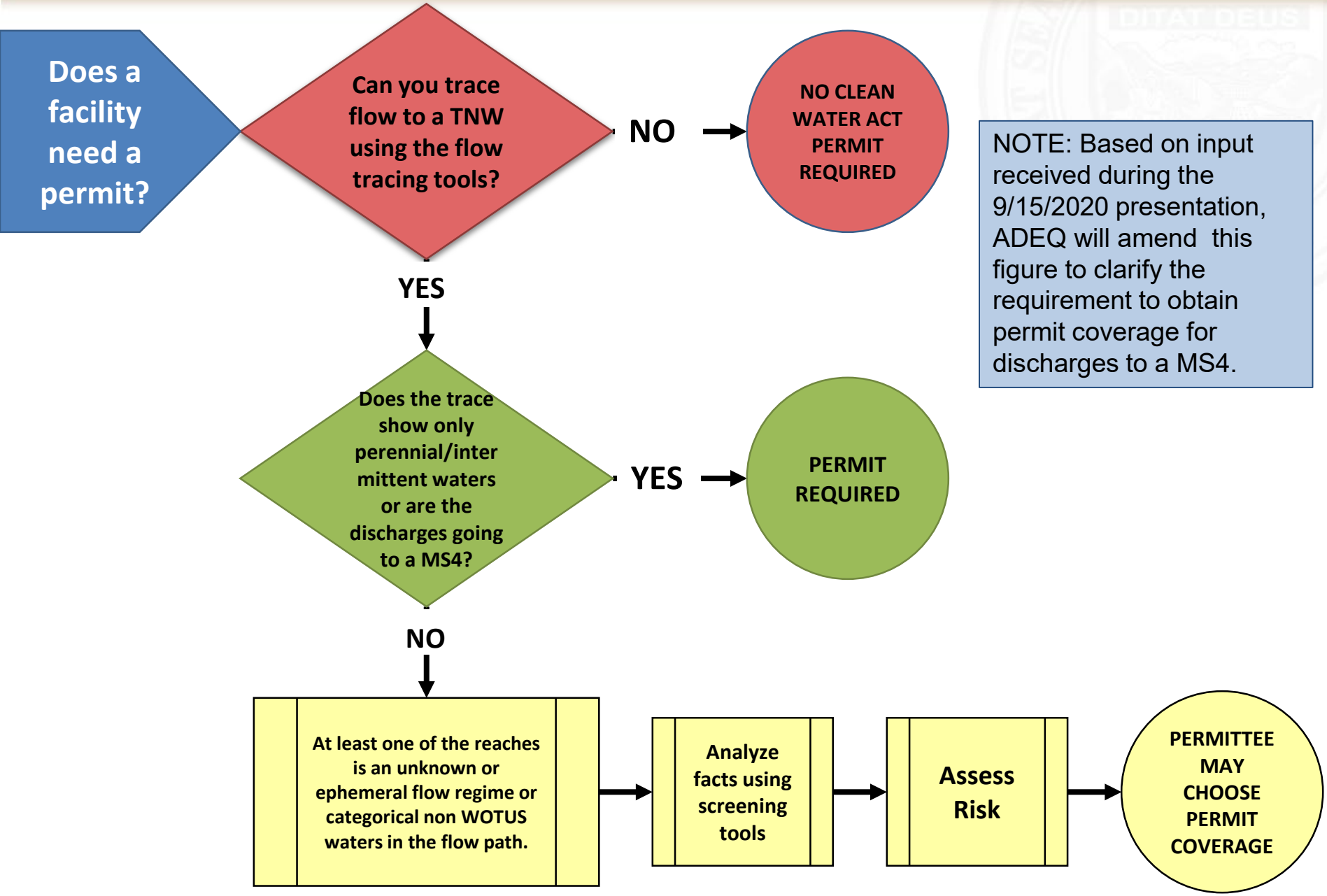
Undetermined



Data sources ADEQ flow regime

- Arizona Department of Environmental Quality
- Arizona Game & Fish Department
- Maricopa County Flood Control District
- Arizona Nonpoint Education for Municipal Officials
- United States Geological Survey

NWPR Screening Toolkit Flow Chart



NOTE: Based on input received during the 9/15/2020 presentation, ADEQ will amend this figure to clarify the requirement to obtain permit coverage for discharges to a MS4.

Resources

1. USGS Streamflow-Rain Drop
   - Trace path of hydrologic flow
2. ADEQ GIS
   - Flow regime
   - Channelized conveyance
3. NAIPS-near Infrared Vegetation
   - Riparian Vegetation
4. Google Earth Pro
   - Visual evidence of flow
   - Channelized conveyance
   - Elevation
5. ADEQ-Surface water monitoring data
   - Presence of contaminants
6. ADWR-Groundwater Site Inventory
   - Groundwater elevation
7. AZGS GIS layers
   - Surficial bedrock

The USGS Streamflow Statistics and Spatial Analysis Tools for Water-Resources

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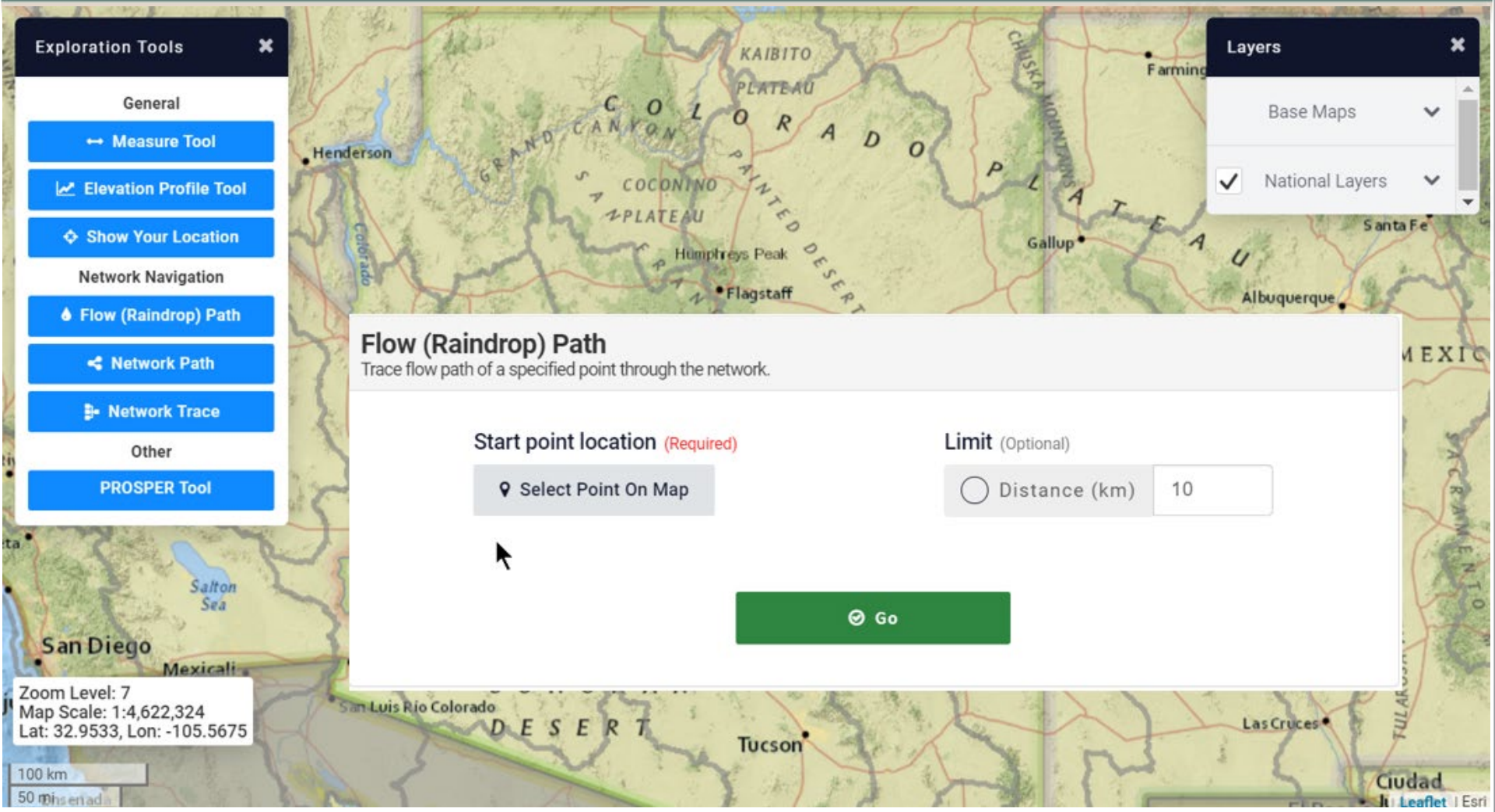

https://streamstats.usgs.gov/ss/

Use Cases
Terminal Basin

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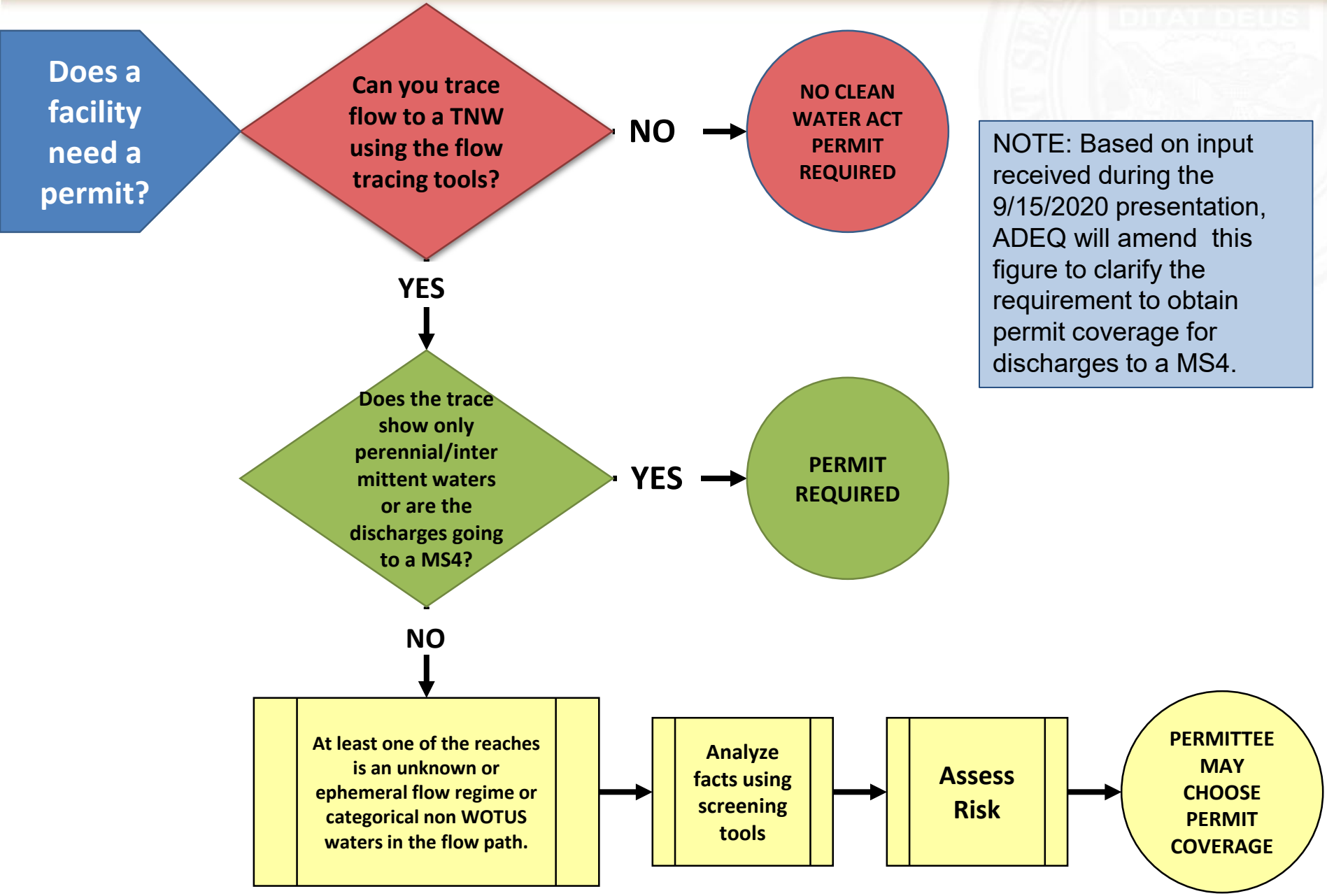
NWPR Screening Toolkit Flow Chart



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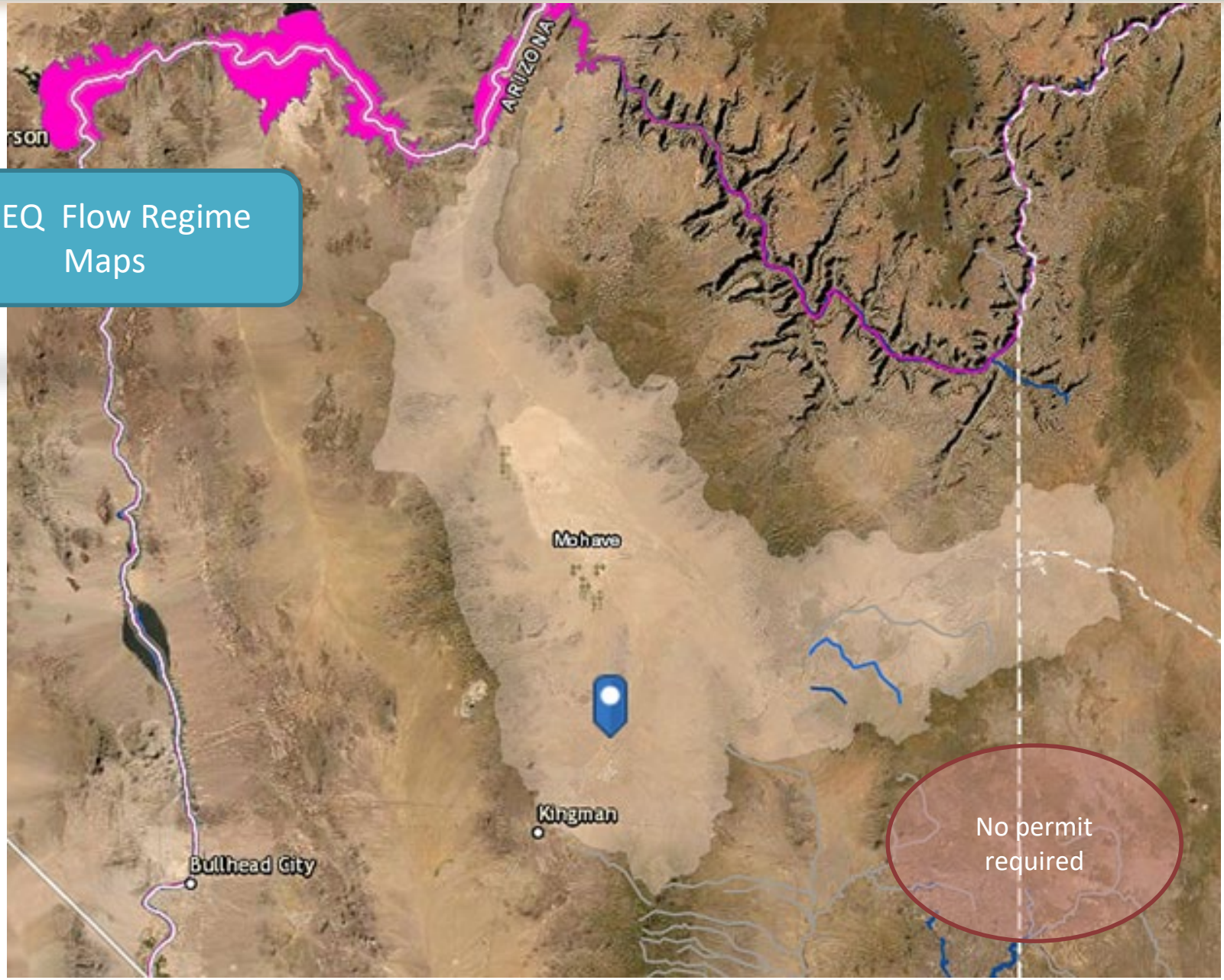
City of Kingman Hilltop WWTP

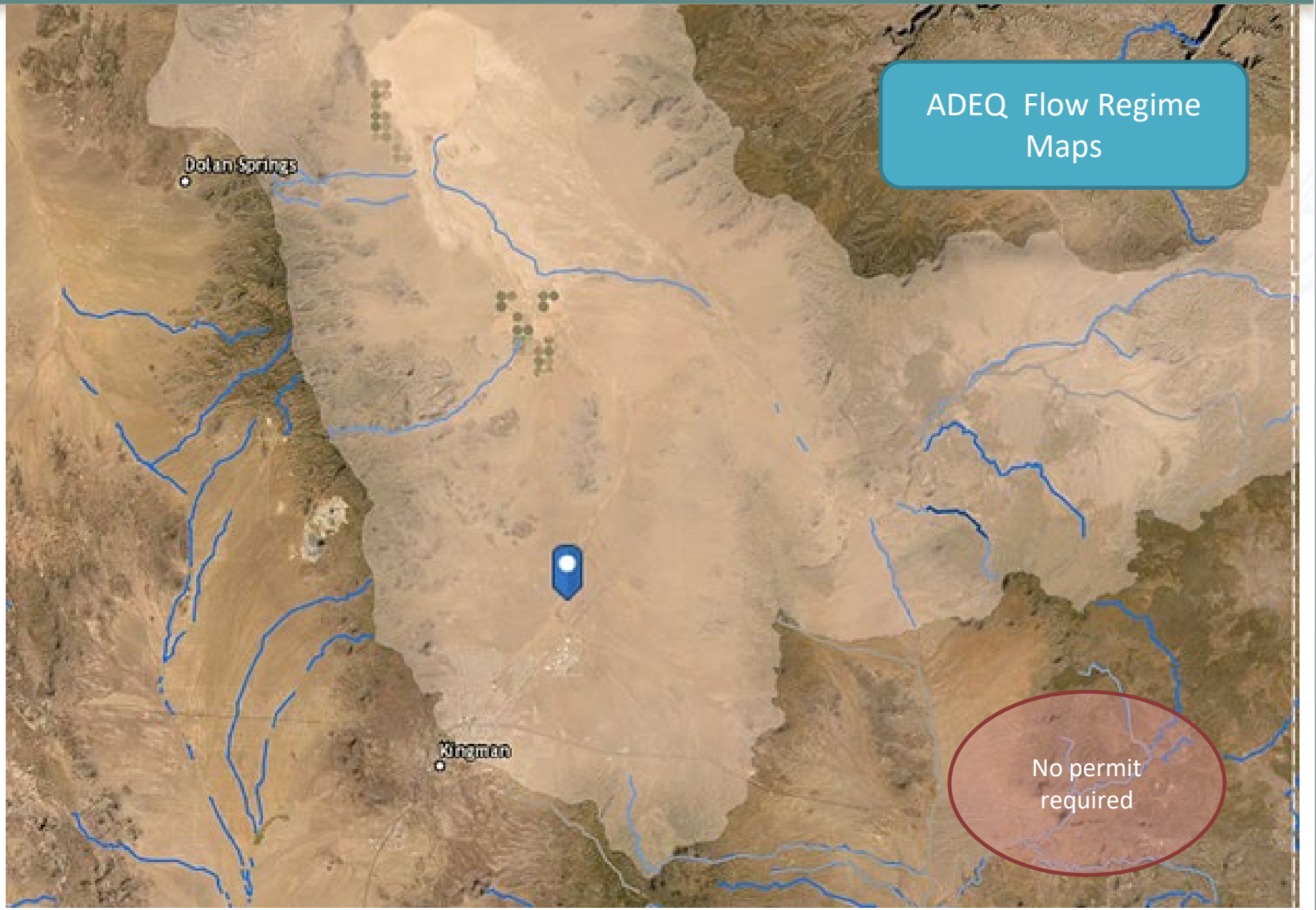
USGS Raindrop Flow Path Tool

City of Kingman Hilltop WWTP

ADEQ Flow Regime Maps

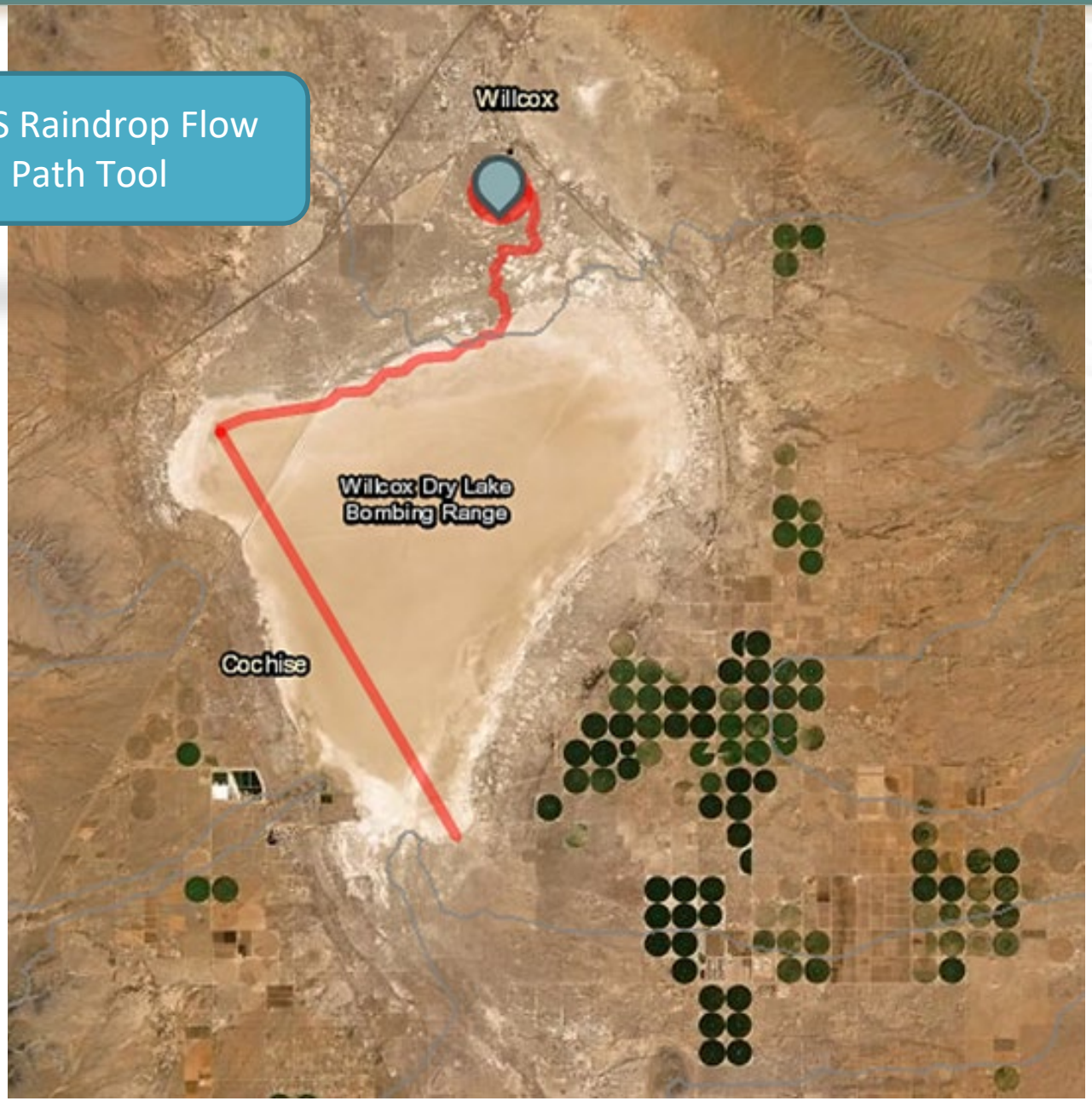


City of Kingman Hilltop WWTP

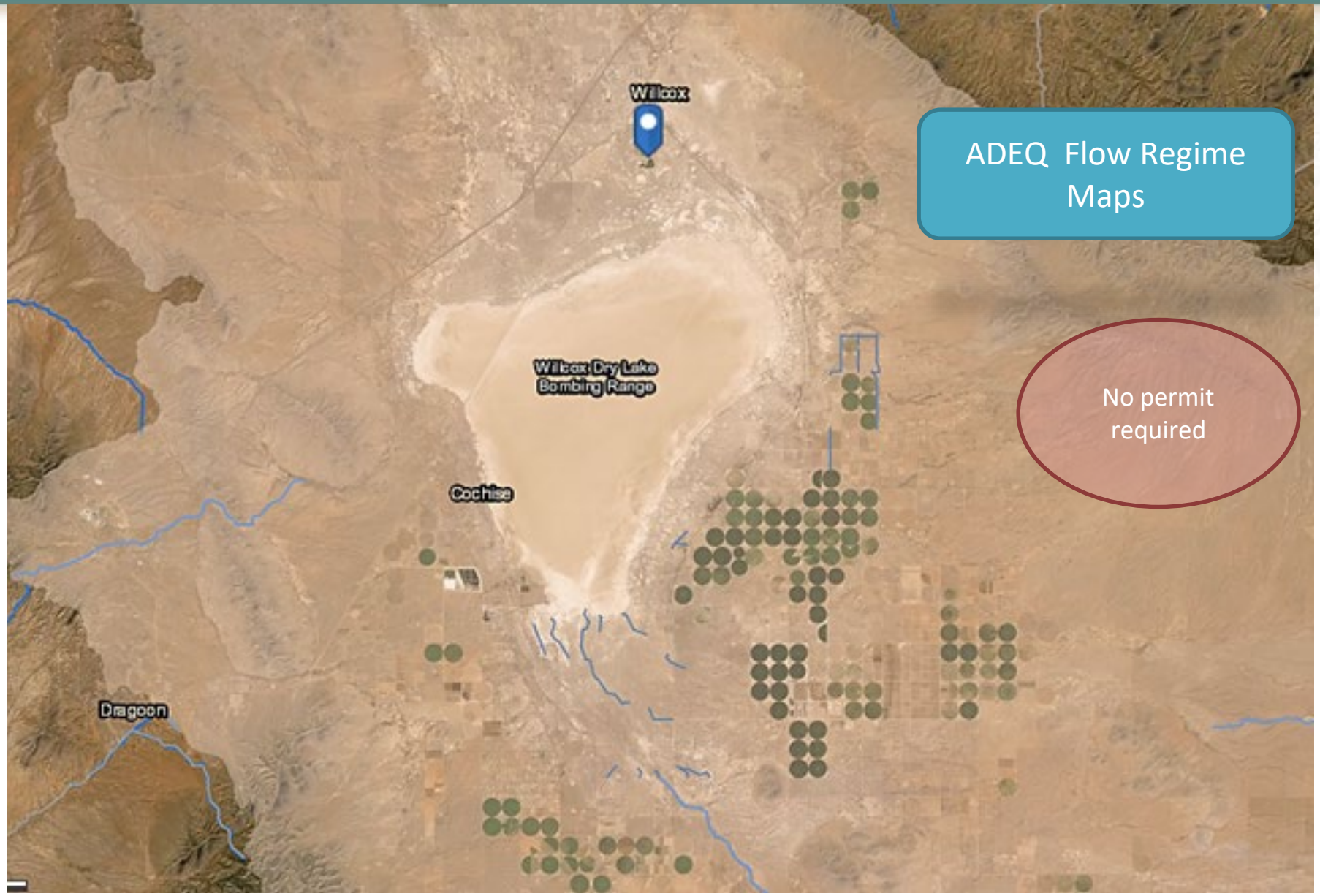


City of Willcox WWTP

USGS Raindrop Flow Path Tool



City of Willcox WWTP



ADEQ Flow Regime Maps

No permit required

Use Case
Discharge to a WOTUS via relatively permanent waters

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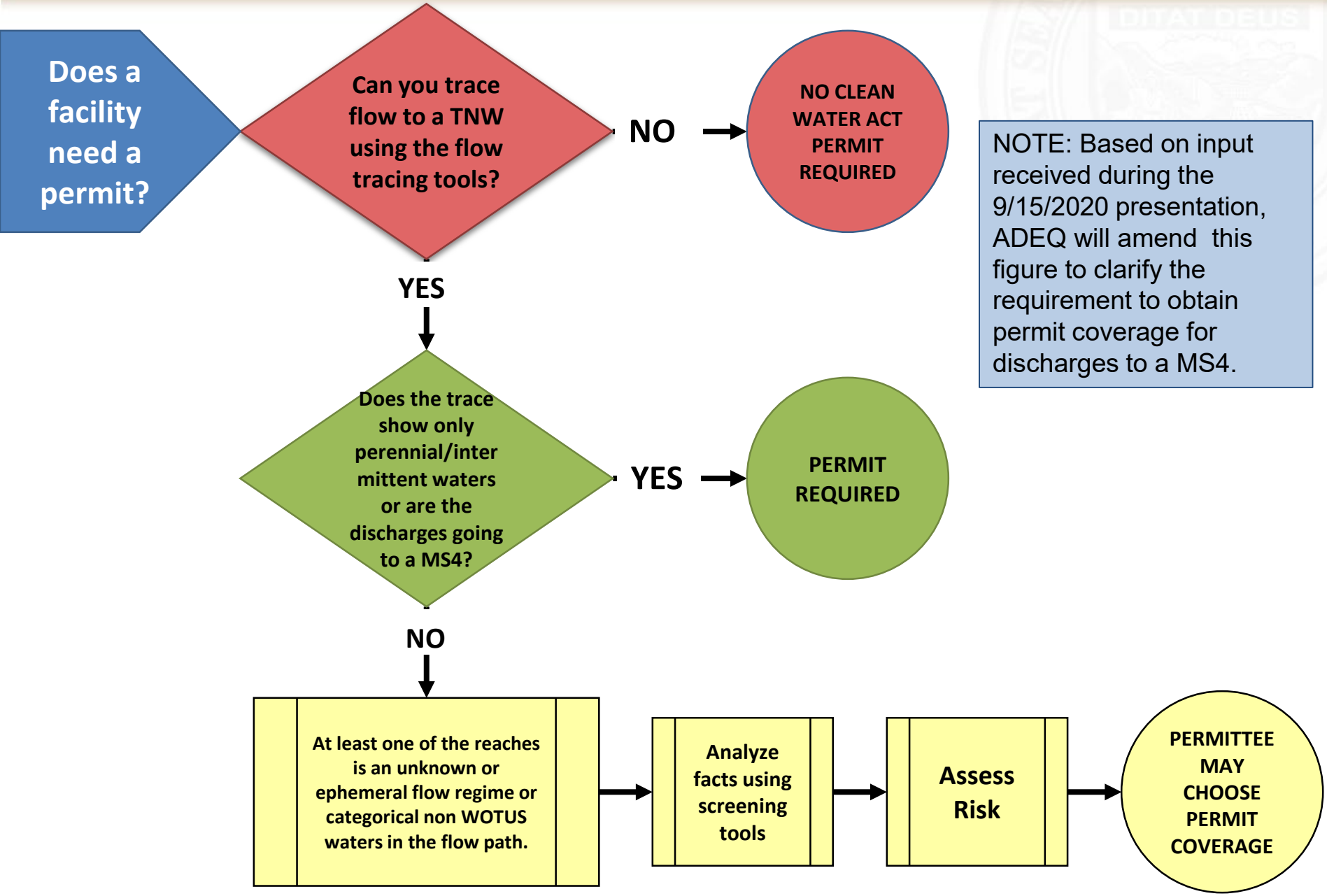
NWPR Screening Toolkit Flow Chart



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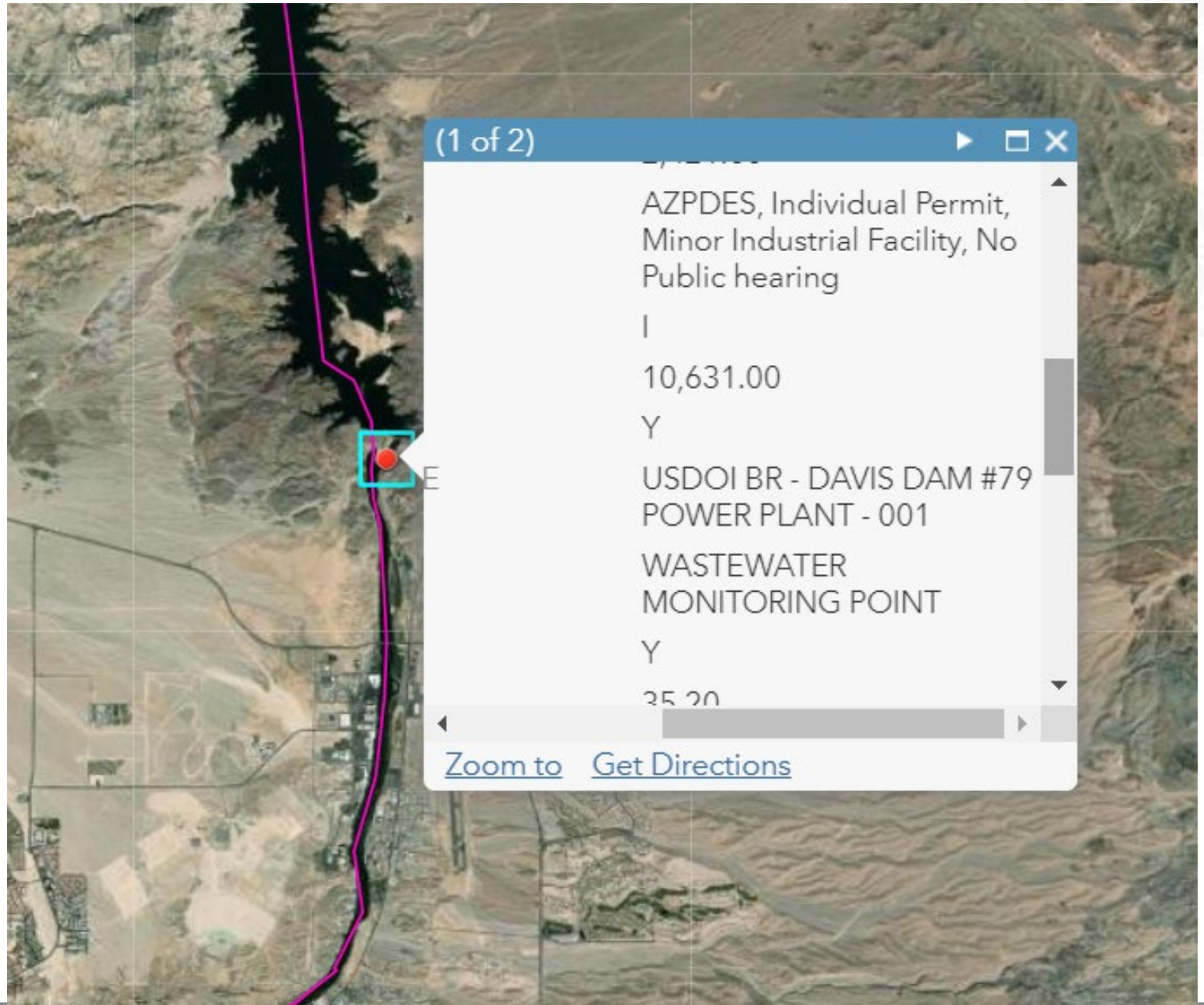
Discharges to MS4s

- MS4s always discharge to a WOTUS
- Construction or industrial operators discharging to a MS4 require CGP or MSGP coverage, same as before NWPR
- MS4 area may change due to NWPR

Davis Dam Power Plant

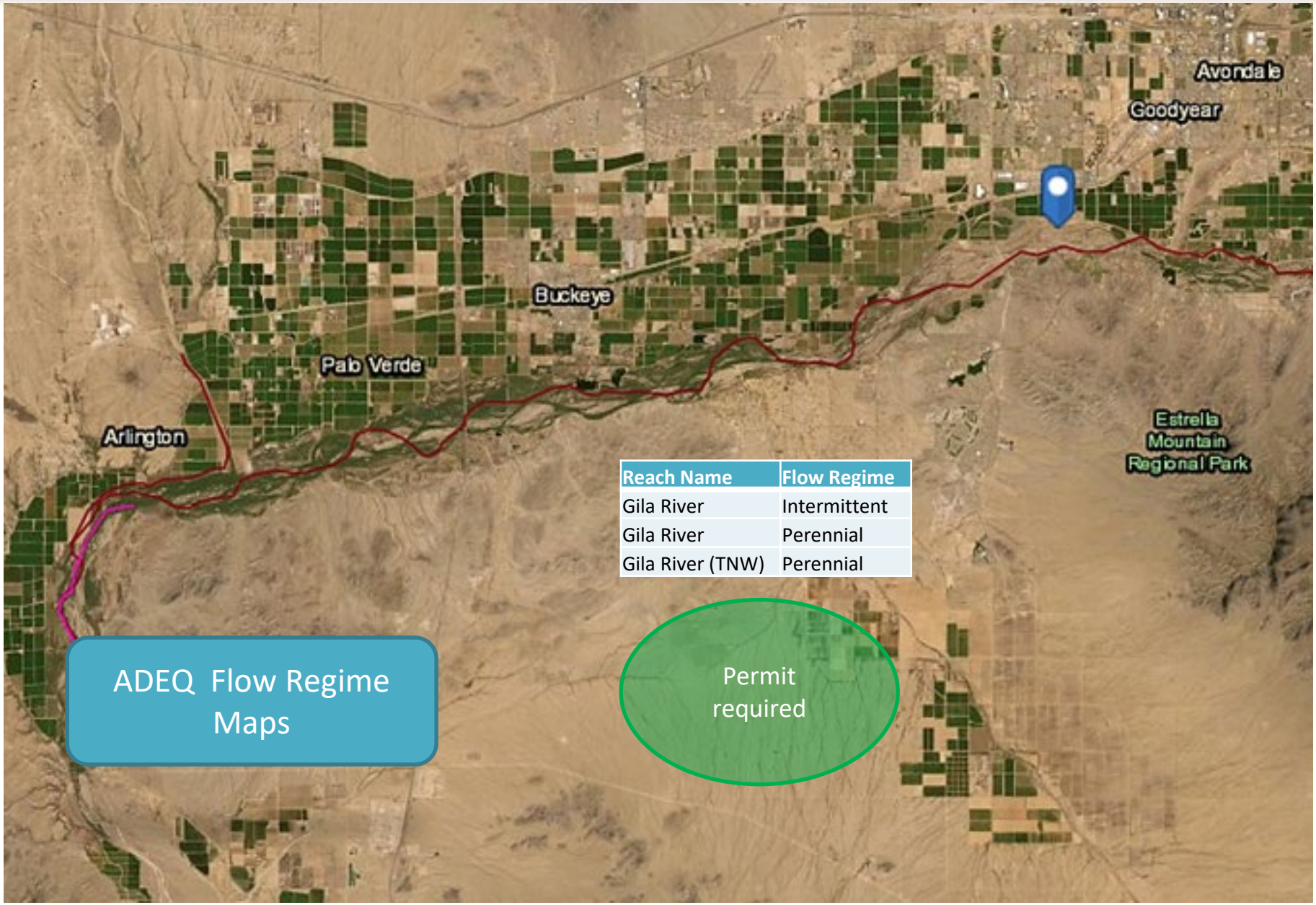


City of Goodyear 157th Ave Water Reclamation Facility

City of Goodyear 157th Ave Water Reclamation Facility

ADEQ Flow Regime Maps

City of Goodyear 157th Ave Water Reclamation Facility



Reach Name	Flow Regime
Gila River	Intermittent
Gila River	Perennial
Gila River (TNW)	Perennial

Use Case
Assess risk when flow permanence is unknown

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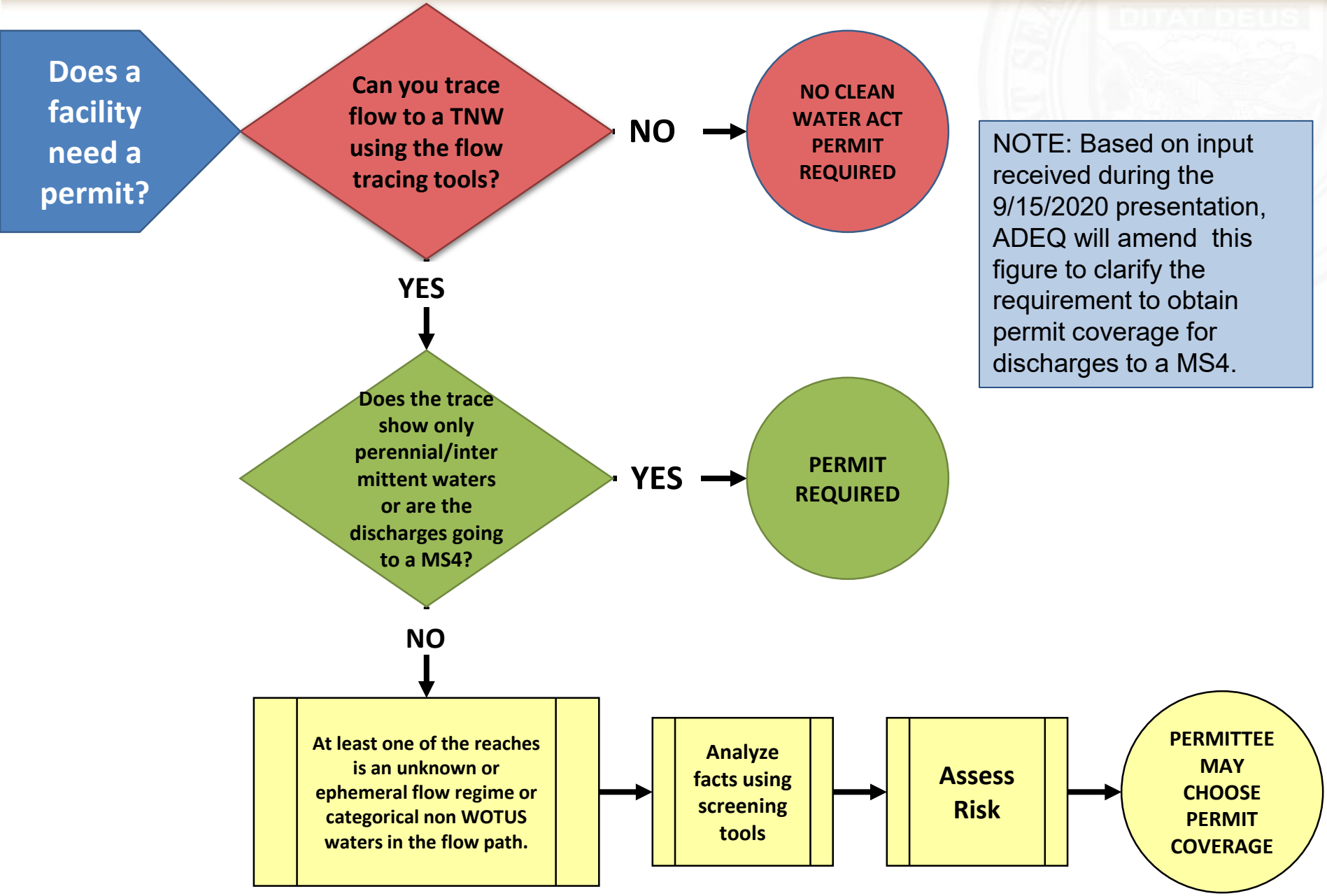
NWPR Screening Toolkit Flow Chart



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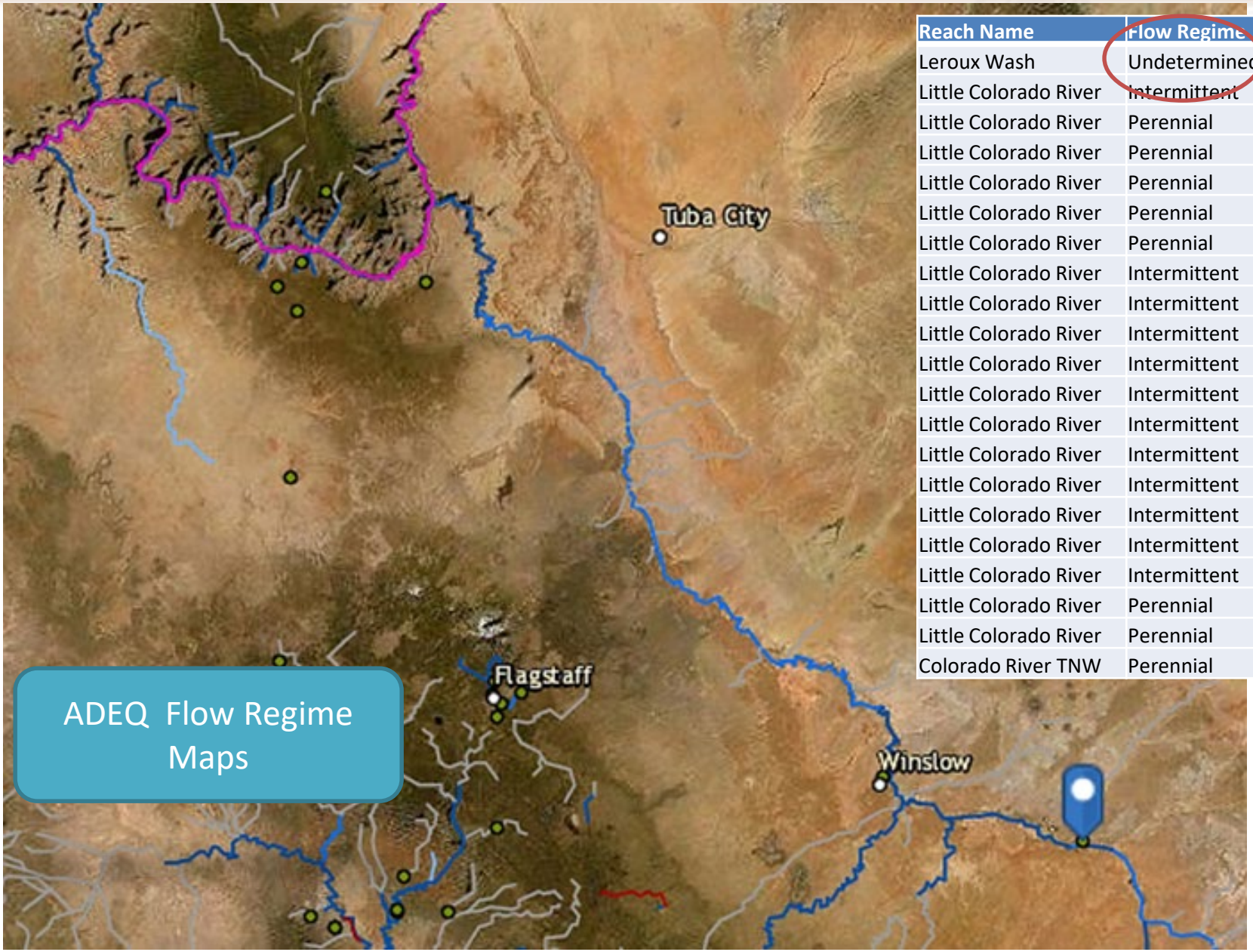
Risk Factor Checklist

- **Channelized conveyance**
- **Visual evidence of flow**
- **Surface water monitoring data**
- **Riparian Vegetation**
- **Groundwater level***
- **Surficial bedrock***
- **Snowpack***

***under development**

City of Holbrook Painted Mesa Water Reclamation Facility

City of Holbrook Painted Mesa Water Reclamation Facility



Reach Name	Flow Regime
Leroux Wash	Undetermined
Little Colorado River	Intermittent
Little Colorado River	Perennial
Little Colorado River	Perennial
Little Colorado River	Perennial
Little Colorado River	Perennial
Little Colorado River	Perennial
Little Colorado River	Intermittent
Little Colorado River	Intermittent
Little Colorado River	Intermittent
Little Colorado River	Intermittent
Little Colorado River	Intermittent
Little Colorado River	Intermittent
Little Colorado River	Intermittent
Little Colorado River	Intermittent
Little Colorado River	Intermittent
Little Colorado River	Intermittent
Little Colorado River	Intermittent
Little Colorado River	Perennial
Little Colorado River	Perennial
Colorado River TNW	Perennial

ADEQ Flow Regime Maps

Riparian Vegetation

Use Case
Assess risk where “no discharge to WOTUS” or “unknown”

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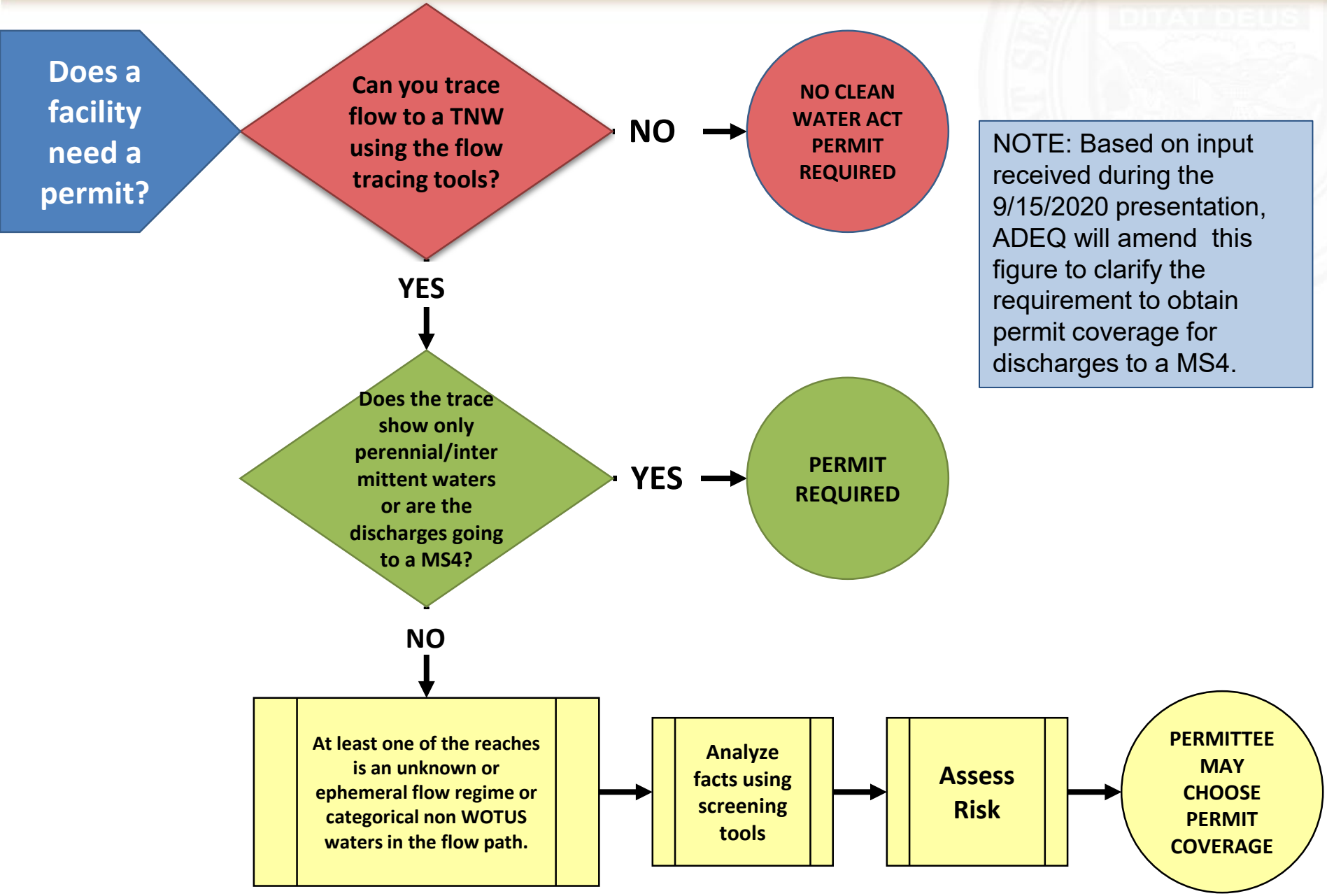

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Sierra Club v. Abston Constr. Co. Applications

Pollutants conveyed to WOTUS via continuous channelized conveyance are point sources requiring AZPDES permits

- This includes depositing pollutants in channels where rainwater or later flows carry the pollutants to the WOTUS.

"A point source of pollution may also be present where miners design spoil piles from discarded overburden such that, during periods of precipitation, erosion of spoil pile walls results in discharges into a navigable body of water by means of ditches, gullies and similar conveyances, even if the miners have done nothing beyond the mere collection of rock and other materials."

Sierra Club v. Abston Constr. Co., 620 F.2d 41, 43 (5th Cir. 1980)

Sierra Club v. Abston Constr. Co. Applications

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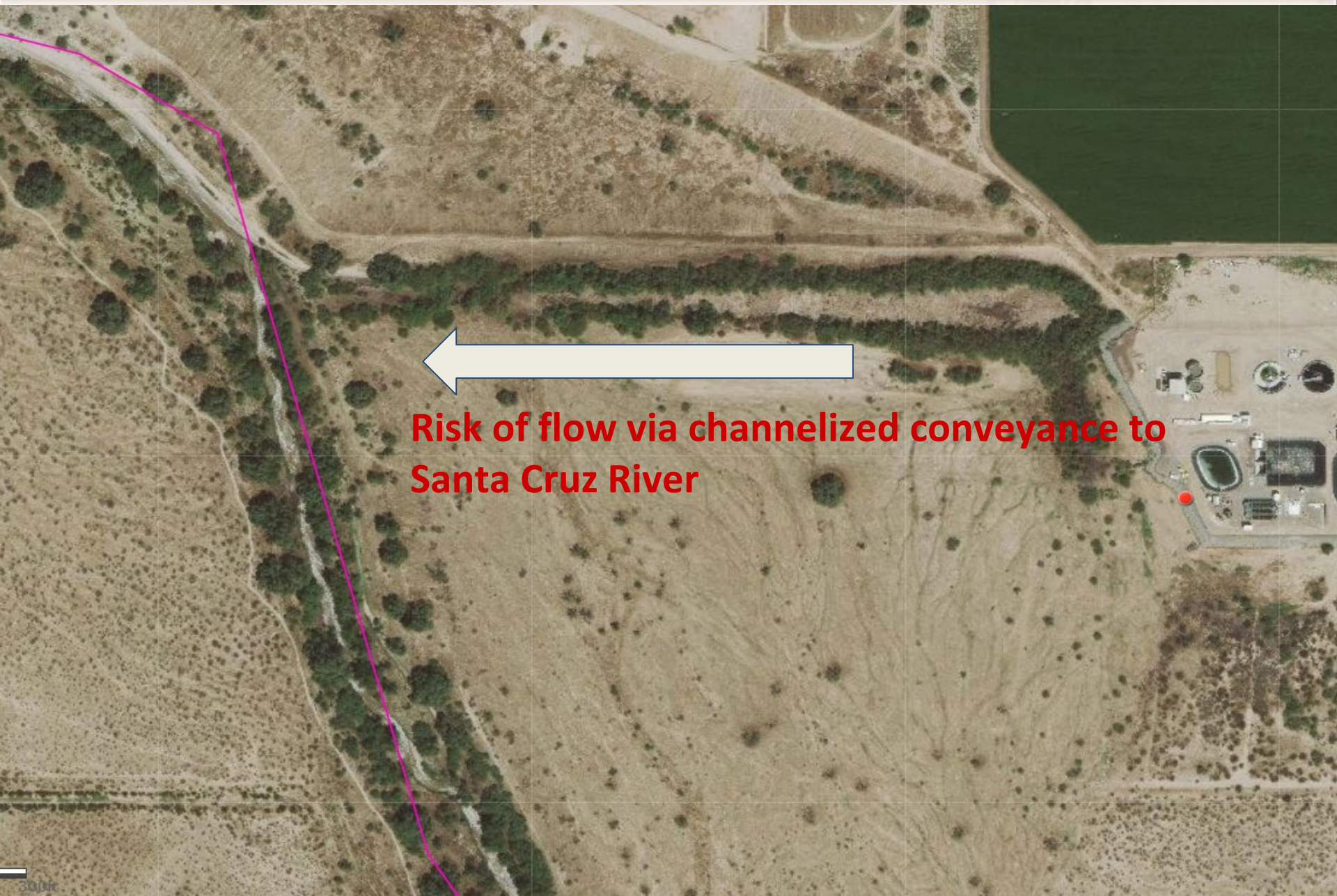
Pollutants conveyed to WOTUS via continuous channelized conveyance are point sources requiring AZPDES permits

What to consider when determining if pollutants will reach a WOTUS.

- Visual evidence of flow from discharge point to WOTUS?
- Channel characteristics necessary to transport pollutants to WOTUS?
- Distance from discharge to WOTUS?*
- ADEQ monitoring data? Are there impairments indicating conveyance of pollutants?

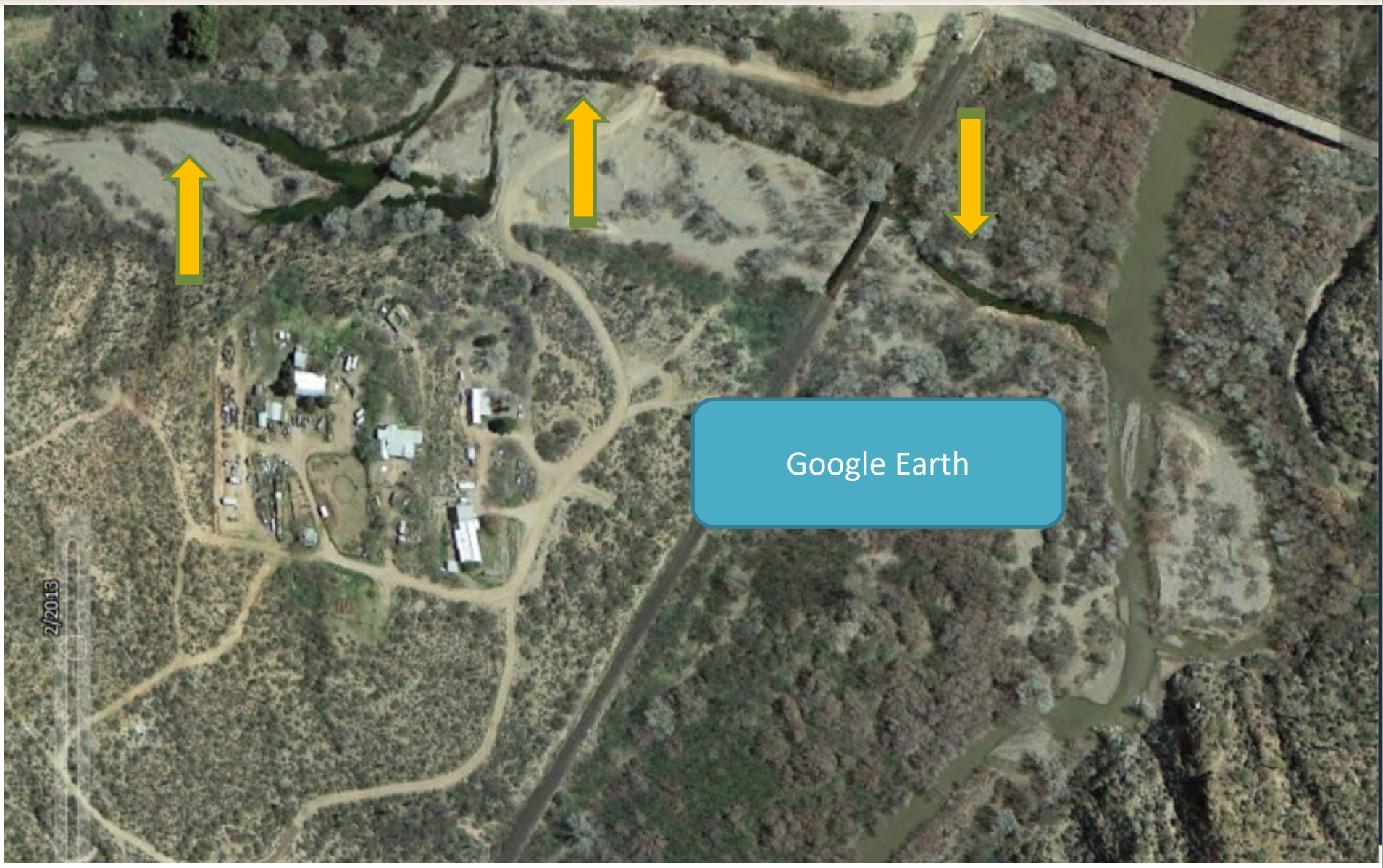
Human-made Channelized Conveyance to WOTUS



Natural Channelized Conveyance to WOTUS

Visual Evidence of Flow

Visual Evidence of Flow



What's Next?

- Continue updating our flow regime maps
- What waters are jurisdictional/WOTUS
- Continue work on a State Surface Water Program

New tools

- Antecedent Precipitation Tool from EPA
- Streamflow Duration Assessment Method

Q and A