

# COLORADO OIL AND GAS CONSERVATION COMMISSION

- Water for Fracing & Other Activities
- Waste Management
- Ground Water Protection, Investigations and Monitoring
- Complaint Response



OIL & GAS CONSERVATION COMMISSION

# Sources of Water in Colorado

## DNR Division of Water Resources

- **Use of Water Must be Legally Allowed**
  - Municipal lease/purchase (industrial uses)
  - Changed water rights (e.g. temp agricultural to industrial)
  - Fully consumed water (leased/purchase effluent)
  - Produced water (non-trib or decreed trib & augmented)
  - Non-tributary (landowner & operator agreement)



# Sources of Water in Colorado

- **Non-tributary Water**
  - 1985 Law (SB5)
  - Allows Non-tributary water withdrawal when mining minerals (includes O&G)
  - Premised on incidental withdrawal
    - Amount that can be withdrawn
    - Duration
  - Land ownership not required
  - O&G reservoirs are deep, therefore not economic, not productive, and not suitable quality



# MANAGEMENT OF E & P WASTE

## ■ PRODUCED WATER

- Injection (COGCC UIC or EPA on Tribal Lands)
- Evaporation (COGCC Pits & Centralized E&P)
- Commercial Facilities (CDPHE – Solid Waste)
- <3,500 TDS dust suppression (COGCC)
- Discharge (CDPHE – WQCD)
- Reuse & Recycle (COGCC)



# MANAGEMENT OF E & P WASTE

- DRILLING FLUIDS, FLOWBACK (FRAC) & OILY WASTES
  - Injection (COGCC UIC or EPA on Tribal Lands)
  - Commercial Facilities (CDPHE – Solid Waste)
  - Land treatment (COGCC)
  - Centralized E&P Waste Facility (COGCC)
  - Reuse & Recycling (COGCC)



# 900 SERIES RULES - Management of E&P Waste

- Rule 901 - General
- Rule 902 to 905 – Pits:  
    permitting (Form 15 & Form 2A), lining, O&M, closing
- Rule 906 – Spills/releases:  
    reporting, cleanup, surface owner notification
- Rule 907 – Management  
    reuse/recycling, tracking, plans, disposal methods  
    produced water, drilling fluids, oily wastes, frac fluid, etc
- Rule 908 – Centralized E&P Waste Management Facilities
- Rule 909 – Site Investigation, Remediation, Closure
- Rule 910 – Cleanup Concentrations



# GROUND WATER PROTECTION

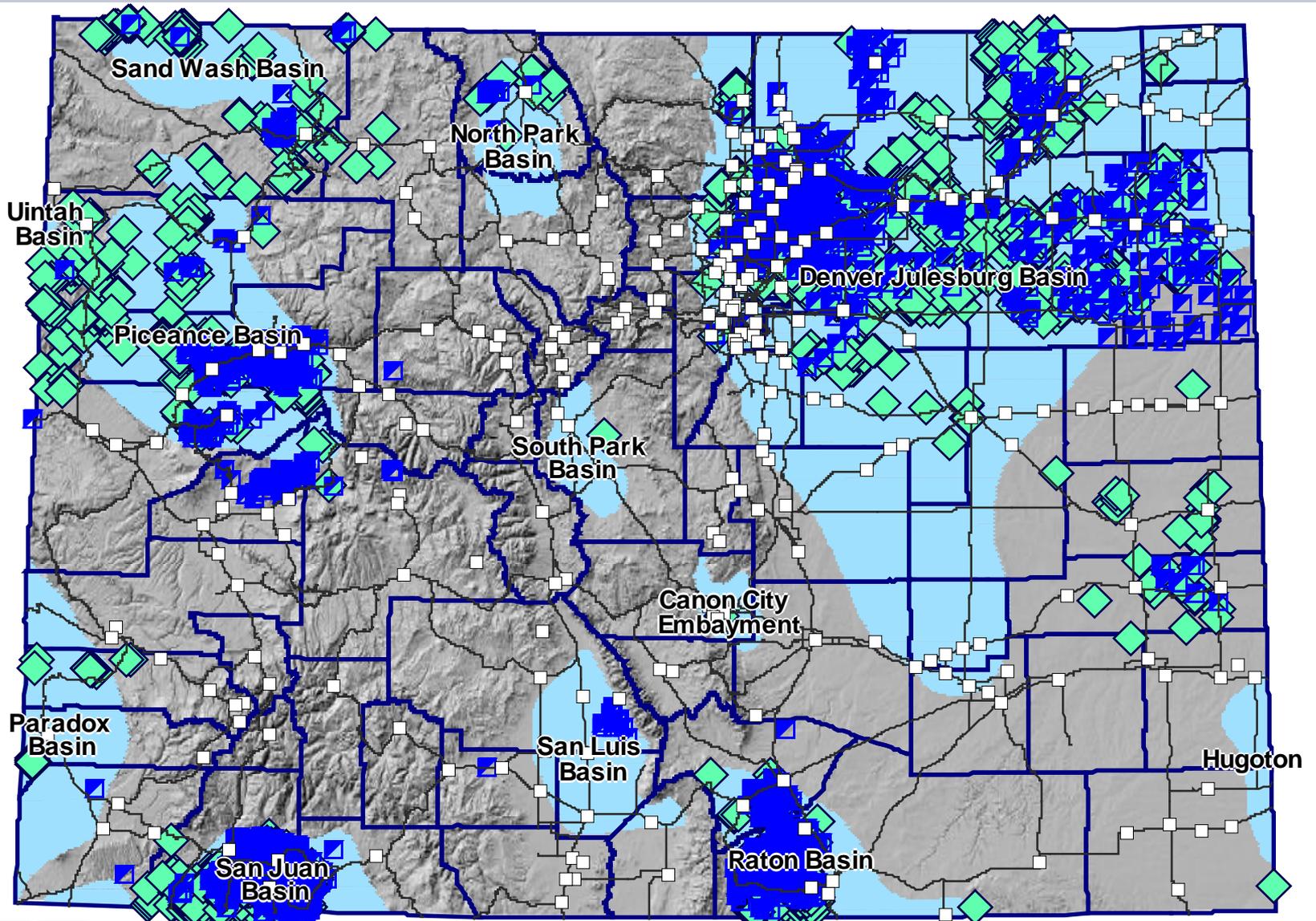
- Properly drilling, completing, operating, and P&A to ensure and maintain isolation of productive zones from GW & SW.
- Properly storing, treating, reusing/recycling, transporting, and disposing of wastes.
- Properly installing and maintaining associated equipment & E&P waste management facilities.
- Rapid response to and thorough remediation of impacts from spills and releases.



# GROUND WATER PROTECTION INVESTIGATIONS & MONITORING

- Analytical results from more than 5,000 water wells.
- Collected by the COGCC, Operators, other agencies
- Studies by COGCC to establish Baseline and Current Conditions
- Collected in response to complaints and requests
- Required by Orders of the Commission (Cause 112)
- Required by Rules (317B, 318A.e.4., 608, 908)
- Required as part of Site Investigation and Remediation activities.





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# COMPLAINT RESPONSE

- Collect samples from water wells, soil or other media for field and laboratory analyses.
- Collect samples of gas, oil, condensate, produced water, flow back, or other wastes from nearby oil and gas wells.
- Compare analytical results to background and water regional water quality.
- Compare stable isotopic signatures and composition of gas samples to determine source.
- If a complaint is verified:
  - Operator must remediate impacts to meet standards.
  - Operator must mitigate impacts.



# COGCC Public Website

[www.colorado.gov/cogcc](http://www.colorado.gov/cogcc)

- Denver Office Phone Number: (303) 894-2100
- Statewide Complaint Line: (888) 235-1101



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