

Rule 411

Public Water System Buffers

COGCC Operator Meeting

October 12, 2021



COLORADO
Oil & Gas Conservation
Commission
Department of Natural Resources

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Overview

- Definitions
- Rules
- PWS Surface Water Intake
- PWS GUDI and Type III Aquifer Wells
- Additional Reminders



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Definitions

- Surface Water Supply Area (411.a.(1))
 - Classified Water Supply Segment (100 Series)
- Groundwater Under the Direct Influence of Surface Water (GUDI) (411.b.(1)A)
 - Groundwater Under the Direct Influence of Surface Water Well (GUDI Well) (411.b.(1)B)
- Type III Aquifer (411.b.(1)C)
 - Type III Well (411.b.(1)D)



Rules - Surface Water PWS

- Surface Water Supply Area
- Buffer Zones
 - Internal (0 - 1,000')
 - Intermediate (1,001 - 1,500')
 - External (1,500' - ½ mile)
- Consultation with PWS operator about BMPs to protect the PWS intake
- Spill/Release Notification & Emergency Response



Rules - Surface Water PWS

- Protections
 - Internal Buffer Zone
 - No new surface disturbance
 - Form 2A or Form 4 for additional disturbance or subsequent operations
 - Commission may grant variance, subject to PWS consultation with CDPHE
 - Plus...



Rules - Surface Water PWS

- Protections
 - Intermediate Buffer Zone
 - Downgradient perimeter berming for liquid storage
 - Lined berms
 - Daily inspections
 - Onsite spill response equipment
 - No pits
 - Plus...



Rules - Surface Water PWS

- Protections
 - External Buffer Zone
 - Pitless drilling
 - Water sampling



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Rules - GUDI & Type III PWS

- Buffer Zones
 - Internal (0 - 1,000')
 - Intermediate (1,001 - 1,500')
 - External (1,500' - ½ mile)
- Consultation with PWS operator about
 - BMPs to protect the PWS intake
 - Groundwater monitoring
 - Protection of recharge facilities
- Spill/Release Notification & Emergency Response



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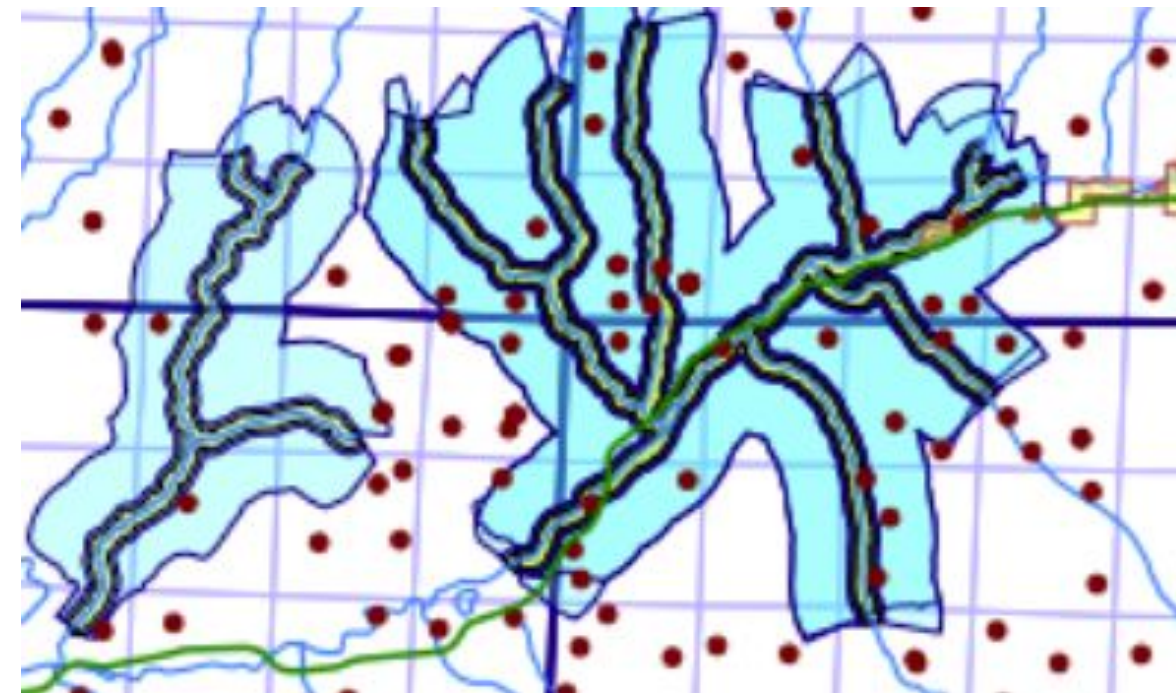
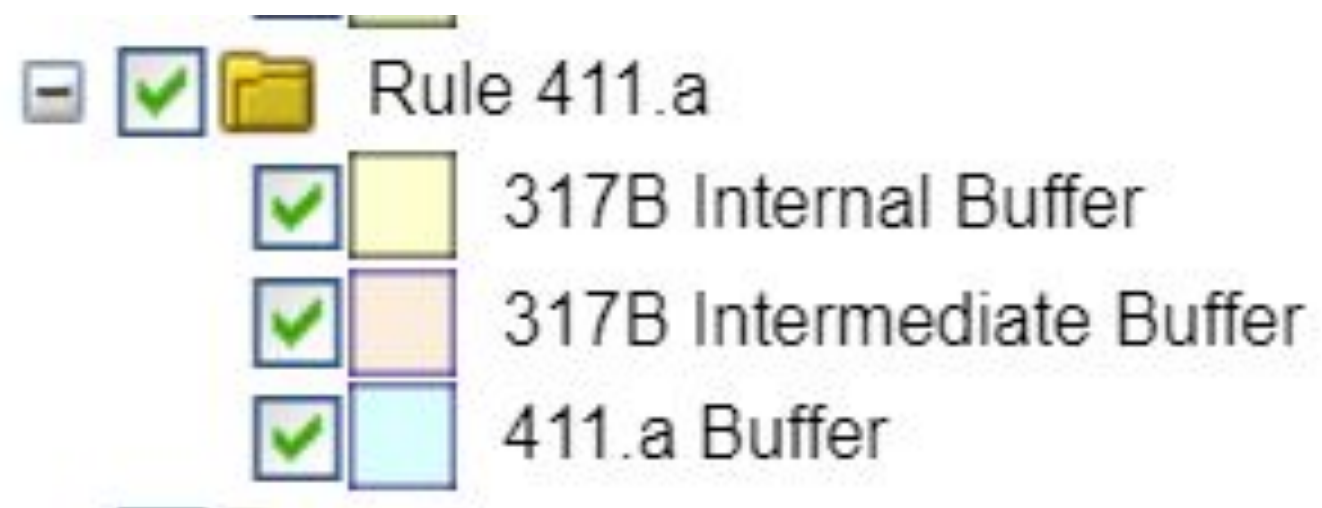
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PWS Surface Water Intakes

- Current COGCC GIS Online Interactive Map Layers
 - GIS Dataset essentially unchanged from former 317B
 - 411.a Buffer is ½ mile per current rule
 - Internal and Intermediate Buffers are narrower



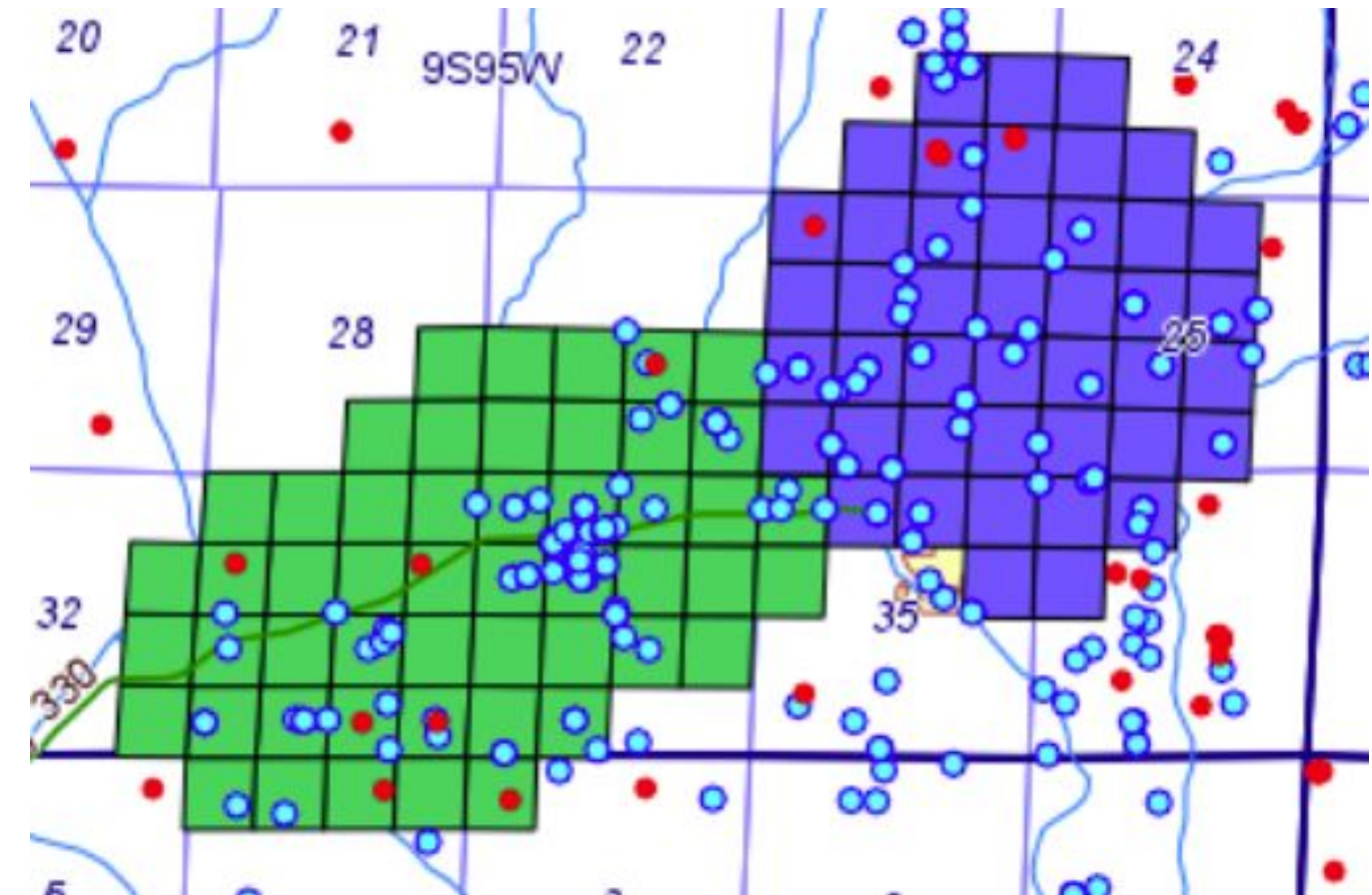
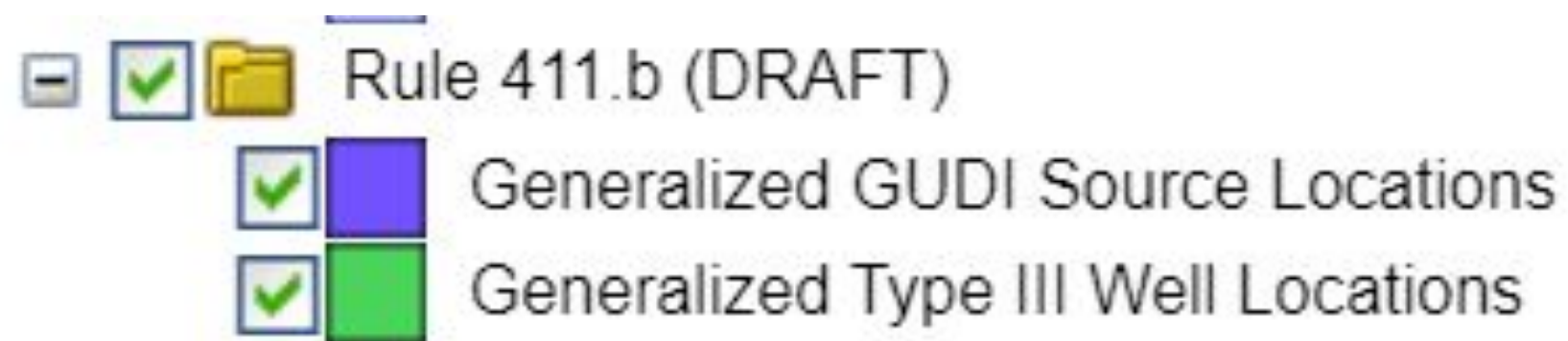
PWS Surface Water Intakes

- Pending Map Layer Updates
 - Dataset has 478 PWS intakes with 41 to be added
 - Reconfirm Classified Water Supply Segments
 - Address intermittent streams with consistency
 - Evaluate lakes and reservoirs within SWSA
 - QA/QC
 - Initial estimates of 2-3 month project



PWS GUDI & Type III Wells

- Current COGCC GIS Online Interactive Map Layers
 - Generalized well location polygons
 - Based on DWR evaluation of SWAP data



PWS GUDI & Type III Wells

- Pending Map Layer Updates
 - Currently evaluating datasets
 - SDWIS
 - CDPHE Shapefiles
 - DWR (SEO) Data
 - Dataset has 729 GUDI; 1,576 Type III wells
 - 259 “Inactive”
 - QA/QC of data to determine best location data



PWS GUDI & Type III Wells

- Pending Map Layer Updates
 - External (Public) map layers will continue to show “generalized” external buffer zone
 - Map tips will display PWS name and contact info
 - Operator will consult with PWS administrator to determine exact location and applicable buffer
 - Internal (COGCC Only) will have exact PWS Locations and buffers
 - Final weeks of work



Additional Reminders

- Spill/Release Notifications apply to PWS operators 15 miles downstream from location
 - This is a manual evaluation of each oil and gas location or spill incident location
 - Emergency Spill Response Plan required with Form 2A
- Spills must be reported to the CDPHE Environmental Release/Incident Report Hotline (1-877-518-5608)



Additional Reminders

- OGDG Notice to PWS Operators
 - Upon OGDG completeness determination
 - within ½ mile of stream <15 miles upstream from PWS surface water intake, or
 - within ½ mile of GUDI or Type III Well
- ALA requirement for locations proposed in buffer zones around SWSA or GUDI/Type III wells
- 411 buffers must be shown on hydrology map
- CAP evaluation includes potential impacts to PWS



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