



# What About Water?

## Water Resource and Land Use Planning 101

### MRCOG's Annual Planning Commissioner's Workshop

#### **Integrated Water and Land Use Planning in Castle Rock, CO**

Mark Marlowe, Director of Castle Rock Water

#### **“How High’s the Water, Momma?” – Legal Requirements for Water Resources in Cannabis Production**

Dan McGregor, Natural Resources Manager, Bernalillo County

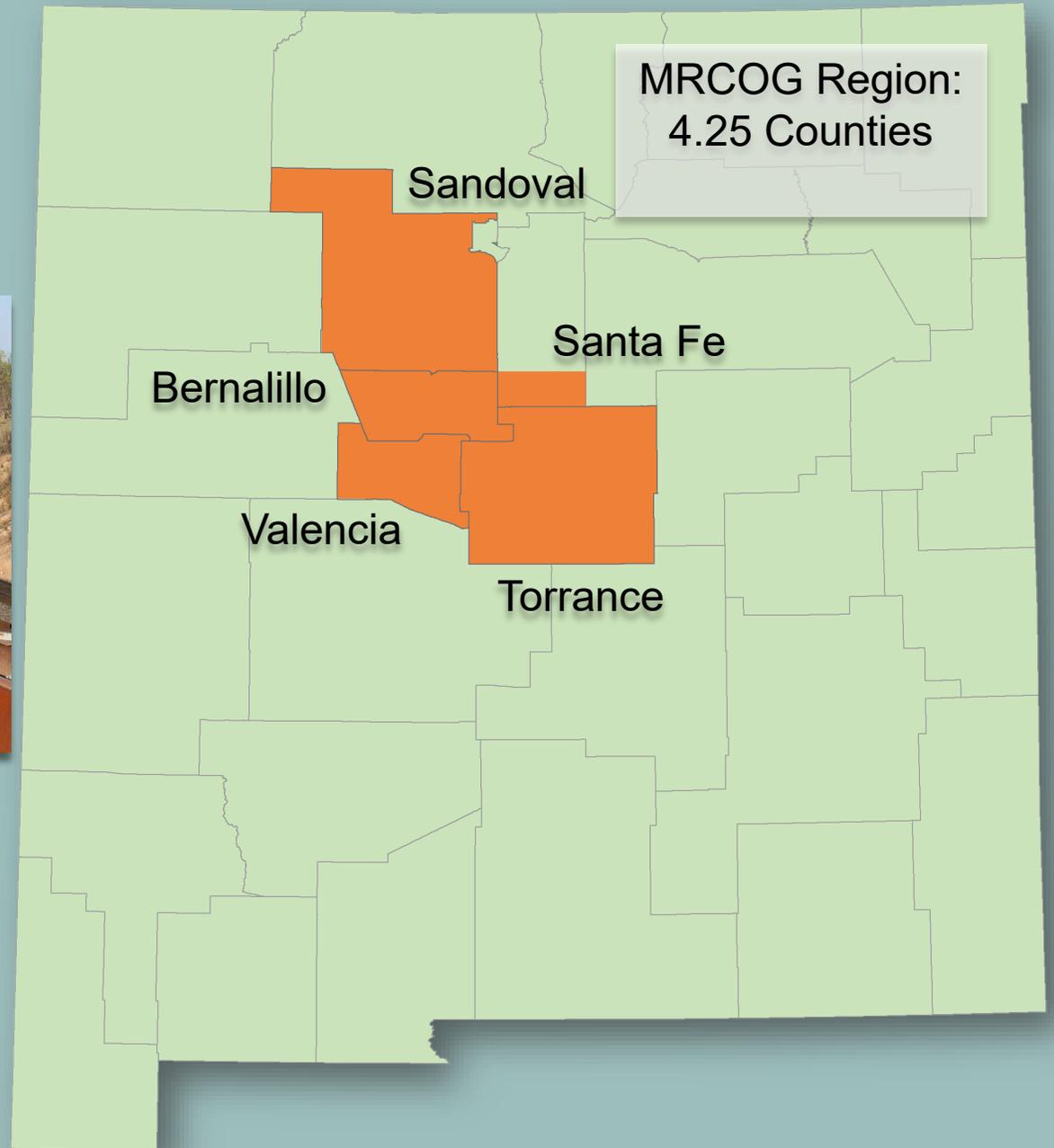
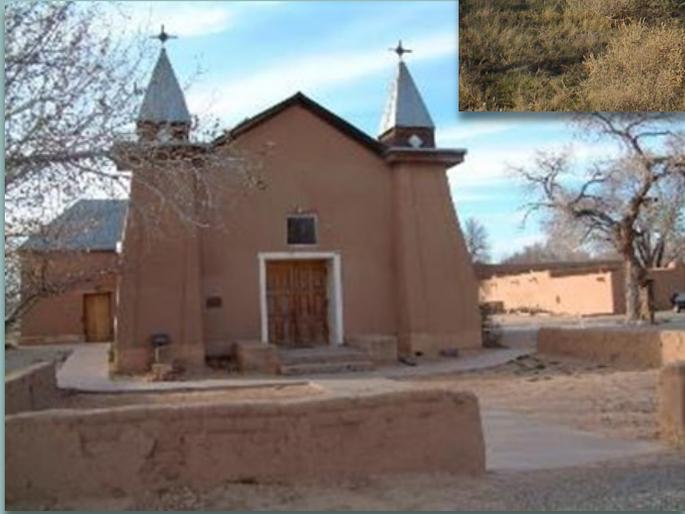
#### **MRGCD Property History & Development Review**

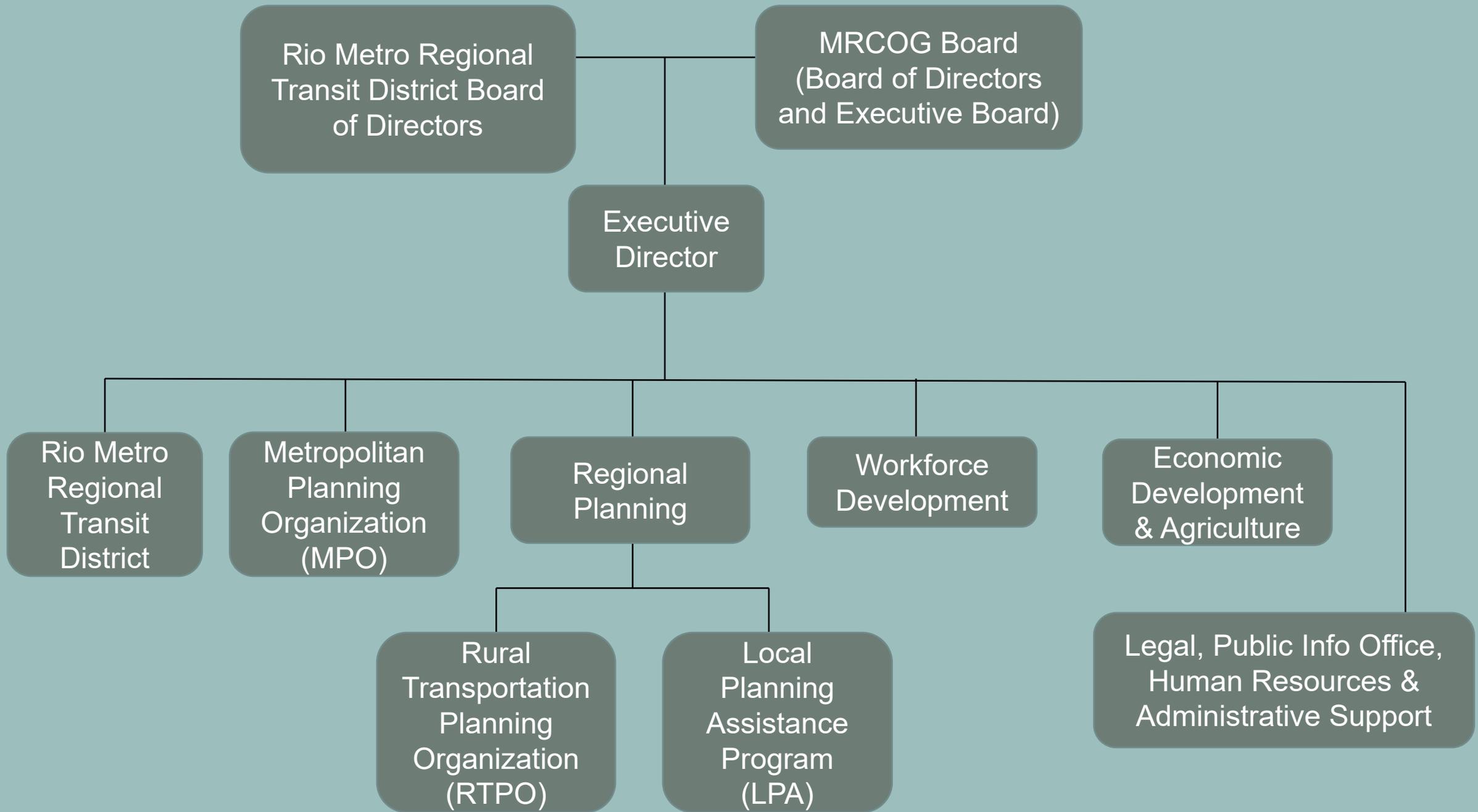
Alicia Lopez, Engineering & Mapping Manager, MRGCD

# MRCOG'S REGIONAL PLANNING PROGRAM

Bianca Borg, Channing Hofman, Payton Showalter

June 10, 2022





## LPA Services

- Workshops and training
- Ordinance revisions
- Comprehensive plans (long-range planning)
- Mapping
- Grant application assistance
- Data
- Fiscal agent services



# Funding Sources

## State Grant In Aid (SGIA)

- Annual Appropriation
- Divided between 7 COGs
- Matched with membership dues

## COG membership dues

- 51 cents X the population of the community = annual fee

## Contracts for larger projects

- Comprehensive Plans
- Ordinances
- Special Studies

# VILLAGE OF ENCINO COMPREHENSIVE PLAN



2020



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## VILLAGE OF CORRALES STATE OF NEW MEXICO

ORDINANCE 22-01  
AN ORDINANCE AMENDING PORTIONS OF CHAPTER 18  
OF THE VILLAGE OF CORRALES CODE GOVERNING  
LAND USE REGULATIONS, SECTIONS 18-11  
APPOINTMENT, 18-12 OFFICERS, 18-14 MEETINGS, 18-27  
PURPOSE, 18-28 APPLICATION, 18-29 DEFINITIONS, 18-30  
GENERAL REGULATIONS, 18-31 ZONE BOUNDARIES, 18-33 A-1 ZONE, 18-34 A-2  
ZONE, 18-35 HISTORICAL ZONE, 18-36 PROFESSIONAL OFFICE ZONE, 18-37  
COMMERCIAL ZONES, 18-38 MUNICIPAL ZONE, 18-39 OFF-STREET PARKING,  
18-40 LANDSCAPING REQUIREMENTS, 18-42 LIGHTING, 18-45 PERMITS AND  
PLAN APPROVALS, 18-47 NONCONFORMANCE, 18-48 AMENDMENT AND  
VARIANCE PROCEDURES, 18-49 APPEALS, 18-50 HEARINGS, 18-51 FEES,  
RENUMBERING SECTION 18-46 AS SECTION 18-2 ADMINISTRATION AND  
ENFORCEMENT, AND REMOVING SECTION 18-44 AREAS SUBJECT TO  
FLOODING.

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WHEREAS, the Village of Corrales contracted with the Mid-Region Council of Governments (MRCOG) to revise the Land Use Chapter of the Village Code; and

WHEREAS, MRCOG has been actively engaged with the Village Steering Committee, Planning and Zoning Commission, and Village Council; and

WHEREAS, the Village finds that a comprehensive review of the Land Use Chapter of the Village Code is critical to aid citizens in accessing and understanding the Village land use and zoning Codes; and

WHEREAS, the following changes support the Village's goal of increasing readability of the Code;

NOW, THEREFORE, BE IT ORDAINED by the Village Council, the Governing Body of the Village of Corrales, that:

### Section 18-2. Administration and enforcement shall be amended as follows:

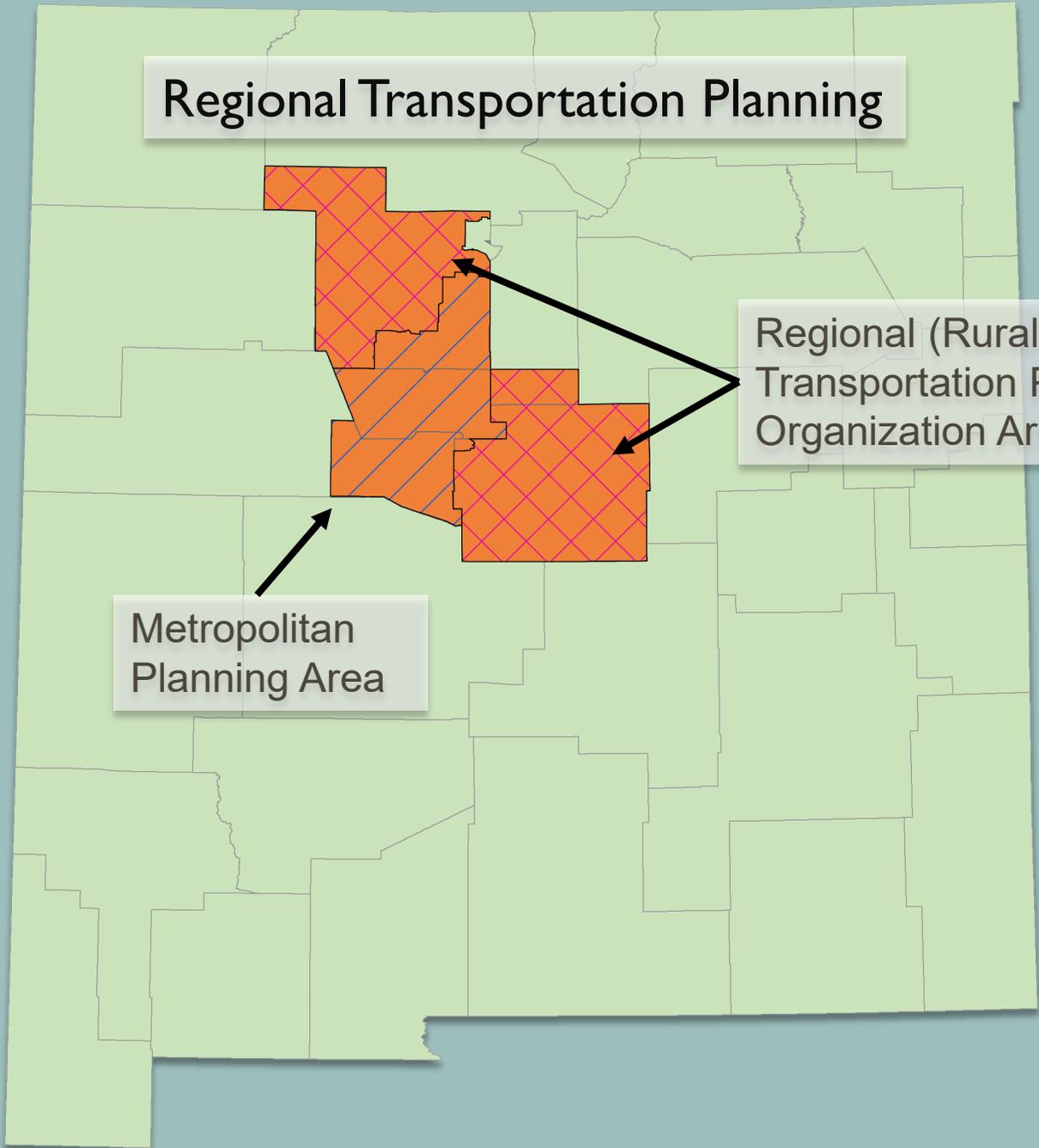
- (a) *Planning and Zoning Administrator.* The Planning and Zoning Administrator (Administrator) shall administer and enforce the provisions of this Chapter.
- (b) *Information and records.* The Administrator shall make available to the public the information contained in this article. The Administrator shall maintain the official zone map. The Administrator shall make available to the public the appropriate forms necessary for compliance with the requirements of this article.
- (c) *Issuance of permits or certificates.* As provided for within this Chapter, applications for permits, reviews, or certificates pertaining to the use of land or buildings shall be subject to the approval of the Administrator

# Town of Edgewood Comprehensive Land Use Plan

Adopted by Town Council January 11, 2020



# Regional Transportation Planning



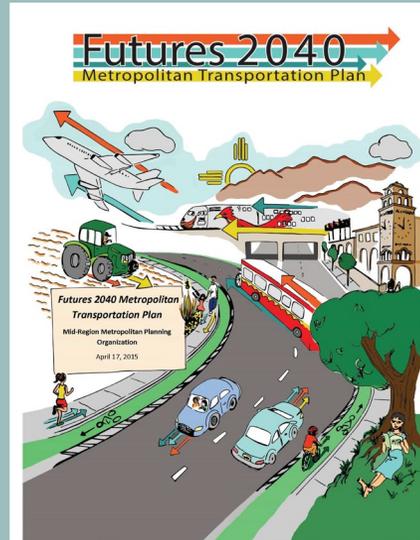
Metropolitan  
Planning Area

Regional (Rural)  
Transportation Planning  
Organization Area

## MPO

Long-range transportation planning in the Albuquerque Metropolitan Planning Area

- Key guiding document: Metropolitan Transportation Plan (MTP)
- Policy board: Metropolitan Transportation Board (and related boards and committees)
- Programs the Transportation Improvements Program (TIP)



## RTPO

Long-range transportation planning in the Regional (rural) Transportation Planning Area

- Key guiding policy document: Regional Transportation Plan (RTP)
- Policy board: RTPO Committee
- Vets projects, provides general technical assistance and application assistance



# RTPO Work Program

## Function 1: Long-Range Planning and Implementation

- Long-Range Plan
- Local Transportation Plans

## Function 2: Technical Support and Data Management

- GIS Mapping
- Data Research & Collection

## Function 3: Project Development and Monitoring

- Funding Applications
- Project Implementation

## Function 4: Other Activities and Projects

- Special Studies with NMDOT
- Special Studies with other COGs/RTPOs

## Function 5: General RTPO Support

- Committee Meeting Preparation
- Outreach Activities

## Function 6: RTPO Administration

- Reporting
- Budgeting
- Newsletter

# RTPO Funding



**Federal**

## FHWA

- 80% of Fiscal Year Budget
- 2-Year Cooperative Agreement between NMDOT and COG based on work outlined in the 2-year work program
- Quarterly Reimbursements



**Local**

## Membership Dues

- 20% of Fiscal Year Budget

WE'RE HERE TO HELP, JUST ASK!

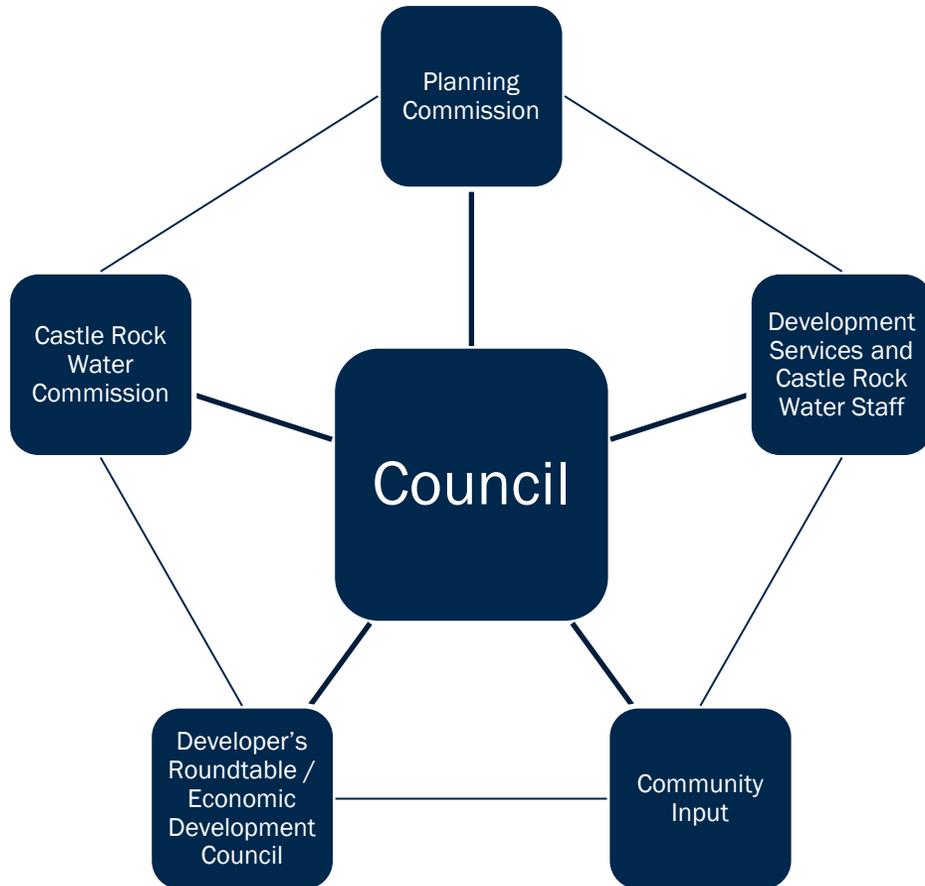


# Mid-Region Council of Government's

June 10, 2022



# Integrated Water/Land Planning



- 2030 Comprehensive Master Plan
- 2021 Water Resources Strategic Master Plan
- Water Supply / Demand Modelling
- Annual Rates and Fees Process
- 2015 Water Efficiency Master Plan
- Organizational Structure
- Town Code
  - Groundwater Dedication
  - Renewable Water Dedication
  - System Development Fees
  - Water Efficiency Plans
  - Criteria Manual References

# Development Process

- Project Pre-applications
- Project Applications
- Development Agreements
  - Water Bank Establishment
  - Entitlement Limits
- Subdivision Improvement Agreements
- Plans / Construction Drawings / Platting
  - Utility Report
  - Landscape review
- Implementation
  - Irrigation systems
  - Water Efficiency Plan
- Implementation
  - Water Bank tracking
  - Landscape/Irrigation System inspections / permits
  - Irrigation budgets – area and plant type
  - Certificates of occupancy



Back Yard Landscape Typicals

# Water Efficiency Requirements

## Current

- No Kentucky Bluegrass
- Landscape and Irrigation Criteria Manual
- Landscaper Registration and Training
  - Qualified Water Efficient Landscaper
  - Castle Rock Requirements
- Requirements from Water Efficiency Plans
  - Required
  - Options

## Next Steps

- No Turf in Front Yard and less than 500 square feet in back
- Non-residential requirements (no turf / no above ground irrigation)

FRONT YARD LOT TYPICAL 1



DRAFT

# Incentives

## Current

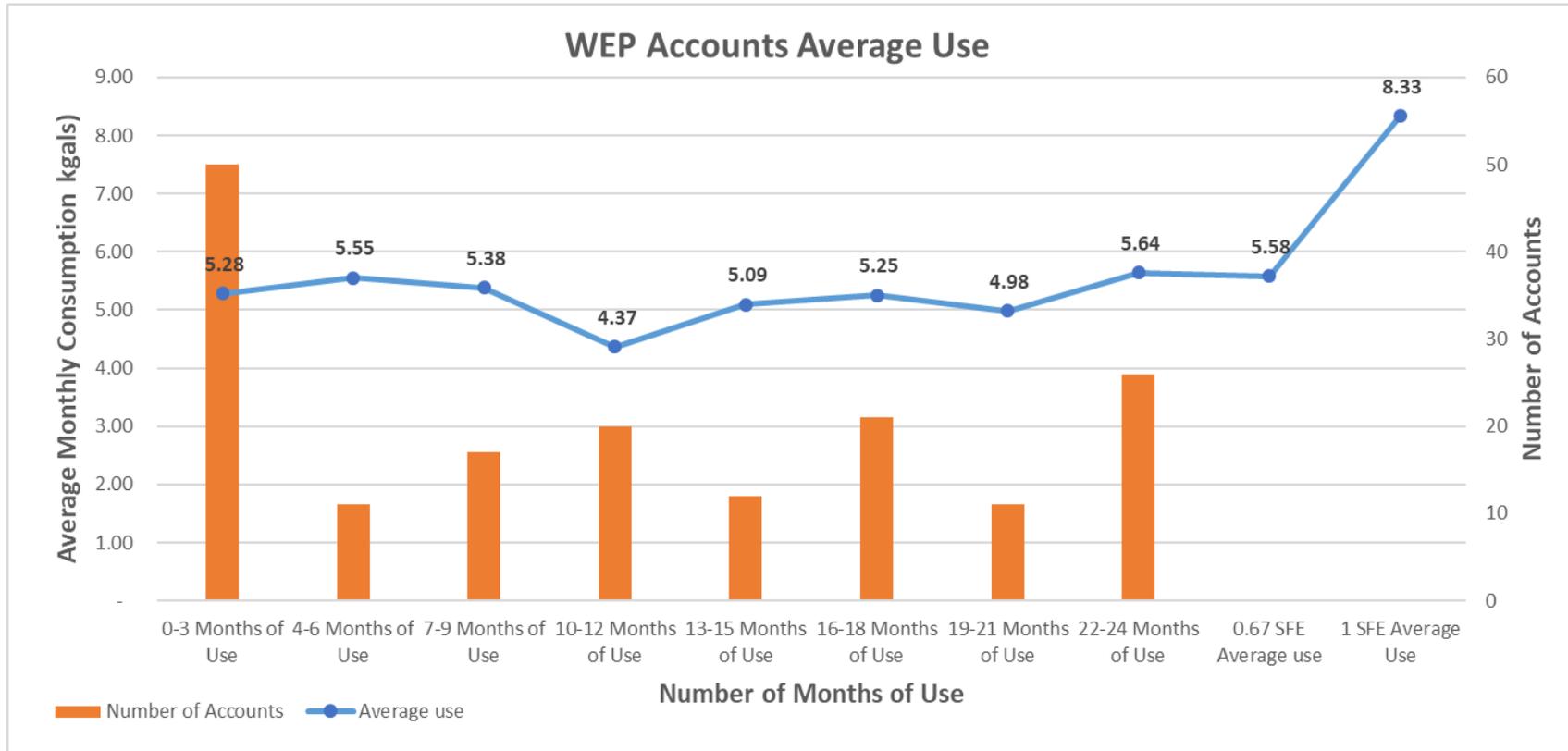
- 0.67 Tap Program
- Water Efficiency Plan Program
- Greywater Pilot Program

## Next Steps

- Installation of front and back yards
- Land use incentives



# Annual Performance Tracking



# Water Conservation Goal

**Conservation is considered a water supply for Castle Rock.**

*The less we use today, the less we have to pay for in the future.*

Goal is 18% reduction over current usage in next 10 to 20 years.

Outdoor usage for new development is the easiest way to meet the goal.

Year	Total Demand (AF)	Estimated Volume Outdoor Use (AF)	% Outdoor Use
2017	8,282	3,479	42%
2018	8,842	3,891	44%
2019	8,711	3,746	43%
2020	9,979	4,590	46%
2021	9,795	4,114	42%

# ColoradoScape

ColoradoScape is a natural landscape, comprised of low to very-low water-use-plant material, which blends in with the native Castle Rock landscape. This landscaping utilizes a combination of hardscape and plant materials, providing a variety of colors, textures, sizes, shapes, and seasonal interest.



# Landscape Renovations

- ColoradoScape Renovation
  - \$1.20 per square foot removed
  - 400 square feet minimum or entire front yard; \$1,800 maximum residential
  - 1,500 square feet minimum; \$18,000 maximum non-residential
- Ballfield conversions
- Developer option to use as water supply
- Modify community expectations on land use as it relates to landscaping and water



Before



After

ColoradoScape Renovation (Meadows)



Questions?



# HOW HIGH'S THE WATER, MOMMA?

LEGAL REQUIREMENTS FOR WATER RESOURCES IN CANNABIS PRODUCTION



Dan McGregor

Natural Resource Services Section Manager

Bernalillo County Public Work

MRCOG Planning Commissioner's Workshop June 10, 2022

## A BIT ABOUT THE SPEAKER

- Certified Professional Geologist (AIPG) / Licensed Geoscientist (Texas)
- Water Resources and Environmental Consulting since 1985
- Bernalillo County:
  - County Hydrogeologist 2005-2013
  - Natural Resource Services Manager from 2012 to Present
- Extensive environmental and water resources technical support to:
  - Board of County Commissioners / County Planning Commission / County Development Review Authority
  - Regional Water Planning Committees / Interstate Stream Commission
- Expert Witness Testimony on Behalf of the County

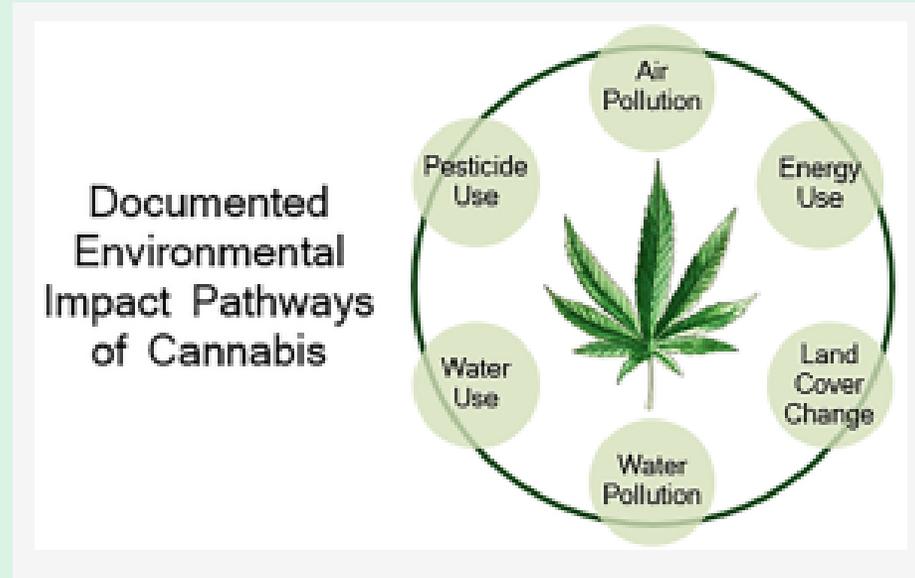
AND I'M NOT THE FIRST TO LEAD WITH THE PUNCH LINE

*Forum*

## **High Time for Conservation: Adding the Environment to the Debate on Marijuana Liberalization**

JENNIFER K. CARAH, JEANETTE K. HOWARD, SALLY E. THOMPSON, ANNE G. SHORT GIANOTTI, SCOTT D. BAUER, STEPHANIE M. CARLSON, DAVID N. DRALLE, MOURAD W. GABRIEL, LISA L. HULETTE, BRIAN J. JOHNSON, CURTIS A. KNIGHT, SARAH J. KUPFERBERG, STEFANIE L. MARTIN, ROSAMOND L. NAYLOR, AND MARY E. POWER

# POTENTIAL ENVIRONMENTAL CONSIDERATIONS FOR CANNABIS OPERATIONS



<https://crc.berkeley.edu/wp-content/uploads/2021/01/Wartenberg-et-al-2021-EST-Letters.pdf>

- **BUT HOW DOES THAT DIFFER FROM ANY OTHER AGRICULTURAL ENTERPRISE?**

# HOW HIGH'S THE WATER, MOMMA?

- Legislative History and Requirements
- Role of Local Governments in Regulating the Cannabis Industry
- Water Needs and Concerns for Cannabis Production
- Water Rights Administration in New Mexico (an overview)
- Municipal Systems and Domestic Wells

# LEGISLATIVE HISTORY

- Schedule I Federal Drug List - 1970
- New Mexico medical use program - 2009
- HB 2 Special Session - 2021
  - June 2021 – legalization for personal plant growth (6 plant limit, 12 per household)
  - April 2022 – Recreational /adult use cannabis production and sell became legal
- As of May 2022
  - 700 approved sell licenses,
  - 94 Manufacturing licenses
  - 1200 licenses of all sorts in the que including microproducers
- Rules and Regulations in NMAC 16.8 Commercial and Medical Cannabis

	Schedule I	Examples
	Substances defined as drugs with no currently accepted medical use and a high potential for abuse.	Marijuana (Cannabis) Ecstasy Heroin LSD Methaqualone (Quaaludes) Peyote
	Substances defined as drugs with a high potential for abuse, with use potentially leading to severe psychological or physical dependence.	Hydrocodone (Vicodin) Cocaine Meth/Fentanyl Methadone Hydromorphone (Dilaudid) Meperidine (Demerol) Oxycodone (OxyContin) Adderall/Ritalin
	Substances defined as drugs with a moderate to low potential for physical and psychological dependence.	Codeine (less than 90 mg per dosage/Tylenol) Ketamine Anabolic steroids Testosterone
	Substances or chemicals defined as drugs with a low potential for abuse and low risk of dependence.	Xanax Soma Darvocet Valium Ativan Talwin Ambien Tramadol
	Substances defined as drugs with lower potential for abuse. Schedule V drugs are generally used for antidiarrheal, antitussive, and analgesic purposes.	Robitussin AC (cough meds) Lomotil Motofen Lyrica Parepectolin

Source: dea.gov

# LICENSING TYPES AND LIMITS:

# NMAC 16:8

## License Types

- Producer License (Producer or Microbusiness)
  - cultivating, planting, growing, harvesting
- Manufacture
  - Class I – packaging/repackaging, label or relabel
  - Class II – Class I plus edible, topical products, but does not extract
  - Class III – Class I and II, and extracts using mechanical or non-volatile solvents
  - Class IV – Class I, II, III and extracts using volatile solvents or COs
- Retail Sales
- Courier
- Testing Laboratory

## Producer Mature Plant Counts and Associated Factoids

- Level 1 - 2,000 plants
- Level 2 - 6,000 plants
- Level 3 - 12,000 plants
- Level 4 - 16,000 plants
- Maximum Cap of 20,000 mature plants



A 10,000 square-foot greenhouse is the first facility for California Cannabis Co. in Lemoore. But more growth is in the pipeline.

Photo by Frank Lopez

## SECTION 7: COMMERCIAL CANNABIS ACTIVITY – ISSUANCE AND DENIAL OF A LICENSE

(3) require as a condition of licensing pursuant to the Cannabis Regulation Act that the applicant demonstrate that the applicant has a legal right to a commercial water supply, water rights or another source of water sufficient to meet the water needs as determined by the division related to the license as evidenced by documentation from the office of the state engineer of a valid water right or from a water provider that the use of water for cannabis production is compliant with that water provider's rules;

HB 2/a  
Page 29

(4) if an applicant applies for a cannabis producer license or a cannabis manufacturer license, in addition to the requirements in Paragraph (3) of this subsection, require that the applicant submit a plan to use, or demonstrate to the division that the applicant cannot feasibly use, energy and water reduction opportunities, including:

(a) for a cannabis producer, drip irrigation and water collection;

(b) natural lighting and energy efficiency measures; and

(c) renewable energy generation; and

# LEGISLATIVE HISTORY: HB 100 (2022) – DID NOT PASS

- Amendment added to eliminate water rights / proof of supply amendment
- Acequia association opposed due to potential use /taking of water provision from acequia users or increase on demand
- Cannabis Chamber of Conference “heartily supported” the requirement for proof of water rights /proof of supply/and water conservation requirements
- Likely to be revisited in 2023 legislation
- **THE ASK: OPPOSE LEGISLATIVE CHANGES TO LICENSING REQUIREMENTS THAT REMOVE PROOF OF WATER RIGHTS /WATER SUPPLIES**



One of the dozens of acequias that form a web of irrigation throughout the Taos Valley. *Katharine Eqli*

# ROLE OF LOCAL GOVERNMENT: CASE EXAMPLE

- Santa Fe: Ordinance 2021-19. (From Next Generation Water Summit, May 2022)
  - Mostly a zoning issue
  - Had dozen applicants for new municipal supply to satisfy water supply requirement for licensing
  - Per existing utility requirements for Development Water Budget: New demand has to be offset by water right acquisition
    - Above 5 acre-feet, have to acquire pre 1907-water rights and provide to utility / under 5 acre feet pay fee in lieu of (\$16,600 per acre-foot)
    - Budget initially based on 6 gallons per plant per day
    - 3 acre feet for 1,000 plants (microproducer size production / small production)
    - Most applicants doing indoor production with use of 1 gallon per plant per day
  - Any related business (production, manufacturing, sells) has to be in good standing (no liens, no past due payments)
  - Utility provides letter of compliance
  - Utility then only tracks gross usage through regular billings

# ROLE OF LOCAL GOVERNMENT IN CANNABIS INDUSTRY REGULATION

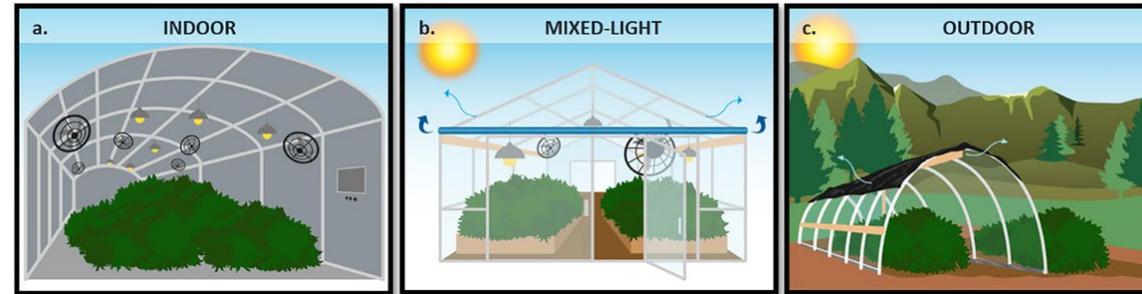
- HOW DOES YOUR ENTITY PERMIT/LICENSE CANNABIS RELATED INDUSTRIES?
  - Zoning Codes:
    - Permissive or Conditional Use
    - Special Use Permit
  - Water Purveyor / Municipal Supply
    - Availability Statements?
    - Water Conservation Requirements?
    - Water Right Acquisition / Payment In Lieu Off?
- HOW DOES YOUR ENTITY PERMIT/LICENSE OTHER REGULATED INDUSTRIES?
  - Wineries / Distilleries and/or Pubs/Breweries
  - Adult Businesses
  - Greenhouse Operations / Essential Oil Manufacturies
  - Pharmacy and Delivery Services

# ROLE OF LOCAL GOVERNMENT IN THE CANNABIS INDUSTRY: POTENTIAL ISSUES FOR INQUIRY

- Production:
  - What Level of Operation (Number of Plants and Square Footage)
  - What Type of Production Operation ( Outdoor, Mixed/Hybrid, Greenhouse, Hydroponic)
  - What Water Conservation Elements are you implementing
  - What is your expected water use per plant / annual water use per year
  - How will waste nutrients be disposed (septic tank or sewer) and is the disposal appropriate for that system
  - What's the source/basis for your water use information
- Manufacturing
  - What Type of Extraction Process are you using
  - What type of chemicals are you using and how will they be safely stored and handled
  - How will waste extraction chemicals or by-products be disposed
  - Potential issues with hydroponics. Option for wastewater system to allow for inspection of wastewater
- Disposal
  - Septic Tank Permit Design (can it handle the flow and waste type) or Sewer (is the waste stream acceptable to the treatment plant)

**WHAT FINDINGS AND PERMIT CONDITIONS ARE APPROPRIATE TO ENSURE COMPLIANCE WITH GOVERNMENT AND SUPPLIER REQUIREMENTS?**

# WATER NEEDS AND CONCERNS IN CANNABIS PRODUCTION



**Closed system**  
**Higher energy inputs**  
**Low permeability**  
**Municipal water sources**  
**Urban land use**

**Open systems**  
**Lower energy inputs**  
**High permeability**  
**Rural water sources**  
**Rural land use**

Indoor cultivation (a) relies on the artificial provision of water, soil medium, nutrients and energy (e.g., to power lights and control temperature and odor). Indoor facilities are typically integrated within municipal power/water/sewage systems, which may facilitate waste management and monitoring of resource-use.

Mixed-light systems (b) combine elements of indoor and outdoor production. Natural sunlight is the primary source of light in greenhouses, although additional light manipulation at different times of the year requires additional energy sources. Mixed-light systems can be connected to municipal water systems or use similar sources as outdoor systems, and odors are vented externally (perimeter arrows in b). Plants are typically grown on imported soils and use of fertilizer or compost amendments is common.

Outdoor cultivation (c) operates similarly to other agricultural crops: energy needs are met through sunlight, water is sourced locally through rainfall, stream diversions, springs, wells and/or storage. Plants are grown either on local or imported soils, and nutrients can be added through fertilizers or composts.

# WATER NEEDS AND CONCERNS FOR THE CANNABIS INDUSTRY

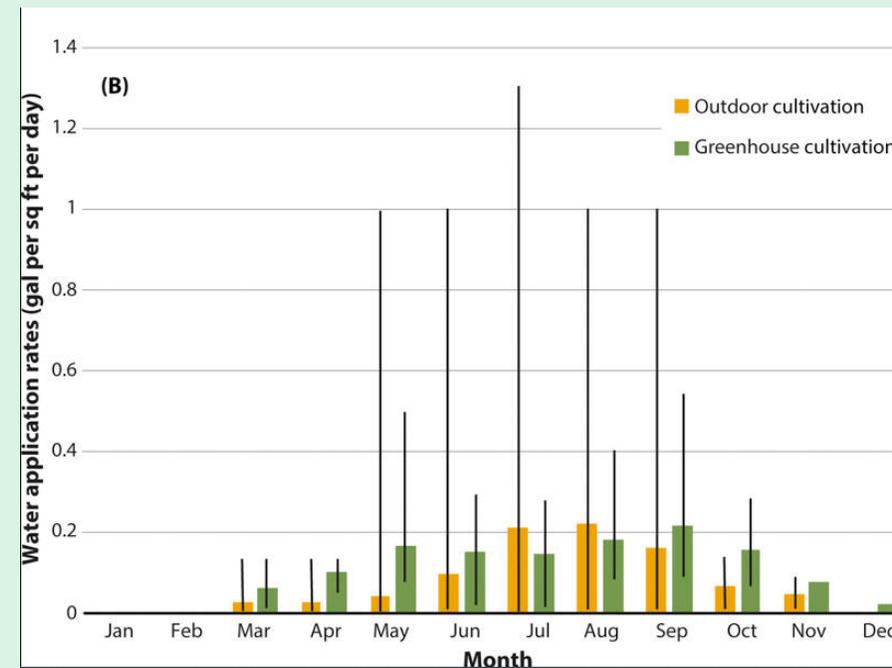
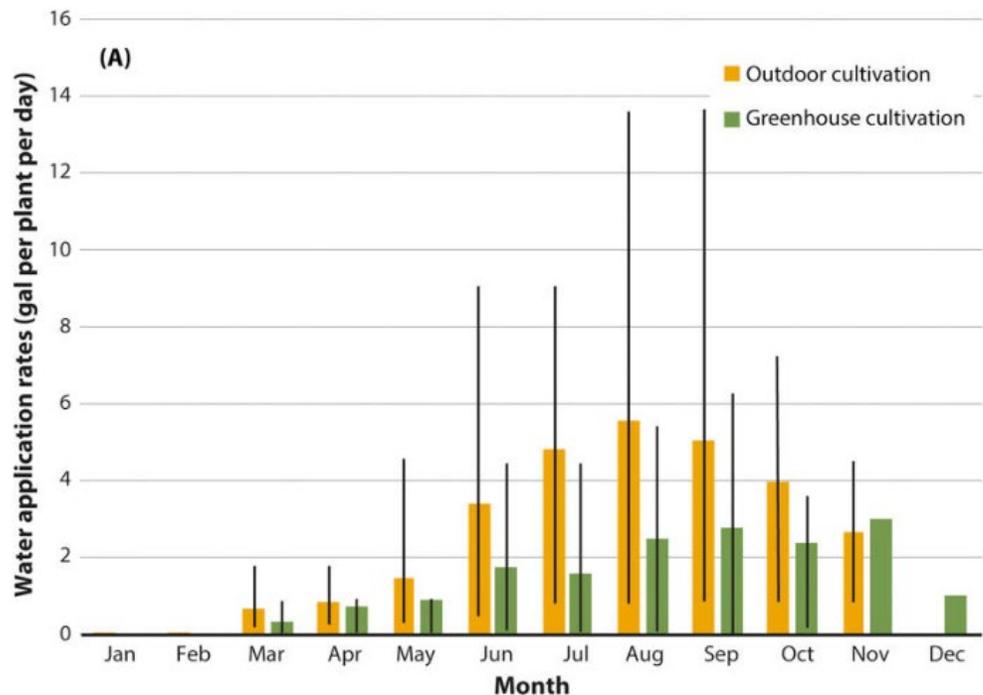
- Very little information nationally or locally on water use and energy use in cannabis
- Berkley Cannabis Research Center (2020)
  - Legal and illicit production nationwide used 2.8 billion gallons of water in 2020 and expected to be up to 3.6 billion gallons nationwide by 2035 / 80 percent of water usage is in illicit market
  - Cannabis use a similar amount of water per acre as other agricultural crops in California
  - Cultivation in greenhouses uses less water per plant than outdoor growing operations, but indoor operations may use more water per square foot because of smaller plant size and higher plant density
  - Farms (of any type) can impair water quality because of the use of pesticides, fertilizers, and soil amendments. However, because of licensing and permitting requirements, cannabis production facilities are more heavily regulated

For more information, visit: [crc.berkeley.edu](https://crc.berkeley.edu) or contact [tgrantham@berkeley.edu](mailto:tgrantham@berkeley.edu)

*Suggested Citation:* Dillis, C., Grantham, T., Butsic, V., Carah, J., Parker-Shames, P. 2020. *Water Use in Cannabis Agriculture*. Cannabis Research Center, University of California, Berkeley, CA.

# WATER NEEDS AND CONCERNS FOR THE CANNABIS INDUSTRY

- Outdoor growers applied 5.5 gallons per day per plant and green house growers applied on average 2.5 to 2.8 gallons per day per plant. On a per square foot basis, application rate was about 0.2 gallons per day per square foot regardless of cultivation type. ( <https://calag.ucanr.edu/archive/?article=ca.2019a0015> )



# WATER NEEDS AND CONCERNS FOR THE CANNABIS INDUSTRY

Anticipated Water Use by Cannabis Production Operation							
	Plants Allowed	Outdoors			Greenhouse		
		Daily use (5.5 gallons per day per plant)	gallons per year	acre-feet per year	Daily use (2.5 gallons per day per plant)	gallons per year	acre-feet per year
Level 1	2000	11,000.00	4,015,000.00	12.3	5000	1825000	5.6
Level 2	6000	33,000.00	12,045,000.00	37.0	15000	5475000	16.8
Level 3	12000	66,000.00	24,090,000.00	73.9	30000	10950000	33.6
Level 4	16000	88,000.00	32,120,000.00	98.6	40000	14600000	44.8
Maximun	20000	110,000.00	40,150,000.00	123.2	50000	18250000	56.0
Cannabis Use:	5,000 plants per acre / 31 acre-feet						
Alfalfa Use:	2 to 3 acre-feet per acre						
Corn Use:	1.5 to 2.5 acre-feet per year						

# WATER RIGHTS AND WATER RIGHTS ADMINISTRATION

(3) require as a condition of licensing pursuant to the Cannabis Regulation Act that the applicant demonstrate that the applicant has a legal right to a commercial water supply, water rights or another source of water sufficient to meet the water needs as determined by the division related to the license as evidenced by documentation from the office of the state engineer of a valid water right or from a water provider that the use of water for cannabis production is compliant with that water provider's rules;

# WATER RIGHTS ADMINISTRATION IN NEW MEXICO

- WATER RIGHTS IN NEW MEXICO ARE ADMINISTERED BY THE OFFICE OF THE STATE ENGINEER
  - Permits are issued for a specified type of diversion (surface water or groundwater), from a specified location (point of diversion) for a specific type of use (purpose of use: such as agriculture, municipal, irrigation), a specified place of use (acreage and location/legal description) and for a specified diversion amount
  - Surface water diversions are addressed through surface water permits (SD number permits issued under 72-5-1) or for groundwater permits (Basin number permits such as for the Rio Grande (RG) and issued under 72-12-3 (and not 72-12-1.2, 1.2, or 1.3 or domestic or livestock well permits)
  - Water rights can be transferred from one location to another, but it is a legal process and can be lengthy and is subject to protest and hearings. Water rights can be transferred into and out of wells, or to/from a specified point of diversion for surface water
  - Water cannot be diverted from surface water sources, irrigation ditches, acequias, or from water wells without a specific permit to allow such diversions

# MUNICIPAL SYSTEMS AND DOMESTIC WELLS

- Water supplied from a municipal system, water user association, or mutual domestic association is allowed:
  - through an established account
  - because the system maintains the necessary water rights and permits
  - and allows the use through its account and customer systems
- The system can impose conditions for use, such as limiting the amount of use or water conservation requirements, as it deems appropriate.

(3) require as a condition of licensing pursuant to the Cannabis Regulation Act that the applicant demonstrate that the applicant has a legal right to a commercial water supply, water rights or another source of water sufficient to meet the water needs as determined by the division related to the license as evidenced by documentation from the office of the state engineer of a valid water right or from a water provider that the use of water for cannabis production is compliant with that water provider's rules;

# MUNICIPAL SYSTEMS AND DOMESTIC WELLS

- A Domestic or Livestock Well Permit cannot be used for cannabis production or manufacturing water supply (72-12-1.1 or 72-12-1.2) **OR FOR ANY OTHER COMMERCIAL PURPOSE EITHER**

*A person, firm or corporation desiring to use public underground waters described in this section for irrigation of not to exceed one acre of **noncommercial** trees, lawn or garden **or for household or other domestic use** shall make application to the state engineer for a well on a form to be prescribed by the state engineer.*

**Non-allowable uses:** greenhouse production, supplying a cement batching operation, serving a carwash, watering plants at a commercial nursery, water for a sand and gravel washing operation uses, use in a food processing plant.

**Allowable uses:** domestic household use (single or multiple), sanitary uses for a commercial operation ( like bathrooms or snack bar at a convenience store), sanitary water supply for a restaurant.

*Be wary of a new operation, particularly a green house operation, on a former ranch, farm, or unirrigated homestead – the source of water is likely a domestic well permit.*

*Be wary of a new operation on a formerly irrigated agricultural property, the water rights from the irrigation well may have been previously “severed” from the property.*

*Domestic well “rights” cannot be severed from a property, but water rights can be transferred into the existing well, but it is then no longer considered a domestic well*

# EXAMPLE OF GROUNDWATER PERMITS

## Domestic Well Permit

## Irrigation Well Permit

Act 545  
#125

File Number: RG 95743

NEW MEXICO STATE ENGINEER OFFICE  
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS  
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

1. APPLICANT  
Name: SUSAN SCHULTE Work Phone: \_\_\_\_\_  
Contact: \_\_\_\_\_ Home Phone: 5054923594  
Address: 9809 EDITH NE  
City: ALBUQUERQUE State: NM Zip: 87113

2. LOCATION OF WELL (D thru I optional)

A. East 353914.3 meters, North 3895313.8 meters, UTM Zone 13, Datum MAD83

B. X = 1534482.0 feet, Y = 1524701.0 feet,  
Coord System S - NAD 1983 SP FT NM Central  
in the HELENA GALLEGOSE Grant.  
U.S.G.S Quad Map \_\_\_\_\_

C. Latitude \_\_\_\_\_ Longitude \_\_\_\_\_

D. 1/4 1/4 Section: 10 Township: 11N Range: 03E N.W.P.W.  
in Bernalillo County  
Other: 225 FRESQUEZ NE/TCT 213A4

E. Lot No. 1 Block No. NA of Unit/tract NA of the  
LANDS OF JOHN DARR Subdivision recorded in Bernalillo County.

F. Tract No. 211 Map No. 23 of the MROCD

G. Is this well within a municipality? \_\_\_\_\_ if yes, where? \_\_\_\_\_

H. Give State Engineer File Number if existing well \_\_\_\_\_

I. On land owned by \_\_\_\_\_

3. USE OF WATER

DOM: One household, non-commercial trees, lawn and garden not to exceed a total of one acre.

NEW MEXICO STATE ENGINEER OFFICE  
APPLICATION FOR PERMIT TO USE UNDERGROUND WATERS  
IN ACCORDANCE WITH SECTION 72-12-1 NEW MEXICO STATUTES

GENERAL CONDITIONS OF APPROVAL (A thru F)

06-A The maximum amount of water that may be appropriated under this permit is 1,000 acre-feet in any year.

1-88754  
#25<sup>00</sup>

APPLICATION FOR PERMIT  
FOR SUPPLEMENTAL WELL to expand the place and purpose of use  
To appropriate the Underground Waters of the State of New Mexico

Date Received \_\_\_\_\_ File No. RG-551-S-5

1. Name of applicant The University of New Mexico  
Mailing address 109 Scholes Hall  
City and State Albuquerque, New Mexico 87131

2. Source of water supply Shallow, located in Rio Grande  
(artesian or shallow water aquifer) (name of underground basin)

3. The well is to be located in the 1/4 SW 1/4 SE 1/4, Section 14 Township 17N Range SE N.M.P.M., or Tract No. \_\_\_\_\_ of the Cañada de Cochiti Grant District, on land owned by applicant and alternatively described as within 750 feet of a point defined by x=460,910 and y=1,709,200, NMCS, Central Zone, NAD 27

4. Description of well: name of driller Rodgers & Co.;  
Outside Diameter of casing 8 inches; Approximate depth to be drilled 1,000 feet;

5. Quantity of water to be appropriated and beneficially used: diversion of 60 acre feet, (consumptive use, diversion) for apple orchard irrigation and University purposes.

6. Acreage to be irrigated or place of use 48.2 acres.

Subdivision	Section	Township	Range	Acres	Owner
<u>Pt SE 1/4</u>	<u>15</u>	<u>17N</u>	<u>5E</u>	<u>6.6</u>	<u>Applicant</u>
<u>Pt SW 1/4</u>	<u>14</u>	<u>17N</u>	<u>5E</u>	<u>15.9</u>	<u>Applicant</u>
<u>Pt NE 1/4</u>	<u>23</u>	<u>17N</u>	<u>5E</u>	<u>18.1</u>	<u>Applicant</u>
<u>Pt NW 1/4</u>	<u>23</u>	<u>17N</u>	<u>5E</u>	<u>7.6</u>	<u>Applicant</u>
				<u>48.2</u>	

7. Additional statements or explanations See Attachment A

# RESOURCES AND REFERENCES

- Water Use in Cannabis Operations (Next Generation Water Summit: Allan Hook, City of Santa Fe; Ben Lewinger, New Mexico Cannabis Chamber of Commerce)
- House Bill 2, 2021  
<https://www.nmlegis.gov/Sessions/21%20Special/final/HB0002.pdf>
- University of California, Berkley – Cannabis Research Center  
<https://crc.berkeley.edu>
- <https://www.ksat.com/health/2019/08/22/why-marijuana-remains-a-schedule-i-drug-the-highest-classification-in-federal-law/>
- <https://www.ose.state.nm.us/VWR/cannabis.php>
- <https://www.srca.nm.gov/parts/title16/16.008.0002.pdf>
- <https://thebusinessjournal.com/10000-square-foot-cannabis-processing-facility-set-to-grow-in-lemoore/>
- <https://calag.ucanr.edu/archive/?article=ca.2019a0015>. First known survey of cannabis production practices in California, Wilson et al., California Agriculture
- [https://gis.ose.state.nm.us/gisapps/ose\\_pod\\_locations/](https://gis.ose.state.nm.us/gisapps/ose_pod_locations/)

# A PROPOSITION TO CHANGE THE STATE MOTTO



CRESCIT EUNDO to VADIT SICUT CRESCIT

“It grows at it goes” to “It goes as it grows”?

# MRGCD Property History & Development Review

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*Presented by:*

*Alicia Lopez, PE  
Engineering & Mapping Manager  
Middle Rio Grande Conservancy District*

*Prepared by:*

*MRGCD Engineering & Mapping Department  
6/10/22*



# Overview

- *MRGCD History & Mission*
- *Lands Tracking: How & Why*
- *Rights of Way Protection*
- *Plat Reviews*
  - *Benefits of MRGCD Input & Signature*





# MRGCD Mission

- *River Flood Control*
- *Ground Water Drainage*
- *Irrigation*

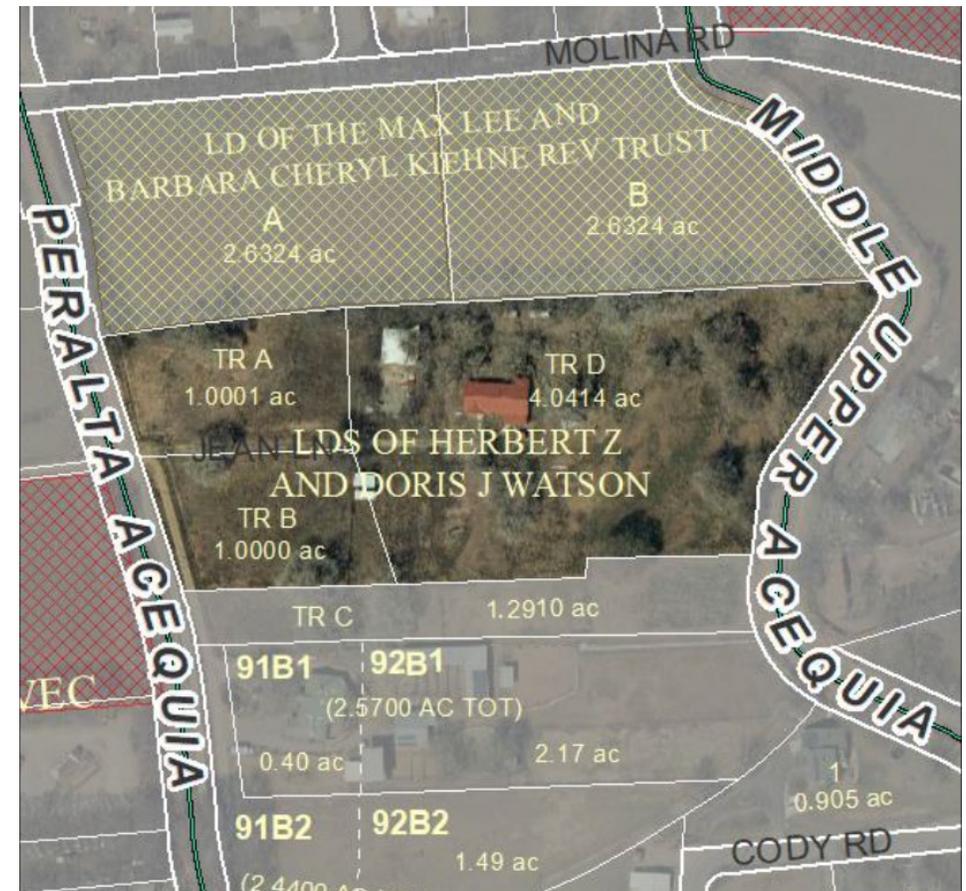


# MRGCD History

- 1923: NM State Legislature passed the Conservancy Act to control river flooding and increase irrigation supply predictability.
- 1925: MRGCD was formed to manage and facilitate the court approved Official Plan which identified benefitted properties
- 1927 MRGCD Property Maps (above) show taxed / assessed properties

# Lands Tracking

- Annual GIS update to MRGCD's ownership layer using County plat and survey downloads
- Accounts for ownership and acreage changes
- Informs MRGCD Assessments and Water Distribution on the status of assessed and irrigated properties
- Maintains a line of property information back to the 1930s



OSE Water Rights Activity:



LEASED



MOVED TO



MRGCD  
TRANSFER



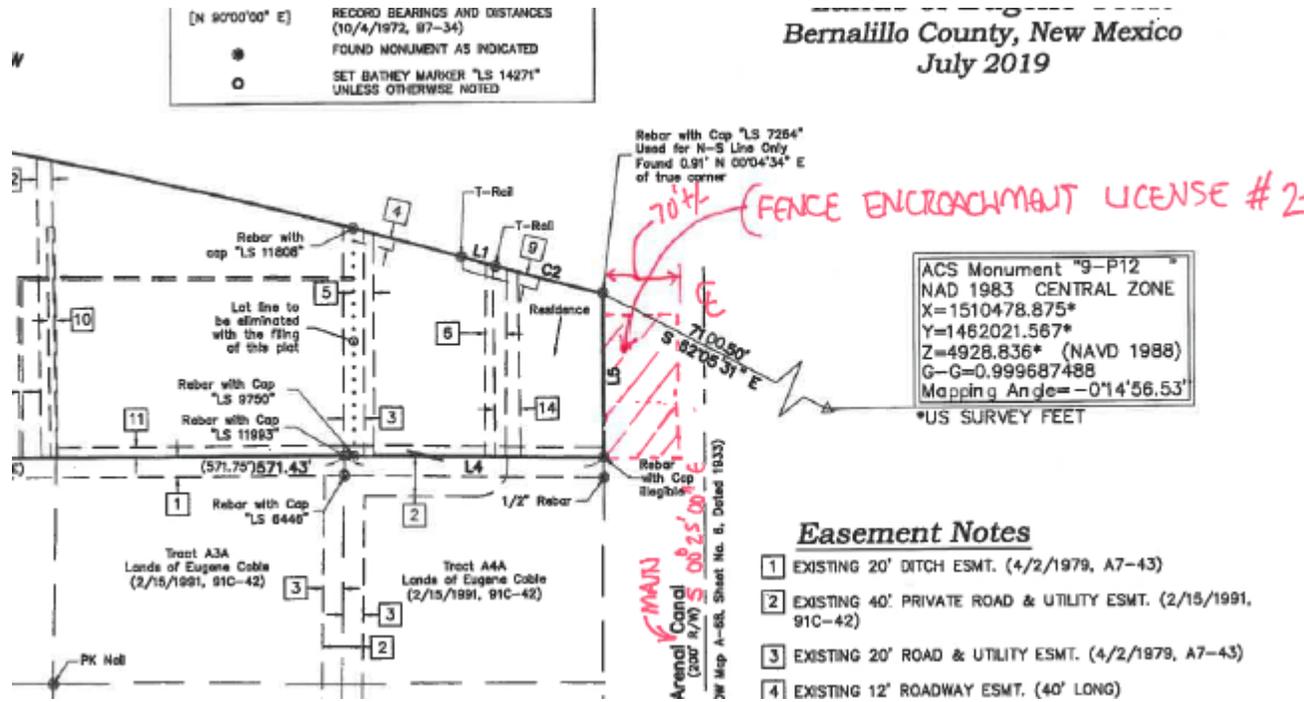
TRANSFER





## Right of Way Protection

- *Obstruction to MRGCD field crews and ISOs*
- *Risk to water quality & conveyance*
- *Potential for inconsistent property boundaries and records*
- *Construction delays associated with MRGCD licensing compliance*



# MRGCD Plat Review

- Identifies license status of structures or fences
- Ensures reference to MRGCD record drawing boundary and right of way width information



### Middle Rio Grande Conservancy District

1931 2nd St Sw | 87102-4515

PO Box 581 | 87103-0581

Albuquerque, New Mexico

Ph: (505) 247-0234 | Email: mapping@mrgcd.us

### MRGCD Engineering/Mapping Plat Reviews

Hearing Date: 5/27/2021

Review Date: 5/25/2021

Project No: SRP2021-0061

Application No:

Agenda: CDRA

Completed By: RJA

Plat Type: Sketch Plat

County:

#### Plat/Survey Title:

PLAT OF LOTS A AND B LANDS OF THE ESTATE OF RUBEN E TRUJILLO

R/W Centerline, Bearings and Distances Referenced: NO

MRGCD Water Service Charge Paid: YES

MRGCD Signature Line Provided: YES

MRGCD Approval Note: YES

MRGCD Signed off for Final Approval on: \_\_\_\_\_

#### Engineering/Mapping Comments:

1. Please add MRGCD R/W information to match MRGCD records.
2. Final Plat Approval Signature required by the MRGCD.

#### Licensing/Lands Comments:

*Middle Rio Grande Conservancy District Approval*

APPROVED ON THE CONDITION THAT ALL RIGHTS OF THE MIDDLE RIO GRANDE CONSERVANCY DISTRICT IN EASEMENTS, RIGHTS OF WAY, ASSESSMENTS AND LIENS, ARE FULLY RESERVED TO SAID DISTRICT, AND THAT IF PROVISION FOR IRRIGATION SOURCE AND EASEMENTS ARE NOT PROVIDED FOR BY THE SUBDIVIDER FOR THE SUBDIVISION, ADDITION, OR PLAT, SAID DISTRICT IS ABSOLVED OF ALL OBLIGATIONS TO FURNISH IRRIGATION WATERS AND SERVICES TO ANY PORTIONS THEREOF, OTHER THAN FROM EXISTING TURNOUTS.





# Questions?



# What About Water?

## Water Resource and Land Use Planning 101

### MRCOG's Annual Planning Commissioner's Workshop

#### **Integrated Water and Land Use Planning in Castle Rock, CO**

Mark Marlowe, Director of Castle Rock Water

#### **“How High’s the Water, Momma?” – Legal Requirements for Water Resources in Cannabis Production**

Dan McGregor, Natural Resources Manager, Bernalillo County

#### **MRGCD Property History & Development Review**

Alicia Lopez, Engineering & Mapping Manager, MRGCD