

Funding Break-Out!

October 5, 2021

Paul Hempel & Mallory Hiss



Kristen Hughes



COLORADO

Department of Public
Health & Environment

USDA NRCS

Source Water Protection Initiative

Creekside
Landowners

Conservation
District

Colorado
Rural Water

Public Water
System

CDPHE

USDA
NRCS

Colorado NRCS Source Water Protection Subcommittee

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graph TD; A[Colorado NRCS Source Water Protection Subcommittee] --- B[Creekside Landowners]; A --- C[Conservation District]; A --- D[Colorado Rural Water]; A --- E[Public Water System]; A --- F[CDPHE]; A --- G[USDA NRCS]
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Creekside
Landowners

Conservation
District

Colorado
Rural Water

Public Water
System

CDPHE

USDA
NRCS





CRWA's Mission

“Provide professional training, technical assistance, and political representation to rural and small communities as they endeavor to maintain industry standards, meet regulatory deadlines, and attain multi-level certifications of their water and wastewater systems operators.”

Programs & Services

Operator
Trainings

Technical
Assistance

Energy Efficiency
Assessment

Source Water
Protection

Annual
Conference

Water and
Wastewater
Circuit Riders



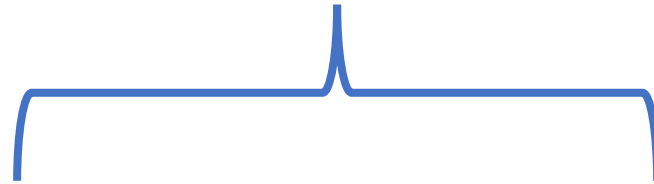
1996 Safe Drinking Water Act Amendments



COLORADO
Department of Public
Health & Environment



Source Water Protection Development & Implementation Grants



Creekside
Landowners

Conservation
District

Colorado
Rural Water

Public Water
System

CDPHE

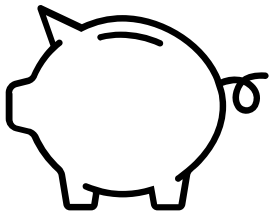
USDA
NRCS



CDPHE D&I Grant Funding



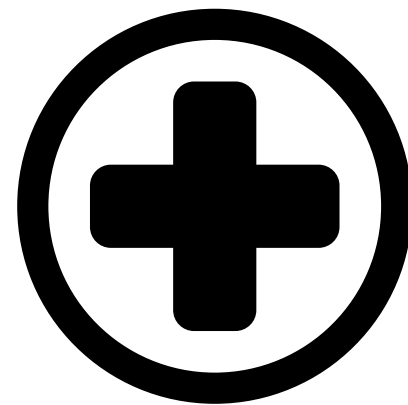
COLORADO
Department of Public
Health & Environment



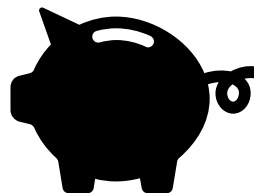
- \$5000 Grant for eligible public water systems in Colorado
- Matching grant
 - Cash... or...
 - In-kind Time
- Best Management Practice implementation

Why Protect Source Water?

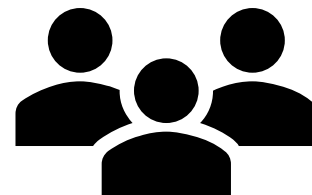
**Protect public health
Reduce risk of contamination**



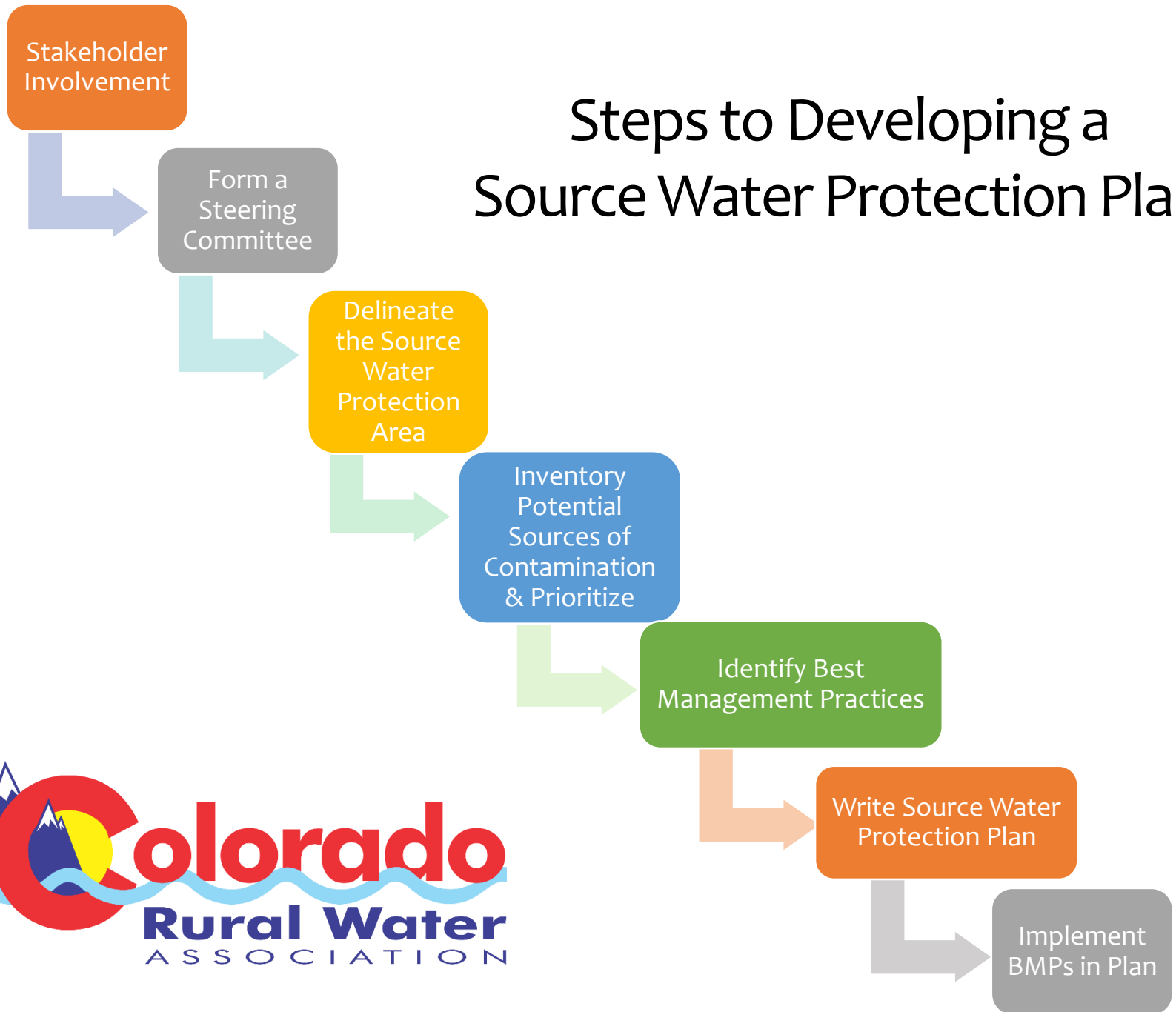
**Reduce cost for treatment
Avoid expensive clean up costs
Earn \$5,000 SWP grant via CDPHE**



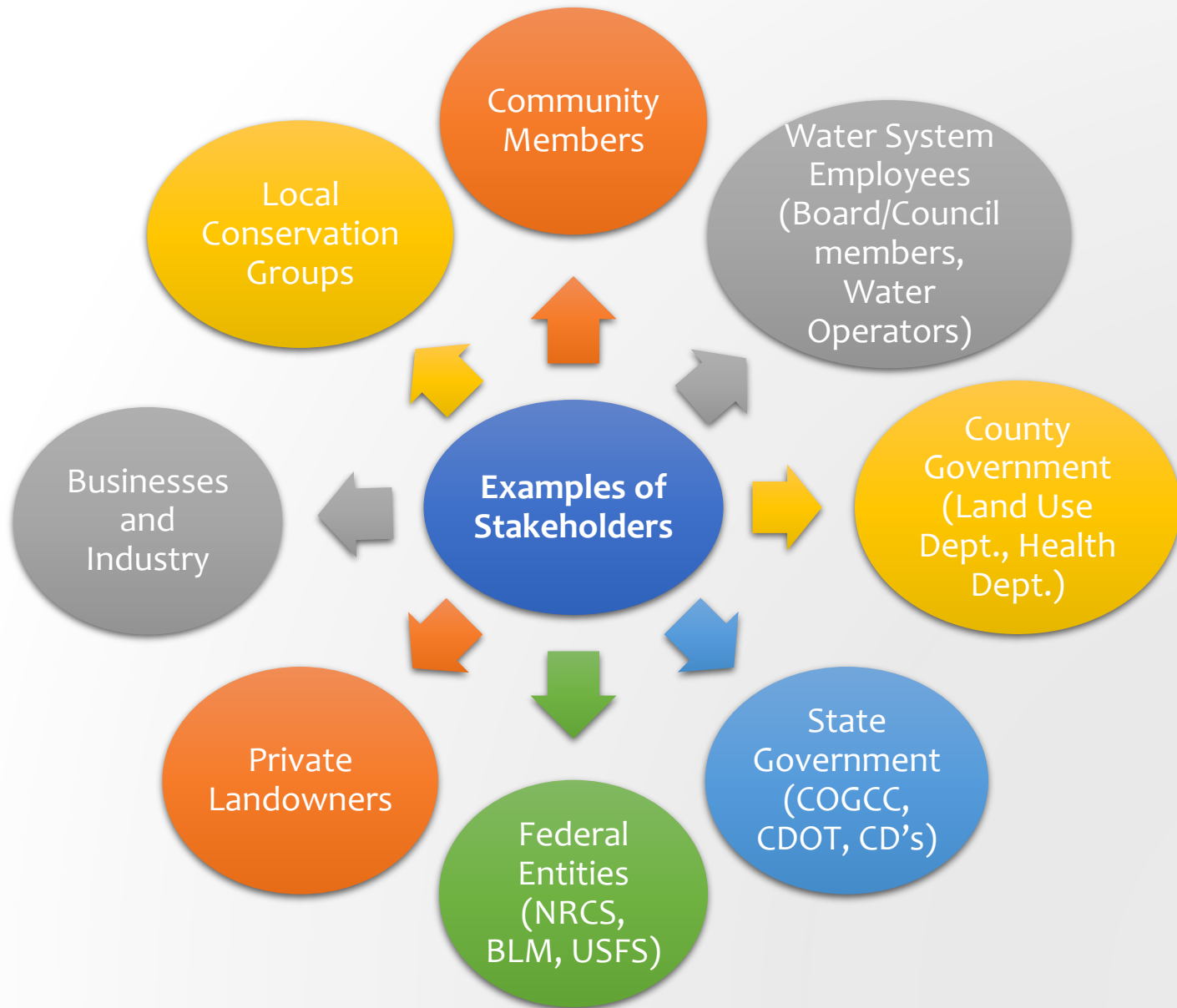
**Share and provide a valuable resource
Coordinate land use**



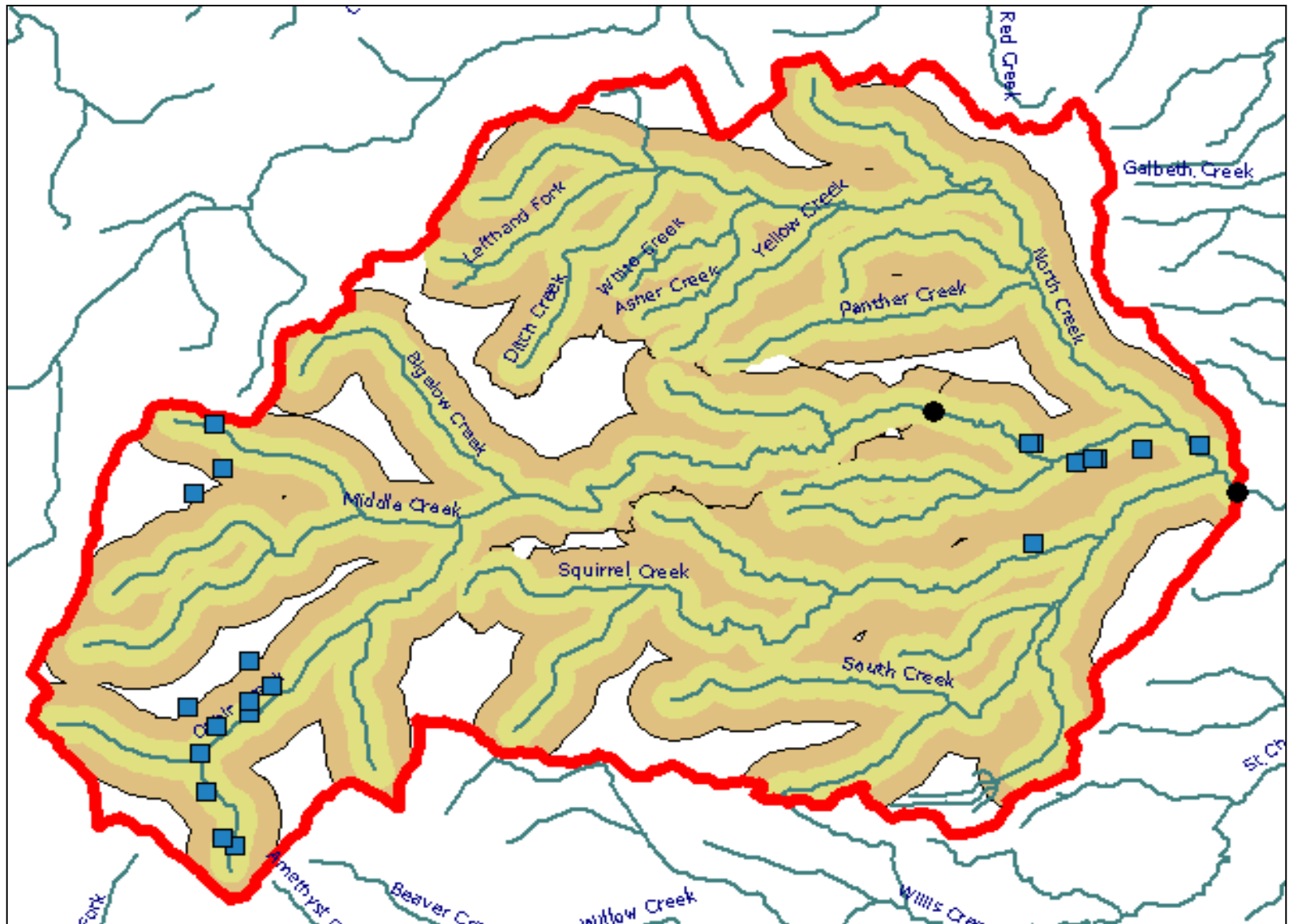
Steps to Developing a Source Water Protection Plan



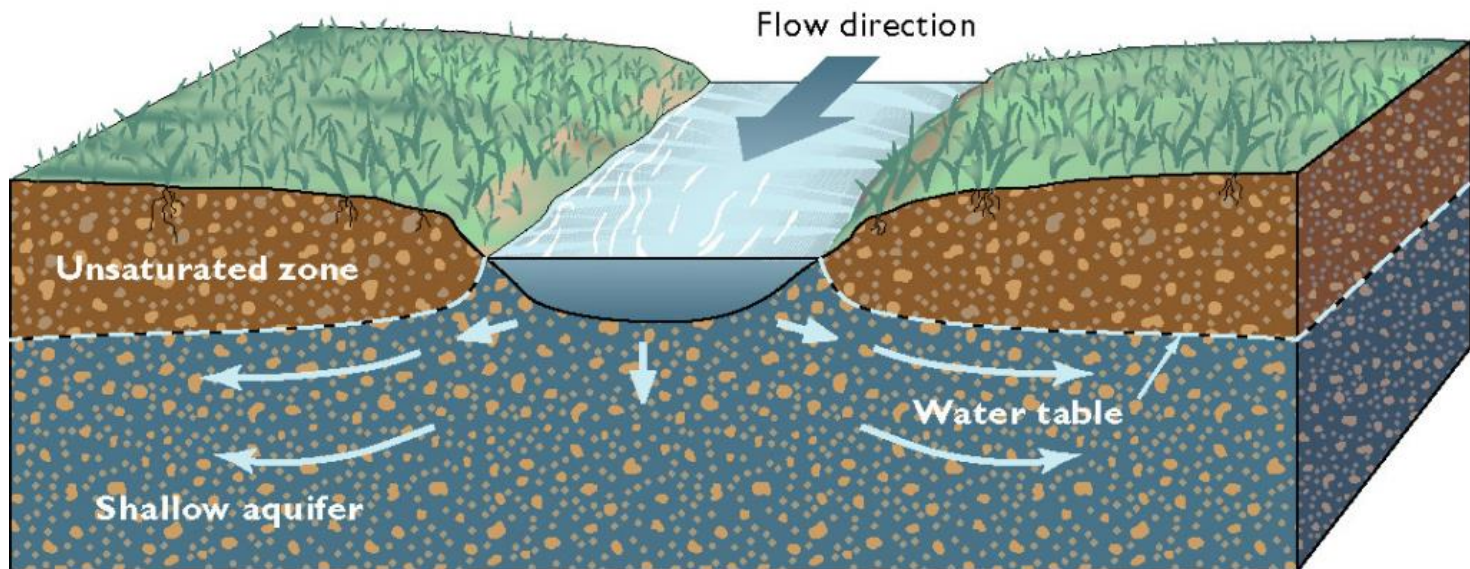
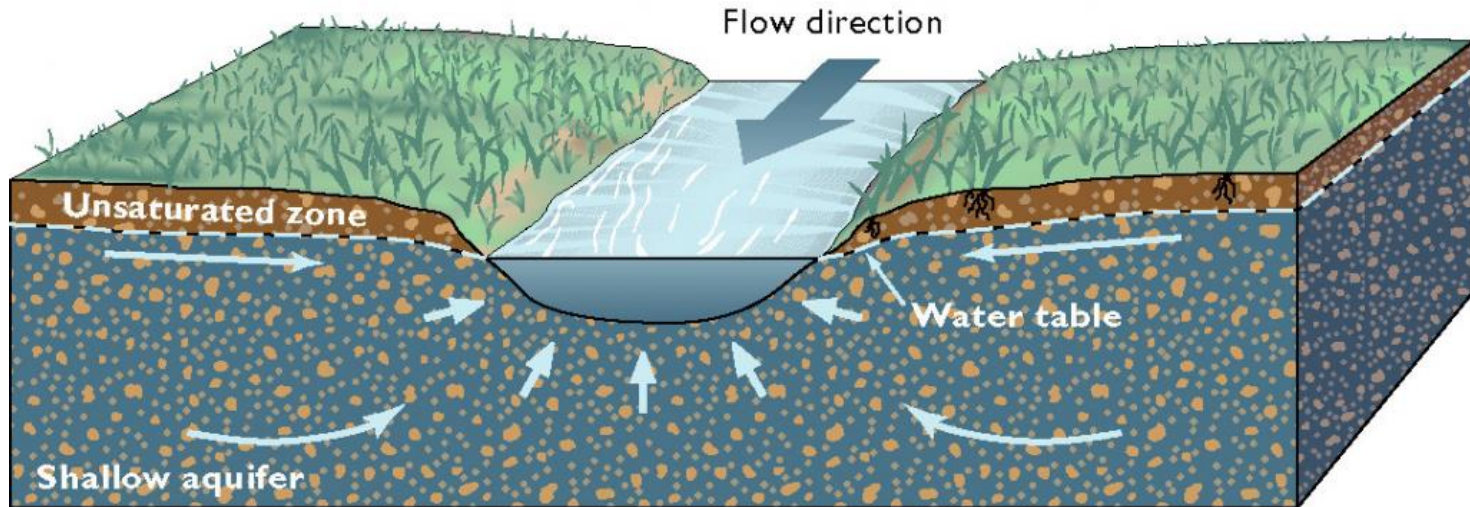
Examples of Stakeholders



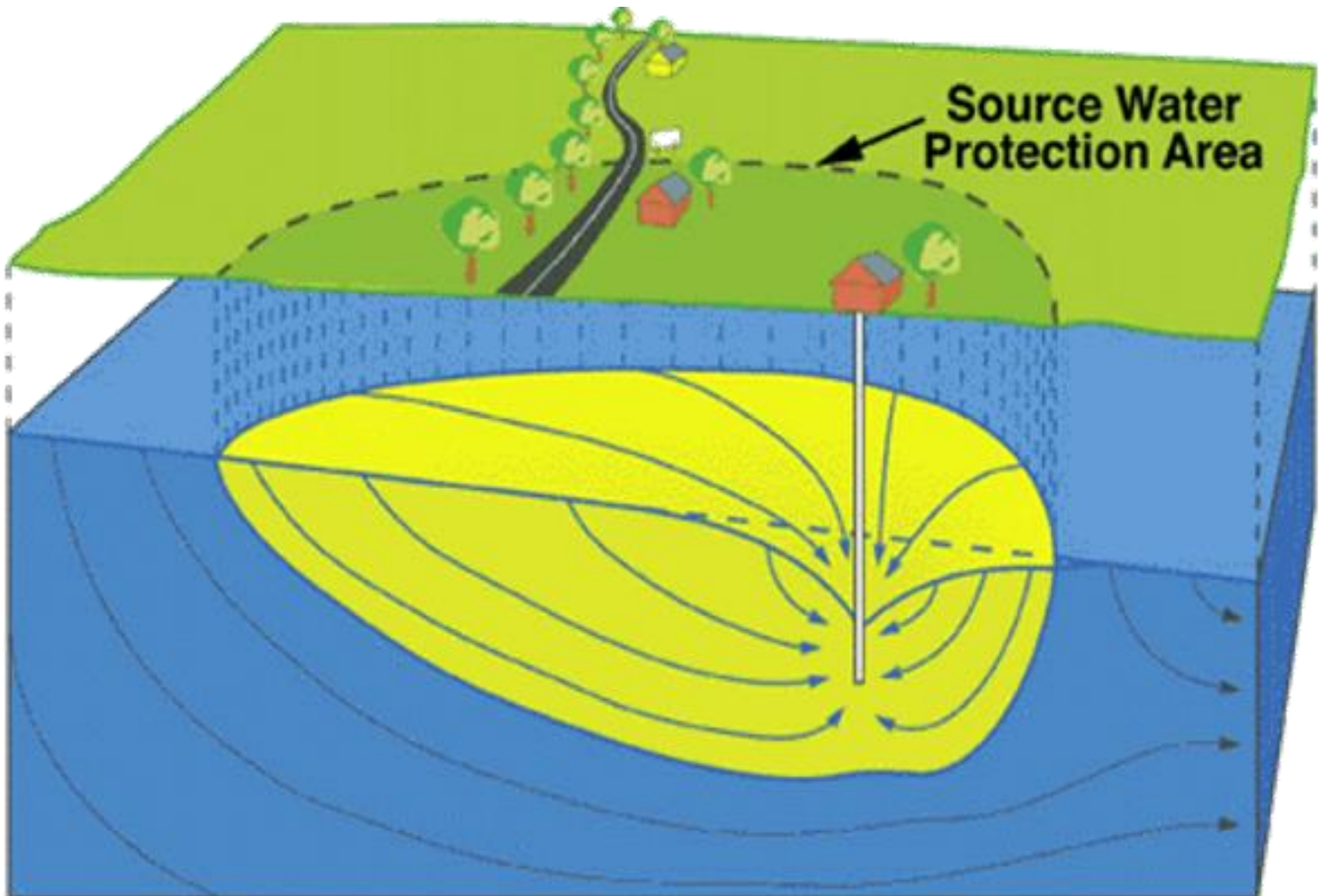
Surface Water Delineation



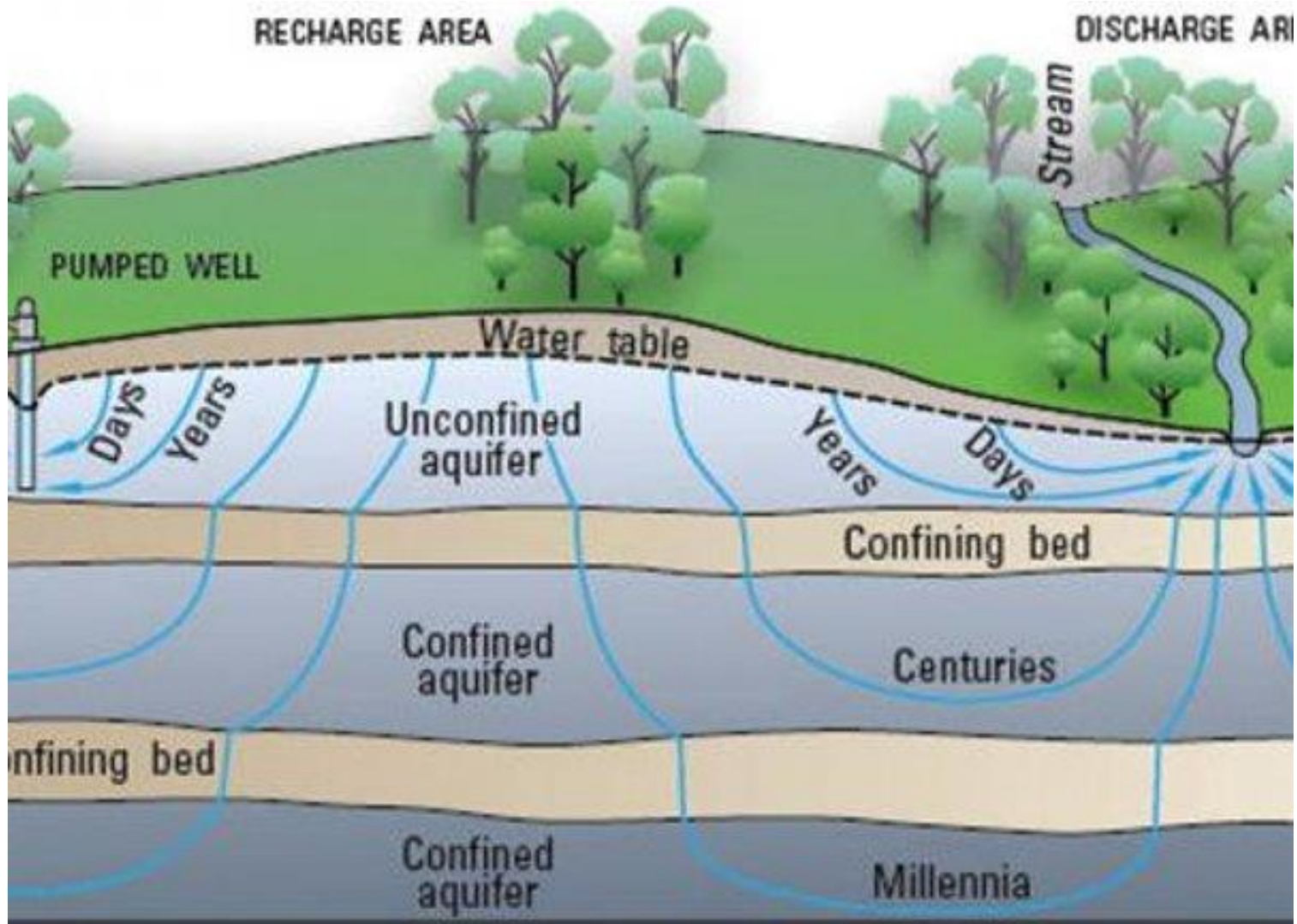
Gaining Stream vs. Losing Stream

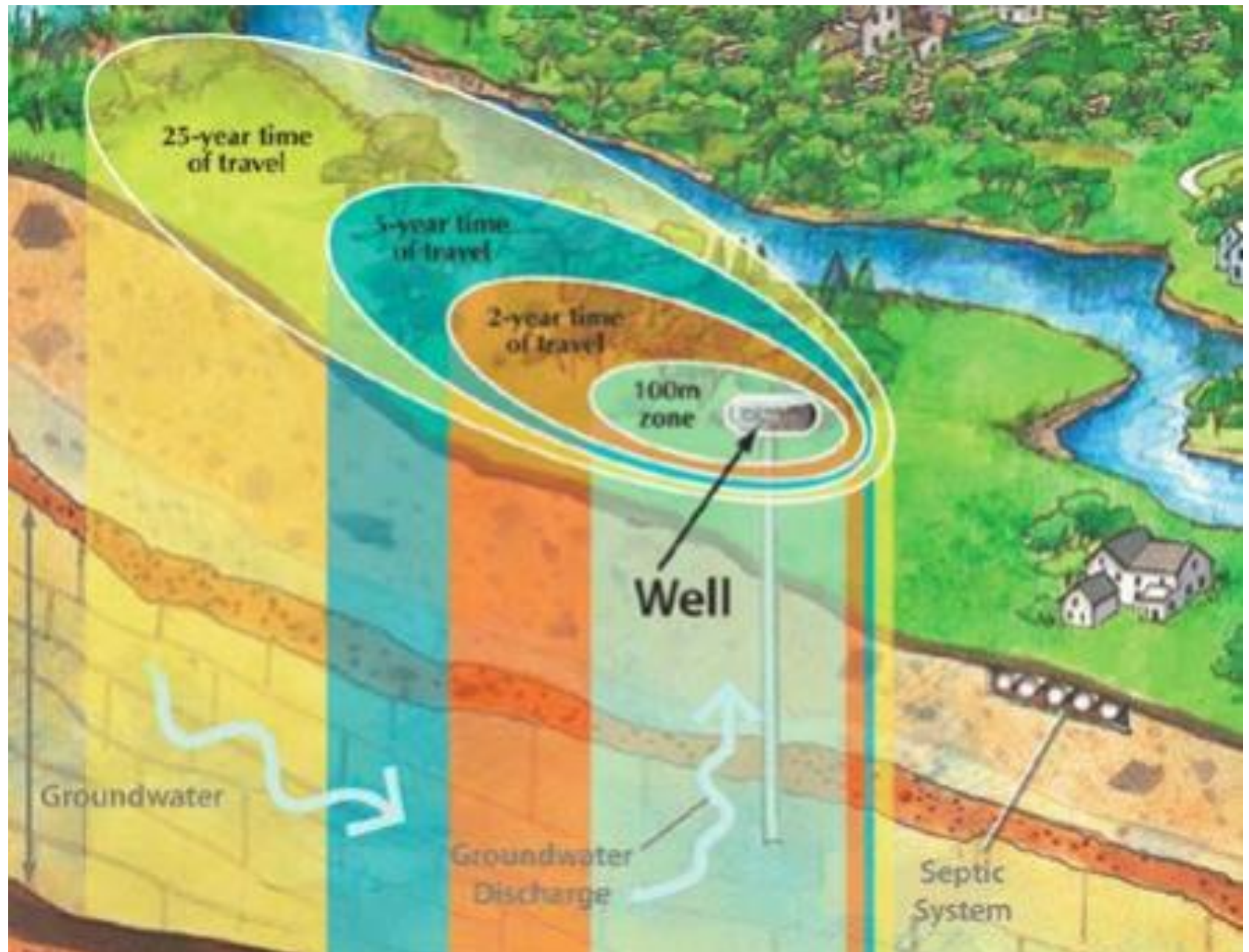


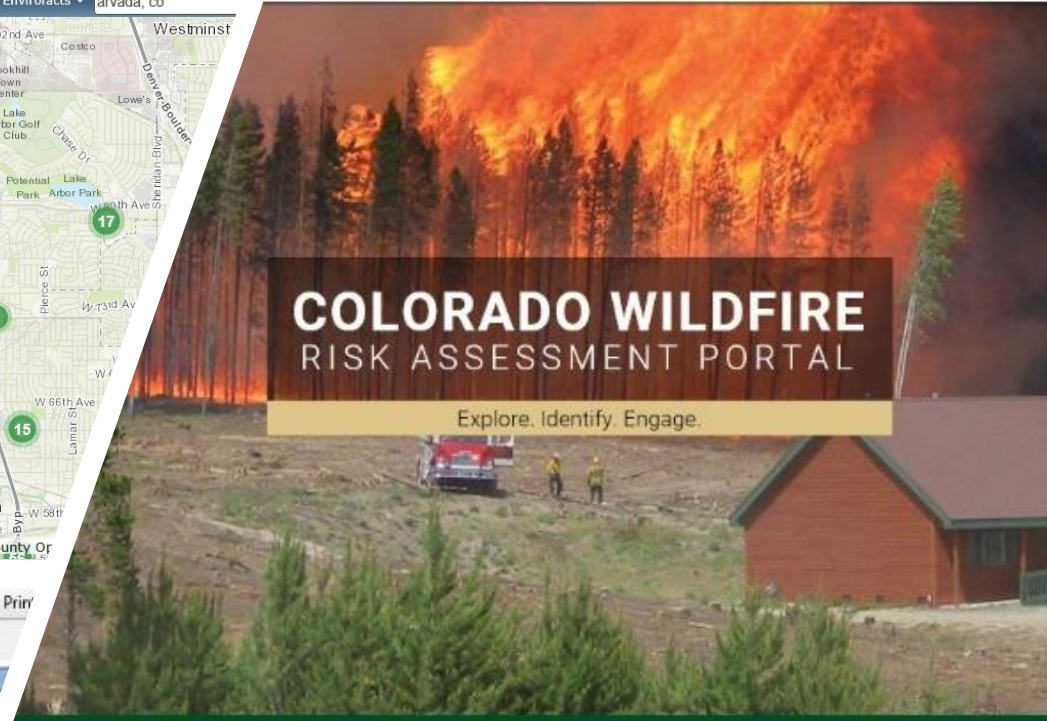
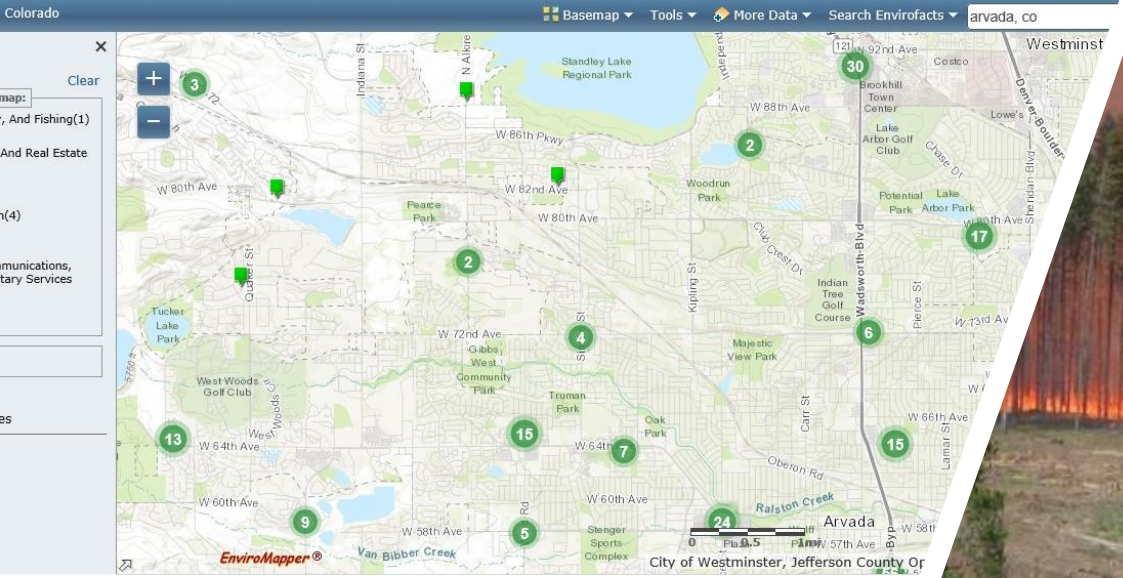
Ground Water Delineation



Groundwater Recharge & Discharge



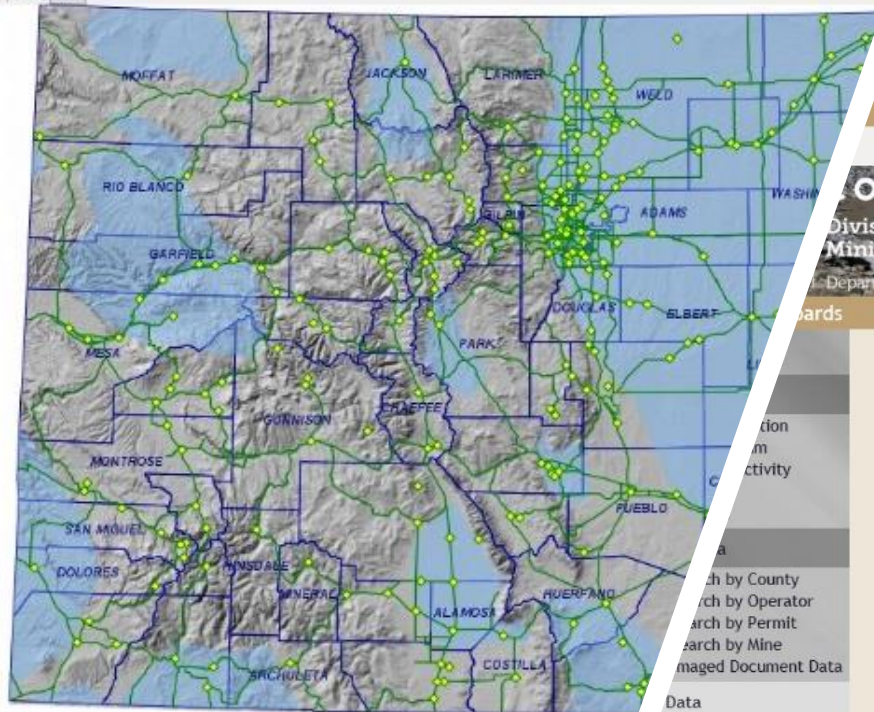




COLORADO WILDFIRE RISK ASSESSMENT PORTAL

Explore. Identify. Engage.

Zoom Selection Results Intersect Add Point Redline Copy Lat/Long Print



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources



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GIS Data

Any data or information provided by the Department of Natural Resources Division of Reclamation, Mining and Safety is provided "as is" without warranty or any kind, either express or implied, including, but not limited to, the implied warranties of merchantability, and fitness for a particular purpose.

- DRMS Map

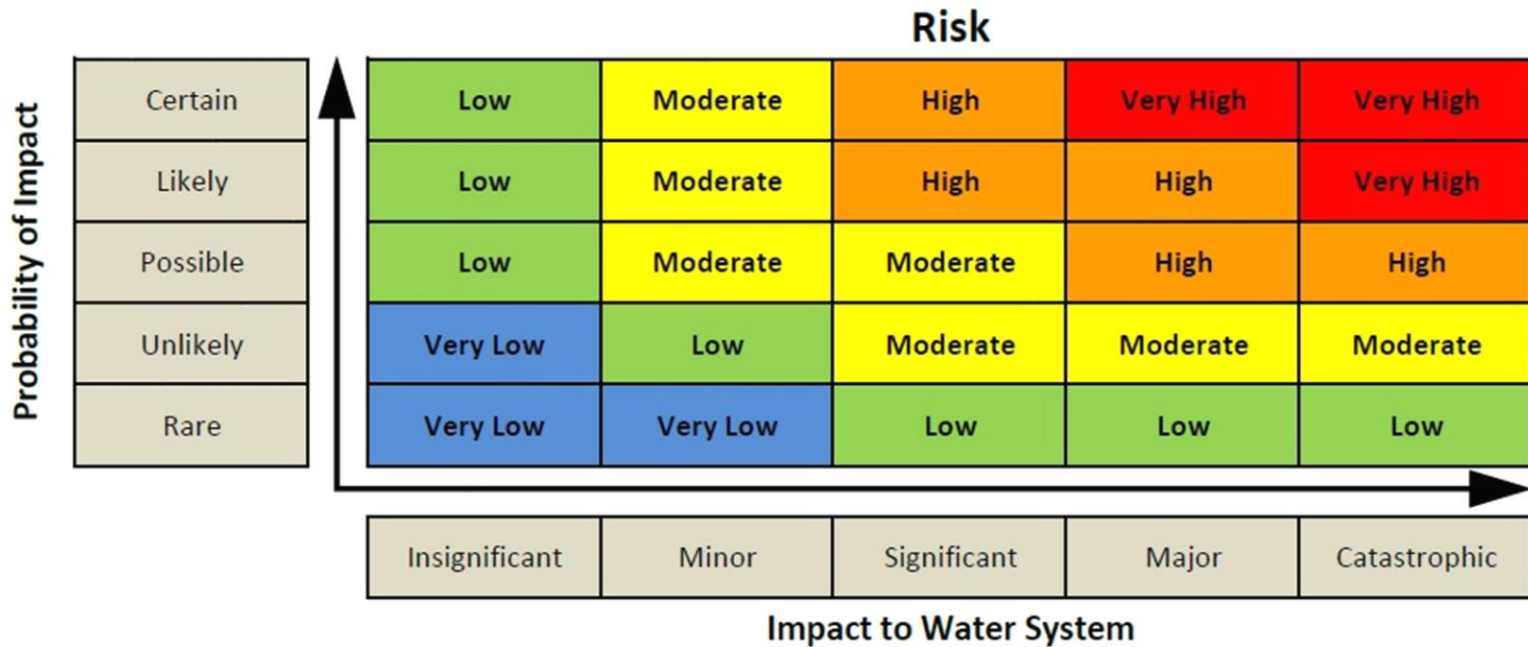
Click on the link above to view the map. At the lower left of the map, click on the layers icon to select available data layers.

Downloadable Shape Files (Zip File Format)

- Permitted Mines, Active Construction Permits, Active Hard Rock Permits
- Coal Mine Permit Boundaries
- Historic Mine Boundaries



SWAP Risk Assessment Matrix



**Prioritizing
Potential Contaminants
+ Level of Control**



Security

Wildfire Mitigation



Eagle County Community Wildfire Protection Plan



Final Draft Created by Ben Garrett



OUTREACH

welcare® information for you about Closing an Abandoned Well

Out-of-service wells must be properly closed and sealed. Otherwise, they pose a threat to ground water quality and a potential safety hazard.

Risks of Abandoned Wells

Normally, ground water flows through soil and bedrock formations, known as aquifers, which filter unhealthy organisms, minerals and other substances. Water that enters an abandoned well bypasses this purifying action. Contaminants enter the aquifer through the unsealed well and may eventually harm the water quality in other wells nearby.

Contaminants usually get into an abandoned well through the casing pipe. It may not extend high enough above the ground surface to prevent runoff from washing into the old pipe. Or the well cap could be broken or in poor condition.

Abandoned large diameter, open wells also pose a real threat to children and animals. There have been numerous reports of children being trapped and even drowned in these types of old wells.

Finding Lost Wells

Some states require disclosure of old wells whenever the property is sold. But in thousands of cases, the old wells are forgotten. The well may be covered by a parking area or a building. Or the only evidence might be a depression or an old well casing in the yard close to the house or another outbuilding.

The Minnesota Department of Health offers this checklist for potential abandoned well sites in older houses or on rural properties:

Physical Evidence of Old Wells

- Well casing visible above the ground, concrete slab or basement floor
- Circular ring in cement or a patch in the floor
- Basement offset, a small room off the basement, under a porch or under steps, where old wells were often located
- Glass block or patch in a step or concrete, which provided access for the old well below
- Windmill, typically located directly over the well on a farm or ranch
- Pit in the yard or basement, which may be covered with wood, concrete or steel, signs of a dug well
- Waterline or patched hole through the basement floor or wall
- Water system components, such as a pressure tank or pump, or shadow lines on the basement floor or wall, indicating where such components once rested
- Electrical components, such as wiring through the basement floor and wall or a control box
- Low spot in the yard, a circular depression that may be damp
- Old outbuilding that may once have been a well house
- Additions, false walls or paneling may hide a well

Your Septic System Is your responsibility!

Did you know that as a homeowner you're responsible for maintaining your septic system? Did you know that maintaining your septic system protects your investment in your home? Did you know that you should periodically inspect your system and pump out your septic tank?

If properly designed, constructed and maintained, your septic system can provide long-term, effective treatment of household wastewater. If your septic system isn't maintained, you might need to replace it, costing you thousands of dollars. A malfunctioning system can contaminate groundwater that might be a source of drinking water. And if you sell your home, your septic system must be in good working order.

This guide will help you care for your septic system. It will help you understand how your system works and what steps you can take as a homeowner to ensure your system will work properly. To help you learn more, consult the resources listed at the back of this booklet. A helpful checklist is also included at the end of the booklet to help you keep track of your septic system maintenance.

Top Four Things You Can Do to Protect Your Septic System

1. Regularly inspect your system and pump your tank as necessary.
2. Use water efficiently.
3. Don't dispose of household hazardous wastes in sinks or toilets.
4. Care for your drainfield.

How does it work?

Components

A typical septic system has four main components: a pipe from the home, a septic tank, a drainfield, and the soil. Microbes in the soil digest or remove most contaminants from wastewater before it eventually reaches groundwater.



Typical septic system

A Homeowner's Guide to Septic Systems

1

How Can You Help Protect Your Drinking Water Source?

As a member of the RRVEWD/KRW community, you have the most to gain or lose in regards to the quality of your drinking water. Keep your water safe from contamination. Things you can do to help protect your drinking water include:

- **Apply Fertilizers & Pesticides Properly**—When possible, use non-chemical control methods to reduce or eliminate pest problems. If using pesticides and/or fertilizers, always read the label first and follow the directions to the letter. Don't use more product than directed by the label (don't think that twice the amount will do twice the job), don't spray outdoors on windy or rainy days, and take precautions to avoid runoff. If using a commercial applicator or lawn care service, ask for information about potential risks and safety precautions.
- **Properly Dispose of Household Hazardous Waste**—Never pour on the ground, down the drain, or toilet: cleaning supplies, paints, solvents, fertilizers & pesticides, gasoline, motor oil, antifreeze, or other waste chemicals. Read product labels for disposal directions and check with your local environmental, health or solid waste agency for more information on household hazardous waste disposal options in your area.
- **Use Your Water Wisely**—Water lawns only when necessary and preferably in the mornings or evenings to avoid evaporation losses from hot and windy weather conditions.
- **Maintain Your Septic System**—Inspect and pump your septic tank every 3-5 years, use water efficiently, and properly maintain your drainfield. Never flush down the toilet or drain: household chemicals, pharmaceuticals, cooking grease/oil, personal care products, and other nondegradable waste. For additional maintenance instructions, visit www.epa.gov/septic/how-care-your-septic-system



RRVEWD/KRW Source Water Protection Areas



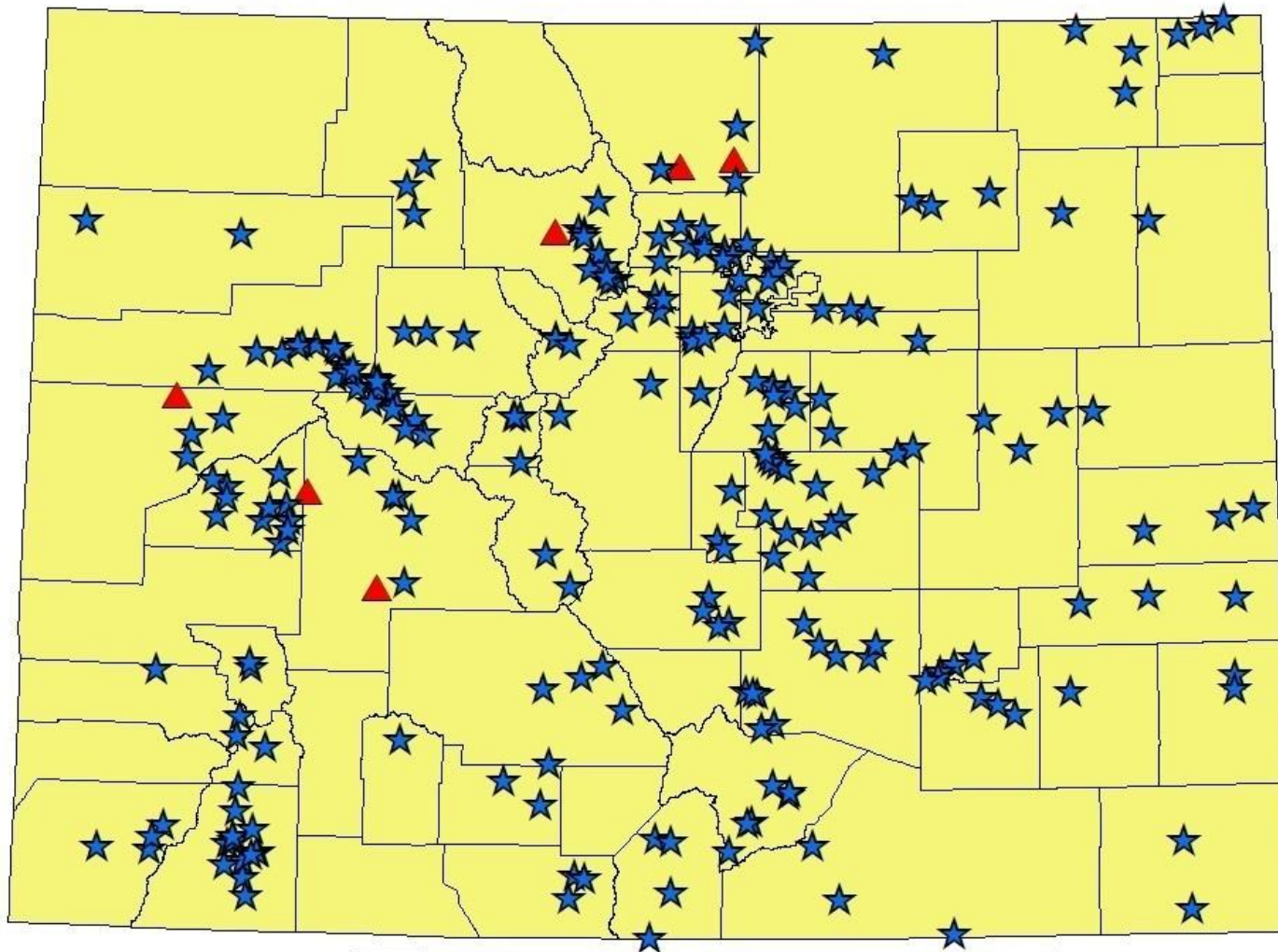
Developed January 2017 by
Colorado Rural Water Association



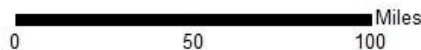


Completed SWPPs: 235

Communities Working with CRWAs Source Water Protection Program



Map Created by Paul Hempel, CRWA April 2021



- ★ Completed SWPPs
- ▲ SWPPs in Progress
- County Boundaries

You need the support of the community
to develop a solid SWPP, and here are
examples of great
community support!!!

Town of Crook

Town of Crook Source Water Protection Plan

Logan County, Colorado
December 16, 2017



Written by: Paul Hempel
Source Water Protection Specialist
Colorado Rural Water Association
For the Community Water Provider:
Town of Crook, PWSID #CO-0138005



Table 3: Stakeholders and Steering Committee Members

Stakeholder	Title	Affiliation	Steering Committee Member
Nikki Schneider	Mayor	Town of Crook	X
Nichole Kahler	Clerk	Town of Crook	X
Theresa Kettle	Board of Trustees	Town of Crook	X
Renay Anderson	Board of Trustees	Town of Crook	X
Brittanie Estrada	Board of Trustees	Town of Crook	X
Donnelle Harms	Board of Trustees	Town of Crook	
Mary Hamilton	Board of Trustees	Town of Crook	X
William Strecker	Board of Trustees	Town of Crook	X
Joe McBride	Commissioner	Logan County	
Bill Wright	WRICO EC	Owner	X
Lydia Kiser	WRICO EC	ORC	X
Rhonda Hernandez		Harmony Ditch Company	
George Hernandez		Harmony Ditch Company	
Coy Marick		Harmony Ditch Company	
Elna Hamilton		Harmony Ditch Company	X
Brad Stromberger	President	Lower Logan Well Users	X
Roy Waitley	Owner	Dinklage Feed Yard	
Everett Anderson		Crook Resident	X
Everett Anderson, II		Crook Resident	X
Alan Estrada		Crook Resident	X
Shealyn Estrada		Crook Resident	X
Seth Estrada		Crook Resident	X
Linda Clevenger		Crook Resident	X
Zechariah Kahler		Crook Resident	
Rodney Kahler		Crook Resident	X
Bernadette Marick		Crook Resident	X
Tracie Stump		Crook Resident	

Dan Velk		Crook Resident	X
Wayne Sieck		Crook Resident	X
Dort Buttle		Crook Resident	X
Michael Sigg		Crook Resident	X
Christine Sigg		Crook Resident	
Michael Juranek		Crook Resident	
Tom Clutter		Crook Resident	X
Ruth Bowen		Crook Resident	X
Gill Slater		Crook Resident	X
Terry Kler		Crook Resident	
Dale Pierce		Crook Resident	
Stan Garrett		Crook Resident	
Beth Garrett		Crook Resident	
Cleo Clevenger		Crook Resident	
Deanna Rosencrantz		Crook Resident	
Frank Lopez		Crook Resident	
Louise Lopez		Crook Resident	X
Howard Hamilton		Crook Resident	X
Elna Hamilton		Crook Resident	
Amber Batrell		Crook Resident	
Norm Savolt		Crook Resident	
Dianna Savolt		Crook Resident	
Connie Andrews		Crook Resident	X
Bobbie Higgins		Crook Resident	



Westbank Ranch HOA

Source Water Protection Plan



Westbank Ranch HOA

PWSID #CO 0123838
Groundwater Source

Garfield County, Colorado

Jay Jahani
194 Fairway Lane
Glenwood Springs, CO 81601

December 17, 2012



<https://www.youtube.com/watch?v=sp0ExzrQ7QQ>

<https://www.youtube.com/watch?v=hJ6r18AODpM>

Colorado River Partnership

Source Water Protection for the Colorado River Partnership

Source Water Protection Plan

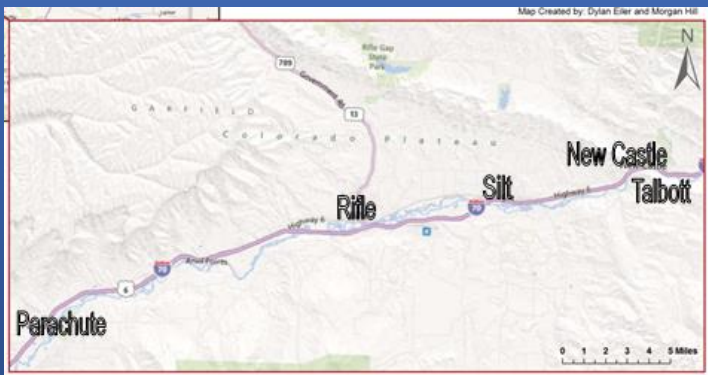
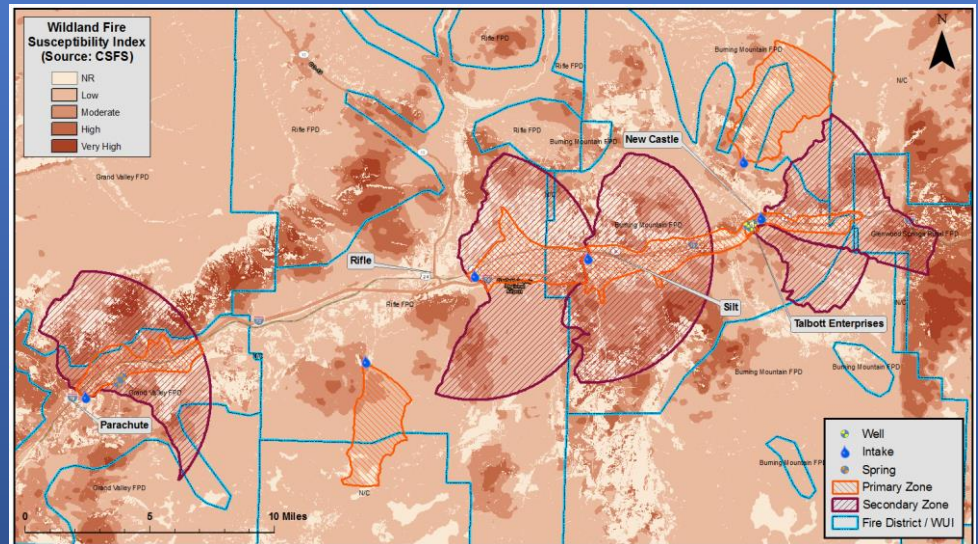
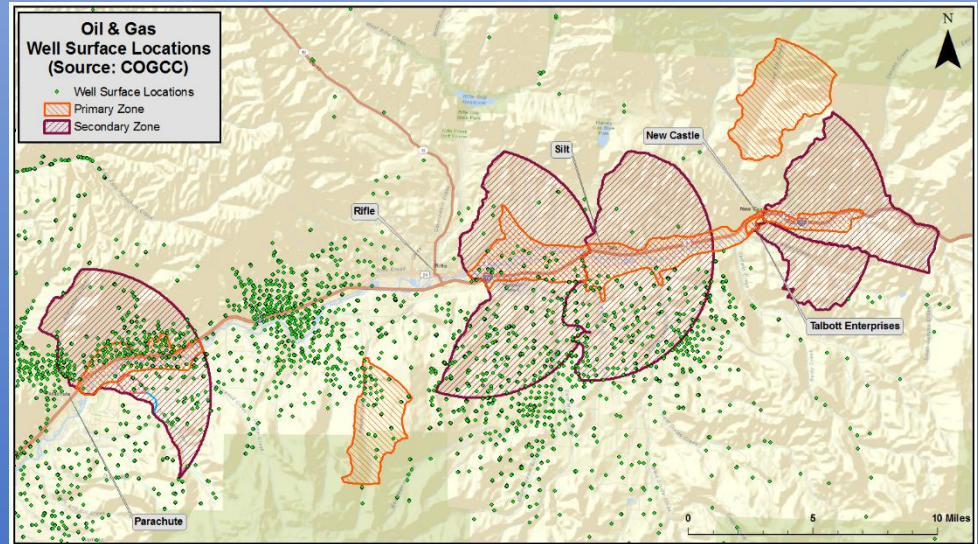


Garfield County, CO
January 2013

Written by: Morgan Hill, Environmental Health Specialist
Garfield County Public Health

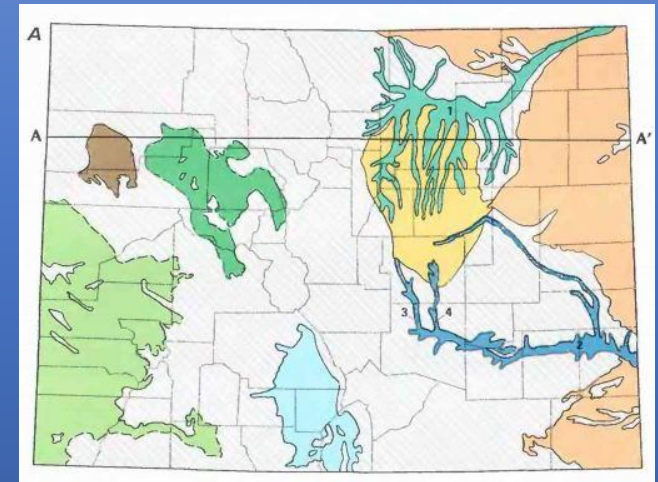
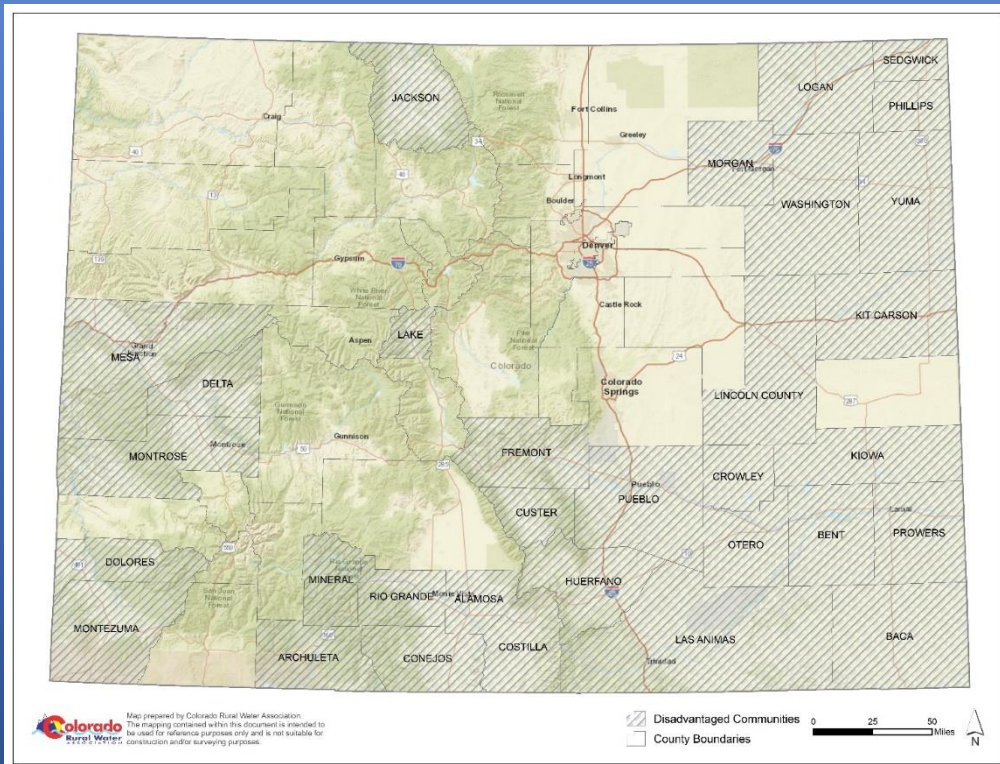
Coordinated by: Dylan Eiler, Source Water Specialist
Colorado Rural Water Association

For the community water providers:
Town of New Castle: ID# CO0123538
Talbot Enterprises: ID# CO0123734
Town of Silt: ID# CO0123710
City of Rifle: ID# CO0123676
Town of Parachute: ID# CO0123602



Key Stakeholders: BLM, CDOT, Garfield County, Encana Oil

Community Support Children's Water Festivals



Community Support

**KEEP
IT CLEAN**
PARTNERSHIP

Stormwater Protection

BOULDER • BOULDER COUNTY • LONGMONT
ERIE • LAFAYETTE • LOUISVILLE • SUPERIOR



Keep It Clean West Slope Partners

City of Aspen
City of Glenwood Springs
Eagle County
Eagle River Watershed Council
Garfield County
Middle Colorado Watershed Council
Pitkin County
Roaring Fork Conservancy
Town of Basalt
Town of Carbondale
Town of Eagle
Town of Gypsum
Town of Vail
White River National Forest



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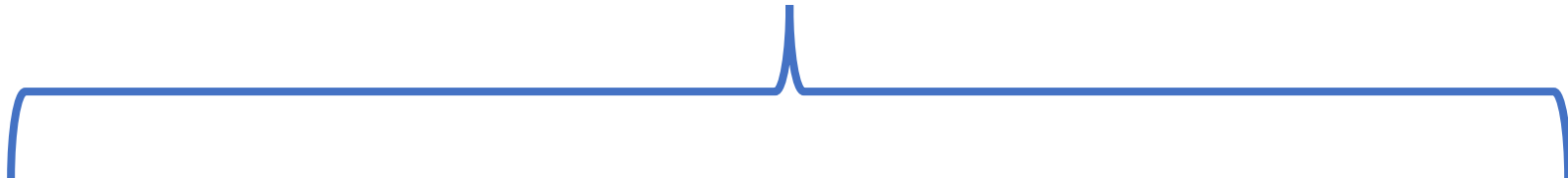
Dovetail



Colorado Rural Water Association
is the chair of the
Colorado NRCS
SWP Subcommittee

Colorado NRCS

Source Water Protection Funding



Creekside Landowners

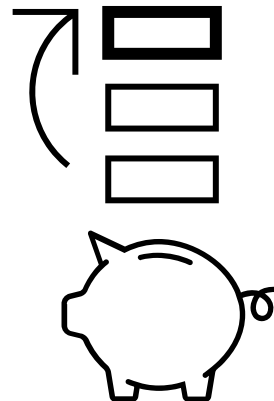
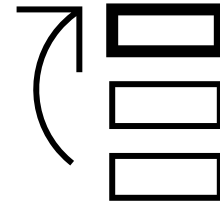
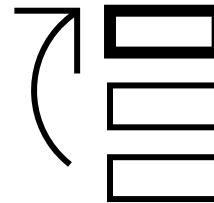
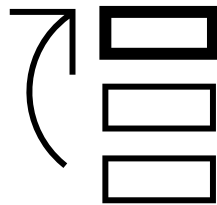
Conservation District

Colorado Rural Water

Public Water System

CDPHE

USDA NRCS



Priority Resource Concerns

Source water depletion
Wildfire Mitigation

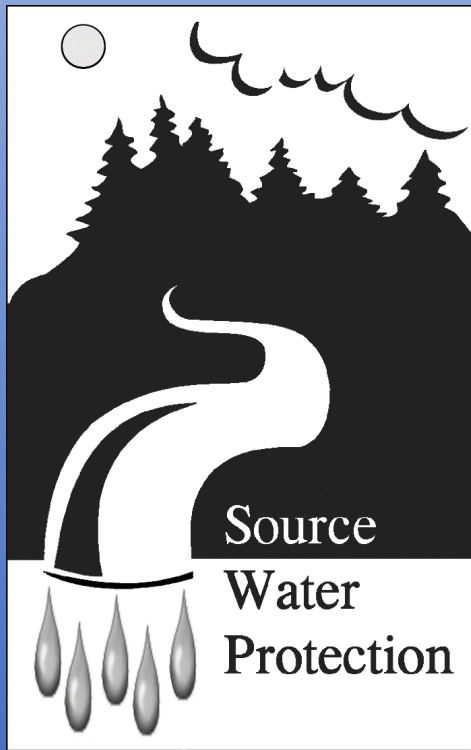
Concentrated erosion
Degraded plant condition
Soil quality limitations
Field, sediment, nutrient, & pathogen loss

Aquatic habitat



KEY

primary practice to address the concept of “Avoid, Control, Trap” (ACT).



Top Conservation Practices

Forest stand improvement
Streambank & shoreline protection

Prescribed grazing
Nutrient management

*Filter strip
*Tree/shrub establishment
*Cover crops

*Conservation crop rotation
Irrigation water mgmt.
Residue & tillage mgmt. – no till

Wetland creation
Pest management

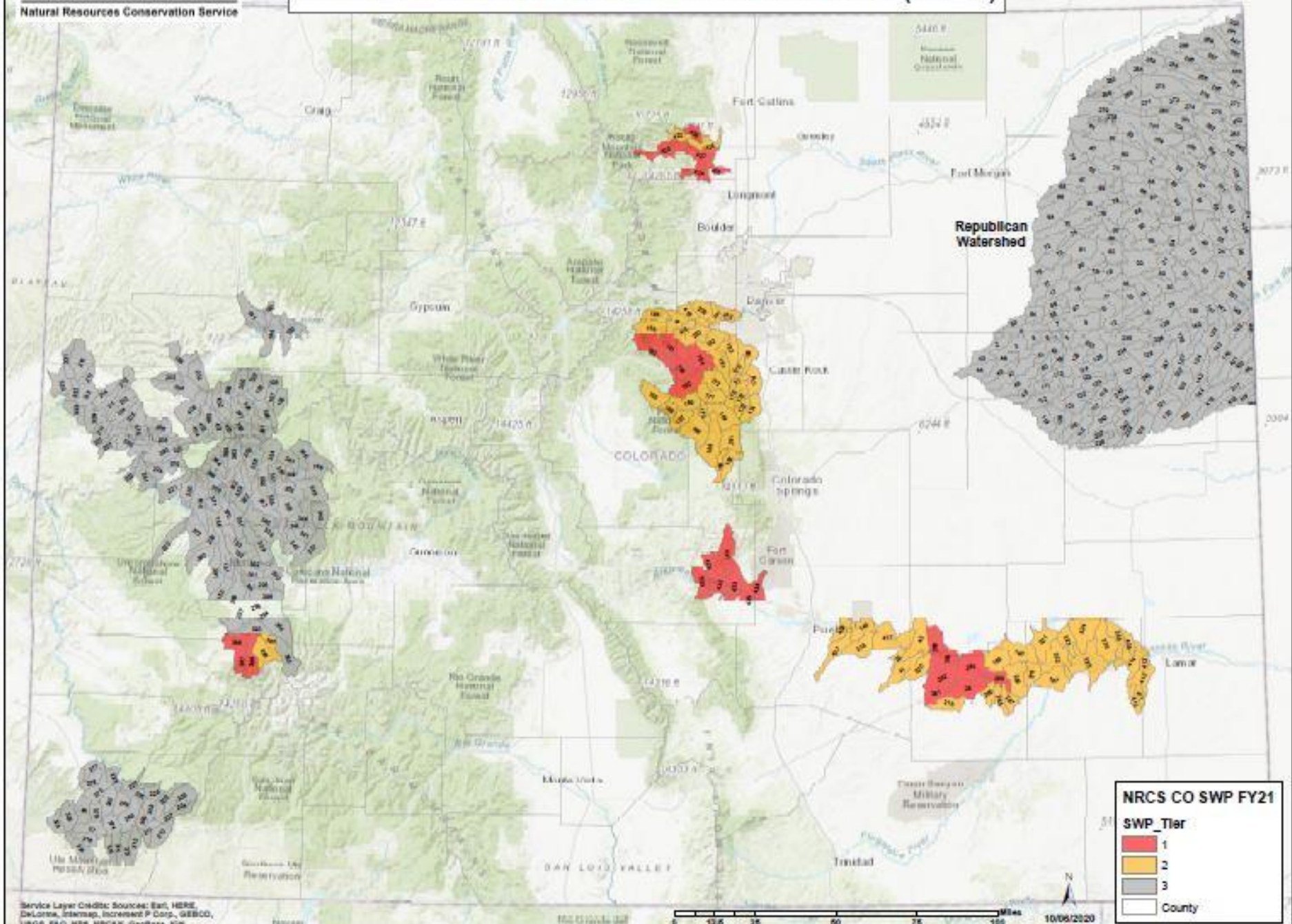
KEY

arranged by # of votes

primary practice to address the concept of “Avoid, Control, Trap” (ACT).

* affects two of the ACT categories

NRCS Colorado Source Water Protection Watersheds (HUC12)



NRCS CO SWP FY21

SWP_Tier

- 1
- 2
- 3
- County

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, Geobase, IGN,

Selected Watershed Funding Offered by NRCS

- Agricultural Conservation Easement Program
- Emergency Watershed Protection Program
- Environmental Quality Incentives Program

1. Agricultural Conservation Easement Program (ACEP)

(umbrella for agricultural and wetland easements)

- **Includes Wetlands Reserve Easements (WRE)** help private and tribal landowners protect, restore and enhance wetlands which have been **previously degraded** due to agricultural uses.

2. Emergency Watershed Protection Program (EWP)

- Offers technical and financial assistance to **provide relief to local communities from imminent threats to life and property** caused by floods, fires, windstorms and other **natural disasters that impair the watershed**. Can also include an EWP Easement that acquires multiple tracts working with a partner that acquires the remaining land.

3. Environmental Quality Incentives Program (EQIP)

“provides financial and technical assistance to agricultural producers and non-industrial forest managers to address natural resource concerns and deliver environmental benefits such as:

- improved water and air quality*
- conserved ground and surface water*
- increased soil health and reduced soil erosion and sedimentation*
- improved or created wildlife habitat*
- mitigation against drought and increasing weather volatility*

EQIP Funding

- **Conservation Innovation Grants (CIG)** – a competitive program that tests new technologies or techniques for conservation. NRCS uses these funds to explore possible new or modified practices (National level, primarily, although states can fund smaller, more localized CIGs). WWW.Grants.gov
- **Resource Conservation Partnership Program (RCPP)** - promotes coordination between NRCS and its partners to deliver conservation assistance to producers and landowners, including conservation easements.
 - * *Often on a larger regional, interstate or national scale*

EQIP Funding

- **Targeted Conservation Program (TCP)** – set asides for specific projects where activities are carried out according to a plan of operations developed with the agricultural producer.

Below are a few examples:

1. Colorado Ogallala and Republican River Basin TCP
2. La Plata County Forest Health and Wildfire Mitigation TCP
3. Farasita/Badito Phreatophyte Control/Restoration Project-Phase 1
4. Rainbow Park and Portland Plant Riparian Restoration
5. Yuma Ephemeral and Classic Gullies
6. Improving Irrigation Water Conveyance in the Lower South Platte

- ***National Water Quality Initiative (NWQI)*** - NRCS invested over \$30 million in targeted assistance to help farmers and ranchers improve water quality in high-priority streams and rivers across the country
- ***Source Water Protection Initiative (SWP)*** - 10% of EQIP funding targeted for HUC-12 watersheds identified as high priority.
(Colorado has 18% of the state designated)

**** Producers develop a Conservation Plan in conjunction with the NRCS that identifies resource concerns and best practices that are implemented and cost-shared.***

Dallas Creek & Pleasant Valley Creek Project

Creekside
Landowners

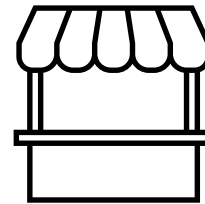
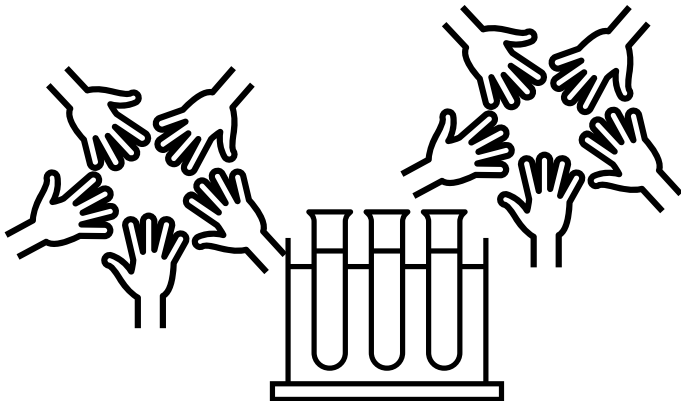
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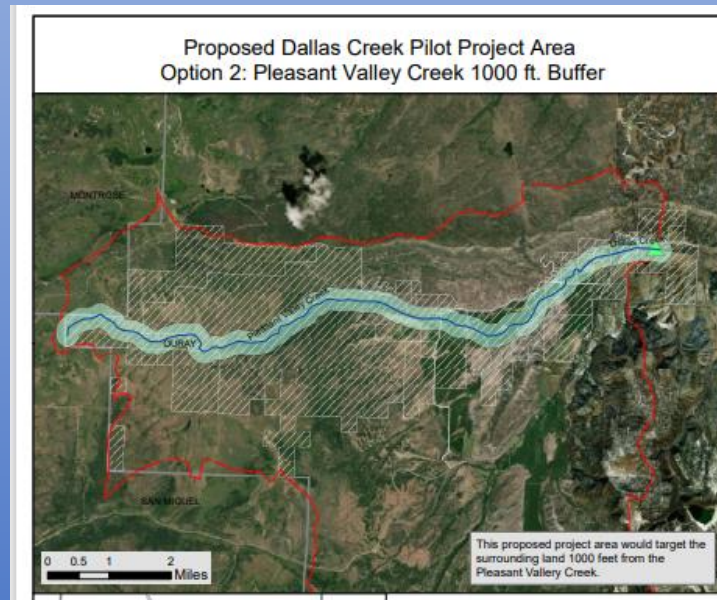


Guest Speaker: Kristen Hughes

Source Water Protection Specialist
Local Assistance Unit






COLORADO
Department of Public
Health & Environment



1	Name	Agency
2	Kenan Diker	CDPHE
3	John Duggan	CDPHE
4	Kristen Hughes	CDPHE
5	Mallory Hiss	CRWA
6	Paul Hempel	CRWA
7	Pam Mencimer	Dallas Creek WC
8	Anthony Ramsey	Dallas Creek WC
9	Eugene Bakhaus	NRCS
10	Michael Brady	NRCS
11	Amanda James	NRCS
12	Michael Brady	NRCS
13	Penny Bishop	Shavano CD
14	Jack Brungardt	Shavano CD
15	Ken Lipton	Shavano CD
16	Dave Dearstyne	Shavano CD

**Dallas Creek Water Company
Source Water Protection Plan**

Ouray County, Colorado
August 2016

Written by: Kimberly Mihelich
Source Water Specialist
Colorado Rural Water Association
For the Community Water Provider:
Dallas Creek Water Company, PWSID# 0146485

Dallas Creek Project

erosion & sedimentation

Thank you!



Questions?

