

Planning can be initiated by

- BLM
- State (COGCC)

- Local Governments
- Communities
- Landowners

Why Plan?

- ❖ Local government wants to minimize the harm and disruption to other land uses and public values such as clean water, wildlife, and public welfare.
- ❖ Local government expects oil and gas industry to play by the same rules as any other development

Why Plan?

- ❖ Industry will build good will,
- ❖ have fewer landowner conflicts,
- ❖ may save costs

Continuum of planning

- 1) Place-based BMPs
- 2) Planned (staged) development
- 3) Monitoring and plan revision

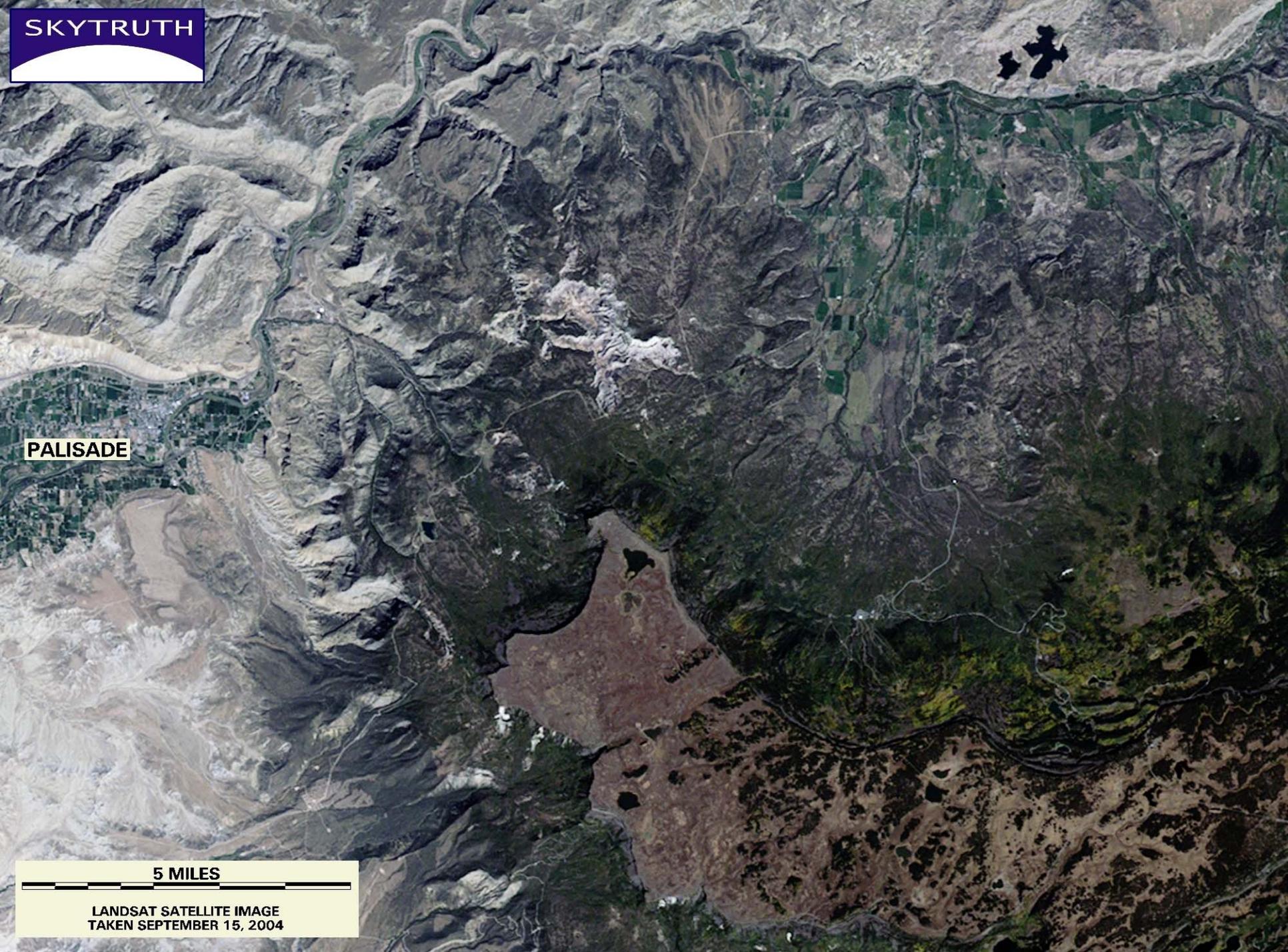
Local Government:

Grand Junction / Palisade Watershed Plan

PALISADE

5 MILES

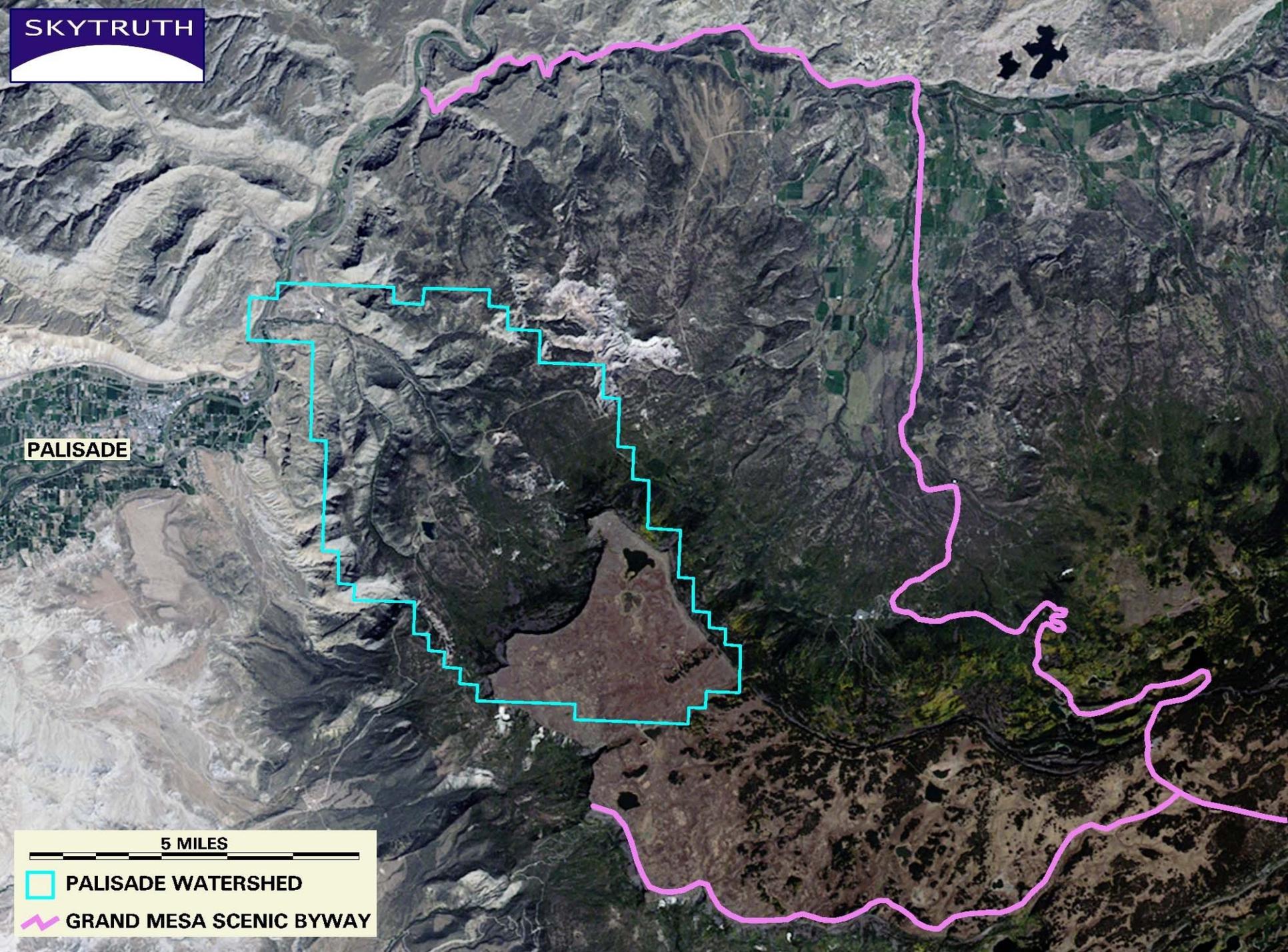
LANDSAT SATELLITE IMAGE
TAKEN SEPTEMBER 15, 2004



PALISADE

5 MILES

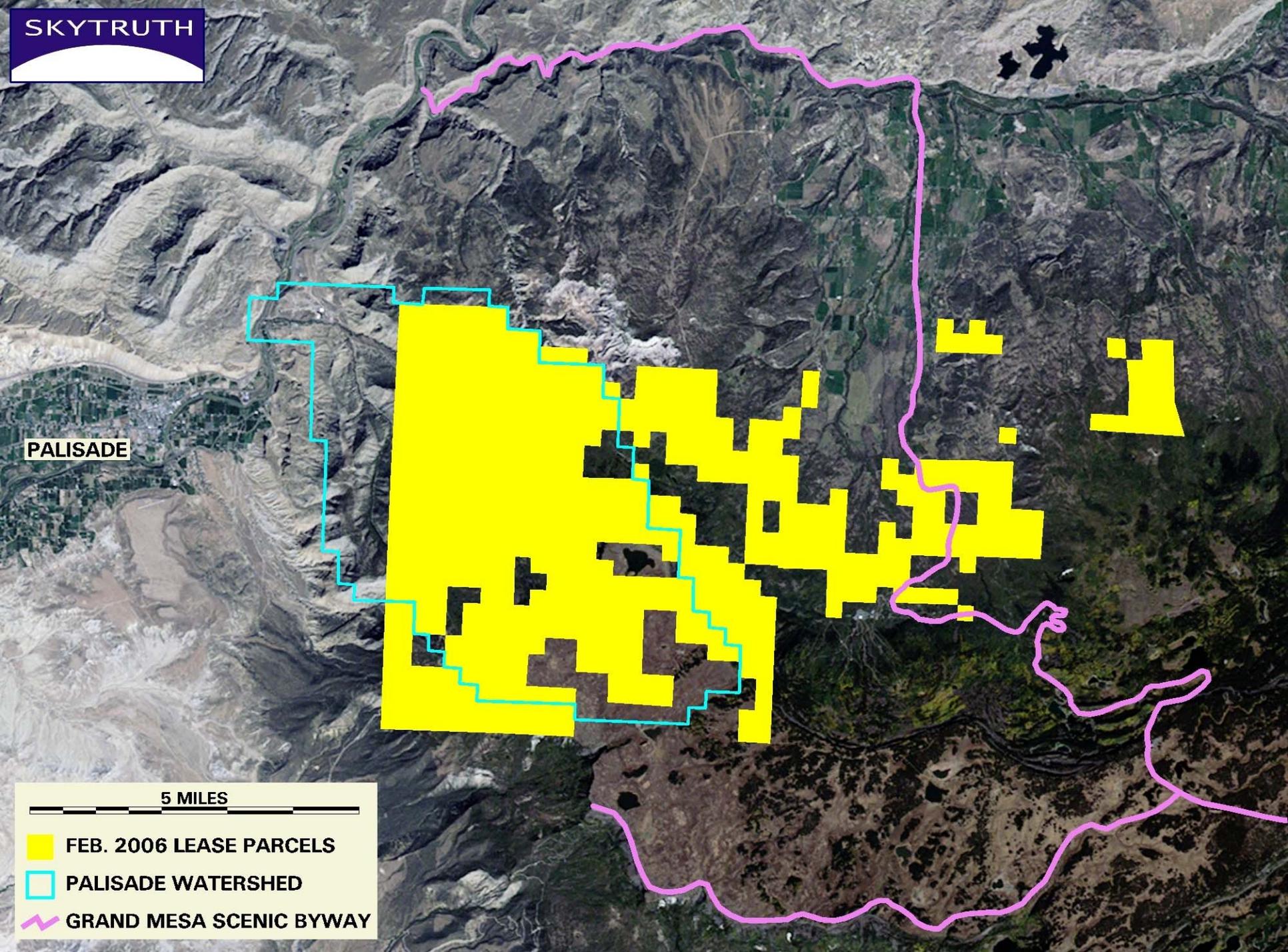
-  PALISADE WATERSHED
-  GRAND MESA SCENIC BYWAY

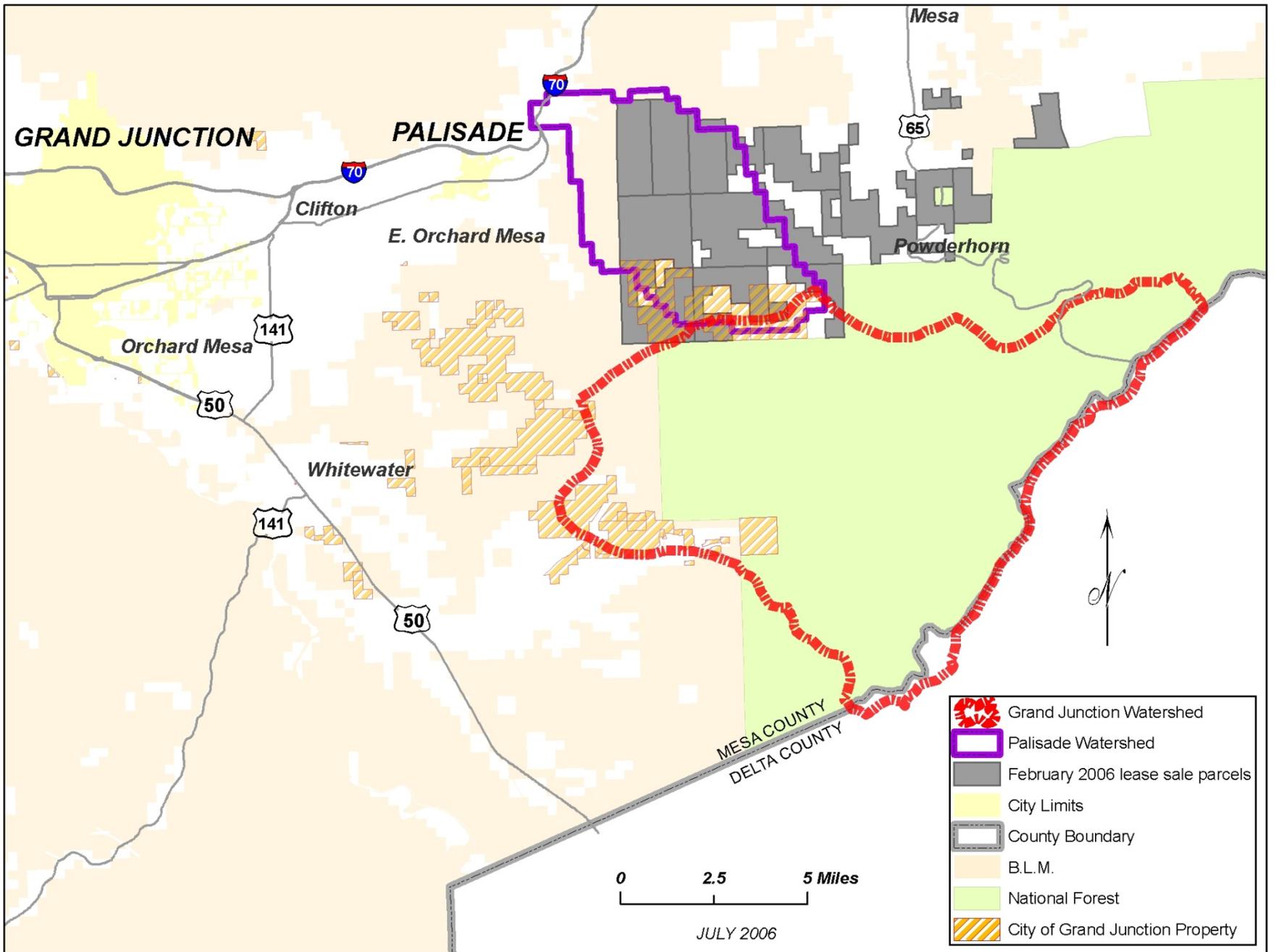


PALISADE

5 MILES

-  FEB. 2006 LEASE PARCELS
-  PALISADE WATERSHED
-  GRAND MESA SCENIC BYWAY





POTENTIAL IMPACTS TO WATER QUALITY



Storm water
sediment
loading from
well pad

Hydraulic Fracturing



Hydraulic fracturing pit.



**Over 1,000
spills
reported
since 2008**



Methane Seeps



Divide Creek in Silt Colorado, April 2004, contaminated with methane and ignitable.



Little regulation or enforcement lead to poor practices

In April 2006 the Colorado Oil
and Gas Conservation
Commission had only

one inspector for
every 3,625 wells.

Industrial accidents happen



Bonding

- BLM requires bonds of \$25,000 for a statewide bond or \$125,000 for a nationwide bond
- In 2001 a company Campbell County Wyoming abandoned 120 wells at a cost to tax payers of \$4 million
- In Colorado, EnCana Oil and Gas has 3,652 wells and a statewide bond of \$235,000.
That is \$64 a well.

BLM Lease Stipulations

Watershed resource: Palisade Watershed

This *may* include the relocation of proposed roads, drilling sites and other facilities or application of appropriate mitigating measures.

This stipulation may be waived or reduced in scope if circumstances change, or if the lessee can demonstrate that operations can be conducted without causing unacceptable impacts on the concerns identified.

BUT the BLM did require a **one year moratorium** on drilling in order to address concerns of the community.

FRIDAY

THE DAILY SENTINEL

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JANUARY 20, 2006 ■ GRAND JUNCTION, COLORADO

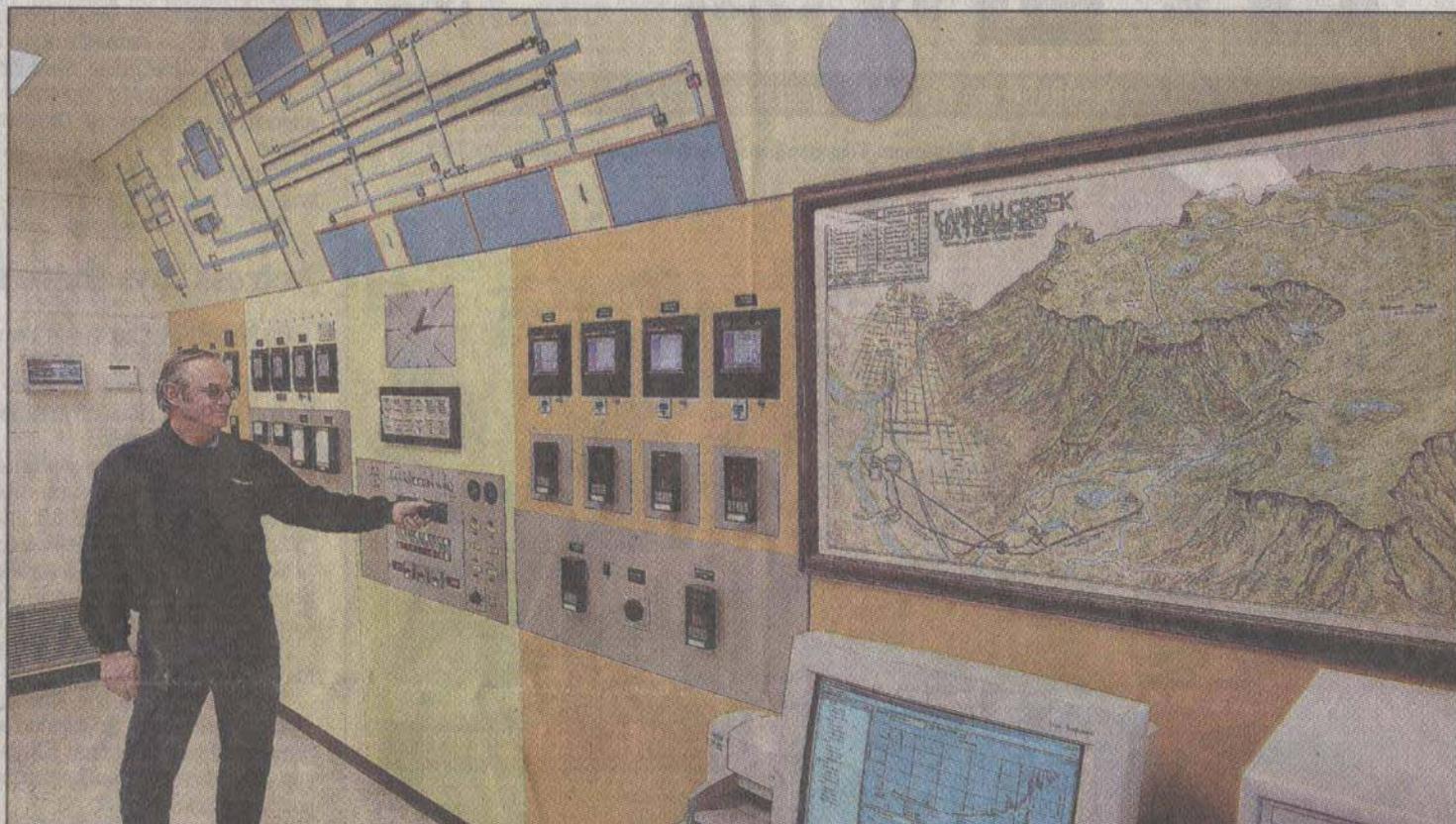
GJ: No drilling on mesa

*City Council
to fight lease
of property
in watershed*

By **MIKE WIGGINS**
The Daily Sentinel

The Grand Junction City Council will fight a plan that could open the city's watershed on Grand Mesa to oil and gas development, saying it wants to take every precaution to safeguard the city's drinking water.

Council members voted 5-2 Wednesday night to oppose a federal lease sale offering more than 13,000 acres on the mesa for drilling. The city will send a formal letter of protest to the Bu-



Greed wins one over nature

Grand Mesa must brace for all that drilling brings

With the news still fresh that the Bureau of Land Management refused to consider the wishes of the cities of Grand Junction and Palisade, as well as a slew of local and state politicians, and went head and leased his city's backyard to oil companies, we say, "Who's surprised?"

This is a federal government in bed with developers, and getting lumpier the minute from all the cash being stuffed under the mattress.

A recent story in the Washington Post reported the nation's giant oil octupi ... err companies, gathered record profits for 2004.

You pay \$2.50 a gallon for gas and Exxon Mobil Corp., the biggest oil frump in the world, pockets after-tax profits of \$26 billion dollars, up 52 percent from 2003.

ChevronTexaco had \$13 billion in profits, up 85 percent from a year ago. Shell Oil had profits of \$19 billion, up 48 percent from 2003.

drill rigs like porcupine quills and the unmarred flanks of what we lovingly consider the world's largest flat-top mountain begins to look like Rulison South.



DAVE BUCHANAN

A generation ago, Rulison was home to close-knit families, horse-and-cattle operations, venerable orchards growing apples and cherries and irrigated fields growing some of the best hay in the valley.

Today, there's still a few remnants of that better time but most of Rulison Basin is buttugly, a throw-away sacrificed to energy companies too busy sticking a well in every piece of ground that holds still to notice they've destroyed a community and a way of life.

Get ready for dusty roads (wells need monitoring every day, seven days a week), the eye-searing flames from wells flaring 24 hours a day, burning enough gas to end any so-called shortage, and garish lights from drilling rigs hiding the night sky.

Not like the BLM really cares



A SIGN OF THE TIMES

DAVE BUCHANAN

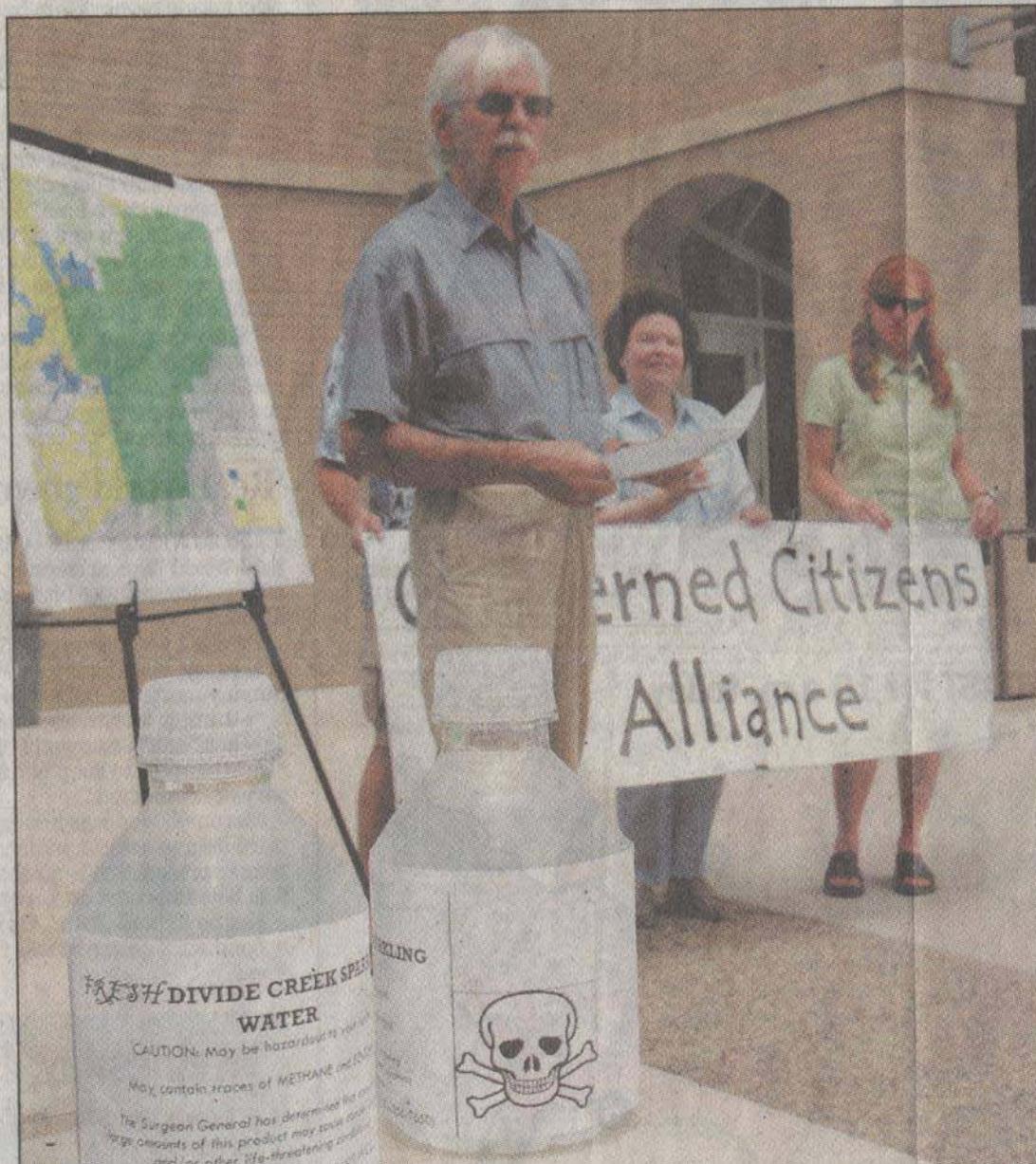
COLORADO STATE STATUTES

31-15-707S. Municipal utilities.

(1) The governing body of each municipality has the power:

(b) To construct or authorize the construction of such waterworks without their limits and, for the purpose of maintaining and protecting the same from injury and the water from pollution, their jurisdiction shall extend over the territory occupied by such works and all reservoirs, streams, trenches, pipes, and drains used in and necessary for the construction, maintenance, and operation of the same and **over the stream or source from which the water is taken for five miles above the point from which it is taken and to enact all ordinances and regulations necessary to carry the power conferred in this paragraph (b) into effect;**

GJ voters may clear the water on drilling



Proposal to protect watersheds from contamination by oil, gas

By DANIE HARRELSON
The Daily Sentinel

Grand Junction voters could weigh in on a proposal this fall to protect their drinking water from contamination by oil and gas drilling and other industrial operations that could threaten the city's water supply.

A local chapter of Western Colorado Congress kicked off its campaign Tuesday outside City Hall to collect the 1,580 signatures necessary to get its proposed city ordinance on the November ballot.

The Concerned Citizens' Alliance aims to enhance the city's ability to guard its water quality against the following "high-risk" activities:

- excavating a large amount

of soil;

- using or transporting large amounts of hazardous materials; and

- timber, mining, feedlot operations and oil and gas drilling.

The proposed ordinance wouldn't bar energy companies or other industry from the city's watershed, said Matt Sura of the Grand Junction-based Western Colorado Congress.

It would empower the city to require drillers and other operations within the city's watershed to take additional precautions to prevent pollution of the city's water supply, Sura said.

See **WATER**, page 8A ➤

Grand Junction Watershed Ordinance Protections

- supplying water quality “baseline” data and extensive planning documents before permit is issued;
- supplying description of activity including any toxic chemicals that will be brought into the watershed;
- no waste pits of any kind are allowed;
- extensive planning required to reduce risk to water quality;

- posting a bond that would cover 100% of potential damages;
- hiring additional third-party monitors to ensure the operations will not harm the water supply; and
- no measurable increase in pollution of Grand Junction's water supply is allowed



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Catholic questions about the environment

Q: What does the environment have to do with being a Catholic?

A: In his New Year's message of 1990, Pope John Paul II said, "In our day, there is growing awareness that world peace is threatened not only by the arms race, regional conflicts and continued injustices among peoples and nations, but also by a lack of due respect for nature, by the plundering of natural resources and by a progressive decline in the quality of life...Faced with the widespread destruction of the environment, people everywhere are coming to understand that we cannot continue to use the goods of the earth as we have in the past."

He continues, "Modern society will find no solution to the ecological problem unless it takes a serious look at its life-style. In many parts of the world, society is given to instant gratification and consumerism while remaining indifferent to the damage which they cause...Simplicity, moderation, and discipline, as well as a spirit of sacrifice, must become part of everyday life, lest all suffer the negative consequences of the careless habits of the few."

At a Symposium on religion and science held in Santa Barbara in 1997, Bartholomew I, patriarch of the 250-mission-member Eastern Orthodox (Christian) Church, declared, "To commit a crime against the natural world is a sin."

Q: In Colorado communities are troubled by possible contamination of drinking water because of natural gas and oil drilling close to water sources. Does the church have a position on the right to clean drinking water?

A: "As a gift from God, water is a vital element essential to survival; thus, everyone has a right to it," said Pope John Paul II in 2004. The Compendium of the Church says, "Satisfying the needs of all, especially of those who live in poverty, must guide the use of water and the services connected with it."

Inadequate access to safe drinking water...

Care for God's Creation

We show our respect for the Creator by our stewardship of creation. Care for the earth is not just an Earth Day slogan; it is a requirement of our faith. We are called to protect people and the planet, living our faith in relationship with all of God's creation.

This environmental challenge has fundamental moral and ethical dimensions that cannot be ignored.



Statue of St. Francis of Assisi, patron of animals and the environment, is outside St. Felix, Clifton Springs, N.Y. Founder of the Friars Minor, or Franciscans, this Italian saint whose feast is celebrated Oct. 4 dedicated himself to poverty and humility.

must therefore respect the particular goodness of every creature, to avoid any disordered use of things which would be in contempt of the Creator and would bring disastrous consequences for human beings and their environment" (Catechism of the Catholic Church, 399). Yes, some animals become extinct over time due to weather changes, ice age and floods.

Today endangered species become extinct because of Global warming and global dimming. As temperatures, humidity, soil and vegetation change it can ruin a habitat for an endangered species in a limited range. Endangered species tend to have lowered genetic diversity of their small numbers, which limits their ability to adapt to different climates. Endangered species often depend one on one or a few species for food, some of which are also vulnerable to global warming.

Human population growth and ever-increasing consumption rates cause: severe deforestation, habitat fragmentation, water scarcity, climate change, loss of biodiversity and pollution. (Quote from National Wildlife Federation's Endangered Species Act.)

Q: Is there a hopeful environmental perspective for the future?

perpetuity, for the land is mine; with me you are but aliens and tenants. Throughout the land that you hold, you shall provide for the redemption of the land." And regardless of our faith traditions, all citizens and leaders of this country have a duty to ensure that the lands we hold collectively are cared for and protected.

Q: What about so-called "endangered species?" Isn't it only natural that certain species become extinct over time? If ibis weren't true, then there would still be dinosaurs roaming the earth today.

A: "Each of the various creatures, willed in its own being, reflects in its own way a ray of God's infinite wisdom and goodness. Man

WEDNESDAY

SENTINEL

AUGUST 2, 2006 ■ GRAND JUNCTION, COLORADO

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Activists: Keep water safe

Thousands
opposed to
drilling in
watershed

By GARY HARMON
The Daily Sentinel

Environmental organizers on Tuesday turned more than 4,000 signatures in to City Hall, calling on the Grand Junction City Council to adopt a restrictive watershed drilling ordinance.

The Western Colorado Congress collected 4,150 signatures for the ordinance in about three weeks and in doing so, said board member Bill Grant, showed government officials and politicians that "there are some places that should not be drilled." Municipal watersheds, which on that



WATERSHED PLAN

FOR THE TOWN OF PALISADE AND THE CITY OF GRAND JUNCTION, COLORADO

WATERSHED WORKING GROUP

Town of Palisade, Colorado

City of Grand Junction, Colorado

Mesa County, Colorado

Ute Water Conservancy District

Mesa Water and Sanitation District

Saddle Mountain Ranch

Bureau of Land Management, Grand Junction Field Office

United States Forest Service

Genesis Gas & Oil LLC

Protections gained through collaborative planning

- Collaborative Plans of Development (PODs)
- Clustered Development and Well Pad Spacing and Well Pads
- Collaborative Storm Water Management Plan
- Subcontractor Education
- Air Quality
- Well Construction – Cementing/Casing Programs

Protections Continued...

- Well Control- Maintenance of wellbore integrity
- Pressure Monitoring- Bradenhead
- Green Fracturing
- Fracture Tracing
- Collaborative Visual Studies
- Staging Areas
- Interim and Final Reclamation Procedures

Lessons from Grand Junction

Keys to success

- Local government had to be willing to pass watershed regulations
- BLM allowed time for the community to meet with operator to work out an agreement prior to drilling.
- The operator was willing to sit down to work out a collaborative agreement

Grand Junction lessons cont...

- Plan is **enforceable** through local regulations, drilling permit conditions, and future BLM Master Development Plan
- Plan was negotiated by local governments - allowing for 45-day public comment
- Plan created trust and a process to resolve disputes

Local Government:

*Special / Conditional Use
Permits*

Preemption

- The state law **does not expressly or impliedly preempt** local governments from regulating oil and gas development.
- But, local government regulations may be preempted if they **operationally conflict** with state laws.
- **Local regulations may not be in direct conflict with state law.**

Local governments may regulate oil and gas development through *PLANNING*

*“Gunnison County has decided to adopt **Performance Based Regulations**. With this type of regulation we acknowledge that:*

Industry knows some aspects of oil and gas operations better than us--

We, the local government, know the problems that can be caused by oil and gas operations. So, we list the problems to avoid and ask industry to offer proposed solutions. We can then determine if the proposed solution is sufficient.”

--David Baumgarten, Gunnison County Attorney

Examples of Plans required by local governments

- Operation plan
- Emergency response plan, *including a fire protection and hazardous materials spills plan.*
- Water quality and quantity plan
- Cultural survey and plan
- Wildfire hazards assessment and plan
- Geologic hazards assessment and plan
- Existing and future land use assessment and plan
- Visual Mitigation Plan
- Reclamation plan

Plans required by local governments cont...

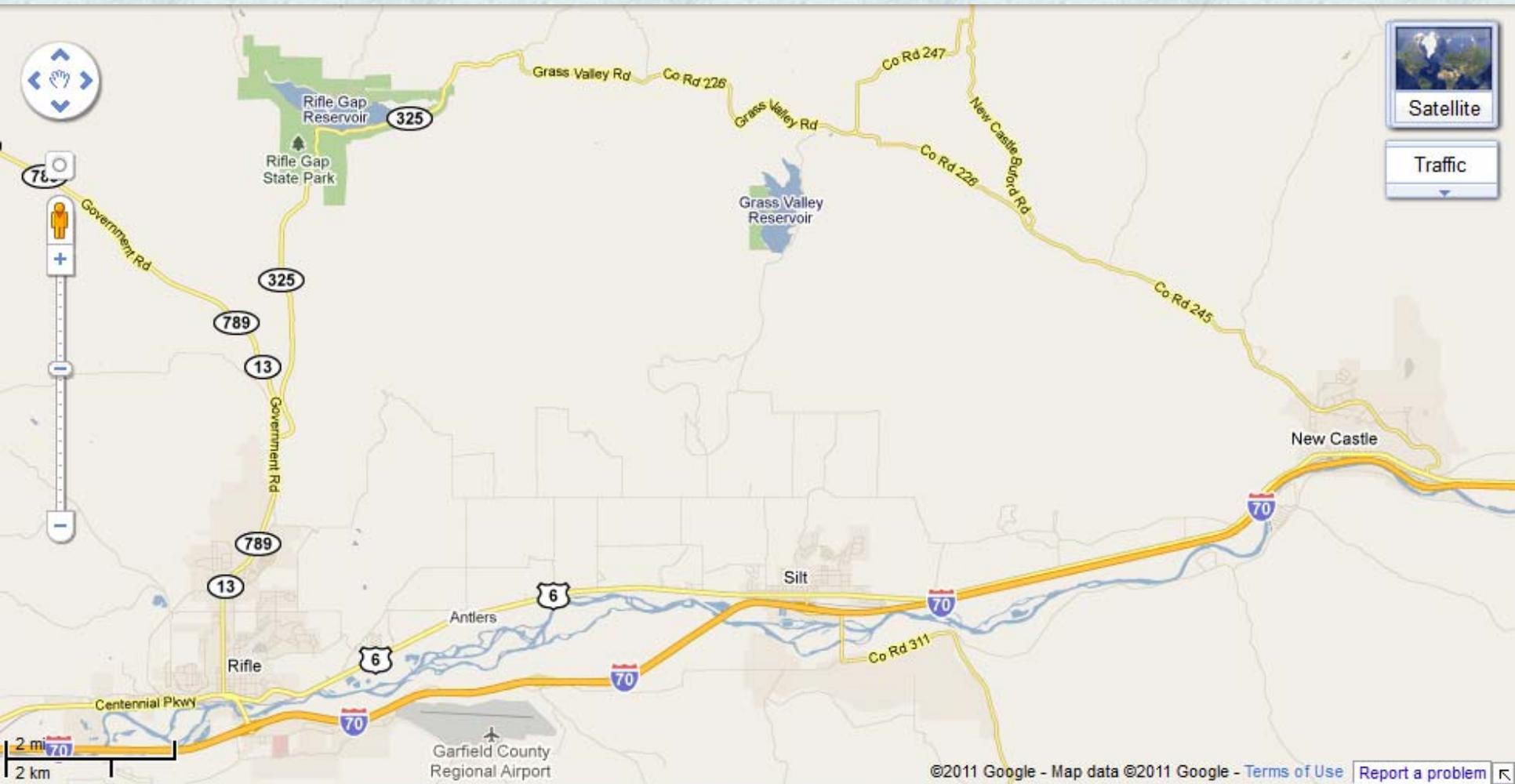
- Transportation Plan
- Roadway Impact Analysis
- Waste Disposal Plan.
- Drainage and erosion control plan for both on-site and off-site drainage.
- Post Construction Stormwater plan
- Weed Management Plan
- Wildlife Avoidance And Minimization Plan
- Compensatory Wildlife Mitigation Plan

Improving local regulations

- Looking at the continuum of planning rather than one permit at a time
- Ensuring that oil and gas industry is paying for the impacts to infrastructure and staffing time (\$18,000/well in Rio Blanco County)
- Ensuring that there is adequate monitoring and enforcement of permit conditions
- Revisiting plans as conditions and technologies change

Community:

*Rifle, Silt, Newcastle,
Community Development Plan*



Protections in the RSN-CDP

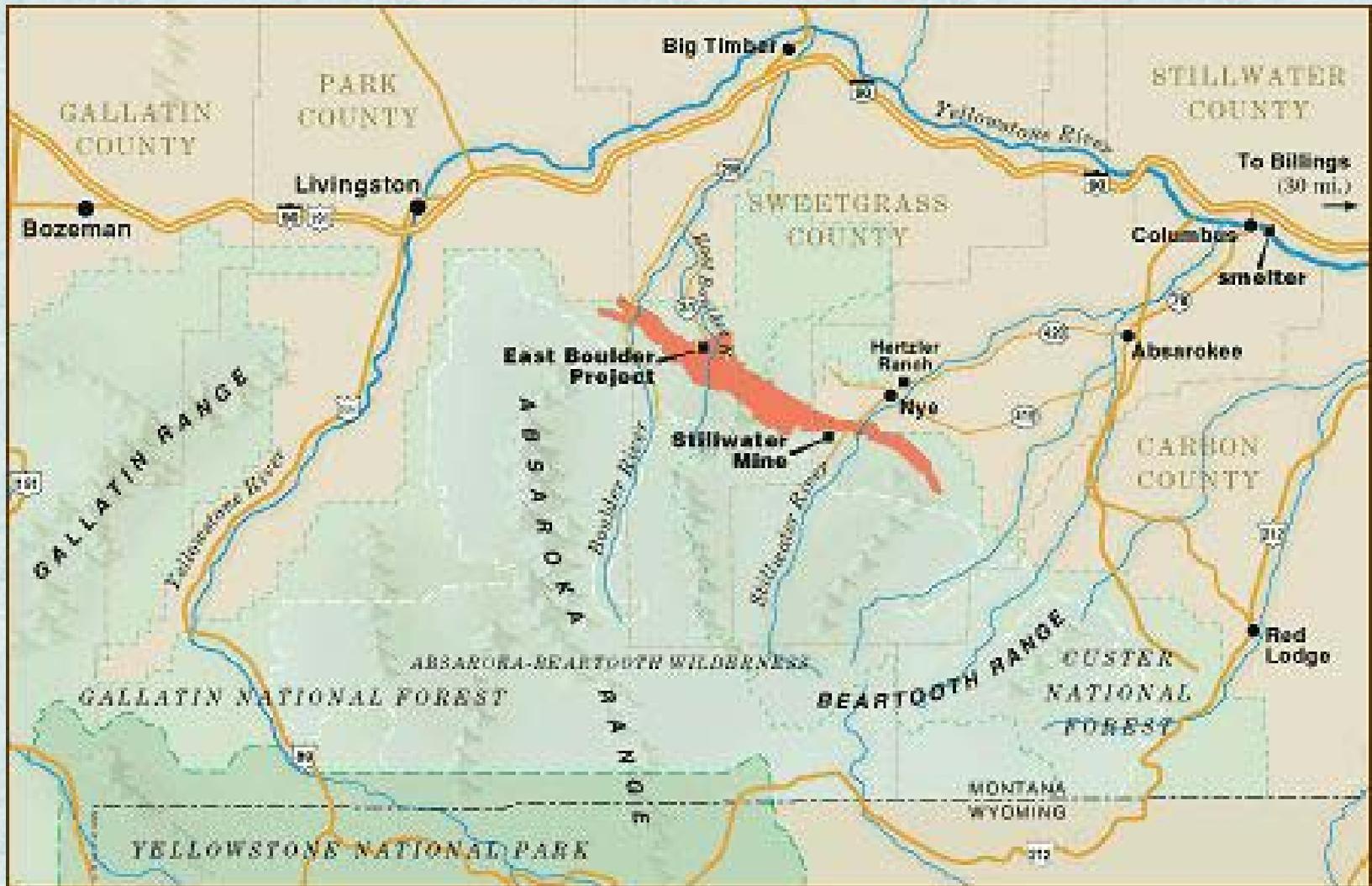
- use **multi-well pads** at 160-acre surface spacing,
- **closed loop** (“pitless”) drilling systems,
- “green” (**non toxic**) fracking fluids,
- **well setback** of at least **500 feet** from homes (over three times the state setback requirement),
- additional controls on **noise and odors**,
- and a process for resolving future community concerns or conflicts.

Lessons from RSN-CDP

- Great benefits for operator by entering into agreement.
- Enforceability an issue
- Difficulty in maintaining agreement because of time commitment and change in residents and operator management.
- Lack of local government support hurt continuity.
- Questions of whether any community group can represent the entire community

Community:

*Stillwater Good Neighbor
Agreement*



Key

 Mine Claim

Protections in the Stillwater Agreement

- citizen water quality monitoring program for rivers.
- safer roads - comprehensive traffic reduction plan;
- citizen access to information through audits of the mine's compliance with clean water and air laws,
- better protections for clean air and water through a baseline water quality study and strict water pollution limits; and
- protection for open space through over 2,220 acres of conservation easements.

Lessons from Stillwater

- Legally binding agreement was obtained through leverage of pending lawsuits
- Agreement was renegotiated twice (2005 and 2009) to meet changing needs and to set new goals
- It is challenging to maintain community involvement
- Volunteers spend between 20-60 hours a month - it has been difficult to keep unpaid volunteers engaged.
- including a requirement for alternative dispute resolution (ADR) processes before any of the parties can back out has been a very important component in the success of the agreement.

Landowners:

*Negotiating joint lease
agreements*

Benefits of joint lease agreements

- Can lead to better area-wide planning
- Surface owners have more leverage to negotiate better lease and surface use terms
- Terms of lease and surface use agreements are enforceable
- Operators gain lease and surface agreements on a larger area

Challenges in joint lease agreements

- Surface owners may not own minerals
- Hold-outs
- Joint decision-making by surface owners may be difficult -- locations, financial issues
- Some operators have shown reluctance to negotiate with groups of landowners
- If not placed as condition in permit to drill, BMPs and other agreements in lease are only enforceable through contract law– very expensive for landowners to enforce.