



Santa Fe County, New Mexico

Planning and Regulating Oil and Gas

Board of County Commissioners
September 30, 2008

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MILLER BARONDESS, LLP

Bruce Peshoff, JD, Principal
PLANNING WORKS

Agenda

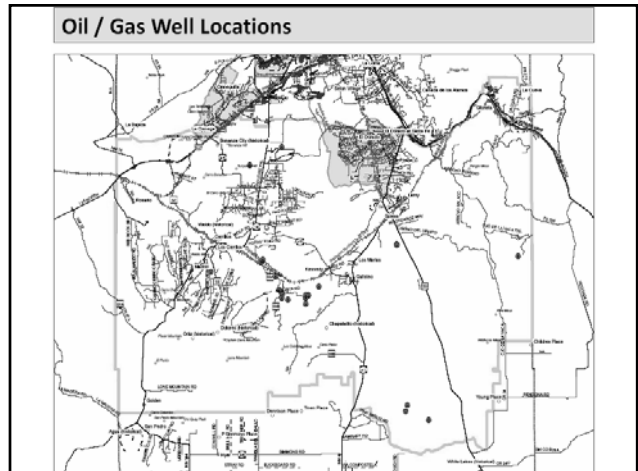
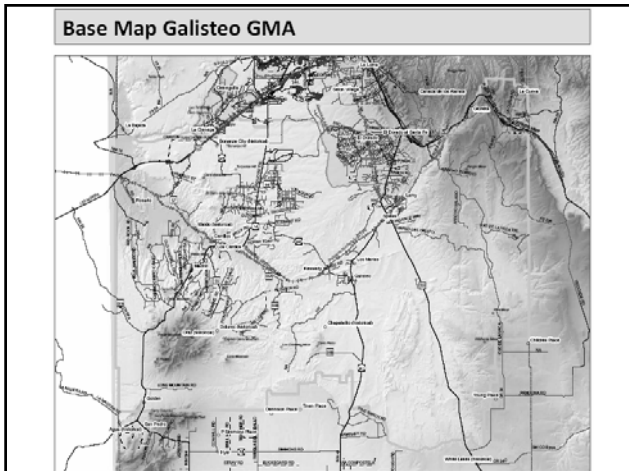
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 - Suitability Model
 - Capital Improvement Planning
- Oil and Gas Ordinance
 - Purpose, Findings
 - Three-Step Approval Process
 - Overlay Zoning District
 - Special Use and Development Permit
 - Building and Grading Permits, Certificate of Completion
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Oil and Gas Element

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“Report on the Galisteo Basin”

- Comprehensive resource-based process should be established
- Santa Fe County should adopt Ordinances to address concerns
- Consider the cumulative effect
- Natural resources are at risk, which basin and County depend upon
- Basin complexity – little definitive, detailed known

Oil and Gas Suitability Model

Model Based On...

- Data, Data, Data
- Presumption of Suitability
 - Low Suitability ≈ High Sensitivity
 - Moderate Suitability ≈ Moderate Sensitivity
 - High Suitability ≈ Low Sensitivity
- Weighted

Factor 1 Identify farms / ranches to be protected

- 1.1 Identify farm / ranch size

Factor 2 Identify lands suitable for protecting native plant and animal species

- 2.1 Identify lands with high amphibian species richness
- 2.2 Identify lands with high reptilian species richness
- 2.3 Identify lands with high bird species richness
- 2.4 Identify lands with high mammal species richness
- 2.5 Identify lands with undisturbed natural grasslands
- 2.6 Identify lands with undisturbed Pinon-Juniper Woodlands
- 2.7 Identify lands with undisturbed forested areas

Factor 3 Identify lands suitable for protecting surface and groundwater quality

- 3.1 Identify lands proximal to natural springs
- 3.2 Identify lands proximal permanent water bodies
- 3.3 Identify lands proximal to drainage buffers
- 3.4 Identify lands within Earth Works Riparian (and wetlands) Inventory
- 3.5 Karen's D.R.A.S.T.I.C. Model
- 3.6 Aquifer Sensitivity (susceptibility)

Factor 4 Identify lands with important physical characteristics

- 4.1 Identify lands within the 100-year floodplain
- 4.2 Identify steep slopes
- 4.3 Faults

Factor 5 Identify areas of cultural, historical and archaeological importance

- 5.1 Identify lands proximal to recorded archaeological, historical, and paleontological sites of demonstrated or potential significance, major Pre-Columbian pueblo sites and areas of importance to Native American groups (traditional cultural properties)

Factor 6 Identify lands with scenic value

- 6.1 Identify scenic highways
- 6.2 Identify scenic dirt roads
- 6.3 Identify lands within delphi-based scenic landmarks, outcrops, peaks, gaps and geologic features

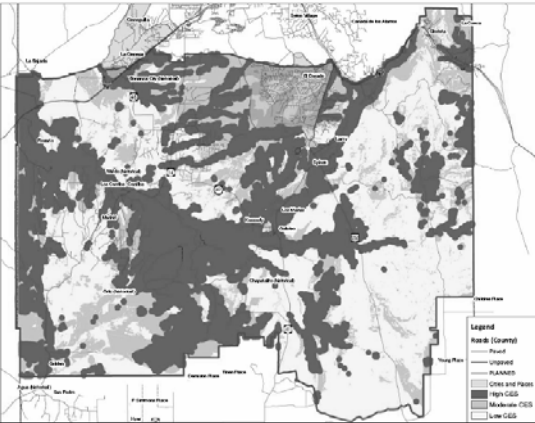
Factor 7 Identify lands unsuitable for oil/gas

- 7.1 Identify lands proximal to community / public water system
- 7.2 Identify lands proximal to paved highway
- 7.3 Identify lands proximal to paved roadway
- 7.4 Identify lands proximal to fire station

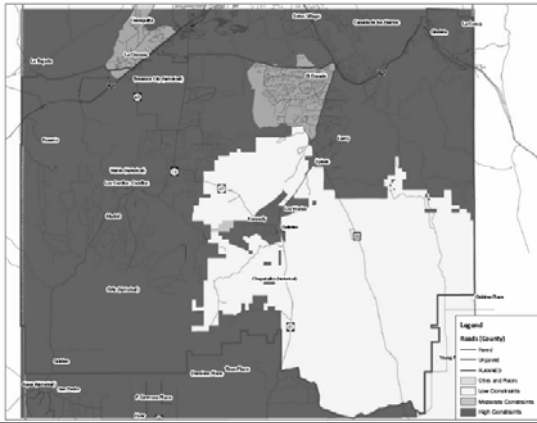
Factor 8 Identify land use compatibility

- 8.1 Identify lands proximal to designated consevation areas

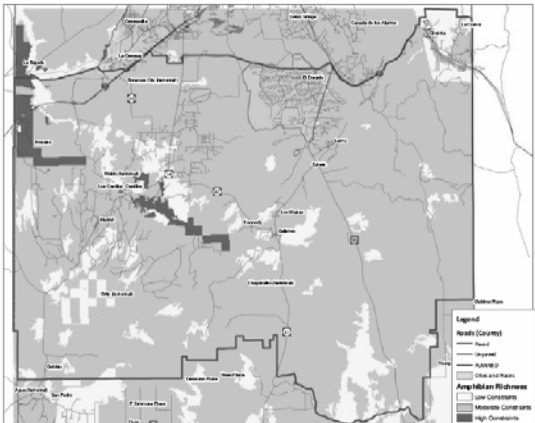
Composite Oil / Gas Suitability



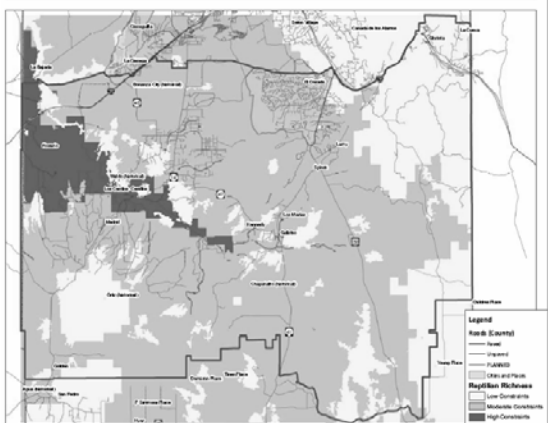
Factor 1.1 - Large Ranch Constraints



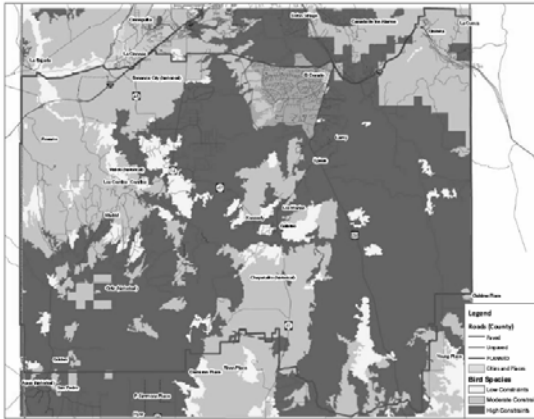
Factor 2.1 - Amphibian Richness Constraints



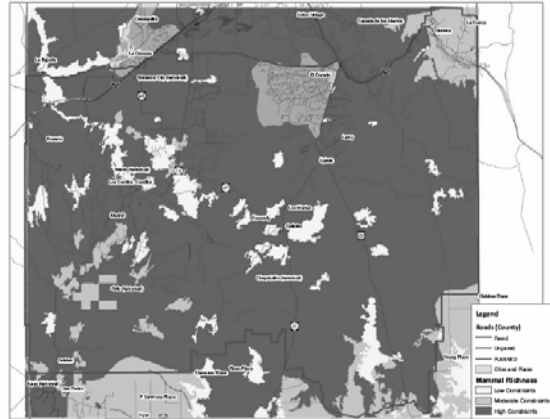
Factor 2.2 - Reptilian Richness Constraints



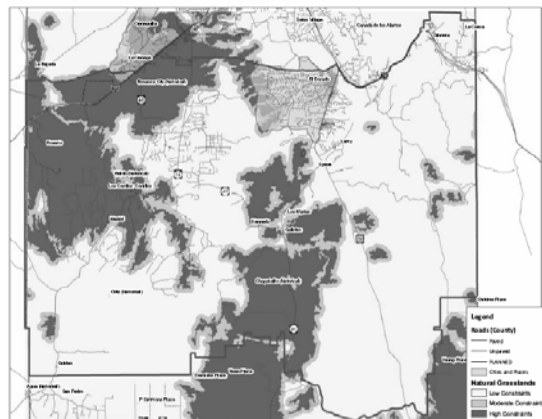
Factor 2.3 - Bird Richness Constraints



Factor 2.4 - Mammal Richness Constraints



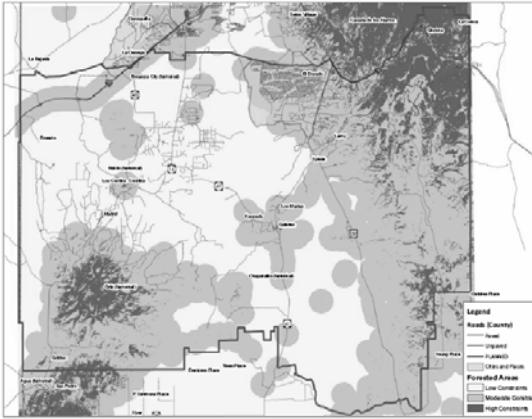
Factor 2.5 - Natural Grasslands Constraints



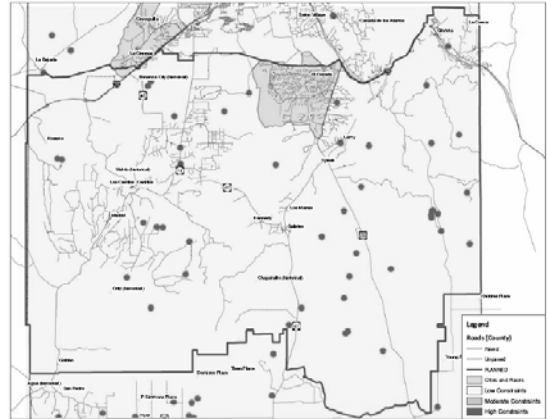
Factor 2.6 - Pinyon-Juniper Constraints



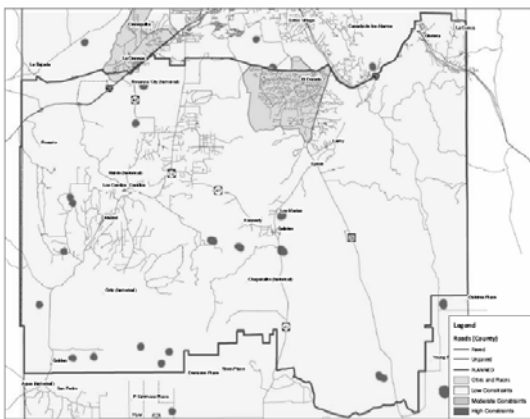
Factor 2.7 - Forest Constraints



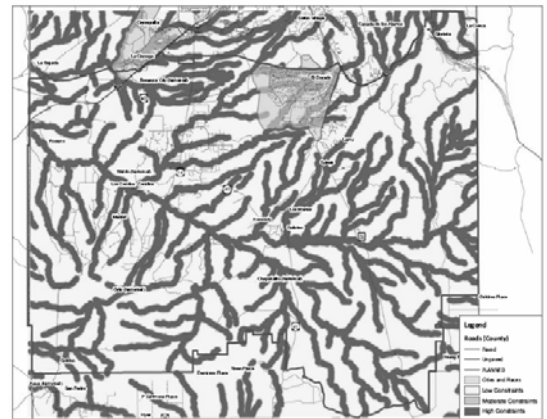
Factor 3.1 - Natural Spring Proximity Constraints



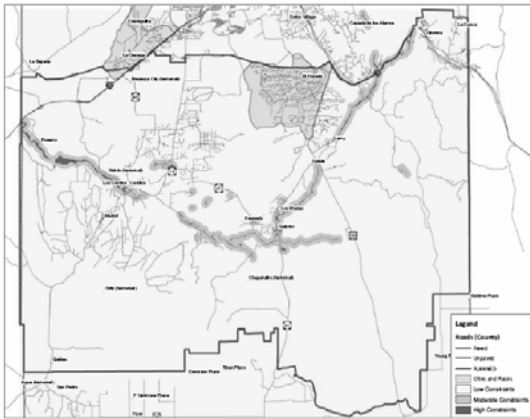
Factor 3.2 - Water Body Proximity Constraints



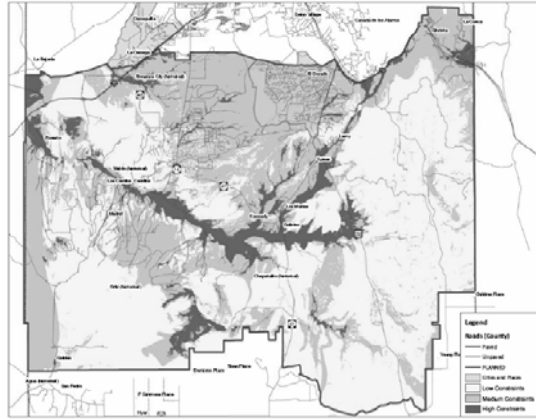
Factor 3.3 - Drainage Proximity Constraints



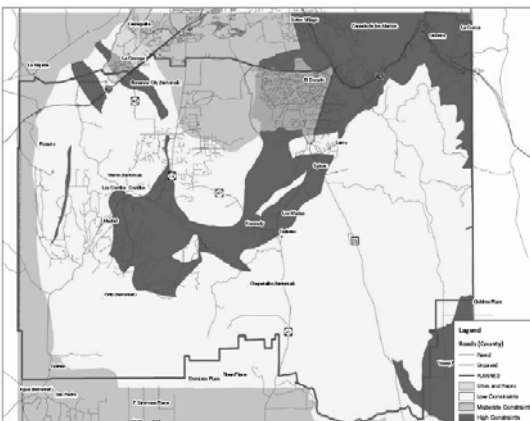
Factor 3.4 - Riparian Constraints



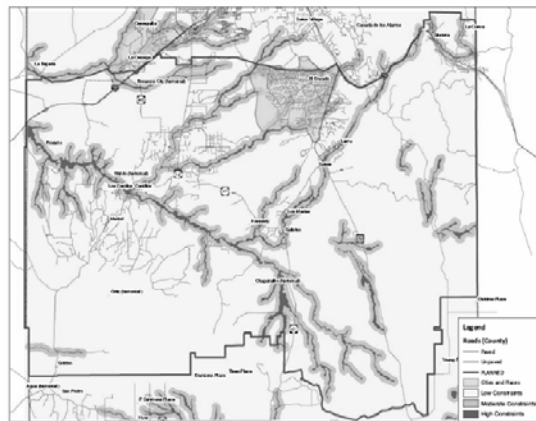
Factor 3.5 - Groundwater Sensitivity Constraints



Factor 3.6 - Aquifer Susceptibility Constraints



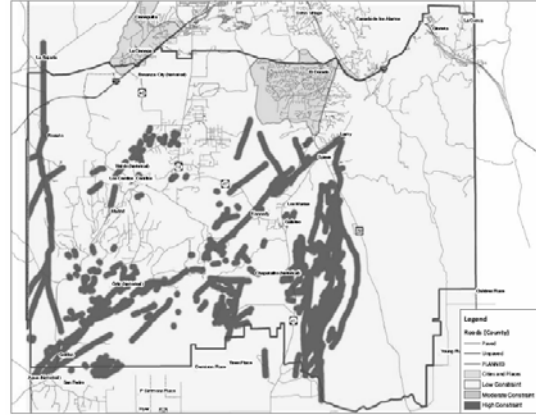
Factor 4.1 - Floodplain Constraints



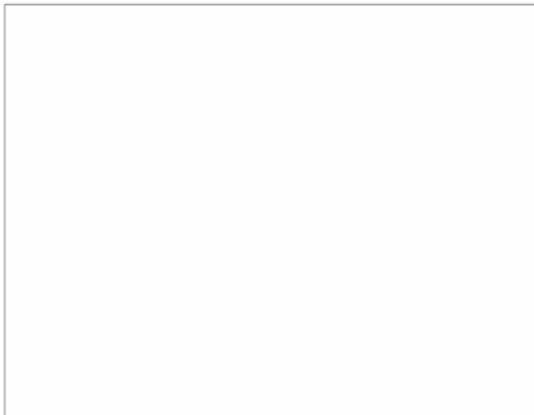
Factor 4.2 - Slope Constraints



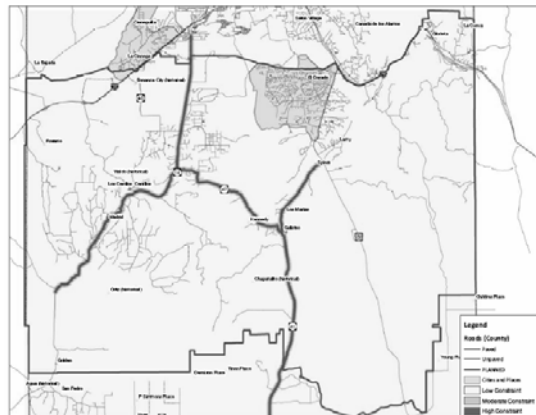
Factor 4.3 - Fault Line Constraints



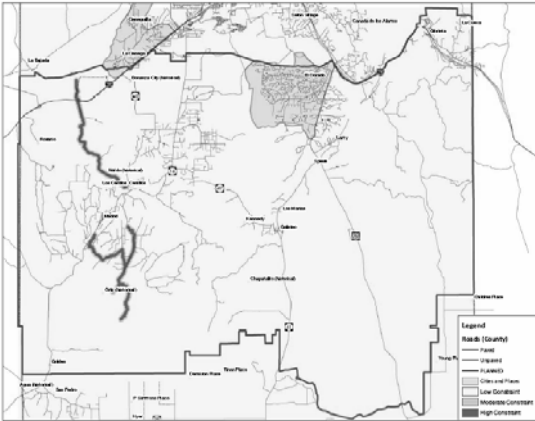
Factor 5.1 - Archaeological and Historical Constraints



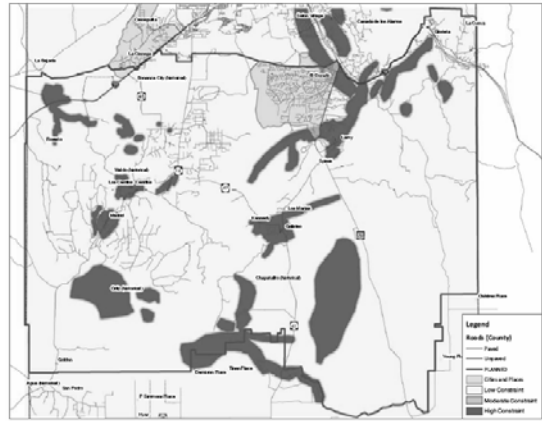
Factor 6.1 - Scenic Highway Constraints



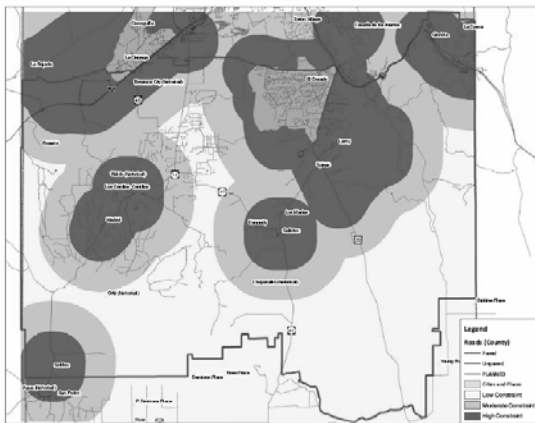
Factor 6.2 - Scenic Dirt Road Constraint



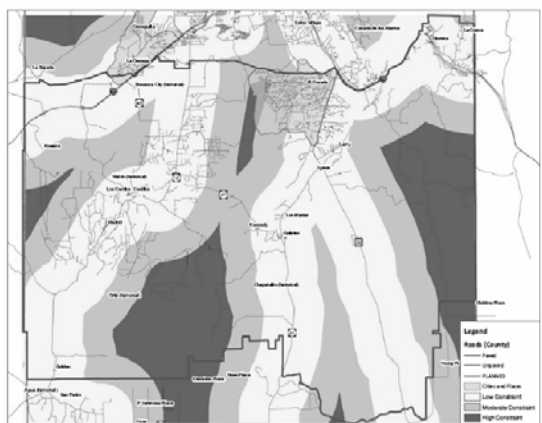
Factor 6.3 - Scenic Area Constraints



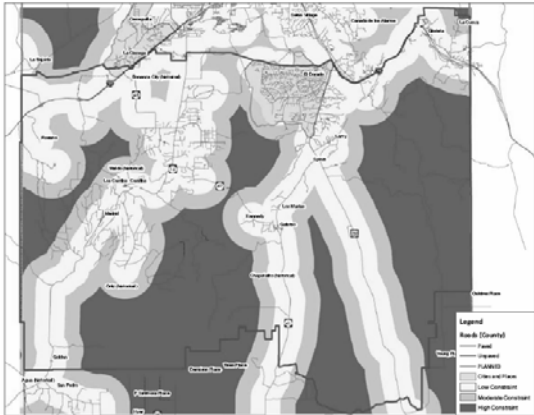
Factor 7.1 - Public Water System Constraints



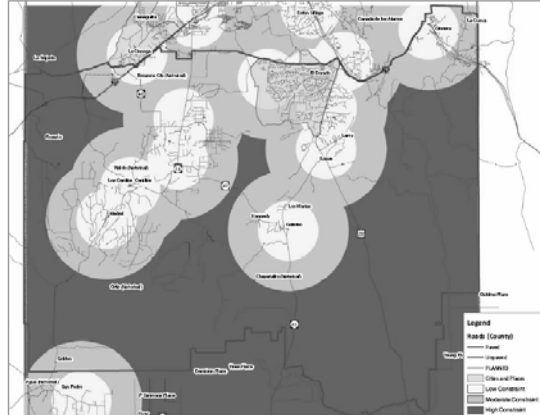
Factor 7.2 - Paved Highway Proximity Constraint



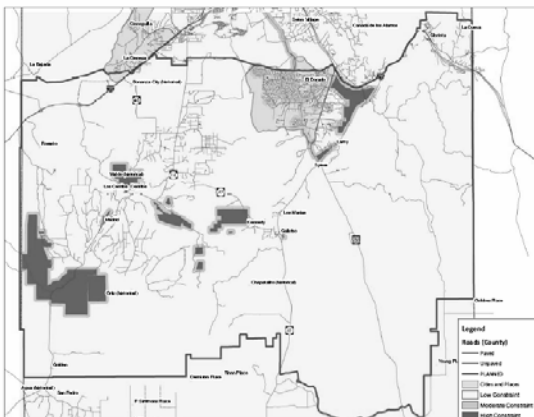
Factor 7.3 - Paved Road Proximity Constraints



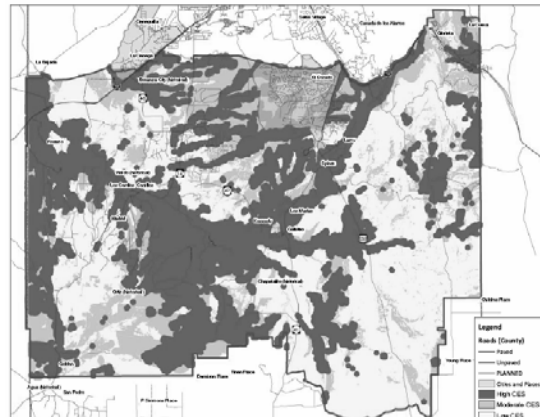
Factor 7.4 - Fire Station Constraints



Factor 8.1 - Conservation Area Constraints



Composite Oil / Gas Suitability



Oil and Gas Buffers

Identify farms / ranches to be protected:

Identify farm / ranch size less than 40 acres	1,000
Identify farm / ranch size less than 40 acres to 100 acres	500
Identify farm / ranch size less greater than 100 acres	250

Identify lands suitable for protecting native plant and animal species:

Identify lands with high amphibian species richness	750
Identify lands with high reptilian species richness	750
Identify lands with high bird species richness	750
Identify lands with high mammal species richness	750
Identify lands with undisturbed natural grasslands	750
Identify lands with undisturbed Pinon-Juniper Woodlands	750
Identify lands with undisturbed forested areas	750

Identify lands suitable for protecting surface and groundwater quality:

Identify lands proximal to natural springs	1,000
Identify lands proximal permanent water bodies	1,000
Identify lands proximal to drainage buffers	1,000
Identify lands within Earth Works Riparian (and wetlands) Inventory	1,000
Identify lands proximal to quaternary alluvium geology	1,000
Identify lands soils classified as excessively or somewhat excessively drained	1,000
Identify lands with reservoir alluvium geology	1,000

Identify lands with important physical characteristics:

Identify lands within the 100-year floodplain	1,000
Identify steep slopes (greater than 30%)	500

Identify areas of cultural, historical and archaeological importance:

Identify lands proximal to recorded archaeological, historical, and paleontological sites of demonstrated or potential significance	750
Identify lands proximal to major Pre-Columbian pueblo sites and zones of high archaeological or paleontological potential	750
Identify lands proximal to areas of importance to Native American groups (traditional cultural properties)	750

Identify lands with scenic value:

Identify scenic highways	500
Identify scenic dirt roads	500
Identify lands within delphi-based scenic landmarks, outcrops, peaks, gaps and geologic features	500

Identify lands unsuitable for oil/gas:

Identify lands proximal to community / public water system	1,000
Identify lands proximal to paved highway	500
Identify lands proximal to paved roadway	500
Identify lands proximal to fire station	500
Identify lands proximal to health care facilities	500

Identify land use compatibility:

Identify lands proximal to designated consevation areas	1,000
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***Capital Improvement Plan and
Annual Operation Costs***

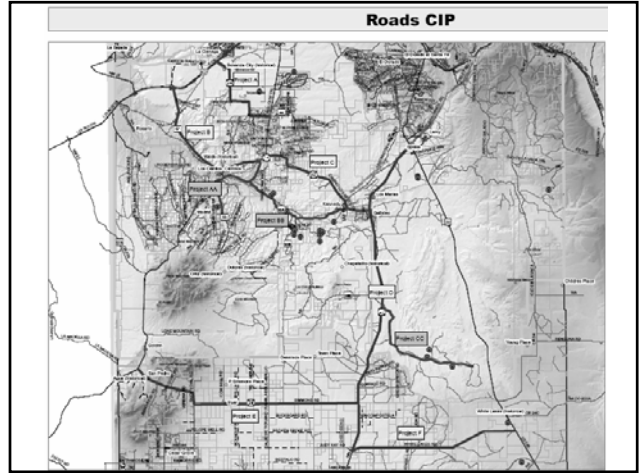
Require 'Concurrency'

- Public facilities and services
- Needed to maintain adopted level of service standards
- Available simultaneous to, or within a reasonable period of time after, development approval or construction

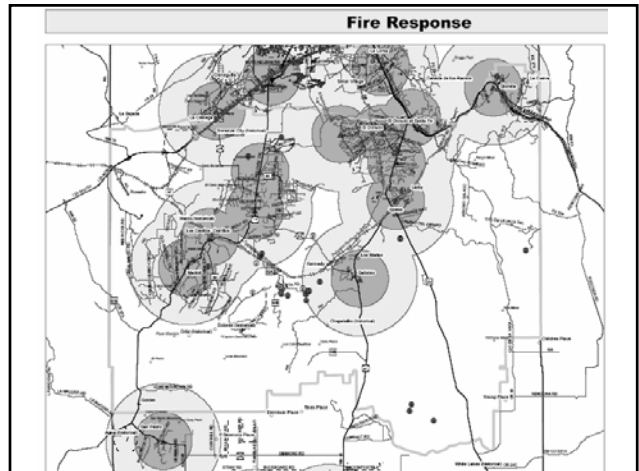
Adequate Public Facilities (APF)

Implement concurrency by creating procedures, standards and enforcement mechanisms to ensure that construction does not proceed where the impact of new development would cause a reduction in the level of service standards

	Roadway	Length (miles)	Cost
ROADS			
Extraction/Production Routes			
Project A	CR 45	6.72	\$1,000,000
Project B	CR 57	6.83	\$1,000,000
Project C	CR 42	9.33	\$1,000,000
Project D	SR 41	22.50	
Project E	CR 26	11.00	\$1,000,000
Project F	CR 20B	11.22	\$1,000,000
Exploration Routes			
Project AA	55A	9.33	\$500,000
Project BB	55	6.72	\$500,000
Project CC	(unnamed)	6.72	\$500,000



	SF GFA	Cost Per SF	Vehicles	Cost
FIRE, EMS				
Public Safety/Civic Center	12,000	\$200		
Vehicles				
Engine			1	\$250,000
Ambulance			1	\$135,000
Tanker			1	\$200,000
Administration/Inspection Vehicle			1	\$30,000
Equipment				\$30,000



	<u>SF GFA</u>	<u>Cost Per SF</u>	<u>Vehicles</u>	<u>Cost</u>
SHERIFF				
Public Safety/Civic Center	2,000	\$200		
Vehicles				
Patrol Car			2	\$31,000
Administration/Investigation Vehicle			1	\$25,000
Equipment				\$10,000

	<u>SF GFA</u>	<u>Cost Per SF</u>	<u>Vehicles</u>	<u>Cost</u>
ADMINISTRATION				
Public Safety/Civic Center	3,000	\$200		
Vehicle				
			1	\$25,000
COMMUNITY SERVICES				
Public Safety/Civic Center	3,000	\$200		

ROADS	
Total	\$56,485,000
FIRE, EMS	
Total	\$3,040,000
SHERIFF	
Total	\$497,000
ADMINISTRATION	
Total	\$625,000
COMMUNITY SERVICES	
Total	\$600,000
TOTAL CIP	\$61,247,000

ROADS	
Total	
FIRE, EMS	
Total	\$1,165,000
SHERIFF	
Total	\$430,000
ADMINISTRATION	
Total	\$65,000
COMMUNITY SERVICES	
Total	
TOTAL ANNUAL COSTS	\$1,660,000

	Capital Costs, Yrs 1-5	Capital Costs, Yrs 6-20
ROADS		
Total	\$30,905,000	\$25,580,000
FIRE, EMS		
Total	\$2,790,000	\$250,000
SHERIFF		
Total	\$66,000	\$431,000
ADMINISTRATION		
Total	\$25,000	\$600,000
COMMUNITY SERVICES		
Total		\$600,000
TOTAL	\$33,786,000	\$27,461,000

Oil and Gas Ordinance

- ## Basic Ordinance Outline
- Purpose, Findings, Definitions
 - Three-step approval process
 - Oil and Gas Overlay Zoning District Classification
 - Required planning and analysis
 - Oil and Gas Special Use and Development Permit
 - Performance standards and general requirements
 - Building or Grading Permits and Certificate of Completion
 - Beneficial Use and Value Determination

- ## Step One - Rezoning
- All proposed oil and gas projects must apply for an Oil and Gas Overlay Zoning District
 - Backbone of the ordinance, authorizes review, calls for resource protection, sets standards and requirements
 - Process:
 - Pre-application meeting with specified surrounding property owners/lessees and groups
 - Submit concept plans to Administrator

Concept Plan Requirements

- Map of proposed facility and surrounding area
- Detailed description of all oil and/or gas activities proposed
- List of assessments, reports, plans and studies to fully evaluate the potential impacts of oil/gas development on the area before a rezoning decision is made

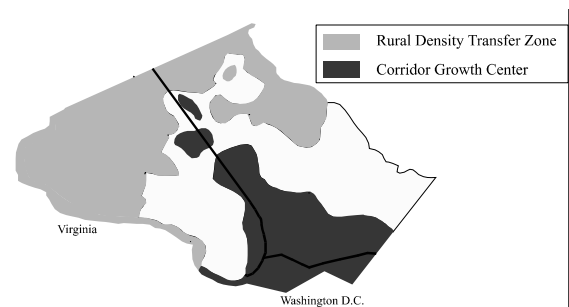
Land Suitability Analysis

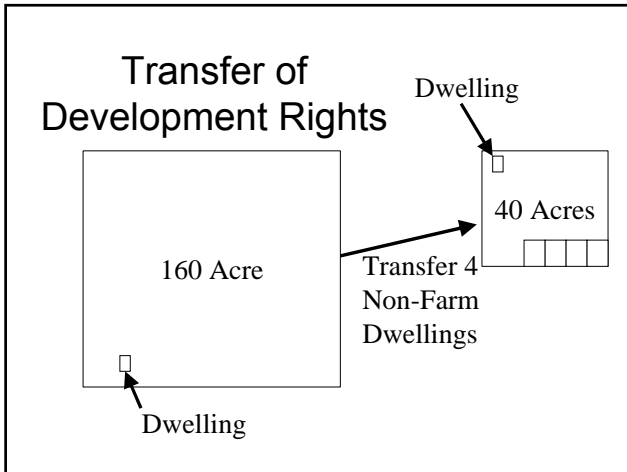
- Designed to protect community resources by limiting oil and gas development in sensitive areas as a legislative enactment
- Protects resources such as:
 - Farms/ranches
 - Native plant and animal species
 - Surface and ground water
 - Important physical characteristics
 - Areas of cultural, historical and archaeological importance
 - Lands with scenic value
 - Lands near conservation areas

Sensitivity Areas

- High Sensitivity
 - Because these areas are the most sensitive to oil/gas development, the number of wells is limited to 1.6 per square mile, with a TDR allocation of up to .5 additional oil wells per square mile
- Moderate Sensitivity
 - Oil wells limited to 3.2 per square mile, TDR allocation of up to .75 additional oil wells per square mile
- Low Sensitivity
 - Oil wells limited to 6.4 per square mile, TDR allocation of up to 1.25 additional oil wells per square mile

Montgomery County, MD





- ### Assessments, Reports, Plans and Studies
- Environmental Impact Report
 - Adequate Public Facilities and Services Assessment
 - Water Availability Report
 - Traffic Impact Analysis
 - Geohydrological Report
 - Emergency Response and Preparedness Plan
 - Fiscal Impact Analysis

- ### Environmental Impact Report
- Comprehensive analysis of the environmental impacts likely to occur
 - Designed to inform the County and public of the significant environmental effects of a project, identify possible ways to minimize significant adverse impacts or effects and describe reasonable alternatives to the project
 - Provides support for whatever the County's decision may be and allows for a more informed decision
 - Includes measures to protect/mitigate impacts to historical, cultural and archaeological resources
 - Also takes into account cumulative impacts which may go unnoticed with project-by-project decisionmaking

- ### Adequate Public Facilities and Services Assessment
- Ties approval to the availability of infrastructure and public service capacity required for the project
 - Used to time approval based on the availability of infrastructure and services to an adopted capital improvements plan (CIP)
 - Takes into account services required by oil and gas projects, such as:
 - Fire protection
 - Law enforcement
 - Emergency response
 - Water
 - Roads
 - All of these services must be available at adopted level of service (LOS) for the project to proceed

Water Availability and Geohydrological Reports

- Water availability report requires applicant to show it has planned for and made available adequate water supplies
- Geohydrological report details the geohydrology of the site and surrounding area
 - Sets baseline water quality measurements
 - Ensures minimal impacts

Traffic Impact Analysis (TIA)

- Provides information necessary for the Board to assess the transportation effects and impacts of the traffic associated with an oil/gas project
- Oil/gas traffic involves heavier vehicles and loads than regular passenger traffic, impacting roads on a different scale
- A TIA measures this impact and reveals any mitigation required

Emergency Response and Preparedness Plan

- A plan to handle possible emergency situations related to oil and/or gas development
- Includes planning to prevent emergency situations too
- Specifies contact person, map of the area, facilities, pipes, etc.
- Ensures everything emergency personnel need to respond is planned for ahead of an emergency situation

Fiscal Impact Analysis

- A study of the fiscal implications of an oil/gas project
- Determines how much the project will cost the County to provide services (fire, police, etc.)
- Costs to County minus revenues the County will receive from the project equals fiscal impact

Development Agreements

- Provide a mechanism for the County and owners/lessees to form agreements regarding development, financing and land use of the oil and gas project;
- Allow the County to include terms, conditions, and other provisions that may not otherwise be able to be mitigated or implemented;
- Provide stability through enforceability;
- Provide a procedure that ensures participation and comment of the public and elected officials;
- Provide a partial mechanism for the financing of all capital facilities and public services as provided for in the ordinance.

Step 2 - Oil and Gas Special Use and Development Permit (SUDP) Process

- Permit required in addition to rezoning process above and subsequent Grading and/or Building Permits and a Certificate of Completion
- Process:
 - Application to Administrator
 - Completeness Review
 - Planning Commission hearing and decision

SUDP Review Criteria

- for consistency with adopted plans
- to determine whether performance standards are met
- to determine whether location is compatible with adjoining uses
- to determine whether project will be detrimental to the safety, health, prosperity, morals, order, comfort and convenience of the County
- for consistency with OCD location requirements
- to determine if the proposed location is in a geologic hazard area or an area with slopes equal to or exceeding eleven (11 %) percent.
- to determine if the proposed location meets the criteria for a drilling island made up of a single well pad with multiple wells collocated on the site.
- to determine whether the Operator has violated any laws pertaining to oil and gas development.
- whether the proposed project will have an adverse effect or impact on any fiscal, economic or environmental factors, and whether the proposed facility will be detrimental to the public health, and safety.

General Requirements

- Ordinance requires reclamation and re-vegetation plan to return surface to mirror of pre-project appearance
- Adequate bonds and insurance required for project approval, including pollution liability insurance
- Adequate fire prevention equipment required on-site, fire preventing storage and operational standards

Performance Standards

- Appearance and maintenance of site
- Storage tanks and closed-loop systems
- Noise
- Light
- Fracturing and acidizing
- Setbacks
- Hours of operation

Performance Standards

- Visual impacts
- Well pads
- Flaring of gas
- Landscaping
- Fencing
- Water quality
- Disposal of salt and other deleterious substances

Performance Standards

- Abandonment, Plugging and Site Remediation
- Violations
- Enforcement
- Penalties, including permit revocation

Beneficial Use and Value Determination

- Used to ensure that a denial of an Oil and Gas Overlay Zoning District Classification application or a denial of a subsequent Special Use and Development Permit application does not result in an unconstitutional deprivation of private property rights
- Administrative variance process used to resolve any claims that application of the Ordinance has had an unconstitutional effect on property
- Hearing before Hearing Officer
- Final Action by Board

Step 3 – Ministerial Permits

- Obtain Grading and/or Building Permit and Certificate of Completion

Next Steps

Next Steps

- CDRC Meetings (October, November)
- Growth Management Element (November)
- Board of County Commissioners (November, December)
- Comprehensive Land Development Code Amendment
- General Plan Update (Area Plans)