



Local Oil and Gas Comprehensive Plan

The Governor's Oil and Gas Task Recommendation #17:

“The purpose is to reduce impacts to and conflicts with communities, and include siting tools to locate facilities away from residential areas when feasible.”

“Creates incentive for early resolution of concerns about siting in urban communities by providing local government with opportunity to participate in siting facilities before an Operator finalizes locations.”

from Colorado Oil and Gas Task Force Final Report, February 27, 2015, Pages 5-6

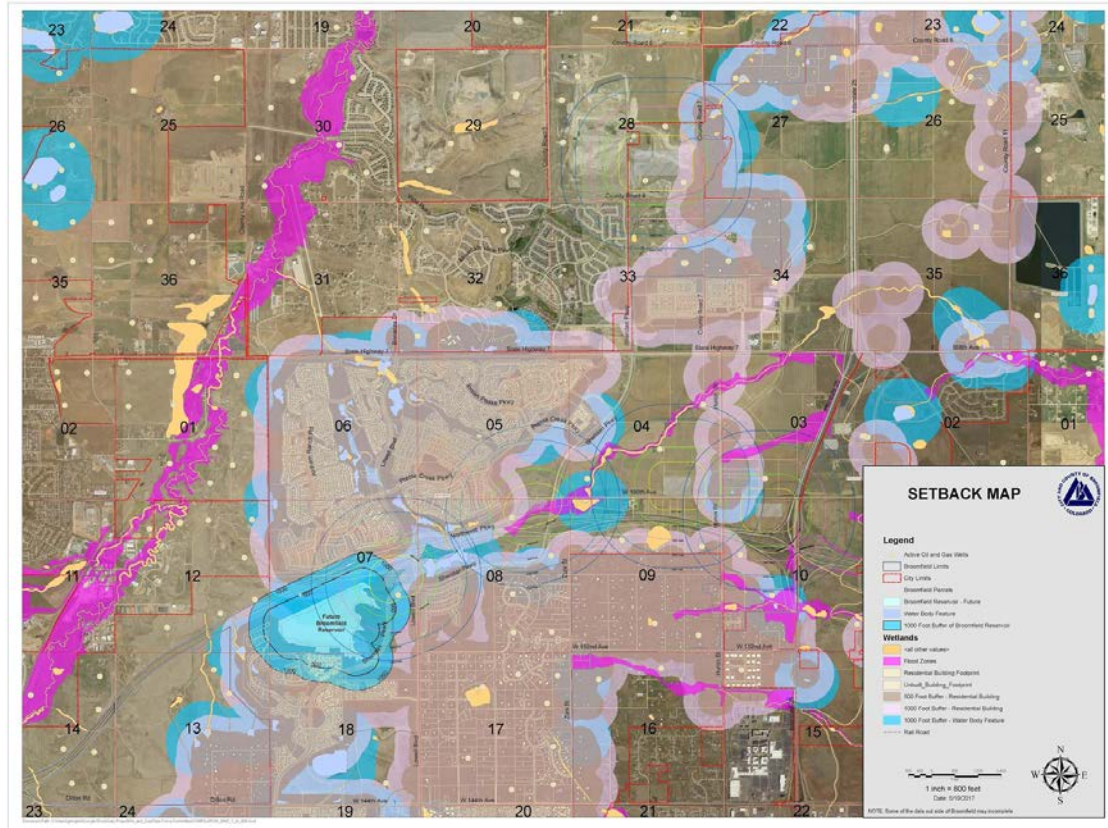


- Broomfield City Council created an Oil and Gas Comprehensive Plan Update Committee, by resolution, which consisted of 14 Citizen Members, with oil and gas, legal, environmental, and other backgrounds.
- The Committee conducted meetings for six months, engaging with consultants and researchers, and produced a new chapter to Broomfield's Comprehensive Plan on Oil and Gas Development.
- The presentations, legal analysis of issues, and complete Oil and Gas Chapter can be found at this link:

<https://drive.google.com/drive/folders/0BxAJnoFWbi4RR1U3YU5RX2dHc00>



Planning Sub-committee: Large Compilation Map



Final Weighted Criteria

Heavily Weighted towards Distances and Residential Density

Weighted Criteria Were Used to Evaluate Potential Adverse Community Impacts to Public Health, Safety, Welfare and the Environment for Alternative Well Sites

Factor	Weighting Criteria Development			Type of Impact	General Comments on Approaches for Using Criteria to Evaluate Alternative Sites
	Site Criteria (10 Factors Total) on 1 to 10 Point Scale Weighting for each Factor	Pairing Exercise Votes	Weighting On 1 to 10 Point Scale		
1	Number of Occupiable Residential Units within 1500 foot Radius Circle	12	10.0	PHS,PW	<p>Directly Quantifiable Factors: (1) Distance from Well Site Center and/or (2) Number of Residences within X foot radius of Well Site Center</p> <p>Number of Occupied Residence within 2500 feet of Well Site Used to Compare Alternative Sites (Based on CSU Greeley Study)</p> <p>For Visual Impact, 360 Degree Drone Panoramas (at 30 & 100) feet, and City Maps for Each Well Site used compare Alternative Sites</p> <p>Simple Matrix Used to Evaluate and Rate Alternative Sites</p>
2	Distance to Nearest Surface Water	12	10.0	Env	
3	Distance to Nearest Occupied Residence	11	9.2	PHS,PW	
4	Distance to Nearest School Property Line	11	9.2	PHS,PW	
5	Potential Impact on Residential Property Values during Drilling through Flowback Phases	7	5.8	PW	
6	Visual Impact during Drilling through Completion Phases	6	5.0	PW	
7	Distance to Nearest Hospital/Overnight Health Care Facility	6	5.0	PHS,PW	
8	Number of Occupiable Residential Units within 3000' radius (Major Event impact case)	5	4.2	PHS,PW	
9	Use of Active Well Site or Previously Disturbed Industrial Use Site	3	2.5	PHS,PW	
10	Distance to Nearest Platted Residential lot (ft)	2	1.7	PHS,PW	
11	Land Use % Breakdown within 80-Acre Circle (Radius of 1050 feet from Center of Well Site)	2	1.7	PHS,PW	
TOTALS Pairing Votes		77	64		

Categories of Criteria	#	% Weight of Total Criteria
Resident Distances - (from Site to Buildings)	4	39%
Resident Density	3	31%
Environmental – Distance to Surface Water	1	16%
Visual Impact	1	8%
Current Land Use surrounding site	2	6%

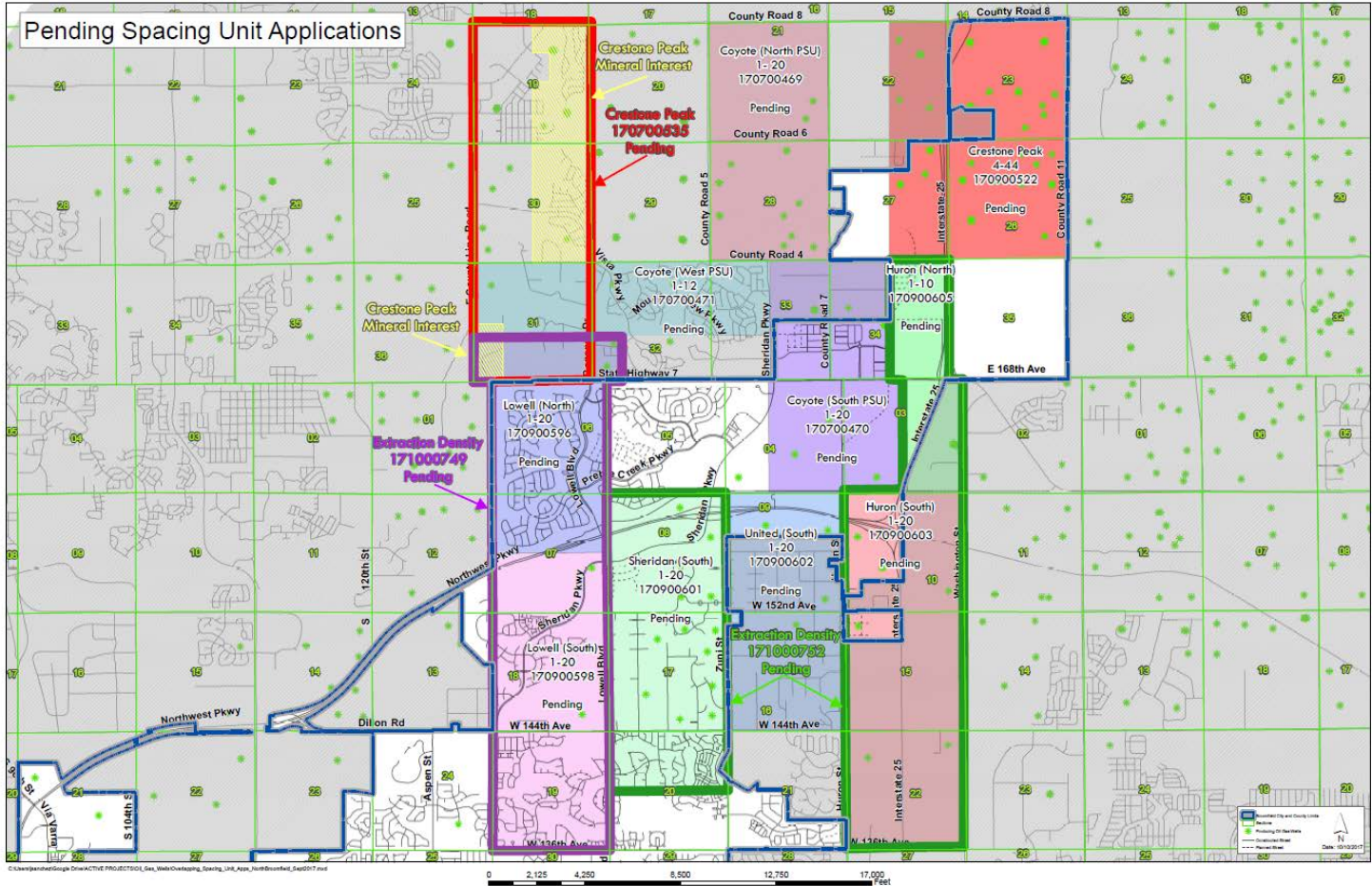
- ❖ **Distances from Well Site:** Nearest Residence, School, Overnight Health Care Facility, Platted Residence, and Surface Waters (Environmental)
- ❖ **Density of Residences:** Number of Residences within Specific Distances of Well Site (3000', 2500', 1500')
- ❖ **Visual Impacts:** From Drilling thru Completion using Drone Panos (100' and 30' Elevations) and City Overhead Maps
- ❖ **Types of Land Uses Nearest Well Site:** Within 1050' (~80 acres)
- ❖ **Current Use of Site:** Active Well Site, Previously Disturbed Site, Industrial Site

Alternative Sites Total Score on Scale 1 to 100



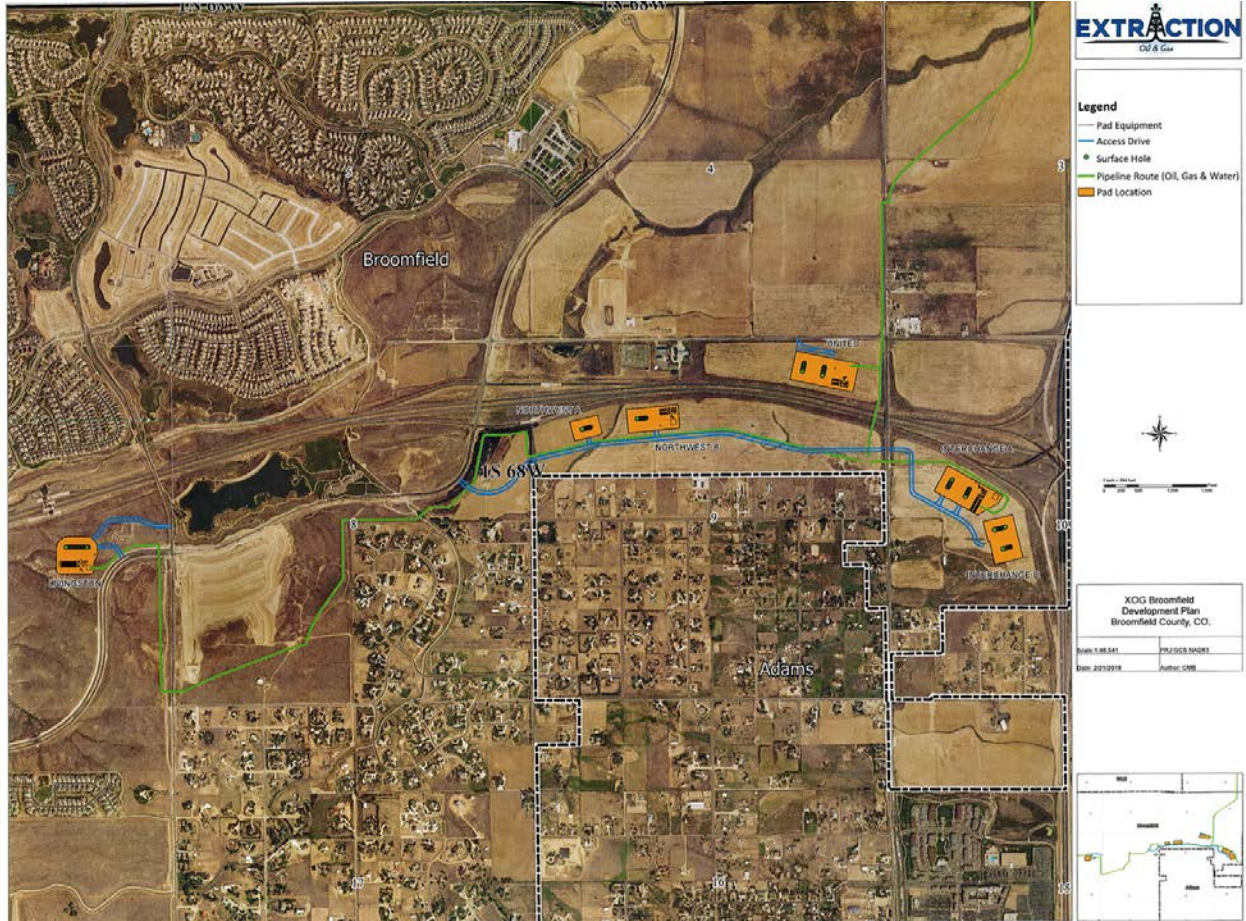
Site Ranking Transposed to 100 Scale	
Site Location	Rank
Loc. #15	100
Loc. #14	98
Loc. #3	98
Loc. #16	95
Loc. #20 - Huron	93
Loc. #3B	93
Loc. #19 - United	92
Loc. #13	91
Loc. #4	89
Loc. #5	89
Loc. #11	88
Loc. #21 - Coyote Trails	88
Loc. #2	88
Loc. #12	87
Loc. #23	86
Loc. #24	81
Loc. #6	78
Loc. #10	77
Loc. #7	76
Loc. #18 - Sheridan	76
Loc. #1	75
Loc. #9	74
Loc. #3A	73
Loc. #8	71
Loc. #17 - Lowell	65
Loc. #22	56

OIL AND GAS COMMITTEE



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Extraction Well Pad map





More Rigorous State Regulations for Urban Areas

- Onsite power generation
- Noise
- No on site storage tanks
- Closed looped systems with 98% hydrocarbon control
- Required mapping of flowlines and pipelines, with more routine testing
- Setbacks
- Routine testing and monitoring of new and P&A's wells
- Increased financial assurances
- More frequent water quality monitoring in the GWA
- Require a more rigorous alternative site analysis



EXTRACTION/BROOMFIELD OPERATOR AGREEMENT

- From 10 well sites to six well sites
- From 139 wells to 84 wells
- Extraction to plug and abandon 42 old wells in Broomfield, Adams & Weld Counties
- All oil, gas & produced water to be removed from well sites by pipeline
- 57 best management practices on COGCC permits, including closed looped systems, containment berms, air modeling,, quiet drilling technology, setback requirements, minimal pad equipment after completion
- Dedication of 39 acres of open space to Broomfield
- Comprehensive Drilling Plans that includes 28 plans on topics like air quality, emergency response, risk analysis, electrification of well sites, noise mitigation, water quality
- As built map of pipelines and flowlines
- \$100,000,000 general liability insurance and environmental liability insurance
- <https://drive.google.com/file/d/0B2fG3PRBssZzMIV4UjJBb0ZXQ3pGejVIMThhUHVuQjhyT2c0/view>