Memorandum of Understanding (MOU): Non-Regulatory Tool for Local Governments and Industry

Rocky Mountain Land Use Institute: Western Places / Western Spaces

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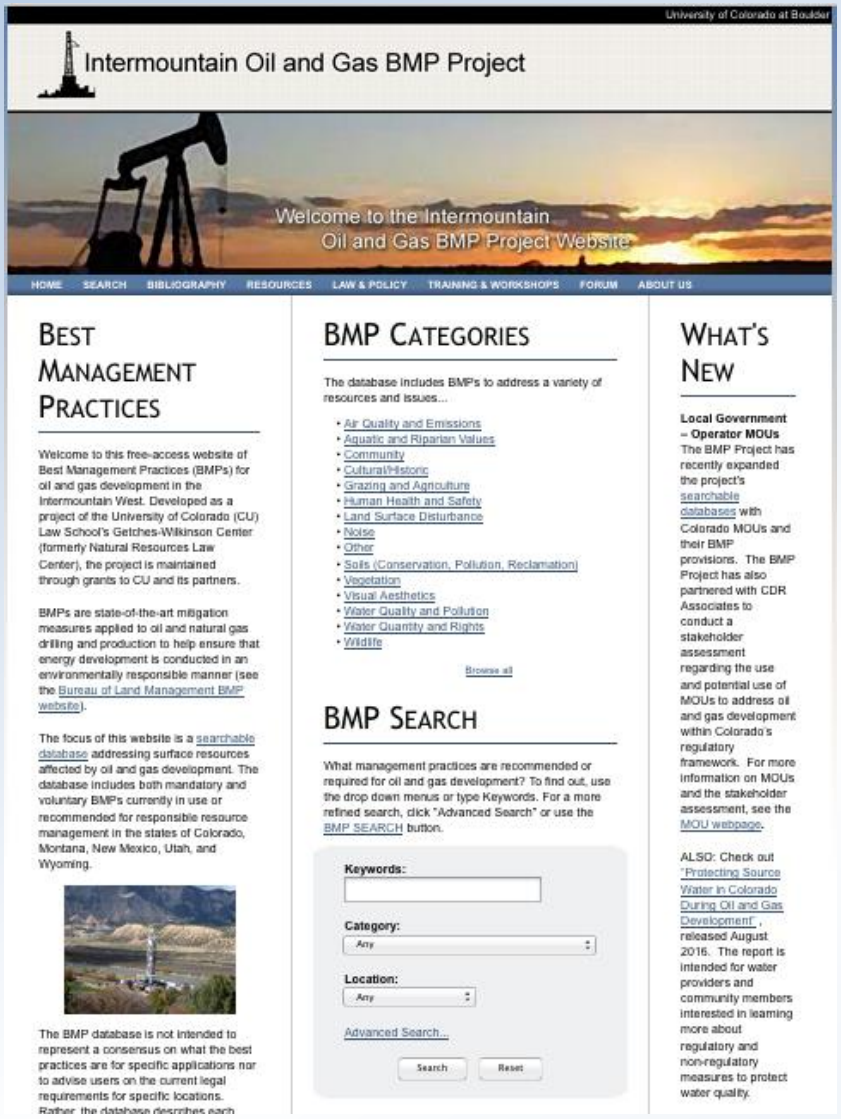
MOUs in the BMP Project



- Geographic Scope
  - CO, MT, NM, UT, WY
  - Beyond the Region ?
- Databases
  - Documents
  - BMPs
  - Laws and Regulations (LawAtlas)
- Website Background Materials
  - Resource Pages
  - Law and Policy (Federal, state, local, tribes)
- Workshops
- Research Assistance

BMP Project Databases

Documents DB: > 900 Citations

- Searchable on author, title, and annotation
- Authors include:
  - Government agencies
  - Advocacy groups
  - Industry
  - Academics
- Publications include:
  - EISs, RMPs
  - Research reports, factsheets
  - MOUs (44 +14)
  - Books, Journals, PPTs
  - Websites

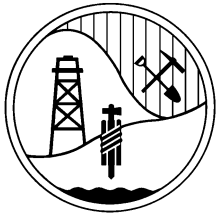
BMP DB: ~ 12,000 BMPs

(~3000 from MOUs)

- Air Quality
- Aquatic/Riparian
- Community
- Cultural/Historic
- Grazing/Agriculture
- Human Health/Safety
- Land Surface Disturbance
- Noise
- Soils
- Vegetation
- Visual
- Water Quality/Quantity
- Wildlife

MOU Project Logistics

- Project Staff:
  - BMP Project staff
  - Law and Engineering Students
  - CDR Associates
- Multiple Participants:
  - O & G Task Force Members
  - COGCC, CDPHE
  - Local Governments
  - Industry
  - NGO/Community Observers
  - Colorado Municipal League?
  - AWGSRN Researchers?
  - Colorado Oil and Gas Association?
  - American Petroleum Institute?
  - Western Energy Alliance?



AirWaterGas

MOU Project Webpage

Memorandum of Understanding (MOU)

A Memorandum of Understanding (MOU) memorializes an agreement between parties. In Colorado, such agreements are often negotiated by a local government and an oil and gas operator. The document may be called an MOU, a memorandum of agreement (MOA), operator agreement, or development agreement. In these documents (that we collectively call "MOUs"), the parties agree on how the oil and gas operator will develop and/or operate oil and gas facilities within the local jurisdiction and how the local government will interact with the operator.

Anatomy of an MOU

MOUs and the processes used to develop them are as different as the communities, operators and issues that they address. Yet they have commonalities as well.

Learn more

Database of MOUs

The BMP Project hosts a database of Local Government / Operator MOUs within the BMP Project's searchable bibliographic database.

Find MOU Documents

Database of MOU BMPs

Best management practices (BMPs) from MOUs are catalogued in the BMP Project's searchable BMP database.

Find BMPs

Stakeholder Assessment

The BMP Project conducted interviews with stakeholders to identify the challenges and opportunities of developing and implementing MOUs.

Learn from Stakeholders

BMPs in CO MOUs

BMP database searches can be used to identify and compare development practices among Colorado communities.

Search/Compare BMPs

Additional Resources

This section provides links to various resources cited in the Stakeholder Assessment report or otherwise useful for those interested in MOUs.

Find Cases, Reports, and More

Anatomy of an MOU

MOUs and the processes used to develop them are as different as the communities, operators and issues that they address. Yet they have commonalities as well.

MOU Evolution

Over a decade ago, La Plata County Commissioners and operators started developing MOUs - agreeing to disagree on the authority of local governments to regulate oil and gas beyond the requirements of the Colorado Oil and Gas Conservation Commission (COGCC). Beginning in 2005, La Plata County and several operators negotiated and signed MOUs that recognized this disagreement and agreed to terms of development that would guarantee the county certain operating standards and pay certain road fees. In exchange, the operator could avoid protracted formal hearings of the County's standard land use permitting process. Over the next decade, 10 additional communities negotiated over 40 MOUs with operators.

Just prior to the 2014 elections, Governor Hickenlooper created the Colorado Oil and Gas Task Force, as an alternative to contentious ballot initiatives on local control and in order to address conflicts between local and state regulation, multiple-well production areas, and drilling operations near and within communities. The Task Force meetings included discussions of MOUs and several Task Force proposals for action included MOUs.

Governor's T
Task Force an

MOU Negotiations

The process of negotiating MOUs varies substantially from jurisdiction to jurisdiction. Local governments ha
after intense negotiation with particular operators and more general MOUs that are subsequently signed by s
tweaks). Individual operators, industry groups (e.g., Colorado Oil and Gas Association), and the COGCC ha
negotiations. For some MOUs, the parties have used public information meetings, Council/Commission hea
inform community members and other stakeholders. Other MOUs have been negotiated with little if any publ

MOU Components: Administrative Clauses and Substantive El

MOUs generally begin by naming and describing the parties and setting out the understanding between the p
MOU (Recitals, Background or "Whereas" sections). Common, but not universal, administrative provisions o
timeframe or term, whether the agreement would apply to successors or assigns (following sale of properties
on severability, force majeure, waiver of rights, governing law, and default.

More substantive provisions that are common elements of MOUs include:

Comparison
MOUs

- Applicability of the MOU within the jurisdiction – varying between a few specific wells to all future development;
- Specific incentives for operators and the expected advantages to the community for agreeing to the specific agreements of the MOU;
- Enforcement provisions, including incorporation of all or part of the MOU in COGCC permits or orders fo
- Provisions regarding imposition of impact fees; and
- Best management practices.

- Evolution:
  - 2005 – 2017
  - Roads >> Comprehensive
- Negotiations
- MOU Components:
  - Administrative clauses
  - Substantive Elements
  - BMPs

Database of MOUs

The BMP Project hosts databases of information from Local Government / Operator MOUs within the BMP Project's existing searchable database of documents and searchable database of BMPs. These databases allow users to access the MOUs and to compare the BMPs included in them.

CATALOG OF MOU DOCUMENTS:

All known MOUs are included in the BMP Project's searchable bibliography. These
(including draft, final but unsigned, and signed MOUs) were obtained through Inte
searches, and contributions from individuals working on these issues, including th
COGCC.

These MOUs are accessible via this website's **'SEARCH'** tab. A keyword search
"MOU") in this bibliographic database will yield a search report of all of the Local
Government – Operator MOUs in the database.

See the How-to Guide for Searching the Bibliography for details on:

- Customizing and sorting your search results;
- Downloading data; and
- Accessing a .pdf copy of each MOU.


Anatomy of an MOU

Database of MOUs


Database of MOU BMPs

Stakeholder Assessment


BMPs in CO MOUs

- Catalog of MOUs – updating and adding
- Searchable
  - by local government
  - by operator
  - How-to guide
- PDF documents of all MOUs (historic & current)
- Elements Comparison Table

Who and When?

Community	Dates
Adams Co.	2014 - 2015
Arapahoe Co.	2013
Brighton	2015 - 2017
Broomfield Co.	2013
Elbert Co.	2014
Erie	2012 - 2015
Ft. Collins	2013
Hudson	2012 - 2015
LaPlata Co.	2005 - 2015
Longmont	2012
Timnath	2015

Operators

Agave
Anadarko
Black Hills
BP
Chevron
Coleman
ConocoPhilips
Elm Ridge
Encana
Energen
Extraction
Four Star
Great Western
Kerr-McGee
Maralex
McElvain
Pablo
Petersen Energy
Petro Operating
Petrogulf
Samson
Sovereign
Swift
Synergy
TOP Operating
XTO

Community	Examples of MOU Elements
Adams Co.	1. Land Use Jurisdiction not waived 2. Access to facility sites for inspections wo notice 3. BMPs to be incorporated in COGCC permit
Arapahoe Co.	1. Land Use Jurisdiction not waived 2. Access to facility sites for inspections wo notice 3. BMPs to be incorporated in COGCC permit
Brighton	1. Land Use Jurisdiction not waived 2. No inspection language 3. BMPs to be incorporated in COGCC permit
Broomfield Co.	1. No language on waivers 2. Access to facility sites for inspections 3. BMPs to be incorporated in COGCC permit
Elbert Co.	1. Land Use Jurisdiction not waived; or general no-waiver language 2. Access to facility sites for inspections wo notice 3. BMPs to be incorporated in COGCC permit
Erie	1. Land Use Jurisdiction not waived; or general no-waiver language 2. Access to facility sites for inspections 3. BMPs to be incorporated in COGCC permit
Ft. Collins	1. No language on waivers 2. Access to facility sites for inspections 3. BMPs to be incorporated in COGCC permit
Hudson	1. Land Use Jurisdiction not waived; or general no-waiver language 2. No inspection language 3. No incorporation language
LaPlata Co.	1. Land Use Jurisdiction not waived 2. No inspection language 3. BMPs to be incorporated in COGCC permit
Longmont	1. No language on waivers 2. Access to facility sites for inspections wo notice 3. No incorporation language
Timnath	1. No language on waivers 2. Access to facility sites for inspections 3. BMPs to be incorporated in COGCC permit

Database of MOU BMPs

The BMP Project hosts databases of information from Local Government / Operator MOUs within the BMP Project's existing searchable database of documents and searchable database of BMPs. These databases allow users to access the MOUs and to compare the BMPs included in them. The BMP database also allows users to compare BMPs to state regulatory requirements and to monitor the incorporation of MOU provisions into COGCC permits and orders.

Catalog of MOU BMPs

Best management practices (BMPs) included in these MOUs are catalogued in the searchable BMP database. These BMPs can be accessed in two ways:

1. Users can access a list of all of the BMPs from a specific MOU through the MOU's data record (see the Catalog of MOU Documents, above). Click on **View all BMPs from this publication**. Sorting the report of BMPs by **BMP ID** will ***generally*** list the BMPs in the order in which they occurred in the MOU, (e.g., Adams County general MOU).

2. Users can also search the BMP database for BMPs using a keyword and/or filter search. Using the acronym 'MOU' in the Keyword panel will limit your search to BMPs entered into our database from the Local Government – Operator MOUs (less than 50 documents). Omitting 'MOU' from the Keyword panel will result in a search of BMPs from all of the 800+ documents in the database.

Comparison T
state regulation

See the How-to Guide for Searching the BMP Database for details on:

- Finding a specific MOU and listing its BMPs;
- Limiting your search to only the MOU documents;
- Limiting your search by keywords and filters;
- Tips for crafting a search to find plurals and word variations; and
- Sorting and downloading your search result.


Anatomy of an MOU

Database of MOUs


Database of MOU BMPs

Stakeholder Assessment


BMPs in CO MOUs

Additional Resources

- Catalog of BMPs in MOUs
- Searchable
  - by keyword
  - by category
- Guide to searching the DB
- BMP Comparison Table:
  - among MOUs
  - to COGCC regs

BMP in CO MOUs

A BMP database search can be used to see what practices operators and a local government have agreed to during development in a community or to compare the BMPs in one community to those of another. Some examples are provided below, but see the How-to Guide for Searching the BMP Database in order to create your own searches.

The following are examples, generated from the database in early June , 2016, when BMPs from 38 MOUs had been entered into the database. The number of MOUs identified in the searches below reflect that initial search. Following t he link to a particular search will, however, provide an updated report — current to the time you "click" to retrieve it. Consequently, your download of data may indicate more MOUs addressing the specific issue if additional documents have been added to the database since June 2016.

Setbacks:

37 MOUs (88%) address setbacks (Keyword search = MOU setback?) These BMPs include setbacks from Residential and High Occupancy Building Units, measure setbacks from wellheads, tanks, treaters, etc., address pit setbacks from water wells and residences, address non-conforming uses, waivers, and encroachment of development.

Roads:

39 MOUs (92%) address roads (Keyword search = MOU road?) These BMPs address many road issues, including access route plans, rights-of-way, traffic, dust suppression, pipeline alignments in roads and pipelines crossing roads, weeds, reclamation, permanent, temporary, public and private roads, permits, specifications (including width, load limits, and surfacing), and costs for road building or repair.

Air Quality:

38 MOUs (90%) address air quality issues (Keyword search = MOU; Category filter = Air Quality and Emissions). The treatment of air quality in MOUs varies between a single BMP addressing dust in Hudson to an MOU between Fort Collins and Prospect that includes using centralized hubs for gathering, storage, compression, etc., vapor capture, flaring, plunger lift systems, instituting well leak detection and repair programs, baseline and subsequent air sampling, and green completions.

Noise:

13 MOUs (31%) address noise (Keyword search = MOU noise). These BMPs vary from requiring noise mitigation study or plans, to using electric powered equipment (where feasible), to requiring insulating materials or structures surrounding

Chemicals:

7 MOUs (17%) address chemicals (Keyword search = MOU chemical?) including chemical disclosure (to FracFocus or the local government), storage, spills, releases, discharges, use in dust suppression, and regarding emergency planning.

Wildlife:

6 MOUs (14%) address wildlife, including habitat, issues (Keyword search = MOU habitat?) or (Keyword search = MOU; Category filter = wildlife). Note that a Keyword search = MOU habitat? wildlife, will only yield three BMPs because both

- Illustrates BMP data and searches for six issues:
  - Setbacks
  - Roads
  - Air Quality
  - Noise
  - Chemicals
  - Wildlife
- Links to auto-update search results

Community	Air Quality -- Dust
Adams Co.	> Permit may require dust control > Materials used for dust suppression > Control measures and procedures to minimize fugitive particulate emissions
Arapahoe Co.	> Permit may require dust control > Materials used for dust suppression
Brighton	> Type of dust (silica) > Location of dust suppression (site, roads, near water) > Fluids used for dust suppression
Broomfield Co.	> Location of dust suppression (site, roads, near water) > Fluids used for dust suppression
Elbert Co.	> Material (water) used for dust suppression
Erie	> Provide plan for dust suppression
Ft. Collins	> Location of dust suppression (site, roads, near water) > Fluids used for dust suppression > Applies to existing wells
Hudson	> Material (mag chloride) used for dust suppression
LaPlata Co.	> Timing of dust suppression
Longmont	> Roads surfaced to prevent mud
Timnath	> Location of dust suppression (site, roads, near water) > Fluids used for dust suppression > Response to complaints

Community	Air Quality – Control Measures / Efficiencies
Adams Co.	
Arapahoe Co.	
Brighton	> 95% efficient VOC control technologies for tanks capable of emitting > 2 tons annually
Broomfield Co.	> 98% efficient VOC control technologies for normal operations (not excluding malfunction due to poor maintenance, etc.)
Elbert Co.	
Erie	
Ft. Collins	> Vapor capture equipment shall operate at 98% efficiency or better > Uncontrolled venting is prohibited
Hudson	
LaPlata Co.	> 95% efficient VOC control technologies for tanks and glycol dehydrators capable of emitting > 5 tons annually
Longmont	
Timnath	> 98% efficient VOC control technologies for normal operations (not excluding malfunction due to poor maintenance, etc.)

Community	Air Quality – Inspection / Monitoring
Adams Co.	
Arapahoe Co.	
Brighton	> Annual LDAR inspection > Commence repairs < 24 hours
Broomfield Co.	> Monetary contribution and cooperation for sampling > Baseline sampling prior to additional drilling > Emergency response
Elbert Co.	
Erie	> Audio, visual and olfactory inspections monthly for 5 years > Baseline, then monthly infra-red camera > Encana reports LDAR to City; City informs public
Ft. Collins	> One time air sampling during completions by a third party > Baseline sampling and sampling during drilling. > Requirements for location of sampling > Application to existing wells
Hudson	
LaPlata Co.	
Longmont	
Timnath	> Monetary contribution and cooperation for sampling > Baseline sampling prior to additional drilling > Emergency response

Community	Noise -- Other Than Electric Equipment
Adams Co.	> 24-7 contact information to deal with all noise complaints > Construct measures along any edge of operations adjacent to existing residential development or zoned for future residential development > Noise mitigation baseline study
Arapahoe Co.	> 24-7 contact information to deal with all noise complaints; info posted at access road
Brighton	> Plan for noise mitigation prior to drilling > Light industrial operations does not exceed 60 db(A) and is reduced by at least 5 db(A) below the COGCC regulation limit; compliance with COGCC regs
Broomfield Co.	> Construct measures along any edge of operations adjacent to existing residential development or zoned for future residential development > Noise mitigation study
Elbert Co.	> Any setbacks less than one-thousand feet (1000') from a building unit or outdoor venue or recreation area as defined by COGCC, shall be mitigated for noise . . . impacts > 24-7 contact information to deal with all noise complaints; operator respond to all reasonable complaints
Erie	> Plan for noise mitigation prior to drilling (2012) > Light industrial operations does not exceed 60 db(A) and is reduced by at least 5 db(A) below the COGCC regulation limit; compliance with COGCC regs. (2015)
Ft. Collins	> Construct measures along any edge of operations adjacent to existing residential development or zoned for future residential development > Noise mitigation study
Hudson	
LaPlata Co.	
Longmont	> Compressor equipment – approved by City and surrounded by acoustically insulating material/housing to meet COGCC standards > Additional mitigation as reasonably required by City (criteria listed) > Measures may include: insulated housings/covers, screening, electric equipment
Timnath	> Use temporary perimeter sound wall during drilling and completion > Post-completion compliance with COGCC 800 Rules

Community	Noise -- Electrification of Engines and Pumping Systems
Adams Co.	
Arapahoe Co.	
Brighton	. . . if available from the grid.
Broomfield Co.	Operator shall take all reasonable efforts . . .
Elbert Co.	
Erie	
Ft. Collins	. . .when feasible.
Hudson	
LaPlata Co.	. . . for all [long-term] artificial lift installations provided the Well Pad is within 1320 feet of distribution voltage [except if certain impediments]
Longmont	. . . if requested by the City (depending on proximity, level of noise, etc.)
Timnath	. . . unless the Operator demonstrates to the Town that the use of such equipment in a particular situation is not economically feasible or practical.

Community	Source Water Protection - Setback
Adams Co.	> All pit construction within 1/4 mile of a water well is generally discouraged
Arapahoe Co.	> All pit construction within 1/4 mile of a water well is generally discouraged > Case by case review -- may be additional requirements, e.g., fencing
Brighton	> Locate wellhead at least 1000' from public water supply wells > If 1000' not reasonably practicable, maximize setback
Broomfield Co.	
Elbert Co.	> All pit construction within 1/4 mile of a water well is generally discouraged > Case by case review -- may be additional requirements
Erie	
Ft. Collins	
Hudson	
LaPlata Co.	
Longmont	
Timnath	

Stakeholder Assessment

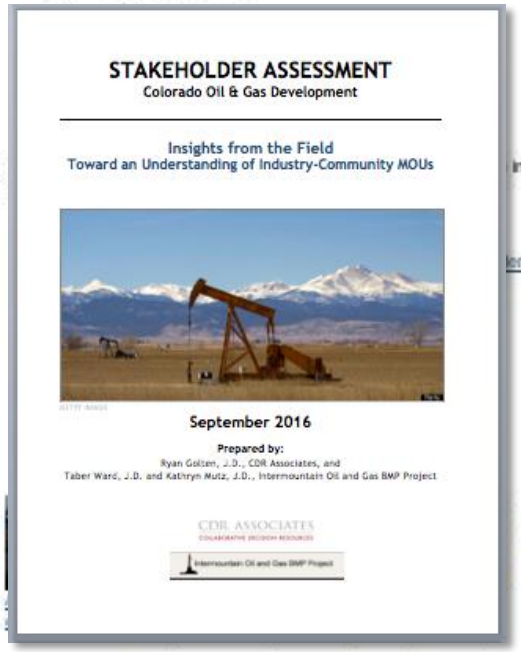
In early 2016, the BMP Project, in conjunction with CDR Associates, conducted interviews with a variety of stakeholders. The stakeholder assessment process included a dozen interviews with stakeholders, including state agency and regulatory staff, local governments, industry representatives, and others to learn from those who have negotiated or used MOUs.

Interview questions focused on four major topic areas:

1. The context and background for MOU negotiations, including the local regulatory scheme and what brought parties to the table;
2. The negotiation process itself, including the role (or lack thereof) of community engagement during the process;
3. Implementation and enforcement of MOUs; and
4. Perspectives on the substantive provisions of MOUs, including their BMPs.

The report summarizes project findings and is intended to identify the challenges and opportunities of developing and implementing MOUs. also explores use of MOUs as a tool for addressing the interests of stakeholders while reducing conflict, political polarization and expensive, time-consuming legal battles with the state and industry over jurisdictional authority.

Stakeholder interviews suggested several "Next Steps" outlined in the report:



STAKEHOLDER ASSESSMENT
Colorado Oil & Gas Development

Insights from the Field
Toward an Understanding of Industry-Community MOUs

September 2016

Prepared by:
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CDR ASSOCIATES

information from this research with assessment participants and others who

erstanding of Industry-Community MOUs

BMPs in CO MOUs

Additional Resources

12 Stakeholder interviews:

- Context & background
- Negotiation process
- Implementation & Enforcement
- Substantive provisions

Identified:

- Challenges
- Opportunities
- Next Steps

Stakeholder Interviews

Stakeholders included:

- Local Government
- State Government
- Industry
- Community

Goals:

- Decrease polarization in O&G negotiations
- Explore whether MOUs address local siting and operational issues at the local level to meet key interests of stakeholders
- Provide best practices and lessons learned to stakeholders

Questions included:

- What have you found to be successful and difficult in negotiating and implementing MOUs in your community?
- Are there certain BMPs in your MOU that you think are particularly critical for protecting your community? How/why?
- What do you see as the mechanism for enforcing the MOU?

Challenges and Opportunities

Challenges

- Negotiation – imbalance in resources and capacity
- Lack of public participation/transparency
- MOU Enforcement
- MOUs are static, a snapshot in time: How to keep up with technological advancements
- Piecemeal approach – negotiation with each operator

Challenges and Opportunities

Opportunities

- Predictability, certainty – for both operator and community
- Find creative solutions
- Long-term tool for building communication, trust, transparency & coordination
- Enforce local priorities/values/needs that go beyond state requirements
- Strategy for raising the bar on industry practices

Next Steps

Visit the MOU webpage or
Search the databases

Add to the databases:

- Contribute MOUs from your community
- Lead us to others

Join the Dialogue:

- Add your voice to the stakeholder interviews
- Host / Join / Attend an MOU discussion – whether or not your community has an MOU

For More Information:

See the Conference Handouts

Browse the MOU webpage at:
http://www.oilandgasbmps.org/resources/MOU.php

Bibliographic search at:
http://www.oilandgasbmps.org/bibliosearch.php - include MOU as a search term

BMP Database search at:
http://www.oilandgasbmps.org/bmpadvsearch.php - include MOU as a search term

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