DRAFT

MINUTES

REAP Business Meeting

May 13, 2021

12:00 p.m.

Zoom Meeting ID#761-014-5598

The monthly meeting of the I-70 Regional Economic Advancement Partnership was called to order at 12:00 p.m. by Chair Kirk Howell, who welcomed the attendees and called for introductions.

The following Board Members were present:

Jeff Baker	Wil Chase	Mark Harding	Kirk Holwell
Tom Turrell	Jan Yeckes	Becky Zierer	

Guests attending were:

Sarah	Brown	Early Childhood Council
Andres	Carrera	Sen. Hickenlooper's Office
Tracy	Carter	SBDC
Loretta	Daniel	Arapahoe County
Quinn	Evans	
Kat	Hammer	Arapahoe County
Steve	Hebert	Town of Bennett
Julio	Iturreria	Reap
Jack	Keever	Retired Reap
Diane	Kocis	Arapahoe County
Kathy	Mahan	Reap
Cooper	Raines	Real Estate
Gary	Salazar	Arapahoe County
Kathy	Smiley	I-70 Publishing
Nathan	Sumner	Sun Financial Group

Julie	?	

Approval of April 8, 2021 Meeting Minutes:
Minutes were approved as submitted.

Chairman Report:

Executive Director Report:
Julio Iturreria announced Reap is currently recruiting an Executive Director for the program and suggested we send the notice out to the I-70 Corridor Chamber, I-70 Scout, Aurora Chamber, Pro 15 and post on the Reap website. He thanked Kathy for the job she is doing for Reap.
Julio introduced the guest speaker Diane Kocis and talked about her vast experience dealing with the oil and gas industry and regulations in Arapahoe County.

Guest Speakers:
Diane Kocis, Energy Specialist – Arapahoe County
Everything you wanted to know about oil and gas in Arapahoe Count, mineral rights, geology, drilling, fracking, production, and regulation. Oil and gas is often a very controversial topic and maybe the biggest reason is Colorado's split estate legal system. Simeone may own the surface rights and someone else may own the mineral rights below the surface. Under State law, surface landowners must grant reasonable access for mineral owners to extract oil and gas. This can set up clashes between landowners and oil and gas companies. More reasons for the controversy are well pads have been getting closer to homes and schools. While most of the nuisance aspects are temporary, there is heavy truck traffic, noise, and bright lights at night, as well as potential real estate drops. The period of nuisances depends on how many wells are drilled and fracked. Location of oil and gas development can occur in any type of zoning, even residential. Spills reported in the news can be concerning if you do not understand how, they are reported and remediated. Chemicals used for fracking are concerning to those who are not familiar with that fact that there is no public exposure. Misinformation on the internet and in documentaries that occur elsewhere are not applicable in Colorado. The movie Gasland shows someone lighting a faucet on fire is not due to oil and gas development, that is due to coal layers that they drill through and the methane is released through the water. There is no direct link relating earthquakes to drilling or fracking only to underground disposal of wastewater known as injection wells. The other concern is about groundwater. The Front Range horizonal drilling is to the Niobrara Shale, deposited as layers of mud in an intercontinental sea 82 -87 million years ago. The dark shale is rich in hydrocarbons, derived from the decomposition of tiny marine organisms. Crude oil is a mixture of oil, natural gas, and salt water. The water layer on the bottom is a remnant of the sea water the was deposited in. When it is brought to the surface along with the oil and gas the water is called produced water. Oil floats on the saltwater and gas is present in and above the oil layer. Produced water has to be disposed so it is injected into layers beneath all producing layers. It is too saline to treat economically although that the

technology is probably going to evolve soon to be able to use it again. The salts would damage the formation if used for fracking. The produced water has 55,000 ppm of total solids. Even though it's been done in the past it's not a good idea to use ponds due to the odors produced from hydrocarbons and solids in the water. The only other option is to dispose of it underground, in formations below the producing formations. Our Niobrara Shale and Dakota Sandstone formations in Arapahoe County are about 7,000 ft. deep and 7,700 ft. deep. Injection zones are greater that 9,200 – 11,000 ft. down. If produced water is injected at high pressures and volumes too great for the formation, induced seismicity or earthquakes will be the result. The Colorado Oil and Gas Conservation Commission (COGCC). Unlike Oklahoma Colorado does not have earthquake problems. In the Greeley area there were some low intensity earthquakes, and 2 nearby injection wells were shut down while geologist studied the situation. It was remedied by introducing lesser volume of produced water and changing the intervals of injections. It cost nearly $3 million dollars per well depending how far the horizontal well extends and it takes approximately 8 days to drill a single well to the Niobrara. The horizontal drilling hole starts as vertical, and the drilling bit is turned. It is good to get around obstacles, the major intent is to intersect a larger section of the producing formation. The reason wells are drilled horizontally is a smaller footprint means less surface disturbance, fewer well pads, fewer access roads and one well pad instead of 32. You can think of a cased and cemented well as a very tall building upside down. The largest diameter is at the surface and it gets narrower as you go down in depth. Once the hole is drilled, it's lined with casing and cement to keep the hole open. Casing is placed inside casing with cement in between to prevent migration of any fluids from the target formation to the aquifers. To prepare a well for fracking it has to be perforated. Armor-piercing bullets are shot through the casing to make holes in the casing, cement and into the formation. Then those holes can be used to inject the fracking fluids. This technology has been used on wells for 45 - 50 years. With a horizonal well this is repeated over and over again in the horizontal portions of the well and it's been very successful. Hydraulic fracturing or fracking is water mixed with trace amounts of chemicals and is used to fracture the rock formation, followed by sand. Sand ensures the fractures stay open and allow oil and gas to move through the sand. Fracking is a big deal. On a fracking site there is a data van that holds highly skilled technicians who sit in front of many monitors controlling every aspect of the fracking. At the well head there are many hoses leading from the pump trucks down into the well. Large tanks filled with water is stored onsite for the fracking process. There are blender trucks which hold the chemicals that are then blended with the water and sand. Fracking is the noisiest part of the operation and will exceed the regulatory limits for noise, sound walls have to be constructed. These walls are about 30 to 40 ft. tall and are constructed in a fabric. Where do the fractures go? They stay in the formation and typically are 300 to 1,500 ft. long and 0.1" - 0.3", ten times thicker than a human fingernail. About 5M gallons are used for each "frack job". So if there are 4 wells drilled on a pad, 20 Million gallons need to be transported to that pad, just for fracking – either by trucking the water or piping it to the pad. Although 5 Million gallons per well is a lot, the Division of Water Resources estimates that an average of less than 0.1% of the water used statewide from 2011-2015 was for fracking each year. That number could increase with longer laterals. The vast majority of the water used statewide was for agriculture (86.5%). About 90% of what is injected is fresh water. Sand is 9% and chemicals are about 1%. Most chemicals used for fracking are used in

everyday life. They include: Diluted Acid (Hydrochloric, Muriatic Acid) - Swimming Pools, Biocide (Glutaraldehyde) - Dental Disinfectant, Breaker (Ammonium Persulfate) - Bleaching Hair, Crosslinker (Borate Salts) - Laundry Detergents, Iron Control (Citric Acid) - Food Additive, Gelling Agent (Guar Gum) – Biscuits, Scale Inhibitor (Ethylene Glycol) – Antifreeze, Surfactant (Isopropanol) - Glass Cleaner, and Friction Reducer (Polyacrylamide) - Water and Soil Treatment. As I mentioned in the beginning, people have concerns about ground water. There actually three protections in place and one of them is provided by mother nature. Aquifers are way above the producing formation and separated by impermeable shale – over 5,000' above. There are multiple layers of cement inside multiple layers of steel casing. Colorado has really strict rules compared to other states for oil and gas operations. Colorado rules that include sonic bond logs to make sure the hole is completely lined with cement. If there was a cavity the operator would be required to pierce the casing at that depth and squeeze more cement into that zone and another sonic bond log would be performed to make sure the cavity was filled. Up to the present time, oil and gas operations in the County are regulated through an administrative process once an operator signs our Oil and Gas MOU. Because of state preemption on oil and gas rules, the County was only able to regulate traffic, construction of access roads, use and maintenance of public roads, weed control, erosion control, floodplain encroachment and emergency response planning. Prior to the passage of SB19-181 in April of 2019. Our oil and gas MOU was adopted in May of 2013, based on the areas with no state preemption, COGCC input and industry input. Several Front Range local governments were sued by the State when they attempted to enact stricter laws than the Colorado Oil & Gas Conservation Commission. MOUs were used throughout the state. What happened in April 2019? Senate Bill 19-181 was signed into law by the Governor, making public health and the environment the Commission's top priority, rather than conservation of oil and gas. With the passage of SB19-181, State preemption over Oil & Gas is removed for surface operations. Local Governments now have authority to develop reasonable regulations to govern site approval and mitigate impacts on surface operations. State maintains control of downhole operations. Since the summer of 2019, the Arapahoe County Planning Division has done stakeholder outreach, researched what other jurisdictions drafted or adopted for rules. We have conducted open houses, drafted rules, done 2 stakeholder surveys, examined COGCC's new rules and conducted numerous study sessions. Staff will send out the revised draft rules to stakeholders in June. They will be going out soon to concerned citizens, citizens with mineral rights, operators with pipelines, state agencies, pipeline companies, and real estate developers. The following 3 slides list the direction given to staff by the BoCC on our draft rules for health and safety, quality of life and process improvements. We also drafted rules for improved operations and for the protection of wildlife, wetlands, riparian areas, and streams. This is the health and safety part of our rules. Air quality was a topic we brought to the Board and they said do not regulate that because, the Colorado Department of Public Health and the Environment has new air quality regulations, and the county does not have an air quality expert. Colorado has the most restrictive rules in the country. Other areas we addressed are emergency response plans and we have gotten them in the past, but they were not site specific. So, we are going to have our operators submit ERP's and we will update them with GIS data when the roads and paths are constructed. For firefighting supplies, we drafted a rule for operators to supply water and foam for their pads should there be a fire. We have

drafted rules for coordinated training with operators and emergency responders. Rules on chemicals used and stored on site. Report all facility incidents to emergency responders and we have drafted setback rules. Our setback is 1,000' from the edge of the pad to the nearest occupied structure. Not only homes we are also including garages and sheds that are occupied for short intervals. COGCC has actually has a general setback of 2,000' from the edge of the pad to the nearest occupied structure but they have a number of exceptions to that setback. Whereas the County has only one exception to their setback and that's if the surface owner wants the pad closer to a structure and the fire department is willing to provide service to that closer pad. We also have a 300' from wetlands and riparian areas that we developed through discussion with the Colorado Department of Parks and Wildlife. We also have a reverse setback which is the distance between and existing oil and gas pad and a structure somebody wants to build on their property. When these rules pass, we will require a reverse setback of 250' which will allow emergency responders use their fire hoses which are generally 200' long. Under quality of life, we have drafted rules for noise, light, visual mitigation, and traffic. Noise is generally the top complaint I have heard from nearby residences since I started with the county in 2012. The state now has new stricter standards for noise and our noise nearly mimics what the state has, 60dbA for high frequency noise and 65dbC for low frequency noise. Light associated with drilling have been very intense so have adopted a rule for operators to drop lights inside of sound walls and we drafted a rule that full cut off and shielded. For pads within ¼ mile the operator would be required to do some form of landscaping and screening which would include privacy fencing of 8' in height. We are also suggesting production equipment be low profile equipment. For example, tanks that could be 20' tall for tanks in a ¼ mile from homes we will require tanks that are 15' in height. We have also been drafting rules for traffic. We are going to ask operators to limit heavy truck traffic during peak commuting hours and school bus hours. The county is going to redo the truck routes the operator purposes to use. We are encouraging them to pipe water to the pads and we have a new road damage agreement that we did not have before. Under process improvements we have drafted rules for neighborhood meetings where the operator would be required to meet with residents within 1 mile of the pad. A notice of the application that was submitted to the county is sent to residents within the 1-mile radius. We have drafted a requirement for the notification of commencement for each phase of operation. For when they bring in large equipment for the construction of the pad, constructing the access road, the residents will also get notice for drilling, fracking, production, and abandonment. Recordation of approvals. Example, Conoco got approval for a pad and did not build an access road right away, probably 1 ½ year later after their approval and they went out there and discovered that somebody built a modular home on part of what was going to use for the pad. What happened is the buyer was not advised by the seller that there was a pad approved for that land, so we are trying to avoid that situation in the future. County staff will be recording the approvals at the County Clerk's Office. Also, our approvals will expire after 3 years instead of after 5 years. We feel that a character of a neighborhood could change in 3 years, so we shortened that period. After these rules are adopted that we are working on now we are going to start working on rules for pipelines where we will identify pipelines to reduce traffic and reduce the number of tanks on a site with more administrative processes. Hopefully, we can eliminate the 2 public hearings which will take about 3 ½ months off the application process. We asked the Board if we could draft rules for alternative

processes. That is where the operator would present the location where they want to install the pad on a couple of other locations so the County could look at all three. The Board asked us not to draft rules for ALA's because that was being addressed by the COGCC.

Mark Harding: I want to make sure I understand the reverse setback rules to the extent that you got a pad site that had their wells drilled that drilled in advance of any development and met any requirements from the state or the county, then in years ahead development activity occurs in and round of where that is at. Is that requirement for growth coming to a well site within that 200' setback?

Diane Kocis: 250' would be required in most cases in new construction within the distance of a pad. However, when wells were plugged and abandoned during 2009 and later we could take that reverse setback down to 150'. In 2009, COGCC took stricter standards for plugging and abandonment. Those wells are less of a danger to nearby construction.

Mark Harding: Has COGCC given any guidance on setback or are they silent on that still?

Diane Kocis: They are still silent on that subject; I think they feel that's a local government matter.

Kirk Holwell: Are seeing a lot of request for new permits or permits?

Diane Kocis: No things have slowed down. We see very few applications in a year even as low as one in a year.

Development Updates:

Julio Iturreria: There has been some activity recently coming out of Bennett which I have already made some recommendations to. In the last 24 hours I received three more from Bennett so there is still strong economic activity going on.

Other Business:

Becky Zierer: I have an announcement. The I-70 Corridor Chamber of Commerce is having a summer farm fair June the 27th and it will be at May Farms. Right now, we are looking for vendors that would like to come and participate. It will also be a family thing and should be a lot of fun.

Kirk Holwell: I wanted to say thank to Julio for last few years of his service. As many of you know he is choosing to move on, and we are looking for a new Executive Director.

Adjournment:

The meeting was adjourned at 1:00 p.m.