

**AIR QUALITY ADVISORY BOARD  
REGULAR MEETING  
MONDAY, NOVEMBER 19, 2012**

**DATE:** Monday, October 15 2012  
**LOCATION:** 215 N. Mason Conference Room 1-A  
**TIME:** 5:30 – 8:30 pm

**For Reference** Greg McMaster, Chair - 484-3348  
Ben Manvel, Council Liaison - 217-1932  
Lucinda Smith, Staff Liaison - 224-6085

**Present:** Scott Groen, Hugh Mackay, Nancy York, David Dietrich, Greg McMaster, John Schroeer, Dennis Georg

**Absent:** Michael Lynn, Rich Fisher

**Staff present** –Alexis Hmielak, Lucinda Smith, Dan Weinheimer, Melissa Hovey, Bonnie Pierce, Laurie Kadrich, Lindsay Ex  
Greg McMaster called the meeting to order at 5:30 pm.

**Guests:** John Shenot, Tom Moore, Zach Weeks, residents. Scott Hull, Prospect Energy.

**Review and Approval of October 15, 2012 minutes**  
Hugh Mackay had some small editing changes in grammar.

Nancy York moved and Hugh Mackay seconded a motion to approve the AQAB October 15, 2012, minutes as amended

Motion passed unanimously

**Oil and Gas Monitoring in Garfield County**

Dr. Jeff Collett, Professor and Department Head of CSU’s Atmospheric Science Department, presented information on the research project to assess air emissions from natural gas operations in Garfield County, CO.

- Mr. Collette has launched a study to look at emissions from oil and gas activities, especially in Garfield County. He may also do a study along the Front Range if there is interest from the oil and gas industry to do so.
  - In Garfield County he will be working with CSU, Air Resource Specialists, a technical advisory committee, and an operations committee.
  - The \$1.76 million study was mostly funded from Garfield County and industry partners.
- Timeline
  - September, 2011 – initial meeting
  - December, 2011 – preproposal submitted

- February, 2012 – stakeholder meeting
- March/April, 2012 – technical advisory committee will be assembled
- May, 2012 – final proposal submitted
- August – citizen group meeting and presentation to Garfield county
- Because not much research has been done about emissions from oil and gas wells, the scope of this study will be emissions from well drilling, fracking and flow back.
  - The overall objectives of the study will be to quantify emissions of chemical compounds, especially VOCs during well development and characterize how these compounds are dispersed in the atmosphere.
  - Technical objectives are to quantify air emissions at the pad or remote operations site during activity. The primary focus of the study will be on air toxics, but it will also be looking at ozone precursors.
- Measurement will include a mobile plume tracker SUV, a CSU mobile lab and other down wind measurements set up across the emissions plume.
  - General approach will include independent approaches such as a tracer method and dispersion modeling.
  - VOC measurements will include an online type of mass spectrometer and offline canisters and cartridges. VOCs are expected to fluctuate rapidly.
  - Once emissions are quantified they can run dispersion models to predict concentrations at various distances from the site.
  - Field data can later be combined with regional transport models to predict transport and chemistry at greater distances.
- Anticipated results from the study should yield:
  - Quantitative emissions with uncertainties that can also be used for impact assessments
  - Validation of dispersion model accuracy
  - Validated data set for use in future assessments/studies for other people to use with ultimate goal of producing peer-reviewed publications in journals.
- Summary
  - This is a three year study to quantify emission fluxes and validate downwind dispersion predictions.
  - Funding will be from Garfield County and local oil and gas operators.
  - Government involvement is important to insure the public is well represented.
  - Industry is involved to get access to sites and operational information relevant to emissions.

## Discussion

- Dennis Georg: What is the baseline before you start? (Make measurements just upwind of site. Set up before an experiment to understand meteorology then go upwind of emissions and take samples of cartridges to characterize what is coming. Determine the difference between what is up and down wind.)
- Dennis Georg: Why Garfield County? (Both Garfield County and some operators on the west slope approached us because there had been a prior study that had not been completed)
- Greg McMaster: What happens after the well is drilled? Any plan for others to follow through after you complete the study? (Some people are looking at that. NOAA is doing

measurements and looking at emissions, from especially production. Their work is not part of this study. The focus here is first on air toxics and new activities in populated areas.)

- Lucinda Smith: Will all three years of the study be data collection? (Two years will be on experiments and, if we have enough suitable sites the third year, will focus on data analysis and validation)
- David Dietrich: What is the duration of your experiments? (Up to a few days. Flow back varies by well)
- Melissa Hovey: Is your study primarily on shale gas? (Yes. It depends on what choices we have because the sites vary from valley to cliffs. Our interest is primarily populated areas).
- Lucinda Smith: Why was industry willing to participate? (The operators called us and asked if we would be interested in helping them understand the characterizations of their emissions).
- David Dietrich: Garfield County has been involved in oil and gas for 10 years and has built relationships with developers. Is there a history here that lead up to this study? (Yes, Garfield County staff has an oil and gas liaison).
- David Dietrich: Is anyone else funding this study? (No, just Garfield County; not the state).
- Lucinda Smith: We would like to keep in touch with you and this study, especially if you do a front range study.

## **Oil and Gas / Next Steps**

The board continued a discussion on whether to offer a recommendation to City Council regarding the air quality aspects of oil and gas activities.

In preparation for this meeting, Dennis Georg wrote a draft recommendation for group to consider.

- Laurie Kadrich: We have developed another option, Option B. Expedited prescriptive criteria will be added to the standard review process.
- Dennis Georg: The question is, it is probably legal, but is it politically acceptable? There is always a risk. The reality is what someone wants will be diminished with public input.
  - Laurie Kadrich: The advantage to citizens is to allow them to bring up issues they feel is important. The expedited public review will be in writing and in front of the Planning and Zoning Board.
  - Dennis Georg: You don't get dialogue with written input.
  - Dennis Georg: I am biased toward alternative B because until we have experience, we won't know how it works. We are better off for now with open dialogue.
  - Dennis Georg: Council would be wise to adopt one or other, but not both options.
- Dave Dietrich: How long before this is visited again or should we make a recommendation tonight?
  - Laurie I think it would be helpful to recommend a time period for review or ongoing review. Nancy York: Is there a possibility for citizen appeal in the expedited review? Laurie Kadrich: Only the right to appeal which would be court process.
- Nancy York: Be sure there is enough citizen notification. Are you using newspaper and online?

- Lindsay Ex: A notice was mailed to property owners within a half mile and people registered with City, including HOAs. Signs were posted on site, notices placed on the City website and also in the Coloradoan newspaper.
- Guest, Scott Hall, with Prospect Energy addressed the board:
  - Prospect Energy is the only oil and gas operator in Fort Collins and we are therefore the only ones being impacted by the Council's decisions. I would like to give the board some quantified differences of our operation.
    - We currently have 15 oil wells within Fort Collins and no permits to drill more at this time.
    - Our well field was developed in 1924 and are mostly oil wells producing 130 barrels of oil per day. We produce what is called "dead oil" that does not have much gas in solution in the oil.
  - We flare all our gas and destroy 99.95% of whatever gas we produce.
    - Most of what we produce is water. We recycle 100% of the water we produce and don't take water from elsewhere.
    - The City limits have expanded into our operations.
  - In reviewing the regulations I've seen so far, one issue we think would impact to us is that the City buildings have a higher impact on air quality than we do because they use more gas than we do. Other parts of the City could also be contributing to air pollution with gases from gas stations, cars, dry cleaners, etc. Baseline testing makes sense to test straight across the City. Prospect Energy will partner with other groups if you do a bigger model because we think our impacts are less than other industrial impacts.
  - I'm approachable if you have questions about what we're doing.
- Hugh Mackay: Are there things that Prospect Energy objects to in expedited review?
  - Scott Hall: The biggest thing is that baseline sampling only targets us, not the whole city. We think we have less emissions than others.
- Greg McMaster: There are other issues of concern besides emissions, such as having a well next to your house. In this policy, how would it distinguish between properties that have other emissions?
  - Laurie Kadrich: In the current development review process, you can seek a modification to issue a waiver if certain conditions are met.
  - Bonnie Pierce: In the expedited option you can request additional monitoring if data indicates an issue.
- John Schroerer: We are looking at emissions in the City. Some of them are definable. The big issue here is we don't know what the oil and gas industry is and what the inputs and outputs are. That is why we're interested in this.
  - Scott Hall: I'm trying to help you with my output. It is available on our website.
- Laurie Kadrich: Council did not ask staff to write new regulations for current fields. They wanted a more comprehensive approach to what may happen in the future.
- Scott Hall: We have identified through reservoir studies of the field a potential of more 6 wells on the south end of the field, but we have no current plan to submit any permits until these regulations are set.
- Greg McMaster: The question is how to move forward. We were asked our opinion previously on dual track regulations. We were uncomfortable without public input. Option B discusses setbacks and I suggest we comment on that in a recommendation.

- Dennis Georg: My motivation to write the recommendation I did was 3 things:
  - It would be wise for the City to move forward with a review period in the Planning and Zoning Board because, if there is a reason for a larger setback, it would get reviewed. A good place to start is a minimum setback.
  - We need to be clear. If the state has regulations similar to EPA, the City should work with the state. If one state organization has air monitoring and control it makes sense for the City to work with the state on rulemaking and make air quality issues part of the Air Pollution Control Division because they have expertise and monitoring in one place.
  - Another thing I would add is to suggest the City would adopt a review calendar to evaluate implementation of these regulations every 6 months for 2 years.
- Greg McMaster: Oil wells are there for a long time. I suggest a larger setback and change it later. 350 feet is too close.
  - Bonnie Pierce: The expedited process is 600 feet.
  - Laurie Kadrich: Option B setbacks are yet to be determined. The state's default is 350 ft.
  - Dan Weinheimer. The state is having discussions right now on setbacks and the City of Fort Collins can comment on those discussions.

David Dietrich moved and Dennis Georg seconded a motion to submit the following recommendation to Council regarding oil and gas regulations:

The Air Quality Advisory Board makes the following recommendations to City Council. The AQAB believes it is prudent to take these steps to maintain and continue to improve the air quality in Fort Collins.

1. The City should adopt the oil and gas review processes as proposed (Standard, Expedited). An expedited review that includes an option for citizen input would be preferable to such a review with staff input only.
2. The City should, through the implementation of the development review process, explicitly itemize air quality maintenance requirements, including monitoring to ensure that these requirements are continuously being met. We ask Council to request staff to evaluate the Air Quality Sampling Plan and additional monitoring needs for effective protection of Fort Collins' air quality.
3. The City should implement monitoring, inspection, and audit functions that address and respond to local concerns and work in concert with the APCD on enforcing oil and gas related air quality regulations.
4. The City should support staff engagement in the State regulatory processes, including engaging COGCC to achieve the greatest minimum setback for O&G activities feasible.
5. The City should support the rule-making process that would provide authority and staffing to the APCD to address air emissions issues associated with oil and gas construction, drilling, and well completion.
6. The City should adopt a periodic review process for the Oil and Gas Land Use Code

Motion passed unanimously

## **Increase Diversion of Cardboard and Disposable Bags from the Landfill**

Susie Gordon, Senior Environmental Planner, presented two separate items that the City Council will discuss in a work session on November 27.

### **Increase cardboard recycling**

- 12,000 tons/year of cardboard are thrown away in Fort Collins.
- Council asked for information to determine whether prohibiting cardboard from being placed in the trash is a waste reduction idea that works for Fort Collins. This prohibition would apply to both residential and commercial customers.
  - Residential users already have the ability to do curbside cardboard recycling and dispose of cardboard for free at Rivendell and the drop-off site at the County landfill.
  - Most large commercial consumers already have cardboard compactors and balers.
  - Smaller commercial businesses would have this as a new cost.
- As noted in the City's 2008 Climate Action Plan, stricter policies for cardboard would:
  - Reduce greenhouse gas emissions
  - Increase the life of the landfill
  - Help the community meet our waste diversion goals
- Local code requirement options:
  - Apply ban to residential and commercial generators
  - Provide education, outreach and technical assistance during first 18 months
  - Encourage free cardboard recycling at City recycling drop-off site
  - Enforcement emphasis placed on warnings, education during first 18 months
- The haulers' role would be to help customers transition with an educational approach.
- This is not a new idea. Eleven states currently have a ban on cardboard in the waste stream.
- In 2007 the Council banned electronics in the landfill. This year the state of Colorado banned electronics in the waste stream.

### **Discussion**

- John Schroer: I would like to make things convenient but I see safety issues. A lot of people don't know how to cut up cardboard safely. (Some options could be to work with furniture stores and other stores to take back the cardboard they deliver things in. We could also have an on-line cardboard box exchange. Education of the public is important.)
- Dennis Georg: A good idea would be to hand out a box cutter to everyone.
- Dave Dietrich: It would be nice for Best Buy to take their cardboard boxes back.

### **Reducing disposable bags**

- Council also asked for information to see if reducing disposable bags from the waste stream is a waste reduction idea that works for Fort Collins.
- Disposable bags include plastic bags and paper bags. Paper bags may even be more of an environmental problem because they are heavier, therefore more fuel intensive to ship.
- Reducing disposable bags is not a radical idea and is happening all over the world. Communities have begun with grocery stores and then expanded to other stores.
- Potential shopping bag restrictions:
  - Include paper and plastic single-use bags; both have significant environmental "footprints"

- Aim at plastic/paper grocery shopping bags from major chain stores (60% of total)
  - Exclude non-grocery plastic bags (produce bags, can liners, doggie bags, etc.).
  - Exempt food-stamp shoppers if fee or tax is charged
- The City hired the Brendle Group to do an analysis of four options to reduce disposable bags in the waste stream:
  - No action
  - Education-only campaign
  - Ban disposable bags
  - Charge a fee or tax on single use bags. A 5-10 cent charge is common.
- Other bag reduction ideas would be to require grocers to reimburse customers for every durable bag and involve retailers to enhance recycling opportunities of film plastic in addition to plastic shopping bags.
- Fee or tax on disposable bags
  - Pros
    - Communities like Washington DC show reductions of 80% + in disposable bags
    - Fewer entangled plastic bags at recycling plants and less litter
    - Retailers can retain some/all of fees to offset administration and implementation costs.
  - Cons
    - Additional costs to shoppers
    - Financial burden for low-income households
    - Costs for City staff to administer programs
    - May not reduce bag use as much as outright bans
- Ban on disposable bags
  - Pros
    - Decreases retailer costs to purchase and stock bags
    - Greatest reduction in single-use bags
    - Behavior change supports community sustainability
    - Easier than fee to administer
  - Cons
    - Removes consumer choice
    - Not supported by bag manufacturers, nor by retailers
    - Potential impacts to low-income households
    - Consumers or retailers may relocate or shop elsewhere
- Public involvement regarding this issue
  - Website [fcgov.com/cardboard](http://fcgov.com/cardboard)
  - Five newsletter and newspaper articles
  - Presentations to AQAB and NRAB
  - Presentation to Chamber of Commerce
  - Public Open House (35 attendees)

## Discussion

- David Dietrich: Who pays the tax? (The grocery store collects it and saves 20% for the cost of the bags and their expenses. They can send the remittance along with their sales tax already being submitted to the City.)
- Nancy York: Many people are already taking their own bags to the store.
- Scott Groen: Are paper bags recyclable? (Yes. Also, plastic bags get reused several times before disposal.)
- Susie Gordon: Producer responsibility is very common in Europe and Canada.
- Susie Gordon: The operators of the Larimer County Landfill spend a lot of money each year to remove the plastic bags that become airborne and get lodged in their fence and other structures.
- Dennis George: It is hard to draw a conclusion. However, it is in the Climate Action Plan and the Air Quality Plan to reduce emissions. I think we should encourage Council to ban both plastic bags and cardboard, even though cardboard is easier to “sell”. Banning is consistent with our goals and policies that Council has already approved. This is a way of following through on those policies.

David Dietrich moved and Scott Groen seconded a motion to recommend that Council adopt an ordinance to prohibit cardboard from being placed in the waste stream.

Motion passed unanimously 7 – 0 – 0

Dennis Georg moved and David Dietrich seconded a motion to recommend to Council that they adopt ordinances that would significantly reduce plastic bags.

Motion passed 4 – 3 - 0

Scott Groen, Nancy York and Hugh Mackay dissented because they felt the motion was not strong enough. They want plastic bags banned.

## AQAB 2013 Work Plan

- Greg McMaster stated he updated last year’s work plan for 2013 and asked the board if they had any fundamental changes.
- The group reviewed and updated the work plan.
- Lucinda will send the final document to the board

Scott Groen moved and John Schroeer seconded a motion to approve the AQAB 2013 work plan as completed at this meeting.

Motion Passed Unanimously



**8:00 Brief updates & announcements**

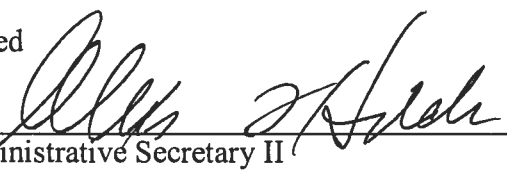
- Bike Advisory Committee report. As Michael Lynn was not present, there was no report.
- West Nile Virus update
  - Greg McMaster reported the WNV committee met last week and voted to review their process.
    - Their next meeting will be December 2.
    - The NRAB will be replacing their representative to the committee.
    - He talked to AQAB Council liaison Ben Manvel who agreed the process needs to be looked at. Gerry Horak was also concerned how the process played out.
    - Greg has sent an email to Mike Calhoon but has not had a response.

**Adjourn**

Nancy York moved and Dennis Georg seconded a motion to adjourn.

Greg McMaster adjourned the meeting at 8:50 p.m.

Approved by the Board on December 10, 2012

Signed   
Administrative Secretary II

12 10 12  
Date / /

