Natural Gas Advisory Committee
Meeting Notes
7/23/15

Secretary Dunn Introduction

- With its 20th anniversary, DCNR is recommitting to the pillars of its mission: stewardship, partnership, and service.
- Advisory committees, like NGAC, provide a good opportunity to enhance partnerships.
- Leasing Moratorium (Executive Order 2015-03)
  - The leasing moratorium allows us to focus on the leases we have – continuing to improve our BMPs. Between existing leases and severed lands, the bureau wants to take a pause to better understand development and potential impacts on state forest values.
  - It was clarified that the legal document (lease) allows for future development of leased lands, regardless of the moratorium.
  - The Governor campaigned on the promise of re-instating the moratorium, and the public has supported enacting a moratorium.
  - The Governor and DCNR relied largely on analysis from the Rendell administration to formulate the “Whereas” statements in the executive order. At a time, there was the possibility that 700,000 acres of state forest land could be excised from certification based on gas development.
- Secretary Dunn is recusing herself from the Clarence Moore issue in the Loyalsock State Forest based on her past employment with Penn Future
- Secretary Quigley is leading a pipeline task force, and Dan Devlin is DCNR’s representative on that task force. Practices employed on state forest lands will help inform the work of the task force. Dan will carry input from NGAC to the task force.
  - NGAC members asked for clarification on estimates of overall impacts to state forestland from pipeline and gas-pad development, and noted discrepancy between some nonprofit estimates and DCNR's estimate in its Marcellus Shale Monitoring Report of 2014.
- NGAC has proven valuable to the bureau on a number of issues, such as compressor noise guidance and perspectives on invasive species.
- Possible changes to NGAC, based on the survey, could be a closed working session, separate work groups for specific topics, and more involvement of Commonwealth staff. Jim Grace will continue as the Chair.
- State Forest Resource Management Plan update
  - A public draft will be released mid-late August
  - There will be 12 public meetings in late Sept-Oct. Locations were chosen based on population centers and concentrations of state forest land.
  - There will also be an opportunity to comment via email.
  - The SFRMP covers the full range of state forest land uses, values, and resources.
NGAC would like an opportunity to review the Geologic Resources chapter of the SFRMP.

Dan Devlin (State Forester) Update

- Leasing moratorium applies only to state forest and state park land. It does not apply to riverland leasing or leasing of other Commonwealth land (e.g., Department of General Services)
- An update of the number of acres of riverland leasing is on the website.
- NGAC may have insight on issues with adjoining land owners related to riverland leasing.
- Statistics Update
  - Total wells approved 1,021
  - Wells permitted by DEP 1,006
  - Wells drilled 612
  - Wells reporting production 528
    - 2008 – 28
    - 2009 – 179
    - 2010 – 303
    - 2011 – 315
    - 2012 – 76
    - 2013 – 79
    - 2014 – 47
    - 2014 – 1
  - Well pads 234
  - Approximately 40,000 acres released back from shale-gas leases.
- Pipeline Task Force
  - The intent is to have a stakeholder-driven effort to develop guidelines, recommendations, and BMPs.
  - It is patterned after the Wind and Wildlife Collaborative.
  - 48 members with a range of backgrounds and expertise.
  - 12 committees (e.g., agriculture, conservation and natural resources, counties, emergency response)
  - There are extra participants on the committees beyond the 48 official members. Roughly 150 people involved total.
  - The first meeting was about the role of the task force and procedures for the task force and committees. The task force and committees will strive for consensus, but Roberts Rules will apply if necessary.
  - There is also an internal DEP task force about provision of information and streamlining permitting.
  - There was a presentation at the first meeting about smart landscape-level planning.
  - There will be an opportunity for public comment at each task force meeting.
o Committees must meet for the first time by July 31. The next task force meeting is Aug 26. Meetings will follow in Sept, Oct, Nov (reports from committees due), Dec (public comment on committee input), Feb (recommendations finalized for Governor).

o It is more likely that the DCNR process regarding rights-of-way will inform the task force, than that the task force will inform the DCNR process, but it is too early to say for sure.

o One NGAC member commented that it is important to recognize existing regulations and BMPs as a starting point.

- PNDI
  o BOF is far along in upgrading the PNDI tool.
  o Existing tool is 10 years old.
  o The new tool combines the environmental review function and planning tools together.
  o There will be mapping improvements and better access to information.
  o Polygons are based on habitat areas, not just circles.
  o It will automatically submit review requests to cooperating agencies.
  o There will be various webinars and trainings on the new tool.
  o We are considering implementing a one-time fee for PNDI receipts to help defray the cost of running this program.

- Guidelines
  o BOF is working on an update to the entire The Guidelines for Administering Oil and Gas Activity on State Forest Lands document.
  o We are adding new BMPs and improving the process for certain things, such as seismic surveys and invasive species reports.
  o Draft expected in December with track changes.

- Monitoring
  o Periodic updates will be provided on different topics. Leaning towards a major report every 5 years.
  o Infrastructure update was provided with data through 2014.
    - One NGAC member suggested it would be good to provide information on lease differences, such as storage leases.
    - One NGAC member suggested that total average disturbance per well pad would be an interesting metric.
  o Working on Plants and Water updates.
  o One NGAC member expressed an interest in seeing comparative reports on shale-gas development relative to other activities, such as power lines.
  o One NGAC member suggested it would be good to show benefits, such as revenue.
  o One NGAC member suggested it would be good to reference other chapters and the 2014 report in the update documents.

- Mock Well Pad
  o 4 soil test treatments
  o Cooperative project with Penn State
NGAC members pointed out that timing of restoration, relative to future development, is important. This would be a good topic for future discussion.

- **Invasives**
  - BOF wants to do training with the operators.
  - BOF is developing a field guide document.

- **Private Forestland BMPs**
  - BOF would like to bring ideas for this to NGAC.
  - It may take a year or more to develop.

- **NGAC member survey results**
  - Suggested that having Commonwealth staff on the committee would be valuable.
  - Sentiment that a closed working session would be beneficial.
  - Sentiment that given the size of NGAC, working groups would not be necessary.
  - BOF should use phone calls to check in with inactive members.
  - BOF should use NGAC to get input on policy decisions as the policies are being developed.
  - One NGAC member expressed that a more specific agenda and background information beforehand would be helpful. Members could discuss topics with specialists in their organizations beforehand and bring that input to the meeting.

**Industry Update**

- **Seneca**
  - 2008-2010 was testing mode
  - 2011-2015 development phase in Tioga, Loyalsock, and Elk
  - Discussed how commitments to pipeline projects can drive development.

- **PGE**
  - Not drilling at present
  - Not anticipating drilling within next year

- **Andadarko**
  - Not anticipating drilling this year

- Discussed how market demand is driving development, as a huge resource lies waiting to be tapped. Export potential could play a large role in the pace of future development.

- **Scott Perry (DEP)** discussed how DEP recognizes two phases to reclamation: (1) erosion and sedimentation control, and post-construction stormwater management, (2) restoration back to landowners desired land use. He expressed that there are opportunities for interim restoration for ecological enhancement.

**Wastewater**

- 20-40% of 5 million gallons used to hydraulically fracture a well returns as flowback. It contains low concentration of additives from the fracturing fluid, and other constituents such as barium and strontium, naturally occurring radioactive materials and relatively high TDS.

- Flowback is temporarily stored in tanks with secondary containment.
Management options include:
- Treatment and discharge to surface waters (This is not presently being done or pursued, due to voluntary compliance by operators.)
- Reuse for future hydraulic fracturing jobs; both with or without some level of treatment, depending on site-specific circumstances and needs.
- Deep well injection (i.e. permitted Underground Injection Wells).
- What are the capacities of these various options, and how will new technology affect them?

Main transport of flowback water has been trucking. There is potential for pipeline transport, but, as with trucking, this has risks and benefits that need to be considered. For example, there is a difference between a visible truck spill and an underground pipe leak, but there are also potential safety and environmental benefits associated with reduced trucking.

There is potential for more deep well injection in PA.

Industry can use flowback in a new hydraulic fracturing job, such as ranging to 50%, or even higher in some cases.

A concern raised by one NGAC member was related to freshwater use. Groundwater wells are not presently being used on state forest land to supply freshwater. More water supply wells would reduce truck traffic and reduce the need for more pipeline construction.

BOF is reacting to groundwater well requests and wastewater pipeline requests by being conservative in the face of uncertainty.

One NGAC member questioned whether BOF would allow deep injection wells on state forest land in appropriate formations and locations, as this would limit transport of flowback water.

One NGAC member pointed out that it is very common in other states (e.g., Oklahoma, Texas) to use deep injection wells and wastewater pipelines. The waste is often handled locally within the well field.

One NGAC member suggested that it would be good to have EPA give a presentation on deep well injection.

It was suggested that industry members could bring some experts on water and waste management to some future meetings.

**Pipelines**

- A discussion of impacts and BMPs would be valuable. For example, the edge effects of pipelines versus other forms of disturbance. Are there ways to ameliorate edge effects by softening edges? How are pipeline stream crossings being handled?
- Questioned how we determine that adding additional pipelines to an existing corridor becomes too wide (ecologically, or aesthetically)?
- One NGAC member recommended that it would be helpful for various state agencies to coordinate their responses on preferred route alternatives for pipelines.