



## Office News

*Bureau of Land Management \* Wyoming Department of Agriculture \*  
Wyoming Game & Fish \* Wyoming Department of Environmental Quality*

### JIO Activities

By Mike Stiewig

The JIO has been very busy since our beginnings in the spring of 2006. Since this is the first of many quarterly newsletters that we'll release, it's going to cover a lot of information from the inception of the office to date. The following is a *short* list of highlights of our accomplishments: 1) Generated a number of Jonah-specific monitoring plans (wildlife, air quality, reclamation, surface disturbance, and ground water to date), 2) Using a public process, developed quantitative, measurable reclamation criteria for use in Jonah, 3) Established off-site mitigation goals and developed a process to evaluate potential mitigation projects, 4) Initiated development of a Web-based monitoring database, 5) Sponsored a reclamation workshop in Pinedale to exchange ideas for best practices, 6) Performed countless monitoring and inspection activities, 7) Conducted or participated in multiple field tours of Jonah for a variety of groups, 8) Provided JIO briefings to a host of different audiences, 9) Evaluated and approved mitigation project from Jul 06 cycle, 10) Evaluated and approved mitigation project from Mar 07 cycle, and 11) Participated in establishment of the WLCI.

This list touches just a few of the highpoints of our activities so far. Other members of the JIO may provide more detail on some of these topics in their specific sections of the newsletter. Overall, the staff of the JIO believes it's been an extremely productive first year and is looking forward to continuing to improve our processes and meet our challenges head-on!

### Off-Site Mitigation Project Cycle Status

BY Mike Stiewig

#### **July 2006 Off-Site Mitigation Project Cycle Status**

The JIO received a total of 19 applications for mitigation projects during our first funding cycle. Of these, seven were approved at a total cost of \$660,000 and two others were deferred until the next cycle. Status of the approved projects is included below. If anyone wants additional information on any of these projects, please contact the JIO and we'll be happy to provide the information.

#### **March 2007 Off-Site Mitigation Project Cycle Status**

The JIO considered 14 new projects and two projects deferred from the previous cycle, for a total of 16 projects evaluated. Of these, seven were approved. Status of the approved projects can be found at [http://www.wy.blm.gov/jonah\\_office/projects/2007project\\_table.pdf](http://www.wy.blm.gov/jonah_office/projects/2007project_table.pdf)

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# Jonah Disturbance Report

By Lisa Reinhart

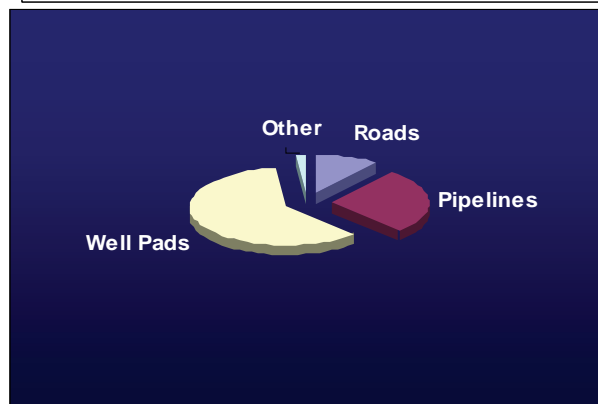
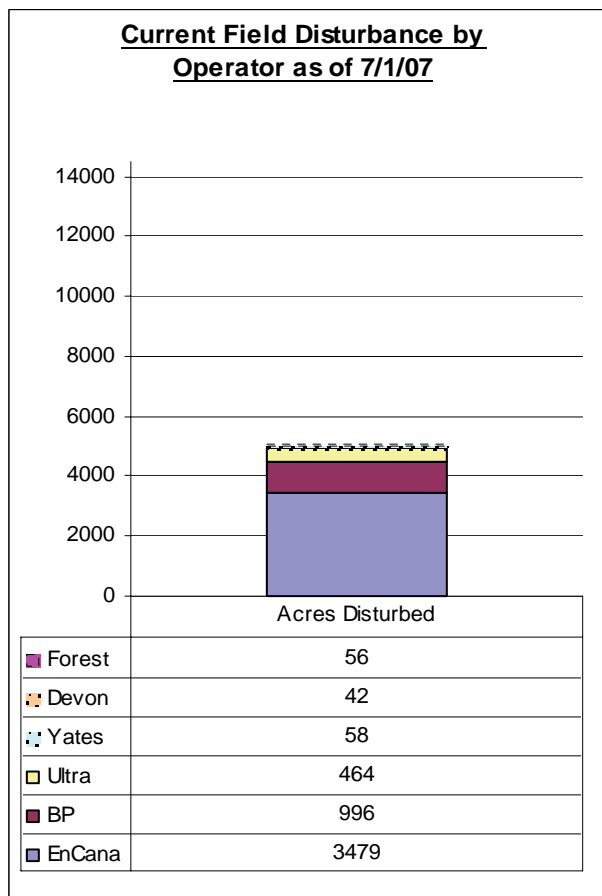
One of the many innovations in the Jonah Record of Decision was the establishment of an acreage “roll-over” credit. What that means is although a total of 20,334 acres are allowed to be disturbed in Jonah, only 14,030 (46% of the 30,500 ac. field) can be disturbed at any given time. Therefore, once the 14,030 mark is reached, land must be successfully reclaimed in order for more acreage to be disturbed. This “roll-over” caveat gives an incentive for gas operators to restore the land to a functioning ecosystem as quickly as possible. This requirement also demands close attention to surface disturbance tracking.

High-resolution aerial photography from September of 2006 was used to establish a baseline of total field disturbance in the Jonah Field. Total disturbance was found at 4,287 acres. From that time, the operators report field disturbance on a quarterly basis. As of June 31, 2007, total disturbance was 5094 acres including well pads, pipelines, roads, and other disturbance.

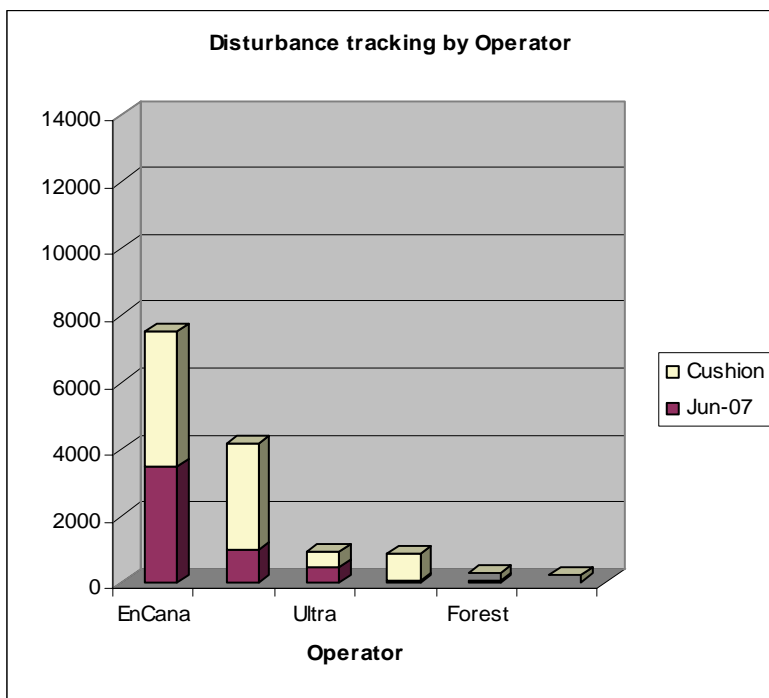
Note: Although the 6 gas companies may not actually disturb areas of major rights-of-way, they are assigned the disturbance on a operated acreage basis for roll-over credits. The pipeline companies are also responsible for reclamation and monitoring but do not have a roll-over incentive.

The figure on the upper right shows total allocated field disturbance by operator.

The figure on the bottom right shows the type of disturbance (well pads, pipelines, roads, and other infrastructure) recorded in September '06.



The figure to the left shows disturbance levels for each operator as of 7/1/07. This figure helps illustrate how close the disturbance threshold is for each company. The red columns indicate current disturbance acreage while the yellow columns indicate the cushion before roll-over must be met. Note total field disturbance is approximately 5,094 acres out of 14,030.



**STAY TUNED**  
**Disturbance is tracked on a quarterly basis and updated versions will be available in following newsletters.**

## Reclamation Status

By Lisa Reinhart

Summer is here and the heat is on in Jonah to collect monitoring data on reclamation status field wide. Range folks are swiftly collecting detailed monitoring data that is used to determine if roll-over reclamation status has been met.

Data includes cover by species and density or frequency of forbs and shrubs. Once the data is submitted to the Jonah Interagency Office in the fall of 2007, we will be able to provide reclamation status by stage field wide.

Stages include: Stage 1 is where the site has been re-contoured and seeded. Stage 2 is when perennial plants have germinated and are establishing on the site. Stage 3 meets roll-over and stage 4 meets final criteria.

After data has been collected and analyzed, a report will be available that describes the status of Jonah reclamation.

To view the detailed reclamation criteria and monitoring guidelines, please visit our website at: [http://www.wy.blm.gov/jonah\\_office/monitoring.htm](http://www.wy.blm.gov/jonah_office/monitoring.htm)



The above photo is a line transect set up for data collection on one of EnCana's mat pad sites.

## Reclamation Symposium

By Lisa Reinhart

On April 4, 2007, the JIO sponsored a symposium to encourage education, communication and sharing of reclamation success stories resulting from oil and gas development. The symposium featured speakers with experienced in Wyoming rangelands. Topics varied from range ecology, seed mixes, seeding techniques, shrub establishment, communication and new innovations.



The speakers' presentations from the symposium are provided on our web-site in PowerPoint format.

[http://www.wy.blm.gov/jonah\\_office/reclamationwkshp07/index.htm](http://www.wy.blm.gov/jonah_office/reclamationwkshp07/index.htm)

## Oil and Gas BACT Revisions

By Jennifer Frazier

The Air Quality Advisory Board (AQAB) recently approved Wyoming Department of Environmental Quality / Air Quality Division's (WDEQ/AQD) Oil and Gas Permitting Guidance. The Guidance will become effective for all facilities with spud dates later than 9/1/2007 and for all facilities started after 9/1/2007.

The last revision of the Guidance occurred July 28, 2004, and speci-

fied tighter air restrictions in the Jonah and Pinedale Anticline Development Area. The latest revision (June 2007) further tightens these restrictions in regards to emissions associated with dehydration units, tanks, and pneumatic pumps.

These types of equipment produce flashing emissions. Flashing emissions are VOCs (Volatile Organic Compounds) and HAPs (Hazardous Air Pollutants). Industry is required

to control these emissions with vapor recovery devices (e.g. condenser, BTEX control system). Emission control requirements are determined through a process called Best Available Control Technology (BACT). The new Guidance may be found at <http://deq.state.wy.us/aqd/Miscellaneous/2007%20GUIDANCE.pdf>.

## Upcoming Air News

By Jennifer Frazier

- Wyoming DEQ / AQD will be conducting a Network Assessment of Ambient Air Quality Monitoring Stations in the Area—<http://www.wyvisnet.com/>
- A new station has been placed at South Pass—<http://www.wyvisnet.com/sopal/index.html>
- The Wyoming Air Quality Manager's Committee Meeting was held in Pinedale recently. Representatives of the Environmental Protection Agency, DEQ, United States Forest Service, Bureau of Land Management, and industry toured the Jonah Field and the Pinedale Anticline and discussed air issues facing this area.
- EPA is "out of the closet" regarding global climate change—<http://www.epa.gov/climatechange/index.html>
- EPA proposing to tighten ground-level ozone standards—<http://www.epa.gov/air/ozonepollution/naaqsrev2007.html>
- Drill rig emissions data will be available in the fall!!! Industry is currently buying new natural gas engines for the rigs or retrofitting existing ones. The DEQ drill rig permitting program is also underway.
- The 2007 winter time ozone study (<http://70.133.103.202/ugwos/>) results will be available this fall. Although elevated ozone concentrations were not seen in the winter of 2007, valuable air data was collected in the upper Green River Valley. Stay tuned for news regarding this exciting project!



## Air Quality Project Ideas

By Jennifer Frazier

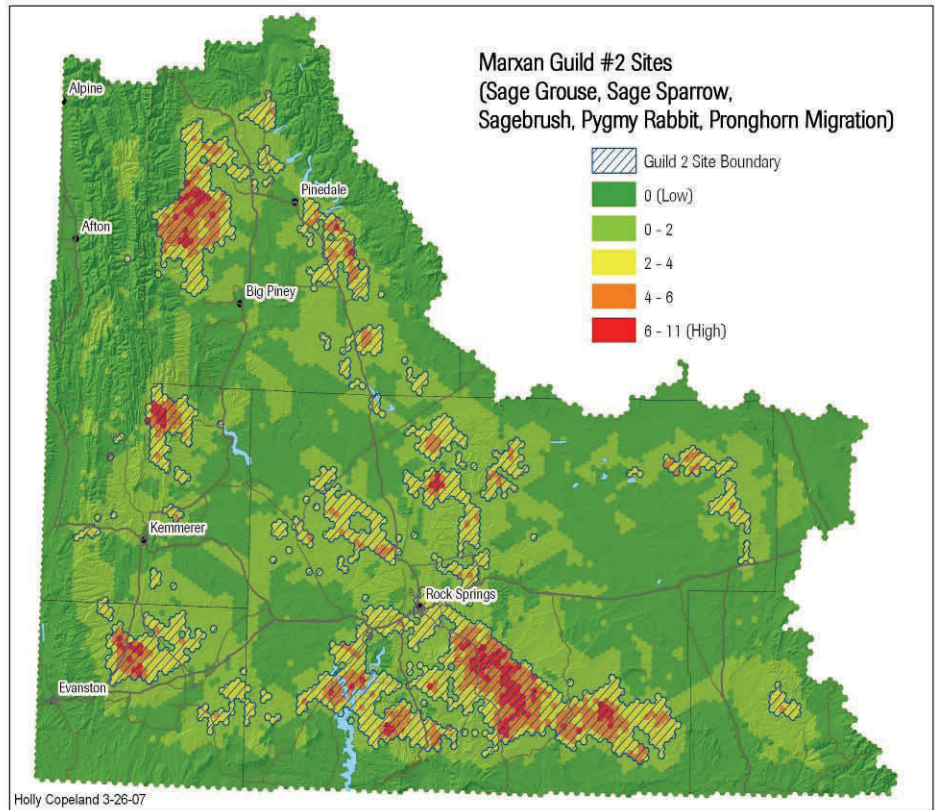
Do you have an idea for an off-site air quality mitigation project that you would like to discuss? Identified impacts in the Jonah Record of Decision include 1) Concentrations of criteria and PSD pollutants and 2) Visibility and Atmospheric Deposition. A document may be found at [http://www.wy.blm.gov/jonah\\_office/monitoring/AirQualityPlan011207.pdf](http://www.wy.blm.gov/jonah_office/monitoring/AirQualityPlan011207.pdf) to assist in aligning your project goals and objectives with the commitments made in the ROD. Some ideas that have been discussed include mass transportation system to/from high traffic areas, carpooling, replacing wood stoves with natural gas stoves...but all projects will be considered!

## TNC Prioritization Model

By Dan Stroud

The Jonah Interagency Office is tasked with selecting and funding projects that best address the wildlife resources adversely impacted by Jonah Field energy development. In order to focus efforts and dollars on projects that most accurately capture the biological assets compromised, BP contracted the Wyoming Chapter of The Nature Conservancy (TNC) to assist with this effort. In addition to using its own ecoregional planning methodology, TNC's process incorporated the Marxan Sites Model to predict occurrences of plant and animal communities that most replicate the Jonah Field prior to energy development taking place. TNC contacted numerous sources including agency biologists, wildlife consultants, researchers and others who agreed to share information on the various plant and animal species specific to the Jonah Field. The distribution of species was graphically illustrated in a number of maps; the most important of which for JIO needs is the one below.

This map illustrates the presence of the guild of species most impacted by development on the Jonah Field, particularly sage-grouse and pronghorn, as well as habitat areas sufficient for them to thrive. The areas which capture the highest populations and best quality habitat are illustrated by color (the highest/best in red). Future proactive efforts by JIO will focus on these priority sites to some extent, although will not eliminate other areas of importance to one or more species. One added highlight of these mapping efforts is that TNC's modeling not only indicates areas of importance for various species, but also factors in future development potential for oil and gas.



Not only are the highest priority areas considered important habitat, but they are also at a low risk of development for oil and gas resources and so are most likely to provide high quality wildlife habitat for the remainder of the productive life of the Jonah Field.

# What do we want in the way of projects? How about vegetative diversity?

By Dan Stroud

We get a lot of questions regarding the kinds of wildlife projects we're interested in receiving at the JIO. This is certainly not a surprise since there are many varying opinions regarding the best strategies for managing sage-grouse, which is a primary focus of our office in regards to off-site mitigation. Perhaps the easiest way to answer this is by reviewing our **Off-Site Mitigation Strategic Goals**. Our primary wildlife mitigation goal involves maintenance or enhancement of 90,000 acres of habitat, which in itself conjures up even more questions. What exactly constitutes "maintenance or enhancement" of wildlife habitat? As with the sage-grouse management strategies mentioned earlier, there is an abundance of conflicting ideas on this topic as well. However, for this article I'd like to focus on the concept of adding vegetative diversity to the landscape, especially in terms of forbs. In my opinion, increasing the quantity and diversity of forbs is an extremely important component of habitat management regarding the various needs of sage-grouse.

When the situation warrants, there are numerous tools that can be employed to meet the objective of increasing vegetative diversity. These tools include a variety of mechanical, chemical or fire manipulations, adding water, seed and/or fencing in strategic locations, controlling noxious or invasive weeds, and/or modifying grazing management. We understand that to implement *any* of these tools, livestock operators are critical players who must be consulted and their objectives considered along side wildlife objectives. In some cases, adjustments to grazing management practices across a large area could provide many of the desired vegetative diversity benefits, especially when implemented in concert with other tools such as water and fencing. Though we recognize there are operational constraints that many livestock operators face, we in the JIO are willing to provide assistance to increase a rancher's flexibility when there are mutual livestock/wildlife objectives, to include potentially adding additional water facilities, leasing alternative grazing areas, using available grass banks, or purchasing supplemental feed to name a few.

We have included a laundry list of project types on our Website for your information. Large scale projects are preferred; however, we work on smaller projects as well. In addition, there are other types of plans and guidelines we rely on heavily, to include the following:

*Sage-Grouse Habitat Management Guidelines for Wyoming* (Final draft – 4/11/07) authored by Joe Bohne, Tom Rinkes and Steve Kilpatrick  
*Wyoming Guidelines for Managing Sagebrush Communi-*

*ties with Emphasis on Fire Management* – Interagency Vegetation Committee – 2002  
*Gunnison Sage Grouse Rangewide Conservation Plan* (<http://wildlife.state.co.us/WildlifeSpecies/SpeciesOfConcern/Birds/GunnisonConsPlan.htm>)

Another source of important information we routinely reference is the USGS SageMap Website at <http://sagemap.wr.usgs.gov/>. This Website contains a myriad of information regarding sagebrush systems and sage-grouse, and can be very useful in determining both needs of sage-grouse as well as ties to conservation strategies, sagebrush mapping and other information which is very useful.

In conclusion, the JIO is more than assist project proponents with their proposals. In fact, we strongly advise potential proponents contact us prior to submitting proposals to better understand our project goals/objectives and how they would relate to their specific ideas. Stay tuned for more upcoming information in the next newsletter.



Example of a habitat tool (mower) doing work in the Big Piney-LaBarge Area. Example of a mosaic (below) that fits in with the natural topography.



# Do you have range enhancement ideas?

By Lisa Reinhart

The Jonah Interagency Mitigation and Reclamation Office (JIO) has funding opportunities to enhance or maintain the health and habitat values of sagebrush systems in the Green River Basin area.

Wyoming's sagebrush communities provide forage for livestock and habitat for hundreds of species of mammals, birds, fish, reptiles, and amphibians. Due to various factors, many of our local sagebrush communities have turned into monotypic stands of later successional ecosystems that are typically >50 years old (Wyoming Interagency Vegetation Committee, 2002). These later stage plant communities tend to lack biodiversity, vigor, and production characteristics. The JIO is pursuing projects to reverse that trend. Many of these plant communities are dominated by decadent sagebrush which has reduced the forb and grass diversity necessary for a balanced healthy sagebrush community. This lack of biodiversity has negative impacts on both livestock production and wildlife habitat by reducing essential food and cover.

One of the resources that energy development in the Jonah gas field has impacted is wildlife species, primarily sage-grouse and pronghorn antelope. The JIO has set out to off-set those impacts by improving habitat outside the gas field. We are progressively pursuing project ideas with willing participants and want to talk "project-talk" with others who have the same goals in mind. Project goals of the JIO include: enhancing sagebrush communities using various treatments, providing structures that improve foraging distribution and management flexibility, enhancing riparian systems, and conservation/habitat planning. To implement these projects funds are available for prescribed treatments such as: burns, spike, using a Lawson aerator, inter-seeding, mowing, irrigation, prescribed grazing & related structures, and possible conservation easements.

Do you have any project ideas? I would enjoy visiting with you about project ideas and can assist in the planning and application process. Just stop by the new BLM building at 1625 West Pine Street, call me at 367-5386, or email me at [Lreinh@state.wy.us](mailto:Lreinh@state.wy.us). You may also visit our website for detailed JIO Off-Site Strategic Mitigation Goals at [http://www.wy.blm.gov/jonah\\_office/project\\_aps.htm](http://www.wy.blm.gov/jonah_office/project_aps.htm)

## What is the Jonah Interagency Office?

By Mike Stiewig

The Jonah Natural Gas Field is an area of west central Wyoming, south of the town of Pinedale in the Upper Green River Basin, and has one of the richest concentrations of natural gas in the United States. Several unique approaches were instituted in the Jonah Infill Development Project Record of Decision (ROD), to include a commitment by EnCana Oil and Gas (USA), Inc. to a \$24.5 million off-site mitigation fund and establishment of the Jonah Interagency Mitigation and Reclamation Office (JIO) to provide overall management of field monitoring and mitigation activities, both on- and off-site.

The JIO is staffed with a full-time person from the Wyoming Department of Agriculture, Wyoming Game & Fish Department, Wyoming Department of Environmental Quality and the Department of the Interior/Bureau of Land Management, who serves as the JIO Project Coordinator.

Oversight of the JIO is provided by an Agency Managers Committee, composed of participating Agency heads or their representatives. This committee meets periodically to provide senior-level guidance, evaluate past performance, review large-scale off-site mitigation projects (>\$100,000) and review future needs and planned activities.

**Jonah Interagency Office**  
**625 W. Pine St.**  
**Pinedale, WY 82941**  
**(307) 367-5300**  
**[www.wy.blm.gov/jonah\\_office](http://www.wy.blm.gov/jonah_office)**



From left to right, Jennifer Frazier (WDEQ), Dan Stroud (WGFD), Mike Stiewig (BLM), Lisa Reinhart (WDA)  
*Photo courtesy of Janet Montgomery*