

**Agricultural BMP Committee**  
**\*FINAL\* Meeting Minutes**  
**January 6, 2010; 9:30 a.m.**  
**Arizona Department of Environmental Quality, Conference Room 250**  
**1110 W. Washington St., Phoenix, AZ 85007**  
**Call-in Number: (800) 746-4352, pin #1828417**

**Committee members present:** Don Butler, Clint Hickman (appointment pending), Colin Kaltenback, Alfred Lopez, Earl Petznick Jr. (appointment pending), Kevin Rogers, Mike Terrill (appointment pending), Dan Thelander (Chair), Tom Thompson (appointment pending), Jim Walworth (call-in), and Nancy Wrona.

**Committee members absent:** Wade Accomazzo and Will Rousseau

**Additional attendees:** Bas Aja, Diane Arnst, Philip Bashaw, Mike Billotte, Emily Bonanni, Brett Cameron, Aaron Chavez, Kris Graham Chavez, Sona Chilingaryan (on the phone), Bob Collier, Danielle Dancho, Scott DiBiase, Don Gabrielson, Kazi Haque, Ken Hooker, Nicholas Kilb, Dena Konopka, Rick Lavis, Tom Luch, Corky Martinkovic, Steve Peplau, Jeff Sandquist, Frank Schinzel, Randy Sedlacek, Robert Shuler, Lisa Tomczak, and Greg Wuertz.

### **Welcome**

Chairman Thelander opened the meeting and welcomed everyone present. A quorum of confirmed members was present (eight of 15 positions). Mr. Thelander introduced the new members to the Committee. Since the new members have not received official documentation from the Governor regarding their appointment, they did not have voting privileges.

### **Discussion and Possible Action on Minutes from September 9, 2009, Committee Meeting**

Chairman Thelander started the meeting with the review of the minutes from the September 9, 2009, Agricultural Best Management Practices Committee (hereafter Committee) meeting. The Committee briefly reviewed the minutes. Chairman Thelander asked if there were any changes or corrections to the minutes. Hearing no comments, Chairman Thelander asked for a motion to approve the minutes from the September 9, 2009, Committee meeting. Colin Kaltenbach, University of Arizona, moved to accept the minutes from September 9, 2009; seconded by Al Lopez, Committee member. Chairman Thelander asked if there was any further discussion regarding the minutes. Hearing no additional comments, Chairman Thelander asked the Committee to approve the minutes; all approved.

Don Gabrielson, Pinal County Air Quality Director, asked that since the new members have yet to be formally appointed and Senate Bill (SB) 1225 expanded the geographic reach of the BMP program and the Committee membership, is it appropriate for the Committee to take any formal action. Nancy Wrona, Committee Member, said that she did not think the language of SB 1225 implied the Committee could not act on any proposals until the new members are officially appointed. Rick Lavis, Arizona Cotton Growers Association, stated that SB 1225 did expand the BMP Program and added five new members to the Committee. Mr. Lavis added that he did not think it was the intention of the Committee to adopt any resolutions today, but rather to review and discuss the recommendations from the Technical Workgroup and possibly direct additional research.

Chairman Thelander agreed and stated the Committee would not take any formal action regarding the proposed best management practices (BMPs) today but would review and discuss the proposals by each agricultural sector. Chairman Thelander asked Bas Aja, Arizona Cattleman's Association, and Mr. Lavis to provide an overview of the BMP Program and SB 1225 for the new members of the Committee.

Mr. Lavis began by saying approximately 13 years ago the Environmental Protection Agency (EPA) determined that agriculture contributed to particulate matter emissions (PM) in the Maricopa County nonattainment area. As a result of litigation, the Agricultural BMP Program was created to reduce PM emissions from agricultural activities. The Program contained a menu of options that were scientifically verified to reduce emissions. In 2007, EPA determined that the area had not attained the National Ambient Air Quality Standards (NAAQS) and all sources of PM must reduce emissions by five percent. At that time, the Committee formed a Technical Workgroup to re-evaluate the BMP Program and determine if changes or additions should be made to the Program. The Committee adopted five new BMPs, increased the number of required BMPs in each agricultural category from one to two, and also expanded the area of applicability to include Maricopa County portions of Area A. In 2009, livestock agriculture wanted to become involved in the BMP Program. The Arizona Legislature approved SB 1225 in June 2009, requiring the inclusion of beef feedlots, dairies, swine, and poultry operations in the Program through addition of livestock categories along with representatives from the livestock sectors to the Committee; a county representative will also be added. The Committee began meeting in during the summer of 2009 and formed a Technical Workgroup to evaluate and develop BMPs for livestock activities.

Mr. Aja said exceedances of the NAAQS in many areas of the State mean that the Committee would look at other areas of the State to implement control measures. After researching other areas of the country with similar livestock sources (livestock, dairy, swine, and poultry), the Technical Workgroup found that San Joaquin Valley and Imperial County (California) had similar conditions and situations. It was clear since the nonattainment status of Maricopa County was elevated to serious, that a better program should be developed that was more efficient at reducing emissions. This new program would be supported with science and the experience from the program in San Joaquin Valley. The primary issue related to PM emissions has been the high population coupled with multiple sources of emissions driven by land use activities. Emissions from livestock operations are not land use driven, but driven by daily activities such as feeding and cattle walking in pens. Livestock operators have been conducting studies in the area and have started to get an idea of what control measures are most effective for the area.

## **Discussion and Possible Action on Recommendations from the AgBMP Technical Workgroup**

Chairman Thelander asked Kevin Rogers, Committee member, or Earl Petznick Jr., Committee member (appointment pending) to provide an overview of the final recommendations from the Technical Workgroup. Mr. Rogers said the Workgroup met five times and divided into subgroups, representing each agricultural sector, to develop livestock BMPs in addition to reviewing the crop BMPs. The recommendations presented to the Committee provide a good starting point to evaluate where the Technical Workgroup is in the development process. Mr. Petznick added that the proposed BMPs provide the groundwork and believes all of the BMPs reduce emissions but they should to be further evaluated to clarify overall effectiveness.

Robert Shuler, Shuler Government Affairs LLC, representing both swine and poultry sectors, stated both the swine and poultry groups are in the process of revising their respective narratives for their proposed BMPs. The revisions would clarify when the BMPs would be triggered or thresholds for when operations need to implement BMPs.

Ms. Wrona suggested that a representative from each agricultural sector list and describe each proposed BMP and provide some background on how they were developed. Ms. Wrona summarized that all of the benchmarking was based on work accomplished in San Joaquin Valley and Imperial County as well as ongoing studies pertaining to PM emissions. She also pointed out the narratives are organized in the same way for each sector. Colin Kaltenbach, Committee member, asked to clarify and describe the control efficiency numbers for the BMPs in each sector.

### ***Beef Feedlots***

Mr. Aja said the question of control efficiencies highlights some differences from other programs and the questions that some people have regarding the proposed BMPs. The proposed program took the control measures for livestock operations from San Joaquin Valley and tailored them to Arizona. Mr. Aja noted the control efficiencies that are greater than 10 percent are scientifically based. He also said some of the proposed BMPs for feedlots are not in the San Joaquin Valley program. There is some concern that there are discrepancies in some of the emissions factors (lbs/head/year); however, these numbers were taken directly from the San Joaquin program. Early in 2009, Dr. Brent Auvermann, Professor of Agricultural Engineering at Texas AgriLife Research and Extension Center at Amarillo, provided some assistance for a dust study and said there is a range and variation in emissions according to soil type, animal, and other factors. Mr. Aja said he presented the concerns regarding control efficiency and emission factors to Dr. Auvermann and hopes for a reply soon. Chairman Thelander asked for a clarification of control efficiency. Mr. Aja responded by saying the control efficiency represents the percent of the emissions (left column) that would potentially be reduced if a BMP was applied. Mr. Aja added that per Dr. Auvermann, control efficiencies are not cumulative.

Mr. Lavis asked about the BMP with a 98 percent control efficiency. Mike Billotte, United Dairymen's Association, stated that there is a formula for estimating the control efficiency for a given BMP. He reiterated that it is not cumulative; therefore a person cannot use one BMP with 10 percent and another BMP with 25 percent to have a control efficiency of 35 percent. Ms. Wrona said that the Workgroup looked at control efficiencies from other jurisdictions and

evaluated how they would apply and work in Arizona. She added that ADEQ and the Maricopa Association of Governments will help verify the emissions and control efficiencies.

Mr. Aja continued and said that their study found that most PM emissions are from the movement of livestock expending built up energy on a daily basis, particularly later in the day. He also said that the proposed BMPs for the unpaved roads/feed lanes provide more reduction in emissions than the BMPs in the other categories.

Mr. Aja said that SB 1225 contains four categories for emissions reductions: unpaved access connections; unpaved roads or feed lanes; animal feeding, waste handling, and transporting; and arenas, corrals, and pens. Some of the BMPs listed in arenas, corrals, and pens are not from the San Joaquin Valley program. He stated that some of the BMPs are designed to limit animal movement and thus reduce PM emissions and some are designed to reduce emissions directly through watering or spraying. Mr. Aja said that some of the proposed BMPs are from the study recently conducted in the Cowtown area in Pinal County.

Mr. Rogers asked if there was any information on the cost of watering, considering the BMPs related to watering have the highest control efficiencies. Mr. Petznick stated that it could cost between \$3000 and \$5000 per day. Mr. Aja said that their study was conducted in the east valley and considered cost, labor, number of gallons of water, etc.

Mr. Rogers asked how many beef feedlot operations would be subject to implementing these BMPs. Mr. Aja said that one of the charges of the Committee was to determine thresholds which would apply to all licensed feedlots. The threshold would affect the number of operations subject to BMPs. Mr. Aja said there are three licensed operations in Maricopa County; only one operation is a “full” operation, from calf to finishing of the animal. Chairman Thelander asked if that operation was in the nonattainment area. Mr. Aja indicated that it is in the nonattainment area.

Chairman Thelander asked about the difference between feed lanes and unpaved roads. Mr. Aja said that it is mostly an issue of private versus common area. He added that there could be jurisdictional issues related to access connections. Chairman Thelander also asked about how the 20 percent moisture across the pen surface would be measured. Bob Collier, Workgroup member, said there are instruments that measure the percent moisture content. Mr. Petznick added that some access lanes and feed lanes run together.

Sona Chilingaryan, Environmental Protection Agency, said it is important to look at the livestock requirements for Maricopa County to make sure there is no state implementation plan (SIP) relaxation (backsliding) when developing the BMPs. Chairman Thelander said the Committee is charged with developing the BMPs for the livestock operations and making sure they are economically feasible and effective. He is not sure about the final approach to make sure that the BMPs are consistent with Maricopa County. Ms. Wrona said that an anti-backsliding analysis will have to be conducted. She said that ADEQ will work with representatives from each agricultural sector and look at their control efficiencies and emissions numbers to make sure that the data is accurate. Mr. Billotte said that the numbers used in the proposed BMPs should be used as the starting point.

Ms. Wrona said ADEQ will work with Maricopa County to ensure that the rule effectiveness is accurate. Mr. Rogers said that Maricopa County has opacity standards and wonders if the County looks for infractions to see if farmers are in violation. It appears that the County looks for dust clouds behind equipment and is reactive instead of proactive. Some of the BMPs may be more restrictive on the front end to help mitigate emissions on the back end.

Dena Konopka, Maricopa County Air Quality Department, disagreed and said that the livestock provisions in Maricopa County Rule 310.01 have control measure options as well as opacity and property line standards. The opacity and property line standards are measurement tools that enable determination of effective implementation; whereas the BMPs are too general and implementation cannot be determined. The BMP Program has a menu of options and there is no way to tell which BMPs are being chosen and BMPs with low efficiencies could be chosen. Ms. Wrona said that in 2000-2001, ADEQ and the Technical Workgroup determined the effectiveness of the BMPs and that ADEQ, with the assistance of the Maricopa Association of Governments (MAG), would follow the same approach.

### ***Dairy***

Mr. Billotte provided an overview of the dairy BMPs. He said that the main difference between the dairy BMPs and feedlot is in the arenas, corrals and pens category. Dairy pens have differences in shade structures and stocking densities. Brett Cameron, Committee member, asked why there are differences in emissions per head between dairy and feedlot categories. Mr. Billotte said that differences occur because the animals are different, as well as water consumption and behavior. Chairman Thelander pointed out that the document describing the dairy BMPs indicates a farmer should choose one BMP; the program actually requires two BMPs per category. Mr. Billotte said that is an error and it will be changed.

Ms. Chilingaryan said it is important to have measures that are effective and defensible as well as economically feasible. We need to verify that the BMPs are effective. She said that a lot of the proposed BMPs are from San Joaquin Valley and we should remember that their rule is structured in such a way that allowed it to be successfully defended in court – in large part as a result of the monitoring, recordkeeping, and reporting components of the rule. Mr. Billotte said that reporting forms are at the end the Final Recommendations documents, but reporting is not discussed at the beginning of the document.

### ***Poultry***

Mr. Shuler provided an overview of the proposed BMPs for Poultry. He said that most of the BMPs on the list are similar to others already discussed. Mr. Shuler stated two poultry operations in Maricopa County would be subject to the rule. He pointed there are no emissions data for the BMPs in the housing category. He stated they are revising the narrative and will provide the revision to ADEQ when finished. Chairman Thelander asked if there are issues with emissions of particulate matter since the hens are enclosed. Mr. Hickman said that there can be PM emissions.

### ***Swine***

Mr. Shuler provided an overview of the proposed BMPs for swine facilities. Mr. Shuler said they are making a modification to the threshold numbers for animal units in order to exempt State or county fairs or similar events from being subject to the rule. They want to add a 30 day

limit to exempt fairs. The BMPs in the housing category are the most effective way to reduce PM emissions.

Mr. Shuler pointed out that there are no numbers in the animal feeding, waste handling, and transportation category. He said they are discussing the issue with San Joaquin Valley to see if it has emissions data or studies regarding this information. Chairman Thelander asked if there are any swine operations in the nonattainment area. Mr. Shuler said there are none.

Ms. Wrona asked to make a comment related to the poultry BMPs. Ms. Wrona said the language in the recommendations and subsequent rule should clarify that only egg-layers are in the nonattainment area, no fryer operations. If fryer operations are built, then the rule language and BMPs will need to be revised. Mr. Shuler said that they will change the language in the poultry section to reflect laying operations.

### ***Cropland***

Phillip Bashaw, Arizona Farm Bureau, provided an overview of the proposed BMPs for cropland operations. Mr. Bashaw said they are proposing adding transplanting and using shuttle systems as BMPs to the Tillage and Harvest category. He suggested that a new category could be added to address significant land leveling activities. Mr. Bashaw said there are no control efficiencies for the three suggested BMPs for land leveling activities, although they are based on similar practices in the tillage and harvest category. Mr. Thelander said that the first and second proposed BMPs are similar. Ultimately, the proposed BMPs are aimed to reduce the number of passes in the field or to limit the emissions of PM from specific activities and/or during high wind. Mr. Cameron asked about pump replacement or similar activities that move more than one to four inches of soil. It could be an issue of defining the activity.

Ms. Chilingaryan said EPA must act on Imperial County's CMP program by June 15<sup>th</sup> this year. EPA's proposed response will be out in mid-February. Mr. Lavis asked if any of the proposed language or proposed BMPs will have to be changed as a result of EPA's response. Ms. Chilingaryan said EPA must be consistent with how they apply rules, so if the proposed BMPs have issues similar to those in Imperial County EPA's response should be carefully considered.

### **Discussion and Possible Action on Other Regulatory Actions Pertaining to the Implementation of SB 1225**

Mr. Lavis said the Governor should act on the pending appointments for the new Committee members soon, hopefully in February. Ms. Wrona asked if Mr. Lavis would send information regarding the appointments to ADEQ. Mr. Lavis pointed out that the Open Meeting Law requires all appointees to Governor's Boards must take the Public Service Orientation course through the Governor's Office. Mr. Cameron said that all of the training is online. Ms. Wrona asked Mr. Cameron to send the link to ADEQ and will forward the information to the Committee members.

Mr. Lavis indicated the status of the county representative is still pending. The person originally nominated became very ill and is no longer able to fill the position. Ms. Konopka said that MCAQD Director Lawrence Odle requested information regarding an appointment from the

Board of Supervisors. Mr. Rogers asked if there is a nominee from Pinal County. Mr. Gabrielson and Mr. Lavis said there is no nominee from Pinal County.

Chairman Thelander asked if there were any more comments regarding the work conducted by the Workgroup and subgroups. Ms. Wrona stated that ADEQ will work with the Natural Resource Conservation Service (NRCS) and the Arizona Department of Agriculture (ADA) to review the proposed BMPs and control efficiencies. She asked the representatives from the subgroups to send to the MS Word versions of BMP documents to ADEQ. Mr. Thelander directed all subgroups to send the Word versions.

Mr. Lavis said that mandatory reporting may happen in the future. Mr. Lavis asked if it is possible to get copies of the San Joaquin Valley and Imperial County reporting forms. Mr. Billotte asked if the reporting process should be the same as or if it can be different than the one in San Joaquin Valley. Ms. Chilingaryan said the program does not need to be identical but must achieve the same goal. In San Joaquin Valley, farmers complete an application form and submit it to the air district and NRCS. This form is reviewed and once it is approved becomes the CMP Plan. Mr. Billotte asked if there was an annual report to file. Ms. Chilingaryan said that a farmer only needs to submit new forms if changes are made such as changing crops or CMPs.

### **Call to the Public**

Don Gabrielson, Pinal County Air Quality Director, wanted to clarify if the public is allowed to comment during Committee discussions or if the public can only comment during the call to the public. Chairman Thelander said that the public is welcome to comment during the meeting.

Mr. Gabrielson asked if the inevitability of Pinal County becoming nonattainment means the BMP Program will apply to Pinal County. Mr. Lavis said he thought the current program and the coming revisions could become a Pinal County BMP Program. It could be used as a start and after discussion, revised as needed or used as is.

Mr. Gabrielson said if Pinal County is designated as a moderate nonattainment area, farmers should only be required to use one BMP per category instead of the two BMPs per category required in Maricopa County. Chairman Thelander brought up the question if the statutory interpretation of SB 1225 applies to Pinal County.

Mr. Rogers said that the Committee could act for Pinal County but the program could be tweaked for the specific issues and conditions in Pinal. Mr. Gabrielson asked if the Committee has the authority to tailor the program to Pinal County. Ms. Wrona said that ADEQ will look into this issue.

Mr. Thelander asked if the Committee could obtain the Pinal Study conducted by the Arizona Cattleman's Association, or at least the economic portion. Mr. Aja said he could get that information to the Committee. Mr. Gabrielson said they should revisit the numbers from San Joaquin Valley because they do get more rain than the Valley. He also said that major leveling is not a common occurrence, maybe every eight to 10 years, but laser leveling is more common and a one to two inches disturbance can cause issues of PM emissions. Mr. Gabrielson suggested

looking at the statutory definition of a BMP as it applies to laser leveling.

Kazi Haque, City of Maricopa, provided a letter with comments and concerns to the Committee regarding the proposed changes to the BMP Program. Ms. Wrona stated that ADEQ will provide copies of all of the comments from the City of Maricopa.

### **Action Items and Next Steps**

- 1) ADEQ to set up a Committee meeting in February.
- 2) Revise language in Final Recommendations for poultry operations to clarify egg-laying operations.
- 3) ADEQ to track EPA's comments regarding the Imperial County CMP Program.
- 4) ADEQ to check status of new Committee members; including county representative.
- 5) ADEQ to send link to Committee members for on-line training for public service.
- 6) ADEQ to meet with agricultural group representatives, NRCS, and ADA to review all proposed BMPs and control efficiencies.
- 7) Agricultural sectors to send Word versions of BMP proposals to ADEQ.
- 8) ADEQ to acquire the reporting forms for the San Joaquin Valley CMP Program.
- 9) ADEQ to review San Joaquin Valley reporting forms, regulations, and reporting requirements.
- 10) Cattleman's Association to send economic analysis portion of the Pinal County Cowtown Area Feedlot Study.
- 11) Send all comments from the City of Maricopa to the Committee.
- 12) ADEQ and the AG's office to review the statutory language of SB1225 to determine if one or two BMP programs.
- 13) ADEQ to edit Final Recommendations document.

### **Adjournment**

Chairman Thelander asked if there were any further items for discussion. Hearing no other discussion, Chairman Thelander adjourned the meeting at 12:50 p.m.