

**Agricultural BMP Committee**  
**\*FINAL\* Meeting Minutes**  
**April 20, 2010; 1:30 p.m.**  
**Arizona Department of Environmental Quality, Conference Room 3175 A&B**  
**1110 W. Washington St., Phoenix, AZ 85007**  
**Call-in Number: (800) 746-4352, pin #1828417**

**Committee members present:** Brett Cameron, Clint Hickman, Colin Kaltenback, Al Lopez, David McKay, Earl Petznick Jr., Kevin Rogers, Will Rousseau, Mike Terrill, Dan Thelander (Chair), Tom Thompson, and Nancy Wrona.

**Committee members absent:** Wade Accomazzo and Jim Walworth

**Additional attendees:** Bas Aja, Steve Barker, Phil Bashaw, Mike Billotte, Emily Bonanni, Jo Crumbaker, Danielle Dancho, Scott DiBiase, Jeannette Fish, Don Gabrielson, Cheryl Goar, Kazi Haque, Dena Konopka, Rick Lavis, Tom Luch, Corky Martinkovic, Steve Peplau, Frank Schinzel, Randy Sedlacek, Robert Shuler, Joe Sigg, Lisa Tomczak, and Greg Wuertz.

**Welcome**

Chairman Thelander opened the meeting, noted a quorum was present, and welcomed everyone present.

**Discussion and Possible Action on Minutes from February 11, 2010, Committee Meeting**

Chairman Thelander started the meeting with the review of the minutes from the February 11, 2010, Agricultural Best Management Practices Committee (hereafter Committee) meeting. Chairman Thelander asked if there were any comments or revisions to the minutes. Brett Cameron, Committee member, Arizona Department of Agriculture (ADA), moved to approve the minutes; seconded by Nancy Wrona, Committee member, Arizona Department of Environmental Quality (ADEQ). 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; approved. Motion carried.

**Discussion on EPA Comment Letter Regarding Program Approvability Issues**

Chairman Thelander stated that during the Committee meeting on February 11, 2010, the Environmental Protection Agency (EPA) indicated they were close to publishing the proposed

rule for Imperial County's Conservation Management Program (CMP) program. At that time, the Committee asked EPA to provide comments regarding the approvability of Imperial's Program that might relate to the proposed revisions to the Maricopa County BMP Program. Chairman Thelander said the letter was very detailed and since it was not received until last week and representatives from EPA were not able to attend the meeting in person or by phone, the Committee would not review the letter during this meeting.

### **Discussion & Possible Action on Control Efficiencies and Ranking of Proposed BMPs**

Chairman Thelander asked ADEQ to provide an overview of the revisions to the proposed BMPs since the meeting in February. Lisa Tomczak, ADEQ, stated the narrative has not changed since February and that most of the revisions were made to the language of the BMPs, the control efficiencies, and emissions factors. Ms. Tomczak noted that representatives from each livestock group were consulted on all revisions. Some of the language was revised to be consistent with Senate Bill 1225 and the rule; similar BMPs were grouped into one BMP with multiple options; control efficiencies were revised as necessary; the emission factors were revised in poultry and swine for unpaved roads/feed lanes and unpaved access connections/equipment areas (1.444 VMT/yr); and some BMPs were added in the poultry and swine categories to be consistent with the other livestock categories. Robert Shuler, Shuler Government Affairs, representing both poultry and swine, noted that on page 39 one BMP was missing from the table for unpaved roads or feed lanes. Chairman Thelander noticed on page 60 in the cropland BMPs, in the middle paragraph of the section titled "Significant crop land leveling activities", the second sentence should say "Both processes are used in the efficient delivery of water to farm fields...." Tom Thompson, Committee member, said there were inconsistencies between the beef and dairy BMPs. The BMP for feeding high moisture feeds should be split into two separate BMPs. One should read: "Feed higher moisture feeds by adding water to ration mix to achieve a 20 percent minimum moisture level or by adding molasses or tallow to ration mix at a minimum of 10 percent"; and the other should read: "Feed higher moisture feeds by adding silage or green chop." Mr. Thompson also noted the BMP for groom manure surface by scraping and harrowing pens or removing manure every four months should be split into two separate BMPs. Mr. Thompson stated these are separate, very different processes and should be individual BMPs.

Chairman Thelander said the Committee should not adopt the BMPs until all remaining issues are resolved and they discuss them in context of the EPA letter. Ms. Wrona asked if the changes made to the dairy BMPs should also be reflected in the beef BMPs. Bas Aja, Cattleman's Association, said the beef BMPs are correct as presented. Colin Kaltenbach, Committee member, asked if the BMP "Do not run cattle" in the dairy section should be revised to read "Control Cattle during Movement (so they do not run)". Mr. Aja said beef operations provide training to employees so they do push or prod the flight zone of cattle. Kevin Rogers, Committee member, said the dairy BMP "Do not run cattle" should be changed to reflect the language in the respective beef BMP.

Chairman Thelander asked Mr. Aja to address the outstanding issue related to the control efficiency for the beef BMP "maintain 20 percent moisture across pen surface." Mr. Aja said they researched three separate studies while developing this BMP and each relies on different

data. One study from Kansas looked at spraying two millimeters of water over the pen surface, which resulted in control effectiveness between 32 and 80 percent. The same study found that four millimeters of water (in the form of rainfall) resulted in a mean of approximately 74 to 75 percent. Mr. Aja said the study conducted in early 2009 in Pinal County used three to six gallons of water per day, which averaged between three and five millimeters of water per day over the pen surface, and resulted in a control efficiency of approximately 80 percent. Mr. Aja said when you compare these studies the control efficiency range should be between 53 and 74 percent. The concern is if the BMP is assigned a control efficiency that is too high and the measure cannot demonstrate the stated emission reductions, then the real world reductions could be considered relaxation of credited control in the SIP. Mr. Aja said the control efficiency should be in the 60 percent range, but would not oppose a control efficiency in the range of 50 percent, if it could be changed if research demonstrated a different number. Ms. Wrona said the proposed control efficiency is 85 percent but Mr. Aja is saying it could only be as high as 74 percent. Mr. Aja said their research can defend 85 percent, but the study is not published. The published literature indicates the control efficiency should be between 53 and 75 percent, with most of this literature demonstrating that two millimeters of water results in a control efficiency of 53 percent. The Cowtown study used about four millimeters sprinkled over the pen surface. Mr. Aja reiterated that the Kansas study used four millimeters of water per day averaging a control efficiency of 74 – 75 percent was a rainfall event, not sprinkling. Mr. Aja said ADEQ and EPA are concerned if the control efficiency is too high, the modeling will not be accurate and attainment will not result. If that is the case, a number less than 85 percent is acceptable but if further research demonstrates a higher control efficiency, it should be changed. Earl Petznick Jr., Committee member, said they are fairly confident the control efficiency is 85 percent, but it needs to be proven and thinks they could use an efficiency of 70 percent. The primary differences are that the Kansas study used large pens and a rainfall event, whereas the Cowtown study used smaller pens and water trucks.

Chairman Thelander asked if the Committee picks a control efficiency that is too low or too high, will it be permanent or could it be changed. Ms. Wrona said the Committee decides the number and has statutory authority to review and evaluate new research. At this time, if the Committee decides 70 percent is a good control efficiency, there is nothing to stop them from changing the number if additional research demonstrates a different percentage. Ms. Wrona stated that if the control measure claims too high an emissions reduction, the reduction must be made up for somewhere else. Mr. Petznick, Jr. asked if new technology is developed or new research shows there is a better efficiency, can the Committee use the new number. Ms. Wrona said the Committee can change the number in that situation as well. Chairman Thelander said adjusting the control efficiency is not as complex as adding a BMP. Ms. Wrona said the control efficiency numbers are not part of the rule and therefore do not require a rule revision.

Don Gabrielson, Pinal County Air Quality Director, stated that references to the sources of the data should be included in the recommendations from the Technical Workgroup (TWG). Mr. Gabrielson said most of the information is from the California Air Resources Board and the San Joaquin Valley Air District; many of the individuals involved with the research for the Conservation Management Practices (CMP) Program have retired and he could not find other supporting documentation. Mr. Thompson said all of the proposed BMPs are designed to reduce PM<sub>10</sub> emissions and he could show Mr. Gabrielson the calculations. EPA referred the

Committee to the San Joaquin Valley CMP Program, which is the most stringent program in existence. Mr. Gabrielson said he does not take issue with the fact the measures will reduce emissions, but it is necessary to memorialize the science of the BMPs and the fact they actually work in Arizona. Simply because they are valid in San Joaquin Valley does not mean that they will work for the conditions in Arizona. Mr. Thompson said the Committee cannot replicate all of the science and studies; it does not have the time and money. Mr. Gabrielson said for many areas in Pinal County it is very important to correctly characterize an emission inventory, which will be of great interest and have economic consequences to many people. The science should be stated in the documentation and if the science does not exist, then acknowledge there is uncertainty. Mr. Aja asked what can we use if we cannot cite research approved by EPA, approved in State Implementation Plans (SIPs), and upheld by court decisions. Mr. Petznick Jr. said EPA pointed the Committee towards the San Joaquin Valley CMP Program and was given the impression EPA was saying that program was defensible. Mr. Gabrielson said he is speaking on behalf of Pinal County, not EPA.

Kazi Haque, City of Maricopa, said the City would like to submit comments on the BMP document. Mr. Haque said the Executive Summary should be expanded to include the regulatory authority of the Committee and references for the BMPs. Ms. Wrona said it is incumbent on ADEQ to work with the individual groups on the TWG to find the citations to make sure we provide credibility to the Committee's work. ADEQ needs to substantiate the analysis as much as possible by footnote, paragraph, or put into a separate document, the literature and research; and also note if there is data applicable to Arizona. Ms. Wrona added that EPA noted in previous discussions if no research exists, the Committee can use a default 10 percent control efficiency. Chairman Thelander said ADEQ will inform the Committee as to the best format to cite the source of data and how to incorporate that information into the recommendations. Ms. Wrona said ADEQ will consult with the commodity groups and determine the best approach to give credit where credit is due.

Mr. Aja said the Cattleman's Association provided a letter detailing where they derived the control efficiencies, emission factors, and other data for the beef BMPs. When people who work with livestock look for solutions, they look at what works. When those who work on the regulatory side look for solutions, they see how proponents can prove it. Mr. Aja said all of the beef information and BMPs contain measures that already exist in another regulatory program, or are proven by research or other studies. The industry spent time and money on researching a BMP that will work here. Ms. Wrona said when ADEQ puts this information into the document; they will make sure the members of the TWG review it before bringing it back to the Committee. It is ADEQ's responsibility to document any technical analysis relative to each BMP in the State Implementation Plan

Mr. Thompson said another concern is that some of the individuals who helped develop the San Joaquin Valley CMPs have retired, so there might not be a way to determine if some of the measures will apply to the conditions in Arizona. Ms. Wrona said the Committee has been very diligent in terms of reviewing the new livestock and cropland BMPs. Mr. Rogers reminded everyone that the Committee will have the ability to add and subtract BMPs as new technology becomes available; it is not just a one-time approval. This is similar to the expectation we have of the scientific community; to get the modeling and sampling as accurate as technology allows

although not perfect. Mr. Rogers said the ability to be flexible and dynamic is very important to this process over the long term.

Mr. Gabrielson questioned the speed limits regarding internal traffic on livestock operations. Data pertaining to internal traffic on livestock operations points to lower speed leading to lower emissions, but the base speed is listed as 25 mph for analytical purposes, and he asked if this is a realistic speed for internal traffic. Mr. Petznick Jr. asked if the implication is that reducing speed to 15 mph from 25 mph is taking credit for something that does not occur. Mr. Aja said he has witnessed water trucks traveling very fast on livestock operations, possibility faster than 25 mph. Mr. Thompson asked if Mr. Gabrielson was suggesting the speed control BMPs be removed. Mr. Gabrielson said he agrees lower speed leads to lower emissions, but using a baseline of 25 mph may not reflect the actual internal speed currently used on livestock operations. Mr. Thompson said the internal speed needs to be controlled, forcing people to do the right thing, which is one of the objectives of the speed limiting BMPs

Mr. Cameron asked if the BMP for watering on page 8 – in Arenas, Corrals, and Pens – reflects the changes made to the control efficiency for the beef BMP for watering. Mr. Thompson said it should be higher, but there is no research to substantiate a higher control efficiency and the default of 10 percent was used. Mike Billotte, United Dairymen of Arizona, said there are issues with lactating cows and watering pens.

Chairman Thelander asked about the remaining issue with the crop BMP: timing of significant earth moving activities. Ms. Tomczak said since there is no direct research on the control efficiency for the cessation of night tilling on high pollution advisory (HPA) days, but ADEQ is researching this issue. Mr. Cameron said one of the purposes of this BMP was to time significant earth moving activities when there is little air movement. ADA is working with the Farm Bureau and will continue to look into the data to make sure it can apply. Ms. Wrona said one of the purposes of the “cessation” BMP was to address the fact there is no dispersion of PM during inversions. The timing of significant earth moving is tricky because a farmer does not want to engage in field activities during stagnant air events but also not when it is too wet.

Chairman Thelander asked about the remaining issues for poultry and swine: the emission factors for housing and animal waste handling and transportation. Ms. Tomczak stated ADEQ is researching the emission factors and Mr. Shuler is working with them. Ms. Wrona asked that anyone who has additional comments on the proposed BMPs and/or the TWG document, should send them to ADEQ.

Chairman Thelander moved to the issue of fallow fields. Mr. Cameron asked the Committee to look at the ADEQ memo regarding fallow fields. The Farm Service Agency (FSA) definition for fallow fields was too ambiguous and would not work with the Governor’s Regulatory Review Council (GRRC) process. ADEQ and ADA developed a definition for fallow fields and a proposal to add a category for fallow fields to the cropland BMPs. Mr. Gabrielson stated this is a good measure but wondered if the proposed option for fallow fields will be enough, given EPA’s preliminary disapproval of Imperial County’s CMP Program, which indicates the need to address PM from active and fallow fields. About 250,000 acres of farmed land are in Pinal County and it is not uncommon to have a land leveling event every five years or more frequently, which means

about 20 percent of that acreage is being planed or leveled. Mr. Gabrielson added that the Committee should also address wind stabilization on active fields. Mr. Rousseau said he thought the definition is good. Tom Luch, ADEQ, said the proposal was developed for the addition of a possible BMP category for fallow fields based on EPA's analysis of Imperial County's CMP rule. Preliminary analysis shows over 80,000 acres of fallow fields in Maricopa County as opposed to 60,000 acres in Imperial County. Mr. Rogers asked how ADEQ came up with the acreage. Mr. Luch said it was based on information from the FSA. Mr. Rousseau said the definition was not good for the proposed revisions. Mr. Rousseau questioned whether there actually are 84,000 acres of fallow fields in the nonattainment area. That many acres may not fit the proposed definition because fields are not always planted as a result of planting schedules. Chairman Thelander asked if the acreage was for Maricopa County or for the nonattainment area. Mr. Cameron said it was for all of Maricopa County. Chairman Thelander said research should be done to determine the actual acreage of fallow fields. In rural areas, or true agricultural land, fields are not fallow; closer into the city is where fields are likely to be fallow. Mr. Rousseau said he sees very little land as fallow according to the proposed definition. Mr. Cameron asked how to find a more accurate acreage for fallow fields. Mr. Rousseau suggested asking the FSA to review their data using the proposed definition and see how much land is in that category. He also stated the FSA definition has a different meaning; they define fallow ground using a specific length of time. When agricultural acres are classified according to how they are used, there are criteria allowing it to be fallow. The FSA may potentially classify it as being fallow. Mr. Rousseau continued to say it is very important to be accurate with the number of acres because if that many acres are fallow, there are a lot of untended acres and potentially a huge source of PM<sub>10</sub>. Ms. Wrona said this issue needs to be addressed because in Imperial County, part of the conditional disapproval was the failure to address fallow fields. Since EPA has set the precedent, the Committee needs to look into the issue. Mr. Rousseau said Imperial County has more than 500,000 acres of farmed land and their cultivating pattern is less intense than our normal cropping pattern. It would not be surprising if they have more than 60,000 acres of fallow fields that fit the proposed definition, but he does not think that many acres are left in Maricopa County and the Arizona cropping pattern is different.

Jeannette Fish, Maricopa County Farm Bureau, asked if the BMP Program included fallow fields and, if confirmed, the Committee does not need to start from scratch. Chairman Thelander reviewed the BMP Guide Book and said the cropland category includes an option for fallow fields and asked how the issue fits into the current program. Mr. Luch said since there are practices in place to address fallow fields, when we develop an accurate acreage we can determine if it a significant source of PM<sub>10</sub>. Mr. Rousseau asked even if we come up with an accurate number, will the Committee have to address the issue since the program already has optional measures for fallow fields. Mr. Rogers agreed the Committee should determine the accurate acreage of fallow fields. Chairman Thelander said he has fields that are difficult to plant and are fallow at times but implements the BMP for tillage based on soil moisture and tills after a rainfall event. Ms. Wrona said EPA clearly stated the failure to address fallow fields in the Imperial County CMP Program is unacceptable; therefore, ADEQ wants to make sure the issue is addressed. Mr. Cameron, Mr. Rousseau, and Mr. Luch will work with ADEQ, ADA, and FSA to determine the acres of fallow fields.

Ms. Wrona asked ADEQ to provide an update of the ranking and analysis of the proposed BMPs. Randy Sedlacek, Maricopa Association of Governments (MAG), said once the remaining issues are resolved staff will begin to calculate potential emission reductions, rank the proposed BMPs according to the potential reductions, and bring them to the Committee. Ms. Martinkovic said the work is still preliminary and is moving from the earlier work to drafting the rule and State Implementation Plan (SIP) revision. Ms. Wrona said citing the sources for the control efficiencies and emissions factors will assist with the analyses for the rule revision and technical support document (TSD) portion of the SIP. Ms. Martinkovic said the information could be included in the TWG document and the TSD. Ms. Wrona stated the information should also go to GRRC as part of the rulemaking.

### **Call to the Public**

Mr. Gabrielson said there is a major loophole in the program: weed control practices conducted by the agricultural community on public rights-of-way. This represents potentially thousands, if not tens of thousands of acres burned to maintain rights-of-way, which generates PM<sub>10</sub> and dust. Mr. Gabrielson said this issue should be addressed by the Committee. Chairman Thelander said the Committee will address this issue during a future meeting.

Mr. Haque said he will submit the City of Maricopa's comment letter to the Committee.

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

- 1) ADEQ will work with Committee members to provide the references for the control efficiencies and emission factors.
- 2) ADEQ will expand the Executive Summary to include more information about the BMP development process and Committee's authority.
- 3) ADEQ will correct the errors in the proposed BMPs, research emission factors for poultry and swine, and change the proposed beef BMP for watering from 85 percent control efficiency to an agreed upon efficiency.
- 4) Mr. Rousseau, Mr. Cameron, and Mr. Luch will work with the FSA to determine the number of acres of fallow fields according to proposed definition.
- 5) Mr. Bashaw will assist with developing the BMP for timing of earth moving activities.
- 6) ADEQ will schedule a Committee meeting at the end of May or early June; ADEQ to coordinate with EPA and the Committee.

### **Adjournment**

Chairman Thelander asked if there were any further items for discussion. Hearing none, Chairman Thelander adjourned the meeting at 3:20 p.m.