

**Oregon Dairy Air Task Force**  
**Meeting # 6 – May 13 and 14, 2008**  
Hermiston and Boardman  
**May 22, 2008 Draft Meeting Notes**

**Task Force Members Present:**

Dan Bansen, Forest Glen Dairies  
Andy Ginsburg, DEQ Administrator  
Lisa Hanson, ODA Deputy Director  
Dana Kaye, Oregon Chapter American Lung Association  
Kendra Kimbirauskas, Friends of Family Farmers  
Dr. Jim Males, OSU Department of Animal Science  
Dr. Jim Moore, OSU Professor Emeritus  
Marty Myers, Three Mile Canyon Farms  
David Nelson, State Senator  
Gail Shibley, ODHS Environmental Public Health Administrator  
Mark Wustenberg, Tillamook County Creamery Association

**Task Force Members Absent:**

Jeremiah Baumann, Environment Oregon  
Deborah Boone, State Representative  
Jackie Dingfelder, State Representative  
Betsy Johnson, State Senator

**Facilitator:** Sam Imperati, Institute *for* Conflict Management

**Others in Attendance:**

Len Bergstein, Three Mile Canyon Farms  
Carrie Ann Capp, DEQ  
David Collier, DEQ Air Quality Division  
Melissa Egan, ICM  
Walt Guterbock, Three Mile Canyon Farms Livestock Manager  
Ray Jaendl, ODA  
Kathryn Higgs, ODFA  
Gregg Lande, DEQ  
Wym Matthews, ODA CAFO Program  
Jeffrey Stocum, DEQ  
Larry Calkins, DEQ

**Welcome, Announcements and Agenda Review – Sam Imperati**

The meeting began with a working lunch at Oxford Suites in Hermiston. Sam went over the agenda and said that our charge is to finish this two-day meeting having made major progress on crafting the Task Force's recommendations. There will likely be tweaking, editing, and off-line work to be done after the meetings.

Approval of 4/22/08 Meeting Notes. Gail Shibley had three corrections and the notes were adopted with Gail's changes.

pg 4, her comment re: Mitloehner should say, "per 100 lbs of milk."

pg 10, her last name was spelled incorrectly

pg 13, says "statue," but should be "statute"

To frame the discussion, Sam referred us to the latest working draft summary. We have seen it before; it is still a work in progress. Page 7 is the section of Recommendations. We will spend most of the time working on that section. The Task Force homework after this meeting will be to do track change edit the whole document and get back to Sam within two weeks from now. The same is true for the Technical Supporting document. It would be helpful for everyone to do the editing. We will have to reserve some conversations today, and instead, handle some issues in the off-line editing process. Jim and Jim have made the first round of suggestions. Goal is to get this done with sufficient time for everyone to have the edited version at least a week before our last Task Force meeting on June 18.

The field is narrowing, and we have two proposals to explore, Traditional Regulatory Approach Straw Proposal, to be presented by Andy, and the ODFA "Oregon Dairy Emissions Program" Concept Paper, to be presented by Mark. Ideally, these proposals will help us identify key issues, get agreement at the macro level, and then drill down to the detail, time permitting.

*Andy Ginsburg:* put together a straw proposal (**Attachment A**) so we would have something to work from, a launch point for discussion. Section A, Guiding Principles, summary below, should cover everyone's concerns. If it does not, then we need to edit them.

- Ammonia reduction
- Flexibility, not one size fits all
- Economically feasible for dairy farmers, especially small farmers
- Hybrid of mandatory and voluntary, with incentives
- Review periodically
- This program is addition to Clean Air Act, Clean Water Act, Occupational Safety and Health Act
- Acknowledge ammonia comes from a variety of sources; a regional approach working in conjunction with Washington
- SMP (Structural and Management Practices) program should create a solution all interests can support

The proposal breaks dairies down into three sizes, small - less than 200 animals; medium - 200-699, and large - 700 or more (same numbers used in CAFO program). For air quality, we need to be mindful about what types of animals to include in the total number of animals.

Further, it breaks it down into three tiers, as to how many SMPs the dairy will have to implement. The dates and numbers are at this point arbitrary.

No evidence yet that emissions from dairies cause human health impacts, but it seems like the will of the group is to continue studying this aspect. There is monitoring built in to this proposal to measure concentrations.

Tax credits for new dairies – tax credits are typically approved by the Legislature for five years. This is the standard amount of time.

A potentially controversial point is that ODA will issue an air quality permit for the medium and large dairies.

The proposal would establish a Technical Advisory Committee (TAC), not a policy committee like the Task Force. They would be charged with coming up with SMPs. The San Joaquin Valley form is included as a model of what Andy would like to see the TAC create. While they have different concerns in the SJV than we do, it is organized very well and creates a good logical, balanced

structure. In addition, it will prevent some dairies from only doing SMPs in one area and neglecting other areas, should we just offer a list like the Idaho model. Andy sees the TAC as meeting regularly to update the SMP list and refine it based on feedback, new data, and emerging science.

*Jim Moore:* question re: Technical Assistance, Education, and Outreach. How does he see that working?

*Andy Ginsburg:* to use an analogy to pulp and paper, there is someone in DEQ who is the resident expert on pulp and paper, who works with industry and has industry credibility. There currently is nobody at DEQ who can fill a similar role concerning dairies. He sees the need for one FTE each, for ODA and DEQ, to hire people who know dairies, air and water quality. Does not want to duplicate anything happening at the federal level, but does want someone who knows what is going on there.

*Jim Moore:* question re: implementing this program, how many in Oregon are considered small dairies?

*Wym Matthews:* 50% are small.

*Andy Ginsburg:* we do not want to give the impression that big is bad. It is the amount of emissions per acre that matter, so many small dairies close by can create similar concentrations of emissions as one large one. We do not want focus on large dairies only, but recognize that the smaller operations will not have same resources. That is why we suggest different requirements for different size operations.

*Sam Imperati:* (from a prior chart of existing data on cows/dairy in Oregon)

1-99 = 29 dairies  
100-349 = 163 dairies  
350-599 = 58 dairies  
600- 699 = 11 dairies  
700-799 = 11 dairies  
800 + = 42 dairies

*Jim Moore:* question re: reducing ammonia. Let us say you put SMPs in place that reduce ammonia by 50%. What will that do for regional haze?

*Andy Ginsburg:* had some presentations on haze formation; it really depends on where you are looking. It is a site-specific answer. What percentage of ammonia emissions are coming from dairies? It is only going to capture a small amount of the total problem. DEQ does this modeling projection/monitoring every five years to gather data on ammonia forming compounds. His gut tells him that this one thing will not make a huge dent, but it will be one of the many small actions needed to address the problem.

*Jim Moore:* how can you tell a dairyman to do all these SMPs, but not know if it is going to make a big impact?

*Andy Ginsburg:* a dairyman will have a variety of SMPs to choose from, and will be able to choose the ones that make sense for his operation. At DEQ, we have to look at every source of ammonia.

*Sam Imperati:* the current rules require a regional haze plan. The issue of ammonia is already there. Every five years DEQ has to convince the EPA that they have a plan for progress. If our group never existed, DEQ would still have to do something about ammonia.

*Andy Ginsburg:* they have to do a little bit with everybody to make any impact on regional haze.

*Marty Myers:* Andy has framed this pretty well, likes what he is saying. He is not putting the target on the dairy industry's back. He has concerns about mandatory requirements on something that does not have a proven impact on haze. Mark has a voluntary program to propose that we will hear about later.

*Dan Bansen:* any idea what kind of dollar amount you are talking about? Is that money available for new FTEs? Usually they are trying to cut positions.

*Andy Ginsburg:* well, Senator Nelson is here, I am sure we will get everything we need! (Laughter). Compared to 2007, money is going to be really tight in 2009. We have to be prudent about money requests, but the Legislature did ask us to make recommendation to solve this problem, so we have to come back to them with a plan.

*Lisa Hanson:* We are talking about incremental increases to the CAFO inspectors, they are being asked to do more, probably too much. There is a significant cost implementing a program like this.

[In the very roughest terms, ODA would be looking at 4-5 FTEs, Gail Shibley indicated one FTE – split three ways, and Andy Ginsburg talked about one FTE.]

*Kendra Kimbirauskas:* question for clarification on tax credits.

*Andy Ginsburg:* DEQ has a process in place that does some analysis to see if you qualify, then it is referred to the Department of Revenue.

*Dan Bansen:* it looks like this proposal asks for seven people, tax credits, plus money for R&D. Does that sound like where you are?

*Andy Ginsburg:* that sounds about right.

*Kendra Kimbirauskas:* how can a program like this quantify emissions reductions?

*Andy Ginsburg:* that is tough; the NAEMS study is not done yet. The state of the knowledge is that we can say with some SMPs that they will reduce ammonia, but we cannot say by how much. Therefore, what we would be measuring is to see if the dairies have implemented the number of SMPs required. To quantify the benefit, would be something the TAC would deal with as our knowledge increases.

*Mark Wustenberg:* we cannot quantify as well as we like to, but we can qualitatively say that some actions will have the reduction impacts we want. A baseline is needed. The CAFO process for water quality did not capture the data upfront, and as an industry, we are trying to do better on that.

*Lisa Hanson:* we are getting better over time. We do not have a baseline for many programs.

*Kendra Kimbirauskas:* so would you say that some baseline monitoring is needed?

*Lisa Hanson:* yes, it is a good idea because then we know what is going on. She fears that we are having some people chase their tails.

*Andy Ginsburg:* re: methodology, if we have a few details for a baseline, even though we cannot quantify now, we will be able to compare the model output later once we have the model.

Next, we heard the industry's proposal (**Attachment B**) from Mark Wustenberg. Jim Krahn spearheaded this, but is not here today to present. He talked to folks in the room as well as industry people. It is a compilation of discussions.

As immediately as possible, industry wants to move forward in a credible fashion as an industry, even absent funding or rules/legislation. They break it down into three phases. The details are not to be considered set in stone. Mark notes that the guiding principles are similarly to Andy's, but they added methanol and odor issues, in addition to ammonia. Jim proposes two "governing" bodies. Similar to Andy suggestion, one would be a technical group, and the ODFA proposal adds an oversight group.

- Phase I – voluntary, all dairies, in place at the completion of this Task Force
- Phase II – no specific starting period, the threshold would be predicted on the agencies receiving funding
- Phase III – completion of NAEMS study, implementing any rules that result from that

BMPs – similar to California or Idaho program

Technical Advisory Committee – similar to Andy's proposal

Program Oversight Committee – members would be public, dairy industry, technical advisory committee, DEQ, ODA, NRCS, and OSU.

Mark wants to stress that they are on board with the DEQ priority of reducing ammonia, but maybe even get it going a little quicker. The proposal is not mutually exclusive with Andy's proposal.

*David Nelson:* this is going to be very difficult to ask for more money. If you put this in order of priority, what are you going to do about cigarette smoke? That is the Governor's priority, and we could not get that tax passed. It is going to be a very hard sell to the Legislature; he does not think we can count on any money. Where does Dairy Air fit in?

*Dana Kaye:* knows about the funding problems, but these are air quality issues. The dairy industry is contributing, so some of that financial burden should fall back on them. The industry should take some responsibility.

*Mark Wustenberg:* acknowledges Dana's comments about air quality, but thinks we are at risk of not making the impact we want to make. As an industry, we want to do this.

*Sam Imperati:* the questions on the table are: is the Legislature going to fund, and is this going to apply to small dairies?

*Andy Ginsburg:* thanks Mark and Jim for the work they did on their proposal. He thinks it has a lot to it, and knows it was done quickly. He wonders if the overall industry is supportive.

*Dan Bansen:* thinks the support is real general right now. Certain segments will kick and scream, but thinks we are heading in the right direction.

*Jim Males:* is this any different from when CAFO was implemented?

*Lisa Hanson:* no.

*Gail Shibley:* question for clarification about Phase III – is the ultimate target to meet the federal standards?

*Mark Wustenberg:* that would be the minimum. We went over and above the fed standards by including every dairy. As an industry, we will sit down and ask what makes the most impact? We will consider all options and ideas.

*Andy Ginsburg:* this is not the first case where Oregon is out ahead of the feds. When EPA comes to us, an important blending needs to happen, especially with new things.

*Gail Shibley:* question re: “a cow's a cow.” From an emission standpoint, what is the point of identifying a milking or other kind of cow?

*Mark Wustenberg:* willing to consider what to count.

*Andy Ginsburg:* in some ways, in Jim's proposal, because all dairies are included, it does not matter as much. In my proposal, with only dairies over 200 animals included, then it is more significant.

*Kendra Kimbirauskas:* can Mark and Andy say what each proposal addresses that the other does not?

*Mark Wustenberg:* our proposal includes methanol and odor. It addresses immediate action rather than sitting and waiting for a rule to be adopted. It covers all dairies.

*Andy Ginsburg:* the big difference is that Mark's proposal is more incremental; less regulatory, and more voluntary. Mine starts out by saying by 2012 you have to be at certain levels. In Mark's, if we do not get the funding, we will never get to Phase II.

*Dana Kaye:* what makes Phase I voluntary and why no oversight?

*Mark Wustenberg:* there would be resources dedicated to it, as part of a CAFO inspection. In addition, we are still going to have someone, 3<sup>rd</sup> party, oversight.

*Lisa Hanson:* either way, ODA is going to have to ask for additional resources. We do not have the resources.

*Mark Wustenberg:* from a qualitative standpoint, as an incremental step, we might be able to get funding from NRCS or the dairy industry.

*Andy Ginsburg:* it will take 6-9 months to evaluate SMPs, then the Legislative session, so we are talking one and a half years before anything gets up and running. The Dairy Association has already said they are interested in some action before then, doing as much voluntarily as we can. To get to Phase II with Andy's proposal, it is a matter of time; with Mark's the trigger is funding.

*Kendra Kimbirauskas:* question re: permits.

*Andy Ginsburg:* once we have a regulation, it applies whether or not there is a permit. Permits help with compliance, but it is no less enforceable without a permit. A permit can be a funding mechanism; the fees would have to be too high in this case. It is part of the dilemma.

*Sam Imperati:* we are looking at what are the differences. We can also look at the similarities. Go through the guiding principles, they are very similar. Of course, there are subtle but important differences. Both have Technical Advisory Committees. Both have Oversight Groups. There is a lot in common here.

*Andy Ginsburg:* sees the difference is the Phase II threshold. We cannot ask ODA to implement a new program with no staff. However, if we set this up such that the mandatory requirements are only triggered with funding, we may not get anywhere. We have to have enough resources to get the baseline done. We could say something like, by 2012, you have to be in Tier II, but with the caveat that oversight and inspections are predicated on funding.

*Marty Myers:* does not think this Task Force is required to do anything. What are we required to come into compliance with? We do not know that dairies really contribute to regional haze. You have an industry that is coming forward and voluntarily taking action. Why is this committee considering regulation? There is already the incentive financially to dairies to do what you are asking them to do. (Ex. Ammonia is a fertilizer, and dairies do everything they can to capture and reuse it.)

*Dana Kaye:* the folks at this table are the ones who are doing good work. What about the outliers?

*Marty Myers:* they plan on working with all dairies. Oregon got all dairies in the water program, so we expect to be able to do the same on this.

*Andy Ginsburg:* to Marty, concerning the industry's proposal, page 2, #6. Our hope and goal is to recommend something that all can be happy with, balanced with the reality of the state of our knowledge and resources. What we end up with might not be what any one member would like, but a compromise of all views. Marty, obviously you think market forces will get us there. Not everyone agrees. An all-voluntary program will not get the interest and support. We want to find the common ground.

*Lisa Hanson:* One of the things she heard in Tillamook that she had not heard before is that in Oregon, we have no more capacity to process milk. There is not likely to be any more dairies coming if there is nowhere for their product to be sold.

*Jim Moore:* comment on why folks bought into the water problem solution. Dairymen said we were not part of the problem, but once they learned they could be, they got on board. Thinks we should start with the idea that it is coming down the road, letting the dairymen ease their operations into it, with rewards for those who do a good job.

*Marty Myers:* comment re: Tillamook. He asked how many cows in the area, ~15,000. They are all small; therefore, they would be exempt under Andy's, even though they have arguably similar impact on the environments.

## **Break**

*Sam Imperati:* hears repeated misunderstandings around the NAEMS study and the resulting, if any, regulation.

*Andy Ginsburg:* it is not a study to design regulation, it is to develop a model to better estimate emissions. The point Sam was making is that in 2012, there will not be a big federal program, but there will hopefully be information that will help us create better BMPs.

*Marty Myers:* some benefits from the industry proposal are: 1) it starts immediately with voluntary program and 2) if the Legislature chooses not to fund, we still have a fall-back position that the dairy industry will do what it needs to do re: BMPs. Thinks we have a great program here if we can work out the few points on which we differ.

*Kendra Kimbirauskas:* will dairy industry be at the table asking for funding?

*Marty Myers:* the dairy industry will support what comes out of the Task Force.

*Andy Ginsburg:* do we want to set up a scenario that if we get the money, the industry is regulated? Where is there incentive for getting the money? We have to have something that starts out gradual, but that has some certainty to it.

*Sam Imperati:* we have two hours for conversation left, and we have to make progress. We will have to decide on the list below:

- Guiding Principles
- What pollutants
- Goal statement
- Thresholds based on herd size
- Number of Tiers
- Permit/Regulation v. Voluntary. Who decides, EQC, Industry, other?
- Timing & Triggers of movement from Phase I – III
- Role of public and human health, if any
- Misc. language issues that need nuancing
- Cost: amount, for what, likelihood of funding, and source

How do we want to proceed with the triage?

*David Nelson:* it is a challenge because we do not know what is coming down the pike from the feds.

*Gail Shibley:* process thought suggesting getting some of the low hanging fruit done first, and then set a time for the last big chunk of hard stuff.

*Andy Ginsburg:* seconds that, with a friendly amendment: the issue of timing and triggers of movement from Phase I – III is the hardest nut to crack. Without everyone here, he does not think we will get it done today.

The group sorted the list to prioritize the discussion. We went over the text of the guiding principles, merging and refining both proposals into one document. The resulting text could look something like:

1. The program goal is to reduce ammonia, methanol, and odors.
2. The program should allow flexibility for dairy farmers to select SMPs that are compatible with their operations. However, all SMPs should be evaluated as to their impact and consequences on water quality, land quality, human health, and livestock health, and should minimize or reduce greenhouse gas emissions to the extent possible.

3. The program should be economically feasible for all Oregon dairy producers.
4. The program should include incentives to encourage and support efforts to go beyond requirements.
5. The program should be reviewed periodically by an advisory committee appointed by DEQ and ODA. SMPs should be adjusted as needed by ODA and DEQ as more is learned about dairy emissions, the effectiveness of SMPs, and the environmental and health impacts of dairy emissions. One example: with the completion of the NAEMS study (2011 or 2012), this program will be revisited
6. The program is in addition to other existing requirements, including the federal Clean Air Act, the federal Clean Water Act, and the Occupational Safety and Health Act.
7. Work to ensure level playing field
8. The SMP program should create a solution that all interests can support.

#### Thresholds based on herd size

*Andy Ginsburg:* this means any dairy that has milking cows. We are only talking about dairies, heifer-only facilities are not included, but dairies with heifers are included.

*Gail Shibley:* how many are heifers-only?

*Wym Matthews:* approximately 42.

*Jim Males:* they are considered feedlots, the same as beef feedlots.

#### Number of Tiers

*Andy Ginsburg:* Let us talk about the purpose of tiers. He had in mind helping smaller operations when he included this. Does not care how we do it, but wants to be sure there is some sort of system with guidance. Idaho said their goal was to get the lower performing dairies up to the median.

*Jim Males:* what does the industry proposal mean re: tiers?

*Mark Wustenberg:* we used numbers from the CAFO program. There is no data to tell us where the thresholds should be.

*Andy Ginsburg:* purpose of tiers is for how many BMPs you have to do.

*Kendra Kimbirauskas:* do tax credits disadvantage the smaller operation?

*Jim Moore:* it helps people understand how much of an investment they would have to make to get the tax credit.

*Marty Myers:* the small guys can get funding from NRCS much easier than the big guys.

*Andy Ginsburg:* he would personally have a less stringent bar for the smaller dairies.

*Gail Shibley:* to try to level the playing field, two tiers, at a minimum, seems logical.

Concepts:

Number of Tiers: Purpose: 1) clear targets, 2) thresholds for tax credits, 3) encouraging more use of BMPs, 4) economic fairness/leveling of field to encourage even the smaller farmers to comply (perhaps at least two levels), 5) DTAC makes recommendation to the policy group balancing our principles, and suggesting, among other things, the amount and pace of improvement, and the manner in which any goals can be measured utilizing a baseline data set. Re-look down the road with more information and experience. Look to CA and ID.

Role of public and human health, if any

*Gail Shibley:* public health is involved due to the inquiries and complaints they get as an agency.

*Mark Wustenberg:* he is concerned that we are directing people to do something that is already being done.

*Gail Shibley:* it is valuable to the dairy industry. The kinds of questions and issues do require public health skills, which is why she sees DHS involved.

*Andy Ginsburg:* we do not want to create an implication that there is a health effect, when the data is not in and we do not know that for sure. We know we have concerns and that we have to address them. That is why he charged the Technical Group with creating procedures for addressing the concerns so they are addressed consistently. If you look at it that way, it is a benefit to the industry.

*Lisa Hanson:* is valuable to have DHS at the table as partners. When we get into situations for which we need technical public health folks; it is preferable to have them in the conversation on the early end.

*Andy Ginsburg:* thinks all three agencies, DHS, DEQ and ODA should request funding. The Legislature will approve what it approves.

*Gail Shibley:* we operate on 90% fee for service or restrictive federal grants. There is no more room to expand programs within our current budget.

*Mark Wustenberg:* question for clarification – are there resources that exist already that we could avail ourselves of? (Ex., he used the free OSHA annual inspections to teach/review worker safety.)

*Andy Ginsburg:* if you have people that are concerned about health risks, in air quality, if there are odors, often one assumes there are health effects. This is not true. He thinks the likelihood of off-site concentrations being high enough to cause any harmful impacts is slim to none.

*Andy Ginsburg:* wants to re-visit the Tier discussion; feels we still have not identified what they are for. We do not have to say something on this, but then we would be punting to another group.

*Kendra Kimbirauskas:* feels that we can develop all the BMPs we want, but without baseline data, how will we know if we are making any improvements. Monitoring is important.

## Regulation v. Voluntary. Who decides? Timing & Triggers of movement from Phase I – III

Concept/principles:

- 1) Important that timing follow model like water where we ease our way in
- 2) Adequate resources to implement
- 3) Encourage voluntary action now
- 4) Certainty that there will be a Phase two
- 5) Public confidence
- 6) Stability
- 7) The choices impact on ability to get resources
- 8) Level of “enforcement” can move over time as resources become evadible

*Andy Ginsburg:* to re-cap, it is important that we follow a model like the water CAFO program, easing our way into it. Another is to not get ahead of ourselves in terms of implementation; encourage voluntary actions while the program is being developed. We want something that has certainty in triggering actions.

*Marty Myers:* why is that so important?

*Andy Ginsburg:* we want to avoid more lawsuits and we need to have something to show to the environmental community that progress is being made.

*Dan Bansen:* how would you do that if there were no funding?

*Andy Ginsburg:* tier system requiring meeting some level of BMPs, with a certain number of years to comply. During that period of time, assume we do not have enough resources for ODA to inspect every facility; we will have a little, so we can do some Technical Assistance. Therefore, you can have a requirement, but we are not going to have a penalty or inspection for not meeting it. There are plenty of rules out there for which the rules set the bar and most people will try to meet it to be lawful.

*Kendra Kimbirauskas:* wants to respond to Marty, the voluntary compliance part is what brought us here. The stakeholders are watching this and we have come a long way to be held up on the same point.

*Marty Myers:* so, voluntary to start with, then melding into a California and/or Idaho style system?

*Andy Ginsburg:* we would have the agencies get the info out, but within the first year, we will not get everyone on board. However, it is a way to tell them what is coming down the pike. We have to find a way to implement with minimal resources, which could mean it is mostly self-policing.

*Mark Wustenberg:* there is some concern from the industry. Being regulated would increase our chances for funding, and would help deter lawsuits. However, if we do not get the funding, we have a program that is regulatory on paper.

*Andy Ginsburg:* if I were an environmental litigation organization, would I say Oregon needs a lawsuit to shake things up? I would look at what the state is doing currently. If it is a requirement to comply, you will have most dairies complying even if there is no annual inspection. Maybe we can do voluntary, then mandatory with no penalties, then penalties kick in after X years.

*Mark Wustenberg:* that is where the third party oversight comes in.

*Andy Ginsburg:* we have part of the third party oversight with the Technical Advisory Committee, because the benchmarks are set outside the agencies. Bottom line is we cannot add workload with no resources.

*Jim Moore:* is it better to have a program in place that you are not enforcing to impress someone, or have a voluntary program in place and see what you get?

*Andy Ginsburg:* voluntary program take resources, too, as much or more as others.

*Dana Kaye:* agreed.

*Andy Ginsburg:* explained his idea of a progression from voluntary to mandatory with no enforcement to a program with some teeth.

*Lisa Hanson:* what are the risks to the State of having an unfunded mandate on the books? It sets up people to have expectations and that is where we could get into trouble.

*Andy Ginsburg:* in similar scenarios, you write the rule in a way that gives you room to breathe.

*Kendra Kimbirauskas:* question about funding.

*David Nelson:* they will ask “where is the health issue?” and from all that he is hearing, this is just not going to rise that high on the overall state priority list.

*Lisa Hanson:* there is the general fund, lottery fund, federal funds, and other funds (such as fee for service).

Meeting adjourned.

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### Wednesday Morning, May 14, 2008

#### **Task Force Members Present:**

Dan Bansen, Forest Glen Dairies  
Lisa Hanson, ODA Deputy Director  
Dana Kaye, Oregon Chapter American Lung Association  
Kendra Kimbirauskas, Friends of Family Farmers  
Dr. Jim Males, OSU Department of Animal Science  
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**Facilitator:** Sam Imperati, Institute for Conflict Management

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Wym Matthews, ODA CAFO Program  
Jeffrey Stocum, DEQ  
Larry Calkins, DEQ

**Welcome, Announcements and Agenda Review – Sam Imperati**

Sam welcomed everyone to the meeting. He realized he forgot to ask for public comment yesterday, and wondered if there was anyone here today who would like to comment. There was not.

Andy Ginsburg was unable to stay for the second day of the meeting, and Sam passed out an email from him with a chart laying out “Possible Staging of DTF Recommendations.” In this, Andy laid out an example of what incremental implementation could look like.

*David Nelson:* is concerned about making things mandatory, but understands the implications of not doing so.

*Dan Bansen:* does it make it easier that we are asking for less in this version?

*David Nelson:* it is still basically the same. Health impacts?

*Marty Myers:* our operation has had complaints, which triggered a NIOSH inspection that we passed.

*David Nelson:* wants to make sure there are teeth in it, but does not want any dairies to go out of business. We want to take care of air quality. The legislative viewpoint is that this is not very high on the list of priorities.

*Lisa Hanson:* when I look at the Governor’s priorities for 2009, they are transportation, education, healthcare, and climate change. While there are connections, she agrees with Senator Nelson. She does not want to create regulatory uncertainty for producers. Between air, land, and water, doing something to prevent ammonia emissions, which does not trigger other negative impacts, is a curious choice. She struggles with the lack of comprehensive knowledge, and making decisions without data makes her nervous.

*Dana Kaye:* the dairy industry is at the table, so we are at least at the first step. There are many other factors, but allowing everyone to self-regulate is not sufficient. Policy creates behavior change. For the overall health of the State, this is just the beginning. This could serve as a model for others. We do not have to assume we will not get funding. That is not a good policy-making process.

*Lisa Hanson:* we use pilot projects a lot. Is it an option to do such a thing in this case, and then re-visit when the NAEMS study comes in? We might not fully lay out the entire path now, but with a firm check-in date.

*Dana Kaye:* needs to be well designed, so when the next pollutant comes up, we have a basis to move forward on that. We do not have the luxury to think air quality is not a problem; we need to make this substantial.

*Mark Wustenberg:* before we make decisions, we need to sit down with Jim Krahn and ODFA. Speaking for myself, I think we are pretty clear on expectations that will lead to agreement. The intent of what I presented yesterday was not to leave it as a voluntary program. If we producers are at risk of having folks come in to make changes, it is a more contentious way to get things done. He sees a more formal regulatory framework in the future.

*Jim Moore:* the way I read this, it is the wrong progression. Rulemaking comes too early. It should occur March 2010, not 2009.

*Kendra Kimbirauskas:* what would be the intention of rule? Do you need a rule to even begin?

*Sam Imperati:* not really, you can still do a lot without the rule, such as set up the Advisory Committee and collect baseline data.

*Lisa Hanson:* when you move to the regulatory side, you do need a rule or statute to endorse.

*Marty Myers:* you have a dichotomy in this state – like our operation as compared to Tillamook-type operations. Very different BMPs. This is where the industry can help.

*Lisa Hanson:* do you see this in the early, voluntary stages?

*Kendra Kimbirauskas:* does not see this as mutually exclusive.

*Lisa Hanson:* the phasing approach is the logical way to go. We clearly need to sort out the details, but it will help us develop something appropriate for the variety we see in the industry.

*Mark Wustenberg:* there is no conflict; the framework is there. In my mind, when you talk about Technical Oversight Committee, it has to be there in the voluntary phase, too. This is what will give us credibility; this is not the part he is concerned about. As an industry, they want the best technical people to answer the scientific questions. The concern is he does not want to go through a process, start agreeing to stuff, and then have no resources. The industry does not have the resources internally to self-fund. Third party oversight is the key to credibility.

*Kendra Kimbirauskas:* agreed, does not think it is a good idea for the industry to fund it. That is why this proposal makes sense to her.

*Jim Moore:* Mark, is your concern answered in Phase II, second box (text below)?

2011 legislative session: Request increased funding: 1) additional ODA staff to expand outreach, 2) DEQ staff to expand technical assistance, 3) DHS FTE (parts of three positions) to conduct risk communication. 4) Also, request funding for SMP research.

*Mark Wustenberg:* perhaps. We need some sort of assurance about what to expect if we head down this path.

*Jim Males:* when Troy Downing was here, he said he is already working on BMPs with the industry.

*Lisa Hanson:* NRCS can help move this forward; using them to help focus the technical side, working with air and water together.

*Sam Imperati:* some ideas. Develop a survey for air BMPs and have them returned anonymously, if needed. In addition, you do not have to inspect every year, you can do spot audits. There are ways to skinny down the program.

*Lisa Hanson:* you are right. Should the Task Force be working on that level?

*Mark Wustenberg:* my personal opinion is that if you have the right people on your Advisory Committee, then they will figure this out.

*Sam Imperati:* OK, how about we talk about backing up from Phase III, agree on the ultimate goal of what we want the program to look like, and then figure out how to get there. We are trying to do a roadmap without figuring out where we are going.

*Dana Kaye:* that is a common way to do these types of things; we do that in public health a lot. Starting from the goal and working backward.

*Sam Imperati:* I am not seeing much disagreement of where we need to end up. There are technical issues – the industry assumed the EPA would have a rule. If the EPA does it, fine. Does Oregon want to do more? Therefore, we can pick a reasonable year and work from there. Is the industry willing to agree that by year X, we will have EPA or EPA plus program in place?

*Jim Moore:* in this proposal it is 2014, which may be a realistic date.

*David Nelson:* I'm concerned about the uncertainties with technology. What about the example of digesters in California? That turned out to be not so good.

*Dan Bansen:* that will happen. That is why we will reevaluate our BMPs all the time. As new technology and information come out, we will incorporate it into our best practices.

*Mark Wustenberg:* that is why we want to structure this so there is a lot of flexibility. There is not a single business decision you make in a day that you have 100% certainty about.

*Jim Males:* we want our unique dairy industry to survive.

*David Nelson:* where is Jeremiah and his input? We are having all these conversations without him.

*Kendra Kimbirauskas:* we are not seeing the same lawsuits in Oregon because we are engaged in this process.

*Lisa Hanson:* Kendra, do you think the phased-in approach will work for the conservation community?

*Kendra Kimbirauskas:* I do, if there continues to be public input and if there is some certainty about ending up with some regulatory framework.

*Kendra Kimbirauskas:* we may not have any dairies relocating now because of the processing issue, but we cannot assume that will always be the case. Ten years down the road, should have a program in place.

*Sam Imperati:* a voluntary-only program even in an OAR?

*Kendra Kimbirauskas:* in the long run, no.

*Dan Bansen:* that is why Jim drew up the proposal as he did; he understands that we are beyond that.

*Jim Males:* and the third party auditing aspect, anyone in agriculture has to accept that it is part of the deal now.

*Sam Imperati:* process suggestion: Sam will take all the work from yesterday and create one document, which identifies decision points. You will get that by Monday. You also have the Technical document on the CD to make track change edit. Sees the need for some off-line meetings to work out details and contingency planning.

*Dan Bansen:* good idea.

*Sam Imperati:* we need one subcommittee to work on Technical Scientific document. Jim and Jim?

*Jim Moore:* anyone else is welcome to work with us.

*Sam Imperati:* Gregg Lande and Gail will get a staffer to help as well. We need that document at least a week before the next meeting. In addition, the policy/recommendation committee: Kendra, Lisa, Jeremiah, Mark, and Jim Krahn. Jeremiah will be the Chair. We will ask Senator Johnson if she wishes to participate. Our next and last meeting is in Salem on June 18.

**Break.** (Subcommittees meet and figure out schedules)

### **Thremile Canyon Farms PowerPoint Overview - Marty Myers**

Marty went over his PPT to introduce TMCF. It is about 12 miles x 12 miles, mostly in Morrow County. The dairy operations were designed to be in the middle of their farm, to be as far away from neighbors as possible. They irrigate from the Columbia River. PGE Boardman lies within the boundaries of their farm.

In 1999, cheese factory recruited to Port of Morrow, and Marty committed to them that they would supply the milk.

December 2000 - Environmental lawsuits settled: agreed that TMCF could farm 41,000 acres of land, cap on water withdrawals, consultation process for impact on fish, and set aside conservation area. It was good to get the environmental lawsuits settled because then they knew what their business landscape was, how much water they could use, and how much land they could farm, etc.

Overall Operation:

3 free stall dairies (one leased to a California dairyman)  
22,000 milk cows, 16,000 cows owned  
8,500 Jerseys, 7,500 Holsteins  
25,000 replacement heifers  
1.6 million pounds of milk per day  
All their heifers are self-raised and they sell the extras.

Corporate Social Reasonability - "Turning our good intentions into intentional good acts." To develop their CSR program, they selected existing standards that were applicable to their operation in:

Natural resources  
Ag practices  
Workplace  
Animal welfare  
Community management systems

They hired a firm to audit them and write a report. Their intention is to make it a "living document" and incorporate good practices in the management and operation of their farm.

Animal welfare: they scored 100% on their audit this year.

Community: they participate in Farmers Fighting Hunger by donating 25 beef cows per month, which translates to 9,000 lbs of ground beef. They also have an internship/scholarship program.

Meeting adjourned.

The Task Force traveled to TMCF for onsite tour from about 11:30 until 3:00. Marty Myers, along with Farm Manager, Greg Harris, and Livestock Manager, Walt Guterbock, gave us a tour of the grounds and operations.

Notes respectfully submitted by the ICM, Inc. facilitation team.





## Attachment A Traditional Regulatory Approach Straw Proposal

### A. Guiding Principles

The Task Force utilized the following overarching principles to govern the design of a dairy Structural and Management Practices (SMP) program:

1. The program should focus on ammonia reduction as a priority for the purpose of helping reduce regional haze pollution.
2. The program should allow flexibility for dairy farmers to select SMPs that are compatible with their operations. However, all SMPs should be evaluated as to their impact and consequences on water quality, land quality, human health, and livestock health, and should minimize or reduce greenhouse gas emissions to the extent possible.
3. The program should be economically feasible for dairy farmers, especially small farmers.
4. The program should use a hybrid of mandatory and voluntary approaches, and should utilize incentives to encourage and support efforts to go beyond requirements.
5. The program should be reviewed periodically and adjusted, if needed, as more is learned about dairy emissions, the effectiveness of SMPs, and the environmental and health impacts of dairy emissions.
6. The program is in addition to other existing requirements, including the Federal Clean Air Act, the federal Clean Water Act, and the Occupational Safety and Health Act.
7. While recognizing that ammonia comes from a variety of sources, DEQ, ODA, and the Oregon Dairy Farmers Association should encourage the development of a comparable SMP program in Washington, to help address ammonia emission regionally and ensure a level playing field between Oregon and Washington dairies.
8. The SMP program should create a solution that all interests can support, and thus, avoid the need to revisit this issue in the near future.

### B. Program Design: Hybrid Menu of SMPs with State Agency Oversight

1. **Program Goal.** The goal of the program is to reduce ammonia emissions from dairies. The primary reason for reducing ammonia is to help address regional haze, but the program also directs the agencies to evaluate other pollutants from dairies to determine if additional measures are needed to protect health.
2. **Structural and Management Practices (SMPs):** The recommended program is based on a menu of SMPs that reduce ammonia emissions.
  - a) **SMP Menu:** The program is modeled on the California approach<sup>1</sup>, where a menu of SMPs is established for each segment of a dairy operation (process category), such

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<sup>1</sup> See Exhibit 1, San Joaquin Valley Air Pollution control district Rule 4570 Permit Application Form, Dairy confined Animal Feeding Mitigation Measures, for example purposes only.

as the milking parlor, feeding operation, freestall barn, lagoons, etc. Each participating dairy will select one or more SMPs from the menu for each part of their operation. The menu will be developed by a technical advisory committee (see section 3).

- b) **Three Tiers of participation:** The number of SMPs needed for each segment of the dairy operation is based on a three-tier system. The specific number of SMPs for each tier will be periodically reviewed and adjusted (see section 7).
    - 1. Tier-III is based on increasing the level of SMPs above the baseline level used at an individual dairy at the time of program start-up.
    - 2. Tier-II is based on the level of SMPs currently used by the better-performing dairies.
    - 3. Tier-I is based on the level of SMPs currently used by the best-performing dairies.
  - c) **Phase-in schedule:** The schedule to install SMPs is designed to coordinate with the next update of Oregon's Regional Haze plan that is due in 2012.
3. **Technical Advisory Committee:** DEQ and ODA, in consultation with DHS, will convene a Dairy Technical Advisory Committee (DTAC).
- a) DTAC will develop and update the initial menu of SMPs for each process category (i.e. California approach) and recommend them for adoption by EQC. SMPs will be rated for their effectiveness in reducing ammonia, but the menu will also identify other impact factors like compatibility with water or land quality issues, affects on other air emissions, livestock health, and other factors pursuant to the principles in Section I. To the extent possible, the menu will be coordinated with SMPs developed by neighboring states, particularly Washington.
  - b) DTAC will also advise DHS, DEQ, and ODA on procedures and criteria for evaluating the potential for public health risks from any air pollutants from dairy operations. These procedures could be used, as needed, if public health concerns at specific dairies need to be investigated. Criteria and procedures to be discussed may cover topics such as emissions estimation, air quality analysis methods, and risk assessment procedures.
2. **Rule Adoption:** The Task Force recommends that the Environmental Quality Commission (EQC) adopt the recommended program by administrative rule as authorized by ORS 468A.020(2)(c), in consultation with ODA as required by ORS 468A.790(3). This includes the SMP menu and other elements of the program as specified in option 1, 2 or 3. EQC or ODA would adopt implementing rules for tax credits to encourage voluntary participation if authorized by the legislature.

**3. Technical Assistance, Education, and Outreach:**

- a) DEQ and ODA will develop and maintain technical expertise in SMPs to reduce ammonia.
- b) ODA will provide technical assistance to dairies in selecting SMPs that are compatible with water quality and other factors pursuant to the Guiding Principles.
- c) ODA and DEQ, working with the industry, will develop and distribute educational materials encouraging dairies to participate in the program.
- d) ODA and DEQ, working with the industry, will provide information to dairies about potential federal requirements, including the potential for methanol emissions to trigger Title V permitting.
- e) ODA, DEQ, and DHS, working with the industry, will provide information about dairies, emissions, and health to the public, the media, and neighboring communities.

6. **Reporting:** ODA will develop a periodic report of SMPs in use based on reports and inspections. The report will be provided to EQC and the Board of Agriculture, posted on the web, and otherwise communicated to the public.

**7. Periodic Program Assessment:**

- a) After 5 years, ODA and DEQ will report on the effectiveness of the program to the EQC and the Board of Agriculture, and recommend revisions, if needed. This report may include recommendations for the program to address pollutants in addition to ammonia.
- b) Periodically, or as new information is developed, an SMP oversight group would be convened by DEQ and ODA to review the SMP menu and the overall program design. This group would include DEQ, ODA, the dairy industry, and representation from other stakeholders such as environmental groups, or other state agencies.

8. **Resources:** The Task Force recommends that the 2009 legislature provide the following resources to implement the recommended program:

- a) Tax credits for voluntary participation.
- b) Resources to ODA for program implementation.
- c) Resources to DEQ for rule development, ammonia air monitoring, and technical assistance.
- d) Resources to DHS for technical assistance, consultation, and risk communication.
- e) Funding for research and development of demonstration projects and SMPs tailored to Oregon's needs.

### C. Program Overview

Over time, dairies with 200 or more animals will be required to meet the Tier II or Tier I level of SMPs. Participation by smaller dairies will be voluntary. Incentives will be provided to encourage dairies to go beyond the minimum requirements. ODA will include requirements in permits and ensure compliance through inspections.

The following table provides an overview of the dairy Structural and Management Practices (SMP) program.

Dairy Size	Tier III (Fewer SMPs)	Tier II (Intermediate SMPs)	Tier I (Higher SMPs)
Less than 200 animals*	Tax credit for voluntary participation	Tax credit for voluntary participation	Tax credit for voluntary participation
200 to 699 animals*	Comply by 2012	Tax credit for voluntary participation	Tax credit for voluntary participation
700 or more animals*	-----	Comply by 2012	Comply by 2015

Notes:

- 1) \*Based on actual (not permitted) mature dairy cows, whether milked or dry. As with all of the issues, the Task Force needs to discuss size thresholds, applicability, and definition of terms. Proposed size thresholds are based on current federal and state CAFO thresholds for water permitting.
- 2) New dairies required to comply upon startup.
- 3) If ammonia emissions from a dairy (of any size) are causing public health impacts, the dairy may be required to participate in the program at the next higher Tier. Any health impact must be demonstrated by a regulatory agency through air quality monitoring and risk assessment, using procedures recommended by the technical advisory committee.
- 4) Tax will require approval by the Governor and legislative authorization, and will be subject to the usual restrictions (e.g. only available for voluntary capital investments in SMPs made for the primary purpose of reducing emissions). The tax credits will expire in 2015, the farthest out year the legislature is likely to authorize. This will also create an incentive for early action.
- 5) For dairies that are required to participate in the program, ODA will issue an Air Contaminant Discharge Permit (ACDP), including appropriate conditions for selected SMPs, recordkeeping, and reporting. ODA will conduct annual inspections, determine compliance, provide technical assistance, and conduct enforcement.

ATTACHMENT A, EXHIBIT I

San Joaquin Valley Air Pollution Control District

[www.valleyair.org](http://www.valleyair.org)

Rule 4570 Permit Application Form

Dairy Confined Animal Feeding (CAF) Mitigation Measures

Facility Name:	_____
Facility Location:	_____
Mailing Address:	_____
Phone No.:	(____) _____ - _____
Cell Phone No.:	(____) _____ - _____
Owner/Operator:	_____
Title:	_____
Signature:	_____
Date:	_____

**Instructions**

1. Please completely fill out the tables included in the following pages of this form indicating the mitigation measures that you will be utilizing to comply with Rule 4570.
2. This application must be submitted with application filing fees totaling \$325 (\$65 per permit unit x 5 permit units). If submitting this form at a workshop, please do not submit the fees at the workshop. The District will send you an invoice at a later date.
3. Have you received a CMP Plan as required by District Rule 4550 or permit from the District for your existing dairy?
  - If yes, what is your facility number? \_\_\_\_\_
  - If you have not received a CMP Plan or permit from the District, you must fill out the following application forms and attach them to this form. The application forms may be found on the District’s website at [http://www.valleyair.org/General\\_Info/AGLoader.htm](http://www.valleyair.org/General_Info/AGLoader.htm):
    - **Initial Permit Application Form for Farms (Form “PA-0”)**
    - **Dairy Farm Permit Application Form (Form “Dairy”)**
    - **CMP Plan Application (Form “CMP 0”)**
    - **CMP Dairy Supplemental Application (Form “CMP 13”)**
    - **Other Applicable CMP Supplemental Application Forms**
    - **Other applicable CMP supplemental application forms**

<p style="text-align: center;"><b>Feed Mitigation Measures</b></p>	<p><b>Dairy owners/operators must select at least <u>four</u> of the following feed mitigation measures:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Feed according to National Research Council (NRC) guidelines.</li> <li><input type="checkbox"/> Feed animals high moisture corn or steam-flaked corn and not feed animals dry rolled corn.</li> <li><input type="checkbox"/> At least once every 14 days remove feed from the area where animals stand to eat feed.</li> <li><input type="checkbox"/> At least once every 14 days remove spilled feed from the area where equipment travels to place feed in the feed bunk.</li> <li><input type="checkbox"/> Remove uneaten wet feed from feed bunks within twenty-four hours of a rain event.</li> <li><input type="checkbox"/> Feed or dispose of rations within 48 hours of grinding and mixing rations.</li> <li><input type="checkbox"/> Store grain in a weatherproof storage structure from October through May.</li> <li><input type="checkbox"/> Implement an alternative mitigation measure(s), not listed above. <i>Please provide details on an attached Alternate Mitigation Measures supplemental application form.</i></li> </ul>
<p style="text-align: center;"><b>Feed Mitigation Measures</b></p>	<p><b>Dairy owners/operators must select at least <u>one</u> of the following feed mitigation measures:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Cover the horizontal surface of silage piles, except for the area where feed is being removed from the pile.</li> <li><input type="checkbox"/> Collect leachate from the silage piles and send it to a waste treatment system such as a lagoon at least once every 24 hours.</li> <li><input type="checkbox"/> Enclose silage in a bag and vent to a VOC control device with a combined VOC capture and VOC control efficiency of at least 80%. (Please note: Source testing per Section 7.2 of Rule 4570 will be required.)</li> <li><input type="checkbox"/> Enclose silage in a weatherproof structure and vent to a VOC control device with a combined VOC capture and VOC control efficiency of at least 80%. (Please note: Source testing per Section 7.2 of Rule 4570 will be required.)</li> <li><input type="checkbox"/> Eliminate silage from animal diet.</li> <li><input type="checkbox"/> Implement an alternative mitigation measure(s), not listed above. <i>Please provide details on an attached Alternate Mitigation Measures supplemental application form.</i></li> </ul>
<p style="text-align: center;"><b>Milk Parlor Mitigation Measures</b></p>	<p><b>Dairy owners/operators must select at least <u>one</u> of the following milk parlor mitigation measures:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Flush or hose milk parlor immediately prior to, immediately after, or during each milking.</li> <li><input type="checkbox"/> Enclose and vent the milk parlor to a VOC control device with an overall VOC capture and VOC control efficiency of at least 80% when animals are in the parlor.</li> <li><input type="checkbox"/> Implement an alternative mitigation measure(s), not listed above. <i>Please provide details on an attached Alternate Mitigation Measures form.</i></li> </ul>
<p style="text-align: center;"><b>Freestall Barn Mitigation Measures</b></p>	<p><b>Dairy owners/operators with freestall barns must select at least <u>two</u> of the following freestall barn mitigation measures:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Vacuum or scrape freestall lanes immediately prior to, immediately after, or during each milking.</li> <li><input type="checkbox"/> Inspect water pipes and troughs and repair leaks at least once every 14 days.</li> <li><input type="checkbox"/> Use non-animal waste-based bedding and non-separated solids based bedding for at least 90% of the bedding material, by weight, for freestalls (e.g. rubber mats, almond shells, sand, or waterbeds).</li> <li><input type="checkbox"/> Remove animal waste that is not dry from individual cow freestall beds at least once every 14 days.</li> <li><input type="checkbox"/> Groom (rake, harrow, scrape, or grade) bedding in freestalls at least once every 14 days.</li> <li><input type="checkbox"/> Use a dry animal waste handling system, such as scraping, instead of a liquid animal waste handling system, such as a flush system.</li> <li><input type="checkbox"/> Have no animals in exercise pens, corrals, or drylots at any time.</li> <li><input type="checkbox"/> Flush freestalls more frequently than the milking schedule.</li> <li><input type="checkbox"/> Vacuum animal waste instead of flushing or scraping and apply animal waste directly to land either through injection or incorporation within 72 hours of removal from animal housing or vacuum truck.</li> <li><input type="checkbox"/> Implement an alternative mitigation measure(s), not listed above. <i>Please provide details on an attached Alternate Mitigation Measures supplemental application form.</i></li> <li><input type="checkbox"/> <b>Not Applicable – No freestall barns</b></li> </ul>

**Corral  
Mitigation  
Measures**

**Dairy owners/operators with corrals** must select at least **six** of the following mitigation measures for each **corral** where animals have been housed in the last 30 days:

**Please note, only one of the following three measures will count towards the six required for this category.**

- Clean animal waste from corrals at least 4 times per year with at least 60 days between cleaning.
- Clean corrals at least once between April and July and at least once between October and December.
- Clean concreted areas such that the depth of animal waste does not exceed 12 inches at any point or time, except for in-corral mounding.

**Please note, only one of the following two measures will count towards the six required for this category.**

- Maintain corrals to ensure drainage and prevent water from standing more than 48 hours after a storm.
- Maintain corrals and drylots so that there are not indentions in the surface where puddles may form and remain for more than 48 hours.

**Please note, only one of the following three measures will count towards the six required for this category.**

- Install no shade structures in the corrals.
- Install shade structures such that they are constructed with a semi-permeable roofing material.
- Install all shade structures uphill of any slope in the corral.

**Please note, only one of the following two measures will count towards the six required for this category.**

- Use lime or a similar absorbent material in the pens according to the manufacturer's recommendations to minimize moisture in the pens.
- Apply thymol to corral soil in accordance with the manufacturer's recommendation.

**Please note, any of the following nine measures may be selected.**

- Manage corrals such that the animal waste depth in the corral does not exceed 12 inches at any time or point, except for in-corral mounding.
- Knockdown fence line animal waste build-up prior to it exceeding a height of 12 inches at any time or point.
- Scrape or flush feed aprons in corrals at least once every seven 7 days.
- Slope the surface of the pens at least 3% where the available space for each animal is 400 square feet or less. Slope the surface of the pens at least 1.5% where the available space for each animal is more than 400 square feet per animal.
- Install floats on the troughs or use another method approved by the APCO, ARB, and EPA to ensure that the water in the troughs does not intentionally or unintentionally overflow or spill onto an earthen ground.
- Inspect water pipes and troughs and repair leaks at least once every 14 days.
- Groom (harrow, rake, or scrape) pens sufficiently to maintain a dry surface.
- House animals in an enclosure vented to a VOC control device with a combined VOC capture and VOC control efficiency of at least 80%.
- Implement an alternative mitigation measure(s), not listed above. *Please provide details on an attached Alternate Mitigation Measures supplemental application form.*
- Not Applicable – No open corrals**

<p style="text-align: center;"><b>Solid Waste Mitigation Measures</b></p>	<p><b>Dairy owners/operators which handle solid animal waste or separated solids animal waste stored outside the animal housing must select at least <u>two</u> of the following solid or separated solids animal waste mitigation measures:</b></p> <p><b>Please note, only one of the following <u>two</u> measures will count towards the <u>two</u> required for this category.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Remove separated solids from the facility within 72 hours of separation.</li> <li><input type="checkbox"/> Store no separated solids outside of anaerobic digesters or aerobic lagoons.</li> </ul> <p><b>Please note, any of the following <u>seven</u> measures may be selected.</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Cover dry animal waste piles outside the pens with a weatherproof covering from October through May, except for times, not to exceed 24 hours per event, when wind events remove the covering.</li> <li><input type="checkbox"/> Cover dry separated solids outside the pens with a weatherproof covering from October through May, except for times, not to exceed 24 hours per event, when wind events remove the covering.</li> <li><input type="checkbox"/> Remove animal waste from the facility within 72 hours of removal from the pens or corrals.</li> <li><input type="checkbox"/> Compost animal waste removed from pens with an aerated static pile vented to a VOC control device with an overall VOC capture and VOC control efficiency of at least 80%.</li> <li><input type="checkbox"/> Store all removed animal waste in an enclosure vented to a VOC control device with an overall VOC capture and VOC control efficiency of at least 80%.</li> <li><input type="checkbox"/> Send at least 51% of the animal waste removed from animal housing to a digester, with a VOC control device with an overall VOC capture and VOC control efficiency of at least 80%.</li> <li><input type="checkbox"/> Implement an alternative mitigation measure(s), not listed above. <i>Please provide details on an attached Alternate Mitigation Measures supplemental application form.</i></li> <li><input type="checkbox"/> <b>Not Applicable – No solid waste handled</b></li> </ul>
<p style="text-align: center;"><b>Liquid Waste Mitigation Measures</b></p>	<p><b>Dairy owners/operators which handle liquid animal waste must select at least <u>one</u> of the following liquid animal waste mitigation measures:</b></p> <ul style="list-style-type: none"> <li><input type="checkbox"/> Use phototrophic lagoon. (Please note: Testing per Section 7.2 of Rule 4570 will be required.)</li> <li><input type="checkbox"/> Use an anaerobic treatment lagoon designed according to NRCS Guideline No. 359. (Please note: Testing per Section 7.2 of Rule 4570 will be required.)</li> <li><input type="checkbox"/> Use an aerobic lagoon. (Please note: Testing per Section 7.2 of Rule 4570 will be required.)</li> <li><input type="checkbox"/> Use a mechanically aerated lagoon (aerators). (Please note: Testing per Section 7.2 of Rule 4570 will be required.)</li> <li><input type="checkbox"/> Manage the facility such that there are no lagoons at the facility. (Lagoons are defined as a basin constructed, maintained, and operated to store and treat animal waste. This does not include basins primarily used to collect runoff and storm water.)</li> <li><input type="checkbox"/> Remove solids from the waste system with a solid separator system, prior to the waste entering the lagoon.</li> <li><input type="checkbox"/> Maintain lagoon pH between 6.5 and 7.5.</li> <li><input type="checkbox"/> Maintain organic loading in the lagoon such that the total solids are less than 3.5 mg (dry weight)/mL, or total volatile solids are less than 3.5 mg/mL.</li> <li><input type="checkbox"/> Use additional non-standard equipment or chemicals on the solid separator system, such as roller or screw presses or chemical coagulants and flocculants, that increase the percent of solid separation achieved by the separator and that is approved by the APCO, ARB, and EPA.</li> <li><input type="checkbox"/> Cover the lagoon or storage pond and vent to a VOC control device with an overall VOC capture and VOC control efficiency of at least 80%.</li> <li><input type="checkbox"/> Implement an alternative mitigation measure(s), not listed above. <i>Please provide details on an attached Alternate Mitigation Measures supplemental application form.</i></li> <li><input type="checkbox"/> <b>Not Applicable – No liquid waste handled</b></li> </ul>

**Land  
Application  
Mitigation  
Measures**

**Dairy owners/operators which land apply dry or liquid animal waste must select at least two of the following land applied dry or liquid animal waste mitigation measures:**

**Please note, only one of the following two measures will count towards the two required for this category.**

- Allow liquid animal waste to stand in the fields no more than 24 hours after irrigation.
- Apply no liquid animal waste.

**Please note, only one of the following two measures will count towards the two required for this category.**

- Apply no solid animal waste with a moisture content of more than 50%.
- Apply no solid animal waste.

**Please note, any of the following three measures may be selected.**

- Land incorporate all solid animal waste within 72 hours of removal from animal housing.
- Only apply solid or liquid animal waste that has been treated with an anaerobic or aerobic lagoon or digester system.
- Implement an alternative mitigation measure(s), not listed above. *Please provide details on an attached Alternate Mitigation Measures supplemental application form.*
- Not Applicable – Liquid or solid manure is not land applied**

**Attachment B: DTFA Straw Proposal**

<b>Element</b>	<b>Phase I</b>	<b>Phase II</b>	<b>Phase III</b>
A. Overview	<p>The following is Phase I of the Oregon Dairy Air Emission Program. This program will go into place at the completion of the Dairy Air Task Force recommendations. It will continue until the funding for Phase II is granted or until the completion of the NAEMS study and the recommendations of EPA.</p>	<p>The following describes an outline for a regulatory program that would include all Oregon dairies. There are several areas in which funding from the 2009 legislature is needed if this program is to be put into place (Section III-D). This program would be adopted once the funding was secured.</p> <p>If funding is not provided by the 2009 legislature for Phase II, Phase I of the program would stay in place until the NAEMS study is completed and EPA makes any rulings.</p> <p>At that time there needs to be a review of the program to assure that it meets federal requirements. That would be covered under Phase III of the program.</p>	<p>Phase III would come into play with the completion of the NAEMS study and any resulting rules that would be required for dairies. At this time, ODA and DEQ working with a program oversight committee and technical advisory committee if needed would make the needed adjustments so the Oregon Dairy Air Emissions program would meet the federal requirements.</p>
B. Guiding Principles	<ol style="list-style-type: none"> <li>1. The program will focus on ammonia, methanol, and odor for the entire state of Oregon.</li> <li>2. The program will allow flexibility for dairy producers to select BMPs that are compatible with their operations.</li> <li>3. The BMPs will be evaluated as to their impact on other entities such as water quality.</li> <li>4. The program will be economically feasible for all Oregon dairy producers.</li> <li>5. The program will be reviewed annually by</li> </ol>	Same	Same

	<p>an advisory committee appointed by DEQ and ODA.</p> <p>6. The program should create a solution that all interests can support.</p> <p>7. With the completion of the NAEMS study (2011 or 2012) and the recommendations by EPA for the dairy industry, this program will be revisited.</p>		
C. Program Goal		<ol style="list-style-type: none"> <li>1. Participation in the program is mandatory for all Oregon dairies with a CAFO permit</li> <li>2. The program will focus on ammonia, methanol, and odor.</li> <li>3. ODA will check the compliance with the BMPs at the time of the annual CAFO water quality inspection.</li> <li>4. ODA will compile data concerning implementation of BMPs</li> </ol>	
D. Program Thresholds		<ol style="list-style-type: none"> <li>1. The program will be a hybrid of voluntary and regulatory approaches.</li> <li>2. All dairies who have a CAFO permit will participate in this program.</li> <li>3. The number of cows will be determined by milking cows on site.</li> </ol>	
E. BMPs	<ol style="list-style-type: none"> <li>1. The program BMPs will be developed to reduce ammonia, methanol, and odor.</li> <li>2. A technical advisory committee will look at the Idaho and California models as they develop the BMPs for this</li> </ol>	Same	

	<p>program.</p> <p>3. The BMP development will consider the potential negative impact on other entities such as water quality.</p>		
F. Incentives and Phase-In (Tax Credits)		<ol style="list-style-type: none"> <li>1. The recommended program includes tax credits. The percentage of eligible costs for the tax credit is linked to the tier system.               <ol style="list-style-type: none"> <li>a) Tier I 50% Credit</li> <li>b) Tier II 35% Credit</li> </ol> </li> <li>2. Dairies between 0 and 699 milking cows will be required to meet Tier II by 2014.</li> <li>3. Dairies over 700 milking cows will be required to meet Tier I by 2012.</li> <li>4. New dairies will meet the tier appropriate to the number of milking cows at time of construction.</li> <li>5. Dairies will be eligible for tax credit if they go beyond the required BMPs for their size dairy.</li> <li>6. If tax credits are adopted by the legislature, ODA and DEQ will administer the tax credits</li> </ol>	
G. Technical Advisory Committee	<ol style="list-style-type: none"> <li>1. This committee will consist of people who have knowledge of the dairy industry and air emissions. People from OSU, NRCS, ODA, and the dairy industry are examples.</li> <li>2. This committee will develop BMPs for each tier and determine the type of program that best fits the Oregon dairy industry. Examples are the Idaho and the California</li> </ol>	Same	1-5 Same, but no #6

	<p>models.</p> <ol style="list-style-type: none"> <li>3. The main focus will be the reduction of methanol, ammonia, and odor.</li> <li>4. The BMPs developed will be financially feasible.</li> <li>5. As the BMPs are developed consideration will be given to impacts on other entities such as water quality.</li> <li>6. This committee will complete the BMPs by (nine months after adoption of the program)</li> </ol>		
H. Program Oversight Committee	<ol style="list-style-type: none"> <li>1. The committee will consist of members of the public, dairy industry, technical advisory committee, DEQ, ODA, NRCS and OSU.</li> <li>2. The committee will, at minimum, review annually the program and its progress.</li> </ol>	Same	Same
I. Program Implementation, Education and Outreach	<ol style="list-style-type: none"> <li>1. ODA, DEQ, OSU, and the dairy industry will provide information to dairy producers concerning air emissions.</li> <li>2. ODA, DEQ, OSU, and the dairy industry will provide information of federal regulations and the new state program.</li> <li>3. There will be a series of meetings held around the state to describe the BMP program to all dairy producers.</li> </ol>	<ol style="list-style-type: none"> <li>1. ODA will provide technical assistance to dairies in selecting BMPs that are compatible to water quality.</li> <li>2. ODA and DEQ will work to provide funding that will allow OSU to hire and maintain technical expertise centering on air emissions from dairies.</li> <li>3. ODA, DEQ, OSU, and the dairy industry will provide information to dairy producers concerning air emissions.</li> <li>4. ODA, DEQ, OSU, and the</li> </ol>	

	<p>4. ODA will do an assessment and collect baseline data concerning what is occurring on Oregon dairies today to decrease air emissions based on the BMPs that are developed by the technical advisory committee.</p>	<p>dairy industry will provide information of federal regulations and the new state program.</p> <p>5. There will be a series of meetings held around the state to describe the program to all dairy producers.</p>	
J. Research		<p>1. Funds will be provided to OSU by the legislature to determine the effectiveness of BMPs and there impact on air emissions.</p>	
K. Rule Adoption		<p>1. The Task Force recommends the EQC adopt the recommended program by administrative rule as authorized by ORS 468A.020(2)(c), in consultation with ODA as required by ORS 468A.790(3). This includes the BMP approach, requirements for mandatory participation, and other elements of the program. EQC and ODA will adopt implementing rules for tax credits if authorized by the legislature.</p>	

L. Resources		<ol style="list-style-type: none"> <li>1. The Task Force recommends that the 2009 legislature provide the following resources to implement the recommended program.</li> <li>2. Tax credit for voluntary participation.</li> <li>3. Resources for ODA to implement the program and technical assistance.</li> <li>4. Resources for DEQ for rule development</li> <li>5. Resources for OSU for research on BMPs, education and outreach and technical assistance</li> </ol>	