Oregon Dairy Air Quality Task Force

Final Report to the Department of Environmental Quality & Department of Agriculture

July 1, 2008

Executive Summary

The 2007 Oregon Legislature passed Senate Bill 235 to address the inconsistency between state and federal law by allowing the Oregon Environmental Quality Commission (EQC) to regulate agricultural operations to the extent needed under the Clean Air Act. The Bill directed the Oregon Department of Environmental Quality (DEQ) and the Oregon Department of Agriculture (ODA) to enter into a Memorandum of Understanding in order to implement the federal Clean Air Act requirements for agriculture. **(Section I)**. Additionally, SB 235 established a Task Force on Dairy Air Quality, legislated its membership, **(Section II)** charged it with, among other things, studying the emissions from dairy operations, evaluating available alternatives for reducing emissions, and presenting findings and recommendations to the DEQ and ODA.

The Task Force met seven times from January through June 2008. It studied, explored, and debated the current state of the science, regulatory frameworks outside of Oregon, and various options from doing nothing to traditional regulation. The members reached a consensus on the included Findings **(Section III)** and Recommendations **(Section IV)**. The package recommendation was the thoughtful and deliberate result of the Task Force members navigating through very thorny issues and collaboratively balancing deeply held, diverse opinions.

By way of overview, the Task Force found that under certain circumstances, air emissions from dairy operations might become subject to regulation under the Clean Air Act. However, the current uncertainties in our quantitative knowledge of air emissions from dairies make the application of Clean Air Act requirements uncertain. There is a need to improve our understanding of emissions from dairies and improve our ability to quantify these emissions, especially if those estimates are to inform future regulatory decisions. While we build our knowledge and certainty of dairy emissions, there is a desire by the Task Force to reduce these air emissions to prevent future problems from arising.

Specifically, the Task Force recommends the EQC, working with ODA, DEQ, and the Department of Human Services (DHS), should adopt rules to implement the proposed "Oregon Dairy Air Emissions Program" (Program), as a whole, **(Section IV. A.),** based upon carefully crafted Guiding Principles **(Section IV. B.)**. The Program **(Section IV. C.)** would start as a voluntary program, and move into a state mandatory program pursuant to the recommended conditions and schedule. The Task Force also recommends that DEQ and ODA, in consultation with DHS, should convene a Dairy Air Advisory Committee (DAAC) to advise and make recommendations about the Program implementation details. **(Section IV. D.)** It recommends the needed resources **(Section IV. E.)** that are essential to implement and administer the Program. Finally, the Task Force provides an overall recommended program structure, staging and funding. **(Section IV. E.)**

In conclusion, The Task Force thanks the Legislature for the opportunity to serve and formulate this consensus package of recommendations. Taken as a whole, the recommendations represent an optimal balance between the need to protect air quality and ensure the viability of Oregon's dairies, and they chart a clear and positive path forward for all Oregonians. These recommendations were created because the Task Force worked hard to achieve the necessary levels of understanding, trust, and respect. In order to maintain this positive and balanced momentum, the Task Force believes it is imperative that the Legislature provide the funding for this necessary and evolving program. The monetary requests are modest and responsibly staged over time to ensure the Program can accomplish its purposes without negatively affecting the state's other priorities.

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I. Background

Until 2007, Oregon law exempted agricultural operations from air quality regulations with the exception of field burning in the Willamette Valley. In the fall of 2005, several environmental and public interest groups petitioned the U.S. Environmental Protection Agency (EPA) asserting that Oregon's air quality program was deficient because Oregon statute exempted agriculture from regulation if those regulations were necessary to comply with the Clean Air Act.

Senate Bill 235 addressed the inconsistency between state and federal law by allowing the Oregon Environmental Quality Commission (EQC) to regulate agricultural operations to the extent needed under the Clean Air Act. The Bill directed the Oregon Department of Environmental Quality (DEQ) and the Oregon Department of Agriculture (ODA) to enter into a Memorandum of Understanding in order to implement federal Clean Air Act requirements for agriculture. In addition, it established a Task Force on Dairy Air Quality, and charged it with, among other things, studying the emissions from dairy operations, evaluating available alternatives for reducing emissions, and presenting findings and recommendations to the DEQ and ODA by July 1, 2008. The findings and recommendations could include technical studies, voluntary actions, regulation, and proposed legislation. The recommendations are not limited to current requirements of the federal Clean Air Act and may recommend that the EQC adopt rules beyond the authorities in the Clean Air Act. The Task Force Charter can be found in the Technical Supporting Document

The Task Force's work plan follows:

A. Study the emission of air contaminants from dairy operations, including but not limited to, emissions regulated under the Clean Air Act.

B. Study available data on the emission of air contaminants, including but not limited to, the United States EPA national air study of animal feeding operations.

C. Determine the problem(s) that need to be solved.

D. Formulate a plan to reduce emissions.

E. Identify the option(s) to reduce emissions:
   1) voluntary measures, including education, demonstration projects, and incentives;
   2) regulatory measures;
   3) legislative measures or funding; and
   4) other recommendations.

F. Select the solutions(s) for fixing the problem(s) and accomplishing the goals by taking into consideration:
   1) The diverse nature and economic viability of dairies and the economic contribution dairies make to the state economy;
   2) The impact that federal Clean Air Act regulations have, and that actions to address air emissions would have, on Oregon's dairies in the Pacific Northwest markets;
   3) The protection of human health, the environment, and scenic and cultural resources; and
   4) The impact of available alternatives on other environmental media, energy, the cost of producing dairy products, and the feasibility of implementation.

G. Make Other Observations and Recommendations

The Task Force began its work in January 2008 and has studied the air emissions associated with dairy operations, including but not limited to, emissions regulated under the Clean Air Act. It has evaluated alternatives for reducing air emissions, and explored voluntary measures, including education, demonstration projects, and incentive options, together with regulatory and/or legislative options for emission reduction.

This summary Report provides a broad overview of the Task Force findings and the information related to quantifying, managing, and reducing air emissions from dairy operations. The Technical Support Document (TSD), http://www.deq.state.or.us/aq/dairy/report.htm, accompanying this Report provides considerably more detail, served as the foundation for some of discussions, contains the Task Force Meeting Notes, and is intended for background purposes only. This Report contains the final Task Force findings and recommendations.

II. Task Force Members

- Two members of the Senate, appointed by the President of the Senate:
    - Senator Betsy Johnson
    - Senator David Nelson
- Two members of the House of Representatives, appointed by the Speaker of the House:
    - Representative Debbie Boone
    - Representative Jackie Dingfelder
- One representative from the Oregon Department of Environmental Quality (DEQ), appointed by the DEQ Director:
    - Andrew Ginsburg, Air Quality Division Administrator, DEQ
- One representative from the Oregon Department of Agriculture (ODA), appointed by the ODA Director:
    - Lisa Hanson, Deputy Director, ODA
- One representative from the Department of Human Services (DHS) having expertise in public health, appointed by the Director of Human Services:
    - Gail Shibley, Administrator, Environmental Public Health , ODHS
- Three representatives, appointed by the governor from the dairy industry:
    - Dan Bansen, Dairyman, Forest Glen Jerseys, Forest Glen Heifer Ranch, and Forest Glen Oaks
    - Martin Myers, General Manager, Threemile Canyon Farms
    - Dr. Mark Wustenberg, Vice President, Dairy Services Tillamook Creamery Association
- Three representatives, appointed by the governor from environmental-public interest organizations:
    - Jeremiah Baumann, Environment Oregon
    - Dana Kaye, Executive Director for Oregon Chapter American Lung Association
    - Kendra Kimbirauskas, Friends of Family Farmers
- Two representatives, appointed by the governor from institutions of higher education listed in ORS 352.002 having expertise in science and technology relevant to air emissions generated by dairy operations:
    - Dr. Jim Males, Department Head Animal Science, OSU
    - Dr. Jim Moore, Professor Emeritus, OSU

III. Findings

A. Oregon Dairy Farm Overview

There are currently more than 60,000 dairy farms in the United States. Seventy seven percent of these dairies have herds of less than 100 mature cows. The remaining dairies provide 77% of all milk sold in the United States. To place Oregon within the national context, as of October 31, 2007, there were 370 permitted dairy operations. Of those 370 permitted dairy operations, 39 of them were heifer raising facilities and 331 of them were milking operations with 116,335 milking cows contained in the milking operations. Of the 331 permitted dairy operations, 39 were registered as large federal concentrated animal feeding operations (CAFOs), meaning that they had 700 or more dairy milking cows. All dairies in Oregon that provide milk for public consumption (grade A licensed) are permitted by the ODA Confined Animal Feeding Operation (CAFO) Program.

Oregon dairies are an important component of the state's economy. Milk products were the fifth most valuable agricultural commodity in Oregon in 2006 with a farm gate value of $329,574,000. Oregon dairies range in size from 25 to 16,000 milking cows and produce both conventional and organic milk; most are family farms and a few are corporately owned. Dairy production in Oregon spans across the state with at least one permitted dairy operation in 27 of Oregon's 36 counties. Currently, dairy production systems in Oregon include pasture-based production systems, partial confinement in free stall barns, total confinement in free stall barns, and dry lot operations.

During the last decade, the increased cost of fuel, feed, and transportation have had a direct effect on the cost of operating a dairy and, therefore, net dairy income. Milk price volatility has become greater in recent years, and this increased volatility has added significant challenges for dairy farm businesses. The number of dairy operations in Oregon has remained fairly constant over the last several years, but following a national trend, the Oregon industry has seen smaller farms ceasing milking operations or consolidating and the newer operations coming into production tending to be larger than the ones going out of business.

While the three new dairy facilities registered to the CAFO Permit in the last five years are all located on the east side of the Cascades, a large geographic movement or relocation of facilities does not seem to be occurring in Oregon at this time. This is because niche marketing of artisan cheeses and organic production have provided opportunities for dairies to remain in their current locations and current sizes.

There are significant regional differences in the conditions under which Oregon dairies operate. These include variations in climate (i.e. temperature, humidity, rainfall) and site characteristics (soil types for growing crops, availability of grassland for feed, etc.). The variation in these conditions affects what types of approaches and challenges operators evaluate when considering changing the production system to address existing and future environmental regulations.

B. Environmental Regulations

The EPA, under the authority of the federal Clean Water Act (CWA), primarily drives today's environmental requirements for large dairies. The Oregon CAFO program began in the early 1980s to prevent CAFO wastes from contaminating groundwater and surface water. When the program began, the DEQ was the permit issuing and enforcement authority, and the ODA acted as program administrator and investigating authority. This relationship has been modified and changed over time so that currently ODA operates the program under Memoranda of Agreement (MOA) with DEQ and EPA.

All CAFOs that require a permit are required to prepare an animal waste management plan. This plan is a detailed description of facilities and operations with respect to containment, treatment, storage, and disposal of waste including wastewater. The plan also describes how compliance with permit conditions and water quality laws will be achieved and maintained. The level and amount of information required will depend upon the size, complexity, and other specifics of each facility. The Oregon CAFO Program is a national leader in adopting and implementing innovative and effective ways to address water quality. Good communication with the industry and regular routine inspections of permitted operations have contributed to the participants actively seeking opportunities that meet, and in many cases exceed, state water quality expectations. It serves as a strong model and foundation to address air quality issues.

Other states have recently begun regulating dairy air emissions through permitting and by requiring the adoption of "best management practices." These regulations have targeted specific emissions of local concern.

Current Regulations for Air Quality in Oregon:

1. **Federal Clean Air Act**
   a) National Ambient Air Quality Standards (NAAQS) – The EPA establishes standards to protect public health, including sensitive people. State and local air agencies determine if these standards are being met, and devise emissions reduction strategies in any location where standards are exceeded.

   b) Hazardous Air Pollutants - Congress provided EPA with a list of hazardous air pollutants and EPA has identified categories of sources for control of these pollutants. Currently, dairies are not one of the identified categories, although methanol emissions may be large enough to require an air quality permit.

   c) Regional Haze – The Clean Air Act requires air agencies to protect visibility in wilderness areas and National Parks. Visibility degradation in the Columbia River Gorge Scenic Area, however, is not subject to authorities in the Clean Air Act.

2. **Oregon Air Program**
   a) Air Toxics – Oregon has established a program to complement the federal approach by focusing on urban areas where many smaller sources contribute to air toxics concentrations that affect public health.

   b) Nuisance – DEQ has the authority to identify and reduce certain nuisance odors through existing rules. (OAR 340-208-0300). However, this state authority does not include odors from agricultural operations under ORS 30.930. Finally, odors are not subject to regulation under the Federal Clean Air Act.

3. **Other Federal Authorities**
   a) Occupational Safety and Health - Worker health concerns are within the authority of OR-OSHA, which has established standards for exposure.

   b) Emergency Planning and Community Right to Know Act (EPCRA) and Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Reporting to EPA is required for both episodic and continuous releases of regulated substances by facilities that meet certain criteria.

C. Air Emissions from Dairies

The National Research Council of the National Academy of Sciences, in its 2003 report titled *Air Emissions from Animal Feeding Operations: Current Knowledge and Future Needs*, identified these air pollutants from animal feeding operations in general, not specifically from dairies. The report identified: Ammonia (NH_3); Nitrous Oxide (N_2O); Nitrogen Oxides (NOx); Methane (CH_4); Volatile Organic Compounds (VOC); Hydrogen Sulfide (H_2S); and Particulate Matter (PM_{10} and $PM_{2.5}$). In addition, the Task Force identified Methanol, a Hazardous Air Pollutant, and Odors as important emissions.

D. Human Health and Dairy CAFOs

There is very sparse research regarding human health issues related to dairy CAFO air emissions. No Oregon industry-wide study was presented to the Task Force that established there was or was not a human health problem associated with dairies. However, if inhaled at sufficiently high concentrations, each of the emissions types associated with dairy CAFOs could be harmful to human health. Health impacts may be acute (immediate) or chronic (long-term). This dairy-specific data gap is important to fill, in order to better understand and protect human health because conclusions drawn from other livestock CAFO studies are not directly transferable to dairy operations.

Research in this area is needed to identify, quantify health risks, and determine appropriate measures to protect: 1) *worker health* (because of their proximity to emission sources, people working and residing on dairies have the greatest risk of experiencing health effects.) 2) *community health* (little is known about health effects on nearby people that are a direct result from dairy air emissions), and 3) *odors* (sensitive individuals experience these effects at lower levels than the general population, and concentrated odors over time are known to cause changes in behavior.)

E. Environmental Impacts

Air emissions from dairies, together with emissions from many other sources, contribute to the following environmental effects:

1. Visibility Degradation: Ammonia plays a key role in the formation of small sulfate and nitrate particles leading to haze pollution, thus degrading scenic vistas in our wilderness areas, National Park, and the Columbia River Gorge

Scenic Area.

2. Acidic Deposition: The same pollutants that affect visibility (sulfates and nitrates) can also increase acidic deposition, increasing risks to ecosystems and cultural resources.

3. Climate Change: Methane is a potent Greenhouse Gas (GHG). The role that methane emissions from Oregon dairies play in overall statewide greenhouse gas emissions is not well understood.

In summary, dairy operations have the potential to release several different kinds of air emissions that under certain circumstances could contribute to environmental degradation. The extent to which this occurs in Oregon is currently unclear because of uncertainty in quantifying air emissions from dairies (discussed below).

F. Quantifying Emissions from Oregon Dairies

DEQ estimates air emissions from all types of sources. A compilation of emissions estimates from all source sectors is known as an "emissions inventory." These inventories are routinely developed by DEQ and updated over time to reflect changing conditions. Each source category in the emissions inventory (such as transportation, industry, burning, and agriculture) has its own state-of-knowledge and level of uncertainty inherent in its emissions estimate.

In the absence of a national emissions estimation method, DEQ currently estimates dairy emissions by simply multiplying the number of animals reported for each dairy operation by a fixed amount of emission per animal for each air pollutant, using the best available factors from the scientific literature. This methodology does not reflect what occurs on individual dairies, as it does not consider the variation of emissions over time or the variation in mitigation practices that may be in place. Using the current methods and understanding their limitations, initial statewide dairy emissions estimates indicate that they are a notable portion of Oregon's ammonia and methane emissions, but are a relatively small portion of other types of emissions on a statewide level.

In 2006, the National Air Emission Monitoring Study (NAEMS) was initiated to address the lack of scientific data needed to estimate emissions accurately from individual agricultural operations, including dairies. It originated from a voluntary air compliance agreement (also known as a consent decree) between the EPA and the pork, dairy, egg, and broiler industries. Livestock producers have provided the financial support for the NAEMS so that emissions data can be collected at select sites to:

1. Accurately assess emissions from livestock operations and compile a database for estimation of emissions rates, and

2. Promote a national consensus for emissions estimation methods/procedures from livestock operations.

This study is being led by Purdue University and researchers are currently collecting data at twelve sites across the nation. While interim results from these studies will provide useful information, improved national guidance on estimating emissions from individual dairies will not be available until approximately 2012. EPA has said that the results from this research will be used to construct the official method for estimating CAFO emissions, and that it will be of sufficient quality to be used in regulatory decisions.

IV. Recommendations

The Task Force respectfully and strongly makes the following recommendations:

A. Program Development

The EQC, working with ODA, DEQ, and DHS, should adopt the rules to implement the following "Oregon Dairy Air Emissions Program" (Program), as a whole, as authorized by ORS 468A.020(2)(c) (SB 235). The Program consists of and is guided by this Recommendation. (Report Section (IV). Over time, Program adjustments should be made, as needed, to implement the intent of these recommendations.

B. Guiding Principles

Program development, implementation and compliance are guided by the following principles:

1. Initially focus on reducing ammonia, methanol, and odors, and instill public confidence in the Program.

2. Make technical decisions based on a review of the available existing science.

3. Allow flexibility for dairy farmers to make decisions that are compatible with their operations and other environmental obligations.

4. Provide economic feasibility and stability for dairy farmers.

5. Model program implementation after the development of Oregon's CAFO Program to prevent water pollution, which was phased from a voluntary program to a regulatory program in a gradual manner as information and experience were obtained.

6. Encourage early, voluntary action and efforts to go beyond requirements.

7. Tailor Program over time to the realities of the state budget, and regularly review and update it as more is learned about dairy emissions.

8. Ensure level playing field and equity for all Oregon dairy producers within Oregon and in the Northwest.

9. Recognize that the Clean Air Act, the Clean Water Act, and the Occupational Safety and Health Act still apply.

10. Create a solution that all interests can support.

C. Program Elements

The Program development, implementation, and compliance are guided by the following elements:

1. Apply to all existing Grade A dairies in Oregon that have or need a CAFO permit;

2. Based on a Best Management Practices (BMP) approach using California and Idaho models as points of reference and the recommendations of a Dairy Air Advisory Committee (DAAC) as specified in section IV. D., below. The BMPs should:

    a. Include structural and management practices to reduce air emissions while considering other impact factors specified herein;

    b. Establish clearly defined BMP targets that are economically feasible for Oregon dairy producers; and

    c. Provide guidance on implementation;

3. Start as a voluntary program, known as "Phase I" at the completion of the Dairy Air Quality Task Force process.

Move into a state mandatory program during "Phase II," pursuant to the conditions and schedule contained below, and as adequate resources to implement and administer the Program become available. New dairies should be required to comply with the Program upon startup.

4. ODA and DEQ develop an interim list of recommended air BMPs in collaboration with the Oregon Dairy Farmers Association (ODFA), Oregon State University (OSU), National Resources Conservation Service (NRCS), and the stakeholders identified for DAAC. Collect and assess baseline data about what is currently occurring on Oregon dairies to decrease air emissions as soon as practical after the creation of an interim list of air Best Management Practices (BMPs). This data set should be as inclusive as resources allow.

5. Level of implementation, monitoring, and compliance may change over time as resources and research results become available;

6. Tax incentives should be provided to encourage dairies to meet BMP targets established for Phase I and should be provided for dairies to create an incentive for early action. Any proposed tax credits should be transferable to a third party and should be phased out over time. Tax credits should be reauthorized beyond five years for those dairies that go beyond the minimum requirements in Phase II. If tax credits are adopted by the legislature, DEQ or ODA could administer the tax credits. Tax incentives will require approval of the Governor and legislative authorization. They should be subjected to the usual restrictions (e.g. only available for voluntary capital investments made for the primary purpose of reducing emissions).

7. DEQ, ODA, DHS, NRCS, and OSU, working with the industry, should provide technical assistance, education and outreach, as follows:

    a. develop and maintain technical expertise in BMPs to reduce ammonia, methanol, and odors;

    b. provide technical assistance to dairies in selecting BMPs that are compatible with water quality and other factors pursuant to the Guiding Principles;

    c. develop and distribute educational materials encouraging dairies to participate in the Program hold a series of meetings held around the state to describe the Program to all dairy producers;

    d. provide information to dairies about potential federal requirements, including the potential for methanol emissions to trigger Title V permitting;

    e. provide information about dairies, emissions, and health to the public, the media, and neighboring communities; and

    f. provide information of federal regulations and the new state Program; and

8. ODA should receive funds necessary to determine compliance, provide technical assistance, and conduct any enforcement. ODA should develop a periodic report of BMPs in use based on reports and inspections. ODA should check Program implementation and compliance at the time of the annual CAFO water quality inspection. The annual reports should be provided to EQC and the Board of Agriculture, posted on the web, and otherwise communicated to the public. ODA should communicate to CAFO permit holders the requirements for air BMPs, record keeping, and reporting. ODA should determine compliance, provide technical assistance, and conduct any enforcement.

D. Dairy Air Advisory Committee

DEQ and ODA, in consultation with DHS, should convene a Dairy Air Advisory Committee (DAAC) to advise and make recommendations about Program implementation details. While the overall Program direction is within the purview of the EQC in consultation with ODA and DHS, DAAC should be structured and empowered as follows:

1. A balanced committee with knowledge of the dairy industry, such as representatives from OSU, NRCS, ODA, USDA, DEQ, DHS, ODFA, dairy farmers, health, environmental groups and the public The initial members of DAAC should include members of the Dairy Air Quality Task Force;

2. Use of consensus decision making. If no consensus can be reached, a majority and minority report should be prepared;

3. Make implementation detail recommendations for both Phases that are designed to accomplish the Program in a fashion consistent with these recommendations;

4. Have, if it desires, subcommittees to manage the work, (e.g. a technical committee and a policy subcommittee), each with balanced representation;

5. Create a program that accommodates the diversity of the Oregon dairy industry;

6. Recommend BMPs as soon as possible, including:

    a) Structural and management approaches to reduce ammonia, methanol, and odors;

    b) Guidance for the implementation of the BMPs;

    c) Tiers based on dairy size/resources (for example, 700 cows and above could be one level, 200 - 699 could be another level, and less than 200 cows could be another level); and

    d) Phase I and II BMP targets for each tier;

7. Evaluate BMP effectiveness on air emissions while considering other impact factors like compatibility with water or land quality issues, affects on other air emissions and livestock health. DAAC should also consider existing third party standards when evaluating BMPs. To the extent possible, the menu should be coordinated with BMPs developed by neighboring states, particularly Washington.

8. Consult with DEQ, ODA, and DHS on procedures and criteria for evaluating the potential for public health risks from any air emissions 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.

9. Report regularly to DEQ, ODA, and DHS on the progress and success of the Program; and

10. Recommend changes to the Program, as needed over time, based on new scientific information and an evaluation of Program effectiveness. This could include updates to the emissions of concern. DAAC should not make recommendations that change the core of this recommended Program and this Task Force's intent.

E. Overall Program Resources

The Task Force recommends that the following resources be provided to implement the recommended Program:

1. Tax credits for voluntary participation during Phase I and exceeding the requirements during Phase II if the tax credit program is extended;

2. Resources to ODA for Program implementation, monitoring and compliance;

3. Resources to DEQ for rule development, Program implementation, and air monitoring;

4. Resources to DHS for technical assistance, consultation, and risk communication; and

5. Funding for OSU to conduct research and development of demonstration projects, BMPs tailored to Oregon's needs, the effectiveness of BMPs, their impact on air emissions, and funds for education, outreach, and technical assistance.

F. Overall Recommended Program Structure, Staging and Funding Summary

The Task Force recommends that the following structure, staging and funding:

July 2008	Oregon Dairy Air Quality Task Force (With Co-Chairs) report to ODA and DEQ.
Sept 2008	Task Force, ODA, and DEQ report (with Co-Chairs) to interim legislative committees.
Oct/Nov 2008	Possible Task Force reconvening based upon interim legislative committee input.
Late 2008	ODA and DEQ approve an interim list of recommended air BMPs in collaboration with ODFA, OSU, NRCS, and the stakeholders identified for DAAC.
Jan 2009	ODFA begins outreach to educate industry about the Program and encourages the use of the interim air BMPs.
Jan-July 2009	**2009 Legislative Session:** • Request initial staffing for the program: 1 ODA and 1 DEQ staff to do outreach and assistance, conduct a baseline survey, develop rules, and implement tax credits; • Request $500K for OSU research and development of BMPs that are specific to Oregon's needs; and • Request tax credits for voluntary BMPs to begin in 2010 and continue through 2014.
Late 2009	1) EQC adopts initial program rules under ORS 468A.020(2)(c) based upon the Dairy Air Quality Task Force recommendations in section IV of this report, including: a) Framework for Program; b) Membership and structure of the Dairy Air Advisory Committee (DAAC); d) Tax credits if EQC is authorized by the 2009 legislature. 2) DAAC starts. Initial focus is to refine the air BMP list. Subsequent focus is to refine the program structure. 3) ODA conducts baseline survey of air BMPs in use in Oregon.
2010	**Phase I Begins:** • ODA/DEQ/OSU Outreach / Education begins to encourage voluntary participation in phase 1 of the Program and provide assistance to dairies in the selection of BMPs; • DEQ implements the tax credits for dairies that meet the phase 1 targets. • DAAC recommends Program revisions, including revisions to the BMP list, targets and program structure.
2011	**2011 Legislative Session:** • Request increased staffing for the program: 2 additional ODA staff to expand outreach implementation, and 1 DHS FTE (parts of three positions) to conduct risk communication. • Request additional funding for BMP research and development if needed. • Request $500K for OSU research and development of BMPs that are specific to Oregon's needs. DAAC continues to evaluate Program and make recommendations, including mandatory targets to apply in 2015.
Late 2011 and 2012	• EQC revises rules to incorporate DAAC recommendations. • ODA expands outreach and assistance, conducts follow-up survey of BMP use in Oregon, and issues Annual Program Report. • DEQ continues to implement tax credits for dairies that meet the phase 1 targets. • DAAC continues to evaluate Program; assess EPA's NAEMS preliminary results; make recommendations as needed.
2013	**2013 Legislative Session:** • Request increased staffing for the program: 2 additional ODA staff to further implementation, monitoring, and compliance. • Request $500 K for OSU research and development of BMPs that are specific to Oregon's needs. DAAC continues to evaluate Program and make recommendations as needed.
Late 2013 and 2014	• EQC revises rules to incorporate any further DAAC recommendations. • ODA conducts follow-up survey of BMP use in Oregon, and issues Biennial Program Report. • DEQ continues to implement tax credits for dairies that meet the phase 1 targets. • DAAC continues to evaluate Program; assess EPA's NAEMS results; make recommendations as needed.
2015	**2015 Legislative Session:** • Request $500 K for OSU research and development of BMPs that are specific to Oregon's needs.
2015	**Phase II begins:** • Targets become mandatory. • ODA implements the program, ensures compliance, and issues annual Program Report. • DAAC continues to evaluate Program and make recommendations, as needed.

V. Conclusion

In conclusion, The Task Force thanks the Legislature for the opportunity to serve and formulate this consensus package of recommendations. Taken as a whole, they represent an optimal balance between the competing interests and chart a clear and positive path forward for all Oregonians. These recommendations were created because the Task Force worked hard to achieve the necessary levels of understanding, trust, and respect. In order to maintain this positive and balanced momentum, the Task Force believes it is imperative that the Legislature provide the funding for this necessary and evolving program. The monetary requests are modest and responsibly staged over time to ensure the Program can accomplish its purposes without negatively affecting Oregon's other priorities.

Respectfully Submitted on July 1, 2008

Oregon Dairy Air Quality Task Force