

## **Summary Focus Groups on Agriculture and Water Quality in Vermont**

### **Background**

From October 25, 2011 until December 19, 2012, a team of facilitators led focus groups on agricultural practices and water quality, primarily focused on the Lake Champlain watershed. The total number of participants was over 230 people. Of this number 83 identified themselves as dairy farmers. There was diversity among the dairy participants with 52 dairy farmers falling into the medium to large farm operations categories (200 cows and up) and 31 with smaller herds, some as small as 30 head.

The groups were geographically mixed and included groups from southern as well as northern Vermont. While the focus group meetings were concentrated heavily around the Lake Champlain Basin, it was recognized that the decisions to be made would be implemented state-wide and a variety of opinions was needed. The groups included poultry and beef farmers as well as crop, vegetable, fruit and maple producers as well. Focus groups included as few as three (3) people to as many as twelve (12). The focus group participants included over 50 participants who did not report as actively engaged in farming but who were either agricultural service providers, agricultural businesses, or members of environmental non-governmental organizations. In December, two large public meetings were held and 125 people attended those meetings. Break out, small focus group facilitations were convened at these meetings to receive feedback and comments on a variety of water quality initiatives under consideration by various state and federal agencies.

The facilitators included staff from the Environmental Mediation Center (EMC), based in Vermont, and the Consensus Building Institute (CBI), based in Cambridge, Massachusetts. Both EMC and CBI are not-for-profit, independent and non-partisan facilitation and mediation organizations. In many focus groups, staff from the Vermont Department of Environmental Conservation (DEC) and the Vermont Agency of Agriculture, Food and Markets (VAAFAM) also participated. The project was funded by various grants, including ones from the Natural Resource Conservation Service (NRCS), Green Mountain Coffee Roasters, and the U.S. Environmental Protection Agency (EPA).

Each focus group included a standard set of questions, though the conversation pursued varying directions depending on the interest and knowledge of the participants. A set of minutes, without attribution, was prepared for each focus group. This document attempts to summarize and synthesize the key points made in the interviews. Comments were not attributed to individuals or organizations to encourage openness and frankness. Please note that this synthesis represents the views and statements of those who participated and is not meant to be an independent, qualitative analysis of the issues raised in the interviews. Please note that any errors or omissions in this document are the sole responsibility of EMC and CBI.

## **Summary of Findings**

The following is a summary of the key findings from our focus groups. Further below we offer greater detail and explanation of those findings.

### *Current Situation*

- Many to most farmers understand that agriculture is contributing to water quality issues in the Lake, but they do want to ensure that the science behind such conclusions is rigorous, sound, and open to revision should new data suggest something different.
- Many farms have and are undertaking active and substantial practices to reduce phosphorus inputs into the Lake and its watershed.
- Efforts to date by agriculture, as well as other sectors, are insufficient to restore Lake Champlain's waters.

### *Possible further Actions, Programs, and Ideas*

- There are a number of actions that may hold promise to further improve water quality.
- There are some current or potential actions that, though they might help improve water quality, are controversial.
- Cost share and technical assistance programs are and will be essential to making further progress.
- Whatever money is available to help implement measures must be efficiently and effectively spent.

### *An Implementation and Regulatory Framework*

- Most are not certain how individual practices will fit into an overall regulatory framework and the extent to which actions are voluntary or mandatory.
- Enforcement and monitoring of non-point sources such as agricultural has and will raise a number of difficult issues.
- A common theme among most stakeholders was that flexible approaches allow farmers to harness their ingenuity and knowledge while ensuring that they do their part to help achieve water quality standards.
- Farmers have a range of views on to the extent they are open to further government involvement in the achievement of a TMDL for phosphorus.
- Stakeholders view a certainty program with some measure of skepticism at this time, but want to understand more about how such a program might work.

### *Context*

- The demographics of the state are changing and agriculture as a large contributor to the economy and with strong political influence is waning over time.
- Though some farms are doing well financially, the dairy industry in Vermont is undergoing significant financial stress at this time.

## **Findings**

The following is a detailed summary of the findings from our focus groups.

### Current Situation

- **Most farmers understand that agriculture is contributing to water quality issues in the Lake, but they do want to ensure that the science behind such conclusions is rigorous, sound, and open to revision should new data suggest something different.**

Most commenters accept that agriculture is a significant non-point source for phosphorus in the basin. However, many remain concerned about how EPA will calculate and allocate phosphorus loads, to the extent conclusions are based on modeling rather than hard field data. Many are concerned that other contributors might be a greater source than originally thought. For instance, some raised questions about the degree to which woodlands and gravel roads may be contributing a greater quantity than originally assumed.

- **Many farms have and are undertaking active and substantial practices to reduce phosphorus inputs into the Lake and its watershed.**

Interviewees named a number of programs that they believe have been adopted by at least some farms and proving at least somewhat successful. These are listed below in no particular order.

- *Cover cropping.* Cover crops benefit the soil, ensure nutrients do not escape due to erosion, and are being used because there is a cost share to make it economically feasible.
- *Nutrient Management Plans.* The medium and large farms—200 cows and up -- all have nutrient management plans and they have addressed a lot of these issues on the farms. They are following the BMPs and have good management practices.
- *Drag line systems and culverts.* Some saw this as valuable in keeping manure off of roads and in reducing the ill-will caused when farmers track manure on public roads. A few noted that they would like to see additional funds, perhaps from VTRANS, to help install such devices with the benefit being decreased manure tracking and increased road safety.
- *Liquid Manure.* Generally, commenters note that management of manure, at least on larger farms, is working to some extent. For instance, lagoons are very effective but often a neighborhood/public nuisance because of the smell. These are also expensive to put in. However, some noted the earlier 1980's regulatory efforts drove the creation of containment systems and liquid manure spreading programs, but the water quality is not appreciably better. Some noted that containment systems are expensive, increase operation costs, and drive application due to managing the pit, not the fields and water quality.
- *Livestock exclusion.* This was seen by many as a common sense practice on their farms. However, some noted that regulators need to be aware that there are added costs to this practice such as the cost of fencing, bringing in fresh water and shade to the cows, and managing livestock movement with fences, especially in stream crossing areas. Some noted that while in general exclusion is desirable, it may not

make sense across an entire farm. Some noted that putting up permanent fencing in flood plains doesn't make sense because it gets washed away every year. Some noted that excessive fencing will inhibit access and raise concern by hunters and snowmobilers. Others noted that unless the fenced area is managed invasive species of plants grow uninhibited and may create worse erosion during prolonged rain events.

- *Riparian Buffers* (see below for further discussion)
- *Tile drains*
- *Field stacking and filters for run off*
- *No and conservation tillage*
- *Rotational grazing*
- *Riverside plantings*
- *Selective logging*

- **Efforts to date by agriculture, as well as other sectors, are insufficient to date to restore Lake Champlain's waters.**

Many interviewees expressed concern that efforts to date are not only insufficient, but they may not have made a substantial difference. Some commenters noted, for instance, that dairy has done a lot to improve practices but the question is whether this had made a significant difference. The lake appears worse than it ever did – worse than in the last 50 years and this is against a backdrop of fewer total numbers of farms and more organic farms. As one farmer said: “*Farms have done a lot in the last ten years especially and yet the lake looks even worse. We are doing everything we have been told to do so the lake should not be in the shape it is in.*” Some suggested that perhaps rather than looking primarily to agriculture for action, the agencies needed to consider what to do about the legacy phosphorus in the banks and lake bottom and considering improving habitat through new technologies. Commenters expressed a range of views on why actions to date have been insufficient. Causes suggested included but were not limited to: 1) legacy phosphorus in soils and sediments is difficult to overcome; 2) the current regulations are not adequately enforced and followed; 3) cost incentive program targets are not well aligned with measures that most effectively reduce phosphorus inputs; 4) we don't know enough of what is actually possible and needed in terms of restoring the Lake.

*Possible further Actions, Programs, and Ideas*

- **There are a number of actions that may hold promise to further improve water quality.**

Interviewees named a number of programs that they believe could be adopted or adopted at a larger scale. These are listed below in no particular order.

- *Nutrient Management Plans for Smaller Farms.* Many noted that smaller farms are exempt from existing regulations, are contributing to water quality issues, and often do not know the problems they may be creating. Thus, many commenters suggested requiring nutrient management plans for smaller farmers, even down to 50 or fewer cows. Some noted that these farms that have no oversight and no information about

- how to manage the farms and this is where the work is needed. One commenter stated: “*The issue is not on MFOs or LFOs; we are educated about water quality and have numerous good management practices. But there’s only 170 or so of us. What about the other 6,000 farms in the state who may not be doing their part?*”
- Some suggested that even smaller farms should have to do the full 590 paperwork. Others noted that at least small farms should report how many animals, how many acres, and what crops they are raising, at least to obtain a baseline of what is happening out there. Some noted that one should have to do basic actions like an NMP to be eligible for various incentives such as property tax abatements, exemptions, or reductions. A few did raise concern that if the funding for NMPs is fixed, then numerous small farms might siphon money away from larger farms for their cost share at the expense of effective and funded programs like cover cropping.
- *Outreach and Education on AAPs.* Some noted the value of educating small and hobby farmers on the AAPs so that awareness might lead to action. Some suggested a mandatory attendance at a yearly event for education for small farms.
  - *Aeration.* Aeration has promise, with such results as better absorption of manure, healthier grass or crops, and less run-off. Others who tried this, however, noted they did not see appreciable improvements.
  - *Manure Injection.* Injection of manure may be desirable in some cases, depending on soil type, crop, and location, and should have significant nutrient management value. However, the equipment is expensive to purchase and maintain and is not a typical practice on most farms today.
  - *Flexible Point Systems.* It would be helpful to award farmers certain points for certain practices and allow individual farms to adopt the tailored actions that would both sufficiently benefit water quality and work operationally.
  - *Ditches and Buffer Zones.* Many noted that implementing ditch maintenance and using buffer zones was effective. However, farmers expressed the need for more flexibility in farm-by-farm cases that would allow common sense application of buffer zones and ditch maintenance to respond to the specific conditions on their particular farm. Some raised concern about the land that is taken out of production for buffers in terms of impacts on operations and revenues. Some raised concern about how perennial streams would be identified, who would monitor and enforce such actions, and who would provide oversight. For example, who decides and how should a ditch be cleared regularly or filled with vegetation, what size buffer was needed, and under what conditions, and how can farmers ensure that their routine maintenance doesn’t inadvertently trigger non-compliance?
  - *Farms of Distinction.* Some noted that a program that publicizes and rewards farms who have gone above and beyond basic requirements might be effective. Such a program would have to be meaningful (i.e. higher practices are in fact in place and working), visible (neighbors and consumers could easily recognize such farms), incentivized (say, through a greater cost share or some such means), and revocable (you would have to be able to remove the distinction from a farm if it fell out of compliance with the program which can be very difficult to do).
  - *Methane Digesters.* These can help control high nutrients on the farms, but they are expensive and farms need money to invest and they also get taxed on the electricity

they are generating. One commenter suggested investigating establishing regional digesters.

- **There are some current or potential actions that, though they might help improve water quality, are controversial.**

Interviewees named some actions that they believe could be adopted or adopted at a larger scale but that these particular practices are or would be quite controversial.

- *Winter Spreading Ban.* Many noted that this has been broadly implemented, but the rigid dates have such unintended consequences as forcing farmers to spread manure from lagoons just before the ban date, even during heavy precipitation, in order to drain the lagoons to avoid flooding the following winter/early spring. Some suggested that spreading times should respond to soil conditions, weather, size of farm, location, and not dates. One farmer stated, for instance: “*It is so stupid to be out there when the weather is not good but you have to do it because the time is running out.*” Given that the ban has been in place for over a decade, yet the water quality is still problematic, some raised doubt that this practice was actually serving its intended purpose.
- *Banning Cropping in the Floodplain.* Some suggested that eliminating all cropping in the flood plains (but retaining woodlands to perennial grass and grazing) would substantially eliminate erosion and fertilizer-caused phosphorus contribution to the watersheds. However, some noted that flood plains may be as much recipients of upstream silt as donors to downstream sedimentation. Some noted that flood plains are often an integral part of a farm’s operations and an outright ban would be very harmful and far too directive by state government. A few suggested that it might be acceptable to have a practice that created an incentive to not grow corn or other cover crops in certain priority critical source areas.
- *Rip rap.* Rip rap keeps the topsoil out of the river. This is not a cost share so farmers who do this have to pay for it on their own but those that have invested in this practice report find that it works well. The goal is to protect the banks. However, implementation of rip rap as a formal practice is does not have agency support due to concerns over potential unintended downstream consequences.

- **Cost share and technical assistance programs are and will be essential to making further progress.**

Many noted that technical assistance and cost share programs are essential to increasing action by agriculture. Many expressed appreciation for the technical assistance the state, UVM Extension, and the Natural Resources Conservation Service (NRCS) have provided over the years. Some noted that without cost share, for such programs as cover cropping, the financial incentives for action simply wouldn’t be there. At the same time, several commenters expressed concern about the sustainability of such programs over time with shrinking federal and state budgets.

- **Whatever money is available to help implement measures must be efficiently and effectively spent.**

Many interviewees expressed concern that whatever money is spent on implementing measures be done both effectively and efficiently. Some noted that there is at least the perception that a lot of money has been spent on water quality programs and the lake is not healthier. Many commenters wrestled with the question of whether and how to target expenditures in the highest contributing areas or farms, if that would be rewarding the worst, not best, actors, and if there was sufficient data to even undertake such a targeted approach. The following related points were raised.

- Many farmers are willing to do new things to improve water quality but they are not in favor of doing anything that increases the cost of production when it has a direct impact on their pocketbook and there is no evidence that it works.
- Should money be spent on farms where it's not clear whether the farm will be viable over the short or medium term? To determine whether it is economically a good idea to support a farm with an expensive program or cost share perhaps we should ask for a lender's endorsement.
- One needs to understand the consequences on the farm system as a whole from a specific action or requirement—when an action is undertaken it has an effect on other parts of a farm operation, sometimes that is not understood until later.
- What about having varying regulations or requirements (and cost shares) depending on if you are in a high contribution area or zone. You might have “critical source areas” with much greater expectations but where you can also concentrate cost share expenditures.
- Unequal allocation of resources would be poorly received by some because if one farm received a higher cost share or was able to implement the practice sooner it would not go over well with other farmers in the area.
- If there was unequal treatment then it would cause some farmers to not implement certain practices unless they were mandated. For example, if a farmer not in the critical source area only received 50% cost share (versus 80 to 100% for a critical source area farm), the operator may not adopt the practice and if enough in the non-critical source areas don't adopt the practice, the overall effect may be negative.

One commenter noted that if there were efforts directed at critical source area farms and they had access to greater technical and financial assistance, then by definition it must mean that implementing those same practices on non-critical source area farms is not a priority for either the farmer or the agencies. Therefore, in exchange for not getting the greater technical and financial assistance, such a prioritization should be coupled with the understanding that the farms not receiving the additional help are not significantly contributing to poor water quality.

### *An Implementation and Regulatory Framework*

- **Most are not certain how individual practices will fit into an overall regulatory framework and the extent to which actions are voluntary or mandatory.**

Across most interviewees, there is high uncertainty about how any singular practice or action will fit into a larger TMDL implementation plan. Commenters raised many questions. Will

the plan be voluntary or mandated? How will cost share programs be coordinated with various requests and requirements? How much time will operations be given to comply? What new regulations, if any, will the state have to create? Since non-point sources are notoriously difficult to address and agriculture has been given a greater benefit of the doubt over many other sectors, how will the state provide sufficient leadership, commitment, and requirements to ensure sufficient action occurs? What “back stops” or “fail safes” will be put in place? How will any implementation plan fit with any certainty program as explained by NRCS? How will the overall framework not only account for a community’s growth (and likely increased contribution) but for my desire and need to grow as a business?

Some interviewees were reluctant to identify specific practices or actions until they had a better idea of the intent of the agencies for enacting a robust, goal-oriented TMDL implementation plan. Such a plan might need to include a greater number of mandatory requirements, a revision of existing state regulations, and sufficient clarity on enforcement, fines, and the disincentives for non-compliance, to be believable and effective. Some noted that the overall state approach to agriculture has to shift to focus more on organic, sustainable, diversified, small-scale production.

- **Enforcement and monitoring of non-point sources such as agricultural has and will raise a number of difficult issues.**

Many interviewees raised concern about the monitoring and enforcement of existing, let alone, potential future regulations and requirements. Many stated that monitoring and enforcement, especially on smaller operations, is insufficient. Some noted that the current system is neither systematic nor risk-based, but rather complaint driven, forcing an under resourced agency to respond to local complaints, however small. Some interviewees noted that there are numerous laws on the books, from AAPs to others, that are ignored, neglected, or weakly enforced and that if the current laws and regulations were sufficiently supported, water quality would be improving without further need for plans, laws, or regulations.

Some farmers voiced strong objection to too much intrusive, on-farm inspections. Others expressed concern about the state’s ability to fund sufficient resources for monitoring and enforcement. Some expressed a desire for a 21<sup>st</sup> century monitoring system that would monitor phosphorus coming off of fields and farms, while acknowledging the current high cost of such an effort. Some expressed concern that the VAAF is tasked with both promoting and enforcing agricultural directives. Some believe that DEC should take back enforcement and monitoring. Others note that the bureaucratic arrangement is far less important than the leadership commitment from the Governor, the legislature, and the agency heads, as well as the necessary resources, to adequately address the problem.

- **Many different stakeholders want flexible approaches that allow farmers to harness their ingenuity and knowledge while ensuring that they do their part to help achieve water quality standards.**

Almost all interviewees supported the general idea of creating programs and/or regulations to harness the know-how and ingenuity of individual farmers to take action to address water



quality on their unique and individual farms. Many interviewees were concerned about both cost-share programs and regulations that may be a “one size fits all” and can lead to inefficient actions or perverse results when applied on the ground in specific circumstances. Commenters noted that field location, existing buffer zones, slope, soil type, and other factors all drive what may or may not make sense on a particular piece of land. A few interviewees noted that cost share programs have to take into account inflation, since one may sign up for a program, but not have access to the money until a few years later, when the dollars granted in the cost share stay the same but the practice cost has gone up. Some also noted that the current metric of number of livestock may not be the best metric for considering regulated or programmatic classes. Many, for instance, noted that the density of use of livestock on the land may be far more important the total number of animals. Though the idea of flexibility is widely supported, many interviewees noted the challenge of actually creating programs, monitoring, affording and enforcing with preferred flexibility.

- **Farmers have a range of views on to the extent they are open to further government involvement in the achievement of a TMDL for phosphorus.**

Farmers have a range of views on how much more government action they could and would support on this issues. Some commenters recognize that the state is going to have to take greater action and it is better for the farming community to engage now and in an on-going fashion to ensure that the requirements that result will least hinder farming viability. Others are deeply concerned about further government intrusion on top of existing rules and requirements and would be strongly opposed to more vigorous oversight, monitoring, and inspection.

- **Farmers at the two larger public meetings provided feedback on concrete initiatives proposed by the agencies.**

While there was a range of diverse individual responses, in general the findings were:

- When asked whether they would be open to providing an annual report to the state of farm operations to enable agencies to have accurate data regarding location and types of farms throughout the state, most farmers indicated that they were willing. Most were also willing to attend annual workshops focusing on water quality initiatives. Some expressed concerns over how the information they provided would be used and about whether the education component would be relevant to their particular situations.
- Farmers recognized the need for increased inspections and reporting as important steps in addressing water quality issues. There were a range of views expressed on logistical and financial obstacles to such an initiative on the part of both farmers and agencies.
- Farmers were supportive of a mandatory regulation for excluding all livestock from streams and showed support for the idea of diminishing cost-share rates as the regulation was phased in. There were disagreements regarding the time line for the exclusion. The least popular choice was a seven year time frame, most farmers believed that the time should be shorter than that for compliance with a range of between now and five years from now.

- Farmers were divided on whether all farms, large, small, dairy and non-dairy should be required to have the same type of nutrient management plans, buffers, and erosion tolerances. Some farmers felt that all farms should have the same standards, some felt that the topography and circumstances of each farm should dictate and impact what was required of them.
  - Farmers were in favor of a manure application certification or licensing requirement.
  - Farmers were generally in favor of having a suite of enhanced cropland management tools (including cover cropping, manure injection and increased buffers) for use in flood plains and more cautious on whether those same tools should be utilized in non-flood plain areas.
  - Concerns were expressed regarding the impact these requirements would have on utilization of productive land and the economic impact of such requirements.
  - Tile drainage was seen as a potential practice of benefit but more data was needed to better evaluate this option.
  - In general, farmers accepted the idea of increased cost shares in high priority areas such as critical source areas.
  - Farmers were open to exploring the implementation of a flexible exchange system to address water quality issues. For example, utilizing wider buffers in areas of run off in exchange for smaller ones in areas on no run off or a prohibition of spreading in a critical source area in exchange for limited spreading in a pre-approved area.
  - Farmers expressed support for non-traditional incentives for implementing water quality initiatives. Elevated cost shares, public recognition for the hard work they have done on their farms, and credit for practices they have already done were seen as good incentives.
- **Stakeholders view a certainty program with some measure of skepticism at this time, but want to understand more about how such a program might work.**

Most interviewees need more understanding of and information about a possible Certainty Program to determine if it has merit. Commenters had a difficult time understanding such a program, in part, because it is not yet clear against what a certainty program might provide safe harbor, at least for a period of time. Second, it is not clear whether a certainty program comes with cost share and financial incentives, what measures would be included, and what requirements as a baseline would be imposed above and beyond a Certainty Program.

Interviewees raised the following range of issues.

- Many are skeptical of the program actually providing high probability certainty. Many felt that if a regulator deemed more and intensive action was needed, that they would require this regardless of a certainty program, and that furthermore, further litigation might drive action even if regulatory agencies wanted to adhere to such a program.
- Some noted that if a certainty program were primarily couched, not as avoidance of a “bad” but as an incentives program to do “good” it would work better. That might be increased cost shares, higher visibility, or other incentives to encourage action.
- Some noted that farmers need help getting credit in the public view for work and actions they have already taken. Many believed that the efforts undertaken by farmers as positive stewards of the land who manage their farms accordingly is not well

- understood in the public sphere and leads to misunderstandings between farmers and others. .
- Many noted that they would need more detail. How many years would such a program provide certainty, five, ten, other? If one signed up for a cost share, but the program did not release money for some years, would the applicant still be part of the program? What would be the intensity or threat of the backstops and how real would they be to encourage if not coerce earlier action? Given that farming and politics are inherently risky and variable businesses, does certainty beyond a few years make any sense both in terms of certainty the government can provide and a farmer's ability to commit to various actions, resources, and investment?
  - Some expressed a concern about what happens once the certainty period passes. Will a farmer have to implement all of the regulations he was exempted from during the period of certainty? Would he or she have access to the needed funding to bring the farm into compliance? What would the time frame for implementation be? If the farm was not up-to-date on newer regulations, would the farmer be denied cost shares for other programs? What if there were suddenly several new practices needed and the farmer is worse off financially and compliance wise because of participation in the program?

### *Context*

- **The demographics of the state are changing and agriculture as a large contributor to the economy and with strong political influence is waning over time.**

Some interviewees noted that the demographics, and hence politics, of Vermont are changing substantially. Agriculture is less of a contributor to overall GDP. Fewer Vermonters are in farming as an economic enterprise. Much of the energy and public attention is on small-scale, local, farm to plate agriculture. These interviewees note that agriculture has benefitted in the past from strong support in Montpelier, including support for various programs from property tax to regulatory relief. At the same time, these interviewees note, Vermonters are becoming increasingly frustrated with the lack of restoration of the Lake and the property value diminution, ecological harm, and diminishment of use and enjoyment. They note the concern that agriculture is likely to suffer public reproach if it is not able to become a part of the solution.

- **Though some farms are doing well financially, the dairy industry in Vermont is undergoing significant financial stress at this time.**

Some interviewees noted that the dairy industry in general is under financial strain, and only the most financially stable, large farms are likely to be able to bear up under significantly additional regulatory burdens. These interviewees note tight credit, the expiration of milk supports, high feed prices, an aging work force, and depressed milk prices are all contributing to both loss and consolidation in the industry.