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Dear Kari:

Thank you for the opportunity to comment on your *Water Quality Remediation, Implementation and Funding Report, DRAFT* (herein after WQRIFR), which I received today.

First, I recognize that this report represents a tremendous effort on your part, which I do not mean in any way to diminish. That said, I will comment on certain underlying assumptions at the report's conception, and I offer the following for your consideration.

Overview

In your Executive Summary, you admonish Vermonters that we need " to fundamentally shift our collective thinking, set a statewide goal to achieve sustainable, high quality water, prioritize actions, and develop

dedicated funding streams for these high priority clean water initiatives." You go on to say that we need to raise \$656 Million or \$156m/year to achieve the goals outlined in the report.

This is not a shift in fundamental collective thinking: it is another in a long line of conventional proposals identical to those written by your predecessors going back forty or more years.

For example, the *Lake Champlain Special Designation Act* of 1990 called for Vermont to:

1. Identify corrective actions and compliance schedules addressing point and non-point sources of pollution necessary to restore and maintain the chemical, physical, and biological integrity of water quality, a balanced, indigenous population of shellfish, fish and wildlife, recreational, and economic activities in and on the lake;
2. Incorporate environmental management concepts and programs established in State and Federal plans and programs in effect at the time of the development of such plan;
3. Clarify the duties of Federal and State agencies in pollution prevention and control activities, and to the extent allowable by law, suggest a timetable for adoption by the appropriate Federal and State agencies to accomplish such duties within a reasonable period of time;
4. Describe the methods and schedules for funding of programs, activities, and projects identified in the Plan, including the use of Federal funds and other sources of funds; and

5. Include a strategy for pollution prevention and control that includes the promotion of pollution prevention and management practices to reduce the amount of pollution generated in the Lake Champlain basin.

The language in the LCSDA is laudatory. And if it sounds familiar, it is the same language that we see in Act 138. But Vermont did not do what LCSDA called for us to do in 1990 and we spent \$140M and got nothing in return.

Act 138 states, *inter alia*, that "Clean water is a key factor in Vermont's quality of life, economy, and image. All Vermonters ultimately benefit from clean water." (WQRIFR p. 7).

It *is* time for a fundamental shift in our collective thinking but we do not need more precatory statements. We need meaningful action, backed up with incentives and penalties to ensure performance.

Your report deals, as is proper, with the three major sources of pollution entering our water: agriculture, storm water and inadequately designed or antiquated municipal waste water treatment plants. Of these, I believe we have all agreed that at 55-60% agriculture is the largest. I will address only agriculture in these comments.

Putting custom and habit aside, agriculture is fundamentally unlike the other two: it is voluntary. Vermont could, in pursuit of clean water, stop farming completely and not go without food or milk. Processors and manufacturers in other states would, as they do now, ship food products produced at a loss

by farmers in other states, here for sale and they would make a profit.

If the only value of farmers is, as I have heard many times, that they” keep the land open,” the state could pay them to bush hog their fields at far lower cost than what it costs to support them in dairy farming, which is \$60M/year. Farming in Vermont is, sad to say, not *necessary*.

I say this because, by contrast, the other two are completely necessary: it is not going to stop raining, Vermonters are not going to stop driving cars and they will not stop going to the bathroom. Repairing or updating storm water infrastructure and wastewater treatment plants will require new taxes and the expenditure by the state of millions or billions of dollars. The pollution coming from agriculture, by contrast, can be stopped without expenditure.

With that perspective in mind, I am not unmindful of farming's historical and cultural significance, or that 97% of Vermonters reported to the *Survey on the Future of Vermont* that they support agriculture. However, what they had in mind was the agriculture Vermont had fifty years ago; thousands of small family farms on quiet dirt roads scattered all over the state. They could not possibly have had in mind the agriculture we have today: fewer and fewer larger and larger farms, some milking upwards of 2,000 cows, consolidating and expanding in pursuit of an indisputably broken business model. The model could not survive a month without generous state and federal support. These farms do not conform to what 97% of Vermonters want.

I do not see in your report any acknowledgement of these unpalatable facts

and, therefore, I do not see any measures designed to confront them.

Land Use Regulation

In the 1970s, Vermont legislators wrote and passed a number of laws to protect its farms from development: Vermont's Land Use Regulations, Act 250, the Right to Farm Law and the Accepted Agricultural Practices rules.

On their face, these policies were a response to a growing anxiety about the appalling pace of urban development, which was targeting open farmland enfeebled by market forces few understood. To arrest this trend, not to mention the degradation of the single family home ethic and the introduction of multi-family housing, “Smart Growth Vermont,” (a name chosen for the ineluctable appeal of distinguishing itself from its opposite), the Vermont Law School’s Land Use Institute, the Vermont Housing and Conservation Board and the Vermont Land Trust had to assiduously construct a land use rubric that would comprise all the complex land use problems facing municipalities—urban sprawl, resource and energy conservation, water pollution, infrastructure costs, green development, social equity, economic stability, peak oil and the earthly effects of climate change—and corral them, which it did under the mantra of “sustainability.”

Because agricultural land was an obvious target for new development, because it was vulnerable (and because its owners were often eager to sell their land for development), Smart Growth regulators had to construct a legal and societal armor around farming, to make it more resistant to development, to nuisance suits and to off-the-reservation planners, who

might not fully appreciate the value of farms to their communities.

Vermont's land use regulations espouse, *inter alia*, the following noble purposes:

“To encourage the appropriate development of *all lands* in this state by the action of its constituent municipalities and regions...promote the public health, safety...prosperity, comfort, access to adequate light and air, convenience, efficiency, economy and general welfare; *to enable the mitigation of the burden of property taxes on agricultural, forest and other open lands*...to protect residential, agricultural and other areas from undue concentrations of population and overcrowding of land and buildings...municipalities shall take care to protect the constitutional right of the people to acquire, possess, and protect property.” 24 V.S.A. § 4302(a) *Emphasis added*

Vermont's zoning laws, remarkably similar to those now adopted by all fifty states, have their genesis in the federal “Standard Zoning Enabling Act” (1924), which conferred upon communities that wished to regulate land use a legitimate and necessary exercise of the police power.

In 1921, the Vermont Legislature, based primarily upon protecting the public welfare, authorized municipalities to create planning commissions to propose comprehensive plans for future development of public land within the municipality. This early enabling legislation only applied to public improvements and did not yet apply to private projects.

In 1931, the General Assembly enacted enabling legislation permitting Vermont municipalities to regulate public land use in their communities

through zoning. It was not until 1978 that the Vermont Legislature completed a comprehensive revision that would apply to private land use.

The justification for land use planning has, since *Village of Euclid v Ambler Realty*, 272 U.S. 365 (1926) always been stated in exorbitant declarations about public health, smart growth, moral welfare and safety. These regulations were justified as saving the area's rural character and agricultural heritage.

But the unstated rationalization for them was far plainer: urban society, confirmed in the beneficent tradition of yeoman farming—and trusting official assurances that modern, untested noxious chemicals would dissipate harmlessly—would acquiesce in modern agriculture's onrushing (and seemingly inevitable) demolition of the working landscape and of the rural economy, in exchange for three-fold cheaper food.

It is difficult to over state the allure to society of cheaper food: the share of Disposable Personal Income (DPI) spent by the mean US household on food in 1947 was 24%, while today it is 8%, a three-fold difference.

In 1967, Vermont passed land use regulation—except the statute exempted agricultural and silvicultural uses, the state's two largest land uses, which would become the sole province of the Vermont Agency of Agriculture Food & Markets. Vermont's enabling statute for land use makes this exclusion crystal clear:

“A bylaw under this chapter *shall not regulate accepted agricultural practices...*” 24 V.S.A. § 4413(d) *emphasis added.*

Title 6, Vermont's Agricultural Water Quality statute, provides the same broad exemption:

“Persons engaged in farming, as defined in 10 V.S.A. § 6001 [Act 250], who follow these practices *shall be presumed to be in compliance with water quality standards.*” 6 V.S.A. § 4810(a)(1).

These exemptions make the attainment of clean water in Vermont virtually impossible. Worse, they belie the environmental purposes claimed in the *Lake Champlain Special Designation Act* of 1990, in 24 V.S.A. § 4413, in 6 V.S.A. § 4810, in 10 V.S.A. § 6001 [Act 250], in the Accepted Agricultural Practices rules and now in Act 138. We can now see the empirical results of this Faustian bargain. Two generations on, the empirical result is that Vermont farm numbers have steadily dwindled from 11,200 in 1947 to fewer than 900 today, an attrition rate of 92%.

The effort to slow urban development by "saving farmland" was not unique to Vermont.

In *Construction Industry Association of Sonoma County v The City of Petaluma*, 522 F.2nd 897 (9th Cir.1975), plaintiff alleged that the City's new Master plan, ostensibly written to slow development of the eastern sections of the city where, coincidentally, multi-family, as distinct from single-family homes were springing up at an alarming rate, was “primarily enacted to limit Petaluma's demographic and market growth rate in housing and in the immigration of new residents.” *Id.* There is no space here for a detailed discussion of whether or not Petaluma's Master Plan was an exercise in *de jure* segregation or whether there were similar motivations behind land use

regulations in *Belle Terre v Boraas*, 416 U.S. 1 (1974) and in *Ybarro v City of Town of Los Altos Hills*, 503 F.2nd 250 (9th Cir. 1974) or in many other similar cases. I wish only to point out that amidst arguments around whether or not land use planning served “a legitimate public interest,” or whether “the avoidance of the social and environmental problems caused by an uncontrolled growth rate” fell outside the scope of any legitimate governmental interest.

There was no mention in any of these cases of what effect the adoption of modern farming technology may have had upon the value of open farm land or whether multi-family housing, typically inhabited by immigrants, was a fair exchange for the cheap food that, as a consequence, the residents of traditional, single-family housing also enjoyed.

Again, it is impossible to overstate society’s dedication to the prospect of cheaper food: both the *Belle Terre* ordinance and the *Los Altos Hills* regulations were upheld on the ground that they served “legitimate governmental interests within the concept of the public welfare, the preservation of quiet family neighborhoods” (*Belle Terre*) and the “preservation of the rural environment” (*Los Altos Hills*).

Had anyone in Vermont in the 1970s thought that there might be a significant nexus between land use planning, saving agricultural land from development and water quality, they did not write about it. The prevailing conceit was that we could have our cake and eat it too.

In the name of saving Vermont farmland and of curbing urban development, Vermont promulgated the AAPs, which in essence proposed that society

accepts the benefits of modern farm technology—three-fold cheaper food—but does not wish to pay its wages—over production, low milk prices, the voracious development of the working landscape, the demolition of the rural economy and rising lake pollution.

The AAPs were written in response to state statutes designating the Vermont Agency of Agriculture, Food & Markets to promulgate rules to “reduce pollution from agriculture.” 6 V.S.A. §4810, 10 V.S.A. §1021(f), and 10 V.S.A. §1259(f) and (i). After ten or more years of internal resistance to their necessity (and a very short period for public comment), the rules were promulgated in 1996 and amended in 2006. They are empirically ineffective: the loss of Vermont's farms continues since Calvin Coolidge to slide at a rate of 5-8%/year, which trend is unaffected by any of Vermont's efforts to arrest it.

Not only did the authors of the 2006 AAP revision not correct the flaws integrated in the original, 1996 version, they compounded those errors by failing to ask if, in light of widely disseminated data, the rules were achieving the legislature’s purpose.

Act 138 extends this mistake. It (i) fortifies the minimalist standards propounded in the AAPs, (ii) suggests again that "proactive" inspections will correct the problem and (iii) suggests that small farms should also be required to adopt nutrient management plans. (WQRIFR § 1.3,p. 12; § 1.4, p. 13). Act 138 asks the legislature to appropriate \$635,000 and \$700,000 respectively for these "fundamental changes in our collective thinking." It does not question what responsibility conventional farming or the AAPs themselves may have for the degradation of our water quality.

Keeping livestock out of streams has been debated in Montpelier for decades. It is not a "fundamental change in our collective thinking." Every society the world round has known for eons that if livestock have "unmanaged access" to running water, they will pollute water use downstream. Act 138 asks the legislature to appropriate a staggering \$3.3M to erect fencing to keep livestock out of waterways.

Subsidizing farmers for this expense means farmers are absolved of what is known as "buy-in:" the fences will not achieve the goal nor will farmers have any incentive to maintain them.

The goal can be accomplished for no cost, by enacting prescriptive regulation forbidding farmers under penalty of fines for giving their livestock "unmanaged access" to surface water be it in draws, brooks, streams or lakes.

Likewise, the idea of increasing technical assistance (WQRIFR § 1.6 p. 14) is not a "fundamental change in our collective thinking." It has been suggested time after time over the years and the empirical results are in: it does not deliver results.

It is suggested that farmers need guidance to understand the value of cover cropping and nutrient management planning, which are "agronomic tools, not water quality tools." *Id.*

Act 138's writers are trying to have it both ways, *i.e.*, they would like to crimp the amount of farm nutrients applied to crop land but they want to

keep farm production up. Perhaps they do not see the contradiction: the dairy farmers' chief goal is to boost milk production, which they achieve by feeding a corn-based ration in place of a forage-based ration. The farmers' goal is not to protect water quality. They might very well approve the state's efforts to clean up Lake Champlain but they cannot serve two masters.

No farmer can afford to waste expensive nutrients and frugality is good farming. But when and if farmers follow sound agronomic advice, they will still be striving to keep production up first and protecting water quality second (if at all). Ergo, the only plan that will effectively stop nutrients from flowing into the lake must be predicated upon lowering crop and milk yields. We cannot have the first without the second.

High corn yields require generous applications of artificial fertilizer and herbicides. If they are not too distant from the barn, some fields will get an application of manure, perhaps as much as 24,000/gal/acre.

But corn ground is often too distant from the barn to justify the high cost of transporting and spreading manure. Consequently, in order to grow corn to feed to their cows, conventional Vermont farmers apply synthetic NPK fertilizer to their corn ground, almost all of it in the floodplain.

The only reason to feed corn to cows is to make more milk than if they were fed forage diets. But US dairy farmers are already drowning in milk they can't sell above what it costs them to make, which is why milk prices are so low, which is why they constantly consolidate their neighbors and expand, in order to lower their unit cost of production to make more milk. Making more

milk drives prices lower still, causing them to have to consolidate their neighbors and expand again. This is classic economics; but when every farmer applies the same model, it is said to be mature, i.e., there is no longer any margin left in it. This is where we are today.

To defeat this ruinous cycle, farmers need to *reduce* production, not boost it further. Therefore, they do not need agronomists to help them grow more corn to feed to cows; therefore, they do not need to apply nutrients to land in the floodplains; therefore, the Vermont legislature need not appropriate \$653,000 with which to pay technical advisors to disseminate advice on how to grow corn to feed to cows to boost milk production.

Act 138 hints at making the changes I am referring to, but it does not mandate them.¹ (WQRIFR § 1.6, p. 15):

- Aerial seeding of cover crops
- Conversion from annual cropland to permanent grass
- Improved floodplain management (cover crops, larger buffers)
- Conversion from liquid to solid or semi-solid manure

Act 138 also lists a few ideas for “consideration:”

- *Consider* a change to the AAPs that would require either a successful cover crop or a larger buffer in floodplains, where fall nutrients are applied.
- *Evaluate* current soil loss tolerance (T) system as a regulatory tool.

¹ No farmer or group of farmers can limit production in order to raise prices. They must all do it cooperatively to prevent “free riders.” Since they will not do this voluntarily, production controls must be mandated.

- *Consider* alternative water quality based measures to reduce soil loss and runoff, such as a Phosphorus Index tool, to evaluate and manage the impacts of soil runoff.
- *Consider* a program that allows an adjustment to gross income for the purchase of equipment that positively impacts water quality on farms.
- *Consider* development of a “certainty program” or “point system” format that allows for greater flexibility with water quality improvements, especially for farmers who proactively implement critical practices and programs.

Again, Act 138 does not mandate these changes because it’s writers want to maintain production *and* arrest the flow of nutrients off the farm, which is like riding a horse in two directions at once. Nor does it explain how Vermont can meet its TMDL while these practices are taken under “consideration.”

Act 138 recommends the appropriation of \$3.3 M to implement Best Management Practices. It does not mandate these practices or anything like them or explain how these practices will ensure that Vermont meets its TMDL.

3.2. State Based Quasi Judicial Public Agency: Vermont Natural Resources Board.

Because of the magnitude of the impacts of their policies on water quality, the following comments on VHCB and VCF are of particular importance:

The VNRB was originally tasked with providing “independent, meaningful public participation in Act 250 and water resource decisions.” In 2012, Act

138 transferred rulemaking authority from the Water Resources Panel to VANR, which now makes all future rulemaking and policy decisions related to water quality. The NRB administers the Land Use Panel, which together with VANR's decision making on water resources are appealable to the Vermont Environmental Court.

This change augers well for clean water ***but only if VANR and VNRB reexamine their basic assumptions about the relationship between land use regulation, farming and clean water sufficiently to deprive conventional Vermont agriculture the right to continue applying 80,000,000 lbs/year² of petroleum-based fertilizer to cropland.***

Conventional dairy methodology is predicated upon over supply, low milk prices, farm attrition and externalization of the costs of soil fertility, weed control and labor into the lake. The protocol transfers massive amounts of wealth out of the rural economy and addicts its adherents. These are not incidental side effects of the protocol to be “managed” and accommodated by writing statutes like Act 138. These are the conventional protocol's central precepts, which cannot be applied without inviting them. By exempting agriculture from its land use regulations and by promulgating and revising the AAPs, the state directly supports the paradigm and its concomitant results. ***Act 138 cannot reconcile these results and Vermont's WQ statutes because its authors have not accepted that implicit support for conventional farming prevents the attainment of clean water.***

3.3. State-Based Quasi-Governmental Funding Agency: Vermont

² Vermont Agency of Agriculture, Food & Markets

Housing and Conservation Board³

The primary purpose for which the legislature established the Vermont Housing and Conservation Board was to assist “in creating affordable housing for Vermonters, conserving and protecting Vermont’s agricultural and forest land...[which are] of primary importance to the economic vitality and quality of life of the state...” (Title 10: *Conservation and Development/* Chapter 15, § 302: *Vermont Housing and Conservation Trust Fund*) § 302(a).

To accomplish these purposes, the legislature created the VHCB Trust Fund, which, by taxing property transfers, receives \$23-26M/year. VHCB accomplishes the second part of its mission by purchasing, with a part of its funds, conservation easements principally on farmland.

For those in government intent upon creating housing for lower income Vermonters and preserving Vermont farmland, the conflation of the two goals into one mission made sense, to a point: developers, if left to their own devices, were targeting open farmland, and once acquired, they were not inclined to build houses for people who could ill afford them. I do not criticize the first part of VHCB’s dual mission and I note here that VHCB has largely achieved it.

I do, however, vociferously criticize the second part for three reasons:

- (i) The second part of the mission—the preservation and conservation of Vermont farmland—was popular, so it was added as justification for the first part, which was unpopular—the creation

³ The following remarks also pertain substantively to WQRIFR § 3.4., Non-Governmental Third Party Organization: Vermont Community Foundation

of affordable housing. But the mission at its core was to slow urban growth in Vermont. Saving agricultural land was a handy leg up.

- (ii) VHCB's purchase of conservation easements were not, nor are they today, contingent upon sellers' who remain in possession or, if transferred, upon prospective purchasers' agreement to farm their land sustainably, *i.e.*, in compliance with the Clean Water Act, (33 U.S.C. §1251 et seq. (1972), or with Vermont's water quality statutes (6 V.S.A. § 4810 or 10 V.S.A § 1259(i));
- (iii) There is no mention in *Title 10: Conservation and Development/ Chapter 15, § 302: Vermont Housing and Conservation Trust Fund* of non-point source pollution from agriculture or of conventional farming or of sustainability. There is only a paragraph at the end entitled "Stewardship" which provides, somewhat mysteriously, that "If an activity funded by the board involves acquisition by the state of an interest in real property *for the purpose of conserving and protecting agricultural land or forestland, important natural areas, or recreation lands*, the board, in its discretion, may make a one-time grant to the appropriate state agency or municipality. The grant shall not exceed ten percent of the current appraised value of that property interest and shall be used to support its *proper management or maintenance or both*. (Added 1987, No. 88, § 1, eff. June 11, 1987; amended 2011, No. 142 (Adj. Sess.), § 3, eff. May 15, 2012.) *Id.* at § 324.

I am at a loss to know what this paragraph, written in suspiciously opaque

language and amended just six months ago, is about. But the implication is either (a) VHCB has never questioned the probity of conventional farming (b) VHCB does not want to question the probity of conventional farming (c) VHCB does not want to make the purchase of conservation easements contingent upon farming practices.

VHCB's failure to impose this contingency as a condition of purchasing conservation easements on farmland—or even as a condition of accepting it as a gift—has been to egregiously frustrate (or belie) the second part of VHCB's mission: the application of \$23-26M/year of taxpayers' money to the “preservation and conservation” of Vermont's farmland, which has empirically not arrested or even attenuated the steady attrition of Vermont family farms. What is more, the purchase of farmland—much of it primary agricultural land—without the contingent imposition of sustainable farming practices *is a major cause of Vermont's failure to meet its water quality standards*.

It could be argued that VHCB's mission was the preservation of Vermont *farmland* not of farming or of farmers *per se*. But if that were the mission, VHCB should explain why it is expending \$23-26M/year in taxpayers' money to encumber privately owned farmland when Vermont everywhere espouses the importance of farming but has expended no taxpayer money to assure farmers that under state stewardship, they will have an economic justification *to* farm. What, in other words, are the taxpayers conserving farmland for?

It is important to note in this section that the statement “*Voluntary participation by farmers and other landowners in these permanent*

restrictions is helping to address sedimentation and nutrient runoff in the state” is at best disingenuous or at worst empirically false.

Likewise, if we are to discover the reasons why Vermont cannot achieve its water quality standards, statements such as “*VHCB’s statute was expanded to specifically include “the protection of surface waters and associate resources”*” and “*VHCB has worked effectively across the entire state both in rural and urban communities with targeted grant-making that results in perpetual stewardship of resources”* (WQRIFR § 3.3., p. 35) must be tried against empirical data.

The suggestion that, in order to accomplish the goals outlined in this section, VHCB will require \$20M in additional funding to pay new personnel, also wants empirical proof that its policies are “conserving farms” or “protecting surface waters.” *Id.*

Similarly, the statement “*The Vermont Community Foundation’s ...\$10M in grants and distributions annually...support a range of issues [including] “environmental sustainability”* is woefully heedless of empirical data, which tell us unequivocally that funding no matter if it is governmental or non-governmental, has had no effect upon water quality or farm attrition.

Conclusion

States all across the country, including Vermont, have adopted land use plans to “promote the public health, safety...access to adequate light and air...to protect residential, agricultural and other areas...” 24 V.S.A. § 4302(a). This noble language obscures a less noble urge: the adoption of conventional farming after WWII greatly increased agricultural yields,

which in turn destroyed the agricultural economy, which ruined the value of farmland all across the US, making it a target for development. Urban planners did not yet have enough perspective to appreciate these forces and we cannot go back and undo the decisions of the past.

But we can address their consequences. Conventional farming is driving farmers to over produce their markets, which is driving milk prices down, which is enfeebling farmland, which is driving farmers to sell conservation easements on their land. Vermont legislation intended to save farmland is not stanching agricultural non-point source pollution because it was written to achieve that end. With \$23-26M in taxpayers' money allocated to VHCB and another \$60M allocated to *Current Use* and a panoply of elaborate sales and property tax abatements and exemptions, Vermont is inadvertently driving the force that is driving the crisis Vermont Act 138 is seeking to address.

Respectfully submitted,

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/jm

The Remedy¹

James H. Maroney, Jr.
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The majority of Vermont dairy farmers operate in a system that, by official government policy, is stacked against them. The goal of the Vermont Milk Commission, convened to ‘help’ by assuring farmers an “equitable rate of return” and consumers a “supply of milk at reasonable prices,” are contradictory and unachievable—if, that is, one wants to accomplish both at once while preserving the conventional, farm paradigm.

But the interests of both farmers and consumers *could* be simultaneously served if the VMC were to view the problem from different perspectives and provide solutions suitable to each:

- The conventional one for consumers
- A new one for farmers

We, in the U.S., have the duty, inasmuch as we are able, to try through our congressional delegation, to affect policy. But, from Vermont, changing U.S. farm and/or energy policy is virtually beyond our parochial competency. Altering our own little farm economy, on the other hand, while still imposing, is possibly within our reach.

Separate in your mind the world’s, and even the country’s, food problem from the farm problem we have here in Vermont. Our largest dairy farms are, of course, part of the vast federal food system: they will undoubtedly stay that way and there is nothing we can, or should, do about them.

The problem I ask you to address is how to restore to profitability 900 small and middle-sized, *Vermont* farms, the majority, without raising the price of milk, and how to protect the contribution hundreds of *Vermont* farmers could make to the social and rural fabric of this once-predominantly, agricultural state. It is about how to change conditions *here* so that as members of our middle class, hundreds more than just the largest fifteen or twenty Vermont farmers will again be in a position to earn net profits from dairying, purchase feed, supplies and equipment *here* at their local dealerships, call and pay for veterinarian and other services and make a taxable contribution to *Vermont’s* economy.

Keep in mind that not all farms are the same, that some will make profits while others cannot. Keep in mind that Vermont does not need to produce more commodity milk; milk made here is identical to milk made in surplus on farms in neighboring states. Keep in mind that no matter what we do here in Vermont, commodity milk will continue to be both cheap

¹ The Remedy is excerpted from James H. Maroney, Jr., *The Political Economy of Milk: Reinvigorating Vermont’s Family Dairy Farms*, (Gala Books: Leicester, VT 2008) Chapter VIII, pp. 124-136

and plentiful for the foreseeable future.

The VMC heard testimony from Milk Commissioners from New Jersey, Maine and New York and has recommended that farmers here might be given a modest, over-order premium if neighboring states enact similar legislation first. But it is not, to put it bluntly, the Vermont taxpayer's concern to provide a living wage to dairy farmers from other states. It is not either about preserving Vermont's present level of milk production. The VMC's two, incompatible goals are achievable but first, they must be de-coupled so as to:

1. Allow conventional farmers from other states to supply Vermont consumers with a continuous supply of inexpensive, commodity milk at reasonable prices
2. Divert Vermont farmers to the production of expensive, organic milk made for export

To do this, the VMC must recognize that:

1. The urban market for expensive, organic milk is not identical with the market for inexpensive, commodity milk
2. The production of Vermont organic milk is not synonymous with the production of a basic food

Norman Borlaug's assertion that 50 million people would starve if farmers were to go back to organic agriculture implies that people would starve if *all* farmers went organic, or that small and mid-sized Vermont farmers are not distinct from large farmers here and elsewhere, or that they could not adjust their operations to serve a particular clientele. He accepts that, like all the rest, Vermont farmers, large and small, must make commodity milk. In 1972, this may well have been so.

But it is no longer so: organic milk is successfully differentiated from commodity milk. Vermont farmers have a unique opportunity to get out of a system that is hostile to their interests. But they will need help and they must get it without delay. They have, alas, but a crumbling infrastructure ravaged by decades of financial losses, the consequence of staying too long in the conventional paradigm. But 85% of them do still have land and infrastructure just barely adequate to make another product besides commodity milk: organic milk. This opportunity is not new; why don't they convert?

The answer is complicated; the word "organic" conveys to some farmers something soft and pliable, something "girlie-men." Although *Agricola*, the Latin word for farmer, is feminine, and there are certainly women farmers, the majority is indisputably men.

Equipment and farm supply advertisers have duly noted this fact and gone to considerable trouble to link the farmers' subliminal, masculine values to big yields, big tractors, big farms and big debt—the products they are selling—which are incompatible with organic farming. Or, it may be that conversion requires capital or struggling with a frightening,

new, learning curve. Dairy farmers are also, by custom, not in touch with their customers, from whom the owners of most businesses learn to make adjustments. It may be all or any combination of these.

Traditional dairy farmers, for reasons there is no space here to address, resist the notion of farming organically, in spite of the now-proven success of the word's allure to urban consumers and in spite of its demonstrated payback to farmers. Perversely, those who oppose organic methods and support conventional practices place themselves in the awkward position of defending low farm prices, which is what conventional farming returns. Why do that? Today, organic dairy farmers—up to 200 now from 3 in 1989—represent 20% of dairy farms in Vermont. They do not all make money farming organically, but—obviously—they are converting for a reason. Could the reason be that they are getting (with quality premiums) \$31-34/cwt instead of \$17-19/cwt?

To be sure, what we now know as “conventional” farming practices have taken a strong foothold, and “wealth is wheat in the bin” is, for farmers everywhere, both a true and potent adage. The conversion from conventional to organic, which requires an acceptance of static, or even reduced, annual yields, a three-year period of “cleansing” for animals and land, some handwork, pasturing and other techniques lost, since grandfather was in the barn, will necessitate a radical adjustment in facility, methodology and attitude. During and after transition, converts may use no antibiotics or hormones and they must graze their small herds, in season, on grass pasture. The majority grows no corn, feeds dry hay with little or no grain and typically milks cows in stanchions. These methods, all perfectly standard operating procedure on all Vermont dairy farms prior to 1950 are, after a period of adjustment that will be wrenching for some, duplicable in most small to medium-sized operations.

Organic will be resisted by those farmers with deeply ingrained and understandable fears of backing off on higher herd averages, greater corn acreage and steady production gains per fixed unit of input, all of the goals they have fought so hard to achieve in order to remain competitive. Yet, continuing resistance, in the face of \$34/cwt, is hard to rationalize. And we could spend years contesting the large farm/small farm thing and do nothing about \$17/cwt milk payments for Vermont's 900 small to medium-sized conventional, dairy farmers.

This, however, is incontestable: if they will but transition to organic, Vermont dairy farmers could have what amounts to a monopoly on the state's brand name.

We all know that the market for Maine lobsters is wider and richer out-of-state than in, just as in Florida the greater, richer market for oranges is realized by adding value and exporting. In Idaho, this is true for potatoes; in Maryland it is true for crabs; in Botswana it is diamonds and in Friedrichshafen, Germany it is Zeppelins. Vermont milk, by comparison, is almost entirely (95%) shipped, in raw form, out of state where others add

value, brand it, and reap profits. At present, the words “organic milk” are linked to no particular region or state: the phrase is available.

If the Vermont Milk Commission had wanted to fix the farm problem here, they might have ventured to assist our farmers to:

1. Convert to organic production
2. Organize under a Vermont Organic coop that owns a *brand*
3. Raise capital
4. Build infrastructure and distribution
5. Offer affluent, east coast consumers a line of dairy products that will forever link in their minds the word “Vermont” to the words “Organic Milk.”

If the farmers were to add to those words the phrase “Fair Trade,” the product would speak clearly and loudly to urban consumers—the most prosperous demographic in the world lives within a 300-500 mile radius of Vermont—all familiar with, and eager to buy, products thus described and thus supplied. And, because farmers in New York, New Hampshire, Pennsylvania, Maine, California, Texas, Florida or Wisconsin cannot make *Vermont* Certified Organic Fair Trade Milk, the product can come from nowhere else. If 900 of Vermont’s dairy farmers will but take it—and if our chronically, ossified Agency of Agriculture would reorganize itself and lead them to it—a share of the market for organic milk is theirs to claim and theirs to exploit.

Such a venture needs capital: how to raise it?

The answer is not—*not, not, not*—to invite investment from the conventional processors, be they “farmer-owned” coops or privately held handlers. Class I buyers pay only slightly more than the cost of production for 41% of the milk Vermont farmers ship and Class II, III and IV buyers pay well below the farmers’ cost of production for the other 59%. Farmers do not need any more of these kinds of partners; and the market does not need more commodity milk products, made in Vermont or elsewhere.

Modern dairy food manufacturing, as we have seen, is a huge industry and the barriers to entry are incredibly formidable. Profit margins are so thin that huge volumes and 24/7 work schedules are the norm. New entrants must have access to staggering amounts of capital to buy equipment, to pay fixed costs and guarantee free cash flow from operations. Beyond that, distribution routes and retail grocery slotting fees are so competitive that new, smaller brands are discouraged from entering the fray. If and when they do (Organic Cow, Vermont Family Farms, etc.), the big boys quickly crush them.

Truth be told, it is late in the game: Horizon, Organic Valley and Stonyfield have effectively garnered all available organic milk supplies and these companies enjoy first-mover status among consumers looking into the dairy cases all around the country. Yet, exclusively Vermont-sourced, fluid milk and milk products, conventional or organic, make

no major appearance in the urban markets.

Notwithstanding this vacuum, Vermont-made milk enjoys two very important properties, largely untapped, that would boost the chances for a new entry:

1. The state's very marketable name, which to milk consumers, already means fresh, green and organic.
2. The state's proximity to markets in Connecticut, Boston and New York.

The "Farm Problem," in summation, has arisen because Vermont dairy farmers make a commodity product for which there is insufficient demand, and to which, because it is so plentiful and cheap, others, for their own private gain, add value. To thrive, Vermont farmers must, instead, produce a value-added, retail product of their own that will grow just below demand, which prospers because it enjoys a *Durable Competitive Advantage*.

There are only three ways for any business to gain a Durable, Competitive Advantage:

- ⊏ Price Leader (lowest cost)
- ⊏ Shortest Time/distance to Market
- ⊏ Control a valuable resource

Vermont dairy farmers, who presently have none of these, could have all three. Competitively produced, in an era when the cost of fuel makes long-distance shipping prohibitive, Vermont Certified Organic Fair Trade Milk can be exported to the nearby New York, Connecticut and Boston groceries, where up-scale, urban consumers gladly pay \$9-13/gal, of which Vermont dairy farmers will get roughly \$2.70.²

Keep in mind that organic milk is not a necessary staple food product, nor will everyone buy it. Keep also in mind it is unimportant that a majority of Vermont consumers will not support Vermont organic milk. Ordinary, commodity milk and Vermont Certified Organic Fair Trade Milk are both milk (even identical)³. But to the retailer and the consumer, they

² On a trip to my local Middlebury supermarket, I identified in the case not fewer than fifteen SKUs for fluid milk, whole, skim, 1%, 2%, organic, coop, etc., ranging in price from \$3/gal to \$7/gal. In April 2008, on a fact-finding trip to upscale stores in New York--Whole Foods, Dean & DeLuca and Zabars—customers are paying prices ranging from \$9/gal to \$13/gal for organic milk.

³ Some consumers are motivated to buy organic milk as a health issue, because they fear that ordinary, commodity milk contains antibiotics, growth hormones or pesticide residues. BGH, also known as rBST, is a synthetic hormone injected into cows to stimulate milk production. But it is so thoroughly metabolized in the cow's rumen that a dedicated team of biochemists could not find traces of it in the milk of cows treated with the hormone. Antibiotics, on the other hand, do pass through the cow into the milk; but farmers are obligated to withhold milk from treated cows until, after four or five days, the cow passes it out, at which time, her milk is allowed into the bulk tank. All milk coops and handlers are required to screen milk at every pickup for trace amounts of antibiotics, which by Federal law, are not allowed in the milk. Petroleum-based herbicides and pesticides are highly effective, labor saving technologies. But they are virulent toxic substances and ideally, they have no place in the food chain. Obviously, since they are applied to the fields where crops are grown, there is concern they will leach into the water or migrate into the food system. This

are very, distinctly different, “stock keeping units” (SKUs), with their own associative values, costs and price points. And lastly, keep in mind that consumers do not all fit into one or even two classes; they can be divided, depending upon where you find them, into an impressive array of demographics, with distinct preferences, tolerances and capabilities.

For example, the Vermont Milk Commission recently heard an interesting report from the manager of Burlington City Market on how they created a market for “Coop Milk.”

Vermonters, he said, reported in a survey that they would pay a modest premium in exchange for milk that was (in this order):

1. Pure, fresh and clean
2. From local, family farms
3. Made without rBST
4. Organic

The manager of Burlington City Market asked Monument Farms of Middlebury to partner with them to create a new SKU to be branded Coop Milk, which would meet the first three requirements on the list.

Coop Milk provides the Vermont coop consumer—who is inclined to help farmers yet value-conscious—the *barest minimum* of quality assurance. It provides the producer a slim premium over what he is paid to produce commodity milk. It is a success because it is ideal *for the market segment* into which it is sold.

Keep in mind that the idea for Coop Milk was driven by a concern not for Vermont dairy farmers but for Burlington City Market consumers. As such, retail price was a major factor, and only some, but by no means all, BCM consumers will pay the modest, extra price. But Vermont coop consumers are not identical to up-scale milk consumers, who shop in relatively small, up-scale urban markets. Vermont dairy farmers as a class make much, much more milk than can be sold in Vermont’s little coops. Consequently, more Coop Milk would quickly surpass local demand and drive the price back down.

Vermont, Certified Organic, Fair Trade Milk, on the other hand, requires the farmer to make a commitment to a rigorous standard, which in most cases involves major financial and cultural adjustments. Precisely because organic farming repudiates production-oriented technologies—the root cause of high yields and lower prices—and because the demand for milk is inelastic—demand is relatively constant in the face of ordinary supply volatility—organic milk farmers cannot overproduce their market. Adherence to the organic standards lowers milk production 15%, and it is received wisdom that a drop in milk production of just 5% would double the farm price. Consumers, in other words, would pay more for milk were they offered no cheaper alternative. There is justification, therefore, for all Vermont

may be so. But my objection to them is that they enhance production for those who use them and lower prices for all farmers, whether they use them or not.

dairy farmers, who wish to make more income, to produce less milk and to make it organically.

To capture this opportunity there are three steps that call for an organization with authority similar to what the state invested in the VMC to:

1. Offer our farmers financial and technical support for the transition to organic
2. Organize a Vermont Fair Trade, Organic Milk Coop that promises them:
 - A real voice in management
 - A decent, middle-class existence
 - A sound economic future in retirement

It is imperative to understand that even if 700 of Vermont's remaining conventional dairy farmers turn to the production of organic milk, large conventional farmers in other states, will continue to supply commodity milk to value-oriented Vermont consumers. This would satisfy the second half of the VMC's mandate, to "assure Vermont consumers a supply of fresh milk at reasonable prices."

In answer to those who insist that organic milk is but a niche market, I offer these simple observations:

1. The national trend toward organic milk, which pays farmers a steady price reliably 30-40% above that paid to conventional farmers (organic is all one class), is entering its twentieth year and Vermont now has 200 converts. Still, the vast majority of Vermont farmers (with the active or passive complicity of the Vermont Agency of Agriculture) clings to the conventional model;
2. Organic milk is currently just 15% of all milk made in Vermont but it earns its producers 30% of gross Vermont dairy farm income;
3. Ben & Jerry's Homemade requires 210,000 pounds of cream per batch to fill their vats, which is separated from 6.4 million pounds of 3.25% milk;
4. At these metrics, if Ben & Jerry's plant were operating one shift, 300 days of the year, they would require near 2 billion pounds of organic milk, tantalizingly close to the conventional Vermont dairy farmers' total annual production of 2.6 billion lbs;
5. That 2.6 billion lbs of conventional milk is now worth \$442 million to farmers (\$17/cwt);
6. If 80% of all Vermont farmers converted to organic and sold all their milk at prevailing prices (\$34/cwt) to just Ben & Jerry's, their 2 billion lbs would earn them

\$633 million.

In order to help Vermont farmers take advantage of the organic milk market, it will first be necessary for the Agency of Agriculture Food & Markets to shift the *greater* part—not the least—of its resources to the support of small and medium-sized dairy farmers—about 80% of the remaining 900—and away from its decades-old devotion to a dwindling population of large, conventional farmers.

The agency must also confine its mission to *farming*, which is about cultivating the soil to grow foodstuffs and raw produce in Vermont, and away from nutrition, food assistance, marketing and food manufacturing. Coffee roasted and packaged in Vermont or salsa, cut, mixed and packaged here, are welcome businesses in Vermont and of course, people who need food assistance must be provided for. But these programs belong respectively in the Departments of Commerce, Economic Development and Health & Human Services.

Those farmers who wish to change, rather than slide into oblivion, will need assistance to convert their operations to organic. They will also need a leg up to meet the higher cost of three years' annual organic expenses while they are still making conventional incomes. The Agency of Agriculture must also facilitate a plan to capitalize and equip in-state manufacturing capacity that Vermont producers will own and always control.

It must be said that the \$11M, dispensed as welfare by the state in 2007, mainly to large, conventional dairy farmers, went out without asking in return for a single concession from farmers to adjust a threadbare business plan, and without creating even one, long-lasting effect, would have made a nice, capital investment in an organic transition program. It would have benefited all but the most stubborn small to medium-sized farmers and, collaterally, all ordinary Vermonters. Instead, \$11M is gone with nothing but more milk from fewer farms to show for it. But that is water under the bridge.

Working capital for a new, in-state milk manufacturing plant would, ordinarily, come from the private sector, which, if it saw an opportunity, would reap the benefits, leaving farmers where they presently are as low-paid producers. Farmers, in view of their experience with rock bottom prices over the past three decades, have no spare capital to invest in a new venture, no more credit resources to draw upon and good reason to be risk averse. Consequently, working capital must be raised by public subscription, not from private, or venture capital, sources.

An initial public offering (IPO) could take the form of a statewide, Community Supported Agriculture (CSA) whereby, in exchange for capitalizing—not expensing—the business, subscribers would receive their milk as dividends. For example, a \$5,000 investment that might, if invested in commercial paper, yield 6%, or \$300, would instead pay the average family of four's annual expenditure for milk, every year. This model would be a departure from the conventional CSA where, in exchange for an advance against the season's expenses, the farmer disperses a share of the season's vegetables to her supporters. The

next season, another advance is made, a share of the season's produce is distributed, and so on.

I would hope the state would offer Vermont investors in this issue a 3:1 tax shelter opportunity if they buy a 6% convertible preferred stock. After three years, stockholders could convert their preferred stock to common, which would be issued in two classes: B shares, reserved for NOFA certified farmers, would exercise 10 votes to every A share. For every 10 shares of A class stock converted, the investor would give one share of B class stock to the farmers, thus assuring 51% farmer control.

Only 60% of the capital should be in equity with the remainder in debt, which if guaranteed by the state in the form of tax-free municipal bonds, is very attractive. Capital can also be raised from grants or by application to various federal and state government sources. Given that farmer-owned coops today routinely pay their members below their cost of production (and are even regulated by Capper-Volstead to pay not more than 8%), it is unclear if the enterprise must, or might not have to, take the form of a cooperative.

The goals, similar to those for any new enterprise, are:

- Analyze value proposition; identify opportunities, competitive advantages and threats
- Organize and contract for sources of raw product (VOMPA and NOFA-VT)
- Research and secure ongoing funding resources
- Design and perfect organizational and capital structures
- Research facilities and process design for manufacturing
- Source and price durable equipment requirements
- Research and identify haulers and suppliers; strategic alliances
- Research applicable State and Federal regulations and requirements for compliance
- Analyze market needs, trends and growth
- Analyze competition
- Devise pricing strategy; promotion and distributors
- Identify management and personnel requirements
- Construct and write marketing and public relations plans
- Research and write breakeven analysis, three-year cash flow projections and P&L

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