

Submitted by the Marin Food Policy Council
The Food and Agriculture Element
Marin Countywide Plan
Last revised - May 1, 2002

"I have the audacity to believe that peoples everywhere can have three meals a day for their bodies, education and culture for their minds, and dignity, equality and freedom for their spirits."

--Dr. Martin Luther King

"Sustainable development necessitates protecting the natural resources needed for food production and cooking fuels, while expanding production to meet the needs of the population. These are potentially conflicting goals, and yet failure to conserve the natural resources on which agriculture depends would ensure future shortages of food. Sustainable development, where food and agriculture are concerned, means more efficient use of arable land and water supplies, as well as development and adoption of improved agricultural practices and technologies to increase yields while maintaining soil fertility. It aims to avoid the use of chemical fertilizers, pesticides, and other chemical additives so that they do not degrade rivers and lakes, threaten wildlife, and contaminate human food and water supplies. It means careful use of irrigation, and promotion of the conservation of water. It means avoiding the expansion of agriculture into marginal soils that would rapidly erode, while at the same time exploring possibilities for soils that can be enriched and improved for food production."

The Hanover Principles, Design for Sustainability,

William McDonough Architects, NY, NY

PREAMBLE

A Sustainable Food System

Agriculture is defined as the production of food, fiber, fodder and fuel, the growing of row crops, the raising and keeping of livestock, dairies, aquaculture, timber, apiaries, nurseries, orcharding, floriculture, seed production, mushrooms, and medicinal plants. The food system is defined as the entire set of decisions, connections, relationships, and processes that control the production and distribution of food from field to table. Food and agricultural systems depend upon the natural world, with broad and diverse implications at every scale.

Planning for sustainability recognizes even distant effects of human decisions upon human well-being, upon the viability of natural systems, as well as their necessity to coexist. The carrying capacity of an ecosystem, biome, or bioregion is the organizing principle for the regulation of resources if sustainability is to be achieved. A problem-solving effort that seeks to consider other species and the land itself as part of the overall dilemma of assessment is fundamental. Commonsense dictates that, in planning for the well-being of present and future residents of Marin County, insuring the security and sustainability of the food system, and universal access to sufficient nutritious food for all residents, is of primary importance. This is what is meant by "community food security."

The Food and Agriculture Element embodies certain planning assumptions. Central among these is the assumption that we are planning for both the present and future of the residents of Marin County. Within that assumption are nested other assumptions, such the protection of natural resources and living systems.

Implied in all of this is a choice about how we should use planning and what we should use it for. Under the rubric of sustainability, the present and future of the residents of Marin County comes to the fore of the planning process in a new way. With sustainability as the theme of revision, such process must exceed historical limits of scope focused on "growth" or "commerce" or other emergent exigencies. Once the lens of sustainability is invoked, time horizons are moved outward considerably, beyond consideration of ephemeral commercial fluctuations or traffic patterns. Such process must also exceed its former limits of human centered concerns as the exclusive yardstick of relevance or

competing need. Unwise competition of human concerns with nature's capacities and limits can only result in failure of human communities since human needs are inextricably tied to the environment that sustains life. Sustainability is the outcome of a planning process that considers competing needs for resources focusing on health as the overall assessment tool.

In a sustainable planning process, planning principles are structured as a flexible set of principles to encourage creative responses to suggested symptoms and problems. Since fully sustainable modern human communities do not yet exist, the sustainability theme of this latest revision of the Countywide Plan presents the reasoning for why the sustainable vision is essential, the guiding set of assumptions, and the tools and reasoning used to inform future decisions.

It is the recommendation of the Marin Food Policy Council that each group offering input to this latest revision of the countywide plan do likewise. It is of paramount importance that the tools and the reasoning used to arrive at any conclusions to be incorporated into the final revision of the countywide plan be examined as closely as the conclusions themselves.

Lastly, it is impossible to consider a healthy and productive, sustainable food system without broadening the plan to include consideration of the entire fabric of the food web by including the food needs of those that do not directly feed human beings. Humans are only one species whose needs must be met. A plan that does not meet the needs of those that perform countless necessary tasks to replenish the productivity of the system is not a sustainable plan. A plan for a sustainable food system includes nectar corridors for pollinators, replenishment of mineral and organic matter for soil microbes in agricultural soils, protected hatcheries for fisheries, sheltered fly paths for migrators of all kinds, etc.

I. INTRODUCTION

*“To define an agricultural problem as if it were solely a problem of agriculture--or solely a problem of production or technology or economics--is simply to misunderstand the problem, either inadvertently or deliberately, either for profit or because of a prevalent fashion of thought. The whole problem must be solved, not just some handily identifiable or simplifiable aspect of it.” Wendell Berry, *The Gift of Good Land, Solving for Pattern*, 1980*

The Food and Agriculture Element

The goal of the Food and Agriculture Element is to encourage a thriving agricultural base in Marin County, to facilitate consumer appreciation of, and access to, locally produced food and agricultural products, and to ensure that no resident in Marin County suffers hunger.

Agriculture is an important part of Marin County's historic past and remains a desirable and vital part of the environmental, social, aesthetic and economic health of Marin County's future. Agriculture contributes to the economic and cultural vibrancy of Marin's rural communities and provides opportunities for rural and urban dwellers alike to obtain fresh, nutritious and sustainably produced foods. Agriculture offers all residents a first hand experience of the relationship between the food they eat and its source. It is the basis of the agrarian values which have influenced our country's literature, art, education and national character.

The practice of agriculture in Marin County provides multiple and connected benefits to our land and community. Grazing livestock add an educational and aesthetic element to the landscape and can increase soil fertility while at the same time reducing fire fuel loads. Agricultural lands provide a crucial habitat for many species of animals and plants and preserve the edge habitat between woodland and agriculture as necessary corridors for wildlife. This same habitat enriches the quality of recreational activities for all residents and contributes to the breathtaking beauty of Marin County enjoyed by both residents and visitors.

Key Indicators of a Sustainable Food System

Indicators of a sustainable food system assess that food system's capacity to meet human need for food and fiber without compromising nature's ability to sustain life. An entire system must be assessed in different terms than that of any of its parts. Systems assessment requires a shift in emphasis from quantity to quality, from content to process, from measuring to mapping, from parts to wholes. The indicators for determining the sustainability of a local food system might better be framed as questions rather than absolutes, to be revisited over time.

Ecological conditions are continually changing and human actions are a primary provocateur of change. Therefore, contextual assessment focused on the whole, rather than the parts, is the right means to assess the balance within a system in light of the variable conditions of climate, moisture, season, fertility and demand. The following questions are proposed indicators of systemic integrity of a food system.

1. In the ecological communities that sustain the local agriculture, is diversity being maintained?
2. Where agriculture is practiced, is soil fertility being maintained?
3. How far is food traveling from field to table within the system (food miles)?
4. Are the people feeding themselves within a pattern that can be repeated from generation to generation?.

Characteristics of an Environmentally Sound Food System

Agriculture is an enterprise based on land. Land availability impacts the viability of agriculture. Agricultural land is not undeveloped land, but rather land that is already developed for the highly evolved enterprise of food, fiber, fodder forage and fuel production. The impact of a changing landscape redefines the character of our small and rural towns. To be sustainable, farm operations must be environmentally beneficial, socially integrated, and economically stable. Any discussion of alternative development of agricultural land necessarily provokes questions regarding what we want our future to be.

Agricultural lands must be managed with future generations in mind according to long-range farm plans that generate income while building topsoil and increasing biological diversity. Wise government policies, aimed at sustainability, must recognize the multiple beneficial functions of agricultural systems and specifically reward farmers that implement those practices.

Future design processes should undertake to design food production into rural and urban Marin communities. In these locally responsive, appropriate scale sustainable food systems, food production, processing and distribution practices are designed to enhance soil, water and air quality. Nutrient cycles, wherein nutrients are captured and re-incorporated into the biological system, increasing soil health and protecting air and water quality, are mandatory. Sustainable food production systems strengthen local economies and in doing so, increase self-reliance while reducing dependence on external food sources and resources.

Sustainable food systems are inherently local and of appropriate scale. They are integrated into the communities they serve, creating interesting and diverse local job opportunities for gardeners, food artisans, seed, feed, and hardware store owners, independent grocers and food processors. They deliver multiple social benefits that include; creating a sense of place, knitting intergenerational bonds, building cultural bridges, and generating a quality of wholeness, diversity and beauty in neighborhoods and in modern community life.

A sustainable food system is not possible unless consumers understand the benefits of ecologically sound local food systems, including the "ecological footprint" of food production, and are willing to purchase these foods. The "ecological footprint" of individual food items becomes increasingly smaller through use of new energy efficient technologies and strong local food systems. In order to promote a sustainable food system that feeds all residents, Marin County's goal must necessarily be to decrease its total ecological footprint where food production is concerned. A primary way of achieving this goal is to move the field closer to the table by reducing the miles food travels in the system. In order to accomplish this shift in purchasing patterns, strong local production and distribution systems must be established. The buying public must be engaged in the process since consumer awareness is a critical element in agricultural sustainability.

Community Food Security

The concept of community food security provides an integrated framework for developing a coherent perspective to the food system. Food security broadens the traditional conception of hunger. Food security can be defined as a community need, rather than an individual condition, as with hunger. Whereas hunger measures unfulfilled individual need, food security is prevention oriented, evaluating access to resources--both community and personal--to provide an individual with adequate acceptable food. In this context, food security is defined as, "all persons obtaining at all times a culturally acceptable, nutritionally adequate diet through local, sustainable sources."

“Cheap Food” vs. Sustainable Agriculture

“Our current food system values centralization; cheap food; cosmetically uniform food; highly processed and packaged food; and uniformity in food worldwide. This global industrial model harms family farms and local economies since it ignores core American values of individualism and thrift, as well as the intricacies of growing and harvesting food in a particular place. A sustainable food system is based on a fundamentally different set of values. That set of values, or food ethic, recognizes how all of the stakeholders interact with and impact each other. A food ethic which recognizes the central importance of food in all our lives is the essence of sustainable agriculture and local food systems.”

*Defining a Food Ethic: Common Values for the Sustainable Food and Farm Movement, J. Redmond, T. Nelson
January, 2001*

Current production and processing systems externalize the costs of soil erosion, air and water pollution to society and to future generations. This in part subsidizes a "cheap food" policy. Government policies are tied to income generation and acres of production, not to benefits accrued, nor to costs externalized.

For too long, economists and “farm experts” have merely assumed, based on buying behavior, that what the public wants is cheap food, cheap above all else. But this assumption collapses if the marketplace is an imperfect indicator of what people truly want. However, in important matters, we do not allow the marketplace to dictate public policy. For example, in matters such as national defense, education, and public health, we do not replace sound policy development with consumer impulse. Why then, would we substitute the whims of the marketplace for a policy of substance when it comes to a matter as critical to society as its food supply?

Conservation vs. Regeneration

Conservation efforts advocate either taking land out of production or remediating after destructive practices have been implemented. Conservation efforts should be made to address the careful and sustainable production of food for local consumption on public lands where such production is possible and desirable.

Parks and open space policies should include the ways in which public land is benefiting Marin residents by recouping maintenance costs through the careful and benign production of a diverse and nourishing food supply. The integration of food production activities in balance with recreation and practical concerns is ideal. More should be made of the beauty of sustainable agriculture to the landscape and the contribution of such activities to tourist and recreational activities. Such policies should not be limited to the rural Marin landscape, but should apply equally to rural, urban and suburban communities as well.

Global Economy vs. Local Food Systems

An increasingly globalized food system threatens the global environment. Local patterns of production, distribution and consumption are being replaced by global operations and interests. Global interests are indifferent to rural communities and local economies, favoring quick profit and the absence of regulation to be found in long distance marketing. In this volatile and rapacious atmosphere, family farmers are at a disadvantage. Infrastructure for local food production slowly erodes until the connection is lost between communities and their food supply. Once disturbed, these locally responsive production patterns seldom if ever return to their former vibrancy.

However, while consumer prices may decrease momentarily with relaxed trade barriers, the ecological footprint of grapes grown in Brazil and apples in New Zealand for consumption in Marin is tremendous. In addition, as the

distance between field and table is increased, accountability is lost, and consumers forfeit their ability to discern the ecological and social impacts of distant labor practices, food production, processing and safety. While appearing in the short term as an economic benefit, distant food production is at best a temporary measure, costing far more than it can deliver.

Local food systems, on the other hand, support local economies. They are driven and supported by the stakeholders whom they both serve and benefit. Local food systems are networks of production and consumption where the land itself is a primary beneficiary. As the field moves closer to the table, the benefits are systemic. Where local food systems are reinvigorated, people are reconnected to each other, to the food they eat, and its source. Such a connection nurtures an appreciation of the need to preserve farmland and farming as a way of life in the region. Consumers have shown, again and again, that they will protect the resources necessary for local food production in direct proportion to their sense of connection to it.

Institutional Food vs. Quality Meal Service

“The sharing of food is a fundamental experience for all peoples; a primary way to nurture and celebrate our cultural diversity; and an excellent bridge for building friendships and inter-generational bonds.”

Berkeley Unified School District Food Policy, Berkeley Board of Education, August 1999

Poor quality food in schools and colleges, and the lack of locally produced and processed, seasonal food from sustainable agriculture sends a poor message to students of all ages. Delicious meals, served in a pleasant atmosphere with sufficient time for eating, recognizes the important connection between a healthy diet and a student’s ability to learn effectively and achieve high standards in school.

It should be part of the educational mission of all Marin schools to improve the health of the entire community by teaching students and families ways to establish and maintain life-long healthy eating habits. This mission can be accomplished through nutrition education, garden experiences, the food served in schools, and core academic content in the classroom. The schools have a role, as part of the larger community, to promote family health, sustainable agriculture, and environmental restoration.

Marin County schools should begin to use their institutional buying power to link to Marin farms, thereby creating an economic generator for local agriculture. At the same time, Marin students will benefit from the increased quality of school meals that emphasize freshness, nutrition, diversity, seasonality and flavor. In improving the nutritional content of school meals, we recognize the obvious links between nutrition and cognition and support students in learning to their full potential.

IA. Purpose & Vision

The Food and Agriculture Element recognizes that access to food is a right and responsibility of all residents. It supports the creation of a food system that ensures that no resident of Marin County is hungry - that each resident is assured of a culturally appropriate, nutritionally adequate diet from local, sustainable sources, now, and for future generations.

In order to meet the challenge of assuring that right, and to support the need for a sustainable food supply that feeds everyone, this element supports the use of the tools of public advocacy, education and policy making in order to promote:

- *institutions that preserve farmland and farming as a way of life*
- *infrastructure that addresses waste reduction, material reuse, composting and recycling*
- *education that instills respect for sustainable agriculture and localized food systems*
- *planning that designs food access into communities*
- *strategies that lead to economic, social and environmental sustainability*
- *programs that further the goals of community food security*

- *county policies that promote a vibrant and sustainable food system for all residents*

Marin Food Policy Council, Food Policy Document, 1997

IB. Organization of Element - Section Four - Three Integrators

In order to address the multifunction of solutions that is the hallmark of sustainable planning, wherein a good solution solves more than one problem without creating new ones, the policies and programs of Section Four (IV) of the Food and Agriculture Element are arranged under three primary sections or “integrators”. These integrators form a kind of lens through which to consider the programs and policies that follow and are arranged in the characteristic rubric of the sustainable context as environmentally sound, economically stable and socially integrated.

Environmental Integrator

Addresses natural history, land use, wild foods and foraging, soil, water, agricultural practices, agricultural impacts, protection of watersheds, conservation of natural resources and pollinator corridors;

Economic Integrator

Addresses local distribution systems and marketing practices, institutional procurement practices, higher education linked to sustainable living patterns, K - 12 curriculum that integrates agriculture and food systems, and a complete program of local agricultural sales, marketing and education for consumers and county residents that connects the practice of local production for local consumption to the future viability of agriculture and communities.

Social Integrator

Addresses community food security, emergency food systems, social equity and access, urban agriculture, edible landscaping and community greening using food as an organizing principle.

IB-1. Legal Authority

The Agriculture Element is optional under California general plan law. However, California planning law states that "the general plan may include any elements or address subjects which...relate to the physical development of the county or city" (Government Code Section 65303).

The County originally addressed agricultural land use issues in the Environmental Quality Element. Those issues and policies as well as additional policies now included in the Food and Agriculture Element, help to emphasize the County's commitment to preservation of agriculture and supporting land uses.

IB-2. Relationship to Other General Plan Elements

The Food and Agriculture Element is related to each of the elements in the countywide plan through the impacts food and agriculture have on all systems of community life. It is the purpose of this element to acknowledge the ways in which we feed ourselves as a primary stressor on ecological, social and economic systems, and to propose alternatives which; reduce dependencies on external food sources and resources; enrich biological supports for agriculture; provide economic incentives for local food production; offer the benefits of using food as an organizing principle for community.

The Food and Agriculture Element is related to the:

-Transportation Element, as transportation of food is a primary consumer of non-renewable resources. The food and Agriculture Element proposes ways in which food sources can be moved closer to communities thereby decreasing dependence on non-renewable resources and reducing traffic on already overburdened streets and highways while increasing strong local food systems and community self-reliance.

-Community Development Element, by addressing the negative economic realities of an import/export food system and the ways in which local food production can enrich both the land and the community in multiple ways. Agricultural enterprises confer a multiplier effect to local economies where dollars are sourced from the land and circulate throughout the community with multiple positive impacts. The Food and Agriculture Element proposes a new set of economic measures that properly assess agriculture's contribution to Marin's economy and sustainability.

-Environmental Quality Element, by promoting a sustainable food supply and a benign agriculture that enriches the landscape and protects vital ecological communities while producing a wholesome, diverse and nourishing diet for all residents. The Food and Agriculture Element proposes a systemic approach to the way Marinites feed themselves that connects local production to local consumption in a pattern that can be repeated from generation to generation.

IB-3. Relationship to Other General Plan Documents

The County shall make efforts to create consistency between the countywide plan and other jurisdictional plans within the county. Examples may include Local Coastal Commission (Program Unit I & II), Golden Gate Recreation Area, etc. The county shall encourage all community plans to include a food policy

The Agricultural Element is related to Local Coastal Plans I and II and West Marin community plans in the following manner:

Local Coastal Plans I and II:

Maintains the rural quality of the coastal environment as required by the California Coastal Zone Act. The Act requires the County to: "protect maintain, and, where feasible, enhance and restore the overall quality of the coastal environment and its natural and artificial resources."

Community Plans:

Supports continuance of sustainable agricultural land uses and operations in West Marin communities and surrounding areas, including the communities of Nicasio, San Geronimo, East Shore, Dillon Beach, Point Reyes Station, Tomales, and Stinson Beach, and Bolinas.

The county encourages all Marin community plans to include a food policy, which supports local agriculture and agricultural land preservation. These plans should encourage the purchasing of local products whenever possible. .

II. BACKGROUND

IIA. Early Natural Food Systems in Marin

The Bay Area, before contact with western man, comprised one of the richest and most diverse foraging grounds ever known. Marin County was a premier fertile area in that landscape. Stands of native bunch grasses covered the marshy lowlands. Wetlands surrounded the shores of the Bay. Heavily wooded forests covered the hills, and the cliffs above the ocean were ablaze with wildflowers.

The examples of wildlife throughout Marin today comprise only a hint of what was once a wildlife habitat of almost unequalled fertility, where animals and food plants grew dense in numbers and diversity. Elk, pronghorn antelope, deer, grizzly bears, foxes, racoons, quail, rabbits, and wolves lived in close communities of interdependency. The sky was dark with geese, ducks, eagles, hawks, seabirds, and songbirds. The bay and the ocean teemed with whales, seals, fish, mussels, clams, shrimp, crab, oysters, and sea otters.

Roots, seeds, acorns, hazelnuts and berries of many varieties are only a few of the food plants gathered by the early inhabitants of this place. Mushrooms, bulbs and shoots were dug from the ground and dried for future use. Medicine plants provided a pharmacopeia for illness and injury. Reeds and sedges were gathered and processed into basketmaking materials for cooking, transport, and storage.

Early accounts agree that wildlife in Marin was uncommonly tame and unshy. Wild animals did not keep a distance from early hunters and had not become accustomed to deception or concealment. The relative abundance of wild animals and the relatively modest human populations, coupled with silent and moderate methods of hunting, had not instilled in game animals the impulse to hide when humans approached. Therefore, hunting and gathering in such an abundant landscape was neither arduous nor time consuming. All parts of game animals, and food, medicinal and shelter plants, were used. All waste was biodegradable and integrated with daily life routines.

IIB. History of Food Resources in Marin

In the early 1820s Marin was settled by Mexicans whose home base was the San Rafael mission. Mexican ranchers raised thousands of longhorn cattle for hides and tallow. The cattle ran wild along with herds of native tule elk and were rounded up yearly by Mexican and Miwok vaqueros. After the mission was shut down in 1834, the land and the longhorns were divided up into vast ranchos. During the Gold Rush of 1849, the longhorns were driven to the gold country. After the Gold Rush faded, ranchers began to introduce American stock to replace the Mexican cattle and the tule elk, wiped out by hunting and loss of habitat.

The Gold Rush of 1849 helped start the dairy industry. In the 1850s a San Francisco law firm owned most of the Point Reyes peninsula and established several very successful tenant ranches. These first dairy ranchers were mostly Swiss, Italian, Portuguese and Irish in descent. Such dairy ranches, owned by absentee landowners, were also set up in Sausalito. They not only produced dairy products, but huge crops of fruit. At that time, most dairy operations were small, 10 to 15 cows, or as many as they could milk by hand. Before refrigeration, all of the milk produced was churned into butter. In 1862 Marin provided a quarter of California's butter. Fresh milk was poured into pans and cooled. The cream was skimmed from the top, churned into butter and salted to preserve it. Some families made their own cheese or hired the skills of a cheese maker, who traveled from ranch to ranch.

From its early beginnings, the Marin dairy industry has been known for its high-quality delicious milk. The invention of the milk bottle in 1884 made handling and distribution much easier. The California Cooperative Creamery was established in 1913 by local milk producers to process and distribute milk products (milk, butter, cheese). Today most Marin milk is transported in trucks to a creamery in Petaluma.

Since land travel was limited to horse trails and wagon roads, creeks and waterways were the major links to the San Francisco market. The Marin coastal towns of Bolinas and Tomales were shipping ports for agricultural products. Tons of potatoes, grains, clams and dairy products were shipped from warehouses to eager markets in San Francisco. Flat-bottomed hay schooners were important boats for moving hay to hungry San Francisco horses and livestock. They also carried wheat and barley, vegetables, salt, dairy products, lumber and bricks from Marin brickyards. Ross Landing in Kentfield was one of Marin's busiest ports until the trains came in the 1880s.

Towns like Tomales, Olema and Nicasio were early trading centers for Marin's growing dairy ranches. Potatoes were a huge crop in the Tomales area from the 1850s to 1900. The steep hillsides planted in vertical row crops couldn't take the intensive cultivation, and the resulting erosion caused tremendous sedimentation of Tomales Bay, the Esteros and Key's Creek.

In 1870 the North Pacific coast railroad was completed, traversing Marin and connecting coastal towns to San Francisco. All kinds of agricultural products traveled south on the railroad. Towns along the railroad (Fairfax, Mill Valley, San Rafael) blossomed, while those bypassed by the trains froze in time. By the 1920s U.C. Berkeley, a land-grant university, was sending agricultural agents out to Marin ranchers to spread new information and methods. M.B. Boissevain was the first farm advisor in Marin County.

During WWII there were around 2,200 mostly small farms, producing a wide variety of crops, dairy, beef and lamb for Bay Area consumption. In one generation, since 1945, agricultural production and diversity has rapidly declined, to 276 today. Between 1949 and 1982 about 783,000 acres, or roughly one-quarter of the Bay Area's farmland, was lost. Since 1959 Marin has lost 32,000 acres of agricultural lands.

In 1971 Marin's agriculture was threatened with plans for major highway extensions to the coast. The county was rezoned to include three major planning corridors, of which two, the coastal recreation and inland rural corridors, contain most of the agriculture in Marin today. Most agricultural lands in central and west Marin were rezoned to A-60, a low density zoning which permits no more than one unit per 60 acres.

Two additional agricultural zoning districts, ARP (Agricultural/Residential Planned) and C-APZ (Coastal Agricultural Production Zone) were created in the early 1980's. The C-APZ district imposed the strictest conditions for non-agricultural development. The pre-1971 zoning designation, A-2, a residential zoning district permitting one

unit per 2 acres and allowing agricultural uses, remains in effect on some small parcels in West Marin and most agricultural parcels in the City-Centered Corridor which were not rezoned to ARP or a planned residential zoning district.

Complementing agricultural zoning, the non-profit Marin Agricultural Land /trust was created in 1980, and has since acquired easements on 26,600 acres, protecting and keeping those lands forever in agriculture.

In 1982 the County created a Bayfront Conservation Zone (BFCZ), an overlay zone applicable to tidelands and historic bay marshlands along San Francisco and San Pablo Bays in the City Center Corridor. Some of the historic bay marshlands had been diked and have been used for agriculture since (primarily for growing oat hay or grazing cattle). The purpose of the BFCZ is to preserve natural and agricultural values of property within the BFCZ. An environmental assessment is required prior to any application for development in this zone.

In the 1994 revision of the Countywide Plan an "Agricultural Element" was added to emphasize the County's commitment to the preservation of agriculture. The Agricultural Element included a separate section for agricultural lands in the BFCZ. The County is currently developing recommendations for revising the County's agricultural zoning. These recommendations apply to lands zoned A,ARP,C-APZ, but not A-2. There remains an inherent policy conflict between the purposes of the BFCZ and the development permitted by an A-2 zoning.

III. Background & Current Status of Agriculture in Marin Today most of the food consumed in Marin is not produced in Marin. It is trucked in from the Central Valley or trucked in from much farther afield. Since one of the most important indicators of the long-term sustainability of a food system is the distance food travels from field to table, and since the average unit of food travels 1,300 miles from field to table in the U.S., a primary focus of this food and agriculture element is to decrease that distance through programs that support local production for local consumption.

Agriculture is California's number one industry, with sales at over \$15 billion a year and over 250 commodity groups (milk has the highest annual sales value.) California provides a quarter of the nation's food and 40 percent of its fresh fruits and vegetables. Today, farmers and ranchers must be experts in business as well as agriculture and master many related fields such as genetics, nutrition, marketing, mechanical repair, policy development, networking and aftermarket opportunities.

The food and fiber production industry is interwoven with the Marin County economy. Bankers, accountants, feed suppliers, veterinarians, product testers, equipment retailers, grocers, restaurateurs, and feed mills are just a part of the manufacturing, marketing and distribution network which supports, and is supported by, Marin's agriculture. Agriculture in Marin contributes over \$56 million annually to the local economy, with milk production dominating at 65 percent.

Approximately 167,000 acres in Marin are farms or ranches. This amounts to 50 percent of the land in Marin. Of the 276 agricultural operations in Marin, 72 are considered large farms (annual gross income of \$100,000 or more), and 204 are considered small or mini-farms (annual gross income of less than \$100,000). The average size of a farm in Marin is 588 acres, and the majority are third and fourth generation family owned operations. Many of these operations contain environmentally sensitive habitats in addition to active farming lands, which add significantly to the biodiversity of Marin County.

Compilation of Income from Agricultural Sources in Marin County, 1997 - 1998

- Field & Orchard Crops: \$7,162,265 / \$6,948,705
- Nursery Crops: \$547,182 / \$683,354
- Livestock & Poultry: \$10,664,088 / \$8,330,921
- Livestock Products: \$35,958,019 / \$38,655,066
- Aquaculture Products: \$3,007,430 / \$1,548,900
- TOTAL: (1997) \$57,338,984 / (1998) \$56,166,946**

The figures quoted above are the gross values and don't include the multiplying factor of 2.5 used to represent agriculture's contribution to the local economy in associated areas such as tourism, employment opportunities and support businesses in Marin communities.

Marin's topography is one of rolling hills, coastal bluffs and flat interior valleys separated by hills. While the hilly topography, prevalence of non-prime soils and lack of reliable water supplies are deterrents to more intensive agriculture like row crops, some areas in Marin that are rich in alluvial soils support diverse vegetable and specialty crops.

Marin's coastal agriculture is well known for its quality grasslands, due to foggy, moist conditions that keep the grasses green much of the year and make them well suited for grazing dairy, beef cattle and sheep. About twenty percent of the Bay Area's milk comes from Marin dairies. Milk and milk products have dominated agricultural sales in Marin for over 125 years. Livestock production is the second largest agriculture industry in the county, with 159 beef cattle, cow/calf, and sheep grazing operations producing livestock, replacement heifers for dairies and breeding stock.

There is an incipient trend in Marin agriculture toward fresh produce. Dairy and grazing operations are diversifying into row and perennial crops. A number of small new organic farms have registered with the state. Production of row crops is increasing for the first time in 55 years. Marin Organic, an association of local organic food producers has been established to create and promote a local food label. Farmer's markets in Marin have been increasing in popularity since they began in 1983.

This growing number of small truck farm operations (28) produce organic vegetables on 385 acres for Bay Area restaurants and farmer's markets totaling \$3.2 million. Several of these innovative operations have strong reputations for producing a high-quality product, such as Star Route Farms vegetables and greens in Bolinas; Nieman natural beef grown in West Marin; and Green Gulch Farms in Muir Beach.

Large parcels near urban development have important potential for innovative farming techniques and providing fresh food to local residents. It follows that existing large agricultural parcels in both East and West Marin should be protected for that purpose, provided that wetlands, watercourses, and other environmentally sensitive areas are not adversely impacted.

Several nurseries in Marin grow many crops, from roses, iris¹, and heather to edible and native plants. Several ranchers are experimenting with growing cool-weather wine grapes and are hopeful of future market potential. Nicolas Turkey Breeding Farm near Tomales is part of a Sonoma-Marín operation that supplies half of the worldwide demand for fertile turkey eggs for hatching.

There are approximately 89 dairies in Sonoma and 32 in Marin. Among the 43 counties in California that produce milk, Marin is ranked 15th. Marin and Sonoma farmers share many things in common, from family relationships to agricultural suppliers.

Oyster culture is the oldest aquaculture industry in California, dating back to the 1850s. Marin is second only to Humboldt Bay in California in shellfish production, which includes oysters, clams, and mussels. In 1998, 11 growers used 1,287 acres of bay bottom in Tomales Bay and Drakes Estero to grow approximately 850,000 lbs. of shellfish worth about \$1.5 million. Many local restaurants want fresh oysters and mussels for their customers who often drive up from San Francisco for this fresh seafood. Abalone and scallops are two other species that aquaculturalists are beginning to raise.

Marin has 70 miles of open coastline and 40 miles of San Francisco Bay frontage. Many types of fish live in the waters of Marin, including salmon, rockfish, halibut, striped bass, sturgeon, ling cod, herring and others. Sport fishing and commercial boats leave Sausalito, Drakes Bay and Tomales Bay to catch these fish for food or sport. Today most of these species have declined in numbers, due to habitat loss, reduced fresh water flows into the bays, and over-fishing.

The major fishery in San Francisco and Tomales Bay is for Pacific herring, which are processed for their roe (herring eggs). In 1918 a shortage of herring in the North Sea caused increased fishing locally of about 4,000 tons. In the '40s and '50s, production increased further when the sardine fishery collapsed and herring were used in their place for canning. In the 1970s, herring were marketed to Japan for their roe, and this continues along with a new crop of herring roe on kelp, wherein kelp is hung from rafts and harvested when it has a layer of eggs on it. This roe on kelp fishery in San Francisco Bay produced 106 tons in 1995-96, which at \$20/lb. was valued at over \$4.3 million. The herring gill net fishery and round haul fishery in San Francisco Bay produced 6,165 tons worth \$18.5 million, while in Tomales Bay this fishery captured 355 tons valued at just over \$1 million.

A major sport fishery for clams exists in Tomales Bay, where during low tides up to 100 enthusiasts spread out on mud flats to dig Washington clams and other bivalves to barbecue and use in chowder.

IV. CHARACTERISTICS OF AGRICULTURE IN MARIN

IV. A. Natural Resources

IV. A-1. Climate

IV. A-2. Soil

The Soil Conservation Service uses a land capability classification system developed by the U. S. Department of Agriculture to place areas into soil groups with similar management options or problems. Soils have been ranked by relative importance to agriculture in the state. The soils are designated by roman numerals I through VIII, depending on their limitations and suitability for the most common crops. The numerals indicate progressively greater limitations and narrower choices for use, with Class I soils having few limitations and Class VIII having severe limitations.

The majority of agricultural soils in Marin fall into range from Class II through VII. The relationship between important farmlands, grazing lands, and other County land uses is shown in Table A-1. About 98% of Marin's agricultural lands fall into one of the two categories of either local farmland or grazing land (see Table A-1 and Figure A-2)

Much of Marin County is defined by the State Department of Conservation as grazing land. Grazing lands are those lands in soil classes V through VI, and further defined as "land on which the existing vegetation, whether grown naturally or through management, is suitable for grazing or browsing of livestock. Although livestock grazing has been the predominant agricultural use of land in Marin County since 1945, a significant percentage of these soils historically and currently support row crop and fruit production. Currently there is a trend toward successful small-scale production of vegetable and small fruit crops on soils that had been labeled as grazing land.

A citizens advisory committee, in cooperation with the local Marin County Resource Conservation District and the U.S. Soil Conservation Service, identified farmlands of local importance. These lands included "all non-irrigated tillable and potentially tillable lands, including Classes II through IV." These soils are most often found on level or gently sloping terrain, such as found on the bayside lands east of Highway 101, the eastern shore of Tomales Bay, and the northwestern area of the County.

According to State soil maps, there are three small zones in Marin County ideally suited for the production of row crops. They are classified as "Farmland of Statewide Importance" ([Marin County Important Farmland 1996](#); State Dept. of Conservation Mapping and Monitoring Program). They are located in the area of Papermill Creek in Point Reyes Station, Pine Gulch Creek near Bolinas, and Redwood Creek near Muir Beach.

In the last three decades many small organic farms have begun operations in various areas of the county. These farms are improving soils to increase production through sustainable agriculture practices geared toward soil fertility. Such practices are making agriculture possible in many areas not identified on State soil maps as ideally suited for the production of row crops. Soil building practices are increasing suitability of land for agriculture.

The viability and potential of row crop farming on soils of Point Reyes Station and Muir Beach has been suspended due to regrettable changes in public policies by the agencies that have acquired these farms. Yet, sustainable agriculture has been recognized as a positive environmental enterprise and a precious resource by the County. The County should consider continued protection of the rights and abilities of Marin farms to continue to operate in areas that may be annexed as public lands.

IV A-2. Water

There are generally three major watershed groups within Marin County, with streams being tributary to San Francisco Bay, Tomales Bay, or directly to the Pacific Ocean. Also notable are Bolinas Lagoon and Drakes Estero, bays which although similar to Tomales Bay in that they are bays that open into the Pacific Ocean, have significantly smaller watershed drainage areas but are watersheds of high environmental value.

Until the late 1940s there were many productive dairies and farms on the eastern, San Francisco Bay watershed of Marin. Urban development and effects of industrialization have significantly reduced the number of farms and ranches in the eastern portion of Marin.

Over the last four decades there has been a steady decline in creek flows during the dry months due to development in watersheds. This has precipitated substantial declines in salmon and steel head populations. Since these fish populations are part of the wild food base of the county, and since declining populations threaten the future existence of these fish in Marin County streams, care must be taken to protect sensitive habitat and to preserve creek flows by limiting or mitigating development where negative impacts would occur. Watershed restoration projects using appropriate native vegetation are a desirable activity for such mitigation.

Also significantly affected by urbanization and development were once viable commercial fisheries and aquaculture operations in and along San Francisco Bay. These once thriving businesses are now a thing of Marin's past. This plan places increasing importance toward preserving the open space and agricultural lands along the eastern corridor as well as the important bayside lands and marshes (See Community Marin) and restoring habitat for wild foods such as fish.

West Marin/Tomales Bay

Tomales Bay and Drakes Estero continue to support viable aquaculture and fisheries industries, mainly because of low population densities and lack of heavy industry. Drakes Estero is surrounded by the pastoral zones and wilderness areas of the Point Reyes National Seashore. Historic ranches continue to operate within the Point Reyes National Seashore, with many located on tributaries to the Estero, and water quality is considered to be relatively good. Rainfall impacts (fecal coliform concentrations) are less than those for Tomales Bay. The impacts in the Tomales watershed are greater than what has been observed in recent studies in Humboldt Bay and Morro Bay. While agriculture is not the only source of water quality degradation in West Marin, it is the predominant land use, and as such, has a great effect on water quality and natural resources than any other land uses.

Tomales Bay Watershed

Tomales Bay is listed by the state's San Francisco Regional Water Quality Control Board as being an impaired water body, primarily due to water quality concerns from high bacterial coliform counts, but is also impacted and threatened by high nutrient levels, sediment loading, exportation of water, and mining discharges. Tomales Bay covers 11 square miles and its watershed area is approximately 220 square miles. The major stream systems of biological importance that are tributary to Tomales Bay include: Lagunitas Creek; Walker Creek, and Olema Creek. Lagunitas Creek has an approximately 108 square mile watershed, making it the largest stream in Marin County. Included are second order tributaries including Olema Creek, Bear Valley Creek, Nicasio Creek, Cheda, Devils Gulch, and San Geronimo Creek.

Lagunitas Creek was originally called Arroyo San Geronimo, and the lower section of the stream is popularly called Paper Mill Creek. Agriculture is not the predominant land use within the watershed, although significant portions of

the watershed within the Point Reyes National Seashore and Golden Gate National Recreation Area are leased for ranching, and large portions of Nicasio watershed are grazed. Small farms are scattered throughout the watershed, but not significant in acreage. Much of watershed is owned by MMWD and supplies San Geronimo, East Marin south of Hamilton, and North Marin Water District. MMWD has drastically altered stream flows and permanently removed over 50% of watershed once available to anadromous fishes such as salmon. Despite these changes, fish populations are in relatively good condition when compared to other streams in California or Marin County. Olema Creek, with an approximately 15 square mile watershed, is itself a subwatershed of Lagunitas Creek. Olema Creek is significant in that it runs in the historic San Andreas Fault zone and the valley has had a long history of agricultural operations. Although once more extensive, current operations essentially consist of cattle grazing on federally owned lands. Olema Creek nonetheless supports relatively healthy populations of Coho and steelhead salmonids. Most of the Olema Creek watershed is within either the GGNRA or Point Reyes National Seashore (Brannon Ketcham, NPS hydrologist, pers. comm.).

The Walker Creek watershed covers 73 square miles, and is composed of four main sub watersheds that have distinct physical characteristics. The subwatersheds include: Chileno Creek; Arroyo Sausal and Salmon Creek which both flow through Hicks Valley, and Keyes Creek, which flows through the low hills east of the town of Tomales. (Final report of the Marin Coastal Watershed Enhancement Project 1995, UC cooperative Extension).

Vegetation in the Walker Creek watershed is approximately 63% open grassland and 37% woodland and shrub communities (Zumwalt 1972). Walker Creek and its four main tributaries all have numerous reaches that are devoid of riparian vegetation. (MCWEP, 1995)

The predominant land use in the Walker Creek watershed is livestock production, primarily beef cattle, with a small number of sheep ranches. Dairies. Dairying is concentrated in the level and productive valleys of the Chileno Creek and Keyes Creek sub-watershed. Some ranchers raise their own hay and silage, and there is small-scale commercial hay production in Hicks Valley. Over 95% of the watershed is privately owned.

Most farms and ranches utilize on farm water sources such as wells and catchment ponds to supply farm needs. Many are dependant on rainfall to support growth of pasture. Urban agriculture such as nurseries, community gardens, school gardens and small specialty growers may utilize MMWD water. In these cases where small-scale agricultural enterprises contribute to the diversity of neighborhoods and local economies, the county should insure proper support through the discontinuance of penalty pricing structures for MMWD water.

IV. B. Types of Agriculture

Both so-called “conventional” and “organic” agriculture is practiced in Marin County. The conventional farming operations are primarily livestock, dairy and poultry ranches. The organic operations are primarily vegetable and fruit farms although Straus Family Creamery and Gale Livestock are notable exceptions. Some cut flower and nursery operations are a part of the agricultural community and Marin is seeing an exciting swing toward a diversified food system in the newest olive oil and vineyard operations. In addition, there is a trend toward more on farm, after-market processed products such as farmstead cheeses, olive oil, and wines. This entrepreneurial element is an important step toward sustainability in a upscale market. Virtually all farms in Marin are family farmed or owner operated.

IV. E. State & Federal Parks

Six dairy ranchers continue their operations as part of the Point Reyes National Seashore, a national park. The county supports the continuation of farming activities in the parks and open space where they exist. Both as a part of Marin’s historical past, and its vibrant future, ranches and farms are a picturesque and practical, desirable element of recreational lands. Marin County residents are entitled to enjoyment of these working treasures and every effort should be made to allow them to continue to operate as a publicly prized additions to our national parks.

Working farms enrich and beautify our landscape. Marin residents in particular appreciate scenes of grazing livestock and picturesque row crops. The county seeks to preserve and protect farming operations in state and

national parks in Marin as a unique feature of our landscape. Though many visitors from outside our community travel to Marin County to enjoy our scenic views and beautiful countryside, their presence ought not to interfere with the routine operation of family farms in the park. These farms and ranches existed before the park was decreed and the Marin County right-to-farm ordinance ought not to be suspended inside the park boundaries.

Ranchers and farmers inside park boundaries are stewards of land held in public trust and, as such, should receive assistance from local, state and federal sources for maintaining ecologically sound operations. Information, funding, labor and materials contributed by park authorities that promote sustainable farming practices and enhance the connections between farm and environment are encouraged. Because of their high visibility, wherever possible, these farms and ranches ought to become examples of the ideal marriage between food production and natural systems.

IV. F. Sonoma/Marin Relationships

IV. G. General Management Plans

IV. H. Agricultural Production Trends

V. EXISTING AGRICULTURAL POLICY IN MARIN COUNTY

The County's agricultural policies and implementation programs must recognize and be consistent with the development of a sustainable agriculture and food system for producing food and fiber for the region and as an important component of the county's diversified economy. The policies and programs in this element protect and preserve agricultural lands through making use of: 1) very low density zoning in the Inland Rural and Coastal Corridors; 2) transferable development rights from agricultural areas to areas more suitable for development; 3) agricultural easements which preserve land for continued agricultural uses; 4) cluster development and master plan development standards, and 5) the Williamson Act.

Section V. A: Food and Agricultural Areas

It is the purpose of the Food and Agriculture Element to present policies that enhance, support, promote, and preserve agricultural land uses and agricultural enterprises in Marin County through the protection of the agricultural land base from conversion to non-agricultural uses and through the encouragement of sustainable agricultural practices.

V A-1. Agricultural Zoning

V A-2. Local Coastal Program

V A-3. LafCo Policies

V A-4. Williamson Act

V A-5. MALT

V A-6. Environmental Corridors

Environmental Quality:

The Food and Agriculture Element supports policies which help preserve long-term viability of the land through preservation of soils, riparian habitat, pollinator corridors, wetlands, and wildfood sources which are essential for a sustainable food system and environmental quality. Environmental quality policy ensures preservation of agricultural lands by encouraging best management practices and protection of riparian habitat, wetlands and other sensitive areas from destructive land use practices and development. Agricultural uses in environmentally sensitive areas should be conducted in a careful and informed way so as to be of the most benign and compatible character possible

without compromising nature's ability to sustain itself.

IV A-6.1 Inland Rural Corridor

IV A-6.2 City-Centered Corridor

It is the policy of the county to preserve remaining "urban open space" for agriculture whenever feasible and to promote the development and operation of home and school gardens and community-based agricultural production throughout the county. A primary example of an agricultural parcel in the city-centered corridor is the 18 acre Niven Nursery located in Larkspur. The county supports the location of food sources near communities so that all residents can have access to fresh, seasonal, locally grown foods and to ensure a ready food supply for inhabitants of the city-centered corridor in case of disaster or interruption of supply lines. Another example is the St. Vincent/Solvera parcels along Highway 101.

IV A-6.3 Baylands Protection Corridor

The adoption of the Baylands Protection Corridor would expand the Bayfront Conservation Zone and extend from Point San Pedro north to the Marin/Sonoma County line. The Corridor would be comprised of all undeveloped diked historic wetlands, seasonal wetlands, streams, and adjacent upland habitats. The purpose of the Baylands Protection Corridor is to clearly designate these lands primarily for resource conservation, wildlife habitat and other natural resources, agriculture, and protection of public health, enjoyment and safety rather than for development.

Language for the land use and development of the Baylands Protection Corridor would be coordinated with language developed in the Environmental Quality Element and the Community Development Element.

The Baylands Protection Corridor supports agricultural practices that are compatible with wetland protection on those lands zoned for agriculture, but which have wetland habitat values, and discourages agricultural practices that would be harmful to wetlands and sensitive wildlife habitat on these lands.

Agriculture which is compatible with wetlands protections should be a permitted use, but conversion of non-agricultural land to agriculture should be allowed only if wetlands or other important habitats would not be adversely impacted. Where possible, wetlands should be enhanced and restored, if possible in conjunction with agricultural protection.

IV A-6.4 Coastal Recreation Corridor

IV A-7. Mariculture

IV A-8. Parklands, Watershed, and Open Space Acquisitions

IV A-9. Transfer of Development Rights

IV. OBJECTIVES, POLICIES, AND IMPLEMENTATION PROGRAMS

ENVIRONMENTAL INTEGRATOR

The Environmental Integrator contains those policies and programs intended to promote and support an environmentally sound food system. Such policies and programs include ecologically and agriculturally sound land use, farm management and agricultural practices, and protection of the ecological communities that uphold local food production. The Environmental Integrator includes information, policies and programs that address natural history, natural resources, watersheds, land use, agricultural practices, and agricultural production.

IV. A-1.1. SOIL RESOURCES MANAGEMENT POLICIES

Policy: Protection of Topsoil

Marin County soils shall be preserved as a precious natural resource, that along with water and sunlight makes all life possible. The topsoil is necessary to maintain the health of natural systems, for food production, and for future generations, and farming practices that build or maintain topsoil are encouraged.

Policy: Sustainable Soil Building Practices Shall Be Encouraged

Practices to be encouraged are:

- cover cropping and green manuring in rotation, at least biannually
- making and spreading of compost from farm animal wastes and crop residues, and other biomass sources
- avoiding bare soil whenever possible, especially during the rainy season and hot dry windy conditions to avoid erosion
- tilling and establishing row crops and perennial crops such as vineyards on the contours of hills to avoid erosion
- work toward fewer inputs from off-farm and more nutrient cycling on farm.
- managed grazing to build the soil and grasses
- the use of the Resource Conservation District's no-till drill in planting pasture and silage crops, and the avoidance in general of frequent tillage
- encourage agricultural diversity and crop rotations vs. mono-cropping
- discourage the use of toxic chemicals on the soil, including herbicides, pesticides, fungicides and nitrate fertilizers

Policy: Protection of Organic Farms in Bolinas Soil Zone

In the Bolinas soil zone, four organic row crop operations still survive. The County should place a high priority on insuring the future of these Pine Gulch row crop operations. In the absence of such protection, their contributions to the agricultural diversity of Marin, and the local food supply, could be lost. Both the sensitive ecology of Pine Gulch Creek drainage and these sustainable farms are environmental treasures. Both must enjoy the protection of the County.

Policy: Soil Improvement for Agriculture

Soil building practices are part of a sustainable food system and are necessary to the future of food production. Currently, little exists in the literature of the Soil Conservation Service on the practice of soil building or the possibility of improving marginal soils for their use in intensive, small-scale agriculture. Yet, this practice has proven successful for a number of Marin farms that have implemented soil-building programs in advance of production of crops and have continued soil building as part of the production cycle of the farm.

Program: Information and Instruction on Soil Building

The county shall encourage expansion of arable soils through soil building practices and shall support the Office of the Commissioner of Agriculture to have information and instruction available to county farmers on such practices.

Program: Reclassification of Soils

It is imperative that Marin County engage in a program of reclassification of soils to include those that can be brought into production through sustainable soil building techniques. Such soils comprise a substantial percentage of all soils in the county and are significant enough to change the map of soil classification to widen the margins deemed suitable for agriculture. In such a case, the county will be compelled to revisit those areas classified as marginal and to include a new classification, "Marginal and Improvable".

Program : Marin County Office of Commissioner of Agriculture Support for Sustainable Agriculture

Given that the demand for organic food is increasing at 25% per year, and that the environmental community and the public are concerned about the use of chemicals in the environment, it is reasonable that the Office of the Agriculture Commissioner shall:

- implement programs to educate the public on the importance of sustainable agriculture in Marin especially as

regards the importance of topsoil.

- make available information, classes, and hands-on workshops on sustainable farming and ranching practices.
- have alternative solutions to recommend to farmers and ranchers who apply for permits to use chemical fertilizers, germination accelerators, herbicides, pesticides, fungicides, and genetically modified organisms.

IV. A-2.1 Water Resource Management Policies

Agricultural practices that foster a positive marriage between food, fiber, fodder and fuel production and ecological communities should be encouraged. Innovative measures that store water in the ground and raise the water table, such as swales, creek restoration, and vegetative ground covers, are worthy of experimental implementation. While it is important and necessary to develop a sufficient and diverse food supply for all Marin residents from local sustainable sources, it is also vital to protect the ecological communities that uphold agricultural activities.

Program: Environmental Protection Information

The County should provide, through its Agricultural Commissioner's office, information and support for farmers and ranchers whose operations are near environmentally sensitive areas. Such information and support will guide agricultural development toward practices that are minimally impactful and compatible with the needs of living systems to coexist with human development. It shall be the intent of this element to support both a thriving agricultural economy and a healthy and diverse watershed.

Policy: Protection and Restoration of Watershed Areas

Watersheds are the foundational element of water quality, agriculture, recreation, and quality of life for all Marin residents. Wise agricultural practices that work in tandem with natural systems, protection through buffer zones and habitat conservation, and remediation of damage from overuse of wild areas through watershed restoration practices is a primary goal of a sustainable food system. All open space and watershed areas should be considered for their potential as migratory pollinator corridors.

Program: Restoration In Watershed Areas

Watershed areas shall be preserved by protecting, restoring, and enhancing riparian systems adjacent to agricultural operations where such natural systems may be compromised. The gradual restoration of creek flows during dry months, reforestation, re-introduction of native vegetation into riparian habitats, the use of swales on contours leading to downhill ponds and the storage water in the soil are examples of desirable practices.

Program: County Assistance to Farmers for Water Conservation

County government and utility districts should provide assistance to farmers for increased efficiency and recycling of water, including rain water harvesting, gray water, and constructed wetland treatment systems. This approach can reduce polluted flows into local watersheds while providing additional water resources to the farm community and additional wetland habitat (see OEC Constructed Wetlands for Wastewater Treatment,¹ by Donald Hammer).

IV A-10.3 Wild Foods

Early populations of indigenous peoples in Marin County found an abundance of wild foods on which to support themselves. The waterways, the bay and the ocean provided an abundance of seafood and shellfish. The forests provided nuts and mushrooms. The plains supported dense populations of elk, deer, and antelope, and the valleys were home to rabbit, quail, and squirrels. Early residents also foraged for materials for home making, clothing and medicine.

Policy: Continued Existence of Wild Foods

Today, wild foods consumed by Marin residents are primarily seafoods, many of which are cultivated in public and private waters. But foraged foods also include such traditional plant and animal food sources as acorn, hazelnut, berries, mushrooms, wild-crafted herbs, wild turkey, salmon and deer. For a variety of reasons, ranging from species decline to changes in diet and agency regulation, traditional wild foods are seldom harvested for market, with the exception of wild-crafted herbs. There is a significant, though poorly documented, harvest of mushrooms in Marin

County. For those Marin residents who search out and enjoy these delicacies, wildcrafted foods are a delightful and important link to the land and the seasons. Their continued existence is a vital concern.

Policy: Protection of Wild Foods Sources

Natural resources historically used as a food source, and their habitats, should be given special attention with regard to the restoration and protection of that resource toward long-term harvestable populations. Examples may include salmonid species, wild hazelnut, and native herbs.

Policy: Protection of Pollinators

A healthy diverse food system is dependant on pollinators to accomplish the cycle of fertility. These fragile agents are seldom recognized for their indispensable contribution to food production. Timber cutting, pesticides, herbicides, destruction of habitat, lack of nectar producing plants and disease are stressors on the pollinator population. The county should encourage the cultivation of pollinator corridors on farms and public land and easements and the elimination of agricultural chemical agents whenever possible to protect this element of the food system.

IV A-11. Environmentally Sound Agricultural Practices

In order to promote environmentally sound agricultural production, new or proposed agricultural uses in designated environmentally sensitive areas will be open to public review and comment. This is not meant to limit the expansion of agricultural use of land, but to insure the best possible compatibility of agriculture with environment.

Policy: Strengthen Local Agriculture

The county supports the preservation and protection of local agriculture, (defined as the production of food, fiber, fodder and fuel, the growing of row crops, the raising and keeping of livestock, dairies, aquaculture, timber, apiaries, nurseries, orcharding, floriculture, seed production, mushrooms, medicinal plants, etc.) food processing, and the promotion of sustainable farming practices. It is the policy of the County of Marin to promote and strengthen the role and economic viability of small and medium-sized family and owner-operated farms in the agricultural system, and develop farming opportunities for future generations. The county shall support policies and practices based on principles which insure intergenerational equity, safeguarding the rights and opportunities of future generations to be self-determining with regard to their food supply.

Policy: Regular Review of Impacts of County Agricultural Policies

The true test of any policy is time. Over time, many policy innovations that may have appeared as solutions to particular problems, proved to be mere interventions, lacking long term merit. They may have actually aggravated the problem, produced new problems, or had unintended effects. This is, if anything, more true of agricultural policy than of other types, since agricultural policy will play itself out in the health of the land, its future, and the future of all who depend upon it. Therefore, a regular re-examination of the correctness of agricultural policy is essential to the preservation of agriculture in the region.

Program: Food and Agriculture Policy Assessment Panel

The county shall support the development of a Food and Agriculture Policy Assessment Panel to regularly examine actual impacts of local, state and federal policies on agriculture. Are agricultural policies hurting or helping agriculture? An independent and thorough assessment is vital to formulation of future policy and correction of faulty policy.

Assessment shall be based on factual criteria, key indicators, and input from farmers and ranchers in Marin. The purpose of the assessment shall be wise development of policies that affect agriculture, removal of policy obstacles that impede agriculture's ability to thrive, and the adoption of policies that insure long-term sustainability of food and fiber production in Marin County.

Policy: Agriculture Infrastructure

The county shall promote the development of infrastructure that supports a sustainable and diverse food system and

farming as a way of life, including post production facilities for the production, marketing and sale of local products. Such facilities may be located on or off the farm. Such infrastructure includes, but is not limited to, barns, stables, packing sheds, livestock processing facilities, simple bed and breakfast accommodations on farms, inventory warehouses, greenhouses, methane generators, farm worker housing, fuel storage facilities, drying rooms, mushroom growing sheds, cheese making facilities, and visitor viewing and tasting accommodations.

It is not the purpose of this policy to promote non-agricultural infrastructure. Such improvements to infrastructure shall be limited to working farms and ranches and shall contribute to on farm income. Agricultural zoning should be revised to limit the size of additional residences permitted on agriculturally zoned properties in order to encourage the continued agricultural use. Expanded development on agricultural lands may require an agricultural easement in perpetuity to insure that only active farming operations and agricultural uses will benefit from improvements.

Policy: Biological Diversity

The county shall insure the preservation of a biologically diverse agricultural gene pool through support for locally based practices such as crop production, plant propagation, seed saving/exchange, and heritage livestock breeding.

Policy: Disclosure of Farm Practices.

The County supports the implementation of organic farming practices, and discourages use of genetic engineering and biocide applications. Toward support of a more sustainable food system, the county promotes communication between farmers and consumers concerning agricultural practices used in the production of food products.

Agricultural practices should be compatible with environmental, economic, and social sustainability guidelines as described in the Countywide Plan and elsewhere.

Policy: Risk Management vs. Precautionary Principle

Marin County shall promote the use of the Precautionary Principle where agriculture and food safety is at stake. In contrast to the Risk Management Principle that weighs hypothetical outcomes and determines hypothetical manageability of risk, the Precautionary Principle states that a practice must be proven to be safe in order to be allowed. Where risk is indeterminable and recall is questionable, as in the case of genetically modified organisms and genetically engineered seeds and substances, the Precautionary Principle is becoming the standard of choice in policy development. It is the responsibility of the county to ensure the environment is not degraded, nor its residents exposed to environmental or health hazards, in the production of local foods.

Policy: Protection of Third Party Organic Certification and Organic Farming Systems.

Conventional farm practices, non-certified organic farm practices and county support of conventional agriculture shall not impede on the ability of any farmer to meet third party organic certification such as California Certified Organic Farmers or USDA Organic certification requirements. The County will not permit conventional agricultural practices, or county support of conventional agricultural practices, to compromise organic agricultural practices.

Program: Labeling of Products Containing rBGH.

Food products produced in the County of Marin for local sale shall display clear, accurate, and complete labeling of all food and products derived from, processed with, produced by, containing or consisting of food and products containing Bovine Growth Hormone rBGH(rBST).

IV A-11.2 Genetically Modified Organisms(GMOs)

Program: "Genetic Drift"

Certified organic farms shall be protected from new farm practices with a demonstrated risk of genetic drift which may render adjacent organic crops unsuitable for CCOF certification. Organic farms shall be compensated by the offending party for any and all present and future losses due to such genetic drift.

Program: Labeling of Genetically Engineered Products

In order to protect Marin's organic farming industry, and to meet the expectations of the public for full transparency

where food safety is in question, food products produced in the county of Marin for local sale shall display clear, accurate, and complete labeling of all food and products derived from, processed with, produced by, containing or consisting of genetically engineered organisms.

Program: Label Disclosure Advocacy

The County will advocate for label disclosure and request State and Federal representatives support legislation that will clearly label food products that have been irradiated, genetically modified or have been exposed to bovine growth hormones (recombinant DNA).

Policy: Animal Damage Control Integrated Process

The purpose of the Food and Agriculture Element is to preserve a diverse and thriving sustainable farming system for the production food and fiber. Animal damage control is part of animal husbandry. The county supports an inclusive process to formulate the most innovative, holistic, humane, cost effective, non-toxic methods for protecting herd animals and poultry from predation. Such a process should include multiple perspectives from all points of the food web including both producers and consumers, and shall value and represent a whole-systems approach inclusive of the role of tertiary predators in a healthy watershed.

Program: Animal Damage Control Integrated Practices

The outcome of such a process is the formulation of a program of animal damage control that protects against the undue loss of herd animals and poultry while respecting the unique and vital contributions of tertiary predators to ecological communities. The goal is a balanced, integrated, safe, and sensible set of practices arising out of the shared understanding of all parties. Such policies may include special support and promotion of price programs that reflect "Predator Friendly Beef and Lamb".

IV A-11.1 Biocide Use

Organic agriculture is a valued agricultural activity by the county of Marin. Organic agriculture depends on a vast and intricate network of natural cycles and processes to be accomplished. Biocides are antithetical to organic agricultural practices. Their use in proximity to organic agricultural operations is of concern since biocide trespass would likely result in the diminishment or cessation of organic production and/or certification. Such diminishment or cessation, and/or the revocation of organic certification due to biocide contamination would result in harm to the biological farming operation and financial hardship to its practitioners. It is unwise and unfair to allow conventional agricultural systems to compromise or damage sustainable agricultural systems.

Policy: Encourage Private Use of Non-Toxics

The county shall encourage all landowners and property managers to use, at minimum, Integrated Pest Management utilizing the standards now practiced on county owned and managed land through an aggressive education effort.

Program: Biocide Application

Certified organic farms shall be protected from the use of biocides (fungicides, pesticides, and herbicides) which may render their crops unsuitable for organic certification, through the creation and maintenance of contiguous buffer zones, hedgerows, and windrows. The creation of these shall be required of the party using the biocides. To eliminate drift, no-wind requirements will control application of biocide. Organic farmers shall be compensated by the offending party for losses due to inappropriate application of biocides.

Program: Green Waste Management

The county shall reduce pollution and landfill use by instituting comprehensive localized countywide green waste composting and recycling programs and link them to on-farm soil fertility practices, thereby creating material links between the farm and urban corridors.

ECONOMIC INTEGRATOR

The Economic Integrator contains those policies and programs intended to create an agriculturally literate citizenry that understands, supports and promotes local food production and agriculture as a way of life, and appreciates the connections between the environment and the ecology of human health.

III.C. Economics

Though Marin County has managed to preserve a significant amount of its production base, it continues to import virtually everything it eats and export nearly everything it produces. This is not a sustainable pattern of production. The rapid loss of agricultural land and operations in the last few decades is a testament to the short-lived nature of the import-export system.

In order to preserve farmland, and farming as a way of life in the region, a more local economy based on the production base of agriculture must be supported. A key factor in recognizing the localization of the food system is the number of miles food travels from field to table. Today, in the United States, the average number of food miles of any given food product is 1,300.

Yet, in Marin County, the residents still have an option to eat locally and seasonally if they begin to change their patterns of eating. It will require good policy, good public process, and public education to bring about this localization of the food supply, but the benefits of doing so positively effect the economy, public health, social equity, labor markets, transportation, disaster preparedness, and quality of life for all Marin residents.

Eating with a sense of place is a key element to more sustainable patterns of living. It is a good solution that solves more than one problem without creating new ones. It is the economically smart thing to preserve the production base and it is the intergenerationally responsible thing to do as well.

Marin currently is home to approximately 250,000 people. Most of these residents spend a minimum of ten dollars a day on food. At that rate, feeding ourselves is conservatively a billion dollar a year enterprise. However, since a single coffee drink can easily cost three dollars, our collective food bill is likely closer to five times a billion dollars a year. At that rate, feeding ourselves would be the largest grossing industry in Marin if a concerted effort were made to localize even a modest percentage of production and procurement.

For example, if only 20% of the food eaten by Marin residents were purchased from Marin County farms, it would exceed a billion dollar a year enterprise, farming would be a profitable occupation, and farmland would be worth more as farmland than as any other competing use. In addition, Marin residents would regain a sense of place and connectedness to the landscape that would encourage the preservation of the land base for food production.

III.D. Consumer Awareness

In Marin's distant past, passive grazing and livestock ranching operations maintained their place in Marin's economy without much direct support from local consumers. Recently, though, these operations have come under intense pressure from large domestic producers, foreign producers and rising land costs. In addition, inheritance tax laws are making it almost impossible to pass the farm on to the next generation of farmers.

In modern times, the consumer is a necessary partner in preserving farming as a way of life in the region. Marin County has done some outreach to consumers to bring their attention to the plight of local farmers, but much more will have to be done if farming is to survive as a viable occupation in Marin County. Farmer's markets, CSAs, and local labels are important and necessary elements in the effort to reconnect consumers with farmers. But wise public policy can do so much more.

When consumers begin to request locally produced products, retailers, wholesalers, and restaurateurs respond. When Marin County schools adopt food policies that include purchasing from local farms, a new and substantial demand for locally produced foods is created. When the county fair and the civic center serve foods grown in Marin, a new kind of spirit and awareness is the result. When every Marin school child eats locally grown food in school meal programs, learns about the source of their meals, and has an opportunity to visit local farms, a new generation of local food enthusiasts is born. These kinds of policies and activities are necessary to localize production and demand.

IV A-11.3 Local Economics

Barriers and limitations to meeting the goal of an environmentally sound food policy include short sighted reliance on outdated and misleading indicators of economic profitability. Such indicators do not measure genuine progress of a local economy. Education regarding true cost accounting measures will raise public awareness of the full costs of production, processing, distribution, and consumption of contrasting agricultural systems including costs to human health, the environment and rural and urban communities.

Policy: Genuine Economic Indicators

Current linear economic units of measure fail to recognize the multiple and reciprocal benefits of local food systems to local economies. The County shall work in tandem with the Economic Commission, the Marin Food Policy Council and the Agriculture Commissioner, the UC Extension and the Agriculture community to establish a new, reliable and systemic set of genuine economic indicators that measure the contribution of Marin's agriculture to its economy. Such set of indicators will take into account the multi-functional effect of agriculture on the economy. The new set of indicators can more accurately reflect the value in preserving and supporting a vibrant and growing agricultural community and provide the motivation for doing so.

In the Midwest, Wisconsin has determined that the average Wisconsin farm generates \$720K in annual revenue. In Nebraska, the state has determined that the average Nebraska farm directly or indirectly supports eleven jobs and that every seven farms support one business in town. Many agricultural states recognize that there is a multiplier effect to owner-operated farm income and that each dollar the farm generates can be multiplied by 2.5, since that is the true effect of dollars sourced from the land and circulated in the community. Without a clear accounting of the value of agriculture to Marin, agriculture will continue to be placed at a disadvantage in planning decisions that determine land use based on economic potential.

Program: Economics of Local Food Production

The County shall foster local food production through the creation of economic incentives which assist local farms in competing for local markets. Examples may include the support of local food labeling efforts and assistance in the creation of on-farm product sale mechanisms.

Policy: Agricultural Job Development

The County shall support programs that stimulate living-wage job creation by promoting community and neighborhood based food production, processing and marketing. Such activities include farmers markets and tangential enterprises, products made from Marin county produced foods, special events featuring Marin produced foods and fibers, demonstrations of cheese making, wine making, honey processing, floral displays, instrument building from local hardwoods.

Policy: Housing for Agricultural Workers

The County recognizes the obvious ties between farm economic viability, farm workers and on-farm housing and shall undertake to review the ways in which current zoning restricts ability of farmers and ranchers to hire, hold and house farm workers. Farm workers deserve to find housing near their place of employment and farmers are not able to hire an affordable workforce when affordable housing is unavailable. The county shall pilot several housing solutions that address the needs of farm workers and farmers to develop stable, safe and healthy housing arrangements for farm workers and their families.

Program . Local Production for Local Consumption

The county shall support local consumption of local products by budgeting funds to help farmers' markets with education, publicity, and facilities, including planning for indoor year round locations.

IV C-2. Marin Organic and Other Local Food Labels

The Marin County Board of Supervisors should support the local label effort, Marin Organic, as an effective means to sustain family farms, sustainable agriculture, local food production and a healthy food supply for all Marin County

residents. Through this local marketing program, the county can meet a goal of increasing consumer awareness of locally grown foods.

Program: Funding for Marin Agriculture Marketing Labels

The County of Marin shall budget funds to assist the Marin Organic Label and other organizations that help local farmers market their products locally. Such label programs must maintain a standard of production that meets local needs and protects the environment.

Program : Local Label Program

The County shall assist in the dissemination of the Marin Organic label to define Marin County produced and processed foods that can be used by grocery stores, institutions, growers and restaurants.

IV C-3. Institutional Support for Local Agriculture

Program: Cooperative Municipal Marketing Programs

The County shall work with municipalities to create prime locations for farmers¹ markets, farm stands and CSA shares distribution points. Such locations should be designated at community gathering places where it is convenient for consumers to connect with farmers. The County shall encourage popularity of purchasing locally grown food by ensuring high profile locations for showcasing local marketing programs. County properties such as libraries, courthouses, etc. are good places for the public to find locally produced foods. Use of such locations should be free or for a nominal fee to the farmers who provide a service to the community in selling their products.

Program: Public Awareness Campaign

The county shall promote local agriculture by helping to educate the public about the importance of Marin farms to the economy and food security.

Policy: County Supervisors Promote Locally Produced Foods

Members of Board of Supervisors shall request Marin County grown foods, dairy products, olive oils and wines be served, as a condition of their appearance, at dinner engagements or any special events where food is served. On such occasions, county supervisors will announce that locally produced food is being served as part of their opening remarks. Menu cards listing the names and locations of the farms supplying ingredients for the event will be showcased on serving and dining tables.

Program: Maintain Current Listing of Locally Produced Foods

The county will maintain and provide a current listing of local farms and processors who can provide locally grown produce and products and will make such list available at all venues where county supervisors appear so that caterers and chefs can easily purchase locally grown food.

Program: \$20 a Week Program

Encourage and champion a campaign to promote use of Marin County produced food (e.g. "\$20 per week program" whereby \$20 a week of a family's food budget is dedicated toward Marin County produced food. County shall encourage local restaurants and grocery stores to participate in the campaign through newspaper ads and menus.

Policy: Marin County Fair Supports Marin County Agriculture

The Marin County Board of Supervisors shall request that the Marin County Fair return to agricultural themes exclusively in promotion of the fair. No other industry shall be showcased in the themes and overarching marketing promotion of the county fair.

Programs: Promotion of Local Agriculture

The Marin County Fair shall:

1. Establish a baseline quantity for use of Marin County produced and processed foods at concessions and promote such foods.
2. Such baseline shall move upward each year, both in quantity and diversity.
3. The Marin County Fair shall return to, and remain a celebration of, Marin County agriculture.
4. The Supporter Banquet shall serve exclusively Marin County grown and processed foods and printed menus shall reflect the origins of the foods served and the names and locations of the farms that produced them.
5. The County Fair shall undertake to reinvigorate its showcasing of local food production and animal husbandry by working together with farmers and ranchers to bring more farm animals, and more locally grown produce and products, to the fair. Residents who visit the fair should gain a first-hand experience of how farm animals contribute to their lives and to the small farm system. Activities such as sheep shearing, milking, herding, spinning, cheese-making, etc. should be in progress on all days of the fair at all times throughout the day, in all corners of the fair.

In addition, special events that demonstrate the direct value of agriculture to the lives of residents, and that draw media attention, such as making a suit in a few hours from sheep to loom to model, shall be encouraged. As much as possible, the goal shall be to demonstrate the entire system of production: from whole ingredients or raw materials to finished products that can be sampled or experienced by fair goers. These kinds of programs make valuable connections for consumers and are traditional activities for county fairs.

Program: Coalition of Support for Local Agriculture

The Board of Supervisors shall build a coalition of business groups to help further the cause by:

1. Defining how Marin county-based products positively affect Marin's economy and local producers.
2. Including the hospitality, media and grocery industries in the process
3. Providing information on how Marin's sustainable resources are positively affected
4. Heightening awareness of the wide variety of products available to all ethnic and food cultures.
5. Developing marketing strategies that integrate local agriculture with local businesses and enhance the ability of local businesses to attract customers.

Program: Food System Excellence Awards

Through the Marin Food Policy Council, the Board of Supervisors shall support an annual awards program, recognizing home, business, and institutional contributions to Marin's food system.

Program: Public Service Announcements

The Board of Supervisors shall produce public service announcements promoting Marin's agriculture.

Section IV B: Food & Agricultural Education

Policy: Public Schools Should Promote Agricultural Literacy

An agriculturally literate citizenry understands, supports, and promotes local food production and agriculture as a way of life, and appreciates the connections between the environment and ecology of human health. Since agricultural literacy is a cornerstone of consumer support for a sustainable food system, and since modern farming operations are dependent on consumer support for their economic viability, it shall be the goal of the county to promote agricultural literacy in the public schools in K through Adult education.

Policy: Educational Institutions Should Promote Family Health, Sustainable Agriculture, and Environmental Restoration

Educational institutions should recognize that the sharing of food is a fundamental experience for all peoples; a primary way to nurture and celebrate our cultural diversity, and an excellent bridge for building friendships, and

inter-generational bonds. Educational institutions should recognize the vital connection between a healthy diet and a student's ability to learn effectively and achieve high standards in school. The Board of Supervisors should encourage educational institutions to recognize their role, as part of the larger community, to promote family health, sustainable agriculture, and environmental restoration.

Program: Educational Mission to Improve the Health of All Residents

The educational mission of all Marin County schools should include improvement of the health of the entire community by teaching students and families ways to establish and maintain life-long eating habits. This mission shall be accomplished through nutrition education, school garden experiences, the food served in schools, and core academic content in the classroom.

Program: Adoption of the Vision of a Garden in Every School

Marin County should adopt and support the "Vision of a Garden in Every School" initiative through the California State Department of Education. These instructional gardens should be integrated with the school meal programs, classroom curriculum, nutrient, material and energy recycling, nutrition education, composting, local sustainable agriculture, and a curriculum that make connections between the environment and the ecology of human health. These efforts should be integrated with existing programs and educational food projects within the county, such as the recently formed Marin Schools Food Systems Project. This project of the Environmental Educators of Marin (EECOM) seeks to align a coalition of Marin government and non-governmental organizations in support of the aforementioned goals.

IV B-1 Designation of Agricultural areas

IV B-2 Program: Marin School Food Policy and Curriculum

The county shall encourage community process that leads to the development of a food policy for Marin County's nineteen school districts. Such food policies shall support the purchase of locally, sustainably produced foods for service in school meal programs. Such policies shall also include the construction and maintenance of appropriate dining facilities, adequate time for eating, suitable ambiance of food service facilities, complete and transparent accountability of school meal services, an instructional garden at every school and an integrated curriculum that makes the connections between diet, health and environment. In the interest of the health of the youngest members of the community, the county shall discourage schools from entering into contracts with cola and fast-food corporations.

Program: Kindergarten - Adult Agriculture Education

The Board of Supervisors shall encourage that agriculture and the food system be instated as part of the educational curriculum of Marin County schools. Such learning programs shall be implemented from Kindergarten to Adult levels and will include field trips from schools to local farms, and visits from farmers, farm workers, and farm animals to schools.

Sustainable Campus of Marin University

The University of California's (UC) roots are in agriculture, UC, chartered by the California State Legislature in 1868, is a result of the federal Morrill Land Grant Act of 1862, which established perpetual endowments for colleges of agriculture and mechanical arts. While some states have several land-grant universities, California has only one, so the direction of its research and outreach programs is particularly critical. Nationally, land grant colleges conduct agriculture research on a total of 860,000 acres, yet only 150 of those acres is devoted to organic and sustainable farming research and not a single acre of those is in California. Less than 1% of the total budget of all combined land grant colleges in the United States is allocated to sustainable, family farm scale, farming research. According to Organic Farming Research Foundation, there are only nine acres in the UC land grant system identified as organic, and none of them are certified organic. Roots of Change - Agriculture, Ecology and Health in California, Report of Funders Agriculture Working Group, March 2001.

Policy: Development of Institution of Higher Learning Dedicated to Sustainable Patterns of Living

Research on organic farming methods can only be conducted on land that is certified organic. Therefore, it is in the best interest of the public and Marin County, to add acreage to the farming research agenda that is certified organic. A multiple use, agriculturally oriented education facility located on the St. Vincent's/Silveira can provide that unique research capability while at the same time providing a non-toxic policy for the campus and the adjacent wetlands, healthful food for the campus, a built-in revenue generator through the school meal service, a diverse, nourishing, income generating CSA program for Marin residents, and a sustainable agriculture component as part of the curriculum for students.

Program: Exploration of Feasibility of St. Vincent's/Silveira Educational Facility

The county shall explore the feasibility of situating a campus for an educational facility or college dedicated to sustainable patterns of living on the St. Vincent/Silveira ranch. Where permitted, land in the Baylands Protection Corridor shall be dedicated to agriculture and education. This unique addition to the Marin's educational system will focus on sustainable agriculture, sustainable building practices, renewable energy, food systems, environmental/wetlands restoration and social systems such as consensus building, public policy, community organizing and conflict resolution. The campus will be designed to be self-sustaining with regard to food, waste management, water recycling, energy and transportation and will be a model for sustainable communities.

The campus population will be determined primarily by the carrying capacity of its location. Marin students shall have priority status in attending the facility. In this way Marin County can begin to build a critical mass of residents who are prepared to live by principles of sustainability because they will have been exposed to the information and experiences that engender that kind of commitment.

The campus is uniquely positioned to promote generation of alternative energy production and to use that energy to be 100% self-contained. The campus can provide and utilize passive solar, photovoltaic, wind, and tidal generation of power and can also use animal waste from the organic dairy and creamery to power a methane generator. The live power of farm animals is an additional part of the equation. The study of these forms of alternative power are the substantive and practical energy curriculum.

Since the campus is located near and on wetlands and the Bay, environmental restoration is a natural and logical element to add to the curriculum. Students can study the sensitive wetlands environment and ecology, native plants, the Bay aquatic environment and wildlife while making a useful contribution to its protection and health.

Waste management of campus systems is another obvious area of study in a sustainability curriculum. All waste streams can be analyzed for reduction or elimination by students. Water recycling, wastewater treatment pond systems, material reduction, recycling and reuse will also point the campus in the direction of 100% containment. As the campus reaches goals of sustainability and reduction of dependence on off-campus resources,, student tuition and farm income will provide a substantial percentage of operating expenses. *The economics of the facility will allow it to follow a more independent and publicly responsive research agenda.*

Campus population will be held in check. Recent Annenburg studies of learning communities show a decrease in learning and the well being of students and staff when learning communities exceed certain boundaries. The primary limitation shall be the carrying capacity of the land.

Lastly, the facility will complete its compliment of curriculum subjects pertaining to sustainability by offering courses in the social technologies of community development, sustainable planning, consensus building, conflict resolution, public discourse, policy development, community organizing and public service. This social element will ultimately become the foundation upon which the other course-work, and the college community, rest.

In the Agricultural Economic Feasibility Study of the St. Vincent's/Silveira Site (December 1998) prepared by Strong Associates for the County of Marin and City of San Rafael Joint St. Vincent's/Silveira Taskforce the properties are identified as the largest remaining undeveloped land along the Highway 101 corridor in central Marin County. The analysis finds that "some combination of existing and new agricultural uses on the site would be economically viable, provided water can be made available at a reasonable cost. The report recommends a cropping system that includes the existing dairy, oat hay operation, wine grape production, and vegetable farming.

The report recommends sales of crops through roadside stand, U-pick, farmers' market, restaurants and CSA distribution system. These kinds of operations can be run by students of the college and can be used to understand

economics, marketing, sales, and distribution systems. They would also represent revenue streams for the college that would offset operational costs.

Program: Rezoning of City-Centered Corridor to Protect Agricultural Land

Large agricultural properties in the City-Centered Corridor should be rezoned to densities consistent with agricultural zoning densities in the Inland Rural Corridor, and the same standards and requirements as in revised A, A-RP and C-APZ zoning should be incorporated.

Policy: Marin County Schools Local Procurement Program

The County shall encourage and support Marin County schools, K - Adult, to develop a food policy and program of procurement that requires locally grown and processed foods for service in school meal programs.

Policy: Marin Community College Curriculum

The county shall encourage and support a comprehensive program dedicated to the teaching of sustainable agriculture and supporting demonstration facility at Indian Valley Campus and at the Kentfield Campus of the College of Marin. Such program shall include courses on food systems theory, small farm curriculum, community food security principles, and sustainable agriculture practices.

Program: Community College Sustainable Agriculture Demonstration Programs

The county shall assist with the development of both campuses as model organic urban farms and gardens to the greatest extent possible and shall support project-based learning linked to the food system at each campus. Each program shall be encouraged to produce a significant amount of the food served on campus from the campus grounds as part of the learning experience.

IV B-3 Agricultural Education in the Parks

Policy: Agricultural Enterprises in the Parks

Some Marin County ranches and farms are located inside State and National parks. Wherever such is the case, agricultural operations inside public parks shall be preserved and allowed to continue operations for the benefit of Marin residents and future generations. Such enterprises enrich the character of parks and provide a unique resource for education, recreation, beauty, and historical context. The residents of Marin County support the protection of these living treasures and insist on their preservation.

IV B-4 Agricultural Education Farm(s)/Ranch(es)

Program: Provision of a method which allows a broad array of interests involved in the local food system, a much broader scope than just agriculture, to share their ideas and concerns for how government actions impact food issues.

SOCIAL INTEGRATOR

The Social Integrator contains those policies and programs intended to provide for the food security of Marin County residents. Such policies and programs include emergency food programs, supplemental food programs, and other programs that solve problems of food access for all Marin residents. It also explores programs that use food as an organizing principle for community. The Social Integrator recognizes that access to food is a human right and a responsibility of all residents.

Section IV C: Community Food Security

Community Food Security is defined as all residents having access to a nutritionally adequate, culturally appropriate diet from local sustainable sources. The purpose of community food security assessment is to create a food system that provides each resident access to such a diet.

The concept of community food security provides an integrated framework for developing a coherent approach to food policy at the municipal level. A food security analysis embraces a systemic view of the causes of hunger and poor nutrition within communities while identifying the changes necessary to prevent their occurrence. As an

effective tool for evaluating and addressing food and agriculture policy, it emphasizes the need to build and coordinate community institutions to ensure access and availability to an acceptable and adequate diet for its residents. It should be seen as a form of community development and empowerment which complements and extends the traditional approach of addressing food and hunger issues at the individual level.

In terms of disaster preparedness, and in planning for the future of the people of Marin, the CWP cannot ignore the possibility of future food shortages. Estimates calculate that only 20% of U.S. topsoil remains in agriculture and that industrial agribusiness practices are depleting topsoil at a current rate of 8 bushels of topsoil lost to create 1 bushel of grain. Water shortages for agriculture are predicted within the next 10 years. Current energy shortages are already interfering with farmers' ability to pump water to irrigate crops, to warm citrus fields and other temperature sensitive crops on degree days, and to transport food to communities. Since, currently, the majority of Marin's food comes from outside county borders, primarily from many miles away, it is only prudent that the County begin to plan for local food security.

Policy: Sustainable Food Supply Planning

The county will incorporate community food security as an essential consideration when planning communities, transportation programs, and economic policies, and when allocating County resources.

Policy: Disaster Preparedness

The County shall include in its planning process consideration of a disaster preparedness plan that includes local food production and access. The planning process will respond to the geographic fact that Marin County is functionally an island with over 70 miles of coastline. Though the county is connected to Sonoma County by Highway 101, most of its food supply arrives by way of the Golden Gate Bridge and the Richmond/San Rafael Bridge. Even so, the link of the 101 corridor is tenuous at best, likely to be either destroyed, disrupted or overwhelmed in a natural disaster of even moderate proportion.

What then is the plan for feeding the people? With over 250,000 lives at risk, a planning process aimed at sustainability that fails to recognize the geographic reality of Marin's relative isolation in case of an emergency is flawed. A disaster preparedness plan for this county must include a pro-active forecast of food production sufficient to sustain the population over time in the event that such circumstances arise. Such food production must also be located near where people live. This is what is meant by community food security.

Program: Public Service Announcements

The County shall use local access television and micro-radio, FM radio, in addition to local newspapers and community outreach programs to support a program of regular public service announcements that make clear the special vulnerabilities of Marin's population to food shortages in case of a disaster. Regular public service announcements that teach Marin residents what to have on hand in the way of emergency food supplies are necessary. Radios, flashlights, water, medicine and emergency fuel supplies should be included. Staple foods such as grains and beans, if sufficient amounts are on hand and residents retain water access and an ability to cook, will provide a base of nourishment, but community gardens and a thriving agriculture must be prepared to supply the rest. As the county moves to envision and implement such a plan, it takes the lead in community planning among other municipalities in the nation. Clearly, local self-sufficiency cannot be surpassed as a disaster preparedness strategy.

Fuel costs are rising and the economy is uncertain. Energy supplies are tightening and energy affects transportation. Even without a natural disaster, a human-made one is quite foreseeable. Marin residents will be comforted in knowing that the county has planned for their security by moving to implement a practical plan of food access for all residents.

Program: Support for Food Banks

The county shall increase support for food banks, including the creation of additional food banks throughout the county and the setting aside of public land for the production of food to alleviate hunger. The County of Marin has only one food bank. In addition, the county's single food bank requires more county support as a resource for the protection of all residents than it is currently given.

At present, the food bank serves primarily that portion of the Marin population that experiences temporary, intermittent, or regular household food shortages. Even so, it is stretched to respond to recent increases in need within that at-risk population base. Meals received through the food bank are not exceedingly nutritious and lack a daily component of fresh, wholesome produce. On rare occasions, such as the Mt. Vision fire, the food bank is pressed into service as a true emergency food distribution center, though it's resources are not adequate to meet a sudden emergency of that nature for long.

The food bank is not currently funded or prepared to serve as a feeding station for a significant portion of Marin's population for any length of time, though that was the original intention at the time of its creation. In other communities, a cutting-edge integration of the food bank with the community includes surrounding the food bank with a "green apron" for production of fresh food. This strategy also creates jobs within the food system and more than serves the needs of the food bank, supplemental food programs, Headstart, church kitchens, soup kitchens and elder programs.

Program: Survey of Nutritional Shortfall and Community Need

The County shall create a task force, through the Marin Food Policy Council, to survey the need within the county for supplemental food. Such survey will include information from food banks, supplemental food programs, Headstart, church kitchens, soup kitchens, food stamp, welfare, and elder programs. The information will be used to determine how much public land should be set aside for food production to serve clients of supplemental feeding programs.

The County shall also work through the task force to determine how much public land should be used to create a fresh food pantry for disaster preparedness that would serve all residents.

Policy: Breastmilk is a Sustainable Natural Resource

A primary purpose of food security planning is to provide for the youngest and most vulnerable members of the community. Infants are most at risk from food and water shortages and are least able to withstand wrenching changes in diet and routine. Authorities agree that breastmilk, whenever available, is the most appropriate and nourishing food for infants and young children. The county recognizes breastmilk as a sustainable natural resource and acknowledges its role in helping to achieve community food security and nutritional health in developing children.

Program- Support for Breastfeeding Programs

The county will encourage/support programs that increase the rates of initiation and duration of breastfeeding. The county will also encourage/support programs that provide adequate nutrition for nursing mothers.

IV C-1. Farmer's Markets

In cooperation with the trend toward fresh produce, the Marin Farmer's Market has helped connect consumers directly to farmers and their produce since 1983. Farmers' Markets have sprung up at the Civic Center, Downtown San Rafael, the Canal district, Sausalito, Novato, Pt. Reyes, San Geronimo, Fairfax, and Corte Madera to serve the increasing number of consumers seeking fresher, tastier, local produce, and a relationship with those who are producing their food. There are approximately 80,000 "small farmers" in California, 5,000 of which market to consumers directly at 300 farmer's markets all over the state. Farmers' markets serve to create a local gathering place for communities, where people can meet on a weekly basis. In addition to farm products, farmers markets create a place for local artisans, craftspersons, herbalists, etc.

IV C-4. Community Supported Agriculture

The county has experienced a few Community Supported Agriculture (CSA) farms starting up in the last several years. This new form of local marketing and support for farms is growing all over the world. CSAs are a vital link between farms and communities, producers and consumers. These links are valuable networks that build the bonds between people and land. CSAs deliver a healthful, seasonal, fresh and diverse food supply directly to residents who benefit both in pricing and from the relationship it provides to the farm. CSAs are an example of the blend between oldest and most modern forms of distribution.

Policy: CSA Support

The County shall not raise obstacles, and shall seek to remove obstacles and barriers, to the innovative distribution system known as CSA. The county shall work cooperatively with farmers and consumers to find mutually agreeable means of accomplishing the purpose CSA distribution networks serve without placing undue regulatory burdens on the farmer or the recipient.

IV C-5. Right to Farm

Policy: Use of Precautionary Principle Regarding Grievance

If non-farm residents should establish a grievance over a farm practice involving the use of pending use of pesticides, the county will apply the precautionary rule regarding matters of public health and wildlife impacts.

IV C-6. Marin Food Policy Council

The Marin Food Policy Council is a broad-based coalition of community leaders, organizations and interested citizens who gather information and make recommendations regarding local food systems planning and policy formulation. Food policy development is a systemic approach to the cultivation of a sustainable agriculture and food system. It fosters policies which shorten the distance from field to table while benefiting the land, economy, and well being of all residents.

The Marin Food Policy Council provides a valuable service to the county by providing the county with a cooperative framework for action which addresses food policy issues and assists residents in gaining a useful understanding of the food system.

Policy: Support for Marin Food Policy Council

The Marin Food Policy Council shall serve in an advisory capacity to the Health and Human Services Department and the Board of Supervisors on food issues and provide a forum to discuss food related topics of concern to the community. The county shall encourage and support activities of the Marin Food Policy Council and shall invite the recommendations of the council where questions of planning and use of county resources are involved.

A primary goal of food policy is to generate information which provides a better understanding of the current status of Marin County's food system and to identify positive examples for how farmers, consumers, processors, and marketers are benefiting by focusing on food. Four primary areas of concern the Marin Food Policy Council feels can and should provide the foundation for identifying and evaluating food policies which lead to an equitable and sustainable food system for county residents are:

1. Access to nutritious food for all residents
2. Sustainable management of Marin County's resources
3. Promotion of diversity in Marin County foods, culture, and people
4. Promotion of prosperous, independent farm and food businesses in Marin County

Sustainability of a food system is directly proportional to the distance food travels from the farm to the table and all that implies. Decreasing the distance from field to table is a primary step in the direction of a sustainable pattern of living. A decision to support the Marin Food Policy Council recognizes the value to the county of creating such a vision and is an important step in making a sustainable future possible.

Program: Marin Food Policy Council

The County shall support the development and activities of the Marin Food Policy Council. Such council shall provide a framework for action for policy recommendations affecting food access, sustainable agriculture, and the economic future of a local food system. The Marin Food Policy Council shall respond to requests from the Board of supervisors regarding food issues in the county.

Program: Adoption and Implementation of Food Systems Policy

The County shall adopt a county food policy. Such policy shall make clear the connections between economic development, environmental protection, and social equity as hallmarks of a sustainable food system.

Program : Examination of State and Local Regulation

The county shall conduct an examination of how state and local regulations and policies affect Marin agriculture. Such an examination can be used to increase the production and consumption of Marin County grown food and food products.

Program: Identification of Model Food Policies

An identification of policies and programs being used in other states and cities, which might be adapted to improve the Marin County food system shall be conducted by the Marin Food Policy Council and presented to the Board of Supervisors.

Program: Preparation and Submission of Food Policy Report

The County shall request the preparation and submission of a regular food policy report from the Food Policy Council to the Board of Supervisors that examines how policy may be used to increase the production and consumption of Marin County grown food and food products.

Program: Edible Landscaping and Community Design

The county shall work through its planning department to take the initiative in designing food into communities through food production in parks and open space, edible landscaping of streets, office buildings and playing fields, community gardens, and edible landscaping of public buildings. Such examples shall provide direction and motivation for residents to implement edible landscaping in households, private yards and businesses.

Food produced on public lands, parks and open space shall be available to all who enjoy Marin’s recreational areas and food harvested through county gleaning programs shall be made available to Marin County emergency food programs.

Program: Creation of Gleaning Program through Marin Organic

The County shall work through the Marin Organic local label organic program to coordinate a gleaning program that rescues that part of the harvest that would not otherwise reach market and deliver it to programs that serve Marin residents with limited access to fresh food.

Program: Creation of Food Recovery Program through Local Chefs and Caterers

The County shall work with local catering and chefs organizations to develop a food recovery program that rescues food that would otherwise be thrown away and deliver it to programs that serve Marin resident with limited access to adequate diet.

Program: Increasing Food Access for the Hungry

Such programs should also link residents with limited access to nutritious, fresh foods to community garden programs and gardening classes through adult schools and through the Master Gardeners Program. Any residents that are eligible for emergency food assistance such as the WIC program, food bank, food stamps or soup kitchens should be linked to a community garden. The county will create a task force of emergency food providers and representatives from communities of need and the county to calculate how many acres of community gardens are needed to serve these residents.

Policy: Community Gardens - A Foot of Earth

The county shall support the location and development of community gardens to enhance the beauty and diversity of neighborhoods, to provide a food source for disaster preparedness, to encourage self-reliance, to support dietary diversity and seasonality, to positively influence the health of Marin residents, and to promote cultural and intergenerational bridges. The county shall support the creation of community gardens such that every resident with a desire to grow some part of their diet has access to a garden plot, or pied a terre.

Program: Inventory of Available Space for Gardens

The county shall inventory lots and easements throughout the county that can be used for community gardens and county jail gardens. The total amount of acreage needed shall be determined by the working definition of a community garden, “To, at minimum, supply each member of the garden with one fruit or vegetable a day”. The county shall work through the Agricultural Commissioner’s Office, the County Extension, the Department of

Employment and the Master Gardener's Program to support residents in locating, developing and managing community gardens.

Policy: Self-Sufficiency and Economic Equity

Marin County welcomes all members of its culturally diverse population and recognizes the ability of food to build bridges across generations and cultures. The county recognizes the diverse agricultural skills of its immigrant residents and their ability to generate a culturally diverse food supply if land were available. The county shall assist low-income residents and communities in gaining access to public land, materials, food production and nutrition education programs supported by county services for the purposes of raising food crops. In this way the county supports the production of foods which reflect the cultural diversity of the region within the limitations of the local agriculture. Such policy recognizes the right and responsibility of all residents to a culturally appropriate, nutritionally adequate diet through local sustainable sources.

Program: Alleviation of Hunger

The county shall support public, non-profit and private efforts that promote nutrition education and provide emergency food supplies such as food banks, food recovery, soup kitchen and gleanings programs which increase access to adequate and nutritious food.

Policy: Institutional Buying Policies

Certain programs can play a vital role in supporting the reorientation of the local food system to be more sustainable and equitable. The Board of Supervisors shall make a statement to the Executive branch agencies and county employees concerning the importance of using county programs and policies to assist in developing Marin County's food system and economy. This statement should include several specific action steps including:

Program: Use and Consumption of Marin County Foods

The county shall promote the use and consumption of Marin County grown and processed food in county supported institutions and activities. This commitment will include a specific time goal, e.g. by the year 2006 at least 20% of the food purchased and served by county institutions will be grown and processed in Marin.

Program: Agency Review of Procurement Practices

The county shall request each county agency involved in purchasing or using food products, or involved in regulation or licensing of food production and processing activities, report to BOS no later than June, 2002, concerning how it is promoting and encouraging the utilization of Marin County raised foods or assisting the creation and operation of food-based Marin County businesses and a set of specific suggestions for actions it can take to do so in the future.

Program: Inter-agency Food Task Force

The county shall create an inter-agency food task force to bring together representatives of all county agencies involved in the acquisition and use of food products, the promotion or regulation of food related businesses, or the delivery of food assistance for nutrition education programs to develop an integrated program of procurement from local agriculture.

Program: Baseline Study

The Board of Supervisors shall request that the departments of agriculture, economic development, planning, health, transportation, energy and others coordinate the design and completion of a baseline study to identify:

- a) The current level of economic activity, by quantity and category, in Marin County's food based economy, for production, consumption, processing and marketing activities as well as the tangential positive economic impacts of the county's land-based enterprises;
- b) Present policies and actions of state agencies relating to the use of Marin County grown and processed foods;
- c) Any barriers or obstacles which limit the creation or growth of food-based businesses in Marin County;
4. Opportunities to foster collaboration between state agencies, county agencies, and other public and private

entities, for promoting Marin County's food policy goals.

5. Current state of need among Marin County residents with limited access to adequate and nutritious food.

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