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Public Policies & Public Choices: Issues for Michigan

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The Environmental Quality Incentives Program: Locally Managing Natural Resources

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The theme of flexibility is fundamental to the 1996 Farm Bill--flexibility to plant according to market signals, flexibility to manage production and marketing risks through alternative crop insurance tools, and flexibility to locally manage natural resource problems using comprehensive conservation planning.

The 1996 Farm Bill re-authorized the Environmental Conservation Acreage Reserve Program (ECARP) as the umbrella conservation program that encompasses the Conservation Reserve Program, the Wetlands Reserve Program, and the newly created Environmental Quality Incentives Program. The Environmental Quality Incentives Program (EQIP) replaced the Agricultural Conservation Program, the Water Quality Incentives Program, the Great Plains Conservation Program, and the Colorado River Basin Salinity Control Program.

As part of EQIP, Congress replaced the traditional top-down, "one-size-fits-all" conservation cost share programs with a more flexible, locally-controlled, targeted program to assist farmers and ranchers in combating nonpoint source pollution. EQIP provides technical, financial, and educational assistance primarily in designated priority areas where significant natural resource problems have been identified using a specified process. Nationally, one-half of the EQIP funding is targeted to natural resource problems related to livestock production and the other half to more general agricultural conservation priorities.

Conservation planning is a key requirement to receive EQIP funds. All EQIP activities must be carried out according to a conservation plan. Conservation plans are site-specific for each farm or ranch and describe the conservation practices that will be used to protect the soil, water, air, plant and animal resources. Plans are developed by farmers with technical assistance provided by NRCS staff or other certified conservation planner.

Unlike the Conservation Reserve Program, which pays farmers to idle land from agricultural production, EQIP provides assistance to farmers and ranchers to conserve and improve land while it remains in agricultural production. There are a few conservation practices allowed within EQIP that will take some land out of agricultural production, such as filter strips and riparian buffer strips, but these practices use only a small percentage of the EQIP funds and affect only a small portion of the cropland.

Farmers and ranchers with natural resource problems who meet the producer and land eligibility criteria may submit an application and conservation plan for an EQIP contract. EQIP applications are accepted by the Natural Resources Conservation Service, Farm Service Agency and Conservation Districts throughout the year. EQIP contracts are for a minimum of five years and a maximum of ten years. Under an EQIP contract, a producer may receive cost-share and incentive payments for certain conservation practices.

The Environmental Quality Incentives Program has an authorized budget of $1.3 billion over the seven year period beginning in fiscal year 1996 through fiscal year 2002, with annual amounts of $200 million per year after the initial transition year of $130 million. Michigan's allocation for fiscal year 1997 was $4.4 million, and it is expected to be approximately $3.5 million for fiscal year 1998. Any EQIP funds not obligated by September 30th of the current fiscal year will no longer be available for the program.

Locally-Led Conservation

EQIP is managed jointly between two United States Department of Agriculture agencies: the Natural Resources Conservation Service (NRCS) and the Farm Service Agency (FSA), with NRCS as the lead agency for the program. Because EQIP is based on locally determined conservation needs, Conservation Districts play a central role in the development and implementation of the program.

Implementation of EQIP in Michigan is guided, in part, by a statewide group of agriculture and natural resource leaders, referred to as the Michigan Technical Committee. The Michigan

Technical Committee serves as an advisory body to the NRCS's State Conservationist. The majority of EQIP funds are targeted in priority areas that are established based on proposals submitted by local work groups. The Michigan Technical Committee reviews proposals for identifying and funding priority areas addressing environmental problems and makes recommendations to the State Conservationist as to which proposals should be approved. Several criteria are used to select the priority areas: the significance of the environmental and natural resources conditions, special environmental problems, expected producer participation, estimated program cost, and whether State or local governments offer financial or technical assistance. If a proposal is selected, a Conservation Priority Area (CPA) is created[1]. Conservation Priority Areas are reviewed annually and may be modified annually.

Local Conservation Districts have the responsibility to establish local work groups to determine the most significant natural resource needs of the community. The local work group then quantifies the natural resource needs and obtains funding to resolve the environmental problems from a variety of federal, state, local, and private sources. These local work groups have the opportunity, based on its natural resource assessment, to develop a proposal to establish a priority area in their community and receive EQIP funds.

Once a proposal is selected to be a designated CPA, the local work group is charged with designing criteria for ranking the primary natural resource concerns in that priority area. The ranking criteria are used to rank individual farmer applications for an EQIP contract in that priority area. Local work groups also have the responsibility for establishing the cost share payment rates for structural practices and incentive payment rates for those land management practices identified in the proposal as appropriate for addressing the environmental problems in that designated conservation priority area. The State-level Michigan Technical Committee reviews both the ranking criteria and payment rates for each designated priority area.

There are also opportunities for Michigan State University Extension to assist the local work groups. Extension can assist the local work groups in determining local natural resource and environmental concerns, writing a priority area proposal, and designing performance indicators to assess the impacts of the program on the impaired natural resources.

The remainder of this briefing paper covers important issues for those seeking funds from EQIP. Designation of state conservation priority areas and statewide priority resource concerns is discussed first. General information on program eligibility, the application, ranking and selection process, and cost-share and incentive payments for conservation practices follows, as well as a discussion of conservation planning and its importance to program participation. Finally, three scenarios are provided to assist in matching individual farm resource concerns identified in the conservation plan to EQIP priority resource concerns.

State Conservation Priority Areas

One of the most important aspects of the EQIP is that assistance is targeted to specific resource concerns within designated priority areas. A priority area is a watershed or a specific geographic region with significant soil, water or related natural resource concerns. When implementing EQIP, the Michigan Technical Committee decided that at least sixty-five percent of the state's EQIP fund allocation will go toward supporting the designated Conservation Priority Areas (CPA), with the remaining funds available statewide to address statewide natural resource concerns.

The fourteen designated Conservation Priority Areas for fiscal year 1997-98 include: the Animal Manure Area, the Bays de Noc Area, the Capital Area, the Crockery Creek Watershed, the Huron and River Raisin Watershed, the Karst Water Quality Protection Area, the Maumee River Watershed, the Michigan Native American Area, the Michigan West Coast Specialty Crop Area, the Missoukee and Wexford Livestock Initiative, the Muskegon/White Lakes Riparian Corridor Areas, the Northern Michigan's Livestock and Water Quality Area, the Saginaw Bay Watershed, and the St. Joseph River Basin. Maps 1 through 4 show Michigan's fourteen designated Conservation Priority Areas, and, Table 1 lists the fourteen designated Conservation Priority Areas (CPAs) for Michigan in fiscal year 1998 and the corresponding resource concerns for each. For example, farmers in the St. Joseph River Basin Conservation Priority Area are eligible for EQIP funds to address erosion, agrichemical leaching and runoff, and surface water resource concerns.

Statewide Priority Resource Concerns

Farmers and landowners in Michigan who have significant natural resource needs and meet the land and producer eligibility criteria, but are not located in the fourteen priority areas listed in Table 1, are also eligible for funds. Funds are available statewide to address Statewide Priority Resource Concerns (SPRC). A statewide natural resource concern may have characteristics similar to those in a priority area, such as soil erosion or livestock waste management, but the concerns are not confined to a geographic area. As with priority areas, targeting assistance to specific natural resource concerns in non-priority areas is an essential component of implementing EQIP.

Table 2 lists the six Statewide Priority Resource Concerns that have been established in Michigan until fiscal year 1999: 1) Integrated Wildlife Management Systems; 2) Riparian Corridor

[1]The fourteen designated Conservation Priority Areas under the 1998 EQIP program in Michigan are different from the four National Conservation Priority Areas under the Conservation Reserve Program. Under the Conservation Reserve Program, every part of Michigan is within one of the four National Conservation Priority Areas, but not every part of Michigan is within a Conservation Priority Area.

Management Systems; 3) Impaired Use Waterbodies Protection System; 4) Groundwater Resource Protection Systems; 5) Integrated Conservation Cropping System; and 6) Animal Production Management System. For example, the Integrated Wildlife Management Systems concern addresses the need to protect permanent fish habitat, wetland and upland wildlife habitat.

Michigan's First EQIP Sign-up: Fiscal Year 1997

Table 3 lists the number of EQIP contracts and the corresponding funding level for each designated Conservation Priority Area and under the Statewide Priority Resource Concerns priority category established in Michigan for fiscal year 1997 (October 1, 1996 to September 30, 1997). A total of 206 EQIP contracts, obligating $4,515,921, were signed in that year.[2] The average Michigan fiscal year 1997 EQIP contract is for five years and was funded at $21,900. Approximately 25 percent of the EQIP contracts are Statewide Priority Resource Concern contracts, with 30 percent of the total program dollars supporting these contracts.

Within the eleven designated geographic Conservation Priority Areas, 158 EQIP contracts were established in 1997. The Saginaw Bay Watershed CPA had the most contracts with 44 contracts obligating $465,650. The Michigan West Coast Speciality Crop CPA obligated the most EQIP funds with $501,100 for 27 contracts.

Producer Eligibility

The Farm Service Agency determines which producers are eligible to apply for EQIP funds. EQIP eligibility is limited to persons who are engaged in both livestock and non-livestock (or crops) agricultural production. Only small and medium size livestock operations are eligible for cost-share assistance to construct an animal waste management facility. Owners of large confined livestock operations, while not eligible for financial assistance for animal waste management storage or treatment facilities, can obtain financial and technical assistance for other conservation practices on the farm or ranch. For example, financial assistance is available to establish certain components of a waste utilization system on a large confined livestock operation such as those used to remove or transport the waste from the storage or treatment facility to other locations.

The definition of a large confined livestock operation is a farm with more than 1,000 animal units in confinement. Table 4 explains the definition and calculation of animal units for EQIP contracts. (The EQIP definition differs from that used in the Clean Water Act.) However, the EQIP rules permit the NRCS State Conservationist, in consultation with the State Technical Committee, to request that the Chief of NRCS amend this definition to better meet the situation of a particular state. To date, the Michigan Technical Committee has not recommended amending this definition for Michigan.

Land Eligibility Requirements

In addition to determining producer eligibility, the land must also meet certain criteria to be eligible for EQIP funds. The NRCS makes the land eligibility determination for EQIP applications. To be eligible for the Environmental Quality Incentives Program, land must be: 1) cropland; 2) rangeland; 3) pasture; 4) hayland; or 5) forestland. Other agricultural land is also eligible for EQIP if it poses a serious threat to soil, water, air, and other natural resources because of its: 1) soil types and characteristics; or 2) terrain and topographic characteristics; or 3) climate; or 4) flood characteristics; or 5) saline characteristics; or 6) existing agricultural management practices of the applicant.

EQIP Application, Ranking and Selection Process

EQIP applications are accepted continuously throughout each fiscal year at all NRCS field offices, FSA county offices and Conservation District offices. The NRCS is responsible for approval of all conservation plans, including those prepared by non-NRCS conservation consultants. Additionally, the NRCS will certify all practice installations and conduct annual status reviews on every conservation plan for each EQIP contract.

After receipt of an EQIP application, applications are sorted by designated Conservation Priority Area (CPA) or Statewide Priority Resource Concern (SPRC). Each application is ranked according to the ranking criteria specific to one of the fourteen designated Conservation Priority Areas or the ranking criteria for the Statewide Priority Resource Concerns. Each of the fourteen CPAs have ranking criteria specific to its environmental priorities, therefore, only applicants within a particular CPA compete against others in that CPA. In contrast, applicants under SPRC ranking criteria compete statewide. Each of the CPA and SPRC ranking criteria rewards farmers for conservation plans that are designed to achieve a sustainable level of conservation.

The NRCS designated conservationist for each CPA conducts the evaluations for applications within that CPA. SPRC applications are evaluated by the NRCS State EQIP Coordinator. Applications are reviewed each month, with those having the highest priority, based on the ranking criteria, selected and recommended for approval for an EQIP contract. At least the top third of the applications each month will be selected as highest priority. Those applications that have been funded are removed from future ranking registers. Deferred applications will remain on the ranking register until they are approved or until their application is withdrawn. Low ranking applications may never be approved. The Farm Service Agency County Committee has the authority to give final approval for an EQIP contract and obligates the EQIP funds to support the contract.

[2] Due to the short time available in fiscal year 1997 to fully coordinate EQIP educational assistance efforts and to use all the education assistance funds, $115,921 of Michigan's education assistance funds were used to finance additional EQIP contracts in FY 1997, thus obligating more than the allocated $4.4 million.

Cost Share Rate and Incentive Payments

Once an EQIP contract has been established, a farmer will begin to receive cost share and incentive payments after the conservation practice in his/her conservation plan is implemented and certified by the NRCS. In most Conservation Priority Areas, certain conservation practices, such as riparian buffer strips, grassed waterways, agrichemical containment facilities, capping abandoned wells, and wetland development or restoration, may receive up to 75 percent cost share assistance. Incentive payments may also be made for up to three years to a farmer to encourage performance and maintenance of certain land management practices such as integrated pest management, nutrient management, manure management, irrigation water management, and wildlife habitat management. Table 6 lists the conservation practices eligible for cost share payments as well as land management practices eligible for incentive payments statewide and for each priority area. EQIP cost-share and incentive payments are only available on land that has a demonstrable problem and only for structural and land management practices not currently being used by the producer and which are part of a planned resource management system. Though large confined livestock operations are ineligible for cost share assistance for an animal waste management facility, technical and educational assistance may be available for these producers.

The total amount of cost share and incentive payment a farm operation (whether operated as a partnership or corporation) may receive is limited to $10,000 per year and $50,000 over the length of the contract. An exception to the annual limit is provided to allow payments to exceed the limitation on the annual amount of a payment if NRCS determines that a larger payment is essential to accomplish the land management, structural, or vegetative practice. The producer must provide a written justification to NRCS when requesting a waiver of the annual payment limitation.

Approval of the annual payment limitation waiver for a person may be justified because:

1) the practices in the conservation management system need to be applied at once so that the system is fully functioning to resolve the natural resource problem;
2) the natural resource problem is so severe that immediate resolution of the problem is needed;
3) the producer needs to complete the practices in one year so that the farming operation is not interrupted or disturbed by practice installation over a period of time; or
4) the producer can install the practices at a lower total cost when installed in one year, thereby reducing the program payments.

Producers that complete and certify their practice schedules for the first year of their EQIP contract will receive their cost share payments after October 1 of the following fiscal year. EQIP rules specify that payments cannot be made in the year the EQIP contract was established, therefore, EQIP contracts entered into during FY 1997 may begin to receive payments in FY 1998. Subsequent cost share payments can be made as soon as the practice is completed and certified.

Conservation Planning

All EQIP applications must include a conservation plan approved by the Conservation District and NRCS and signed by the producer. For assistance developing a conservation plan a farmer can contact the local Natural Resource Conservation Service. A qualified conservation consultant may also be a good resource to help develop a conservation plan.

The conservation plan is a record of a program participant's conservation decisions for treatment of a unit of land or water, and includes the schedule of operations, activities, and estimated expenditures needed to solve identified natural resource problems. EQIP participants are responsible for implementing all conservation practices scheduled in the conservation plan.

The conservation plan should be of excellent quality to assure final selection for the receipt of EQIP funds. The conservation plans that will rank higher in the competitive process, will address soil, water, air, plant, and animal resources, in addition to social, cultural and economic concerns. A conservation plan at this level of complexity is called a Resource Management System (RMS) plan. Quality criteria for RMS is contained in the Michigan NRCS Field Office Technical Guide. (Farmers should contact their local NRCS service center for the Field Office Technical Guide criteria for a Resource Management System level plan.)

However, for many reasons, not all conservation plans will be at a Resource Management System level. While RMS quality conservation plans are the goal for each situation, it may take time to achieve this level of management. If a conservation plan does not meet the quality level of a RMA, then the plan is referred to as a "Progressive Plan." All future assistance by NRCS will be directed to advance the plan to a RMS. Thus, the answer to a producer's question, "Do I have to develop a RMS quality conservation plan to be eligible for EQIP?" is "No." The conservation plan may be either a Progressive Conservation Plan or a RMS Plan.

A natural follow up question, then, is "Why would a producer consider a RMS plan when a Progressive Plan could be sufficient?" The 1996 FAIR Act states that USDA financial assistance programs are to achieve the most environmental benefits for each dollar spent. RMS quality conservation plans consider all five natural resources: soil, water, air, plant, and animal including social, cultural and economic factors. Conservation plans developed at the RMS level provide the most environmental benefits, and thus RMS plans are more likely to be ranked higher in the EQIP selection process.

Matching Resource Problems to EQIP Priority Categories

The EQIP is designed to address natural resource problems in 1) designated geographic priority *areas* where conservation activities can be emphasized and 2) throughout the state where natural resource *concerns* are not confined to a geographic area. A quick way to determine which EQIP contract a farmer is eligible to receive is to use Figure 1. Two factors are key in the decision: 1) the farm's location; and 2) the farm's resource and environmental problem(s). Farmers located in a designated geographic Conservation Priority Area have greater flexibility when applying for an EQIP contract than those not located in one.

Using Figure 1, if a farm is located in a designated CPA and the farm's resource and environmental problems match the resource concerns of that particular CPA, then farmers may apply for an EQIP contract under that CPA's criteria.

A farm located in a designated CPA may also apply for an EQIP contract under the Statewide Priority Resource Concerns criteria, if the farm's resource problems match the resource concerns of the SPRC criteria. However a farmer may not apply under both CPA and SPRC criteria at the same time for the same farmland tract.

If a farm is not located in a designated geographic CPA, but the farm's resource problems match the resource concerns of the Statewide Priority Resource Concerns, then the farmer may apply for an EQIP contract under the SPRC criteria.

Three Scenarios

Below are three scenarios for three different Michigan farmers that illustrate eligibility for EQIP funds.

Scenario 1: Farmer Adams has erosion and manure management problems he would like to address under EQIP. The farm is located in eastern Huron county. Farmer Adams has three choices under which to apply for an EQIP contract since the Adams farm is located in a region of Michigan with overlapping designated Conservation Priority Areas: the Saginaw Bay Area and the Eastern Thumb Animal Manure Area. Farmer Adams can apply under 1) the Saginaw Bay Watershed Area-CPA criteria; or under 2) the Eastern Thumb Animal Manure Area-CPA criteria; or under 3) the Statewide Priority Resource Concern criteria. In this case, Farmer Adams may be eligible for assistance in both CPAs, as long as the two applications are for different tracts.

Scenario 2: Farmer Brown has erosion and manure management problems that she would like to address under EQIP. The farm is located in western Huron county. Farmer Brown has two choices under which to apply for an EQIP contract. Farmer Bower can apply under 1) the Saginaw Bay Watershed Area-CPA criteria; or 2) the Statewide Priority Resource Concern criteria.

Scenario 3: Farmer Cole also has erosion and manure management problems that he would like to address under EQIP. The farm is located in Osceola county and not within a designated CPA. Farmer Cole can apply only under the Statewide Priority Resource Concern criteria.

As these examples illustrate, a farmer located in a designated CPA with a diverse resource management system plan may have resource concerns outside the focus of a particular CPA. In this situation, a farmer is eligible for assistance through a geographic Conservation Priority Area and a Statewide Priority Resource Concern, provided the conservation plan addresses the specific resource concerns of the designated Conservation Priority Area *and* the Statewide Priority Resource Concern. However, the farmer cannot receive double cost-share or incentive payments for an individual conservation practice installation, and there can only be *one* EQIP contract on a tract of land. This restriction means that a farmer, for example, can have a CPA-EQIP contract on tract A and a SPRC-EQIP contract on tract B, but not two contracts on a single tract[3].

Farmers should consult local NRCS field staff to work through both the ranking criteria and cost share rates under a particular Conservation Priority Area and for the Statewide Priority Resource Concerns in order to best meet their needs.

Conclusion

EQIP is an important opportunity for farmers and ranchers to voluntarily manage their natural resources and address important environmental problems. EQIP uses conservation planning as the basis for conservation implementation and many view EQIP as the first "green payments" program—that is the first, large scale, cost-share and incentive program that emphasizes payments for achieving environmental quality objectives rather than farm income support objectives. Thus, its success in achieving environmental quality objectives will be an important criteria by which the program's success will be judged.

[3]On Native American lands, there may be multiple EQIP contracts on a single tract of land.

Table 1: Michigan's Conservation Priority Areas for Fiscal Years 1997-1998

CONSERVATION PRIORITY AREA	**REGION**-Includes all or portions of counties listed	**RESOURCE CONCERNS**
MAP 1		
St. Joseph River Basin	Berrien, Branch, Calhoun, Cass, Hillsdale, Kalamazoo, St. Joseph, Van Buren	excessive water erosion, excessive wind erosion, conversion to non-ag land uses, agrichemical leaching, agrichemical runoff into surface waters, limited water supply, accelerated sediment/deposition into surface water, agrichemical contamination via wells, streambank/shoreline erosion/degradation
Saginaw Bay Watershed	Arenac, Bay, Clare, Clinton, Genesee, Gladwin, Gratiot, Huron, Iosco, Isabella, Lapeer, Macomb, Midland, Saginaw, Sanilac, Shiawassee, St. Clair, Tuscola	excessive water erosion, excessive wind erosion, increased compaction, agrichemical runoff, accelerated sedimentation/deposition, sedimentation of wetland basins, streambank and shoreline erosion/degradation
Crockery Creek Watershed	Kent, Muskegon, Newaygo, Ottawa	excessive water erosion, buildup of soil phosphorus levels, agrichemical leaching or runoff, significant hydrological modification, sedimentation of lakes and streams, agricultural runoff, wetland conversion to agriculture or other uses, sedimentation and eutrophication of waterbodies, streambank/shoreline erosion/degradation
Huron and River Raisin Watersheds	Hillsdale, Jackson, Lenawee, Monroe, Washtenaw	excessive water erosion, agrichemical leaching or runoff, excessive erosion, wetland conversion to agricultural or other uses, streambank and shoreline erosion/degradation
Karst Water Quality Protection Area	Alpena, Charlevoix, Cheboygan, Chippewa, Delta, Emmet, Mackinac, Monroe, Montmorency, Presque Isle, Schoolcraft	agrichemical leaching and other pollutant impacts on ground water, loss of riparian vegetation
Maumee River Watershed	Hillsdale, Lenawee	excessive water erosion (sheet & rill), excessive water erosion (concentrated flow), agrichemical runoff, accelerated sedimentation/deposition, loss of native habitats
Bays de Noc Area	Alger, Delta, Dickinson, Iron, Marquette, Menominee, Schoolcraft	excessive water erosion, agrichemical leaching and runoff, animal manure utilization, loss or fragmentation of native habitats excessive water erosion, conversion to non-ag land uses
Capital Area	Clinton, Eaton, Ingham	agrichemical leaching and runoff, accelerated sedimentation/deposition, loss or fragmentation of native habitats

Table 1: Michigan's Conservation Priority Areas for Fiscal Years 1997-1998 (cont.)

MAP 2		
Michigan West Coast Specialty Crop Area	Allegan, Antrim, Benzie, Berrien, Charlevoix, Emmet, Grand Traverse, Kent, Lake, Leelanau, Manistee, Mason, Muskegon, Newaygo, Oceana, Ottawa, Van Buren	excessive water erosion, excessive wind erosion, accelerated sedimentation/deposition, agrichemical or other pollutant leaching
MAP 3		
Multi-Area Animal Manure Production	Allegan, Barry, Branch, Calhoun, Cass, Clinton, Hillsdale, Huron, Ionia, Ingham, Isabella, Jackson, Kent, Montcalm, Ottawa, Sanilac, St. Joseph	build-up of soil phosphorus levels, animal manure runoff, animal manure utilization, sreambank and shoreline erosion and degradation, excessive erosion, loss of riparian vegetation
MAP 4		
Missaukee and Wexford Livestock Initiative	Missaukee, Wexford	excessive fertilizers in soil, risk of phosphorus runoff into surface water, nitrates in groundwater, nutrients and organics in surface water, offensive livestock odors
Muskegon/White Lakes Riparian Corridor Areas	Mecosta, Muskegon, Newaygo,	excessive soil erosion; soil quality/health inhibited due to compaction, low organic matter; sediments, nutrients, pesticides entering surface and ground water; livestock causing sediment in streams; lack of wetlands to filter runoff, recharge groundwater, reduce exceedance flows and provide habitat diversity; sediment and dissolved solids in riparian corridor inhibiting fish habitat
Northern Michigan's Livestock and Water Quality Area	Charlevoix, Cheboygan, Chippewa, Emmet, Mackinac, Otsego, Presque Isle	excessive soil erosion; streambank erosion due to livestock; nutrients and organics in surface water; poor animal production and nutrient management practices on grazing lands
ALL OF MICHIGAN		
Michigan Native American	Any privately held Native American land in Michigan	excessive water erosion, streambank erosion, ground water contamination, agrichemical runoff, accelerated sediment, agricultural runoff in wetlands, native plant use, streambank/shoreline erosion/degradation, loss/fragmentation of native habitats

Table 2: Michigan's Six Statewide Priority Resource Concerns

Statewide Priority Resource Concern	Description
Integrated Wildlife Management Systems	This concern addresses the need to protect permanent fish habitat, wetland wildlife habitat, and upland wildlife habitat. Protection includes the replacement of lost habitat with newly established sites of similar habitat. Poor quality habitat will be identified and where appropriate will be improved with habitat management practices.
Riparian Corridor Management Systems	This concern addresses natural resource problems that occur in the riparian zone of surface waters and wetlands. They include soil resource concerns related to excessive soil erosion from water and loss of protective vegetation at the water's edge. Water resource concerns are related to agrichemical runoff and accelerated sedimentation. Grazing lands concerns related to excessive soil erosion due to poor pasture management and animal control. Wetlands concerns are related to those wetlands that are subjected to agricultural runoff contaminated with phosphorus and sediment. Wildlife habitat concerns deal with habitat that has been degraded due to loss of native plants and loss of biodiversity and fragmentation.
Impaired Use Waterbodies Protection System	This concern addresses documented water quality concerns where agriculture has been cited as a major source of pollution. According to the Michigan Department of Environmental Quality, this is a concern in 75 percent of Michigan's watersheds. EQIP will be used in a coordinated and complementary way with existing programs, including EPA's Section 319 Program, the 14 Great Lakes Areas of Concern (AOC's), the 13 Water Quality Incentive Program areas (WQIP), and the four PL-566 Watershed Projects in Michigan.
Groundwater Resource Protection Systems	This concern addresses water resources in terms of groundwater quality. The issues involved include agrichemical and nitrogen leaching and runoff to recharge areas and the leaching of agricultural petroleum products into the groundwater. Protection of recharge areas includes removing the risk of direct discharge from abandoned wells and Karst Water Quality Protection areas.
Integrated Conservation Cropping System	This concern addresses soil, water, wetland and wildlife habitat resource concerns. The soil resources include excessive wind and water erosion and increasing soil compaction. The water resources have the following concerns: agrichemical runoff, accelerated sedimentation, agrichemical leaching, and improper irrigation water management. Wetland resources are being threatened by sedimentation as a result of excessive soil erosion from adjacent cropland. The loss and degradation of wildlife habitat that serves as a buffer between cropland and surface waters are a concern.
Animal Production Management System	This concern addresses soil resources in terms of those land areas with escalating phosphorus levels above 300 pounds per acre. Water resources are a concern in terms of animal manure runoff to surface waters, waste disposal methods causing excess nitrogen and phosphorus to enter groundwater and surface water, and livestock activity in riparian areas causing sedimentation and direct discharge of manure to surface water. Grazing lands are a concern in terms of lost vegetative cover on grazing systems and location of adequate watering and feeding locations away from surface waters and highly leachable soils.

Table 3: EQIP Contracts and Corresponding Funding for Fiscal Year 1997 in Michigan

Conservation Priority Name	Number of EQIP Contracts in 1997	Obligated Funding in 1997
Map 1: CPAs		
Karst Water Quality Protection Area	4	$156,220
St. Joseph River Basin	21	$470,408
Saginaw Bay Watershed	44	$465,650
Crockery Creek Watershed	4	$76,735
Huron and River Raisin Watersheds	12	$200,019
Bays de Noc Area	10	$464,815
Maumee River Basin	13	$198,535
Capital Area	6	$206,930
Michigan Native American[4]	0[5]	$0
Map 2: CPAs		
Animal Manure Production Areas	14	$395,555
Map 3: CPAs		
MI West Coast Specialty Crop Area	27	$501,100
Statewide Priority Resource Concerns	51	$1,379,954
TOTAL	206	$4,515,921

[4]The Native American CPA is not a discrete geographic area. A Native American who owns agricultural land in the state could apply for EQIP under this CPA designation.

[5]The Native American CPA did not establish any EQIP contracts in fiscal year 1997. There will be additional efforts to promote EQIP to eligible farmers and ranchers under the Native American CPA in fiscal year 1998.

Table 4: Animal Unit Calculation

EQIP counts animal numbers as a function of animal units. For the purposes of calculating animal units, an animal unit means 1,000 pounds of live weight of any given livestock species, or any combination of livestock species. Converting animal numbers into an equivalent number of animal units requires, therefore, knowing the average weight of the animal. NRCS has developed conversion factors that facilitate converting animal numbers into their equivalent number of animal units. Table 5 lists the number of live animals that are equivalent to an animal unit for most of the major animal species that are raised in a confinement situation and the corresponding average weight of the animal.

To calculate the total animal units in an enterprise, first determine the number of animals of each species in the enterprise. For each species category, divide the number of animals by the number of animals per 1000 pounds animal unit (from Table 5) to determine its equivalent animal units.

For operations that contain animals not shown in Table 5, divide the average weight of an animal category, (i.e., 4 pound rabbit), into 1000 pounds to determine the number of animals per animal unit for each category (i.e., 250 animals per animal unit). Then divide the number of animals in each category by the number of animals per animal unit for each category. Finally, total the animal units for all categories.

Table 5 can be used to determine the total animal units for the following example.

Example: Farmer Jones has a dairy operation with 250 milking cows, 40 replacement heifers and 40 calves (less than 2 months old). The farm also has two 20,000 broiler houses, and raises 500 rabbits, which average 4 pounds each. The total animal units for farmer Jones' operation is 475. Below are the animal unit calculations by species on Farmer Jones' farm.

250 mature dairy cows / 0.7	=	357 AU
40 dairy heifers / 1.8	=	22 AU
40 dairy calves / 6.7	=	6 AU
40,000 broilers / 455	=	88 AU
{1000 lbs/4 lbs rabbits = 250 rabbit AU}		
500 rabbits / 250	=	2 AU
TOTAL	**=**	**475 AU**

Table 5: Animal Species and Corresponding Animal Unit Equivalent

Animal Type	Approximate Average Animal Weight (lbs)	Number of Animals Per 1,000 Pound Animal Unit (AU)
Beef		
Feeder	875	1.1
Calf	250	4
Breeding Stock	1000	1
Dairy		
Mature Cow	1400	0.7
Heifer/Heifer Calf	550	1.8
Calf (0-2 months old)	150	6.7
Bull/Bull Calf	875	1.1
Poultry		
Broiler	2.2	455
Layer	4	250
Pullet (<3 months old)	2.2	455
Pullet (>3 months old)	4	250
Turkey on Feed	15	66.7
Turkey Breeding Stock	20	50
Swine		
Nursery Pig	50	20
Growing Pig	110	9.1
Finishing Pig	185	5.4
Gestating Sow	275	3.6
Sow and Litter	375	2.7
Boar	350	2.9

Table 6: Conservation practices eligible for cost share payments and land management practices eligible for incentive payments

CONSERVATION PRIORITY AREA	CONSERVATION PRACTICES ELIGIBLE FOR COST SHARE PAYMENTS	MANAGEMENT PRACTICES ELIGIBLE FOR INCENTIVE PAYMENTS
MAP 1		
St. Joseph River Basin	agrichemical containment facility, animal trails/walkways, critical area planting, diversion, fence with use exclusion, animal waste management filter strip, above ground fuel storage facility, grade stabilization structure, grassed waterway of outlet, heavy use area protection, lined waterway or outlet, riparian buffer strips, sediment basin, streambank and shoreline protection, tree/shrub establishment with use exclusion, waste storage facility, water and sediment control basin, well decommissioning, wetland development or restoration, windbreak/shelterbelt establishment, windbreak/shelterbelt renovation	conservation cover, conservation crop rotation, cover and green manure crop, cross wind strip cropping, cross wind trap filter strip, filter strip, irrigation water management, nutrient management, pasture and hayland planting, pest management, prescribed grazing, residue management (no till, strip till and mulch till 30% minimum), field strip cropping, waste utilization, wildlife upland management, wildlife wetland habitat management
Saginaw Bay Watershed	vegetative barriers, critical area planting, grade stabilization structure, windbreak/shelterbelt renovation, tree planting, grassed waterway, water and sediment control basin, stream crossing and livestock access, dike, clearing and snagging, sediment basin, wetland restoration, diversion, field border, riparian buffer areas, use exclusion, prescribed grazing, agrichemical containment facility, above ground fuel storage facility, streambank protection	conservation cropping rotation, residue management, windbreak/shelterbelt establishment, cover and green manure crop, cross wind stripcropping, strip intercropping, pasture and hayland planting, wildlife upland habitat management, wildlife wetland habitat management, filter strip, waste utilization, field stripcropping, pest management, nutrient management, conservation cover, chiseling and subsoiling
Crockery Creek Watershed	critical area planting, well decommissioning, fence, trough or tank, agrichemical containment facility, above ground fuel storage facility, riparian buffer strip, streambank and shoreline protection, grade stabilization structure, tree/shrub establishment, grassed waterway, sediment basin, wetland development or restoration, animal trails/walkways, waste storage facility, composting facility, filterstrip, windbreak/shelterbelt renovation, windbreak/shelterbelt establishment, animal waste management filter strip	conservation crop rotation, filter strip, waste utilization, use exclusion, prescribed grazing, residue management, no till/strip till, mulch till, cover and green manure crop, conservation cover, wildlife wetland habitat management, wildlife upland habitat management, nutrient management, pest management, integrated crop management, chiseling and subsoiling
Huron and River Raisin Watersheds	agrichemical containment facility, critical area planting, diversion, animal waste management filter strip, above ground fuel storage facility, grade stabilization structure, grassed waterway or outlet, lined waterway or outlet, obstruction removal, pasture and hayland planting, sediment basin, streambank and shoreline protection, stream channel stabilization, stream crossing and livestock access, terrace, underground outlet, use exclusion, vegetative barriers, waste storage facility, waste utilization, water and sediment control basin, well decommissioning, wetland development or restoration, windbreak/shelterbelt establishment	conservation cover, conservation crop rotation, contour farming, cover and green manure, cross wind stripcropping, cross wind trap strip, filter strip, nutrient management, prescribed grazing, residue management, no till, strip till, mulch till, riparian buffer strips, contour stripcropping, field stripcropping, waste storage pond

Table 6: Conservation practices eligible for cost share payments and land management practices eligible for incentive payments (cont.)

Karst Water Quality Protection Area	well decommissioning, underground outlet, diversion, use exclusion, above ground fuel storage facility, agrichemical containment facility, filter strip, riparian buffer strips, water and sediment control basin, waste storage facility, trough or tank, stream crossing and livestock access, spring development, grassed waterway or outlet, roof runoff management, well	waste management system, nutrient management system, pest management system, waste utilization, prescribed grazing, residue management, conservation cover, septic drainfield maintenance, cover and green manure crop, critical area planting, Farm*A*Syst, conservation crop rotation, fence, pasture and hayland planting, residue management mulch till
Maumee River Watershed	sediment basin, diversion, grade control structures, grassed waterway, streambank stabilization, stream channel stabilization, terraces and water control and stabilization basin, tree planting, wetland restoration, agrichemical containment facility	conservation cover, conservation crop rotation, residue management, contour farming, cover crop, critical area planting, riparian buffer, filter strip, pasture and hayland planting, nutrient management, pesticide management, wetland wildlife habitat, upland wildlife habitat
Bays de Noc Area	agrichemical containment facility, composting facility, critical area planting, diversion, fence, filter strip, animal waste filter strip, fish stream improvement, forest harvest trails and landings, above ground fuel storage, grade stabilization structure, grassed waterway or outlet, irrigation with water conveyance pipe, obstruction removal, pond, roof runoff management, streambank, and shoreline protection, stream crossing and livestock access, trough or tank, waste storage facility, water and sediment control basin, well decommissioning, wetland development or restoration	conservation crop rotation, contour farming, cover and green manure crop, Farm*A*Syst, irrigation water management, nutrient management, prescribed grazing, pasture and hayland planting, pest management, residue management, riparian buffer strips, field stripcropping, tree/shrub establishment, use exclusion, waste utilization, wildlife food plots, wildlife upland habitat management, wildlife wetland habitat management
Capital Area	composting, agrichemical containment facility, critical area planting, diversion, fence, animal waste filter strip, above ground fuel storage, grade stabilization structure, grassed waterway or outlet, heavy use area protection, lined waterway or outlet, mulching, riparian buffer strips, roof runoff management, streambank and shoreline protection, stream crossing and livestock access, terrace, trough or tank, waste storage structure, waste storage pond, water and sediment control basin, well decommissioning, wetland development or restoration	conservation cover, cover and green manure crop, filter strip, nutrient management, pest management, waste utilization, wildlife upland habitat management, wildlife wetland habitat management, prescribed grazing, use exclusion
MAP 2		
Michigan West Coast Specialty Crop - Cental West Michigan Area	critical area planting, well decommissioning, agrichemical containment facility, above ground fuel storage facility, riparian buffer strips, streambank and shoreline protection, heavy use area protection, windbreak and shelterbelt establishment and renovation, grade stabilization structure, pasture and hayland planting, tree/shrub establishment, grassed water, diversion, sediment basin, water and sediment control basins, wetland development and restoration, cross wind trap field strips, cross wind trap filter strips	conservation crop rotation, residue management, cover and green manure crop, filter strip, nutrient management, pest management, waste utilization, irrigation water management, contour orchards and other fruit area, field stripcropping

Table 6: Conservation practices eligible for cost share payments and land management practices eligible for incentive payments (cont.)

Michigan West Coast Specialty Crop - South West Michigan Area	critical area planting, well decommissioning, agrichemical containment facility, fuel containment facility, riparian buffer strips, streambank and shoreline protection, heavy use area protection, field windbreak, grade stabilization structure, grasses and legumes in rotation, tree/shrub establishment, windbreak renovation, grassed waterway, diversion, sediment basin, water and sediment control basins, wetland restoration, cross wind trap strips	conservation crop rotation, residue management, cover and green manure crop, filter strips, nutrient management, pest management, waste utilization, irrigation water management, contour orchards, field stripcropping
Michigan West Coast Specialty Crop - Grand Traverse Bay Area	critical area planting, well decommissioning, agrichemical containment facility, fuel containment facility, riparian buffer strips, streambank and shoreline erosion protection, heavy use area protection, field windbreak, grade stabilization structure, windbreak renovation, grassed waterway, diversion, sediment basin, water and sediment control basins	residue management, cover and green manure crop, filter strips, irrigation water management, contour orchards, nutrient management, pest management
MAP 3		
Animal Manure Production Area	agrichemical containment facility, composting facility, conservation cover, critical area planting, cross wind trap filter strip, cross wind trap field strip, well decommissioning, diversion, fence, field windbreak, filter strip, animal waste management filter strip, above ground fuel storage facility, grade stabilization structure, grassed waterway or outlet, heavy use area protection, pasture and hayland planting, riparian buffer strips, roof runoff management, sediment basin, spring development, stream crossing and livestock access, streambank and shoreline protection, structure for water control, tree/shrub establishment, trough or tank, waste storage facility, water and sediment control basin, well, wetland development and restoration, windbreak/shelterbelt establishment, windbreak/shelterbelt renovation	conservation cropping rotation both with and without residue management, cover and green manure crop, cross wind trap filter strip, cross wind trap field strip, filter strip, animal waste management filter strip, windbreak and shelterbelt establishment, nutrient management, pest management, prescribed grazing, residue management, no till, strip till, mulch till, ridge till, riparian buffer strips, cross wind stripcropping, tree/shrub establishment, use exclusion, waste utilization, wildlife wetland habitat management
MAP 4		
Missaukee and Wexford Livestock Initiative	composting facility, critical area planing, diversion, fence, filter strip, grassed waterway or outlet, heavy use area protection, pasture and hayland planting, pipeline, roof runoff management, spring development, animal trails and walkways, streambank/shoreline protection, trough or tank, waste storage facility, well, windbreak/shelterbelt establishment or restoration	cover and green manure crop, filter strip, nutrient management, prescribed grazing, residue management, no till, strip till, mulch till, use exclusion, waste utilization, cross wind stripcropping, cross wind strip field or filter, conservation cropping rotation, well decommissioning
Muskegon/White Lakes Riparian Corridor Areas	critical area planting, fence, trough or tank, agrichemical containment facility, above ground fuel facility, riparian buffer strip, streambank and shoreline protection, grade stabilization structure, tree/shrub establishment, grassed waterways, wetland development or restoration, waste storage facility, composting facility, stream crossing and livestock access, filter strip	conservation crop rotation, filter strip, waste utilization, use exclusion, prescribe grazing, residue management, cover and green manure crop, conservation cover, wildlife wetland habitat management, wildlife upland habitat management, nutrient management, pest management, integrated crop management, chiseling and subsoiling

Table 6: Conservation practices eligible for cost share payments and land management practices eligible for incentive payments (cont.)

Northern Michigan's Livestock and Water Quality Area	animal trails and walkways, composting facility, critical area planting, diversion, fence, filter strip animal waste management, grade stabilization structure, grassed waterway or outlet, heavy use area protection, pipeline, pond, riparian buffer strips, roof runoff management, sediment basin, spring development, streambank and shoreline protection, tree/shrub establishment, trough or tank, waste storage facility, water and sediment control basin, well, windbreak/shelterbelt establishment or renovation	conservation crop rotation, cover and green manure crop, filter strip, nutrient management, pasture and hayland planting, pest management, prescribed grazing, residue management, no till, strip till, mulch till, use exclusion, waste utilization
ALL OF MICHIGAN		
Michigan Native American	agrichemical containment facility, composting facility, critical area planting, diversion, fence, animal waste management filter strip, above ground fuel storage facility, grade stabilization structure, grassed waterway or outlet, heavy use area protection, riparian buffer strips, roof runoff management, sediment basin, spring development, stream crossing and livestock access, streambank and shoreline protection, structure for water control, tree/shrub establishment, trough or tank, waste storage facility, water and sediment control basin, well decommissioning, wetland development or restoration, windbreak/shelterbelt establishment, windbreak/shelterbelt renovation	chiseling and subsoiling, conservation cover, cover and green manure crop, cross wind stripcropping, filter strip, hedgerow planting, irrigation water management, pasture and hayland planting, pest management, prescribed grazing, residue management, strip intercropping, field stripcropping, use exclusion, vegetative barriers, waste utilization, wildlife upland habitat management, wildlife wetland habitat management
Statewide Priority Resource Concerns	agrichemical containment facility, composting facility, critical area planting, diversion, fence, animal waste management filter strip, above ground fuel storage facility, grade stabilization structure, grassed waterway or outlet, heavy use area protection, riparian buffer strips, roof runoff management, sediment basin, spring development, stream crossing and livestock access, streambank and shoreline protection, structure for water control, tree/shrub establishment, trough or tank, waste storage facility, water and sediment control basin, well decommissioning, wetland development or restoration, windbreak/shelterbelt establishment, windbreak/shelterbelt renovation	chiseling and subsoiling, conservation cover, cover and green manure crop, cross wind stripcropping, filter strip, hedgerow planting, irrigation water management, pasture and hayland planting, pest management, prescribed grazing, residue management, strip intercropping, field stripcropping, use exclusion, vegetative barriers, waste utilization, wildlife upland habitat management, wildlife wetland habitat management