TECHNICAL MEMORANDUM **Resource Economics, Inc.**

Rice Irrigation Economics

And An Agriculture-to-Agriculture Transfer Option

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A number of conservation measures on the farm and in the canal system will act to reduce water requirements per cwt. of rice production, thus adding to the quantity of water available for use in the region. In addition, there are non-structural, market type mechanisms that could eliminate the shortages during drought by removing marginal water use from the system. One such mechanism is presented here.

One alternative to doing nothing (the status quo) is to set up a program of payments to farmers to transfer the ability to take water from the system during times of drought. Such a program is referred to here as an Agriculture-to-Agriculture transfer program. Such a transfer would be accomplished by setting up a bidding system similar to the one used by the federal government to gain acreage commitments for the conservation reserve program (CRP). The CRP system relies (in part) on farmers to bid a price for removing acreage from production for a period of years, in exchange for a cash payment. Appendix A contains a brief summary of the operation of the CRP program.

The Agriculture-to-Agriculture transfer program has the purpose of reducing the taking of water from the irrigation district providers by encouraging farmers to eliminate the least productive use of water. The least productive use could be either water for the second crop, or removal of the least productive land from rice production. The program would be voluntary and depend on willing farmers to reduce takes of water in exchange for a cash payment. Funding for payments would come from a surcharge placed on the use of water by those who continue to take water from the system, perhaps subsidized by others in and out of the basin. The key components of the program are as follows:

Components of the Program

1. The program would be land based, so that contracts for payments follow the land, not the owner/operator. Eligibility would be established on the basis of historical rice production, and an associated rotation pattern. Only rotation land coming up for production in the current year would be eligible for a current year contract. Each year is a separate program, so that land (or second crop water) commitments under contract last only one year.

2. The selection of acres for payment would be based on a combination of the bid price and a water loss index reflecting the severity of canal losses to the farm.

3. LCRA would announce the needed reduction in takes in January per the current drought management plan, and a sign-up period would be set for receiving bids.

4. Farmers could either bid to forgo water takes for the second crop, or bid to reduce acreage for rice production (both on an equivalent price per acre foot basis).

a. The bid price could not exceed some reasonable limit such as the rental rate per acre, converted to an acre foot equivalent basis.

b. Agreement must be reached between owner and renter (if such is applicable) for the sharing of the payment. (This is a routine requirement of the CRP program).

c. Selected acreage would qualify for 50/50 cost sharing of the cost of seeding idle acres to grass. Acres accepting the 50/50 cost share would likely be precluded from going back into rice production for a minimum period of time, perhaps three years.

Note: Bids that remove acreage from production would not effect the direct government payment under the current 1996 farm bill through year 2002, since the flexibility provisions allow planting of alternate crops.

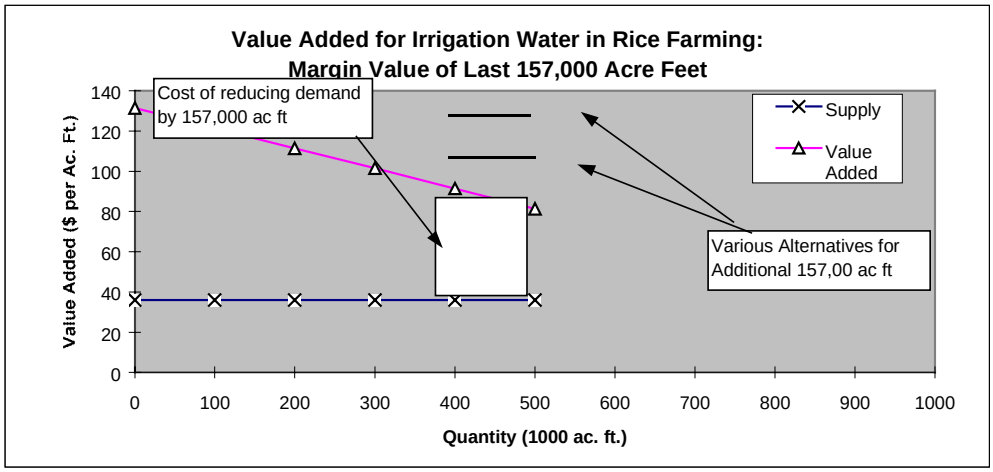
5. The funding for the program would come from a surcharge on water users continuing on the system, perhaps supplemented by funds from other contributors, in or out of basin. LCRA has the flexibility to receive and distribute such outside funding through their economic development program.

Cost of the Program

The expected cost of the agriculture-to-agriculture transfer program is estimated by calculating the short term payment that marginal producers (or any producer with marginal lands) would need to be paid to make them indifferent between producing rice and receiving a cash payment. An approximation of the cost of implementing such a program that would manage the average year shortage in year 2050 is $38.16 per acre-foot. This estimate is

the average value added per acre-foot for 157,000 acre-feet (see Figure 1). The cost of administration would need to be added to this estimate. The $38.16 estimate is the price where farmers would be indifferent in the short term between taking a payment or using the water on marginal lands, or for the second crop irrigation. (Note: the cost to farmers remaining on the system would be much lower as discussed below).

Figure 1



Average Value Added: for 500,000 ac ft		**Marginal Value Added: for 129,000 ac ft**	
$131.41	(P at zero Q)	$97.13	(P at Q=372 ac ft)
$36.00	(P at 500 Q)	$36.00	(P at 500 Q)
$95.41	(Difference)	$61.13	(Difference)
500.00	(at P = $36)	157.23	(at P = $36)
$47.71	(Difference X 500/2)/500	**$38.16**	(area/129)
$23,853,044	(Dollar Value of 500,000 ac ft)	**$5,999,937**	(Dollar Value of 129,000 ac ft)
Note: Value Added excludes payments to hired labor			
Added Cost of Water for Remaining Users		**$17.50**	
Added Cost of Grass Seeding/ac.ft.=50% of $120/acre		**$11.01**	
Total Cost to Remaining Users		**$28.51**	

A short-term payment for the value of water, and returns to management and capital would leave production facilities intact and pay a normal return to the farmer who withdraws from the irrigation system or reduces use levels until the drought has passed. Hired labor would not be paid. The $38.16 value would be enough to pay for returns to capital (depreciation, plus a return on equipment investment) and management, and rental values that supplement those of dry-land grass production.

A summary of the cost of the ag-to-ag transfer program by shortage level is shown in Table 1. The average cost per acre-foot ranges from $27.45 in year 2000 to $38.16 per acre-foot in year 2050. The cost spread fully over the remaining users on the system would be considerable less, however, even without subsidies from outside. The estimates range from $1.58 per acre-foot in 2000 to $28.51 in 2050.

Table 1. Willingness to Take Payment for Reduced Water Use, or Marginal Value Added for Water in Rice Irrigation for Various Shortage Levels

Year	Maximum Yearly Shortage During Drought of Record	Average Yearly Shortage During Drought of Record	Marginal Value of Maximum Shortage ($/ ac. ft.)	Marginal Value of Average Shortage ($/ ac. ft.)	Extra Cost of Average Shortage to Remaining Users ($/ ac. ft.)
2000	68,123	14,934	$31.43	$27.45	$1.58
2010	63,757	47,403	$31.11	$29.88	$5.64
2020	84,785	61,580	$32.68	$30.94	$7.72
2030	123,586	104,578	$35.59	$34.17	$15.38
2040	146,673	126,492	$37.33	$35.81	$20.26
2050	179,363	157,228	$39.78	$38.16	$28.51

An additional consideration is that LCRA would be able to take payments from other (non farmer) sources and put such funds to work for economic development to off set the regional effects of indirect impacts of reduced production. Such payments could focus directly on the impacted processors/suppliers, or wherever the most productive use of development funds appear justified. Such an institutional mechanism is already in place through special legislation creating economic development programs for a number of river basins, including the LCRA, that produce and market electric power[1].

Environmental Impacts

No significant, negative environmental impacts are associated with this alternative. It is possible that positive impacts would be expected because of the expected increase in grassland. Fish and wildlife habitat is created by the irrigation of rice, but the effects of drought on these resources are the same, with and without the program since the amount of irrigation is unchanged by the program.

Advantages of the Approach

There are two major difficulties with solving the drought year problem for rice irrigation. First, rice irrigation is a low valued user of water, meaning an investment to solve the problem needs to be very economical, or get someone else to heavily subsidize a solution. Second, the problem only exists in drought years, meaning that the most efficient approach is likely to be a strategy that only incurs a cost in drought years. There are few options that address these two problems since the obvious option of purchasing surplus water from

[1] Holloway, Milton L. and David Yoskowitz, **Third Party Compensation for Interbasin Transfers of Water in Texas: Alternatives for Funding and Payment,** Prepared for Texas Water Development Board Austin, Resource Economics, Inc. Texas July, 1999 **(**Contract No. 99-483-269).

others in drought years is non-existent. The Agriculture-to-Agriculture transfer option addresses both of these problems.

Appendix A
Description of the USDA Conservation Reserve Program

A Continuation of Environmental Conservation Policy:
The Conservation Reserve Program

by

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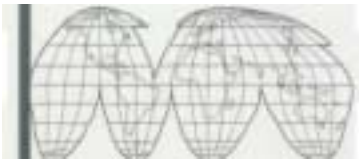
MICHIGAN AGRICULTURE



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A CONTINUATION OF ENVIRONMENTAL CONSERVATION POLICY: THE CONSERVATION RESERVE PROGRAM

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The Conservation Reserve Program (CRP) is continued as part of the Federal Agriculture Improvement and Reform Act (FAIR) of 1996; and has been extended until 2002. Authority exists for enrollment of up to 36.4 million acres, at any one time, in the CRP. Nationally, some 21 million acres currently under CRP contracts are scheduled to expire this year, and Michigan land coming out of CRP this year totals about 101,700 acres. The CRP reauthorization eligibility criteria provides opportunities for Michigan producers to participate if they so choose. The purposes underlying the CRP have undergone some evolution since its initiation in the 1985 Farm Bill.

HOW DOES CRP WORK?

The objectives of the CRP are threefold: (1) to reduce soil erosion; (2) to improve water quality; and (3) to enhance wildlife habitat. It is a voluntary program that offers annual rental payments and cost-share assistance to participants to convert eligible land to a conserving use. Producers interested in participating must identify the amount and location of acreage they wish to enroll and the minimum annual rental rate they will accept in order to place the acreage in the CRP, and they must forgo production on these acres. The duration of CRP contracts is from 10 to 15 years.

With the reauthorized CRP bid process, contract offers for whole farms or whole fields are to be ranked according an Environmental Benefits Index which awards points for certain environmental factors associated with the proposed acreage. These factors include: soil erosion, water quality, air quality, proximity to wetlands, and wildlife benefits. Those bids located in one of four "conservation priority areas" designated by the United States Department of Agriculture (USDA) will receive additional Environmental Benefits Index points. The Environmental Benefits Index score for each offer will then be considered along with the offered bid rate relative to an established maximum county rental rate. Michigan is located in one of these four National Conservation Priority areas. The CRP contract offers most likely to be accepted by the USDA are those with the highest Environmental Benefits Index score and the lowest cost bid.

WHY A CRP?

A *BRIEF IIISTOR Y*

A brief history is informative as to the redesign of the 1996-2002 CRP in the 1996 Farm Bill.

The 1985 CRP was targeted at highly erodible lands as well as supply control. Such a focus was not surprising, since in the early 1980's, land in agricultural production reached the highest level of the post-World War 11 period. Government expenditures on farm programs were headed for record-breaking levels. At the same time, concerns arose about the environmental impact of production on highly erodible lands. In such a context, it made little sense for USDA programs to provide deficiency payments to grow crops on these lands, particularly since lann program costs were spiraling upwards. For these reasons, a political consensus was reached to establish the Conservation Reserve Program in the 1985 farin bill.

When the CRP was originally established in 1985, it was thought that only the most erosive cropland would be enrolled and that stringent conservation compliance standards would prevent most of the CRP land from ever returning to crop production. Thus, land was selected for the CRP if it met the erosion eligibility criteria and the farmer's bid price was below a predetermined bid price per acre. However, because the eligibility standards were subsequently expanded, only about one-third of the current CRP land is classified as extremely erodible. Also, conservation compliance standards are not as strict as originally proposed, thus many more CRP acres were able to meet the standards than initially anticipated. In the 1990 Farm Bill, the CRP eligibility criteria were broadened to give more consideration to water quality concerns and an Environmental Benefits Index was used to prioritize contract offers. Most of the Michigan CRP contracts were signed following the 1990 Farm Bill and thus do not expire until the next decade.

A NEW 1996 CRP

The eligible land targeted in the 1996 CRP is the acreage with the greatest environmental sensitivity. All offers of whole farms or whole fields accepted into the CRP during this current sign-up, whether re-enrolled or new acreage, will be land which ranks high on the redesigned Environmental Benefits Index (EBI). While the actual weighting of factors within the EBI will not be determined until after the offers are compiled by USDA, Michigan's abundance of water resources means that Michigan acreage should be more likely to be selected for the CRP than many other states.

The 1996 farrn bill changed the funding of the CRP from annual Congressional appropriations to the Commodity Credit Corporation (CCC) fund. The CCC is funded out of mandatory spending, consequently, the CRP no longer faces a annual battle for funding out of a shrinking level of discretionary money. This change is significant and was considered a major improvement by CRP supporters. The Administration's 1998 budget request (fiscal year) for CRP is $1.9 billion.

The 1997 Appropriations Act precludes the automatic extension of the 21 million CRP contracts scheduled to expire in fall of 1997. Acreage eligible to replace the expired contracts will be determined using the new pro gram rules. Thus, though USDA's goal is to have 36.4 million acres enrolled in CRP contracts, this goal and funding from the CCC does not assure automatic reenrollment of existing contracts.

SIGN-UP PERIOD FOR WHOLE FIELDS

There are two types of enrollment procedures: one for whole fields or whole farms and the other pertaining to certain practices on portions offields. Applications for the 15th CRP contract sign-up period for whole fields or farms will be accepted at the local offices of the USDA's Farm Service Agency (FSA) **from March 3, 1997 until March 28, 1997.** CRP contract bids that are accepted into the program will be announced by the end of May. Applications will only be accepted during that period at the local offices of the USDA's Farrn Service Agency.

Renewed CRP contracts originally scheduled to expire on September 30, 1997 will become effective on October 1, 1997. New contracts for acreage not previously enrolled in CRP become effective October 1, 1997 or October 1, 1998, at the participant's option. It is anticipated that there will be periodic sign-ups for whole farms and fields as deemed necessary by the USDA. Table I highlights the major changes in the 1996 CRP from previous CRP sign-up rules.

CONTINUOUS CRP SIGN-UP FOR CERTAIN PRACTICES

Producers may at any time during the year enroll acreage in the CRP under "continuous sign-up" to implement certain high-priority conservation practices such as riparian buffers, filter strips, grassed waterways, shelter belts, living snow fences, contour grass strips, salt tolerant vegetation, and shallow water areas for wildlife, on eligible land. Continuous sign-up is for special land use areas, not whole fields. Offers may be enrolled at any time and are not subject to competitive bidding, provided the acreage and producer meet certain eligibility requirements. While total county acreage enrolled in CRP is usually limited to 25 percent, this county cropland limitation is waived for continuous sign-up practices.

Table 1. Major Changes in CRP Sign-up Rules

- Acreage located in National Conservation Priority areas is eligible for enrollment and provided additional consideration in the acceptance process. National conservation priority areas include the regions encompassing Long Island Sound, Chesapeake Bay, and the Great Lakes, as well as, the Prairie Pothole Region in the upper Great Plains.

- As has been the case since 1990, offers for CRP contracts are ranked according to the Environmental Benefits Index (EBI), however, there is an additional factor included in the 1996 EBI, that of "air quality".

Up to 8.4 million acres of cropped wetlands are eligible for enrollment. Marginal pasture land is eligible if it is suitable for use as a riparian buffer planted to trees. Cropland associated with non-cropped wetlands is eligible if it provides high environmental benefits, particularly as wildlife habitat for waterfowl and other species.

N There will be the continuous sign-up of highly valuable environmental acreage designated to conserving practices, including filter strips, riparian buffers, grassed waterways, field windbreaks, shelter belts, living snow fences, salt-tolerant shallow water areas for wildlife, contour grass strips, or acreage in a wellhead protection area designated by the Environmental Protection Agency or appropriate state agency.

0 The period of time owners and operators must have managed the cropland before they are eligible to submit a bid for a CRP contract has been reduced from 3 years to I year.

E Eligible land must have been planted, or considered planted, to an agricultural commodity in 2 of the most recent 5 crop years. Acreage previously enrolled in a CRP contract is "considered planted" to an agricultural commodity.

LAND ELIGIBILITY REQUIREMENTS

To be eligible for periodic or continuous CRP sign-up, land must first meet the following CRP eligibility requirements:

Eligible cropland is defined as land that has been planted or considered planted to an agricultural commodity 2 of the 5 most recent crop years and must be capable (physically and legally) of being planted to an agricultural commodity. Eligibile land may include marginal pasture land is eligible if it is suitable for use as a riparian buffer planted to trees.

Additionally, eligible cropland must also meet one of the nine following criteria:

Have an Erosion Index (EI) of greater than or equal to 8, calculated by using the weighted average of the El's of soil map units within the field; or be considered highly erodible land according to the conservation compliance provisions. Be considered a cropped wetland. Be within a public wellhead protection area. Be cropland associated with noncropped wet lands. Be within a designated national or state CRP conservation priority area. Have evidence of scour erosion. Be suitable for use as a permanent wildlife habitat, filter strip, riparian buffer, field windbreak, shelter belt, contour grass strip, grass waterway, or other beneficial environmental practice, wetland or wellhead protection area. Be contributing to the degradation of water quality or posing an on-site or off-site environmental threat to water quality if the land remains in production. Be cropland which produces or serves as the recharge area for saline seeps.

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FRODIBILITY INDEX EXAMPLE

The Erodibility Index (EI) was developed by the Natural Resources Conservation Service (NRCS) of USDA as a means to determine the inherent susceptibility of land to either sheet and rill erosion (water erosion) or wind erosion in relation to the amount of soil loss that can be tolerated for a particular soil type. The index is based on natural site conditions, such as soil characteristics, rainfall, slope length, and wind speed, that can contribute to erosion in relation to a site's ability to

withstand erosion and still sustain long-terrn productivity. A producer's crop management decision will affect actual erosion rates but not the El. The higher the crodibility index, the greater the potential a soil has to erode.

The Conservation Reserve Program uses an erodibility index (EI) greater than or equal to 8 as a means of determining whether land is highly erodible. The El standard of 8 or greater has been used for CRP land eligibility purposes since February of 1987.

However, if the acreage offered is located entirely within Michigan, and already meets one of the nine eligibility criteria, it does not have to pass the El test of 8 or greater because Michigan is within a designated National Conservation Priority area.

The El formula to used to estimate the potential erodibility for **water erosion** is:
Erodibility Index = (R)(K)(LS)/T.

The factor values from the Universal Soil Loss Equation (USLE) that are used are:
R = A rainfall factor that accounts for energy and intensity of rainstorms;
K = A soil erodibility factor which measures how erodible a soil is;
LS A single factor related to slope length and percent slope; and
T A soil loss tolerance that is soil specific.

Table 2 shows an example of calculations of El. However, the FSA, in cooperation with the NRCS will provide these calculations for a CRP offer.

ELIGIBLE PERSONS

In order to be eligible to enter into a periodic sign-up or continuous CRP contract, a person must be an owner or operator of eligible land for at least 12 months prior to close of the sign-up period, unless:

The new owner acquired the land by will or succession as a result of the death of the previous owner;
The ownership change occurred due to foreclosure on the land and the previous owner met certain criteria;

Table 2. Example of Erodibility Index Under CRP

Example: Assume a 100 acre field offered for a CRP contra
Of these 100 acres, 60 acres are highly erodible (soil type
FFF) and 40 acres are non-highly erodible (soil type EEE)

Area	Acres	Soil Type	R K IJS	El	El x acres
1	40	EEE	150 .32 .4	5 3.8	152
2	60	FFF	150 .37 .8	5 8.9	534
Total	100				686

Weighted average El = Sum of (El x acres)
Divided by Total acres

= (152+534)/100 acres = (686)/100 acres = 6.9

In this example, the 100 acre field would NOT qualify for the CRP because the weighted average El for the entire 10 acres is only 6.9. The producer could offer the 60 acres of area 2 because its El is 8.9, which is greater than the minimum El value of 8. Michigan land does not have to p the El test of 8 or greater.

9 The circumstances of the acquisition present adequate assurance that the new owner did not acquire the land for t purpose of placing it in the CRP; or If a tenant, the tenant i participant with an eligible owner or operator.

ENVIRONMENTAL BENEFITS INDEX

Producers may submit offers for the amount they are willing to accept as rental payments to enroll their acreage in the CRP. The Natural Resources Conservation Service (NRCS) collects data based upon the relative environmental benefits for the land offere The CRP contract offers are then ranked according the Environmental Benefits Index (EBI) and selections from the submitted bids are based on that ranking.

In evaluating contract offers, different priority factors based up the relative environmental benefits for the land offered have b identified. The EBI factors include:

Soil erosion;
Water quality (both surface and ground water)
Wildlife benefits;
Conservation priority area designations;
Soil productivity;
Conservation compliance considerations;
Likely long-term benefits beyond the contract period from certain practices such as tree plantings; and
Air quality.

While not part of the EBI, a ninth factor considered will be:

The cost of enrolling acreage in the program relative to average county rental rates.

The actual weightings of the nine factors and rankings will be determined by USDA after the offers have been compiled.

RENTAL RATES

The average county rental rate is based on the relative productivity of soils within each county, and the average of the past three years of local dryland cash rent or the cash rent equivalent. Table 3 shows the range and average of the per acre rental rate for each Michigan county. However, an applicant should contact the local FAS or NRCS office to determine the maximum annual per acre CRP rental rate for each potential offer prior to making a bid. Offers may be made at the maximum rate permissible, however placing an offer at a lower rental rate may increase the likelihood of bid acceptance. The continuous sign-up bids are not subject to the EBI rating, but are subject to the same comparisons on rental rates as are periodic sign-up bids. A 10 to 20 percent bonus (added to the rental rate) is available for specific continuous sign-up practices. Appeal of a CRP maximum payment rate is not permitted. The maximum amount of rental payments which a person may receive under the CRP for any fiscal year shall not exceed $50,000.

PERIODIC CRP SIGN- UP

An additional amount of up to $5 per acre can be received annually for maintenance of certain conservation practices established on CRP acreage. This amount is added to the soil rental rate to determine the maximum payment rate per acre. Table 4 denotes the eligible practices and maintenance rate per acre paid for sign-up number 15.

The restoration of cropped wetlands is also rewarded with a one-time incentive payment equal to 25 percent of the costs incurred. This option is only available under periodic whole farm or field sign-up. This payment is in addition to the 50 percent cost share provided to establish approved cover.

CONTINUOUS CRPSIGAr- UP

An additional amount, not to exceed $5 per acre, is provided for annual maintenance costs for the conserving use on CRP acreage. Table 5 denotes the eligible practices and maintenance rate per acre paid for continuous CRP sign-up.

Additional financial incentives of up to 20 percent of the annual payment for certain continuous sign-up practices are offered. This payment is in addition to the 50 percent cost share provided to establish approved cover. Under continuous CRP sign-up, any incentive payment and/or maintenance payment is added to the soil rental rate to determine the maximum payment rate. Interested producers should contact their local FSA office.

CONSERVATION PLANS

A conservation plan must be developed which is acceptable to NRCS and accepted by the conservation district for the land to be entered in the CRP. The practices included in the conservation plan must cost effectively reduce erosion necessary to maintain the productive capability of the soil, improve water quality. protect wildlife or wetlands, protect a public wellhead, or achieve other environmental benefits. If applicable, a tree planting plan must be developed and included in the conservation plan. All conservation plans and revisions are subject to the final approval of CCC and NRCS.

Interested producers should contact their local FSA or NRCS officefor more information.

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TABLE 3. Michigan's 1997 Approved Soil Rental Rates Per Acre for CRP

County	Range	County Average
Alcona	$9-24	$ 17
Alger	$6-15	$ 10
Allegan	$28-73	$50
Alpena	$11-29	$20
Antrim	$8-22	$ 15
Arenac	$36-94	$65
Baraga	$8-22	$ 15
Barry	$28-73	$50
Bay	$41-116	$80
Benzie	$10-24	$ 17
Berrien	$28-73	$50
Branch	$30-80	$55
Calhoun	$27-63	$45
Cass	$30-80	$55
Charlevoix	$6-15	$ 10
Cheboygan	$8-19	$ 13
Chippewa	$8-17	$ 13
Clare	$26-68	$ 45
Clinton	$29-75	$52
Crawford	$8-22	$ 15
Delta	$6-15	$ 10
Dickinson	$8-22	$ 15
Eaton	$30-80	$55
Emmet	$8-22	$ 15
Genesee	$19-51	$35
Gladwin	$26-68	$47
Gogebic	$7-17	$ 12
Gr Traverse	$14-36	$25
Gratiot	$41-109	$ 75
Hillsdale	$35-91	$63
Houghton	$11-29	$20
Huron	$36-94	$65
Ingham	$28-73	$50
Ionia	$32-78	$55
losco	$10-26	$ 18
Iron	$6-15	$ 10
Isabella	$25-65	S45
Jackson	$20-54	$ 37
Kalamazoo	$28-73	$50
Kalkaska	$17-44	$30
Kent	$25-67	$46
Keweenaw	$11-29	$20
Lake	$19-47	S 33
Lapeer	$25-65	$45
Lenawee	$41-125	$ 83
Leelanau	$11-29	$20
Livingston	$25-65	$45
Luce	$9-19	$14

TABLE 3. Michigan's 1997 Approved Soil Rental Rates Per Acre for CRP, continued

County	Range	County Average
Mackinac	$8-17	$ 11
Macomb	$25-65	$45
Manistee	$8-22	$ 15
Marquette	$6-15	S 10
Mason	$14-36	$25
Mecosta	$17-44	$30
Menominee	$7-17	$ 12
Midland	$39-102	$70
Missaukee	$20-42	$31
Monroe	$41-109	$75
Montcalm	$19-51	$ 35
Montmorency	$11-29	$20
Muskegon	$25-65	$45
Newaygo	$19-57	$ 37
Oakland	$22-58	$40
Oceana	$23-55	$39
Ogemaw	$11-31	$21
Ontonagon	$3-7	$5
Osceola	$19-47	$33
Oscoda	$8-22	$ 15
Otsego	$8-22	$ 15
Ottawa	$30-70	$50
Presque Isle	$15-41	$29
Roscommon	$8-22	$ 15
Saginaw	$44-116	$80
St. Clair	$19-51	$35
St. Joseph	$31-81	$56
Sanilac	$30-80	$ 55
Schoolcraft	$6-15	$ 10
Shiawassee	$28-73	$50
Tuscola	$36-94	$65
Van Buren	$28-73	$50
Washtenaw	$30-78	$54
Wayne	$42-78	S 58
Wexford	$14-36	$25

TABLE 4. Eligible Practices Under CRP Sign-up 15

Periodic (sign-up 15) CRP Practices	Maintenance Rate per Acre
Establishment of Permanent Introduced Grasses and Legumes	$0.00
Establishment of Permanent Native Grasses	$0.00
Tree Planting	$5.00
Hardwood Tree Planting	$5.00
Permanent Wildlife Habitat (Corridors) noneasement	$3.00
Permanent Wildlife Habitat (noneasement)	$3.00
Diversions	$5.00
Erosion Control Structure	$3.00
Vegetative Cover-Grass-Already Established	$0.00
Vegetative Cover-Trees-Already Established	$0.00
Wildlife Food Plot	$0.00
Wetland Perennial	$0.00
Alternative Perennial*	$5.00

*Indicates not an available practice for sign-up 15, but contracts enrolled under other acceptable codes may be converted this practice.

TABLE 5. Eligible Practices Under Continuous CRP Sign-up

Continuous Sign-up Practices	Maintenance Rate per Acre
Establishment of Permanent Introduced Grasses and Legumes*	$0.00
Establishment of Permanent Native Grasses*	$0.00
Tree Planting*	$5.00
Hardwood Tree Planting*	$5.00
Permanent Wildlife Habitat (Corridors) noneasement*	$5.00
Permanent Wildlife Habitat (noneasement)*	$5.00
Field Windbreak Establishment, Noneasement	$5.00
Grass Waterways, Noneasement	$5.00
Shallow Water Areas for Wildlife	$0.00
Vegetative Cover-Grass-Already Established*	$0.00
Establishment of Permanent Vegetative Cover (Contour Grass Strips), Noneasement	$0.00
Shelterbelt Establishment, Noneasement	$5.00
Filter Strips	$5.00
Riparian Buffer	$5.00

Indicates eligible within approved wellhead protection areas only.