

Staff Paper

CZARA and Michigan Agriculture

Sandra S. Batie and David B. Schweikhardt

Staff Paper No. 95-29

May 1995



Department of Agricultural Economics
MICHIGAN STATE UNIVERSITY
East Lansing, Michigan 48824

MSU is an Affirmative Action/Equal Opportunity Institution

CZARA and Michigan Agriculture

Sandra S. Batie and David B. Schweikhardt
batie@msu.edu; schweikh@msu.edu

number of pages: 13

Copyright © 1995, **Sandra S. Batie and David B. Schweikhardt**. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

CZARA and Michigan Agriculture

Sandra S. Batie
and
David B. Schweikhardt
Department of Agricultural Economics
Michigan State University

Many policies affecting agriculture are not found in agricultural policy or the federal farm bill. An example is the Coastal Zone Act Reauthorization Amendments of 1990, or CZARA. The following questions and answers should help explain the importance of CZARA to Michigan farmers. The CZARA program guidelines have undergone some modification since January 1995, and now appear to have some greater flexibility.

What is CZARA?

The Coastal Zone Act Reauthorization Amendments of 1990 (CZARA), is sometimes referred to as the Coastal Zone Management Act (CZMA). The CZMA was enacted in 1972 and is a voluntary federal program designed to assist states in managing their coastal resources. The intent of the CZMA was to raise public awareness of the importance of coastal resources, to minimize negative impacts of land and water use decisions on coastal resources, and to broaden and strengthen public participation in coastal zone programs. CZMA has been amended several times, with the 1990 amendments resulting in CZMA becoming CZARA.

Why should farmers care about CZARA?

Section 6217 of CZARA is directed at the control of nonpoint pollution of coastal waters including the Great Lakes. Some observers have called Section 6217 the first federally mandated land use program because it requires specific measures to manage nonpoint source pollution in those states which have an approved Coastal Management Program under the CZMA.

Does CZARA affect inland farms?

Michigan received approval of its Coastal Zone Management (CZM) program in 1978 and defined the coastal zone as all areas generally 1000 feet from the Great Lakes shoreline. In contrast, the 1990 CZARA, as currently interpreted by the two CZARA oversight federal agencies, the Environmental Protection Agency (EPA) and the National Oceanic and Atmospheric Administration (NOAA), recommends the coastal nonpoint program boundaries to include virtually all of Michigan. The justification for this approach is that Michigan's 36,350 miles of rivers drain into the Great Lakes. Consequently, within CZARA all of the state is considered part of the Great Lakes Watershed, although the Michigan Department of Natural Resource officials are proposing a much smaller boundary.

What is meant by "nonpoint pollution" in CZARA?

Nonpoint pollution is polluted runoff or leaching that comes from diffuse areas such as farm fields. Soil sediment, nitrogen,

phosphorous, pesticides, fungicides, or bacteria in water runoff from farms are considered nonpoint pollution. State CZARA nonpoint pollution plans encompass all nonpoint pollution sources stemming from agriculture, forestry, urban development, septic systems, roads, bridges, highways, marinas, canal dredging, and drainage improvements.

Why all the attention to agricultural sources of water pollutants?

The CZARA program's focus on nonpoint pollution resulted from reports that a significant amount of pollutants entering the Great Lakes and coastal waters were from nonpoint sources including agriculture. Indeed, the Environmental Protection Agency estimates that over 40 percent of the pollution resulting in impaired water quality in U.S. rivers comes from agriculture.

What is required in CZARA with respect to nonpoint pollution control?

Initial EPA and NOAA guidance to the states on agricultural source nonpoint pollution were developed as specific *technology based* management measures. These measures were defined as the best management practices for erosion and sediment control, livestock facility wastewater management, nutrient management, pesticide management, grazing management and irrigation water management. For example, the management measure for nutrient management requires farmers to:

"develop, implement and periodically update a nutrient management plan to

- (1) Apply nutrients at rates necessary to achieve realistic crop yields.
- (2) Improve the timing of nutrient application, and
- (3) Use agronomic crop production technology to achieve nutrient use efficiency.

When the source of the nutrients is other than commercial fertilizer, determine the nutrient value and the rate of availability. Determine and credit the nitrogen contribution of any legume crop. Soil and plant tissue testing should be used routinely"

The state can provide alternatives to the CZARA management measures but must show the alternatives to be equally effective to the measures specified.

What is the time frame for state program design and implementation?

Action deadlines for the states are mandated by CZARA , requires draft plans by July 1995, implementation by January 1996, effectiveness monitoring by 1999-2001, and water quality based measures for some areas by 2001-2004.

How is the state to implement CZARA nonpoint pollution requirements?

State policymakers are required to design an enforceable program to implement these management measures. The state program can be cost-shared, include other economic incentives, or it can be regulatory. Section 6217 does not specify the state approach,

but EPA and NOAA have consistently interpreted the requirement of enforceability quite strictly.

What if my farm is not contributing to a water quality problem?

Farmers would like an assurance that CZARA management measures, if implemented, would improve water quality. One necessity for this to hold true is that, before the implementation of a CZARA management measure, a farm must be contributing to a water quality problem. CZARA is silent on this point, and Section 6217 as initially interpreted by the federal agencies, requires each farm type to be treated identically.

What if the management measure used on my farm would not be effective in improving water quality?

The federal agencies' intent is to have states first implement these CZARA management measures regardless of the extent of impaired water. As long as a proposed management measure is "technically" and "economically" achievable, and experts agree that it will generally reduce nonpoint pollution, then a state program can require its adoption. There is no requirement that adoption of the management measure will actually improve water quality.

The federal agencies also require the states, beginning in 1999, to extensively monitor water quality and identify areas not meeting water quality standards for uses such as swimming,

fishing, and drinking. The states are then required to implement *water quality based* measures in 2001.

What if the management measures are too expensive to implement?

The CZARA requires that management measures be "economically achievable", but does not define what is meant by economically achievable. Furthermore, it is not clear whether economically achievable refers to individual profitability, such as for an individual farmer, or to sector profitability for the industry. Nor is it clear how great an income reduction could occur before a management measure would be deemed uneconomic.

Are there cost estimates for these management measures?

A recent study by region of the nation and by type of farm estimated the additional costs of implementing management measures for various types of farms. While the study provides only "ballpark" estimates, the researchers estimated that, for Great Lakes farms of a \$100,000-\$250,000 economic class, average annual costs of CZARA compliance for the management measures were estimated to be \$712 for erosion control on average erodible lands; \$1,398 for nutrient and pesticide management; \$349 for irrigation management; and \$23 for grazing management measures. Total annualized cost were \$8,445 for confined dairy facilities and \$1,542 for swine facilities.

If the program is voluntary, does this mean a farmer may choose not to participate?

Michigan as a state may choose not to participate in CZMA.

However, if it continues with a coastal program, it must develop a 6217 program. Within the nonpoint program an individual farmer might not be able to avoid participation, depending on the design of the Michigan program. However, Michigan policymakers are proposing a flexible program that would not require every farmer to implement management measures.

As written in 1972, the CZMA did not include sanctions for states that did not participate, and partial funding was provided to the states to develop comprehensive coastal resource management plans. Federal funds, through the National Oceanic and Atmospheric Administration (NOAA), were made available for protecting resources of national significance, redeveloping urban waterfronts, agency planning and coordination activities, and providing public access to beaches, among other actions. To date, Michigan has elected to participate in CZM.

So, Michigan can choose not to participate if state policymakers are willing to forgo the federal funds?

Yes. Failure to implement CZARA requirements involves the following penalties to Michigan:

- o 1996: 10 percent of the CZM grant and the Clean Water Act 319 watershed planning grant from the previous year.
- o 1997: 15 percent of CZM and 319 watershed planning grant from previous year
- o 1998: 20 percent of CZM and 319 watershed planning grant from previous year
- o 1999: 30 percent of CZM and 319 watershed planning grant from previous year and every year thereafter.

Ultimately, these penalties could amount to as much as \$2.4 million annually.

Has Michigan decided to participate in CZARA?

For the present time the state has decided to participate in CZARA although state leaders reserve the option to reverse their decision at a later date. Michigan and other states already have participated in CZARA "threshold reviews." In this review, Michigan's existing laws were presented to EPA and NOAA. EPA and NOAA expressed concern that existing nonpoint pollution control legislation lacked enforceable measures.

Have Michigan policymakers expressed concern about CZARA and its potential impacts to EPA and NOAA?

Yes Michigan policy makers are concerned about several CZARA issues. These issues include: (1) perceived inflexibility of the required program design, (2) enforceability requirements of the program, (2) the cost and effectiveness of required agricultural management measures, (3) the time frame for implementation of the program, and (4) the amount of land encompassed within the boundaries of the coastal zone. Michigan joined other states in formally expressing these concerns to EPA and NOAA.

How were the state concerns conveyed to EPA and NOAA?

In December of 1994, the Coastal States Organization, representing the governors of the 35 coastal states, territories and commonwealths, including Michigan, raised these issues with the Administrator of EPA and the Undersecretary of Commerce where NOAA resides. The Organization used strong language that reflected the voluntary nature of state participation in the CZMA:

"There is a real danger that several states will withdraw completely from the National Coastal Zone Management program unless there is immediate relief granted by NOAA and EPA for the Section 6217 portion of the program....Further...the entire National CZM program, which is up for reauthorization in the 104th Congress, will be in jeopardy due almost solely to the onerous agency requirements pertaining to the Section 6217 program".

What did the Coastal States Organization request of EPA and NOAA?

The Coastal States Organization asked for four changes in the Section 6217 program of CZARA:

- o States should define which land will be encompassed within the coastal zone boundaries.
- o States should be able to "target" certain lands and water within CZM boundaries for the program and not have to treat all land and water within the boundary as equal priority for non pollution control.
- o The CZARA enforceability component of Section 6217 be interpreted to include policies that prohibit certain activities, including "bad actor" laws, serve as inducements for voluntary compliance or provide legal authority for enforcement and restoration.
- o The three year time frame for implementation of the Section 6217 program should be extended.

What was the reply from EPA and NOAA to the Coastal States Organization requests?

EPA and NOAA officials, having been informed by state concerns posed in the threshold reviews as well as the Coastal States Organization request were faced with the embarrassing prospect of states bolting from the CZM program. In addition there was a new political context provided by a Republican majority in Congress which perhaps influenced the EPA-NOAA reply.

Whatever the motivation, EPA and NOAA officials agreed to extend the time frame of CZARA implementation to five years and provide additional funds as an incentive for full approval. Furthermore, they indicated their willingness to consider state-specific data in the determination of the boundaries of the coastal zone. While EPA and NOAA did not agree that states would be allowed to "target" the nonpoint pollution program so that the nonpoint sources with the most significant impact on coastal waters are addressed first, they did show some willingness to consider this issue further. Finally, the EPA and NOAA officials agreed to expand their view of enforceable policies to include "bad actor laws", enforceable water quality standards, general environmental laws and prohibitions, and other existing authorities that will accomplish the implementation of management measures.

What does this enhanced flexibility in CZARA mean for Michigan?

The willingness of EPA and NOAA to listen to the states' concerns and to add flexibility in program design provides an opportunity for Michigan to remain in the CZM program and receive federal coastal zone funds while also designing an enhanced nonpoint pollution control program that fits the needs and concerns of the state's citizens.

Why should Michigan participate in CZARA at all?

Some may argue that the Republican Congress reduction in federal spending suggests that the state should refuse to participate in

CZARA and forgo any federal funding associated with participation.

Still, polls suggest that the CZM goals of the protection of the Great Lakes remains a high priority with the general public. The public argument appears to be not so much about the "goals of" environmental protection as it is about the "means to" achieve these goals. Because of its dominance as a user of land within the Great Lakes watersheds, agriculture can play an important role in pursuing those goals and will probably see increasing public demands for enhanced stewardship. Thus, a counter argument to those who argue that Michigan should "opt out" of the CZARA program is that the current political climate surrounding CZARA gives the state both partial federal funding and time to consider alternative nonpoint pollution program designs. This argument is that the enhanced CZARA flexibility is an opportunity to be pursued.

What are Michigan policy makers doing?

Currently, there are several task forces considering alternatives for Michigan's nonpoint pollution program if the state elects to continue participating in CZARA. One of these task forces is comprised of agricultural leaders throughout the state and is considering agricultural concerns with respect to Section 6217. This task force, The Agricultural Nonpoint Pollution Task Force,

was initiated by the Michigan Farm Bureau in 1994 to consider agricultural issues in CZARA.

Put simply, the Michigan response to CZARA is still developing, but the ultimate design of a CZARA nonpoint pollution program is of considerable importance to Michigan farmers.