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FISH CONSUMPTION ADVISORY

House Bill 4206 (Substitute H-3) First Analysis (3-11-97)

Sponsor: Rep. Mary Schroer
**Committee: Conservation, Environment
and Recreation**

THE APPARENT PROBLEM:

In 1986, in recognition of the fact that the general public receives conflicting information regarding the amount of fish that is safe for consumption, the Great Lakes Governors' Toxic Substance Control Agreement established a Great Lakes Sport Fish Consumption Advisory Task Force that included representatives from each natural resources, public health, or environmental agency in the eight states (Michigan, Illinois, Indiana, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin) that border on the Great Lakes. The task force was charged with developing a uniform standard for a safe level of consumption of sport fish caught in the Great Lakes basin, and subsequently issued a draft protocol in September, 1993. The protocol recommended a specific fish consumption standard that is based on an acceptable rate of consumption of polychlorinated biphenyls (PCBs) -- a contaminant that is judged to provide the highest risk to human health -- and that is expressed as a "health protection value" (HPV). The protocol's recommended HPV for PCBs is .05 micrograms of PCB per kilogram per day (.05 micrograms PCB/kg/day). This means that the acceptable human exposure from eating sport fish is no more than .05 micrograms of PCBs per kilogram of body weight per day. The HPV of .05 PCB/Kg/day was to be used as a basis for quantifying the amount of PCBs in fish when rating them in fish advisories that advocate varying degrees of restriction of fish consumption. However, Michigan did not adopt the .05 micrograms PCB/kg/day recommendation. The state maintains that its standards are higher than those proposed in the protocol, since they take all contaminants into consideration, while the protocol's recommended standard only measures one contaminant -- PCBs.

Michigan's recommendations on the consumption of Great Lakes' fish are outlined in a pamphlet entitled the "Michigan Fish Advisory," which has been issued annually by the Department of Community Health since 1988, and is provided to everyone who buys a fishing license. The 1997 fish advisory lists fish that should be avoided by persons in an "at risk" group: children younger than 15 and by women who intend to have

children, are pregnant, or are nursing. It also warns that certain kinds and sizes of fish have been polluted by chemicals, such as mercury, PCBs, chlordane, and dioxin, and includes a special warning on mercury pollution in Michigan's inland lakes and reservoirs. The main feature of the fish advisory is a chart which enumerates the fish that are found in the bays, lakes, rivers, reservoirs, and dams of the Lake Erie, Lake Superior, Lake Michigan, and Lake Huron watersheds. The chart has four advisory levels for consumption, ranging from "no restriction" to "do not eat," categorized by location and length for most sport fish. (The size of a fish is important, since contaminants accumulate in fat.) The fish consumption advisory applies only to fish caught by anglers; fish sold in restaurants and stores is subject to Food and Drug Administration (FDA) standards. The Department of Community Health uses FDA cancer risk assessment criteria as a basis for quantifying the amount of PCBs in the fish rated in its fish advisories.

Included with the 1997 fish advisory is a one-page pamphlet, also issued by the DCH, entitled "What Women of Childbearing Age Should Know About Eating Fish." The pamphlet contains warnings about contaminated fish that are similar to those published in the "Michigan Fish Advisory," and refers back to the fish advisory for additional information. However, while the "Michigan Fish Advisory" warns that fatty fish, including large salmon, tend to collect PCBs and similar chemicals, and the pamphlet also advises against women of childbearing age eating fatty fish such as large salmon, there is no specific mention of salmon in the 1997 fish advisory *chart*. This omission has led to charges that the DCH is ignoring the health risks associated with consuming Great Lakes' salmon, and has raised concern among environmental groups and the media, who warn that the Great Lakes Governors' goals of having a consistent fish advisory strategy has broken down, and urge that the health risks associated with eating Great Lakes salmon necessitate that the state adopt the standard proposed in the 1993 Great Lakes

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Uniform Fish Advisory protocol of .05 micrograms of PCB/KG per day.

THE CONTENT OF THE BILL:

House Bill 4206 would amend the Public Health Code to adopt a health protection value (HPV) of .05 micrograms of PCB per kilogram per day (.005 PCB/Kg/day), as this value pertains to women who are pregnant, nursing, or of childbearing age, as well as to children under the age of 15. The bill would specify, however, that the Department of Community Health (DCH) should utilize a more protective value if it determined that the .05 PCB/kg/day value was no longer appropriate for these groups. In addition, the department would be required to review the .05 micrograms of PCB/kg per day health protection value at least every two years, and, if it determined that the value was no longer appropriate, make recommendations to the legislature on a more appropriate health protection value. The bill would also require that a fish consumption advisory program be established, as follows:

Sport Fish Consumption Advisory. If the health protection value incorporated in the 1997 advisory -- before the effective date of the bill -- was not at least as protective as the HPV of .05 PCB/KG per day for the group that includes women who are pregnant, nursing, or of childbearing age, and children under the age of 15, then the DCH would be required to issue a new sport fish consumption advisory within 60 days after the bill's effective date. In addition, the bill would require that, beginning in 1997, on November 20th of each year the department would have to prepare a draft advisory for the succeeding year for public comment. Any comments received on the advisory before December 20th of each year would be considered by the department and a final advisory would be issued by March 10th of the following year. The final advisory would have to incorporate the health protection value of .05 micrograms of PCB/KG per day.

Fish Consumption Advisory Program. Under the bill, a program to inform women of childbearing age of the health implications of consuming Great Lakes sport fish would be established and coordinated by the department. The program would be designed to disseminate information using existing public and private entities and programs that could include, but would not be limited to, one or more of the following:

- The program for medical assistance administered by the Family Independence Agency (FIA) under the Social Welfare Act, or other programs administered by the FIA.

- The special supplemental food program for women, infants, and children (WIC) administered by the department under the federal Child Nutrition Act of 1966 (42 U.S.C. 1771 - 1776, 1777 - 1786, and 1788 - 1790), or other programs administered by the department.

- Local health departments.

- School readiness programs such as the program under the federal Head Start Act, subchapter B of Chapter 8 of Subtitle A of Title VI of the Omnibus Budget Reconciliation Act of 1981 (42 U.S.C. 9831 - 9844, 9846, and 9848 - 9852a).

- The Michigan State Medical Society.

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BACKGROUND INFORMATION:

Polychlorinated biphenyl (PCB) has been in use throughout the world since 1929. The compound is used in a variety of industrial processes as hydraulic and heat transfer fluids, insulation in electrical transformers, adhesives, laminates for metal and ceramics, textile coverings and casting waxes. PCB also appears in varnishes and paints, inks, carbonless papers, plastics, soaps, and ironing board covers. Chemically, PCB is a heat resistant compound that is highly indestructible to breakdown by natural forces.

PCBs have been detected in rain, in snowfalls, and in the flesh of many birds and animals. Controlled experiments and environmental accidents have shown that PCBs cause, among other defects, tumors, liver disturbances, visual impairment, and reproductive problems in both animals and humans. In addition, scientific data shows that chemical pollutants such as PCBs wreak havoc on the hormonal systems of humans and wildlife. The results of exposure to toxins in utero and through breast-feeding can be developmental delays and reproductive abnormalities in the offspring of mothers who consume PCBs.

After alarming concentrations of PCBs were found in virtually all fish tested from the Great Lakes, Michigan placed restrictions on the use of PCBs in 1976 to forestall the imminent decline in its fishing industry. According to reports, PCB levels decreased substantially in the Great Lakes between the 1970s and the mid-1980s, but the decline has since slowed. Furthermore, certain species of fish, such as trout and salmon, migrate freely throughout the Great Lakes, and, since there has been an increase recently in the levels of PCBs found in Wisconsin salmon, it is feared that Michigan salmon will also be affected.

FISCAL IMPLICATIONS:

The House Fiscal Agency reports that the provisions of the bill would have an indeterminate impact on state funds, depending upon whether the Department of Community Health uses existing or new programs and personnel. (3-7-97)

ARGUMENTS:**For:**

The main issue involved in the controversy over standards for fish consumption is whether Great Lakes' salmon are safe for the most susceptible populations, that is, women of childbearing age and children. Studies indicate that exposure to polychlorinated biphenyls (PCBs) results in increased cancer risks, neurobehavioral and developmental deficits in newborns, and reproductive health impacts. Research also indicates that, in spite of the considerable progress the state has made in recent years in cleaning up pollution in the Great Lakes, salmon are still unsafe to eat in unrestricted amounts, since they are high on the food chain (they ingest and store toxins from smaller plants and fish); and they are fatty, and it is known that toxic substances cluster in fat. The bill would protect this susceptible segment of the population by adopting a health protection value of .05 micrograms of PCB per kilograms per day for children and for women of child-bearing age, particularly those whose are pregnant or nursing.

Response:

The bill does not go far enough. It is important that all segments of the population that are susceptible to contaminated fish receive information in fish advisories on the amount of fish that can be safely consumed. For example, it is well known that anglers tend to eat more fish than the general population, which buys its fish from supermarkets or from restaurants. Therefore, while the highest-risk population with regard to fish consumption may include children and women of child-bearing age, anglers and their families also need specific advice. Moreover, the general public is confused about the issue of food advisories, in part because of the recent dissension between the state and the federal Environmental Protection Agency (EPA). The EPA has asked all Great Lakes states to consider the most recent research and keep uniform standards. In fact, the agency recently advised Michigan that, unless the state adopts stricter advisories, it will usurp state authority and mail its own fish advisories to state residents who purchased fishing licenses in the state last year. Other Great Lakes states have also criticized Michigan, noting that, if their standards for fish consumption are higher than Michigan's, people will assume that Michigan's fish contain fewer contaminants, and will flock to Michigan to fish. In fact, some have said that it is for

this reason that Michigan has refused to adopt the higher standards proposed in the protocol.

In addition, it isn't clear that the warnings against consumption of contaminated fish contained in the "Michigan Fish Advisory" and the pamphlet entitled "What Women of Childbearing Age Should Know About Eating Fish" will reach many state residents. For example, under the provisions of the bill, the guides will be sent only to those who purchase fishing licenses or those who attend the social agencies and programs, such as the food program for women and children (WIC.) or the Head Start program for children, that are typically directed toward lower-income residents. House Bill 4206, as introduced, would have adopted the Uniform Great Lakes Fish Advisory protocol recommendation of a uniform health protection value (HPV) of .05 micrograms of PCB/kg per day as the basis for quantifying the amount of PCBs in fish. This is the standard that should be used by the Department of Community Health (DCH) in its fish advisories and that should be adopted for all fish consumption.

Against:

It must be noted that fish consumption advisories are perplexing, that they generate controversy, and that often the research they are based on may be inconclusive. For example, in testimony before the House Committee on Conservation, Environment and Recreation, one of the state's recognized scientific experts on this subject stated that the difference between the .05 micrograms of PCB per kilograms per day, as proposed in the 1993 uniform Great Lakes sport fish consumption advisory, and the 2 parts per million adhered to by the FDA, may be insignificant. Furthermore, the DCH, which issues the Michigan Fish Advisories and the pamphlets directed toward fish consumption by women of childbearing age, points out that its recommendations "seek protection at a higher and more restrictive level than the 1993 draft protocol for the uniform Great Lakes sports fish consumption." More importantly, as pointed out by the department, the standard proposed in the protocol is based on a measure of only one contaminant, PCBs, while the department's standards are based on measures of *all* contaminants found in Great Lakes waters.

In addition to the confusion generated by such conflicting claims, there are some who contend that the standard proposed in the Uniform Great Lakes Fish Advisory protocol is too restrictive for the general population, and that fish consumption advisories issued with warnings of high PCB levels could alarm the general public and result in a widespread disregard of the health benefits of including fish in one's diet. In fact, a panel of scientists with expertise in Great Lakes contaminants, toxicology risk assessment, human health

and risk communication, that was formed by the Michigan Environmental Science Board (MESB) to review the 1993 uniform Great Lakes fish advisory protocol, voiced concern on this subject. In its September, 1994 report, the MESB panel stressed that, while it supported the proposed health protection value of .05 micrograms of PCB per kilograms per day for children and women of childbearing age, that HPV may be overly protective for other segments of the population. The panel's report also stressed that the protocol lacked information on the relative risk of consuming fish versus other foods, or the health benefits from eating fish. The panel concluded that "the benefits associated with fish consumption by adults may be greater than the risks associated with chemical contaminants in fish caught in the Great Lakes."

Some have suggested that, rather than alarm the general public and frighten tourists, the pragmatic approach would be to merely provide the public with the information necessary to make informed and rational decisions on fish consumption. The DCH maintains that it follows this policy. Moreover, the department has written the EPA, suggesting that a joint state and federal scientific panel be convened to review the draft protocol, and that the impasse should be resolved by the National Academy of Sciences if no consensus is reached.

POSITIONS:

The Michigan Environmental Council (MEC) supports the bill. (3-6-97)

The Sierra Club, Mackinac Chapter, supports the bill. (3-6-97)

The Michigan Charter Boat Association has no position on the bill. The association's position is that the proposed legislation could have a negative impact on tourism and on young people learning to fish. (3-6-97)

The Michigan United Conservation Clubs (MUCC) has no position on the bill. In written testimony presented to the House committee, the MUCC specified that, while it recognizes the importance of uniform fish consumption advisories, it is unable to determine which approach would best protect the health of Great Lakes fish consumers. (3-6-97)

The Department of Community Health opposes the bills. (3-10-97)

The Michigan Steelhead and Salmon Fishermen's Association, Inc., opposes the bill. (3-10-97)

Analyst: R. Young

■ This analysis was prepared by nonpartisan House staff for use by House members in their deliberations, and does not constitute an official statement of legislative intent.