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### SIERRA URGES DEP TO WITHDRAW HAZARDOUS WASTE PROPOSAL

Date: 28 Nov 2001

From: "Bill Wolfe" {[billwolfe2@earthlink.net](mailto:billwolfe2@earthlink.net)}

### SIERRA CLUB URGES DEP TO WITHDRAW HAZARDOUS WASTE MANAGEMENT PROPOSAL

SIERRA ASKS RECONSIDERATION OF ENFORCEMENT, BUDGET, ENVIRONMENTAL JUSTICE, POLLUTION PREVENTION, FEDERAL CONSISTENCY, AND HOMELAND SECURITY POLICY ISSUES

November 28, 2001

Trenton - The Sierra Club, NJ Chapter criticized the Department of Environmental Protection's (DEP) November 19, 2001 regulatory proposal to re-adopt the current State hazardous waste management program regulations. The proposal would apply to thousands of New Jersey's industrial facilities that generate, transport, treat, store or dispose of millions of pounds of hazardous waste, as well as dozens of facilities required to clean up toxic soil and groundwater contamination due to mismanagement of hazardous waste on-site.

The proposal would readopt for 5 years the current \$7.12 million program. The existing program has been weakened over the last 8 years under the former Whitman Administration's "federal consistency" (Executive Order 27 - 1994), "voluntary compliance" and "open for business" policies. The proposal would re-adopt the current program, basically unchanged, despite weaknesses and new concerns raised by recent events.

"At this time, it is inappropriate for DEP Commissioner Shinn to propose major initiatives or to attempt to impose outdated policies on the next administration, as he exits after 8 years of environmental rollbacks, budget cuts, lax enforcement and failure to move the program forward." said Jeff Tittel, Chapter Director. "We call on Commissioner Shinn to voluntarily withdraw the proposal. If necessary, we will ask the new Administration to postpone and reconsider the proposal in light of its failure to address the following important concerns" concluded Tittel.

#### ENFORCEMENT

The proposal "reflects current [Whitman] policy regarding civil penalty assessment for violations of hazardous waste rules" (33 NJR 3797).

After 8 years of a voluntary compliance enforcement policy, it's time to get tough with those that would violate laws designed to protect the health of our communities from the risks of toxic waste. The oversight, inspection, and enforcement fines and penalties of the proposal may need to be reconsidered to assure that they provide adequate deterrence and punishment.

#### NJ NEEDS TOUGHER STATE STANDARDS AND TO CLOSE LOOPHOLES

The current NJ hazardous waste management program was scaled back under the Whitman Administration's "federal consistency" policy of Executive Order 27 (1994). That policy scaled back NJ standards that were more stringent than minimum federal counterparts. Because the USEPA national program is weaker than NJ's historically more stringent State program, this policy led to such things as the deregulation of used oil, widespread abuse of loopholes for hazardous waste generators to avoid oversight, and inaction in the "corrective action" program, a program designed to cleanup highly contaminated sites and make these "brownfields" available for redevelopment. Additionally, the federal consistency policy limited the implementation of new State initiatives, such as NJ's model Pollution Prevention policy and planning efforts to reduce the use of hazardous substances and the generation of hazardous waste. The federal consistency policy also limited DEP's ability to adopt stronger measures to address NJ

specific problems and/or weaknesses in the federal program, such as those illustrated by recent floods, which caused numerous barrels of drums of toxic waste to float down NJ rivers (i.e. the Raritan River, upstream of water supply intakes).

The current proposal is based on this flawed federal consistency policy. The proposal goes even further by including a provision that would automatically adopt any future weakening by the federal USEPA. For example, USEPA could adopt weaker national standards, which would then automatically become the law of the land in NJ, without even the opportunity for NJ residents to comment or question whether this is appropriate for NJ. Given the direction of environmental policy under the Bush Administration, this is a serious concern for NJ.

The federal consistency policy makes no sense for NJ, given NJ's concentration of hazardous waste facilities, proximity to residential areas, and population density. We need to renew our focus on pollution prevention and do more to discourage the use and generation of hazardous waste. We need to promote advanced treatment technologies and phase out the land disposal and incineration of hazardous waste. We need to adopt common sense measures such as prohibiting the outdoor storage of hazardous waste drums in flood prone areas. We need to assure environmental justice considerations prevail over the location and operation of major hazardous waste management facilities. We need to assure that polluters pay. We need to accelerate the corrective action program. None of these issues is adequately addressed under the federal program. By adopting the federal program, the DEP proposal fails in all these regards.

#### ENVIRONMENTAL JUSTICE

Studies have shown that solid and hazardous waste management facilities are concentrated and disproportionately located in poor, disadvantaged and/or minority communities. These facilities present excess health and environmental risks and a range of potential adverse impacts associated with releases of toxic wastes, truck traffic, etc. The proposal fails to consider or include environmental justice review requirements, to expand community participation or to provide siting criteria or mechanisms to evaluate, mitigate and compensate for disproportionate impacts.

#### HOMELAND SECURITY

The September 11 attacks revealed vulnerabilities at chemical facilities. Federal investigations documented efforts of terrorist groups to secure hazardous transportation licenses. The proposal fails to consider the need for heightened plant security, or better controls over hazardous waste shipments. State police and Emergency Management

officials may need to know the location of hazardous waste shipments or facilities. For example, commercially available technology now allows real time monitoring of vehicle locations - if a car owner now benefits from this technology to prevent car theft, State officials should also benefit by knowing where large quantities of hazardous waste are located.

BUDGET AND STAFFING

Given projected state budget deficits, it is imperative to assure that hazardous waste generators, treatment and disposal facilities, not the taxpayer, fully pay their fair share of DEP's operating budget. The Whitman Administration abandoned NJ's historic "Polluter Pays" policy. The current \$7.12 million program collects \$3.8 million in fees. The remainder of the program is funded by an EPA grant. The current fee schedule was established in 1996. The proposal increases current fees slightly, but the overall fee schedule may need to be revised to consider inflation and to incorporate new program costs, given new State budget realities.

OPEN AND BALANCED GOVERNMENT

The current proposal was industry dominated. DEP even acknowledged that

"the Department initiated an informal interested party review of its regulatory program to solicit input needed changes from the regulated community (emphasis added, 33 NJR 3795).

No environmental or community groups were given this access. This "client service" orientation is not appropriate practice and must change as a matter of DEP policy.

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## STUDY LINKS AIR POLLUTION TO MEASURABLE LUNG DAMAGE

Date: 011128

From: <http://www.nandotimes.com/>

By Tammy Webber, Associated Press, November 28, 2001

Chicago - Some children who appear to be in perfect health have measurable lung damage from exposure to air pollution, researchers found, suggesting that such damage could develop into lung disease.

Past research has found that children living in polluted areas have higher rates of lung diseases such as asthma. But a new study is the first to use X-ray imaging to measure changes in children with no symptoms of lung problems, the researchers said.

Chest X-rays of 241 children in Mexico City were compared with those of 19 children living in a small coastal town. Throughout the 20-month study, smog levels in Mexico City exceeded U.S. air quality standards for more than four hours a day on average. Particulate matter - tiny pieces of soot and other materials in the air - also was above U.S. standards.

Researchers found 63 percent of the Mexico City children had excessive inflation of both lungs, said Dr. Lynn Ansley Fordham, an associate professor of radiology and chief of pediatric imaging at the University of North Carolina School of Medicine.

In addition, 52 percent of the urban children had abnormal numbers of interstitial markings - fine lines that could indicate inflammation along the airways, Fordham said.

CT scans of 25 children with the most abnormal X-rays found 10 with mild thickening of the walls of the bronchial airways, eight with air trapped in their lungs and four with unusually prominent central airways. One child had a lung nodule.

In the coastal town, one child had mild over-inflation of the lungs. The rest had no damage.

Lung damage could be a precursor to problems such as pulmonary disease, but the findings also might point to a reliable way to test children early, before lung disease develops, Fordham said.

"X-rays are a relatively inexpensive, easy-to-obtain screening for children," said Fordham. "You can find (problems) and do something for those kids."

Fordham said some of the children might be helped by vitamins, better diet, and staying inside when air pollution is at its peak.

She and Dr. Lilian Calderon-Garcidueana of the University of North Carolina and the National Institute of Pediatrics in Mexico City presented the study Wednesday at the Radiological Society of North America's annual meeting.

Joel Schwartz, an environmental epidemiologist at Harvard's School of Public Health, said other research has indirectly linked air pollution with respiratory ailments. But to find radiographic evidence of lung abnormalities in seemingly healthy children "is pretty unusual," he said.

The results "are showing what we suspect - that there are chronic effects that can be seen in the lung that would show up this early ... on X-ray," said Schwartz, who was not involved in the study.

Some of the changes, such as airway thickening, might disappear if the children moved to a less polluted area, "but it would certainly take a long time to reverse," Schwartz said.

Although Mexico City is more polluted than U.S. cities, the results can be generalized to other polluted areas, Fordham said. She said a study on euthanized dogs in Mexico found that those from moderately polluted areas - similar to some areas of the United States - had thickening of the lungs' lining, inflammation and particulate matter lodged in the lungs.

The findings might be more severe in dogs because of their poor diets, but "we presume the same things could be found in people," said Fordham, adding that another study of children in a moderately polluted city is planned.

Fordham said it would be difficult to duplicate the study in the United States because of the high rates of asthma and higher levels of indoor air pollution from such things as carpet and glues, which could skew the results. It also was easier to find Mexican children who had lived in the same neighborhood all their lives.

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## WALKWAY RECORDS SUBPOENAED

Date: 27 Nov 2001

From: Andrew Willner {[andy\\_keeper@netlabs.net](mailto:andy_keeper@netlabs.net)}

By Ronald Leir, Staff Writer, Jersey Journal, 11/27/01

Hoboken - Federal law enforcement agents have subpoenaed Hudson County Improvement Authority records involving the Hoboken Shipyard walkway project, official sources have confirmed.

The public walkway at the \$150 million multiuse development at the city's northern end was funded largely by a nearly \$1 million grant awarded to the Applied Cos. of Hoboken through the federal Intermodal Surface Transportation Efficiency Act.

The action follows an Aug. 14 raid on Applied's office that has been connected to an ongoing federal probe involving former Hudson County Executive Robert Janiszewski, who submitted a letter of resignation in September. It could not be learned yesterday who, if anyone, is the target of the investigation.

"Previously, they had a search warrant for the Shipyard project and this (subpoena) is not inconsistent with (the previous action)," Joseph Hayden, the Teaneck-based attorney for Applied and its principal figure, Joseph Barry, said yesterday. "Joe Barry and Applied Companies did nothing wrong and we're comfortable that's what (the feds') finding will be."

Barry declined comment.

When Janiszewski suddenly quit after 14 years at the county's helm and went into apparent hiding - he hasn't been heard from publicly for months - several sources said the county's top Democrat had been captured on surveillance tapes earlier this year during an FBI sting operation involving an unnamed county vendor.

After he was confronted, the sources said, he became a cooperating witness for the government, secretly taping other targets from his car over several months. Among those taped was Barry, those with knowledge of the investigation said.

When Barry was confronted, he also was asked to become a cooperating witness but declined, sources said, forcing authorities to shut down the undercover probe prematurely to avoid word of Janiszewski's clandestine activities from becoming public.

The \$150 million Shipyard project, comprising nearly 1,200 luxury apartments and retail shops off 14th Street and the Hudson River,

includes one of Hoboken's several completed portions of the Hudson River Waterfront Walkway, a state-mandated public esplanade that officials hope will one day be a continuous boardwalk of sorts extending from the Bayonne Bridge to the George Washington Bridge in Fort Lee.

In a Jersey Journal series on the walkway project that appeared last week, Barry expressed pride in his portion of the project.

"We're trying to build a walkway to the highest standard," Barry said. "It's a beautiful amenity."

In addition to the ISTEA grant, Applied put up a smaller amount of money to fund the walkway segment as part of what was billed as a public-private partnership to expedite development of another piece of the esplanade.

Because the grants can only be paid to public entities, the funding was channeled through the Office of Transportation Management Associates, an arm of the HCIA, located in Downtown Jersey City, and that is where the records pertaining to the ISTEA grant are stored, sources said.

Lawyers for the HCIA are in the process of trying to comply with the demands of the subpoena, which requests data dating to 1998, sources said.

The brick walkway stretches from the 14th Street Pier along the river to the old Maxwell House plant and accesses the 13th Street pier where, on one side, NY Waterway ferries provide service to New York and, on the other side, the Manhattan Yacht Club offers classes.

The New Jersey Law Journal has reported that federal investigators have subpoenaed records of the North Jersey Transportation Planning Authority, where Janiszewski served as chairman, with a focus on ISTEA grants and on Section 108 loans made by the U.S. Department of Housing & Urban Development.

Barry, a major contributor to state and local politicians, obtained a \$6.7 million ISTEA grant for his Shipyard project.

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PINELANDS COMMISSION OPENS PEMBERTON CENTER

Date: 011129

From: "Dennis W. Schvejda" {[dschvejda@igc.org](mailto:dschvejda@igc.org)}

Philadelphia Inquirer, November 28, 2001

Pemberton - The Pinelands Commission yesterday opened the doors to its new \$2.4 million facility that rests just a few yards from the farm and carriage houses that served as its base for 19 years.

The new 12,600-square-foot Richard J. Sullivan Center for Environmental Policy and Education is named for the state's first Department of Environmental Protection commissioner, who also was chairman of the Pinelands Commission from 1988 to 1998. Sullivan, who spoke at the dedication, played a crucial role in creating the state's stringent wetlands regulations and high auto-emissions standards.

The commission, which is not under the state's control, funded most of the building's price tag, but was helped by a \$615,000 grant from the Fund for New Jersey, a philanthropic organization based in New Brunswick. The two-story facility on Springfield Road has a furnished basement, a large meeting chamber and a library.

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Dennis W. Schvejda, Co-Conservation Chair  
New Jersey Chapter Sierra Club

Web: <http://sierraactivist.org>

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EPA TO HOLD HEARINGS ON WASTE IN FERTILIZERS

Date: 28 Nov 2001

From: [chyveminde@my-deja.com](mailto:chyveminde@my-deja.com) (Chive Mynde)

By Eric Sorensen, Seattle Times Science Reporter, November 28, 2001

The Environmental Protection Agency will use Seattle as a sounding board tomorrow for a proposal to tighten regulation of recycled hazardous waste in fertilizers.

In afternoon and evening hearings, the agency will field comments on a rule that would impose limits on the hazardous metals that can be in

zinc fertilizer made from hazardous waste. The rule would also eliminate loopholes that currently put no such limits on material drawn from steel mills.

Only three states, including Washington, impose limits on the hazardous waste in fertilizers.

The agency has already received more than 600 comments, with the comment period continuing until Feb. 26.

The proposed rule is part of an agreement struck with the Washington Toxics Coalition after it and the Sierra Club sued the EPA in 1998 for failing to regulate hazardous waste in fertilizers as aggressively as it did hazardous waste in landfills. The lawsuit followed a Seattle Times investigation showing how manufacturing industries dispose of some hazardous waste by turning it into fertilizer to be spread on farms.

The new rule would apply only to zinc, a micronutrient essential in small quantities for optimal plant growth. The agency is also fielding comments on the use of iron from mining waste, which is now exempt from hazardous-waste regulation. Standards for other types of hazardous waste may be proposed later.

The primary issue is how heavy metals such as lead and cadmium, as well as dioxins, can end up in the fertilizer when it is made with the zinc dust from steel recyclers' furnaces.

The Fertilizer Institute, the trade association for the industry, would prefer the EPA base its restrictions on the assessed risk of different metals in fertilizers. As it is, the restrictions are "technology-based," meaning they are based on the technology available for removing metals from hazardous materials.

"There's no sense in going through the process of removing metals that are no threat to human health and the environment," said Kathy Mathers, the institute's vice president for public relations.

The Washington Toxics Coalition wishes the EPA regulation would go further.

The group wants tougher restrictions on dioxins and heavy metals and more comprehensive reporting, tracking and labeling requirements.

Today, the coalition will release a report that contends zinc-containing fertilizers made from recycled hazardous waste do not perform well. One widely used fertilizer was the most contaminated yet had the lowest level of zinc solubility, a key measure of how well the nutrient is taken up by plants. The solubility of the zinc in most

fertilizers is not enough for the zinc to be available to plants, the study says.

The EPA should require that fertilizers containing hazardous waste at least be effective, said Erika Schreder, coalition staff scientist.

"Otherwise, it's simply dumping waste," she said.

The agency says a review of contaminants in fertilizers did not find enough risk to justify a complete revision of rules governing them, but it did decide to make some revisions to rules on recycled hazardous waste.

Specifically, the agency decided rules on hazardous waste were developed for disposing of them in landfills, not as fertilizers. The EPA has also said it wants to leave fertilizer regulation to the states.

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STATISTICS MASK DECLINING WORLDWIDE FISH POPULATIONS

Date: 011128  
From: <http://www.nandotimes.com>

SLIPPERY STATISTICS MASK DECLINING WORLDWIDE FISH POPULATIONS

By John Heilprin, Associated Press, November 28, 2001

Washington - Catches from the world's oceans are severely declining but the trend has been masked by China's practice of increasingly overreporting the amount of fish it pulls in each year, researchers say.

A team of scientists based at the University of British Columbia at Vancouver found that global catches, which were thought to be increasing during the 1990s by 700 million pounds of fish per year, actually have been decreasing by nearly 800 million pounds of fish annually.

Just one entity, the Food and Agriculture Organization of the United

Nations, compiles global fisheries statistics, but it relies on voluntary reporting of catches from countries to estimate the amount of fish the oceans hold.

The new studies being reported Thursday in the journal Nature call into question the veracity of FAO figures and its reporting system.

"FAO must generally rely on the statistics provided by member countries, even if it is doubtful that these correspond to reality," authors Reg Watson and Daniel Pauly said.

Moreover, by subtracting just one fish from the equation, the abundant Peruvian anchoveta, which is used only for fish meal and whose population fluctuates due to El Nino, an even more striking decrease was apparent: 1.5 billion pounds a year less seafood available for human consumption.

"Misreporting by countries with large fisheries, combined with the large and widely fluctuating catch of species such as the Peruvian anchoveta, can cause globally spurious trends," Watson and Pauly said.

Since 1988, when the world's seafood supply peaked at 34 pounds a person each year, the combined effects of overfishing and increasing human populations have reduced the amount of fish and shellfish available on Earth to only about 25 pounds a person per year now, according to the findings.

The trend is projected to continue rapidly downward to less than 17 pounds a person each year by 2020.

The studies' authors also note that the practice of aquaculture, or fish farming, cannot make up the difference since that system relies on the use of fish meal that comes from a third of all fish landed globally.

The Chinese government relies on local officials to provide catch figures. Wan Cheng, a spokesman for the Chinese Agricultural Ministry's Fisheries Department, said the government had offered county and provincial officials job promotions based on growth in those figures, giving them incentive to inflate numbers.

That practice ended two years ago, when the government put into effect a "zero growth" policy saying catch reports from oceans should not exceed 1998 levels of about 35 billion pounds of fish and shellfish per year.

Wan said preservation of fisheries is now the aim and there is no longer any pressure to boost figures, which also were subject to some defects due to imperfect methods of compiling information.

"Local government officials have no incentive to inflate their fishing output. Therefore, we believe there is no intentional overreporting of statistics, but only some possible statistical defects," Wan said.

"The Chinese government has noted the problem of falling fish stocks and is paying more attention to the preservation of resources."

Using statistics gathered by the FAO since 1950, the scientists created maps of world fisheries catches and then built a computer model to predict catch size in different ocean regions.

The model showed China's reported catches were unrealistically high when compared with catches from other ocean areas that have similar characteristics such as depth, temperature and biological productivity.

The findings came as little surprise to Lee Alverson, a global fisheries consultant in Seattle who headed research for the National Marine Fisheries Service in the Northwest and Alaska from 1970 to 1980.

"It takes a lot of nerve to make the sort of accusation they did about China, but there were a lot of scientists who felt nervous about those numbers," Alverson said Tuesday. "If any of the nations are putting bogus numbers into the accounting process, then our ability to assess if overfishing is going on is in jeopardy."

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SCIENCE AND ETHICS OF WATER FLUORIDATION

Date: 28 Nov 2001  
From: "Mermer, Cory" {[CMermer@panynj.gov](mailto:CMermer@panynj.gov)}

Howard Cohen, BA, MA, PhD  
David Locker, BDS, PhD

A statement concerning the ethics of water fluoridation was published in a recent issue of the Journal of the Canadian Dental Association.1 The arguments presented in that paper did not constitute what we would

consider a complete and systematic account of the scientific and moral issues involved. It is our contention that water fluoridation, by the very nature of the way it is administered, engenders a number of moral dilemmas that do not admit to any easy solution. In this paper, we attempt to elucidate the particular problems posed by this public health initiative, according to the principles of bioethics.

## THE ROLE OF BIOETHICS

Whether or not water fluoridation reduces dental caries in child populations has been subject to considerable debate.<sup>2,3</sup> This debate is scientific rather than moral in character and revolves around the validity of the evidence concerning the benefits of adding fluoride to community water supplies. However, even if it were universally accepted that water fluoridation is beneficial and the scientific evidence incontrovertible, it would still have a moral dimension. This moral status arises in the application of water fluoridation in health care policy and public health practice. Attitudes toward public health initiatives are of necessity shaped by values. Bioethics is the study of the moral, social and political problems that arise from biology and the life sciences, and that involve human well-being.<sup>4</sup> Of particular relevance are the core values of autonomy, beneficence and truthfulness.

## BENEFACTENCE AND AUTONOMY

Beneficence denotes the practice of good deeds and signifies an obligation to benefit others or seek their good. How this principle is put into practice depends on whose notion of good is applied. Health policy-makers and professionals, in advocating for the addition of fluoride to drinking water, are making moral decisions about the well-being of individuals and applying their own notions of good. If beneficent acts are to benefit the recipients of the actions, the basis for the goodness of the actions must lie in the values or preferences of autonomous, self-determining individuals. In practice, however, beneficent acts such as water fluoridation tend to be in conflict with autonomy. Since it is effectively impossible for individuals to opt out, fluoridation takes away the freedom to choose.

Advocates of water fluoridation argue that the benefits accruing to society through reductions in dental caries outweigh any harm to individual autonomy. Defenders of autonomy argue that fluoride is available from many sources, and so its benefits can be realized without violating the principle of autonomy. However, this presumes that everyone in society can access these alternative sources. The most vulnerable in society, it is countered, would surely miss out on the benefits of fluoride.<sup>1</sup>

Therefore, considering the benefit that accrues to disadvantaged groups in society, advocates of fluoridation contend that water supplies should be fluoridated on the grounds that everyone, regardless of socioeconomic status, can benefit. The claim here is that water fluoridation promotes social equity. This solution still leaves the conflict of beneficence and autonomy unresolved. In fact, there appears to be no escape from this conflict of values, which would exist even if water fluoridation involved benefits and no risks. However, water fluoridation does involve risks, in the form of increases in the prevalence and severity of dental fluorosis. Moreover, as Coggon and Cooper<sup>5</sup> indicate, those most likely to benefit from water fluoridation are not necessarily those placed at most risk. This complicates considerably any attempt to balance beneficence and autonomy.

Advocates of water fluoridation, in seeking to strike a balance between competing values, are attempting to reconcile irreconcilables: the demands of moral autonomy cannot be made compatible with what could be regarded as the involuntary medication of populations. This situation gives rise to the question of which values concerning the conflict between beneficence and autonomy should inform decision making with respect to water fluoridation: those of health professionals or those of the community?

#### TRUTHFULNESS

An assessment of the ethics of water fluoridation must also take into account the moral issues surrounding scientific inquiry in order for health professionals to be justified in advising or compelling others how to act. This aspect pertains to the principle of truthfulness, whereby health professionals are obligated to tell their patients the truth,<sup>6</sup> for one cannot influence the way others act without first being justified in one's own beliefs.

The conventional view is that policy-makers are presented with a clear moral choice when weighing the benefits and harms associated with water fluoridation. Historically this may have been the case. The original community trials of water fluoridation indicated a substantial effect.<sup>7,8</sup> However, over the past 25 years there has been a marked reduction in rates of dental caries among children, such that the benefits of water fluoridation are no longer so clear. Although current studies indicate that water fluoridation continues to be beneficial, recent reviews have shown that the quality of the evidence provided by these studies is poor.<sup>9-11</sup> In addition, studies that are more methodologically sound indicate that differences in rates of dental decay between optimally fluoridated and nonfluoridated child populations are small in absolute terms.<sup>12,13</sup> Canadian studies of fluoridated and nonfluoridated communities provide little systematic

evidence regarding the benefits to children of water fluoridation.<sup>14-17</sup> Moreover, studies of the benefits to adults are largely absent,<sup>9</sup> and there is little evidence that water fluoridation has reduced social inequalities in dental health.<sup>10</sup>

Truthfulness entails a proper appraisal of the benefits and risks. Currently, the benefits of water fluoridation are exaggerated by the use of misleading measures of effect such as percent reductions. The risks are minimized by the characterization of dental fluorosis as a "cosmetic" problem. Yet a study of the psychosocial impact of fluorosis found that "10 to 17 year olds were able to recognize very mild and mild fluorosis and register changes in satisfaction with the colour and appearance of the teeth."<sup>18</sup> The investigators also stated, "The most dramatic finding was that the strength of association of [fluorosis] score with psycho-behavioural impact was similar to that of overcrowding and overbite, both considered key occlusal traits driving the demand for orthodontic care." In the absence of a full account of benefits and risks, communities cannot make a properly informed decision whether or not to fluoridate, and if so at what level, on the basis of their own values regarding the balance of benefits and risks.

In the absence of comprehensive, high-quality evidence with respect to the benefits and risks of water fluoridation, the moral status of advocacy for this practice is, at best, indeterminate, and could perhaps be considered immoral.

## CONCLUSION

These scientific and moral issues must be addressed and resolved if policy and practice with respect to water fluoridation are to be considered ethically sound. Yet it is not clear that this work can be accomplished satisfactorily. The conventional view that the ethical dilemmas posed by water fluoridation can be resolved by balancing the benefits and harms actually begs the question, for it presumes that such a balance can be achieved. The preceding arguments indicate that this view needs to be replaced by a moral account showing an appreciation for the ineradicability of the conflict of values that water fluoridation engenders. They also raise the question of whose values should take precedence when decisions regarding water fluoridation are being made.

Ethically, it cannot be argued that past benefits, by themselves, justify continuing the practice of fluoridation. This position presumes the constancy of the environment in which policy decisions are made. Questions of public health policy are relative, not absolute, and different stages of human progress not only will have, but ought to have, different needs and different means of meeting



those needs. Standards regarding the optimal level of fluoride in the water supply were developed on the basis of epidemiological data collected more than 50 years ago. There is a need for new guidelines for water fluoridation that are based on sound, up-to-date science and sound ethics. In this context, we would argue that sound ethics presupposes sound science.

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Dr. Cohen has a PhD in political and moral philosophy from the University of Toronto. He is currently enrolled in the dental undergraduate program at the University of Toronto.

Dr. Locker is professor and director of the Community Dental Health Services Research Unit, Faculty of Dentistry, University of Toronto.

The views expressed are those of the authors and do not necessarily reflect the opinions or official policies of the Canadian Dental Association.

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#### REFERENCES

1. McNally M, Downie J. The ethics of water fluoridation. J Can Dent Assoc 2000; 66(11):592-3.
2. Diesendorf M, Colquhoun J, Spittle BJ, Everingham DN, Clutterbuck FW. New evidence on fluoridation. Australian N Z J Public Health 1997; 21(2):187-90.
3. Spencer AJ. New, or biased, evidence on water fluoridation? Australian N Z J Public Health 1998; 22(1):149-54.
4. Potter VR. Bioethics: Bridge to the Future. Englewood Cliffs: Prentice Hall, 1971.
5. Coggon D, Cooper C. Fluoridation of water supplies: Debate on ethics must be informed by sound science. BMJ 1999; 319(7205):269-70.
6. Higgs R. On telling patients the truth. In: Lockwood M, editor. Moral dilemmas in modern medicine. Oxford: Oxford University Press; 1985.
7. Burt B, Eklund S. Dentistry, dental practice and the community. 5th ed. Philadelphia: WB Saunders Company; 1999.
8. Lewis DW, Banting DW. Water fluoridation: current effectiveness and dental fluorosis. Community Dent Oral Epidemiol 1994; 22(3):153-8.

9. Locker D. Benefits and risks of water fluoridation. University of Toronto, Community Dental Health Services Research Unit; 1999.
10. McDonah M, Whiting P, Bradley M, Cooper J. A systematic review of public water fluoridation. University of York: NHS Centre for Reviews and Dissemination; 2000.
11. Hawkins RJ, Leake JL, Adegbenbo AO. Water fluoridation and the prevention of dental caries. J Can Dent Assoc 2000; 66(11):620-3.
12. Slade GD, Davies MJ, Spencer JA, Stewart JF. Association between exposure to fluoridated drinking water and dental caries experience among children in two Australian states. J Public Health Dent 1995; 55(4):218-28.
13. Heller KE, Eklund SA, Burt BA. Dental caries and dental fluorosis at varying water fluoride concentrations. J Public Health Dent 1997; 57(3):136-43.
14. Clovis J, Hargreaves JA, Thompson GW. Caries prevalence and length of residency in fluoridated and non-fluoridated communities. Caries Res 1988; 22(5):311-5.
15. Ismail AI, Brodeur JM, Kavanagh M, Boisclair G, Tessier C, Picotte L. Prevalence of dental caries and dental fluorosis in students 11-17 years of age, in fluoridated and non-fluoridated cities in Quebec. Caries Res 1990; 24(4):290-7.
16. Ismail AI, Shoveller J, Langille D, MacInnis WA, McNally M. Should the drinking water of Truro, Nova Scotia be fluoridated? Water fluoridation in the 1990s. Community Dent Oral Epidemiol 1993; 21(3):118-25.
17. Clark DC, Hann HJ, Williamson MF, Berkovitz J. Effects of lifelong consumption of fluoridated water or use of fluoride supplements on dental caries prevalence. Community Dent Oral Epidemiol 1995; 23(1):20-4.
18. Spencer AJ, Slade GD, Davies M. Water fluoridation in Australia. Community Dent Health 1996; 13(Suppl 2):27-37.

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