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COOPERATION

PURSUANT TO ARTICLE 14,  
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ON ENVIRONMENTAL COOPERATION*

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## I. SUMMARY

The Submitters request, pursuant to Article 14 of the *North American Agreement on Environmental Cooperation* (NAAEC), that a factual record be prepared for the United States' failure to effectively enforce the *Clean Water Act*<sup>1</sup> (CWA) against coal-fired power plants for mercury emissions that are degrading thousands of rivers, lakes, and other waters across the country. We assert that this failure of effective enforcement through appropriate government action has thwarted the aim of the NAAEC to prevent trade advantages between the parties gained at the expense of the environment.

Fish have long been a healthy part of the diet of millions of Americans; indeed, for many economically disadvantaged communities across North America fish constitute a major source of nutrition. The pervasiveness of mercury in our aquatic environment and a dramatic increase in Fish Consumption Advisories (FCAs), however, is a growing concern across the continent. **Since 1993, the total number of fish advisories for mercury across the U.S. has risen sharply from 899<sup>2</sup> to 2347, an increase of 244%.<sup>3</sup>** Today 45 States --- compared to only 27 in 1993 --- issue FCAs for some or all of their lakes, rivers and other waters<sup>4</sup> warning the general public and sensitive subpopulations, such as pregnant women, of the dangers of consuming this otherwise healthy food. According to the U.S. Environmental Protection Agency (EPA), 35% of the total lake acres and 24% of the river miles in the nation are now under advisory.<sup>5</sup>

More than 30 years ago,<sup>6</sup> the U.S. Congress enacted laws to prevent the very degradation of these waters that has actually been occurring. An antidegradation policy, with the force of law, lies at the very heart of the CWA, which was passed to *restore and maintain* U.S. waters. Under the CWA's *Water Quality Standards* (WQS) existing uses of waterways, including fishing, must be preserved without exception. Yet, the EPA is in essence overseeing the loss of treasured water uses across many of the country's waterways by failing to take appropriate action against coal-fired power plants as provided for in U.S. domestic laws. The fact that this widespread degradation of U.S. waters has happened in the face of a clear antidegradation policy is itself strong evidence that the EPA has failed to effectively enforce the nation's environmental laws and calls for a full CEC inquiry. In the following submission we (1) elaborate on the evidence of widespread degradation of waters; (2) provide statistical data for the state sources, with additional emphasis on the Ohio Valley, of the 48 tons<sup>7</sup> of mercury emitted annually from coal-fired power plants; and (3) detail the legal scheme of the CWA, particularly s. 402 and s. 303 --- including the antidegradation policy<sup>8</sup> --- pursuant to which we allege the failure of effective enforcement.<sup>9</sup>

Water bodies in the U.S. [and Canada] are being used as toxic waste dumps for mercury emitted by coal-fired power plants, precisely the impact the CWA is designed to prevent. Coincidental to this failure of effective enforcement is the EPA refusal to impose mercury reduction requirements under the *Clean Air Act* on power plants despite the availability of affordable technologies that can greatly reduce such emissions.

The obvious result of this failure to enforce environmental laws against coal-fired power plants is the very trade advantage, namely cheap power produced at the expense of the environment, which the NAAEC seeks to prevent. We therefore respectfully petition the CEC for a factual record for this alleged failure to enforce for the period of 1993 to 2003, based on the evidence presented in our submission.

## II. BACKGROUND

### *i. The Toxic Health Impacts of Mercury*

Mercury is a toxic, persistent, and bioaccumulative pollutant. It is listed by the EPA as a hazardous air pollutant under Title III of the federal *Clean Air Act*.<sup>10</sup>

Mercury can be converted in waters to a highly toxic form called methylmercury, which accumulates in fish and the humans that eat those fish. Even at very low atmospheric deposition rates in locations remote from point sources, mercury biomagnifications can result in toxic effects in consumers, like humans, at the top of aquatic food chains. Since animals accumulate methylmercury faster than they eliminate it, they therefore consume higher concentrations of it at each successive level of the food chain. Small environmental concentrations of methylmercury can thus readily accumulate to potentially harmful concentrations in fish, fish-eating wildlife, and humans.

Children and fetuses are at the greatest risk because of the adverse impact of mercury on their neurological development. Mercury is readily passed through the placenta to the foetus.<sup>11</sup> The U.S. EPA recently estimated that 630,000 U.S. newborns had unsafe levels of mercury in their blood in 1999-2000.<sup>12</sup> This estimate doubled previous estimates from the National Academy of Science (NAS).<sup>13</sup> In its 2000 report on the toxicological effects of methylmercury, the National Research Council, a division of the NAS, estimated that more than 60,000 children in the U.S. are born each year at risk for adverse neuro-developmental effects due to *in utero* exposure to methylmercury.<sup>14</sup> A study by the U.S. Centers for Disease Control has estimated that one in twelve women of child-bearing age has blood mercury levels at or in excess of levels considered safe by the EPA.<sup>15</sup> A more recent EPA analysis estimated that one in six women of childbearing age has mercury levels in her blood high enough to put her baby at risk.<sup>16</sup>

### *ii. U.S. coal-fired power plants as a source of mercury contamination*

U.S. coal fired plants emit more mercury to the air than any other U.S. source,<sup>17</sup> accounting for over 40% of total human-generated mercury emissions in the country.<sup>18</sup> In fact, U.S. emissions from coal-fired power plants are the largest *North American* source of mercury air emissions.<sup>19</sup> (Despite these troubling figures, coal-fired power plants are the only major source of mercury emissions that are unregulated under the U.S. *Clean Air Act*.<sup>20</sup> Instead it appears U.S. energy industry giants are being allowed to script the environmental policies of the country to the detriment of all North Americans.)

According to the *Toxic Release Inventory* (TRI), in 2002 the 1,100 coal-fired units<sup>21</sup> operating at approximately 480 U.S. power plants emitted 90,361 pounds or 45.181 tons (40.987 tonnes) of mercury to the air.<sup>22</sup> The U.S. EPA puts the current figure somewhat

higher at 48 tons annually for coal-fired power plants.<sup>23</sup> By comparison, mercury emissions from all Canadian coal-fired power plants, although a serious problem, are relatively small with a total of about 2.5 tons (2 tonnes) annually.<sup>24</sup>

Mercury emitted into the atmosphere by coal-fired power plants falls back to the earth in the form of precipitation or as dry particles. Energy industry supporters have long suggested that mercury emissions from coal-fired power plants is a long range issue and that controls on local sources would have little or no effect on local water quality. For example, EPRI, an energy industry lobbyist, argues that over 50% of mercury deposition is attributable to background emissions and not local sources.<sup>25</sup> Recent studies, however, suggest that the impacts of mercury emissions are having a much greater impact on local water quality than was once held. A decade-long EPA-funded study of southern Florida and the Everglades<sup>26</sup> concluded that reductions in local mercury emissions to air--- in that case as a result of strong regulations --- result in a profound and almost immediate effect in removing mercury from the environment and the food chain.<sup>27</sup>

EPA data suggests that 60% of the mercury deposited in the U.S. originates from within the country.<sup>28</sup> The contribution from domestic coal-fired plants therefore represents about 38% of the mercury that is atmospherically deposited within the U.S.<sup>29</sup> The highest deposition rates occur in areas that are near or downwind of coal-fired power plants; in the U.S. these include the southern Great Lakes, the Ohio Valley, the Northeast, and areas in the Southeast.<sup>30</sup> Mercury monitoring of rain and snow in the Northeast has established that this precipitation contains “mercury at levels above the water quality guidelines for protection of wildlife and human health.”<sup>31</sup> Mercury levels in precipitation in Pennsylvania, New York, Maine and New Hampshire were 16.5, 10.7, 24.2 and 1.5 times, respectively, the EPA’s human health standard for mercury in lakes.<sup>32</sup> Appendix 8 shows deposition levels in individual states.

Of the 12 states emitting the most mercury to air in 2002, seven are in the Ohio Valley.<sup>33</sup> The TRI database shows the following mercury releases to air for 2001 and 2002.<sup>34</sup>

**Table 1: Mercury Emissions (measured in lbs.) to Air --- Ohio Valley Coal-fired Plants**

State	Hg and Hg Compounds Emissions to Air 2001	EPA Ranking out of 48 in 2001	Hg and Hg Compounds Emissions to Air 2002	EPA Ranking out of 48 in 2002
Ohio	8,050	2	7358	2
Pennsylvania	7,427	3	7002	3
Indiana	5,728	4	4927	4
West Virginia	4,796	5	3680	7
Illinois	4,005	6	4318	5
Kentucky	3,796	8	3540	8
Michigan	2,852	11	2706	12

U.S. utility units are not only putting mercury into the nation’s waterways indirectly through airborne emissions but also directly. TRI data from 2001 and 2002 for Ohio Valley States shows significant point source mercury discharges to water.<sup>35</sup>

**Table 2: Mercury Discharges (measured in lbs.) to Water -- Ohio Valley Coal-fired Plants**

State	Mercury Discharges from Electric Utilities 2001	Mercury Discharges from Other Sources 2001	Total State Mercury Discharges to Water 2001	Mercury Discharges from Electric Utilities 2002	Mercury Discharges from Other Sources 2002	Total State Mercury Discharges 2002
Kentucky	81	22	103	65	13	78
Pennsylvania	61	7	68	65	6	71
Michigan	19	4	23	19	0	19
Illinois	5	11	16	9	33	42
Ohio	13	554	567	8	9	17
W. Virginia	5	160	165	5	35	40
Indiana	5	117	122	2	115	117

**iii. Mercury Deposition into US Waterways and Fish Consumption Advisories**

Mercury enters U.S. waters either directly from point sources, such as sewage discharge pipes, or indirectly from atmospheric sources, both domestic and international. The International Joint Commission’s *2001-2003 Priorities Report*, which highlighted the sources and impacts of mercury pollution,<sup>36</sup> reaffirmed the place of coal-fired power plants as the “largest, unregulated source of mercury air deposition to the Great Lakes area.”<sup>37</sup> With respect to atmospheric deposition of mercury to Lake Erie (and Lake Ontario) in particular, the “contribution from the Ohio River Valley appears to be very significant, again, due to the high emissions in this region and the comparative proximity to those lakes.”<sup>38</sup>

The number and geographic extent of state advisories against the consumption of fish because of mercury contamination is rising. Fish consumption advisories (FCAs) for methylmercury now account for more than three-quarters of all FCAs in the U.S. Today, 45 states issue FCAs for methylmercury on selected water-bodies, a dramatic increase from the 27 states with advisories in 1993.<sup>39</sup> Mercury FCAs in waters rose 11% from 2001 to 2002 alone, and 244% since 1993.<sup>40</sup> The geographic extent of the advisories has also increased dramatically as three states issued new “statewide” mercury FCAs in 2002, bringing the total of statewide lake and river mercury advisories to 19, and statewide coastal mercury advisories to 11.<sup>41</sup> Over one third of American lakes and one quarter of American river miles are under mercury advisory.<sup>42</sup> The head of the EPA, Mike Leavitt, recently acknowledged that, “mercury is everywhere. The more waters we monitor, the more we find mercury.”<sup>43</sup>

The following table includes a list of Ohio Valley states that have statewide fish consumption advisories:<sup>44</sup>

**Table 3: Statewide Fish Consumption Advisories in the Ohio Valley**

State	Statewide Mercury FCAs for Lakes (07/2004)	Statewide Mercury FCAs for Rivers (07/2004) <sup>45</sup>	Other Mercury FCAs (07/2004)	River Miles reported as mercury impaired (03/2003) <sup>46</sup>	Lake Acres reported as mercury impaired (03/2003)
Illinois	Yes	Yes	9	62	5
Kentucky	Yes	Yes	5	6	0

Michigan	Yes	No	92	254	362,042
Ohio	Yes	Yes	61	0	0
Pennsylvania	Yes	Yes	76	0	1
W. Virginia	No	No	1	0	0
Indiana	No	Yes	171	2,431	75,516

**Note:** A "statewide" advisory covers all state waters; either all freshwater lakes and/or rivers or all estuarine/marine waters, or all state lands.

The low figures for FCAs for certain Ohio Valley States bear further scrutiny especially given the high levels of advisories in the neighboring State of Michigan and in Ontario --- where over 98% of FCAs for inland lakes are due to mercury contamination,<sup>47</sup> --- and the large number of coal-fired power plants in the Ohio Valley. West Virginia, for instance, officially has no waters subject to FCAs. Recent data<sup>48</sup> from non-governmental organizations, however, suggest that 56 water bodies in that State have mercury levels in fish above .28ug/g --- the standard at which an FCA should be issued for children. In addition, of the 56 waterbodies, 17 had mercury levels in fish above .5ug/g (the higher threshold that West Virginia sets for itself before it will list a water body as mercury impaired). None of these water bodies, however, have been listed by the state as mercury impaired.<sup>49</sup>

### III. CLEAN WATER ACT<sup>50</sup>

The CWA is a comprehensive environmental protection statute designed to “restore and maintain the chemical, physical, and biological integrity” of U.S. waters.<sup>51</sup> To attain these goals, the CWA employs various tools and regulatory provisions to monitor pollution, control discharges, protect water quality, and reduce degradation of water bodies from both point and nonpoint sources of pollutants.<sup>52</sup>

The principal mechanism for control of all **point** sources of pollutants under the CWA is the *National Pollutant Discharge Elimination System* (NPDES), a permitting scheme created under s. 402 of the CWA.

Controls of **nonpoint** sources of pollutants, on the other hand, are primarily delegated by the federal government to the individual states and attained through a complex interplay of Water Quality Standards (WQS) pursuant to s. 303 of the CWA. These standards provide for the preservation of water uses such as swimming and fishing and the protection and propagation of fish and wildlife.<sup>53</sup> Among the main components of state WQS are **designated uses, water quality criteria**, and the **antidegradation policy**, all of which are further described below.

**It is important to note that although the primary responsibility for nonpoint source pollutant control lies with the individual states, EPA maintains ultimate oversight and approval authority over state WQS.** WQS, including a state’s antidegradation policy, must be submitted to the federal EPA for approval. If state proposed standards do not meet the minimum federal guidelines then the state is given the opportunity to amend its WQS to meet federal requirements. If the state fails to do so, the EPA is required to promulgate and implement state WQS that do meet the minimum criteria. The EPA, therefore, must ensure that all state controls on nonpoint sources of water pollutants are



properly adopted and implemented to meet the strict mandates of the CWA and preserve water quality.

In addition to the pollutant control achieved by NPDES permitting and state WQS, the CWA also contains sections that address both point and nonpoint sources and their collective impacts on water quality through the *Total Maximum Daily Load* (TMDL).

### ***i. The National Pollutant Discharge Elimination System***

The *National Pollutant Discharge Elimination System* (NPDES) under the CWA addresses point source discharges of water pollutants. As stated earlier, a point source is any clearly identifiable discharge location such as a sewage pipe that discharges into a river from a factory.<sup>54</sup> The CWA requires the EPA Administrator to establish and enforce technology and water quality-based limitations for point source discharges into the country's navigable waters.<sup>55</sup> The EPA carries out this requirement through NPDES permits on point sources of water pollution.

The EPA often delegates<sup>56</sup> NPDES permitting authority to states that have their own agencies. Each of the Ohio Valley States, for instance, administers NPDES (sometimes called SPDES at the State level) permits.<sup>57</sup> These states implement SPDES that are at least as stringent as the federal program.<sup>58</sup> Yet, even where the EPA does delegate such authority to individual states it retains oversight power.<sup>59</sup>

The EPA's and state environmental agencies' point source permitting programs place careful and comprehensive controls on point sources of pollution. Under the CWA, it is expressly forbidden to discharge any pollutant to waters of the U.S. from a point source unless that discharge is done in compliance with the terms of a SPDES or NPDES permit. 33 U.S.C. ss. 1311, 1342.

### ***ii. State Water Quality Standards***

#### **a. Designated uses**

Designated uses must be described by the state for all water bodies located within its borders. Designated uses are the starting point for any state WQS program. State WQS are the primary CWA mechanism for controlling nonpoint sources of pollution --- sources of pollution for which the origin cannot be precisely identified.<sup>60</sup> Designated uses must account for the "use and value of the water for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes" including navigation. 33 U.S.C. s. 1313 (c)(2)(A). With designated uses, the state is required to look at each water body within its borders and assign existing and desired uses for that waterway. Uses may include both human uses, such as fish consumption, primary contact recreation, or drinking and aquatic uses such as "fishable," "swimmable," etc. Many states implement designated uses by assigning specific "water quality classifications" to each water body in the state.

Designated uses under the CWA also embrace the notion of "existing uses." Existing uses are "those uses actually attained in the water body on or after November 28, 1975, whether or not they are included in the water quality standards," while designated uses

are “those uses specified in water quality standards for each water body or segment whether or not they are being attained.” 40 C.F.R. 131(e-f). Furthermore, “existing instream water uses and the level of water quality necessary to protect the existing use shall be maintained and protected.” 40 C.F.R. 131.12(a)(1). “Where an existing use is established, it must be protected even if it is not listed in the water quality standards as a designated use.”<sup>61</sup> **In other words, if a waterway in the U.S. was being used as a source for fish consumption on or after November 28, 1975, the CWA makes it clear that both point and nonpoint sources of pollutants must be controlled to allow this existing use to continue.**

### **b. Water Quality Criteria**

Water quality criteria are descriptions of the chemical, physical, and biological conditions necessary to achieve and protect designated and existing uses of waterways. States must develop these criteria “based on sound scientific rationale” that is designed to protect each designated use.

States must adopt those water quality criteria that protect the designated use. Such criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. For waters with multiple use designations, the criteria shall support the most sensitive use. 40 C.F.R. 131.11(a)(1)

Water quality criteria may be expressed in "numeric" form that contain concrete, objective, measurable benchmarks, for example, “concentrations of arsenic may not exceed 18 micrograms of arsenic per liter,” or in narrative form, which more generally describe desired biologic conditions, such as “produce objectionable color, odor, taste, or turbidity,” or both. 40 C.F.R. s. 131.11(b)(1), (2). The latter are more free form standards that supplement state numeric criteria.

### **c. Antidegradation Policy**

The most critical component of the state WQS scheme, for the purposes of this submission, is the antidegradation provision.

State antidegradation policies must be at least as strong as the federal policy<sup>62</sup> and must be included in the WQS of each state. USC 1313(d)(4)(B). The EPA implemented CWA s. 303’s antidegradation mandates by requiring that states “develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy...”<sup>63</sup> The purpose of the antidegradation policy is to ensure that existing water uses and the level of water quality to protect those uses are maintained and protected. Congress endorsed s. 303 of the CWA, which created the antidegradation policy in the 1978 amendments to the Act.<sup>64</sup> The policy was recognized as binding on states in a 1994 decision of the Supreme Court.<sup>65</sup> Among other things, this policy provides that “existing instream water uses and the level of water quality necessary to protect the existing use shall be maintained and protected.” That is to say, standards or permits such as the WQS or NPDES permits cannot be revised unless there will be no loss of a beneficial use of that water body.<sup>66</sup> The CWA’s antidegradation provisions thus require that controls of both point and nonpoint

sources of water pollution be maintained to protect designated and existing uses of all U.S. waterways.<sup>67</sup>

The federal anti-degradation policy establishes a three-tier approach to protecting water quality. As noted, an existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur.<sup>68</sup>

Tier I applies to all waters, and requires that existing uses of waters, such as fishing, be protected.<sup>69</sup> This standard provides "the absolute floor of water quality in all waters."<sup>70</sup>

Tier II applies to high quality waters, requiring that where the quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water, that quality shall be maintained and protected.<sup>71</sup> A state can obtain an exemption from this requirement but only if it finds that allowing lower water quality --- as opposed to water uses --- is necessary to accommodate important economic or social development in the area.<sup>72</sup> The state must nonetheless assure that water quality remains adequate to protect existing uses fully.<sup>73</sup> Finally the state must assure the achievement of the highest statutory and regulatory requirements for all new and existing point sources and all cost-effective and reasonable "Best Management Practices" (BMPs) for nonpoint source control.<sup>74</sup>

Tier III applies to high quality waters that constitute an outstanding national resource, such as waters of National and State parks and wildlife refuges.<sup>75</sup> For all Tier III waters, "water quality shall be maintained and protected," with no exception for economic or social necessity.<sup>76</sup>

**EPA oversight of WQS** is an important feature of the **CWA**, despite delegation to states of s. 303 WQS, including antidegradation policies. Not only does the federal agency retain a considerable degree of oversight, it must act to ensure that WQS and federal policies are being complied with by individual states. For example, states must submit their antidegradation policy and implementation procedures to the EPA for approval.<sup>77</sup> If the EPA Administrator determines that the standard for the applicable water is "not consistent with the applicable requirements of this Act, he shall within 90 days ... notify the State and specify the changes to meet such requirements." If such changes are not adopted by the State, then the EPA shall promulgate its own standard for the state.<sup>78</sup> **This approval process ensures that it is the federal government's ultimate responsibility to safeguard water quality standards under the CWA.**

Likewise, whenever a state revises a WQS, it must submit the standard to the EPA's Regional Director for a determination as to whether the new standard is consistent with the Act.<sup>79</sup> The EPA Administrator must develop and oversee state promulgation of water quality standards for U.S. waters.<sup>80</sup> Once the EPA has reviewed a state's water quality standards, these standards become the WQS for the applicable waters of the state.<sup>81</sup>

The EPA is also responsible for ensuring that states promulgate WQS that meet the minimum criteria of the CWA by approving various reports and plans.

### *iii. Total Maximum Daily Loads*

Section 303 of the CWA integrates the management of point and nonpoint sources of pollution under *Total Maximum Daily Load* (TMDL) provisions.<sup>82</sup> In cases where waterways have become contaminated beyond levels set in the WQS, the state must establish a TMDL to bring a water body back into compliance.<sup>83</sup> S. 1313(d)(1)(C).<sup>84</sup>

The EPA also maintains considerable oversight of a state's TMDL program. In *Sierra Club v. Meiburg* the Court said that the “EPA, for its part, has supervisory authority over various reports and plans which the state is required by the Act to produce. The EPA can also compile its own list of limited segments and establish its own TMDLs, if the state’s efforts are either inadequate or too long delayed.”<sup>85</sup> The EPA must review state submissions and approve or reject them. If the EPA disapproves of the submission then the EPA, instead of the state, promulgates acceptable TMDLs.

The objective of the TMDL therefore is to bring a water body back into compliance with the WQS by establishing the maximum amount of pollution that can be added to a water body.<sup>86</sup> “The theory is that individual discharge permits will be adjusted **and other measures taken** so that the sum of that pollutant in the waterbody is reduced to the level specified by the TMDL.” (Emphasis added)<sup>87</sup> Indeed, TMDLs apply to waterbodies that exceed their WQS even where there is no point source of pollution, that is, where the only sources of pollution are nonpoint, for example from atmospheric deposition.<sup>88</sup> The CWA requires that TMDLs incorporate (1) a waste load allocation for point sources (those with NPDES permits), (2) a load allocation for natural background pollution, and (3) a load allocation for nonpoint sources.<sup>89</sup>

The CWA also requires states to maintain a "continuing planning process" describing how the state will clean up pollution.<sup>90</sup> These plans are also subject to EPA approval on a periodic basis.<sup>91</sup> TMDLs established by the state, or by the EPA in cases of state failure, must be incorporated into the process.<sup>92</sup> Once this TMDL has been incorporated the EPA will only re-approve a state’s continuing planning process where the plan includes, “adequate implementation, including schedules of compliance, for revised or new water quality standards.”<sup>93</sup> Thus the TMDL is a central part of state actions to address water pollution, and the establishment of a TMDL and its incorporation into a continuing planning process is a strict requirement imposed by the Act on states along with explicit EPA obligations for oversight. Without a TMDL there is no way to control the cumulative effect of point and nonpoint source pollution – thus there is no way to implement the antidegradation provisions.<sup>94</sup>

## **IV. THE UNITED STATES IS FAILING TO EFFECTIVELY ENFORCE THE CWA WITH REGARD TO MERCURY POLLUTION FROM COAL-FIRED POWER PLANTS**

The Submitters allege that the U.S. government is failing to comply with the letter and spirit of the *Clean Water Act* and the s. 402 NPDES and s. 303 WQS provisions. The

EPA is allowing both nonpoint and point source discharges of mercury from coal-fired power plants that are contributing to a steady degradation of the nation's waterways as evidenced by increasing mercury FCAs and the effective withdrawal of existing uses (fishable) of many of these water bodies. Specifically, we request the CEC to prepare a factual record to investigate --- in light of the dramatic increase in FCAs and other evidence and despite strong U.S. water protection laws --- whether the EPA is:

**a. Issuing NPDES permits or delegating the issuance of SPDES permits that allow for ongoing point source discharges of mercury into U.S. waterways.**

According to TRI data for 2002, 1,237 pounds of mercury were directly released to water from various industries across the U.S.<sup>95</sup> Of that amount 503 pounds of mercury were released to water from electric utilities.<sup>96</sup> Fifty-three electric generating facilities in the continental U.S. reported releases to water of more than one pound and as much as 58 pounds.<sup>97</sup> At least one electric facility in each of the Ohio Valley states is included in these 53 facilities.<sup>98</sup> Four Ohio Valley states (Pennsylvania, Kentucky, Illinois, and Ohio) have statewide mercury FCAs, thus suggesting that permits are being issued for impaired waters.<sup>99</sup> Michigan, for example, has allowed emissions of mercury to at least three water bodies under advisory.<sup>100</sup>

The dramatic increase in FCAs suggests the EPA is permitting direct discharges through its CWA NPDES program or through state delegated SPDES permitting without consideration for the cumulative impact of point and nonpoint discharges of mercury on degraded waters. Thus the discharge of mercury under NPDES/SPDES permits is affecting bodies of water that are already directly impacted by atmospheric deposition of mercury and suffering the consequences of mercury contamination.

A CEC factual record would establish whether the EPA is allowing direct discharges of mercury to waterways that are currently under FCAs for mercury and thus no longer suitable for fishing.

**b. Approving of and signing off on inadequate state antidegradation policies and implementation procedures that are failing to safeguard tiered water bodies.**

Waterways across the U.S. are suffering from continuing degradation as evidenced by the large increase in FCAs in almost every state in the nation. Each of these tiered waterways is, at the very least, subject to Tier I safeguards and the existing and designated uses must be protected. For Tier II waterbodies, the Federal government must ensure that BMPs are employed for nonpoint sources of pollution, such as mercury emissions from coal-fired power plants. Finally, as stated earlier, Tier III waterways must be protected from any type of water quality degradation. The issues to be investigated include:

1) Whether the EPA is approving of and signing off on inadequate state antidegradation policies and implementation procedures that are failing to safeguard existing uses for Tier I water bodies. Each time that a FCA is issued for a Tier I waterway that has historically been used for fishing or has been designated as a "fishable" waterway, the U.S.

government has failed to effectively protect an existing or designated use and is in violation of the CWA's antidegradation mandates.

2) Whether the EPA is approving of and signing off on inadequate state antidegradation policies and implementation procedures that fail to adhere to the procedural and substantive requirements for the protection of Tier II waterways with respect to mercury emissions from coal-fired power plants. Although Tier II water quality may be degraded to serve important economic or social requirements, under the federal policy degradation can only take place when public hearings are convened and only after BMPs have been implemented for all nonpoint sources of pollution. To the Submitters' knowledge, the EPA or state governments have not held public meetings on the issue of nonpoint mercury emissions from coal-fired power plants as they relate to antidegradation.

More importantly, to date, the U.S. government has failed to issue *any* control requirements to reduce nonpoint source mercury pollution from coal-fired power plants, much less BMPs, even where these emissions are having an adverse effect on Tier II waterways. Since mercury pollution in water is largely from atmospheric deposition, and since the overwhelmingly largest domestic source of mercury air emissions is coal-fired power plants, it is difficult to envision a set of BMPs that do not directly address mercury air emissions from coal-fired power plants. Coal-fired power plants should not be allowed to operate so long as the state governments have not established BMPs for nonpoint source pollution control of mercury. Currently affordable technologies could reduce mercury emissions from coal-fired power plants by up to 90%.<sup>101</sup> Thus BMPs should include, at a minimum, issuing specific guidelines for mercury air emissions from coal-fired power plants.

3) Whether the EPA is approving of and signing off on inadequate state antidegradation policies and implementation procedures that fail to properly protect Tier III water bodies from mercury degradation from coal-fired power plants. Tier III maintains and protects water quality in outstanding national resource waters (ONRWs). "Except for certain temporary changes, water quality cannot be lowered in such waters."<sup>102</sup> Yet ONRWs are being adversely impacted by mercury contamination in the U.S. For example, the state of Florida has declared the Everglades National Park to be an ONRW,<sup>103</sup> yet significant segments of this same watershed are currently under active mercury advisories for several species of fish.<sup>104</sup> Wherever a mercury FCA has been issued for a Tier III waterway, federal and state governments are in violation of mandatory Tier III protections.

**c. EPA is failing to use its authority to require States to pass TMDLs for mercury where WQS are not being met or a beneficial use has been lost, and EPA is failing to intervene by issuing its own TMDLs where State action is inadequate.**

A CEC factual record would determine which state continuing planning processes fail to incorporate an existing TMDL or incorporates a TMDL that does not have any regulation or BMP for mercury air emissions from coal-fired plants.<sup>105</sup> It would also determine if EPA is failing to use its authority to require states to pass TMDLs for mercury where

WQS are not being met or a beneficial use has been lost. And finally, if EPA is failing to intervene by issuing its own TMDLs where state action is inadequate.<sup>106</sup>

In addition, as part of a factual record the CEC may need to inquire into the possible failure to use FCAs to declare waters impaired. Despite issuing FCAs, some states will not declare their waters "unfishable" and therefore fail to identify water quality as impaired.<sup>107</sup> For example, Ohio only began using fish advisories to determine whether their waters are water quality impaired in 2004;<sup>108</sup> West Virginia still does not. In addition, West Virginia has issued no mercury TMDLs nor does it have definite plans to issue mercury TMDLs.<sup>109</sup> Despite overwhelming evidence of mercury contamination throughout the U.S. over the last 20 years, and despite West Virginia's status as a huge coal mining and coal burning state, the EPA has approved the state's CWA documents as a matter of course. Indeed, the issue of mercury pollution has progressed no further in West Virginia than to be under consideration for possible addition to the list of water quality impairments in 2006.<sup>110</sup>

A CEC investigation would determine whether the EPA is approving other states' inadequate 303(d) lists that under-report mercury pollution and impaired waters by, among other things, not using FCAs as a factor in determining 303(d) list status. This type of action/inaction impedes regulatory efforts to address the sources of pollution by undermining the whole TMDL process. Moreover, given that the EPA has only moved very recently to fix this particular problem, a CEC investigation would determine whether the EPA has allowed similar inadequacies in state documents submitted for approval to pass without comment.<sup>111</sup>

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We believe it is not an answer to our petition for the EPA to point to reductions of mercury emissions from other industry as evidence of effective enforcement. Our petition relates to the evidence of increasing FCAs and water degradation despite the reduction of those emissions. Since even tiny amounts of mercury can contaminate waterbodies, therefore an ongoing failure to enforce, especially in light of continuing massive levels of mercury emissions from coal-fired power plants, will continue to cause degradation to U.S. water resources.<sup>112</sup> Also, although we recognize that some portion of FCAs may be the result of better or more testing, this alone cannot be assumed to account for the dramatic increase in FCAs, nor excuse the EPA from effective enforcement.

In addition, we believe the U.S. is not entitled to respond to our petition by suggesting that past and existing problems with mercury degradation of waters will be remedied by the proposed mercury rule under the *Clean Air Act*. Proposed future action does not address an allegation respecting failures to effectively enforce environmental laws that have already occurred. In any case, the proposed rule has been widely criticized as being inadequate --- even contrary to the law --- in part because it will continue to allow many tons of mercury to be emitted to the air beyond 2018, despite the fact of current and emerging technologies that are capable of reducing emissions by more than 90% within several years. In fact, it is likely the ongoing failure to regulate those emissions that is

leading to nationwide failures to comply with WQS (both in terms of established criteria and the protection of designated uses) and the antidegradation policy.

**V. ART. 14(1):<sup>113</sup> IS THIS A SUBMISSION THE CEC “MAY CONSIDER”?**

We believe this submission meets the criteria specified in Article 14(1). Specifically,

- a. The submission is in writing and in English, a language designated by the U.S.
- b. The Submitters are clearly identified non-governmental organizations.
- c. The information provided in this document and appendices is sufficient for the purposes of the Secretariat's review.
- d. This submission promotes enforcement of U.S. law, particularly environmental laws aimed at protecting the rivers, lakes, and streams that are essential to the well being of humans, wildlife, and animals from mercury contamination.
- e. This matter has been communicated to the relevant American authority. On June 9, 2004, Waterkeeper Alliance submitted comments to the EPA Administrator Michael Leavitt, on the agency's proposed mercury rule.<sup>114</sup> The EPA's attention was drawn to the failure to enforce the antidegradation provisions of the CWA. Soon thereafter, on June 15, 2004, Sierra Legal wrote to the EPA Administrator -- - but has received no response --- about the failure to enforce the CWA:

We wish to bring to your attention our concern that the Environmental Protection Agency is not taking appropriate and necessary action to prevent the contamination of water bodies with mercury emitted from coal-fired power plants in the Ohio Valley states and elsewhere in the U.S. We believe that this contamination violates the *Clean Water Act*, including the water quality standard, anti-degradation, and Great Lakes provisions of the Act.

- f. The Submitters are organizations residing and established in Canada and the U.S.

**VI. ART. 14(2): IS A RESPONSE UNDER ARTICLE 14, NAAEC MERITED?**

Article 14(2) provides that if the criteria of the first part are met then, “the Secretariat shall determine whether the submission merits requesting a response from the Party” based on the following considerations:

***a. Harm to the submitting organizations***

The submitting parties include residents of both the U.S. and Canada. These residents, individually and collectively, depend on water resources that are free of contamination for many activities, including the consumption of fish. Widespread mercury contamination of waterbodies deprives individuals of an otherwise healthy food source and the full use and enjoyment of their waterways.

In terms of specific impacts on Canadians --- and specifically those among the Submitters --- the failure to adequately control mercury emissions from U.S. coal-fired plants means that mercury, which can persist and travel long distances, is carried with prevailing winds into Canadian territory where waterbodies are also contaminated. A full 98% of fish



consumption advisories in Ontario's inland lakes are the result of mercury contamination while 18% to 47% of FCAs issued by Ontario for the Great Lakes are from mercury contamination.<sup>115</sup> A total of 38% of all mercury deposition in the heavily populated Great Lakes area of Canada originate from U.S. sources (most of the remainder is from international sources) while 10% of such deposition across Canada as a whole comes from U.S. sources.<sup>116</sup>

In addition, the CEC has recognized that while,

the submitters may not have alleged the particularized, individual harm required to acquire legal standing to bring suit in some civil proceeding in North America, the especially public nature of marine resources bring the submitters within the spirit and intent of Article 14...<sup>117</sup>

***b. Further study of the matters raised will advance the goals of the NAAEC***

This submission raises matters, the further study of which would advance the goals of the NAAEC. Power plants that are not required to reduce emissions as a result of the failure to enforce, and therefore avoid the expense of pollution control technologies, are at a competitive advantage thereby distorting competition and trade in electricity. U.S. business also benefits from lower energy prices. In particular, the preparation of a factual record would:

- a. foster the protection and improvement of the environment for present and future generations (Preamble para.1, Article 1(a));
- b. ensure that activities in the United States do not cause damage to the environment shared with Canada (Preamble, para. 2);
- c. promote sustainable development based on cooperation and mutually supportive environmental and economic policies (Article 1(b));
- d. increase cooperation between governments to better conserve, protect, and enhance the environment, particularly the shared fisheries (Articles 1(c), and 10(2)(i));
- e. strengthen cooperation on the development and improvement of environmental laws, regulations, procedures, policies and practices (Article 1(f));
- f. enhance compliance with, and enforcement of, environmental laws and regulations (Articles 1(g), and 10(2)(p)); and
- g. promote pollution prevention policies, practices, techniques and strategies (Articles 1(j) and 10(2)(b)).

***c. Unavailability of private remedies under American law and non-existence of any ongoing judicial or administrative proceeding***

There are no realistic private remedies available. Private tort actions and other common law property rights actions against the polluters themselves, e.g., trespass, private nuisance or riparian rights, would face obstacles in proving causation and standing. A public nuisance suit would also be problematic. American law has evolved such that only government officials are well placed to prosecute public nuisance suits.

It is impractical and unrealistic for individuals and non-governmental entities with limited resources to seek redress through private remedies for a transnational problem of

such scope and complexity. The EPA Administrator, as a representative of the U.S. government, is vested with the authority and responsibility to deal with the cumulative impact of American pollution from coal-fired power plants upon Americans. The EPA's failure to do so makes this the very type of problem that the CEC was created to address.

Suing the EPA for widespread non-enforcement would constitute a hardship on the Submitters. The aim of this petition is to address the cumulative impact upon Americans and Canadians of the EPA's multiple failures to enforce environmental laws upon coal-fired power plants. To appeal for judicial review of repeated EPA failures in the many states from which emissions are degrading U.S. waters would require multiple lawsuits in different federal courts and would put an onerous financial burden on the Submitters.

CWA prosecutions focus on the impacted water, and therefore a private case seeking redress for injuries to thousands of water bodies in many different jurisdictions would be extremely demanding. A direct review of the EPA's failures in this context would be difficult and costly.

The Submitters and their representatives in this case have taken many actions to push the U.S. to effectively enforce the CWA. For instance, both Sierra Legal and Waterkeeper Alliance commented on the inadequacy of the proposed EPA mercury rule.

Sierra Legal and the Waterkeeper Alliance are not aware of any ongoing administrative or judicial proceeding that would preclude the preparation of a factual record. As noted above, there is ongoing litigation on the topic of nonpoint source regulations, but this is largely limited to the EPA's failure to promulgate TMDLs for American states that have failed to create their own.

There is also ongoing EPA action regarding the proposed mercury regulations, but those regulations are measures targeted at private actors (operators of coal-fired power plants) as part of the *Clean Air Act* and are not directly the subject of this submission. Sierra Legal and Waterkeeper Alliance are not aware of any ongoing agency proceedings related to EPA approval of state actions that violate the CWA. In any case, such action would not address the widespread failure to enforce that we address in this petition.

***d. The submission is primarily based upon our research***

The submission is primarily based upon our research and the reports of various American, Canadian, and international authorities, not upon mass media reports.

## VII. CONCLUSION

Our petition seeks to expose the widespread failure by the EPA to enforce the provisions of the *Clean Water Act* instead of drawing attention to any individual failure by the agency. The dramatic surge in mercury degraded waters in the U.S. in the context of various EPA powers to prevent precisely such degradation --- both by way of direct and oversight authority --- amounts to strong evidence of a failure of enforcement contrary to the provisions of the NAAEC.

Ultimately, a failure to enforce environmental laws designed to prevent mercury contamination means U.S. business may achieve a trade advantage over other NAFTA parties because of inexpensive electrical power produced at the expense of the environment. The failure equally contributes to a potential trade advantage in electricity.

We therefore respectfully petition the CEC to request a response from the United States for its failure to effectively enforce its environmental laws to prevent the degradation of U.S. waters and to proceed towards the development of a factual record.

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## ENDNOTE REFERENCES

<sup>1</sup> The official title of the Act is the *Federal Water Pollution Control Act*, enacted on October 18, 1972. The section numbers of the Act are referenced herein, as are the U.S. Code numbers, which are found at 33 U.S.C. s. 1251 *et seq.*

<sup>2</sup> The figure of "899" is from an earlier EPA website posting. This figure, for unknown reasons, has since been removed from the website. Previously the website in its "Update: National Listing of Fish and Wildlife Advisories," US EPA, Office of Water. EPA-823-F-03-003. (May 2003), then found at <http://www.epa.gov/waterscience/fish/advisories/factsheet.pdf>, noted that: "Advisories for mercury increased 11% from 2001 to 2002 (1,933 to 2,140) and increased 138% from 1993 to 2002 (899 to 2,140)." (Our emphasis)

<sup>3</sup> United States EPA, Fact Sheet, Update: National Listing of Fish and Wildlife Advisories, p.1. Figures are for 2002, released May 2003. See <http://134.67.99.49>

<sup>4</sup> *Ibid.*

<sup>5</sup> <http://yosemite.epa.gov/opa/admpress.nsf/b1ab9f485b098972852562e7004dc686/cd01bdd45c06c3c985256efa00597985!OpenDocument>

<sup>6</sup> On February 8, 1968, the Secretary of the U.S. Department of the Interior released the first antidegradation policy statement. This policy statement was included in the EPA's first Water Quality Standards Regulation (40 CFR 130.17) Source: US EPA Handbook for 1994.

<sup>7</sup> The U.S. EPA quotes the figure of 48 tons in its rule-making process under the Clean Air Act related to power utilities. See also: [www.epa.gov/air/clearskies/facts.html](http://www.epa.gov/air/clearskies/facts.html) and [www.epa.gov/tri](http://www.epa.gov/tri)

<sup>8</sup> 33 U.S.C. § 1313(d)(4)(b)

<sup>9</sup> 33 U.S.C. §§ 1313, 1329 (2004).

<sup>10</sup> To date, mercury emissions from U.S. coal-fired power plants remain unregulated under the CAA.

<sup>11</sup> *EPA Policy Statement and Action Plan for Mercury* (Draft), November 12, 1997, page 1.

<sup>12</sup> Dr. Kathryn R. Mahaffey, Methylmercury: Epidemiological Update. Presentation at Fish Forum 2004. Available at: [http://www.ewg.org/issues\\_content/mercury/ppt/Fish\\_Forum\\_2004.ppt](http://www.ewg.org/issues_content/mercury/ppt/Fish_Forum_2004.ppt) See also: Heinzerling and Steinzor, *A Perfect Storm: Mercury and the Bush Administration* p.1-2, Environmental Law Reporter News & Analysis, April, 2004.

<sup>13</sup> National Research Council, *Toxicological Effects of Methylmercury*, (2000). Available at <http://books.nap.edu/openbook/0309071402/html/index.html>

<sup>14</sup> *Id.* at 325

<sup>15</sup> Bowman, J: "Taking stock of mercury air pollution" *Trio* (Summer 2004). Available online at: [www.cec.org/trio/stories/index.cfm?ed=13&ID=148&varlan=english](http://www.cec.org/trio/stories/index.cfm?ed=13&ID=148&varlan=english). See also: Schober, S.E. et al, "Blood mercury levels in US children and women of childbearing age, 1999-2000" (2003) 289(13) JAMA 1667-74.

<sup>16</sup> U.S. Environmental Protection Agency, Methylmercury: Epidemiology Update, Presentation by Kathryn Mahaffey, PhD at the National Forum on Contaminants in Fish, San Diego, CA (January 25-28, 2004).

<sup>17</sup> "...[C]oal-fired power plants are the largest source of mercury air emissions in the U.S." <http://www.epa.gov/mercury/actions.htm#utility>. In the U.S., over 50% of the electricity supply is generated from coal-fired power, compared to less than 20% in Canada. Miller, Paul J., "Power Plant Emissions in North America", CEC-IJC Consultation on Emissions from Coal-fired Electrical Utilities, July 20, 2004. See also Little, Matt: *Reducing Mercury Pollution from Electric Power Plants*, Issues in Science & Technology at 27 (Summer 2002).

<sup>18</sup> *Id.* at 27.

<sup>19</sup> CEC, *Taking Stock 2001* Executive Summary (June 2004). In 2001 the figure was approximately 64% of all mercury air releases,<sup>19</sup> and in 2002 it was 63%, or approximately 45 tons (41 tonnes).<sup>19</sup> U.S. EPA Toxics Release Inventory 2002 Data Release, Summary of Key Findings. Source: <http://www.epa.gov/tri> TRI data for 2002 indicate 90,313 pounds of mercury released as point source air emissions. At 2000 pounds per U.S. ton, this is approximately 45 tons.

<sup>20</sup> *Id.* at 28

<sup>21</sup> U.S. Department of Energy figures, see <http://www.eia.doe.gov>. The number of coal-fired power plants is estimated from the number of electric utilities releasing significant amounts of mercury in U.S. EPA Toxics Release Inventory (TRI) 2002 Data Release. Source: <http://www.epa.gov/tri>.

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- <sup>22</sup> TRI. [www.epa.gov/tri](http://www.epa.gov/tri) See also the U.S. EPA, Utility Air Toxics Determination, available at: <http://www.epa.gov/mercury/actions.htm#utility> for mercury release data. In 1999, U.S. coal-fired plants emitted approximately 43 tons (39 tonnes) of mercury. In fact, current annual mercury emission figures are even higher according to the U.S. EPA, which uses an annual figure of 48 tons. See <http://www.epa.gov/air/mercuryrule/factsheetsup.pdf> See Matt Little, *Reducing Mercury Pollution from Electric Power Plants*, Issues in Science & Technology at 27 (Summer 2002).
- <sup>23</sup> EPA: Fact Sheet on "Proposed Supplemental Rule for Reducing Mercury Emissions from Power Plants."
- <sup>24</sup> Miller, Paul J.: "Power Plant Emissions in North America", CEC-IJC Consultation on Emissions from Coal-fired Electrical Utilities, July 20, 2004. Available on the CEC website.
- <sup>25</sup> See final report, "Assessment of Mercury Emissions, Transport, Fate and Cycling for the Continental United States."
- <sup>26</sup> See Heinzerling, L. and Steinzor, R.; *A Perfect Storm: Mercury and the Bush Administration*; Environmental Law Reporter News and Analysis, April 2004. See also Florida Dep't of Env'tl. Protection (FDEP), Integrating Atmospheric Mercury Deposition with Aquatic Cycling in South Florida (2002, rev. 2003). See Appendix 10. Also available at <http://www.floridadep.org/labs/mercury/docs/flmercury.htm>
- <sup>27</sup> [http://www.dep.state.fl.us/secretary/news/2003/nov/pdf/mercury\\_report.pdf](http://www.dep.state.fl.us/secretary/news/2003/nov/pdf/mercury_report.pdf)
- <sup>28</sup> US EPA: *Utility Air Toxics Determination*, available at: <http://www.epa.gov/mercury/actions.htm#utility> Affordable technologies could reduce mercury emissions from coal-fired power plants by up to 90%. Source: Environment Canada, *Submission to the EPA on Proposed National Emission Standards for Hazardous Air Pollutants etc.* March 30, 2004 at <http://www.ec.gc.ca/mercury/en/mcepa.cfm>
- <sup>29</sup> 60% of mercury deposition is American in origin, 63% of this equals 37.8% of total mercury deposition.
- <sup>30</sup> EPA: *Regulatory Finding on the Emissions of Hazardous Air Pollutants From Electric Utility Steam Generating Units*, 65 Fed. Reg. 79825, 79827 (2000).
- <sup>31</sup> National Wildlife Federation, *Rain and Mercury: How Much Mercury is in the Rain?* at 1 (2004).
- <sup>32</sup> *Id.* at 3-4.
- <sup>33</sup> CEC, *Taking Stock 2000* at 248 (April 2003)
- <sup>34</sup> U.S. EPA *Toxics Release Inventory 2002 Data Release*. Available at <http://www.epa.gov/tri> Information generated by searching for On-site and Off-site Reported Releases of mercury and mercury compounds by State in pounds for electric utilities (SIC codes 4911, 4931, 4939)
- <sup>35</sup> In five of the six states it appears that emissions are to waterbodies with FCAs. The only update is for West Virginia - there is no FCA on Mt. Storm Lake, but according to the West Virginia Rivers Coalition data there should be it's one of the 56 waterbodies that should have a children's FCA.
- <sup>36</sup> International Joint Commission (IJC): *2001-2003 Priorities and Progress under the Great Lakes Water Quality Agreement*, Ch. 1: Mercury, pp. 17, 36. The IJC is a Canada-US body that monitors and reports on the quality of the Great Lakes.
- <sup>37</sup> *Id.* at 36.
- <sup>38</sup> *Id.* at 36. The report, at p. 16, also noted that the contributions to each of the Great Lakes appeared to be somewhat greater than contributions from Canada.
- <sup>39</sup> U.S. EPA: *Fact Sheet, Update: National Listing of Fish and Wildlife Advisories*, p.5. Figures are for 2002, released May 2003. See <http://134.67.99.49>
- <sup>40</sup> *Id.*
- <sup>41</sup> *Id.* Note that "statewide" means every water body in the state, however, statewide FCAs are also passed on the basis of a class --- all the lakes, all the rivers, all the estuaries, etc. --- in a state. Of the 19 states with inland statewide advisories, not including statewide coastal advisories (of which there are 11 states), 15 have both statewide lake and river advisories. Only Indiana has statewide river but no statewide lake mercury FCA, while only Michigan, Minnesota, and Wisconsin have statewide lake mercury FCA but no statewide river FCA (however they have mercury FCAs on individual rivers).
- <sup>42</sup> *Id.*
- <sup>43</sup> *New York Times*, August 25, 2004
- <sup>44</sup> United States EPA, *Fact Sheet, Update: National Listing of Fish and Wildlife Advisories*, Table 2. See <http://134.67.99.49>
- <sup>45</sup> EPA, National Listing of Fish and Wildlife Advisories Database, July 2004 (<http://134.67.99.49>)
- <sup>46</sup> EPA, Update: National Listing of fish and Wildlife Advisories, May 2003

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<sup>47</sup> *Ontario Fish Guide*, 2003-2004. In fact, according to our review of the US EPA website, which tracks both Canadian and American FCA's (<http://134.67.99.49/>), Ontario has 1309 mercury FCAs on lakes. There are 32 on the Great Lakes. The US EPA advises, however, [personal comm.: Sept 15, 2004] that these figures may be somewhat dated and the database for Canada may soon be removed.

<sup>48</sup> The West Virginia Rivers Coalition, in comments to its State Department of Environmental Protection (WVDEP) indicate that the West Virginia University and the Ohio River Valley Water Sanitation Commission (ORSANCO) gave WVDEP new data on mercury contamination at the beginning of 2004.

<sup>49</sup> The EPA, in a recent policy memorandum, stated that FCAs are a very good indicator that a body of water should be on a state 303(d) list as mercury impaired, thus all 56 water bodies should probably be listed as impaired. It seems likely that Ohio is doing something similar, because they have statewide FCAs but no mercury impaired segments reported as of March 2003.

EPA generally believes that fish and shellfish consumption advisories and certain shellfish growing area classifications based on segment specific information demonstrates impairment of CWA Section 101(a) "fishable" uses. This applies to fish and shellfish consumption advisories and certain shellfish area classifications for all pollutants that constitute potential risks to human health. For purposes of determining whether a segment is impaired by a pollutant and should be included in Category 5, EPA considers a fish consumption advisory or shellfish consumption advisory, a National Shellfish Sanitation Program (NSSP) Classification, and the supporting data to be existing and readily available data and information that demonstrate non-attainment of a Section 101(a) "fishable" use when:

- the advisory is based on fish and shellfish tissue data,
- a lower than "Approved" NSSP classification is based on water column and/or shellfish data (and this is not a precautionary "Prohibited" Classification or the State WQS does not identify lower than "Approved" as attainment of the standard),
- the data are collected from the specific segment in question, and
- the risk assessment parameters (e.g., toxicity, risk level, exposure duration and consumption rate) of the advisory or classification are cumulatively equal to, or less protective than those in the State's WQSs.

This applies to all pollutants that constitute potential risks to human health, regardless of the source of the pollutant.

Source: EPA, Guidance for 2004 Assessment, Listing and Reporting Requirements Pursuant to Sections 303(d) and 305(b) of the Clean Water Act; TMDL-01-03, p.11 (2003). Available at: [http://www.epa.gov/owow/tmdl/tmdl0103/2004rpt\\_guidance.pdf](http://www.epa.gov/owow/tmdl/tmdl0103/2004rpt_guidance.pdf)

<sup>50</sup> A note about section numbers: In the US, agencies such as the EPA are authorized to interpret and implement laws written by Congress. Courts generally defer to agency interpretations of national laws, provided the interpretation is not unreasonable or capricious. Water laws are found in the CWA and compiled with all other laws in the US Code, which explains why provisions have different section numbers under the original Act and the Code. Interpretation and implementation of those laws by agencies such as the EPA become part of the "Code of Federal Regulations" or "CFR".

<sup>51</sup> 33 U.S.C. § 1251(a)

<sup>52</sup> The CWA defines point source as "any discernible, confined, and discrete conveyance" of pollutants to a water body. The definition of discrete conveyance includes, but is not limited to, "any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, landfill leachate collection system, vessel or other floating craft from which pollutants are or may be discharged." 33 U.S.C. § 1362(14). Nonpoint source pollution is not specifically defined in the Act, but it is pollution that does not result from the 'discharge' or 'addition' of pollutants from a point source. In other words, nonpoint sources of water pollution includes all those sources, including atmospheric deposition, runoff, etc., that are not considered to be a point source. *Oregon Natural Resources Council v. U.S. Forest Serv.*, 834 F.2d 842, 849 n.9 (9th Cir. 1987)

<sup>53</sup> 33 U.S.C. § 1251(a)(2)

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<sup>54</sup> 33 U.S.C. § 1362(14) identifies a point source as “any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit . . . from which pollutants are or may be discharged.”<sup>54</sup>

<sup>55</sup> 33 U.S.C. §§ 1311, 1314

<sup>56</sup> Delegation of authority by EPA for the NPDES program to states is found in 33 USC 1342(b).

<sup>57</sup> For a complete list of States that administer SPDES, please see <http://cfpub.epa.gov/npdes/statestats.cfm>

<sup>58</sup> This includes the power to issue permits, administer the system, and enforce against violations.

<sup>59</sup> 33 U.S.C. § 1313(d)(2); *see also American Canoe Ass'n. v. E.P.A.*, 30 F.Supp.2d 908 (E.D.Va.1998).

<sup>60</sup> Or perhaps "non point" is more accurately defined as a source that cannot be fully quantified at the point of entry into a waterbody since there is little question that emissions from coal-fired plants are emitted at a distinct point, namely emission stacks, and that those emissions find their way into U.S. waters.

<sup>61</sup> EPA: *Water Quality Standard: Basic Information "Antidegradation Policy"* See:

<http://www.epa.gov/waterscience/standards/about/adeq.htm>

<sup>62</sup> 40 C.F.R. § 131.12

<sup>63</sup> 40 CFR 131.12(a). See Appendix 3.

<sup>64</sup> 33 U.S.C.A. ss 1313 (d)(4)(B), 1342 (o)(1).

<sup>65</sup> *PUD No. 1 v. Washington Dep't of Ecology*, 511 U.S. 700, 1912 (1994) (Dosewallips River Dam)

<sup>66</sup> S. 303 (33 U.S.C. § 1313(d)(4)(B)) says,

where the quality of such waters equals or exceeds levels necessary to protect the designated use for such waters or otherwise required by applicable water quality standards, any effluent limitation based on a total maximum daily load or other waste load allocation established under this section, or any water quality standard established under this section, or any other permitting standard **may be revised only if such revision is subject to and consistent with the antidegradation policy** established under this section.<sup>66</sup>

<sup>67</sup> 40 C.F.R. 131.12

<sup>68</sup> <http://www.epa.gov/waterscience/standards/about/adeq.htm>

<sup>69</sup> 40 C.F.R. § 131.12(a)(1).

<sup>70</sup> 48 Fed. Reg. 51,400, 51,403 (1983)

<sup>71</sup> *Id.* at 131.12(a)(2).

<sup>72</sup> *Id.*

<sup>73</sup> *Id.*

<sup>74</sup> *Id.*

<sup>75</sup> *Id.* at 131.12(a)(3).

<sup>76</sup> *Id.*

<sup>77</sup> 33 U.S.C. § 1313(c)(2)(A).

<sup>78</sup> The relevant section reads as follows:

(2)(A) Whenever the State revises or adopts a new standard, **such revised or new standard shall be submitted to the Administrator.** Such revised or new water quality standard shall consist of the designated uses of the navigable waters involved and the water quality criteria for such waters based upon such uses. **Such standards shall be such as to protect the public health or welfare, enhance the quality of water and serve the purposes of this Act** ... Such standards shall be established taking into consideration their use and value for public water supplies, propagation of fish and wildlife, recreational purposes, and agricultural, industrial, and other purposes ...

(B) Whenever a State reviews water quality standards pursuant to paragraph (1) of this subsection, or revises or adopts new standards pursuant to this paragraph, such State shall adopt criteria for all toxic pollutants listed pursuant to section 307(a)(1) of this Act ... for which criteria have been published under section 304(a), the discharge or presence of which in the affected waters could reasonably be expected to interfere with those designated uses adopted by the State, as necessary to support such designated uses. Such criteria shall be specific numerical criteria for such toxic pollutants. ....

(3) **If the Administrator ... determines that such standard meets the requirements of this Act,** such standard shall thereafter be the water quality standard for the applicable waters of that State. If the Administrator **determines that any such revised or new standard is not**

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**consistent with the applicable requirements of this Act, he shall ...notify the State and specify the changes to meet such requirements.** If such changes are not adopted by the State ... the Administrator shall promulgate such standard pursuant to paragraph (4) of this subsection. (Emphasis added)

<sup>79</sup> 33 U.S.C. § 1313(c)(2); 40 C.F.R. § 131.12

<sup>80</sup> 33 U.S.C. § 1313(c)

<sup>81</sup> 33 U.S.C. s. 1313(c) (3)

<sup>82</sup> 33 U.S.C. § 1313(d)(1)(C) says, "Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants which the Administrator identifies under section 304(a)(2) as suitable for such calculation."

<sup>83</sup> 33 U.S.C. § 1313(d). See also *Friends of the Wild Swan, Inc. v. U.S. E.P.A.*, 130 F.Supp. 2d 1184, 1191 (D. Mont. 1999), wherein it was said:

The EPA has only two affirmative duties upon receipt of a state's submission of WQLSs or TMDLs. First, the EPA has a mandatory duty to review the submission within thirty days. . . . Second, if the EPA disapproves of a state's submission of WQLSs or TMDLs, the EPA has a mandatory duty to identify appropriate WQLSs and develop corresponding TMDLs within 30 days of the disapproval.

<sup>84</sup> The section reads as follows:

Each State shall establish for the waters identified in paragraph (1)(A) of this subsection, and in accordance with the priority ranking, the total maximum daily load, for those pollutants **which the Administrator identifies under section 304(a)(2) as suitable for such calculation.** (Emphasis added)

<sup>85</sup> *Sierra Club v. Meiburg*, 296 F.3d at 1027. (11th Cir. 2002).

<sup>86</sup> *Id.* The TMDL must account for seasonal variations and a margin of safety

<sup>87</sup> *Sierra Club v. Meiburg*, 296 F.3d 1021, at 1025

<sup>88</sup> *Pronsolino v. Nastri*, 291 F.3d 1123, 1141 (9th Cir. 2002)

<sup>89</sup> 40 C.F.R. § 130.2(i).

<sup>90</sup> 33 U.S.C. § 1313(e)(1)

<sup>91</sup> 33 U.S.C. § 1313(e)(2). It is arguable, however, that the EPA's oversight authority is quite limited In one case the court case suggested that this authority is exhausted after the EPA ensures merely that the elements of the continuing planning process have been addressed, without any review of the adequacy of those elements. In *American Canoe Ass'n v. United States EPA*, 30 F. Supp. 2d 908 (D.Va. 1998) the Court concluded that

[p]laintiffs argue that since Virginia's 1987 CPP did not include many of these components, EPA had a nondiscretionary duty to disapprove it. While this provision clearly imposes a duty upon the EPA to approve a proposed CPP that includes various enumerated elements, by its plain language it imposes no complementary duty to disapprove a CPP that does not include these elements. Thus, it does not establish a mandatory, nondiscretionary duty enforceable under the citizen suit provision of the CWA, and so count 7 must be dismissed.

This case is of course not a binding precedent and even if the EPA does have discretion here it nonetheless constitutes a failure to effectively enforce, when viewed in the context of other failures. The NAAEC does specify that the use of discretion in a certain manner does not constitute a failure to effectively enforce, however, when this discretion is always exercised in the same way, it cannot be said to be the exercise of discretion.

<sup>92</sup> 33 U.S.C. § 1313(e)(3)(C); see also *Sierra Club v. Meiburg*, 296 F.3d at 1026

<sup>93</sup> 33 U.S.C. § 1313(e)(3)(F)

<sup>94</sup> A strong record of violations and inadequate EPA response, crystallized in the 40+ lawsuits that have been launched, and largely won, against the EPA on this front are illustrative on this point.

<sup>95</sup> U.S. EPA Toxics Release Inventory 2002 Data Release. Available at <http://www.epa.gov/tri>.

<sup>96</sup> *Id.*

<sup>97</sup> *Id.*

<sup>98</sup> *Id.*

<sup>99</sup> United States EPA, *Fact Sheet, Update: National Listing of Fish and Wildlife Advisories*, Table 2. See <http://134.67.99.49>

<sup>100</sup> It appears at least three plants in Michigan released mercury into surface waters with mercury FCAs.



Plant	Pounds of Hg in 2002	Receiving* waterbody with FCAs due to mercury
BC Cobb Generating Plant	1.8	Lake Muskegon
Detroit Edison Co., Belle River Power Plant	7.4	Belle River
Detroit Edison Co., St. Clair Power Plant	8.2	St. Clair River

\*The plant is located on this waterbody, although TRI data does not specifically note that the discharge is to this waterbody.

This chart was arrived at by using TRI for information on mercury discharges to surface waters, the 2004 *Michigan Family Fish Consumption Guide* from the Michigan State Government to determine water bodies with Hg-related advisories, and the EPA *envirofacts warehouse* database which maps facilities with water discharge permits by postal code. See:

<http://www.epa.gov/enviro/index.html>

[http://oaspub.epa.gov/enviro/ef\\_home2.water](http://oaspub.epa.gov/enviro/ef_home2.water)

<http://www.epa.gov/tri/>

<http://www.michigan.gov/mdch/0,1607,7-132--13110--00.html>

<sup>101</sup> Waterkeeper Alliance: Re: Proposed National Emissions Standards for Hazardous Air Pollutants; and, in the Alternative, Proposed Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units; Proposed Rule, 69 Fed. Reg. 4652 (2003). EPA Docket Number OAR-2002-0056-2575. See also: Environment Canada, *Submission to the EPA on Proposed National Emission Standards for Hazardous Air Pollutants etc.* March 30, 2004. See

<http://www.ec.gc.ca/mercury/en/mcepa.cfm>

<sup>102</sup> <http://www.epa.gov/waterscience/standards/about/adeq.htm>

<sup>103</sup> [http://www.fl-dof.com/Conservation/hydrology/page\\_66.html](http://www.fl-dof.com/Conservation/hydrology/page_66.html)

<sup>104</sup> <http://134.67.99.49/scripts/.esrimap?Name=Listing&Cmd=NameQuery&Left=-81.9298523&Right=-79.4656901&Top=26.4834952999999&Bottom=24.1374209&shp=3&shp=6&idChoice=3&loc=on&NameZoom=FL%20-%20Everglades%20National%20Park%20-%20Shark%20River%20Slough>

<sup>105</sup> For example, the model TMDL on the EPA website for the Savannah River in Georgia deals with nonpoint source mercury pollution by saying that the proposed mercury rule's MACT standard will take care of the problem. Given however that the recently proposed MACT standard is very weak then TMDLs based on it would fail.

<sup>106</sup> In Georgia the EPA created TMDLs for the state. The EPA responded to individuals submitting comments about the TMDLs by saying that if the state had given them a list of waters that did not include waters with mercury FCAs they would probably have disapproved the list and promulgated a new list that included those water bodies. Source: Responsiveness Summary Concerning EPA's February 8, June 23, and December 8, 2000 public notices concerning a proposed mercury TMDL for the Savannah River in Georgia, available at [http://www.epa.gov/owow/tmdl/examples/mercury/ga\\_savresponse.pdf](http://www.epa.gov/owow/tmdl/examples/mercury/ga_savresponse.pdf) This suggests the EPA is accepting inadequate 303(d) lists from W. Virginia, and this may indicate a likelihood of problems elsewhere.

<sup>107</sup> Environmental Integrity Project; *Flying Blind, Water Quality Monitoring and Assessment in the Great Lakes States*, pp. 14-16, March 2004.

<sup>108</sup> State of Ohio Environmental Protection Agency, Division of Surface Water; Ohio 2004 *Integrated Water Quality Monitoring and Assessment Report*, p.25.

<sup>109</sup> Examination of West Virginia's scheduled TMDLs and completed TMDLs confirms the lack of mercury TMDLs. Schedules, lists of completed TMDLs, and West Virginia's 303(d) list are available at <http://www.dep.state.wv.us/item.cfm?ssid=11&ssid=188>

<sup>110</sup> In Georgia the EPA created TMDLs for the state. The EPA responded to individuals submitting comments about the TMDLs by saying that if the state had given them a list of waters that did not include waters with mercury FCAs they would probably have disapproved the list and promulgated a new list that included those water bodies. Source: Responsiveness Summary Concerning EPA's February 8, June 23, and December 8, 2000 public notices concerning a proposed mercury TMDL for the Savannah River in Georgia, available at [http://www.epa.gov/owow/tmdl/examples/mercury/ga\\_savresponse.pdf](http://www.epa.gov/owow/tmdl/examples/mercury/ga_savresponse.pdf)

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This suggests the EPA is accepting inadequate 303(d) lists from W. Virginia, and this may indicate a likelihood of problems elsewhere.

<sup>111</sup> Chronic U.S. government under funding may equally constitute a failure to enforce environmental laws. The first Bush Administration budget proposed a \$25 million cut to the agency's operating funds and the removal of 270 enforcement jobs. See: Christensen, A.; *Environmental Protection in the United States: A Right, a Privilege, or Politics?* Human Rights Dialogue 2.11 (Spring 2004): Environmental Rights. Although Congress blocked those cuts, the Administration reduced EPA's enforcement staff by 210 positions, a reduction of nearly half. An internal EPA study conducted in 2003 found that about 25% of all large industrial plants and water treatment facilities are in serious violation of water pollution standards at any time, yet only a fraction of water polluters face formal enforcement action. See: Gugliotta, G. and Pianin, E.; EPA: Few Fined for Polluting Water; Agency Says It Must Do Better Job of Monitoring; *The Washington Post*, Jun 6, 2003. page A.01)

Article 45 s.1 of the NAAEC says:

A party has not failed to "effectively enforce its environmental law" in a particular case where the action or inaction in question . . . results from *bona fide* decisions to allocate resources to enforcement in respect of other environmental matters determined to have higher priorities.

But it cannot be said that the Bush administration has made any such *bona fide* decision or that environmental funding has been reserved for other matters. The administration has tried to slash the EPA's budget and has succeeded in laying off enforcement officers. This is an overall attack on environmental enforcement, not a choice to expend resources on other environmental priorities.

<sup>112</sup> We also noted the ability of mercury to accumulate in sediments that may increase the long term impact of a failure of effective enforcement action. A recent study reported:

Recently, due to the increasing levels of mercury in lake sediments, despite the significant reductions from the earlier principal emitters, there has been an increasing interest in the long-range transport and deposition of Hg into Canada. In many remote lakes in Canada, the increase in Hg concentrations at the surface of bottom sediments is seen as evidence of increased deposition of anthropogenic Hg from the atmosphere (Lockhart et al., 1995).<sup>112</sup>

<sup>113</sup> The full text of Article 14 of the North American Agreement on Environmental Cooperation is attached in Appendix 5.

<sup>114</sup> Waterkeeper Alliance, "Re: Proposed National Emissions Standards for Hazardous Air Pollutants; and, in the Alternative, Proposed Standards of Performance for New and Existing Stationary Sources: Electric Utility Steam Generating Units; Proposed Rule", 69 Fed. Reg. 4652 (2003). EPA Docket Number OAR-2002-0056-2575, p.61. The relevant excerpt is attached in Appendix 7.

<sup>115</sup> Ontario Ministry of the Environment: *Guide to Eating Ontario Sport Fish*, 2003-2004, at 17-18.

<sup>116</sup> Environment Canada, *Submission to the EPA on Proposed National Emission Standards for Hazardous Air Pollutants etc.* March 30, 2004. See <http://www.ec.gc.ca/mercury/en/mcepa.cfm>

<sup>117</sup> *Secretariat's Notification to Council* (Article 15(1)), SEM-96-001, June 7, 1996 at Section IV(B).