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Green
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A Call to Action on Ocean Acidity

By John Collins Rudolf

States bordering water bodies that are becoming more acidic from the absorption of carbon dioxide should list them as impaired under the Clean Water Act, the Environmental Protection Agency declared in a memo this week.

Carbon dioxide emissions are considered a threat not only because of their heat-trapping properties in the atmosphere but also because of their ability to change ocean chemistry. The world's oceans act as a sponge for carbon dioxide, and as the gas dissolves in seawater, it changes into carbonic acid.

More acidic seawater harms shellfish by inhibiting shell formation, a problem already observed at oyster farms along the Washington State coast. Ocean acidification is also seen as a major threat to the world's coral reefs.

The E.P.A.'s declaration, which also urges states to gather data on ocean acidification in their coastal waters, is a result of a successful lawsuit by the Center for Biological Diversity, an environmental advocacy group. Under the Clean Water Act, states that list bodies of water as impaired must take action to curb the pollution responsible for the impact.

In the case of ocean acidification, such declarations could conceivably compel states or the federal government to act to limit carbon dioxide emissions.

Ron Wurzer for The New York Times/
A (healthy) oyster from Puget Sound.

"It gives the green light to states to go ahead and assess whether their waters are being impacted by ocean acidification and designate them if they are," said Miyoko Sakashita, an attorney with the Center for Biological Diversity. "Step two would be some kind of approach to controlling the pollution that's causing the problem, which in this case would be carbon dioxide."

Several precedents exist for using provisions of the Clean Water Act to curb air pollution, like controls placed on mercury emissions from power plants, which have been linked to mercury contamination in fish.

In its memo, the E.P.A. acknowledged that ocean chemistry was observably changing because of human activity and that ocean acidification was "likely to negatively affect important marine ecosystems and species including coral reefs, shellfish and fisheries."

Many coastal states have little or no information on the impact of carbon emissions on ocean water quality, however, the agency stated. Information on the precise threat that growing ocean acidity poses to marine life is also lacking, the memo said.