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To: CWAwaters@EPA
cc:
Subject: Attention Docket ID No. OW-2000-0050

Attention Docket ID No. OW-2002-0050. Comments from Hawaii
are attached.

June Harrigan/HIDOH/EPO

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In reply, please refer to:

File:

April 16, 2003

Subject: Docket ID No. OW-2002-0050

"Advance Notice of Proposed Rulemaking on the Clean Water Act
Regulatory Definition of "Waters of the United States"

Federal Register, Vol. 68, No.10, Wednesday, January 15, 2003; proposed rules

For the reasons outlined below, the Hawaii State Department of Health, which administers the federal Clean Water Act in Hawaii for the U.S. Environmental Protection Agency, believes that removal of waters defined as "isolated," in the sense of the SWANCC decision, from waters currently under Clean Water Act jurisdiction in the State of Hawaii is unworkable in practice. We recommend, below, an alternative approach to defining "waters of the United States" (please see page 4, Recommendations).

Introductory comments:

The proposed criteria for excluding waters from Clean Water Act (CWA) protection by defining certain water bodies or types of water bodies as either "isolated" or "adjacent" is insufficient for purposes of deciding if these waters drain into waters of the U.S., as defined in 40 C.F.R. §122.2. Using the dictionary meaning of "isolated" and "adjacent," both non-technical terms, we find that "isolated" means "of or relating to someone or something that is set apart," and that "adjacent" is defined as "near or close to (something); adjoining," suggesting that spatial proximity to an indisputable water of the U.S. should be the sole basis for deciding if these waters should be included under CWA protection.

However, whether objects are in spatial proximity is a matter of judgment, not objective measurement, leaving obscure the meanings of "isolated" and "adjacency" when applied to surface waters on small volcanic islands made of porous lava, where hydrologic connectivity via underground cracks, fissures, lava tubes, underground voids and porous lava rocks combined with frequent rainfall events, especially on the windward sides of islands, make it difficult to demonstrate that a water body is hydrologically "isolated," or "set apart," from an "adjacent" stream or wetland which is tributary to a navigable coastal area.

Hawaii's watersheds are small by continental standards - 97 per cent of the State's 614 delineated watersheds are less than 6.2 square miles in area, with the largest watershed (Pohakuloa, island of Hawaii) encompassing 507 square miles. Rainfall is "flashy," with subtropical rainfall runoff rapidly building to peak flows in short, steep perennial streams and intermittent flow channels which discharge to the coastal ocean in a period of hours and over distances less than about thirty miles. With the exception of lakes and wetlands located within the walls of high volcanic calderas, it is likely that all water bodies will overflow and contribute waters to the coastal ocean at some times.

Absent accepted legal definitions of "isolated" and "adjacency", there is no clear test of whether waters in such relatively small, steep watersheds can be considered to contain surface waters that are not rapidly discharged during rainfall events through surface or shallow ground water flows to streams, wetlands and coastal areas in Hawaii; decisions would be made on a strictly subjective case-by-case basis. It is preferable to have more clarity regarding which waters are "waters of the "U.S."

Types of non-navigable waters in Hawaii:

§ Montane bogs: significant headwaters for streams, important groundwater recharge areas, habitat for endemic and endangered plants;

§ Depressional wetlands in coastal plains, agricultural lands, and wet forests: these water bodies are significant recharge areas and are used by migratory birds and endangered water birds;

§ Discontinuous streams. The surface flows for many streams in Hawaii may move into the subsurface (porous lava) at some point, and reappear downstream (gaining and losing streams). Sometimes the stream flow is continuous to the ocean during wet periods but discontinuous in other seasons. These streams and residual ponds in stream channels are habitat for native aquatic species (insects and gobies) and for water birds (migratory and endangered; and

§ Crater lakes. Some high volcanic craters contain shallow lakes or wetlands that are not tributary to streams or the ocean. These lakes are the only water body type that may meet a criterion of spatial isolation (i.e., Lake Waiau on Mauna Kea, elevation over 12,000 feet). However, they provide habitat for endemic and endangered plants and are used by migratory and endangered water birds.

Importance of "isolated" waters in Hawaii:

"Isolated" waters such as bogs, depressional wetlands, and are not functionally isolated on volcanic islands like Hawaii, but are integral to the hydrology and biology of the natural island systems. On volcanic islands "isolated" waters are hydrologically connected because their surface water infiltrates into the aquifer, and shallow groundwater flows reemerge down gradient as baseflow in streams. All baseflow in Hawaiian streams originates from rainfall events which contribute water either in immediate surface runoff or as slower groundwater discharges; Hawaii does not have snowmelt contributions to flows. Filling such "isolated" waters (which serve as flood storage and recharge areas) exacerbates flooding and erosion down gradient. "Isolated" waters do not differ from adjacent waters/wetlands in their function as habitat for birds. These waters deserve protection on islands where any fresh surface water is a scarce resource for bird and aquatic life, and is necessary for aquifer recharge.

State law (Hawaii Revised Statutes, Chapter 342D, Water Pollution) includes all surface and ground waters in the

definition of State waters, with the sole exception of ditches, ponds and reservoirs used as parts of water pollution control systems (wastewater management systems). However, if the federal definition of "waters of the U.S." is narrowed to exclude waters categorically defined as "isolated," the state may not have adequate resources to replace the federal program, especially for wetlands regulation and management, for which no state program currently exists.

Potential implications of the proposed rulemaking on Clean Water Act §§404, 303, 311, 401, and 402:

Because distances in Hawaii are short, navigable waters often act as receiving waters for pollutant loads when irrigation systems, reservoirs and ponds overflow during heavy rains into streams, wetlands and the coastal ocean. High concentrations of dissolved pollutants such as nutrients, solvents and agricultural chemicals are constantly discharged at numerous locations where subtidal groundwater flows enter the coastal ocean. Absent inclusion of all hydrologically-connected surface and ground waters under Clean Water Act protection, Hawaii would have difficulty implementing an integrated approach to reducing pollutant loads entering navigable waters and their tributary systems to levels meeting state water quality standards. Because the State of Hawaii lacks a state-level wetlands management program due to funding limitations, "isolated" wetlands, in particular, would not receive adequate protection.

The State's Water Quality Standards (CWA §303) cannot be achieved in the absence of pollution control authority over pollutants carried in all interconnected bodies of water. Unless all interconnected waters are included under the same set of legal authorities, the spill program and the water pollution permit programs authorized under CWA §§311, 404, 401 and 402 will not be able to rely on the standards as indicators of ambient water quality for purposes of TMDL implementation or as discharge permit conditions, significantly weakening these water programs.

Use of factors listed in 33 CFR 328.3(a)(3):

Many interstate and foreign visitors travel to Hawaii to observe the unique endemic flora and fauna, including water birds found nowhere else in the world. Some native Hawaiian waterbirds are also threatened and endangered species (Hawaiian stilt, Koloa duck, Moorhen). These birds feed in open water and mudflats, including "isolated" waters such as depressional wetlands. The argument for claiming jurisdiction over isolated waterbird habitat in Hawaii on the basis of interstate/foreign travelers is a strong one.

One factor that should be considered in distinguishing "adjacent" from "isolated" waters is evidence for a temporary surface or subsurface hydrological connection. For example, some intermittent streams in Hawaii have remnant pools that contain native gobies. These gobies are dependent upon a connection between the stream and the ocean for their life cycles. Larvae drift out to sea and subsequently return to fresh water during storm discharges to grow and breed in the streams and freshwater pools. If an "isolated" water contains gobies, that is proof of a recent prior

connection with the ocean.

Similarly, low elevation anchialine pools and lakes in Hawaii often contain brackish water, which is proof of a subsurface connection with the ocean. The presence of minute shrimp capable of travel between the pools and ocean through porous lava can also be used to document the hydrological connection of these waters..

Recommendations:

We recommend that use of non-technical, judgmental terms such as "isolated" and "adjacency" be omitted from the proposed rulemaking process, and that the standard for inclusion of naturally-occurring waters under Clean Water Act protection be based on structural and functional criteria that can be evaluated in the physical environment by qualified scientists and resource managers. Use of demonstrated surface and subsurface flow pathways (hydrological connectivity) as the structural criterion, and demonstration that the water body in question supports recreational and/or aquatic life and wildlife uses as the functional criterion allows surface and groundwater flows to be viewed as interconnected elements of the single hydrological cycle that exists in the physical world. These demonstrations should be made in writing in technical reports and publications, and contain the data supporting the authors' conclusions.

Such a standard might read in part: "A specific water body (by name and location) or category of water bodies shall be defined as "isolated" (i.e., not a "water of the U.S.") when an agency submits for approval to the U.S. Environmental Protection Agency a determination in writing, accompanied by technical reports(s) prepared by qualified scientists and resource managers, that available data and other evidence are sufficient to prove within reason that the water body(ies) in question are highly unlikely to:

- (1) drain into "waters of the U.S." via either surface or subsurface flows at any time; and
- (2) support recreational and aquatic/wildlife uses that, if lost, would not significantly reduce local recreational opportunities, reduce biological diversity in the region, or reduce the population sizes and ranges of any threatened or endangered species dependent on the waters for any part of their life cycles."

Application of a test of this nature is essential in Hawaii. The state's unique geology and small, midocean land areas make it improbable that an "isolated" water can be identified with a reasonable degree of confidence, except in high volcanic calderas. Adoption of this approach would conform the legal definition of waters of the U.S. to physical reality in a way that enhances the effectiveness of existing water pollution control and water quality management programs at both federal and state levels of effort, and conforms to Congressional intent as expressed in the goals of the Clean Water Act, which are based on restoration and maintenance of the integrity of the nation's waters

If any waters fail to meet the flow pathway (hydrological connectivity) test and the recreational/aquatic life and wildlife use test, then these waters may be considered "isolated" for Clean Water Act purposes.

Thank you for the opportunity to comment.

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