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ENVS 171
CWA Policy Paper

The Clean Water Act, henceforth CWA, is a federal policy that aims at regulating the (surface) Waters of the United States (WOTUS). WOTUS was termed in the Refuse Act of 1899, where this act established the U.S. Army Core of Engineers as regulators of the WOTUS. The first major U.S. law to address water pollution was the Federal Water Pollution Act of 1948 (P.L. 80-845), which provided "state and local governments with technical assistance funds to address water pollution problems, including research" (Copeland, 2016, pg. 2). Issues associated with the Federal Water Pollution Act of 1948 were commonly focused around the establishment, or lack thereof, of authority to regulate. Major amendments were established in 1972, with the Federal Water Pollution Control Act Amendments (P.L. 92-500), which laid the groundwork for the present-day CWA. "Mounting frustration over the pace of pollution cleanup efforts… along with increased public interest in environmental protection, set the stage for the 1972 amendments" (Copeland, 2016, pg. 2). The 1972 amendments declared a clear objective related to water quality and water resource management: "restoration and maintenance of the chemical, physical, and biological integrity of the nation's waters" … where goals of zero discharge of pollutants by 1985 and water quality in the US that is to be both "fishable" and swimmable" by mid-1983 (Copeland, 2016, pg. 2).

Following the 1972 amendments there has been some major acts and amendments. The Clean Water Act of 1977 (P.L. 95-217), where the CWA namesake comes from, authorized the U.S. Fish and Wildlife Service (FWS) to assist states in developing Best Management Practices (BMPs) and industries and municipalities were required to establish "best practicable control technology" (BPT) to clean up waste discharges (Copeland, 2016, pg. 2). In 1981, the Municipal

Wastewater Treatment Construction Grants Amendments (P.L. 97-117) were established. Further amendments were made in both 1987 and 2014, with the passage of the Water Quality Act of 1987 (P.L. 100-4) and the Water Resources Reform and Development Act of 2014 (P.L. 113-121).

The establishment of regulators is a commonly disputed key idea within the CWA package. However, the implementation of the CWA is fairly clear, where the Environmental Protection Agency (EPA) and state governments are responsible for the implementation and enforcement of the CWA (EPA, *Summary of*…). The EPA's major regulation as part of the CWA is the National Pollutant Discharge Elimination System program (NPDES). This NPDES program "controls water pollution by regulating point sources that discharge pollutants into the [WOTUS]" (SWRCB, *National Pollutant*…). The EPA delegates states to regulate the implementation of NPDES permits. In addition to NPDES, the EPA also conducts CWA Compliance Monitoring and Water Enforcement. For CWA Compliance Monitoring, the "EPA works with its federal, state, and tribal regulatory partners to monitor and ensure compliance with clean water laws and regulations in order to protect human health and the environment" (EPA, *Clean Water Act (CWA) Compliance*…). In addition to monitoring, the EPA enforces regulations, as part of the CWA), in wastewater management, pretreatment, stormwater pollution, animal waste from concentrated animal feeding operations (CAFOs), spills (oil and hazardous substances), and wetlands (EPA, *Water Enforcement*).

In addition to federal-level regulations, the State Water Resources Control Board (SWRCB), and their nine Regional Water Quality Control Boards (Regional Water Boards), are responsible for implementation of the CWA in the State of California (SWRCB, 2014). There are also state-level acts that regulate water quality in California (CA). The Porter-Cologne Water

Quality Control Act (Porter-Cologne Act) of 1969 is the "principal law governing water quality regulation in California" (SWRCB, 2014). The Porter-Cologne Act established a comprehensive program to protect water quality and uses of water, where it applies to surface waters, wetlands, and groundwater for both point and nonpoint pollution sources (SWRCB, 2014). This state-level act built upon the federal-level CWA, where it expanded regulation of where the CWA lacked. The CWA primarily regulates surface waters and point pollutants, therefore, the Porter-Cologne Act furthered regulations in CA to include wetlands, groundwater, and nonpoint pollution sources (NPS). As part of this policy, the Regional Water Boards issue "NPDES permits for point source discharges and waste discharge requirements (WDRs) for NPS discharges" (SWRCB, 2014).

The goal of the CWA is to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (33 U.S.C. § 1251(a)). Keiser and Shapiro (2018) penned about whether or not the CWA has been beneficial for the US, they state that some argue that "there is no clear evidence that the [CWA] has decreased pollution, or even whether water pollution has fallen… [additionally], some argue that the [CWA]'s costs have exceeded the benefits" (Keiser and Shapiro, 2018). Keiser and Shapiro conducted analysis of "50 million water pollution readings from more than 240,000 sites in continental US, from 1962 to 2001" and used "detailed records on each 35,000 grants the federal government gave cities in order to improve the treatment of municipal wastewater" (Keiser and Shapiro, 2018). From their study, they found that water pollution has declined between 1962 and 2001. Additionally, they found that the CWA grants (totaling $650 billion) given to cities to improve wastewater treatment plants "substantially decreased water pollution" (Keiser and Shapiro, 2018). Lastly, Keiser and Shapiro found that the grants "increased home values within a 25-mile radius around the waters that were

cleaned up" (Keiser and Shapiro, 2018). Keiser and Shapiro conclude that the CWA has decreased US water pollution, however, the economic change in housing values did not overweight the costs associated in the environmental grants' costs.

Through the findings of Keiser and Shapiro, the CWA has significantly decreased water pollutants in the US, which was the goal of the CWA: to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (33 U.S.C. § 1251(a)). Federal and state-level regulations on point and NPS, surface waters, groundwater, and wetlands all made strides to increasing the environmental quality of WOTUS. Clarification is needed on regulators of WOTUS. As the Army Corps of Engineers are outlined in the 1899 federal regulation policy, they need to clarify their responsibility in regulating WOTUS. Several Supreme Court cases has originated out of this issue, therefore, clear and outlined clarification of what role does the US Army Corps of Engineers plays in WOTUS would be needed. Limitations in the federal-level policy of the CWA have been made by states, for example CA. However, adjustments to include stricter regulations of wetlands, groundwater, and NPS should be made at the federal-level to ensure that all states are meeting the environmental goal of ensuring the "integrity of the Nation's waters".

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