

This Chapter Has Been Updated. Updates Are Available At: [www.heinzctr.org/ecosystems](http://www.heinzctr.org/ecosystems)

# Fresh Waters





**What Indicators are used to describe Fresh Waters? Can we report trends? Are there other useful reference points?**

**SYSTEM DIMENSIONS**

⓪	Extent of Freshwater Ecosystems	What is the area of lakes and wetlands, and the length of streams, rivers, and their stream bank (riparian) areas?	Some trends
⓪	Altered Freshwater Ecosystems	How much of the nation’s lakes, wetlands, streams, and riparian areas has been significantly altered?	Current data only

**CHEMICAL AND PHYSICAL CONDITIONS**

⓪	Phosphorus in Lakes, Reservoirs, and Large Rivers	How much phosphorus is there in lakes, reservoirs, and large rivers?	Current data only, federal limit
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*Nutrients in Fresh Waters:* Additional indicators may be found in the core national indicators chapter, as well as in the forest, farmlands, grassland/shrubland, and urban/suburban chapters.

*Chemical Contamination in Fresh Waters:* Indicators dealing with chemical contamination in fresh waters may be found in the core national indicators chapter and in the farmland and urban/suburban chapters.

●	Changing Stream Flows	How many streams have had major changes in the size or timing of their lowest or highest flows since the 1930s and 1940s?	Trends
⊖	Water Clarity	How clear are lakes in the United States?	No data reported

**BIOLOGICAL COMPONENTS**

⓪	At-Risk Native Species	How many freshwater species are at different levels of risk of extinction?	Current data only, regional comparison
⓪	Non-native Species	How many non-native species are found in watersheds throughout the United States?	Current data only, regional comparison
⓪	Animal Deaths and Deformities	How many die-offs of waterfowl, fish, mammals, and amphibians occur? How common are amphibian deformities?	Trends, regional comparison
⊖	Status of Freshwater Animal Communities	What is the condition of communities of fish and bottom-dwelling animals in the nation’s streams?	No data reported
⓪	At-Risk Freshwater Plant Communities	How many wetland and stream bank plant communities are rare and thus potentially at risk?	Current data only, regional comparison
?	Stream Habitat Quality	What is the quality of the habitat in the nation’s streams?	No data reported

**HUMAN USES**

●	Water Withdrawals	How much fresh water do people withdraw, and what do they use it for?	Trends
⊖	Groundwater Levels	Are groundwater levels changing? Are they increasing or decreasing and at what rate?	No data reported
●	Waterborne Human Disease Outbreaks	How often do people get sick from drinking or swimming in contaminated water?	Trends
⊖	Freshwater Recreation Activities	How much recreation takes place in the nation’s fresh waters?	No data reported

● All Necessary Data Available    ⓪ Partial Data Available    ⊖ Data Not Adequate for National Reporting    ? Indicator Development Needed