

1 Electronic Supplementary Information

2 Water quality data in the boxplots of Figure 1 were taken from the National Surface Water
 3 Quality Database (NSQD) v.4.02, released in January 2015, downloaded from
 4 www.bmpdatabase.org. The federal standards and recommended criteria, reported in Table S1,
 5 were taken from three EPA websites and reported referenced therein (also referenced in the main
 6 body text):

- 7 • Drinking water standards from National Primary Drinking Water Regulations:
 8 [https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-](https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations)
 9 [regulations](https://www.epa.gov/ground-water-and-drinking-water/national-primary-drinking-water-regulations)
- 10 • Aquatic life recommended criteria: [https://www.epa.gov/wqc/national-recommended-](https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table)
 11 [water-quality-criteria-aquatic-life-criteria-table](https://www.epa.gov/wqc/national-recommended-water-quality-criteria-aquatic-life-criteria-table)
- 12 • Recreational criteria: <https://www.epa.gov/wqc/2012-recreational-water-quality-criteria>
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14 Table S1. Federal standards and recommended criteria for water quality parameter in figure 1.

Water quality parameter in figure 1	Water quality parameter name in the NSQD	Notes or assumptions regarding the standards or criteria plotted
Ammonium	Ammonia (mg/L)	<ul style="list-style-type: none"> • Acute freshwater standard sampled over 1 hour average • Chronic freshwater standard 30 day rolling average • Saltwater standards vary with pH, temperature so not plotted
Nitrate	NO ₂ ⁻ +NO ₃ ⁻ (mg/L as N)	
<i>E. coli</i>	Total <i>E. coli</i> (colony forming units/100 mL)	<ul style="list-style-type: none"> • Recreation standard is the geometric mean of samples taken, assuming an estimated illness rate of 36 per 1,000 primary contact recreators.
Dissolved copper	Copper Filtered (µg/L)	
Dissolved lead	Lead Filtered After 1984 (µg/L)	<ul style="list-style-type: none"> • Aquatic life criteria for freshwater are a function of hardness, the values plotted assume a hardness of 100 mg/L
Zinc	Zinc Total (µg/L)	<ul style="list-style-type: none"> • Assumed “Zinc” aquatic life criteria referred to total Zinc • Drinking water standard is from National Secondary Drinking Water Regulations

17 Table S2. Figure 3 was created with data from the International Stormwater BMP Database.
18 Category names were aggregated from the 'CommonName' field in the database.
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Category Name	International Stormwater BMP Database 'CommonName' fields
Phosphate	Phosphorus, orthophosphate as PO_4^{3+} ; Phosphorus, orthophosphate as P; Phosphate- phosphorus
Nitrate	Nitrogen, Nitrite (NO_2^-) + Nitrate (NO_3^-) as N; Nitrogen, Nitrate (NO_3^-)
Fecal indicator bacteria	<i>Escherichia coli</i> ; Fecal coliform

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The full data recovered during the systematic review is available from a persistent URL:
<https://purl.stanford.edu/qs993pr7111>

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27 Table S3. Chemical acronyms used in Figures 4 and 5.

Acronym	Chemical name
2,4-D	2,4-Dichlorophenoxyacetic acid
BPA	Bisphenol-A
PFOA	Perfluorooctanoic acid
PFOS	Perfluorooctanesulfonic acid
TCEP	Tris(2-chloroethyl) phosphate
TCPP	Tris (1-chloro-2-propyl) phosphate

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