



TAP WATER AT RISK

Bush Administration Actions Endanger America's Drinking Water Supplies

WHAT'S ON TAP?

Grading Drinking Water in U.S. Cities

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Relying on a water supply system that is, on average, a century old, the health of America's tap water is precarious at best. However, if the Bush administration is successful in its targeted assault on the nation's water protection laws, tap water quality will assuredly get worse. Through rollbacks of existing water protection laws, through delays in issuing new and strengthening existing standards, and in budget proposals that slash funding for water quality and protection programs, the administration is further endangering the health of our nation's tap water. We must act now to protect and to strengthen the legislative infrastructure we have in place: citizens must urge legislators not to pull the plug on healthy water supplies.

ATTACKING THE NATION'S WATER PROTECTION LAWS

As we examine drinking water quality in 19 cities across the country, it is critical to remember that the quality of tap water across America is profoundly influenced by the overall health of one contiguous system of interconnected waterways—the complex hydrologic spectrum, which includes streams, rivers, ponds, lakes, wetlands, and groundwater aquifers. Tap water comes from one of two places along this spectrum: surface water (lakes and rivers) and groundwater (underground aquifers tapped by city wells). The healthier these waterways, the better the quality of our tap water.

Unfortunately, the Bush administration has targeted for dismantlement the laws that protect these waters, and it has proposed sharp cuts in federal funds to clean up and protect America's waterways. The result: more water pollution and fewer cleanup efforts, which will exacerbate source water and groundwater pollution. Ultimately, the quality of U.S. tap water will be profoundly diminished.

Dismantling the Clean Water Act

One of the nation's premier environmental laws, the 1972 Clean Water Act has successfully protected U.S. waterways for more than 30 years. During this time, Congress and numerous courts have continued to reaffirm the role of this landmark environmental law, holding that the Clean Water Act protects *all* waters of the

United States from pollution. It has been a success. The Clean Water Act has made America's rivers, lakes, and estuaries cleaner and healthier, and it has made many of our waterways fishable and swimmable. The work is far from over: today, fewer than half of all waterways surveyed still do not meet water quality standards.¹ The task before us must be to press on and to enforce the Clean Water Act, which has served our country well.

Instead, however, at the behest of developers, agribusiness, and the mining, oil, and gas industries, the Bush administration is chipping away at key provisions of the Clean Water Act that affect America's waterways. On January 15, 2003, the Environmental Protection Agency (EPA) and the U.S. Army Corps of Engineers (Corps) initiated a rulemaking to limit the number of waterways protected by the Clean Water Act. The waters most affected by this action are headwater streams, seasonal waters, wetlands, and natural ponds—so-called “isolated” wetlands and waters that lack a direct surface connection to “navigable” waters but which are essential nonetheless to the overall health of the hydrologic system. These waterways replenish groundwater supplies, filter drinking water sources, absorb floodwaters, and provide essential wildlife habitat, including the breeding habitat used by more than half the ducks in North America. Indeed, about one-third of the water in the nation's rivers and streams originates as groundwater, and much of this groundwater is replenished from such isolated wetlands and ponds.

The EPA has estimated that the rulemaking could eliminate Clean Water Act protections for as much as 20 percent of America's wetlands.² Furthermore, the rulemaking undermines a key goal of the Clean Water Act—ensuring the chemical, physical, and biological integrity of our nation's waterways—by exposing currently protected waters to dumping, filling, oil spills, and other pollution discharges.

A Supreme Court Decision as Scapegoat. The basis for the EPA and Corps rulemaking is a 5-4 Supreme Court decision handed down on January 9, 2001, that hinged on the definition of “navigable” waters under the Clean Water Act. The lawsuit was brought by the Solid Waste Agency of Northern Cook County (SWANCC) against the Corps when the Corps blocked, using its authority under the Clean Water Act, construction of a landfill planned on the site of a 17-acre tract of seasonal pond. Ultimately, the Supreme Court ruled in SWANCC's favor, saying that the Corps had overstepped its authority because it had determined that the waters in question were shown to be protected by the Clean Water Act solely based on their use by migratory birds.³ The Court ruled that without a more clearly demonstrated connection to navigable waters, the Corps should not have regulated such wetlands. The Bush administration, egged on by industry and developers, has seized on the SWANCC decision as an excuse to propose a substantial narrowing of the reach of the Clean Water Act. It is mounting a two-pronged attack: first on wetlands and second on nonnavigable headwaters and other streams.

Target: Wetlands. Today, America loses from 50,000 to 100,000 acres of wetlands each year to development. Wetlands are a crucial link in the hydrologic chain, performing

two essential functions that improve the quality of surface water and groundwater supplies—and ultimately tap water. Wetlands act as pollution filters, transforming and reducing the flow of sediments, nutrients, heavy metals, and other contaminants.⁴ At the same time, wetlands act as water regulators: in floods, wetlands store excess water and slowly replenish groundwater supplies; in droughts, wetlands discharge water to adjacent streams.⁵ For example, shallow ponds found in the southwestern United States (called “playas”) filter 20 to 80 percent of collected water to the Ogallala or Great Plains aquifer, which provides drinking water to the citizens of many states.^{6,7}

Wetlands protections were the first component of the Clean Water Act to be jettisoned by the Bush administration—and the planned rulemaking will assuredly accelerate the pace. The rulemaking will have a direct and negative impact on the health of drinking water supplies. When wetlands are left unprotected, they can become pathways for contaminants that ultimately end up in tap water. The aforementioned Ogallala aquifer provides a stark example: in its unprotected playas, nitrates (which can cause miscarriages and death in infants) infiltrated the drinking water supply.⁸

Target: Headwaters and Other Small Streams. Wetlands are one target of an administration intent on eviscerating the Clean Water Act; headwaters—streams, tributaries, creeks, and other waters upstream that largely determine the health of more substantial waterways downstream—are another. Many small streams directly supply drinking water because segments have been diverted to create reservoirs for drinking water and other purposes.⁹ Other small streams serve as conduits for snowmelt, precipitation, and groundwater discharge, feeding larger rivers that serve as drinking water sources.¹⁰ In fact, between 60 and 80 percent of the water that feeds larger rivers comes from small streams (most of the rest is from groundwater).¹¹ For example, in many western states, seasonal streams predominate: they account for 72 percent of Colorado’s stream miles, 97 percent of Arizona’s total stream miles, and 91 percent of New Mexico’s total stream miles.^{12, 13, 14}

Headwaters also help dilute pollution, runoff, nutrients, and organic matter downstream, thereby protecting drinking and other water quality.¹⁵ Studies have shown that water quality is more affected by the disturbance of headwater wetlands than downstream wetlands.¹⁶ Headwaters and their riparian areas also absorb floodwater, thereby regulating its downstream volume and velocity.¹⁷ If this function is compromised, erosion can result, which ultimately can harm downstream drinking water sources.¹⁸ Degraded headwaters that cause serious erosion can produce highly turbid (cloudy) and polluted water downstream, potentially interfering with or bypassing drinking water treatment and triggering increased treatment costs.

The Bush administration is considering changes that abandon protections for headwaters and other small streams. Exempting so-called isolated and nonnavigable waters from Clean Water Act protection would result in reduced groundwater recharge capacity, reductions in water quantity, and greatly degraded water quality with increased levels of nutrients, sediments, heavy metals, and other contaminants

in our drinking source waters. Safe and affordable drinking water is at risk if headwaters, wetlands, and seasonal streams lose Clean Water Act protection since these waters help keep drinking water clean and plentiful.

Relaxing Standards That Limit Daily Pollution Loads. Another component of the Clean Water Act that the administration plans to unravel is a key provision governing cleanup of polluted waters, the total maximum daily load (TMDL) program. The TMDL program requires states and the EPA to identify polluted waterways, rank them for priority attention, and develop pollution limits for each water body. The administration has significantly weakened the TMDL rule to delay cleanup efforts, to make it more difficult to implement cleanup plans, to make it easier for states to remove waterways from the cleanup list, and to make it more difficult for additional waterways to be added to the list. As a result, source waters will be degraded, which ultimately will threaten the safety of drinking water. These changes would directly affect the 218 million Americans who live within 10 miles of a polluted river, lake, or coastal water body.

Weakening Restrictions on Livestock Waste

Large concentrated animal feeding operations (CAFOs) now dominate animal production across the country and produce a staggering 220 billion gallons of manure annually—nearly 1,000 gallons of manure for every man, woman, and child in the nation. These factory-size hog, dairy, chicken, and cattle farms routinely dump massive amounts of animal manure into waterways, killing fish, spreading disease, and seriously degrading water quality. Animal waste then often leaches into groundwater supplies from storage lagoons and fields that are saturated with overapplied animal manure—and ultimately contaminates drinking water.

In December 2002, the Bush administration finalized its new rule governing disposal of livestock waste: the rule guts the Clinton EPA's proposal prohibiting discharges of animal waste to groundwater and requiring groundwater monitoring. Instead, the new EPA regulations allow factory farms to draft their own pollution management plans without review or approval by the state or the EPA, relieve agribusiness corporations from liability for environmental damage, eliminate measures to update technology standards to combat pollution, and limit public participation and access to information.¹⁹

As a result, factory farms will continue fouling the nation's waterways with animal waste pollution, and the public—not the polluter—will pay the price for contaminated drinking water. Because groundwater is the primary source of drinking water for people living in rural communities, the Bush administration's decision will directly harm human health. Drinking water that contains elevated concentrations of nitrate from animal waste can cause very serious health effects, including spontaneous miscarriages and blue baby syndrome (from excessive nitrates in drinking water, which can cause death in infants). Moreover, contrary to what many experts believed, some microscopic parasites can travel through the groundwater and contaminate wells or surface waters; indeed, recent major waterborne disease outbreaks have been caused by animal waste-contaminated water reaching water supply wells and sickening hundreds of people.²⁰

Lifting the Ban on Dumping Mining Waste

Responding to mining industry pressure, the Bush administration recently reversed a 25-year-old rule that prohibited dumping mining waste and other industrial solid waste into U.S. waterways. As a result, hard rock mining waste—which is often laden with toxic heavy metals such as arsenic, lead, and cadmium—can now be classified as fill material and dumped directly into streams, wetlands, and other waters. These toxic discharges could severely compromise water quality and eventually drinking water downstream. Coal mining wastes, construction and demolition debris, used tires, and plastic waste may now be permitted for disposal in the nation's waters as well.

Relaxing Sewage Treatment Requirements After Rain and Snow

A storm can wreak havoc with sewage treatment plants as rain or snowmelt seeps into pipes and overloads the system. Sewage treatment plants filter and treat water, but some contaminants still can get through the safety net and work their way downstream, eventually to waterways and drinking water supplies, where they can make people sick with nausea and vomiting. Pathogens such as *Giardia* and *Cryptosporidium*, for example, cause the majority of waterborne disease outbreaks in the United States because they are not effectively removed by filtration and chlorination. Academic experts have estimated that 7.1 million cases of mild to moderate and 560,000 cases of moderate to severe infectious waterborne disease come from contaminated drinking water in the United States each year; many of the microscopic parasites causing these diseases enter water supplies through polluted runoff. Children, the elderly, and those with compromised immune systems are most likely to become sick or even to die from infectious waterborne diseases.²¹

In the spring of 2003, the EPA will release a draft policy that relaxes sewage treatment requirements after rainfall or snowfall. The EPA's approach violates Clean Water Act sewage treatment requirements and does not provide effective treatment for viruses, parasites, or pathogens such as *Giardia* or *Cryptosporidium*, which can contaminate drinking water sources and also can make recreational swimmers sick with nausea and vomiting. *Giardia* and *Cryptosporidium* cause many waterborne outbreaks in the U.S. because they sometimes are not effectively removed by drinking water filtration or chlorination.

Exempting the Pollution Industry for Paying for Superfund Cleanup

In the event of industrial pollution, polluters are generally required by law to pay for cleanup. But in the event that the responsible polluter cannot be determined, has gone bankrupt, or has disappeared, the EPA is left to foot the bill for cleanup. To offset those costs, the EPA established a Superfund Hazardous Waste Cleanup Program, funded by user fees that are paid by the chemical, petroleum, and manufacturing industries. These user fees also pay for the EPA and the Justice Department to take enforcement actions against polluters who refuse to pay their share of toxic waste cleanups.

When these fees recently expired, the Bush administration announced that it would not seek to renew them—which seriously undermined the government's ability to study waste sites, to force polluters to clean them up, or to sue or to prose-

cute uncooperative polluters. Drinking water treatment technologies in most cities are ill-equipped to remove the kinds of industrial chemicals released by hazardous waste dumps; without the infusion of funds from the Superfund Hazardous Waste Cleanup Program to clean up toxic waste sites before they pollute groundwater, lakes, and streams, source waters used for drinking water will suffer more chemical pollution. (For more on budget-related issues on Superfund cleanup, see page 87.)

UNDERMINING WATER STANDARDS

To protect public health, the EPA is legally mandated to improve tap water quality by issuing new and by strengthening existing standards on contaminants in drinking water. However, the Bush administration effectively shut down EPA progress on this front, thwarting the effectiveness of its own agency, impairing drinking water, and endangering the public health of Americans.

The Saga Surrounding the Arsenic Standard

Perhaps the starkest example of administration stalling in issuing new health protection standards for drinking water was the arsenic rule. Arsenic is one of the most dangerous contaminants found in tap water; it is also one of the most ubiquitous, present in the water supplies of 22 million Americans, at levels averaging more than 5 parts per billion (ppb).²² The EPA spent more than two decades studying the effects of arsenic in drinking water and finally, in January 2001, issued a new standard setting arsenic levels at 10 ppb—a significant improvement from the rule set in 1942 at 50 ppb. The EPA estimated that 13 million people in the United States drink water containing more arsenic than allowed under the new EPA standard. However, in January 2002, the Bush administration, backed by mining, chemical, and some water utility industry lobbyists, blocked the new standard, requiring more research. Meanwhile, the 1942 standard remained in effect.

Many scientific studies, including no fewer than seven reviews by the National Academy of Sciences (NAS), determined that arsenic in drinking water is known to cause cancer of the bladder, skin, and lungs; that arsenic likely causes other cancers; and that arsenic is responsible for a variety of other serious health ailments. In fact, a 2001 NAS report found that a person who drinks two liters of water a day containing 10 ppb arsenic—the new EPA standard—has a lifetime total fatal cancer risk greater than 1 in 333. That risk level is more than 30 times higher than what the EPA traditionally allows in tap water.²³ The findings of the 2001 NAS report likely would have been major news across the nation, but they were released on September 11, 2001.²⁴ Nonetheless, NRDC pushed hard to focus public and media scrutiny on the matter, and ultimately the Bush administration's delay and suspension of the arsenic in drinking water rule was reversed.

Halting Progress on New Contaminant Standards

The arsenic rule was just one example among many of the administration's failure to implement a safe and comprehensive drinking water program. Specifically, the

Safe Drinking Water Act (SDWA) required the administration to determine by August 2001 whether to issue a standard for at least five contaminants in tap water that remain unregulated. But in June 2002, nearly a year later, the Bush administration issued a surprising *Federal Register* notice: after six years of EPA study, the administration announced that it had not found enough information to issue standards for any drinking water contaminants that remained unregulated. In finding that there was insufficient evidence to regulate any new contaminants, the EPA rebuffed pleas from public health and other groups to issue controls on many emerging high-risk contaminants. These include:

► **Parasites and chlorine by-products.** Final “Stage 2” rules for *Cryptosporidium* and cancer-causing chlorine by-products are required by the SDWA to be issued by May 2003. A major negotiation involving the EPA and all interested parties reached a consensus proposal for the standard in 2000, but the Bush administration has now halted progress. In fact, it has not even published the proposed rules—which were required by May 2002.

► **Radioactive radon.** The SDWA required the EPA to issue a standard for radon by August 2001, in order to protect the tens of millions of Americans who have radioactive and cancer-causing radon in their tap water. The Bush administration has stopped progress on radon and has not even proposed a rule.

► **Groundwater disinfection.** Although groundwater is the source of water for nearly half of all Americans, EPA rules do not require any disinfection. At present, only surface water must be treated. Many people have become ill in disease outbreaks in groundwater supplies that have not been disinfected. Congress, therefore, required the EPA to issue a new rule for groundwater disinfection as soon as possible, but no later than May 2003. The Bush EPA privately admits that it will not come close to meeting this deadline; a proposed rule issued in 2000 by the Clinton EPA was attacked by the water industry and states, and since, the final rule has languished.

► **The rocket fuel perchlorate.** Perchlorate (PERC), an inorganic contaminant that usually comes from rocket fuel spills or leaks at military facilities, harms the thyroid and may cause cancer. More than 10 million Americans drink tap water containing PERC at levels higher than what the EPA considers safe. But today, as a result of administration stalling and fierce debate between the EPA and the Pentagon over what levels constitute dangerous exposure, the substance remains only partly regulated.

Refusing to Strengthen Existing Standards

Congress ordered the EPA to review under the SDWA the adequacy of all existing tap water rules by August 2001. But the Bush administration recently announced that all of the approximately 80 current tap water standards in existence—many of which have remained unchanged for decades—are sufficiently protective of public health. In spite of the fact that recent data demonstrated higher risks for many contaminants than were previously recognized, the administration asserted that there is no need

for a change in standards—effectively ignoring scientific studies showing that many of its current tap water standards are inadequately protective.²⁵ These include:

- ▶ **Lead, chromium, and atrazine and triazine herbicides**, as well as other chemicals that new data prove to be more dangerous than was previously believed. For example, the EPA itself decided in 2001 that triazine herbicides—including the nation's most widely used pesticide, atrazine—act as a common poison and that therefore a single standard should be set for the total (cumulative) exposure to these triazine herbicides in food. Under the Bush administration, however, the EPA decided not to issue any new standard for these chemicals in tap water.
- ▶ Classes of pesticides that can be toxic when consumed in small quantities, including **organophosphates, carbamates, and chlor herbicides**. In 2001, the EPA concluded that these pesticides should be controlled as a family with a single cumulative standard, but no standards have been set.
- ▶ Other chemicals, from **fluoride to chromium**, which are more toxic than was previously believed. New data collected by academic researchers, EPA scientists, and in some cases even industry-funded scientists demonstrate that these chemicals are more harmful than was previously believed, but the Bush administration disregarded these findings; instead, it opted to do nothing to strengthen or to broaden its standards for these chemicals.

SLASHING FUNDING FOR WATER QUALITY

In the new budget for fiscal year 2004, the Bush administration slated a \$1.6 billion (5.5 percent) cut for environmental spending compared to FY 2002. Therefore, it is no surprise that the administration's weak commitment to water quality and protection is directly reflected in recent budget figures for key programs.

- ▶ In the budget for FY 2004, the Bush administration has proposed a cut of more than 32 percent to \$1.798 billion—a loss of \$861 million.
- ▶ The largest single area to be reduced is the Clean Water Act State Revolving Fund (CWASRF), which lends money to states to pay for sewage plants. Bush's budget for CWASRF would decline by \$500 million—from \$1.350 billion in FY 2002 to only \$850 million in FY 2004.
- ▶ The Safe Drinking Water Act State Revolving Fund, which supports construction of purification facilities, would remain unchanged at \$850 million—still far below annual needs and \$150 million below the authorized level.
- ▶ A significant slash in funding for one particular category of water pollution projects will push it perilously close to extinction. Funding for this family of projects—which addresses particular needs in specific places and includes a range of activities such as water treatment, sewage control, and nonpoint pollution—would be reduced from \$459 million to a mere \$98 million.
- ▶ As discussed earlier, the administration has largely abandoned the principle of polluter pays. While the Superfund cleanup program would grow from \$1.31 billion in FY 2002 to \$1.39 billion in FY 2004, a hefty \$1.1 billion would be borne by taxpayers

due to the failure of the administration to reinstate the polluter pays user fee. Even the administration has admitted that today, in light of the recent expiration of the Superfund user fee on industry, polluters are paying for only about 70 percent of Superfund site cleanup costs; the government (*i.e.*, taxpayers) is stuck with the rest of the tab. These figures will only get worse now that the polluter tax-based Superfund is exhausted of funds, and since the administration has refused to support the reinstatement of the polluter tax. Meanwhile, the oil industry enjoys an exemption from liability at these sites, ensuring that it will never be held responsible for its toxic pollution even though it no longer contributes to the Superfund tax. The lack of cleanup of such toxic waste sites can and has led to pollution of drinking water source waters.

► Despite the president's promises to "fully fund the LWCF [Land and Water Conservation Fund]," his budget proposes cutting 50 percent of the fund's core federal land acquisition programs, from \$429 million in FY 2002 to \$187 million for FY 2004. The Land and Water Conservation Fund was established in 1964 to protect important natural areas. The annual \$900 million income for this trust is largely generated by revenues from oil and gas drilling in the Outer Continental Shelf, and these monies are earmarked to pay for land acquisition and important water and land resource protections—many of which serve as the headwaters and important components of rivers and lakes that serve as drinking water sources. Although LWCF has never received its full authorization of \$900 million annually, it has worked well for decades. Bush's budget betrays this fund, raiding it to pay for 15 other extraneous programs while claiming to fully fund the LWCF. In reality, it slashes at the core of LWCF.

RECOMMENDATIONS

Important actions are needed to counter the Bush administration's efforts to dismantle or cut drinking water and source water protection programs. In order to:

Retain Legislation That Protects Drinking Water Sources

- The administration should renounce its proposal to substantially narrow protections for wetlands and headwaters and other small streams under the Clean Water Act; it should implement the existing TMDL program; and Congress should overturn the SWANCC decision that narrowed the applicability of the CWA for certain wetlands.
- The EPA or Congress should overhaul the Bush EPA's rule for factory farms by adopting clear prohibitions on groundwater and surface water contamination.
- The Bush administration should reinstate the EPA's 25-year-old rule against dumping mining waste into streams—particularly during mountaintop removal mining.
- The administration should not adopt its new policy relaxing sewage treatment requirements after rainfall or snowfall.
- The Bush administration should work with Congress to assure the reinstatement of the Superfund polluter tax. It should also commit to full funding for EPA and Justice Department enforcement and implementation of the toxic waste cleanup program.

Issue New and Strengthen Existing Standards Protecting Public Health

- ▶ The administration should establish new tap water standards for *Cryptosporidium*, cancer-causing by-products of chlorination, groundwater disinfecton, radon, perchlorate, and other emerging contaminants.
- ▶ The EPA should revise the old, weak standards for long-regulated contaminants, including strengthening the standards for arsenic, lead, chromium, atrazine/triazines, and organophosphate insecticides.

Maintain Funding for Water Quality and Protection Programs

- ▶ The administration should work with Congress to assure full funding for environmental protection, including sufficient funding to ensure strong water enforcement, full funding for the State Revolving Funds and clean water and drinking water programs, and full funding for the Land and Water Conservation Fund, as promised by President Bush during the election campaign.

NOTES

1 Statement of G. Tracy Mehan III, Assistant Administrator for Water, U.S. Environmental Protection Agency before the Committee on Environment and Public Works, United States Senate, October 8, 2002.

2 Jehl, D., "U.S. Plan Could Ease Limits on Wetlands Development," *The New York Times*, January 11, 2003.

3 Administration officials launched the dismantlement process in response to a January 2001 Supreme Court decision, *Solid Waste Agency of Northern Cook County vs. U.S. Army Corps of Engineers*, 121 S.Ct. 675 (2001) (SWANCC). A 5-4 majority held that the Corps could not protect intrastate, isolated, nonnavigable ponds solely based on their use by migratory birds. However, the ruling did not invalidate existing Clean Water Act rules. In fact, the Department of Justice has argued in numerous cases that the SWANCC decision does not necessitate any additional restriction of the scope of the Clean Water Act.

4 Maryland's Nonpoint Source Pollution Prevention Programs, Department of Natural Resources, Annapolis, Maryland, www.dnr.state.md.us/bay/czm/nps.whatisnps.html, and untitled, undated document by Region 3, Water Protection Division, the Mid Atlantic states, U.S. Environmental Protection Division, www.epa.gov/reg3wapd/nps/pdf/wetlands.pdf, visited January 20, 2003.

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6 Hawks Aloft, Inc., First Final Draft Bird Conservation Plan, Partners in Flight, Draft Land Bird Conservation Plan, New Mexico State Plan, Version 1.0, Albuquerque, New Mexico, March 31, 2000.

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9 U.S. Fish and Wildlife Service, "The Value of Headwater Streams: Results of a Workshop," State College, Pennsylvania, April 13, 1999, Pennsylvania Field Office, State College, Pennsylvania, April 2000.

10 Ibid.

11 Ibid.

12 Theo Stein, "Oversight of Wetlands Might Shift; Critics Decry Federal Proposal," *Denver Post*, January 12, 2003.

13 Arizona Department of Environmental Quality, "The Status of Water Quality in Arizona—2002," Volume 1, Arizona's Integrated 305(b) Assessment and 303(d) Listing Report, Phoenix, Arizona, EQR02-04, 2002.

14 New Mexico Water Quality Commission, "Water Quality and Water Pollution Control in New Mexico, 2002," Santa Fe, New Mexico, Appendix A, [www.nmenv.state.nm.us/swqb/305\(b\)/2002/](http://www.nmenv.state.nm.us/swqb/305(b)/2002/).

15 Russell Cohen, "Fact Sheet: The Importance of Protecting Water Quality in Intermittent and Other Smaller Brooks and Streams," Riverways Program, Massachusetts Department of Fisheries, Wildlife, and Environmental Law Enforcement, January 8, 2003.

- 16 Carl Hershner, et al., "Wetlands in Virginia," Special Report, Center for Coastal Resource Management, Virginia Institute of Marine Science, School of Marine Science, College of William and Mary, Gloucester Point, Virginia, January 2000, No. 00-1.
- 17 Russell Cohen, "Fact Sheet: The Importance of Protecting Water Quality in Intermittent and Other Smaller Brooks and Streams," Riverways Program, Massachusetts Department of Fisheries, Wildlife, and Environmental Law Enforcement, January 8, 2003.
- 18 Letter to the U.S. Army Corps of Engineers from Dr. Judy Meyer, Distinguished Research Professor, Institute of Ecology, University of Georgia, Athens, Georgia, et al., re: Comments to the Army Corps of Engineers Proposal to Reissue and Modify Nationwide Permits, October 5, 2001.
- 19 This rule is yet another example of how contributors to the Bush-Cheney campaign are getting what they paid for. During the 2000 election, the Bush-Cheney campaign received \$2,636,625 from agribusiness, including \$647,285 from the dairy, livestock, and poultry and egg industries. President Bush received more livestock industry contributions (\$506,085) in the 2000 election campaign than any other federal candidate received between 1990 and 2000. (Source: www.opensecrets.org)
- 20 See, for example, "1,061 Suspected *E. coli* Cases in New York Outbreak," *Infectious Disease News*, (October 1999), available online at www.infectiousdiseaseneews.com/199910/frameset.asp?article=ecoli.asp; Centers for Disease Control, "Public Health Dispatch: Outbreak of *Escherichiacoli* O157:H7 and *Campylobacter* Among Attendees of the Washington County Fair, New York," 1999; *MMWR*, 1999, 48(36):803; Rachel S. Barwick, M.S., Deborah A. Levy, Günter F. Craun, Michael J. Beach, Rebecca L. Calderon, "Surveillance for Waterborne-Disease Outbreaks—United States, 1997–1998," *MMWR*, May 26, 2000, 49(SS04):1-35; Deborah A. Levy, Michelle S. Bens, Gunther F. Craun, Rebecca L. Calderon, Barbara L. Herwaldt, "Surveillance for Waterborne-Disease Outbreaks—United States, 1995–1996," *MMWR*, December 11, 1998, 47(SS-5):1–34; Michael H. Kramer, Barbara L. Herwaldt, Gunther F. Craun, Rebecca L. Calderon, Dennis D. Juranek, "Surveillance for Waterborne-Disease Outbreaks—United States, 1993–1994," *MMWR*, 45(SS-1)1-33, April 12, 1996, 45(SS-1):1-33; Erik D. Olson and Diane Cameron, *The Dirty Little Secret About Our Drinking Water: New Data Show Over 100 Drinking Water Disease Outbreaks from 1986–1994, and Strong Evidence of More Widespread Problems* (NRDC, February 1995).
- 21 R. Levin and W. Harrington, "Infectious Waterborne Disease and Disinfection By-products in the U.S.: Costs of disease," *Assessing and Managing Health Risks from Drinking Water Contamination: Approaches and Applications*, edited by E. Reichard and G. Zapponi, IAHS Publication No. 233, proceedings of an international symposium held at Rome, Italy, September 13–17, 1994.
- 22 P. Mushak, M. McKinzie, and E. Olson, *Arsenic and Old Laws*, NRDC, 2001.
- 23 National Academy of Sciences, National Research Council, *Arsenic in Drinking Water: 2001 Update* (National Academy Press, 2001), available online at www.nap.edu/catalog/10194.html.
- 24 Total cancer risk figures are taken from the National Academy of Sciences' report *Arsenic in Drinking Water: 2001 Update*, 2001; for a plain-English explanation of the Academy's arsenic cancer risk figures, see NAS's September 11, 2002, press release, available online at www4.nationalacademies.org/news.nsf/isbn/0309076293?OpenDocument. EPA's maximum acceptable cancer risk is 1 in 10,000.
- 25 The one possible exception was for coliform bacteria, which the administration said it would consider revising—perhaps due to a 1998 signed EPA agreement reached in a regulatory negotiation that EPA would overhaul the coliform rule, and perhaps also due in part to industry pressure to weaken the rule.