

Atrazine Contamination in Nebraska



Atrazine contamination is widespread in Nebraska. Scientific studies have linked atrazine to a higher risk of prostate cancer, and hormonal, cardiovascular, lung and kidney problems in humans; sexual and hormonal abnormalities in frogs, fish and reptiles, and to decreased production in aquatic plants. Unfortunately, USDA allocated less than 1% of EQIP funds for pest management in Nebraska from 2003 through 2005. A last minute provision added to the House 2007 Farm Bill, sponsored by pesticide manufacturers, would bar USDA from encouraging alternatives to “specific” pesticides like atrazine in the future.

Atrazine contaminates Nebraska’s drinking water and environment:

- ▶ Data obtained from public water systems by the Environmental Working Group (EWG) show that 234,500 people in Nebraska were exposed to atrazine in their drinking water above state or federal health-based limits between 1998 and 2003.¹
- ▶ Seven Nebraska watersheds monitored through an Ecological Watershed Monitoring Program (2004-2006) ordered by EPA had average atrazine concentrations ranging from 0.43 to 14.3 ppb. Maximum concentrations ranged from 11.9 ppb to a whopping 125 ppb, or up to 125 times the 1 ppb level that has been found in scientific studies to cause reproductive abnormalities in fish and amphibians,^{2, 3} and 12 times the EPA 10 ppb aquatic-community effect level. Maximum concentrations (spikes) are a greater indicator of risk than averages because they may indicate the “tip of the iceberg” for other spikes that are difficult to detect through intermittent monitoring; many health and ecosystem impacts may result from repeated short-term, high-level exposures; and single exposures during biologically sensitive periods (eg pregnancy, childhood development) can cause serious injuries.

Atrazine in surface water in seven monitored Nebraska watersheds, Ecological Watershed Monitoring Program⁴

Watershed	Years sampled	Number of samples analyzed	Number of samples containing atrazine	Maximum atrazine concentration (ppb)	Number of samples with concentrations above:	
					3 ppb*	10 ppb
Wahoo Creek	2004-05	72	58 (81%)	19.25	10	5
Middle Loup Creek	2005-06	76	56 (74%)	82.0	12	6
Platte River	2004-05	75	59 (79%)	11.92	1	0
Upper Big Blue River	2005-06	70	67 (96%)	125.0	19	11
Muddy Creek	2005-06	46	37 (80%)	49.87	8	3
Crooked Creek	2004-06	192	102 (53%)	36.13	15	7
Lower Big Blue River	2005-06	51	44 (86%)	112.19	6	4

* 3 ppb = EPA drinking water standard (Maximum Contaminant Level, or MCL).

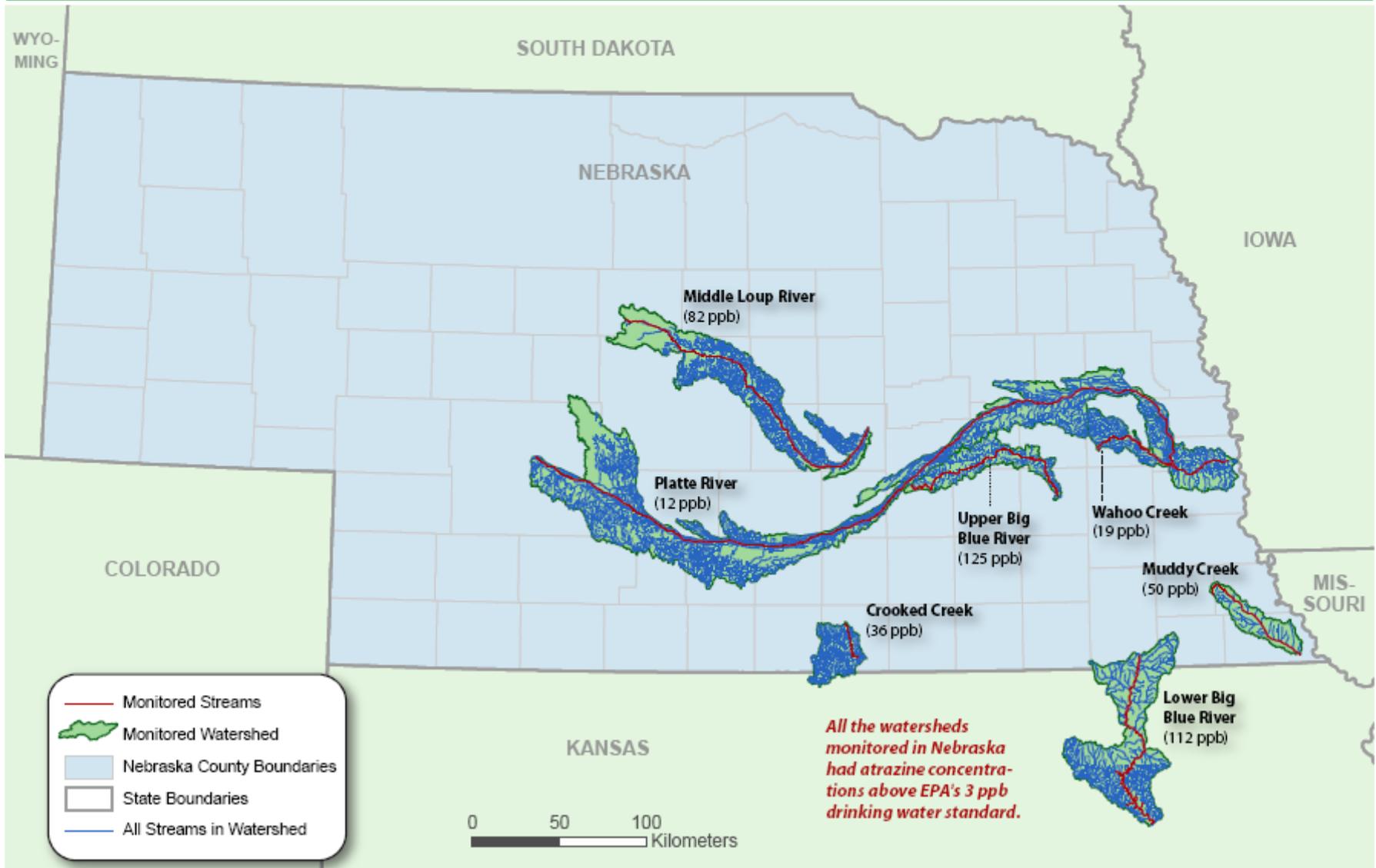
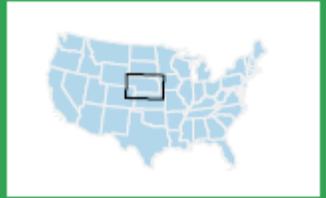
1 Environmental Working Group, National Tap Water Quality Database, <http://www.ewg.org/tapwater/index.php> The State of California has established a Public Health Goal for atrazine of 0.15 parts per billion (ppb), while the U.S. Environmental Protection Agency (EPA) has set a drinking water standard and a Maximum Contaminant Level Goal (MCLG) of 3 ppb.

2 Hayes, T, et al. 2001. Atrazine disrupts sex differentiation in the African Clawed Frog (*Xenopus laevis*) at ecologically relevant doses, presentation at SETAC (Society of Environmental Toxicology and Chemistry) meeting, Baltimore, Nov. 14, 2001.

3 Moore, A. and N. Lower. 2001. The impact of two pesticides on olfactory-mediated endocrine function in mature male Atlantic salmon (*Salmo salar* L.) parr. *Comp.Biochem.Physiol. B* 129:269-276.

4 U.S. EPA, Atrazine Ecological Watershed Monitoring Data, http://www.epa.gov/pesticides/reregistration/atrazine/atrazine_update.htm#ewmp

Atrazine Monitoring in Nebraska



Concentrations shown represent maximum concentrations in each watershed.
Source: U.S. EPA, Ecological Watershed Monitoring Program.