BEYOND PESTICIDES
701 E Street, SE ■ Washington DC 20003
202-543-5450 phone ■ 202-543-4791 fax
info@beyondpesticides.org ■ www.beyondpesticides.org

October 5, 2016

Office of Pesticide Programs
Environmental Protection Agency, (28221T),
1200 Pennsylvania Ave., NW
Washington, DC 20460-0001

Re: Draft Ecological Risk Assessments for the Registration Review of Atrazine EPA-HQ-OPP-2013-0266; Simazine EPA-HQ-OPP-2013-0251; Propazine EPA-HQ-OPP-2013-0250

Dear Sir/Madam,

We are writing in response to the publication of the draft ecological risk assessments for the triazines; atrazine, simazine, propazine and their degradates. This class of herbicides is widely used in the U.S. on various agricultural and non-agricultural sites. According to the U.S. Environmental Protection Agency (EPA), over 90 percent of atrazine is used on corn, which, as the most widely cultivated crop in the U.S.,[1] means atrazine contamination is a threat to millions of acres of land and waterways. Atrazine, as well as simazine and propazine, has been linked to numerous adverse health and environmental effects, which has motivated numerous public interest campaigns to ban its uses in the U.S.

Atrazine, like the other triazines, is highly mobile and persistent in the environment, and has documented adverse impacts on numerous wildlife. Currently, atrazine is not approved for use in the European Union based on concerns that atrazine residues in groundwater would exceed its standards.[2] Based on EPA's updated ecological risk assessment, which supports previous findings of atrazine's highly hazardous toxicological profile and environmental contamination risks, we urge the agency to issue a revocation of its registration. Since simazine and propazine also have similar toxicological profiles to atrazine, we are urging that their registrations be revoked as well.

---

[1] USDA Economic Research Service. http://www.ers.usda.gov/topics/crops/corn.aspx.
[2] European Commission. Review report for the active substance atrazine Finalised in the Standing Committee on the Food Chain and Animal Health at its meeting on 3 October 2003. Available at http://ec.europa.eu/food/plant/pesticides/eu-pesticides-database/public/?event=activesubstance.ViewReview&id=108 .

I. Atrazine

a. Ecological Toxicity

According to EPA's refined ecological assessment for atrazine,[3] "…aquatic plant communities are impacted in many areas where atrazine use is heaviest, and there is potential chronic risk to fish, amphibians, and aquatic invertebrates in these same locations. In the terrestrial environment, there are risk concerns for mammals, birds, reptiles, plants and plant communities across the country for many of the atrazine uses." Atrazine, even at the lowest application rates, exceed current levels of concern (LOCs) and poses risks for almost every specie of plant and animal studied. Specifically:

For mammals,

> "..chronic levels of concern are exceeded for a number of uses while acute RQs only exceed the listed species LOC…"
> "Based on a tier I terrestrial spray drift analysis, chronic risk LOCs for mammals are exceeded at distances of 25 to 250 feet off the field following ground spray application."

For birds,

> "..acute and chronic levels of concern are exceeded for a number of uses."
> "Although acute risks are of concern, for most use scenarios, chronic risks pose the greater concern in birds."

For amphibians and reptiles,

> "Consistent with the calculated RQs for birds, the primary risk concerns for herpetofauna were associated with chronic risk, with RQs ranging from 1.2 to 22.6."
> "The weight of evidence analysis concluded there is possible risk to amphibians as there is significant overlap of multiple effects endpoints…..This is consistent with the results found for all other aquatic organisms, including fish, invertebrates and plants."

For aquatic vertebrates,

> "Chronic exposure studies for freshwater and estuarine/marine fish, aquatic phase amphibians … resulted in significant effects on survival, growth or reproduction, with freshwater fish having the most sensitive reported chronic endpoint due to reproductive effects."
> "Levels of concern are exceeded for freshwater and estuarine marine fish based on chronic exposures to atrazine through runoff and spray drift following labeled applications for all registered uses (RQs = 0.94 to 61). Estimated RQs following the modeled refinements, reduced application rates and soil incorporation, exceed levels of concern for all modeled corn scenarios."

For aquatic invertebrates,

> "There are risk concerns to listed freshwater invertebrates from acute exposures (RQs = 0.2 - 0.3 and to non-listed and listed species from chronic exposure (RQs = 0.5 - 3.3).

[3] USEPA. 2016. Refined Ecological Risk Assessment for Atrazine. Office of Pesticide Programs, Washington DC.

Estuarine/marine invertebrates are more sensitive than freshwater species on both an acute exposure and chronic exposure basis and result in risk conclusions for all uses and modeled rate reduction scenarios."

For terrestrial plants,

" levels of concern for terrestrial plants are exceeded for all atrazine labeled uses and application rates….the levels of concern are exceeded for all runoff and runoff+spray drift conditions."

"…terrestrial plants exposed to atrazine from spray drift following aerial application, and runoff with and without spray drift following either ground or aerial applications are at risk….."

"A broad diversity of plants are sensitive to atrazine exposure. The breadth of species and families of plants potentially impacted by atrazine use at current maximum labeled rates, as well as following application at reduced rates of 0.5 and 0.25 lb a.i./A suggest that terrestrial plant biodiversity and communities are likely to be impacted from off-field exposures via runoff and spray drift."

For aquatic plants,

"The non-listed LOCs for aquatic non-vascular and vascular plants are exceeded for all uses, rates and [Surface Water Concentration Calculator, SWCC] scenarios including those evaluating exposures following reduced rates and soil incorporation (RQs = 5.2 – 316 and 1.1 – 68.7 respectively)."

"The [Concentration Equivalent Level of Concern (CELOC)] is exceeded for all labeled uses and for 100% of the modeled scenarios for these uses. The evaluation of lower application rates down to 0.5 lb a.i./A results in reduced RQs; however, risk to the aquatic plant community is still predicted, with all scenarios exceeding the CELOC."

"Because of the dependence of the entire aquatic ecosystem on the plant community, negative impacts on the plant community are expected to cascade through the ecosystem. Potential impacts on the entire aquatic ecosystem include reduced biological diversity, reduced food items for fish, birds and mammals (e.g., drifting insects; benthic organisms, and emerging insects), reductions in spawning and nursery habitat, increased erodibility, and reduction in overall water quality."

The evidence and conclusions presented in this risk assessment are quite resounding, reflect the independent literature, and support the need for a more proactive approach for protecting non-target species from atrazine. Atrazine is a potent endocrine disruptor with strong associations with birth defects, sex reversal and hermaphroditism in organisms,[4] and whose risk to environmental health is exacerbated by pervasive surface, ground and drinking water contamination.[5] The science and environmental monitoring data supports a national ban

[4] Hayes, T., et al. 2011. Demasculinization and feminization of male gonads by atrazine: Consistent effects across vertebrate classes. *J. Steroid Biochem and Molecular Bio*. 127(1-2):64-73.

[5] USEPA. 1999. A Review of Contaminant Occurrence in Public Water Systems. EPA 816-R-99-006, Office of Water, Washington DC

on this herbicide, citing unreasonable risks to the environment under the *Federal Insecticide, Fungicide and Rodenticide Act* (FIFRA).

b. Monitoring and Mitigation Measures Not Effective in Reducing Contamination Levels

Potential mitigation measures, like those proposed in past atrazine assessments, continue to prove inadequate in reducing environmental exposures from the chemical. For instance, in its 2003 Interim Registration Eligibility Decision (IRED),[6] EPA stated that to mitigate ecological risks, registrants in consultation with EPA, would "develop a program under which the registrants monitor for atrazine concentrations and mitigate environmental exposures if EPA determined that mitigation is necessary," and that this, "monitoring and mitigation program would be designed, conducted and implemented on a tiered watershed level and must be consistent with existing state and federal water quality programs."

As a result of the 2003 IRED and the subsequent 2004 Memorandum of Agreement,[7] monitoring for atrazine in watersheds has been required. If atrazine concentrations are detected at or above certain set levels under various conditions, mitigation action must be conducted to reduce impacts to aquatic plant communities, and drinking water.[8] The agency stipulated that the mitigation measures to reduce atrazine loads (concentrations that exceed LOCs) would be specific to the watershed and undertaken with local watershed management programs. Ultimately, these mitigation measures typically comprise 'best management practices,' buffer zones, and reduced application rates.

Not surprisingly, watersheds that exceed federal recommended levels are mostly in areas with heavy atrazine application in corn, sugarcane, and sorghum producing areas (Midwest, some southern states). According to the U.S. Geological Survey (USGS), atrazine, including its degradate deethylatrazine (DEA), continue to be the most frequently detected pesticides in U.S. streams and rivers at concentrations at or above one or more benchmarks at sampled sites.[9] Independent monitoring reports since the 2003/4 monitoring stipulations, like those conducted by the Natural Resources Defense Council (NRDC), [10] also show continued pervasive contamination at levels of concern in watersheds across the country. Atrazine is also frequently detected in shallow groundwater in agricultural areas, and in urban streams.[11] USGS also reports that during the spring, after the application of herbicides, the concentrations of

---

[6] USEPA. 2003. Interim Reregistration Eligibility Decision for Atrazine. Office of Pesticide programs. Washington DC.
[7] Memorandum of Agreement Between the U. S. Environmental Protection Agency and Agan Chemical Manufacturing, Dow AgroSciences, Drexel Chemical, Oxon Italia S.P.A., and Syngenta Crop Protection Concerning the Registration of Pesticide Products Containing Atrazine. 2004. https://www3.epa.gov/pesticides/chem_search/reg_actions/reregistration/related_PC-080803_9-Nov-04.pdf
[8] USEPA. Atrazine Ecological Exposure Monitoring Program https://www.epa.gov/ingredients-used-pesticide-products/atrazine-background-and-updates#aeemp.
[9] USGS. 2013. Quality of Our Nation's Waters: Ecological Health in the Nation's Streams, 1993-2005. Water-Quality Assessment Program. Circular 1391.
[10] Wu. M, Quirindongo, M, Sass, J, Wetzler, A. 2010. Still Poisoning the Well: Atrazine Continues to Contaminate Surface Water and Drinking Water in the United States. Natural Resources Defense Council. Washington DC.
[11] Gilliom, R, Barbash, J., et al. 2006. Pesticides in the Nation's Streams and Ground Water, 1992–2001. U.S. Geological Survey.

atrazine and others are frequently 3-10 times greater than the maximum contaminant level (MCL).[12]

In its most recent monitoring report (2001–2010), USGS finds there was a smaller proportion of downtrends in atrazine detections even though national use declined. While the Midwest and Great Lakes regions experienced some nonsignificant downtrends, there were uptrends in the Southeast which may reflect possible increasing use of atrazine on turf grass.[13] However, for this same time period, there were more uptrends than downtrends in DEA concentrations compared to atrazine, which the authors theorize can be a result of a failure to account for certain uses that were increasing, or groundwater sources that have multi-year lags between use and contribution to streams from past uses. Further, the authors consider that rising DEA concentrations may also be a result of land management practices that increases atrazine runoff as DEA. This shows that even with best management practices on farms, DEA still poses a contamination issue.

These trends exemplify that current monitoring and mitigation measures are not adequate in significantly reducing atrazine and its degradate runoff into streams. Additionally, the seemingly increasing use of atrazine on non-agricultural sites is also becoming a significant source of waterway contamination- which has not been previously addressed in mitigation efforts. This can only be remedied by eliminating these uses.

c. The Benefits of Continued Use of Atrazine Do Not Outweigh Ecological Costs

In the 2003 IRED, EPA concluded, the "benefits of continued use of atrazine will outweigh any potential ecological risk." In support of this the agency detailed the economic costs of removing atrazine from the market (including an average estimated loss of $28 per acre corn). However, as is customary to agency reviews, no assessment of a loss of ecosystem services from impaired habitats and wildlife was considered.

In this ecological assessment the agency has acknowledged broad ecological impairment from atrazine exposure. The agency states:

> "..negative impacts on the plant community are expected to cascade through the ecosystem. Potential impacts on the entire aquatic ecosystem include reduced biological diversity, reduced food items for fish, birds and mammals (e.g., drifting insects; benthic organisms, and emerging insects), reductions in spawning and nursery habitat, increased erodibility, and reduction in overall water quality. Impacts on smaller scale communities such as headwater streams, ponds, and wetlands could carry over to larger rivers, lakes, and reservoirs which contain organisms that depend on the

[12] Thurman, E.M. et al. 1992. A Reconnaissance Study of Herbicides and Their Metabolites in Surface Water of the Midwestern United States Using Immunoassay and Gas Chromatography/Mass Spectrometry. *Environ. Sci. Technoi. 26:* 2440-2447.

[13] Ryberg, K.R and Gilliom, R.J. 2015. Trends in pesticide concentrations and use for major rivers of the United States. *Science of the Total Environmen*t 538: 431–444.

headwaters and microhabitats the CELOC is intended to protect for refuge (e.g., during high flow events, thermal events, predation and competition) and rich feeding sites for spawning and nursery habitat."

Atrazine's high toxicity to mammals, amphibians, birds, terrestrial and aquatic plants, and invertebrates threatens the heath and function of the ecosystems to which these organisms belong. Impairments to populations of these organisms lead to reductions in aquatic and terrestrial biodiversity. Studies looking at the value of ecosystem services calculate that annual damage to wildlife and ecosystem biodiversity due to agricultural production (crop production) is approximately $1133-1162.2 million annually,[14] while others estimate that the economic and environmental loses as a result of groundwater contamination is closer to $2 billion.[15]

In addition, the costs of atrazine's contamination of drinking water sources must be considered. According to some estimates, local governments and water utilities will have to shoulder over $150 billion over a 20-year period to ensure they meet drinking water standards for pesticides.[16] Additional costs for removing atrazine from drinking water in regions where atrazine contamination is widespread places undue hardships on already strained local budgets. A recent lawsuit[17] distributed over $100 million to various local utilities, but this amount would not cover additional needs for cleanup, given the constant presence of atrazine in waterways.

As indicated in EPA's ecological assessment, atrazine's impact on terrestrial and aquatic ecosystems has a detrimental effect on the health, function, and productivity of these diverse ecosystems. Impacts on contaminated drinking water sources, reduced habitat, food sources and overall reduced biodiversity impact organisms at all trophic levels, whose economic benefits to human and environmental well-being must be considered.

d. Revoking atrazine's registration will not burden farmers

EPA will undoubtedly face push back for the findings in this assessment from industry and farming groups who promote the benefits of atrazine. Contrary to sensationalist headlines, the impact on farmers will not be dire, given the many other chemical options on the market. However, according to one Tufts University study, industry-funded studies that feed these sensational claims significantly overestimate the benefits of atrazine without considering the value of alternative weed management techniques.[18] Claims that a loss of atrazine will lead to reduced corn yields and an increase in prices have been refuted by these researchers. Assumptions that crop prices are unaffected by changes in crop yields are misleading given that prices are affected by multiple factors, including demand. Given that much of the corn grown in

---

[14] Tegtmeier, E and Duffy, M,D. 2004. External Costs of Agricultural Production in the United States. *International J Agricultural Sustainability.* 2(1).

[15] Pimentel, D, Peshin, R. (Eds). 2014. Integrated Pest Management, Pesticide Problems Vol. 3. Springer New York.

[16] USEAP. 2009. Water on tap: what you need to know. Office of Water (4601) www.epa.gov/safewater.

[17] *City of Greenville v. Syngenta Crop Protection, Inc., and Syngenta AG*, Case No. 3:10-cv-00188- JPG-PMF.

[18] Ackerman, F, Whited, M and Knight, P. 2014. Would banning atrazine benefit farmers? I*nternational Journal Of Occupational And Environmental Health* 20(1).

the U.S. are intended for ethanol producers and livestock feed, corn prices will be heavily determined by the demand from these two sectors, when compared to production costs.

This study finds that a loss of atrazine would actually boost farm revenues, while minimally impacting consumer prices. Specifically, corn growers' revenue would actually *increase* by 3.2%, providing a total of $1.7 billion to farmers and the U.S. economy. Additionally, there are also several chemical and non-chemical alternatives to atrazine available to farmers. This, coupled with the ecological costs of atrazine, present a case which supports moving forward with an elimination of atrazine from the market.

II. Simazine

a. Ecological toxicity

Like atrazine, simazine is mobile and persistent in the environment, and elicits risks to birds, mammals and plants. Similar to atrazine's assessment, simazine is highly toxic to several species of plant and animals. For birds and mammals, chronic exposures are the main risks of concern, with spray drift a concern for all labeled uses.

For terrestrial plants, runoff and spray drift exposure exceed levels of concern. EPA notes, "the diversity of species that are sensitive to simazine in the vegetative vigor and seedling emergence studies suggests that a broad diversity of plants are sensitive to simazine exposure. The breadth of species and families of plants potentially impacted by simazine use at current maximum labeled rates, as well as following application at a reduced rate of 0.5 lb a.i./A suggest that terrestrial plant biodiversity and communities are likely to be impacted from off-field exposures via runoff and spray drift." EPA also identified risks for aquatic animals, and non-vascular and vascular plants.

Like atrazine, simazine is frequently detected in surface and groundwaters. According to USGS for 2001-2010 simazine concentrations at sample sites reflected uptrends and downtrends in certain regions of the country.[19] The uptrends were found in the regions of the Mississippi river and Great Lakes where use on corn increased. Previous surveys (1996–2004 and 2000–2008) have also reported increasing concentrations in urban areas, suggesting that nonagricultural uses are increasing.[20]

Similar to atrazine, mitigation and monitoring measures would not be enough to protect sensitive species from the impacts of simazine. Additionally, we find that ecological costs outweigh economic benefits, given the available alternatives. Like atrazine, we recommend revoking simazine registrations.

III. Propazine

[19] Ryberg, K.R and Gilliom, R.J. 2015. Trends in pesticide concentrations and use for major rivers of the United States. *Science of the Total Environmen*t 538: 431–444.

[20] Ryberg, K, Vecchia, A, Martin, J and Gilliom, R. 2010. Trends in Pesticide Concentrations in Urban Streams in the United States, 1992–2008. U.S. Geological Survey Scientific Investigations Report 2010–5139, p101.

a. Ecological toxicity

Like atrazine and simazine, propazine's assessment identified risks to several species, including chronic risks to mammals, chronic risks to birds, terrestrial plants, and aquatic vascular and nonvascular plants. The science on the adverse impacts associated with propazine use are not as robust as atrazine, but the agency believes risk conclusions are similar to atrazine.

In 2014, EPA denied a Section 18 request for propazine to control glyphosate resistant Palmer amaranth on three million acres of cotton.[21] In the letter to the state of Texas issuing the denial of the request EPA states, "Safety determinations are based on all routes of exposure to the public and include food, drinking water, and residential uses (an aggregate assessment). Current registered uses already show unacceptable risk levels which must then be incorporated into the aggregate risk estimates in order to make a safety finding for the proposed Section 18 use, as required by the FQPA [Food Quality Protection Act]." The letter continues, "…drinking water estimates suggest that risks from drinking water alone may lead to unacceptable risks in some cases, both for the parent compound (including chlorinated metabolites) and for the hydroxyl metabolites." Further, the agency notes that the aggregate risks are likely to be "unacceptable."

In light of the toxicological profile of propazine and the "unacceptable" risks posed to drinking water, this chemical should also be have its registration revoked.

IV. Impacts on amphibians are not uncertain

Of the triazines, atrazine has been the most studied regarding its impact on amphibians. EPA thoroughly reviewed the scientific literature surrounding the impacts of atrazine on amphibians. But while the agency concluded that for aquatic phase amphibians, "there is potential for chronic risks," the agency is uncertain about the risks to amphibians in general. Specifically, EPA finds "[T]he available amphibian data suggest that the range of effects reported for amphibians exposed to atrazine vary considerably between species and testing conditions… . .Many uncertainties and concerns have been identified in study protocols and results of the available amphibian data. Therefore, it is difficult to make definitive conclusions about the impact of atrazine at a given concentration, but multiple studies have reported effects to various endpoints at environmentally-relevant concentrations."

Nevertheless, most would say that the scientific consensus is definitive on the adverse impact atrazine exposure has on amphibians. Many studies, including those by Hayes and Rohr, have documented hormone disruption and feminization in amphibians and other aquatic

[21] Jack E. Housenger, Director, Office of Pesticides, USEPA. (July 18, 2014). Letter to David Kostroun, Chief Administrator for Agriculture and Consumer Protection, Texas Department of Agriculture, Re: Emergency Exemption Number-14TX04.

organisms as a result of atrazine exposure.[22,23] Many of these studies have been forwarded by Beyond Pesticides in previous comments to the agency,[24] and have been reviewed for these current assessments. There can be no uncertainty in this fact: atrazine is a gender-bending chemical that has no place contaminating waterways where amphibians and other organisms live.

V. Chemical Mixtures Still Unevaluated

EPA notes that it does not routinely conduct evaluations of mixtures of multiple active ingredients in product formulations or the tank mixes. Atrazine and simazine are typically co-formulated with each other and other herbicides (metolachlor, acetochlor, glyphosate, dicamba),[25] and atrazine specifically is formulated with 22 different active ingredients in 52 formulated products. Further, according to the agency, atrazine has been reported to synergistically increase the toxicity of organophosphates in aquatic and terrestrial invertebrates. EPA also notes that USGS has identified real-world chemical mixtures commonly detected in streams, with the atrazine/metolachlor combination detected 77 percent of the time. In atrazine's ecological risk assessment the agency admits that, "Quantitatively predicting the combined effects of all these variables on mixture toxicity to any given taxa with confidence is beyond the capabilities of the available data and methodologies," and concedes that the impact of chemical mixtures in the environment remains an uncertainty. However, EPA has the responsibility to evaluate these real world risks so as not to underestimate the hazards.

VI. Uncertainties and Data Gaps Remain

As mentioned above, EPA has identified uncertainties within the ecological assessment for the triazines, including the unknown hazards of chemical mixtures. EPA lists several other uncertainties and limitations in its assessments that include monitoring and modeling aquatic exposures, drinking water risks to terrestrial organisms, and sensitivity differences between test species and wild species. These are all valid limitations to any chemical risk assessment and underscore the importance of taking a conservative and precautionary approach to regulating toxic substances that have a ubiquitous presence in the environment.

Additionally, data gaps exist for pollinator tier 1 assessment following the new pollinator guidance, as well as an endangered species evaluation consistent with the Endangered Species Act (ESA). For atrazine, EPA indicates that it will complete its consultation by 2020, citing the continued development of a common method for ESA analysis among federal agencies (U.S. Fish and Wildlife Service, National Marine Fisheries Services). The pollinator assessment suffers from a lack of data regarding adult oral exposure and larval exposure needed to officially

---

[22] Hayes, T., et al. 2011. Demasculinization and feminization of male gonads by atrazine: Consistent effects across vertebrate classes. *J. Steroid Biochem and Molecular Bio*. 127(1-2):64-73.
[23] Rohr, J and McCoy, K. 2010. A Qualitative Meta-Analysis Reveals Consistent Effects of Atrazine on Freshwater Fish and Amphibians. *Environ Health Perspect;* 118(1): 20–32.
[24] Comment submitted by Nichelle Harriott, Staff Scientist, Beyond Pesticides. EPA-HQ-OPP-2013-0266-0073.
[25] National Pesticide Information Retrieval System http://npirspublic.ceris.purdue.edu/ppis/.

complete the tier 1 assessment, even though the triazines generally have low toxicity to honey bees. Due to outstanding data gaps around important sensitive species, EPA must not delay in collecting this outstanding information, and should in the meantime prevent these substances from causing potential harm to these sensitive organisms.

VII. Alternatives are widely available

Given the availability of alternative pest management practices that incorporate alternative cultural practices and/or less toxic pest management products, including other registered pesticides, the agency has a statutory duty to revoke all registrations of the triazine pesticides under its unreasonable adverse effects standard in FIFRA. The risks and uncertainties identified by EPA and in the independent scientific literature are not reasonable in light of the availability of less toxic alternatives and materials and practices.

To the extent that EPA assumes the benefits of the triazines in the marketplace, the agency is not fulfilling its statutory or regulatory duty to evaluate benefits in light of risk criteria being exceeded. Certainly, a review of the literature and an inventory of field experience in integrated pest management and organic agriculture demonstrate the viability of alternative practices that do not rely on atrazine, simazine or propazine. EPA would fail to meet its legal responsibility under FIFRA if it allows the continued use of triazines, given the current ecological assessments which show that these substances impact multiple plants and animal species and can disrupt fragile ecosystems upon which we depend.

When it comes to atrazine, previous calls for a ban have been responded to with mitigation measures and surface water monitoring. However, these measures have failed to reverse atrazine contamination, and safeguard against the risks it poses to ecological health as atrazine continues to wash into surface water and leach into groundwater, even finding its way into municipal drinking water. Further, along with the multitude of ecological impacts outlined in the assessment, atrazine has also been linked to a myriad of health problems in humans including endocrine disruption and birth defects. Given the availability of other herbicides on the market, including least-toxic options and integrated organic land management, there is no economic or production-based reason that atrazine should be left to continue to plague our environment.

We urge the agency to move quickly to update its human health review of the atrazine, simazine, and propazine and find an “unreasonable adverse effect” finding under FIFRA and revoke their registrations.

Respectfully,

Nichelle Harriott
Science and Regulatory Director