



Department of
Environmental
Conservation

Long Island Pesticide Pollution Prevention Strategy

3rd TRAC Meeting – Status Update and Next AI's
Jeanine Broughel

March 23, 2017

2

Identifying the Next Group of AI's

- 1) Current status of original 47 AI's
- 2) Narrowing our focus
- 3) Which AI's require no further action



The Original 47

Strategy identified 47 parent active ingredients

- Detected at least once in Long Island groundwater between 1996 and 2010
- That were currently registered for distribution and use in Nassau and Suffolk Counties



LONG ISLAND PESTICIDE POLLUTION PREVENTION STRATEGY
 NY'S DEPARTMENT OF ENVIRONMENTAL CONSERVATION
 7/11/2014

Identification of 61 Pesticide-Related Chemicals Detected in Long Island Groundwater Between 1996 and 2010 and Associated with 47 Parent Active Ingredients Currently Registered for Distribution and Use in Nassau and Suffolk Counties, New York	
Parent Active Ingredient	Degradate, Carrier, Impurity
<p>Arsenic Inorganic arsenicals such as chromate copper arsenate (CCA), ammoniacal copper arsenate (ACA), and ammoniacal copper zinc arsenate (ACZA) are used as wood preservatives, herbicides, soil sterilants, insecticides, fungicides, and rodenticides. Organic arsenicals such as monosodium methanearsonate (MSMA), disodium methanearsonate (DSMA), calcium acid methanearsonate (CAMA), and cacodylic acid and its sodium salt are used as herbicides, insecticides, defoliants, and soil sterilants on agricultural crops, in forestry, on residential and other lawns and turf, and in non-crop areas such as rights of way, drainage ditch banks, fence rows, and storage yards.</p>	
<p>Atrazine (A-Atrax, Atrazine) (CAS Reg. No. 1912-24-9) Triazine herbicide used to control broadleaf and grassy weeds in agricultural crops, including corn, sorghum, and turf grass sod. Used for selective weed control in Christmas tree farms as well as for nonselective control of vegetation in noncrop land.</p>	
<p>↘ Atrazine Degradates →</p>	<p>Deethylatrazine a.k.a. 2-Chloro-4-isopropylamino-6-amino-5-triazine (CIAT) (CAS Reg. No. 6190-65-4)</p>
<p>Deisopropylatrazine may also be a degradate of Simazine listed below.</p>	<p>Deisopropylatrazine a.k.a. 2-chloro-6-ethylamino-4-amino-5-triazine (CEAT) (CAS Reg. No. 1007-28-9)</p>
	<p>Didealkylatrazine (No CAS Reg. No.)</p>
	<p>Hydroxyatrazine a.k.a. 2-Hydroxy-4-isopropylamino-6-ethylamino-5-triazine (OJET) (CAS Reg. No. 2163-68-0)</p>
<p><i>Atrazine</i></p>	



Current Status

Most current sampling – 23 of the 47 detected

- Imidacloprid, atrazine and metalaxyl (mefenoxam) being addressed by the strategy
- Arsenic, DEET, Fluoride, Diuron, Simazine, Dichlobenil, Propiconazole, Chlorothalonil, Iprodione, Ethofumesate, Trichlorfon, Propamocarb HCl, Chloroxylonol, Oxadiazon, Bentazon, Hexazinone, Dichlorvos, Triadimefon, Prometon
- Endosulfan - no longer registered

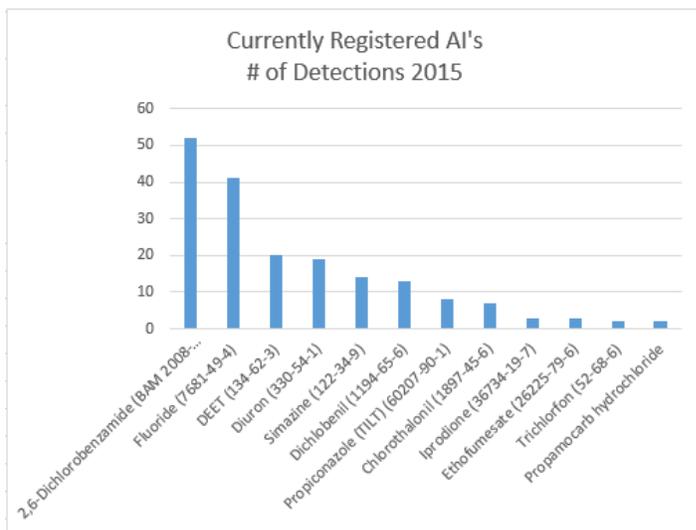


23 of the Original 47 Currently Detected

Arsenic	Atrazine		Bentazon		
	Chlorothalonil	Chloroxylonol			
Dichlobenil	Dichlorvos	DEET		Diuron	Endosulfan
Ethofumesate			Fluoride	Hexazinone	Imidacloprid
Iprodione			Metalaxyl		
		Oxadiazon			Prometon
Propamocarb HCl	Propiconazole			Simazine	
Triadimefon		Trichlorfon			



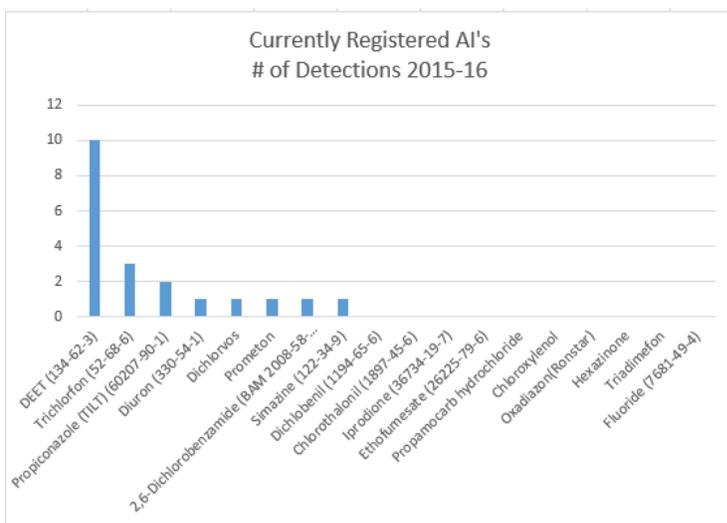
Suffolk County



Samples collected from April 1, 2015 through March 31, 2016



Nassau County



Samples collected from April 1, 2015 through March 31, 2016



Results – Number of Detections

- 2,6-Dichlorobenzamide (BAM) – 53 (30 locations)
- Fluoride – 41
- DEET – 30
- Diuron – 20 (16 locations)
- Simazine – 15 (9 locations)
- Dichlobenil – 13 (10 locations – repeat of BAM locations)
- Propiconazole – 10 (5 locations)
- Chlorothalonil – 7 (5 locations)



Paring Down the List

Arsenic	Atrazine		Bentazon		
	Chlorothalonil	Chloroxlenol			
Dichlobenil	Dichlorvos	DEET		Diuron	Endosulfan
Ethofumesate			Fluoride	Hexazinone	Imidacloprid
Iprodione			Metalaxyl		
		Oxadiazon			Prometon
Propamocarb HCl	Propiconazole			Simazine	
Triadimefon		Trichlorfon			



Focusing In - 15 Active Ingredients

			Bentazon		
	Chlorothalonil				
Dichlobenil	Dichlorvos			Diuron	
Ethofumesate				Hexazinone	
Iprodione					
		Oxadiazon			Prometon
Propamocarb HCl	Propiconazole			Simazine	
Triadimefon		Trichlorfon			

Narrowing the Field

Top Six

- 2,6-Dichlorobenzamide (BAM) - degradate
- Dichlobenil
- Simazine
- Chlorothalonil
- Diuron
- Propiconazole

Factors to Consider

- Human health concerns
 - Toxicologic properties, drinking water/groundwater standards
- Number of products and uses
 - Are the uses critical
- Alternatives



Next Steps

- Decide which active ingredients will be next
- Identify and contact interested stakeholders
- Mitigation steps
 - Best Management Practices
 - Outreach
 - Registration changes



Dynamic Process

- Working on the active ingredients originally identified
- Assessing and adding active ingredients to analyze for as needed

Following actives are being added to analyte list

- Mesotrione, Clothianidin, Fomesafen, Fluopicolide, Flutolanil and Quinclorac



Questions?



Thank You

- Jeanine Broughel
- Chief, Pesticide Product Registration Section
- 625 Broadway, Albany, NY 12233-7257
- Jeanine.Broughel@dec.ny.gov
- (518) 402-8768

Connect with us:

Facebook: www.facebook.com/NYSDEC

Twitter: twitter.com/NYSDEC

Flickr: www.flickr.com/photos/nysdec

