

MD Pesticide Reporting and Information Workgroup

MDNR response to feedback questions (12 August 2013)

1. What pesticide data exist and who uses it?

The Maryland Department of Natural Resources (DNR) has little data on pesticide **USE** except in annual reports from farmers who lease selected public lands for agricultural uses (pasture or croplands). In 2012, of the more than 460,000 acres of public lands and protected open spaces managed by DNR, 12,931 acres within 35 State Parks and Forests, Natural Environmental Areas, Natural Resource Management Areas, and Wildlife Management Areas were leased as cropland (92 leases ranging from less than 1 to more than 1,860 acres).

Lessees are required to comply with laws, regulations and rules of any government authority, especially those of MD Department of Agriculture, DNR and the local US Natural Resources Conservation Service. Certain annual reporting requirements may include having Soil and Water Quality Plans, Nutrient Management Plan, submission of a list of chemicals intended to be used during the year, an approved control plan for noxious weed control. Lessees also are required to plant winter cover crops, and limit fertilizer and pesticide applications near waterways. Documents are submitted annually to the Park or Area manager.

DNR has limited pesticide data which would be based on:

- **reported sources** - limited reviews of specific, proposed pesticide applications (MDE Toxic Materials Permits), documentation of specific pesticide applications (DNR applicators/contractors) and annual reports (State land lessees)
- **environmental endpoints** - pesticides/degradate product concentrations measured in select media - sediment, water, animal tissue - through some specific and select monitoring programs are often conducted in partnerships with other State agencies (MDAg, MDE, DHMH, MDOT) and federal agencies (NOAA, US EPA, USGS). These data often are used to determine spatial and temporal trends and assess ecological risk to fish-eating birds and mammals.

2. What information gaps have been identified / by whom?

Comments from some Wildlife and Heritage Service staff describe the MD Department of Agriculture's 2011 pesticide statistics report data as helpful but noted that the report does not provide a discussion of data limitations, uncertainty, or supporting information to explain observed changes - whether they reflect trends in pesticide use, changes in pesticide products or changes in target crops. Other concerns regarding information gaps relate to representation, due to the voluntary nature of the survey process and lack of geographic focus.

Pesticide use information, especially if these data include some geographic information, are potentially useful to DNR for defining potential ecological risk (Wildlife and Heritage Service; Fisheries Service) and in defining environmental assessments (Resource Assessment Service).

3. If you had more information about pesticide use (where, when, how applied, etc.), how valuable is it and is there other information that would be more useful?

Reliable usage data is needed to systematically maintain and improve our understanding of human and ecological risk. Usage information would help define targeted and cost-effective monitoring programs that could provide data for application of risk-screening thresholds where available and help identify other thresholds needing development. Presence information may initiate assessments of combined risk when multiple pesticides and degradation products are in the water or sediment.

Some DNR staff have described efforts needed to fulfill information gaps about recent pesticide usage in targeted study/restoration areas. An accessible, comprehensive database of pesticide use in sites defined as specific as possible by pesticide name, type/brand, amount and location, would help to determine when pesticides were used by other applicators treating the same area.

4. What is not being done now because the data are not available?

There are many potential active pesticide ingredients that could be monitored in the environment. Without an ability to target monitoring efforts on expected chemicals or degradation products, costly monitoring and analysis methods will not be as efficient and effective as they could be.