**ATTACHMENT 1-1: Ecological Incidents**

The primary sources of ecological incident information that OPP uses are the Incident Data System (IDS) [a database maintained by the Information Technology and Resources Management Division (ITRMD) in OPP]; the Ecological Incident Information System (EIIS) [a database maintained by the Environmental Fate and Effects Division (EFED) in OPP]; and the Avian Incident Monitoring System (AIMS) (a database maintained by the American Bird Conservancy). These databases contain information from pesticide incident reports. The incident reports are from a variety of sources [those submitted directly to OPP (*e.g*., by pesticide registrants, the public, and state, federal, and local government agencies) and those available through other sources (*e.g*., the United States Geological Survey’s Contaminant Exposure and Effects – Terrestrial Vertebrate Database, the open literature and media accounts)].

The Incident Data System (IDS) database includes all pesticide incidents of which OPP is aware (*e.g*., those involving humans, wildlife, pets, and other domestic animals). IDS is primarily used by risk managers and staff to track the total number of all incidents (human, wildlife, *etc.*) associated with a particular pesticide active ingredient or product; IDS also contains information on aggregated incident reports. Although pesticide registrants are required to report adverse effect incidents under FIFRA 6(a)(2), the section 6(a)(2) reporting requirements allow registrants to ‘aggregately’ report all ‘minor’ ecological incidents. Incidents that can be aggregately reported include incidents that involve fewer than 200 birds or 5 mammals. The aggregate incident reports lack details including information on effects, specific taxa involved, and descriptions of use; therefore, aggregate incident reports are not included in the EIIS.

The Ecological Incident Information System (EIIS) database contains information on pesticide incidents involving primarily plants, birds (non-domesticated), mammals (non-domesticated), fish, and honey bees. Information from ecological incident reports is only included in the EIIS if the reports contain, at a minimum, information on a specific pesticide, specific effects, and identity of specific wildlife/plants involved in the incident. Therefore, all of the ecological incidents found in the EIIS are also in IDS, but not all of the ecological incidents in IDS are in the EIIS. Ecological incidents included in IDS but not EIIS involve some plant incidents (*e.g*., those involving direct application to target plant pests) and incident reports that do not provide sufficient information on a potential cause(s) and effect(s) (*e.g*., aggregate incidents – see below). The Avian Incident Monitoring System (AIMS) is similar to EIIS, however, it only contains incident data involving birds.

For ecological incidents involving animals in the EIIS, mortality is the most common effect reported. Most of the reports in EIIS are from incidents that occurred in the United States; however, a small number of foreign incidents are also included in the database. Foreign incidents are included in the database to supplement the available U.S. incidents; they can provide useful information on potential routes of exposure and effects for pesticides also registered in the U.S.

Incidents in the EIIS are given a certainty index classification [*i.e*., ‘unrelated’, ‘unlikely’, ‘possible’, ‘probable’, ‘highly probable’– and the relatively new classification of ‘exposure only’ (residues detected but no effects noted)]. The certainty level indicates the likelihood that a particular pesticide caused the observed effects. In general, “highly probable” incidents require residues and/or clear circumstances linking the exposure to the effects. “Probable” incidents include those where residues are not available and/or circumstances are slightly less conclusive than for “highly probable.” “Possible” incidents are those where there was exposure to multiple chemicals, and it is not clear which one was the primary causal factor however, circumstances surrounding the incident and toxicological properties of the pesticide suggest a possible causal relationship. “Unlikely” incidents are those for which evidence suggests that another pesticide or another stressor was the primary cause of the effect, but contribution by the given chemical cannot be completely ruled out. Finally, “unrelated” incidents are those in which evidence clearly indicates that another stressor besides the given pesticide caused the effects. Each incident in the EIIS is also given a legality of use classification [‘registered use’ (the label directions were followed), ‘misuse’ [label directions were not followed; for example, the application involved (accidental or intentional) higher than labeled rates, non-labeled application sites, or the intentional targeting on non-labeled species], or ‘unknown’ (it in not known whether or not the label directions were followed)]**.**