

## DRAFT

### **Guidance for State Lead Agencies for the Development and Implementation of Managed Pollinator Protection Plans**

#### **Introduction**

Pollinator health is a high priority national issue due to significant colony losses experienced by U.S. beekeepers over the past decade. In his memo, “*Creating a Federal Strategy to Promote the Health of Honey Bees and Other Pollinators*” in June of 2014, the President called attention to the issue of pollinator health and directed federal efforts to reverse pollinator losses and help restore populations to healthy levels. In particular, the memo directed the U.S. Environmental Protection Agency (EPA) to engage state agencies in developing state pollinator protection plans as a means of mitigating the risk of pesticides to bees and other managed pollinators.

This guidance is provided by the State FIFRA Issues Research and Evaluation Group (SFIREG) with input from EPA as a resource for state lead pesticide regulatory agencies (State Lead Agencies or SLAs) as they develop and implement state managed pollinator protection plans. The term “managed pollinators” includes any species of pollinators that are managed by humans, be it for pollination services; the production of honey, beeswax, and other products; or for some other purpose. Managed pollinators may be managed by hobbyists or commercial beekeepers. Managed pollinators are primarily honey bees (*Apis mellifera*), but could include alfalfa leafcutting bees (*Megachile rotundata*), orchard bees (*Osmia spp.*), mason bees (*Osmia spp.*) and some species of bumble bees (*Bombus spp.*).

The scope of Managed Pollinator Protection Plans (MP<sup>3</sup>'s) is limited to managed bees not under contracted pollination services at the site of application. It is expected that alternative mitigation measures in an MP<sup>3</sup> based on local conditions will be effective in minimizing effects to managed bees in the vicinity of pesticide applications. Conversely, for contracted pollination services, which result in a large number of honey bee colonies being transported into an area for purposes of increased crop yield, EPA is considering label restrictions to protect managed bees under contracted services from the potential acute hazards from acutely toxic pesticides. It should be noted that many of the strategies to mitigate risk of pesticides to managed pollinators are expected to reduce risk to native bees and other pollinators as well.

Although state plans do not apply in Indian country, states are encouraged to include tribes in the communication process to ensure the broadest input as possible and to share expertise. In addition, while this guidance was developed from the state's perspective, tribes who want to develop tribal plans may want to use this guidance document as a resource.

The primary purpose of a state Managed Pollinator Protection Plan is to establish a framework for open communication and coordination among key stakeholders, including beekeepers, growers, pesticide applicators, and landowners. Open communication will not only help build relationships and increase mutual understanding, but also ensure peaceful co-existence and allow all parties to operate successfully. It is the intent that such open communication will lead to practices that both mitigate potential pesticide exposure to bees and allow for crop production.

MP<sup>3</sup>s are intended to reduce pesticide exposure to bees that are adjacent to, or nearby a pesticide treatment site where bees can receive exposure via drift, or by flying to and foraging in the treatment site.

The key to a successful MP<sup>3</sup> is the reduction of pesticide exposure to bees through timely communication and coordination between beekeepers and pesticide applicators, as well as establishing clear expectations when a pesticide application needs to be made near managed colonies. Pesticide exposure can be minimized if pesticide applicators and beekeepers communicate prior to pesticide applications to coordinate activities and allow crop protection products to be used without unreasonable adverse effects to managed pollinators. For example, this could involve collaboration on the selection of the pesticide product, a change to the application timing, or an opportunity for beekeepers to move or cover their hives prior to a pesticide application, thereby reducing the chance that managed bees are found in the treatment area. In concert with this guidance, SFIREG is working with EPA to explore how to incorporate state MP<sup>3</sup>s into pesticide label language as a way to mitigate risk of certain pesticides to managed pollinators.

The purpose of this guidance document is to identify the critical elements of an EPA-accepted state MP<sup>3</sup> which are believed to help increase communication and collaboration that will reduce potential risk from pesticides. A number of pesticide SLAs have developed MP<sup>3</sup>s in recent years to encourage communication and cooperation among stakeholders. These proactive approaches have demonstrated success in preventing adverse impacts to bees, while allowing crop producers to use the tools needed for crop protection. The experience of these SLAs is incorporated into this guidance.

### **Need for State Flexibility**

State approaches may vary greatly depending on each state's agriculture, urban floral aesthetics, the local beekeeping industry, state pesticide and apiary laws, and other factors. Therefore, it is essential to allow sufficient flexibility for state approaches to address pollinator health and meet the goals of a state MP<sup>3</sup>. Some states may adopt a regulatory approach, while others may develop plans built on voluntary best management practices (BMPs). State plans can address the critical elements found in this guidance through either regulatory or voluntary approaches. In addition, states are free to expand an MP<sup>3</sup> to include other elements beyond the core elements described in this guidance if they see a need to address other issues.

## **Critical Elements of State Managed Pollinator Protection Plans**

### **1. Public stakeholder participation process**

The state plans that have been developed to date are a result of direct discussions among beekeepers, crop producers, pesticide applicators, and other stakeholders. Public participation is essential to gain buy-in from stakeholders, build relationships and trust, and identify key issues affecting pollinator health at the state level. Existing state pollinator plans originated from stakeholder meetings initiated and facilitated by the SLA, providing opportunities for stakeholders to offer input and recommendations.

Therefore, EPA-approved MP<sup>3</sup>'s must include opportunities for input from a balanced (*i.e.*, representative) cross-section of stakeholders when plans are being developed or updated. This is best done by face-to-face public meetings involving broad stakeholder involvement. The process should also provide opportunities for the public to comment on a draft MP<sup>3</sup> prior to it being finalized.

## **2.A method for growers/applicators to know if there are managed pollinators near treatment sites**

An important element of an MP<sup>3</sup> is the ability for an applicator to contact beekeepers with colonies near a treatment area to alert them of a pending treatment. In order to adequately coordinate and communicate with beekeepers, growers and applicators need accurate and timely information on the location of nearby colonies that could affect application decisions.

An MP<sup>3</sup> should define the distance from the treatment site inside which the pesticide applicator should identify the location of managed colonies (*i.e.* a “pollinator awareness zone”). This has typically been defined as an area within a 1-2 mile radius of the treatment site in agricultural areas; in urban settings abutting areas to application sites may be sufficient.

MP<sup>3</sup>'s should define the mechanism or means by which a pesticide user will be able to identify the location of managed bee colonies within the pollinator awareness zone. Methods for accomplishing this include mandatory or voluntary hive/apiary registration systems that identify location of colonies geographically or other strategies to visually identify hive/apiary locations (*e.g.*, bee flags). In some cases, the geographic location information is very specific (*e.g.*, GPS coordinates), while in others the location is within a township, section, range, in which case the grower/applicator must directly contact the beekeeper to determine the exact location.

Some states with state apiary registration requirements provide information on the locations of registered colonies (<https://apps.nd.gov/ndda/mapping/>). Other states utilize self-registry sites such as the “DriftWatch” specialty crop site self-registry system (<http://www.fieldwatch.com/>), and such sites may be adapted to provide apiary location information. Florida’s “Apiary-Citrus Industry Link Mapping Service” is another example. (<http://www.freshfromflorida.com/Divisions-Offices/Plant-Industry/Agriculture-Industry/Apiary-Inspection/Florida-Apiary-Citrus-Industry-Link-Mapping-Service>).

## **3. A method for growers/applicators to identify and contact beekeepers prior to application.**

Once growers and applicators identify managed hives in the pollinator awareness zone, there needs to be a means for growers and applicators to contact those beekeepers to notify them that a pesticide application needs to be made. Beekeepers, in turn, need a reasonable period in order to take action to protect their colonies if necessary. This is often done by moving colonies temporarily to a protected location. Growers or applicators should notify beekeepers in advance

of treatment so that parties can discuss and decide upon steps to protect the managed bees in the defined area, while still allowing management of the pest(s).

Plans should identify a minimum time prior to an anticipated pesticide application in which all beekeepers of managed colonies in the defined action zone should be contacted. The minimum time frame used by several states is 48 hours prior to the anticipated application.

Plans should clearly describe how pesticide applicators and/or landowners will be able to obtain contact information for owners of managed colonies near a pesticide treatment area. In the plans that have been developed to date, states have utilized a variety of strategies to provide applicators with beekeeper contact information. These include web-based apiary registration databases or self-registry websites in which an applicator can quickly and easily obtain beekeeper contact information for a given colony. Other states have utilized requirements for beekeepers to prominently display beekeeper contact information via signage at the colony location. Regardless of the approach, there needs to be a means for pesticide applicators to obtain timely contact information for beekeepers when there is a need to do so.

It should also be stressed that pesticide applicators are bound by label restrictions, even if they contact beekeepers in the area prior to a pesticide application. For example, many pesticide labels have prohibitions against making applications if bees are foraging in the treatment area. Contacting beekeepers prior to application does not exempt applicators from complying with such restrictions.

#### **4. Recommendations on how to minimize risk of pesticides to bees**

The intended goal of the MP<sup>3</sup> is to be the framework for communication needed to encourage growers and pesticide applicators to mitigate risk of pesticides to bees while adequately managing pests. State MP<sup>3</sup>'s that have been developed to date include other BMPs to minimize risk of pesticides to bees. Examples of BMPs include controlling flowering weeds in a crop, making applications when bees are less active (such as after dusk or before dawn), using application methods that are more targeted (such as drip irrigation), using products less toxic to bees when possible, minimizing or reducing pesticide drift, utilizing Integrated Pest Management (IPM), and other approaches. These recommendations may be developed with the assistance of university researchers and extension specialists, as well as input from crop producers and beekeepers. These sorts of BMPs can be effective in mitigating risk of pesticides to managed bees and should be included in state plans.

#### **5. A clear defined plan for public outreach**

State MP<sup>3</sup>'s will only be successful if there is robust adoption of the plan. One way to accomplish this is through adequate outreach to publicize the MP<sup>3</sup> and its recommendations/requirements not only to key stakeholders, but to the general public as well. This typically involves meetings with organized stakeholder groups, such as trade associations, commodity groups, and beekeeping organizations. Public outreach should also include posting

plans on an SLA's website for easy access by the public. States should clearly describe how they will provide outreach to the public on their MP<sup>3</sup>.

## **6. Mechanism to measure effectiveness of an MP<sup>3</sup> and a process to periodically review and modify each plan**

As stated above, the objective of an MP<sup>3</sup> is reduced exposure to bees through enhanced communication and collaboration among stakeholders. An MP<sup>3</sup> should include measures that can be used to determine whether the objective is being met. Specifically, an MP<sup>3</sup> should include measure(s) that indicate whether communication/cooperation has increased and whether pesticide exposure to bees has decreased.

Based upon stakeholder feedback and the information gathered through the measurement tools, states must determine whether or how to adjust the MP<sup>3</sup> so that it ultimately leads to better relationships among the stakeholders and less pesticide exposure to bees. Therefore, MP<sup>3</sup>'s should include a requirement for a periodic review that is no greater than 3 years between such reviews and submission to EPA for acceptance. Again the review should include a public stakeholder process to evaluate the effectiveness of the MP<sup>3</sup> and to make modifications as needed. An MP<sup>3</sup> should clearly describe a process and timeline for how it will be periodically reviewed and modified by the state.

### **Optional/Recommended Elements of State Managed Pollinator Protection Plans**

States are free to expand their MP<sup>3</sup> to include other elements beyond the critical elements described above if they see a need to do so. State MP<sup>3</sup>'s that have been developed to date have included additional elements, and states are encouraged to address them, either in public stakeholder discussions or in their MP<sup>3</sup>. Additional elements to consider for an MP<sup>3</sup> include the following:

#### **1. A strategy to deal with colonies without identified owners**

The placement of colonies by a beekeeper without a formal agreement with the landowner is a concern in some areas. Even after a state has developed a plan to allow applicators to identify beekeepers in the area and obtain beekeeper contact information, there may be instances in which an applicator or landowner encounters a colony with an unknown owner. States are encouraged to develop strategies to address these types of situations in a way that does not penalize the landowner or pesticide applicator. Strategies will likely depend on a state's laws and regulatory authority. States are encouraged to explore their authority to seize or remove unidentified colonies, and to seek stakeholder input on reasonable approaches that can be taken when unidentified colonies are found.

#### **2. Communication with crop advisors and agricultural extension service**

Many landowners utilize crop advisors and agricultural extension specialists for input on cropping and pest management decisions. These individuals are often aware of local pest

pressures and crop protection needs not only at the field level, but also at a landscape level. Crop advisors and agricultural extension are important partners in integrating crop protection and pollinator protection beyond just the individual field. States are encouraged to engage in regular communication to explore and develop strategies on how the expertise and input of crop advisors and agricultural extension services can be utilized in pollinator protection efforts.

### **3. Clear information as to the applicability of the MP<sup>3</sup>**

Because different crops have different crop protection needs and different pollinator risk mitigation strategies, separate or modified MP<sup>3</sup>'s may be developed for specific cropping systems. Managed pollinators are primarily honey bees, but could include some species of bumble bees, mason bees, and alfalfa leafcutting bees. States are encouraged to clearly define the agricultural production/beekeeping system to which their MP<sup>3</sup> applies, including timeframes of applicability. States are also encouraged to develop crop-specific approaches if they see a need to do so.

### **4. Addressing urban beekeeping and pesticide use in non-agricultural settings**

Urban beekeeping is significant in some states. In addition, there have been significant bee kills in some parts of the country involving non-agricultural pesticide applications. States are encouraged to include provisions addressing urban beekeeping and non-agricultural pesticide applications if managed bees are found in close proximity to urban and residential areas.

### **5. Recommendations for more formalized agreements between beekeepers, crop producers, and property owners, especially in situations with a financial agreement.**

In some situations, beekeepers place hives on private property without contractual agreement or landowner compensation. However, there are other cases, even when managed bees are not present for pollination services, in which there is a financial agreement between the beekeeper and landowner (*e.g.*, the beekeeper compensates the landowner for use of their property).

States are encouraged to include language in their MP<sup>3</sup> supporting the use of written contracts or other written agreement between beekeepers and growers when there is a financial relationship. These agreements should include elements such as contact information; expectations, roles, responsibilities, and notification requirements when pesticide applications need to be made; expected crop protection needs and practices; specifications regarding hive location; specifications regarding time frames for placement and removal of colonies, and specifics related to financial arrangements and compensation. Verbal agreements are made in many cases, but exchange of contact information is still critical, and should be documented.

## **Resources**

Some MP<sup>3</sup>'s are available for review from the following sites (with links)

North Dakota: <http://www.nd.gov/ndda/files/resource/NorthDakotaPollinatorPlan2014.pdf>

California: <http://www.cdpr.ca.gov/docs/legbills/calcode/030203.htm>, and  
<http://www.leginfo.ca.gov/cgi-bin/displaycode?section=fac&group=29001-30000&file=29100-29103>

Mississippi: <http://www.mdac.state.ms.us/departments/bpi/index.html>

Florida: <http://www.freshfromflorida.com/Consumer-Resources/Florida-Bee-Protection>

Colorado: <http://www.cepep.colostate.edu/Pollinator%20Protection/index.html>

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