STATE WATER RESOURCES CONTROL BOARD
BOARD MEETING SESSION – DIVISION OF WATER QUALITY
NOVEMBER 4, 2014

ITEM9

SUBJECT

COLLABORATION WITH THE DEPARTMENT OF PESTICIDE REGULATION AND MUNICIPALITIES TO RESOLVE AND PREVENT ADVERSE WATER QUALITY IMPACTS ASSOCIATED WITH URBAN-USE PESTICIDES

DISCUSSION

Use of pesticides for urban pest control has resulted in pesticides-caused toxicity in urban water bodies throughout the State, and many water bodies are on the 303(d) list due to impairment caused by urban-use pesticides. Water quality impairment associated with diazinon, which was the most-used urban pesticide until its urban-uses were eliminated in 2004, has been replaced with impairments associated with pyrethroids that are now the active ingredient in many pesticide products that used to contain diazinon. We have been working with United States Environmental Protection Agency (U.S. EPA), the California Department of Pesticide Regulation (CDPR), municipalities, and other stakeholders since the mid-1990s to resolve and prevent water quality impairment associated with current urban-use pesticides, and to avoid replacing one water quality problem with another as new or alternative pesticides replace the pesticides that currently cause impairment. We are hopeful that our evolving management strategy, particularly efforts by CDPR, will stem this tide of solving a problem by creating another.

A key component of our strategy is to better account for potential adverse water quality impacts in the regulation of pesticides. We see some progress by U.S. EPA at the federal level in response to our recurring input and comments on its registration of urban-use pesticides, but the actions and progress at CDPR are particularly noteworthy and an impetus for this information item. CDPR promulgated regulations in 2012 to prevent surface water contamination by pyrethoid pesticides applied outdoors to structural, residential, industrial, and institutional sites. These regulations limit pesticide application methods on horizontal impervious surfaces to spot treatments, crack and crevice treatments, and pin stream treatments of one-inch wide or less, and prohibit exposed applications during precipitation events. The resulting reduced and mitigated applications should significantly reduce wash off of pyrethoids into urban water bodies. CDPR has also recently improved its methodology and procedures for reviewing new pesticide product data submitted for registration to provide more focus on potential impacts of pesticide on surface water quality.

Our collaborative strategy also includes coordination of monitoring to determine presence and trends of toxicity and pesticides of concern. CDPR's Surface Water Protection Program monitors urban pesticide runoff at several long-term monitoring sites in northern and southern California, and our Stream Pollution Trends Program, part of our Surface Water Ambient Monitoring Program, monitors trends in sediment toxicity and pesticides in sediments in rivers and streams throughout the State. We also plan to include and account for pesticides monitoring by municipalities in our strategy. These coordinated monitoring programs will be used to assess the effectiveness of CDPR's new surface water protection regulations and to evaluate the need for other urban pesticides management actions to protect water quality.

Many municipalities throughout the State are implementing pesticides management strategies. Municipal storm drain systems are the main pathway for urban-use pesticides to get from application sites to water bodies, but California law prohibits municipalities from regulating use of pesticides to water bodies. (See Food and Agricultural Code section 11501.1, subdivision (a).) However, municipalities can and many do control their own uses through integrated pest management at municipal facilities, and they can and do affect uses by others though outreach. They also engage in pesticide regulatory efforts at the federal and State level by providing water quality data and calling attention to known and potential adverse water quality impacts caused by urban-use pesticides.

The Regional Water Quality Control Boards have developed a number of pesticide total maximum daily loads (TMDLs), including urban-use pesticides. However, they have been challenged by the dilemma noted above that municipal storm drain systems are a main source of pesticides to urban water bodies, but municipalities cannot control use of pesticides. The San Francisco Bay Regional Water Board's San Francisco Bay Area Urban Creeks Pesticides TMDL, for diazinon and pesticide-caused toxicity, directly acknowledges the federal and State regulatory processes as the preferred means of resolving water quality impairment due to urban-use pesticides while only holding municipalities accountable for actions they can control. Also, as the TMDL was being developed in the early 2000s when diazinon use was being phased out, it was evident that other pesticides with equal or greater aquatic toxicity would replace diazinon in the marketplace. Therefore, the TMDL addresses pesticide-related aquatic toxicity in general, regardless of which pesticide causes the toxicity or when the toxicity is discovered, and as such, the TMDL is applicable to current and future urban-pesticide listed water bodies. Our Water Boards' TMDL Roundtable is currently evaluating options to streamline and consistently respond to urban-use pesticide impairment listings throughout the State through including a statewide urban-use pesticide TMDL modeled after the San Francisco Bay Area Urban Creeks Pesticides TMDL.

POLICY ISSUE

None.

FISCAL IMPACT

None.

REGIONAL BOARD IMPACT

None.

STAFF RECOMMENDATION

No action, this is an informational item.

State Water Board action on this item will assist the Water Boards in reaching Goal 7 of the Strategic Plan Update: 2008-2012. In particular to "Ensure that the Water Boards have access to information and expertise … needed to effectively and efficiently carry out the Water Board's mission."