Waste Management Account and made available to CIWMB and, until June 30, 1994, continuously appropriates these funds to the Board for offsetting recycling program costs, but, after July 1, 1994, allows CIWMB to expend the funds in the Account only upon appropriation by the legislature. This bill was signed by the Governor on September 28 (Chapter 1116, Statutes of 1992).

SB 610 (Calderon). Under existing law, evidence of financial ability submitted to CIWMB with closure and postclosure maintenance plans is required to be in a specified form. This bill specifies that the evidence of financial ability must be sufficient to meet the closure and postclosure maintenance costs when needed; allows owners and operators of disposal sites to provide evidence of financial ability through the use of mechanisms set forth in related federal regulations or any other mechanism approved by CIWMB; and authorizes CIWMB to adopt regulations which reasonably condition the use of one or more of these mechanisms to ensure adequate protection of the public health and safety of the environment. This bill was signed by the Governor on September 27 (Chapter 1062, Statutes of 1992).

AB 2092 (Sher) extends the date by when the city and county SRR element of a CoIWMP is required to be prepared and adopted to July 1, 1992. This bill also extends the date by when city and county HHW elements are required to be prepared to July 1, 1992, and specifies related duties if the city or county determines that it is unable to comply with the deadline and requirements of the California Environmental Quality Act. This bill was signed by the Governor on June 29 (Chapter 105, Statutes of 1992).

AB 2211 (Sher), among other things, repeals the provisions of law which require CIWMB to conduct prescribed testing of co-compost products to determine whether certain requirements are met, and authorizes CIWMB to impose civil penalties on a city or county that fails to submit an adequate SRR element or CoIWMP. This bill was signed by the Governor on July 21 (Chapter 280, Statutes of 1992).

The following bills died in committee: **SB 1668 (Beverly)**, which would have extended by one year the deadline for the preparation and adoption by each county and city of a SRR element and a HHW element of a CoIWMP; **AB 3470 (O'Connell)**, which would have required all state and county agencies, when carrying out a public works contract or purchasing glass, plastic, compost, motor oil, or rubberized asphalt products, to give a 10% preference for recycled products made by a company within California and, if the recycled products are not made by a company within California, to give a 5% preference for recycled products made by a company outside of California; **SB 44 (Torres)**, which would have specified that the term "transformation," as used in PRC section 41783, does not include the incineration of unprocessed municipal waste in a mass-burning facility, as specified, which begins operation after January 1, 1992; **SB 1955 (Morgan)**, which would have—among other things—established procedures for local agencies to prepare and submit to CIWMB integrated waste management plans for a local planning area, as defined, in lieu of countywide plans; and **AB 1388 (Horcher)** which would have, with respect to the Puente Hills Landfill in Los Angeles County only, prohibited an LEA from approving a revision of a solid waste facilities permit for the expansion of an existing solid waste facility or transformation facility unless the city or county in which the facility is located makes a specified finding after a public hearing, noticed as prescribed, concerning the distance between the outside perimeter of the disposal area and adjacent land uses.

FUTURE MEETINGS

December 16 in Sacramento.

DEPARTMENT OF PESTICIDE REGULATION

Director: James Wells
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The California Department of Food and Agriculture's Division of Pest Management officially became the Department of Pesticide Regulation (DPR) within the California Environmental Protection Agency (Cal-EPA) on July 17, 1991. DPR's enabling statute appears at Food and Agricultural Code (FAC) section 11401 *et seq.*; its regulations are codified in Titles 3 and 26 of the California Code of Regulations (CCR).

With the creation of Cal-EPA, all jurisdiction over pesticide regulation and registration was removed from CDFA and transferred to DPR. Pest eradication activities (including aerial malathion spraying, quarantines, and other methods of eliminating and/or preventing pest infestations) remain with CDFA. The important statutes which DPR is now responsible for implementing and administering include the Birth Defect Prevention Act (FAC section 13121 *et seq.*), the Pesticide Contamination Prevention Act (section 13141 *et seq.*), and laws relating to pesticide residue monitoring (section 12501 *et seq.*), registration of economic poisons (section 12811 *et seq.*), assessments against pesticide registrants (section 12841 *et seq.*), pesticide labeling (section 12851 *et seq.*), worker safety (section 12980 *et seq.*), restricted materials (section 14001 *et seq.*), and qualified pesticide applicator certificates (section 14151 *et seq.*).

DPR includes the following branches:

1. The Pesticide Registration Branch is responsible for product registration and coordination of the required evaluation process among other DPR branches and state agencies.

2. The Medical Toxicology Branch reviews toxicology studies and prepares risk assessments. Data are reviewed for chronic and acute health effects for new active ingredients, label amendments on currently registered products which include major new uses, and for reevaluation of currently registered active ingredients. The results of these reviews, as well as exposure information from other DPR branches, are used in the conduct of health risk characterizations.

3. The Worker Health and Safety Branch evaluates potential workplace hazards resulting from pesticides. It is responsible for evaluating exposure studies on active and inert ingredients in pesticide products and on application methodologies. It also evaluates and recommends measures designed to provide a safer environment for workers who handle or are exposed to pesticides.

4. The Environmental Monitoring and Pest Management Branch monitors the environmental fate of pesticides, and identifies, analyzes, and recommends chemical, cultural, and biological alternatives for managing pests.

5. The Pesticide Use and Enforcement Branch enforces state and federal laws and regulations pertaining to the proper and safe use of pesticides. It oversees the licensing and certification of dealers and pest control operators and applicators. It is responsible for conducting pesticide incident investigations, administering the state pesticide residue monitoring program, monitoring pesticide product quality, and coordinating pesticide use reporting.

6. The Information Services Branch provides support services to DPR's programs, including overall coordination, evaluation, and implementation of data processing needs and activities.

Also included in DPR are the Pesticide Registration and Evaluation Committee (PREC), the Pesticide Advisory Committee (PAC), and the Pest Management Advisory Committee (PMAC). PREC meets monthly, bringing together representatives from all public agencies with an interest in pesticide regulation to consult on pesticide product registration, renewal, and reevaluation issues. PAC meets bimonthly, bringing together representatives from public agencies with an interest in pesticide regulation to discuss all policy issues regarding pesticides. PMAC, established in conjunction with CDFA, also meets bimonthly, and seeks to develop alternative crop protection strategies enabling growers to abandon traditional, chemical-dependent systems and reduce the potential environmental burden associated with pesticide use.

MAJOR PROJECTS

DPR Continues Birth Defect Prevention Act Enforcement Efforts. Last February, DPR initiated suspension action against 57 pesticide active ingredients contained in more than 3,000 products sold in California, stating that the manufacturers of the chemicals failed to provide toxicity studies needed to assess the health effects of their use, as mandated by the Birth Defect Prevention Act of 1985. Pursuant to SB 550 (Petris) (Chapter 1228, Statutes of 1991), which amended the Act, DPR must suspend the registration of any pesticide on its priority list for which registrants have not submitted all required chronic health effects studies as of December 31, 1991; these 57 chemicals are on that priority list. *[12:2&3 CRLR 210–11]*

As of September 15, registrants of nine of the 57 active ingredients had submitted the required data; DPR will discontinue the suspension process in these cases pending complete evaluation of the data submitted. Registrants of 47 active ingredients had submitted petitions for extensions of time and/or deferral of suspension of registration. To qualify for an extension of time, a registrant must (1) have eight of the ten required studies completed, (2) have begun the other two studies, and (3) have a record of timely and appropriate compliance with other DPR data requests. Of 41 petitions for extension of time, two have been granted and seven denied. Four of the seven registrants denied an extension of time have petitions for deferral still pending.

To qualify for a deferral of suspension, a registrant must prove that the suspension would have an adverse effect on either public health or the environment, or cause substantial economic hardship; registrants must also prove that no feasible alternatives exist. Of sixteen petitions for deferral, one petition has been denied—bendiocarb. DPR initiated the suspension process for bendiocarb on August 26, but has since delayed the suspension because of a pending change in the suspension process (*see infra* "*Rulemaking Update*").

DPR has finalized the suspension of only one active ingredient—ethyl parathion. DPR initiated that suspension process on March 27 after the registrants of ethyl parathion failed to respond to DPR's notice of impending suspension. The registrants also failed to request a hearing within thirty days after receiving the notice of intent to suspend, making the suspension final. Once a pesticide is suspended, it may no longer be sold by registrants, although products held by dealers in California may be sold for up to two years, and products in the hands of end users may be consumed.

DPR received requests for exemption from the data requirements from registrants of four active ingredients. An exemption may be granted based on limited use and insignificant exposure to the pesticide. At this writing, these requests remain pending.

The registrants of two active ingredients have withdrawn all products containing their ingredients. These registrants may no longer sell products containing these active ingredients in California.

$694,000 Fine Paid to DPR for Selling Unregistered Pesticide. On September 23, Cal-EPA Secretary James M. Strock announced that Georgia-Pacific Corporation of Atlanta has agreed to pay DPR $694,000 in penalties for selling an unregistered pesticide product. The company had a valid California registration prior to 1979, but inadvertently allowed it to lapse. DPR learned of the violation through an anonymous complaint. The amount of the settlement was calculated to erase unfair profits made by Georgia-Pacific for illegal sales between 1979 and 1991. The amount takes into account yearly registration fees and the mill tax which must be paid on every dollar of product sales. DPR Director James W. Wells commented, "Although DPR's principal focus is, and will continue to be, protection of public health and the environment, we want to ensure that enforcement is fair and equitable in every arena that we regulate."

DPR Readopts Emergency Regulation for Fumigants. During the summer, DPR readopted on an emergency basis new section 6455 and amendments to section 6454, Titles 3 and 26 of the CCR, regarding the use of methyl bromide and sulfuryl fluoride in the fumigation of structures. The revisions generally increase the length of time occupants must wait before re-entering a fumigated structure. The regulations also require that lower levels of methyl bromide be reached before a building may be cleared for reentry. The regulations require consumers, owners, and occupants of the property fumigated to read and sign a fact sheet created by DPR, explaining potential health risks. *[12:2&3 CRLR 211]*

DPR did not begin the formal rulemaking process to establish permanent regulations during the 120-day period provided by the initial emergency rulemaking because it anticipated that the U.S. Environmental Protection Agency (EPA) would adopt labeling regulations that would incorporate California requirements into federal labeling law. During that period, EPA incorporated almost all of the requirements regarding methyl bromide; however, by August 14 the EPA had yet to incorporate all the details pertaining to sulfuryl fluoride. DPR decided to readopt its regulations on an emergency basis, hoping EPA will finalize its labeling changes by the end of the second 120-day period. The Office of Administrative Law (OAL) approved DPR's readoption of the emergency rules on August 14.

DPR Proposes to Amend Regulations Controlling Use of Antifouling Paints Containing Tributyltin. On July 10, DPR published notice of intent to amend sections 6488 and 6574, Titles 3 and 26 of the CCR, relating to the use of antifouling paints or coatings containing tributyltin (TBT).

The Department regulates pesticides containing TBT, which is used in paints and coatings to inhibit the growth of aquatic organisms. TBT-containing paints and coatings are called antifouling paints or antifouling coatings and are applied to the bottom of boats and ships. The growth of aquatic organisms on the hull of a ship is referred to as fouling. Fouling creates drag which retards the performance of a ship, is unsightly, and can lead to structural weakening. The paints work by releasing TBT, which is toxic to the aquatic organisms that attach to the bottoms of boats and ships.

In 1987, the Department restricted the use of antifouling paints and coatings containing TBT in response to concerns about the toxicity of the poison to non-target aquatic organisms. *[8:2 CRLR 94–95]* Paints and coatings containing TBT are designated as restricted materials which may be applied only by certified applicators and sold only by licensed

dealers. Use of the paints is restricted to aluminum vessel hulls or vessel hulls 82 feet or more in length. Also allowed is the use of antifouling paints referred to as outboard or lower unit paints, which are distributed and sold in spray cans of 16 ounces or less by weight. Use of antifouling paints containing TBT in spray cans is allowed on aluminum vessels and outboard motors or lower drive units because they are made of metal, and the only other antifouling paint available contains cuprous oxide which is corrosive to metal surfaces.

On June 16, 1988, EPA noticed the conclusion of a special review of antifouling paints containing TBT. EPA's use restrictions, for the most part, duplicated those already in place in California. The main exception is that California regulations established that antifouling paints containing TBT could only be applied to outboard motors and lower drive units from spray cans 16 ounces or less by weight; federal regulations allow the application of antifouling paints containing TBT to outboard motors and lower drive units from containers other than spray cans.

As of January 1, 1992, no antifouling paints containing TBT in spray cans are registered for use in California. The Department thus proposes to amend sections 6488 and 6574 to allow the use of antifouling paints containing TBT to outboard motors and lower drive units from any type of container. Consistent with federal and state regulations, such use will be restricted to certified applicators.

Section 6488 establishes use requirements for persons who purchase antifouling paints containing TBT, and section 6574 establishes requirements for dealers who sell paints containing TBT. Among other things, the proposed amendments establish that antifouling paints containing TBT distributed and sold in any type of container may be applied to outboard motors and lower drive units in addition to aluminum vessel hulls and vessel hulls 82 feet or more in length; users of antifouling paints containing TBT must present the dealer from whom they are buying the paint with a copy of the vessel registration or submit a sworn statement verifying that the paint is being purchased for a legal use; and pesticide dealers, prior to sale of TBT antifouling paint, must secure a sworn statement from the purchaser that the coating or paint will be applied to an outboard motor or lower unit drive.

DPR did not schedule a hearing on these proposed regulatory changes, but accepted public comments until September 4. At this writing, the Department is reviewing the comments received.

DPR to Create List of Toxic Air Contaminants. On September 4, the Department published notice of its intent to adopt section 6860, Titles 3 and 26 of the CCR, to create DPR's Toxic Air Contaminants List and place ethyl parathion (a pesticide) on that list.

In 1983, CDFA was mandated to investigate the potential of agricultural chemicals to become air pollutants (FAC sections 14021–26). In 1984, the Department's role in designating pesticides as toxic air contaminants (TAC) was clarified, and provisions were added setting forth penalties for noncompliance (section 14027). In 1991, these responsibilities were transferred to DPR. Article 1.5 requires DPR to evaluate the health effects of pesticides which may be emitted into the ambient air and pose a present or potential threat to human health.

A TAC is defined as an air pollutant that may cause or contribute to an increase in human mortality or an increase in serious illness, or that may pose a present or potential hazard to human health (section 14021(b)). DPR is required to investigate the potential of pesticides to be TACs and, in consultation with Cal-EPA's Office of Environmental Health Hazard Assessment (OEHHA), prepare a report on the present or potential hazardous health effects of candidate pesticides (section 14023). This report is then submitted to the scientific review panel (Health and Safety Code section 39661(b)). After the panel deems the health report acceptable, the DPR Director is required to decide whether the pesticide under review is a TAC and to determine, in consultation with OEHHA, the Air Resources Board, and the air pollution control districts and air quality management districts of the affected counties, the need for and appropriate degree of control measures.

Section 14023(d) requires the DPR Director to establish by regulation a list of pesticides determined to be TACs. A pesticide is determined to be a TAC if its concentrations in ambient air are greater than the following levels: (1) for pesticides that have identified thresholds for adverse health effects, this level shall be ten-fold below the air concentration that has been determined by the Director to be adequately protective of human health; (2) for pesticides without identified thresholds, this level shall be equivalent to the air concentration that would result in a risk that is tenfold below the risk determined by the Director to be a negligible risk.

DPR investigated the pesticide ethyl parathion as a potential TAC. Overexposure to this pesticide has been shown to cause adverse health effects. In short-term toxic episodes, effects such as excessive secretion of tears, headache, nausea, vomiting, diarrhea, and blurred vision may occur. Severe poisoning by ethyl parathion may lead to coma and death. It is possible that exposure to very low levels of ethyl parathion may result in no adverse heath effects. However, the short- and long-term air monitoring data indicate that airborne concentrations of ethyl parathion exceed the criteria for a TAC listing. Therefore, the DPR Director has determined that ethyl parathion should be listed as a TAC in section 6890.

DPR scheduled a public hearing on this proposed regulatory action for October 23.

DPR Releases Pesticide Contamination Prevention Act's Annual Reports. Over the summer, DPR released two reports pursuant to its duties under the Pesticide Contamination Prevention Act (PCPA):

• ***Well Monitoring Report.*** On June 22, DPR released its sixth annual report on the results of groundwater monitoring for pesticides. The PCPA requires the DPR Director to maintain a statewide database of wells sampled for pesticidal active ingredients; all agencies must submit to the Director the results of any well sampling for the active ingredients of pesticides. In consultation with the Department of Health Services and the Water Resources Control Board, DPR must submit to the legislature: (1) specified information contained in the database; (2) actions taken by the state agencies to prevent pesticides from leaching to groundwater; and (3) factors contributing to the movement of pesticides into groundwater.

DPR's 1991 report summarizes the results of 49 separate groundwater monitoring studies submitted to DPR between July 1, 1990 and September 1, 1991. The report's usefulness is limited due to several factors. For example, the data are difficult to compare because each study is conducted in a different manner and for a different purpose. Despite its limitations, however, the report has many useful applications, including identifying areas potentially sensitive to pesticide leaching. Using the data submitted for the 1991 report, DPR confirmed 11 cases where pesticides leached into California well waters.

• ***Groundwater Protection Status Report.*** On July 1, DPR released its annual report updating the status of groundwater protection data for pesticide active ingredients registered for agricultural use. For each ingredient, the report

includes data on its specific physical and chemical properties and on its general environmental impact. The PCPA requires DPR to annually report to the legislature, the OEHHA, and the Water Resources Control Board a list of ingredients for which there are groundwater protection data gaps and a list of the ingredients DPR classifies as having the potential to contaminate groundwater.

The 1991 report identifies 169 pesticide active ingredients subject to the data requirements. Adequate data are not available for 33 of the 169 ingredients, a lower percentage than in 1990. DPR states that one reason for the decrease is that a number of companies withdrew their registrations after being fined $500 per day for failure to submit the required data. The report also identifies 102 ingredients with the potential to contaminate groundwater. These ingredients are to be screened for their application methods, and the most dangerous ingredients will be placed on the Groundwater Protection List.

DPR Releases Semi-Annual Reevaluation Report. On May 22, DPR released its Semi-Annual Report Summarizing Reevaluation of Registration Status of Pesticide Products. The report covers reevaluation occurring from July 1, 1991 through December 31, 1991. Section 6225, Title 3 of the CCR, requires DPR to publish a semi-annual report describing economic poisons evaluated, under reevaluation, or for which factual or scientific information was received but no reevaluation was initiated. DPR investigates all reports of actual or potential significant adverse effects to people or the environment resulting from the use of pesticides. If an adverse impact has occurred or is likely to occur, the regulation requires the Department to reevaluate the registration of the pesticide.

The report is divided into four sections. The first section lists all pesticides that underwent formal reevaluation, explaining what triggered the reevaluation and what conclusion was reached. DPR formally reevaluated 21 different pesticides during this time period. The second section identifies pesticides subject to the risk assessment process required by the Birth Defect Prevention Act. The Act requires DPR to review toxicology data for all active ingredients currently registered in California. DPR must then assess the risk of all pesticides that have a significant adverse health effect. Risk assessment and reevaluation are separate functions of DPR, but the data and conclusions of a risk assessment are often used in the reevaluation process. The third section lists products undergoing preliminary investigations that might lead to formal reevaluation. This report lists only one such product—glutaraldehyde. The final section lists adverse effects disclosures submitted by pesticide registrants. Section 6210, Title 3 of the CCR, requires all registrants to immediately submit all factual or scientific evidence of any adverse effect, or risk of effect, to human health or the environment. The report lists 43 such disclosures.

DPR Prepares to Comment on EPA's Proposal on Incentives for Development and Registration of Reduced-Risk Pesticides. On July 20, EPA solicited comments on potential policies employing economic incentives to encourage the development, registration, and use of pesticides or pest control practices that present lower risks to public health and the environment. A more specific goal of such policies is to encourage the registration of lower-risk substitutes for existing high-risk pesticides.

EPA will consider encouraging the development of lower-risk pesticides by streamlining registration and otherwise lowering barriers to market entry when applications for registration meet criteria indicating that the proposed product is likely to pose a lower risk to public health and the environment than comparable products currently on the market. Among others, EPA is considering the following as criteria for identifying pesticides that would be eligible for special treatment as lower-risk products: (1) very low acute (short-term) and chronic (long-term) toxicity in test animals; (2) little or no persistence in the environment; (3) little or no potential to contaminate ground and surface water; (4) very low potential toxicity to nontarget organisms; (5) low exposure to humans and the environment; (6) likely to be more compatible with integrated pest management (IPM) strategies, resulting in reduced pesticide risk, and/or less likely to result in the development of resistance by the target pest. EPA is also considering regulatory actions on those uses of higher-risk registered pesticides that raise concerns about the risks posed.

DPR sought discussion on these proposals at PAC's September 18 meeting and PMAC's September 25 meeting. Although there was a consensus of opinion that legislation is needed, many committee members were not satisfied with EPA's proposals. The comments focused on the need for an overall reduction in pesticide use; greater concern for workers' safety; and concern with procedure for removing older materials from the shelves. The Director has created a staff committee to look at the proposal so DPR will have its comments ready for submission to EPA by the November 5 deadline.

EPA Releases New Worker Protection Standards. On August 13, after eight years of bureaucratic wrangling, the federal government released a set of rules aimed at protecting farmworkers from on-the-job exposure to pesticides. EPA's rules will apply to farmworkers, employees of nurseries, forests, and greenhouses, and anyone who handles pesticides for use in such places.

Under the new regulations, employers must train their workers on handling pesticides and using protective equipment, such as goggles and gloves. Workers must have a place to wash and have access to emergency medical care. Employers must also post notices at treated fields warning workers in Spanish and English of pesticide risks, and bar them from fields for 12–72 hours after spraying, depending on the type of pesticide used and environmental conditions.

According to DPR Director Wells, the new national standards should not have a major impact in California, where a comprehensive pesticide worker protection program has been in place for some time. Wells said, "Farmers nationwide will now be required to do many things our growers have had to do for many years, like providing safety training, warnings about pesticide treatments, washing facilities, and protective equipment." Wells maintained that the new regulations will probably benefit California farmers. Local growers frequently complain that "costly state environmental regulations" hamper their ability to compete with other United States producers. "This will help level the playing field," said Wells.

DPR will have to make changes to its regulations to comply with the new nationwide standards, however. Identification of the necessary changes and how they will be implemented was a major topic of discussion at PREC's September 18 meeting. The new regulations fall into one of three categories. The first category includes those new federal regulations that are stricter than California's existing ones. One example is EPA's expansion of decontamination procedures. California now provides that clean-up supplies be provided to pesticide handlers using highly and moderately toxic pesticides. Under the new regulations, these supplies must be provided for handlers of all pesticides. The second category consists of those new federal regulations which are more lenient than California's existing regulations. According to DPR, most of the federal standards fall into this category. The third

category includes California regulations that are not addressed at all by the new federal standards, such as certain medical provisions. Some regulations do not easily fall into any of the three categories; these are not easily identifiable as stricter or more lenient. One example of such a regulation concerns the posting of a use report at a central location for a restricted re-entry interval plus thirty days. Current California regulations require that the use report be on file, but not posted, at a central location for two years. These are issues that must be resolved before the state can implement the new federal standards.

DPR has three choices in the implementation process of the new federal regulations. The first option is to maintain current California regulations, amending only particular sections in which state regulations do not meet EPA's new minimum standards. The second option is to simply adopt the new federal regulations across the board. A third option might lie somewhere between the first two. Issues raised by the new federal standards continue to be internally investigated by the Department and will be discussed at later meetings.

PMAC Formed to Help Reduce Reliance on Agricultural Chemicals. On June 10, DPR and CDFA announced the formation of a committee designed to cope with the loss of traditional chemical-dependent pest control systems and help find alternative crop protection strategies that reduce environmental problems associated with pesticide use. The Pest Management Advisory Committee (PMAC) will address the "minor use" problem and the issue of alternatives to pesticides. The Committee will also advise the DPR Director on ways to improve the Department's implementation of its mandate under the Food and Agricultural Code to promote environmentally protective pest management systems. The mission of PMAC is "to identify, facilitate, and promote environmentally sound pest management practices in order to reduce exposure to pesticide residues while, at the same time, recognizing the importance of pesticides as tools for continued agricultural production in California."

PMAC is co-chaired by DPR Director James Wells and CDFA Chief Deputy Director Robert Shuler. The Committee includes representatives of the agricultural pest management industry, agricultural producers, public interest groups active in the pesticide arena, county agricultural commissioners, California Certified Organic Farmers, the University of California, state and federal regulators, and other entities.

PMAC's broad assignment is to identify critical threats to minor and major crop production due to loss of traditional, chemical-dependent systems, and to identify alternative crop protection strategies either in practice or under development that will reduce the environmental burden associated with chemical use and/or accommodate the loss of pesticide "tools." The Committee will assist in identifying pesticides critical to the success of integrated pest management programs. IPM is a long-term strategy for pest control that uses all available techniques, including cultural and mechanical controls, pest-resistant plants, release of beneficial organisms, and the judicious use of pesticides. The goal of IPM is to reduce the impact of farming practices on the environment.

PMAC will assist in conducting a review of research being done around the world into alternative pest management practices for all pesticide uses, with particular emphasis on uses identified as critical to production of minor crops. Minor crops are commodities with relatively limited nationwide acreage, considered to have limited market potential for pesticide sales. Due to increasing costs of data development and escalating registration fees, many manufacturers are withdrawing pesticides with minor crop uses from the market. In 1990, fourteen of the fifteen highest value crops grown in California were minor use crops. (*See infra* RECENT MEETINGS for related discussion.)

Report Summarizes First Year of Full Reporting of Agricultural Pesticide Use. On May 29, DPR announced the release of a 402-page summary of reported agricultural pesticide use in California during 1990. The summary lists the amount of agricultural pesticides reported used and on what commodities. California broadly defines the term "agricultural use." Reporting requirements apply to pesticides used on parks, golf courses, cemeteries, range land, pastures, and along roads and railroad rights-of-way. In addition, post-harvest pesticide treatments of agricultural commodities must be reported, as must use of pesticides on poultry and fish, and some livestock applications. Home and garden uses are exempt from reporting requirements, as are mosquito abatement and most industrial and institutional uses.

DPR received more than two million use reporting records in 1990. This represents a dramatic increase over 1988, the last year in which use reports were compiled under the old system of limited use reporting, when DPR received 823,000 records. In addition, an estimated 15,000 additional growers submitted use reports, 38% more than had filed reports in previous years. DPR Communications Director Veda Federighi asserted that the increase in reports does not reflect an increase in pesticide use.

Total reported agricultural pesticide use in 1990 amounted to 163 million pounds, 57 million more than previously reported. Since 605 million pounds of pesticides were sold in California in 1990, DPR suspects the possibility of underreporting. The report noted higher use of certain controversial chemicals: metam sodium, which devastated a 42-mile stretch of the Sacramento River after last year's spill, was applied in quantities nearly 40 times greater than previously reported; and malathion, infamous for aerial medfly spraying in southern California, was applied in quantities three times greater than earlier reported.

California has required limited reporting of agricultural pesticide use since at least the 1950s. Beginning in 1970, anyone who used restricted materials had to file a pesticide use report with the county agricultural commissioner. In addition, the state required all commercial pest control operators to report any pesticides used, whether restricted or non-restricted. Under the new system of full use reporting which commenced in 1990, all agricultural pesticide use must be reported monthly to the county agricultural commissioner who, in turn, reports the data to DPR. The reports must include the specific site where the pesticide was applied and detail the kind and amount of pesticide used. If the pesticide is applied to a crop, the type of commodity must be specified.

The expansion of use reporting occurred in response to concerns of many individuals and groups including government officials, scientists, farmers, legislators, and public interest groups. For example, under the previous system, estimating dietary exposure to pesticide residues did not provide sufficient data upon which to make realistic assessments. DPR Director James Wells claimed that this often resulted in overestimation of risks. "With knowledge about actual usage available, DPR and other regulatory agencies will be able to more realistically assess risks and make better risk management decisions," Wells said.

Rulemaking Update. The following is a status update on DPR regulatory proposals reported in recent issues of the *Reporter*:

• ***Rulemaking Under the PCPA.*** On June 3, OAL approved DPR's amend-

ments to section 6802, Titles 3 and 26 of the CCR. The amendments add 94 new pesticide management zones in eight counties to its list of geographic areas demonstrated to be sensitive to groundwater contamination by pesticides containing atrazine, simazine, bromacil, and duiron. *[12:1 CRLR 149]*

• ***Conflict of Interest Code.*** On September 16, OAL approved DPR's proposed conflict of interest code. The code designates employees who must disclose certain investments, income, interests in real property, and business positions, and who must disqualify themselves from making or participating in the making of governmental decisions affecting those interests. *[12:1 CRLR 149]*

• ***Procedures for Suspension of Pesticide Products.*** Last April, DPR published notice of its intent to amend section 6196 and adopt section 6196.1, Titles 3 and 26 of the CCR, to establish procedures for the suspension of pesticide products under the Birth Defect Prevention Act and the Pesticide Contamination Prevention Act. *[12:2&3 CRLR 211]* The proposed amendments to section 6196 establish which provisions of the federal Insecticide, Fungicide and Rodenticide Act (FIFRA), regarding the powers and limitations of the EPA Administrator, apply to the DPR Director when requiring information from registrants. The proposed adoption of section 6196.1 establishes which of the provisions of Chapter 5 of the Government Code (also known as the Administrative Procedure Act) apply when a hearing is requested regarding the proposed suspension of a registration.

DPR did not schedule a hearing on the proposed regulatory changes, but accepted public comments until May 22. DPR made no changes to the proposed rules following the public comment period and submitted the regulatory file to OAL for approval on June 30. OAL denied approval and returned the proposed changes to DPR, requesting that several technical modifications be made. DPR made the suggested changes, and released the modified version for a 15-day public comment period beginning on October 2.

• ***Monitoring of Human Participants for Pesticide Exposure.*** On June 17, DPR published a modified version of its proposed amendments to sections 6177, 6183, and 6170, Titles 3 and 26 of the CCR. These amendments establish procedures for DPR's review of protocols for any study that includes the monitoring of human participants for pesticide exposure. *[12:1 CRLR 149–50]* The Department proposed the modifications after internal review of testimony received from the regulated public. The most significant changes concern the information which must be included in a protocol submitted to the Department for a pesticide exposure study. DPR accepted comments regarding the modifications until July 15.

After subsequent review of comments received, DPR concluded that more changes are necessary to clarify confusion caused by these amendments. The Department has decided to allow the one-year deadline to lapse, and plans to commence a new rulemaking proceeding on this issue by late November.

• ***Specific Numerical Values for Aerobic Soil Metabolism.*** DPR's proposed amendments to section 6804, Titles 3 and 26 of the CCR, would revise the existing specific numerical values (SNVs) for aerobic soil metabolism and establish a SNV for anaerobic soil metabolism. *[12:1 CRLR 149]* DPR expects to submit its rulemaking file to OAL for review and approval by early November.

• ***Standards for Use of Chloropicrin and Methyl Bromide in Field Fumigation.*** DPR has decided to drop its proposed amendments to sections 6450 and 6784 and adoption of section 6451, Title 3 and 26 of the CCR, which would establish stringent use requirements for field applications of methyl bromide and chloropicrin, and would shift responsibility for worker and public safety from the person applying the fumigant to the operator of the property to be treated. *[12:1 CRLR 150]* Instead, the Department has set up interim permit conditions to meet this objective; under this system, DPR requires growers to obtain permits before using these pesticides. DPR expects to proceed with the regulatory package sometime next year.

LEGISLATION

The following is a status update on bills reported in detail in CRLR Vol. 12, Nos. 2 & 3 (Spring/Summer 1992) at pages 212–13:

SB 1794 (Hart), among other things, would have required every physician providing treatment for pesticide poisoning or a condition suspected to be pesticide poisoning to file, within 24 hours of the initial examination, a complete report with the local health officer by facsimile transmission or other means. This bill was vetoed by the Governor on September 30.

AB 2430 (Bronzan) requires the CDFA Director to maintain a program to develop new methods and modify existing methods for testing produce for the presence of pesticide residues. This bill was signed by the Governor on September 12 (Chapter 640, Statutes of 1992).

AB 2292 (Hannigan). Existing law authorizes a county to develop and establish a program for the collection of banned, unregistered, or outdated agricultural waste from an eligible participant, who is defined as a person who stores specified amounts of these wastes and operates a farm. This bill additionally includes, as an eligible participant, a person who stores that waste in those amounts and operates an agricultural pest control business, an agricultural pesticide dealership, a park, a cemetery, or a golf course, a governmental agency which performs pest control work and stores that waste in those amounts, or a business concern which primarily conducts operations relating to agriculture and stores that waste in those amounts. This bill was signed by the Governor on September 8 (Chapter 591, Statutes of 1992).

AB 2787 (Areias). Existing law makes it unlawful for any person to manufacture, deliver, or sell any economic poison or any substance or mixture of substances that is represented to be an economic poison, or to retail any formula for an economic poison in conjunction with the sale or gift of materials represented to be the essential ingredients necessary to constitute an economic poison, or to possess or use any economic poison, which is not registered with DPR. This bill prohibits any of the above activities with respect to an economic poison for which the registration has been suspended or canceled, with specified exceptions. This bill also requires the DPR Director, in consultation with the CDFA Director, to review and comment on specified regulations proposed to be adopted by EPA relating to agricultural pesticide containers, and make specified recommendations relating to the findings in the bill. This bill was signed by the Governor on September 29 (Chapter 1211, Statutes of 1992).

AB 3395 (Hayden). Existing law requires DPR to notify registrants of data requirements for certain pesticide active ingredients. This bill requires the DPR Director to suspend the registration of certain pesticides containing an active ingredient for which the Director notifies a registrant and for which the registrant or data generator fails to respond appropriately or fails to provide evidence that it is taking appropriate steps to secure the data that are required pursuant to the notification of data requirements or the final notice of data gaps. This bill was signed by the Governor on September 18 (Chapter 764, Statutes of 1992).

SB 1850 (Petris). Existing law required the DPR Director, by January 15, 1992, to issue a notice of intent to suspend

the registration of any pesticide product containing certain active ingredients for which the registrant did not submit required data by December 31, 1991. Under existing law, a study required pursuant to these provisions is deemed to be submitted until it is determined to be unacceptable by DPR. This bill provides that a study shall be deemed to be submitted until it has been determined by DPR to be unacceptable and not capable of being upgraded. This bill also requires the Director to issue a notice of the impending suspension of the registration of certain pesticide products, rather than a notice of intent to suspend the registration.

Existing law requires the Director to levy a charge on data generators of up to $1,000 per day for each day a data gap continues to exist after January 15, 1992. This bill instead requires the Director to levy the charge on data generators for each day a data gap continues to exist after the date the Director issues a deferral of suspension of registration pursuant to other specified provisions of existing law. This bill was signed by the Governor on September 14 (Chapter 706, Statutes of 1992).

SB 926 (Petris) would have enacted the School Pesticide Use Reduction Act of 1992, requiring the DPR Director to compile a list of all school-use pesticide products used in school facilities, preschools, or child day care facilities located on the property of a school facility, that contain a pesticide active ingredient or intentionally added inert ingredient that is known to cause cancer or reproductive harm, or is identified as a probable or possible human carcinogen. This bill would have required the Director to provide the list and any pertinent additional information to the Superintendent of Public Instruction with a specified statement, and required the Superintendent to make the list available to schools and child day care facilities. This bill was vetoed by the Governor on September 26.

The following bills died in committee: **AB 103 (Tanner)**, which would have required DPR to require an applicant, as a condition of registration, to submit specified information to DPR and the Office of Emergency Services concerning the hazards associated with a sudden release of economic poisons into the environment, unless exempted by DPR; **AB 3650 (Tanner)**, which would have repealed the dates on which specified existing DPR assessment rates would otherwise become inoperative and imposed new assessment and reimbursement rates; **SB 1969 (McCorquodale)**, which would have deleted existing law which exempts officials of specified recreation and park districts from having to obtain an agricultural pest control adviser license from DPR if they make a recommendation in writing as to a specific application of pesticide on a specific parcel; **AB 1325 (Jones)**, which would have authorized the DPR Director to cancel the registration of, or refuse to register, any economic poison if the Director determines that the registrant has failed to submit data required to be submitted as part of the reevaluation of the registrant's product; and **AB 1206 (Areias)**, which would have included any agricultural commodity grown for food within existing law which authorizes the DPR Director to seize and hold any lots of produce, or any unharvested produce that is within one week of being in harvestable condition, which carries or is suspected of carrying pesticide residue or other added deleterious ingredients in violation of designated provisions regulating pesticide residue.

LITIGATION

In ***Les v. Reilly***, No. 91-70234 (July 8, 1992), the U.S. Court of Appeals for the Ninth Circuit held that EPA erred in permitting the use of four pesticides found to be known carcinogens as food additives in violation of the Delaney Clause of the Federal Food, Drug, and Cosmetic Act (FFDCA). *[11:3 CRLR 37]* The FFDCA is designed to ensure the safety of the food Americans eat by prohibiting the sale of a food containing any unsafe additive.

In October 1988, EPA published a list of substances found to induce cancer. This list included the pesticide chemicals benomyl, mancozeb, phosmet, and trifluralin. As known carcinogens, the four pesticides ran afoul of a special provision of the FFDCA known as the Delaney Clause, which prohibits the use of food additives found to induce cancer. A pesticide becomes a food additive when pesticide residue in raw agricultural commodities "flows through" and concentrates in processed foods. However, EPA found that these four pesticides pose a "*de minimis*" risk of cancer by choosing to regulate pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act, which requires risk assessment methodology that allows small amounts of cancer-causing chemicals in foods if the chemicals' benefits to farmers and consumers outweigh the risk to health and the environment. In May 1989, Kathleen Les and others filed a petition requesting EPA to revoke the food additive regulations that permitted use of these pesticides; EPA refused to revoke its regulations, maintaining that the legislative history of the FFDCA indicates that Congress never intended to regulate pesticides with the same rigidity as it does other additives.

The Ninth Circuit set aside EPA's decision permitting use of these pesticides as additives. Judge Mary Schroeder stated, "The language is clear and mandatory. The Delaney Clause provides that no additive shall be deemed safe if it induces cancer....The statute provides that once the finding of carcinogenicity is made, the EPA has no discretion." The court also rejected EPA's view of the overall statutory scheme governing pesticides, stating "Throughout its 30-year history, the Delaney Clause has been interpreted as an absolute bar to all carcinogenic food additives." The court concluded that it is neither its nor the EPA's function to revise the existing statutory scheme. "If there is to be a change, it is for Congress to direct."

EPA has found that at least 67 of about 300 pesticides used on food crops induce cancer in one or more laboratory animals. The ruling in this case affects at least 35 of these carcinogenic agricultural chemicals that also concentrate in processed foods. (*See supra* report on NATURAL RESOURCES DEFENSE COUNCIL for related discussion.)

RECENT MEETINGS

At PREC's June 19 meeting, Maureen Sharp of the Structural Pest Control Board gave a presentation on "Alternatives for Control of Structural Pests." Sharp told the committee that the only alternatives to chemical pest control in structures are available in spot treatments. She emphasized that there are no overall treatment alternatives for infestations within a structure. Sharp also discussed several specific methods of structure treatment, including heat treatment, electrical treatment, microwave systems, and liquid nitrogen. The committee discussed the registration status of these methods, as well as research on their use, and reinfestations. The presentation ended with a general discussion concerning the relative cost of the various methods.

Also at PREC's June 19 meeting, John Stutz of DPR's Pesticide Registration Branch discussed the automation of "Public Notices." DPR releases "Public Notices" weekly to inform the public of all final decisions regarding new pesticide registrations. As Stutz discussed, the Department has developed a new computerized system, enabling it to save valuable time.

At PREC's July 17 meeting, Lisa Ross of DPR's Environmental Monitoring and Pest Management Branch gave an update on the San Joaquin River Study. The

project is a cooperative effort of the Department of Fish and Game, U.S. Geographical Survey, Regional Water Quality Control Board, and DPR. When pesticide levels start to rise at a designated site, a "Lagrangian survey" is used to follow the pesticide in the velocity of the flow of the river system. Ross used slides and transparencies to show specific sites and methods of sampling. She also discussed the findings of several samples, and responded to questions regarding analysis results and the overall goals of the survey.

At its July 17 meeting, PAC discussed DPR's coordination with EPA and the Office of Atmospheric Quality in field activities to sample methyl bromide concentrations to determine if an ozone depletion flux study could be developed. This project is being headed by the National Center for Atmospheric Research (NCAR) in Boulder, Colorado under contract with EPA. NCAR expects EPA to fund the field study. DPR agreed to assist NCAR in developing a protocol for the field projects that it needs. This project was scheduled to begin after October 1. In the interim, DPR will assist NCAR in doing some preliminary samples in California.

At its September 18 meeting, PAC discussed a transgenic (bio-engineered) cotton containing *Bacillus Thuringensis* (BT) endotoxin. This is the first genetically-engineered, built-in, pesticide-containing plant approved by EPA for experimental growth on several acres. Transgenic plant pesticides are heralded as a new tool available to growers in combatting pests. It is hoped they will supplant the use of hard chemicals if the experiments prove successful. A few members of the committee raised concerns about EPA's lack of guidelines for transgenic pesticidal plants. Although the transgenic BT cotton has a potentially greater immediate effectiveness than spraying because of a greater continuous dose to the pest, there is a strong possibility transgenic cotton may lead to resistance to BT in major cotton pests. This would be unfortunate, because BT is non-toxic and has proven itself as an important means of cotton pest control.

Also at the September meeting, PAC members discussed increasing the size of the committee to include representation from all organizations within Cal-EPA, along with someone from CDFA and the chemical industry. It was suggested that the Department of Health Services and the Structural Pest Control Board, among others, should also be offered an invitation to serve on the committee. Members raised concerns about a possible conflict with the state constitution as well as tensions among the different agencies. This topic will be discussed further at upcoming meetings.

PMAC held its first meeting on June 26. Co-chairs James Wells and Robert Shuler stated that the purpose of the committee is to advise DPR and CDFA on a number of important pest management issues. The two most pressing issues at the present time are as follows:

- Emphasizing pollution prevention through integrated pest management is a priority of the Wilson administration and Cal-EPA. Both Cal-EPA and its federal counterpart are working to identify constraints to implementation of alternative pest management strategies, including but not limited to IPM and biological control. The Directors of DPR and CDFA will be looking to PMAC for advice on how to identify and deal with such constraints.
- The public's desire to reduce risks associated with pesticide exposure has prompted passage of many state and federal laws that have resulted in reducing the number of pesticides available to agriculture. In addition, many more pesticides, particularly those used on minor crops, may be lost in the future. DPR and CDFA believe this is a major problem that must be addressed aggressively. The loss of certain "critical" pesticides is seen as a major constraint to the adoption of IPM in California. The Directors of DPR and CDFA will be asking for advice on how to preserve certain critical pesticide uses and how to identify alternatives to those uses that may be lost.

Also at PMAC's June meeting, Robert Shuler introduced the Minor Crop Task Force. The purpose of this task force is to help PMAC identify ways to reduce the impact of federal and state programs on the production of minor crops by identifying critical pesticide uses for each minor crop. Task force membership is open to any individual or organization who desires to serve on it. The focus of the task force is to identify the pests affecting minor crops and the tools used to manage those pests, including but not limited to pesticides.

The Minor Crop Task Force will be asked to identify critical pesticide uses for each California commodity group, especially those vital to the success of IPM programs, and determine whether they will be threatened in the next five to seven years. In order to identify pesticide uses important in IPM programs, DPR will provide criteria for use by the task force. James Wells gave the following draft criteria to PMAC: A pesticide is critical to IPM if, for any given commodity-pest combination: (1) there is no suitable chemical or non-chemical alternative, and (2) the pesticide is used in a manner consistent with section 11501(f) of the FAC, which encourages the implementation of pest management systems that stress the application of biological and cultural pest control techniques, with selective pesticide use when necessary to achieve acceptable levels of control with the least possible harm to non-target organisms and the environment.

At its July meeting, PMAC welcomed a guest speaker, Pat Madden, the executive vice president and executive director of the World Sustainable Agriculture Association (WSAA). A general discussion was made about WSAA, its history, and the philosophy of the organization. WSAA offers access to information through translation of multilingual publications. Madden reported that the Netherlands has reduced pesticide use by 50%. Systems approaches have also been successful in Australia, Germany, and Japan. Madden maintained that there are many benefits of biological diversity and that plant breeding is important. WSAA supports the activities of the committee.

PMAC also established an Alternatives Task Force to report to the committee on alternatives to pesticides identified by the Minor Crop Task Force that may be lost for any reason. At its first meeting on September 25, the newly formed task force discussed its role. Peter Stoddard, senior environmental research assistant for DPR's Environmental Monitoring and Pest Management Branch, stated the two major concerns of the task force: (1) to identify alternatives to pesticides that may become unavailable in the next five years, and (2) reasons why these alternatives are not being used in California.

Chair Jim Lyons presented and discussed the results of a pilot project of the task force. Five targeted pesticides that may be lost were randomly chosen so that alternatives might be identified. Lyons researched chemical alternatives and possible constraints as well as non-chemical alternatives, such as biological diversity and crop rotations. From the project, the task force learned that certain chemicals are not in the University of California's Pest Management Guidelines Database, emphasizing the need to investigate every possible source for alternatives. Task force members discussed several critical issues, including the extent to which it should propose alternatives which have little chance of success; the number of pesticide alternatives which should be investigated; and the problem of secrecy among growers. Some positive alterna-

tives may already be used by California farmers who are not willing to share their secrets of success with the task force.

FUTURE MEETINGS

DPR's PAC, PREC, and PMAC meet regularly to discuss issues of practice and policy with other public agencies. The committees meet in the annex of the Food and Agriculture Building in Sacramento. For meeting information, call (916) 654-1117.

WATER RESOURCES CONTROL BOARD

Executive Director: Walt Pettit
Chair: W. Don Maughan
(916) 657-0941

The state Water Resources Control Board (WRCB) is established in Water Code section 174 *et seq.* The Board administers the Porter-Cologne Water Quality Control Act, Water Code section 13000 *et seq.*, and Division 2 of the Water Code, with respect to the allocation of rights to surface waters. The Board consists of five full-time members appointed for four-year terms. The statutory appointment categories for the five positions ensure that the Board collectively has experience in fields which include water quality and rights, civil and sanitary engineering, agricultural irrigation, and law.

Board activity in California operates at regional and state levels. The state is divided into nine regions, each with a regional water quality control board (RWQCB or "regional board") composed of nine members appointed for four-year terms. Each regional board adopts Water Quality Control Plans (Basin Plans) for its area and performs any other function concerning the water resources of its respective region. Most regional board action is subject to State Board review or approval.

The State Board has quasi-legislative powers to adopt, amend, and repeal administrative regulations for itself and the regional boards. WRCB's regulations are codified in Divisions 3 and 4, Title 23 of the California Code of Regulations (CCR). Water quality regulatory activity also includes issuance of waste discharge orders, surveillance and monitoring of discharges and enforcement of effluent limitations. The Board and its staff of approximately 450 provide technical assistance ranging from agricultural pollution control and waste water reclamation to discharge impacts on the marine environment. Construction loans from state and federal sources are allocated for projects such as waste water treatment facilities.

WRCB also administers California's water rights laws through licensing appropriative rights and adjudicating disputed rights. The Board may exercise its investigative and enforcement powers to prevent illegal diversions, wasteful use of water, and violations of license terms.

MAJOR PROJECTS

Hearings on Interim Delta Standards Conclude. On August 4, WRCB wrapped up 15 days of evidentiary hearings on interim water rights standards to protect the Delta waters until it concludes its ongoing, five-year-old San Francisco Bay/Sacramento-San Joaquin Delta Estuary proceedings. The Board is responding to Governor Wilson's call for interim standards to reverse the continuing decline of the Delta. *[12:2&3 CRLR 214–15]* The standards will, among other things, regulate water flow "to ensure that the available water supply is reasonably used and that the public trust resources in the Bay-Delta Estuary are reasonably protected."

At the hearings, testimony by the U.S. Environmental Protection Agency (EPA) laid out three proposed standards that are designed to provide protection to Delta fish and wildlife. EPA acknowledged that it has started its own rulemaking process, but hopes that WRCB's interim standards will avoid the need for federal regulation in the Delta.

At this writing, the Board plans to meet in closed session in October to deliberate on evidence presented at the hearings. The exact release date has not been established, but draft interim standards may be published in October for public review and comment, with a final order issued by December to meet the Governor's end-of-the-year deadline.

Proposed Central Valley Project Takeover. On September 15, the Wilson administration unveiled a skeletal agreement with the federal government containing initial elements of a plan for the State of California to assume ownership and control of the Central Valley Project (CVP) by 1995. The CVP is a federally-owned water system that supplies over 30% of California's farms with water. *[12:2&3 CRLR 214–15]* Environmentalists, noting that all crucial details of the transfer have yet to be negotiated, charged that the announcement was timed to influence deliberations of congressional conferees meeting to decide whether to shift a substantial amount of CVP water rights from farmers to environmental protection (*see infra* for discussion of the Miller bill). Absent from the agreement are provisions that determine the price to be paid by the state (which, according to statements of federal officials, apparently may range anywhere from $1.9 to $7 billion); decide whether farmers will continue to receive very long-term contracts for highly-subsidized water; and determine whether water will be set aside for environmental protection. California Resources Agency Secretary Douglas P. Wheeler argues that the substantial shortfall in California's projected water supply over the next 20 years can only be solved by integrating the CVP with the smaller State Water Project (SWP). He expects this consolidation to reduce redundancy and increase water supply efficiency, facilitate development of an institutional framework to support marketing of water rights, and subject all Central Valley water systems to the Board's anticipated interim Bay/Delta standards and to the Governor's long-term program to "fix the Delta."

Under the agreed-upon schedule, the general terms and conditions of the transfer are to be worked out by November. Public hearings would start in January and continue until shortly before the final decision in October 1995. The agreement calls for joint operation of the CVP and SWP by next year.

However, in early October, the U.S. Senate approved and sent to President Bush an omnibus water bill that included historic CVP reform. Introduced by California Representative George Miller, the CVP reform provisions include the following:

–modification of the primarily agricultural purpose of CVP water to add as a priority the restoration and protection of fish and wildlife habitat, and setting a goal of doubling the historic fish populations in Central Valley rivers and streams by 2002;

–prohibiting the government from entering into new contracts for CVP water until the environmental restoration goals are achieved;

–setting aside 800,000 acre-feet of CVP water (approximately 18% of 1991 CVP water deliveries to farmers) to meet the new fish and wildlife protection goals;

–establishing a $50 million restoration fund financed by fees on CVP water and power sales to pay for fish and wildlife restoration activities;

–renewing existing water contracts for 25 years—with reduced water quantities to reflect water allocated to the environment—and providing for additional 25-year extensions at the discretion of the Secretary of the Interior, thus ending the controversial practice of automatic