

**PROPOSAL FOR PRIORITIZING CANDIDATE AGENTS  
FOR CONSIDERATION UNDER PROPOSITION 65  
BY THE OEHHA SCIENCE ADVISORY BOARD**

Reproductive and Cancer Hazard Assessment Section  
Office of Environmental Health Hazard Assessment  
California Environmental Protection Agency  
April 7, 1995

**1 BACKGROUND**

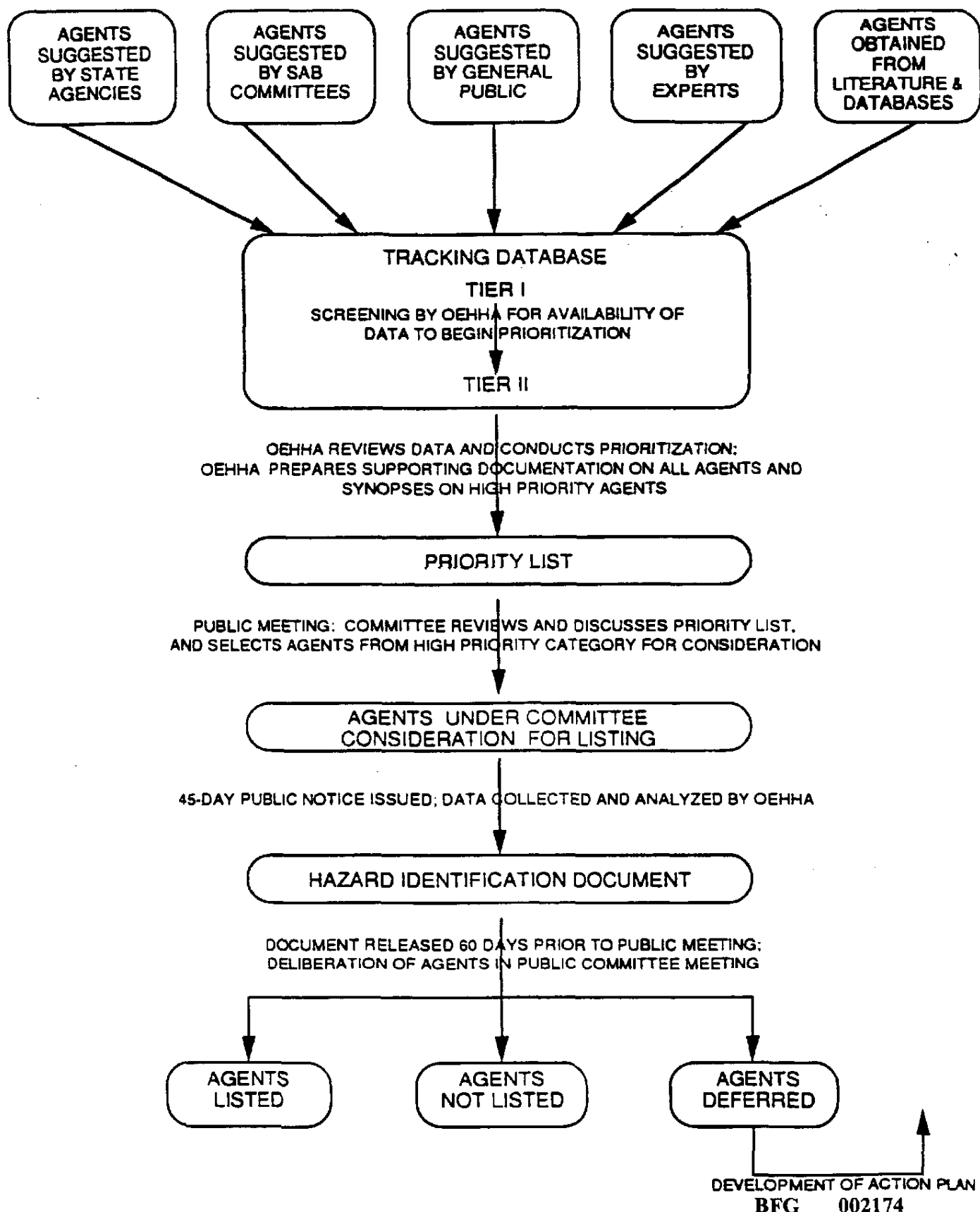
The Safe Drinking Water and Toxic Enforcement Act (Proposition 65, California Health and Safety Code 25249.5 *et seq.*) requires the Governor to publish lists of agents known to cause cancer and reproductive toxicity. One of the mechanisms by which an agent is placed on this list is a finding by the "state's qualified experts" that an agent has been clearly shown through scientifically valid testing according to generally accepted principles to cause cancer or reproductive toxicity. As lead agency for the implementation of Proposition 65, the Office of Environmental Health Hazard Assessment (OEHHA) has formed two committees of the Science Advisory Board (SAB) to serve as the state's qualified experts. These committees are the Developmental and Reproductive Toxicant (DART) Identification Committee and the Carcinogen Identification Committee.

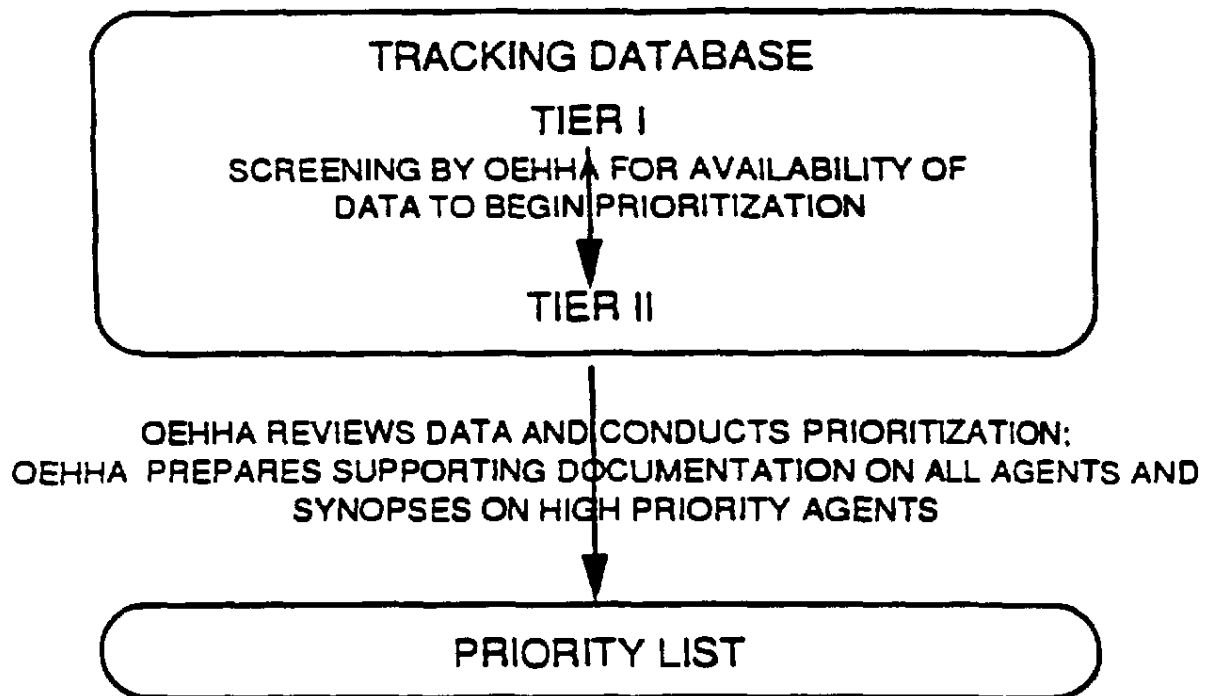
The purpose of this draft document is to propose a mechanism for compiling and prioritizing candidate agents for consideration by the SAB Identification Committees. The proposed mechanism provides a systematic process for compiling and tracking possible candidate agents and for prioritizing these agents for consideration by the Identification Committees. Key elements include (1) a database to track agents suggested for consideration, (2) development by OEHHA of a priority list of agents, grouped into high, medium, or low priority on the basis of their potential for human exposure and developmental/reproductive or carcinogenic hazard, and (3) expert review in the final prioritization of agents. Opportunity is provided for input and review by state agencies and departments, the scientific community, and other interested parties both in the suggestion of candidate agents and the development of the priority lists.

As emphasized by California's Court of Appeal (1989), Proposition 65 directs the state "to engage in a diligent, thorough, and continuing search for additional chemicals which evolving scientific knowledge demonstrates are subject to the Act." Accordingly, the meeting agendas of the Identification Committees will largely be taken up by consideration of potential candidates for listing generated by this process. Other items that may compete for space on the agendas include, for example, proposed delistings of particular agents or general scientific issues to be considered in listing.

**FIGURE 1:**

**FLOWCHART FOR CONSIDERATION OF  
AGENTS UNDER PROPOSITION 65**





| Name of Agent               | CAS#             |
|-----------------------------|------------------|
| acetazolamide               | 59665            |
| acrylamide                  | 79061            |
| acrylonitrile               | 107131           |
| aldrin                      | 309002           |
| aminoacetonitrile           | 540614           |
| aminonicotinamide, 6-       | 329895           |
| aminopropionitrile, B-      | 151188           |
| ammonium perfluorooctanoate | 3825261          |
| aniline                     | 62533            |
| apholate                    | 52460            |
| arsenic (inorganic)         | 7440382          |
| arsenous oxide              | 1327533          |
| asparaginase, L             | 9015683          |
| AY-9944                     | 366938           |
| azacytidine, 5-             | 320672           |
| azaundine                   | 54251            |
| balagrin                    | 71330433         |
| benzene                     | 71432            |
| benzo[a]pyrene              | 50328            |
| beryllium                   | 7440417          |
| betamethasone               | 378449           |
| boric acid                  | 10043353         |
| boron                       | 7440428          |
| bromo-2'-deoxyuridine, 5-   | 59143            |
| bromodichloromethane        | 75274            |
| butadiene, 1,3-             | 106990           |
| butyl ester, 2,4,5-T        | 93798            |
| butyl ester, 2,4-D          | 94804            |
| cadmium                     | 7440439          |
| cadmium sulfate             | 10124364         |
| caffeine                    | 58082            |
| cannabis                    | 8063147          |
| captan                      | 133062           |
| carbamazepine               | 36507309         |
| carbon dioxide              | 124389           |
| carbon tetrachloride        | 56235            |
| carbutamide                 | 339435           |
| chloramphenicol             | 58757            |
| chlordane                   | 57749            |
| chlorfenvinfos              | 470906           |
| chloroform                  | 67663            |
| chlorohydrin                | 96242            |
| chloroprene                 | 126998           |
| chromium trioxide           | 1333820          |
| chromium VI                 | 18540299         |
| copper sulfate              | 7758987          |
| corticosterone              | 50226            |
| cyclizine                   | BFG 002176 82928 |
| DDE                         | 72559            |

**PROPOSITION 65 PRIORITY LIST - CANDIDATE AGENTS UNDER CONSIDERATION FOR  
DEVELOPMENTAL AND REPRODUCTIVE TOXICITY EVALUTATION<sup>(1)</sup>**

| Name of Agent        | CAS#     | Level of Toxicological Concern <sup>(2)</sup> | Level of Exposure Concern | Priority Status - DART |
|----------------------|----------|-----------------------------------------------|---------------------------|------------------------|
| Acrylamide           | 79061    | High                                          | Medium                    | High                   |
| Aldrin               | 309002   | High                                          | Low                       | Medium                 |
| 1,3-Butadiene        | 106990   | Medium                                        | Medium                    | Medium                 |
| Carbamazepine        | 36507309 | High                                          | Low                       | Medium                 |
| Carbon tetrachloride | 56235    | Medium                                        | Medium                    | Medium                 |
| Chlordane            | 57749    | High                                          | Low                       | Medium                 |
| DDT <sup>(3)</sup>   | 50293    | High                                          | Medium                    | High                   |
| Ethylene dibromide   | 106934   | High                                          | Low                       | Medium                 |
| Formaldehyde         | 50000    | Low                                           | High                      | Medium                 |
| Heptachlor           | 76448    | High                                          | Low                       | Medium                 |
| Methylene chloride   | 75092    | Low                                           | High                      | Medium                 |
| Progesterone         | 57830    | High                                          | Low                       | Medium <sup>(4)</sup>  |
| 2,4,5-T, butyl ester | 93798    | Low                                           | Low                       | Low                    |
| Trichloroethylene    | 79016    | Medium                                        | High                      | High                   |
| Vinyl chloride       | 75014    | Medium                                        | Medium                    | Medium                 |

- (1) Priority chemicals from Donald, JM, Monserrat, LG, Hooper, K, Book, SA and Chernoff, GF (1992). Prioritizing candidate reproductive/developmental toxicants for evaluation. *Reprod Toxicol* 6:99-108.
- (2) The evaluation of the level of toxicological concern is based on secondary sources (databases and reviews). It is likely that data exist which have not been considered in the evaluation. In a more detailed review, additional data may be found that will alter the assigned "level of toxicologic concern". Consequently, a "low" or "medium" level of toxicologic concern should not be interpreted to mean that the chemical has little or no potential to cause reproductive or developmental effects.
- (3) Would also include consideration of major metabolites and breakdown products such as DDE (CAS # 72559) and DDD (CAS # 72548).
- (4) Progesterone is intentionally used as a contraceptive. Unintentional exposures are believed to be low.

*LO exposure concern;*  
**HI/MED toxicity concern**

aldrin  
chlordane  
ethylene dibromide  
heptachlor  
2,4,5-butyl ester

progesterone  
carbamazepine

*HI exposure concern;*  
**LO toxicity concern**

formaldehyde  
methylene chloride

*MED exposure concern;*  
**MED toxicity concern**

1,3-butadiene  
carbon tetrachloride  
vinyl chloride

**HI PRIORITY AGENTS**

acrylamide  
DDT  
trichloroethylene

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| acrylamide                  | 79061    |
| acrylonitrile               | 107131   |
| aldrin                      | 309002   |
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| chlorfenvinfos              | 470906   |
| chloroform                  | 67663    |
| chlorohydrin                | 96242    |
| chloroprene                 | 126998   |
| chromium trioxide           | 1333820  |
| chromium VI                 | 18540299 |
| copper sulfate              | 7758987  |
| corticosterone              | 50226    |
| cyclizine                   | 82928    |
| DDE                         | 72559    |

|                                       |          |
|---------------------------------------|----------|
| DDT                                   | 50293    |
| diaminostilbene                       | 621965   |
| dichloroethylene, 1,1-                | 75354    |
| dichloropropane, 1,2-                 | 78875    |
| dieldrin                              | 60571    |
| diethylene glycol diethyl ether       | 112367   |
| diethylene glycol dimethyl ether      | 111966   |
| diethylene glycol methyl ether        | 111773   |
| diethylhexyl phthalate                | 117817   |
| diltiazem                             | 42399417 |
| dimethyl acetamide                    | 127195   |
| dimethyl-1,2-benz(a)anthracene, 7,12- | 57976    |
| dimpylate                             | 333415   |
| dinitrotoluene, 2,6-                  | 25321146 |
| dromostanolone propionate             | 521120   |
| EM 12                                 | 26581817 |
| endrin                                | 72208    |
| enflurane                             | 13838169 |
| environmental tobacco smoke           |          |
| epichlorohydrin                       | 106898   |
| estradiol, 17-beta                    | 50282    |
| ethisterone                           | 434037   |
| ethosuximide                          | 77678    |
| ethoxyethyl acetate, 2-               | 111159   |
| ethylene dibromide                    | 108934   |
| ethylene glycol diethyl ether         | 629141   |
| ethylene glycol dimethyl ether        | 110714   |
| ethylnitrosourea                      | 759739   |
| ethynylestradiol                      | 57636    |
| etizolam                              | 40054691 |
| fluoroacetate                         | 144490   |
| folpet                                | 133073   |
| formaldehyde                          | 50000    |
| formamide                             | 75127    |
| furylfuramide                         | 3688537  |
| griseofulvin                          | 126078   |
| hadacidin                             | 689134   |
| halothane                             | 151677   |
| heptachlor                            | 76448    |
| heroin                                | 561273   |
| hexamethylene diisocyanate            | 822060   |
| hexane, N-                            | 110543   |
| hydroxy-oxo-L-norvaline               | 4439843  |
| hydroxyprogesterone                   | 68962    |
| hydroxytryptophan, 5-                 | 56699    |
| hydroxyurea                           | 127071   |
| idoxundine                            | 54422    |
| indomethacin                          | 53861    |
| insulin (natural)                     | 9004108  |
| karathane                             | 39300453 |

|                                                                              |          |
|------------------------------------------------------------------------------|----------|
| manganese                                                                    | 7439965  |
| mestranol                                                                    | 72333    |
| methadone                                                                    | 78993    |
| methandrostenolone                                                           | 72639    |
| methoxyethyl acetate, 2-                                                     | 110496   |
| methoxyflurane                                                               | 76380    |
| methyl 2(p-aliophanoylbenzyl)hydrazine, 1-                                   | 60344    |
| methyl butyl ketone                                                          | 591788   |
| methyl chloride                                                              | 74873    |
| methyl PGA, X-                                                               |          |
| methyl salicylate                                                            | 119368   |
| methylacetamide, N-                                                          | 79163    |
| methylazoxymethanol                                                          | 590965   |
| methylene bis(4-cyclohexylisocyanate)                                        | 5124301  |
| methylene chloride                                                           | 75092    |
| methylformamide                                                              | 123397   |
| methylpyrrolidone, N-                                                        | 872504   |
| monocrotophos                                                                | 6923224  |
| monosodium glutamate                                                         | 142472   |
| myclobutanil                                                                 | 88671890 |
| N-methylnitrosourea (n-nitroso-n-methylurea)                                 | 684935   |
| n-nitroso bis(2-oxopropyl)amine                                              | 60599384 |
| nickel carbonyl                                                              | 13463393 |
| nitrochlorobenzene, p-                                                       | 100005   |
| nitrofen                                                                     | 1836755  |
| nitroquinolone-1-oxide, 4-                                                   | 56575    |
| nitrous oxide                                                                | 10024972 |
| ochratoxin A                                                                 | 303479   |
| oxydemeton-methyl                                                            | 301122   |
| oxytocin                                                                     | 50566    |
| phencyclidine (PCP)                                                          | 77101    |
| phenol                                                                       | 108952   |
| phenoxybenzamine                                                             | 59961    |
| phenylalanine (DL)                                                           | 3617445  |
| prednisolone                                                                 | 50248    |
| primidone                                                                    | 125337   |
| progesterone                                                                 | 57830    |
| propargite                                                                   | 2312358  |
| propylene glycol methyl ether, beta-isomer (PGME-beta, 2-methoxy-1-propanol) | 1589497  |
| pyrimethamine                                                                | 58140    |
| razoxane                                                                     | 24584096 |
| red palm oil                                                                 | 8002753  |
| Ro 10-8359                                                                   | 54350480 |
| strontium (unspecified salt)                                                 | 543942   |
| styrene                                                                      | 100425   |
| tetrachloroacetone                                                           | 31422814 |
| tetrahydrocannabinol (THC)                                                   | 1972083  |
| thiouracil                                                                   | 141902   |
| thiram                                                                       | 137288   |
| thyroxine                                                                    | 51489    |

|                                   |         |
|-----------------------------------|---------|
| tolbutamide                       | 64777   |
| toluene 2,4-diisocyanate          | 584849  |
| toxapnene                         | 8001352 |
| triamcinolone                     | 124947  |
| trichloroethylene                 | 79016   |
| trichlorofon                      | 52686   |
| tricyanoaminopropene              |         |
| triethylene glycol dimethyl ether | 112492  |
| trypan blue                       | 72571   |
| vinyl chloride                    | 75014   |
| vitamin D                         | 1406162 |
| xylene                            | 1330207 |

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