Appendix G
EXPOSURE & EFFECTS DATA SOURCE MATRICES

TABLE 1. BIOLOGICAL SAMPLING DATA

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Bay Delta Estuary Monitoring Program	**Description:** Fish, surface water, various contaminants (San Francisco Bay) **Citation:** **Availability:** STORET (Phone: 800-424-9067).	?
Columbia River Basin Fish and Wildlife Program	**Description:** Contaminants, media (Columbia River Basin) **Citation:** Northwest Power Planning Council. **Availability:**	?
Environmental Contaminant Data Management System	**Description:** Compilation of analytical data of approximately 100,000 samples of invertebrates, fish and wildlife in the Environmental Contaminant Data Management System of the Patuxent Analytical Control Facility, U.S. Fish and Wildlife Service. The presence and concentration of about 625 compounds (pesticides and organochlorines, contaminants, metals, and petroleum hydrocarbons) are recorded from a wide variety of environmental biomonitoring and research activities. This database contains many unique datasets that are not replicated in time or space. The analytical procedures do not favor amines, sulfides, and volatile compounds. **Citation:** Patuxent Analytical Control Facility, U.S. Fish and Wildlife Service. **Availability:**	Y
Great Lakes Fish Monitoring Program	**Description:** Fish tissues, pesticides. Compilation of data from a 30-year biomonitoring effort conducted by the Great Lakes Science Center of the U.S. Geological Survey. Composite samples of whole-fish collected from the Great Lakes and nearby rivers were analyzed by full-scan gas chromatography/mass spectral analysis for over 550 compounds. The presence and concentration of a wide range of pesticides, organochlorines, ketones, aldehydes, alcohols, phenols and other oxygenates contaminants are measured in fish of a known species, size and age. The analytical procedures do not favor amines, sulfides, and volatile compounds. Polychlorinated dibenzodioxins and dibenzofurans are not quantified. **Citation:** Hesselberg, R.J., J.P. Hickey, D.A. Nortrup, and W.A. Willford, "Contaminant Residues in the Bloater (Coregonus hoyi) of Lake Michigan," *J. Great Lakes Res*., 16(1), 1990, pp. 121-129. Great Lakes Science Center, U.S. Geological Survey. **Availability:** EPA Great Lakes Program Office, Chicago, IL	Y

TABLE 1. BIOLOGICAL SAMPLING DATA (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
National Health and Nutrition Examination Survey (NHANES)	**Description:** National survey of U.S. population includes physical examination and collection of blood and urine samples. Biological measurements have included specific environmental contaminants (e.g., lead, VOCs, pesticides). Four surveys have been completed: (National Health Service-dates, NHANES II-dates, Hispanic NHANES-dates, and NHANES III-dates). NHANES III was conducted in two phases and represents two samplings of the U.S. population. NHANES III and IV include approximately 40,000 people. Stored serum remains available for NHANES III and possibly Hispanic NHANES. Representativeness is maintained for demographic strata including age, gender, race, and region. All data are quality controlled. CLIA regulations for analyses. Assured Quality Assurance/Quality Control (QA/QC) with analytic comparability over time. This is the only ongoing survey that is representative of the U.S. population with weights to estimate population distributions according to age, race, gender, and region. Provides unique data on human adipose levels of contaminations to toxic substances. Analyses by standard protocol. Tissues may not be representative of the US population. **Citations:** • Plan and Operation of the Third National Health and Nutrition Examination Survey, National Center for Health Statistics, 1988-94. • Vital Health Statistics, 1994. • Exposure of the U.S. Population to Environmental Tobacco Smoke: NHANES III, 1988-91. • Pirkle, J.L., K.M. Flegal, J.T. Bernert, et al., *JAMA*, 275, 1996, pp. 1233-1240. • VOC's Ashley. **Availability:** Public use computer tapes. Stored samples for NHANES III; authorization must be sought.	Y

TABLE 1. BIOLOGICAL SAMPLING DATA (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
National Human Adipose Tissue Survey (NHATS) Office of Toxic Substances, U.S. EPA	**Description:** National survey of human adipose tissue for PCBs, dioxins/furans, volatile and semivolatile organics. Analyses of adipose tissue from autopsied cadavers and surgical patients. Analyses for a variety of toxic compounds using standardized protocols on composites that represent nine regions and three age groups. **Citations:** • Human Body Burden Database, EPA Field Studies Branch. • U.S. EPA, "Broad scan analysis of the FY 82 National Human Adipose Tissue Survey specimens," Vol. 1-Executive Summary, U.S. EPA Document No. EPA-560/5-86-035, Washington, D.C. • Phillips and Birchard, *Arch. Environ. Contam. Toxicol*., 21, 1991, pp. 159-168. **Availability:** EPA Field Studies Branch, Washington DC (Phone: 202-382-3853), Nationwide, discontinued 1990	Y
National Human Exposure Assessment Survey (NHEXAS)	**Description:** Surveys designed to assess human exposure via multiple pathways (food, water, air, dust). Limited biomonitoring (urine, blood). Could provide unique data on individual (non-occupational) human ambient exposures as well as resulting levels of pollutants in human blood and urine. Analysis by standard protocol. Could provide important information for preventions targeted to eliminating specific exposure pathways. May also be focused on sensitive populations. **Citation:** Office of Research and Development, U.S. EPA. **Availability:** Not yet available. Full scale funding has not been secured.	?
National Neonatal Bloodspot Exposure and Effects Survey (NNBEES) - proposed	**Description:** NCEH provides national quality assurance for state neonatal blood spot programs. All babies born in the U.S. are bled and tested for a variety of metabolic and hereditary conditions. Could provide data on exposure levels to endocrine disrupting substances of newborn babies. Measurements of newborn hormone levels could be taken from same blood spot. Contamination is an issue so care in handling must be emphasized, unless substance to be measured is not found in the environment. **Citation:** National Center for Environmental Health (NCEH), Centers for Disease Control and Prevention. **Availability:**	?

TABLE 1. BIOLOGICAL SAMPLING DATA (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
National Status and Trends: Mussel Watch, Benthis Surveillance	**Description:** Mussels, other bivalves, sediments, bottom fish, major and trace elements, PAHs, PCBs. chlorinated compounds, coastal areas **Citation:** National Oceanic and Atmospheric Administration (NOAA). **Availability:** National status and trends database, Tom O'Connor, NOAA-OAD (Phone: 301-443-8698).	?
Puget Sound Monitoring Program	**Description:** Fish, surface water, sediments, PAHs, PCBs (Puget Sound) **Citation:** Puget Sound Water Quality Authority. **Availability:**	?
Total Exposure Assessment Methodology (TEAM) Study - 1979-1985	**Description:** Breath samples analyzed for 20 target chemicals. Included nursing study, dry cleaners study, swimming pool exposures study, and indoor air study. Assured QA/QC with analytic comparability over time. **Citation:** Office of Acid Deposition, Environmental Monitoring, and QA. **Availability:**	Y

TABLE 2. ENVIRONMENTAL, OCCUPATIONAL, FOOD, AND CONSUMER PRODUCT DATA

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Agency for Toxic Substances Disease Registry (ATSDR) Priority List (PL)	**Description:** Biannual list of hazardous substances, in order of priority, which are most commonly found at facilities on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priorities List and that pose the most significant potential threat to human health. Identifies hazardous substances commonly found at certain sites that pose a threat to human health. Sites at which the chemicals are found and the frequency of finding them are not disclosed. **Citation:** **Availability:** Publicly available.	Y
American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) List	**Description:** The ACGIH is a non-governmental organization that issues recommended acceptable workplace exposure limits (TLVs) for several hundred chemicals. **Citation:** **Availability:** Publicly available. The ACGIH TLV booklet is available from ACGIH in Cincinnati, OH, and may be available via Internet.	Y
Ashford's Dictionary of Industrial Chemicals	**Description:** Use information. Secondary source. **Citation:** Ashford, R.D. , *Ashford's Dictionary of Industrial Chemicals: Properties, Production, Uses*, London, England: Wavelength Publ, Ltd., 1994. **Availability:** Published information. Book.	N
California Department of Food and Agriculture (CDFA)/ California Department of Pesticide Regulation (CDPR)	**Description:** Subcategories: Foreign, domestic, water, worker exposure, retail, pesticide use, fields targeted by county agriculture commissioners. Raw data and summaries. Very close to GLPs. **Citation:** **Availability:** Paul Gosselin, Division of Enforcement and Data Management. Contact California Department of Pesticide Regulation/Cal EPA for fruits and vegetables; Worker Health and Safety Group/Cal EPA for worker exposure; Environmental Monitoring/Cal EPA for environmental samples. CDFA analyzes crops under contract to Cal EPA.	?
Certified and Commercial Pesticide Applicator Survey	**Description:** Non-agricultural use data for pesticides. **Citation:** **Availability:**	?

TABLE 2. ENVIRONMENTAL, OCCUPATIONAL, FOOD, AND CONSUMER PRODUCT DATA (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Chem Use Database	**Description:** Use information. Summary of information presented on PMNs and results of patent searches. **Citation:** Chem Use Data Base. **Availability:** TSCA Not publicly available. Available on an as-needed basis with TSCA NPA clearance.	?
Chesapeake Bay Monitoring Program	**Description:** Surface water, sediments, air, various contaminants (Chesapeake Bay) **Citation:** **Availability:**	?
chemicals found in cosmetics	**Description:** **Citation:** FDA **Availability:**.	?
Consumer Product Indoor Air Source Ranking Database	**Description:** Data on approximately 1,400 chemicals used in consumer products. **Citation:** U.S. EPA, Office of Pollution Prevention and Toxic Substances (OPPT) **Availability:**.	Y?
Eastern Fine Particle Visibility Network	**Description:** Air, carbon, volatile organics, NO3, HNO3, particulate sulfate **Citation:** East regional, Acid Deposition System, Batelle PNL. **Availability:** Tom Thomas, (Phone: 509-375-2783).	?
Environmental Contaminant Reference Databook	**Description:** Use information. Secondary source. **Citation:** Prager, Jan C. New York, NY: Van Nostrand Reinhold. **Availability:** Published information. 2 volume book set.	N
Environmental Monitoring and Assessment Program (EMAP)	**Description:** Air, groundwater, surface water, biota, soil by ecosystem group, pollutants by ecosystem (nationwide) **Citation:** EMAP Research & Assessment Center, ORD, U.S. EPA, Research Triangle **Availability:**	Y?
EPA Doane 3 Profile Data Base	**Description:** Production and use data for pesticides. Produced annually. Computerized. **Citation:** **Availability:** Not publicly available.	?

TABLE 2. ENVIRONMENTAL, OCCUPATIONAL, FOOD, AND CONSUMER PRODUCT DATA (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Farmers Pesticide Use/ Satisfaction Study	**Description:** Product/use data for pesticides. Survey information produced annually. Computerized. **Citation:** **Availability:** Not publicly available.	?
FDA - Surveillance and Compliance	**Description:** Subcategories: Domestic, import, surveillance, compliance. Summary, raw data. Most QA measures observed; not strictly GLP. **Citation:** FDA **Availability:** On diskette, web site in future, Mike Bolger, FDA, (Phone: 202-205-8705)	?
Florida Department of Agriculture and Consumer Services	**Description:** Subcategories: Domestic, foreign, ground water, surface water. Raw data. Violations summarized. Not strictly GLP. **Citation:** **Availability:** George Fong (Phone: 904-488-9670).	?
Food Quality Protection Act (FQPA) "Cumulative to Pesticides" List	**Description:** List of chemicals satisfying statutory requirements of being cumulative to pesticides. **Citation:** **Availability:**.	Y?
Generally Regarded As Safe (GRAS) Substances	**Description:** **Citation:** FDA **Availability:**.	Y
Handbook of Environmental Data on Organic Chemicals, 3rd edition	**Description:** Use information. Secondary source. **Citation:** Verschueren, Karel. New York, NY: Van Nostrand Reinhold. **Availability:** Published information. Book.	N
Hawley's Condensed Chemical Dictionary	**Description:** Use information. Secondary source. **Citation:** Lewis, R.J., Sr. (ed.), *Hawley's Condensed Chemical Dictionary*. 12th ed. New York, NY: Van Nostrand Reinhold, 1993. **Availability:** Published information. Book.	N

TABLE 2. ENVIRONMENTAL, OCCUPATIONAL, FOOD, AND CONSUMER PRODUCT DATA (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Industry Databases	**Description:** Occupational exposure air monitoring data, generally for chemicals with OSHA Permissible Exposure Limits (PELs) or ACGIH TLVs. Relatively few chemicals. Variable quality. **Citation:** **Availability:**	?
International Agency for Research on Cancer (IARC) Monographs	**Description:** Use information and, in some cases, producers and production methods. Review of existing data. **Citation:** World Health Organization, IARC. IARC Monographs on the Evaluation of the Carcinogenic Risk of Chemicals to Humans. **Availability:** Published information. Multi-volume book set.	N
International Program On Chemical Safety, Environmental Health Criteria	**Description:** Use information, as well as some production information. Chemical review based on the collective views of an international group of experts. **Citation:** International Program On Chemical Safety, Environmental Health Criteria. World Health Organization. **Availability:** Published information. Publication of the World Health Organization.	?
Kirk-Othmer Encyclopedia of Chemical Technology	**Description:** Use information as well as production methods and, sometimes, production volumes. Secondary source. **Citation:** *Kirk-Othmer Encyclopedia of Chemical Technology*, 4th ed., Volumes 1-present. New York, NY: John Wiley and Sons, 1991-present. **Availability:** Published information. Multi-volume encyclopedia set.	N
Kline & Co. Survey	**Description:** Agricultural and non-agricultural use data for pesticides by product/use. Produced annually. **Citation:** **Availability:** Publicly available.	?
Market Basket Survey Residue Data	**Description:** Pesticide intake; summary data. Not strictly GLP. **Citation:** FDA **Availability:** Mike Bolger, FDA, (Phone: 202-205-8705).	Y

TABLE 2. ENVIRONMENTAL, OCCUPATIONAL, FOOD, AND CONSUMER PRODUCT DATA (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Microbiological and Residue Computer Information Systems (MARCIS)	**Description:** Analyzes for residues of chlorinated hydrocarbons and chlorinated organophosphates in eggs/meat and poultry. Residue Violation Information System (RVIS) reports only violative findings and the "Red Book" published annually reports the same. QA measures observed. Not strictly GLP. **Citation:** Food Safety and Inspection Service/USDA. **Availability:** Published summaries available to public. Raw data available to other government agencies through FSIS. Joanne Hicks, FSIS, (Phone: 202-501-6354).	?
Ministry of Agriculture, Fisheries, and Food, Food Contaminants Division	**Description:** Monitoring data on food contaminants including phthalates. Samples analyzed at CSL food science laboratory (Norwich). **Citation:** **Availability:** Contact Mr. Steven Wearne, Ergon House, c/o Nobel House, 17 Smith Square, London, England SW1P 31R.	?
National Estuary Program	**Description:** Sediments, surface water, fish, PCBs, heavy metals, fecal coliform, nutrients, coastal/estuarine areas in the U.S. **Citation:** U. S. EPA **Availability:** Contact regional EPA office.	?
National Institute for Occupational Safety and Health (NIOSH) Health Hazard Evaluations	**Description:** Occupational exposure air monitoring data from NIOSH Health Hazard Evaluations. Worst case rather than representative. **Citation:** **Availability:** NIOSH, Cincinnati, OH (Phone: 800-35-NIOSH).	?
National Institute for Occupational Safety and Health (NIOSH) Pocket Guide to Chemical Hazards	**Description:** A list of 677 chemicals or substances found in the work environment. The list contains all chemicals with OSHA PELs (as of the last printing - 1994) as well as chemicals for which NIOSH has Recommended Exposure Limits (RELs). **Citation:** **Availability:** Publicly available. This list can be obtained from NIOSH in hard copy or electronic form (Phone: 800-35-NIOSH).	?

TABLE 2. ENVIRONMENTAL, OCCUPATIONAL, FOOD, AND CONSUMER PRODUCT DATA (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
National Occupational Hazard Survey	**Description:** National survey of U.S. workplaces. Identified chemicals used in different industries, attempts to estimate number of workers exposed. Outdated. Numbers are estimates. Perhaps useful for identifying endocrine disruptors to which a large number of workers are exposed. **Citation:** National Institute for Occupational Safety and Health. **Availability:**	?
National Toxics Inventory	**Description:** Reports air emissions on a county basis but are moving to a facility-specific basis in the next 2 years. Not externally peer reviewed. Updated every 3 years. **Citation:** Office of Air, U.S. EPA. **Availability:** Available on disk as ASCII file.	?
National Water Information System (NWIS)	**Description:** Contains 4 sub-data sets: Water Quality System, Automated Data Processing System (surface water), Ground-Water Site Inventory System, and the Water Use Data System. Uses multiresidue methods. GLP. **Citation:** U.S. Geological Survey **Availability:** Subsets through STORET; CD-ROM. Currently undergoing change to UNIX-based workstations.	?
National Water Quality Assessment Program (NAWQA)	**Description:** Surface water, ground water, trace organics, trace elements. **Citation:** U.S. Geological Survey. **Availability:** NAWDEX/WATSTORE USGS, Water Resources Division, Reston, VA (Phone: 703- 860-6031).	?
OSHA Compliance Database	**Description:** OSHA inspection air monitoring data for occupational exposures. Raw data. Only includes chemicals with OSHA Permissible Exposure Limits PELs (relatively few chemicals). Worst case rather than representative. Useful for identifying high-end exposures. **Citation:** **Availability:** Occupational Safety and Health Administration.	?
OSHA Consultation Programs for small businesses	**Description:** Contains air monitoring data for occupational exposures obtained during consultation. **Citation:** **Availability:** Regional/area OSHA offices.	?

TABLE 2. ENVIRONMENTAL, OCCUPATIONAL, FOOD, AND CONSUMER PRODUCT DATA (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
OSHA Permissible Exposure Limit (PEL) List	**Description:** The PEL list is a list of chemicals regulated by OSHA (approx. 400-500 chemicals), and for which OSHA has recommended acceptable exposure limits. **Citation:** **Availability:** This is public information that can be obtained from OSHA or the 29 Code of Federal Regulations (CFR). May be available via Internet, as well.	Y
Pesticide Data Program	**Description:** Analyzes for pesticide residues on food. Raw data. Relational database. GLP - multiresidue methods. **Citation:** AMS/USDA. **Availability:** On diskette, hardcopy. Bob Epstein, AMS, (Phone: 202-720-2158).	?
Pesticides in Ground-Water Database	**Description:** Multiresidue methods. GLP. **Citation:** Office of Pesticide Programs/U. S. EPA. **Availability:** Hard copy (1992), future Internet access.	?
Permit Compliance System	**Description:** Information on municipal and industrial wastewater discharge. GLP. **Citation:** U. S. EPA **Availability:**	?
Pre-Manufacture Notification Database (PMN)	**Description:** Use information. Summary of PMN information. **Citation:** PMN Database. **Availability:** TSCA. Not publicly available. Available on an as-needed basis with TSCA NPA clearance.	?
Priority-based Assessment of Food Additives (PAFA) database, U.S. FDA	**Description:** Contains administrative, chemical, and toxicological information on over 2,000 substances directly added to food, including substances regulated by the U.S. FDA as direct, "secondary" direct, and color additives, and Generally Regarded as Safe (GRAS) and prior-sanctioned substances. The database also contains only administrative and chemical information on less than 1,000 such substances. The more than 3,000 total substances together comprise an inventory often referred to as "Everything Added to Food in the United States" (EAFUS). While this is a comprehensive list of substances added directly to food that FDA has either approved as food additives or listed or affirmed as GRAS, it contains only a partial list of all food ingredients added to food because, under federal law, some ingredients may be added to food under a GRAS determination made independently from the FDA. **Citation:** U.S. Food and Drug Administration (FDA). **Availability:** Publicly available on the Internet, <http://vm.cfscan.fda.gov/~dms/eafus.html>.	Y

TABLE 2. ENVIRONMENTAL, OCCUPATIONAL, FOOD, AND CONSUMER PRODUCT DATA (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Public Health Departments	**Description:** Some state health departments collect surveillance data on specific occupational exposures and health effects. **Citation:** **Availability:**	?
Safe Drinking Water Act (SDWA) Contaminant Candidate List	**Description:** **Citations:** • U.S. EPA, Announcement of the Draft Drinking Water Contaminant Candidate List; Notice, 62 FR #193, Oct. 6, 1997, pp. 52194-52219. • U.S. EPA, Announcement of the Drinking Water Contaminant Candidate List; Notice, 63 FR #40, Mar. 2, 1998, pp. 10274-10287. **Availability:**	Y
Safe Drinking Water Information System (SDWIS)	**Description:** Coliform, lead, copper, radionuclides, pesticides. GLP. **Citation:** Office of Water, U.S. EPA **Availability:** On Internet (account required), but not user friendly. In development, but will contain approximately 58,000 community water systems.	?
State OSHA databases	**Description:** Approximately one-half of states administer state OSHA programs that collect air monitoring data during inspections. Worst case rather than representative. Useful for identifying high-end exposures. **Citation:** **Availability:** Available through Freedom of Information Act?	?
State Water Quality Databases	**Description:** Many states maintain an ambient water quality database, some also a compliance database. Generally GLP; multi-residue methods. **Citation:** **Availability:** Contact individual State Departments of Environmental Protection.	?
STOrage and RETrieval System (STORET)	**Description:** Point and non point source ambient water monitoring and biological monitoring (pesticides are one parameter). Generally not GLP. **Citation:** Office of Water, U. S. EPA **Availability:** Currently PC based. By late 1997 will use UNIX/Oracle server and PC based Windows 95 configuration.	?

TABLE 2. ENVIRONMENTAL, OCCUPATIONAL, FOOD, AND CONSUMER PRODUCT DATA (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Ullmann's Encyclopedia of Industrial Chemistry	**Description:** Use information as well as production methods and, sometimes, production volumes. Secondary source. **Citation:** Gerhartz, W., *Ullmann's Encyclopedia of Industrial Chemistry*, 5th ed., Deerfield Beach, FL: VCH publishers, 1985. **Availability:** Published information. Multi-volume encyclopedia set.	N
USDA National Agricultural Statistics Survey	**Description:** Use data for pesticides by production/crop. Updated annually. **Citation:** **Availability:** Published information.	?
USDA Management Center for Food and Agricultural Police Survey	**Description:** Use data for pesticides by crop/product/site. **Citation:** **Availability:**	?

TABLE 3. ENVIRONMENTAL RELEASE DATA

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Comprehensive Environmental Response, Compensation and Liability Information System	**Description:** Contaminant data from Superfund sites. **Citation:** U. S. EPA **Availability:** Internet access.	?
Hazardous Substances Emergency Event Surveillance (HSEES)	**Description:** **Citation:** Agency for Toxic Substances Disease Registry (ATSDR). **Availability:**	Y
Toxics Release Inventory (TRI)	**Description:** Chemicals released from manufacturing facilities by pounds per year. Provides valuable information to citizens about types of chemicals released from manufacturing facilities in communities across the U.S. Information may be useful for environmental justice concerns to identify those communities to which potential endocrine-disrupting chemicals are being released. Information is limited to chemicals listed in Title III of the 1986 Superfund Amendments and Reauthorization Act (SARA) and chemicals added to that list. Current TRI contains 581 discrete chemicals and 28 chemical groups. **Citation:** OPPT, U. S. EPA **Availability:** Hard copy and Internet access.	Y

TABLE 4. PRODUCTION VOLUME DATA

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
FIFRA Section 7 Data Base	**Description:** Production and use volumes for pesticides by product/company. Produced annually. 2-3 year lag in information. **Citation:** **Availability:** Published information.	?
Inorganic chemicals	**Description:** **Citation:** **Availability:**	Y
Organic chemicals that are site-limited intermediates	**Description:** Mostly discrete organic chemicals that are site-limited intermediates. Industry submitted data in compliance with TSCA section 8(b). **Citation:** **Availability:**	Y
Organic chemicals with annual production/importation volumes less than 10,000 pounds per year	**Description:** Mostly discrete organic chemicals with annual production/importation volumes < 10,000 pounds. Industry submitted data in compliance with TSCA section 8(b). May not include new chemicals that meet production volume threshold. **Citation:** **Availability:**	Y
Organic chemicals with annual production/importation volumes between 10,000 pounds and 1 million pounds per year	**Description:** Mostly discrete organic chemicals with annual production/importation volumes between 10,000 pounds and 1 million pounds per year. Industry submitted data in compliance with TSCA section 8(b). Does not yet include about 5,600 chemicals for which production or importation volumes need to be cleared for Confidential Business Information (CBI). May not include new chemicals that meet production volume threshold. **Citation:** **Availability:**	Y
Organic chemicals with annual production/importation volumes between 1 million pounds and 1 billion pounds per year	**Description:** Mostly discrete organic chemicals with annual production/importation volumes between 1 million and 1 billion pounds. Industry submitted data in compliance with TSCA section 8(b). Does not yet include about 2,000 chemicals for which production or importation volumes need to be cleared for CBI. May not include new chemicals that meet production volume threshold. Contains many petroleum feedstock chemicals and mixtures. **Citation:** **Availability:**	Y

TABLE 4. PRODUCTION VOLUME DATA

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Organic chemicals with annual production/importation volumes greater than 1 billion pounds per year	**Description:** Mostly discrete organic chemicals with annual production/importation volumes greater than 1 billion pounds. Industry submitted data in compliance with TSCA section 8(b). Does not yet include about 60 chemicals for which production or importation volumes need to be cleared for CBI. May not include new chemicals that meet production volume threshold. Contains many petroleum feedstock chemicals and mixtures. **Citation:** **Availability:**	Y
Other pesticide ingredients	**Description:** Food-use other pesticide ingredients. Does not yet include non-food use other pesticide ingredients. **Citation:** **Availability:**	Y
Pesticide active ingredients	**Description:** Food-use pesticide active ingredients. Does not yet include non-food use pesticide active ingredients. **Citation:** **Availability:**	Y
Polymers	**Description:** **Citation:** **Availability:**	Y
SRI International Directory of Chemical Producers	**Description:** Summary of producer information: producers; production sites; and, in some cases, production volumes. **Citation:** *Directory of Chemical Producers*. United States of America. Menlo Park, CA: SRI International, 1996. **Availability:** Published information. Supplied on an annual subscription basis.	?
Toxic Substances Control Act (TSCA) Inventory and Updates	**Description:** Producers, production sites, and production volumes by Chemical Abstracts Service Registry Number (CASRN). Updated every 4 years. Exemptions <10k/lb. Primary source. Some errors, but difficult to check. Not much use information included. **Citation:** TSCA Inventory and Inventory Update Rule information (Chemical Update System). **Availability:** TSCA Confidential Business Information (Not publicly available.) Available on an as-needed basis with TSCA NPA clearance.	?

TABLE 4. PRODUCTION VOLUME DATA (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
U.S. International Trade Commission (U.S. ITC) Synthetic Organic Chemicals	**Description:** Producers, production sites, and, in some cases, production volumes. Updated annually. Data supplied by producers, summarized by U.S. ITC. **Citation: "**U.S. ITC Synthetic Organic Chemicals – U.S. Production and Sales, 1992," U.S. ITC Publ 2720, February 1994, Washington, DC.: United States Trade Commission, 1994. **Availability:** U.S. ITC publication which may be ordered from The Office of the Secretary Publications Section, Unites States U.S. ITC.; 1-2 year lag in information.	?

TABLE 5. FATE AND TRANSPORT DATA AND MODELS

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Absorption Coefficient (K_{oc})	**Description:** Indicator of mobility. **Citation:** **Availability:**	Y
Biodegradation	**Description:** Indicator of persistence. **Citation:** **Availability:**	Y
Environmental Contaminant Reference Databook	**Description:** In some cases, biodegradation data and bioconcentration information is provided. Secondary source. **Citation:** Prager, J.C., Van Nostrand Reinhold: New York, NY, 1996. **Availability:** Published information. 2 volume book set.	N*
Environmental Fate Databases (EFDB)	**Description:** Source of available references on chemical fate and transport. Database of primary sources and some secondary sources. **Citation:** Syracuse Research Corporation's EFDB. **Availability:** EFDB may be purchased from Syracuse Research Corporation. On-line commercial database with proven usefulness.	N*
Handbook of Chemical Property Estimation Methods	**Description:** Chemical and physical properties, media-specific environmental fate properties. Secondary source. **Citation:** Lyman, W.J., W.F. Reehl, and D.H. Rosenblatt, American Chemical Society: Washington D.C., 1990. **Availability:** Published information. Book.	N*
Handbook of Chemistry and Physics (57th Ed.)	**Description:** Chemical and physical properties. Secondary source. **Citation:** Weast, R., (Ed.), CRC Press: Cleveland, OH, 1976. **Availability:** Published information. Book.	N*

TABLE 5. FATE AND TRANSPORT DATA AND MODELS (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Handbook of Environmental Data on Organic Chemicals	**Description:** Chemical and physical properties, natural and anthropogenic sources, media-specific fate information. Secondary source. **Citation:** Verschueren, K., Van Nostrand Reinhold Co: New York, NY, 1983. **Availability:** Published information. Book.	N*
Handbook of Environmental Data on Organic Chemicals, 3rd edition	**Description:** Biodegradation rates and mechanisms, atmospheric reactions. Secondary source. **Citation:** Verschueren, K., Van Nostrand, Reinhold: New York, NY, 1996. **Availability:** Published information. Book.	N*
Handbook of Environmental Degradation Rates	**Description:** Chemical-specific empirical and theoretical environmental degradation rates. Secondary source. **Citation:** Howard, P.H., R.S. Boethling, W.F. Jarvis, W.M. Meylan, and E.M. Michalenko, Lewis Publishers: Chelsea, MI, 1991. **Availability:** Published information. Book.	N*
Handbook of Environmental Fate and Exposure Data for Organic Chemicals: Volumes I-III	**Description:** Large production and priority pollutants, solvents, pesticides: physical and chemical properties, environmental fate data, natural and anthropogenic sources, media-specific background concentrations. Secondary source. **Citation:** Howard, P.H., (Ed.), Lewis Publishers: Chelsea, MI, 1991. **Availability:** Published information. Books (3 volumes).	N*
"Health Assessment Guidance Manual" (draft)	**Description:** Guidance for performing ATSDR "Health Assessments" to sites on the National Priorities List. Secondary source. **Citation:** U.S. Department of Health and Human Services for the Agency for Toxic Substances Disease Registry, 1990. **Availability:** Available from US Department of Health and Human Services. Atlanta, GA. Guidance document.	N*

TABLE 5. FATE AND TRANSPORT DATA AND MODELS (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Hydrolysis Half-Life	**Description:** Indicator of persistence. **Citation:** **Availability:**	Y
Illustrated Handbook of Physical and Chemical Properties and Environmental Fate for Organic Chemicals (Volume I & II)	**Description:** Physical and chemical properties, environmental fate data. Secondary source. **Citation:** Mackay, D., W.Y. Shiu, and K.C. Ma, Lewis Publishers: Chelsea, MI, 1992. **Availability:** Published information. Books (2 volumes).	N*
Octanol: Water Partition Coefficient (K_{ow})	**Description:** Indicator of mobility and bioaccumulation. **Citation:** **Availability:**	Y
Pesticide Document Management System (PDMS)	**Description:** Bibliographic information on unpublished fate and transport studies on pesticide chemicals. Information is variable but recent information is of good quality. **Citation:** PDMS available from Office of Pesticide Programs U. S. EPA. **Availability:** Available from U. S. EPA (contact John Jamula at 703-305-6426). Data base with proven usefulness.	N*
The Pesticide Manual, Incorporating The Agrochemicals Handbook, 10th edition	**Description:** Source of degradation and environmental data on pesticides. Reference source. Also contains some information on use. **Citation:** Tomlin, C. (Ed.), The Bath Press: Bath, UK, 1994. **Availability:** Published information. Book.	N*
Photooxidation	**Description:** Indicator of persistence. **Citation:** **Availability:**	Y

TABLE 5. FATE AND TRANSPORT DATA AND MODELS (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
"Risk Assessment Guidance for Superfund Volume 1. Human Health Evaluation Manual Parts A & B"	**Description:** Federal guidance for performing risk assessments for Superfund sites. Secondary source. **Citation:** U.S. EPA, Office of Emergency and Remedial Response: Washington DC. EPA/540/1-89/002, 1989. **Availability:** Available from U. S. EPA and/or NTIS (703-487-4650). Guidance document.	N*
The Soil Chemistry of Hazardous Materials	**Description:** Interaction and fate of inorganic and organic chemicals in soil. Secondary source. **Citation:** Dragun, J., The Hazardous Materials Control Research Institute: Silver Spring, MD, 1988. **Availability:** Published information. Book.	N*
"Superfund Exposure Assessment Manual"	**Description:** Federal guidance to estimate exposure to contaminants migrating from uncontrolled hazardous waste sites. Secondary source. **Citation:** U.S. EPA, Office of Emergency and Remedial Response: Washington DC. EPA/540/1-88/001, 1988. **Availability:** Available from U. S. EPA and/or NTIS (703-487-4650). Guidance document.	N*
Volatility (Henry's Law)	**Description:** Indicator of mobility. **Citation:** **Availability:**	Y
Syracuse Research Corporation's EPI Suite	**Description:** Source of estimated environmental fate data including adsorption to soil, atmospheric photooxidation, volatilization half-lives from water, biodegradability, and, sometimes, hydrolysis half-lives. Estimation programs for which the methodology has been peer reviewed. **Citation:** Syracuse Research Corporation's EPI Suite. **Availability:** The EPI Suite may be purchased from Syracuse Research Corporation. Methodology for the estimation programs in EPI has been published. Computer software may be purchased from Syracuse Research Corporation.	N*

*While none of these data sources is being recommended for inclusion in the EDPSD, specific physiochemical properties related to environmental fate and transport are recommended for inclusion. These properties are included in this matrix as data sources, and are denoted with a "Y" in the "Recommended for Inclusion in EDPSD?" column. For further information, and for a specific listing of these properties, please refer to Chapter Four, Section III, E.

TABLE 6/7. TOXICOLOGY LABORATORY STUDIES & EPIDEMIOLOGY AND FIELD STUDIES[±]

[±]For text explaining the combination of Toxicology Laboratory Studies and Epidemiology and Field Studies for use in the EDPSD, please refer to Chapter Four, Section X, E.

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Amphibian/reptile-related toxicological peer reviewed published scientific literature.	**Description:** Morphology of gonads and vitellogenin induction for amphibians/reptiles. Chemicals studied include metabolites of DDT, PCBs, and mercury. Summary data principally addressing single compounds. Peer reviewed; not GLP. **Citations:** • Bergeron, Crews, and McLachlan, Environ. Health Perspectives, 102, 1994, pp. 780-781. • Crews, Bergeron, and McLachlan. Environ. Health Perspectives, 103, 1995, pp. 73-77. • Kanamadi and Daidapur, *J. Herpetology*, 25, 1991, p. 497. • Punzo, *Bull. Environ. Contamin. Toxicol*., 50, 1993, pp. 385-391. **Availability:** Publicly available.	N [†]

TABLE 6/7. TOXICOLOGY LABORATORY STUDIES & EPIDEMIOLOGY AND FIELD STUDIES (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Avian-related toxicological peer reviewed published scientific literature.	**Description:** Responses include morphology of gonads and thyroid, and plasma concentrations of steroids, thyronines, hypophyseal hormones, and some receptor binding data. Studies report exposure to organochlorine pesticides and metabolites, PCBs, TCDD, and metals. Summary data principally addressing single compounds. Peer reviewed; not GLP. **Citations:** • Rattner, Eroschenko, Fox, Fry, and Gorsline, "Organochlorine Insecticides: Persistent Organic Pollutants," *J. Exp. Zool*., 232, 1975, pp. 683-689. • Rattner et al., "Reviews in Environmental Toxicology I," *Comp. Biochem. Physiol*., 83C, 1984, pp. 451-453. • Mayer et al., *Biomarkers: Biochemical, Physiological, and Histological Markers of Anthropogenic Stress*. Huggett, Kimerle, Merhle and Bergman (Eds.), 1992. • Review Article – Fox, "*Chemically-induced alterations in sexual and functional development: The wildlife/human connection*," 1992. • Guilette et al., *Environ. Health Perspectives*., 103, 1995, pp. 157-164. • Fry, *Environ. Health Perspect*., 103, 1995, pp. 165-171. • Chen et al., *Environ. Toxicol. Chem*., 13, 1994, pp. 789-796. • MacLellan et al., *Arch. Environ. Toxicol. Chem*., 30, 1996, pp. 364-372. • Janz and Bellward, *Toxicol. Appl. Pharmacol*., 139:281-291 and 292-300. • Janz and Bellward, *Environ. Toxicol. Chem.*, 16:985-989. **Availability:** Publicly available.	N †
California Proposition 65 List	**Description:** **Citation:** **Availability:**	Y
ECOTOX (AQUIRE, PHYTOTOX, and TERRETOX)	**Description:** Bibliographic information and data on published ecotoxicity studies on industrial chemicals and pesticides related to fish and aquatic organisms. Summary data. **Citation:** ECOTOXicology Data Base System - on-line U. S. EPA Database. **Availability:** Not publicly available.	?

TABLE 6/7. TOXICOLOGY LABORATORY STUDIES & EPIDEMIOLOGY AND FIELD STUDIES (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Fish- and aquatic organism-related toxicological peer reviewed published scientific literature.	**Description:** *In vitro* responses using fish and wildlife tissues. Summary data. Peer reviewed. **Citations:** • Review article – Nimrod and Benson. "Environmental estrogenic effects of alkylphenol ethoxylates," Critical Reviews in Toxicology, 26, 1996, pp. 335-364. • Review article - Toppari et al., Male reproductive health and environmental xenoestrogens. *Environ. Health Perspectives,* 104, 1996, pp. 741-830. • Jobling and Sumpter, *Aquatic Toxicology,* 27, pp. 361-372. **Availability:** Publicly available.	N †
Fish- and aquatic organism-related toxicological peer reviewed published scientific literature.	**Description:** Morphology of gonads, steroidogenesis, plasma steroid concentrations, and vitellogenin concentration in fish and aquatic organisms. Chemicals include organochlorine pesticides, PCBs, petroleum hydrocarbons, alkylphenols, and ethoxylates. Summary data principally addressing single compounds. Peer reviewed; not GLP. **Citations:** • Review article – Mayer et al., *Biomarkers: Biochemical, Physiological, and Histological Makers of Anthropogenic Stress*, Huggett, Kimerle, Merhle and Bergman (Eds.), Lewis Publishers, 1992. • Review article – Reijnders and Brasseur, *Chemically-induced alternations in sexual and functional development: The wildlife/human connection*, Colburn and Clement (Eds.), 1992. • Jobling et al., *Aquatic Toxicology,* 27, 1993, pp. 361-372. • Jobling et al., *Environ. Toxicol. Chem*., 15, 1996, pp. 194-202. • Guillette et al., *Environ. Health Perspectives,* 103, 1995, pp. 157-164. • Sumpter and Jobling, *Environ. Health Perspectives,* 103, 1995, pp. 173-178. **Availability:** Publicly available.	N †
Hazardous Substances Databank (HSDB)	**Description:** Toxicity and bibliographic information on many chemicals. Summary information of studies. Usually peer reviewed. Not GLP. **Citation:** National Library of Medicine. **Availability:** Publicly available.	?

TABLE 6/7. TOXICOLOGY LABORATORY STUDIES & EPIDEMIOLOGY AND FIELD STUDIES (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Interagency Testing Committee Screening Information Retrieval Exchange Network (ITCSIREN)	**Description:** TSCA Interagency Testing Committee (ITC) testing decisions for about 40,000 existing and new chemicals and mixtures and rationales for decisions. Discussion of endpoints of concern related to humans. Federal Register citations of ITC Reports to the U. S. EPA Administrator are provided for chemicals and mixtures added to the Priority Testing List. High quality, peer-reviewed. (Some not publicly available; being sanitized.) **Citation:** Walker, ITCSIREN, 1997. **Availability:**	?
Medline	**Description:** **Citation:** **Availability:**	N†
Pesticide Document Management System (PDMS)	**Description:** Bibliographic information on unpublished mammalian and ecotoxicity studies on pesticide chemicals. Recent data are of high quality. Often GLP. **Citation:** PDMS available from Office of Pesticide Programs U. S. EPA. **Availability:** Publicly available. John Jamula, U. S. EPA, (Phone: 703-305-6426)	?
Registry of Toxic Effects of Chemical Substances (RTECS) Reproductive Effects Data	**Description:** **Citation:** **Availability:**	Y
Toxline	**Description:** **Citation:** **Availability:**	N†
Toxic Substance Control Act Test Submissions - Health Effects (TSCATS-HE)	**Description:** Bibliographic information (with some abstracts) on unpublished human health effects, chemical fate, ecological effects, and industrial hygiene studies on industrial chemicals. Information is highly variable, from well-conducted GLP studies to very brief data sheets. **Citation:** TSCATS Data Base available in TOXLINE. **Availability:** Publicly available from NLM, CIS, or Syracuse Research Corporation. On-line charges apply. Full text studies available from NTIS and CIS.	Y

TABLE 6/7. TOXICOLOGY LABORATORY STUDIES & EPIDEMIOLOGY AND FIELD STUDIES (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Toxic Substance Control Act Test Submissions - Ecological Effects (TSCATS- EE)	**Description:** Bibliographic information (with some abstracts) on unpublished human health effects, chemical fate, ecological effects, and industrial hygiene studies on industrial chemicals. Information is highly variable, from well-conducted GLP studies to very brief data sheets. **Citation:** TSCATS Data Base available in TOXLINE. **Availability:** Publicly available from NLM, CIS, or Syracuse Research Corporation. On-line charges apply. Full text studies available from NTIS and CIS.	Y
Web-based searches; e.g., http://chemfinder. camsoft.com/ and http://ntp-server. niehs.nih.gov/	**Description:** Toxicity and bibliographic information on many chemicals. Information is highly variable from well-conducted GLP studies to very brief data sheets. **Citation:** Various **Availability:** Publicly available.	?

TABLE 6/7. TOXICOLOGY LABORATORY STUDIES & EPIDEMIOLOGY AND FIELD STUDIES (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Wild mammal-related toxicological peer reviewed published scientific literature.	**Description:** Morphology of gonads, oviduct, and thyroid, and plasma concentrations of steroids, luteinizing hormone, and thyronines, and some steroid receptor binding data for wild mammals. Responses measured following exposure to organochlorine pesticides and metabolites, PCBs, TCDD petroleum hydrocarbons, mercury and lead. Summary data principally addressing single compounds. Peer reviewed; not GLP. **Citations:** • Mayer et al., *Biomarkers: Biochemical, Physiological, and Histological Markers of Anthropogenic Stress*, Huggett, Kimerle, Merhle and Bergman (Eds.), Lewis Publishers, 1992. • Wren, J., *Toxicol. Environ. Health*, 33, 1991, pp. 549-585. • Sanders and Kirkpatrick, *Environ. Res.*, 13, 1977, pp. 358-363. (1977). • Rattner and Michael, *Toxicol. Letters*, 24, 1985, pp. 65-69. • Giesy, J.P., D.A. Verbrugge, R.A. Othout, et al., *Archives of Environmental Contamination and Toxicology*, 27, 1994, pp. 21-223. • Kihlstrom, J.E., M. Olsson, S. Jensen, A. Johansson, and J. Ahlbom, "Effects of PCB and different fractions of PCBs on the reproduction of the mink (mustela vison)," *Ambio.*, 21, 1992, pp. 563-569. • Patnode, K.A., and L.R. Curtis, *Toxicology and Applied Pharmacol.*, 127, 1994, pp. 9-18. **Availability:** Publicly available.	N†

†Peer reviewed scientific literature is not being recommended for inclusion in the EDPSD due to the fact that the nature of the data does not lend itself to such use. However, the Committee recognizes the value of such literature and recommends that it be used outside the EDPSD to gather further information on chemical substances or mixtures of concern.

TABLE 8. PREDICTIVE BIOLOGICAL ACTIVITY OR EFFECTS MODELS

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
Androgen Receptor Model (AR)	**Description:** Model developed that predicts chemicals similar to the chemicals used to train the model. Predicts binding affinity like *in vitro* models, and therefore has the same advantages and disadvantages. Expert opinions, not peer reviewed. Data is course, but fast and inexpensive to generate. The model does not appear to be as robust as the estrogen receptor model, but it does appear to be predictive and useful. Overall data quality is not as good as the estrogen receptor model, but it does appear to be fairly accurate at predicting *in vitro* activity. **Citation:** Waller, C.L., B.W. Juma, W.R. Kelce, and L.E. Gray, Jr., "Three-Dimensional Quantitative Structure-Activity Relationship Models for Androgen Receptor Ligands," *Toxicol. Appl. Pharmacol*., 137, 1996, pp. 219-227. **Availability:** Model is available free to anyone. One would need the CoMFA software and proper computer to run the model (which EPA has).	?
Aromatase Inhibition Model	**Description:** There is currently a published model by Oprea and Garcia that indicates that this activity can be modeled. However, not many nonsteroidal chemicals have been tested and included. This problem has, to a small extent, been addressed by the senior author who has an unpublished model and ideas on how to merge it with another. **Citation:** **Availability:**	?

TABLE 8. PREDICTIVE BIOLOGICAL ACTIVITY OR EFFECTS MODELS (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
CoMFA model (Estrogen Receptor Model)	**Description:** Model developed that predicts chemicals similar to the chemicals used to train the model. Predicts binding affinity like *in vitro* models, and therefore has the same advantages and disadvantages. Even though the data is course, but fast and inexpensive to generate. The chemicals used to train the model are not very diverse. Overall data quality is almost as good as *in vitro* tests. **Citations:** • Waller, C.L., T.I. Oprea, K. Chae, H-K. Rhee-Park, K.S. Korach, S. Laws, T.E. Wiese, W.R. Kelce, and L.E. Gray, Jr., "Ligand-Based Identification of Environmental Estrogens," *Chem. Res. Toxicol.*, 9, 1996, pp. 1240-1248. • Waller, C.L., and J.D. McKinney, "Examination of the Estrogen Receptor Binding Affinities of Polychlorinated Hydroxybiphenyls Using Three-Dimensional Quantitative Structure-Activity Relationships," *Environ. Health Perspectives*, 103, 1995, pp. 702-707. **Availability:** Model is available free to anyone. One would need the CoMFA software and proper computer to run the model (which U. S. EPA has).	?
ECOSAR	**Description:** An automated collection of over 300 SAR equations for estimating toxicity to aquatic organisms mainly from log K_{ow} and functional groups. Equations for predictive use. The quality of the value calculated by the program varies with the number and type of chemicals used to derive the equation. Separate equations are used for different functional groups. For multi-functional compounds, lowest value is used. **Citation:** ECOSAR Program; Environmental Effects Branch, OPPT; U. S. EPA - 7403; 401 M Street, S.W. Washington, DC 20460. **Availability:** Publicly available. The program is readily available from U. S. EPA or National Technical Information Service NTIS ($97). NTIS, Technology Administration, U.S. Department of Commerce, Springfield, VA 22161, (Phone: 703-487-4650). Order number PB94-500485INC	?

TABLE 8. PREDICTIVE BIOLOGICAL ACTIVITY OR EFFECTS MODELS (cont.)

Name of Data Source	Description / Characteristics of Data Source	Recommended for Inclusion in EDPSD?
QSAR for Androgen Receptor Binding	**Description:** Would be developed or improved upon using data obtained from HTPS assays. **Citation:** **Availability:**	Y
QSAR for Estrogen Receptor Binding	**Description:** Would be developed or improved upon using data obtained from HTPS assays. **Citation:** **Availability:**	Y
QSAR for Thyroid Receptor Binding	**Description:** Would be developed or improved upon using data obtained from HTPS assays. **Citation:** **Availability:**	Y
Substructure-based Computerized Chemical Selection Expert System (SuCCSES)	**Description:** Chemical substructures (121) representing over 13,000 chemicals for which experts have reported that chemicals containing one of these substructures have potential to cause specific health or ecological effects. Expert opinions, not peer-reviewed. **Citations:** • Walker and Brink, *ASTM STP*, 1007, 1989, pp. 507-536. • Walker, *Sci. Total Environ.*, 109/110, 1991, pp. 691-700. • Walker, *Toxicol. Model.*, 1, 1995, pp. 123-141. **Availability:** Published information. Available in journals.	N