#### Marine Pollution Information Resources

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invited lecture presented in "Environmental information: sources and access", UCLA Extension Course #X857.23, Dr Zorana Ercegovac, 9 May 1992.

Marine pollution information can be found in sources specific to marine pollution, in sources covering marine sciences, in sources covering the environment in general, and in sources covering scientific disciplines.

### Dictionaries/encyclopedias

DICTIONARY OF THE ENVIRONMENT. Michael Allaby. 3rd ed. 1989. New York University Press, New York. Best of the three dictionaries listed.

FACTS ON FILE DICTIONARY OF MARINE SCIENCE. Barbara Charton. 1988. Facts on File, New York. Not oriented to professionals but there is no recent professional-level marine science dictionary.

ENCYCLOPEDIA OF ENVIRONMENTAL STUDIES. William Ashworth. 1991. Facts on File, New York. Not oriented to professionals.

THE WATER ENCYCLOPEDIA. Frits van der Leeden et al. Lewis Publishers, Chelsea, Michigan, 1990. Major statistical compilation on climate and precipitation; water cycle (eg runoff, erosion and sedimentation, consumptive use); surface water including oceans and seas (eg depths, dimensions, water residence times, water balance, tides, temperature/salinity, composition); ground water; water use; water quality; environmental problems (eg pollution sources, sewage, runoff, offshore waste disposal); water resources management; physical constants and conversion factors; and laws, treaties, agencies, and organizations.

MARINE POLLUTION YEAR BOOK. Advisory Committee on Pollution of the Sea. Pergamon Press, New York. Overview of major

marine pollution incidents worldwide. Reports on marine pollution activities of United nations and other global intergovernmental agencies. Reports on national activities in marine pollution. Reports on marine pollution activities of non-governmental organizations. Reports on main international and regional legal instruments concerning marine pollution. Directory of organizations in back.

OCEAN YEARBOOK. University of Chicago Press, Chicago. Each yearbook has articles on aspects of the ocean policy including pollution. Tables in back, including offshore oil and natural gas production and merchant fleet sizes. Directories

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An essential guide is the CALIFORNIA ENVIRONMENTAL LAW HANDBOOK. Richard J Denney et al. 5th ed. 1991. Government Institutes, Rockville, Maryland. The Handbook is a general guide to statutes, regulations, agency policies, and court decisions that comprise environmental regulation in California. With regard to marine pollution, the Handbook covers state environmental agencies, water pollution control, waste release reporting into California waters, oil spill prevention and response, California Environmental Quality Act, California Coastal Act, and environmental common law. Agency address/telephone directory printed on inside covers.

CALIFORNIA ENVIRONMENTAL DIRECTORY, A GUIDE TO ORGANIZATIONS AND RESOURCES. Thaddeus C Trzyna and Ilze Gotelli, eds. 4th ed. 1988. California Institute of Public Affairs, Claremont, California. Descriptive directory to federal, state, regional, local, and private environmental and natural resource agencies and programs.

CALIFORNIA WATER RESOURCES DIRECTORY. Roberta Childers. 2nd ed. California Institute of Public Affairs, Sacramento, California, 1991. Descriptive directory of federal, state, regional, local agencies involved with water including marine environment. Also lists associations & academic programs.

RESOURCE GUIDE TO STATE ENVIRONMENTAL MANAGEMENT. R Steven Brown and L Edward Garner. 1988. Council for State Governments, Lexington, Kentucky. Has organizational charts and names/addresses/telephone numbers for state environmental agencies. Not an annual publication so it is less reliable.

CALIFORNIA, AN ENVIRONMENTAL ATLAS & GUIDE. Bern Kreissman. 1991. Bear Klaw Press, Davis, California. The map atlas locates, maps, and lists those features of California of most

interest to the environmental community. Thus, it serves as a map-oriented guide to California environmental features and agencies including: Dept of fish and Game, State Water Resources Control Board, bays, islands, coastal wetlands, kelp forests, habitat areas, underwater parks, artificial reefs, marine life refuges, ecological reserves, and, marine and estuarine sanctuaries. Has directories of federal, state, regional, county, and private environmental agencies.

ENVIRONMENTAL TELEPHONE DIRECTORY. Annual publication. Government Institutes, Rockville, Maryland. Environmental hotlines are listed inside front and back covers. Telephone/address directory covers US senators and representatives with environmental aides, US Senate and House Committees and Subcommittees, EPA, state environmental agencies, and, individuals and offices in other federal Executive (including the National Oceanic and Atmospheric Administration), Legislative and independent agencies. GUIDE TO STATE ENVIRONMENTAL PROGRAMS. Deborah H Hessup. 2nd ed. 1990. Bureau of National Affairs, Washington DC. California section is on pages 79-95. Gives an overview of each state's environmental organizational scheme with agency names, addresses, and telephone numbers. Details the agency assigned for reporting spills and the "first contact" office for the regulatory permit process, including an overview of the permit fee structure. General, readable overview.

DIRECTORY OF NATIONAL ENVIRONMENTAL ORGANIZATIONS. John C Brainard, ed. 4th ed. US Environmental Directories, PO Box 65156, St Paul MN 55165. Descriptive directory of national environmental organizations. Subject index provides access to those organizations concerned with "oceans and marine environment" and "shorelines and coastal areas".

THE NATURE DIRECTORY, A GUIDE TO ENVIRONMENTAL ORGANIZATIONS. Susan D Lanier-Graham. Walker and Company, New York, 1991. Descriptive directory of environmental organizations with extensive descriptions, including those ocean-related.

YOUR RESOURCE GUIDE TO ENVIRONMENTAL ORGANIZATIONS. John Seredich, ed. Smiling Dolphins Press, Irvine, California, 1991. Descriptive directory of environmental organizations, governmental and non-governmental, with extensive descriptions, including ocean-related organizations.

DIRECTORY OF ENVIRONMENTAL INFORMATION SOURCES. Thomas FP Sullivan, ed. 3rd ed. Government Institutes, Rockville, Maryland, 1990. Indispensable environmental information

resource guide to federal agencies, state agencies, professional/scientific/trade organizations, newsletters/magazines/periodicals, and databases. Environmental hotlines listed inside front and back covers.

INFORMATION RESOURCES DIRECTORY, US ENVIRONMENTAL PROTECTION AGENCY. 2nd ed. EPA Office of Information Resources
Management, Washington DC, 1989. Available from NTIS as
document number PB 90-132192ACS. Indispensable guide to the
EPA and to some non-EPA resources. Chapters cover: EPA
overview and organization, addresses, mailcodes; EPA
information systems; EPA contacts; hotlines, bulletin boards,
clearinghouses; EPA libraries; EPA documents; non-EPA federal
environmental contacts; environmental interest groups;
environmental acronyms; environmental glossary.

OFFSHORE INFORMATION GUIDE. Arnold Myers. 3rd ed. 1988. ASR Books, 31 Bridge St, Berkhamsted, Herts HP4 2EB, UK. Guide to offshore oil information, though with a British slant. Has bibliography on offshore literature. Descriptive directory of information services and providers relevant to offshore oil: organizations, online databases, publishers, societies, research organizations,

GUIDE TO THE PETROLEUM REFERENCE LITERATURE. Barbara C Pearson and Katherine B Ellwood. Libraries Unlimited, Littleton, Colorado, 1987. As the title says, this is the book to check to determine where to find petroleum information. Relevant for offshore oil information.

DIRECTORY OF MARINE DRILLING RIGS. Annual in September issue of OCEAN INDUSTRY. Gulf Publishing, PO Box 2608, Houston TX 77252-2608. 713-529-4301. Fax: 713-520-4433. Annual listing of offshore oil drilling rigs (669 rigs in 1991). Technical specifications are detailed for each rig including a color picture. An index to rig names is provided.

PACIFIC COAST OIL DIRECTORY. Petroleum Publishers, 222 So Brea Blvd, Brea, California 92621. Directory of Pacific coast oil industry and related associations, government agencies, etc.

#### Indexes/abstracts

MARINE POLLUTION RESEARCH TITLES. Marine Pollution Information Centre, Plymouth Marine Laboratory, Citadel Hill, Plymouth PL1 2PB, Devon UK. Telephone: 0752-222772. Fax: 0752-226865. Marine Pollution Research Titles is a current-

awareness publication for marine and estuarine pollution, covering approx 3200 citations per year. Abstracts are not provided in this publication. There is no indexing other than the subject-arrangement of citations in sections: general, petroleum, metals, radioactivity, other chemicals, biological wastes, heat, and, solids. Annual subscription of twelve issues costs \$155 surface mail and \$180 airmail. Useful publication for current awareness of the marine pollution literature, but tedious for retrospective coverage due to lack of indexing or cumulative annual index.

AQUATIC SCIENCES AND FISHERIES ABSTRACTS, PART THREE. AQUATIC POLLUTION AND ENVIRONMENTAL QUALITY. Cambridge Scientific Abstracts, 7200 Wisconsin Ave, Bethesda MD 20814. 7751. Fax 301-961-6720. Aquatic Sciences and Fisheries Abstracts is commonly referred to by its acronym, ASFA. ASFA Part 3 provides 6000 citations with abstracts each year; has subject, geographic, taxonomic, and author indexes and a cumulative annual index. ASFA Part 3 covers all aspects related to pollution and environmental quality of aquatic environments (including freshwater): pollution monitoring, characteristics and fate, effects on organisms and environmental impact, prevention and control, man-made and natural environmental changes, conservation, wildlife management, recreation, and public health. ASFA Part 3 is produced from the ASFA database which is the premier marine science database. ASFA database is published in cooperation with United nationals Environment Programme, United Nations Office for Ocean Affairs and the Law of the Sea, The Food and Agriculture Organization of the UN, and the Intergovernmental Oceanographic Commission. The publisher, Cambridge Scientific Abstracts, supplies most of the references for the database with a smaller percentage provided by a worldwide network of input centers at various institutions. ASFA database may have spotty coverage of journal issues and backlogs; database producer is working to better track journal issues indexed and manage workflow better. Some of coverage problems due to unwieldy nature of joint creation of a database with many input centers. ASFA Part 3 started in Before 1990, aquatic pollution and environmental quality was covered in both Part One (Biological Sciences and Living Resources) and Two (Ocean Technology, Policy, and Non-Living Resources). Excellent publication for currentawareness and retrospective coverage of the literature (due to cumulative annual index). Costs \$225 per year for 6 issues plus annual cumulative index. EXCELLENT VALUE FOR THE MONEY.

SELECTED WATER RESOURCES ABSTRACTS. Water Resources Division, US Geological Survey, MS 425. Reston VA 22092. Available for subscription from NTIS, 5285 Port Royal Rd, Springfield VA 22161. Annual subscription of twelve issues costs \$170; cost including annual cumulative indexes is \$200. Provides abstracts of water resources literature and includes the marine environment as it relates to water resources and the impact of man. Covers effects of sewage and ocean dumping on marine environment. Finding references from its indexes is not straight forward and takes practice.

MARINE AFFAIRS BIBLIOGRAPHY. University of Virginia Law Library, Charlottesville VA 22901. 804-924-3384. An index to marine law and policy literature and includes coverage of law and policy as related to marine pollution. Useful because it indexes legal journals as well as marine science journals. Citations are arranged by subject and indexed by geography and author in the rear; abstracts are not provided. Annual subscription of four issues is \$95.

GLOBAL MARINE POLLUTION BIBLIOGRAPHY: OCEAN DUMPING OF MUNICIPAL AND INDUSTRIAL WASTES. Michael A Champ and P Kilho Park. IFI/Plenum, New York, 1982. Subject-indexed bibliography of 1742 references on marine waste disposal. Dated but useful for background research since its timespan goes back before some databases.

#### Hotlines

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CALIFORNIA EMERGENCY RESPONSE COMMISSION: 800-852-7550. The state Office of Emergency Services is the designated recipient of spill reports.

EPA PUBLIC INFORMATION CENTER: 202-260-7751. Refers to appropriate EPA offices to answer questions about EPA and its programs and activities.

US COAST GUARD NATIONAL RESPONSE CENTER: 800-424-8802. 24-hour hotline responds to accidental releases of oil and hazardous substances, and chemical spills.

POLLUTION PREVENTION INFORMATION CLEARINGHOUSE: 703-821-4800. Provides technical, policy, programmatic, legislative, and financial information dedicated to reducing industrial pollutants.

WETLANDS PROTECTION HOTLINE: 800-832-7828. Intended as central point of contact to provide a wide range of oral information on wetlands protection efforts involving EPA and

other public and private programs.

STRANDED MARINE MAMMALS IN CALIFORNIA: 213-514-6199. Brad Hanson, National Marine Fisheries Service, 300 S Ferry St, Terminal Island CA 90731.

# Information Centers

OIL SPILL PUBLIC INFORMATION CENTER, 645 G St, Anchorage Alaska 99501. 800-283-7745. Fax:907-276-7178. Oil Spill Public Information Center provides public access to information on the Exxon Valdez oil spill. Using the Center's library collection and other information resources, the Center provides information by telephone, fax, or mail. The Center can provide reference service and bibliographies of oil spill information in its collection.

NOAA CENTRAL LIBRARY, 6009 Executive Blvd WSC-4, Rockville MD 20852. 301-443-8332. The NOAA Library provides library services to NOAA and is available for public use. Extensive library collection; largest in the world for marine and atmospheric sciences.

MARINE POLLUTION INFORMATION CENTRE, Plymouth Marine Laboratory, Citadel Hill, Plymouth PL1 2PB, Devon UK. Telephone: 0752-222772. Fax: 0752-226865. The Marine Pollution Information Centre has a library of over 50,000 items and provides information services in the field of marine and estuarine pollution, including the detection, analysis and removal of pollutants, levels of pollutants in sea water, sediments and organisms, and the biological effects of pollutants. Legal, economic and social aspects are excluded. In addition to being open to visitors, the Centre provides literature searches and bibliographies for customers; for simple inquiries, there are no charges. The Centre publishes Marine Pollution Research Titles.

OCEAN AND COASTAL LAW CENTER LIBRARY. School of Law, University of Oregon, Eugene, Oregon 97403-1221. 503-346-1567. Fax:503-346-1564. The Ocean and Coastal Law Center Library's collection emphasizes the legal aspects of marine resources development and marine pollution, ocean policy and international law of the sea. This specialized collection is valuable because it brings together in one location specialized legal publications and relevant material from scientific disciplines. Reference service is available and photocopies are provided at cost.

### Organizations and agencies

The state SECRETARY OF ENVIRONMENTAL AFFAIRS is a cabinet-level advocate for state resource management and serves as liaison between the governor and the boards. This agency also develops and implements state policy on offshore oil development.

State governmental responsibility for implementing and enforcing water pollution law (adopting specific policies and regulations, issuing orders and assessing penalties, instigating court actions) is the STATE WATER RESOURCES CONTROL BOARD (SWRCB) [901 P St, PO Box 100, Sacramento CA 95801. 916-332-3132] and the REGIONAL WATER QUALITY CONTROL BOARDS (RWQCB). The primary statute giving these agencies broad powers to protect water quality is the Porter-Cologne Water Quality Act which implements state responsibilities under the federal Clean Water Act.

SWRCB is an agency under the Secretary of Environmental Affairs and coordinates water quality and water rights. SWRCB covers bays and estuaries in addition to the ocean and freshwater. The EPA delegates its full authority to the SWRCB for carrying out provisions of the federal Clean Water Act. In directing state policy and plans for water quality, current SWRCB policies and plans include California Ocean Plan; Plan for Control of Temperature in Coastal and Interstate Waters and Enclosed Bays and Estuaries; Maintaining High Quality of State Waters Policy; Coastal Marine Environment Policy; and, Enclosed Bays and Estuaries Policy. SWRCB's Division of Water Quality administers state and federal Clean Water grant programs for building and upgrading sewage treatment facilities.

RWQCBs divide the state into nine regions and regulate and plan water quality. They implement water quality control plans, issue waste discharge requirements specifying minimum acceptable discharges, issue cease-and-desist orders to curtail hazardous waste releases, review wastewater treatment plants, etc.

The state DEPT OF FISH AND GAME, through the OIL SPILL RESPONSE ADMINISTRATOR, coordinates prevention, contingency planning and response actions for marine oil spills. This Administrator position was newly created by the 1990 Lempert-Keene-Seastrand Oil Spill Prevention and Response Act. The Act also addresses oil spill liability and penalties. The Dept of Fish and Game is concerned with living marine

resources and has a Marine Resources Branch.

The OFFICE OF EMERGENCY SERVICES in the state Governor's Office maintains a central notification system to facilitate oil spill response: 800-852-7550.

The state RESOURCES AGENCY (1416 9th St Suite 1311, Sacramento CA 95814. 916-445-5656) is a cabinet-level super agency in the state and has several specific departments underneath it eg California Coastal Commission. The Resources Agency oversees the implementation of the California Environmental Quality Act which mandates environmental impact reports.

The National Oceanic and Atmospheric Administration's OCEAN POLLUTION DATA AND INFORMATION NETWORK [OPDIN; Ocean Pollution Data and Information Network, Central Coordination and Referral Office, National Oceanographic Data Center, NOAA/NESDIS E/OC24, 1825 Connecticut Ave NW, Washington DC 20235. 202-606-4539] coordinates and facilitates access to ocean pollution data and information generated by eleven participating federal departments and agencies. OPDIN provides products and services to scientists, managers, and others who need data and information about marine pollution. CCRO maintains databases of federal programs, projects, scientists, managers, literature references, systems and services and search them in response to requests. Some of OPDIN's in-house databases are the National Marine Pollution Information System (information on federally funded pollution projects); Guide to Marine Pollution Related Data (types of data, geographic location, oceanographic zone); Handbook of Federal Systems and Services (information on federal systems and services with marine pollution field data or information); Mussel Watch literature database; and, access to commercial with references to marine pollution literature. The National Marine Pollution Information System can be used to find expert contacts and find out current federal marine pollution research activity. Some of the information in the databases is available in printed publications available for free from OPDIN. OPDIN is managed by the Central Coordination and Referral Office (CCRO) with NOAA's National Oceanographic Data Center. OPDIN's products and services partially fulfill NOAA's mandate in the National Ocean Pollution Planning Act.

NOAA's OFFICE OF OCEAN AND COASTAL RESOURCE MANAGEMENT [1825 Connecticut Ave NW, Washington DC 20235. 202-673-5126] has a Pacific Regional Manager responsible for certifying

California's coastal management program administered by the California Coastal Commission under the federal Coastal Zone Management Act.

CALIFORNIA COASTAL COMMISSION (45 Fremont St Suite 2000, San Francisco CA 94105. 415-904-5200) is an agency within the state Resources Agency. It plans and manages the coastal zone and implements the 1976 California Coastal Act and provisions of the federal Coastal Zone Management Act. Commission oversees coastal development and ensures that state coastal policies are reflected in county coastal programs consisting of land use plans and ordinances regarding access, protection of environmentally sensitive land and water areas, industrial development, port expansion, etc. After the Commission approves a local coastal program, regulation of coastal development is delegated to local government. The Commission reviews proposed federal offshore drilling activities to ensure that these activities conform to California's Coastal Management Program. The Commission operates a Coastal Resources Information Center acting as a central clearinghouse for coastal studies and data.

SOUTHERN CALIFORNIA COASTAL WATER RESEARCH PROJECT (SCCWRP), 646 West Pacific Coast Highway, Long Beach, CA 90806. 213-435-7071. Fax 213-432-2171. SCCWRP is a scientific organization founded in 1969 whose objective is to understand the ecology of the coastal waters of southern California. SCCWRP is primarily concerned with the effects of the ocean discharge of municipal wastewater on sea life. SCCWRP started under a joint powers agreement among five local government agencies (Ventura County, Cities of San Diego and Los Angeles, and County Sanitation Districts of Los Angeles and Orange Counties) to sponsor environmental studies. Control is delegated to a commission of civic leaders and elected officials who are to reflect public concern for environmental quality, and, a consulting board of scientists provides overall research guidance. Financial support is also provided from EPA grants. SCCWRP sponsors seminars, SCCWRP staff author scientific papers, and, SCCWRP provides funds to graduate students. SCCWRP lists its research publications in a Contribution List and has a library. SCCWRP's 1988-1989 Annual Report lists marine outfalls along southern California coast with data on flow, concentration of effluent constituents, and level of treatment.

CENTER FOR MARINE CONSERVATION, 1725 DeSales St NW, Washington DC 20036. 202-429-5609. Perhaps the foremost non-profit environmental organization dedicated to protection

of endangered marine wildlife and habitats. One of leading advocates for protection and enlightened use of the ocean. Plays a leading role in the fight to stop marine debris, plastics, and marine wildlife entanglement. Organizes studies and coastal cleanups, publishes books, produces educational material. Manages NOAA's Marine Debris Information Offices: west coast Marine Debris Information Office is c/o Center for Marine Conservation/Pacific Region, 312 Sutter St #606, San Francisco, CA 94108. 415-391-6204.

The US DEPT OF INTERIOR'S MINERALS MANAGEMENT SERVICE (MMS), through its PACIFIC OUTER CONTINENTAL SHELF office [770 Paseo Camarillo, Camarillo, CA 93010. 805-389-7520. Fax 805-389-7637] administers petroleum and other mineral leases on the Pacific continental shelf. MMS is responsible for evaluation, classification, environmental review, leasing, inspection, and enforcement of, as well as collection of royalties and other revenues from offshore petroleum and other mineral operations on the outer continental shelf (beyond three mile state territorial limits). The Federal OCS encompasses 1.4 billion acres, of which 33 million acres were under lease to oil and gas exploration, development, and production companies during 1990. MMS POCS has databases available corresponding to printed publications, eg Ecology of Southern California Bight, Fisheries Species and Oil/Gas Platforms Offshore California, Environmental Studies Program.

MMS publishes numerous reports, including:

PACIFIC UPDATE, OUTER CONTINENTAL SHELF OIL & GAS ACTIVITIES. US Dept of the Interior, Minerals Management Service. Annual. [Available from Offshore Information & Publications, Minerals Management Service MS 4610, 381 Elden St, Herndon VA 22070-4817. 703-787-1080]. For Pacific region, this guide reviews offshore geology, lists estimated reserves and production statistics, reviews history and status of Pacific offshore lease sales, summarizes postlease activity, and covers pipelines, refineries, and tanker shipping. Useful overview of offshore oil drilling with many statistics.

MANAGING OIL AND GAS OPERATIONS ON THE OUTER CONTINENTAL SHELF. US Dept of the Interior, Minerals Management Service, 1986. [Available from Offshore Minerals Management MS 646, Minerals Management Service, Washington DC 20240]. This booklet summarizes MMS's involvement in offshore oil and gas; it describes activities following a lease sale, from plan review and approval, through drilling and production, to lease relinquishment. The booklet introduces MMS and

offshore petroleum development, reviews statutory and regulatory authority, summarizes the leasing process, covers plans and permits, and, inspection and enforcement.

LEASING ENERGY RESOURCES ON THE OUTER CONTINENTAL SHELF. US Dept of the Interior, Minerals Management Service, 1987. [Available from Offshore Minerals Management MS 646, Minerals Management Service, Washington DC 20240]. This booklet reviews the leasing process for oil and gas on the outer continental shelf, including background, leasing procedures, statutory and regulatory authority, and revenues.

OCS NATIONAL COMPENDIUM: OUTER CONTINENTAL SHELF OIL AND GAS INFORMATION. US Dept of Interior, Minerals Management Service, biennial. [Available from Offshore Information & Publications, Minerals Management Service MS 4610, 381 Elden St, Herndon VA 22070-4817. 703-787-1080]. Provides overviews of each OCS offshore drilling Region including geology, leasing program, postlease drilling activities, oil and gas transportation and onshore facilities,

FEDERAL OFFSHORE STATISTICS: LEASING, EXPLORATION, PRODUCTION AND REVENUES. US Dept of Interior, Minerals Management Service, biennial. [Available from Offshore Information & Publications, Minerals Management Service MS 4610, 381 Elden St, Herndon VA 22070-4817. 703-787-1080]. Provides statistics on federal offshore lands, offshore leases, offshore exploration and development, offshore production and revenue, reserves and resources, and, oil pollution in US and international waters. Presents tables on: oil spills greater than one barrel from offshore facilities on federal leases, oil spills of 1000 barrels or more from offshore facilities on federal leases, drilling and nondrilling blowouts from federal offshore oil wells, oil tanker spills worldwide.

ENVIRONMENTAL STUDIES PROGRAM BIBLIOGRAPHY 1973-1987. William C Johnson et al. 1989. US Dept of Interior, Minerals Management Service, Branch of Environmental Studies. Bibliography of environmental studies conducted by MMS to ensure that proposed offshore energy development will not harm the environment. MMS maintains a database that produces this bibliography.

ENVIRONMENTAL PROTECTION AGENCY (EPA) develops national programs, technical policies, and regulations for water pollution control. EPA administers a grant program for construction of municipal sewage treatment plants. EPA delegates to State Water Resources Control Board enforcement

of federal water quality requirements.

## Statutes and regulations

A publisher in Maryland, Government Institutes Inc., (4 Research Place, Suite 200, Rockville, Maryland. 20850. 301-921-2355), is the primary publisher of state and federal environmental law handbooks.

CALIFORNIA ENVIRONMENTAL LAW HANDBOOK. Attorneys of Baker & Hostetler, McCutchen Black. 5th ed. 1991. Government Institutes, Rockville, Maryland.

The Handbook is a general guide to statutes, regulations, agency policies, and court decisions that comprise environmental regulation in California. With regard to marine pollution, covers state environmental agencies, water pollution control, waste release reporting, oil spill prevention and response, California Environmental Quality Act, California Coastal Act, and environmental common law.

A three-volume set, ENVIRONMENTAL STATUTES, ENVIRONMENTAL LAW HANDBOOK, and ENVIRONMENTAL REGULATORY GLOSSARY, provide complete text of federal environment laws, authoritative explanations of them, and a dictionary of terms. Federal statutes include the Clean Water Act, Oil Pollution Act, and, Pollution Prevention Act. The Handbook's authoritative discussions cover the fundamentals of environmental law, enforcement and liabilities, water pollution control, and toxic substances. The Glossary identifies basic regulatory concepts and terminology; definitions reflect use of the term in a specific regulatory or statutory context.

- 1) ENVIRONMENTAL STATUTES. 1991 ed. Government Institutes, Rockville, Maryland.
- 2) ENVIRONMENTAL LAW HANDBOOK. J Gordon Arbuckle et al. 11th ed. 1991. Government Institutes, Rockville, Maryland.
- 3) ENVIRONMENTAL REGULATORY GLOSSARY. G William Frick et al. 5th ed. 1990. Government Institutes, Rockville, Maryland.

OCS REGULATIONS RELATED TO MINERAL RESOURCE ACTIVITIES ON THE OUTER CONTINENTAL SHELF. 1988. US Dept of Interior, Minerals Management Service, Offshore Information & Publications, MS 4610, 381 Elden St, Herndon VA 22070-4817. 703-787-1080. Text in OCS Regulations is excerpted from the Code of Federal Regulations. Regulations implement mandates given to federal

agencies in legislation and each agency publishes its regulations in the Code of Federal Regulations. Regulations from various agencies pertaining to the outer continental shelf (OCS) are compiled in this book. Each OCS regulation in the book cites the Federal Register where the regulation was published so that the user can find the regulation's preamble. In the Federal Register, a final rule is accompanied by a preamble providing a summary, agency contacts, and supplementary information on that rulemaking. Preambles are useful for researching individual regulations.

AND TWO IF BY SEA, FIGHTING THE ATTACH ON AMERICA'S COASTS. Beth Millemann. Coast Alliance, Washington DC, 1986. Very-readable guide to the Coastal Zone Management Act and other coastal laws. Chapter coverage includes coastal pollution, offshore resource development, and, ocean dumping. Includes directory of state & national coastal zone management offices and environmental organizations involved with coastal issues.

#### Databases

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Local information rarely covered in usual information resources and databases. Have to check regional, county, city agencies and departments for information.

NATIONAL MARINE DEBRIS DATABASE. c/o Center for Marine Conservation/Chesapeake Region, 306A Buckroe Ave, Hampton VA 23664. 804-851-6734. Starting with 1988, database contains data for 77 types of marine pollutant items (eg plastic bags, glass bottles, styrofoam cups, wood pallets) collected during international coastal cleanup campaigns each fall.

WORLDWIDE TANKER SPILL DATABASE. c/o US Dept of Interior, Minerals Management Service, Office of Statistics and Information, Technical Analysis Group, Mail Stop 4610, 381 Elden St, Herndon, VA 22070-4817. 703-787-1080. The Worldwide Tanker Spill database covers oil tanker spills worldwide and incorporates US Coast Guard data for US waters. Oil spills can be cargo or fuel for the petroleum carrier and must be at least 1000 barrels in size. The database differentiates between crude and refined petroleum product spillage and provides annual totals. The database also includes spills from barges and spills occurring on inland waters (primarily within US).

MINERAL MANAGEMENT SERVICE databases (see above)

NOAA/EPA LIBRARIES AND INFORMATION NETWORK CATALOG

(NOAALINC). NOAALINC is a CD-ROM catalog of library holdings in the NOAA and EPA libraries. NOAALINC is available for walkin users in NOAA and EPA libraries. NOAALINC is also available for dialup use FOR ONLY ONE USER AT A TIME. NOAALINC dialup supports up to 9600 baud access and it is best used at 9600 baud; 2400 baud access will become insufferably slow after awhile. To ensure access, try dialing up at night from the Pacific coast well after the east coast has gone to bed. Set telecommunications software to: ANSI terminal emulation, 8 bits, 1 stop bit, no parity. Dial 800-352-7281. Press <enter> twice to establish contact and type ANSI as the user id. Follow menu instructions from there. You can set up your own access to NOAALINC and its NOAA and EPA library holdings by purchasing the compact disc (CD-ROM). Available for purchase from NOAA Central Library, 6009 Executive Blvd WSC-4, Rockville MD 20852. 301-443-8332.

AQUATIC SCIENCES AND FISHERIES ABSTRACTS. Cambridge Scientific Abstracts, 7200 Wisconsin Ave, Bethesda MD 20814. 800-843-7751. Fax 301-961-6720. File 44 on Dialog with ridiculously expensive citation charges online. Current Dialog price is \$1.70/min and \$1.10/citation. Referred to by its acronym -ASFA. Database started in 1978 and coverage of publication year starts approx 1977. In addition to coverage of living and non-living marine resources, ocean technology, fisheries and aquaculture, ASFA covers all aspects related to pollution and environmental quality of aquatic environments (including freshwater): pollution monitoring, characteristics and fate, effects on organisms and environmental impact, prevention and control, man-made and natural environmental changes, conservation, wildlife management, recreation, and public health. The ASFA database is the premier marine science database and is published in cooperation with United nationals Environment Programme, United Nations Office for Ocean Affairs and the Law of the Sea, The Food and Agriculture Organization of the UN, and the Intergovernmental Oceanographic Commission. The publisher, Cambridge Scientific Abstracts, supplies most of the references for the database with a smaller percentage provided by a worldwide network of input centers at various institutions. ASFA database can have spotty coverage of journal issues and backlogs; database producer is working to better track journal issues indexed and manage workflow better. Some of ASFA's problems with coverage are due to unwieldy nature of joint creation of a database with many input centers. Very useful for its indexing of the aquatic environment covered by the citation; retrieval of marine environment references can be controlled by searching EN=MARINE. For pre-1978 coverage,

use Oceanic Abstracts (file 28 starts in 1964), Pollution Abstracts (file 41 starts in 1970), and Water Resources Abstracts (file 117 starts in 1968).

ASFA is available on compact disc (CD-ROM) for annual subscription price of \$1500. To start, have to purchase backfiles for the first year and then pay \$1500 for annual renewal starting with second year. 1978+ backfile costs \$5700; 1982+ backfile costs \$5000; 1988+ backfile costs \$2500. CD-ROM subscription useful to control online costs and if user base is sufficiently large to justify cost.

WATER RESOURCES ABSTRACTS. Water Resources Division, US Geological Survey, MS 425. Reston VA 22092. Dialog file 117; current price is \$1.50/min and \$0.45/citation. Starts with 1968 and printed version is entitled SELECTED WATER RESOURCES ABSTRACTS. Provides abstracts of water resources literature and includes the marine environment as it relates to water resources and the impact of man. Covers effects of sewage and ocean dumping on marine environment. Most useful for specifying before ASFA and Pollution Abstracts in Dialog OneSearch in order to reduce costs. Water Resources Abstracts' references are \$0.45 each whereas Pollution Abstracts is \$0.90 and ASFA is \$1.10. WATER RESOURCES ABSTRACTS is available on compact disc from several vendors including Cambridge Scientific Abstracts; least expensive source (\$625/yr) is NISC, Wyman Towers Suite 6, 3100 St Paul St, Baltimore MD 21218. 301-243-0797. Fax:301-243-0982.

POLLUTION ABSTRACTS. Dialog file 41; current cost is \$1.70/min and \$0.90/citation. Pollution Abstracts is produced by Cambridge Scientific Abstracts and comes from Cambridge's mother database which also produces ASFA file 44. Thus Pollution Abstracts' coverage of marine pollution is redundant with ASFA's but extends further back into time. Pollution Abstracts starts with 1970 and ASFA starts with 1978. Pollution Abstracts' references cost \$0.20 less so it should be specified before ASFA in Dialog OneSearch in order to reduce costs.

OCEANIC ABSTRACTS. Dialog file 28; current cost is \$1.70/min and \$1.10/citation. Oceanic Abstracts is produced by Cambridge Scientific Abstracts and comes from Cambridge's mother database which also produces ASFA file 44. Thus Oceanic Abstracts' coverage of marine pollution is redundant with ASFA's but extends further back into time. Oceanic Abstracts starts with 1964 and ASFA starts with 1978. Oceanic Abstracts should be searched only when retrospective

coverage before 1978 is needed.

NTIS. National Technical Information Service, 5825 Port Royal Rd, Springfield VA 22161. Order NTIS publications from 703-487-4650. Dialog file 6; current cost is \$1.40/min and \$0.65/citation. NTIS is a federal clearinghouse for technical reports from government-sponsored contract research. The NTIS database is a valuable resource for marine pollution information and much of what it contains is not covered well by other databases. However libraries will have few of the technical reports cited in the NTIS database and desired reports may have to be ordered from NTIS. The California State Library maintains an NTIS collection and will provide free microfiche copies to requesting libraries. In the past few years, ASFA has incorporated relevant NTIS references but ASFA costs more per minute and per citation. Therefore list NTIS before ASFA in a Dialog OneSearch if coverage of technical report literature is desirable.

Other water and environmental databases -- ENVIRONMENTAL BIBLIOGRAPHY, ENVIROLINE, WATERNET, GEOBASE (includes Ecological Abstracts) BIOSIS, ZOOLOGICAL RECORD -- are useful to specify in a Dialog OneSearch before ASFA and Pollution Abstracts in order to reduce costs and ensure comprehensive retrieval.

#### Search process

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Marine pollution information can be found in several databases. It is best to search several databases to ensure comprehensive retrieval AND TO SAVE MONEY. Dialog is the databank of preference for most marine pollution information needs; contact Dialog at 800-334-2564. While one or two databases can be searched to retrieve most of the marine pollution literature, several databases can be searched to select inexpensive references preferentially over expensive references AND ENSURING COMPREHENSIVE RETRIEVAL. Use Dialog's OneSearch and Remove Duplicates capabilities to search several databases simultaneously and remove most of duplicated citations. Order of specification of databases in OneSearch instructs Dialog which duplicate references to remove; references from the first databases specified are kept preferentially over databases specified later in Dialog's OneSearch "begin" command. In this way, you can specify that the more expensive duplicates be removed while keeping the less expensive references.

BRS databank offers access to some of the databases mentioned

above, notably ASFA (file CSAL) and NTIS. However BRS doesn't offer simultaneous database searching like Dialog and doesn't offer as many environmental databases. If online access to ASFA is desired at least cost possible, BRS After Dark service offers CSAL version of ASFA for \$0.47/min and \$0.40/citation. However BRS After Dark has a monthly minimum charge of \$12. BRS After Dark access is after 5pm. Call BRS at 800-955-0906 for more information.

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Dialog database charges are based on connect time and citations and range from \$1.50-\$2/min and \$0.50-\$1.10/citation. Therefore minimizing connect time and retrieval of complete citations is essential. In specifying databases for Dialog's OneSearch, arrange databases by price and give priority to presence of abstracts. Save on citation charges by searching the databases with the lowest-price citations first followed by databases with higher-priced citations. Take citations with abstracts over citations alone. Abstracts are desirable and assist in screening out less interesting references so that fewer references will need to be located.

For example, begin a Dialog OneSearch for a marine pollution topic as follows:

b292,117,245,40,6,5,41,44,28,68,185

292=Geobase, abstracts, \$0.40/ref

117=Water Resources Abstracts, abstracts, \$0.45/ref

245=Waternet, abstracts, \$0.45/ref

40 =Enviroline, abstracts, \$0.45/ref

6 =NTIS, abstracts, \$0.65/ref

5 =BIOSIS, abstracts, \$0.75/ref

41 =Pollution Abstracts, abstracts, \$0.90

44 =Aquatic Sciences & Fisheries, abstracts, \$1.10!

28 = Oceanic Abstracts, abstracts, \$1.10!

68 =Environmental Bibliography, no abstracts, \$0.0/ref

185=Zoological Record, no abstracts, \$0.85

Since Oceanic Abstracts is redundant with ASFA, don't search Oceanic Abstracts (file 28) unless searching for pre-1978 information; Oceanic Abstracts starts with 1964. Aquatic Sciences & Fisheries Abstracts (file 44) starts with 1978 and has everything that Oceanic Abstracts covers except shipping.

Almost all marine pollution information in Pollution

Abstracts (file 41) is in Aquatic Sciences & Fisheries Abstracts (file 44). However references from Pollution Abstracts are \$0.20 cheaper so it should be specified in Dialog's OneSearch database order before Aquatic Sciences & Fisheries Abstracts. Pollution Abstracts goes back to 1979 so it is useful for coverage before Aquatic Sciences & Fisheries Abstracts starts in 1978.

NTIS citations are considerably less expensive than ASFA. Specify NTIS before ASFA in OneSearch if extensive coverage of technical report literature is desired.

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When searching, follow this strategy if using Dialog's Dialoglink telecommunication software:

1) Search broadly on relevant terms. Review some titles online to ensure relevance. Download retrieval as titles only specifying Dialog format 6. Logoff.

Read titles offline and select those that are relevant. You will subsequently retrieve the corresponding references. Edit downloaded title-only file so that only the file numbers and relevant database accession numbers remain. Edit the the file numbers and accompanying database accession numbers into a search strategy for uploading in order to retrieve desired references. For example,

t1647999/7 t1625800/7 b41 t12060675/7 t11688277/7 t11214522/7 t10493225/7 t09538685/7 t09354050/7 b44 t1123164/7 t1111355/7 t1104663/7 t1087416/7 t1068554/7 t1055558/7 logoff

b117

DOS file extension must be .SRC for Dialoglink to upload it.

Upload the edited search strategy to retrieve references corresponding to accession numbers eg t00056734/7.

Dialog's "type" command will result in online display of references; you can "print" references via Dialmail to save more money. References printed to Dialmail are available the next morning for downloading; Dialmail connect time is less expensive.

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Alternate strategy, or, if Dialoglink telecommunication software not available:

Download titles in format 6 and use Dialog's "logoff hold" if you can review titles offline in less than 30 minutes. When you log back onto Dialog within 30 minutes, your search results are still available. Use Dialog's DS command to ascertain that your search is still active and then "type" references corresponding to selected titles.

If title review will take longer than 30 minutes, download the titles in format 6 and use Dialog's "Save" command to save the search strategy for reuse. Review downloaded titles offline and then execute the saved search to end up with the same set of references. Type the numbers corresponding to selected titles.

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When title scanning, watch closely for duplicate titles that Dialog's Remove Duplicates did not remove. Dialog's Remove Duplicates feature is not 100% perfect due to variation among databases in handling titles. Do not get corresponding references for duplicate titles that Remove Duplicates missed.

Search broadly on a topic and don't spend too much time narrowing the search down. You can download approx 80 titles per minute at 2400 baud. Better to download 300 titles then to spend expensive connect time narrowing them down to the best 50. Use offline title scanning to narrow retrieval down; there is no connect time charge for offline title scanning.

Recall is important. Precision can become too expensive if it is time-consuming online. Best to go for recall while online and spend offline time scanning and selecting titles to get precision.

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Additional search tips:

Search on common name and taxonomic name of organism.

Be suspicious of zero results.

Think flexibly regarding variant wordings, eg tributyltin, TBT, organotin, tin.

Think flexibly regarding truncated words and always truncate as POLLUT? to retrieve: pollution, pollutant, pollutants, pollute, polluting, etc.

To comprehensively search for the marine environment, search these words: ocean? (truncated to retrieve ocean, oceans, oceanic), marine, sea, seawater, estuar? (truncated to retrieve estuary, estuarine, estuaries), coast, coastal, coasts, lagoon, lagoons, bay, bays, harbor, harbors, harbour, harbours, saltwater (to retrieve saltwater marshes).

To quick-search for the marine environment, search these words: ocean?, marine, sea, seawater, estuar?, coast, coastal, coasts, bay, bays.