

DOCUMENT RESUME

ED 200 456

SE 034 673

TITLE Water Quality Instructional Resources Information System (IRIS): A Compilation of Abstracts to Water Quality and Water Resources Materials. Supplement V.

INSTITUTION Ohio State Univ., Columbus, Ohio. Information Reference Center for Science, Mathematics, and Environmental Education.

SPONS AGENCY Environmental Protection Agency, Columbus, Ohio.; Environmental Protection Agency, Washington, D. C.

PUB DATE Mar 81

GRANT T-900710-03-0

NOTE 323p.; For related documents, see SE 034 413, ED 182 111, and ED 194 448-450.

AVAILABLE FROM EPA Information Dissemination Project, 1200 Chambers Rd., 3rd Floor, Columbus, OH 43212 (subscription \$12.00, \$4.00 each).

EDRS PRICE MF01/PC13 Plus Postage.

DESCRIPTORS Audiovisual Aids; Environmental Education; \*Information Dissemination; \*Instructional Materials; Pesticides; Technology; \*Water Pollution; Water Resources

IDENTIFIERS \*Waste Water Treatment; \*Water Quality

ABSTRACT

Presented are abstracts and indexes to selected materials related to wastewater treatment and water quality education and instruction. In addition, some materials related to pesticides, hazardous wastes, and public participation are included. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements in their programs. (CO)

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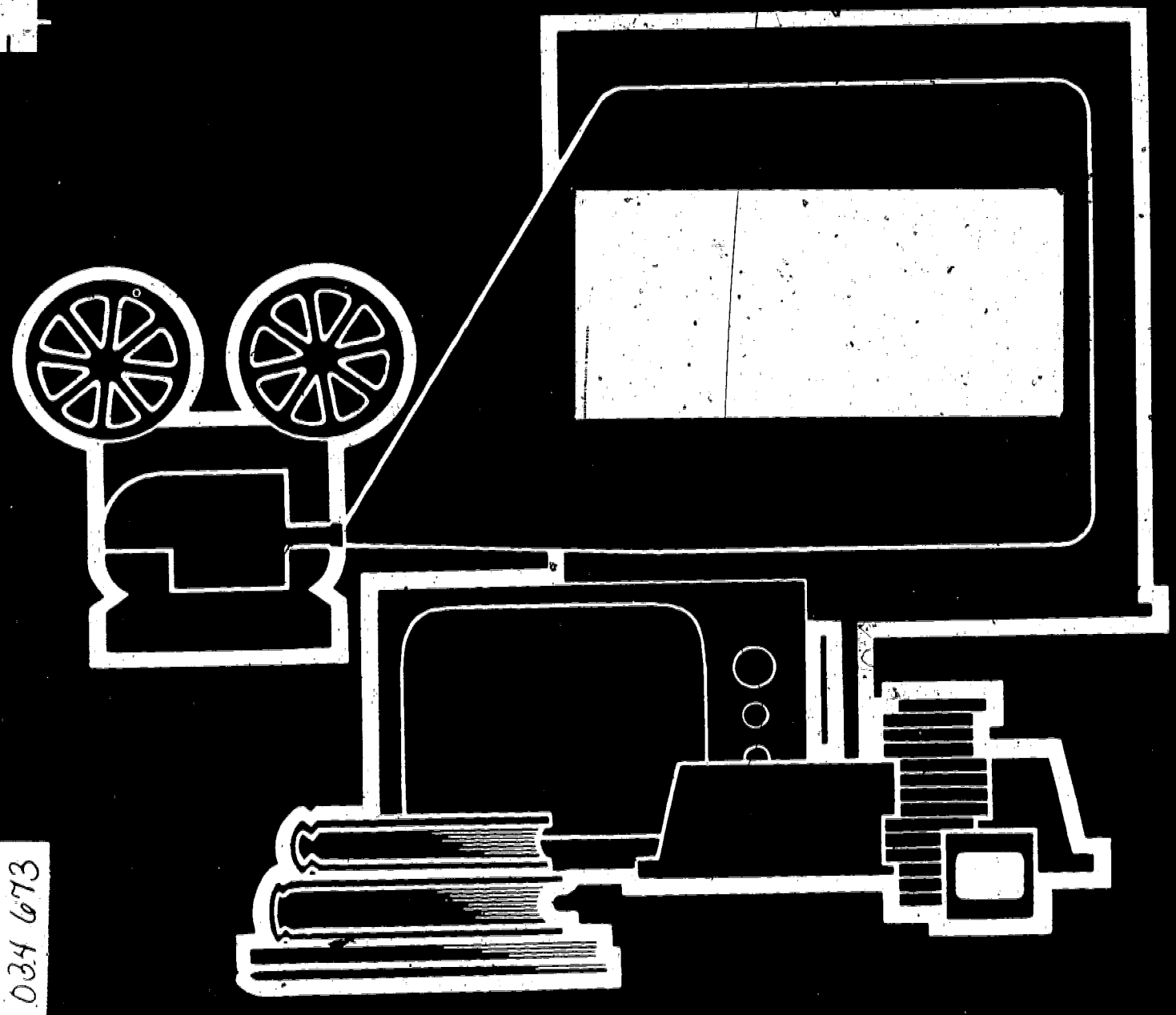
Water

# Water Quality Instructional Resources Information System

U.S. DEPARTMENT OF HEALTH,  
EDUCATION & WELFARE  
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Prepared by

EPA Information Dissemination Project  
SMEAC Information Reference Center  
1200 Chambers Road - 3rd Floor  
Columbus, Ohio 43212

as part of  
Grant No. T-900710-03-0

WATER QUALITY INSTRUCTIONAL  
RESOURCES INFORMATION SYSTEM (IRIS)

A Compilation of Abstracts  
to Water Quality and Water  
Resources Materials

Supplement V (1981)  
March, 1981

National Training and Operational Technology Center  
Office of Water Program Operations  
U.S. Environmental Protection Agency  
Cincinnati, Ohio 45268

March, 1981

This project has been financed (in part) with Federal funds from the U.S. Environmental Protection Agency, Office of Water Program Operations, National Training and Operational Technology Center, Cincinnati, Ohio, under grant identification number T-900710-03-0. The contents do not necessarily reflect the views and policies of the U.S. Environmental Protection Agency, nor does mention of trade names or commercial products constitute endorsement or recommendation for use.

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## Preface

This publication contains abstracts and indexes to selected materials related to wastewater treatment and water quality education and instruction. In addition, some materials related to pesticides, hazardous wastes, and public participation are included. Also included are procedures to illustrate how instructors and curriculum developers in the water quality control field can locate instructional materials to meet very general or highly specific requirements in their programs.

Supplements to this publication will be issued periodically.

For further information about these materials contact:

EPA Information Dissemination Project

1200 Chambers Road

Columbus, Ohio 43212

Telephone: (614) 422-6717

## I. General Information about Materials in IRIS.

### A. What types of materials are included in IRIS?

The EPA Information Dissemination Project (water) acquires, reviews, indexes, and announces both print (books, modules, units, etc.) and non-print (films, slides, video tapes, etc.) materials related to water quality and water resources education and instruction.

Materials selected must be available from some source for announcement. When materials are not readily available we attempt to make the materials available through some national information service for easier acquisition. In a few cases the EPA Information Dissemination Project is the source of the materials.

### B. How are materials entered into IRIS?

We request that people assist us in locating materials for the system. If you have materials you believe to be useful to others, please send two copies if possible to the:

EPA Information Dissemination Project  
1200 Chambers Road  
Columbus, Ohio 43212.

Materials are reviewed by the project staff. Availability of the material is checked, and the materials are abstracted and indexed. The abstract describes the contents of the material. The index terms (descriptors) are concepts or terms used to describe the contents and the form of the document. (See the Subject Index for a listing of those that have been used.) The index terms are useful for locating materials manually, such as with this compilation, and also by computer.

When items are processed they are entered on the IRIS (water) computer tape. This tape is maintained by the EPA Information Dissemination Project at The Ohio State University and is used for producing tapes for other information systems, publications, and for computer searches conducted at The Ohio State University.

### C. How can a user locate materials in IRIS?

#### 1. All materials placed in IRIS (water) Collection.

Materials entered into the IRIS (water) collection can be located in two ways: (1) by manual search of this compilation and similar ones to follow and (2) by computer.

The first compilation contained resumes of selected materials processed for the previous IRIS (water) collection and resumes of selected materials of items added to the IRIS (water) collection. A limited number of copies of the compilation in paper copy and microfiche are available free of charge as long as the supply lasts from the EPA Information Dissemination Project. After the free copies of the compilations are gone, copies will be available for purchase from the EPA Information Dissemination Project.

Quarterly updates of the compilation are available by subscription on a yearly basis beginning November, 1979. Information regarding an annual subscription to IRIS (water) Quarterly Compilations can be obtained by writing to the EPA Information Dissemination Project. A subscription to the quarterly supplements for 1979-80 is \$12.00 (within the U.S.). Price to Canada is \$14.00. Prices in other countries is \$20.00. Separate quarterly supplements are \$4.00 each.

The compilation and the quarterly supplements can be scanned and the subject index can be used for manual searches.

Computer tapes of the IRIS (water) collection can also be searched by both batch and on-line computer searches. The IRIS tapes are available for purchase from the SMEAC Information Reference Center. In addition, the IRIS tapes are available for searching through the Bibliographic Retrieval Services, Inc., (BRS). Any search service that currently subscribes to BRS is able to search the IRIS data base by on-line techniques. Individuals or agencies with computer terminals and telephone connection equipment can subscribe to BRS and do their own searches if they desire. Current plans are to update the IRIS tapes every three months.

Information regarding BRS may be obtained by writing or phoning BRS, Corporation Park, Building 702, Scotia, NY 12302, (518) 374-5011.

- Plans are being made to mount IRIS tapes with other on-line vendors. Information regarding this service will be announced in a future EPA IRC Bulletin and in mailings from the EPA Information Dissemination Project.
- 2. Materials placed in the Educational Resources Information System (ERIC)
  - A number of the materials processed for the IRIS (water) system are entered into the ERIC system and announced in Resources in Education (RIE). Resources in Education (RIE) is published monthly and is available from:

Superintendent of Documents  
U.S. Government Printing Office  
Washington, DC 20402

The current price is listed in the most recent issue of RIE. Check if a college or university library close to you has a copy. If they do not contact the EPA Information Dissemination for assistance.

Many libraries subscribe to RIE. Materials announced in RIE can be searched manually each month by scanning RIE or by checking the index terms in the back of each issue. Materials announced in RIE can be searched by computer also. ERIC computer tapes may be purchased outright, but most users of the tapes gain access



to them through three major database vendors, Lockheed (Dialog), Systems Development Corporation (Orbit), and Bibliographic Retrieval Services. For the addresses of search services in your state that can search these databases, contact the:

EPA Information Dissemination Project  
1200 Chambers Rd., Room 310  
Columbus, Ohio 43212

Most of the materials announced in RIE are available on microfiche (microfilm) at over 700 sites throughout the United States and the world. Users can view these materials on site at many locations to identify what they believe will be useful to them at no cost. Microfiche copies (or in most cases Xerox copies) can be ordered through the ERIC Document Reproduction Service. The address and order information is in the back of each issue of RIE. Xerox copies of many items related to water quality and resource education and training can also be ordered through the EPA Information Dissemination Project for 3¢ per page + \$1.00 per document.,

For information about locations of ERIC microfiche sites in your state, contact the EPA Information Dissemination Project.

A number of journal articles processed for the IRIS (water) system are entered into the ERIC system and announced in Current Index to Journals in Education (CIJE).

Current Index to Journals in Education is published monthly and is available from:

ORYX Press  
3930 East Camelback Road  
Phoenix, Arizona 85018

Many libraries subscribe to CIJE. Materials announced in CIJE can be searched manually each month by scanning CIJE or by checking the index terms in the back of each issue. Materials announced in CIJE can be searched by computer also. Refer to the previous discussion of RIE concerning computer searches.

Materials announced in CIJE can be located in journals at many university libraries.

Many of the articles can be obtained from University Microfilms. Current prices are \$6.00 for articles published before January 1976 and \$4.00 for articles published after January 1976. For further information write to:

UMI Article Reprint Department  
300 North Zeeb Road  
Ann Arbor, Michigan 48106

## II. How to Use the Compilation

### A. Description of Information in Resumes

Each resume is listed by EW number in numerical order in the resume section. Two samples of resumes are provided to explain the data fields in the resumes. Sample resume #1 is a sample resume of an item not entered in ERIC. Sample resume #2 is a sample resume of an item entered into ERIC; a few additional data elements are in these resumes and are explained.

#### 1. Sample resume of materials not entered into ERIC

- a. IRIS NUMBER: EW 005 089
- b. PUBLICATION DATE: AUG 79
- c. TITLE: A HANDBOOK OF KEY FEDERAL REGULATIONS AND CRITERIA FOR MULTIMEDIA ENVIRONMENTAL CONTROL.
- d. PERSONAL AUTHOR: GREENWOOD, D. R.; AND OTHERS
- e. DESCRIPTOR: \*ENVIRONMENTAL CONTROL; ENVIRONMENTAL LEGISLATION; \*FEDERAL REGULATIONS; \*FEDERAL CRITERIA; \*MULTIMEDIA ENVIRONMENTAL CONTROLS; OCCUPATIONAL HEALTH; \*POLLUTION CONTROL; \*REGULATIONS; \*STANDARDS; TOXIC SUBSTANCES
- f. DESCRIPTIVE NOTE: 272P.
- g. ABSTRACT: A SUMMARY OF MAJOR FEDERAL ENVIRONMENTAL REGULATIONS AND RECOMMENDATIONS AND THE LEGISLATIVE ACTS THAT AUTHORIZE THEM IS PRESENTED. QUANTITATIVE CONTROL LIMITS SPECIFIED BY FEDERAL AGENCIES ARE SUMMARIZED AND TABULATED. THE VARIOUS REGULATIONS, STANDARDS, AND CRITERIA ARE COMPARED. A SELECTED BIBLIOGRAPHY ADDRESSING FEDERAL ENVIRONMENTAL CONTROL ACTIVITIES IS INCLUDED.
- h. AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

- a. IRIS NUMBER -- this is the identification number sequentially assigned to materials as they are processed. Gaps in numbers mean that some items have been deleted, are being processed to add new information, or have been delayed in processing for some reason
- b. PUBLICATION DATE -- date material was published according to information on the material.
- c. TITLE
- d. PERSONAL AUTHOR -- person or persons who wrote, compiled, or edited the material. Up to two personal authors can be listed.
- e. DESCRIPTOR -- subject terms which characterize substantive contents and form of the materials. The major terms are preceded by an asterisk. Terms used to index all resumes in this compilation can be reviewed in the Subject Index.
- f. DESCRIPTIVE NOTE -- various items of information may be contained in this section. For print materials the number of pages is usually listed.

- g. ABSTRACT -- some early materials entered into IRIS did not have abstract information. All materials currently being entered into IRIS have an informative abstract that describes the contents of the item.
- h. AVAILABILITY -- information in this field indicates where the material can be obtained and the price of the material quoted the last time information was received from the source. Please note: Prices of nearly all materials are subject to changes and may not be accurate at the time a person orders a specific item.

2. Sample resume of material entered into ERIC (Resources in Education)

Item entered into ERIC (Resources in Education) will have a few additional data fields.

- IRIS NUMBER: EW002998
- a. ERIC NUMBER: ED151236
- PUBLICATION DATE: SEP 77
- TITLE: CHLORINATION. TRAINING MODULE 2.300.2.77.
- INSTITUTION CODE: ✓BBBQ8399
- SPONSORING AGENCY CODE: BBB15379; FGK21436
- DESCRIPTOR: \*CHEMISTRY; \*INSTRUCTIONAL MATERIALS; \*POST SECONDARY EDUCATION; SECONDARY EDUCATION; \*TEACHING GUIDES; \*UNITS OF STUDY; WATER POLLUTION CONTROL; \*CHLORINATION; \*WASTE WATER TREATMENT; WATER TREATMENT
- b. EDRS PRICE: EDRS PRICE MF-\$0.83 HC-\$3.50 PLUS POSTAGE
- DESCRIPTIVE NOTE: 60P. FOR RELATED DOCUMENTS, SEE SE 024 025-046
- c. ISSUE: RIEJUL78
- ABSTRACT: THIS DOCUMENT IS AN INSTRUCTIONAL MODULE PACKAGE PREPARED IN OBJECTIVE FORM FOR USE BY AN INSTRUCTOR FAMILIAR WITH CHLORINE. THE REASONS FOR CHLORINATION AND SAFE OPERATION AND MAINTENANCE OF GAS CHLORINE, DRY CALCIUM HYPOCHLORITE AND LIQUID SODIUM HYPOCHLORITE CHLORINATION SYSTEMS FOR WATER SUPPLY AND WASTEWATER TREATMENT FACILITIES ARE GIVEN. INCLUDED ARE OBJECTIVES, INSTRUCTOR GUIDES, STUDENT HANDOUTS AND TRANSPARENCY MASTERS. THE MODULE CONSIDERS PURPOSES OF CHLORINATION, PROPERTIES OF CHLORINE, METHODS OF CHLORINATION, SAFETY, MAINTENANCE OF CHLORINATION UNITS AND INTERPRETATION OF TEST RESULTS. (AUTHOR/RH)
- d. INSTITUTION NAME: KIRKWOOD COMMUNITY COLL., CEDAR RAPIDS, IOWA.
- SPONSORING AGENCY NAME: DEPARTMENT OF LABOR, WASHINGTON, D.C.; IOWA STATE DEPT. OF ENVIRONMENTAL QUALITY, DES MOINES.
- a. ERIC NUMBER -- the ED number indicates the document has been processed and entered into Resources in Education. This identification number is the number to use when ordering a document or when requesting information about a document.

- D. EDRS PRICE -- If material is available through the ERIC Document Reproduction Service, the price of the material when it was entered into the ERIC system and the form of the material is indicated. "MF" means microfiche; "HC" means Xerox copy. Prices are subject to change. Current prices of microfiche and paper copies are listed in the back of each issue of Resources in Education; consult the latest monthly issue for current prices. Information about ordering items can also be obtained by contacting:

ERIC Document Reproduction Service (EDRS)

P.O. Box 190

Arlington, Virginia 22210

Telephone: 703-841-1212

Items that are available on microfiche (MF) are contained in microfiche collections at over 700 sites where they can be read. For information on the microfiche locations in your state contact the EPA Information Dissemination Project.

- c. ISSUE -- this indicates the monthly issue of Resources in Education in which the resume appeared.
- d. INSTITUTION NAME -- organization where document originated.

### 3. How to Locate Desired Materials

Users can identify materials of interest by scanning the resume listings, or using the Subject Index, Author Index, Institution Index, or Title Index.

#### 1. Subject Index

The Subject Index is designed to enable the user to search for information on either a broad subject or a narrow information concern. An EW number is included for each item listed under the subject heading. The EW number refers to the abstract entry in the resume section where complete bibliographic information, an abstract of the item, and availability information can be found.

A user can also coordinate a search by checking EW numbers that appear under two or more subject headings. For example, you could check all the EW numbers under Water Treatment and all the EW numbers under Films. EW numbers included under both subject headings would include information relevant to Water Treatment that were Films. EW numbers under wastewater treatment and laboratory techniques would provide a list of materials related to laboratory techniques and to wastewater treatment. Similar techniques could be used to identify other information desired.

Users with ERIC microfiche should check the resume entry. If the document is available on microfiche from the ERIC Document Reproduction Service, the availability will be indicated by "MF" on the resume by "EDRS Price." This means libraries with ERIC microfiche collections should have the document on microfiche.

If you want a document available through the ERIC Document Reproduction Service (EDRS) see the section on ordering documents.

## 2. Author Index :

If you desire to locate a document by the name of the author, you can use the Author Index. EW numbers are provided under the author in the Author Index as in the Subject Index. Some documents do not have a listed author; hence they are not listed in this index.

## 3. Title Index to the IRIS Compilation (Not included in the compilation)

The Title Index to the IRIS Compilation is a separate document. It is available from the EPA Information Project for \$5.00 prepaid or \$5.00 plus postage if invoiced. Supplements will be available on an annual basis for \$5.00 beginning in January, 1981.

The Title Index contains all titles in the compilation listed in alphabetical order. If you are searching for material and know the title, you can check the title list to determine if the item is in the IRIS data base. Each title includes the IRIS resume number. The number can be found in the resume section of the compilation.

## III. Correcting an Existing IRIS Record

The IRIS data base will be updated on a quarterly basis. Corrections will be made to the data base at those times. You can help improve IRIS by sending corrections for items you find to be in error.

We request that you duplicate (copy) the resume from the compilation, mark the information you believe to be wrong (or incomplete), and send the marked resume to:

EPA Information Dissemination Project  
1200 Chambers Road, Rm. 310  
Columbus, OH 43212

Corrections of errors will occur in the IRIS tapes at the next update after comments are received.

If you have difficulty obtaining materials from the listed source in the AVAILABILITY section of the resume, please let us know. We will contact the sources to verify whether the materials are available, but your assistance will provide corrections between annual availability checks.

If you are the supplier of materials in IRIS, please let us know if you remove a product from your list, modify a product on your list, or change the price of the product.

IV. Requests to Receive Information about IRIS and the IRC Bulletin

Information regarding IRIS, materials in IRIS, and modifications in the system will be announced in the IRC Bulletin. The Bulletin is issued about six times a year as information is available.

If you are not on the mailing list write to the EPA Information Dissemination Project. Limited numbers of some back issues are still available.

If you need information about IRIS you can also phone 614-422-6717 with your questions.

V. Requests for Assistance in Using IRIS

A. Assistance in use of IRIS manuals.

If you need help in using the IRIS manuals phone 614-422-6717 or write to the EPA Information Dissemination Project. Staff are normally available from about 8:30 a.m. to 4:30 p.m. Eastern time to answer your questions.

B. Assistance in accessing IRIS by computer

1. Conducting searches.

See section VIII.

2. Subscribing to BRS, Inc. for computer searching of IRIS

Contact: Bibliographic Retrieval Services, Inc.  
Corporation Park, Building 702  
Scotia, New York 12302

Phone: . 518-374-5011

3. Contacting a computer search service (an agency that will conduct a search for you, usually for a fee)

The EPA Information Dissemination Project maintains a list of agencies that can conduct searches. Most charge a fee, though some are free to qualified users in a limited geographical area.

Phone or write to obtain information for your area.

VI. How to Locate Other Relevant Educational Materials

A number of people have requested information related to such areas as management, basic skills (reading, mathematics, writing) human relations, contract negotiations, and other topics. The EPA Information Dissemination Project plans to develop some user service products in selected areas in 1980.

Another excellent source of information for many educational concerns is the ERIC System.

ERIC is a national information system designed and developed by the U.S. Office of Education, and now supported and operated by the National Institute of Education (NIE), for providing ready access to descriptions of exemplary programs, research and development efforts, and related information that can be used in developing more effective educational programs.

There are 16 Clearinghouses in the nationwide ERIC network. Each specializes in a different, multi-discipline, educational area. Each searches out pertinent documents.

The ERIC Clearinghouses have responsibility within the network for acquiring the significant educational literature within their particular areas, selecting the highest quality and most relevant material, processing (i.e., cataloging, indexing, abstracting) the selected items for input to the data base, and also for providing information analysis products and various user services based on the data base.

The 16 ERIC Clearinghouses are listed on the next few pages, together with addresses, telephone numbers, and brief scope notes describing the areas they cover. You can contact them for assistance in locating information relevant to their scope notes.

A. ERIC Clearinghouse for Adult, Career, and Vocational Education

Ohio State University  
Center for Vocational Education  
1960 Kenny Road  
Columbus, Ohio 43210  
Telephone: (614) 486-3655

Career education, formal and informal at all levels, encompassing attitudes, self-knowledge, decision-making skills, general and occupational knowledge, and specific vocational and occupational skills; adult and continuing education, formal and informal, relating to occupational, family, leisure, citizen, organizational, and retirement roles; vocational and technical education, including new sub-professional fields, industrial arts, and vocational rehabilitation for the handicapped.

B. ERIC Clearinghouse on Counseling and Personnel Services

University of Michigan  
School of Education Building, Room 2108  
Ann Arbor, Michigan 48109  
Telephone: (313) 764-9492

Preparation, practice, and supervision of counselors at all educational levels and in all settings, theoretical development of counseling and guidance, use and results of personnel procedures such as testing, interviewing, disseminating, and analyzing such information, group work and case work; nature of pupil, student, and adult characteristics; personnel workers and their relation to career planning, family consultations, and student orientation activities.

C. ERIC Clearinghouse on Elementary & Early Childhood Education

University of Illinois  
College of Education  
Urbana, Illinois 61801  
Telephone: (217) 333-1386

Prenatal factors, parental behavior; the physical, psychological, social, educational, and cultural development of children from birth through the primary grades; educational theory, research, and practice related to the development of young children.

D. ERIC Clearinghouse on Educational Management

University of Oregon  
Eugene, Oregon 97403  
Telephone: (503) 686-5043

Leadership, management, and structure of public and private educational organizations; practice and theory of administration; preservice and inservice preparation of administrators, tasks and processes of administration, methods and varieties of organization, organizational change, and social context of the organization.

Sites, buildings, and equipment for education; planning, financing, constructing, renovating, equipping, maintaining, operating, insuring, utilizing, and evaluating educational facilities.

E. ERIC Clearinghouse on Handicapped and Gifted Children

Council for Exceptional Children  
1920 Association Drive  
Reston, Virginia 22091  
Telephone: (703) 620-3660

Aurally handicapped, visually handicapped, mentally handicapped, physically handicapped, emotionally disturbed, speech handicapped, learning disabilities, and the gifted; behavioral, psychomotor, and communication disorders, administration of special education services; preparation and continuing education of professional and paraprofessional personnel; preschool learning and development of the exceptional; general studies on creativity.

F. ERIC Clearinghouse on Higher Education

George Washington University  
One Dupont Circle, Suite 630  
Washington, DC 20036  
Telephone: (202) 296-2597

Various subjects relating to college and university students, college and university conditions and problems, college and university programs; curricular and instructional problems and programs, faculty, institutional research; federal programs, professional education (medical, law, etc.); graduate education, university extension programs, teaching-learning, planning, governance, finance, evaluation, interinstitutional arrangements, and management of higher educational institutions.



G. ERIC Clearinghouse on Information Resources

Syracuse University  
School of Education  
Syracuse, New York 13210  
Telephone: (315) 423-3640

Management, operation, and use of libraries; the technology to improve their operation and the education, training, and professional activities of librarians and information specialists. Educational techniques involved in microteaching, systems analysis, and programmed instruction employing audiovisual teaching aids and technology, such as television, radio, computers, and cable television; communication satellites, microforms, and public television.

H. ERIC Clearinghouse for Junior Colleges

University of California  
Powell Library, Room 96  
Los Angeles, California 90024  
Telephone: (213) 825-3931

Development, administration, and evaluation of public and private community junior colleges. Junior college students, staff, curricula, programs, libraries, and community services.

I. ERIC Clearinghouse on Languages and Linguistics

Center for Applied Linguistics  
1611 North Kent Street  
Arlington, Virginia 22209  
Telephone: (703) 528-4312

Languages and linguistics. Instructional methodology, psychology of language learning, cultural and intercultural content, application of linguistics, curricular problems and developments, teacher training and qualifications, language sciences, psycholinguistics, theoretical and applied linguistics, language pedagogy, bilingualism, and commonly taught languages including English for speakers of other languages.

J. ERIC Clearinghouse on Reading and Communication Skills

National Council of Teachers of English  
1111 Kenyon Road  
Urbana, Illinois 61801  
Telephone: (217) 328-3870

Reading, English, and communication skills, preschool through college. Educational research and development in reading, writing, speaking, and listening. Identification, diagnosis, and remediation of reading problems. Speech communication--forensics, mass communication, interpersonal and small group interaction, interpretation, rhetorical and communication theory, instruction development, speech sciences, and theater. Preparation of instructional staff and related personnel in these areas.

All aspects of reading behavior with emphasis on physiology, psychology, sociology, and teaching. Instructional materials, curricula, tests and measurement, preparation of reading teachers and specialists, and methodology at all levels. Role of libraries and other agencies in fostering and guiding reading. Diagnostic and remedial services in school and clinical settings.

- K. ERIC Clearinghouse on Rural Education and Small Schools  
 New Mexico State University  
 Box 3AP  
 Las Cruces, New Mexico 88003  
 Telephone: (505) 646-2623

Education of Indian Americans, Mexican Americans, Spanish Americans, and migratory farm workers and their children; outdoor education; economic, cultural, social, or other factors related to educational programs in rural areas and small schools; disadvantaged of rural and small school populations.

- L. ERIC Clearinghouse for Science, Mathematics, and Environmental Education  
 Ohio State University  
 1200 Chambers Road, Third Floor  
 Columbus, Ohio 43212  
 Telephone: (614) 422-6717

All levels of science, mathematics, and environmental education; development of curriculum and instructional materials; media applications; impact of interest, intelligence, values, and concept development upon learning; preservice and inservice teacher education and supervision.

- M. ERIC Clearinghouse for Social Studies/Social Science Education  
 855 Broadway  
 Boulder, Colorado 80302  
 Telephone: (303) 492-8434

All levels of social studies and social science; all activities relating to teachers; content of disciplines; applications of learning theory, curriculum theory, child development theory, and instructional theory; research and development programs; special needs of student groups; education as a social science; social studies/social science and the community.

- N. ERIC Clearinghouse on Teacher Education  
 American Association of Colleges for Teacher Education  
 One Dupont Circle, NW, Suite 616  
 Washington, DC 20036  
 Telephone: (202) 293-7280

School personnel at all levels; all issues from selection through preservice and inservice preparation and training to retirement; curricula; educational theory and philosophy; general education not specifically covered by Educational Management Clearinghouse; Title XI NDEA Institutes not covered by subject speciality in other ERIC Clearinghouses; all aspects of physical education.

- O. ERIC Clearinghouse on Tests, Measurement, and Evaluation  
 Educational Testing Service  
 Princeton, New Jersey 08540  
 Telephone: (609) 921-9000 ext. 2176

Tests and other measurement devices; evaluation procedures and techniques; application of tests, measurement, or evaluation in educational projects or programs.

P. ERIC Clearinghouse on Urban Education  
Box 40  
Teachers College, Columbia University  
525 W. 120th Street  
New York, New York 10027  
Telephone: (212) 678-3437

The relationship between urban life and schooling; the effect of urban experiences and environments from birth onward; the academic, intellectual, and social performance of urban children and youth from grade three through college entrance (including the effect of self concept, motivation, and other affective influences); education of urban, Puerto Rican and Asian American populations, and rural and urban black populations; programs and practices which provide learning experiences designed to meet the special needs of diverse populations served by urban schools and which build upon their unique as well as their common characteristics; structural changes in the classroom, school, school system, and community and innovative instructional practices which directly affect urban children and youth; programs, practices, and materials related to economic and ethnic discrimination, segregation, desegregation, and integration in education; issues, programs, practices, and materials related to redressing the curriculum imbalance in the treatment of ethnic minority groups.

Q. Educational Resources Information Center  
Central ERIC  
National Institute of Education  
Washington, DC 20208  
Telephone: (202) 254-5555

There are other sources of educational information in many states. Included are information dissemination units in the state departments of education, intermediate education units, and local education units. In many cases, a local school administrator or school librarian can help you locate assistance.

## VII. How to Structure a Computer Search of IRIS

This explanation relates to the IRIS data base that can be searched on-line through Bibliographic Retrieval Services, Inc. As IRIS becomes available through other sources, information relevant to those services will be provided.

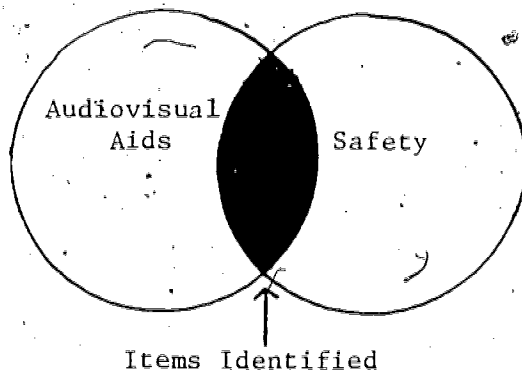
A few notes about the service are important. The following fields are searchable by computer: (1) IRIS Accession Number (EW number), (2) ERIC Accession Number (ED number), (3) Authors, (4) Institution (5) Title, (6) subject index terms, and (7) abstract.

If you submit a search of IRIS through BRS, the program will search for the words you select in three fields unless the searcher requests to limit the search. These fields are: (1) the title field, (2) the subject index field, and (3) the abstract. We recommend you use this feature especially for searches on specific terms. If you find more material than you want by this technique you can narrow the search to items that may have the most information on the topic by limiting the search to the subject index field.

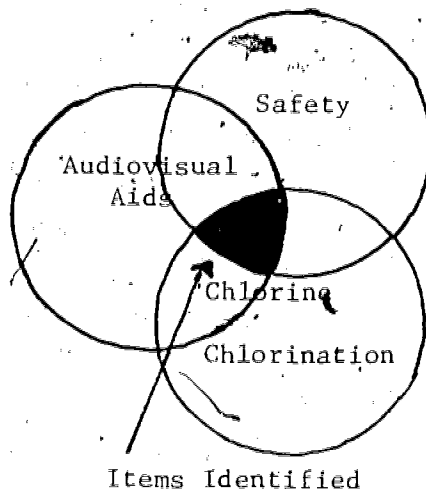
Several sample searches are listed.

A. Sample 1

If you want to locate audiovisual aids that relate to safety you would submit a search with audiovisual aids and safety. Materials that included the terms both audiovisual aids and safety in the title field, the abstract, and the subject index field would be identified by the computer.

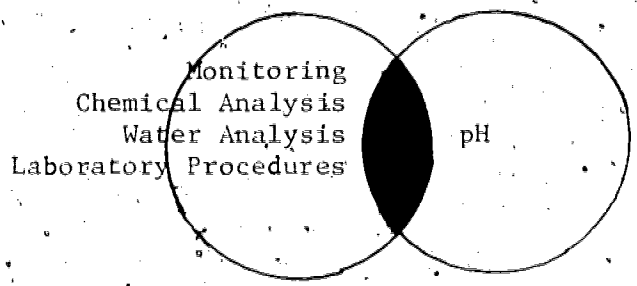


The computer program can tell you the number of items, the title of the items, or print the entire resume of each item. If you were primarily interested in audiovisual aids, safety, and chlorine you would submit a search of these three terms. You might want to include chlorides and chlorination as well as chlorine in the search. This search would identify materials that contained audiovisual aids, safety, and one or more of the words, chlorine, and chlorination.



B. Sample 2

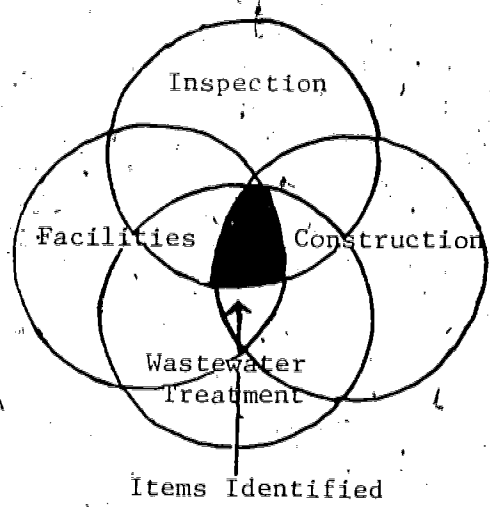
If you want to identify materials related to monitoring, you should include several related terms and the chemical, material, or situation that is being monitored. See the example below.



This search would identify all the items that included any of the terms on the left and pH.

C. Sample 3

If you are interested in materials related to inspection and construction you could conduct a search of these two terms. The search would identify all materials that included both terms. If you were interested in only wastewater treatment facilities you could construct a search as diagrammed.



This search would yield specific materials and demonstrates how a computer search can help you locate materials you want.

D. Use of the Subject Index

The subject index in the back of the compilation can be used to help you decide if you want to do a computer search. If there are relatively few entries, you can check the resumes in the resume section. If there is a large number of entries (perhaps 50 or more) you may want to use a computer search.

As the data base gets larger, you will find more entries for subject index terms and computer searching will offer more advantages.

The subject index can also be used to help you select words to include in a search. Words listed in the subject index are certain to be in the searchable fields. Therefore, selecting these terms to use in structuring a search will increase the probability of locating materials. Some words will appear in the title or abstract that are not included in the subject term field. Such words can be used to check if any materials are in the data base. If, however, you conduct a search with such a word it is usually best to include a synonym that is in the subject index.

#### I. How to Order Materials

The AVAILABILITY field in the resume indicates where materials can be obtained. A few of the sources are explained.

- A. A number of audiovisual materials can be obtained on loan from the EPA National Training and Operational Technology Center, Cincinnati, Ohio 45268. They also offer a copy service to reproduce materials at a very reasonable price.
- B. Some of the materials are available through the ERIC Document Reproduction Service. MF (microfiche) are 4" x 6" sheets of microfilm; up to 96 pages of text can be reproduced on one sheet. HC (paper copy) is a reproduction of the document in paper form at the original size.

Order forms for these materials can be obtained from:

ERIC Document Reproduction Service  
P.O. Box 190  
Arlington, Virginia 22210

- C. The EPA Information Dissemination Project will provide xerox copies of materials that are not copyrighted for \$1.00 per document plus \$0.03 per page.

If you can not obtain materials that are listed or have difficulty obtaining materials, please contact the EPA Information Dissemination Project. We can provide assistance in obtaining materials from some sources. If materials become unavailable, we will remove them from the IRIS data base.

#### K. USEPA

National Training and Operation Technology Center  
Cincinnati, Ohio 45268

To fulfill national educational and training requirements, USEPA has organized the National Training and Operational Technology Center (NTOTC). NTOTC has the responsibility for planning, developing, conducting and evaluating USEPA's water pollution control training and education program. As an instructional resource, its purpose is to help regions, states, local governments and educational institutions to become knowledgeable about USEPA's goals, regulations, strategies, as well as the implications of USEPA programs which affect virtually everyone.

Activities encompass three categories: (1) instruction; (2) course development; and (3) information management.

Instruction--NTOTC offers a variety of training courses in water quality control. Such courses are taught at many locations, but most are presented at the Environmental Research Center in Cincinnati, Ohio. A current project will expand this effort to enable more environmental personnel to receive specialized instruction. Area training centers will soon act as satellites to the NTOTC program, offering similar courses and instructional support. Select universities with broad pollution control curricula will act as area training centers within a region. As a result, more pollution control personnel will have access to needed specialized training.

Since 1971, the NTOTC professional staff of chemists, biologists and engineers has presented nearly 350 courses to more than 8,000 students. Courses are offered throughout the year, and are designed to help participants understand current pollution control techniques and procedures. As USEPA regulations and policies are implemented, based in large part on USEPA research, courses are offered by NTOTC staff to upgrade knowledge and develop specific skills or procedures.

Some courses are conducted at wastewater treatment plants, enabling USEPA to work directly with plant personnel to improve treatment plant effluent. While working on site at treatment plants, staff can diagnose and discuss particular problems and can provide information on design and operation to many technicians within the local region.

Courses currently are offered in five general categories: wastewater treatment technology, treatment facility evaluation and inspection, water quality surveillance and monitoring, water quality analysis, and drinking water quality monitoring.

Students attend courses from all states, and from some foreign countries. The largest percentage represent federal, state, and municipal pollution control agencies. A relatively small number of college and university instructors attend these short courses which are typically one week in length. USEPA encourages more participation by the educational community, so that current skills and knowledge will be transmitted to students to enable them to deal with pollution control problems as they enter environmental occupations. Community college and university instructors may attend courses free of charge by following prescribed application procedures.

Course Development--NTOTC is active in the field of course development. As new educational and training needs are identified, appropriate instructional packages are developed. Almost all such development is based on current research and agency regulations. Materials include instructor guides, student manuals and supporting audiovisual materials. If USEPA's pollution control training programs are to be successfully implemented, college and university staff from various departments must cooperate and integrate these instructional activities within their curriculums; or students will not be adequately prepared, either theoretically or practically.

Information Management--The goal of USEPA's information management system is to support, in a comprehensive and systematic manner, those involved with pollution control education and training. A central location within the NTOTC facility is designed to provide a contact point and to coordinate assistance efforts and has been designated the Instructional Resources Center (IRC).

As the education and training community has become more aware of the types of programs operated by the IRC, requests for information have expanded dramatically. Many requests for assistance from instructors, information specialists, municipal water and wastewater treatment plant trainers, and representatives of government and business have been received.

Through the IRC, NTOTC maintains a central location to inventory, evaluate, catalog and disseminate instructional materials in the areas of water pollution control, water supply, and pesticides. Composed of several different but interrelated activities, it acts as a primary communications link between USEPA and educators at all post-secondary levels.

The IRC includes an audiovisual lending library housing slide/tape presentations, films and videotapes, all available for free, short-term loan. Most subject areas available are water quality-oriented.

Interested persons are invited to Cincinnati to use IRC facilities for reviewing tapes, slides, films, and other materials before deciding about purchases or curriculum development requirements. IRC staff assist visitors by determining the most appropriate ways to use the Center's resources, or in determining educational and training program requirements and available resources. During the past year, universities and state and local governments have been assisted with curriculum design, course materials selection, and audiovisual support efforts.

For more information on NTOTC write to the center at the following address:

National Training and Operational  
Technology Center (NTOTC)  
26 West St. Clair  
Cincinnati, Ohio 45268

Telephone: (513) 684-7501



RESUME SECTION

IRIS ACCESSION NUMBER: EW003555

PUBLICATION DATE: APR 77

TITLE: THE MIT/MARINE INDUSTRY COLLEGIUM OPPORTUNITY BRIEF  
#6. ELECTRON IRRADIATION, SEWAGE SLUDGE AND AQUACULTURE.

DESCRIPTOR: \*AQUACULTURE; COST EFFECTIVENESS; \*ELECTRON  
IRRADIATION; FACILITIES; FERTILIZERS; \*OCEANOLOGY;  
PATHOGENS; POLLUTION CONTROL; \*SLUDGE; \*SLUDGE DISPOSAL;  
\*WASTEWATER TREATMENT; WASTE DISPOSAL

DESCRIPTIVE NOTE: 28P.

ABSTRACT: THE CURRENT STATE OF ELECTRON IRRADIATION AS A  
SLUDGE STERILIZATION METHOD IS REVIEWED. THE COSTS OF  
EXISTING METHODS ARE COMPARED AND SOME ECONOMIC PROJECTIONS  
ABOUT THE PRODUCTION AND SALE OF SLUDGE AS FERTILIZER ARE  
MADE. ALSO EXAMINED IS THE USE OF IRRADIATED SLUDGE AS A  
NUTRIENT ENERGY BASE FOR AQUACULTURAL SYSTEMS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION CENTER, 5285  
PORT ROYAL ROAD, SPRINGFIELD, VA 22161

INSTITUTION NAME: SEA GRANT PROGRAM.

IRIS ACCESSION NUMBER: EW003783

PUBLICATION DATE: 78

TITLE: ENGINEERS HANDBOOK: HYDROGEN PEROXIDE INSTALLATIONS  
FOR WASTE TREATMENT APPLICATIONS.

DESCRIPTOR: \*CHEMICAL TREATMENT; DESIGN; \*ENGINEERING  
HANDBOOK; \*EQUIPMENT; \*FACILITIES; \*HYDROGEN PEROXIDE;  
HYDROGEN SULFIDE; \*OPERATIONS (WASTEWATER); \*WASTEWATER  
TREATMENT; WATER POLLUTION CONTROL; WATER TREATMENT

DESCRIPTIVE NOTE: PRICE: FREE

ABSTRACT: THIS HANDBOOK CONTAINS PRACTICAL INFORMATION FOR  
SPECIFYING A HYDROGEN PEROXIDE WASTE TREATMENT INSTALLATION.  
CONTENTS INCLUDE A CHAPTER ON WHEN TO CONSIDER HYDROGEN  
PEROXIDE: HYDROGEN SULFIDE GENERATION, CORROSION, BULKING,  
HYDROGEN PEROXIDE TREATMENT, AND COMPARISON WITH OTHER  
CHEMICAL TREATMENTS. ANOTHER CHAPTER EXAMINES HOW TO SELECT  
HYDROGEN PEROXIDE HANDLING AND STORAGE EQUIPMENT: SHIPPING  
METHODS, PEROXIDE INJECTION SYSTEMS, MATERIALS SUITABLE FOR  
USE WITH HYDROGEN PEROXIDE, STORAGE SYSTEMS AND ECONOMICS. A  
THIRD MAJOR SECTION OUTLINES SPECIFIC FACTS ABOUT HYDROGEN  
PEROXIDE AND ITS USE: OXIDATION OF CHEMICAL POLLUTANTS WITH  
HYDROGEN PEROXIDE, REACTIONS WITH INORGANIC SALTS, AND  
PHYSICAL PROPERTIES. ALSO INCLUDED ARE BLUEPRINTS OF TYPICAL  
HYDROGEN PEROXIDE STORAGE INJECTION AND FEED METERING  
SYSTEMS.

AVAILABILITY: FMC CORPORATION, INDUSTRIAL CHEMICAL GROUP,  
2000 MARKET ST, DEPT N, PHILADELPHIA, PA 19103

IRIS ACCESSION NUMBER: EW004371

PUBLICATION DATE: 78

TITLE: DESIGN OF MUNICIPAL SLUDGE COMPOST FACILITIES.

DESCRIPTOR: \*CONFERENCE PROCEEDINGS; \*COMPOSTING; \*DESIGN;  
\*ECONOMICS; \*FACILITIES; HEALTH; \*MUNICIPALITIES; MARKETING;  
QUALITY CONTROL; \*SLUDGE; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 200P. PRICE: \$25.00

ABSTRACT: THESE CONFERENCE PROCEEDINGS CONSIST OF 31 PAPERS  
PRESENTED AT THE NATIONAL CONFERENCE ON DESIGN OF MUNICIPAL  
SLUDGE COMPOST FACILITIES. SPECIFIC TOPICS INCLUDE: (1)  
RULES AND REGULATIONS, (2) BASIC COMPOSTING CONSIDERATIONS,  
(3) HEALTH ASPECTS, (4) COMPOST ENGINEERING, (5) QUALITY  
CONTROL, (6) FOREIGN EXPERIENCE, AND (7) ECONOMICS AND  
MARKETING.

AVAILABILITY: INFORMATION TRANSFER, INC., 9300 COLUMBIA  
BLVD, SILVER SPRING, MARYLAND 20910

IRIS ACCESSION NUMBER: EW004380

PUBLICATION DATE: 79

TITLE: HOW TO PREPARE AN EFFECTIVE COMPANY OPERATIONS  
MANUAL.

PERSONAL AUTHOR: SELTZ, DAVID D.; RADLAVER, MARVIN I.

DESCRIPTOR: ADMINISTRATION; \*FLOW CHARTS; \*MANAGEMENT;  
\*ORGANIZATION; \*OPERATIONS MANUALS; \*POLICIES; \*PERSONNEL

DESCRIPTIVE NOTE: 234P. PRICE: \$49.50

ABSTRACT: THIS BOOK WHICH WAS WRITTEN BY MANAGEMENT  
CONSULTANTS, OUTLINES THE STAGES IN THE DEVELOPMENT OF AN  
OPERATIONS MANUAL. METHODOLOGY AND CONTENT OF DATA  
COLLECTION AND ANALYSIS ARE CAREFULLY DETAILED. DEVELOPMENT  
OF THE MANUAL THROUGH TO THE PRINTING OF THE FINAL DRAFT ARE  
INCLUDED.

AVAILABILITY: DARTNELL, 4660 RAVENSWOOD AVENUE, CHICAGO, IL  
60640

IRIS ACCESSION NUMBER: EW004404

PUBLICATION DATE: 78

TITLE: DIRECTORY OF MANAGEMENT EDUCATION PROGRAMS-VOLUMES I  
& II.

DESCRIPTOR: \*DIRECTORIES; DISTRIBUTIVE EDUCATION;  
\*INSTRUCTION; LEADERSHIP TRAINING; \*MANAGEMENT; \*MANAGEMENT  
DEVELOPMENT; \*MANAGEMENT EDUCATION; MANPOWER DEVELOPMENT;  
\*PROGRAM DESCRIPTIONS; \*PROGRAM GUIDES; \*SKILL DEVELOPMENT;  
TRAINING

DESCRIPTIVE NOTE: 1310P. PRICE: \$175.00 NON-MEMBER,  
\$150.00 MEMBER

ABSTRACT: PRESENTED IN THIS TWO VOLUME WORK IS A DIRECTORY OF MANAGEMENT EDUCATION PROGRAMS WITH A DESCRIPTION OF: (1) THE PROGRAM, (2) FEES, AWARD, AND METHOD OF EVALUATION OF THE PARTICIPANT, (3) THE PROFILE OF THE INSTRUCTIONAL STAFF, AND (4) THE PROFILE OF RECENT PARTICIPANTS. THE PROGRAM DESCRIPTION INCLUDES SUCH TOPICS AS: THE AIMS OR OBJECTIVES, THE MAJOR TOPICS, FOR WHOM THE PROGRAM WAS DESIGNED, THE PROGRAM LOCATION, THE LENGTH OF THE PROGRAM, RESIDENCE CHARACTERISTICS, AND THE ADMISSION REQUIREMENTS. THE DIRECTORY WAS COMPILED BY THE MANAGEMENT DEVELOPMENT RESOURCE SERVICE OF THE AMERICAN MANAGEMENT ASSOCIATION FROM INFORMATION SUPPLIED BY THE CONTRIBUTORS WHO SPONSOR THE PROGRAMS. THE TYPES OF PROGRAMS INCLUDED IN THE DIRECTORY INCLUDE THE FOLLOWING: (1) NON-CREDIT PROGRAMS WHICH ARE NOT PART OF AN UNDERGRADUATE DEGREE PROGRAM, (2) RECURRING PROGRAMS (CONDUCTED AT LEAST ONCE A YEAR) THAT ARE REGULARLY SCHEDULED OR AVAILABLE TO PROSPECTIVE USERS AT MUTUALLY NEGOTIATED LOCATIONS AND TIMES, (3) PROGRAMS THAT ARE AVAILABLE TO LARGE SEGMENTS OF THE MANAGEMENT COMMUNITY, AND (4) PROGRAMS THAT ARE OF INTEREST TO THE MANAGEMENT COMMUNITY IN THE BROADEST SENSE INCLUDING PROGRAMS THAT MAY EVEN BE MORE TECHNICAL THAN MANAGERIAL IN CONTENT. VOLUME 1 CONTAINS PROGRAMS AVAILABLE FROM ACADEMIC SOURCES WHILE VOLUME 2 CONTAINS PROGRAMS AVAILABLE FROM OTHER MORE GENERAL SOURCES.

AVAILABILITY: AMERICAN MANAGEMENT ASSOCIATIONS, 135 WEST 50TH STREET, NEW YORK, NY 10029

IRIS ACCESSION NUMBER: EW004467

PUBLICATION DATE: 70

TITLE: WATER UTILITY ACCOUNTING.

PERSONAL AUTHOR: HAY, LEON E.; GRINNELL, D. J.

DESCRIPTOR: \*ACCOUNTING; \*ECONOMICS; \*MANAGEMENT REPORTS; \*PLANNING; \*RECORDS; \*TAXES; \*WATER UTILITIES

DESCRIPTIVE NOTE: 235P. PRICE: \$10.00

ABSTRACT: THIS MANUAL IS DESIGNED FOR THE FORMALLY TRAINED ACCOUNTANT OPERATING IN THE WATER WORKS FIELD. IT CONTAINS SUGGESTIONS FOR IMPLEMENTING ACCOUNTING PROCEDURES THAT REFLECT THE UTILITY STATUS OF TODAY'S WATER WORKS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 WEST QUINCY AVE. DENVER, COLORADO 80235

IRIS ACCESSION NUMBER: EW004476

PUBLICATION DATE: 78

TITLE: ACTIVATED SLUDGE PACKAGE PLANT OPERATIONS MANUAL.

PERSONAL AUTHOR: QUICK, FRANK L.

DESCRIPTOR: \*ACTIVATED SLUDGE; \*FACILITIES; \*INSTRUCTIONAL MATERIALS; \*MAINTENANCE; \*OPERATIONS (WASTEWATER); SOLIDS HANDLING; TERTIARY TREATMENT; \*TRAINING MANUALS; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 140P.

ABSTRACT: THIS MANUAL WAS WRITTEN AS PART OF THE OPERATOR TRAINING UNIT. IT IS INTENDED TO BRIDGE THE GAPS BETWEEN TRAINING COURSES, TELEPHONE CALLS TO THE AGENCY, AND ON-SITE ASSISTANCE SESSIONS. THIS MANUAL IS DESIGNED TO PROVIDE EASY ACCESS TO REFERENCE INFORMATION WHICH WILL ASSIST IN PREVENTING PROBLEMS THROUGH RESPONSIBLE OPERATION AND MAINTENANCE PROCEDURES. IT PRESENTS THE HOWS AND WHYS OF THE SYSTEM, ITS PARTS, AND POTENTIAL PROBLEMS.

AVAILABILITY: MINNESOTA POLLUTION CONTROL AGENCY, 1935 WEST COUNTY ROAD B2, ROSEVILLE, MINNESOTA 55113

IRIS ACCESSION NUMBER: EW004532

PUBLICATION DATE: JUL 79

TITLE: MARYLAND MANPOWER INFORMATION SYSTEM FOR MUNICIPAL WATER AND WASTEWATER FACILITIES.

PERSONAL AUTHOR: AUSTIN, JOHN H.; AND HOLTAN, ANDREW

DESCRIPTOR: \*CERTIFICATION; \*DATA COLLECTING SYSTEMS; FACILITIES; \*INFORMATION SYSTEMS; \*MUNICIPALITIES; \*MANPOWER NEEDS; \*PLANNING; \*TRAINING NEEDS; \*UTILITIES; \*WATER TREATMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 183P.

ABSTRACT: THIS REPORT SETS IN FOCUS THE INFORMATION NEEDS OF THE MARYLAND DEPARTMENT OF HEALTH AND MENTAL HYGIENE AND OTHER GROUPS FOR PLANNING, DEVELOPING AND IMPLEMENTING PROGRAMS TO PROVIDE THE PROPERLY TRAINED MANPOWER TO OPERATE AND MAINTAIN THE WATER AND WASTEWATER FACILITIES OF THE STATE.

AVAILABILITY: ENVIRONMENTAL HEALTH ADMINISTRATION, DEPARTMENT OF HEALTH AND MENTAL HYGIENE, P.O. BOX 13387, BALTIMORE, MD 21203

IRIS ACCESSION NUMBER: EW004534

PUBLICATION DATE: 78

TITLE: BASICS OF FILTRATION AND SEPARATION.

PERSONAL AUTHOR: BALLEW, H. W.; AND STAFF

DESCRIPTOR: \*CENTRIFUGATION; FLUID FLOW; \*FILTRATION; \*FILTER SYSTEMS; \*FILTER MEDIA; \*LABORATORY TECHNIQUES; \*SEPARATION PROCESSES

DESCRIPTIVE NOTE: 69P.

ABSTRACT: THIS HANDBOOK IS DESIGNED TO CONVEY A BASIC UNDERSTANDING OF FILTRATION AND SEPARATION PRINCIPLES TO THOSE NOT IN THE FIELD. IT PROVIDES A COMPARISON OF CENTRIFUGATION VERSUS FILTRATION, ADVICE ON SELECTING AN APPROPRIATE FILTER MEDIUM, DESCRIPTION OF SEVERAL TYPES OF FILTER SYSTEMS, METHODOLOGY OF MEMBRANE SEPARATIONS AND MICROFILTRATION PROCEDURES.

BUILDING, AMES, IOWA 50010

IRIS ACCESSION NUMBER: EW004563

PUBLICATION DATE: 72

TITLE: WASHINGTON STATE; WATERWORKS MANUAL-BASIC.

DESCRIPTOR: \*INSTRUCTIONAL MATERIALS; \*MAINTENANCE; \*MANAGEMENT; \*OPERATIONS (WATER); PUBLIC RELATIONS; WATER QUALITY; \*WATER SUPPLY; \*WATER UTILITIES; \*WATER TREATMENT; \*WATER DISTRIBUTION SYSTEM

DESCRIPTIVE NOTE: 228P. PRICE: \$10.00

ABSTRACT: THIS MANUAL WAS PREPARED FOR WATER UTILITY PERSONNEL IN THE STATE OF WASHINGTON. IT IS INTENDED TO PRESENT MATERIAL NECESSARY TO IMPROVE THE WORKING KNOWLEDGE OF THESE PEOPLE. THE MANUAL INCLUDES TOPICS ON COMMUNICATIONS, WATERWORKS HYDRAULICS, DISTRIBUTION, PUMPING AND STORAGE, MATERIALS, METERS AND RECORDS, WATER QUALITY, WATER MAINS AND SERVICE INSTALLATIONS, SYSTEM MAINTENANCE, WATER ECONOMICS AND PUBLIC RELATIONS.

AVAILABILITY: GREEN RIVER COMMUNITY COLLEGE, 12401 S.E. 320TH ST., AUBURN, WA 98002

IRIS ACCESSION NUMBER: EW004507

PUBLICATION DATE: JUL 78

TITLE: MANUAL OF METHODS: PRESERVATION AND ANALYSIS OF COAL GASIFICATION WASTEWATERS.

PERSONAL AUTHOR: LUTHY, RICHARD G.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; ASSESSMENT; CHEMICAL ANALYSIS; \*COAL GASIFICATION; \*COAL GASIFICATION WASTEWATERS; ENVIRONMENTAL IMPACT; INDUSTRIAL TECHNOLOGY; \*LABORATORY TECHNIQUES; LABORATORY TESTING; MONITORING; \*OPERATIONS (WASTEWATER); SAMPLE PRESERVATION; \*SAMPLING METHODS; TESTING; \*WASTEWATER TREATMENT; \*WASTEWATER ANALYSIS

DESCRIPTIVE NOTE: 49P. PRICE: \$5.25

ABSTRACT: THE ENVIRONMENTAL STUDIES INSTITUTE OF CARNEGIE MELLON UNIVERSITY HAS BEEN ENGAGED BY ERDA TO PROVIDE A RANGE OF ASSISTANCE, COORDINATION, AND EVALUATION SERVICES IN A PROGRAM FOR ENVIRONMENTAL ASSESSMENT IN THE ERDA HIGH-BTU COAL GASIFICATION PROGRAM. WITH THE COOPERATION AND ASSISTANCE OF OTHER ENVIRONMENTAL ASSESSMENT CONTRACTORS IN THE PROGRAM, CARNEGIE MELLON HAS DEVELOPED AND TESTED A MODIFIED SET OF PRESERVATION AND ANALYSIS PROCEDURES FOR THE FOLLOWING PRIORITY COAL GASIFICATION WASTEWATER PARAMETER GROUPS: (1) PHYSICAL PROPERTIES, (2) INORGANIC NON-METALS, (3) NITROGEN, (4) PHOSPHOROUS, (5) SULFUR, (6) ORGANIC CONSTITUENTS, AND (7) OXYGEN DEMAND. THIS REPORT CONSTITUTES A MANUAL OF METHODS FOR 23 SPECIFIC PARAMETERS WITHIN THESE SEVEN GROUPS.

AVAILABILITY: NUCLEPORE CORPORATION, 7035 COMMERCE CIRCLE, PLEASANTON, CA 94566

IRIS ACCESSION NUMBER: EW004533

PUBLICATION DATE: 76

TITLE: PROCEEDINGS OF 1976 NATIONAL WASTE PROCESSING CONFERENCE, SUPPLEMENT-DISCUSSIONS.

DESCRIPTOR: COST EFFECTIVENESS; CORROSION CONTROL; ECONOMICS; EMISSIONS; \*ENERGY CONSERVATION; FUELS; INCINERATORS; \*INDUSTRIAL WASTES; \*MUNICIPAL WASTES; METHANE; \*RECYCLING; SOLID WASTES; \*WASTE DISPOSAL; \*WASTE PROCESSING; \*WASTE UTILIZATION

DESCRIPTIVE NOTE: 140P.

ABSTRACT: PAPERS PRESENTED IN THIS VOLUME COVER A WIDE VARIETY OF TOPICS RELATED TO WASTE PROCESSING IN EUROPE AND NORTH AMERICA, FUEL PRODUCTION FROM REFUSE, ECONOMICS OF RECYCLING, RESEARCH NEEDS IN REPROCESSING, MATERIALS RECOVERY PROCESSING, PYROLYSIS, THERMAL DISPOSAL OF WASTES, EMISSIONS STANDARDS, INCINERATOR PERFORMANCE, POLLUTION ABATEMENT, CORROSION CONTROL AND INNOVATIVE PROCESSING SYSTEMS.

AVAILABILITY: THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS, UNITED ENGINEERING CENTER, 345 EAST 47TH STREET, NEW YORK, NEW YORK 10017

IRIS ACCESSION NUMBER: EW004560

PUBLICATION DATE: SEP 79

TITLE: A CERTIFICATION PROGRAM FOR WATER AND WASTEWATER LABORATORY PERSONNEL.

DESCRIPTOR: ANALYTICAL TECHNIQUES; \*CERTIFICATION; \*EVALUATION; \*INSTRUCTION; \*LABORATORY TECHNIQUES; \*LABORATORY PERSONNEL; \*OPERATIONS (WASTEWATER); \*OPERATIONS (WATER); \*PROGRAM DESCRIPTIONS; \*QUALIFICATIONS; \*TRAINING; \*WATER TREATMENT; \*WASTEWATER TREATMENT; \*WATER RESOURCES

DESCRIPTIVE NOTE: 17P.

ABSTRACT: THE REPORT CONTAINS DETAILS OF THE ASSOCIATION OF BOARDS OF CERTIFICATIONS PROPOSED LABORATORY PERSONNEL CERTIFICATION PROGRAM. RECOMMENDATIONS ARE MADE REGARDING STANDARD LEVELS OF COMPETENCY AND DESERVED QUALIFICATIONS.

AVAILABILITY: ABC ADMINISTRATIVE OFFICE, MUNICIPAL

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICES,  
OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004602

TITLE: PROCEEDINGS OF THE WATER REUSE SYMPOSIUM-THREE  
VOLUMES.

DESCRIPTOR: \*CONFERENCE PROCEEDINGS; \*CONSERVATION;  
ENVIRONMENTAL EFFECTS; ECONOMICS; HEALTH EFFECTS; LEGAL  
FACTORS; \*RECYCLING; \*WATER RESOURCES; \*WATER REUSE; \*WATER  
CONSERVATION; WATER QUALITY; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2400P. PRICE: \$15.00 A SET

ABSTRACT: THIS VOLUME PRESENTS SYMPOSIUM PROCEEDINGS  
DEALING WITH THE RENOVATION AND REUSE OF WASTEWATERS FROM  
MUNICIPAL, INDUSTRIAL AND AGRICULTURAL SOURCES. THE PAPERS  
DEMONSTRATE (1) THAT SIGNIFICANT GLOBAL INTEREST EXISTS IN  
WASTEWATER REUSE, (2) THAT RECYCLING CONCEPTS ARE BEING  
APPLIED TO A BROAD RANGE OF FUNCTIONS, (3) THAT APPLICATION  
OF WATER REUSE MAY BE HIGHLY SITUATION DEPENDENT, AND (4)  
THAT REUSE APPLICATIONS ARE IMPORTANT SOLUTIONS TO  
CONSERVATION OF WATER.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 WEST  
QUINCY AVE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW004642

PUBLICATION DATE: APR 78

TITLE: SUMMARY OF WRC EQUIPMENT DEVELOPED FOR BIOLOGICAL  
MONITORING OF WATER QUALITY.

PERSONAL AUTHOR: WORDINGHAM, V.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; BIOLOGICAL MONITORING;  
\*FISH HEART MUSCLES; \*INSTRUMENTATION; \*LABORATORY  
EQUIPMENT; \*MONITORING; \*WATER RESEARCH CENTER; \*WATER  
QUALITY

DESCRIPTIVE NOTE: 20P. PRICE: \$4.00

ABSTRACT: DESCRIBED IS THE LABORATORY EQUIPMENT THAT THE  
WATER RESEARCH CENTER IS USING TO MEASURE CHANGES IN  
ELECTRICAL SIGNALS PRODUCED BY THE HEAT MUSCLES IN FISH.  
THIS FORM OF BIOLOGICAL MONITORING WILL BE UTILIZED IN  
DETECTING CHANGES IN THE WATER QUALITY OF RIVERS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE,  
OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004731

PUBLICATION DATE: 79

TITLE: THE BASICS OF OIL SPILL CLEANUP.

PERSONAL AUTHOR: FINCAS, MERVIN F., AND OTHERS

DESCRIPTOR: ACCIDENT PREVENTION; \*ENVIRONMENT; \*OIL  
POLLUTION; \*OIL SPILLS; \*POLLUTION; \*SEPARATION METHODS;  
\*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 155P. PRICE: \$6.95

ABSTRACT: THIS MANUAL IS INTENDED AS A GENERAL INTRODUCTION  
TO OIL SPILL CLEANUP TECHNOLOGY AND EQUIPMENT. THE BOOK  
EXPLAINS WHAT HAPPENS TO OIL WHEN IT IS ACCIDENTALLY SPILLED  
IN WATER OR LAND AND THE SPECIFIC CLEANUP STRATEGIES WHICH  
ARE POSSIBLE UNDER VARYING ENVIRONMENTAL CONDITIONS. THIS  
MATERIAL IS DESIGNED TO PROVIDE BASIC INFORMATION TO THE  
PUBLIC AT LARGE AND TO THOSE PERSONS WHO MAY ACTUALLY HAVE  
TO DEAL WITH THE CLEANUP OF AN OIL SPILL. SPECIFIC TOPICS  
INCLUDE OILTYPES CHARACTERISTICS, OIL BEHAVIOUR IN THE  
ENVIRONMENT RESPONSE TO OIL SPILLS, CONTAINMENT, RECOVERY,  
SEPARATION AND DISPOSAL METHODS, TREATMENT OF SPILLED OIL,  
SHORELINE CLEANUP AND RESTORATION AND LAND SPILLS.

AVAILABILITY: CANADIAN GOVERNMENT PUBLISHING CENTRE, SUPPLY  
AND SERVICES, HULL, QUEBEC KIA 0S9 CANADA

IRIS ACCESSION NUMBER: EW004733

PUBLICATION DATE: 78

TITLE: CORROSION CONTROL BY DEPOSITION OF CaCO3 FILMS.

IRIS ACCESSION NUMBER: EW004629

PUBLICATION DATE: 78

TITLE: DICHLOROBENZIDINE: AMBIENT WATER QUALITY CRITERIA.

DESCRIPTOR: \*AMBIENT WATER QUALITY; \*DICHLOROBENZIDINE;  
\*PUBLIC HEALTH; \*STANDARDS; \*WATER QUALITY; \*WATER QUALITY  
CRITERIA

DESCRIPTIVE NOTE: 43P. PRICE: \$4.50

ABSTRACT: THIS PAPER ANALYZES EXPERIMENTAL STUDIES WHICH  
EXAMINE DICHLOROBENZIDINE IN RELATION TO MAMMALIAN  
TOXICOLOGY AND HUMAN HEALTH. IT CONTAINS A DETAILED REVIEW  
OF LABORATORY AND EPIDEMIOLOGICAL STUDIES ON EXPOSURE TO THE  
CHEMICAL, PHARMOKINETICS AND CHEMICAL EFFECTS, INCLUDING  
ACUTE, SUB-ACUTE AND CHRONIC TOXICITY, TERATOGENICITY,  
MUTAGENICITY AND CARCINOGENICITY. THE SECOND HALF OF THE  
PAPER CITES EXISTING GUIDELINES/STANDARDS, EXAMINES CURRENT  
LEVELS OF EXPOSURE, AND DISCUSSES SPECIAL GROUPS WHICH ARE  
AT RISK FROM THE CHEMICAL. AMBIENT WATER QUALITY CRITERIA  
ARE THEN FORMULATED BASED ON THE RESULTS OF EXISTING  
EXPERIMENTAL STUDIES AND AVAILABLE DATA.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE,  
OPERATIONS DIVISION, SPRINGFIELD, VA 22161

PERSONAL AUTHOR: MERRILL, DOUGLAS T.; AND SANKS, ROBERT L.

DESCRIPTOR: CHEMISTRY; \*CORROSION CONTROL; \*CALCIUM CARBONATE; \*DEPOSITION; \*EQUIPMENT; \*MAINTENANCE; \*OPERATIONS (WATER); PUBLIC HEALTH; \*WATER SUPPLY; \*WATER DISTRIBUTION; WATER QUALITY

DESCRIPTIVE NOTE: 50P. PRICE: \$8.00

ABSTRACT: THIS HANDBOOK CONTAINS PRACTICAL INSTRUCTIONS TO CONTROL CORROSION IN WATER DISTRIBUTION SYSTEMS. IT CONTAINS CHAPTERS ON THE CHEMISTRY OF CORROSION, SELECTING AND APPLYING CONDITIONING CHEMICALS AND SPECIAL PROBLEMS ASSOCIATED WITH PLANT OPERATIONS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 WEST QUINCY AVENUE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW004734

PUBLICATION DATE: 77

TITLE: AUTOMATION AND INSTRUMENTATION.

DESCRIPTOR: \*AUTOMATION; EQUIPMENT; \*INSTRUMENTATION; \*INSTRUCTIONAL MATERIALS; MEASUREMENT; \*OPERATIONS (WATER); PUMPS; \*WATER SUPPLY; \*WATER TREATMENT; \*WATER DISTRIBUTION; \*WATER WORKS; \*WATER UTILITIES

DESCRIPTIVE NOTE: 150P. PRICE: \$14.00

ABSTRACT: THIS OPERATORS MANUAL IS WRITTEN PRIMARILY FOR THE OPERATOR OF ANY WATER UTILITY, LARGE OR SMALL, WHO WOULD NOT, NECESSARILY HAVE A TECHNICAL BACKGROUND, BUT WOULD LIKELY BE SEARCHING FOR ELEMENTARY EXPLANATIONS AND GENERAL INFORMATION. THE MANUAL, THEREFORE, DOES NOT INDULGE IN THEORY OR DESIGN CONCEPTS, NOR DOES IT DUPLICATE COVERAGE OF READILY AVAILABLE SUBJECTS SUCH AS BASIC ELECTRICITY, MECHANICS, OR HYDRAULICS. IT IS INTENDED TO BE A GENERAL DISCUSSION OF EQUIPMENT, TERMS, AND EXPRESSIONS AN OPERATOR COULD ENCOUNTER WHEREVER AUTOMATION AND INSTRUMENTATION ARE FOUND.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 WEST QUINCY AVENUE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW004735

PUBLICATION DATE: 76

TITLE: DESIGN OF WATER AND WASTEWATER SYSTEMS.

PERSONAL AUTHOR: FLACK, ERNEST J.

DESCRIPTOR: \*DESIGN; \*ENVIRONMENTAL IMPACT; \*FACILITIES; PLANNING; RESORTS; SEWAGE; URBAN AREAS; \*WATER DISTRIBUTION; \*WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 150P. PRICE: \$4.00

ABSTRACT: THIS HANDBOOK DEALS WITH DESIGN CRITERIA AND PARAMETERS FOR WATER AND WASTEWATER SYSTEMS IN RAPID GROWTH AREAS AND RESORTS. THE TOPICS COVERED INCLUDE ENVIRONMENTAL IMPACTS OF NEW WATER AND SEWAGE FACILITIES, DESIGN PARAMETERS, SEWAGE COLLECTION AND WATER DISTRIBUTION, WATER TREATMENT AND WASTEWATER TREATMENT.

AVAILABILITY: COLORADO STATE UNIVERSITY, BULLETIN ROOM, FT. COLLINS, CO 80523

IRIS ACCESSION NUMBER: EW004740

PUBLICATION DATE: MAR 79

TITLE: LOCATION KEY FOR BEST MANAGEMENT PRACTICES-SILVICULTURE. AFRI RESEARCH REPORT NUMBER 39.

PERSONAL AUTHOR: MCCLIMANS, RICHARD J.

DESCRIPTOR: \*BEST MANAGEMENT PRACTICES; \*FORESTRY; \*NONPOINT SOURCE POLLUTION; \*SILVICULTURE; \*SURFACE RUNOFF; \*WATER QUALITY; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 13P. PRICE: FREE OF CHARGE

ABSTRACT: RESEARCH HAS SHOWN THAT WATER QUALITY PROBLEMS CAN OCCUR WHEN CERTAIN FORESTRY ACTIVITIES TAKE PLACE UNDER CRITICAL CONDITIONS AND LOCATIONS, ESPECIALLY ALONG THE SMALLER HEADWATER STREAMS AND TRIBUTARIES. THIS REPORT IS INTENDED AS A GUIDE TO THE IDENTIFICATION OF THOSE CRITICAL CONDITIONS OR LOCATIONS THAT NEED SPECIAL ALTERATION IN ORDER TO MINIMIZE ADVERSE IMPACTS ON SURFACE WATER. IN ORDER TO USE THIS GUIDE, THE NATURE AND SCOPE OF A JOB AND APPROXIMATIONS OF SLOPE, SOIL AND WATER SENSITIVITY NEED TO BE KNOWN.

AVAILABILITY: STATE UNIVERSITY OF NEW YORK, COLLEGE OF ENVIRONMENTAL SCIENCE AND FORESTRY, SYRACUSE, NY 13210

IRIS ACCESSION NUMBER: EW004741

PUBLICATION DATE: 78

TITLE: NOTES ON WATER RESEARCH: TESTS FOR ASSESSING THE OXYGEN DEMAND OF EFFLUENTS.

DESCRIPTOR: ANALYTICAL TECHNIQUES; \*EFFLUENTS; \*LABORATORY PROCEDURES; \*MONITORING; \*OPERATIONS (WASTEWATER); OXYGEN; \*OXYGEN DEMAND; \*RESEARCH; \*SAMPLING; \*WASTEWATER; \*WATER POLLUTION; \*WATER RESOURCES

DESCRIPTIVE NOTE: 4P. PRICE: \$1.00

ABSTRACT: EVALUATED ARE THE RESULTS OBTAINED BY APPLYING FIVE DIFFERENT POLLUTION MEASURES TO THE SAME WATER SAMPLES. THE TESTS WERE PERMANGANATE VALUE, BIOCHEMICAL OXYGEN DEMAND, CHEMICAL OXYGEN DEMAND, TOTAL OXYGEN DEMAND, AND TOTAL ORGANIC CARBON. THE RESULTS OBTAINED FOR EACH TEST WERE DIFFERENT ALTHOUGH THEY WERE RELATED. THE PURPOSE OF THIS PAPER IS TO OUTLINE THE REASONS FOR THESE DIFFERENCES SO

THAT THE MOST APPROPRIATE TEST MAY BE SELECTED FOR ANY GIVEN APPLICATION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004742

PUBLICATION DATE: JUN 78

TITLE: APPLICATIONS OF MASS SPECTROMETRY IN POLLUTION CONTROL.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; GAS CHROMATOGRAPHY; \*LABORATORY TECHNIQUES; \*MASS SPECTROMETRY; ORGANIC COMPOUNDS; \*POLLUTION CONTROL; PUBLIC HEALTH; VOLATILE COMPOUNDS.

DESCRIPTIVE NOTE: 74P. PRICE: \$1.00

ABSTRACT: THIS IS A DESCRIPTION OF THE ANALYTICAL TECHNIQUE USED BY THE WATER RESEARCH CENTER TO IDENTIFY VOLATILE COMPONENTS OF ORGANIC COMPOUND MIXTURES. GAS CHROMATOGRAPHY IS COUPLED WITH MASS SPECTROMETRY AND DATA PROCESSING IS THE IDENTIFICATION AND QUANTIFICATION PROCESS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004743

PUBLICATION DATE: 79

TITLE: PROCEDURES AND TEST EQUIPMENT FOR WATER/WASTEWATER ANALYSES.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; BIOLOGICAL ANALYSIS; CHEMICAL ANALYSIS; \*EQUIPMENT; \*LABORATORY TECHNIQUES; METALS; \*OPERATIONS (WATER); \*OPERATIONS (WASTEWATER); \*WATER ANALYSES; \*WASTEWATER ANALYSES

DESCRIPTIVE NOTE: 130P. PRICE: \$6.50

ABSTRACT: THIS MANUAL HAS BEEN DESIGNED AS A USEFUL, ABRIDGED SOURCE FOR PROCEDURES OF THE SO TESTS THAT FEDERAL AND LOCAL GOVERNMENTS REQUIRE OF FACILITIES SEEKING PERMITS TO DISCHARGE WASTE MATTER INTO NATURAL BODIES OF WATER.

AVAILABILITY: FISHER SCIENTIFIC COMPANY, 5401 CREEK ROAD, CINCINNATI, OH 45242

IRIS ACCESSION NUMBER: EW004772

PUBLICATION DATE: 79

TITLE: WASTEWATER TREATMENT PLANT O&M. A NATIONAL ISSUE.

DESCRIPTOR: BACTERIAL SUPPLEMENTATION; \*BIOAUGMENTATION;

FACILITIES; MAINTENANCE; MICROORGANISMS; \*OPERATIONS (WASTEWATER); \*SYMPOSIA PROCEEDINGS; SECONDARY TREATMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 12P. FREE OF CHARGE

ABSTRACT: THIS PAPER DEALS WITH THE PROCESS OF BIOAUGMENTATION. THE VALUE OF BACTERIAL SUPPLEMENTATION IS EXAMINED, ALTHOUGH THE PROBLEMS STEMMING FROM MICROBIAL UNPREDICTABILITY ARE STRESSED.

AVAILABILITY: FLOW LABORATORIES, INC., 1601 WEST ORANGEWOOD AVENUE, ORANGE, CA 92668

IRIS ACCESSION NUMBER: EW004773

PUBLICATION DATE: FEB 79

TITLE: BACTERIAL SUPPLEMENTATION: WHAT IT CAN AND CANNOT DO.

PERSONAL AUTHOR: GRUBBS, R. B.

DESCRIPTOR: ACTIVATED SLUDGE; BACTERIAL SUPPLEMENTATION; \*BACTERIOLOGY; \*BIOAUGMENTATION; EFFLUENTS; \*FACILITIES; LAGOON SYSTEMS; \*OPERATIONS (WASTEWATER); \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 12P. FREE OF CHARGE

ABSTRACT: THIS PAPER DEALS WITH THE SUBJECT OF BIOAUGMENTATION AT WASTEWATER TREATMENT PLANTS. INFORMATION IS PROVIDED ON THE GENERAL BACKGROUND OF BIOAUGMENTATION, AS WELL AS THE CURRENT UNDERSTANDING OF THE MECHANISMS OF SUCCESSFUL PROGRAMS.

AVAILABILITY: FLOW LABORATORIES, INC., 1601 WEST ORANGEWOOD AVENUE, ORANGE, CA 92668

IRIS ACCESSION NUMBER: EW004774

PUBLICATION DATE: 76

TITLE: BIOLOGICAL CONTROL OF WATER POLLUTION.

PERSONAL AUTHOR: EDITORS: TOURBIER, JOACHIM; PIERSON, ROBERT W.

DESCRIPTOR: \*BIOLOGICAL CONTROL; \*BACTERIOLOGY; \*GREASE; MUNICIPAL SEWAGE; \*MAINTENANCE; POLLUTION; \*SEWERS; \*WATER POLLUTION CONTROL; \*WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 10P. FREE OF CHARGE

ABSTRACT: THIS STUDY EXAMINES THE PROBLEM OF SEWER LINES BLOCKED BY GREASE IN RESIDENTIAL AREAS. THE TRADITIONAL TECHNIQUE OF MECHANICALLY CLEANSING THE PIPES IS COMPARED TO THE INNOVATIVE APPROACH OF CLEANSING BY USING BACTERIAL CULTURES. THE STUDY CONCLUDES THAT CLEANING OF SEWERS BY GREASE CONSUMING BACTERIA REPRESENTS A VIABLE AND IN SOME

CASES ECONOMICAL ALTERNATIVE TO TRADITIONAL MECHANICAL METHODS OF CLEANING SEWERS.

ORANGEWOOD, ORANGE, CA 92668

AVAILABILITY: FLOW LABORATORIES, INC., 1601 WEST ORANGEWOOD, ORANGE, CA 92668

IRIS ACCESSION NUMBER: EW004793

PUBLICATION DATE: 78

IRIS ACCESSION NUMBER: EW004775

PUBLICATION DATE: MAR 77

TITLE: CONTROL OF NUISANCE ODORS FROM PONDS BY THE USE OF BACTERIA CULTURES.

TITLE: RESIDENTIAL EROSION AND SEDIMENT CONTROL OBJECTIVES, PRINCIPLES AND DESIGN CONSIDERATIONS.

PERSONAL AUTHOR: JENSEN, RANDOLPH A.

DESCRIPTOR: \*COSTS; \*DESIGN CONSIDERATIONS; \*EROSION CONTROL; LEGAL IMPLICATIONS; \*MANAGEMENT; \*PLANNING; \*SEDIMENT CONTROL; SOILS; STORMWATER; URBAN LAND; \*WATER EROSION; \*WIND EROSION; \*WATER EROSION CONTROL; \*WIND EROSION CONTROL

DESCRIPTOR: AERATION; \*BIOLOGICAL CONTROL; \*BACTERIOLOGY; \*HOLDING PONDS; \*ODORS; \*POLLUTION CONTROL; \*PONDS; \*STAGNANT WATER; \*WATER POLLUTION

DESCRIPTIVE NOTE: 63P. PRICE: \$7.50

DESCRIPTIVE NOTE: 6P. FREE OF CHARGE

ABSTRACT: THE INFORMATION IN THIS PAPER IS DIRECTED TO THOSE INDIVIDUALS CONCERNED WITH THE MAINTENANCE OF ODOR CONTROL IN HOLDING PONDS OR OTHER BODIES OF RELATIVELY STAGNANT WATER. A FULL-SCALE COMPARISON OF ODOR CONTROL METHODS WAS MADE BETWEEN AERATION WITH COMPRESSED AIR OXIDATION WITH HYDROGEN PEROXIDE, DESTRUCTION OF THE ODOR CAUSING BACTERIA WITH FORMALDEHYDE AND OVERRIDING OF THE ODOR CAUSING BACTERIA WITH DESIRABLE BACTERIA STRAINS. THE LATTER PROVED TO BE THE METHOD EVENTUALLY ADOPTED TO HANDLE THE ODOR PROBLEM.

ABSTRACT: THIS REPORT EXAMINES THE PROBLEM OF EROSION AND SEDIMENT CONTROL. CAREFUL CONSIDERATION IS GIVEN TO DESIGN IN PROBLEM AREAS, RISKS AND COSTS ARE EVALUATED, THE RELATIONSHIPS BETWEEN CONTROL AND MANAGEMENT ARE ANALYZED, THE NATURE OF THE PROCESSES ARE EXAMINED AND FACTORS INFLUENCING EROSION ARE DISCUSSED. WATER EROSION, WIND EROSION AND SEDIMENT CONTROL METHODS ARE DETAILED, AND THE LEGAL IMPLICATIONS ARE INCLUDED.

AVAILABILITY: FLOW LABORATORIES, INC., 1601 WEST ORANGEWOOD, ORANGE, CA 92668

AVAILABILITY: AMERICAN SOCIETY OF CIVIL ENGINEERS, 345 EAST 47TH STREET, NEW YORK, NEW YORK 10017

IRIS ACCESSION NUMBER: EW004776

IRIS ACCESSION NUMBER: EW004794

PUBLICATION DATE: MAY 71

PUBLICATION DATE: JUN 75

TITLE: USE OF BACTERIAL CULTURES TO CONTROL OILY WASTEWATERS FROM A BULK OIL HANDLING TERMINAL.

TITLE: WATER QUALITY AS AN APPROACH TO MANAGING RECREATIONAL USE AND DEVELOPMENT ON A MOUNTAIN WATERSHED.

PERSONAL AUTHOR: CASWELL, C. A.

DESCRIPTOR: \*CONTAMINATION; \*LAND USE; \*MANAGEMENT; \*RECREATION AREAS; \*SAMPLING; \*VISITORS; \*WATER QUALITY; \*WATERSHEDS

DESCRIPTOR: \*BIOLOGICAL CONTROL; \*BACTERIOLOGY; GREASES; \*INDUSTRIAL WASTEWATER; \*OIL; \*WATER POLLUTION CONTROL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 84P. PRICE: \$2.50

DESCRIPTIVE NOTE: 13P. FREE OF CHARGE

ABSTRACT: THIS PAPER DISCUSSES THE DESIGN AND OPERATION OF A BIOLOGIC TREATMENT SYSTEM TO CONTROL AN OILY WASTEWATER EFFLUENT FROM A BULK OIL HANDLING TERMINAL. THE RATIONALE FOR THE DESIGN, THE BASIC DESIGN PARAMETERS, AND THE SYSTEMS OPERATIONAL HISTORY ARE DISCUSSED. THE USE OF COMMERCIALY PREPARED DRIED BACTERIAL CULTURES TO ESTABLISH AN EFFECTIVE BIOMASS FOR THE REMOVAL OF OILS AND GREASES, AND TO IMPROVE BIOLOGICAL OXYGEN DEMAND IS SUMMARIZED.

ABSTRACT: THE SOUTH FORK OF THE OGDEN RIVER, ONE OF SEVERAL HEAVILY USED MOUNTAIN WATERSHEDS ALONG UTAHS WASATCH FRONT, WAS STUDIED BETWEEN FEBRUARY 1 AND NOVEMBER 1, 1974, TO DETERMINE THE EFFECTS OF RECREATION ON WATER QUALITY. ALTHOUGH THE GREATEST IMPACTS ON WATER QUALITY OCCURRED DURING SPRING RUNOFF, IT WAS FOUND THAT RECREATIONAL USE HAD A DEFINITE EFFECT ON WATER QUALITY. BACTERIOLOGICAL PARAMETERS WERE FOUND TO BE THE MOST SENSITIVE INDICATORS OF CONTAMINATION. DIFFERENCES BETWEEN HEAVY WEEKEND AND LIGHT WEEKDAY RECREATIONAL USE WERE REFLECTED BY DIFFERENCES IN BACTERIOLOGICAL COUNTS. ALSO, IT APPEARS THAT CHANGES IN BACTERIAL WATER QUALITY WERE MORE CLOSELY CORRELATED WITH HIGH INTENSITY, SHORT DURATION USE RATHER THAN WITH THE OVERALL NUMBER OF VISITOR DAYS USE RECEIVED AT A RECREATIONAL SITE. THE RESULTS OF THIS STUDY INDICATE THAT IMPROVEMENTS ARE NEEDED AT SEVERAL RECREATIONAL SITES. STUDIES TO INVESTIGATE THE IMPROVEMENT OF RECREATIONAL FACILITIES ALONG THE SOUTH FORK ARE RECOMMENDED.

AVAILABILITY: FLOW LABORATORIES, INC., 1601 WEST



AVAILABILITY: UTAH STATE UNIVERSITY, UTAH WATER RESEARCH  
LABORATORY, COLLEGE OF ENGINEERING, LOGAN, UTAH 84322

INSTITUTION NAME: UTAH WATER RESEARCH LABORATORY.

IRIS ACCESSION NUMBER: EW004803

PUBLICATION DATE: 79

TITLE: A WORKFORCE AND TRAINING PROFILE FOR SOLID WASTE  
MANAGEMENT AND RESOURCE RECOVERY.

DESCRIPTOR: ENVIRONMENTAL ENGINEERING; FEDERAL GOVERNMENT;  
FORECASTING; \*LABOR FORCE; \*MANPOWER NEEDS; \*MANAGEMENT;  
POLLUTION CONTROL; \*PLANNING; RECYCLING; \*RESOURCE RECOVERY;  
\*SOLID WASTES; STATE PLANNING; \*TRAINING

DESCRIPTIVE NOTE: 152P. PRICE: \$11.00

ABSTRACT: THIS REPORT IS DIVIDED INTO THE FOLLOWING TOPICS:  
(1) A WORKFORCE PROFILE AND ANALYSIS SECTION STUDYING THE  
WORKFORCE NEEDS OF PUBLIC AND PRIVATE AGENCIES INVOLVED IN  
SOLID WASTE MANAGEMENT AND RECOVERY, (2) A SECTION ANALYZING  
WHAT ARE CONSIDERED BY SOURCES IN THE FIELD TO BE THE  
PRINCIPAL BLOCKAGES TO INITIAL EMPLOYMENT AND CAREER  
ADVANCEMENT IN SOLID WASTE MANAGEMENT, AND (3) AN ANALYSIS  
OF THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S  
RESPONSIBILITIES FOR WORKFORCE DEVELOPMENT AND TRAINING  
ACTIVITIES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE,  
OPERATIONS DIVISION, SPRINGFIELD, VA 22161

INSTITUTION NAME: NATIONAL FIELD RESEARCH CENTER.

IRIS ACCESSION NUMBER: EW004804

PUBLICATION DATE: 75

TITLE: AMBIENT WATER QUALITY CRITERIA: ARSENIC.

DESCRIPTOR: AQUATIC LIFE; \*ARSENIC; \*AMBIENT WATER QUALITY  
CRITERIA; CARCINOGENICITY; HUMAN HEALTH; PUBLIC HEALTH;  
\*REGULATIONS; \*STANDARDS; \*TOXICOLOGY; \*TOXIC SUBSTANCES;  
\*WATER QUALITY

DESCRIPTIVE NOTE: 189P. PRICE: \$10.00

ABSTRACT: PRESENTED ARE THE AMBIENT WATER QUALITY CRITERIA  
FOR ARSENIC AQUATIC LIFE AND HUMAN HEALTH. EVALUATED ARE  
ACUTE AND CHRONIC TOXICITY FOR FRESHWATER AND SALTWATER  
ORGANISMS. ANALYZED ARE HUMAN AND OTHER MAMMAL EXPOSURE TO,  
INGESTION OF, INHALATION OF, AND DERMAL ABSORPTION OF  
ARSENIC. EXAMINED ARE RESEARCH ON THE CHEMICAL  
PHARMOKINETICS (ABSORPTION, DISTRIBUTION, METABOLISM,  
EXCRETION) AND ITS EFFECTS (SYNERGISM, TERATOGENICITY,  
MUTAGENICITY, CARCINOGENICITY, ACUTE, SUB-ACUTE AND CHRONIC  
TOXICITY). REVIEWS EXISTING GUIDELINES AND STANDARDS,  
CURRENT EXPOSURE LEVELS AND SPECIAL RISK GROUPS TO FORMULATE  
THE WATER QUALITY CRITERIA.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE,  
OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004805

PUBLICATION DATE: 75

TITLE: AMBIENT WATER QUALITY CRITERIA: BENZENE.

DESCRIPTOR: \*AMBIENT WATER QUALITY CRITERIA; \*BENZENE;  
CHEMISTRY; CARCINOGENICITY; HUMAN HEALTH; MUTAGENICITY;  
PUBLIC HEALTH; \*REGULATIONS; \*TOXICOLOGY; \*TOXIC SUBSTANCES;  
\*WATER QUALITY

DESCRIPTIVE NOTE: 150P. PRICE: \$8.00

ABSTRACT: PRESENTED ARE THE WATER QUALITY CRITERIA FOR  
BENZENE FOR AQUATIC LIFE AND HUMAN HEALTH, USING AVAILABLE  
INFORMATION AND CURRENT RESEARCH DATA. EVALUATES ACUTE AND  
CHRONIC TOXICITY FOR FRESHWATER AND SALTWATER ORGANISMS.  
ANALYZES HUMAN AND OTHER MAMMALS EXPOSURE TO, INGESTION OF  
INHALATION OF AND DERMAL ABSORPTION OF BENZENE. EXAMINES  
RESEARCH ON THE CHEMICALS PHARMOKINETICS, (ABSORPTION,  
DISTRIBUTION, METABOLISM, EXCRETION), AND ITS EFFECTS,  
(SYNERGISM, TERATOGENICITY, MUTAGENICITY, CARCINOGENICITY,  
ACUTE, SUB-ACUTE AND CHRONIC TOXICITY). REVIEWS EXISTING  
GUIDELINES AND STANDARDS, CURRENT EXPOSURE LEVELS AND  
SPECIAL RISK GROUPS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE,  
OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004806

PUBLICATION DATE: DEC 75

TITLE: SLUDGE PROCESSING; TRANSPORTATION AND  
DISPOSAL/RESOURCE RECOVERY: A PLANNING PERSPECTIVE.

PERSONAL AUTHOR: NEPTUNE, DEAN, AND OTHERS

DESCRIPTOR: MUNICIPALITIES; \*PLANNING; \*RESOURCE RECOVERY;  
\*SLUDGE; \*SLUDGE DISPOSAL; \*SLUDGE TRANSPORTATION; SOLID  
WASTES; WATER POLLUTION; \*WASTEWATER TREATMENT; \*WASTE  
DISPOSAL

DESCRIPTIVE NOTE: 189P. PRICE: \$13.00

ABSTRACT: A METHODOLOGY WAS DEVELOPED IN THIS REPORT FOR  
USE IN THE EVALUATION OF ALTERNATIVES FOR THE ULTIMATE  
DISPOSAL OF RESIDUAL WASTES GENERATED IN MUNICIPAL  
WASTEWATER TREATMENT PLANTS. THIS METHODOLOGY CONSIDERED  
TECHNICAL, ECONOMIC, SOCIAL, AND INSTITUTIONAL FACTORS  
PERTINENT TO A THOROUGH REVIEW OF ALTERNATIVES. RESIDUAL  
WASTES GENERATED IN MUNICIPAL WASTEWATER TREATMENT PLANTS  
WERE CHARACTERIZED. HANDLING AND TREATMENT PROCESSES FOR THE  
RESIDUAL WASTES ARE DISCUSSED AND EVALUATED IN LIGHT OF  
QUALITATIVE AND QUANTITATIVE CHARGES TO THE RESIDUAL WASTE'S.  
LIQUID, GASEOUS, AND SOLID SIDESTREAMS PRODUCED IN RESIDUAL  
WASTE TREATMENT WERE EVALUATED AND RAIL, PIPELINE, BARGE,

AND TRUCK TRANSPORT OF RESIDUAL WASTES WERE ANALYZED. ENVIRONMENTAL, OPERATIONAL AND INSTITUTIONAL CONSTRAINTS TO THE USE OF OCEAN DISPOSAL, LAGOONS, SANITARY LANDFILLS, SLUDGE RECYCLING, AND LAND RECLAMATION WERE PRESENTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004810

PUBLICATION DATE: JAN 77

TITLE: PREVENTIVE APPROACHES TO STORMWATER MANAGEMENT.

PERSONAL AUTHOR: WILLISON, JOHN; AND OTHERS

DESCRIPTOR: \*BEST MANAGEMENT PRACTICES; \*ECONOMICS; EROSION; HYDROLOGY; \*MANAGEMENT; REGULATIONS; \*STORMWATER; SEDIMENT; \*URBAN RUNOFF; WATER QUALITY

DESCRIPTIVE NOTE: 207P. PRICE: \$13.00

ABSTRACT: THIS DOCUMENT WAS PREPARED FOR USE BY LOCAL AGENCY ADMINISTRATORS, AND OTHERS WHO MAY BE INVOLVED IN PROGRAMS TO ABATE POLLUTION FROM URBAN RUNOFF. THIS REPORT DISCUSSES THE CONCEPT OF SOURCE CONTROL (BEST MANAGEMENT PRACTICE) AND LISTS MANY APPROPRIATE TECHNIQUES. THE PROBLEMS ASSOCIATED WITH IMPLEMENTING THESE PRACTICES, LEGAL, FINANCIAL, AND INSTITUTIONAL ARE ALSO DISCUSSED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004811

PUBLICATION DATE: APR 78

TITLE: MANAGEMENT OF ENGINEERING OF CONTROL SYSTEMS FOR WATER PIPELINES.

DESCRIPTOR: \*CONTROL SYSTEMS; \*DESIGN; \*ENGINEERING; \*MANAGEMENT; MANUFACTURING; MAINTENANCE; \*OPERATIONS (WATER); PLANNING; \*PIPES; \*WATER DISTRIBUTION

DESCRIPTIVE NOTE: 180P. PRICE: \$12.00

ABSTRACT: THIS REPORT IS THE CULMINATION OF THE WORK OF THE TASK COMMITTEE ON PROCEDURES FOR MANAGEMENT OF CONTROL SYSTEMS ENGINEERING FOR WATER PIPELINES. IT PRESENTS PROCEDURAL GUIDELINES FOR MANAGING THE CONCEPTION, DESIGN, MANUFACTURE, INSTALLATION, START-UP, OPERATION AND MAINTENANCE OF CONTROL SYSTEMS FOR WATER PIPELINES.

AVAILABILITY: AMERICAN SOCIETY OF CIVIL ENGINEERS, 345 EAST 47TH STREET, NEW YORK, NY 10017

IRIS ACCESSION NUMBER: EW004813

PUBLICATION DATE: JUL 76

TITLE: MODELING NONPOINT POLLUTION FROM THE LAND SURFACE.

PERSONAL AUTHOR: DONICIAN, ANTHONY S.; CRAWFORD, NORMAN H.

DESCRIPTOR: EROSION; \*HYDROLOGY; \*LAND USE; \*MODELS; \*NONPOINT SOURCE POLLUTION; \*PLANNING; \*POLLUTION INDICATORS; \*SURFACE RUNOFF; \*SIMULATION; \*URBAN AREAS; WATER QUALITY; \*WATER POLLUTION

DESCRIPTIVE NOTE: 280P. PRICE: \$16.00

ABSTRACT: DEVELOPMENT AND INITIAL TESTING OF A MATHEMATICAL MODEL TO CONTINUOUSLY SIMULATE POLLUTANT CONTRIBUTIONS TO STREAM CHANNELS FROM NONPOINT SOURCES IS PRESENTED. THE NONPOINT SOURCE POLLUTANT LOADING (NPS) MODEL IS COMPRISED OF SUBPROGRAMS TO REPRESENT THE HYDROLOGIC RESPONSE OF A WATERSHED, INCLUDING SNOW ACCUMULATION AND MELT, AND THE PROCESSES OF POLLUTANT ACCUMULATION, GENERATION, AND WASHOFF FROM THE LAND SURFACE. THE SIMULATION OF NONPOINT POLLUTANTS FROM BOTH PERVIOUS AND IMPVIOUS AREAS IS BASED ON SEDIMENT AS A POLLUTANT INDICATOR. THE CALCULATED SEDIMENT WASHOFF IS MULTIPLIED BY USER-SPECIFIED POTENCY FACTORS THAT INDICATE THE POLLUTANT STRENGTH OF THE SEDIMENT FOR EACH POLLUTANT SIMULATED. INITIAL TESTING OF THE NPS MODEL WAS PERFORMED ON THREE URBAN WATERSHEDS IN DURHAM, NORTH CAROLINA; MADISON, WISCONSIN; AND SEATTLE, WASHINGTON. THE HYDROLOGIC SIMULATION RESULTS WERE GOOD WHILE THE SIMULATION OF NONPOINT POLLUTANTS WAS FAIR TO GOOD. SEDIMENT, BOD, AND S.S. WERE THE MAJOR POLLUTANTS INVESTIGATED. A DETAILED USER MANUAL IS PROVIDED TO ASSIST POTENTIAL USERS. PARAMETER DEFINITIONS AND GUIDELINES FOR PARAMETER EVALUATION AND CALIBRATION ARE INCLUDED. POSSIBLE USES OF THE NPS MODEL FOR EVALUATION OF PROBLEMS ARE DISCUSSED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004818

PUBLICATION DATE: JAN 76

TITLE: PROCEEDINGS URBAN STORMWATER MANAGEMENT SEMINARS.

PERSONAL AUTHOR: ATHYDE, DENNIS N.

DESCRIPTOR: \*BEST MANAGEMENT PRACTICES; ECONOMICS; LEGISLATION; LAWS; \*MANAGEMENT; POLLUTION ABATEMENT; REGULATIONS; \*SURFACE RUNOFF; \*STORMWATER; \*SEMINAR PROCEEDINGS; \*URBAN AREAS; \*WATER POLLUTION; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 456P. PRICE: \$25.00

ABSTRACT: THIS PROJECT WAS DESIGNED TO PROVIDE INITIAL GUIDANCE FOR THE DEVELOPMENT OF WORK PLANS PURSUANT TO SECTION 208 OF PL92-500. THREE AREAS ARE DISCUSSED. THE FIRST IS PROBLEM ASSESSMENT FOR POLLUTION FROM URBAN STORM WATER RUNOFF. THE SECOND AREA COVERED DISCUSSES MEANS TO

CONTROL POLLUTION, AND THE THIRD AREA DEALS WITH THE LEGAL, INSTITUTIONAL, AND FINANCIAL ASPECTS OF CONTROLLING URBAN STORMWATER RUNOFF FOR POLLUTION ABATEMENT. THE REPORT OF THE TWO SEMINARS INCLUDES TRANSCRIBED TAPES OF QUESTION AND ANSWER PERIODS WHICH WERE HELD AFTER EACH OF THE THREE AREAS WERE DISCUSSED. INCLUDED IS A BIBLIOGRAPHY ON INSTITUTIONAL ARRANGEMENTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004820

PUBLICATION DATE: 74

TITLE: WATER RESOURCES PROTECTION MEASURES IN LAND DEVELOPMENT - A HANDBOOK.

PERSONAL AUTHOR: TOURBIER, J.; WESTMACOTT, R.

DESCRIPTOR: \*DESIGN; EROSION; \*ENVIRONMENT; FLOODING; INFILTRATION; LAND USE; \*LAND DEVELOPMENT; LEGAL ASPECTS; \*PLANNING; \*POLLUTION CONTROL; \*SEDIMENTATION; \*SEWAGE; \*SURFACE RUNOFF; \*URBAN AREA; WATER RESOURCES; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 237P. PRICE: \$15.00

ABSTRACT: THIS REPORT DESCRIBES MEASURES TO REDUCE WATER RESOURCE PROBLEMS THAT ARE ASSOCIATED WITH URBAN DEVELOPMENT. THESE PROBLEMS CONSIST OF INCREASED RUNOFF, DECREASED INFILTRATION, GREATER DEGREES OF EROSION AND SEDIMENTATION, FLOODING, RUNOFF POLLUTION, AND DISCHARGE OF SEWAGE EFFLUENT. ISSUES HAVE BEEN ANALYZED INDIVIDUALLY IN THE CHRISTINA RIVER BASIN IN DELAWARE AND WHERE POSSIBLE, QUANTIFIED. PROTECTION MEASURES ARE PRESENTED IN GROUPS WHICH ARE DIRECTLY RELATED TO SITE CHARACTERISTICS AND ALSO TO THE PROBLEMS LISTED ABOVE. THE APPLICATION, ADVANTAGES AND DISADVANTAGES, DESIGN CRITERIA AND OUTLINE SPECIFICATIONS, COST GUIDELINES AND MAINTENANCE, AND LEGAL IMPLEMENTATION OF EACH MEASURE ARE INDIVIDUALLY COVERED. LEGAL ASPECTS OF IMPLEMENTATION ON THE COUNTY, STATE AND REGIONAL LEVEL ARE ALSO MENTIONED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004878

PUBLICATION DATE: JUN 79

TITLE: PROGRESS IN WASTEWATER DISINFECTION TECHNOLOGY.

DESCRIPTOR: COST EFFECTIVENESS; COLIFORM BACTERIA; CHLORINE; CHLORINATION; CHLOROHYDROCARBONS; \*DISINFECTION; \*DECHLORINATION; LAGOONS; OZONE; RESEARCH; SYMPOSIUM PROCEEDINGS; ULTRAVIOLET RADIATION; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 286P. PRICE: \$16.00

ABSTRACT: THIS SYMPOSIUM BROUGHT TOGETHER SCIENTISTS, CONSULTING ENGINEERS, MUNICIPAL DESIGN ENGINEERS, AND VARIOUS TECHNICAL, STATE AND LOCAL GOVERNMENT OFFICIALS TO LISTEN TO PRESENTATIONS ON THE LATEST DEVELOPMENTS IN THE FIELD OF WASTEWATER DISINFECTION AND TO ACTIVELY PARTICIPATE IN DISCUSSIONS ON THE DATA AND INTERPRETATIONS PRESENTED. PROGRESS IS BEING MADE IN THE FIELD OF WASTEWATER DISINFECTION, BUT MUCH MORE WORK IS NEEDED BEFORE A DESIGN MANUAL CAN BE COMPILED. IT APPEARS THAT SUBSTANTIAL SAVINGS IN CHLORINE USAGE IS POSSIBLE WITH A WELL DESIGNED, OPTIMIZED MIXING AND CONTRACTING SYSTEM. DECHLORINATION WITH SULFUR DIOXIDE IS COST EFFECTIVE, BUT NOT WITH ACTIVATED CARBON OR HOLDING LAGOONS. DISINFECTION OF WELL OXIDIZED, FILTERED SECONDARY EFFLUENT IS BEST ACHIEVED WITH A BUBBLE DIFFUSER CONTACTOR AND IS INDEPENDENT OF CONTACT TIME. TOTAL COSTS OF OZONE DISINFECTION APPEAR TO BE TWICE THE COST OF CHLORINE. ULTRAVIOLET LIGHT IS FINALLY BEING RECOGNIZED AS AN EXTREMELY EFFECTIVE ALTERNATIVE DISINFECTION PROCESS, WITH COSTS ULTIMATELY PROMISING TO BE COMPETITIVE WITH CHLORINE. CHLORINE DIOXIDE IS SOMEWHAT DISAPPOINTING COMPARED WITH CHLORINE ON BENCH-SCALE ANALYSIS, BUT PILOT TESTING SHOULD REVEAL THE TRUE EFFECTIVENESS. VERY INTERESTING PRELIMINARY RESULTS WERE PRESENTED ON NONVOLATILE ORGANIC, BY-PRODUCT FORMATION BY CHLORINE, OZONE, AND ULTRAVIOLET LIGHT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004881

PUBLICATION DATE: MAR 79

TITLE: THE DISINFECTION OF DRINKING WATER.

DESCRIPTOR: BROMINE; CHLORINE DIOXIDE; CHLORINE; CHLORAMINES; \*DISINFECTION; \*DRINKING WATER; HYDROGEN PEROXIDE; IODINE; IONIZING RADIATION; OZONE; POTASSIUM PERMANGANATE; ULTRAVIOLET LIGHT; \*WATER TREATMENT; \*WATER SUPPLY

DESCRIPTIVE NOTE: 225P. PRICE: \$14.00

ABSTRACT: THE CURRENT STATUS OF POSSIBLE METHODS FOR DISINFECTING DRINKING WATER ARE REVIEWED. THE SPECIFIC BIOCIDAL ACTIVITY OF EACH OF THE DISINFECTANTS IS CONSIDERED, AS WELL AS INFORMATION (OR LACK OF IT) ON THE PRACTICAL APPLICATION AND RELIABILITY OF THE METHODS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004886

PUBLICATION DATE: 79

TITLE: CHLORINATION SKILL TRAINING PACKAGE-WASTEWATER TREATMENT.

DESCRIPTOR: \*AUTOINSTRUCTIONAL PROGRAMS; \*CHLORINATION;

\*CHLORINE; COURSE EVALUATION; DISINFECTION; EDUCATIONAL PROGRAMS; EQUIPMENT; FACILITIES; \*HYPOCHLORINATION; INDEPENDENT STUDY; \*INSTRUCTIONAL MATERIALS; \*OPERATIONS (WASTEWATER); PROGRAMMED INSTRUCTION; SAFETY; \*WASTEWATER TREATMENT; \*WORKBOOKS

DESCRIPTIVE NOTE: 375P. PRICE: \$0.00

ABSTRACT: THIS PUBLICATION IS DESIGNED AS A SELF-INSTRUCTION HANDBOOK FOR WASTEWATER TREATMENT PLANT OPERATORS. THIS WORKBOOK CONTAINS 3 PARTS: A&B DESIGNED FOR OPERATIONS THAT HAVE A GAS CHLORINATION SYSTEM AND PART C DESIGNED FOR OPERATORS THAT WORK WITH HYPOCHLORINATION SYSTEMS. PART A CONTAINS INFORMATION ON THE USES, PROPERTIES AND HAZARDS OF CHLORINE, DOSAGE, RESIDUAL AND FEED RATE CALCULATIONS, AND IDENTIFICATION AND FUNCTION OF GAS CHLORINATION COMPONENTS. PART B CONTAINS A GUIDE FOR HANDS-ON TRAINING THAT SHOULD BE CONDUCTED IN A GAS CHLORINATION WORKSHOP. PART C CONTAINS MATERIAL ON HYPOCHLORINATION. EACH OF THE THREE PARTS CONTAIN INSTRUCTIONS, PREREQUISITES, OBJECTIVES, AND A NUMBER OF SELF-TESTS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVENUE, N.W. WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW004887

PUBLICATION DATE: 79

TITLE: UTILIZATION OF MUNICIPAL SEWAGE EFFLUENT AND SLUDGE ON FOREST AND DISTURBED LAND.

PERSONAL AUTHOR: EDITORS: SOPPER, WILLIAM E.; KERR, SONJA N.

DESCRIPTOR: \*ECOSYSTEMS; \*FORESTRY; \*LAND APPLICATION; \*MUNICIPAL SEWAGE; MICROBIOLOGY; \*PUBLIC HEALTH; REVEGETATION; \*SEWAGE; \*SLUDGE; \*WASTEWATER; WATER QUALITY

DESCRIPTIVE NOTE: 537P. PRICE: \$20.00

ABSTRACT: THESE PAPERS ARE THE PROCEEDINGS OF A SYMPOSIUM CONDUCTED BY THE SCHOOL OF FOREST RESOURCES AND THE INSTITUTE FOR RESEARCH ON LAND AND WATER RESOURCES AT THE PENNSYLVANIA STATE UNIVERSITY. THE PAPERS ARE DIVIDED INTO TWO SECTIONS, WASTEWATER AND SLUDGE APPLICATIONS IN FORESTS, AND DISTURBED LAND REVEGETATION. THE FIRST SECTION COVERS SUCH TOPICS AS WATER QUALITY AND RENOVATION, MICROBIOLOGICAL ASPECTS, VEGETATION RESPONSES, FOREST SOILS, ECOSYSTEM RESPONSES, PUBLIC HEALTH, AND SYSTEM DESIGN AND ECONOMICS. THE SECOND SECTION COVERS SLUDGE APPLICATION, MICROBIOLOGY AND PUBLIC HEALTH, DOMESTIC ANIMALS AND WILDLIFE, AND GUIDELINES AND REGULATIONS.

AVAILABILITY: THE PENN STATE PRESS, 215 WAGNER BUILDING, UNIVERSITY PARK, PA 16802

IRIS ACCESSION NUMBER: EW004888

PUBLICATION DATE: SEP-79

TITLE: OXIDATION TECHNIQUES IN DRINKING WATER TREATMENT.

PERSONAL AUTHOR: KARLSRUHE, F. R. G.

DESCRIPTOR: ANALYTICAL TECHNIQUES; \*CHLORINATION; \*CONFERENCE REPORTS; \*DISINFECTION; \*DRINKING WATER; HEALTH RISKS; ORGANIC CHEMISTRY; OXIDATION TECHNIQUES; \*OZONE; \*OPERATIONS (WATER); \*WATER SUPPLY; \*WATER ANALYSIS; WATER QUALITY; \*WATER TREATMENT

DESCRIPTIVE NOTE: 750P. PRICE: \$35.00

ABSTRACT: THIS DOCUMENT CONTAINS THE COMPLETE MANUSCRIPTS OF ALL LECTURES GIVEN BY INTERNATIONAL SCIENTISTS AND ENGINEERS AT A 1978 CONFERENCE ON THE TREATMENT OF DRINKING WATER. MAJOR AREAS OF DISCUSSION INCLUDE: PRACTICAL USE OF DRINKING WATER CHLORINATION, UNWANTED BY-PRODUCTS OF CHLORINATION, OZONE TREATMENT AND REACTIONS, OZONE PRODUCTION, CONTACTORS, DEMAND, THE USE OF OZONE IN DRINKING WATER TREATMENT, APPLICATION OF OTHER OXIDATION PROCESSES, BIOLOGICAL PROCESSES IN DRINKING WATER TREATMENT, AND COMBINATION OF CHEMICAL AND BIOLOGICAL OXIDATION PROCESSES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004889

PUBLICATION DATE: AUG 79

TITLE: COSTS AND WATER QUALITY IMPACTS OF REDUCING AGRICULTURAL NONPOINT SOURCE POLLUTION: AN ANALYSIS METHODOLOGY.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*AGRICULTURAL ECONOMICS; \*AGRICULTURAL POLLUTION; \*ECONOMIC IMPACTS; \*MODELS; \*NONPOINT SOURCE POLLUTION; POLICY; \*POLLUTION CONTROL; \*REGIONAL PLANNING; SOCIAL IMPACTS; \*WATER QUALITY; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 350P. PRICE: \$19.00

ABSTRACT: THIS STUDY ADDRESSES THE PROBLEM OF ANALYZING THE EFFECTS OF AGRICULTURAL NONPOINT SOURCE POLLUTION. A METHODOLOGY FOR REGIONAL-LEVEL PLANNING IS PRESENTED THAT, WITH FURTHER REFINEMENT, COULD PROVE OF SIGNIFICANT VALUE FOR BROAD ANALYSIS OF LARGE NUMBERS OF POLICY ALTERNATIVES, INCLUDING TEST MANAGEMENT PRACTICES. THE ANALYTICAL METHOD DEVELOPED ALLOWS THE SIMULTANEOUS EXAMINATION OF THE WATER QUALITY IMPACTS OF SELECTED AGRICULTURAL PRACTICES AND THE ECONOMIC EFFECTS THAT ALTERNATIVE PRACTICES AND NONPOINT SOURCE POLLUTION CONTROL POLICIES HAVE ON THE FARMER. THE PROPOSED METHODOLOGY INCLUDES A FARM MODEL, A WATER QUALITY MODEL, AND A QUALITATIVE APPROACH FOR THE ASSESSMENT OF THE SOCIAL AND ECONOMIC IMPACTS OF WATER QUALITY CHARGES ON DOWNSTREAM USERS. IT MAY BE APPLIED TO EVALUATE GOVERNMENT NONPOINT SOURCE POLLUTION CONTROL POLICIES AND THE EFFECTS OF ALTERNATIVE AGRICULTURAL FUTURES. THE METHODOLOGIES FOR

THESE PURPOSES ARE EVALUATED THROUGH AN ILLUSTRATIVE EXAMPLE BASED ON DATA FROM THE BLACK CREEK WATERSHED IN NORTHEASTERN INDIANA AND A SYNTHESIZED DOWNSTREAM IMPOUNDMENT.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004890

PUBLICATION DATE: JUL 79

TITLE: RADIOMETRIC METHOD FOR THE DETERMINATION OF URANIUM IN WATER.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; CHEMICAL ANALYSIS; \*LABORATORY PROCEDURES; \*LABORATORY TESTING; MILLING; MINING; \*MONITORING; NUCLEAR POWER PLANTS; \*POLLUTION; \*URANIUM; URANIUM ORES; \*WATER ANALYSIS; \*WATER QUALITY

DESCRIPTIVE NOTE: 50P. PRICE: \$7.00

ABSTRACT: THE RESULTS OF A SINGLE LABORATORY EVALUATION AND AN INTERLABORATORY COLLABORATIVE STUDY OF A METHOD FOR DETERMINING URANIUM IN WATER ARE REPORTED. THE METHOD CONSISTS OF COPRECIPITATION OF URANIUM WITH FERROUS HYDROXIDE, A NITRIC-HYDROFLUORIC ACID DISSOLUTION IF THE SAMPLE CONTAINS SEDIMENT, SEPARATION OF THE URANIUM BY ANION EXCHANGE CHROMATOGRAPHY, AND ELECTRODEPOSITION, FOLLOWED BY ALPHA PULSE HEIGHT ANALYSIS. MEASURED URANIUM CONCENTRATIONS AGREED TO WITHIN 5% OF THE REFERENCE CONCENTRATIONS, WHILE TRACER RECOVERIES AVERAGED ABOUT 70%.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004893

PUBLICATION DATE: MAY 79

TITLE: DEVELOPMENT OF MEASUREMENT TECHNIQUES FOR FUGITIVE EMISSIONS FROM PROCESS AND EFFLUENT STREAMS.

DESCRIPTOR: AIR POLLUTION; COAL; COMBUSTION; DUST; \*EFFLUENTS; ELECTRICAL POWER PLANTS; \*FUGITIVE EMISSIONS; \*INDUSTRIAL WASTES; \*MEASUREMENT TECHNIQUES; MATHEMATICAL MODELING; \*POLLUTION CONTROL; PETROLEUM; \*STREAMS; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 43P. PRICE: \$6.00

ABSTRACT: THIS REPORT SUMMARIZES WORK COMPLETED IN A CONTINUING PROGRAM OF EVALUATION, DEVELOPMENT, TESTING, AND ADAPTATION OF EXISTING AND PROPOSED MEASUREMENT TECHNIQUES FOR AIR AND WATERBORNE INDUSTRIAL PROCESS FUGITIVE EMISSIONS. RESULTS OF FIVE MAJOR RESEARCH AND DEVELOPMENT TASKS ARE PRESENTED: (1) A MEASUREMENT AND MODELING PROGRAM FOR WATERBORNE EMISSIONS FROM COAL-FIRED UTILITY BOILERS; (2) A STUDY OF THE APPLICABILITY OF REMOTE SENSING METHODS FOR MEASUREMENT OF AIRBORNE FUGITIVE EMISSIONS; (3) A MEASUREMENT PROGRAM TO ASSESS THE ENVIRONMENTAL

PROBLEMS CAUSED BY RUNOFF FROM INTEGRATED IRON AND STEEL MILLS; (4) THE DESIGN AND DEVELOPMENT OF A FUGITIVE ASSESSMENT SAMPLING TRAIN FOR PARTICULATE AND ORGANIC VAPOR EMISSIONS; AND (5) AN EVALUATION OF TECHNIQUES FOR THE DETERMINATION OF LARGEHOOD CAPTIVE EFFICIENCIES. SUMMARIES OF SERVICE WEAR TASKS RELATED TO FUGITIVE EMISSIONS MEASUREMENTS INCLUDE: METHODOLOGY DEVELOPMENTS FOR EMISSION MEASUREMENT PROGRAMS AT COKE QUENCHING TOWERS, COAL CLEANING PLANTS, IRON ORE, LOADING OPERATIONS, AND AN OPEN HEARTH SHOP'S ROOF MONITORS, AND REVIEWS OF PROPOSED SAMPLING PROGRAMS AND METHODS FOR FUGITIVE EMISSIONS FROM MINING OPERATIONS, PETROLEUM REFINERIES, AND COAL CLEANING OPERATIONS. ABSTRACTS OF THREE PAPERS ON FUGITIVE EMISSION TOPICS PRESENTED AT EPA SYMPOSIA ARE INCLUDED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004894

PUBLICATION DATE: JUN 79

TITLE: A STANDARD PROCEDURE FOR COST ANALYSIS OF POLLUTION CONTROL OPERATIONS. VOLUME II. APPENDICES.

DESCRIPTOR: \*COST ANALYSIS; \*COST ESTIMATES; ENGINEERING; \*MEASURE OF MERIT; \*OPERATING COSTS; \*POLLUTION CONTROL; POLLUTION

DESCRIPTIVE NOTE: 115P. PRICE: \$11.00

ABSTRACT: THIS MANUAL IS PART OF A USER GUIDE FOR A STANDARD PROCEDURE FOR THE ENGINEERING COST ANALYSIS OF POLLUTION ABATEMENT OPERATIONS AND PROCESSES. THE PROCEDURE APPLIES TO PROJECTS IN VARIOUS ECONOMIC SECTORS: PRIVATE, REGULATED, AND PUBLIC. THE MODELS ARE CONSISTENT WITH COST EVALUATION PRACTICES IN ENGINEERING ECONOMIC AND FINANCIAL ANALYSIS. THIS VOLUME CONTAINS 11 APPENDICES (PROVIDING DETAILED BACKGROUND MATERIAL) AND TWO COMPREHENSIVE EXAMPLES. APPENDIX SUBJECTS INCLUDE: CAPITAL INVESTMENT ESTIMATION, ANNUAL EXPENSE ESTIMATE, THE CASH FLOW CONCEPTS, DISCRETE AND CONTINUOUS INTEREST FACTORS, COST INDICES AND INFLATION FACTOR RATES OR RETURN AND INTEREST RATES, METHODS OF RELIABILITY ASSESSMENT, AND SENSITIVITY ANALYSIS. THE MEASURES OF MERIT APPENDIX CONSIDERS: RETURN ON INVESTMENT, INTERNAL RATE OF RETURN, PAYOUT TIME, EQUIVALENT ANNUAL COSTS, AND UNIT COSTS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004908

PUBLICATION DATE: JUN 79

TITLE: ASSESSMENT OF LAND TREATMENT TECHNOLOGY FOR TEXTILE MILL INDUSTRY.

PERSONAL AUTHOR: PAL, DHIRAJ; OVERCASH, MICHAEL R.

DESCRIPTOR: \*DESIGN; ENVIRONMENTAL REGULATIONS; \*GROUND WATER; \*INDUSTRY; \*INDUSTRIAL WASTES; \*LAND TREATMENT; \*LAND APPLICATION; \*LAND USE; POLLUTION; \*SOIL; \*TEXTILE INDUSTRY; \*WASTE DISPOSAL; \*WASTE TREATMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 32P. PRICE: \$6.00

ABSTRACT: THE TEXTILE MILL INDUSTRY CONSISTING OF SIX SUBCATEGORIES OF MANUFACTURING MUST CONTINUALLY REVIEW THE OPTIONS FOR MEETING STATE AND FEDERAL ENVIRONMENTAL REGULATIONS. LAND TREATMENT IS BECOMING A METHOD OF CHOICE FOR AN INCREASING NUMBER OF MILLS. THIS REPORT EXAMINES LAND TREATMENT ON A FIRST-CUT BASIS. AVERAGE PLANT SIZES FOR EACH SIX SUBCATEGORIES ARE USED ALONG WITH REPRESENTATIVE WASTE AND SOIL CHARACTERISTICS. THESE RESULTS DO NOT REPRESENT DESIGN CRITERIA BECAUSE OF THE HIGHLY CRITICAL NEED TO TEST THE WASTE AND SITE TO BE USED BEFORE SPECIFYING OR PERMITTING OF SUCH SYSTEMS. INSTEAD, THE RESULTS OF THIS REPORT SHOULD BE USED TO COMPARE THE LAND TREATMENT ALTERNATIVE TO CONVENTIONAL PROCESSES. ALTHOUGH NOT INCLUDED SPECIFICALLY, LAND TREATMENT CAN MEET THE HIGHEST LEVELS OF WASTE TREATMENT WHEN CORRECTLY DESIGNED; THUS COMPARISON AGAINST OTHER ALTERNATIVES SHOULD INCLUDE THE ADVANCED WASTEWATER TREATMENT REQUIREMENTS FOR MEETING PRESENT AND FUTURE REGULATIONS. A DESIGN PROCEDURE IS ALSO PRESENTED FOR LAND TREATMENT. THIS PROCEDURE DEMONSTRATES THE DETAILED LEVELS OF SOIL AND WASTE ANALYSIS REQUIRED TO DESIGN ANY LAND APPLICATION SYSTEM.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004911

PUBLICATION DATE: JUN 79

TITLE: PERFORMANCE EVALUATION OF THE MARTEK INSTRUMENTS, INC. MARK V DIGITAL WATER QUALITY ANALYZER SYSTEM.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*EQUIPMENT; \*INSTRUMENTATION; \*MONITORING; \*PERFORMANCE EVALUATION; \*WATER QUALITY

DESCRIPTIVE NOTE: 17P. PRICE: \$5.00

ABSTRACT: TEST AND EVALUATION RESULTS ARE REPORTED FOR A GENERAL PURPOSE, PORTABLE WATER QUALITY SYSTEM DESIGNED TO MEASURE TEMPERATURE, CONDUCTIVITY, PH, AND DISSOLVED OXYGEN TO DEPTHS OF 30 METERS. THE SYSTEM DESCRIPTION, MANUFACTURER'S SPECIFICATION, AND PERFORMANCE RESULTS WITH ASSOCIATED FIGURES AND TABLES GIVING ACCURACY, PRECISION, STABILITY AND ENVIRONMENTAL EFFECTS ARE PROVIDED. A LIST OF REPLACED OR REPAIRED COMPONENTS AND SOME GENERAL COMMENTS ARE GIVEN.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004944

PUBLICATION DATE: 79

TITLE: THE TOXICOLOGY OF OZONE.

DESCRIPTOR: AGRICULTURE; \*ANNOTATED BIBLIOGRAPHIES; \*BIBLIOGRAPHIES; AIR POLLUTION; \*BIOLOGICAL EFFECTS; \*ENVIRONMENTAL INFLUENCES; FORESTRY; INDUSTRIAL HAZARDS; MICROBIOLOGY; \*OZONE; PHYSIOLOGY; \*TOXICOLOGY; \*TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 85P. PRICE: \$30.00

ABSTRACT: STUDIES ARE CITED THAT COVER THE TOXIC EFFECTS OF OZONE IN HUMANS, ANIMALS, AND PLANTS. ALTHOUGH MANY REPORTS CITE THE EFFECTS OF OZONE GENERATED AS A PHOTOCHEMICAL OXIDANT FROM AIR POLLUTION, OTHERS SIMPLY LOOK AT THE BASIC BIOLOGICAL EFFECTS OF OZONE WITHOUT DISCUSSING ITS SOURCE. THE TOPICS DESCRIBED INCLUDE OZONES EFFECTS ON FORESTS AND AGRICULTURAL CROPS, INDUSTRIAL EXPOSURE, MAXIMUM EXPOSURE LEVELS, EFFECTS ON MICRO-ORGANISMS, AND PHYSIOLOGICAL EFFECTS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 126 ABSTRACTS, 41 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION).

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004946

PUBLICATION DATE: MAY 79

TITLE: BASIC ANALYTICAL MODEL FOR ENVIRONMENTAL IMPACT ASSESSMENT OF SURFACE WATER RESOURCES - DOSAG USER MANUAL.

PERSONAL AUTHOR: RIGGINS, ROBERT; AND OTHERS

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*DISSOLVED OXYGEN; \*ENVIRONMENTAL IMPACT ASSESSMENT; ENVIRONMENT; \*MODELS; \*PLANNING; \*SURFACE RUNOFF; \*STREAMS; \*WATER RESOURCES; \*WATER QUALITY

DESCRIPTIVE NOTE: 42P. PRICE: \$6.00

ABSTRACT: THIS REPORT DISCUSSES AND PROVIDES USER INSTRUCTIONS FOR A COMPUTERIZED WATER QUALITY MODEL THAT WILL HELP SATISFY THE ARMY ENVIRONMENTAL PLANNER'S NEED FOR QUANTITATIVE INFORMATION ON DISSOLVED OXYGEN RESOURCES IN A STREAM CAUSED BY NEW ARMY PROJECTS OR ACTIVITIES. THE INFORMATION PROVIDED FROM THIS MODEL WILL BE USEFUL FOR PROVIDING DATA FOR IMPACTS ON THE DISSOLVED OXYGEN CONTENT OF A STREAM FOR A SINGLE-REACH, SINGLE-POINT-SOURCE POLLUTANT INFLOW SITUATION WITH STEADY-FLOW CONDITIONS. THREE SUBPROGRAMS WITHIN THE MODEL ARE USED TO CALCULATE THE IMPACT OF CARBONACEOUS AND NITROGENOUS WASTE DISCHARGES IN THE OXYGEN RESOURCES IN A RECEIVING WATER BODY. THE ULTIMATE BIOLOGICAL OXYGEN DEMAND AND DEOXYGENATION COEFFICIENTS FOR BOTH CARBONACEOUS AND NITROGENOUS WASTE DISCHARGES, AND ANNUAL VARIATION IN TEMPERATURE OF A WATER BODY.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW004948

PUBLICATION DATE: 79

TITLE: LAND APPLICATION OF WASTES, VOL. I.

PERSONAL AUTHOR: LOEHR, RAYMOND C.; AND OTHERS

DESCRIPTOR: CASE STUDIES; COSTS; ENVIRONMENTAL ENGINEERING; EFFLUENTS; \*INSTRUCTIONAL MATERIALS; \*LAND APPLICATION; LEGAL ASPECTS; \*SOILS; \*SITE EVALUATION; \*WASTEWATER TREATMENT; \*WASTE DISPOSAL; \*WASTEWATER POLLUTION CONTROL.

DESCRIPTIVE NOTE: 308P. PRICE: \$19.95

ABSTRACT: THIS VOLUME PRESENTS COMPREHENSIVE INFORMATION IMPORTANT TO THE LAND APPLICATION AND TREATMENT OF MUNICIPAL, INDUSTRIAL AND AGRICULTURAL WASTES. IT PROVIDES COVERAGE OF THE BASIC CONCEPTS THAT MAKE SOIL TREATMENT SYSTEMS EFFECTIVE IN TERMS OF EFFICIENCY AND COST. ALSO CONTAINED IS ESSENTIAL INFORMATION THAT IS NECESSARY TO EVALUATE AND COMPARE LAND DISPOSAL ALTERNATIVES TO CONVENTIONAL TREATMENT AND DISCHARGE TECHNOLOGY.

AVAILABILITY: VAN NOSTRAND REINHOLD CO., 435 WEST 50TH ST, NEW YORK, NY 10020

IRIS ACCESSION NUMBER: EW004953

PUBLICATION DATE: 80

TITLE: HANDBOOK OF ORGANIC WASTE CONVERSION.

PERSONAL AUTHOR: EDITOR: BEWICK, MICHAEL WILLIAM

DESCRIPTOR: AGRICULTURAL WASTES; BY-PRODUCTS; \*FERTILIZERS; MUNICIPAL WASTES; \*ORGANIC WASTES; PAPER WASTES; \*REPROCESSING; \*RESOURCE CONSERVATION; \*SLUDGE; \*WASTE CONVERSION; \*WASTE REPROCESSING.

DESCRIPTIVE NOTE: 420P. PRICE: \$24.50

ABSTRACT: THIS BOOK EXAMINES THE REPROCESSING OF ORGANIC WASTES, ASSESSING THEIR PRESENT AND POTENTIAL USES AS FEED STUFFS AND FERTILIZERS. THE HANDBOOK COVERS: ANIMAL WASTES AND CROP RESIDUES, TREATED AND UNTREATED SEWAGE SLUDGE, MUNICIPAL REFUSE PROCESSING AND USE, BREWERY, MALTING, AND DISTILLING BY-PRODUCTS, FERMENTATION AND ANTIBIOTIC WASTE MATERIALS, CELLULOSE AND LIGNOCELLULOSE WASTES, SLAUGHTERHOUSE, CANNERY, AND FOOD PROCESSING WASTES, FISH AND SHELLFISH WASTES, AND TANNERY AND LIQUID ORGANIC WASTES. EACH CHAPTER INCLUDES A DETAILED CHEMICAL ANALYSIS OF THE WASTE, EXAMINES THE FEED OR FERTILIZER POTENTIAL, EXPLAINS VARIOUS REPROCESSING ALTERNATIVES, AND IDENTIFIES COSTS AND PROBLEM AREAS. SEVERAL TABLES AND DIAGRAMS ARE INCLUDED AS WELL AS DETAILED LIST OF REFERENCES.

AVAILABILITY: VAN NOSTRAND REINHOLD, 7625 EMPIRE DR, FLORENCE, KY 41042

IRIS ACCESSION NUMBER: EW004960

PUBLICATION DATE: 79

TITLE: MANAGING SMALL WATER SYSTEMS; A COST STUDY - VOLUME I.

PERSONAL AUTHOR: STEVIE, RICHARD; AND OTHERS

DESCRIPTOR: \*COST STUDIES; \*DRINKING WATER; EVALUATION; \*LEGAL REQUIREMENTS; \*MANAGEMENT; \*SAFE DRINKING WATER ACT; UTILITIES; \*WATER UTILITIES; \*WATER SUPPLY; \*WATER TREATMENT; \*WATER DISTRIBUTION

DESCRIPTIVE NOTE: 216P.

ABSTRACT: THE SAFE DRINKING WATER ACT OF 1974 ESTABLISHED PRIMARY HEALTH-RELATED, BUT NONENFORCEABLE GUIDELINES FOR DRINKING WATER SUPPLIES. THESE STANDARDS WILL BRING ABOUT A FUNDAMENTAL EXAMINATION OF THE WAY WATER IS HANDLED BEFORE IT IS DELIVERED TO THE CONSUMER. THIS REPORT EXAMINES THE ECONOMIC IMPACT THAT MANY OF THESE CHANGES WILL HAVE ON THE AFFECTED WATER UTILITIES. IT CONTAINS DETAILED INFORMATION ON THE CURRENT COSTS OF WATER SUPPLY FOR 23 SELECTED SMALL WATER UTILITIES. IN ADDITION TO PROVIDING INFORMATION ON THE INDIVIDUAL SUPPLIES, DATA ARE AGGREGATED TO PROVIDE PROJECTIONS OF THE RELATIVE IMPACT OF VARIOUS STRATEGIES THAT MIGHT BE UNDERTAKEN TO SATISFY THE ACT'S REQUIREMENTS. THIS VOLUME IS A SUMMARY OF SELECTED DATA FROM THE STUDY ALONG WITH ANALYSIS OF THE DATA.

AVAILABILITY: U.S.E.P.A., P.O. BOX 19369, CINCINNATI, OH 45219

IRIS ACCESSION NUMBER: EW004961

PUBLICATION DATE: 79

TITLE: MANAGING SMALL WATER SYSTEMS. A COST STUDY-VOL. II.

PERSONAL AUTHOR: GILLEAN, JAMES I.; AND OTHERS

DESCRIPTOR: \*COSTS; \*DRINKING WATER; \*ECONOMICS; \*MANAGEMENT; \*STANDARDS; \*SAFE DRINKING WATER ACT; \*WATER UTILITIES; \*WATER SUPPLY; \*WATER TREATMENT; \*WATER DISTRIBUTION

DESCRIPTIVE NOTE: 292P.

ABSTRACT: THE SAFE DRINKING WATER ACT OF 1974 ESTABLISHES PRIMARY HEALTH-RELATED STANDARDS AND SECONDARY AESTHETIC RELATED, BUT NONENFORCEABLE GUIDELINES FOR DRINKING WATER SUPPLIES. THESE STANDARDS WILL BRING ABOUT A FUNDAMENTAL EXAMINATION OF THE WAY WATER IS HANDLED BEFORE IT IS DELIVERED TO THE CONSUMER. THIS REPORT EXAMINES THE ECONOMIC IMPACT THAT MANY OF THESE CHANGES WILL HAVE ON THE AFFECTED WATER UTILITIES. IT CONTAINS DETAILED INFORMATION ON THE CURRENT COSTS OF WATER SUPPLY FOR 23 SELECTED SMALL WATER UTILITIES. IN ADDITION TO PROVIDING INFORMATION ON THE INDIVIDUAL SUPPLIES, DATA ARE AGGREGATED TO PROVIDE PROJECTIONS OF THE RELATIVE IMPACT OF VARIOUS STRATEGIES THAT MIGHT BE UNDERTAKEN TO SATISFY THE ACTS REQUIREMENTS.

THIS VOLUME CONTAINS DETAILED IN-DEPTH INFORMATION FOR EACH UTILITY STUDIED.

AVAILABILITY: U.S. ENVIRONMENTAL PROTECTION AGENCY, P.O. BOX 19069, CINCINNATI, OH 45219

IRIS ACCESSION NUMBER: EW004962

PUBLICATION DATE: 80

TITLE: DOMESTIC WATER TREATMENT.

PERSONAL AUTHOR: LEHR, JAY H.; AND OTHERS

DESCRIPTOR: ANALYTICAL TECHNIQUES; CONSTRUCTION; FACILITIES; \*INSTRUCTIONAL MATERIALS; MANAGEMENT; MAINTENANCE; \*OPERATIONS (WATER); SAMPLING; \*UTILITIES; \*WATER TREATMENT; \*WATER QUALITY; WATER POLLUTION; WASTE DISPOSAL

DESCRIPTIVE NOTE: 264P. PRICE: \$19.50

ABSTRACT: THIS BOOK IS INTENDED AS A REFERENCE FOR ENGINEERS AND TECHNICIANS, AN AID TO GOVERNMENT OFFICIALS, AND A TEXT FOR STUDENTS OF WATER TREATMENT. IT PROVIDES A COMPACT OVERVIEW OF THE ENTIRE SUBJECT OF WATER QUALITY AND TREATMENT. TOPICS COVERED INCLUDE WATER CHEMISTRY, POLLUTION SOURCES, CONSTRUCTION OF WATER SUPPLY SYSTEMS, WATER SAMPLING, ANALYSIS, AND TREATMENT TECHNIQUES.

AVAILABILITY: NATIONAL WATER WELL ASSOC, 500 WEST WILSON BRIDGE RD, SUITE 135, WORTHINGTON, OH 43085

IRIS ACCESSION NUMBER: EW004965

PUBLICATION DATE: MAR 76

TITLE: MICROBIOLOGY AND CHEMISTRY STUDIES OF WATER QUALITY FACTORS IN A WATERSHED USED FOR MUNICIPAL SUPPLY AND WASTE DISPOSAL (PHASE I).

PERSONAL AUTHOR: SCHILLINGER, JOHN EDWARD; STUART, DAVID G.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; AGRICULTURAL RUNOFF; BACTERIAL INJURY; \*BACTERIA; \*CHEMISTRY; EVALUATION; \*INDICATOR BACTERIA; \*LABORATORY PROCEDURES; \*LOGGING; \*LANDCARE; \*MICROBIOLOGY; POLLUTION; RESEARCH; \*SEWAGE; \*STREAMS; SAMPLING; \*WATER QUALITY; \*WATERSHEDS; \*WASTE DISPOSAL; \*WATER POLLUTION

DESCRIPTIVE NOTE: 124P. PRICE: \$5.25

ABSTRACT: CHEMICAL AND BACTERIOLOGICAL STUDIES OF SEVERAL LAND USES WERE PERFORMED TO DETERMINE RELATIVE IMPACTS ON WATER QUALITY. OUTDOOR RECREATION, CAMPING, SKI DEVELOPMENTS AND CLEARCUT LOGGING WITH THE USE OF STREAMSIDE BUFFER ZONES DID NOT APPEAR TO APPRECIABLY AFFECT WATER QUALITY. HOWEVER, WILD ANIMALS, CATTLE GRAZING, AGRICULTURAL RUNOFF, AND SUMMER AND URBAN POLLUTION AFFECTED LEVELS OF CHEMICAL AND INDICATOR BACTERIA. PROBLEMS ASSOCIATED WITH

RECOVERY OF INDICATOR BACTERIA FROM WATER WERE ALSO INVESTIGATED. BACTERIAL INJURY WAS OBSERVED TO RESULT IN INCOMPLETE RECOVERY OF INDICATOR BACTERIA FROM STREAMS BY SAME LABORATORY METHODS. DIFFERENCES IN THE DEGREE OF AQUATIC INJURY WERE ALSO OBSERVED AT VARIOUS LOCATIONS THROUGHOUT THE DRAINAGE AREA. CHANGES OBSERVED IN COLIFORM SPECIES DISTRIBUTIONS AND IN SURVIVAL RATES FOR DIFFERENT BACTERIA LEAD TO QUESTIONS CONCERNING SOME OF THE ASSUMPTIONS THAT HAVE BEEN MADE REGARDING COLIFORMS AND ENTERIC PATHOGENS.

AVAILABILITY: MONTANA STATE UNIVERSITY, WATER RESOURCES RESEARCH CENTER, BOZEMAN, MT 59715

IRIS ACCESSION NUMBER: EW004972

PUBLICATION DATE: OCT 76

TITLE: PLANNING METHODOLOGIES FOR ANALYSIS OF LAND USE/WATER QUALITY RELATIONSHIPS.

PERSONAL AUTHOR: HAMNER, THOMAS P.

DESCRIPTOR: \*ENVIRONMENTAL INFLUENCES; EROSION; GROUNDWATER; \*HYDROLOGY; \*INSTRUCTIONAL MATERIALS; \*ONSITE WASTEWATER TREATMENT; \*PLANNING; SEPTIC TANKS; SURFACE RUNOFF; \*URBAN ENVIRONMENT; \*WATER POLLUTION; \*WATER POLLUTION CONTROL; \*WATER QUALITY; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 240P. PRICE: \$4.50

ABSTRACT: THIS REPORT EVALUATES THE POTENTIAL USEFULNESS AND PRACTICALITY OF VARIOUS PLANNING METHODOLOGIES WHICH CAN BE USED TO QUANTITATIVELY DETERMINE THE RELATIONSHIP BETWEEN LAND USE AND WATER QUALITY. IT ALSO EVALUATES VARIOUS LAND USE AND LAND MANAGEMENT CONTROLS WHICH CAN BE USED TO REDUCE POLLUTANT LOADINGS. IN CARRYING OUT THESE EVALUATIONS, THE REPORT REVIEWS MUCH OF THE CURRENT LITERATURE ON THE RELATIONSHIP BETWEEN LAND USE AND WATER QUALITY. AFTER EVALUATING A RANGE OF PLANNING METHODOLOGIES AND CONTROL MEASURES, THE REPORT EXAMINES THE ANALYSIS AND CONTROL OF POLLUTANTS RESULTING FROM COMMONLY FOUND LAND USES IN DEVELOPED AND DEVELOPING URBAN AREAS. THE TOPICS INCLUDE POLLUTANTS RESULTING FROM HYDROLOGIC MODIFICATIONS, ON LOT DISPOSAL SYSTEMS, AND CONSTRUCTION ACTIVITY. ALSO APPENDED IS AN EXTENSIVE BIBLIOGRAPHY OF REFERENCES.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW004974

PUBLICATION DATE: JUN 80

TITLE: MANAGEMENT CONTRACT HELPS WAUSAU BACK TO NORMAL.

PERSONAL AUTHOR: HOLZ, WARD E.; AND OTHERS

DESCRIPTOR: ASSESSMENT; \*CONSULTANTS; \*CONTRACTS; COSTS; EVALUATION; LEGAL ACTION; MAINTENANCE; \*MANAGEMENT; MANPOWER



UTILIZATION; STAFF IMPROVEMENT; STANDARDS; TRAINING;  
\*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 54-55,90-92P.

ABSTRACT: A MANAGEMENT CONTRACT TAILORED TO THE UTILITY'S NEEDS LED TO NPDES COMPLIANCE AND/THE SETTLEMENT OF LEGAL ACTION INITIATED BY THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES. THE CONTRACT BETWEEN A PRIVATE MANAGEMENT FIRM AND THE UTILITY SPELLED OUT SPECIFIC PROGRAMS IN PROCESS OPTIMIZATION, STAFFING AND TRAINING, PREVENTATIVE MAINTENANCE AND A SYSTEM OF REPORTING TO THE UTILITY AND TO REGULATORY AGENCIES. IT DEMONSTRATED THE FEASIBILITY OF PRIVATE ASSESSMENT OF A PUBLIC-TREATMENT SITUATION, AND REINFORCEMENT OF A NUMBER OF TREATMENT PLANT BASICS TO STABILIZE PLANT OPERATIONS AND IMPROVE EMPLOYEE EFFECTIVENESS.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N6

IRIS ACCESSION NUMBER: EW004975

PUBLICATION DATE: JUN 80

TITLE: DESIGN TOOL AIDS GROUNDWATER MANAGEMENT.

PERSONAL AUTHOR: NIGHTINGALE, HARRY I.

DESCRIPTOR: CHEMICAL ANALYSIS; \*DECISION MAKING; DRINKING WATER; \*GROUNDWATER; \*HYDROLOGY; \*MANAGEMENT; MATHEMATICAL APPLICATIONS; \*MATHEMATICAL MODELS; STANDARDS; \*STATISTICS; \*WATER QUALITY; WELLS

DESCRIPTIVE NOTE: 56-57,91-92P.

ABSTRACT: DECISION MAKERS NOT TRAINED IN HYDROLOGY OF GEOHYDROCHEMISTRY CAN BE RESPONSIBLE GROUNDWATER CHEMICAL QUALITY MANAGERS IF THEY'LL USE THE SIMPLE STATISTICAL TOOL DESCRIBED IN THIS ARTICLE. THE TOOL IS A GRAPH OF THE PROBABILITY DENSITY OF SPECIFIC ELECTRICAL CONDUCTIVITY OF ION-CONCENTRATION PARAMETER. ONCE THE EMPIRICAL CONCENTRATION-PROBABILITY DISTRIBUTION CURVE IS DRAWN, IT GIVES DECISION MAKERS, FOR NORMAL OR NORMALIZED DISTRIBUTIONS, SUCH INFORMATION AS: (1) AN ESTIMATE OF THE POPULATION MEDIAN, (2) AN ESTIMATE OF POPULATION VARIANCE, (3) THE GENERAL RANGE OF EXPECTED CONCENTRATION VALUES, AND (4) THE PROBABILITY OF FIELD CONCENTRATION VALUES BEING EQUAL TO OR LESS THAN A GIVEN CONCENTRATION VALUE.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N6

IRIS ACCESSION NUMBER: EW004976

PUBLICATION DATE: JUN 80

TITLE: FACING A MAJOR DISASTER WITH CALM ASSURANCE.

PERSONAL AUTHOR: SINGER, PAUL R.; VOYLES, CHARLES F.

DESCRIPTOR: \*CALIFORNIA; \*DISASTERS; \*EARTHQUAKES;

ENGINEERING; EQUIPMENT; \*EMERGENCIES; FACILITIES; MANAGEMENT; MANPOWER UTILIZATION; \*PLANNING; SEISMIC INVESTIGATIONS; \*WATER DISTRICTS; \*WATER RESOURCES

DESCRIPTIVE NOTE: 58-60,74P.

ABSTRACT: THIS ARTICLE DISCUSSES THE FORMALIZED EMERGENCY DISASTER RESPONSE PROCEDURES ESTABLISHED BY SOUTHERN CALIFORNIA'S METROPOLITAN WATER DISTRICT. AN EARTHQUAKE COMMITTEE COMPOSED OF ENGINEERING AND OPERATIONS PERSONNEL WAS FORMED FOR MAKING SEISMIC INVESTIGATIONS OF ALL FACILITIES, RECOMMENDATIONS FOR IMPROVEMENTS, AND AN EARTHQUAKE EMERGENCY RESPONSE PLAN. ITS WORK FOCUSED ON THREE BASIC PROGRAMS, EACH PERFORMED BY A SEPARATE SUBCOMMITTEE: (1) SHORT-RANGE INVESTIGATIONS, (2) LONG RANGE INVESTIGATIONS, AND (3) EMERGENCY RESPONSE. AS A RESULT OF ITS EFFORT, METROPOLITAN HAS THE ABILITY TO CONTINUE FUNCTIONING OR RETURN TO AT LEAST MINIMAL OPERATIONS FOLLOWING A DEVASTATING EARTHQUAKE.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N6

IRIS ACCESSION NUMBER: EW004977

PUBLICATION DATE: JUN 80

TITLE: STAINING MIXED-LIQUOR BIOTA.

PERSONAL AUTHOR: GERARD, MICHAEL

DESCRIPTOR: \*BIOTA; \*LABORATORY PROCEDURES; \*LABORATORY TECHNIQUES; \*MICROSLIDES; \*MIXED LIQUOR; \*MICROBIOLOGY; \*PHOTOMICROGRAPHY; RESEARCH; \*STAINING TECHNIQUES; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 64,74P.

ABSTRACT: THE PREPARATION OF A PERMANENT AND RELIABLE MICROSLIDE RECORD OF MIXED LIQUOR (ML) BIOTA FOR THE CORRELATION WITH TREATMENT PLANT CONDITIONS CAN YIELD NUMEROUS BENEFITS. SUCH METHODOLOGY COULD BE AN "IN PLANT" OPERATIONAL KEY FOR INCREASING EFFICIENCY. OR IT COULD BE AN "ON-SITE" RESEARCH TOOL FOR FURTHER STUDIES OF MIXED LIQUOR BIOTA, AND AN EDUCATIONAL RECORD FOR TRAINING PLANT OPERATORS IN THE WASTEWATER FIELD. THE TECHNIQUES FOR MAKING THESE SLIDES ARE PROVIDED IN THIS ARTICLE.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N6

IRIS ACCESSION NUMBER: EW004978

PUBLICATION DATE: JUN 80

TITLE: RANKING SLUDGE REMOVAL METHODS.

PERSONAL AUTHOR: BOYLE, WILLIAM H.

DESCRIPTOR: \*ACTIVATED SLUDGE; \*CLARIFIERS; DESIGN; \*EQUIPMENT; \*EVALUATION; \*METHODS; \*OPERATIONS (WASTEWATER); SCRAPPING; SLUDGE; \*SLUDGE REMOVAL; SUCTION; TESTING;

**\*WASTEWATER TREATMENT**

**DESCRIPTIVE NOTE: 70-72P.**

**ABSTRACT:** TWO OPTIONS ARE AVAILABLE FOR REMOVING SLUDGE FROM THE FINAL CLARIFIER OF THE ACTIVATED SLUDGE PROCESS: SCRAPING OR SUCTION. THE ARTICLE EXAMINES BOTH METHODS INCLUDING TECHNIQUES THAT FOR PROponents OF SLUDGE THICKENING IN FINAL CLARIFIERS, REMOVAL BY SUCTION ACHIEVES RESULTS EQUAL TO OR BETTER THAN SCRAPING. THE REASONS FOR THIS IS THAT THE SLUDGE CAN BE PERMITTED TO SETTLE FOR A LONGER TIME BEFORE WITHDRAWAL (SINCE WITHDRAWAL CAN BE FASTER), AND USE OF A WIDER BED AREA IS POSSIBLE.

**AVAILABILITY:** WATER & SEWAGE WORKS, V127 N6

**IRIS ACCESSION NUMBER:** EW004979

**PUBLICATION DATE:** JUN 80

**TITLE:** STAFFING FOR WASTEWATER COLLECTION SYSTEMS.

**PERSONAL AUTHOR:** SHAH, JAYPRAKASH B.

**DESCRIPTOR:** \*EMPLOYMENT PROJECTIONS; MAINTENANCE;  
MANAGEMENT; \*MANPOWER NEEDS; MANPOWER UTILIZATION;  
OPERATIONS (WASTEWATER); \*PLANNING; PERSONNEL;  
\*REQUIREMENTS; \*STAFF; STAFF SELECTION; \*WASTEWATER  
COLLECTION; \*WASTEWATER TREATMENT

**DESCRIPTIVE NOTE:** 76-78, 87-89P.

**ABSTRACT:** A METHOD FOR STAFFING FOR A COLLECTION SYSTEM IS PRESENTED WHICH CONSISTS OF COLLECTING DATA FROM EXISTING, WELL-MAINTAINED ONES AND APPLYING THE RESULTS TO A NEW COLLECTION SYSTEM UNDER CONSIDERATION. CARE MUST BE TAKEN IN SELECTING THE COMMUNITIES FOR THE DATA BASE BY ELIMINATING UNDERSTAFFED OR INDUSTRIAL COMMUNITIES. THIS METHOD IS CONSISTENT WITH THE EPA REPORT ON STAFFING FOR WASTEWATER TREATMENT FACILITIES. TOPICS INCLUDED IN THIS ARTICLE ARE: STAFFING SURVEY, DATA BASE, "AVERAGE" COLLECTION SYSTEM, ADJUSTMENT FACTORS, USING STAFFING ESTIMATE CURVES, AND RECOMMENDATIONS.

**AVAILABILITY:** WATER & SEWAGE WORKS; V127 N6

**IRIS ACCESSION NUMBER:** EW005009

**PUBLICATION DATE:** JUL 80

**TITLE:** GROUND-WATER MANAGEMENT WITH FIXED CHARGES.

**PERSONAL AUTHOR:** AGUADO, EDUARDO; REMSON, IRWIN.

**DESCRIPTOR:** \*CONSTRUCTION; \*ECONOMICS; \*EXCAVATIONS;  
\*GROUND WATER; \*HYDRAULICS; \*WATER WELLS

**DESCRIPTIVE NOTE:** 375-381P.

**ABERIC** THE PROBLEM OF WHERE TO DRILL WELLS, HOW MANY TO

DRILL, AND HOW TO PUMP THEM IN ORDER TO MAINTAIN LOW WATER LEVELS IN AN EXCAVATION MOST ECONOMICALLY, IS FORMULATED AS A FIXED-CHARGE PROBLEM. SOLUTIONS INCLUDE OPTIMAL WELL LOCATIONS, COSTS, STEADY-STATE DISCHARGE SCHEDULES, AND HYDRAULIC HEAD DISTRIBUTIONS.

**AVAILABILITY:** JOURNAL OF THE WATER RESOURCES PLANNING AND MANAGEMENT DIVISION; V106 N2

**IRIS ACCESSION NUMBER:** EW005073

**TITLE:** THE IMPACT OF NEW GOVERNMENT REGULATIONS ON OCCUPATIONAL SAFETY.

**PERSONAL AUTHOR:** PURSWELL, JERRY L.

**DESCRIPTOR:** \*AUDIOVISUAL AIDS; FEDERAL GOVERNMENT; \*HEALTH;  
\*INSTRUCTIONAL MATERIALS; \*LEGISLATION; \*OCCUPATIONAL  
SAFETY; \*REGULATIONS; \*SAFETY

**DESCRIPTIVE NOTE:** PRICE: RENTAL \$75.00 PER WEEK, PURCHASE \$300.00

**ABSTRACT:** IN THE 1980'S THE OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATIONS REGULATORY PROGRAM ON SAFETY STANDARDS WILL FOCUS ON CONTINUING REVIEW AND REVISION OF CONSENSUS STANDARDS ADOPTED IN 1971, AND ON THE DEVELOPMENT OF NEW STANDARDS TO DEAL WITH IMPORTANT HAZARDS CURRENTLY NOT REGULATED. PRESENTATION IS BY DR JERRY L PURSWELL.

**AVAILABILITY:** AMCEE, DEPT OSHA, GEORGIA INSTITUTE OF TECHNOLOGY, ATLANTA, GA 30332

**IRIS ACCESSION NUMBER:** EW005074

**TITLE:** MANAGEMENT'S SAFETY MIRROR: ISMEC.

**PERSONAL AUTHOR:** BIRD, FRANK E., JR

**DESCRIPTOR:** \*AUDIOVISUAL AIDS; \*HEALTH; \*INSTRUCTIONAL  
MATERIALS; \*LEGISLATION; \*MANAGEMENT; \*OCCUPATIONAL SAFETY;  
\*RISK FACTORS; \*REGULATIONS; \*SAFETY

**DESCRIPTIVE NOTE:** PRICE: RENTAL \$75.00 PER WEEK, PURCHASE \$300.00

**ABSTRACT:** GROWING RISK FACTORS REQUIRE A MORE COMPREHENSIVE SAFETY MANAGEMENT SYSTEM. THE COMPONENTS OF ISMEC, THE IDENTIFICATION OF WORK REQUIRED TO ACHIEVE DESIRED SAFETY OBJECTIVES, STANDARDS FOR WORK PERFORMANCE, MEASUREMENT OF PERFORMANCE OF STANDARDS, EVALUATING AND CORRECTING ARE ANALYZED IN DETAIL.

**AVAILABILITY:** AMCEE, DEPT OSHA, GEORGIA INSTITUTE OF TECHNOLOGY, ATLANTA, GEORGIA 30332

IRIS ACCESSION NUMBER: EW005081

PUBLICATION DATE: FEB 77

TITLE: THE FOREST PRACTICE RULES AND YOU.

DESCRIPTOR: \*CONSERVATION (ENVIRONMENT); \*FORESTRY;  
LEGISLATION; \*RULES; \*REGULATIONS; TIMBER PRODUCTION; \*WATER  
RESOURCES; \*WILDLIFE MANAGEMENT

DESCRIPTIVE NOTE: 45P.

ABSTRACT: THE NEW FOREST PRACTICES ACT WAS PASSED IN 1974 AND AMENDED IN 1975. THE ACT CONSIDERS ALL USES OF THE FOREST, RANGING FROM TIMBER AND WATER PRODUCTION TO FISH AND WILDLIFE PROTECTION. THIS BOOKLET ILLUSTRATES SUPPLEMENTAL GUIDELINES TO THE RULES AND REGULATIONS OF THE WASHINGTON FOREST PRACTICES BOARD WHICH ENSURE ENVIRONMENTAL PROTECTION.

AVAILABILITY: THE WASHINGTON FOREST PROTECTION ASSOCIATION, 1411 FOURTH AVENUE BUILDING, SUITE 1220, SEATTLE, WASHINGTON 98101

IRIS ACCESSION NUMBER: EW005085

PUBLICATION DATE: AUG 77

TITLE: BACHELOR OF ENGINEERING TECHNOLOGY PROGRAM, FINAL TECHNICAL REPORT.

PERSONAL AUTHOR: CHEVALIER, CHARLES E., PROJECT DIRECTOR

DESCRIPTOR: \*AIR POLLUTION; \*CURRICULUM; \*ENVIRONMENTAL TECHNOLOGISTS; \*ENGINEERING; \*ENVIRONMENTAL ENGINEERING; HIGHER EDUCATION; POLLUTION CONTROL; \*PROGRAM DESCRIPTIONS; \*WATER POLLUTION

DESCRIPTIVE NOTE: 61P.

ABSTRACT: DESCRIBES THE DEVELOPMENT AND IMPLEMENTATION OF A NEW CURRICULUM TO EDUCATE ENVIRONMENTAL TECHNOLOGISTS IN THE AREAS OF AIR AND WATER POLLUTION, WITH EMPHASIS ON MONITORING, ANALYSIS AND CONTROL. THE FOUR YEAR COLLEGE PROGRAM PREPARES AND TRAINS OPERATIONALLY ORIENTED ENGINEERING TECHNOLOGISTS WITH THE SPECIALIZATION TO IMMEDIATELY ASSUME A POSITION AS A MEMBER OF AN ENVIRONMENTAL ENGINEERING TEAM AND THE SOUND BACKGROUND TO REACT TO THE CHARGES OF RAPIDLY EVOLVING TECHNOLOGY.

AVAILABILITY: DEPARTMENT OF ENGINEERING & TECHNOLOGY, NORWICH UNIVERSITY, NORTHFIELD, VERMONT 05663

IRIS ACCESSION NUMBER: EW005086

PUBLICATION DATE: MAR 78

TITLE: ECONOMIC IMPACT OF THE PROPOSED AVERAGING RULE, R76-21.

PERSONAL AUTHOR: MUCHMORE, CHARLES B.; AND OTHERS

DESCRIPTOR: \*AGRICULTURE; \*COST-BENEFIT ANALYSIS; \*ECONOMICS; \*ECONOMIC IMPACT STUDIES; EFFLUENT STANDARDS; ENVIRONMENT; \*REGULATIONS; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 45P.

ABSTRACT: THIS REPORT ANALYZES THE ECONOMIC IMPACTS OF AMENDING A WATER POLLUTION CONTROL REGULATION. THE CURRENT AND ANTICIPATED ENVIRONMENTAL CONSEQUENCES WERE REVIEWED AND ASSESSED, ALONG WITH THE EXPECTED BENEFITS AND COSTS.

AVAILABILITY: ILLINOIS INSTITUTE OF NATURAL RESOURCES, 309 WEST WASHINGTON STREET, CHICAGO, IL 60606

IRIS ACCESSION NUMBER: EW005089

PUBLICATION DATE: AUG 79

TITLE: A HANDBOOK OF KEY FEDERAL REGULATIONS AND CRITERIA FOR MULTIMEDIA ENVIRONMENTAL CONTROL.

PERSONAL AUTHOR: GREENWOOD, D. R.; AND OTHERS

DESCRIPTOR: \*ENVIRONMENTAL CONTROL; ENVIRONMENTAL LEGISLATION; \*FEDERAL REGULATIONS; \*FEDERAL CRITERIA; \*MULTIMEDIA ENVIRONMENTAL CONTROLS; OCCUPATIONAL HEALTH; \*POLLUTION CONTROL; \*REGULATIONS; \*STANDARDS; TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 272P.

ABSTRACT: A SUMMARY OF MAJOR FEDERAL ENVIRONMENTAL REGULATIONS AND RECOMMENDATIONS AND THE LEGISLATIVE ACTS THAT AUTHORIZE THEM IS PRESENTED. QUANTITATIVE CONTROL LIMITS SPECIFIED BY FEDERAL AGENCIES ARE SUMMARIZED AND TABULATED. THE VARIOUS REGULATIONS, STANDARDS, AND CRITERIA ARE COMPARED. A SELECTED BIBLIOGRAPHY ADDRESSING FEDERAL ENVIRONMENTAL CONTROL ACTIVITIES IS INCLUDED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VIRGINIA 22161

IRIS ACCESSION NUMBER: EW005090

TITLE: HANDBOOK OF BEST MANAGEMENT PRACTICES.

DESCRIPTOR: \*BEST MANAGEMENT PRACTICES; CONSERVATION; \*INSTRUCTIONAL MATERIALS; \*LAND USE; \*MANAGEMENT; \*NEVADA; \*NONPOINT POLLUTION; \*NONPOINT SOURCES; PLANNING; SOIL CONSERVATION; WATER CONSERVATION; \*WATER QUALITY

DESCRIPTIVE NOTE: 390P.

ABSTRACT: THIS HANDBOOK WAS DESIGNED AS A GUIDE FOR RESOURCE AND SITE SPECIFIC PLANNING TO BE INCLUDED IN A WATER QUALITY MANAGEMENT PROGRAM FOR THE NON-DESIGNATED AREA OF THE STATE OF NEVADA. BEST MANAGEMENT PRACTICES ARE DEFINED AS "A PRACTICE, OR COMBINATION OF PRACTICES,

DETERMINED TO BE THE MOST EFFECTIVE, PRACTICAL MEANS OF PREVENTING OR REDUCING THE AMOUNT OF WATER POLLUTION FROM NON-POINT SOURCES TO A LEVEL COMPATIBLE WITH WATER QUALITY GOALS. 44 SUCH PRACTICES ARE EXAMINED ACCORDING TO THEIR DEFINITION, PURPOSE, APPLICABILITY, PLANNING CRITERIA, METHODS AND MATERIALS, MAINTENANCE AND EFFECTIVENESS. A DETAILED APPENDIX DISCUSSES LAND TREATMENT GROUPS; INFORMATION ON COSTS FOR SELECT MANAGEMENT PRACTICES, AND GUIDELINES AND SPECIFICATIONS FOR PLANNING LAND TREATMENTS FOR CONTROLLING NON-POINT POLLUTION. ALSO INCLUDED IS A GLOSSARY, LIST OF REFERENCES, AND SOURCES OF ASSISTANCE.

AVAILABILITY: STATE OF NEVADA, DEPARTMENT OF CONSERVATION AND NATURAL RESOURCES, DIVISION OF FORESTRY, CAPITAL COMPLEX, CARSON CITY, NEVADA 89710

IRIS ACCESSION NUMBER: EW005098

PUBLICATION DATE: DEC 79

TITLE: OIL WATER SEPARATORS--(CITATIONS FROM THE ENGINEERING INDEX DATA BASE).

PERSONAL AUTHOR: LEHMANN, EDWARD J.

DESCRIPTOR: \*CHEMISTRY; COST/EFFECTIVENESS; DESIGN; \*EQUIPMENT; \*EFFLUENTS; \*INDUSTRIAL WASTES; \*LITERATURE REVIEWS; \*OIL; \*OIL WATER SEPARATORS; \*OIL RECOVERY; \*WATER POLLUTION CONTROL; \*WASTE OIL TREATMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 132P. PRICE: \$30.00

ABSTRACT: THE CITATIONS IN THIS LITERATURE REVIEW ARE FROM THE ENGINEERING INDEX DATA BASE AND ARE MAINLY CONCERNED WITH WATER POLLUTION CONTROL. A RANGE OF EQUIPMENT IS DESCRIBED, INCLUDING GRAVITY SEPARATORS, CENTRIFUGES, MEMBRANES, COALESCERS, FILTERS, DISTILLATION COLUMNS, AND FLOTATION UNITS. OIL RECOVERY FROM OIL SPILLS IS COVERED. SEPARATION OF THESE COMPONENTS IN BALLAST AND BILGE WATER, FACTORY EFFLUENTS, PETROLEUM REFINERIES, AND WASTE OIL TREATMENT IS STUDIED. DESIGN, OPERATION, COSTS, TESTING, AND EFFICIENCY OF THESE ARTICLES ARE REPORTED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005103

PUBLICATION DATE: DEC 79

TITLE: WATER RESOURCES IN ARID AND SEMIARID REGIONS.

PERSONAL AUTHOR: BROWN, ROBENA J.

DESCRIPTOR: \*ARID REGIONS; \*BIBLIOGRAPHIES; \*HYDROLOGY; \*IRRIGATION; MODELING; \*NATURAL RESOURCES; \*POTABLE WATER; RESOURCE MANAGEMENT; \*SEMIARID REGIONS; \*WATER RESOURCES; WATER QUALITY; \*WATER CONSERVATION

DESCRIPTIVE NOTE: 243P. PRICE: \$30.00

ABSTRACT: THE CITATIONS COVER REPORTS CONCERNED WITH WATER QUALITY, RESOURCE MANAGEMENT, POTABLE WATER, CONSUMPTION, AND IRRIGATION AS THEY APPLY TO SEMIARID REGIONS, PARTICULARLY THOSE IN THE WESTERN REGION OF THE UNITED STATES. HYDROLOGY, MODELING, AND WATER ALLOCATION ARE ALSO COVERED ALONG WITH STUDIES ON WATER CONSERVATION MEASURES, WHICH WILL ADD TO THE WATER RESOURCES IN THESE AREAS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICES, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005104

PUBLICATION DATE: MAR 80

TITLE: WASTE TREATMENT IN DAIRY, POULTRY, MEAT, AND SEAFOODS INDUSTRIES.

PERSONAL AUTHOR: YOUNG, GILBERT C.

DESCRIPTOR: \*DAIRY INDUSTRY; EFFLUENTS; \*INDUSTRIAL WASTES; \*MEAT INDUSTRY; \*OPERATIONS (WASTEWATER); \*POULTRY INDUSTRY; \*POLLUTION CONTROL; \*SEAFOOD INDUSTRY; \*WASTEWATER TREATMENT; \*WASTE DISPOSAL; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 105P. PRICE: \$30.00

ABSTRACT: THE CITED STUDIES COVER THE ANALYSIS AND TREATMENT OF WASTES AND EFFLUENTS IN THE DAIRY, POULTRY, MEAT, AND SEAFOOD INDUSTRIES. OTHER TOPICS INCLUDE, EPIDEMIOLOGICAL STUDIES, ENVIRONMENTAL PROBLEMS RELATED TO WASTE MANAGEMENT, AND POLLUTION CONTROL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005107

PUBLICATION DATE: DEC 79

TITLE: OIL WATER SEPARATORS--(CITATIONS FROM THE AMERICAN PETROLEUM INSTITUTE DATA BASE).

PERSONAL AUTHOR: LEHMANN, EDWARD J.

DESCRIPTOR: \*ANNOTATED BIBLIOGRAPHIES; EQUIPMENT; LABORATORY TESTS; \*OIL WATER SEPARATORS; \*OIL POLLUTION CONTROL; OIL RECOVERY; \*OIL; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 158P. PRICE: \$30.00

ABSTRACT: CITATIONS COVER RESEARCH ON THESE DEVICES PRIMARILY FOR OIL POLLUTION CONTROL. EQUIPMENT STUDIED INCLUDES COALESCERS, FILTERS, SKIMMERS, SCRUBBERS, ABSORBERS, CENTRIFUGES, AND SWEEPS. OIL RECOVERY FROM OIL SPILLS, SEPARATION FROM BILGE AND BALLAST WATER, AND REMOVAL FROM PETROLEUM REFINERY EFFLUENTS ARE DESCRIBED. THE OPERATION, TESTING, AND PERFORMANCE OF THIS EQUIPMENT IN THE

LABORATORY AND IN THE FIELD ARE REPORTED. THIS UPDATED BIBLIOGRAPHY CONTAINS 158 ABSTRACTS, 318 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005114

PUBLICATION DATE: AUG 79

TITLE: CHALLENGES IN URBAN RUNOFF CONTROL (PLANNING, IMPLEMENTATION AND SIMULATION).

PERSONAL AUTHOR: MCPHERSON, M. B.

DESCRIPTOR: COST ANALYSIS; \*ECONOMICS; EROSION; \*FEASIBILITY STUDIES; FLOOD CONTROL; HYDROLOGY; \*PLANNING; \*SURFACE RUNOFF; RESERVOIRS; \*SIMULATION; STORM SEWERS; SEWERS; \*URBAN AREAS; \*WATER QUALITY; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 43P. PRICE: \$6.00

ABSTRACT: AREAWIDE PLANNING FOR WATER POLLUTION MANAGEMENT HAS BEEN UNDERTAKEN IN A MAJORITY OF METROPOLITAN AREAS UNDER SECTION 208 OF PL 92-500. URBAN RUNOFF CONSIDERATIONS HAVE BEEN AN ISSUE IN MANY OF THESE AREAS. IN AN EFFORT TO PROMOTE LONG-RANGE CONJUNCTIVE QUANTITY AND QUALITY PLANNING, A DOZEN SEMINARS, WORKSHOPS, AND CONFERENCES HOSTED BY AREA WIDE PLANNING AGENCIES WERE CONDUCTED AT WIDELY SEPARATED URBAN CENTERS ACROSS THE COUNTRY. REPORTED ARE RESPONSES TO POINTS RAISED AT THESE PRESENTATIONS PLUS FINDINGS FROM THE MONITORING OF FOUR ON-GOING LOCAL JURISDICTION PLANNING PROJECTS. THE POSTPONED ROLE OF STREAM STANDARDS AND THE IMPLICATIONS OF THEIR FUTURE ENFORCEMENT ARE EXAMINED. PLAN FLEXIBILITY, COST ALLOCATION, AVAILABLE TECHNOLOGY, SCALE OF INVESTMENTS AND TECHNICAL INTERRELATIONSHIPS ARE CONSIDERED. A DESCRIPTION IS SYNTHESIZED OF THE FIRST PHASE OF FOUR LOCAL GOVERNMENT TWO-PHASE MASTER PLANS. FINDINGS FROM EXPERIENCES WITH SIMULATION OF AN AREA WIDE PLANNING AGENCY ARE OUTLINED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005117

PUBLICATION DATE: JUL 79

TITLE: MANAGEMENT OF SMALL-TO-MEDIUM SIZED MUNICIPAL WASTEWATER TREATMENT PLANTS.

DESCRIPTOR: \*ADMINISTRATIVE ORGANIZATION; \*ADMINISTRATION; DECISION MAKING; EMPLOYER EMPLOYEE RELATIONSHIPS; FACILITIES; \*INSTRUCTIONAL MATERIALS; \*LEADERSHIP TRAINING; \*MANAGEMENT; \*MANAGEMENT EDUCATION; MANAGEMENT SYSTEMS; OPERATIONS (WASTEWATER); \*PERSONNEL MANAGEMENT; \*PLANNING; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 165P. PRICE: \$12.00

ABSTRACT: PRESENTED IS A DISCUSSION OF EFFECTIVE PLANT MANAGEMENT AND METHODS OF INCREASING THE EFFECTIVENESS OF THE MANAGEMENT. WHILE THE DISCUSSION COULD BE USEFUL TO ANY PLANT MANAGER IT IS ESPECIALLY WRITTEN FOR MANAGERS OF SMALL TO MEDIUM SIZED MUNICIPAL WASTEWATER TREATMENT PLANTS IN THE RANGE OF 3 TO 10 MGD. INCLUDED IN THE DISCUSSION ARE THE FOLLOWING TOPICS: (1) MANAGEMENT OPPORTUNITIES, RESPONSIBILITIES, AND CONSTRAINTS, (2) EVALUATING THE EFFECTIVENESS OF PLANT MANAGEMENT, (3) ORGANIZATIONAL CONSIDERATIONS, (4) REGULATIONS, (5) PLANNING, PROGRAMMING, AND BUDGETING, (6) FINANCING, (7) EVALUATING STAFFING NEEDS, (8) EMPLOYEE RELATIONS, (9) PUBLIC RELATIONS, (10) SELECTION AND USE OF CONSULTANTS, (11) CONTRACTS FOR OPERATION AND MAINTENANCE, AND (12) ENERGY CONSERVATION. APPENDED IS A BIBLIOGRAPHY AND INDICES GIVING AN EXAMPLE ALLOCATION OF COSTS AND EXAMPLE STAFFING CALCULATIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

INSTITUTION NAME: CULP/WESNER/CULP.

IRIS ACCESSION NUMBER: EW005121

PUBLICATION DATE: JUN 78

TITLE: WATER/LAND PROBLEMS IN URBANIZING AREAS.

DESCRIPTOR: \*CONFERENCE PROCEEDINGS; DRAINAGE; FLOOD MANAGEMENT; GROUNDWATER; HYDROLOGY; \*LAND PROBLEMS; \*RESEARCH PRIORITIES; \*SURFACE RUNOFF; \*URBAN AREAS; \*WATER PROBLEMS; \*WATER RESOURCES; \*WATER QUALITY

DESCRIPTIVE NOTE: 78P.

ABSTRACT: URBANIZING AREAS OFTEN EXPERIENCE PROBLEMS IN OBTAINING AN ADEQUATE SUPPLY OF WATER IN PROVIDING FOR WATER TREATMENT AND DISTRIBUTION, AND IN ENSURING THAT WASTEWATER IS ADEQUATELY TREATED SO AS TO PROTECT THE ENVIRONMENT AND, IN SOME CASES, TO PERMIT ITS REUSE. THESE INHERENTLY COMPLEX PROBLEMS ARE BEING MADE MORE DIFFICULT TO SOLVE BY THE CONTINUING INCREASE IN THE NUMBER AND TYPE OF POLLUTANTS PRESENT AND BY THE STRONG DEMAND FOR A HIGH-QUALITY ENVIRONMENT. THESE PROCEEDINGS PRESENT ASSESSMENTS OF THE PROBLEMS AND OF THE RESEARCH NEEDED TO SOLVE THEM AS DISCUSSED BY CONSULTANTS AND GOVERNMENT AGENCY PERSONNEL DURING A ONE-DAY WORKSHOP SPONSORED BY THE WATER RESOURCES CENTER AT THE UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN. THE PRESENTATIONS COVER TOPICS SUCH AS GROUNDWATER AND SURFACE WATER SUPPLIES, DRAINAGE, FLOOD MANAGEMENT, THE QUALITY OF STORM RUNOFF WATER, AND PLANNING METHODS AS THESE ISSUES AFFECT BOTH SMALL COMMUNITIES AND MAJOR URBAN AREAS.

AVAILABILITY: UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN, WATER RESOURCES CENTER, URBANA, ILLINOIS

INSTITUTION NAME: WATER RESOURCES CENTER, UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN.

IRIS ACCESSION NUMBER: EW005128

DESCRIPTIVE NOTE: 20P. PRICE: \$6.00

PUBLICATION DATE: 75

ABSTRACT: THIS REPORT CONTAINS A STATUS ASSESSMENT OF THE AIR EMISSIONS, WATER POLLUTION, HEALTH EFFECTS, AND ENVIRONMENTAL SIGNIFICANCE OF BENZIDINE. THE STUDY WAS CONDUCTED TO PROVIDE A BETTER UNDERSTANDING OF THE DISTRIBUTION AND CHARACTERISTICS OF THIS POLLUTANT.

TITLE: TOXICITY OF PULPING WASTES TO FISH.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

PERSONAL AUTHOR: WEINER, JACK

IRIS ACCESSION NUMBER: EW005147

DESCRIPTOR: \*BIBLIOGRAPHIES; \*CHEMISTRY; EFFLUENTS; \*FISH; \*INDUSTRIAL WASTES; \*PAPER INDUSTRY; \*PULP INDUSTRY; \*PULPING WASTES; \*TOXICITY; \*WASTE DISPOSAL; \*WATER POLLUTION; \*WATER POLLUTION CONTROL

PUBLICATION DATE: AUG 79

DESCRIPTIVE NOTE: 67P. PRICE: \$30.00

TITLE: MULTIMEDIA ENVIRONMENTAL GOALS FOR ENVIRONMENTAL ASSESSMENT, VOLUME III. MEC CHARTS AND BACKGROUND INFORMATION.

ABSTRACT: THIS BIBLIOGRAPHY CITES STUDIES INVESTIGATING THE TOXIC EFFECTS OF PULPING WASTES ON FISH. STUDIES INCLUDE LABORATORY AND FIELD EXPERIMENTS, AND INCLUDE A WIDE RANGE OF FISH SPECIES AND WASTE EFFLUENTS.

PERSONAL AUTHOR: KINGSBURY, C. L.; AND OTHERS

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

DESCRIPTOR: AIR POLLUTION; \*CONTAMINANTS; \*ENVIRONMENTAL ASSESSMENT; \*ORGANIC COMPOUNDS; \*POLLUTION; \*POLLUTION CONTROL; \*WATER POLLUTION

IRIS ACCESSION NUMBER: EW005130

DESCRIPTIVE NOTE: 482P. PRICE: \$25.00

PUBLICATION DATE: DEC 79

ABSTRACT: THIS VOLUME PROVIDES CHARTS AND BACKGROUND INFORMATION SUMMARIES FOR MULTIMEDIA ENVIRONMENTAL GOALS (M.E.G.) CATEGORIES 1-12 AND 13-26. THEY ADDRESS 586 ORGANIC COMPOUNDS. IN THE CONTEXT OF DENYING M.E.G.'S THE REPORT: (1) OFFERS PERSPECTIVES ON THE BROAD RANGE OF CONTAMINANTS WHOSE CONTROL IS OF VITAL INTEREST TO BOTH INDUSTRY AND THE PUBLIC. (2) FURTHER DEVELOPS AND DEFINES INDICATORS DESIGNATING CONTAMINANTS TO BE GIVEN PRIORITY CONSIDERATION FOR IMMEDIATE CONTROL AND FOR SUBSEQUENT RESEARCH. (3) BRINGS TOGETHER EXISTING AND EMERGING DATA IN A FORMAT EFFICIENT FOR USE IN ENVIRONMENTAL ASSESSMENT. AND (4) EXPLORES SOME BASIC METHODOLOGIES WHICH BOTH PROVIDE THE PRESENT GOALS, AND SUGGEST DIRECTIONS FOR REFINED METHODOLOGIES. M.E.G.'S ARE LEVELS OF SIGNIFICANT CONTAMINANTS OR DEGRADENTS (IN AMBIENT AIR, WATER, OR LAND OR IN EMISSION OF EFFLUENTS CONVEYED TO THE AMBIENT MEDIA) THAT ARE JUDGED TO BE (1) APPROPRIATE FOR PREVENTING CERTAIN NEGATIVE EFFECTS IN THE SURROUNDING POPULATIONS IN ECOSYSTEMS, OR (2) REPRESENTATIVE OF THE CONTROL LIMITS ACHIEVABLE THROUGH TECHNOLOGY. M.E.G.'S ARE PREDICTED FOR MORE THAN 650 POLLUTANTS.

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: ARSENIC.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

IRIS ACCESSION NUMBER: EW005152

DESCRIPTOR: \*ARSENIC; AIR EMISSIONS; \*ENVIRONMENTAL EFFECTS; HEALTH EFFECTS; PESTICIDES; POLLUTION; REGULATION; \*STATUS ASSESSMENT; STANDARDS; TOXIC SUBSTANCES; \*TOXIC CHEMICALS; \*WATER POLLUTION CONTROL; \*WATER POLLUTION

PUBLICATION DATE: 80

DESCRIPTIVE NOTE: 35P. PRICE: \$6.00

TITLE: TOXIC AND HAZARDOUS WASTE DISPOSAL--VOLUME FOUR.

ABSTRACT: THE PRODUCTION, CONSUMPTION, AND USES OF ARSENIC ARE DEALT WITH IN THIS REPORT. SOURCES OF ENVIRONMENTAL CONTAMINATION BY ARSENIC ARE IDENTIFIED AND THE CONSEQUENCES OF SUCH POLLUTION EXPLAINED. BETTER CONTROL METHODS ARE NEEDED FOR BOTH AIR EMISSIONS AND DISCHARGE OF ARSENIC CONTAINING WASTEWATER. PRESENT CONTROL TECHNOLOGIES ARE LISTED AS WELL AS AREAS IN WHICH FURTHER STUDY IS REQUIRED.

PERSONAL AUTHOR: POSJASEK, ROBERT B.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005133

PUBLICATION DATE: DEC 79

TITLE: STATUS ASSESSMENT OF TOXIC CHEMICALS: BENZIDINE.

PERSONAL AUTHOR: BLACKWOOD, T. R.; AND OTHERS

DESCRIPTOR: AIR EMISSIONS; \*BENZIDINE; ENVIRONMENTAL EFFECTS; HEALTH EFFECTS; \*STATUS ASSESSMENT; \*TOXIC CHEMICALS; \*WATER POLLUTION

DESCRIPTOR: CHEMICAL WASTES; COMPOSTING; \*HAZARDOUS WASTES;  
HEAVY METALS; INCINERATION; LAND DISPOSAL; LANDFILL;  
RESEARCH ACTIVITIES; RECLAMATION; SOLIDIFICATION PROCESSES;  
\*TOXIC WASTES; UTILITIES; URANIUM TAILINGS; \*WASTE DISPOSAL;  
\*WASTE MANAGEMENT

DESCRIPTIVE NOTE: 313P.

ABSTRACT: THIS BOOK DEALS WITH THE PROBLEM OF DISPOSING OF  
HAZARDOUS WASTES. SEVERAL DISPOSAL OPTIONS ARE EXAMINED IN  
DETAIL. THESE OPTIONS INCLUDE: (1) LAND DISPOSAL, (2)  
SOLIDIFICATION/FIXATION PROCESS, (3) INCINERATION, (4) OCEAN  
INCINERATION, (5) MOLTEN SALT COMBUSTION, (6) COMPOSTING,  
(7) SEALED DISPOSAL, (8) DEEP-WELL DISPOSAL, AND (9) SOIL  
INCORPORATION.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., THE  
BUTTERWORTH GROUP, P. O. BOX 1425, ANN ARBOR, MI 48106

IRIS ACCESSION NUMBER: EW005153

PUBLICATION DATE: SEP 79

TITLE: HISTORY OF FEDERAL WATER RESOURCES PROGRAMS AND  
POLICIES, 1961-70.

PERSONAL AUTHOR: HOLMES, BEATRICE HORT

DESCRIPTOR: ENVIRONMENT; \*FEDERAL PROGRAMS; \*FEDERAL  
POLICIES; \*HISTORY; \*LEGISLATION; \*PLANNING; \*WATER  
RESOURCES; WATER POLLUTION CONTROL  
DESCRIPTIVE NOTE: 331P. PRICE: \$7.00

ABSTRACT: THIS PUBLICATION IS A COMPREHENSIVE ACCOUNT OF  
MAJOR FEDERAL PROGRAMS AND POLICIES RELATING TO CONSERVATION  
AND DEVELOPMENT OF WATER AND RELATED LAND RESOURCES, AND TO  
WATER POLLUTION CONTROL IN THE YEARS 1961 TO 1970. IT  
DISCUSSES MOST RELEVANT FEDERAL LEGISLATION AND THE  
FUNCTIONING OF FEDERAL AND FEDERALLY-ASSISTED PROGRAMS  
INVOLVING RESEARCH, PLANNING, CONSTRUCTION, AND REGULATION.  
ALSO DISCUSSED ARE NATIONAL, REGIONAL, AND LOCAL POLITICAL  
ISSUES RELATED TO WATER PROGRAMS AND POLICIES, PRESIDENTIAL,  
CONGRESSIONAL, AND AGENCY POLICYMAKING PROCESSES, AND  
ORIGINS OF THE ENVIRONMENTAL MOVEMENT AND ITS EFFECTS ON  
WATER RESOURCES PROGRAMS AND POLICIES.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT  
PRINTING OFFICE, WASHINGTON, D.C. 20402

IRIS ACCESSION NUMBER: EW005106

PUBLICATION DATE: AUG 80

TITLE: SEWER TRUNK LINES CAN BE TREATMENT FACILITIES.

PERSONAL AUTHOR: GREEN, MICHAEL; SHELEF, GEDALIAH

DESCRIPTOR: \*DETENTION TIME; \*FACILITIES; \*MODELS; \*SEWERS;  
URBAN AREAS; \*WASTE DISPOSAL; \*WASTEWATER

TREATMENT; \*WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 52-53P.

ABSTRACT: SEWAGE SYSTEMS COVERING CONSIDERABLE DISTANCES  
AND INCORPORATING LARGE-DIAMETER PIPES CHARACTERIZE THE  
RAPID URBAN GROWTH OF THE LAST FEW DECADES. THE POSSIBILITY  
EXISTS FOR USING THE LONG DETENTION TIMES CHARACTERISTIC OF  
WASTEWATER IN THE URBAN SEWER SYSTEM FOR TREATING THE  
SEWAGE, USING SEWER TRUNK LINES AS A PLUG-FLOW BIOLOGICAL  
REACTOR BY INTRODUCING AIR(OR OXYGEN) AND BIOLOGICAL SLUDGE  
TO THE SEWER SYSTEMS. THE KINETIC PARAMETERS AND THE OPTIMAL  
CONDITIONS HAVE BEEN DETERMINED FOR SUCH A SYSTEM, AND A  
SIMULATION MODEL HAS BEEN DEVELOPED.

AVAILABILITY: WATER AND SEWAGE WORKS, V127 N8

IRIS ACCESSION NUMBER: EW005107

PUBLICATION DATE: AUG 80

TITLE: MANAGING ENERGY AT WATER POLLUTION CONTROL  
FACILITIES.

PERSONAL AUTHOR: JACOBS, ALLAN

DESCRIPTOR: \*ENERGY; \*ENERGY CONSERVATION; EFFICIENCY;  
\*FACILITIES; FUEL CONSUMPTION; \*MANAGEMENT; \*POLLUTION  
CONTROL; \*WATER POLLUTION CONTROL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 61-62P.

ABSTRACT: DESCRIBES HOW ENERGY CONSUMPTION IN WASTEWATER  
TREATMENT PLANTS CAN BE REDUCED. CONSERVATION CAN BE  
ACHIEVED BY REDUCING CONSUMPTION AND INCREASING RECOVERY OF  
WASTE HEAT. ENERGY CONSUMPTION CAN BE REDUCED BY IMPROVING  
THE POWER FACTOR, REDUCING PEAK UTILITY-COMPANY ELECTRIC  
DEMAND, USING ENERGY-EFFICIENT EQUIPMENT, REDUCING  
INCINERATOR FUEL CONSUMPTION, AND IMPROVING PLANT CONTROL  
AND OPERATIONAL PROCEDURES.

AVAILABILITY: WATER AND SEWAGE WORKS, V127 N8

IRIS ACCESSION NUMBER: EW005188

PUBLICATION DATE: AUG 80

TITLE: GUIDE TO COMPARATIVE TREATMENT MODE EFFICIENCIES.

PERSONAL AUTHOR: BANERJI, KHANKHA; O'CONNOR, JOHN T.

DESCRIPTOR: \*DESIGN; \*ENERGY; \*ENERGY CONSERVATION;  
EFFICIENCY; EQUIPMENT; \*OPERATIONS (WASTEWATER); RECYCLING;  
\*SLUDGE; \*UTILITIES; \*WASTEWATER; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 32-33P.

ABSTRACT: IN THE FUTURE, THE DESIGNERS OF WASTEWATER  
TREATMENT PLANTS MUST PAY PARTICULAR ATTENTION TO THE DESIGN  
OF THE MAJOR ENERGY INTENSIVE PROCESS, SUCH AS WASTEWATER

PUMPING, SECONDARY BIOLOGICAL WASTEWATER SYSTEMS, AND SLUDGE-TREATMENT PROCESSES. A REDUCTION IN ENERGY CONSUMPTION THROUGH THE PROPER CHOICE OF EQUIPMENT IN THESE PROCESSES CAN MORE THAN OFFSET THE ENERGY USAGE OF ALL OTHER PROCESSES IN THE TREATMENT SCHEME. ENERGY RECOVERY FROM SLUDGE CAN BE AN IMPORTANT FACTOR IN THE OVERALL PLANT ENERGY BALANCE AND MUST BE EVALUATED VERY CAREFULLY.

AVAILABILITY: WATER AND SEWAGE WORKS, V127 NB

IRIS ACCESSION NUMBER: EW005189

PUBLICATION DATE: AUG 80

TITLE: ECONOMICS JUSTIFIES COMPUTER-CONTROL FEED.

PERSONAL AUTHOR: CHING, DAVID L.

DESCRIPTOR: \*AUTOMATION; \*COMPUTERS; \*COMPUTER CONTROL; \*COST EFFECTIVENESS; \*ECONOMICS; ENERGY CONSERVATION; \*FACILITIES; \*UTILITIES; \*WATER TREATMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 36-37P.

ABSTRACT: DISCUSSED ARE THE ECONOMICS AND OPERATIONAL PROCESSES TO DETERMINE THE MOST COST-EFFECTIVE MIX OF INSTRUMENTATION AND CONTROLS. THE EMPHASIS IS ON THE ECONOMIC AND TECHNICAL FEASIBILITY OF THE SYSTEM CONFIGURATION ON THE BASIS OF EQUIVALENT ANNUAL COSTS. THE RESULTS INDICATE THAT COMPUTER CONTROL OF WATER AND WASTEWATER TREATMENT PROCESSES IS JUSTIFIED FOR ITS ENERGY AND OPERATIONAL SAVINGS.

AVAILABILITY: WATER AND SEWAGE WORKS, V127 NB

IRIS ACCESSION NUMBER: EW005190

PUBLICATION DATE: AUG 80

TITLE: WASTEWATER TREATMENT FOR PHOSPHORUS REMOVAL.

PERSONAL AUTHOR: OCKERSHAUSEN, RICHARD W.

DESCRIPTOR: \*ALUM; \*CHEMICAL PRECIPITATION; \*NUTRIENT REMOVAL; \*PHOSPHORUS; \*PHOSPHATES; \*UTILITIES; \*WASTEWATER; \*WASTEWATER TREATMENT; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 40-41P.

ABSTRACT: CHEMICAL PRECIPITATION USING ALUM FOR PHOSPHORUS REMOVAL IN WASTEWATER TREATMENT PLANTS HAS A PROVEN TEN YEAR RECORD. ALSO A NUMBER OF INPLANT APPLICATIONS STUDIES HAVE SHOWN SUCH ADDED BENEFITS AS REDUCED BIOCHEMICAL OXYGEN DEMAND AND SUSPENDED SOLIDS. THE USE OF ALUM FOR PHOSPHORUS REDUCTION IS INDICATED BY ITS SUCCESS AT AN ACTIVATED-SLUDGE, AN ACTIVATED-SLUDGE FOLLOWED BY RAPID-SAND-Filtration, A TRICKLING-FILTER, AND A PRIMARY TREATMENT

AVAILABILITY: WATER AND SEWAGE WORKS, V127 NB

IRIS ACCESSION NUMBER: EW005191

PUBLICATION DATE: AUG 80

TITLE: ELECTRONIC INSTRUMENTATION: ADDS DIMENSIONS TO METERING.

PERSONAL AUTHOR: WEINBERGER, EUGENE M.

DESCRIPTOR: \*ELECTRONIC CONTROL; \*ELECTRONIC INSTRUMENTATION; FACILITIES; \*INSTRUMENTATION; \*UTILITIES; \*WASTEWATER COLLECTION; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 46-47,57P.

ABSTRACT: ARTICLE DESCRIBES TODAY'S WASTEWATER ELECTRONIC CONTROL INSTRUMENTATION. IN THE EVENT OF A LINE BREAK, THE OPERATOR IS IMMEDIATELY ALERTED TO AN EXCESSIVE FLOW THROUGH THE SYSTEM. THE ELECTRONIC SYSTEM CAN ALSO RECORD THE TIME AND MAGNITUDE OF THE BREAK, ACTUATE ALARM SYSTEMS AT BOTH LOCAL OR REMOTE LOCATIONS, AND PROVIDE A VARIETY OF OTHER SIGNALS TO INITIATE CORRECTIVE ACTION.

AVAILABILITY: WATER AND SEWAGE WORKS, V127 NB

IRIS ACCESSION NUMBER: EW005260

PUBLICATION DATE: 80

TITLE: ACTIVATED CARBON ADSORPTION OF ORGANICS FROM THE AQUEOUS PHASE. VOLUME I.

PERSONAL AUTHOR: SUFFET, IRWIN H.; MCCUIRE, MICHAEL J.

DESCRIPTOR: \*ACTIVATED CARBON ADSORPTION; \*CHEMISTRY; \*CARBON; \*ORGANIC COMPOUNDS; \*PILOT STUDIES; \*RESEARCH; SURFACE CHEMISTRY

DESCRIPTIVE NOTE: 510P.

ABSTRACT: THIS VOLUME DEALS MAINLY WITH THE THEORETICAL ASPECTS OF ACTIVATED CARBON ADSORPTION. THE PAPERS INCLUDED REPRESENT A MIXTURE OF REVIEW PAPERS, LABORATORY RESEARCH REPORTS, PILOT PLANT CASE HISTORIES AND DISCUSSIONS OF GENERAL METHODOLOGY.

AVAILABILITY: ARBOR SCIENCE PUBLISHERS, INC., P.O. BOX 1425, ANN ARBOR, MICHIGAN 48106

IRIS ACCESSION NUMBER: EW005261

PUBLICATION DATE: AUG 79

TITLE: SUBPOTABLE WATER REUSE AT ARMY FIXED INSTALLATIONS: A SYSTEMS APPROACH. VOLUME I.



PERSONAL AUTHOR: SCHMIDT, CURTIS J.; AND OTHERS

DESCRIPTOR: CHEMICAL ANALYSIS; COMPUTER MODELING; INDUSTRIAL WASTEWATER; IRRIGATION; \*MODELS; \*OPERATIONS (WASTEWATER); \*PLANNING; POLLUTION; \*RECYCLING; \*SUBPOTABLE WATER; \*U.S. ARMY; \*WASTEWATER TREATMENT; WATER QUALITY; \*WATER REUSE

DESCRIPTIVE NOTE: 166P.

ABSTRACT: THIS REPORT CONCERNS THE TREATMENT AND REUSE OF WASTEWATER AT FIXED ARMY INSTALLATIONS. THE OBJECTIVE WAS TO PROVIDE A TOOL THAT COULD BE USED BY THE ARMY IN ASSESSING THE POTENTIAL FOR WATER REUSE AT ALL THEIR FIXED FACILITIES, IN ISOLATING THOSE BASES WITH THE BEST REUSE POTENTIAL, AND IN EVALUATING CONCEPTUAL REUSE SCHEMES AT THOSE BASES. ALL MAJOR ARMY ACTIVITIES INVOLVING WATER AND WASTEWATER WERE RESEARCHED AND DESCRIBED. IN ADDITION, A THREE-TIER WATER REUSE MODEL WAS DEVELOPED THAT LEADS THROUGH THREE PHASES OF EVALUATION CULMINATING IN THE USE OF A SOPHISTICATED COMPUTER MODEL.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005263

PUBLICATION DATE: 79

TITLE: MSIS TRAINING. FINAL REPORT B.

DESCRIPTOR: ADULT LEARNING; \*COMPUTERS; \*DRINKING WATER; \*ENVIRONMENTAL PROTECTION AGENCY; \*INFORMATION SYSTEMS; \*INSTRUCTION; \*TRAINING PROGRAMS; TEAM TRAINING; \*WATER SUPPLY

DESCRIPTIVE NOTE: 66P.

ABSTRACT: THIS REPORT DESCRIBES THE PROCESS AND EFFECTIVENESS OF THE TRAINING PROGRAM DEVELOPED BY THE SOUTHWESTERN OHIO REGIONAL COMPUTER CENTER FOR THE OFFICE OF DRINKING WATER, ENVIRONMENTAL PROTECTION AGENCY, TO AID STATE AND REGIONAL PERSONNEL IN THE INSTALLATION AND USE OF THE MODEL STATE INFORMATION SYSTEM (M.S.I.S.). THIS TRAINING PROGRAM WAS DEVELOPED USING THEORETICAL INFORMATION CONCERNING ADULT LEARNING, AND CONSISTED OF A FIVE-DAY, TEAM-TAUGHT, ON-SITE PRESENTATION IN 26 STATES AND REGIONS. TRAINEE LEARNING WAS EVALUATED FROM BOTH A SUBJECTIVE AND OBJECTIVE POINT OF VIEW. THESE DATA CLEARLY SHOWED THE EFFECTIVENESS OF THE TRAINING PROGRAM IN ACHIEVING ITS GOAL OF INCREASING THE M.S.I.S. CAPABILITIES OF TRAINEES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATIONS DIVISION, SPRINGFIELD, VA 22161

INSTITUTION NAME: UNIVERSITY OF CINCINNATI COMPUTER CENTER.

IRIS ACCESSION NUMBER: EW005461

PUBLICATION DATE: JUL 79

TITLE: REPORT TO THE CONGRESS ON THE COORDINATION OF FEDERAL ENERGY CONSERVATION PROGRAMS INVOLVING STATE AND LOCAL GOVERNMENTS.

DESCRIPTOR: APPROPRIATE TECHNOLOGY; \*CONSERVATION; EDUCATIONAL PROGRAMS; \*ENERGY CONSERVATION; FEDERAL GOVERNMENT; \*FEDERAL LEGISLATION; FEDERAL STATE RELATIONSHIPS; GOVERNMENT; \*GOVERNMENT ROLE; SOLAR ENERGY; WASTE DISPOSAL

DESCRIPTIVE NOTE: 107P. PRICE: PRINTED COPY: \$6.50, MICROFICHE: \$3.00

ABSTRACT: THE MAIN BODY OF THIS REPORT DESCRIBES IN DETAIL THE COORDINATION EFFORTS RELATING TO ALL ENERGY CONSERVATION PROGRAMS OF VARIOUS FEDERAL AGENCIES THAT INVOLVE STATE AND LOCAL GOVERNMENTS. EACH OF THE 58 PROGRAM DESCRIPTIONS IS DIVIDED INTO FOUR PARTS: (A) BACKGROUND, (B) NEED FOR COORDINATION, (C) CURRENT COORDINATION EFFORTS, AND (D) PLANNED COORDINATION EFFORTS. PART A BRIEFLY DESCRIBES THE PROGRAM, INCLUDING ITS LEGISLATIVE HISTORY, GOALS AND OBJECTIVES, FUNDING LEVELS, AND A DESCRIPTION OF THE INVOLVEMENT OF STATE AND LOCAL GOVERNMENTS IN THE PROGRAM. PART B DESCRIBES THE SPECIFIC REASONS FOR WHICH PROGRAM COORDINATION IS NEEDED. PART C SUMMARIZES THE DIFFERENT LEVELS OF COORDINATION CURRENTLY IN EFFECT. PART D DESCRIBES FUTURE COORDINATION EFFORTS WHICH ARE BEING PLANNED.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, OPERATION DIVISION, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

INSTITUTION NAME: U.S. DEPARTMENT OF ENERGY.

IRIS ACCESSION NUMBER: EW005485

PUBLICATION DATE: SEP 80

TITLE: OPERATOR TRAINING AND PLANT START-UP FOR A REGIONAL WATER RECLAMATION PROJECT.

PERSONAL AUTHOR: GUNN, GEORGE A.; AND OTHERS

DESCRIPTOR: COSTS; ENGINEERING; JOB TRAINING; \*OPERATIONS (WASTEWATER); \*OPERATOR TRAINING; \*PERSONNEL; \*TRAINING; \*TRAINING PROGRAMS; VIRGINIA; \*WASTEWATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 2351-2366P.

ABSTRACT: THE PLANNED AND ACTUAL PROGRAMS DEVELOPED BY THE CONSULTING ENGINEER FOR THE START-UP AND OPERATOR TRAINING AT THE UPPER OCCOQUAN SEWAGE AUTHORITY (VIRGINIA) REGIONAL ADVANCED WASTEWATER RECLAMATION PROJECT ARE DETAILED. SERIOUS CONSTRUCTION DELAYS AFFECTED THE START-UP PROGRAMS AS WELL AS THE TRAINING PROGRAM. THE TRAINING OF KEY STAFF, ORIGINALLY PLANNED TO TAKE 450 HOURS, HAD TO BE REDUCED TO 300 HOURS. A GENERAL STAFF TRAINING PROGRAM OF 630 HOURS WAS

IMPLEMENTED. THE PLANT WAS REQUIRED TO START TREATING WASTEWATER BEFORE ALL AUXILIARY FACILITIES WERE COMPLETED. HOWEVER, EARLY OPERATIONAL RESULTS WERE GOOD AND THE PLANT HAS CONTINUED TO PERFORM SATISFACTORILY.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N9

IRIS ACCESSION NUMBER: EW005486

PUBLICATION DATE: SEP 80

TITLE: ANAEROBIC PHENOL BIOKINETICS.

PERSONAL AUTHOR: NEUFELD, RONALD D.; AND OTHERS

DESCRIPTOR: ANAEROBIC DEGRADATION; \*ANAEROBIC PROCESSES; \*BIODEGRADATION; CHEMISTRY; COAL WASTES; COKE; INDUSTRIAL WASTES; \*KINETICS; LIMNOLOGY; \*PHENOL; \*WASTEWATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 2367-2377P.

ABSTRACT: A LABORATORY INVESTIGATION WAS CONDUCTED TO GENERATE PRELIMINARY DATA ON THE USE OF ANAEROBIC BACTERIA FOR THE REDUCTION OF HIGH-STRENGTH PHENOLIC WASTEWATERS SUCH AS THOSE FROM COAL GASIFICATION. SUCH REDUCTION WAS SHOWN FEASIBLE, WITH SUBSTRATE INHIBITION DOMINATING AT PHENOL LEVELS ABOVE 686 MCL. A MATHEMATICAL MODEL IS PRESENTED THAT CORRELATES THE RATE OF PHENOL REDUCTION TO AMBIENT PHENOL CONCENTRATION. REDUCTION WAS ALSO LINKED WITH CHANGES IN ALKALINITY, VOLATILE ACIDS, INTERMEDIATES, AND CELL YIELD. THE STUDY CONCLUDES THAT ANAEROBIC BIODEGRADATION CONSTITUTES AN ALTERNATIVE PROCESS FOR PHENOL REDUCTION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N9

IRIS ACCESSION NUMBER: EW005487

PUBLICATION DATE: SEP 80

TITLE: EFFECTS OF CADMIUM ON THE COMPLETELY MIXED ACTIVATED SLUDGE PROCESS.

PERSONAL AUTHOR: WEBER, SCOTT A.; SHERRARD, JOSEPH H.

DESCRIPTOR: \*ACTIVATED SLUDGE; \*CADMIUM; CHEMICAL OXYGEN DEMAND; \*HEAVY METALS; INDUSTRIAL EFFLUENTS; LABORATORY PROCEDURES; \*NITRIFICATION; \*TOXICITY; TOXIC SUBSTANCES; WASTEWATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 2378-2388P.

ABSTRACT: A LABORATORY STUDY WAS CONDUCTED TO MEASURE THE EFFECT OF CADMIUM ON CHEMICAL OXYGEN DEMAND REMOVAL EFFICIENCY, DEGREE OF NITRIFICATION, AND ON THE KINETIC COEFFICIENTS  $\mu_{MAX}$  AND  $D_c$ . DATA WERE OBTAINED FROM THE OPERATION OF BENCH SCALE REACTORS WHICH WERE FED 0, 5, 15, AND 30 MGL SOLUTIONS OF CADMIUM. MEAN CELL RESIDENCE TIME

WAS USED AS THE PRIMARY OPERATIONAL CONTROL PARAMETER AND VALUES BETWEEN APPROXIMATELY 3 AND 15 DAYS WERE USED TO OBTAIN DATA. THE CHEMICAL OXYGEN DEMAND REMOVAL EFFICIENCIES FOR THE REACTORS CONTAINING CADMIUM WERE SLIGHTLY LESS THAN THOSE OBTAINED FOR THE CONTROL REACTOR. NO DISTINGUISHABLE DIFFERENCE WAS OBTAINED FOR THE KINETIC COEFFICIENTS  $\mu_{MAX}$  AND  $D_c$ . NITRIFICATION, HOWEVER, WAS FOUND TO BE SIGNIFICANTLY ALTERED IN THE PRESENCE OF CADMIUM. RESULTS CLEARLY SHOW THAT THE DEGREE OF NITRIFICATION DECREASED AS CADMIUM CONCENTRATIONS INCREASED AT A GIVEN MEAN CELL RESIDENCE TIME.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N9

IRIS ACCESSION NUMBER: EW005488

PUBLICATION DATE: SEP 80

TITLE: EXPERIENCE WITH BELT FILTER PRESSES IN THE PULP AND PAPER INDUSTRY.

PERSONAL AUTHOR: MINER, REID

DESCRIPTOR: BELTS; \*DEWATERING; EQUIPMENT; EQUIPMENT EVALUATION; EQUIPMENT MAINTENANCE; \*FILTRATION; OPERATOR REQUIREMENTS; \*PAPER MILLS; \*SLUDGE; SLUDGE DEWATERING; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2389-2395P.

ABSTRACT: A RECENT REVIEW OF BELT FILTER PRESSING IN THE PULP AND PAPER INDUSTRY HAS REVEALED A TOTAL OF 24 OPERATING INSTALLATIONS. CONDITIONING REQUIREMENTS, MACHINE CAPABILITIES, AND CAKE CONSISTENCIES HAVE BEEN FOUND TO VARY WITH THE NATURE OF THE SLUDGE SOLIDS, FEED CONSISTENCIES, AND MACHINE CONFIGURATIONS. ALTHOUGH MECHANICAL RELIABILITY HAS BEEN VARIABLE, THE ONLY MAJOR CONTINUING OPERATING PROBLEM COMMON TO MOST OF THE UNITS HAS BEEN BELT LIFE. A NUMBER OF COMMONLY APPLIED MEASURES HAVE EXTENDED REPRESENTATIVE BELT LIFE TO 3 OR 4 MONTHS. IN THE ABSENCE OF FREQUENT MECHANICAL PROBLEMS OR SEVERE SLUDGE VARIABILITY, TYPICAL OPERATOR ATTENTION REQUIREMENTS HAVE BEEN FOUND TO BE 1-2 HOURS PER SHIFT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N9

IRIS ACCESSION NUMBER: EW005489

PUBLICATION DATE: SEP 80

TITLE: STORMWATER POLLUTANT LOAD-RUNOFF RELATIONSHIPS.

PERSONAL AUTHOR: BEDIENT, PHILIP B.; AND OTHERS

DESCRIPTOR: \*MATHEMATICAL MODELS; \*RUNOFF WATERS; \*STORMWATER; TEXAS; \*URBAN AREAS; \*URBAN RUNOFF; WATER POLLUTION CONTROL; WATER QUALITY

NOTE: 2096-2404P:

RESULTS FROM A COMPREHENSIVE STORMWATER PROGRAM AT FOUR SITES IN HOUSTON, TEXAS, INDICATE RELATIONS BETWEEN TOTAL STORM LOADS AND TOTAL RUNOFF BETWEEN PEAK MASS FLOWS AND PEAK FLOW. ANTECEDENT WAS FOUND TO BE INSIGNIFICANT FOR PREDICTING POLLUTANT LOADS. A METHOD IS PRESENTED FOR POLLUTANT MASS FLOW CURVES USING KNOWN DATA AND AN EXPONENTIAL WASHOFF EQUATION. THE INITIAL COEFFICIENT IS SELECTED USING THE PEAK MASS FLOW-PEAK FLOW RELATIONSHIP. THE EFFECT OF STORM SAMPLING FREQUENCY ON THE ACCURACY OF TOTAL STORM LOAD PREDICTION IS EVALUATED USING EXTENSIVE DATA BASE AVAILABLE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION,

IRIS ACCESSION NUMBER: EW005490

PUBLICATION DATE: SEP 80

TITLE: LOW-COST FILTER SYSTEM MEETS DRINKING WATER

PERSONAL AUTHOR: CHAPMAN, ROBERT L.; BENOIT, GERALD R.

DESCRIPTOR: \*AGRICULTURAL WATER USE; CALIFORNIA; CASE STUDIES; COST EFFECTIVENESS; DESIGN; \*DRINKING WATER; \*FILTER SYSTEMS; IRRIGATION; \*OPERATIONS (WATER); \*WATER QUALITY; \*WATER SUPPLY  
DESCRIPTIVE NOTE: 102-104P.

ABSTRACT: THIS CASE STUDY EXAMINES THE DECISION BY THE SANTA ANITA (CA) WATER DISTRICT TO INSTALL FILTRATION TO UPGRADE THE RAW WATER QUALITY. THE GOAL WAS TO PROVIDE DOMESTIC QUALITY WATER TO ITS COMBINATION OF RESIDENTIAL AND AGRICULTURAL CUSTOMERS AT A COST COMPATIBLE WITH OTHER WATER TREATMENT METHODS. A HIGH-PRESSURE DIRECT FILTER WAS CHOSEN. THE EXPERIENCE AND RESULTS GAINED IN THE SEVERAL YEARS OF OPERATION HAVE PROVEN THE FUNDAMENTAL PRINCIPLES TO BE A GOOD ONE. LOW OPERATION AND MAINTENANCE COSTS IN ADDITION TO THE LOW CAPITAL COST, HAVE MADE THE SYSTEM MOST EFFICIENT, WITH MINIMUM LABOR, POWER, CHEMICAL, AND MAINTENANCE EXPENDITURES.

AVAILABILITY: PUBLIC WORKS, V111 N9

IRIS ACCESSION NUMBER: EW005491

PUBLICATION DATE: SEP 80

TITLE: VEGETATION OF MINED LAND USING WASTEWATER SLUDGE.

PERSONAL AUTHOR: SOPPER, WILLIAM E.; KERR, SONJA N.

DESCRIPTOR: \*AGRICULTURE; \*CASE STUDIES; EQUIPMENT; \*LAND RECLAMATION; PENNSYLVANIA; \*WASTEWATER SLUDGE; SLUDGE DISPOSAL; STRIP-MINED LANDS;

\*WASTE DISPOSAL; \*WASTEWATER SLUDGE

DESCRIPTIVE NOTE: 114-116P.

ABSTRACT: THIS ARTICLE DESCRIBES THE DEMONSTRATION PROJECTS IN PENNSYLVANIA WHERE WASTEWATER SLUDGE HAS BEEN USED ON STRIPMINED LAND. RESULTS OF A TWO-YEAR STUDY MONITORING SYSTEM INDICATE THAT THERE WAS NO DETRIMENTAL EFFECTS ON THE VEGETATION, SOIL, OR GROUNDWATER QUALITY DUE TO THE SLUDGE APPLICATION BUT INSTEAD THERE WAS A FOUR-FOLD INCREASE IN VEGETATION HEIGHT AND APPROXIMATELY A SIX-FOLD INCREASE IN DRY MATTER PRODUCTION OVER THE FIRST YEAR.

AVAILABILITY: PUBLIC WORKS, V111 N9

IRIS ACCESSION NUMBER: EW005492

PUBLICATION DATE: SEP 80

TITLE: EFFECTIVE WASTEWATER MANAGEMENT PLANNING FOR SMALL COMMUNITIES--PART 2.

PERSONAL AUTHOR: BARROR, RICHARD F.; TCHOBANOCOUS, GEORGE

DESCRIPTOR: COST EFFECTIVENESS; FEDERAL PROGRAMS; LABOR UTILIZATION; LAND UTILIZATION; \*MANAGEMENT; OPERATIONS (WATER); \*PLANNING; POLLUTION CONTROL; \*RURAL AREAS; \*SMALL COMMUNITIES; STANDARDS; \*WASTEWATER MANAGEMENT; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 170-174P.

ABSTRACT: IN THE SECOND OF THIS TWO-PART ARTICLE, KEY INNOVATIVE WASTEWATER MANAGEMENT PLANNING CONCEPTS FOR SMALL COMMUNITIES ARE DISCUSSED. TOPICS INCLUDE EFFECTIVE PLANNING APPROACHES, EFFECTIVE UTILIZATION OF LABOR, INSTITUTIONAL CHANGES, AND COST-EFFECTIVENESS. THE CHARACTERISTICS AND PLANNING CONSIDERATIONS FOR SMALL COMMUNITIES WERE THE SUBJECT OF PART 1, AS WELL AS THE IMPACT OF FEDERAL REGULATIONS AND CONSTRUCTION GRANTS PROGRAM.

AVAILABILITY: PUBLIC WORKS, V111 N9

IRIS ACCESSION NUMBER: EW005493

PUBLICATION DATE: SEP 80

TITLE: PLAN PREVENTATIVE MAINTENANCE OF PLANTS AT THE RIGHT TIME.

PERSONAL AUTHOR: METCALF, RICHARD R.

DESCRIPTOR: CONSTRUCTION; \*DESIGN; EQUIPMENT (EVALUATION); \*FACILITIES; \*MAINTENANCE; MANAGEMENT; \*OPERATIONS (WATER); \*PLANNING; PLANT OPERATORS; RECORDKEEPING; \*WATER TREATMENT

DESCRIPTIVE NOTE: 128-129P.

ABSTRACT: THIS ARTICLE CONCLUDES THAT PREVENTATIVE MAINTENANCE OF WATER AND WASTEWATER TREATMENT PLANTS SHOULD

BE CONSIDERED DURING DESIGN AND CONSTRUCTION PHASES, NOT ONLY AFTER THE PLANT IS COMPLETE. IT IS RECOMMENDED THAT PLANT OPERATORS BE AT THE CONSTRUCTION SITE AND REVIEW PLANT PLANS SO THAT THEY CAN AID IN THE REDUCTION OF COSTLY FUTURE MAINTENANCE PROBLEMS.

AVAILABILITY: PUBLIC WORKS, VIII N9

IRIS ACCESSION NUMBER: EW005494

PUBLICATION DATE: SEP 80

TITLE: TREATMENT STRUCTURE SUPPORT OVER DIFFICULT SOILS.

PERSONAL AUTHOR: HUNT, HAL W.

DESCRIPTOR: CONSTRUCTION; \*DESIGN; \*EQUIPMENT; \*FACILITIES; FOUNDATIONS; INSTALLATION; \*PILING; STRUCTURAL DESIGN; \*SUPPORT STRUCTURES; WATER STORAGE; \*WATER TREATMENT

DESCRIPTIVE NOTE: 131-134P.

ABSTRACT: THIS ARTICLE DISCUSSES THE VARIOUS TYPES OF PILES USED TO SUPPORT WATER TREATMENT AND STORAGE STRUCTURES. BOTH DISPLACEMENT AND NON-DISPLACEMENT PILES ARE EXAMINED WITH SPECIFIC ATTENTION FOCUSED ON TIMBER, CLOSED-END PIPE, PRECAST CONCRETE, OPEN-END PIPE, AUGERED HOLE, OR H-PILES. INFORMATION IS PROVIDED CONCERNING INVESTIGATION OF FOUNDATIONS AND SUPERVISION OF CONSTRUCTION.

AVAILABILITY: PUBLIC WORKS, VIII N9

IRIS ACCESSION NUMBER: EW005500

TITLE: TRAINING MATERIALS FOR PESTICIDE APPLICATOR CERTIFICATION.

PERSONAL AUTHOR: RUPPEL, R. F.

DESCRIPTOR: \*APPLICATION; \*AUDIOVISUAL AIDS; \*CERTIFICATION; CHEMISTRY; ENVIRONMENT; \*INSTRUCTIONAL MATERIALS; \*PESTICIDES; \*PESTICIDE FORMULATIONS; PESTICIDE POISONING; PEST CONTROL; \*SAFETY; TAPES

DESCRIPTIVE NOTE: 72P.

ABSTRACT: THESE TRAINING MATERIALS INCLUDE SLIDES, TAPES, SAMPLE QUESTIONS AND AN EXPLANATION OF THE CERTIFICATION REGULATIONS. TOPICS COVERED INCLUDE PESTICIDE REGULATIONS, PESTICIDE FORMULATIONS, PESTICIDE POISONING, PESTICIDE LABELS, APPLICATION SAFETY AND PESTICIDES IN THE ENVIRONMENT.

AVAILABILITY: R. F. RUPPEL, DEPARTMENT OF ENTOMOLOGY, MICHIGAN STATE UNIVERSITY EAST LANSING, MI 48823

IRIS ACCESSION NUMBER: EW005505

PUBLICATION DATE: 76

TITLE: USING PESTICIDES SAFELY #217.

DESCRIPTOR: APPLICATION; CLOTHING; EQUIPMENT; LEGISLATION; \*PESTICIDES; \*PROTECTIVE CLOTHING; POISONS; \*SAFETY; \*TOXICITY; TRANSPORTATION; WASTE DISPOSAL

DESCRIPTIVE NOTE: 17P. PRICE: \$.25

ABSTRACT: THIS HANDBOOK DEALS WITH THE PROBLEM OF USING PESTICIDES SAFELY. TOPICS INCLUDE PESTICIDE LEGISLATION, TOXICITY, ROUTES OF ENTRY, PESTICIDE FORMULATIONS, PROTECTIVE CLOTHING AND SAFETY EQUIPMENT. ADVICE IS ALSO GIVEN ON HOW TO MIX, APPLY, DISPOSE, STORE AND TRANSPORT PESTICIDES SAFELY.

AVAILABILITY: PENNSYLVANIA STATE UNIVERSITY, COLLEGE OF AGRICULTURE EXTENSION SERVICE, UNIVERSITY PARK, PA 16802

IRIS ACCESSION NUMBER: EW005506

PUBLICATION DATE: AUG 77

TITLE: ALABAMA'S RECOMMENDED FOREST MANAGEMENT GUIDELINES TO CONTROL NON-POINT POLLUTION FROM SILVICULTURAL PRACTICES.

DESCRIPTOR: \*ALABAMA; \*FORESTRY; \*MANAGEMENT; \*NONPOINT POLLUTION; \*OPERATIONS (FORESTRY); \*SILVICULTURE; \*STREAMS; \*WATER QUALITY; WATER POLLUTION; \*WATER POLLUTION CONTROL.

DESCRIPTIVE NOTE: 25P. FREE

ABSTRACT: THESE RECOMMENDED GUIDELINES ENCOURAGE THE USE OF MANAGEMENT PRACTICES WHICH ARE ECONOMICALLY FEASIBLE FOR THE PRIVATE FOREST LANDOWNER IN ALABAMA, AND WHICH AT THE SAME TIME, WILL CONTROL WATER POLLUTION FROM NON-POINT SILVICULTURAL SOURCES. TOPICS COVERED INCLUDE: WATER QUALITY PRINCIPLES, MANAGEMENT ZONES AND FOREST OPERATIONS (SUCH AS ACCESS, HARVESTING, SITE PREPARATION, SURFACE WATER MANAGEMENT AND FOREST CHEMICAL UTILIZATION).

AVAILABILITY: ALABAMA'S FORESTRY COMMISSION, 513 MADISON AVE., MONTGOMERY, AL 36130

IRIS ACCESSION NUMBER: EW005508

PUBLICATION DATE: DEC 79

TITLE: DISSOLVED OXYGEN: WATER QUALITY STANDARDS CRITERIA DIGEST A COMPILATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: AQUATIC LIFE; \*DISSOLVED OXYGEN; FEDERAL STANDARDS; \*OXYGEN; \*REGULATIONS; STATE STANDARDS; STANDARDS; \*WATER QUALITY

DESCRIPTIVE NOTE: 20P.

ABSTRACT: THIS DIGEST WAS COMPILED TO PROVIDE GENERAL INFORMATION TO THE PUBLIC AS WELL AS TO FEDERAL, STATE, AND LOCAL OFFICIALS. IT CONTAINS EXCERPTS QUALITY STANDARDS ESTABLISHING POLLUTANT-SPECIFIC CRITERIA FOR NAVIGABLE SURFACE WATERS. THE STANDARDS PROGRAM, A NATIONWIDE STRATEGY FOR SURFACE WATER QUALITY MANAGEMENT, CONTAINS TWO MAJOR ELEMENTS: THE USE (RECREATION, DRINKING WATER, FISH AND WILDLIFE PROPAGATION, INDUSTRIAL, OR AGRICULTURAL) TO BE MADE OF THE NAVIGABLE WATER AND CRITERIA TO PROTECT THESE USES.

AVAILABILITY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER, PLANNING AND STANDARD, WASHINGTON, D.D. 20460

IRIS ACCESSION NUMBER: EW005509

PUBLICATION DATE: 80

TITLE: HANDBOOK OF PROCEDURES: CONSTRUCTION GRANTS PROGRAM FOR MUNICIPAL WASTEWATER TREATMENT WORKS (SECOND EDITION).

DESCRIPTOR: \*CONSTRUCTION; \*GRANTS; \*GRANTS PROGRAMS; \*GRANT PROCESSING; HANDBOOKS; \*MANAGEMENT; \*MUNICIPAL WASTEWATER; \*PLANNING; \*REGIONAL PROGRAMS; \*STATE PROGRAMS; \*WASTEWATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 250P.

ABSTRACT: THIS HANDBOOK IDENTIFIES AND EXPLAINS THE MANY PROCEDURES TO BE FOLLOWED BY THOSE IN THE REGIONAL OFFICES AND THE STATES WHO ARE RESPONSIBLE FOR MUNICIPAL WASTEWATER TREATMENT PROJECTS FROM THEIR CONCEPTION TO COMPLETION. THE PROCEDURES ARE PRESENTED SEQUENTIALLY AND ARE EXPRESSED IN LOGICAL AND CONCISE TERMS. THE OPERATIONAL TASKS DESCRIBED ARE APPLICABLE TO THE PROGRAMS AS A WHOLE AND ARE INTENDED TO SERVE AS AN OPERATIONAL STANDARD SO THAT THIS COMPLEX, MULTIFACETED CONSTRUCTION GRANTS PROGRAM CAN MOVE FORWARD AS A NATIONAL PROGRAM, UNIFORMLY ADMINISTERED.

AVAILABILITY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER, PROGRAM OPERATIONS, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW005510

PUBLICATION DATE: 80

TITLE: THE ASBESTOS PARTICLE ATLAS.

PERSONAL AUTHOR: MCCRONE, WALTER C.

DESCRIPTOR: \*ASBESTOS; CRYSTALLOGRAPHY; \*HAZARDOUS MATERIALS; \*IDENTIFICATION; LABORATORY TESTING; \*PHOTOMICROGRAPHY; POLLUTANTS; PUBLIC HEALTH; TALC; \*TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 120P.

ASSIST LABORATORIES CHARGED WITH THE ANALYSIS OF BULK INSULATION SAMPLES FROM SCHOOLS AND PUBLIC BUILDINGS. SECTIONS INCLUDE: DETAILED ANALYSIS OF THE PROPERTIES OF ASBESTOS, CRYSTALLOGRAPHIC BACKGROUND, IDENTIFICATION OF ASBESTOS, AND QUANTIFICATION. ALSO INCLUDED ARE 44 COLOR PRINTS OF THE SIX ASBESTIFORM MINERALS AND OTHER MATERIALS COMMONLY ENCOUNTERED IN BULK SAMPLE ANALYSIS. THE APPENDICES INCLUDE INFORMATION ON PHOTOMICROGRAPHY, AND PURCHASING A MICROSCOPE.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 230 COLLINGWOOD, P.O. BOX 1425, ANN ARBOR, MI 48106

IRIS ACCESSION NUMBER: EW005512

PUBLICATION DATE: 78

TITLE: ELECTRICAL DESIGN, SAFETY, AND ENERGY CONSERVATION.

PERSONAL AUTHOR: THUMANN, ALBERT, P.E.

DESCRIPTOR: COSTS; \*DESIGN; \*ELECTRICAL SYSTEMS; \*ENERGY CONSERVATION; \*ELECTRICITY; ENGINEERS; \*INSTRUMENTATION; \*SAFETY; UTILITIES

DESCRIPTIVE NOTE: 255P. PRICE: \$29.95

ABSTRACT: THIS BOOK COVERS SAFETY AND ENERGY EFFICIENCY AND THE PRACTICAL PROBLEMS ASSOCIATED WITH THEIR APPLICATION IN THE INDUSTRIAL ELECTRICAL DESIGN PROCESS. THE UNDERSTANDING OF ALL COMPONENTS OF ELECTRICAL SYSTEM DESIGN IS ESSENTIAL FOR ELECTRICAL DESIGNERS, SAFETY, PLANT AND PROJECT ENGINEERS. THIS BOOK IS INTENDED FOR ALL FOUR PROFESSIONS.

AVAILABILITY: AEE ENERGY BOOKS, DEPT, 803, 4025 PLEASANTDALE ROAD, SUITE 3408 ATLANTA, GA 30340

IRIS ACCESSION NUMBER: EW005514

PUBLICATION DATE: JUN 76

TITLE: WATER PLANT INSTRUMENTATION AND AUTOMATION.

DESCRIPTOR: AUTOMATION; \*COMPUTERS; \*ELECTRONIC CONTROL; \*INSTRUMENTATION; \*MEASUREMENT; \*QUALITY CONTROL; \*TECHNOLOGY; \*UTILITIES; WASTE DISPOSAL; \*WATER RESOURCES; WATER POLLUTION CONTROL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 234P. PRICE: MEMBER \$6.00, NON-MEMBER \$12.00

ABSTRACT: INCLUDED ARE PAPERS THAT DEAL WITH THE AUTOMATION OF WATER AND WASTEWATER TREATMENT PLANTS. CONTROL SYSTEMS ENGINEERING, COMPUTER APPLICATIONS AND VARIOUS OTHER INSTRUMENTATION OPPORTUNITIES ARE ALSO DISCUSSED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 W. QUINCY AVENUE, DENVER, CO 80235

ERIC  
Full Text Provided by ERIC  
THIS PHOTOMICROGRAPHIC ATLAS WAS PREPARED TO

IRIS ACCESSION NUMBER: EW005513

PUBLICATION DATE: JUN 76

TITLE: RIVER WATER QUALITY ASSESSMENT.

DESCRIPTOR: \*CONFERENCE PROCEEDINGS; \*CONFERENCES;  
ENVIRONMENTAL IMPACT; \*HYDROLOGY; \*RIVER QUALITY ASSESSMENT;  
\*RIVERS; WATER QUALITY; \*WATER RESOURCES

DESCRIPTIVE NOTE: 110P. PRICE: MEMBER \$3.00, NONMEMBER  
\$6.00, NO. 20133

ABSTRACT: THIS PUBLICATION IS A COMPILATION OF PAPERS ON  
RIVER WATER QUALITY PRESENTED AT THE 96TH ANNUAL CONFERENCE  
OF THE AMERICAN WATER WORKS ASSOCIATION. PAPERS INCLUDED  
ARE: RIVER QUALITY ASSESSMENT: HISTORICAL \*METHODS AND  
CURRENT PHILOSOPHY; A PRACTICAL FRAMEWORK FOR RIVER QUALITY  
ASSESSMENT; CHATTAHOOCHEE RIVER BASIN, GEORGIA; AN  
ENVIRONMENTAL ASSESMENT OF IMPACTS OF COAL DEVELOPMENT ON  
THE WATER RESOURCES OF THE YAMPA RIVER BASIN, COLORADO AND  
WYOMING- PHASE I & II WORK PLAN; AND USE OF HYDROLOGIC DATA  
FOR RIVER QUALITY SAMPLING AND ANALYSIS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 W.  
QUINCY AVE., DENVER, CO 80235

IRIS ACCESSION NUMBER: EW005516

PUBLICATION DATE: MAY 73

TITLE: DEVELOPING WATER RATES.

DESCRIPTOR: \*CONFERENCE PROCEEDINGS; \*COST EFFECTIVENESS;  
COSTS; DESIGN; \*ECONOMIC FACTORS; UTILITY SERVICES; \*WATER  
SUPPLY; \*WATER RATES; \*WATER RATE SCHEDULES

DESCRIPTIVE NOTE: 109P. PRICE: MEMBERS \$3.00, NON MEMBERS  
\$6.00

ABSTRACT: THIS PUBLICATION CONTAINS FOUR PAPERS PRESENTED  
AT A ONE DAY SEMINAR ON DEVELOPING WATER RATES. THE PURPOSE  
OF THE SEMINAR WAS TO DESCRIBE GENERAL PRINCIPLES AND  
PROCEDURES, EXPLAIN THE BASIC METHODS OF COST OF SERVICE  
ANALYSIS, AND DISCUSS SOME OF THE PROBLEMS WHICH ARE  
INVOLVED IN WATER RATE DESIGN. PAPERS INCLUDED ARE: REVENUE  
REQUIREMENTS AND ALLOCATION TO FUNCTIONAL COST COMPONENTS;  
DISTRIBUTION OF COSTS OF WATER SERVICE TO CUSTOMER CLASSES;  
DEVELOPMENT AND DESIGN OF WATER RATE SCHEDULES, AND SPECIAL  
SERVICE CONSIDERATIONS AND OTHER RATE PRACTICES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 2 PARK  
AVE., NEW YORK, NY 10016

IRIS ACCESSION NUMBER: EW005517

PUBLICATION DATE: 74

TITLE: PROCESSING WATER-TREATMENT-PLANT SLUDGE.

DESCRIPTOR: ALUM; CLARIFICATION (WATER); COAGULATION;  
DEWATERING; ENVIRONMENTAL PROTECTION; \*OPERATIONS (WATER);  
POLLUTION CONTROL; \*SLUDGE; \*SLUDGE REMOVAL; \*WATER  
TREATMENT; \*WASTE DISPOSAL;

DESCRIPTIVE NOTE: 151P. PRICE: MEMBERS \$4.50,  
NONMEMBERS \$9.00, NO. 20108.

ABSTRACT: THIS BOOK PRESENTS A COLLECTION OF PAPERS ON  
VARIOUS ASPECTS OF WATER TREATMENT PLANT SLUDGE. TOPICS  
INCLUDE: IMPACT OF ENVIRONMENTALISM ON WATER UTILITY  
OPERATION, ALUM SLUDGE THICKENING AND DISPOSAL, SLUDGE  
HANDLING AND DISPOSAL, DEWATERING OF WATER PLANT SLUDGE,  
DESIGN OF WASH-WATER AND ALUM SLUDGE DISPOSAL FACILITIES,  
THE HYDROCYCLONE FOR WATER CLARIFICATION, FILTRABILITY OF  
WATER TREATMENT SLUDGE, COAGULATION CONSIDERATIONS,  
CHARACTERIZATION OF CHEMICAL SLUDGES, THE EFFECT OF WATER  
UTILITY SLUDGE ON THE ACTIVATED SLUDGE PROCESS, ALUM  
RECOVERY, AND WATER TREATMENT PLANT WASTE DISPOSAL.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 WEST  
QUINCY AVE., DENVER, CO 80235

IRIS ACCESSION NUMBER: EW005518

PUBLICATION DATE: 59

TITLE: WATER UTILITY MANAGEMENT.

DESCRIPTOR: ACCOUNTING; CIVIL DEFENSE; ECONOMICS;  
ENGINEERING; FIRE PROTECTION; INSURANCE; \*INSTRUCTIONAL  
MATERIALS; \*MANAGEMENT; \*MAINTENANCE; PLANNING; PERSONNEL;  
PUBLIC RELATIONS; REGULATIONS; STANDARDS; SAFETY; TRAINING;  
\*UTILITIES; \*WATER TREATMENT; \*WATER SUPPLY

DESCRIPTIVE NOTE: 188P. PRICE: MEMBERS \$7.00, NON MEMBERS  
\$14.00

ABSTRACT: THIS TRAINING MANUAL FOR WATER UTILITY PERSONNEL  
WAS PREPARED BY THE AMERICAN WATERWORKS ASSOCIATION  
COMMITTEE ON EDUCATION. THE MANUAL CONTAINS INFORMATION ON  
OWNERSHIP, PLANNING, RESPONSIBILITY, FIRE PROTECTION, CIVIL  
DEFENSE PARTICIPATION, WATER RIGHTS, PERMITS, REGULATIONS,  
FINANCES, WATER RATES, ACCOUNTING, OPERATING PROCEDURES,  
ENGINEERING, STANDARDS, MAINTENANCE, INSURANCE, PERSONNEL,  
INSERVICE TRAINING, SAFETY AND PUBLIC RELATIONS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 WEST  
QUINCY AVENUE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW005519

PUBLICATION DATE: JAN 77

TITLE: WATER FLUORIDATION PRINCIPLES AND PRACTICES.

DESCRIPTOR: DENTAL HEALTH; \*DRINKING WATER; EQUIPMENT;  
\*FLUORIDATION; \*FLUORINE; \*INSTRUCTIONAL MATERIALS;  
MAINTENANCE; \*OPERATIONS (WATER); POTABLE WATER; SAFETY;  
\*WATER TREATMENT

DESCRIPTIVE NOTE: 79P. PRICE: MEMBERS \$4.00, NON MEMBERS \$8.00

ABSTRACT: THIS MANUAL IS INTENDED TO ASSIST LOCAL AND STATE ENGINEERS IN DESIGNING FLUORIDATION INSTALLATIONS, AND WATER UTILITY PERSONNEL IN OPERATING THEM, SO THAT THE FULLEST ADVANTAGE OF THE BENEFITS OF FLUORIDATION CAN BE ACHIEVED. CHAPTERS INCLUDE: COMPOUNDS USED IN CONTROLLED FLUORIDATION; FEEDERS USED FOR ADDING FLUORIDES; PREPARATION OF FLUORIDE SOLUTIONS; SELECTING THE OPTIMAL FLUORIDATION SYSTEM; CONTROL AND SURVEILLANCE; MAINTENANCE; SAFETY AND HAZARDS IN HANDLING FLUORIDE CHEMICALS; TECHNICAL PROBLEMS ATTRIBUTED TO FLUORIDATION; AND THE PROGRESS OF FLUORIDATION IN POTABLE WATER SUPPLIES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 WEST QUINCY AVE., DENVER, CO 80235

IRIS ACCESSION NUMBER: EW005520

PUBLICATION DATE: JUN 76

TITLE: DUAL DISTRIBUTION SYSTEMS.

DESCRIPTOR: CASE STUDIES; CONSERVATION; COST EFFECTIVENESS; DESIGN; \*DUAL DISTRIBUTION SYSTEMS; \*DUAL WATER SYSTEMS; NON-POTABLE WATER; POTABLE WATER; STATE GUIDELINES; \*WASTEWATER RECLAMATION; WATER QUALITY; \*WATER RESOURCES; \*WATER SUPPLY

DESCRIPTIVE NOTE: 106P. PRICE: MEMBERS \$3.00, NON MEMBER \$6.00

ABSTRACT: THE PAPERS CONTAINED IN THIS PUBLICATION ARE FROM THE 96TH ANNUAL CONFERENCE OF THE AMERICAN WATER WORKS ASSOCIATION - DUAL DISTRIBUTION SYSTEMS SEMINAR. DURING THIS SEMINAR, A WIDE RANGE OF EXAMPLES OF THE APPLICATION OF DUAL SUPPLY SYSTEMS ARE DISCUSSED. SPECIFIC ATTENTION IS FOCUSED ON CASE STUDIES IN EUROPEAN COUNTRIES AND VARIOUS REGIONS OF THE US, DUAL WATER SYSTEM DESIGN, AND STATE GUIDELINES AND RECOMMENDATIONS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 W. QUINCY AVE., DENVER, CO 80235

IRIS ACCESSION NUMBER: EW005521

PUBLICATION DATE: OCT 78

TITLE: CARIBBEAN BASIN WATER MANAGEMENT PROJECT: INSTRUCTOR'S MANUAL & PLANNING GUIDE FOR TRAINING OF TRAINERS.

PERSONAL AUTHOR: AUSTIN, JOHN H.; AND OTHERS

DESCRIPTOR: \*CARIBBEAN; \*EDUCATIONAL NEEDS; \*EDUCATIONAL PROGRAMS; \*INSTRUCTION; INSTRUCTIONAL MATERIALS; \*JUNIOR HIGH SCHOOL EDUCATION; \*INSERVICE EDUCATION; \*MANAGEMENT; \*TRAINING; \*TRAINING PROGRAMS; \*TECHNICAL EDUCATION; \*WATER RESOURCES

DESCRIPTIVE NOTE: 435P.

ABSTRACT: THIS INSTRUCTOR'S MANUAL AND PLANNING GUIDE HAS BEEN DEVELOPED FOR THE TRAINING OF TRAINERS IN THE CARIBBEAN BASIN WATER MANAGEMENT PROJECT. THE MANUAL AIMS TO INCREASE TRAINING EFFECTIVENESS IN ORDER TO IMPROVE MANAGERIAL AND OPERATIONAL COMPETENCE. INNOVATIVE METHODS ARE OUTLINED TO CLOSE THE TRAINING GAP AND SIMULTANEOUSLY DEVELOP IN-COUNTRY CAPABILITIES FOR SUSTAINING A TRAINING DELIVERY SYSTEM. THE PROPOSED METHODOLOGIES EMPHASIZE THE NECESSITY OF ESTABLISHING A FRAMEWORK TO FACILITATE TECHNICAL COOPERATION AMONG THE COUNTRIES OF THE EASTERN CARIBBEAN.

AVAILABILITY: ENGINEER NEIL F. CAREFOOT, PROJECT MANAGER, PAHO/WHO, P.O. BOX 508, BRIDGETOWN, BARBADOS

IRIS ACCESSION NUMBER: EW005522

PUBLICATION DATE: FEB 79

TITLE: TRAINEES MANUAL FOR THE TRAINING COURSE. "SANITARY SURVEYS OF SMALL WATER SUPPLIES".

DESCRIPTOR: DRINKING WATER; EDUCATIONAL PROGRAMS; \*INSTRUCTIONAL MATERIALS; JOB TRAINING; LABORATORY TECHNIQUES; \*OPERATIONS (WATER); \*SANITARY SURVEYS; SEMINARS; TEACHING GUIDES; \*TRAINING MANUALS; WATER RESOURCES; \*WATER SUPPLY; \*WATER TREATMENT

DESCRIPTIVE NOTE: 170P. PRICE: \$23.00

ABSTRACT: THIS TRAINEES MANUAL HAS BEEN DEVELOPED FOR USE IN TRAINING PERSONNEL IN THE TECHNIQUES OF MAKING A SANITARY SURVEY OF PUBLIC WATER SUPPLY SYSTEMS. IT IS INTENDED FOR USE IN CONDUCTING TECHNICAL ASSISTANCE SEMINARS FOR STATE AND LOCAL AGENCY PERSONNEL RESPONSIBLE FOR THE FEDERAL SAFE DRINKING WATER ACT. UNITS INCLUDE: BASIC KNOWLEDGE FOR SANITARY SURVEYS, PREPARATION FOR THE FIELD SURVEY, SANITARY SURVEY COMMON ELEMENTS, WELLS, LABORATORY EVALUATION, SURFACE SOURCES, CROSS CONNECTIONS, PUBLIC RELATIONS, TECHNICAL ASSISTANCE, AND SURVEY REPORTS.

AVAILABILITY: CONFERENCE OF STATE SANITARY ENGINEERS, MEREDIGHT H. THOMPSON, EXECUTIVE SECRETARY, 1 DEERFIELD DRIVE, TROY NY 12180

IRIS ACCESSION NUMBER: EW005523

PUBLICATION DATE: FEB 79

TITLE: INSTRUCTOR'S MANUAL FOR THE TRAINING COURSE. "SANITARY SURVEYS OF SMALL WATER SUPPLIES".

DESCRIPTOR: \*DRINKING WATER; EDUCATIONAL PROBLEMS; \*INSTRUCTIONAL MATERIALS; \*INSTRUCTORS MANUAL; JOB TRAINING; LABORATORY TECHNIQUES; \*SANITARY SURVEYS; SEMINARS; TEACHING GUIDES; \*TRAINING MANUALS; WATER RESOURCES; \*WATER SUPPLY

DESCRIPTIVE NOTE: 200P.

ABSTRACT: THIS INSTRUCTOR'S MANUAL HAS BEEN DEVELOPED FOR USE IN TRAINING PERSONNEL IN THE TECHNIQUES OF MAKING A SANITARY SURVEY OF PUBLIC WATER SUPPLY SYSTEMS. IT IS INTENDED FOR USE IN CONDUCTING TECHNICAL ASSISTANCE SEMINARS FOR STATE AND LOCAL AGENCY PERSONNEL RESPONSIBLE FOR THE STATE PUBLIC WATER SUPPLY PROGRAM UNDER THE FEDERAL SAFE DRINKING WATER ACT. THE MANUAL IS DIVIDED INTO THREE SECTIONS: (1) PRE-COURSE ACTIVITIES, (2) COURSE CONTENT AND LESSON SUPPORT MATERIAL, AND (3) COURSE ASSESSMENT AND EVALUATION. A TRAINEE'S MANUAL ACCOMPANIES THIS.

AVAILABILITY: CONFERENCE OF STATE SANITARY ENGINEERS, MEREDITH H. THOMPSON, EXECUTIVE SECRETARY, 1 DEERFIELD DRIVE, TROY, NY 12180

IRIS ACCESSION NUMBER: EW005524

TITLE: GUIDELINES AND TYPICAL SANITARY SURVEY FORMS FOR EVALUATING PUBLIC WATER SUPPLY SYSTEMS.

DESCRIPTOR: \*EVALUATION; FIELD TESTS; \*INSPECTION; RECORD KEEPING; \*RECORDS; \*SANITATION; \*SANITARY ENGINEERING; \*SURVEYS; \*UTILITIES; \*WATER SUPPLY

DESCRIPTIVE NOTE: 35P.

ABSTRACT: THIS BOOK DESCRIBES THE DEVELOPMENT OF GUIDELINES AND FORMS FOR INSPECTING AND EVALUATING WATER SYSTEMS. IN 1976, ALL STATE SANITARY ENGINEERS WERE CANVASSED BY LETTER, REQUESTING DATA, FORMS, GUIDELINES AND EQUIPMENT USED IN COMPLETING A SANITARY SURVEY OF PUBLIC WATER SYSTEMS. DATA FROM THE 26 STATES THAT SUBMITTED INFORMATION WERE USED TO DEVELOP A GENERALIZED SANITARY SURVEY FORM.

AVAILABILITY: CONFERENCE OF STATE SANITARY ENGINEERS, MEREDITH H. THOMPSON EXECUTIVE SECRETARY, 1 DEERFIELD DRIVE, TROY, NY 12180

IRIS ACCESSION NUMBER: EW005525

PUBLICATION DATE: JAN 70

TITLE: IMPLEMENTATION OF AN EFFECTIVE CROSS-CONNECTION CONTROL PROGRAM.

PERSONAL AUTHOR: VAN METER, ROY O.

DESCRIPTOR: BACKFLOW; \*CROSS-CONNECTIONS; \*DESIGN; EQUIPMENT; HEALTH HAZARDS; \*IMPLEMENTATION; INSPECTION; \*MAINTENANCE; PUBLIC HEALTH; POTABLE WATER; \*PIPES; \*WATER DISTRIBUTION; WATER QUALITY

DESCRIPTIVE NOTE: 32P.

ABSTRACT: THIS DOCUMENT IS A TRANSCRIPT OF A SPEECH ON THE NEED FOR AND IMPLEMENTATION OF A CROSS-CONNECTION CONTROL PROGRAM. THE FIRST PART DISCUSSES WATER QUALITY, HEALTH HAZARDS, AND A REVIEW OF CURRENT CROSS-CONNECTION CONTROL PROGRAMS IN THE U.S. CONTAINED IN THE SECOND PART ARE THE

PROCEDURES FOR IMPLEMENTING A CROSS-CONNECTION CONTROL PROGRAM. DISCUSSION IS FOCUSED AROUND THREE MAJOR TOPICS: OBJECTIVES, RESPONSIBILITY, AND POLICY.

AVAILABILITY: CONSULTING SANITARY ENGINEER TO HERSEY-SPARLING METER COMPANY, 250 ELM STREET, DEDHAM, MA 02026

IRIS ACCESSION NUMBER: EW005526

TITLE: OPERATOR TRAINING WATER AND WASTEWATER WORKS LABORATORY-BASIC.

DESCRIPTOR: EQUIPMENT; FACILITIES; \*INSTRUCTIONAL MATERIALS; \*LABORATORY PROCEDURES; \*LABORATORY TECHNIQUES; LABORATORY TESTING; \*OPERATIONS (WATER); \*OPERATIONS (WASTEWATER); RECORD KEEPING; SAFETY; STUDY GUIDES; \*TRAINING MANUALS; \*WASTEWATER TREATMENT; \*WATER TREATMENT; \*WORKBOOKS

DESCRIPTIVE NOTE: 84P. PRICE: \$8.00

ABSTRACT: THIS WORKBOOK IS DESIGNED FOR A BASIC LABORATORY COURSE IN WATER TREATMENT. IT WAS DEVELOPED WITH FOUR MAJOR OBJECTIVES: (1) TO SERVE AS A STUDY GUIDE, (2) TO PRESENT BASIC QUESTIONS AND PROBLEMS ON THEORETICAL AND ACTUAL LABORATORY TESTS, (3) TO SIMULATE SITUATIONS THAT MAY BE ENCOUNTERED BY THE LABORATORY TECHNICIAN IN A WATER TREATMENT FACILITY, AND (4) TO PROVIDE A REFERENCE BODY FOR FUTURE USE. THE WORKBOOK IS DIVIDED INTO TWO PARTS. PART 1 CONTAINS LABORATORY OPERATIONS INCLUDING "SAMPLING AND PROCEDURES", "APPARATUS AND EQUIPMENT", "SAFETY", AND "RECORDS AND DATA HANDLING". PART 2 CONTAINS 18 LABORATORY TESTS.

AVAILABILITY: OPERATOR TRAINING COMMITTEE OF OHIO, INC., P.O. BOX 626, WORTHINGTON, OHIO 43085

IRIS ACCESSION NUMBER: EW005527

PUBLICATION DATE: 68

TITLE: OPERATOR TRAINING WATER AND WASTEWATER WORKS OPERATIONS--BASIC.

DESCRIPTOR: \*INSTRUCTIONAL MATERIALS; \*JOB TRAINING; \*LEARNING ACTIVITIES; MATHEMATICS; OHIO; \*OPERATIONS (WASTEWATER); \*OPERATIONS (WATER); \*POST SECONDARY EDUCATION; \*WASTEWATER TREATMENT; WATER TREATMENT

DESCRIPTIVE NOTE: 174P. PRICE: \$12.00

ABSTRACT: THIS WORKBOOK WAS DESIGNED TO AID IN THE BASIC TRAINING OF WATER AND WASTEWATER WORKS OPERATORS. SECTIONS INCLUDE: TERMINOLOGY, MATHEMATICS REVIEW AND PLANT DATA, AND THEORY AND OPERATIONS. THESE SECTIONS CONTAIN A NUMBER OF ASSIGNMENTS APPLICABLE TO EACH TOPIC. EACH ASSIGNMENT CONTAINS A STATEMENT OF OBJECTIVES, A READING ASSIGNMENT, AND A SERIES OF QUESTIONS. ALSO INCLUDED IS A GLOSSARY AND A METRIC CONVERSION TABLE.





AVAILABILITY: OPERATOR TRAINING COMMITTEE OF OHIO, INC.,  
P.O. BOX 626, WORTHINGTON, OHIO 43085

IRIS ACCESSION NUMBER: EW003528

PUBLICATION DATE: 68

TITLE: OPERATOR TRAINING WATER AND WASTEWATER WORKS  
OPERATIONS - SECOND COURSE.

DESCRIPTOR: \*EQUIPMENT; \*FACILITIES; \*INSTRUCTIONAL  
MATERIALS; \*OPERATIONS (WATER); \*OPERATIONS (WASTEWATER);  
\*TRAINING MANUAL; \*WATER TREATMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 229P. PRICE: \$15.00

ABSTRACT: THIS WORKBOOK IS DESIGNED FOR AN OPERATOR  
TRAINING COURSE IN WATER AND WASTEWATER TREATMENT. IT IS  
INTENDED FOR PERSONS WHO HAVE OBTAINED AT LEAST A STATE OF  
OHIO I CERTIFICATION OR EQUIVALENT EDUCATION IN WATER  
TREATMENT. THE VARIOUS PARTS OF THIS SECOND COURSE WORKBOOK  
ARE: (1) TERMINOLOGY USED IN THE WATER SUPPLY FIELD  
INCLUDING METRIC CONVERSION, (2) TREATMENT PLANT FLOW  
DIAGRAMS, (3) DESIGN DATA FOR MODEL PLANTS, (4) OPERATING  
DATA FOR MODEL PLANTS, AND (5) THEORY AND OPERATIONS. THIS  
WORKBOOK IS INTENDED TO SERVE AS A STUDY GUIDE, A FUTURE  
REFERENCE BOOK, AND TO PRESENT QUESTIONS AND PROBLEMS THAT  
WILL BE ENCOUNTERED BY LABORATORY TECHNICIANS IN WATER  
TREATMENT FACILITIES.

AVAILABILITY: OPERATOR TRAINING COMMITTEE OF OHIO, INC., P.  
O. BOX 626, WORTHINGTON, OH 43085

INSTITUTION NAME: OHIO STATE UNIVERSITY, WATER RESOURCES  
CENTER.

IRIS ACCESSION NUMBER: EW005529

TITLE: MECHANICAL MAINTENANCE TRAINING PROGRAM #4-BEARINGS  
AND LUBRICATIONS.

DESCRIPTOR: \*BEARINGS; \*LUBRICATION; \*MAINTENANCE;  
\*MECHANICAL MAINTENANCE; MAINTENANCE TRAINING; OPERATIONAL  
TECHNOLOGY; \*TRAINING PROGRAM; VIDEOCASSETTES; WASTEWATER  
TREATMENT; WASTEWATER TREATMENT FACILITIES; WASTEWATER  
TREATMENT PERSONNEL; \*AUDIOVISUAL AIDS; \*INSTRUCTIONAL  
MATERIALS

DESCRIPTIVE NOTE: 3 VC, 6 OVERHEADS, MANUAL. THIS MODULE  
CAN BE BORROWED FOR A TWO WEEK PERIOD FREE OF CHARGE.

ABSTRACT: LARGE AND SMALL TREATMENT FACILITIES ALL BENEFIT  
FROM IMPROVED MAINTENANCE TRAINING. THEREFORE, THE  
INSTRUCTIONAL RESOURCES CENTER HAS PRODUCED THIS MODULE FOR  
AN IN-HOUSE MAINTENANCE TRAINING PROGRAM FOR WATER AND  
WASTEWATER TREATMENT PERSONNEL. THE MODULE CONSIST OF COLOR  
VIDEOCASSETTES, A STUDENT WORKBOOK, TRANSPARENCIES AND THE  
INSTRUCTOR'S GUIDE. THE MODULE CONCENTRATES ON MAINTENANCE  
OF BEARINGS AND THE IMPORTANCE OF CORRECT LUBRICATION.  
CONTAINS DISCUSSION OF PLAIN JOURNAL, ANTI-FRICTION JOURNAL,

AND OIL THRUST BEARINGS. ALSO COVERS PROVEN MAINTENANCE  
PROCEDURES, SUCH AS CHECKING OIL CLEARANCES, CONTACT CHECKS,  
SHAFT AND INNER RING REMOVAL, MAINTENANCE OF TAPERED ROLLER  
BEARINGS, AND PROPER LUBRICATION.

AVAILABILITY: USEPA, NATIONAL TRAINING AND OPERATIONAL  
TECHNOLOGY CENTER, CINCINNATI, OH 45268. ATTENTION: MRS.  
EILEEN HOPENELL.

IRIS ACCESSION NUMBER: EW005530

PUBLICATION DATE: SEP 80

TITLE: CHEMICALS SUBSTITUTE FOR BIOLOGICAL TREATMENT.

PERSONAL AUTHOR: PARROTT, JAMES H.

DESCRIPTOR: \*CASE STUDIES; \*CHEMICAL TREATMENT; \*COSTS;  
DESIGN; EFFLUENTS; MANAGEMENT; NEVADA; \*OPERATIONS  
(WASTEWATER); \*PLANT PERFORMANCE; PROBLEM SOLVING;  
STANDARDS; TESTING; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 105-106P.

ABSTRACT: THE LARGEST WASTEWATER TREATMENT PLANT IN NEVADA  
WAS FACED WITH SEVERE ENGINEERING AND MANAGEMENT PROBLEMS  
INCLUDING A RAPIDLY EXPANDING COMMUNITY, A TREATMENT PLANT  
AT CAPACITY, STRICT EFFLUENT STANDARDS, AND A LIMITED  
BUDGET. TO ATTAIN DISCHARGE LIMITATION, CHEMICAL ADDITION  
WAS ACCEPTED AS THE PRIMARY METHOD. THIS ARTICLE REPORTS ON  
THE INITIAL, PILOT TESTING, FULL PLANT TESTING, HARDWARE  
DESIGN AND IMPLEMENTATION, AND FULL-SCALE DEMONSTRATION. THE  
RESULTS OF THE STUDY INDICATE THAT CHEMICAL ADDITIONS  
SUCCESS DEPENDS UPON SECONDARY PUMPING CAPACITY TO REMOVE  
THE SLUDGE. ULTIMATE SUCCESS DEPENDS UPON THE ABILITY OF THE  
PRIMARY CLARIFIERS AND THE PRIMARY PUMPS TO REMOVE THE  
SLUDGE FROM THE SYSTEM.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N9

IRIS ACCESSION NUMBER: EW005531

PUBLICATION DATE: SEP 80

TITLE: ION-EXCHANGE BEDS DEFY ORGANIC FOULING.

PERSONAL AUTHOR: CICHON, RONALD J.; AND OTHERS

DESCRIPTOR: EQUIPMENT; \*ION-EXCHANGE BEDS; LABORATORY  
PROCEDURES; \*ORGANIC FOULING; \*PILOT TESTS; RESINS;  
\*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 48,54,100P.

ABSTRACT: ION EXCHANGE BEDS CAN BE DESIGNED TO WITHSTAND  
ORGANIC FOULING. HOWEVER, BECAUSE ORGANIC MATTER CAN CONSIST  
OF SUCH COMPOUNDS AS HUMIC AND FUMIC ACIDS, DESIGN OF THE  
TREATMENT SYSTEM DEPENDS ON FIELD TESTING TO VERIFY  
IMMUNITY. PRESENTED IN THIS ARTICLE ARE DETAILED TEST  
PROCEDURES AND RESULTS WHICH SHOW THAT ORGANIC MATTER DID

NOT HINDER THE PERFORMANCE OF PROPERLY STRUCTURED BEDS CONTAINING ION-EXCHANGE RESINS.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N9

IRIS ACCESSION NUMBER: EW005532

PUBLICATION DATE: SEP 80

TITLE: DESIGN AND ECONOMIC CONSIDERATIONS OF GAC SYSTEMS.

PERSONAL AUTHOR: GUARINO, CARMEN F.; AND OTHERS

DESCRIPTOR: \*COMPUTER MODELS; \*COSTS; \*DESIGN CRITERIA; \*ECONOMIC ANALYSIS; \*GRANULAR ACTIVATED CARBON; IMPLEMENTATION; MAINTENANCE; MANAGEMENT; \*OPERATIONS (WATER); PILOT STUDIES; STANDARDS; \*WATER TREATMENT

DESCRIPTIVE NOTE: 58-67P.

ABSTRACT: A PRELIMINARY ECONOMIC ANALYSIS WAS PERFORMED TO EVALUATE ALTERNATIVE GRANULAR ACTIVATED CARBON TREATMENT CONFIGURATIONS, PERMITTING A COMPARATIVE EVALUATION OF TREATMENT MODES AND THE CAPITAL AND OPERATION AND MAINTENANCE COSTS OF DIFFERENTLY SIZED FACILITIES. THE ANALYSIS WAS PERFORMED USING A COMPUTER COST MODEL CALIBRATED WITH DATA FROM THE LITERATURE, MANUFACTURERS COSTS AND, WHENEVER POSSIBLE, INFORMATION BASED ON GAC FACILITIES IN USE. THE RESULT WAS A FLEXIBLE COMPUTER MODEL WHICH CAN BE USED TO EVALUATE POSSIBLE MODIFICATIONS TO EPA GRANULAR ACTIVATED CARBON DESIGN CRITERIA.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N9

IRIS ACCESSION NUMBER: EW005533

PUBLICATION DATE: SEP 80

TITLE: WASTEWATER FLOW MEASURING DEVICES.

PERSONAL AUTHOR: CHEREMISINOFF, NICHOLAS P., DR.; CHEREMISINOFF, PAUL N.

DESCRIPTOR: EQUIPMENT EVALUATION; \*EQUIPMENT MANUFACTURERS; FACILITIES; \*FLOW MEASURING DEVICES; FLOW METERS; \*MEASUREMENT INSTRUMENTS; MEASUREMENT TECHNIQUES; METERS; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 50-57P.

ABSTRACT: PROPERLY DESIGNED WASTEWATER MONITORING AND TREATMENT FACILITIES SHOULD INCORPORATE SUITABLE MEANS OF OBTAINING ACCURATE INFORMATION ON FLOW RATES, FLOW VARIABILITY, AND TOTAL FLOW. SELECTION OF THE CORRECT MEASURING DEVICE OR METHOD WILL DEPEND ON SUCH ITEMS AS COST, TYPE, AND ACCESSIBILITY OF THE CONDUIT CARRYING THE STREAM, AVAILABLE HYDRAULIC HEAD, AND THE NATURE OF THE WASTES. THE ARTICLE PROVIDES GENERAL GUIDELINES THAT CAN BE APPLIED TO EVALUATION AND SELECTION OF WASTEWATER FLOW MEASURING DEVICES. SEVERAL MATHEMATICAL MODELS FOR

DETERMINING FLOW RATES AND A CROSS REFERENCE CHART OF MANUFACTURERS AND THE TYPES OF FLOW MEASURING DEVICES THEY PRODUCE ARE PRESENTED.

AVAILABILITY: POLLUTION ENGINEERING, V12 N3

IRIS ACCESSION NUMBER: EW005534

PUBLICATION DATE: SEP 80

TITLE: ABC'S OF SETTING UP AN AQUATIC TOXICITY LAB.

PERSONAL AUTHOR: VALSATY, VICTORY

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*AQUATIC TOXICOLOGY; BIBLIOGRAPHIES; \*DEMONSTRATION PROJECTS; \*EQUIPMENT; \*GUIDELINES; \*LABORATORY PROCEDURES; \*RESEARCH FACILITIES; \*TOXICOLOGY

DESCRIPTIVE NOTE: 58-61P.

ABSTRACT: PRESENTED ARE THE BASIC GUIDELINES FOR ESTABLISHING AN IN-HOUSE AQUATIC TOXICITY LABORATORY. TOPICS DISCUSSED ARE: DEVELOPMENT, AND PURPOSE OF AQUATIC TOXICOLOGY, INITIAL CONSIDERATIONS, SOURCES OF INFORMATION, LABORATORY WATER SUPPLY, SOURCES OF TEST SPECIMENS, DIETARY REQUIREMENTS, BASIC LABORATORY EQUIPMENT AND CONSIDERATIONS, TEST PROCEDURES, AND ADVANCES IN AQUATIC TOXICOLOGY. IN ADDITION, A LIST OF 27 REFERENCES ARE PRESENTED.

AVAILABILITY: POLLUTION ENGINEERING, V12 N3

IRIS ACCESSION NUMBER: EW005535

PUBLICATION DATE: SEP 80

TITLE: ALL ABOUT TOC ANALYZERS.

PERSONAL AUTHOR: SMALL, JOHN W.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; DESIGN; \*EQUIPMENT EVALUATION; \*INSTRUMENTATION; MAINTENANCE; MONITORING; \*MONITORS; TECHNOLOGICAL ADVANCEMENTS; \*TOTAL ORGANIC CARBON; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 63-65P.

ABSTRACT: THE PURPOSE OF THIS ARTICLE IS TO CRITICALLY EXAMINE THE USE OF ONLINE TOTAL ORGANIC CARBON (TOC) MONITORS WITH A VIEW TOWARD DEFINING OPERATIONAL PROBLEMS AND MAINTENANCE REQUIREMENTS ASSOCIATED WITH VARIOUS TECHNIQUES. RECENT TECHNOLOGY ADVANCES IN TOC MEASUREMENT ARE ALSO COVERED.

AVAILABILITY: POLLUTION ENGINEERING, V12 N3

IRIS ACCESSION NUMBER: EW005536

PUBLICATION DATE: SEP 80

TITLE: NEW WAYS TO FIX LEAKY SEWERS.

PERSONAL AUTHOR: NELSON, RICHARD E.

DESCRIPTOR: CASE STUDIES; ILLINOIS; \*INFILTRATION; \*INFLOW; MANHOLE REPAIR; \*MANAGEMENT; \*MAINTENANCE; PIPE LININGS; PIPES; \*SEWERS; SLIP LINING; \*WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 39-40,42P.

ABSTRACT: THIS ARTICLE REPORTS ON THE SUCCESSFUL ATTEMPT BY THE CITY OF STREAMWOOD, ILLINOIS, TO CONTROL EXCESSIVE INFILTRATION AND INFLOW. A FIVE-PHASE SEWER REHABILITATION PROGRAM WAS IMPLEMENTED: (1) SLIPLINING 1546 FEET OF 24-INCH DIAMETER SEWER, (2) REHABILITATING 991 OUT OF 1154 MANHOLES IN THE SYSTEM, (3) GROUTING LEAKY SEWER LINES, (4) REPLACING CRACKED SEWER LINES, AND (5) DISCONNECTING 850 PRIVATE SECTOR SOURCES OF INFLOW. EACH PHASE OF THE PLAN IS DISCUSSED IN DETAIL.

AVAILABILITY: AMERICAN CITY AND COUNTY, V95 N9

IRIS ACCESSION NUMBER: EW005537

PUBLICATION DATE: SEP 80

TITLE: A U.S. TEST FOR 'INSITUFORM' OR, HOW TO REBUILD PIPE FROM WITHIN.

PERSONAL AUTHOR: OWENS, RON

DESCRIPTOR: CASE STUDIES; COST EFFECTIVENESS; \*EQUIPMENT; FLORIDA; INFILTRATION; \*INSITUFORM; \*MAINTENANCE; PIPE LININGS; \*SEWERS; \*WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 40-41P.

ABSTRACT: THIS ARTICLE EXAMINES THE USE OF THE PROCESS "INSITUFORM" FOR THE RENOVATION OF SEWER AND STORM LINES. THE PROCESS USES A FLAT, FLEXIBLE POLYESTER FIBER FELT TUBING, LINED ON ONE SIDE WITH POLYURETHANE AND IMPREGNATED WITH A LIQUID, THERMAL-SETTING CATALYZED RESIN AT THE TIME OF INSTALLATION. THE CITY OF SOUTH DAYTONA, FLORIDA REPORTS A HIGH DEGREE OF SUCCESS WITH THIS PROCESS.

AVAILABILITY: AMERICAN CITY AND COUNTY, V95 N9

IRIS ACCESSION NUMBER: EW005538

PUBLICATION DATE: SEP 80

TITLE: WHY PRECHLORINATION IS ON THE WAY OUT.

PERSONAL AUTHOR: GROVER, KATHRYN

DESCRIPTOR: AMONIATION; CHLORINATION; \*CHLORINE;

CHLOROFORM; \*DISINFECTION; \*PRECHLORINATION; PRECURSOR REDUCTION; SAFETY; \*TRIHALOMETHANE; \*WATER TREATMENT; WATER TREATMENT PLANTS

DESCRIPTIVE NOTE: 67-68P.

ABSTRACT: THE FUTURE OF PRECHLORINATION OF RAW WATER SUPPLIES IS DISCUSSED IN THIS ARTICLE. TO AVOID THE FORMATION OF TRIHALOMETHANE, CONSULTING ENGINEERS AND ENVIRONMENTAL SCIENTISTS ARGUE THAT CHLORINE IS MOST EFFECTIVE AND SAFEST WHEN IT IS APPLIED TO THE CLEANEST WATER IN A TREATMENT SYSTEM. SEVERAL ALTERNATIVE TREATMENT APPROACHES ARE EXAMINED THROUGH NATIONWIDE CASE STUDIES.

AVAILABILITY: AMERICAN CITY AND COUNTY, V95 N9

IRIS ACCESSION NUMBER: EW005539

PUBLICATION DATE: JUN 76

TITLE: AWWA STANDARD FOR SWING-CHECK VALVES FOR ORDINARY WATERWORKS SERVICE.

DESCRIPTOR: \*DESIGN; \*EQUIPMENT; INSPECTION; \*STANDARDS; \*SWING-CHECK VALVES; TESTING; \*VALVES; \*WATERWORKS EQUIPMENT; \*WATER TREATMENT

DESCRIPTIVE NOTE: 10P. PRICE: MEMBER \$1.50, NON MEMBER \$3.00

ABSTRACT: THIS BOOKLET DISCUSSES A STANDARD FOR SWING-CHECK VALVES FOR WATERWORKS SERVICES. IT INCLUDES INFORMATION ON MATERIALS, DESIGN CONSIDERATIONS, FABRICATION, INSPECTION, TESTING, MARKING AND SHIPPING.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 WEST QUINCY AVENUE, DENVER, CO 80235

INSTITUTION NAME: AMERICAN WATER WORKS ASSOCIATION.

IRIS ACCESSION NUMBER: EW005540

PUBLICATION DATE: JUN 76

TITLE: AWWA STANDARD FOR COLD-APPLIED TAPE COATINGS FOR SPECIAL SECTIONS CONNECTIONS, AND FITTINGS FOR STEEL WATER PIPELINES.

DESCRIPTOR: CONNECTIONS; FITTINGS; INSPECTION; MARKING; PREFABRICATED COATING; PACKAGING; \*PIPES; \*STANDARDS; \*STEEL PIPES; STORING; \*TAPE COATINGS; TESTING; \*WATER DISTRIBUTION; \*WATER SUPPLY

DESCRIPTIVE NOTE: 12P. PRICE: MEMBER \$1.50, NON MEMBER \$3.00

ABSTRACT: THIS BOOKLET DISCUSSES A STANDARD FOR COLD APPLIED TAPE COATINGS FOR SPECIAL SECTIONS, CONNECTIONS, AND FITTING FOR STEEL WATER PIPELINES. IT INCLUDES INFORMATION ON PREFABRICATED COATING SYSTEMS, COATING APPLICATION,

INSPECTION, TESTING, PACKAGING, MARKING AND STORING.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 WEST QUINCY AVENUE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW005541

PUBLICATION DATE: AUG 76

TITLE: BASIC WATER TREATMENT CHEMISTRY.

DESCRIPTOR: CHEMISTRY; CHEMICAL REACTIONS; \*DRINKING WATER; FLUORIDE; \*INSTRUCTIONAL MATERIALS; MEASUREMENT; \*REGULATIONS; SAMPLING; \*WATER CHEMISTRY; \*WATER TREATMENT; \*WATERWORKS CHEMISTRY.

DESCRIPTIVE NOTE: 62P.

ABSTRACT: THIS MANUAL EXPLAINS THE BASICS OF WATER CHEMISTRY. THE TOPICS COVERED INCLUDE: BASIC CHEMISTRY, WATER TESTING PROCEDURES, WATERWORKS CHEMISTRY AND FLUORIDE SOLUTION PREPARATION. AN ADDITIONAL CHAPTER ON NATIONAL INTERIM PRIMARY DRINKING WATER REGULATIONS IS ALSO INCLUDED.

AVAILABILITY: SOUTH DAKOTA DEPARTMENT OF ENVIRONMENTAL PROTECTION, PIERRE, SD 57501

IRIS ACCESSION NUMBER: EW005542

PUBLICATION DATE: 79

TITLE: SMALL WATER SYSTEMS SERVING THE PUBLIC.

DESCRIPTOR: COMMUNITY WATER SYSTEMS; \*DESIGN; DRINKING WATER; \*MAINTENANCE; \*MANUALS; \*NON-COMMUNITY WATER SYSTEMS; \*OPERATIONS (WATER); PLANNING; \*PUBLIC WATER SYSTEMS; \*SMALL WATER SYSTEMS; \*WATER TREATMENT; \*WATER DISTRIBUTION; \*WATER SUPPLY; WELLS

DESCRIPTIVE NOTE: 197P.

ABSTRACT: IT IS THE PURPOSE OF THIS MANUAL TO PROVIDE PLANNING, DESIGN, DEVELOPMENT, OPERATION, AND MAINTENANCE GUIDANCE FOR THE NUMEROUS PUBLIC WATER SYSTEMS SERVING THE NON-COMMUNITY GROUPING AND THE SMALL COMMUNITY SYSTEMS. IN ORDER TO INCREASE ITS USEFULNESS, THE MANUAL IS CORRELATED WITH THE NATIONAL DRINKING WATER REGULATIONS. CHAPTERS INCLUDE: WATER MEASURING TERMS AND UNITS; PLANNING, SANITARY SURVEY AND DESIGN CONSIDERATION; DESIGN CAPACITY OF SYSTEM COMPONENTS; SOURCES OF WATER; WELL CONSTRUCTION AND DEVELOPMENT; WELL PUMP SYSTEMS; DEVELOPING SPRINGS; DEVELOPING SURFACE WATERS; CHLORINATION; TREATMENT AND CONDITIONING; DISTRIBUTION SYSTEM; NATIONAL DRINKING WATER REGULATION; MAINTENANCE; RECORDKEEPING; AND EMERGENCIES AND SPECIAL PROBLEMS.

AVAILABILITY: CONFERENCE OF STATE SANITARY ENGINEERS, MEREDITH H. THOMPSON, EXECUTIVE SECRETARY, 1 DEERFIELD DRIVE, TROY, NY 12180

IRIS ACCESSION NUMBER: EW005543

PUBLICATION DATE: SEP 80

TITLE: RESEARCH SUMMARY. INTEGRATED PEST MANAGEMENT.

DESCRIPTOR: ALFALFA; APPLES; \*BIOLOGICAL CONTROLS; COTTON; ENVIRONMENTAL PROTECTION AGENCY; \*ENVIRONMENT; \*HAZARDOUS MATERIALS; \*INTEGRATED PEST MANAGEMENT; \*PESTICIDES; RESEARCH; \*RESEARCH REVIEWS; SOYBEANS

DESCRIPTIVE NOTE: 28P. PRICE:

ABSTRACT: THIS PUBLICATION SUMMARIZES CURRENT RESEARCH IN THE FIELD OF INTEGRATED PEST MANAGEMENT. INCLUDED IS AN EXAMINATION OF THE CURRENT USE OF PESTICIDES IN THE U.S. AND THE ASSOCIATED PROBLEMS BEING EXPERIENCED. ATTENTION IS FOCUSED ON ALTERNATIVE METHODS OF PEST MANAGEMENT INCLUDING BIOLOGICAL AND CULTURAL CONTROLS. THE RESEARCH OF 15 UNIVERSITIES ON PEST MANAGEMENT FOR ALFALFA, APPLE, COTTON, AND SOYBEAN IS REPORTED. ALSO INCLUDED ARE SECTIONS ON PEST MANAGEMENT STRATEGIES FOR SOIL INSECTS ON CORN, ONION CROP AGROECOSYSTEM, MUSK AND PLUMELESS THISTLE CONTROL, MOSQUITO MANAGEMENT, AND URBAN PEST MANAGEMENT.

AVAILABILITY: PUBLICATIONS, CENTER FOR ENVIRONMENTAL RESEARCH INFORMATION, US EPA, CINCINNATI, OH 45268

INSTITUTION NAME: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

IRIS ACCESSION NUMBER: EW005547

PUBLICATION DATE: MAY 79

TITLE: GUIDELINES FOR THE DESIGN OF WATER STORAGE FACILITIES, WATER DISTRIBUTION SYSTEMS, SANITARY SEWAGE SYSTEMS AND STORM SEWERS.

DESCRIPTOR: DESIGN; \*DESIGN CRITERIA; \*GUIDELINES; ONTARIO; OPERATIONS (WATER); SANITARY SEWAGE SYSTEMS; \*STORAGE FACILITIES; STORM SEWERS; \*SEWERS; \*WASTEWATER COLLECTION; \*WATER DISTRIBUTION SYSTEMS; \*WATER STORAGE FACILITIES; WATER SUPPLY SYSTEMS

DESCRIPTIVE NOTE: 208P.

ABSTRACT: THIS PUBLICATION CONTAINS DESIGN GUIDELINES FOR WATER RESOURCE FACILITIES FOR ONTARIO, CANADA. THE BOOKLET IS DIVIDED INTO FOUR MAJOR SECTIONS: DESIGN GUIDELINES FOR (1) WATER STORAGE FACILITIES, (2) STORM SEWER SYSTEMS, (3) SANITARY SEWAGE SYSTEMS, AND (4) WATER DISTRIBUTION SYSTEMS. EACH SECTION EXAMINES VARIOUS DESIGN PARAMETERS APPROPRIATE TO EACH SYSTEM. IN ADDITION, APPENDICES AND BIBLIOGRAPHIES FOLLOW EACH SECTION.

AVAILABILITY: ONTARIO, MINISTRY OF THE ENVIRONMENT, PERSONNEL SERVICES BRANCH, 135 ST. CLAIR AVENUE, WEST, TORONTO, ONTARIO, M4V 2P5, CANADA

INSTITUTION NAME: ONTARIO, MINISTRY OF THE ENVIRONMENT.

IRIS ACCESSION NUMBER: EW005548

PUBLICATION DATE: DEC 79

TITLE: TRAINING MANUAL. SEWER AND WATERMAIN CONSTRUCTION INSPECTORS COURSE.

DESCRIPTOR: \*CONSTRUCTION; INSPECTORS; \*INSTRUCTIONAL MATERIALS; RECORDKEEPING; SANITARY SEWERS; \*SEWERS; STORM SEWERS; SURVEYING; \*TRAINING MANUALS; \*WATERMAINS; \*WASTEWATER COLLECTION; \*WATER DISTRIBUTION

DESCRIPTIVE NOTE: 266P.

ABSTRACT: THE TOPIC CONTENT OF THIS MANUAL HAS BEEN PREPARED TO ASSIST INSPECTORS CONCERNED WITH THE CONSTRUCTION OF LINEAR TYPE SERVICES. TOPICS DISCUSSED INCLUDE: ROLE OF THE INSPECTOR, RECORDS, BASIC SOILS, ENVIRONMENTAL CONSIDERATIONS, CONSTRUCTION SAFETY, SANITARY AND STORM SEWERS, WATERMAINS, CONSTRUCTION SURVEYING, EXCAVATION AND BACKFILL, PIPE INSTALLATION, LEAKAGE AND PRESSURE TESTING OF GRAVITY SEWERS, SEWAGE FORCEMAINS, AND WATERMAINS, DISINFECTION OF WATERMAINS, RESTORATION, TUNNELLING, BLASTING CONTROL, AND BASIC ELEMENTS OF CONTRACT DOCUMENTS. 17 FIGURES AND 5 APPENDICES ARE INCLUDED.

AVAILABILITY: MR C. D. DOUGALL, P ENG., TREASURER, M.E.A. COURT HOUSE, P.O. BOX 55, BROCKVILLE, ONTARIO K6V 5V8, CANADA

INSTITUTION NAME: MINISTRY OF THE ENVIRONMENT, ONTARIO, MUNICIPAL ENGINEERS ASSOCIATION.

IRIS ACCESSION NUMBER: EW005549

PUBLICATION DATE: AUG 79

TITLE: TRAINING MANUAL: WATER TREATMENT OPERATION.

DESCRIPTOR: \*INSTRUCTIONAL MATERIALS; \*MAINTENANCE; \*OPERATIONS (WATER); PIPES; PLANNING; REFERENCE MANUALS; \*TESTBOOKS; \*TRAINING MANUALS; \*WATER TREATMENT; \*WATER DISTRIBUTION SYSTEMS; \*WATERMAINS; WATER QUALITY

DESCRIPTIVE NOTE: 515P.

ABSTRACT: THIS MANUAL HAS BEEN PREPARED AS A HOME STUDY AND REFERENCE MANUAL AND AS A TEXT FOR WORKSHOPS. THE PRINCIPLE OBJECTIVE IS TO UPGRADE THE KNOWLEDGE AND SKILLS OF WATER DISTRIBUTION STAFF. TOPICS INCLUDE: WATER SOURCES AND TREATMENT; TREATED WATER QUALITY; WATER QUALITY PROBLEMS; BASIC HYDRAULICS; FACTORS IN PLANNING AND DESIGN; EXCAVATION INSTALLATION, AND RESTORATION; WATERMAIN PIPES AND JOINTS; WATERMAIN APPURTENANCES; SERVICE CONNECTIONS AND SIZING; SAFETY; LEAK DETECTION AND FIRE FLOW TESTING; WATER MAIN BREAKS AND REPAIRS; CLEANING DISINFECTION, AND TESTING; CROSS CONNECTIONS; CORROSION; PLANS AND RECORDS; AND ELECTRICAL THAWING. A LARGE NUMBER OF FIGURES, TABLES, AND APPENDICES ACCOMPANY THE MANUAL.

AVAILABILITY: ONTARIO, MINISTRY OF THE ENVIRONMENT, PERIC SERVICES BRANCH, 135 ST CLAIR AVENUE, WEST,

TORONTO, ONTARIO M4V 2P5, CANADA

INSTITUTION NAME: MINISTRY OF THE ENVIRONMENT, ONTARIO.

IRIS ACCESSION NUMBER: EW005550

PUBLICATION DATE: 80

TITLE: MEMBRANE AND ULTRAFILTRATION TECHNOLOGY, 1980.

PERSONAL AUTHOR: SCOTT, JEANETTE

DESCRIPTOR: \*CHEMICAL TECHNOLOGY; DIALYSIS; ELECTROLYTIC PROCESSES; HEMODIALYSIS; \*INDUSTRIES; \*MEMBRANES; \*MEDICINE; \*PURIFICATION; \*TECHNOLOGY; \*ULTRAFILTRATION; \*WATER PURIFICATION; \*WATER TREATMENT

DESCRIPTIVE NOTE: 404P. PRICE: \$48.00

ABSTRACT: THIS BOOK DESCRIBES VARIOUS TYPES OF MEMBRANES, THEIR UTILITY AND THEIR PRACTICAL APPLICATIONS IN VARIOUS INDUSTRIES. CHAPTERS ARE INCLUDED ON MULTIPURPOSE MEMBRANES, LIQUID MEMBRANES, GAS SEPARATION AND PURIFICATION, ELECTROLYTIC PROCESSES, HEMODIALYSIS AND WATER PURIFICATION.

AVAILABILITY: NOYES DATA CORPORATION, NOYES BUILDING, MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW005551

PUBLICATION DATE: 79

TITLE: ENERGY FROM SOLID WASTE 1979, RECENT DEVELOPMENTS.

PERSONAL AUTHOR: DOMINO, FRANCIS A.

DESCRIPTOR: \*ENERGY; \*ENERGY CONSERVATION; ENERGY RECOVERY; MUNICIPALITIES; POLLUTION CONTROL; \*SOLID WASTES; TECHNOLOGY; UTILITIES; \*WASTE DISPOSAL; WASTE PROCESSING

DESCRIPTIVE NOTE: 321P. PRICE: \$36.00

ABSTRACT: THIS BOOK REVIEWS THE MANY PHASES OF WASTE DISPOSAL AND ENERGY RECOVERY INCLUDING RECENTLY TESTED TECHNOLOGY. IT DESCRIBES PLANTS PRESENTLY PRODUCING POWER FROM REFUSE WHILE ALSO SALVAGING MATERIAL. TECHNOLOGICAL DIFFICULTIES ARE ALSO DISCUSSED. PRESENTED IS A PROPOSED WASTE UTILIZATION SYSTEM FOR THE CITY OF NEW YORK, AS AN EXAMPLE THAT COULD BE APPLIED TO OTHER CITIES.

AVAILABILITY: NOYES DATA CORPORATION, NOYES BUILDING, MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW005552

PUBLICATION DATE: 79

TITLE: INDUSTRIAL WASTEWATER CLEANUP 1979, RECENT

DEVELOPMENTS

PERSONAL AUTHOR: YEHASKEL, ALBERT

DESCRIPTOR: ENVIRONMENTAL PROTECTION AGENCY; \*ENVIRONMENT; \*HAZARDOUS WASTES; \*INDUSTRIAL WASTES; \*LEGISLATION; \*POLLUTION; \*STANDARDS; \*STREAMS; WATER RESOURCES; \*WATER POLLUTION CONTROL; \*WASTE DISPOSAL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 308P. PRICE: \$39.00

ABSTRACT: BEFORE 1984, WHEN THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S STRICT SAFE WATER STANDARDS BECOME EFFECTIVE, MUCH MORE WILL HAVE TO BE DONE. INDUSTRIES WHICH DISCHARGE HAZARDOUS SUBSTANCES DAILY INTO OUR STREAMS ARE RISING TO THE CHALLENGE. THIS BOOK DESCRIBES 275 WASTEWATER CLEANUP METHODOLOGIES WHICH ARE ALREADY BEING IMPLEMENTED. THE PROCEDURES ENCOMPASS FILTRATION AND OTHER METHODS DEVELOPED DURING THE LAST TWO YEARS, WHICH USE SOPHISTICATED TECHNOLOGY AND SELECT CHEMICALS. THEY CONSTITUTE AN INVALUABLE GUIDE TO MANAGERS IN SCORES OF INDUSTRIES WHO MUST AMELIORATE EXISTING CONDITIONS.

AVAILABILITY: NOYES DATA CORPORATION, NOYES BUILDING, MILL ROAD AT GRAND AVENUE PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW005553

PUBLICATION DATE: 79

TITLE: SLUDGE DISPOSAL BY LANDSPREADING TECHNIQUES 1979.  
PERSONAL AUTHOR: TORREY, S.

DESCRIPTOR: AGRICULTURE; CONSERVATION; LAND USE; \*LAND APPLICATION; MUNICIPALITIES; \*POLLUTION; \*SLUDGE DISPOSAL; \*SLUDGE; \*TOXIC WASTES; UTILITIES; \*WASTES; \*WASTE DISPOSAL; \*WASTEWATER TREATMENT.

DESCRIPTIVE NOTE: 372P. PRICE: \$36.00

ABSTRACT: THIS BOOK DISCUSSES LAND APPLICATION OF SLUDGE. IF INDUSTRIAL PRETREATMENT PROGRAMS ARE IMPLEMENTED, MUNICIPAL SLUDGE COULD EFFECTIVELY CONDITION SOIL, STIMULATE PLANT AND FOREST GROWTH, AND RENOVATE STRIP-MINED LANDS. LAND APPLICATION OF SLUDGE COULD SATISFY NEARLY 5% OF THIS NATION'S FERTILIZER NEEDS. THERE ARE RISKS, OF COURSE, FROM VIRUSES, BACTERIA, TOXIC METALS AND COMMON POLLUTANTS, WHICH MANDATE PRECAUTIONS. THIS BOOK ASSESSES THE TOXIC AND ENVIRONMENTAL EFFECTS WHILE EVALUATING THE AGRICULTURAL BENEFITS. IT DISCUSSES CRITERIA FOR SELECTING A LANDSPREADING SITE AND THE TECHNIQUES OF OPERATION.

AVAILABILITY: NOYES DATA CORPORATION, NOYES BUILDING, MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW005554

PUBLICATION DATE: 80

TITLE: BIODEGRADATION TECHNIQUES FOR INDUSTRIAL ORGANIC WASTES 1980.

PERSONAL AUTHOR: DERENZO, D. J.

DESCRIPTOR: \*BIOLOGICAL TREATMENT; \*CHEMICAL TECHNOLOGY; ENGINEERING; \*HAZARDOUS WASTES; \*INDUSTRIAL WASTES; MANAGEMENT; \*ORGANIC COMPOUNDS; \*ORGANIC WASTES; \*POLLUTION TECHNOLOGY; SLUDGE; \*TOXIC WASTES; \*UTILITIES; \*WASTEWATER TREATMENT; \*WASTE DISPOSAL; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 358P. PRICE: \$28.00

ABSTRACT: THIS BOOK PROVIDES ENGINEERING AND WASTE MANAGEMENT PERSONNEL WITH DATA ON THE BIOLOGICAL TREATMENT OF HAZARDOUS AND TOXIC ORGANIC COMPOUNDS IN PROBLEMATIC INDUSTRIAL WASTE EFFLUENTS. SELECTED BIOLOGICAL TREATMENT OPERATIONS WHICH CAN SUCCESSFULLY HANDLE THOSE WASTES NOT READILY TREATABLE BY CONVENTIONAL PROCESSES ARE IDENTIFIED AND CHARACTERIZED.

AVAILABILITY: NOYES DATA CORPORATION, NOYES BUILDING, MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW005555

PUBLICATION DATE: 80

TITLE: PROTECTIVE BARRIERS FOR CONTAINMENT OF TOXIC MATERIAL 1980.

PERSONAL AUTHOR: FUNG, R.

DESCRIPTOR: \*CONTAMINANT; ENGINEERING; \*HAZARDOUS WASTES; \*LANDFILLS; \*LAGOONS; \*PROTECTIVE BARRIERS; \*POLLUTION TECHNOLOGY; \*TOXIC MATERIALS; \*TOXIC WASTES; \*WASTES; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 288P. PRICE: \$39.00

ABSTRACT: THE BOOK PROVIDES INFORMATION ON PHYSICAL METHODS FOR TOXIC WASTE CONTAINMENT. DESCRIBED IS AN ASPECT OF WASTE TREATMENT WHICH IS RECEIVING INCREASING ATTENTION - THE USE OF PROTECTIVE, UNPERMEABLE BARRIERS TO PREVENT OR MINIMIZE THE ESCAPE OF TOXIC POLLUTANTS FROM DISPOSAL SITES. MANMADE AND NATURAL LINING AND COVER MATERIALS FOR LAGOONS AND LANDFILLS, AND SOLIDIFICATION/STABILIZATION TECHNIQUES ARE DETAILED, AS WELL AS LISTINGS OF ACTUAL INSTALLATIONS.

AVAILABILITY: NOYES DATA CORPORATION, NOYES BUILDING, MILL ROAD AT GRAND AVENUE, PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW005568

PUBLICATION DATE: SEP 80

TITLE: LAS VEGAS BETS ON A SURE WINNER.

PERSONAL AUTHOR: GILBERT, JEROME B.; AND OTHERS

DESCRIPTOR: CASE STUDIES; COST EFFECTIVENESS; \*DESIGN; EFFLUENTS; ENERGY EFFICIENCY; \*FACILITIES; LAS VEGAS; \*MODIFICATIONS; NEVADA; \*PLANNING; STANDARDS; \*WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 16-21P.

ABSTRACT: SIX TREATMENT ALTERNATIVES INVOLVING THREE WASTEWATER TREATMENT PLANTS WERE ANALYZED WHEN LAS VEGAS, NEVADA SET OUT TO RAISE EFFLUENT STANDARDS AND INCREASE CAPACITY. THIS WAS ONLY PART OF A COMPREHENSIVE STUDY OF WATER QUALITY AND WASTEWATER TREATMENT FACILITIES RESULTING FROM THE SETTLEMENT OF A COURT SUIT. THE MAIN ISSUE UNDERLYING THE SUIT WAS THE NEED FOR ADVANCED WASTEWATER TREATMENT PRIOR TO DISCHARGE INTO LAS VEGAS WASH, A TRIBUTARY TO LAKE MEAD. STUDIES ON COST EFFECTIVENESS, FUNCTIONAL LIMITATIONS, ENVIRONMENTAL IMPACT, AND ENERGY EFFICIENCY DETERMINED THE BEST WASTEWATER TREATMENT MODIFICATION FOR LAS VEGAS.

AVAILABILITY: WATER AND WASTE ENGINEERING, V17 N9

IRIS ACCESSION NUMBER: EW005569

PUBLICATION DATE: SEP 80

TITLE: FEDERAL WATER PROGRAMS NEED A BETTER BALANCE.

PERSONAL AUTHOR: HECKROTH, CHARLES W.

DESCRIPTOR: CONFERENCE REPORTS; DRINKING WATER; \*ENVIRONMENTAL PROTECTION AGENCY; \*ENVIRONMENTAL REGULATIONS; \*FEDERAL PROGRAMS; MANAGEMENT; RESEARCH NEEDS; \*STANDARDS; UTILITIES; WATER POLLUTION CONTROL; \*WATER QUALITY; WATER UTILITY COUNCIL

DESCRIPTIVE NOTE: 30-32,35P.

ABSTRACT: THIS ARTICLE EXPRESSES THE OPINION THAT THE GOVERNMENT, SPECIFICALLY THE ENVIRONMENTAL PROTECTION AGENCY, USES REGULATIONS THAT DO NOT HAVE RATIONAL STANDARDS. ATTENTION IS FOCUSED ON THE BILL H.R. 4509 WHICH WOULD CHANGE THE CRITERIA, UNDER WHICH THE EPA REGULATES SUBSTANCES IN DRINKING WATER. ALSO DISCUSSED IS THE WATER UTILITY COUNCIL AND ITS RESPONSIBILITY TO INFLUENCE LEGISLATION. FINALLY, PROBLEMS AND POSSIBLE SOLUTIONS TO SOME OF THE DILEMMAS FACING SMALL UTILITIES ARE PRESENTED.

AVAILABILITY: WATER & WASTE ENGINEERING, V17 N9

IRIS ACCESSION NUMBER: EW005570

PUBLICATION DATE: SEP 80

TITLE: WEIGH THE ORGANICS CONTROL ALTERNATIVES.

PERSONAL AUTHOR: DIGENNARO, LISA J.

DESCRIPTOR: \*CASE STUDIES; COAGULATION; CONTROL; \*DRINKING WATER; EQUIPMENT; \*GRANULAR ACTIVATED CARBON; LABORATORY TECHNIQUES; \*ORGANICS; OZONATION; \*POWDERED ACTIVATED CARBON; \*RESEARCH; SAFETY; STUDIES; SYNTHETIC ORGANIC CHEMICALS; TESTING METHODS; \*TRICHALOMETHANES; WATER QUALITY; \*WATER TREATMENT

DESCRIPTIVE NOTE: 36-42P.

ABSTRACT: TRICHALOMETHANES AND SYNTHETIC ORGANIC CHEMICALS ARE RELATIVELY NEW HAZARDS TO DRINKING WATER SAFETY. AT THE RECENT AMERICAN WATER WORKS ASSOCIATION (AWWA) CONFERENCE IN ATLANTA, GEORGIA, A NUMBER OF SPEAKERS DISCUSSED ORGANICS CONTROL METHODS, INCLUDING GAC AND GAC REGENERATION, PAC, OZONATION, AND COAGULATION. HIGHLIGHTED IN THE ARTICLE ARE RESULTS OF CASE STUDIES AND RESEARCH UTILIZING THESE APPROACHES TO ORGANICS CONTROL.

AVAILABILITY: WATER AND WASTE ENGINEERING, V17 N9

IRIS ACCESSION NUMBER: EW005571

PUBLICATION DATE: SEP 80

TITLE: CUT O&M COSTS THROUGH VALUE ENGINEERING.

PERSONAL AUTHOR: VONDRICK, ARTHUR R.

DESCRIPTOR: COST EFFECTIVENESS; \*COST; \*DESIGN; ECONOMIC FACTORS; ENERGY CONSERVATION; ENGINEERING; \*MAINTENANCE; MANPOWER UTILIZATION; \*OPERATIONS; PROBLEM SOLVING; SKILL DEVELOPMENT; \*VALUE ENGINEERING; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 58-59P.

ABSTRACT: AS COSTS RISE, THE ROLE OF VALUE ENGINEERING IN ELIMINATING POTENTIAL OPERATIONS AND MAINTENANCE PROBLEMS BECOMES MORE AND MORE IMPORTANT. VALUE ENGINEERING NOT ONLY HELPS REDUCE CAPITAL EXPENSES, IT EXAMINES A PLANTS LIFE CYCLE COSTS AND RECOMMENDS OPERATIONS AND MAINTENANCE-SAVING MODIFICATIONS. CASE STUDIES, COST EFFECTIVENESS, AND EVIDENCE OF ENERGY SAVINGS ARE ALSO PRESENTED.

AVAILABILITY: WATER AND WASTE ENGINEERING, V17 N9

IRIS ACCESSION NUMBER: EW005572

PUBLICATION DATE: SEP 80

TITLE: WASTEWATER TREATMENT PLANT WORKS OVERTIME.

PERSONAL AUTHOR: FRITCH, GENE H.

DESCRIPTOR: AMANA REFRIGERATION, INC.; \*DESIGN; EQUIPMENT;  
\*FACILITIES; HEAVY METALS; \*INDUSTRIAL WASTES; \*IOWA;  
\*MANAGEMENT; MUNICIPAL WASTES; \*OPERATIONS (WASTEWATER);  
PRIVATE OWNERSHIP; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 70-73P.

ABSTRACT: THIS ARTICLE EXAMINES THE WASTEWATER TREATMENT PLANT DESIGNED AND OPERATED BY THE AMANA REFRIGERATION COMPANY IN MIDDLE AMANA, IOWA. THE FACILITY HANDLES THE INDUSTRIAL WASTES FROM AMANAS APPLIANCE FACTORY, AND IS ALSO DESIGNED TO TREAT MUNICIPAL WASTES FROM A NEARBY TOWN. DISCUSSION INCLUDES PLANT LAYOUT, TREATMENT OF DOMESTIC WASTES AND HEAVY METALS AND THE PRIVATE OWNERSHIP OF THE PLANT.

AVAILABILITY: WATER AND WASTE ENGINEERING, V17 N9

IRIS ACCESSION NUMBER: EW005573

PUBLICATION DATE: SEP 80

TITLE: CONSIDER THE MANY REASONS FOR REUSE

PERSONAL AUTHOR: VON DOHREN, RAY

DESCRIPTOR: \*BENEFITS; CALIFORNIA; CONSERVATION; \*COST  
EFFECTIVENESS; ECONOMIC FACTORS; IRRIGATION; LAND USE;  
\*RECYCLING; \*REUSE; \*WASTEWATER RECLAMATION; WATER QUALITY;  
\*WATER RESOURCES; \*WATER REUSE

DESCRIPTIVE NOTE: 74-78P.

ABSTRACT: RECLAMATION/REUSE IN NORTHERN CALIFORNIA COULD LEAD TO YEAR-ROUND AGRICULTURE, FEWER POPULATION GROWTH PROBLEMS AND THE PRESERVATION OF OPEN LAND IN ADDITION TO INCREASED WATER SUPPLY AND BETTER WATER QUALITY. THESE AND OTHER BENEFITS ARE DISCUSSED IN THIS ARTICLE WHICH ADDRESSES THE OVERALL COST EFFECTIVENESS OF WASTEWATER RECLAMATION/REUSE.

AVAILABILITY: WATER AND WASTE ENGINEERING, V17 N9

IRIS ACCESSION NUMBER: EW005574

PUBLICATION DATE: SEP 80

TITLE: A GUIDE TO REGULATIONS AND GUIDANCE FOR THE UTILIZATION AND DISPOSAL OF MUNICIPAL SEWAGE SLUDGE.

DESCRIPTOR: COMPOSTING; COSTS; ENVIRONMENTAL LAWS;  
ENVIRONMENTAL REGULATIONS; \*FEDERAL REGULATIONS;  
\*GUIDELINES; LANDFILLS; MAINTENANCE; \*MUNICIPAL WASTES;  
PLANNING; SITE SELECTION; \*SLUDGE DISPOSAL; SLUDGE  
UTILIZATION; \*SLUDGE; \*WASTEWATER TREATMENT; \*WASTE  
DISPOSAL; WASTE MANAGEMENT; WASTE TREATMENT

DESCRIPTIVE NOTE: 48P.

ABSTRACT: THIS DOCUMENT HAS BEEN PREPARED TO PROVIDE

ENVIRONMENTAL PROTECTION AGENCY (EPA) REGIONAL ADMINISTRATORS, MANAGERS AND OPERATORS OF PUBLICLY OWNED TREATMENT WORKS (POTW'S), CONSULTANT ENGINEERS, STATE AND LOCAL REGULATORY AUTHORITIES AND OTHERS WITH A CONCISE OUTLINE OF CURRENT EPA REGULATIONS AND GUIDELINES THAT NEED TO BE ADDRESSED, AND THE PROBLEMS FREQUENTLY ENCOUNTERED WHEN PLANNING AND OPERATING A SEWAGE SLUDGE DISPOSITION (UTILIZATION AND/OR DISPOSAL) FACILITY. THIS DOCUMENT IS A SUPPLEMENT TO THESE REGULATIONS AND GUIDELINES (NOT A SUBSTITUTE) AND SHOULD AID IN THE SELECTION AND IMPLEMENTATION OF AN APPROPRIATE DISPOSITION TECHNIQUE. COVERAGE OF EACH METHOD DISCUSSED INCLUDES: (1) BACKGROUND INFORMATION, (2) APPLICABLE LAWS, REGULATIONS AND GUIDELINES, (3) PROCEDURE NEEDED FOR IMPLEMENTING THE DISPOSITION METHOD, (4) PROBLEMS FREQUENTLY ASSOCIATED WITH THE DISPOSITION METHOD THAT ARE NOT COVERED BY REGULATIONS AND SOLUTIONS TO THESE PROBLEMS, AND (5) REFERENCES.

AVAILABILITY: GENERAL SERVICES ADMINISTRATION (BBRC), CENTRALIZED MAILING LISTS SERVICES, BUILDING #1, DENVER FEDERAL CENTER, DENVER, CO 80225

INSTITUTION NAME: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY.

IRIS ACCESSION NUMBER: EW005575

TITLE: SEWERS.

DESCRIPTOR: \*AUDIOVISUAL AIDS; CASE STUDIES; DESIGN;  
\*FILMS; MAINTENANCE; \*MUNICIPAL WASTES; \*OPERATION  
(WASTEWATER); PLANNING; POLLUTION CONTROL; SEWERS; \*SEWER  
SYSTEMS; STORM SEWERS; WASHINGTON, DC; \*WASTEWATER  
COLLECTION

DESCRIPTIVE NOTE: 16MM, 20 MINUTES, PRICE: \$300.00  
PURCHASE, \$30.00 RENTAL

ABSTRACT: THIS FILM DEPICTS THE BIG CITY'S WASTEWATER COLLECTION SYSTEMS. OLDER SECTIONS OF THE CITY ARE SERVED BY COMBINED SEWERS WHICH CARRY BOTH SANITARY SEWAGE AND STORM WATER DRAINAGE. NEWER SECTIONS HAVE SANITARY SEWERS WHICH CARRY ONLY THE WASTES FROM PEOPLE'S HOMES AND OFFICES. THE DESIGN AND MAINTENANCE OF THESE SEWER SYSTEMS DETERMINES WHETHER THERE WILL BE OVERFLOWS AND RESULTANT POLLUTION.

AVAILABILITY: STUART FANLEY, INC. 3428 MANSFIELD ROAD, FALLS CHURCH, VA 22041

IRIS ACCESSION NUMBER: EW005576

TITLE: WHERE THE SEWAGE GOES.

DESCRIPTOR: \*AUDIOVISUAL AIDS; CASE STUDIES; DESIGN;  
EFFLUENTS; \*FACILITIES; \*FILMS; MUNICIPAL WASTES;  
\*OPERATIONS (WASTEWATER); POLLUTION CONTROL; SLUDGE; SLUDGE  
DISPOSAL; \*TERTIARY TREATMENT; WASHINGTON, DC; \*WASTEWATER  
TREATMENT

DESCRIPTIVE NOTE: 16MM, 22 MINUTES, PRICE: \$300.00



PURCHASE, \$30.00 RENTAL

ABSTRACT: THIS FILM SHOWS A MODERN ADVANCED WASTEWATER TREATMENT PLANT DESIGNED TO PROVIDE TERTIARY TREATMENT FOR THE BIG CITY'S WASTES. IT IS A COMPLEX PROCESS WHICH IS DESIGNED TO SEPARATE THE GRAY MIXTURE OF INCOMING WASTES INTO A THICK SLUDGE AND A CLEAR EFFLUENT. THE SLUDGE MUST BE DISPOSED OF SATISFACTORILY AND THE EFFLUENT MUST BE KEPT FREE OF NUTRIENTS WHICH WOULD CREATE SECONDARY POLLUTION IN A DISCHARGE WATERWAY.

AVAILABILITY: STUART FINLEY, INC., 3428 MANSFIELD ROAD, FALLS CHURCH, VA 22041

IRIS ACCESSION NUMBER: EW005577

TITLE: A RIVER CALLED POTAMAC.

DESCRIPTOR: \*AUDIOVISUAL AIDS; CASE STUDIES; \*FILMS; \*MANAGEMENT; MUNICIPALITIES; \*POTOMAC RIVER; RIVERS; STORAGE RESERVOIRS; WASHINGTON, DC; \*WATER POLLUTION CONTROL; \*WATER QUALITY; \*WATER RESOURCES; \*WATER SUPPLY

DESCRIPTIVE NOTE: 16MM, 28 MINUTES, PRICE: \$350.00  
PURCHASE, \$30.00 RENTAL

ABSTRACT: THIS FILM STUDIES ALL OF THE WATER RESOURCES AND WATER QUALITY MANAGEMENT PROGRAMS OF A MAJOR RIVER VALLEY AND ILLUSTRATES HOW THEY RELATE TO A BIG CITY. UPSTREAM WATER SUPPLY POTENTIAL SUCH AS STORAGE RESERVOIRS AND UPSTREAM SOURCES OF POLLUTION AND POLLUTION CONTROL PROGRAMS RELATE TO THE CITY IN THE SAME WAY THAT THE CITY'S OWN ENGINEERING SYSTEMS AFFECT DOWNSTREAM COMMUNITIES.

AVAILABILITY: STUART FINLEY, INC., 3428 MANSFIELD ROAD, FALLS CHURCH, VA 22041

IRIS ACCESSION NUMBER: EW005578

TITLE: LANDFILLS.

DESCRIPTOR: \*AUDIOVISUAL AIDS; CASE STUDIES; DESIGN; \*FILMS; LANDFILLS; LAND APPLICATION; \*LAND USE; POLLUTION CONTROL; REFUSE DISPOSAL; \*SOLID WASTE DISPOSAL; TRANSPORTATION SYSTEM; WASHINGTON, DC; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 16MM, 12 MINUTES, PRICE: \$175.00  
PURCHASE, \$17.50 RENTAL

ABSTRACT: THIS FILM ILLUSTRATES A MODERN DISPOSAL SYSTEM WHICH BRINGS THE REFUSE TO THE DISPOSAL AREA. UNTIL RECENTLY, SOLID WASTE DISPOSAL SIMPLY CONVERTED ONE KIND OF POLLUTION INTO ANOTHER FORM OF POLLUTION, SUCH AS A DUMP OR AIR POLLUTION FROM BURNING WASTES. TODAY'S BIG CITY MUST DESIGN A SYSTEM WHICH DISPOSES OF GARBAGE AND TRASH WITHOUT INSULTING AIR, WATER, OR LAND.

AVAILABILITY: STUART FINLEY, INC., 3428 MANSFIELD ROAD, FALLS CHURCH, VA 22041

IRIS ACCESSION NUMBER: EW005579

PUBLICATION DATE: JAN 80

TITLE: SMALL WASTEWATER SYSTEMS. ALTERNATIVE SYSTEMS FOR SMALL COMMUNITIES AND RURAL AREAS.

DESCRIPTOR: ALTERNATIVE WASTEWATER SYSTEMS; CONSERVATION; \*FACILITIES; FEDERAL PROGRAMS; \*GUIDES; LAND APPLICATION; LAND USE; PLANNING; \*RURAL AREAS; \*SEPTIC SYSTEMS; SEWERS; \*SMALL COMMUNITIES; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 8P.

ABSTRACT: THIS PUBLICATION ATTEMPTS TO ACQUAINT THE LAYPERSON WITH SOME ALTERNATE WASTEWATER SYSTEMS FOR SMALL COMMUNITIES AND RURAL AREAS. TWENTY-ONE DIFFERENT SYSTEMS ARE DESCRIBED AND SKETCHED WITH POSSIBLE LOCATIONS INDICATED ON A HYPOTHETICAL COMMUNITY MAP. IN ADDITION, BRIEF INFORMATION IS PRESENTED ON THE EPA CONSTRUCTION GRANTS PROGRAM FOR ALTERNATIVE SYSTEMS.

AVAILABILITY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER PROGRAMS OPERATIONS, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW005581

PUBLICATION DATE: 80

TITLE: EVERYBODY'S PROBLEM: HAZARDOUS WASTE.

DESCRIPTOR: \*CONTAMINATION; \*CASE HISTORIES; \*ENVIRONMENTAL PROTECTION AGENCY; ENVIRONMENT; ECOSYSTEMS; \*HAZARDOUS WASTES; MANAGEMENT; POLLUTION; \*SOLID WASTES; \*WASTE DISPOSAL; \*WATER POLLUTION

DESCRIPTIVE NOTE: 36P.

ABSTRACT: THIS HANDBOOK DISCUSSES THE PROBLEMS THAT IMPROPER DISPOSAL OF HAZARDOUS WASTE CAN CAUSE AND USES CASE HISTORIES TO ILLUSTRATE THE EFFECTS ON GROUND WATER, SURFACE WATER RESOURCES, THE ATMOSPHERE, FOOD CHAINS AND PEOPLE. THE NATIONAL PROGRAM TO CONTROL HAZARDOUS WASTES IS DESCRIBED. HAZARDOUS WASTES ARE DEFINED, APPROPRIATE MANAGEMENT PROCEDURES ARE SUGGESTED, AND KEY PROBLEM AREAS OUTLINED. THE NEED FOR INFORMING AND INVOLVING THE PUBLIC IS STRESSED.

AVAILABILITY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER AND WASTE MANAGEMENT, WASHINGTON, DC 20460.

INSTITUTION NAME: TECHNICAL INFORMATION AND COMMUNICATIONS BRANCH OF EPA'S OFFICE OF SOLID WASTE.

IRIS ACCESSION NUMBER: EW005582

PUBLICATION DATE: AUG 80

TITLE: ENVIRONMENTAL RISK ASSESSMENT.

PERSONAL AUTHOR: 'WHYTE, ANE V.; BURTON, IAN

DESCRIPTOR: \*ENVIRONMENTAL RISK ASSESSMENT; \*ENVIRONMENTAL RISKS; \*HEALTH; MODELS; MONITORING; NATURAL RESOURCES; PROBABILITY; \*PUBLIC HEALTH; \*RISKS; \*RISK ASSESSMENT; RISK MANAGEMENT; \*RISK EVALUATION

DESCRIPTIVE NOTE: PRICE: \$30.00, ISBN 0471-27701-0

ABSTRACT: ENVIRONMENTAL RISK ASSESSMENT IS AN INNOVATIVE METHOD AND MEANS FOR THE EVALUATION OF THE ECONOMIC AND SCIENCE-BASED ALTERNATIVES OF PROCESSES APPLIED IN PROTECTING HUMAN HEALTH. THIS BOOK DEFINES WHAT CONSTITUTES AN ENVIRONMENTAL RISK; DESCRIBES MODELS, BOUNDARIES AND CONTEXTS FOR EVALUATING THE PROBLEM; CONTAINS MEANS OF ESTIMATING AND IDENTIFYING RISKS; CONSIDERS RISK EVALUATIONS IN THE LIGHT OF NATIONAL POLICY; DISCUSSES ENVIRONMENTAL RISK MANAGEMENT; AND STRESSES THE NECESSITY FOR INTERNATIONAL COLLABORATION IN RISK MANAGEMENT.

AVAILABILITY: JOHN WILEY & SONS, INC., ONE WILEY DRIVE, SOMERSET, NJ 08873

IRIS ACCESSION NUMBER: EW005583

PUBLICATION DATE: SEP 79

TITLE: WATER DISTRIBUTION SYSTEMS OPERATION AND MAINTENANCE.

DESCRIPTOR: EQUIPMENT; EQUIPMENT REPAIR; \*INSTRUCTIONAL MATERIALS; \*MAINTENANCE; \*OPERATIONS (WATER); \*RECORD KEEPING; REPAIR; \*SAFETY; \*TRAINING MANUALS; \*WATER DISTRIBUTION SYSTEMS; WATER QUALITY; WATER STORAGE; WATER UTILITIES

DESCRIPTIVE NOTE: 326P.

ABSTRACT: THIS TRAINING GUIDE WAS DEVELOPED TO ACCOMPANY A COURSE DESIGNED TO PROVIDE A BASIC BACKGROUND IN THEORY, OPERATION, REPAIR AND MAINTENANCE OF WATER DISTRIBUTION SYSTEMS. THE FOLLOWING EIGHT TRAINING MODULES ARE INCLUDED IN THIS GUIDE: (1) OVERVIEW OF WATER PRODUCTION, DISTRIBUTION AND STORAGE, (2) WATER QUALITY, (3) INSTALLATION, REPAIR AND MAINTENANCE OF WATER MAINS, (4) REPAIR AND MAINTENANCE OF EQUIPMENT, (5) SERVICE CONNECTIONS AND WATER METERS, (6) CROSS CONNECTION CONTROL, (7) WINTER OPERATION, AND (8) SAFETY AND RECORD KEEPING.

AVAILABILITY: MINNESOTA DEPARTMENT OF HEALTH, 717 DELAWARE STREET, S.E. MINNEAPOLIS, MINNESOTA 55440

INSTITUTION NAME: MINNESOTA DEPARTMENT OF HEALTH.

IRIS ACCESSION NUMBER: EW005584

PUBLICATION DATE: JUL 80

IF ANY WATER QUALITY STANDARD VIOLATIONS MAY NOT BE SEVERE ENOUGH TO JUSTIFY COSTLY PREVENTIVE ACTIONS.

DESCRIPTOR: \*ADVANCED WASTEWATER TREATMENT; \*COST EFFECTIVENESS; CONSTRUCTION; ENVIRONMENTAL PROTECTION AGENCY; \*FACILITIES; FUNDING; MUNICIPALITIES; \*REGULATIONS; \*STANDARDS; \*WASTEWATER TREATMENT; \*WATER QUALITY; \*WATER QUALITY STANDARDS

DESCRIPTIVE NOTE: 78P. PRICE: SINGLE COPY FREE OF CHARGE. MULTIPLE COPIES \$1.00 PER COPY.

ABSTRACT: ADVANCED WASTE TREATMENT FOR MUNICIPAL SEWAGE MAY NOT BE WORTH THE TREMENDOUS COSTS ESTIMATED BY THE ENVIRONMENTAL PROTECTION AGENCY AT \$10 BILLION UNLESS IT WILL MAKE A SUBSTANTIAL DIFFERENCE TO WATER QUALITY. IN SETTING, OR REVISING WATER QUALITY STANDARDS, STATES GENERALLY DO NOT CONSIDER COSTS, AND MANY STANDARDS ARE BASED ON QUESTIONABLE DATA. A NUMBER OF COSTLY ADVANCED WASTE TREATMENT PLANTS MAY HAVE LITTLE EFFECT ON WATER QUALITY. THIS REPORT PRESENTS A NUMBER OF OPTIONS TO THE CONGRESS CONCERNING THE FUNDING OF ADVANCED WASTE TREATMENT PROJECTS. IT ALSO MAKES RECOMMENDATIONS TO THE ADMINISTRATOR OF THE ENVIRONMENTAL PROTECTION AGENCY TO HELP IMPROVE THE WAY WATER QUALITY STANDARDS ARE SET AND IMPLEMENTED AND THE PROCEDURES USED IN ASSESSING THE NEED FOR ADVANCED WASTE TREATMENT.

AVAILABILITY: SINGLE COPY-U.S. GENERAL ACCOUNTING OFFICE, DISTRIBUTION SECTION, ROOM 1518, 441 G STREET, NW, WASHINGTON, DC 20548

IRIS ACCESSION NUMBER: EW005585

PUBLICATION DATE: OCT 80

TITLE: DESIGN MANUAL. ONSITE WASTEWATER TREATMENT AND DISPOSAL SYSTEM.

DESCRIPTOR: \*CONSTRUCTION; \*DESIGN; EQUIPMENT; \*FACILITIES; \*INSTRUCTIONAL MATERIALS; MANAGEMENT; \*ONSITE WASTEWATER TREATMENT; OPERATIONS; SITE EVALUATION; \*WASTEWATER DISPOSAL; \*WASTEWATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 391P.

ABSTRACT: THIS DOCUMENT PROVIDES TECHNICAL INFORMATION ON ONSITE WASTEWATER TREATMENT AND DISPOSAL SYSTEMS. THE INTENDED AUDIENCE FOR THIS MANUAL INCLUDES THOSE INVOLVED IN THE DESIGN, CONSTRUCTION, OPERATION, MAINTENANCE, AND REGULATION OF ONSITE WASTEWATER SYSTEMS. CHAPTERS IN THIS DESIGN MANUAL INCLUDE: STRATEGY FOR ONSITE SYSTEM DESIGN, SITE EVALUATION PROCEDURES, WASTEWATER CHARACTERISTICS, WASTEWATER MODIFICATION, ONSITE TREATMENT METHODS, DISPOSAL METHODS, APPURTENANCES, RESIDUALS DISPOSAL, AND MANAGEMENT OF ONSITE SYSTEMS. A NUMBER OF FIGURES AND TABLES ACCOMPANY THE CHAPTERS.

AVAILABILITY: UNITED STATES ENVIRONMENTAL AGENCY, WATER & WASTE MANAGEMENT, OWPO, WASHINGTON, DC 20460

IF ANY WATER QUALITY STANDARD VIOLATIONS MAY NOT BE SEVERE ENOUGH TO JUSTIFY COSTLY PREVENTIVE ACTIONS.

IRIS ACCESSION NUMBER: EW005586

PUBLICATION DATE: 80

TITLE: WEED CONTROL METHODS FOR PUBLIC HEALTH APPLICATIONS.

PERSONAL AUTHOR: GANGSTAD, EDWARD O.

DESCRIPTOR: AQUATIC VEGETATION; \*DISEASES; \*ECOLOGY; FISH; \*PEST CONTROL; PUBLIC HEALTH; RESEARCH; \*WEED CONTROL; WATER RESOURCES

DESCRIPTIVE NOTE: 301P. PRICE: \$69.95

ABSTRACT: THIS VOLUME INCLUDES CONTROL MEASURES OF AQUATIC WEEDS WHICH ARE INSTRUMENTAL IN THE SPREAD OF WATER RELATED HUMAN DISEASES. THE BOOK IS DIVIDED INTO THREE MAIN SECTIONS: (1) AQUATIC PLANT SURVEY AND ASSESSMENT; (2) ECOSYSTEM STUDIES OF IMPOUNDED WATER; AND (3) RESEARCH AND DEVELOPEMENT STUDIES FOR THE USE OF HERBIVOROUS FISH IN WEED CONTROL.

AVAILABILITY: CRC PRESS, INC., 2000 N.W. 24TH STREET, BOCA RATON, FL 33431

IRIS ACCESSION NUMBER: EW005587

PUBLICATION DATE: 80

TITLE: WATER CHLORINATION: ENVIRONMENTAL IMPACT AND HEALTH EFFECTS-VOLUME 3.

PERSONAL AUTHOR: JOLLEY, ROBERT L., AND OTHERS

DESCRIPTOR: ANALYTICAL TECHNIQUES; AQUATIC SYSTEMS; CHEMICAL ANALYSIS; \*CHLORINATION; \*CHLORINE; \*CONFERENCE REPORTS; DRINKING WATER; \*DISINFECTION; ENVIRONMENTAL IMPACTS; \*HEALTH EFFECTS; \*INSTRUCTIONAL MATERIALS; \*OPERATIONS (WATER); PUBLIC HEALTH; RESEARCH REPORTS; \*TEXTBOOKS; \*WATER TREATMENT; \*WATER QUALITY

DESCRIPTIVE NOTE: 1171P. PRICE: \$37.50

ABSTRACT: THIS BOOK IS A COMPILATION OF 98 PAPERS ON THE VARIOUS ASPECTS OF CHLORINATION. SECTIONS INCLUDE: PERSPECTIVES, CHLORINATION OF 84493 MATERIALS AND TRIHALOMETHANE FORMATION, HALOGENATION OF GEN-3 CONTAINING ORGANIC AND INORGANIC SUBSTRATES, CHEMICAL TECHNIQUES, CHLORINE IN THE FOOD AND PAPER INDUSTRIES, COOLING WATERS, CHLORINATION PRODUCTS AND PREDICTIVE MODELS, AQUATIC TOXICITY, UPTAKE, BIOACCUMULATION, AND COMMUNITY EFFECTS, THE DISINFECTION PROCESS, DRINKING WATER TREATMENT, BIOLOGICAL TESTING OF SIMPLE AND COMPLEX MIXTURES, RISK ASSESMENT, AND REGULATIONS, AND CONFERENCE SUMMARIES.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, P.O. BOX 1425, ANN ARBOR, MI 48106

IRIS ACCESSION NUMBER: EW005588

PUBLICATION DATE: AUG 80

TITLE: ENVIRONMENTAL BIOLOGY.

PERSONAL AUTHOR: BARRINGTON, E. J. W.

DESCRIPTOR: \*BIOLOGICAL SCIENCES; \*CELL BIOLOGY; ENVIRONMENT; \*ENVIRONMENTAL BIOLOGY; ENERGY; ECOSYSTEMS; \*HIGHER EDUCATION; \*INSTRUCTIONAL MATERIALS; RESPIRATION; REPRODUCTION; \*TEXTBOOKS

DESCRIPTIVE NOTE: 244P. PRICE: \$17.95

ABSTRACT: THIS BOOK IS INTENDED AS A BRIEF INTRODUCTION TO CELL AND ORGANISM BIOLOGY. THE BASIC PRINCIPLES WHICH GOVERN THE RELATIONSHIPS OF LIVING ORGANISMS WITH EACH OTHER AND WITH THEIR PHYSICAL ENVIRONMENT ARE PRESENTED AND ILLUSTRATED. TOPICS COVERED INCLUDE: RESPIRATION, REPRODUCTION, NUTRITION, ENERGY FLOWS, SALTS AND WATER, TEMPERATURE BALANCE AND COMMUNICATION.

AVAILABILITY: JOHN WILEY & SONS, INC., ONE WILEY DRIVE, SOMERSET, NJ 08873

IRIS ACCESSION NUMBER: EW005589

PUBLICATION DATE: OCT 80

TITLE: SEWAGE-SLUDGE INCINERATION RAISES AIR POLLUTION CONCERNS

PERSONAL AUTHOR: DEWING, RICHARD T.

DESCRIPTOR: \*AIR POLLUTION; COST EFFECTIVENESS; ENERGY CONSERVATION; \*ENVIRONMENTAL IMPACT; EFFICIENCY; \*HEAVY METALS; \*INCINERATION; \*POLLUTION CONTROL; \*SEWAGE; \*SLUDGE; \*WASTE DISPOSAL; WATER POLLUTION

DESCRIPTIVE NOTE: 26-29843P.

ABSTRACT: RECENTLY SEWAGE-SLUDGE INCINERATION HAS BEEN INCREASING IN POPULARITY AS AN ALTERNATIVE MEANS OF WASTE DISPOSAL DUE TO ITS EFFICIENCY AND COST EFFECTIVENESS. HOWEVER, THERE ARE CONSIDERABLE ENVIRONMENTAL IMPACTS ASSOCIATED WITH INCINERATION. THE ASH, AS WELL AS ANY PARTICULATES CAPTURED BY THE AIR-POLLUTION-CONTROL DEVICES, MAY PRESENT A VERY SPECIAL DISPOSAL PROBLEM, SINCE MOST OF THE HEAVY METALS FOUND IN SLUDGE ARE CONCENTRATED IN THIS WASTE STREAM. IN ANY COMBUSTION SYSTEM, AIR EMISSIONS ARE A MAJOR CONCERN AND THEIR REGULATIONS MAY BE THE MOST DIFFICULT AND COSTLY TO SATISFY. SOLUTIONS EXIST TO MANY OF THESE AIR POLLUTION PROBLEMS, HOWEVER THEY ARE UNCONVENTIONAL AND NOT YET WIDELY USED.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N10

IRIS ACCESSION NUMBER: EW005590

PUBLICATION DATE: OCT 80

TITLE: INCINERATION IN A WASTE-MANAGEMENT ALTERNATIVE.

PERSONAL AUTHOR: NIESSEN, WALTER R.

DESCRIPTOR: \*AIR POLLUTION CONTROL; \*ENVIRONMENTAL IMPACT; ENERGY CONSERVATION; HAZARDOUS WASTES; HEAVY METALS; \*INCINERATION; \*MANAGEMENT ALTERNATIVES; \*POLLUTION CONTROL; \*SLUDGE; \*WASTE MANAGEMENT; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 30-31839P.

ABSTRACT: FLUID-BED BURNING OF SLUDGE IS BUT ONE OF SEVERAL RECENT IMPROVEMENTS THAT MAKE SLUDGE BURNING AN ATTRACTIVE DISPOSAL ALTERNATIVE. BUT THERE ARE DISADVANTAGES AS WELL AS ADVANTAGES ASSOCIATED WITH THE PROCESS. ENVIRONMENTAL PROBLEMS ARISE DUE TO THE MINERAL PARTICULATES, COMBUSTIBLE PARTICULATES, HEAVY METAL CONTAMINANTS, AND GASEOUS POLLUTION GENERATED DURING THE PROCESS. HOWEVER, AIR POLLUTION CONTROL TECHNIQUES CAN BE INSTITUTED AND THE RESIDUE DISPOSAL PROBLEMS SOLVED. THEREFORE, INCINERATION IS A TECHNICALLY ACCEPTABLE, SOMETIMES SUPERIOR METHOD OF PROCESSING WASTES.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N10

IRIS ACCESSION NUMBER: EW005591

PUBLICATION DATE: OCT 80

TITLE: PLANNED PROCESSING BEATS BACK WATER-PLANT SLUDGE DISPOSAL PROBLEMS.

PERSONAL AUTHOR: WESTERHOFF, GARRET P.; CLINE, GARY C.

DESCRIPTOR: COSTS; OPERATIONS (WATER); \*PLANNING; \*PROCESSING; \*SLUDGE DISPOSAL; \*SOLID WASTES; SLUDGE TREATMENT; \*WATER TREATMENT; \*WASTEWATER TREATMENT; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 32-35258P.

ABSTRACT: TRADITIONALLY, THE DISPOSAL OF WATER-PLANT WASTES HAS BEEN BY DISCHARGE TO A NEARBY WATER COURSE. NOW MANY PLANTS CAN NO LONGER DISCHARGE UNTREATED SLUDGE DUE TO ENVIRONMENTAL STANDARDS AND REGULATION. THEREFORE, VARIOUS ALTERNATIVE DISPOSAL METHODS ARE UNDER CONSIDERATION. THESE INVOLVE SLUDGE COLLECTION AND THICKENING, AND THEN DEWATERING BY CODISPOSAL, NONMECHANICAL MEANS AND MECHANICAL MEANS. DEWATERING WITH NONMECHANICAL METHODS IS THE MOST ATTRACTIVE ALTERNATIVE DUE TO THE LOW COSTS ASSOCIATED WITH THE PROCESS.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N10

IRIS ACCESSION NUMBER: EW005592

PUBLICATION DATE: OCT 80

TITLE: IMPROVED METHOD GENERATES MORE CHLORINE DIOXIDE.

PERSONAL AUTHOR: JORDAN, RICHARD W.; AND OTHERS

DESCRIPTOR: CHEMICAL REACTIONS; \*CHLORINE DIOXIDE; \*CHLORINE-CHLORITE PROCESS; \*DISINFECTION; EFFICIENCY; \*DRINKING WATER; \*ODOR CONTROL; OXIDATION; \*POTABLE WATER; QUALITY CONTROL; \*TASTE CONTROL; \*WATER TREATMENT

DESCRIPTIVE NOTE: 44-48P.

ABSTRACT: AN IMPROVED PROCESS GREATLY ENHANCES THE USE OF CHLORINE DIOXIDE AS AN ALTERNATIVE TO CHLORINE FOR DISINFECTION. IT ALSO PROVIDES MORE ECONOMY FOR EXTENSIVE USE IN TASTE AND ODOR CONTROL AND THE OXIDATION OF MANGANESE. THE PROPOSED METHOD IS THE HYDROCHLORINE ACID-SODIUM CHLORITE PROCESS. THE MAIN ADVANTAGE IS THAT IT GENERATES NO CHLORINE. HOWEVER, ONLY 80 PERCENT OF THE THEORETICAL QUANTITY OF CHLORINE DIOXIDE IS PRODUCED FROM THE SAME AMOUNT OF SODIUM CHLORITE AS WHEN CHLORINE IS USED.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N10

IRIS ACCESSION NUMBER: EW005593

PUBLICATION DATE: OCT 80

TITLE: INDUSTRIAL TECHNOLOGY ADAPTED TO MUNICIPAL SLUDGE DRYING.

DESCRIPTOR: \*ENERGY CONSERVATION; \*INDUSTRY; \*MUNICIPALITIES; \*RESOURCE RECOVERY; \*RECYCLING; \*SLUDGE; \*SLUDGE DRYING; SEWAGE TREATMENT; \*TECHNOLOGY; \*WASTEWATER TREATMENT; WATER QUALITY; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 51-53P.

ABSTRACT: DESCRIBES AN INNOVATIVE RESOURCE RECOVERY WASTEWATER TREATMENT PROJECT IN HARRISBURG, PENNSYLVANIA. THE FACILITY INCORPORATES AN ENERGY RECOVERY SYSTEM THAT WILL UPGRADE THE AREAS SEWAGE TREATMENT AND WATER QUALITY, HELP PROVIDE A SOLUTION TO THE CITY'S SOLID WASTE AND SLUDGE DISPOSAL PROBLEMS, AND GENERATE MORE THAN A MILLION DOLLARS PER YEAR THROUGH THE USE AND SALE OF STEAM AND RECYCLED METAL.

AVAILABILITY: PUBLIC WORKS, V111 N10

IRIS ACCESSION NUMBER: EW005594

PUBLICATION DATE: OCT 80

TITLE: ENERGY SAVING IN ACTIVATED SLUDGE TREATMENT.

PERSONAL AUTHOR: GUARINO, CARMEN F.; AND OTHERS

DESCRIPTOR: \*ACTIVATED SLUDGE; ABRATION; \*ENERGY; \*ENERGY CONSERVATION; \*FACILITIES; MICROBIOLOGY; \*OPERATIONS (WASTEWATER); \*SLUDGE TREATMENT; SECONDARY TREATMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 57-62 & 94P.

ABSTRACT: DESCRIPTION OF A NEW TREATMENT PROCESS, KNOWN AS "SURFACT", THAT HAS BEEN SHOWN TO BE A VIABLE MEANS OF UPGRADING EXISTING WASTEWATER TREATMENT FACILITIES. THE PROCESS INVOLVES COMBINING ACTIVATED SLUDGE WITH ROTATING BIOLOGICAL CONTACTORS. THE MAIN ADVANTAGE OF THE SYSTEM IS THE ABILITY TO REDUCE BIOCHEMICAL OXYGEN DEMAND AT LOW ENERGY COSTS. ESTIMATES INDICATE THAT ENERGY CONSUMPTION WILL BE REDUCED BY AT LEAST ONE-THIRD.

AVAILABILITY: PUBLIC WORKS, VIII N10

IRIS ACCESSION NUMBER: EW005595

PUBLICATION DATE: OCT 80

TITLE: ONSITE WASTEWATER TREATMENT FOR A RECREATION AREA.

PERSONAL AUTHOR: VIRARACHAVEN, T.; AND OTHERS

DESCRIPTOR: \*EFFLUENT; \*FACILITIES; \*ONSITE TREATMENT; \*PARKS; \*RECREATION AREAS; \*RURAL AREAS; SEPTIC TANKS; TREATMENT ALTERNATIVES; \*WASTEWATER TREATMENT; \*WASTEWATER DISPOSAL; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 63-64P.

ABSTRACT: FACED WITH AN EVER INCREASING NUMBER OF VISITORS, PARKS CANADA DECIDED THAT FACILITIES FOR CAVENDISH BEACH AT PRICE EDWARD ISLAND NATIONAL PARK WERE INADEQUATE. TO REMEDY THE SITUATION PLANS WERE MADE TO CONSTRUCT A 350 CAR PARKING LOT, A CHANGEHOUSE/CONCESSION BUILDING WITH RELATED WATER DISTRIBUTION AND WASTEWATER DISPOSAL SYSTEMS. SEVERAL ONSITE TREATMENT ALTERNATIVES WERE CONSIDERED FOR CAVENDISH BEACH INCLUDING: PACKAGE AND OTHER MECHANICAL TREATMENT PLANTS WITH SURFACE DISCHARGE OF EFFLUENT, TWO-CELL STABILIZATION POND WITH SURFACE DISCHARGE OF EFFLUENT, SPRAY IRRIGATION AND SEPTIC TANK AND TILE FIELD SYSTEMS (WHICH WAS THE PREFERRED ALTERNATIVE).

AVAILABILITY: PUBLIC WORKS, VIII N10

IRIS ACCESSION NUMBER: EW005602

PUBLICATION DATE: OCT 80

TITLE: FOREST PESTICIDES: AN OVERVIEW.

PERSONAL AUTHOR: JOSEPHSON, JULIAN

DESCRIPTOR: CHEMICALS; CHEMICAL USE STUDY; \*FORESTRY; \*FOREST MANAGEMENT; HAZARDOUS CHEMICALS; NONTARGET SPECIES; \*PESTICIDES; PUBLIC HEALTH; PESTICIDE DRIFT; RISK ASSESSMENT; SPONTANEOUS ABORTIONS

DESCRIPTIVE NOTE: 1165-1168P.

ABSTRACT: FOREST PESTICIDES ONLY COMPRISE A SMALL FRACTION OF TOTAL PESTICIDE APPLICATION, BUT LARGE AREAS ARE COVERED. HUMAN AND NONTARGET SPECIES EXPOSURE, AS WELL AS CERTAIN CHEMICALS INVOLVED, ARE SUBJECTS OF CONCERN AND RATHER INTENSE DEBATE. THE CONTROVERSY "CENTERS AROUND WHETHER OR NOT IT IS SAFE TO APPLY 2,4-D, 2,4-T AND SILVEX (2,4ST ESTER). CHEMICAL USE TESTS HAVE BEEN CARRIED OUT BY VARIOUS REGULATORY AGENCIES, BUT THE RESULTS ARE OFTEN CONFUSING AND CONFLICTING. THEREFORE, FUTHER SCIENTIFICALLY MANAGED RESEARCH HAS BEEN PLANNED, UNTIL THEN THE CONTROVERSY CONTINUES.

AVAILABILITY: ENVIRONMENTAL SCIENCE AND TECHNOLOGY, VI4 N10

IRIS ACCESSION NUMBER: EW005603

PUBLICATION DATE: OCT 80

TITLE: FIRST RESPONSE PROCEDURES FOR HAZARDOUS MATERIALS.

PERSONAL AUTHOR: BERRY, ROBERT E.

DESCRIPTOR: \*CHECKLISTS; \*EMERGENCIES; \*HAZARDOUS MATERIALS; \*MANAGEMENT; \*REGULATIONS; \*SOLID WASTES; \*SPILLS; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 37-41P.

ABSTRACT: THIS ARTICLE INDICATES A POSSIBLE APPROACH TO TAKE WHEN DEALING WITH THE POSSIBILITIES OF SPILLS OF HAZARDOUS MATERIALS. THE AUTHOR SUGGESTS THAT A CHECKLIST APPROACH SHOULD BE TAKEN. THIS WOULD ENTAIL A THOROUGH INVESTIGATION OF ALL MAJOR CHEMICAL SUBSTANCES THAT COULD BE INVOLVED IN AN EMERGENCY SITUATION. THIS CHECKLIST WOULD LEAD TO THE DEVELOPMENT OF A COMPREHENSIVE FILE THAT WOULD CONTAIN KEY INFORMATION FOR CAPSULE REPORTS TO BE GIVEN TO THE MEDIA EMERGENCY GROUPS AND APPROPRIATE REGULATORY AGENCIES. THIS INFORMATION WOULD THEREFORE INDICATE THE FIRST APPROXIMATE RESPONSE PROCEDURE TO AN ACCIDENT OF HAZARDOUS WASTE, AND HENCE PREVENT MISMANAGEMENT OF SPILLS.

AVAILABILITY: POLLUTION ENGINEERING, VI2 N10

IRIS ACCESSION NUMBER: EW005604

PUBLICATION DATE: 80

TITLE: WASTE DISPOSAL EFFECTS ON GROUND WATER.

PERSONAL AUTHOR: MILLER, DAVID W.

DESCRIPTOR: AGRICULTURAL WASTES; \*CONTAMINATION; FEDERAL LEGISLATION; \*GROUND WATER; \*INDUSTRIAL WASTES; INFONDMENTS; \*LAND DISPOSAL; MUNICIPAL WASTE; MINE WASTES; SOLID WASTES; STANDARDS; WATER RESOURCES; WASTE TREATMENT; \*WASTE DISPOSAL; \*WATER POLLUTION; WATER QUALITY

DESCRIPTIVE NOTE: 512P. PRICE: \$16.00

ABSTRACT: THIS BOOK IS A REPRODUCTION OF THE 1977 REPORT TO CONGRESS ON WASTE DISPOSAL PRACTICES AND THEIR EFFECTS ON GROUND WATER. IT DEALS WITH: (1) INDUSTRIAL, MINE, AGRICULTURAL AND MUNICIPAL WASTE TREATMENT AND DISPOSAL PRACTICES, (2) THE CONTAMINATION OF GROUNDWATER AND THE RAMIFICATIONS OF THE POLLUTION, AND (3) EXISTING FEDERAL, STATE AND LOCAL LEGISLATIVE PROTECTION MEASURES. THE REPORT CONCLUDES THAT A NATIONAL STRATEGY OF GROUNDWATER PROTECTION WILL REQUIRE A BETTER UNDERSTANDING OF THE ENVIRONMENTAL, LEGAL, TECHNICAL, AND ECONOMIC COMPLEXITIES OF DEALING WITH THE RESOURCE.

AVAILABILITY: WATER INFORMATION CENTER, 6800 JERICHO TURNPIKE, SYOSSET, NY 11791

IRIS ACCESSION NUMBER: EW005605

PUBLICATION DATE: 79

TITLE: WATER TREATMENT HANDBOOK, FIFTH EDITION.

DESCRIPTOR: CHEMICAL ANALYSIS; DRINKING WATER; EFFLUENTS; \*FACILITIES; \*HANDBOOKS; \*INSTRUCTIONAL MATERIALS; LEGISLATION; NON-POTABLE WATER; \*OPERATIONS (WATER); REGULATIONS; SLUDGE; \*TEXTBOOKS; \*WATER TREATMENT

DESCRIPTIVE NOTE: 1186P. PRICE: \$69.50

ABSTRACT: VARIOUS TOPICS PERTAINING TO WATER TREATMENT ARE DISCUSSED IN THIS TEXT, SIX MAJOR PARTS SUB-DIVIDE THE BOOK. PART ONE (CHAPTERS 1-3): GENERAL ASPECTS OF WATER AND WATER TREATMENT, PART TWO (CHAPTERS 4-19): TREATMENT PLANT AND PROCESSES, PART THREE (CHAPTERS 20-25): TREATMENT METHODS ACCORDING TO THE NATURE AND THE FINAL USE OF THE WATER, PART FOUR (CHAPTERS 26-28): GENERAL INFORMATION, PART FIVE (CHAPTERS 29-33): FORMULAE, PART SIX (CHAPTERS 34): LEGISLATION. SPECIFIC CHAPTERS INCLUDE: WATER PHYSICS, CHEMISTRY, BIOLOGY, ACTION OF WATER ON MATERIALS, THEORY OF THE MAIN TREATMENT PROCESSES, PRELIMINARY TREATMENT, COAGULATION AND FLOCCULATION IN WATER TREATMENT, CHEMICAL PRECIPITATION, SETTLING AND FLOTATION, AEROBIC BIOLOGICAL PROCESSES, WATER FILTRATION, ION-EXCHANGE, ADSORPTION AND ADSORBENTS, SEPARATION BY MEMBRANES, GAS-LIQUID EXCHANGE, CHEMICAL CORRECTION AND CONDITIONING OF WATER, OXIDATION AND DISINFECTION, NATURE, STABILIZATION, THICKENING AND CONDITIONING OF SLUDGE, SLUDGE DEWATERING, DRYING, AND INCINERATION, MEASUREMENT, MONITORING, CONTROL AND AUTOMATION, DRINKING WATER TREATMENT, SWIMMING POOL WATER TREATMENT, TREATMENT OF BOILER AND COOLING SYSTEM WATER, TREATMENT OF INDUSTRIAL PROCESS WATER, TREATMENT OF DOMESTIC SEWAGE, TREATMENT OF INDUSTRIAL EFFLUENTS, CHEMISTRY OF WATER AND REAGENTS, METHODS OF ANALYSIS, BIOLOGY, UNITS OF MEASUREMENT, MATHEMATICAL NOTES, HYDRAULICS, ELECTRICITY, HEAT, AND LEGISLATION.

AVAILABILITY: JOHN WILEY & SONS, INC., ONE WILEY DRIVE, SOMERSET, NJ 08873

INSTITUTION NAME: DEGREMONT COMPANY.

IRIS ACCESSION NUMBER: EW005606

PUBLICATION DATE: 78

TITLE: PUMPING STATIONS FOR WATER AND SEWAGE.

PERSONAL AUTHOR: BARTLETT, RONALD E.

DESCRIPTOR: ENGINEERING; \*DESIGN; \*FACILITIES; \*INSTALLATION; \*MAINTENANCE; OPERATION; \*PUMPING STATIONS; \*SEWAGE; \*WATER SUPPLY; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 150P. PRICE: \$23.95

ABSTRACT: THIS BOOK SUMMARIZES PRESENT-DAY PRACTICE ON PUMPING STATION DESIGN, PARTICULARLY AS IT RELATES TO SEWAGE AND WATER SUPPLY. CHAPTERS ARE INCLUDED ON THE VARIOUS TYPES OF PUMPS, MOTORS AND SWITCHGEAR, TOGETHER WITH INFORMATION ON THE LAYOUT OF THE BUILDINGS AND THE DESIGN OF THE RISING MAINS. THE LATER CHAPTERS COVER SOME ASPECTS OF INSTALLATION, OPERATION AND MAINTENANCE.

AVAILABILITY: JOHN WILEY & SONS, INC., ONE WILEY DRIVE, SOMERSET, NJ 08873

IRIS ACCESSION NUMBER: EW005607

PUBLICATION DATE: OCT 80

TITLE: SEWER WORKERS DON'T FACE HEALTH RISK.

DESCRIPTOR: \*DISEASE CONTROL; \*HEALTH RISKS; INFECTIOUS DISEASES; OCCUPATIONAL HEALTH; \*OCCUPATIONAL SAFETY; RESEARCH; \*SEWAGE WORKERS; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 9P.

ABSTRACT: THIS ARTICLE CITES THREE STUDIES ON HEALTH RISKS TO SEWER WORKERS INCLUDED IN A NATIONAL ASSOCIATION OF SEWER SERVICE COMPANIES MEDICAL ADVISORY REPORT. NONE OF THE THREE REPORTS FOUND AN ADDED RISK OF INFECTIOUS DISEASES AMONG WORKERS EXPOSED TO WASTEWATER. THE ASSOCIATION ALSO STATES IT DOES NOT APPEAR WARRANTED TO RECOMMEND ANY INOCULATIONS FOR SEWER WORKERS OVER AND ABOVE THOSE CURRENTLY ADVISED FOR ADULTS BY THE CENTER FOR DISEASE CONTROL.

AVAILABILITY: WATER AND WASTES ENGINEERING, V17 N10

IRIS ACCESSION NUMBER: EW005608

PUBLICATION DATE: OCT 80

TITLE: FLOW EQUALIZE ALL INFLUENT.

PERSONAL AUTHOR: UPDIKE, JAY

DESCRIPTOR: COSTS; \*DESIGN; EQUIPMENT; \*FACILITIES; \*FLOW EQUALIZATION; INFILTRATION; \*INFLOW; OPERATIONS (WASTEWATER); \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 20-23P.

ABSTRACT: IN-LINE FLOW EQUALIZATION BASINS INSTALLED RECENTLY AT THE MUSKOGEE, OKLAHOMA, WASTEWATER TREATMENT PLANT. SHOULD EQUALIZE WET WEATHER FLOWS TO WITHIN EXISTING PLANT CAPACITY. BY PASSING DRY AND WET WEATHER FLOW THROUGH THE TWO BASINS AT A PRE-SET RATE. THE PLANT REAPS THE ADDED BENEFITS OF CONSTANT INFLUENT RATE, EMERGENCY STORAGE CAPACITY, AND GRIT REMOVAL. IN-LINE FLOW EQUALIZATION, UNDER THE PROPER CIRCUMSTANCES, PROVIDES BENEFITS WHICH SIDE STREAM FLOW EQUALIZATION DOES NOT.

AVAILABILITY: WATER AND WASTES ENGINEERING, V17 N10

IRIS ACCESSION NUMBER: EW005609

PUBLICATION DATE: OCT 80

TITLE: CHOOSE THE RIGHT FLOWMETER.

PERSONAL AUTHOR: BROWN, A. E.

DESCRIPTOR: EQUIPMENT; \*EQUIPMENT EVALUATION; \*FLOWMETERS; \*WATER MEASUREMENT; \*WATER METERS

DESCRIPTIVE NOTE: 24-27P.

ABSTRACT: THIS ARTICLE PRESENTS A REVIEW OF METERING TECHNIQUES, ESPECIALLY ULTRASONIC, AND ADVICE ON PICKING A METER TO SUIT YOUR NEEDS. ALSO SUGGESTED IS THE NEED TO ADDRESS LIQUID FLOW MEASUREMENT APPLICATIONS KNOWLEDGEABLY, AND TO SEEK DEMONSTRATED EXPERTISE FROM THE POTENTIAL SUPPLIERS OF FLOWMETER EQUIPMENT.

AVAILABILITY: WATER AND WASTES ENGINEERING, V17 N10

IRIS ACCESSION NUMBER: EW005610

PUBLICATION DATE: OCT 80

TITLE: HOW CAN CE'S IMPROVE O&M?

PERSONAL AUTHOR: RALSTON, DOUG; CAICEDO, EDUARDO

DESCRIPTOR: COMMUNICATIONS; \*CONSULTANTS; ENGINEERING; \*ENGINEERS; MAINTENANCE; \*MANAGEMENT; \*MANAGEMENT SYSTEMS; \*MANUALS; \*OPERATIONS; PERSONNEL; RECOMMENDATIONS; \*TRAINING

DESCRIPTIVE NOTE: 30-31, 35P.

ABSTRACT: FOR CONSULTING ENGINEERS, THE BLUEPRINT FOR BUILDING BETTER OPERATIONS AND MAINTENANCE IS SIMPLE: CONSTRUCT NEW BRIDGES OF COOPERATION BETWEEN ENGINEER, CLIENT, OPERATOR, CONTRACTOR, AND REGULATORY AGENCY. TEAR DOWN THE OLD PATTERNS OF BLAME-LAYING AND EXCUSEMAKING, AND FOLLOW A SERIES OF STEPS RANGING FROM PREPARING USABLE O AND M MANUALS TO INVOLVING THE OPERATOR IN THE O AND M TEAM.

AVAILABILITY: WATER AND WASTES ENGINEERING, V17 N10

IRIS ACCESSION NUMBER: EW005611

PUBLICATION DATE: OCT 80

TITLE: ANTICIPATE PIPE FREEZE-UPS.

PERSONAL AUTHOR: BLOCK, BILL

DESCRIPTOR: \*EQUIPMENT EVALUATION; \*FREEZE-UPS; \*IDAHO; \*MAINTENANCE (PREVENTATIVE); \*PIPES (WATER); \*TEMPERATURE PROBES; \*WATER DISTRIBUTION

DESCRIPTIVE NOTE: 34-35P.

ABSTRACT: THIS ARTICLE DISCUSSES THE EFFORTS BY THE CITY OF KETCHUM, IDAHO TO ANTICIPATE AND PREVENT WATER PIPE FREEZE-UPS. THE FROST PENETRATION DETECTION SYSTEM CONSISTS OF A TEMPERATURE PROBE IN A ONE INCH PVC CONDUIT NEAR THE PIPE LINE. EIGHT PROBES WERE INSTALLED IN THE DEAD SPOTS OF THE WATER SYSTEM. THE NEW SYSTEM HAS OPERATED ONE WINTER WITHOUT ANY PIPE FREEZE-UPS.

AVAILABILITY: WATER AND WASTES ENGINEERING, V17 N10

IRIS ACCESSION NUMBER: EW005612

PUBLICATION DATE: OCT 80

TITLE: NEW DAY DAWNS FOR CALIFORNIA WATER.

PERSONAL AUTHOR: MADDOCK, THOMAS S.; HARDAN, DAVID L.

DESCRIPTOR: CALIFORNIA; \*COMPUTER APPLICATIONS; \*DESIGN; EQUIPMENT; \*FACILITIES; MANAGEMENT; \*OPERATIONS (WATER); \*WATER DISTRIBUTION; \*WATER TREATMENT

DESCRIPTIVE NOTE: 39-42P.

ABSTRACT: THIS ARTICLE EXAMINES CALIFORNIA'S QUARTZ HILL WATER TREATMENT PLANT, CONSIDERED THE FLAGSHIP OF THE DOMESTIC AND AGRICULTURAL WATER NETWORK (DAWN) DISTRIBUTION SYSTEM. QUARTZ HILL'S COMPUTER SYSTEM WILL OVERSEE THE ENTIRE \$71 MILLION DAWN WATER DISTRIBUTION SYSTEM. THE PLANT WILL ALSO PROVIDE FULL TREATMENT FOR 14 MGD OF RAW WATER AND WILL EVENTUALLY EXPAND TO TREAT 56 MGD.

AVAILABILITY: WATER AND WASTE ENGINEERING, V17 N10

IRIS ACCESSION NUMBER: EW005613

PUBLICATION DATE: OCT 80

TITLE: FIGURE IT OUT!

PERSONAL AUTHOR: CAPLAN, F.

DESCRIPTOR: \*CALCULATIONS; ENGINEERING; \*EQUATIONS; \*MATHEMATICAL APPLICATIONS; \*MATHEMATICAL MODELS; MEASUREMENTS; \*NOMOGRAPHS; \*PIPES; \*PUMPS; \*SCREENS

DESCRIPTIVE NOTE: 44-47P.

ABSTRACT: EXAMPLES, EQUATIONS AND ILLUSTRATIONS ARE INCLUDED IN THESE FIVE NOMOGRAPHS ON SCREEN, PIPE, PUMP, AND CHANNEL PROBLEMS. WITH THESE DETAILED NOMOGRAPHS ENGINEERS CAN CALCULATE SCREEN OPEN AREAS, PIPELINE FREEZING TEMPERATURES, VACUUM PUMP SIZES, AND MORE.

AVAILABILITY: WATER AND WASTE ENGINEERING, V17 N10

IRIS ACCESSION NUMBER: EW005614

PUBLICATION DATE: OCT 80

TITLE: DON'T UNDER ESTIMATE URBAN RUNOFF PROBLEMS.

PERSONAL AUTHOR: FIELD, RICHARD; TURKELTAUB, ROBERT

DESCRIPTOR: \*CASE STUDIES; COLIFORMS; COST EFFECTIVENESS; DISSOLVED OXYGEN; HEAVY METALS; PESTICIDES; \*POLLUTION CONTROL; \*RESEARCH; \*SURFACE RUNOFF; \*STORMWATER; \*SEWAGE; TOXIC SUBSTANCES; \*URBAN ENVIRONMENT; \*WATER POLLUTION; \*WATER QUALITY; \*WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 48-52P.

ABSTRACT: THIS ARTICLE STATES THAT URBAN STORMWATER AND COMBINED SEWER OVERFLOW (CSO) HAVE BEEN UNDER-RESEARCHED AND OFTEN OVERLOOKED CAUSES OF WATER POLLUTION UNTIL RECENTLY. THIS ARTICLE CONCLUDES THAT URBAN RUNOFF IS A MAJOR SOURCE OF TOXIC POLLUTANTS, ESPECIALLY HEAVY METALS AND PETROLEUM HYDROCARBONS. DISCUSSED ARE DISSOLVED OXYGEN IMPACTS, COLIFORM LEVELS, TOXICITY PROBLEMS, AND FUTURE RESEARCH NEEDS.

AVAILABILITY: WATER AND WASTES ENGINEERING, V17 N10

IRIS ACCESSION NUMBER: EW005615

PUBLICATION DATE: OCT 80

TITLE: DESIGNING EQUITABLE WATER RATES: WHAT MANAGERS NEED TO KNOW.

PERSONAL AUTHOR: IDE, WILLIAM J.

DESCRIPTOR: COSTS; DESIGN; \*ECONOMIC FACTORS; \*EVALUATION; MANAGEMENT; \*PUBLIC RELATIONS; \*RATE STRUCTURES; REVENUE REQUIREMENTS; \*WATER SUPPLY; \*WATER RATES; \*WATER UTILITIES

DESCRIPTIVE NOTE: 564-569P.

ABSTRACT: AS A RESULT OF INCREASED CUSTOMER AWARENESS OF THE LEVEL OF CHARGES FOR UTILITY SERVICES, THE WATER INDUSTRY, LIKE THE ELECTRIC, GAS, AND TELEPHONE INDUSTRIES, IS NOW BEING CALLED UPON TO DEAL WITH A NUMBER OF SOCIAL AND ECONOMIC PROBLEMS. IT IS IMPERATIVE THAT WATER UTILITY MANAGEMENT UNDERSTAND THE FUNDAMENTAL PRINCIPLES INVOLVED IN DETERMINING WATER SYSTEM REVENUE REQUIREMENTS AND DESIGNING EQUITABLE WATER RATES. SINCE FUTURE WATER RATES WILL NOT

ONLY BE HIGHER BUT SIGNIFICANTLY SO, UTILITY MANAGERS MUST BE ABLE TO PERFORM OR SUPERVISE THE IN-DEPTH STUDIES AND ANALYSES NEEDED FOR FORMULATION RECOMMENDATIONS AS TO THE EXTENT AND SHAPE OF THE RATE CHANGES TO BE BROUGHT ABOUT.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N10

IRIS ACCESSION NUMBER: EW005616

PUBLICATION DATE: OCT 80

TITLE: DRINKING WATER CHLORINATION: A PRACTICE UNRELATED TO CANCER MORTALITY.

PERSONAL AUTHOR: TUTHILL, ROBERT W.; MOORE, CARY S.

DESCRIPTOR: \*CANCER; \*CHLORINATION; \*DISINFECTION; \*DRINKING WATER; \*HEALTH EFFECTS; HEALTH RISKS; MASSACHUSETTS; \*RESEARCH; TECHNOLOGY; TRIHALOMETHANE; \*WATER QUALITY; \*WATER SUPPLY

DESCRIPTIVE NOTE: 570-573P.

ABSTRACT: THE PRACTICE OF CHLORINATION SHOULD NOT BE PHASED OUT IN PREFERENCE TO OTHER METHODS OF DISINFECTION UNTIL THERE IS STRONGER EPIDEMIOLOGICAL AND CLINICAL EVIDENCE TO SUPPORT THE CHARGE THAT IT PRODUCES SERIOUS HEALTH RISKS, AND UNTIL THE POTENTIAL HEALTH EFFECTS OF SUBSTITUTE DISINFECTANTS ARE CAREFULLY EXPLORED. ESTIMATES OF EXPOSURE TO CARCINOGENIC SUBSTANCES FORMED THROUGH CHLORINATION, MADE IN STUDIES THAT DID NOT CONTROL FOR SOCIOECONOMIC VARIABLES, MAY HAVE LED TO SPURIOUS ASSOCIATIONS OF CHLORINATION OF DRINKING WATER WITH CANCER.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N10

IRIS ACCESSION NUMBER: EW005617

PUBLICATION DATE: OCT 80

TITLE: THE EFFECTS OF PERMANANATE PRETREATMENT ON TRIHALOMETHANE FORMATION IN DRINKING WATER.

PERSONAL AUTHOR: SINGER, PHILLIP C.; AND OTHERS

DESCRIPTOR: CHEMICAL ANALYSIS; CHLOROFORM; \*DRINKING WATER; DISINFECTION; LABORATORY PROCEDURES; NORTH CAROLINA; ODOR; \*PERMANGANATE; \*PRETREATMENT; RESEARCH; TASTE; \*TRIHALOMETHANE; \*WATER QUALITY; \*WATER TREATMENT

DESCRIPTIVE NOTE: 573-578P.

ABSTRACT: BESIDES SATISFYING CONVENTIONAL PRETREATMENT FOR OXIDATION OF IRON AND MANGANESE AND DESTRUCTION OF TASTE AND ODOR CAUSING SUBSTANCES, PERMANGANATE HAS THE POTENTIAL TO OXIDIZE HUMIC AND OTHER ORGANIC CONTAMINANTS IN WATER THAT SERVE AS PRECURSORS OF TRIHALOMETHANES. THE RESULTANT MANGANESE DIOXIDE MAY ALSO ADSORB THESE PRECURSORS, THEREBY



EFFECTING THEIR REMOVAL DURING SEDIMENTATION AND FILTRATION.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72  
N10

IRIS ACCESSION NUMBER: EW005618

PUBLICATION DATE: OCT 80

TITLE: AN EMPIRICAL KINETIC MODEL OF TRIHALOMETHANE  
FORMATION: APPLICATIONS TO MEET THE PROPOSED THM STANDARD.

PERSONAL AUTHOR: KAVANAUGH, MICHAEL C.; AND OTHERS

DESCRIPTOR: ANALYTICAL TECHNIQUES; CHLORINATION; \*DRINKING  
WATER; EFFLUENTS; KINETIC MODEL; \*MATHEMATICAL MODEL;  
PREDICTION; \*RESEARCH; STANDARDS; \*TRICHALOMETHANE; \*WATER  
QUALITY; \*WATER TREATMENT

DESCRIPTIVE NOTE: 578-582P.

ABSTRACT: EVEN THOUGH IT IS STILL IN THE DEVELOPMENTAL  
STAGE, A TWO-PARAMETER KINETIC MODEL OF TRIHALOMETHANE  
FORMATION CAN BE USEFUL FOR PREDICTING THM FORMATION IN THE  
DISTRIBUTION SYSTEM FOLLOWING POSTCHLORINATION BY PROVIDING  
AN ANALYTICAL METHOD FOR ESTIMATING THE ALLOWABLE EFFLUENT  
TOC LEVELS THAT MUST BE ACHIEVED TO ENSURE COMPLIANCE WITH  
THE 100-MG/L THM STANDARD. PARAMETERS CAN BE ESTIMATED FROM  
BATCH CHLORINATION EXPERIMENTS. FOR BATCH CHLORINATION OF  
SEVERAL HUMIC ACIDS, THE MODEL ADEQUATELY FITS THM FORMATION  
RESULTS WITH REACTION TIMES GREATER THAN 100 MIN. THE MODEL  
UNDERESTIMATES THM FORMATION IN THE INITIAL PERIOD OF THE  
REACTION, HOWEVER.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72  
N10

IRIS ACCESSION NUMBER: EW005619

PUBLICATION DATE: 76

TITLE: HOW TO REVIEW AND EVALUATE EMPLOYEE PERFORMANCE.

DESCRIPTOR: CASE STUDIES; \*EMPLOYEE RELATIONS; EMPLOYER  
EMPLOYEE RELATIONSHIPS; \*EVALUATION; EVALUATION METHODS;  
\*GUIDES; \*INSTRUCTIONAL MATERIALS; JOB ANALYSIS;  
\*MANAGEMENT; \*PERFORMANCE REVIEW; \*PERSONNEL

DESCRIPTIVE NOTE: 210P. PRICE: \$59.50

ABSTRACT: THIS MANUAL OUTLINES ONE PROCESS OF EMPLOYEE  
PERFORMANCE REVIEW AND ANALYSIS, PROVIDES A SET OF WORKING  
TOOLS TO MANAGE SUCH A PROCESS. SECTIONS INCLUDE: ISSUES ON  
WORTHWHILE WORK, OPPORTUNITIES, PROBLEMS, AND CHALLENGES,  
ASSESSING NEED FOR PERFORMANCE ANALYSIS AND REVIEW, OVERVIEW  
OF A REVIEW SYSTEM, DEFINING THE JOB AND ITS REQUIREMENTS,  
INFORMAL PROGRESS REVIEWS, PREPARING FOR THE ANNUAL REVIEW,  
CONDUCTING THE INTERVIEW, PARTS A AND B, FORWARD PLANNING,  
PROBLEM OF PROMOTABILITY, APPLYING THE PRINCIPLES, AND  
APPLICATIONS AND CASE STUDIES.

AVAILABILITY: DARTNELL, 4660 RAVENSWOOD AVENUE, CHICAGO, IL  
60640

INSTITUTION NAME: UNIVERSAL TRAINING SYSTEMS COMPANY.

IRIS ACCESSION NUMBER: EW005620

PUBLICATION DATE: 79

TITLE: OPTIONS FOR COMMUNITY RESPONSE TO THE SAFE DRINKING  
WATER ACT.

DESCRIPTOR: ADMINISTRATION; \*COMMUNITY ACTION; \*DRINKING  
WATER; ENVIRONMENTAL PROTECTION AGENCY; ECONOMICS;  
ENGINEERING; \*FEDERAL LEGISLATION; LEGAL IMPLICATIONS;  
PUBLIC HEALTH; POLICY RESEARCH; \*SAFE DRINKING WATER ACT;  
\*WATER TREATMENT; \*WATER SUPPLY; \*WATER RESOURCES; \*WATER  
QUALITY

DESCRIPTIVE NOTE: 116P. PRICE: \$4.00

ABSTRACT: THIS REPORT IS THE OUTGROWTH OF A POLICY RESEARCH  
PROJECT CONDUCTED DURING THE 1977-1978 ACADEMIC YEAR. THE  
STUDY, FUNDED IN PART BY THE ENVIRONMENTAL PROTECTION AGENCY  
AND THE FORD FOUNDATION, EXAMINED ISSUES OF COMMUNITY  
RESPONSE TO IMPLEMENTATION OF THE SAFE DRINKING WATER ACT.  
STUDENTS AND FACULTY PREPARED BRIEFING PAPERS WHICH PROVIDE  
OPTIONS TO COPE WITH THE LEGAL, ADMINISTRATIVE, ECONOMIC,  
AND ENGINEERING IMPLICATIONS OF THE ACT.

AVAILABILITY: OFFICE OF PUBLICATIONS, LYNDON B JOHNSON  
SCHOOL OF PUBLIC AFFAIRS, THE UNIVERSITY OF TEXAS AT AUSTIN,  
DRAWER Y, UNIVERSITY STATION, AUSTIN, TX 78712

IRIS ACCESSION NUMBER: EW005621

PUBLICATION DATE: APR 78

TITLE: IMPACT OF THE FEDERAL SAFE DRINKING WATER ACT ON  
TEXAS.

DESCRIPTOR: \*DRINKING WATER; ENVIRONMENTAL PROTECTION  
AGENCY; \*FEDERAL LEGISLATION; INTERDISCIPLINARY RESEARCH;  
POLICY RESEARCH; PUBLIC HEALTH; \*SAFE DRINKING WATER ACT;  
STATE AGENCIES; \*TEXAS; \*WATER TREATMENT; \*WATER SUPPLY;  
\*WATER RESOURCES; WATER POLICY

DESCRIPTIVE NOTE: 189P. PRICE: \$4.00

ABSTRACT: THIS REPORT DESCRIBES THE IMPLICATIONS OF THE  
FEDERAL SAFE DRINKING WATER ACT (P.L. 93-523) FOR STATE AND  
LOCAL AGENCIES. IT WAS PRODUCED BY A POLICY RESEARCH PROJECT  
UNDERTAKEN AT THE LYNDON B JOHNSON SCHOOL IN THE ACADEMIC  
YEAR 1976-1977. THE STUDY, FUNDED BY THE TEXAS DEPARTMENT OF  
HEALTH, MAKES CONCRETE POLICY RECOMMENDATIONS TO THE  
ENVIRONMENTAL PROTECTION AGENCY ON SUCH ISSUES AS FEDERAL  
FINANCING AND RESPONSIBILITY, STATE FINANCING FOR PRIVATE  
SYSTEMS, MONITORING OF SMALL SYSTEMS, PUBLIC INFORMATION  
REGULATIONS, AND THE GRANTING OF VARIANCES AND EXEMPTIONS.

AVAILABILITY: LYNDON B JOHNSON SCHOOL OF PUBLIC AFFAIRS,  
OFFICE OF PUBLICATIONS, DRAWER Y, UNIVERSITY STATION, THE  
UNIVERSITY OF TEXAS AT AUSTIN, AUSTIN, TX 78712

IRIS ACCESSION NUMBER: EW005622

PUBLICATION DATE: APR 80

TITLE: STATE OF THE STATES: WATER RESOURCES PLANNING AND  
MANAGEMENT.

DESCRIPTOR: \*FEDERAL PROGRAMS; LEGISLATION; \*MANAGEMENT;  
\*PLANNING; \*POLICY; PROBLEM SOLVING; REGULATIONS; RIVERS;  
STANDARDS; \*STATE OF THE ART REVIEWS; UNITED STATES; WATER  
QUALITY; \*WATER RESOURCES

DESCRIPTIVE NOTE: 150P. PRICE: FREE OF CHARGE

ABSTRACT: THIS STUDY BY THE WATER RESOURCES COUNCIL HAS  
BEEN CONDUCTED TO PROVIDE ADDITIONAL INSIGHT INTO VARIOUS  
ASPECTS OF STATE WATER RESOURCES LEGISLATION AND  
ADMINISTRATIVE REGULATIONS AND TO UPDATE EXISTING DATA ON  
THOSE WATER RESOURCE PROBLEMS THAT ARE OF CONCERN TO STATE  
AND REGIONAL WATER RESOURCE AGENCIES. RELIABLE CURRENT DATA  
ON STATES WATER RESOURCES PROBLEMS, ACTIVITIES, AND  
INITIATIVES ARE PARTICULARLY USEFUL FOR EFFECTIVE  
IMPLEMENTATION OF THE COUNCILS TITLE III STATE GRANT  
PROGRAM. THE DATA CAN ALSO SERVE AS A GUIDE IN THE  
FORMULATION OF WATER RESOURCES POLICY AND PROGRAM RESPONSES  
BY FEDERAL, REGIONAL, STATE, AND LOCAL GOVERNMENTS. IN  
ADDITION, THE DATA CAN BE USED IN MAKING COMPARATIVE  
ASSESSMENTS AND HELPING TO GAUGE POLICY OPTIONS.

AVAILABILITY: U.S. WATER RESOURCES COUNCIL, 2120 L STREET,  
N.W., WASHINGTON, D.C. 20037, TELEPHONE: 202-254-8290

IRIS ACCESSION NUMBER: EW005623

PUBLICATION DATE: 79

TITLE: DIRECTORY OF SPECIAL LIBRARIES AND INFORMATION  
CENTERS, VOLUME 1.

PERSONAL AUTHOR: YOUNG, MARGARET L.; YOUNG, HAROLD C.

DESCRIPTOR: \*DIRECTORIES; DATA BASES; \*INFORMATION CENTERS;  
\*LIBRARIES; \*SPECIAL LIBRARIES

DESCRIPTIVE NOTE: 1279P. PRICE: \$110.00

ABSTRACT: THIS DIRECTORY LISTS ALL SPECIAL LIBRARIES AND  
INFORMATION CENTERS IN THE UNITED STATES AND CANADA. SPECIAL  
LIBRARIES ARE LIBRARIES USUALLY BUILT AROUND A SPECIAL  
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AVAILABILITY: GALE RESEARCH COMPANY, BOOK TOWER, DETROIT,  
MI 48226

IRIS ACCESSION NUMBER: EW005624

PUBLICATION DATE: 79

TITLE: DIRECTORY OF SPECIAL LIBRARIES AND INFORMATION  
CENTERS, VOLUME 2, GEOGRAPHIC AND PERSONNEL INDEXES.

PERSONAL AUTHOR: YOUNG, MARGARET L.; YOUNG, HAROLD C.

DESCRIPTOR: \*DIRECTORY; DATA BASES; \*INFORMATION CENTERS;  
INFORMATION SPECIALISTS; LIBRARIES; SPECIAL LIBRARIES

DESCRIPTIVE NOTE: 715P. PRICE: \$86.00

ABSTRACT: THIS DIRECTORY IS ARRANGED IN TWO SECTIONS, A  
GEOGRAPHIC INDEX AND A PERSONNEL INDEX. THE VOLUME CONSISTS  
ESSENTIALLY OF RECLASSIFICATIONS OF THE MATERIAL WHICH IS  
ARRANGED IN VOLUME 1, "DIRECTORY OF SPECIAL LIBRARIES AND  
INFORMATION CENTERS IN THE UNITED STATES AND CANADA".  
THEREFORE, THIS VOLUME MAKES IT POSSIBLE, TO FIND LIBRARIES  
ACCORDING TO THEIR GEOGRAPHIC LOCATIONS, TO DETERMINE WHICH  
AND/OR HOW MANY LIBRARIES ARE LOCATED IN A SPECIFIC CITY,  
AND TO FIND THE ADDRESS AND LIBRARY OF A LIBRARIAN WHEN ONLY  
HER/HIS NAME IS KNOWN.

AVAILABILITY: GALE RESEARCH COMPANY, BOOK TOWER, DETROIT,  
MI 48226

IRIS ACCESSION NUMBER: EW005625

PUBLICATION DATE: 79

TITLE: BOOK PUBLISHERS DIRECTORY.

PERSONAL AUTHOR: BREWER, ANNIE M.; GEISER, ELIZABETH A.

DESCRIPTOR: \*BOOK PUBLISHERS; \*DIRECTORIES; \*PUBLISHERS;  
\*REFERENCE MATERIALS

DESCRIPTIVE NOTE: 668P. PRICE: \$110.00

ABSTRACT: THE SECOND EDITION OF BOOK PUBLISHERS DIRECTORY,  
A GUIDE TO NEW AND ESTABLISHED, PRIVATE AND SPECIAL  
INTEREST, AVANT-GARDE AND ALTERNATIVE, ORGANIZATION AND  
ASSOCIATION, GOVERNMENT AND INSTITUTION PRESSES CUMULATES  
THE ENTRIES FROM THE FOUR QUARTER LIES OF THE FIRST EDITION  
(1977-1978) AND HAS ADDED MORE THAN 800 NEW ENTRIES. THIS  
REFERENCE TOOL PROVIDES LIBRARIANS AND BOOKSELLERS WITH A  
CONVENIENT, UP-TO-DATE SOURCE OF INFORMATION ON MORE THAN  
3,400 PUBLISHING HOUSES. THE VOLUME IS ARRANGED UNDER THREE  
SECTIONS, THE PUBLISHERS INDEX, THE GEOGRAPHIC INDEX AND THE  
SUBJECT INDEX.

AVAILABILITY: GALE RESEARCH COMPANY, BOOK TOWER, DETROIT,  
MI 48226

IRIS ACCESSION NUMBER: EW005626

PUBLICATION DATE: OCT 80

TITLE: WHY CONTRACT OUT WASTEWATER TREATMENT?

DESCRIPTOR: \*CONTRACTS; COST EFFECTIVENESS; JOB TRAINING;  
\*MANAGEMENT; \*MANPOWER NEEDS; \*OPERATIONS (WASTEWATER);  
\*PERSONNEL; \*PLANT OPERATIONS; TRAINING; \*WASTEWATER  
TREATMENT

DESCRIPTIVE NOTE: 16-17P.

ABSTRACT: OVER THE PAST THREE YEARS, THE EPA HAS SPONSORED TWO STUDIES EXAMINING WHY PUBLICLY OWNED TREATMENT WORKS HAVE FAILED TO MEET THEIR WATER QUALITY OBJECTIVES. MOST PROBLEMS POINT TO POOR QUALIFICATION AND TRAINING OF PLANT OPERATIONS PERSONNEL. THIS ARTICLE STATES THAT WHERE SUCH PROBLEMS OCCUR, CONTRACT OPERATIONS SHOULD BE CONSIDERED A VIABLE SOLUTION. OPTIONS AVAILABLE UNDER CONTRACT OPERATIONS ARE EXAMINED FOR: SUPERVISION, FULL STAFFING, FULL SERVICE CONTRACT, CONTRACT TERM, METHOD OF PAYMENT, PERFORMANCE GUARANTEE, EQUIPMENT REPLACEMENT AND MAINTENANCE, MUNICIPAL RESPONSIBILITIES, TERMINATION CLAUSES, AND LIABILITY.

AVAILABILITY: AMERICAN CITY & COUNTY, V95 N10

IRIS ACCESSION NUMBER: EW005627

PUBLICATION DATE: OCT 80

TITLE: AUTOMATIC SEWAGE SAMPLERS: WHAT TO LOOK FOR WHEN BUYING.

PERSONAL AUTHOR: SHELLY, PHILLIP E., PH.D.

DESCRIPTOR: \*AUTOMATIC SAMPLERS; \*EQUIPMENT; \*EQUIPMENT  
EVALUATION; \*EQUIPMENT SELECTION; GUIDES; MANUFACTURERS;  
\*PERFORMANCE CRITERIA; \*SAMPLING; \*SEWAGE; \*WASTEWATER  
COLLECTION

DESCRIPTIVE NOTE: 35-38P.

ABSTRACT: THIS ARTICLE DISCUSSES TWELVE SIGNIFICANT PERFORMANCE FACTORS AND OTHER QUALITATIVE DISTINCTIONS WHICH SHOULD BE CONSIDERED BEFORE CHOOSING AUTOMATIC LIQUID SAMPLING EQUIPMENT. TO AID IN EQUIPMENT SELECTION THE AUTHOR CLASSIFIES THE TYPES OF SAMPLES DESIRED INTO THE FOLLOWING CATEGORIES: DISCRETE SAMPLES, SIMPLE COMPOSITE SAMPLE, FLOW PROPORTIONAL COMPOSITE SAMPLE, SEQUENTIAL COMPOSITE SAMPLE, AND CONTINUOUS COMPOSITE SAMPLE. A DETAILED AUTOMATIC SAMPLER CHARACTERISTIC SUMMARY AND A LIST OF U.S. AUTOMATIC LIQUID SAMPLER MANUFACTURERS ARE PRESENTED.

AVAILABILITY: AMERICAN CITY & COUNTY, V95 N10

IRIS ACCESSION NUMBER: EW005628

PUBLICATION DATE: OCT 80

TITLE: WATER QUALITY CRITERIA AND STANDARDS DEVELOPMENT: TRYING TO MAKE A DIFFICULT APPROACH MANAGEABLE.

PERSONAL AUTHOR: FELICIANO, D. V.

DESCRIPTOR: \*CLEAN WATER ACT; EFFLUENTS; \*ENVIRONMENTAL  
PROTECTION AGENCY; FEDERAL LEGISLATION; \*LEGISLATION;  
\*PLANNING; \*STANDARDS; TOXIC STANDARDS; \*WASTEWATER  
TREATMENT; \*WATER QUALITY; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 2418-2424, 2600P.

ABSTRACT: THE ROLES OF TOXICS AND ADVANCED WASTE TREATMENT IN WATER POLLUTION CONTROL ARE DEPENDENT UPON WATER QUALITY CRITERIA AND WATER QUALITY STANDARDS. THIS ARTICLE EXAMINES THE DEVELOPMENT OF THE CRITERIA AND STANDARD SETTING PROCESS OVER THE YEARS, THE CHANGES THAT HAVE EVOLVED WITH IMPROVED TECHNICAL KNOWLEDGE AND PRACTICAL UNDERSTANDING, AND THE DIRECTION IN WHICH THE PROGRAM MIGHT PROCEED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N10

IRIS ACCESSION NUMBER: EW005629

PUBLICATION DATE: OCT 80

TITLE: ENERGY CONSERVATION AND ALTERNATIVE ENERGY SOURCES IN WASTEWATER TREATMENT.

PERSONAL AUTHOR: RUSHBROOK, EDWARD L., JR.; WILKE, DOUGLAS A.

DESCRIPTOR: \*ALTERNATIVE ENERGY SOURCES; \*CLEAN WATER ACT;  
DESIGN; \*ENERGY; \*ENERGY CONSERVATION; \*FACILITIES; FEDERAL  
LEGISLATION; MUNICIPAL WASTEWATER; PLANNING; \*TECHNOLOGY;  
\*WASTEWATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 2477-2483P.

ABSTRACT: THIS PAPER DESCRIBES HOW THE WASTEWATER TREATMENT PLANT PROPOSED FOR THE TOWN OF HILLSBOROUGH, NH, QUALIFIED AS AN INNOVATIVE PROJECT UNDER THE CLEAN WATER ACT OF 1977. THE PROJECT WAS ABLE TO QUALIFY AS INNOVATIVE BASED ON CONSIDERABLE ENERGY SAVINGS PROJECTED FOR THE PROJECT, AS A RESULT OF THE APPROVAL AS INNOVATIVE, THE TOWN WILL RECEIVE ADDITIONAL CONSTRUCTION FUNDS AND SAVE FROM 30 TO 70% IN ENERGY FOR OPERATION OF THE TREATMENT FACILITY. THE FACILITY WILL INCORPORATE ROTATING BIOLOGICAL CONTACTORS, SOLAR-HEATED ANAEROBIC DIGESTION, AND METHANE RECOVERY.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N10

IRIS ACCESSION NUMBER: EW005630

PUBLICATION DATE: OCT 80

TITLE: RELATIONSHIP BETWEEN ORGANIC LOADING, DISSOLVED OXYGEN CONCENTRATION AND SLUDGE SETTLEABILITY IN THE COMPLETELY-MIXED ACTIVATED SLUDGE PROCESS.

PERSONAL AUTHOR: PALM, JONATHAN C.; AND OTHERS

DESCRIPTOR: \*ACTIVATED SLUDGE; \*BULKING; \*DESIGN; \*MICROORGANISMS; \*ORGANIC LOADING; \*OPERATIONS (WASTEWATER); \*SLUDGE SETTLEABILITY; \*WASTEWATER TREATMENT; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 2484-2506P.

ABSTRACT: THE OUTGROWTH OF FILAMENTOUS MICRO ORGANISMS FROM THE ACTIVATED SLUDGE FLOC TO PRODUCE A BULKING ACTIVATED SLUDGE IS A FUNCTION OF ORGANIC LOADING AND THE RATIO OF FOOD TO MICRO ORGANISMS IN A COMPLETELY MIXED ACTIVATED SLUDGE SYSTEM. BASICALLY THE HIGHER THE RATIO THE HIGHER THE BULK DISSOLVED OXYGEN CONCENTRATION REQUIRED TO PREVENT FILAMENTOUS ORGANISM OUTGROWTH AND SLUDGE BULKING. A COMPLETELY-MIXED ACTIVATED SLUDGE SYSTEM THAT HAS BULKED BECAUSE ITS BULK DISSOLVED OXYGEN CONCENTRATION IS TOO LOW TO PREVENT FILAMENT OUTGROWTH AT A PARTICULAR FOOD TO MICRO ORGANISM RATIO, CAN BE MADE TO SETTLE PROPERLY BY THE SOLE ACTION OF RAISING THE BULK DISSOLVED OXYGEN. FROM A SERIES OF EXPERIMENTS ON DOMESTIC WASTEWATER, A RELATIONSHIP IS DEVELOPED BETWEEN THE FOOD TO MICRO ORGANISM RATIO OF A COMPLETELY-MIXED ACTIVATED SLUDGE SYSTEM AND THE BULK DISSOLVED OXYGEN REQUIRED TO PREVENT BULKING.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N10

IRIS ACCESSION NUMBER: EW005631

PUBLICATION DATE: OCT 80

TITLE: STATISTICAL APPROACH TO INFILTRATION/INFLOW ANALYSES.

PERSONAL AUTHOR: NUTE, W. E.

DESCRIPTOR: ENVIRONMENTAL PROTECTION AGENCY; \*FLOODING; FEDERAL WATER POLLUTION CONTROL ACT; \*FLOW PREDICTION; \*INFILTRATION; \*INFLOW; \*MODELS; \*STATISTICS; \*SEWERS; \*WASTEWATER COLLECTION; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 2507-2515P.

ABSTRACT: THIS PAPER DESCRIBES STATISTICAL METHODS USED TO PREPARE INFILTRATION/INFLOW ANALYSES FOR 12 SEWER SYSTEMS IN MARION COUNTY, CALIFORNIA. THE ANALYSIS CONFORM TO THE STATE BASIN PLAN FOR SAN FRANCISCO BAY THAT ESTABLISHED THREE POSSIBLE MAINTENANCE LEVELS FOR CONTROL OF WET WEATHER FLOWS. THE CONCEPT ALLOWS FOR VIOLATION OF SECONDARY TREATMENT STANDARDS FOR UNUSUALLY SEVERE RAIN STORMS OF CERTAIN RETURN FREQUENCIES WHERE THE RECEIVING WATERS ARE NOT TO BE SENSITIVE TO SUCH WINTER TIME

DISCHARGES. AN ANALOGY IS DRAWN BETWEEN THE PREDICTION OF WET WEATHER WASTEWATER FLOWS AND THE FREQUENCY ANALYSIS USED IN HYDROLOGY FOR THE PREDICTION OF FLOOD FLOWS. THIS DEPENDS ON THE RECOGNITION THAT WET-WEATHER FLOWS ARE MORE COMPLEX THAN REPRESENTED BY THE INFILTRATION AND INFLOW COMPONENTS DEFINED BY THE ENVIRONMENTAL PROTECTION AGENCY. ALSO DISCUSSED ARE WET-WEATHER FLOW TREATMENT STRATEGIES FOR FLOW RETURN FREQUENCIES USED IN DEFINING THE THREE MAINTENANCE LEVELS. ESTIMATES ARE GIVEN OF THE PROBABILITY OF VIOLATION OF SECONDARY TREATMENT STANDARDS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N10

IRIS ACCESSION NUMBER: EW005632

PUBLICATION DATE: OCT 80

TITLE: SAFETY CONSIDERATIONS IN HANDLING ACTIVATED CARBON.

PERSONAL AUTHOR: STUDGEION, GEORGE E.; AND OTHERS

DESCRIPTOR: \*ACCIDENT PREVENTION; \*ACTIVATED CARBON; CASE HISTORIES; \*MATERIALS HANDLING; \*POLLUTION CONTROL; \*SAFETY; \*WATER TREATMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2516-2522P.

ABSTRACT: ACTIVATED CARBON HAS GAINED WIDE ACCEPTANCE THROUGHOUT THE WATER POLLUTION CONTROL INDUSTRY AND PROMISES TO BE MORE WIDELY USED IN THE WATER INDUSTRY. IT HAS TYPICALLY BEEN VIEWED AS AN INNOCUOUS MATERIAL FREE OF OCCUPATIONAL HAZARDS. HOWEVER, RECENT CASE HISTORIES INVOLVING SEVERAL INJURIES AND TWO DEATHS GIVE RISE FOR CONCERN AND REQUIRE CAUTION IN CONSTRUCTION AND OPERATION TO PREVENT FUTURE INJURIES. FURTHER MORE, ADEQUATE PLANNING AND SOUND DESIGN PRACTICE CAN REAP VALUABLE RETURNS IN PROVIDING SAFE OPERATING EQUIPMENT. SPECIFIC HAZARDS COMMONLY ENCOUNTERED IN ACTIVATED CARBON ADSORPTION SYSTEMS ARE PRESENTED AND RECOMMENDATIONS FOR DESIGN AND OPERATING IMPROVEMENTS ARE MADE. SEVERAL RECORDED CASE HISTORIES OF INJURIES AND FATALITIES INVOLVING ACTIVATED CARBON ARE PRESENTED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N10

IRIS ACCESSION NUMBER: EW005633

PUBLICATION DATE: OCT 80

TITLE: ODOR CONTROL: AN OPERATORS GUIDE.

PERSONAL AUTHOR: HENRY, J. G.; GEHR, R.

DESCRIPTOR: AMMONIA; \*GUIDES; HYDROGEN SULFIDE; \*INSTRUCTIONAL MATERIALS; LITERATURE REVIEWS; \*ODORS; \*ODORS PREVENTION; \*ODOR CONTROL; \*QUALITY CONTROL; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 2523-2537P.

ABSTRACT: THIS PAPER INCLUDES A DISCUSSION OF THE IDENTIFICATION AND CAUSES OF ODORS, AND REPORTS ON THE RESULTS OF ODOR SURVEYS CONDUCTED AT 142 PLANTS IN ONTARIO. GAS CHROMATOGRAPHY WAS USED TO ANALYZE THE ODORS FROM FIVE OF THESE PLANTS HAVING SIGNIFICANT ODOR PROBLEMS AND REPRESENTING A RANGE OF PLANT SIZES. METHODS OF ODOR CONTROL IN ORDER OF USEFULNESS TO THE OPERATOR ARE LISTED, AND 15 CASE STUDIES ILLUSTRATING SATISFACTORY SOLUTIONS ARE TABULATED. FINALLY, THE PAPER INCLUDES A STEP-BY-STEP PROCEDURE THAT THE OPERATOR CAN USE AS A GUIDE TO THE PREVENTION AND CONTROL OF WASTEWATER TREATMENT PLANT ODORS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N10

IRIS ACCESSION NUMBER: EW005634

PUBLICATION DATE: OCT 80

TITLE: START-UP PROBLEMS OF SLUDGE DEWATERING FACILITY.

PERSONAL AUTHOR: HANSEN, BLAIR E.; AND OTHERS

DESCRIPTOR: \*DEWATERING FACILITIES; \*DESIGN; \*FACILITIES; INSTRUMENTATION; MACHINERY; \*OPERATIONS (WASTEWATER); \*SLUDGE; SOLIDS PROCESSING; \*START-UP; \*WASTE DISPOSAL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2558-2570P.

ABSTRACT: THIS PAPER DISCUSSES START-UP PROBLEMS ENCOUNTERED DURING THE FIRST TWO YEARS OF OPERATION OF A TWO-STAGE DIGESTED SLUDGE DEWATERING STATION AT A LARGE WATER POLLUTION CONTROL PLANT. AREAS OF CONCERN TO PLANNERS, DESIGNERS, AND OPERATORS INCLUDE MECHANICAL PROBLEMS WITH INSTRUMENTATION AND MACHINERY FACILITY DESIGN, SELECTION, STORAGE, AND HANDLING OF THE DEWATERED SLUDGE, AND VARIATION IN SLUDGE CHARACTERISTICS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N10

IRIS ACCESSION NUMBER: EW005635

PUBLICATION DATE: OCT 80

TITLE: MECHANISMS AND METHODS FOR POLYMER CONDITIONING OF ACTIVATED SLUDGE.

PERSONAL AUTHOR: NOVAK, JOHN T.; HAUGAN, BIORN-ERIK

DESCRIPTOR: \*ACTIVATED SLUDGE; \*CONDITIONING; \*DEWATERING; MIXING; \*OPERATIONS (WASTEWATER); \*POLYMERS; \*POLYMER CONDITIONING; \*SYNTHETIC ORGANIC POLYMERS; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2571-2580P.

72  
ABSTRACT: A SURFACE ADSORPTION MODEL IS USED TO EXPLAIN THE CONDITIONING EFFECT OF POLYMERS AND THE EFFECT OF MIXING OR POLYMER DOSE REQUIREMENTS. EXPERIMENTAL DATA SHOW THAT THE OPTIONAL POLYMER DOSE VARIES WITH THE MIXING TIME, INTENSITY, AND SLUDGE SOLIDS CONCENTRATION. THERE IS NO ONE OPTIMAL POLYMER DOSE FOR A SLUDGE, BUT RATHER THE DOSE MUST BE SELECTED UNDER MIXING CONDITIONS THAT MATCH THOSE OF THE DEWATERING PROCESS TO BE USED: USING A PILOT FILTER PRESS, IT WAS SHOWN THAT SLUDGES THAT WERE CONDITIONED USING RAPID MIXING REQUIRED MORE POLYMER, BUT WERE MUCH MORE RESISTANT TO DETERIORATION THAN THOSE CONDITIONED UNDER MORE GENTLE MIXING CONDITIONS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N10

IRIS ACCESSION NUMBER: EW005636

PUBLICATION DATE: OCT 80

TITLE: A MODEL FOR EVALUATING THE DISPERSION OF WASTEWATER PLANT ODORS.

PERSONAL AUTHOR: BALLING, ROBERT C., JR.; REYNOLDS, CARROL E.

DESCRIPTOR: AEROSOLS; \*DISPERSION; \*EVALUATION; FACILITIES; \*MODELS; \*ODORS; \*ODOR CONTROL; \*OPERATIONS (WASTEWATER); URBAN AREAS; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2589-2593P.

ABSTRACT: THE ODOR PROBLEM ASSOCIATED WITH WASTEWATER TREATMENT FACILITIES HAS BECOME A SIGNIFICANT COMPONENT IN THE MANAGEMENT OF URBAN ENVIRONMENT. IN THIS INVESTIGATION, AN ATMOSPHERIC DISPERSION MODEL WAS DEVELOPED TO ESTIMATE THE SPATIAL PATTERNS IN THE CONCENTRATIONS OF ODORS EMANATING FROM A WASTEWATER PLANT IN LINCOLN, NEBRASKA. MODEL OUTPUTS INCLUDED A SERIES OF MAPS DISPLAYING ODOR CONCENTRATIONS UNDER GIVEN METEOROLOGICAL CONDITIONS AND THE FREQUENCY OF ODOR DAYS FOR SEASONAL OR ANNUAL TIME PERIODS. THE IMPLICATIONS OF THE RESULTS WERE DISCUSSED, AND SUGGESTIONS FOR FURTHER RESEARCH WERE PRESENTED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N10

IRIS ACCESSION NUMBER: EW005637

PUBLICATION DATE: JUL 80

TITLE: MERCURY. WATER QUALITY STANDARDS CRITERIA DIGEST. A COMPIATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: ENVIRONMENTAL PROTECTION AGENCY; \*FEDERAL CRITERIA; \*HEAVY METALS; \*MERCURY; \*POLLUTION STANDARDS; POLLUTION; QUALITY CRITERIA; \*REGULATIONS; \*STATE CRITERIA; SURFACE WATER; \*WATER QUALITY; \*WATER QUALITY STANDARDS; \*WATER POLLUTION CONTROL

NOTE: 29P.

THIS DIGEST IS A COMPILATION OF EXCERPTS FROM THE STATE-FEDERAL WATER QUALITY STANDARDS WHICH ESTABLISH POLLUTION SPECIFIC CRITERIA FOR NAVIGABLE SURFACE WATERS. TOXIC LEVELS OF MERCURY ARE USUALLY ASSOCIATED WITH AGRICULTURAL ACTIVITIES OR DISCHARGES FROM WOOD FACILITIES. THIS DIGEST CONTAINS INFORMATION ON RECOMMENDED LEVELS OF MERCURY FOR DOMESTIC WATER FRESHWATER AQUATIC LIFE AND WILDLIFE, AND MARINE

NALESNIK ASSOCIATES INCORPORATED, 505 ELEVENTH STREET, S.E., WASHINGTON, DC 20003

IRIS ACCESSION NUMBER: EW005638

DATE: DEC 79

TITLE: DISSOLVED SOLIDS. WATER QUALITY STANDARDS CRITERIA A COMPILATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: \*DISSOLVED SOLIDS; ENVIRONMENTAL PROTECTION AGENCY; \*FEDERAL CRITERIA; \*POLLUTION STANDARDS; \*POLLUTION; \*REGULATIONS; \*STATE CRITERIA; SURFACE WATER; \*WATER QUALITY; \*WATER QUALITY STANDARDS; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 19P. PRICE: FREE OF CHARGE

ABSTRACT: THIS DIGEST CONTAINS EXCERPTS FROM THE INDIVIDUAL STATE-FEDERAL WATER QUALITY STANDARDS ESTABLISHING POLLUTANT CRITERIA FOR NAVIGABLE SURFACE WATERS. NATURAL MATERIALS CONTAIN DISSOLVED SOLIDS, CONSISTING MAINLY OF CALCIUM BICARBONATES, CHLORIDES, SULFATES, PHOSPHATES, AND NITRATES WITH TRACES OF METALLIC ELEMENTS. INCREASED CONCENTRATIONS OF THESE SOLIDS CAN BE DETRIMENTAL AND RESULT IN DETRIMENTAL EFFECTS.

AVAILABILITY: U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER QUALITY STANDARDS, WASHINGTON, D.C. 20460

IRIS ACCESSION NUMBER: EW005639

DATE: JUN 80

TITLE: COPPER. WATER QUALITY STANDARDS CRITERIA DIGEST. A COMPILATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: ENVIRONMENTAL PROTECTION AGENCY; \*FEDERAL CRITERIA; \*POLLUTION STANDARDS; POLLUTION; QUALITY CRITERIA; \*REGULATION; \*STATE CRITERIA; SURFACE WATER; \*TOXIC SUBSTANCES; \*WATER QUALITY; \*WATER QUALITY STANDARDS; \*WATER POLLUTION CONTROL; \*ZINC

DESCRIPTIVE NOTE: 30P.

ABSTRACT: THIS DIGEST IS A COMPILATION OF EXCERPTS FROM THE INDIVIDUAL STATE-FEDERAL WATER QUALITY STANDARDS WHICH ESTABLISH POLLUTION SPECIFIC CRITERIA FOR NAVIGABLE SURFACE WATERS. TOXIC LEVELS OF ZINC ARE USUALLY THE RESULT OF GALVANIZING IRON AND STEEL SURFACES, OR DYING ALLOYS. INFORMATION IS GIVEN ON THE RECOMMENDED LEVELS OF ZINC FOR THE DOMESTIC WATER SUPPLY AND FRESHWATER AQUATIC LIFE.

AVAILABILITY: NALESNIK ASSOCIATES INCORPORATED, 505 ELEVENTH STREET, S.E. WASHINGTON, DC 20003

IRIS ACCESSION NUMBER: EW005640

DATE: JUL 80

TITLE: COPPER. WATER QUALITY STANDARDS CRITERIA DIGEST. A COMPILATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: \*COPPER; ENVIRONMENTAL PROTECTION AGENCY; \*FEDERAL CRITERIA; \*HEAVY METALS; \*POLLUTION STANDARDS; POLLUTION; QUALITY CRITERIA; \*REGULATIONS; \*STATE CRITERIA; SURFACE WATER; \*WATER QUALITY; \*WATER QUALITY STANDARDS; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 30P.

ABSTRACT: THIS DIGEST IS A COMPILATION OF EXCERPTS FROM THE INDIVIDUAL STATE-FEDERAL WATER QUALITY STANDARDS WHICH ESTABLISH POLLUTION SPECIFIC CRITERIA FOR NAVIGABLE SURFACE WATERS. INFORMATION IS GIVEN ON RECOMMENDED LEVELS OF COPPER FOR DOMESTIC WATER SUPPLIES, AND FRESHWATER AND MARINE AQUATIC LIFE.

AVAILABILITY: NALESNIK ASSOCIATES INCORPORATED, 505 ELEVENTH STREET, WASHINGTON, DC 20003

IRIS ACCESSION NUMBER: EW005641

DATE: JUL 80

TITLE: GENERAL TOXIC SUBSTANCES. WATER QUALITY STANDARDS CRITERIA DIGEST. A COMPILATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: ENVIRONMENTAL PROTECTION AGENCY; \*FEDERAL CRITERIA; \*POLLUTION STANDARDS; POLLUTION; QUALITY CRITERIA; \*REGULATION; \*STATE CRITERIA; SURFACE WATER; \*TOXIC SUBSTANCES; \*WATER QUALITY; \*WATER QUALITY STANDARDS; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 25P.

ABSTRACT: THIS DIGEST IS A COMPILATION OF EXCERPTS FROM THE INDIVIDUAL STATE-FEDERAL WATER QUALITY STANDARDS WHICH ESTABLISH POLLUTION SPECIFIC CRITERIA FOR NAVIGABLE SURFACE WATERS. INFORMATION IS GIVEN ON THE RECOMMENDED LEVELS OF GENERAL TOXIC SUBSTANCES WHICH PREVENT ADVERSE PHYSIOLOGICAL RESPONSES IN HUMANS, ANIMALS AND PLANTS.

AVAILABILITY: NALESNIK ASSOCIATES INCORPORATED, 505 ELEVENTH STREET, S.E. WASHINGTON, DC 20003

IRIS ACCESSION NUMBER: EW005642

PUBLICATION DATE: JUL 80

TITLE: ARSENIC. WATER QUALITY STANDARDS CRITERIA DIGEST. A COMPILATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: \*ARSENIC; ENVIRONMENTAL PROTECTION AGENCY; \*FEDERAL CRITERIA; \*HEAVY METALS; \*POLLUTION STANDARDS; POLLUTION; QUALITY CRITERIA; \*REGULATIONS; \*STATE CRITERIA; SURFACE WATER; \*WATER QUALITY; \*WATER QUALITY STANDARDS; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 29P.

ABSTRACT: THIS DIGEST IS A COMPILATION OF EXCERPTS FROM THE INDIVIDUAL STATE-FEDERAL WATER QUALITY STANDARDS, WHICH ESTABLISH POLLUTION SPECIFIC CRITERIA FOR NAVIGABLE SURFACE WATERS. IT CONTAINS INFORMATION ON RECOMMENDED LEVELS OF ARSENIC FOR DOMESTIC WATER SUPPLIES AND IRRIGATION CROPS.

AVAILABILITY: NALESNIK ASSOCIATES INCORPORATED, 505 ELEVENTH STREET, S.E. WASHINGTON, DC 20003

IRIS ACCESSION NUMBER: EW005643

PUBLICATION DATE: JUL 80

TITLE: CADMIUM. WATER QUALITY STANDARDS CRITERIA DIGEST. A COMPILATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: \*CADMIUM; ENVIRONMENTAL PROTECTION AGENCY; \*FEDERAL CRITERIA; \*HEAVY METALS; \*POLLUTION STANDARDS; POLLUTION; QUALITY CRITERIA; \*REGULATIONS; \*STATE CRITERIA; SURFACE WATER; \*WATER QUALITY; \*WATER QUALITY STANDARDS; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 30P.

ABSTRACT: THIS DIGEST IS A COMPILATION OF EXCERPTS FROM THE INDIVIDUAL STATE-FEDERAL WATER QUALITY STANDARDS WHICH ESTABLISH POLLUTANT SPECIFIC CRITERIA FOR NAVIGABLE SURFACE WATERS. TOXIC CADMIUM LEVELS ARE USUALLY THE RESULT OF MINING AND SMELTING OPERATIONS OR ELECTROPLATING, TEXTILE, PAINT AND CHEMICAL INDUSTRIES. THIS DIGEST CONTAINS INFORMATION ON THE RECOMMENDED LEVELS OF CADMIUM FOR MARINE AND FRESHWATER LIFE.

AVAILABILITY: NALESNIK ASSOCIATES INCORPORATED, 505 ELEVENTH STREET, S.E. WASHINGTON, DC 20003

IRIS ACCESSION NUMBER: EW005644

PUBLICATION DATE: JUL 80

TITLE: TEMPERATURE. WATER QUALITY STANDARDS CRITERIA DIGEST. A COMPILATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: \*FEDERAL CRITERIA; \*POLLUTION STANDARDS; \*STATE CRITERIA; \*SURFACE WATER; \*TEMPERATURE; \*WATER QUALITY;

\*WATER QUALITY STANDARDS; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 65P.

ABSTRACT: THIS DIGEST IS COMPILED TO PROVIDE GENERAL INFORMATION TO THE PUBLIC AS WELL AS TO FEDERAL, STATE, AND LOCAL OFFICIALS. IT CONTAINS EXCERPTS FROM THE INDIVIDUAL FEDERAL-STATE WATER QUALITY STANDARDS ESTABLISHING THERMAL POLLUTANT CRITERIA FOR INTERSTATE SURFACE WATERS.

AVAILABILITY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER REGULATIONS AND STANDARDS, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW005645

PUBLICATION DATE: JUL 80

TITLE: CHROMIUM. WATER QUALITY STANDARDS CRITERIA DIGEST. A COMPILATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: \*CHROMIUM; \*FEDERAL CRITERIA; HEAVY METALS; \*POLLUTION STANDARDS; \*STATE CRITERIA; \*SURFACE WATER; \*WATER QUALITY; \*WATER QUALITY STANDARDS; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 30P.

ABSTRACT: THIS DIGEST WAS COMPILED TO PROVIDE GENERAL INFORMATION TO THE PUBLIC AS WELL AS TO FEDERAL, STATE, AND LOCAL OFFICIALS. IT CONTAINS EXCERPTS FROM THE INDIVIDUAL STATE-FEDERAL WATER QUALITY STANDARDS ESTABLISHING POLLUTANT SPECIFIC CRITERIA FOR NAVIGABLE SURFACE WATERS. THIS REPORT DEALS WITH SPECIFIC POLLUTANT STANDARDS OF CHROMIUM FOR DOMESTIC WATER SUPPLIES AND FOR FRESHWATER AQUATIC LIFE.

AVAILABILITY: NALESNIK ASSOCIATES INCORPORATED, 505 ELEVENTH STREET, S.E. WASHINGTON, DC 20003

IRIS ACCESSION NUMBER: EW005646

PUBLICATION DATE: JUL 80

TITLE: IRON. WATER QUALITY STANDARDS CRITERIA DIGEST. A COMPILATION OF STATE/FEDERAL CRITERIA.

DESCRIPTOR: \*FEDERAL CRITERIA; \*IRON; \*METALS; \*POLLUTION STANDARDS; \*STATE CRITERIA; \*SURFACE WATER; TRACE ELEMENTS; \*WATER QUALITY; \*WATER QUALITY STANDARDS; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 30P.

ABSTRACT: THIS DIGEST WAS COMPILED TO PROVIDE GENERAL INFORMATION TO THE PUBLIC AS WELL AS TO FEDERAL, STATE, AND LOCAL OFFICIALS. IT CONTAINS EXCERPTS FROM THE INDIVIDUAL STATE-FEDERAL WATER QUALITY STANDARDS ESTABLISHING POLLUTANT SPECIFIC CRITERIA FOR NAVIGABLE SURFACE WATERS. THIS REPORT DEALS WITH SPECIFIC POLLUTANT STANDARDS OF IRON FOR DOMESTIC WATER SUPPLIES AND FRESHWATER AQUATIC LIFE.

AVAILABILITY: NALESNIK ASSOCIATES INCORPORATED, 505  
ELEVENTH STREET, S.E. WASHINGTON, DC 20003

812-232-6311

IRIS ACCESSION NUMBER: EW005647

IRIS ACCESSION NUMBER: EW005649

PUBLICATION DATE: AUG 80

PUBLICATION DATE: 80

TITLE: TRAINING FOR OPERATION AND MAINTENANCE OF  
CHLORINATION EQUIPMENT.

TITLE: BASIC SUPERVISION AND BASIC MANAGEMENT, PRINCIPLES  
AND PRACTICES; PART 2.

PERSONAL AUTHOR: DELVECCHIO, FRED; HARTMANN, ED

PERSONAL AUTHOR: KOREN, HERMAN

DESCRIPTOR: \*CHLORINATION; \*DISINFECTION; \*EQUIPMENT;  
\*INSTRUCTIONAL MATERIALS; \*MAINTENANCE; \*OPERATIONS  
(WASTEWATER); \*TRAINING; \*TRAINING MATERIALS; \*WASTEWATER  
TREATMENT

DESCRIPTOR: ATTITUDES; \*COMMUNICATIONS; \*CIVIL RIGHTS;  
DISCIPLINE; \*HUMAN RELATIONS; HEALTH; \*INSTRUCTIONAL  
MATERIALS; \*INDEPENDENT STUDY; \*MANAGEMENT; \*PEOPLE  
MANAGEMENT; PERFORMANCE RATINGS; \*SUPERVISION; SAFETY;  
UNIONS

DESCRIPTIVE NOTE: 10P.

DESCRIPTIVE NOTE: 200P. PRICE: INDIVIDUAL FOR COURSE-  
\$85.00, GROUP FOR COURSE-\$75.00

ABSTRACT: THIS PRESENTATION DESCRIBES HOW THE WASHINGTON  
ENVIRONMENTAL TRAINING RESOURCE CENTER AT GREEN RIVER  
COMMUNITY COLLEGE USED A SYSTEMATIC INSTRUCTIONAL  
DEVELOPMENT PROCESS TO PUT TOGETHER A COURSE FOR OPERATION  
AND MAINTENANCE OF CHLORINATION EQUIPMENT. IT DESCRIBES  
OTHER TRAINING COURSES AND HOW THESE PAST PROGRAMS WERE  
INVOLVED IN FORMULATING OR DEVELOPING THE GREEN RIVER  
TRAINING COURSE. IT ALSO SUGGESTS HOW THE COURSE COULD BE  
FURTHER DEVELOPED AND REFINED IN THE FUTURE.

ABSTRACT: THE MATERIAL PRESENTED IN PART II OF THIS  
INDEPENDENT STUDY COURSE CONTAINS NINE ASSIGNMENTS AND TWO  
EXAMINATIONS DEALING WITH BASIC SUPERVISION AND BASIC  
MANAGEMENT PRINCIPLES AND PRACTICES. TOPICS COVERED INCLUDE  
COMMUNICATIONS, DISCIPLINARY ACTION, PERFORMANCE RATINGS,  
CIVIL RIGHTS, UNIONS, HEALTH AND SAFETY.

AVAILABILITY: WASHINGTON ENVIRONMENTAL TRAINING RESOURCE  
CENTER, GREEN RIVER COMMUNITY COLLEGE, AUBURN, WA 98002

AVAILABILITY: INDIANA STATE UNIVERSITY, INDEPENDENT STUDY  
OFFICE; AC 220, TERRE HAUTE, IN 47809; DR HERMAN KOREN,  
TELEPHONE: 812-232-6311

IRIS ACCESSION NUMBER: EW005648

IRIS ACCESSION NUMBER: EW005650

PUBLICATION DATE: 80

PUBLICATION DATE: 77

TITLE: BASIC SUPERVISION AND BASIC MANAGEMENT, PRINCIPLES  
AND PRACTICES PART 1, AND TEXT-SUPERVISION. THE DIRECTION OF  
PEOPLE AT WORK.

TITLE: PESTICIDE MANAGEMENT AND INSECTICIDE RESISTANCE.

PERSONAL AUTHOR: KOREN, HERMAN

PERSONAL AUTHOR: WATSON, DAVID L.; BROWN, A. W. A.

DESCRIPTOR: ATTITUDES; COMMUNICATION; HUMAN RELATIONS;  
HEALTH; \*INDEPENDENT STUDY; \*INSTRUCTIONAL MATERIALS;  
\*LEADERSHIP; \*MANAGEMENT; MOTIVATION; \*PERSONNEL;  
\*SUPERVISION; SECURITY; SAFETY; TRAINING; WORKER SELECTION;  
\*WORK ENVIRONMENT

DESCRIPTOR: \*APPLICATION TECHNIQUES; AGRICULTURAL PESTS;  
CHLOROFLUOROCARBONS; ECONOMICS; \*INSECTICIDE RESISTANCE;  
\*INSTRUCTIONAL MATERIALS; \*MANAGEMENT; \*PESTICIDES;  
PESTICIDE RESIDUES; \*SAFETY; URBAN PESTS

DESCRIPTIVE NOTE: 192P. PRICE: INDIVIDUAL FOR COURSE-  
\$95.00, GROUP FOR COURSE-\$85.00

DESCRIPTIVE NOTE: 630P. PRICE: \$36.00

ABSTRACT: THIS PACKAGE CONTAINS THE TEXT AND MATERIALS  
NECESSARY FOR AN INDEPENDENT STUDY COURSE DEALING WITH BASIC  
SUPERVISION AND BASIC MANAGEMENT PRINCIPLES AND PRACTICES.  
THE COURSE EXAMINES ORGANIZATIONAL STRUCTURE, THE MANAGERIAL  
FUNCTION, HUMAN BEHAVIOR, AND THE ROLE OF THE SUPERVISOR IN  
MANAGEMENT.

ABSTRACT: THIS VOLUME IS A COLLECTION OF PAPERS DEALING  
WITH THE DEVELOPMENT AND REGULATION OF PESTICIDE MANAGEMENT.  
TOPICS COVERED INCLUDE: PESTICIDE SAFETY, APPLICATION  
TECHNIQUES, INSECTICIDE RESISTANCE, FLUOROHYDROCARBON  
PROPELLENTS AND OZONE, MANAGEMENT OF URBAN PESTS, AND  
INTERNATIONAL PLANT PROTECTION.

AVAILABILITY: INDIANA STATE UNIVERSITY, INDEPENDENT STUDY  
AC TERRE HAUTE, IN 47809, DR HERMAN KOREN, TELEPHONE:



IRIS ACCESSION NUMBER: EW005651

PUBLICATION DATE: 7 20

TITLE: WASTE RECYCLING AND POLLUTION CONTROL HANDBOOK.

PERSONAL AUTHOR: BRIDGWATER, A. V.; MUMFORD, C. J.

DESCRIPTOR: \*ECONOMIC FACTORS; EFFLUENTS; ENVIRONMENTAL IMPACT; FACILITIES; \*INDUSTRIAL WASTES; \*INSTRUCTIONAL MATERIALS; METALS RECOVERY; \*NATURAL RESOURCES; OPERATIONS (WASTEWATER); \*POLLUTION CONTROL; \*RECYCLING; REGULATIONS; \*RESOURCE RECOVERY; \*WASTE DISPOSAL; \*WASTE MANAGEMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 79P. PRICE: \$35.00

ABSTRACT: THIS BOOK GIVES AN OVERALL COVERAGE OF PRACTICAL MANAGEMENT OF ALL TYPES OF WASTE TO MEET THE NEEDS OF PROCESS AND PLANT ENGINEERS, MANAGERS, CHEMISTS, DESIGNERS, CONTRACTORS AND THOSE CONCERNED WITH MONITORING AND ENFORCING RELEVANT LEGISLATION. THE INTERACTIONS BETWEEN ALL FORMS OF POLLUTION ARE IDENTIFIED AND, PARTICULARLY, THE ROLE THAT RECYCLING HAS TO PLAY, NOT ONLY IN CONTROLLING POLLUTION, BUT OFTEN AS A SIGNIFICANT CONTRIBUTION TO CONTROLLING COSTS. CHAPTERS INCLUDE: (1) THE PROBLEM, (2) RECOVERY VERSUS DISPOSAL, (3) CHARACTERIZATION OF WASTES AND POLLUTANTS, (4) CRITERIA FOR CONTROL, (5) MEASUREMENT TECHNIQUES, (6) SOURCES OF WASTE, (7) PRINCIPLES AND DESIGN OF AQUEOUS EFFLUENT TREATMENT PLANT, (8) EFFLUENT TREATMENT OPERATIONS, (9) MATERIALS RECOVERY FROM LIQUID WASTE, (10) CONTROL OF DUST, FUMES, MISTS AND ODOR FROM MANUFACTURING PROCESSES, (11) PREVENTION OF POLLUTION FROM COMBUSTION PROCESSES, (12) TREATMENT AND RECOVERY PROCESSES FOR GASEOUS POLLUTANTS, (13) INDUSTRIAL WASTE DISPOSAL, (14) DISPOSAL OF HOUSEHOLD AND OTHER SPECIAL WASTES, (15) METALS RECOVERY, (16) RECOVERY AND REUSE OF INDUSTRIAL MATERIALS OTHER THAN METALS, (17) RECOVERY OF MATERIALS FROM HOUSEHOLD REFUSE, (18) NOISE CONTROL, (19) ORGANIZATION AND PROCEDURES, (20) TECHNICAL ECONOMICS FOR WASTE TREATMENT AND RECYCLING PROCESSES, AND (21) SOURCES OF INFORMATION.

AVAILABILITY: LITTON EDUCATIONAL PUBLISHING, INC., 7625 EMPIRE DRIVE, FLORENCE, KY 41042

IRIS ACCESSION NUMBER: EW005652

PUBLICATION DATE: AUG 78

TITLE: AN OVERVIEW OF BENEFIT-COST ANALYSIS FOR WATER RESOURCES PROJECT--IMPROVEMENTS STILL NEEDED.

DESCRIPTOR: BUREAU OF RECLAMATION; \*BENEFIT-COST ANALYSIS; BENEFIT-COST RATIOS; CORPS OF ENGINEERS; \*FEDERAL AGENCIES; \*FEDERAL PROJECTS; ORGANIZATIONAL ALTERNATIVES; SOIL CONSERVATION SERVICE; WATER RESOURCES COUNCIL; \*WATER RESOURCES; \*WATER RESOURCE PROJECTS

DESCRIPTIVE NOTE: 42P. PRICE: FREE OF CHARGE, MULTI COPIES \$1.00-U.S. GENERAL ACCOUNTING OFFICE DISTRIBUTION SECTION, P.O. BOX 1020, WASHINGTON, D.C. 20013

ABSTRACT: DESPITE A CONTINUING AWARENESS OF THE NEED TO IMPROVE BENEFIT-COST ANALYSIS FOR MAKING DECISIONS ON WATER RESOURCE PROJECTS COSTING BILLIONS OF DOLLARS, FEDERAL AGENCIES STILL HAVE PROBLEMS PREPARING ACCURATE, UNIFORM, LOGICALLY DEVELOPED BENEFIT-COST RATIOS FOR THESE PROJECTS. THE WATER RESOURCE AGENCIES SHOULD WORK TOGETHER THROUGH THE WATER RESOURCES COUNCIL TO (1) ESTABLISH MORE SPECIFIC CRITERIA REGARDING THE VALUE AND ACCEPTABILITY OF BENEFITS, (2) DEVELOP MORE DETAILED PROCEDURES, AND (3) STRENGTHEN THEIR REVIEWS TO INSURE CORRECTLY PREPARED BENEFIT-COST ANALYSIS. THIS REPORT SUGGESTS SEVERAL ORGANIZATIONAL ALTERNATIVES TO ACHIEVE MORE OBJECTIVE AND RELIABLE BENEFIT-COST ANALYSIS.

AVAILABILITY: U.S. GENERAL ACCOUNTING OFFICE, DISTRIBUTION SECTION, ROOM 1518, 441 G STREET, N.W., WASHINGTON, DC 20548

IRIS ACCESSION NUMBER: EW005653

PUBLICATION DATE: NOV 78

TITLE: REVIEW OF THE PRESIDENT

DESCRIPTOR: ENVIRONMENTAL PROTECTION; EVALUATION; \*FEDERAL PROGRAMS; FEDERAL STATE RELATIONSHIPS; \*MANAGEMENT; \*POLICIES; \*WATER CONSERVATION; WATER QUALITY; \*WATER RESOURCES

DESCRIPTIVE NOTE: 34P. FREE OF CHARGE; MULTIPLE COPIES FOR \$1.00 - US GENERAL ACCOUNTING OFFICE, DISTRIBUTION SECTION, P.O. BOX 1020, WASHINGTON, DC 20013

ABSTRACT: THIS PUBLICATION IS A REVIEW BY THE COMPTROLLER GENERAL OF PRESIDENT CARTER'S JUNE, 1978 WATER POLICY MESSAGE. THE REPORT SPECIFICALLY ADDRESSES THE FOLLOWING FIVE MAJOR COMPONENTS OF THAT WATER POLICY MESSAGE: (1) FEDERAL PROGRAM INITIATIVES, (2) WATER CONSERVATION, (3) ENHANCED FEDERAL/STATE COOPERATION IN WATER MANAGEMENT, (4) ENVIRONMENTAL PROTECTION, AND (5) LACK OF WATER QUALITY CONSIDERATIONS IN THE WATER POLICY MESSAGE.

AVAILABILITY: U.S. GENERAL ACCOUNTING OFFICE, DISTRIBUTION SECTION, ROOM 1518, 441 G STREET, N.W., WASHINGTON, DC 20548

IRIS ACCESSION NUMBER: EW005654

PUBLICATION DATE: 80

TITLE: LOW-MAINTENANCE, MECHANICALLY SIMPLE WASTEWATER TREATMENT SYSTEM.

PERSONAL AUTHOR: RICH, LINVIL G.

DESCRIPTOR: CHLORINATION; DISINFECTION; \*DESIGN; EQUIPMENT; \*FACILITIES; INDUSTRIAL WASTES; \*INSTRUCTIONAL MATERIALS; MAINTENANCE; \*OPERATIONS (WASTEWATER); PLANNING; SLUDGE TREATMENT; SUSPENDED SOLIDS; WASTE DISPOSAL; \*WASTEWATER TREATMENT

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DESCRIPTIVE NOTE: 211P. PRICE: \$18.95

ABSTRACT: IDEAL FOR BOTH PRACTICING ENGINEERS AND STUDENTS OF WASTEWATER TREATMENT DESIGN, THIS BOOK DISCUSSES THE DESIGN OF SEVERAL TYPES OF LOW MAINTENANCE, MECHANICALLY SIMPLE TREATMENT SYSTEMS THAT ARE SUITABLE FOR SMALLER COMMUNITIES OR INDUSTRIES. THE BOOK ALSO DISCUSSES WASTEWATER TREATMENT FROM BOTH A THEORETICAL AND PRACTICAL POINT OF VIEW. WHENEVER POSSIBLE, THEORY IS APPLIED THROUGH A RATIONAL APPROACH TO DESIGN, AND WHEN THIS IS NOT POSSIBLE, A PRAGMATIC APPROACH IS USED. CHAPTERS INCLUDE: (1) BASIC CONSIDERATIONS, (2) PRINCIPLES OF MICROBIOLOGICAL PROCESSES, (3) ACTIVATED SLUDGE TREATMENT SYSTEMS, (4) LAGOON SYSTEMS, (5) SOLIDS REMOVAL AND TREATMENT SYSTEMS, (6) FIXED-FILM SYSTEMS, AND (7) LAND DISPOSAL PRACTICES.

AVAILABILITY: MCGRAW-HILL BOOK COMPANY, P.O. BOX 400, HIGHTSTOWN, NJ 08520

IRIS ACCESSION NUMBER: EW005655

PUBLICATION DATE: 80

TITLE: CONCRETE PIPE HANDBOOK.

DESCRIPTOR: \*CONCRETE PIPES; CONSTRUCTION; CULVERTS; \*DESIGN; \*HANDBOOKS; HYDRAULICS; \*INSTALLATION; \*INSTRUCTIONAL MATERIALS; \*PIPES; SEWERS

DESCRIPTIVE NOTE: 275P. PRICE: \$27.50

ABSTRACT: THIS HANDBOOK PROVIDES AN UP-TO-DATE COMPILATION OF THE CONCEPTS AND THEORIES WHICH FORM THE BASIS FOR THE DESIGN AND INSTALLATION OF PRECAST CONCRETE PIPE SEWERS AND CULVERTS. THE DISCUSSIONS AND ANALYSIS HAVE BEEN PREPARED FOR USE BY PRACTICING ENGINEERS AND ENGINEERING STUDENTS, AND THE HANDBOOK IS A COMPANION VOLUME TO THE CONCRETE PIPE DESIGN MANUAL BY PROVIDING EXPLANATIONS FOR THE CHARTS, TABLES, AND DESIGN PROCEDURES SUMMARIZED IN THE DESIGN MANUAL. CHAPTERS INCLUDE: (1) DEVELOPMENT OF TECHNOLOGY, (2) MATERIALS AND MANUFACTURE, (3) HYDRAULIC DESIGN, (4) LOADS AND SUPPORTING STRENGTHS, (5) SUPPLEMENTAL DESIGN CONSIDERATIONS AND PROCEDURES, (6) DURABILITY CONSIDERATIONS, (7) DESIGN FOR SULFIDE CONTROL, (8) PRODUCT STANDARDS AND TESTING, (9) INSTALLATION, INSPECTION, AND CONSTRUCTION, AND (10) SOIL-STRUCTURE INTERACTION.

AVAILABILITY: AMERICAN CONCRETE PIPE ASSOCIATION, 8320 OLD COURTHOUSE ROAD, VIENNA, VA 22180

INSTITUTION NAME: AMERICAN CONCRETE PIPE ASSOCIATION.

IRIS ACCESSION NUMBER: EW005656

PUBLICATION DATE: 79

TITLE: SULFUR BACTERIA.

PEL UTHOR: FJERDINGSTAD, EINER

DESCRIPTOR: \*BACTERIA; BIOCHEMISTRY; \*CHLOROBACTERIA; \*BIOLOGICAL INDICATORS; ECOLOGY; \*MONITORING; PHYSIOLOGY; PHOTOSYNTHESIS; \*POLLUTION; \*POLLUTION MEASURES; \*SULFUR BACTERIA; \*WATER POLLUTION

DESCRIPTIVE NOTE: 121P. PRICE: \$15.00

ABSTRACT: DURING THE LAST FEW YEARS SULFUR BACTERIA, TO AN INCREASING EXTENT, HAVE BEEN PUT TO USE IN THE BIOLOGICAL ESTIMATION OF POLLUTION. IN THEIR INVESTIGATIONS ALGEOLOGISTS HAVE DESCRIBED NEW GENERA AND NEW SPECIES OF SULFUR BACTERIA, AND BIOCHEMISTS HAVE ESTABLISHED NEW DESIGNATIONS FOR INCLUSIONS IN SULFUR BACTERIA. IN THIS PAPER BIOCHEMICAL ECOLOGICAL, AND PHYSIOLOGICAL INVESTIGATIONS HAVE BEEN CONSIDERED ONLY TO THE EXTENT OF THEIR BEING OF VALUE TO THE KNOWLEDGE OF SULFUR BACTERIA.

AVAILABILITY: AMERICAN SOCIETY FOR TESTING & MATERIALS, 1916 RACE STREET, PHILADELPHIA, PA 19103

IRIS ACCESSION NUMBER: EW005657

PUBLICATION DATE: 79

TITLE: WASTEWATER ENGINEERING: TREATMENT DISPOSAL REUSE.

DESCRIPTOR: CHEMICAL TREATMENT; DESIGN; EFFLUENTS; \*ENGINEERING; FACILITIES; \*INSTRUCTIONAL MATERIALS; \*OPERATIONS (WASTEWATER); \*RECYCLING; \*REUSE; \*SLUDGE DISPOSAL; \*TEXTBOOKS; WASTEWATER; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 920P. PRICE: \$31.50

ABSTRACT: THIS TEXT PROVIDES A WELL ORGANIZED PRESENTATION OF THE BASIC PRINCIPLES AND PRACTICES OF WASTEWATER ENGINEERING. THE BOOK IS ARRANGED SO THAT READERS MAY APPLY THE PRINCIPLES AND PRACTICES COVERED TO THE SOLUTION OF PROBLEMS INVOLVING THE TREATMENT, DISPOSAL, AND REUSE OF WASTEWATER. CHAPTERS INCLUDE: WASTEWATER ENGINEERING: AN OVERVIEW, WASTEWATER FLOWRATES, WASTEWATER CHARACTERISTICS, WASTEWATER TREATMENT OBJECTIVES, METHODS, AND DESIGN, FUNDAMENTALS OF PROCESS ANALYSIS, PHYSICAL UNIT OPERATIONS, CHEMICAL UNIT PROCESSES, DESIGN OF FACILITIES FOR PHYSICAL AND CHEMICAL TREATMENT OF WASTEWATER, BIOLOGICAL UNIT PROCESSES, DESIGN OF FACILITIES FOR THE BIOLOGICAL TREATMENT OF WASTEWATER, DESIGN OF FACILITIES FOR THE TREATMENT AND DISPOSAL OF SLUDGE, ADVANCED WASTEWATER TREATMENT, LAND TREATMENT SYSTEMS, AND EFFLUENT DISPOSAL AND REUSE.

AVAILABILITY: MCGRAW-HILL BOOK COMPANY, P.O. BOX 400, HIGHTSTOWN, NJ 08520

INSTITUTION NAME: METCALF & EDDY, INC.

IRIS ACCESSION NUMBER: EW005658

PUBLICATION DATE: JUL 79

TITLE: COMPOST TOILETS.

PERSONAL AUTHOR: ADAMS, ROBIN BILLAU; AND OTHERS

DESCRIPTOR: \*APPROPRIATE TECHNOLOGY; CONSTRUCTION; \*COMPOST TOILETS; \*COMPOSTING; \*DESIGN; DISEASE; HOUSEHOLD SEWAGE; \*OWNER-BUILT SYSTEMS; PUBLIC HEALTH; \*SANITATION; \*SANITARY FACILITIES; \*TOILETS; \*WASTE DISPOSAL; \*WASTE RECYCLING; WATER CONSERVATION; WATER POLLUTION; \*WASTE TREATMENT

DESCRIPTIVE NOTE: 51P. PRICE: \$2.50

ABSTRACT: THIS GUIDE TO COMPOSTING TOILETS DISCUSSES THE PROCESS, BASIC COMPOST TOILET DESIGNS AND USER EXPERIENCES. SPECIFIC TOPICS INCLUDE: THE BIOLOGY OF THE COMPOSTING PROCESS, THE BREAKDOWN OF HUMAN WASTES THROUGH NATURAL DECOMPOSITION, EFFECTIVE MANAGEMENT OF THE COMPOSTING PROCESS, HEALTH IMPLICATIONS, LAND CONSTRUCTION, INSTALLATION, AND/OR MAINTENANCE PROBLEMS.

AVAILABILITY: NATIONAL CENTER FOR APPROPRIATE TECHNOLOGY, BOX 3838, BUTTEE, MT 59701

IRIS ACCESSION NUMBER: EW005659

PUBLICATION DATE: NOV 80

TITLE: WATER REUSE: AN UNFINISHED AGENDA.

PERSONAL AUTHOR: JOHNSON, C. C.

DESCRIPTOR: \*CRITERIA; DECISION MAKING; DRINKING WATER; NONPOTABLE WATER; POTABLE WATER; PUBLIC HEALTH; \*RECYCLING; RESEARCH REVIEWS; STANDARDS; \*SYMPOSIA; \*WATER QUALITY; \*WATER RESOURCES; \*WATER REUSE; WATER TREATMENT

DESCRIPTIVE NOTE: 1304-1306P.

ABSTRACT: THIS ARTICLE CONTAINS SUMMARY COMMENTS OF THE EPA SYMPOSIUM ON PROTOCOL DEVELOPMENT: CRITERIA AND STANDARDS FOR POTABLE REUSE AND FEASIBLE ALTERNATIVES, HELD JULY 29-31, 1980 AT WARRENTON, VIRGINIA. THE PURPOSE OF THE SYMPOSIUM WAS TO PROVIDE GUIDANCE WITH RESPECT TO APPROACHES, PROBLEMS, SOLUTIONS, AND NEEDED RESEARCH FOR ESTABLISHING A PATHWAY TO PROTOCOL DEVELOPMENT AND POTABLE REUSE CRITERIA AND STANDARDS FOR CONSIDERATION OF NONPOTABLE OPTIONS

AVAILABILITY: ENVIRONMENTAL SCIENCE AND TECHNOLOGY; V14 N11

IRIS ACCESSION NUMBER: EW005661

PUBLICATION DATE: DEC 78

TITLE: HOW TO DISPOSE OF HAZARDOUS WASTE--A SERIOUS QUESTION THAT NEEDS TO BE RESOLVED.

DESCRIPTOR: ENVIRONMENT; \*FACILITIES; \*HAZARDOUS WASTES; \*MANAGEMENT; PUBLIC HEALTH; \*RESOURCE CONSERVATION AND RECOVERY ACT; SAFETY; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 28P. PRICE: SINGLE COPY - NO CHARGE;

MULTIPLE COPIES - \$1.00 PER COPY; CHECKS OR MONEY ORDERS SHOULD BE MADE PAYABLE TO THE U. S. GENERAL ACCOUNTING OFFICE

ABSTRACT: THIS REPORT DESCRIBES (1) THE PROBLEMS WHICH WILL BE ENCOUNTERED IN IMPLEMENTING THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976 DUE TO THE LIMITED CAPACITY OF COMMERCIAL HAZARDOUS WASTE MANAGEMENT FACILITIES TO SAFELY DISPOSE OF THE WASTE REGULATED AND (2) THE NEED TO PROVIDE ASSURANCES, THROUGH A FEDERALLY ADMINISTERED TRUST FUND, THAT FUNDS WILL BE AVAILABLE WHEN NEEDED TO CORRECT SITES PERMITTED UNDER THE ACT SHOULD THEY CAUSE ENVIRONMENTAL OR OTHER DAMAGE AFTER THEY ARE CLOSED

AVAILABILITY: SINGLE COPIES - U.S. GENERAL ACCOUNTING OFFICE, DISTRIBUTION SECTION, ROOM 1518, 441 G STREET, NW, WASHINGTON, DC 20548; MULTIPLE COPIES - U.S. GENERAL ACCOUNTING OFFICE, DISTRIBUTION SECTION, P.O. BOX 1020, WASHINGTON, DC 20013

IRIS ACCESSION NUMBER: EW005662

PUBLICATION DATE: JAN 80

TITLE: INTERIM METHOD FOR DETERMINING ASBESTOS IN WATER.

PERSONAL AUTHOR: ANDERSON, CHARLES H.; LONG J. MACARTHUR

DESCRIPTOR: \*ASBESTOS; \*ANALYTICAL TECHNIQUES; AMPHIBOLES; \*ELECTRON MICROSCOPY; ELECTRON DIFFRACTION; \*INSTRUMENTATION; \*LABORATORY TECHNIQUES; \*WATER POLLUTION CONTROL; \*WATER RESOURCES; \*WATER SAMPLES

DESCRIPTIVE NOTE: 33P. PRICE: \$6.00; MICROFICHE \$3.50

ABSTRACT: THIS MANUAL DESCRIBES AN INTERIM ELECTRON MICROSCOPE (EM) PROCEDURE FOR MEASURING THE CONCENTRATION OF ASBESTOS IN WATER SAMPLES. THE MAIN FEATURES OF THE METHOD INCLUDE FILTERING THE SAMPLE THROUGH A SUB-MICRON POLYCARBONATE MEMBRANE FILTER, EXAMINING AN EM SPECIMEN GRID IN A TRANSMISSION ELECTRON MICROSCOPE, AND VERIFYING FIBER IDENTITY BY SELECTED AREA ELECTRON DIFFRACTION

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005663

PUBLICATION DATE: 75

TITLE: BEND YOUR KNEES.

DESCRIPTOR: \*ACCIDENT PREVENTION; AUDIOVISUAL AIDS; \*FILMS; HEALTH SERVICES; INDUSTRIAL SAFETY; \*INSTRUCTIONAL MATERIALS; \*LIFTING; \*MANUAL LABOR; \*OCCUPATIONAL SAFETY; \*SAFETY

DESCRIPTIVE NOTE: FILM 22 MINUTE, COLOR, PRICE: \$10.00

ABSTRACT: A MOTIVATIONAL FILM ON THE PROPER METHOD OF

LIFTING DESIGNED FOR A TOTAL WORK FORCE AUDIENCE. THE FILM IS NARRATED BY LEONARD RING OF AUKLAND, NEW ZEALAND, AN INTERNATIONAL AUTHORITY ON MANUAL LIFTING AND PREVENTION OF BACK INJURIES.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: INTERNATIONAL LOSS CONTROL INSTITUTE, LOGANVILLE, GA.

IRIS ACCESSION NUMBER: EW005664

PUBLICATION DATE: 79

TITLE: CROSS CONNECTIONS: THE UNSEEN HAZARD.

DESCRIPTOR: \*AUDIOVISUAL AIDS; BACKFLOW; \*CROSS CONNECTIONS; EQUIPMENT; \*FILMS; INSTRUCTIONAL FILMS; \*INSTRUCTIONAL MATERIALS; POTABLE WATER; \*WATER DISTRIBUTION; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: FILM 31 1/2 MINUTES, COLOR, PRICE: \$15.00

ABSTRACT: THIS FILM WAS PRODUCED FOR THE TEXAS STATE PLUMBING AND EXAMINERS BOARD AND BEGINS WITH A REVIEW OF CROSS-CONNECTIONS. PRESENTED IS AN EXHIBIT INVOLVING GLASS PIPES, MIRRORS, AND COLORED WATER TO SIMULATE CONDITIONS INVOLVING BACK SIPHONAGE, BACKFLOW, AND NEGATIVE PRESSURE. ALSO DEMONSTRATED ARE TYPES OF BACKFLOW DEVICES, BOTH FOR LOW HAZARD AND HIGH HAZARD SITUATIONS. "BEFORE AND AFTER" DEMONSTRATIONS ILLUSTRATE THE EFFECTIVENESS OF THE DEVICES IN PROTECTING THE POTABLE WATER SUPPLY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, TECHNICAL LIBRARY, 6666 QUINCY AVENUE, DENVER, COLORADO 80285, TELEPHONE: (303) 794-7711

INSTITUTION NAME: EPIC FILM PRODUCTION, AUSTIN, TX.

IRIS ACCESSION NUMBER: EW005665

PUBLICATION DATE: 75

TITLE: HOW TO SAVE A CHOKING VICTIM: THE HEIMLICH MANEUVER.

DESCRIPTOR: \*ACCIDENT PREVENTION; \*AUDIOVISUAL AIDS; \*CHOKING; \*FILMS; \*FIRST AID; HEALTH EDUCATION; \*HEIMLICH MANEUVER; \*INSTRUCTIONAL MATERIALS; PUBLIC HEALTH

DESCRIPTIVE NOTE: FILM 11 MINUTES, COLOR, PRICE: \$10.00

ABSTRACT: CHOKING CAN CAUSE DEATH IN JUST FOUR MINUTES. EACH YEAR AN ESTIMATED 4,000 AMERICANS DIE IN THIS WAY. THE FILM DEMONSTRATES A NEW LIFE SAVING TECHNIQUE THAT WAS DEVELOPED BY DR HENRY J HEIMLICH WHICH IS SIMPLE ENOUGH TO BE PERFORMED BY ANY INFORMED LAYMAN.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, TECHNICAL LIBRARY, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: PARAMOUNT OXFORD FILMS, HOLLYWOOD, CA.

IRIS ACCESSION NUMBER: EW005666

PUBLICATION DATE: 77

TITLE: IS YOUR DRINKING WATER SAFE?

DESCRIPTOR: \*AUDIOVISUAL AIDS; \*DRINKING WATER; \*FILMS; HEALTH EFFECTS; \*INSTRUCTIONAL MATERIALS; POTABLE WATER; \*SAFE DRINKING WATER ACT; TOXIC SUBSTANCES; WATER POLLUTION; \*WATER QUALITY; WATER SUPPLY; \*WATER TREATMENT

DESCRIPTIVE NOTE: FILM 28 MINUTES, COLOR, PRICE: \$5.00

ABSTRACT: THIS FILM PRESENTS AN OVERVIEW OF WATER TREATMENT METHODS RELATIVE TO THE SAFE DRINKING WATER ACT. THIS FILM CITES INSTANCES OF WATER CONTAMINATED BY TOXIC METALS AND OTHER FOREIGN MATERIALS, DISCUSSES THE LONG-TERM HEALTH EFFECTS AND THE IMPORTANCE FOR SAFE-GUARDING THE NATIONS DRINKING WATER SUPPLIES.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: CONNECTICUT PUBLIC TELEVISION THROUGH A GRANT FROM THE ENVIRONMENTAL PROTECTION AGENCY.

IRIS ACCESSION NUMBER: EW005667

PUBLICATION DATE: 76

TITLE: THE SUPERVISOR AND ARBITRATION.

DESCRIPTOR: \*ADMINISTRATION; \*ARBITRATION; \*AUDIOVISUAL AIDS; \*DISCIPLINE; EMPLOYER EMPLOYEE RELATIONSHIPS; \*FILMS; \*INSTRUCTIONAL MATERIALS; \*MANAGEMENT; \*PERSONNEL MANAGEMENT; \*SUPERVISORY TRAINING

DESCRIPTIVE NOTE: FILM 20 MINUTES, COLOR, PRICE: \$13.00

ABSTRACT: THIS FILM DRAMATIZES FIVE LEADING REASONS WHY DISCIPLINARY ACTIONS ARE REVERSED, POINTS OUT THE MISTAKES SUPERVISORS MAKE IN TYPICAL DISCIPLINARY SITUATIONS, AND EXPLAINS HOW TO JUSTIFY PENALTIES WITH STEPS SO AIRTIGHT THAT A GRIEVANCE IS SELDOM FILED.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: BUREAU OF BUSINESS PRACTICE.

IRIS ACCESSION NUMBER: EW005668

PUBLICATION DATE: 79

TITLE: TECHNIQUES FOR SAMPLING DRINKING WATER.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; AUDIOVISUAL AIDS; \*DRINKING WATER; \*FILMS; \*INSTRUCTIONAL MATERIALS; LABORATORY PROCEDURES; LABORATORY TECHNIQUES; \*MEASUREMENT TECHNIQUES; \*SAMPLING; TESTING; \*WATER TREATMENT; WATER SUPPLY

DESCRIPTIVE NOTE: FILM 20 MINUTES, COLOR, PRICE: \$5.00

ABSTRACT: THIS FILM SHOWS PROPER TECHNIQUES FOR SAMPLING DRINKING WATER. IT HAS BEEN SPECIFICALLY DESIGNED FOR WATER SUPPLY PERSONNEL INVOLVED IN THE ACTUAL SAMPLING OF DRINKING WATER. THE FILM DEMONSTRATES THE STEPS NECESSARY IN THE PROPER COLLECTION OF DRINKING WATER SAMPLES TO AVOID IMPROPER HANDLING THAT MIGHT ADVERSELY AFFECT THE ACCURACY AND INTEGRITY OF THE RESULTING ANALYSIS.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80135, TELEPHONE: (303) 794-7711

INSTITUTION NAME: U.S. ENVIRONMENTAL PROTECTION AGENCY; OFFICE OF DRINKING WATER.

IRIS ACCESSION NUMBER: EW005669

TITLE: TURN ON THE WATER.

DESCRIPTOR: \*AUDIOVISUAL AIDS; CORROSION; \*FILMS; \*FLOW CAPACITY; \*INSTRUCTIONAL MATERIALS; \*MAINTENANCE; \*PIPE LINING; \*PIPES; REPAIR; \*TUBERCULATION; \*WATER PIPES; \*WATER DISTRIBUTION

DESCRIPTIVE NOTE: FILM 14 MINUTES, COLOR, PRICE: \$5.00

ABSTRACT: REDUCTION OF FLOW CAPACITY IS ILLUSTRATED IN THIS FILM BY EXAMINING THE EFFECTS OF INTERNAL CORROSION AND TUBERCULATION ON PIPELINE SURFACES. A SYSTEM OF REHABILITATING PIPELINE IN PLACE IS SHOWN THROUGH SEVERAL CLEANING METHODS AND APPLICATION OF A PERMANENT PROTECTIVE LINING USING THE CEMENT MORTAR SPUN LINE PROCESS.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: AMERON PIPE LINING DIVISION, WILMINGTON, CA.

IRIS ACCESSION NUMBER: EW005670

PUBLICATION DATE: 76

TITLE: AMMONIA NITROGEN AND NITROGEN IN ENVIRONMENTAL WATERS.

DESCRIPTOR: \*AMMONIA; \*ANALYTICAL TECHNIQUES; AUDIOVISUAL AIDS; \*FILMSTRIPS; \*INSTRUCTIONAL MATERIALS; LABORATORY PROCEDURES; \*LABORATORY TECHNIQUES; \*NITROGEN; \*SKILL DEVELOPMENT; \*SLIDE PROGRAMS; TRAINING PROGRAMS; \*WATER ANALYSIS; WATER QUALITY

DESCRIPTIVE NOTE: 32 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIO TAPE CASSETTE AND STUDY GUIDE, PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DEVELOPING SKILLS NEEDED TO DETERMINE THE AMMONIA IN NATURAL WATER OR WASTEWATER. A SAMPLE IS PREPARED, AMMONIA DISTILLED AND MEASURED BY NESSLER COMPARISON, TO CALCULATE THE CONCENTRATION OF AMMONIA-NITROGEN.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80135, TELEPHONE: (303) 794-7711

INSTITUTION NAME: PRODUCED BY COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005671

PUBLICATION DATE: 76

TITLE: A GOOD DRINK OF WATER.

DESCRIPTOR: \*AUDIOVISUAL AIDS; CITIZEN PARTICIPATION; \*CONSUMER EDUCATION; \*DRINKING WATER; \*FILMS; \*INSTRUCTIONAL MATERIALS; \*SAFE DRINKING WATER ACT; \*SLIDE PROGRAM; \*WATER TREATMENT; \*WATER SUPPLY

DESCRIPTIVE NOTE: 60 SLIDES, COLOR, 35MM, ACCOMPANIED BY AUDIOTAPE CASSETTE SIGNALS ARE PULSED FOR AUDIBLE OR INAUDIBLE USE. PRICE: \$5.00

ABSTRACT: THIS IS AN ESPECIALLY PREPARED PRESENTATION ON THE SAFE DRINKING WATER ACT EXPLAINED IN LAYMAN TERMS. DISCUSSION OF THE ACT IS TO ENCOURAGE CONSUMER INTEREST AND INVOLVEMENT IN LOCAL WATER SUPPLY ACTIVITIES.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: U.S. ENVIRONMENTAL PROTECTION AGENCY.

IRIS ACCESSION NUMBER: EW005672

PUBLICATION DATE: 75

TITLE: HOW TO ANALYZE FOR A HEAVY METAL IN ENVIRONMENTAL WATERS... PART 1: ADSORPTION SPECTROSCOPY.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*AUDIOVISUAL AIDS; FILMSTRIPS; \*HEAVY METALS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; LEAD; \*SKILL DEVELOPMENT; \*SLIDE PROGRAMS; \*SPECTROSCOPY; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 40 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE.  
PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DEVELOPING SKILLS NEEDED TO ANALYZE HEAVY METALS IN ENVIRONMENTAL WATERS USING A SPECTROPHOTOMETRIC TECHNIQUE. IT PROVIDES A GENERAL ANALYTICAL SCHEME FOR OVERCOMING INTERFERENCES IN HEAVY METAL ANALYSIS, SEPARATING HEAVY METALS BY SOLVENT EXTRACTION, AND ANALYZING FOR A HEAVY METAL (LEAD) USING SPECTROPHOTOMETRY.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005673

PUBLICATION DATE: 75

TITLE: HOW TO ANALYZE FOR A HEAVY METAL IN ENVIRONMENTAL WATER... PART II: ATOMIC ABSORPTION SPECTROSCOPY.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*ATOMIC ABSORPTION SPECTROSCOPY; \*AUDIOVISUAL AIDS; FILMSTRIPS; \*HEAVY METALS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; \*SKILL DEVELOPMENT; \*SLIDE PROGRAMS; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 35 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE.  
PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DEVELOPING SKILLS NEEDED TO ANALYZE FOR A HEAVY METAL IN ENVIRONMENTAL WATERS, USING ATOMIC ABSORPTION SPECTROSCOPY.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005674

PUBLICATION DATE: 75

TITLE: HOW TO ANALYZE FOR A HEAVY METAL IN ENVIRONMENTAL WATERS... PART III: ANODIC STRIPPING VOLTAMMETRY.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*ANODIC STRIPPING VOLTAMMETRY; \*AUDIOVISUAL AIDS; FILMSTRIPS; \*HEAVY METALS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; SKILL DEVELOPMENT; \*SLIDE PROGRAMS; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 31 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE.

PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DEVELOPING SKILLS NEEDED TO ANALYZE AN ENVIRONMENTAL WATER SAMPLE FOR CERTAIN HEAVY METALS USING THE TECHNIQUE OF ANODIC STRIPPING VOLTAMMETRY.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005675

PUBLICATION DATE: 75

TITLE: HOW TO ANALYZE FOR CHLORINATION HYDROCARBON PESTICIDES IN WATER USING GAS CHROMATOGRAPHY.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; AUDIOVISUAL AIDS; \*CHLORINATION HYDROCARBONS; FILMSTRIPS; \*GAS CHROMATOGRAPHY; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; \*PESTICIDES; SKILL DEVELOPMENT; \*SLIDE PROGRAMS; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 44 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE.  
PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DEVELOPING SKILLS NEEDED TO IDENTIFY AND MEASURE THE CONCENTRATION OF CHLORINATION HYDROCARBON PESTICIDES IN ENVIRONMENTAL WATERS USING GAS CHROMATOGRAPHY WITH AN ELECTRON CAPTURE DETECTOR.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005676

PUBLICATION DATE: 76

TITLE: HOW TO DETERMINE TOTAL RESIDUE.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*AUDIOVISUAL AIDS; FILMSTRIPS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; \*RESIDUES; \*SLIDE PROGRAMS; WASTEWATER; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 27 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE.  
PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DETERMINING TOTAL RESIDUE ON EVAPORATION OF A SAMPLE OF NATURAL OR WASTE

WATER, AND THE VOLATILE AND FIXED PORTIONS OF THIS RESIDUE.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005677

PUBLICATION DATE: 76

TITLE: HOW TO MEASURE ALKALINITY OF NATURAL AND WASTE WATERS.

DESCRIPTOR: \*ALKALINITY; \*ANALYTICAL TECHNIQUES; \*AUDIOVISUAL AIDS; FILMSTRIPS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; SKILL DEVELOPMENT; \*SLIDE PROGRAMS; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 39 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE. PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DEVELOPING SKILLS NECESSARY TO DETERMINE THE ALKALINITY OF A WATER SAMPLE, USING EITHER AN INDICATOR OR A POTENTIOMETRIC METHOD.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005678

PUBLICATION DATE: 76

TITLE: HOW TO MEASURE NITRATE NITROGEN IN ENVIRONMENTAL WATERS.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; AUDIOVISUAL AIDS; \*BRUCINE METHOD; FILMSTRIPS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; \*NITRATE NITROGEN; \*SLIDE PROGRAMS; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 39 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE. PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN ANALYZING FOR NITRATE NITROGEN IN ENVIRONMENTAL WATERS USING THE BRUCINE METHOD.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005679

PUBLICATION DATE: 76

TITLE: HOW TO MEASURE OIL AND GREASE IN AQUATIC ENVIRONMENTS.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*AQUATIC ENVIRONMENTS; \*AUDIOVISUAL AIDS; FILMSTRIPS; \*GREASE; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; \*OIL; POLLUTANTS; SKILL DEVELOPMENT; \*SLIDE PROGRAMS; \*WATER ANALYSIS; \*WATER POLLUTION

DESCRIPTIVE NOTE: 33 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE. PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DEVELOPING THE SKILLS NEEDED TO DETERMINE THE EXTRACTABLE OIL AND GREASE PRESENT IN A SAMPLE TAKEN FROM AN AQUATIC ENVIRONMENT. A CALCULATION OF THE CONCENTRATION IS MADE BY EXTRACTING AND WEIGHING THOSE MOLECULES.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005680

PUBLICATION DATE: 76

TITLE: HOW TO MEASURE RESIDUAL CHLORINE IN ENVIRONMENTAL WATERS.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*AUDIOVISUAL AIDS; \*CHLORINE; \*DPP METHOD; \*DISINFECTION; FILMSTRIPS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; \*RESIDUAL CHLORINE; SKILL DEVELOPMENT; \*SLIDE PROGRAMS; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 28 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE. PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DEVELOPMENT OF SKILLS NEEDED TO ANALYZE FOR RESIDUAL CHLORINE IN A WATER SAMPLE BY THE D.P.D. METHOD.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005681

PUBLICATION DATE: 76

TITLE: HOW TO MEASURE TOTAL PHOSPHATE IN ENVIRONMENTAL WATERS.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*AUDIOVISUAL AIDS; FILMSTRIPS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; \*PHOSPHATES; \*PHOSPHOROUS; SKILL DEVELOPMENT; \*SLIDE PROGRAMS; WASTEWATER; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 33 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE. PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DEVELOPING SKILLS NEEDED TO MEASURE THE TOTAL PHOSPHOROUS IN NATURAL WATER OR WASTEWATER. PHOSPHOROUS IS DIGESTED IN A SAMPLE OF NATURAL WATER OR WASTEWATER TO ORTHO FORM. AMMONIUM MOLYBDATE AND STANNOUS CHLORIDE SOLUTIONS ARE USED FOR A COLORIMETRIC DETERMINATION OF THE PHOSPHOROUS PRESENT.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005682

PUBLICATION DATE: 76

TITLE: HOW TO MEASURE THE TURBIDITY OF ENVIRONMENTAL WATERS.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*AUDIOVISUAL AIDS; FILMSTRIPS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; SKILL DEVELOPMENT; \*SLIDE PROGRAMS; \*TURBIDITY; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 43 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE. PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DEVELOPING SKILLS NEEDED TO MEASURE TURBIDITY USING A NEPHELOMETER.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILL CORPORATION OF PRENTICE MEDIA.

IRIS ACCESSION NUMBER: EW005683

PUBLICATION DATE: 76

TITLE: HOW TO MEASURE TOTAL SUSPENDED MATTER IN ENVIRONMENTAL WATERS.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*AUDIOVISUAL AIDS; FILMSTRIPS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; \*MEASUREMENT TECHNIQUES; SKILL DEVELOPMENT; \*SLIDE PROGRAMS; \*SUSPENDED MATTER; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 35 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE. PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DEVELOPING SKILLS NEEDED TO DETERMINE THE TOTAL SUSPENDED MATTER IN NATURAL WATER OR WASTEWATER AND THE FIXED RESIDUE. IT DEMONSTRATES THE PREPARATION OF A CRUCIBLE, USING IT TO MEASURE SUSPENDED AND FIXED SOLIDS, AND CALCULATE THE RESULTS.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005684

PUBLICATION DATE: 74

TITLE: HOW TO MEASURE WATER HARDNESS.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*AUDIOVISUAL AIDS; \*CALCIUM HARDNESS; FILMSTRIPS; \*HARDNESS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; MAGNESIUM HARDNESS; \*MEASUREMENT TECHNIQUES; SKILL DEVELOPMENT; \*SLIDE PROGRAMS; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 34 SLIDES, COLOR, 35MM, PLUS DUPLICATE FILMSTRIP ACCOMPANIED BY AUDIOTAPE CASSETTE AND STUDY GUIDE. PRICE: \$5.00

ABSTRACT: THIS MODULE IS DESIGNED TO ASSIST IN DEVELOPING THE SKILLS NECESSARY TO MEASURE WATER HARDNESS USING THE EDTA TITRATION METHOD. TECHNIQUES TO ACCURATELY MEASURE AND THEN CALCULATE TOTAL HARDNESS, CALCIUM HARDNESS AND THE MAGNESIUM HARDNESS OF A WATER SAMPLE CAN BE MADE.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.



IRIS ACCESSION NUMBER: EW005685

TITLE: HOW TO USE THE METRIC SYSTEM OF LENGTH, VOLUME AND MASS MEASUREMENT.

DESCRIPTOR: \*AUDIOVISUAL AIDS; \*CONVERSION FACTORS; \*FILMSTRIPS; \*INSTRUCTIONAL MATERIALS; \*MEASUREMENT; \*METRIC SYSTEM; \*MATHEMATICS; \*MATHEMATICAL APPLICATIONS; \*SLIDE PROGRAMS; \*UNITS OF MEASUREMENT

DESCRIPTIVE NOTE: 31 SLIDES, COLOR, 35MM, ACCOMPANIED BY AUDIOTAPE CASSETTE AND WORKBOOK. PRICE: \$5.00

ABSTRACT: THIS MODULE INTRODUCES FUNDAMENTAL SI UNITS OF LENGTH, MASS, AND TIME RELATIVE TO COMMON MEASUREMENTS USED IN THE LIFE SCIENCES LABORATORY. DERIVED SI UNITS FOR AREA AND VOLUME ARE CONSIDERED AND MULTIPLES, SUBDIVISIONS, ABBREVIATIONS AND CONVERSION FACTORS ARE REVIEWED.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: COMMUNICATION SKILLS CORPORATION OF PRENTICE HALL MEDIA.

IRIS ACCESSION NUMBER: EW005686

PUBLICATION DATE: 74

TITLE: MEMBRANE FILTER TEST FOR FECAL COLIFORM.

DESCRIPTOR: \*AUDIOVISUAL AIDS; \*BACTERIA; COLIFORM; \*FECAL COLIFORM; \*FILMSTRIPS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; \*MEMBRANE FILTER TEST; \*SLIDE PROGRAMS; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 80 SLIDES, COLOR, 35MM, ACCOMPANIED BY AUDIOTAPE CASSETTE AND VISUAL SCRIPT. PRICE: \$5.00

ABSTRACT: THIS MODULE DISCUSSES EQUIPMENT FOR PREPARING MFC BROTH MEDIUM AND PROCEDURES FOR THE MEMBRANE FILTER METHOD FOR DETECTING THE PRESENCE OF FECAL COLIFORM IN WATER. THE PRINTED VISUAL SCRIPT (1) GIVES INSTRUCTION ON COUNTING COLONIES, (2) PROVIDES A COLOR CHART FOR DETECTING FECAL COLIFORMS, AND (3) EXPLAINS HOW TO CONVERT AND REPORT FECAL COLIFORM ORGANISMS.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: MILLIPORE CORPORATION.

IRIS ACCESSION NUMBER: EW005687

PUBLICATION DATE: 74

TITLE: MEMBRANE FILTER TEST FOR TOTAL COLIFORM.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; AUDIOVISUAL AIDS; \*BACTERIA; \*COLIFORM BACTERIA; \*FILMSTRIPS; \*INSTRUCTIONAL MATERIALS; \*LABORATORY TECHNIQUES; \*MEMBRANE FILTER TEST; \*SLIDE PROGRAMS; \*TOTAL COLIFORM; \*WATER ANALYSIS

DESCRIPTIVE NOTE: 80 SLIDES, COLOR, 35MM, ACCOMPANIED BY AUDIOTAPE CASSETTE AND VISUAL SCRIPT. PRICE: \$5.00

ABSTRACT: THIS MODULE DISCUSSES EQUIPMENT FOR PREPARING MF-ENDO MEDIUM AND PROCEDURES OF THE MEMBRANE FILTER METHOD FOR DETERMINING THE PRESENCE OF COLIFORM BACTERIA. THE PRINTED VISUAL SCRIPT ALSO DESCRIBES COLONY COUNTING PROCEDURES.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: MILLIPORE CORPORATION.

IRIS ACCESSION NUMBER: EW005688

TITLE: TAPPING FACTS.

DESCRIPTOR: \*AUDIOVISUAL AIDS; \*CONCRETE PIPE; \*INSTRUCTIONAL MATERIALS; \*PIPES; \*SLIDE PROGRAMS; \*TAPPING

DESCRIPTIVE NOTE: 25 SLIDES, COLOR, 35MM, ACCOMPANIED BY PRINTED SCRIPT AND AUDIOTAPE CASSETTE. PRICE: \$5.00

ABSTRACT: THIS MODULE PRESENTS A STEP-BY-STEP DESCRIPTION OF THE PROCESS INVOLVED IN TAPPING REINFORCED CONCRETE PIPE. SUITABLE FOR THOSE SELECTING PIPE MATERIALS AS WELL AS THOSE ACTUALLY PERFORMING THE TAP.

AVAILABILITY: TECHNICAL LIBRARY, AMERICAN WATER WORKS ASSOCIATION, 6666 W QUINCY AVENUE, DENVER, COLORADO 80235, TELEPHONE: (303) 794-7711

INSTITUTION NAME: INTERPACE CORPORATION.

IRIS ACCESSION NUMBER: EW005692

PUBLICATION DATE: NOV 80

TITLE: ANALYZING FOR TRACE CHEMICALS IN WATER: A MANAGER'S GUIDE.

PERSONAL AUTHOR: CLARK, DOUGLAS W.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*CHEMICAL ANALYSIS; INSTRUMENTATION; \*LABORATORY TECHNIQUES; \*MONITORING; \*MANAGERS; PUBLIC HEALTH; \*TRACE CHEMICALS; TRACE METALS; \*WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 85-89P.

ABSTRACT: SUMMARIZED ARE THE MOST WIDELY USED TECHNIQUES FOR ANALYZING TRACE CHEMICALS IN WATER. DISCUSSED ARE THE STRENGTHS AND WEAKNESS OF EACH METHOD. THE VARIOUS TECHNIQUES DISCUSSED INCLUDE ATOMIC ABSORPTION

SPECTROPHOTOMETRY, POLAROGRAPHY, NEUTRON ACTIVATION ANALYSIS, GAS CHROMATOGRAPHY, MASS SPECTROMETRY, AND INFRARED SPECTROSCOPY

AVAILABILITY: PUBLIC WORKS, VIII N11

IRIS ACCESSION NUMBER: EW005693

PUBLICATION DATE: MAY 79

TITLE: HANDBOOK OF PVC PIPE, DESIGN AND CONSTRUCTION.

DESCRIPTOR: \*CONSTRUCTION; \*DESIGN; ENGINEERING; HYDRAULICS; MUNICIPALITIES; \*POLYVINYLCHLORIDE PIPE; \*PLASTIC PIPE; \*PIPES; SEWERS; \*WATER MAINS; \*WATER DISTRIBUTION

DESCRIPTIVE NOTE: PRICE: \$20.00

ABSTRACT: THIS HANDBOOK CONTAINS ENGINEERING AND CONSTRUCTION DATA AND RECOMMENDATIONS APPLICABLE TO THE DESIGN AND CONSTRUCTION OF UNDERGROUND PVC PIPING SYSTEMS IN PRESSURE AND NON-PRESSURE APPLICATIONS. EMPHASIS IS ON MUNICIPAL WATER MAINS, POTABLE WATER DISTRIBUTION, AND SANITARY SEWER SYSTEMS.

AVAILABILITY: UNI-BELL PLASTIC PIPE ASSOCIATION, 2655 VILLA CREEK DRIVE, SUITE 164, DALLAS, TX 75234

IRIS ACCESSION NUMBER: EW005694

PUBLICATION DATE: 78

TITLE: MEASUREMENT OF DISSOLVED OXYGEN.

PERSONAL AUTHOR: HITCHMAN, MICHAEL L.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*DISSOLVED OXYGEN; ELECTROCHEMICAL MEASUREMENT; \*LABORATORY PROCEDURES; \*MEASUREMENT; METHODOLOGIES; \*MONITORING; POLAROGRAPHIC DETECTORS; \*QUANTITATIVE ASSAY; VOLTAMMETRY

DESCRIPTIVE NOTE: 255P. PRICE: \$25.00 PLUS \$1.00 POSTAGE AND HANDLING

ABSTRACT: THIS BOOK DEALS WITH THE METHODOLOGIES AND TECHNIQUES OF MEASURING DISSOLVED OXYGEN. THE AUTHOR COVERS THE THERMODYNAMIC ASPECTS OF DISSOLVED OXYGEN, THE PRINCIPLES OF VOLTAMMETRY, THE USE OF POLAROGRAPHIC DETECTORS, ELECTROCHEMICAL MEASUREMENT, AND NON-ELECTROCHEMICAL MEASUREMENT TECHNIQUES.

AVAILABILITY: ORBISPHERE LABORATORIES, 287 LACKAWANNA AVENUE, WEST PATERSON, NJ 07424

IRIS ACCESSION NUMBER: EW005695

PUBLICATION DATE: 79

TITLE: ENVIRONMENTAL LAW HANDBOOK, SIXTH EDITION.

DESCRIPTOR: ENVIRONMENTAL IMPACT STATEMENTS; \*ENVIRONMENTAL LAW; ENVIRONMENTAL POLICY ACT; \*ENVIRONMENT; GOVERNMENT ROLE; \*HANDBOOKS; HAZARDOUS WASTES; \*LAW; LAND USE; \*LEGISLATION; NOISE; PESTICIDES; POLLUTION CONTROL; \*REGULATIONS; RESOURCE CONSERVATION AND RECOVERY ACT; SOLID WASTES; TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 368P. PRICE: \$19.50

ABSTRACT: THE PRIMARY OBJECTIVE OF THIS BOOK IS TO SATISFY, IN PART, THE NEED FOR CURRENT INFORMATION ON ENVIRONMENTAL LAWS AND REGULATIONS TO THOSE CONCERNED WITH PROTECTING PUBLIC HEALTH AND THE ENVIRONMENT. CHAPTERS INCLUDE: (1) FUNDAMENTALS OF ENVIRONMENTAL LAW, (2) NATIONAL ENVIRONMENTAL POLICY ACT, (3) WATER POLLUTION CONTROL, (4) AIR POLLUTION CONTROL, (5) LAND USE, MAJOR ISSUES IN THE CONTROL OF INDUSTRIAL DEVELOPMENT, (6) FEDERAL REGULATION OF PESTICIDES, (7) TOXIC SUBSTANCES, (8) NOISE, AND (9) RESOURCE CONSERVATION AND RECOVERY ACT; SOLID AND HAZARDOUS WASTES.

AVAILABILITY: GOVERNMENT INSTITUTES, INC., P.O. BOX 5918, WASHINGTON, D.C. 20014

INSTITUTION NAME: GOVERNMENT INSTITUTES, INC.

IRIS ACCESSION NUMBER: EW005697

PUBLICATION DATE: AUG 80

TITLE: 1979 BIBLIOGRAPHY OF SMALL WASTEWATER FLOWS.

DESCRIPTOR: ALTERNATIVE TECHNOLOGY; \*BIBLIOGRAPHY; COLLECTION; SYSTEMS; DISPOSAL SYSTEMS; GRAVITY SEWERS; INNOVATIVE SYSTEMS; ON-SITE SYSTEMS; PRESSURE SEWERS; \*SMALL FLOWS; SMALL COMMUNITIES; SEPTIC TANKS; VACUUM SEWERS; \*WASTEWATER; WASTEWATER TREATMENT SYSTEMS

DESCRIPTIVE NOTE: 142P. PRICE: \$7.00

ABSTRACT: THIS PUBLICATION CONTAINS ABSTRACTS AND INDEXES OF ALTERNATIVE TREATMENT AND COLLECTION SYSTEMS FROM DOMESTIC AND FOREIGN LITERATURE AS SEARCHED BY ENVIRO CONTROL, INC., AND THE PROFESSIONAL STAFF OF THE ENVIRONMENTAL PROTECTION AGENCY SMALL WASTEWATER FLOWS CLEARINGHOUSE. BOTH TECHNICAL AND NON-TECHNICAL REPORTS AND INFORMATION ARE INCLUDED. THE SUBJECT MATTER RESEARCHED INCLUDES INNOVATIVE AND ALTERNATIVE WASTEWATER TREATMENT SYSTEMS FOR SMALL COMMUNITIES, THE SPARSELY POPULATED AREAS OF LARGER COMMUNITIES AND INDIVIDUAL ON-SITE SYSTEMS.

AVAILABILITY: WEST VIRGINIA UNIVERSITY, WVU BOOKSTORE, MOUNTAINLAIR, MORCANTOWN, WV 26506

INSTITUTION NAME: PROFESSIONAL STAFF, EPA SMALL WASTEWATER FLOWS CLEARINGHOUSE.

IRIS ACCESSION NUMBER: EW005698

PUBLICATION DATE: JUN 80

TITLE: ENVIRONMENTAL GLOSSARY.

DESCRIPTOR: ABBREVIATIONS; DEFINITIONS; \*ENVIRONMENT; ENVIRONMENTAL REGULATIONS; FEDERAL STATUTES; FEDERAL REGULATIONS; \*GLOSSARIES; \*POLLUTION CONTROL; \*TERMINOLOGY

DESCRIPTIVE NOTE: 200P. PRICE: \$19.50

ABSTRACT: THE 1970'S PRODUCED MANY NEW FEDERAL STATUTES AND REGULATIONS CONTROLLING POLLUTION IN THE UNITED STATES. WHILE MANY REGULATIONS CREATED NEW TERMINOLOGY TO IMPLEMENT THE STATUTORY AND REGULATORY PROVISIONS, MANY COMMON TERMS AND PREVIOUSLY-USED DEFINITIONS ASSUMED NEW MEANINGS. THIS GLOSSARY HAS BEEN PREPARED TO COLLECT THESE DEFINITIONS AND ABBREVIATIONS IN ONE LOCATION AS AN ADDITIONAL RESOURCE FOR PERSONS TO WORK THEIR WAY THROUGH THE MAZE OF ENVIRONMENTAL REGULATIONS.

AVAILABILITY: GOVERNMENT INSTITUTES, INC., P. O. BOX 5918, WASHINGTON, DC 20014

IRIS ACCESSION NUMBER: EW005699

PUBLICATION DATE: APR 78

TITLE: STEVENS WATER RESOURCES DATA BOOK.

DESCRIPTOR: EQUIPMENT; HYDROLOGY; \*INSTRUCTIONAL MATERIALS; MANHOLES; \*MEASUREMENT; \*MEASUREMENT INSTRUMENTS; \*MEASUREMENT TECHNIQUES; \*MONITORING; TABLES (DATA); \*WATER RESOURCES; WELLS

DESCRIPTIVE NOTE: 160P. PRICE: \$5.00

ABSTRACT: THIS BOOKLET PROVIDES BASIC, FUNDAMENTAL INFORMATION ON VARIOUS ASPECTS OF WATER RESOURCES EQUIPMENT AND OPERATION. MOST OF THE MATERIAL RELATES TO WATER MEASUREMENT WITH EMPHASIS ON WATER POLLUTION CONTROL, FLOW MEASUREMENT, AND ANALYSIS OF OPEN CHANNEL FLOWS. CHAPTERS INCLUDE: THE HYDROLOGIC CYCLE, WATER LEVEL MEASUREMENT METHODS, FLOAT WELLS AND INSTRUMENT SHELTERS, OPEN CHANNEL FLOW MEASUREMENT, MEASURING FLOWS IN MANHOLES, WELL MEASUREMENT, TELEMETERING, ERRORS IN FLOAT OPERATED DEVICES, WEIRS AND FLUME TABLES, METRIC SYSTEM TABLES, AND HANDY CONVERSION TABLES.

AVAILABILITY: LEUPOLD & STEVENS, INC., P.O. BOX 688, BEAVERTON, OR 97075

IRIS ACCESSION NUMBER: EW005700

PUBLICATION DATE: 76

TITLE: CITIZENS AND THE ENVIRONMENT, CASE STUDIES IN POPULAR ACTION.

PERSONAL AUTHOR: CALDWELL, LYNTON K.; AND OTHERS

DESCRIPTOR: \*CASE STUDIES; \*CITIZEN PARTICIPATION; \*CITIZEN ROLE; CONSERVATION (ENVIRONMENT); DECISION MAKING; ENVIRONMENTAL EDUCATION; \*ENVIRONMENTAL MANAGEMENT; \*ENVIRONMENTAL PROTECTION; GOVERNMENT ROLE; LAND MANAGEMENT; LEGISLATION; POLITICAL SCIENCE; \*PUBLIC PARTICIPATION

DESCRIPTIVE NOTE: 480P. PRICE: \$6.95

ABSTRACT: THIS BOOK DESCRIBES THE WAYS IN WHICH CITIZENS HAVE ORGANIZED AND ACTED IN RESPONSE TO PERCEIVED THREATS TO THEIR ENVIRONMENT. CASE STUDIES HAVE BEEN SELECTED TO ILLUSTRATE THE WIDE VARIETY OF ISSUES IN WHICH CITIZENS HAVE FELT IMPELLED TO ORGANIZE TO DEFEND INTERESTS WHICH WERE THREATENED BY AGENCIES OF GOVERNMENT OR CORPORATE ENTERPRISE. CHAPTERS INCLUDE: SECTION I-CRITICAL AREAS OF THE NATURAL ENVIRONMENT: (1) LAND USE, (2) COASTAL ZONE, (3) INLAND WATERS, (4) AIR QUALITY AND WEATHER MODIFICATION, AND (5) NATURAL AREAS AND WILDLIFE. SECTION II-CRITICAL ASPECTS OF MAN-ENVIRONMENT RELATIONSHIPS: (6) ENERGY, (7) THE ECONOMY AND GROWTH, (8) ENVIRONMENTAL HEALTH, (9) QUALITY OF URBAN LIFE, AND (10) INSTITUTIONAL BEHAVIOR.

AVAILABILITY: INDIANA UNIVERSITY PRESS, 10TH & MORTON STREETS, BLOOMINGTON, IN 47405

IRIS ACCESSION NUMBER: EW005703

PUBLICATION DATE: APR 80

TITLE: ENVIRONMENTAL STATUTES, 1980 EDITION.

DESCRIPTOR: AIR POLLUTION CONTROL; \*ENVIRONMENT; ENVIRONMENTAL PROTECTION; \*LEGISLATION; NOISE POLLUTION CONTROL; OCCUPATIONAL SAFETY AND HEALTH ACT; POLLUTION CONTROL; \*REGULATIONS; RESOURCE RECOVERY; SAFE DRINKING WATER ACT; SAFETY; \*STATUTES; TOXIC SUBSTANCES; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 552P. PRICE: \$12.95

ABSTRACT: THIS DOCUMENT CONTAINS THE ENTIRE CONTENTS OF TEN MAJOR ENVIRONMENT STATUTES. INCLUDED ARE: THE CLEAN AIR ACT (AND AMENDMENTS), THE CLEAN AIR ACT AMENDMENT OF 1977 (WHICH DID NOT AMEND THE PREVIOUS ACT), FEDERAL WATER POLLUTION CONTROL ACT (AND AMENDMENTS), NATIONAL ENVIRONMENTAL POLICY ACT OF 1969 (AND AMENDMENTS), NOISE CONTROL ACT OF 1972, AMENDMENTS TO THE NOISE CONTROL ACT (QUIET COMMUNITIES ACT OF 1978), OCCUPATIONAL SAFETY AND HEALTH ACT, RESOURCE CONSERVATION AND RECOVERY ACT (AND AMENDMENTS), SAFE DRINKING WATER ACT, AND THE TOXIC SUBSTANCES CONTROL ACT.

AVAILABILITY: GOVERNMENT INSTITUTES, P.O. BOX 5918, WASHINGTON, DC 20014

IRIS ACCESSION NUMBER: EW005704

\*PROBLEM ANALYSIS; RESEARCH; WATER SUPPLY; WATER USE; \*WATER CONSERVATION; \*WATER MANAGEMENT; \*WATER RESOURCES; \*WATER RESOURCES COUNCIL; \*WATER POLICY

PUBLICATION DATE: JUL 80

DESCRIPTIVE NOTE: 530P. PRICE: \$11.00

TITLE: CONTAMINANTS AND SEDIMENTS, VOLUME 1, FATE AND TRANSPORT, CASE STUDIES, MODELING, TOXICITY.

ABSTRACT: THIS VOLUME CONTAINS DATA FOR WATER QUANTITY, QUALITY AND RELATED LAND CONSIDERATIONS COLLECTED FOR THE SECOND NATIONAL WATER ASSESSMENT PREPARED UNDER THE AUTHORITY OF THE WATER RESOURCES PLANNING ACT OF 1965. THE INFORMATION COVERED INCLUDES WATER MANAGEMENT PROBLEM PROFILES, WATER USES, WATER SUPPLY, WATER QUALITY, AND SYNOPSES OF THE WATER RESOURCES REGIONS.

PERSONAL AUTHOR: BAKER, ROBERT A.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, US GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

DESCRIPTOR: CASE STUDIES; \*CONTAMINANTS; MODELING; \*SEDIMENTS; \*TRANSPORT; TOXICITY; \*WATER RESOURCES

INSTITUTION NAME: U.S. WATER RESOURCES COUNCIL.

DESCRIPTIVE NOTE: 650P. PRICE: \$39.95-SINGLE COPY

ABSTRACT: THE COLLECTED SYMPOSIUM PAPERS IN THIS VOLUME DEAL WITH THE PROBLEMS OF CONTAMINANTS OF SEDIMENTS IN AQUEOUS SYSTEMS. TOPICS COVERED INCLUDE THE FATE AND TRANSPORT OF CONTAMINANTS, MODELING AND TOXICITY. NUMEROUS CASE STUDIES ARE PRESENTED.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 40 BUTTERWORTH PUBLISHERS, INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW005707

PUBLICATION DATE: DEC 78

IRIS ACCESSION NUMBER: EW005705

TITLE: THE NATION'S WATER RESOURCES 1975-2000, VOLUME 3: ANALYTICAL DATA SUMMARY.

PUBLICATION DATE: AUG 80

DESCRIPTOR: FEDERAL LEGISLATION; HYDROLOGY; \*LEGISLATION; \*NATIONAL ASSESSMENT; \*PLANNING; PROJECTIONS; RESEARCH; WATER SUPPLY; WATER USE; \*WATER CONSERVATION; \*WATER MANAGEMENT; \*WATER RESOURCES; \*WATER RESOURCE COUNCIL; \*WATER POLICY

TITLE: CONTAMINANTS AND SEDIMENTS VOLUME 2, ANALYSIS, CHEMISTRY, BIOLOGY.

DESCRIPTIVE NOTE: 89P. PRICE: \$4.00

PERSONAL AUTHOR: BAKER, ROBERT A.

ABSTRACT: THIS VOLUME CONTAINS BASELINE AND PROJECTED INFORMATION DEVELOPED FOR THE SECOND NATIONAL WATER ASSESSMENT UNDER THE DIRECTION OF THE U.S. WATER RESOURCES COUNCIL TO MEET THE REQUIREMENTS OF THE WATER RESOURCES PLANNING ACT OF 1965. IT INCLUDED NATIONAL AND REGIONAL INFORMATION FOR SOCIAL, ECONOMIC, ENVIRONMENTAL, WATER SUPPLY, AND WATER USE. INFORMATION FOR SUBREGIONS IS CONTAINED IN THE FIVE APPENDIXES.

DESCRIPTOR: AQUEOUS SYSTEMS; ANALYTICAL TECHNIQUES; \*CONTAMINANTS; \*CHEMICAL REACTIONS; \*INSTRUMENTATION; \*SEDIMENTS; \*TOXICITY; \*WATER RESOURCES

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, US GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

DESCRIPTIVE NOTE: 650P. PRICE: \$39.95-VOLUME 2 ONLY, \$69.95-2 VOLUME SET.

INSTITUTION NAME: U.S. WATER RESOURCES COUNCIL.

ABSTRACT: THE COLLECTED SYMPOSIUM PAPERS IN THIS VOLUME DEAL WITH THE ANALYTICAL, CHEMICAL AND BIOLOGICAL ASPECTS OF CONTAMINANTS OR SEDIMENTS IN AQUEOUS SYSTEMS. TOPICS COVERED INCLUDE: INSTRUMENTATION, CHEMICAL REACTIONS, CHEMICAL MECHANISMS, ADSORPTION, AND BIOLOGICAL FACTORS WHICH EFFECT THE FATE AND TRANSPORT OF CONTAMINANTS OR SEDIMENTS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 40 BUTTERWORTH PUBLISHERS, INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW005708

PUBLICATION DATE: DEC 78

IRIS ACCESSION NUMBER: EW005706

TITLE: THE NATION'S WATER RESOURCES 1975-2000, VOLUME 3: ANALYTICAL DATA, APPENDIX I, SOCIAL, ECONOMIC AND ENVIRONMENTAL DATA.

PUBLICATION DATE: DEC 78

DESCRIPTOR: \*ENVIRONMENTAL FACTORS; \*ECONOMICS; FEDERAL LEGISLATION; \*HYDROLOGY; \*MODELS; \*NATIONAL ASSESSMENT; \*PLANNING; PROJECTIONS; RESEARCH; \*SOCIAL FACTORS; WATER SUPPLY; WATER USE; \*WATER CONSERVATION; \*WATER MANAGEMENT;

TITLE: THE NATION'S WATER RESOURCES 1975-2000, VOLUME 2: WATER QUANTITY, QUALITY, AND RELATED LAND CONSIDERATIONS.

DESCRIPTOR: CASE STUDIES; \*FEDERAL LEGISLATION; LEGISLATION; \*NATIONAL ASSESSMENT; PLANNING; PROJECTIONS;

\*WATER RESOURCES; \*WATER RESOURCE COUNCIL; \*WATER POLICY

DESCRIPTIVE NOTE: 150P. PRICE: \$4.75

ABSTRACT: THIS APPENDIX CONTAINS BASELINE AND PROJECTED INFORMATION DEVELOPED FOR THE SECOND NATIONAL WATER ASSESSMENT UNDER THE DIRECTION OF THE U.S. WATER RESOURCES COUNCIL TO MEET THE REQUIREMENTS OF THE WATER RESOURCES PLANNING ACT OF 1965. IT INCLUDES SOCIAL, ECONOMIC, ENVIRONMENTAL, AND OTHER WATER-RELATED DATA CONSISTENT WITH THE WATER-USE AND WATER-SUPPLY INFORMATION FOUND IN APPENDICES II, III, AND IV. THIS APPENDIX PRESENTS TWO ALTERNATIVE VIEWS. ONE VIEW, THE NATIONAL FUTURE (NF), REPRESENTS THE FEDERAL VIEWPOINT. THE OTHER VIEW, THE STATE-REGIONAL FUTURE (SRF), REPRESENTS THE REGIONAL SPONSOR AND STATE VIEWPOINT. THE NF INFORMATION ATTEMPTS TO BE NATIONALLY CONSISTENT IN ITS ASSUMPTIONS OF GROWTH AND CHANGE, WHEREAS THE SRF INFORMATION REFLECTS A MORE LOCALIZED, BUT OFTEN MORE ACCURATE VIEW OF REGIONAL AND SUBREGIONAL CONDITIONS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

INSTITUTION NAME: U.S. WATER RESOURCES COUNCIL.

IRIS ACCESSION NUMBER: EW005709

PUBLICATION DATE: DEC 78

TITLE: THE NATION'S WATER RESOURCES 1975-2000, VOLUME 3: ANALYTICAL DATA, APPENDIX II, ANNUAL WATER SUPPLY AND USE ANALYSIS.

DESCRIPTOR: \*BASELINE DATA; DATA ANALYSIS; \*EVALUATION; FEDERAL LEGISLATION; HYDROLOGY; \*PLANNING; \*PREDICTION; \*POLICY; RESEARCH; WATER SUPPLY; WATER CONSERVATION; \*WATER MANAGEMENT; \*WATER RESOURCES

DESCRIPTIVE NOTE: 174P. PRICE: \$5.00

ABSTRACT: THIS APPENDIX CONTAINS BASELINE AND PROJECTED INFORMATION DEVELOPED FOR THE SECOND NATIONAL WATER ASSESSMENT UNDER THE DIRECTION OF THE U.S. WATER RESOURCES COUNCIL TO FULFILL THE REQUIREMENTS OF THE WATER RESOURCES PLANNING ACT OF 1965. IT INCLUDES ANNUAL BASELINE WATER-SUPPLY DATA AND BASELINE AND PROJECTED WATER-WITHDRAWAL AND WATER-CONSUMPTION DATA. THE WATER ADEQUACY ANALYSIS AND NATURAL WATER SUPPLY ANALYSIS PROVIDE ESTIMATES OF THE ADEQUACY OF FUTURE FRESH-WATER SUPPLIES TO MEET BOTH OFFSTREAM AND INSTREAM NEEDS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

INSTITUTION NAME: U.S. WATER RESOURCES COUNCIL.

IRIS ACCESSION NUMBER: EW005710

PUBLICATION DATE: DEC 78

TITLE: THE NATION'S WATER RESOURCES 1975-2000, VOLUME 3: ANALYTICAL DATA APPENDIX III, MONTHLY WATER SUPPLY AND USE ANALYSIS.

DESCRIPTOR: FEDERAL LEGISLATION; \*HYDROLOGY; \*LEGISLATION; \*NATIONAL ASSESSMENT; \*PLANNING; PROJECTIONS; RESEARCH; WATER SUPPLY; WATER USE; \*WATER CONSERVATION; \*WATER MANAGEMENT; \*WATER RESOURCES; \*WATER RESOURCES COUNCIL; \*WATER POLICY

DESCRIPTIVE NOTE: 302P. PRICE: \$7.00

ABSTRACT: THIS APPENDIX CONTAINS BASELINE AND PROJECTED INFORMATION DEVELOPED FOR THE SECOND NATIONAL WATER ASSESSMENT UNDER THE DIRECTION OF THE U.S. WATER RESOURCES COUNCIL TO MEET THE REQUIREMENTS OF THE WATER RESOURCES PLANNING ACT OF 1965. IT INCLUDES MONTHLY BASELINE WATER-SUPPLY DATA AND BASELINE AND PROJECTED WATER-WITHDRAWAL AND WATER-CONSUMPTION DATA. THE WATER ADEQUACY ANALYSIS PROVIDES MONTHLY ESTIMATES OF THE ADEQUACY OF FUTURE FRESH-WATER SUPPLIES TO MEET BOTH OFFSTREAM AND INSTREAM NEEDS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

INSTITUTION NAME: U.S. WATER RESOURCES COUNCIL.

IRIS ACCESSION NUMBER: EW005711

PUBLICATION DATE: DEC 78

TITLE: THE NATION'S WATER RESOURCES 1975-2000, VOLUME 3: ANALYTICAL DATA APPENDIX IV, DRY CONDITIONS WATER SUPPLY AND USE ANALYSIS.

DESCRIPTOR: \*DROUGHTS; FEDERAL LEGISLATION; \*HYDROLOGY; \*LEGISLATION; \*NATIONAL ASSESSMENT; \*PLANNING; PROJECTIONS; RESEARCH; WATER SUPPLY; WATER USE; \*WATER CONSERVATION; \*WATER MANAGEMENT; \*WATER RESOURCES; \*WATER RESOURCES COUNCIL; \*WATER POLICY

DESCRIPTIVE NOTE: 337P. PRICE: \$7.00

ABSTRACT: THIS APPENDIX CONTAINS BASELINE AND PROJECTED INFORMATION DEVELOPED FOR THE SECOND NATIONAL WATER ASSESSMENT WHICH WAS CARRIED OUT UNDER THE DIRECTION OF THE U.S. WATER RESOURCES COUNCIL TO MEET THE REQUIREMENTS OF THE WATER RESOURCES PLANNING ACT OF 1965. IT INCLUDES BOTH ANNUAL AND MONTHLY DRY-CONDITION NEEDS FOR WATER WITHDRAWALS AND CONSUMPTION. THE DRY-CONDITION WATER ADEQUACY ANALYSIS PROVIDES BOTH ANNUAL AND MONTHLY ESTIMATES OF THE ADEQUACY OF FUTURE FRESH-WATER SUPPLIES TO MEET BOTH OFFSTREAM AND INSTREAM NEEDS UNDER A MODERATE DROUGHT CONDITION WHICH OCCURS, ON THE AVERAGE, ONCE IN FIVE YEARS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT PRINTING OFFICE, WASHINGTON, DC 20402

INSTITUTION NAME: U.S. WATER RESOURCES COUNCIL.

IRIS ACCESSION NUMBER: EW005712

PUBLICATION DATE: DEC 78

TITLE: THE NATION'S WATER RESOURCES 1975-2000, VOLUME 3:  
ANALYTICAL DATA, APPENDIX V. STREAMFLOW CONDITIONS.

DESCRIPTOR: FEDERAL LEGISLATION; \*HYDROLOGY;  
INSTRUMENTATION; \*NATIONAL ASSESSMENT; PLANNING;  
PROJECTIONS; RESEARCH; \*STREAMS; \*STREAMFLOW; WATER SUPPLY;  
WATER USE; \*WATER CONSERVATION; \*WATER MANAGEMENT; \*WATER  
RESOURCES; \*WATER RESOURCES COUNCIL; \*WATER POLICY

DESCRIPTIVE NOTE: 276P. PRICE: \$6.00

ABSTRACT: THIS APPENDIX CONTAINS DETAILED BACKGROUND  
INFORMATION ON THE DEVIATION OF THE BASELINE STREAMFLOW  
INFORMATION. THIS INFORMATION WAS COLLECTED FOR THE SECOND  
NATIONAL WATER ASSESSMENT BY THE U.S. WATER RESOURCES  
COUNCIL TO MEET THE REQUIREMENTS OF THE WATER RESOURCES  
PLANNING ACT OF 1965. IT CONTAINS A DESCRIPTION OF  
STREAMFLOW INSTRUMENTS USED, CORRECTION FACTORS APPLIED,  
PERIODS OF RECORD, AND EXTREME FLOWS OF RECORD FOR EACH  
SUBREGION. ALSO INCLUDED IS THE STATE REGIONAL FUTURE  
ESTIMATE OF AVERAGE STREAM FLOW CONDITIONS.

AVAILABILITY: SUPERINTENDENT OF DOCUMENTS, U.S. GOVERNMENT  
PRINTING OFFICE WASHINGTON, DC 20462

INSTITUTION NAME: U.S. WATER RESOURCES COUNCIL.

IRIS ACCESSION NUMBER: EW005713

PUBLICATION DATE: 80

TITLE: INDIVIDUAL ONSITE WASTEWATER SYSTEMS.

PERSONAL AUTHOR: MCELLAND, NINA I.

DESCRIPTOR: CASE STUDIES; \*CONFERENCE REPORTS; \*DESIGN;  
\*FACILITIES; \*MANAGEMENT; \*ONSITE DISPOSAL; \*ONSITE  
WASTEWATER SYSTEMS; ONSITE WASTEWATER TREATMENT; OPERATIONS  
(WASTEWATER); RURAL AREAS; SEWAGE; SOILS; \*WASTEWATER  
TREATMENT

DESCRIPTIVE NOTE: 522P. PRICE: \$30.00

ABSTRACT: THIS BOOK CONTAINS A COMPILATION OF 40 PAPERS  
PRESENTED AT THE SIXTH NATIONAL CONFERENCE (1979) ON  
INDIVIDUAL ONSITE WASTEWATER SYSTEMS. THIS CONFERENCE HAS  
PROVIDED A FORUM FOR COMMUNICATION BETWEEN PROFESSIONALS AND  
USERS CONCERNED WITH EFFECTIVE UTILIZATION OF ONSITE  
WASTEWATER SYSTEMS. THE KINDS OF PROBLEMS FOR WHICH ONSITE  
TREATMENT AND DISPOSAL SHOULD APPROPRIATELY BE CONSIDERED,  
SELECTION CRITERIA, MANAGEMENT STRATEGIES, AND TECHNIQUES  
FOR REJUVENATING FAILED SYSTEMS ARE DESCRIBED IN THESE  
PROCEEDINGS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., C/O  
BUTTERWORTH PUBLISHERS, INC., 10 TOWER OFFICE PARK, WOBURN,  
MA 01801.

IRIS ACCESSION NUMBER: EW005715

PUBLICATION DATE: 80

TITLE: MANUAL FOR WATERWORKS OPERATORS.

DESCRIPTOR: CHEMISTRY; DISINFECTION; ELECTRICITY;  
FACILITIES; HYDRAULICS; INSTALLATION; \*INSTRUCTIONAL  
MATERIALS; LABORATORY PROCEDURES; MAINTENANCE; \*MANAGEMENT;  
\*MANUALS; MATHEMATICS; MICROBIOLOGY; \*OPERATIONS (WATER);  
SAFETY; WATER DISTRIBUTION; \*WATER TREATMENT; \*WATER  
UTILITIES

DESCRIPTIVE NOTE: 500P.

ABSTRACT: THIS COMPREHENSIVE MANUAL PROVIDES THE NECESSARY  
INFORMATION FOR OPERATIONS, MAINTENANCE, AND MANAGEMENT OF  
WATERWORK PROJECTS. CHAPTERS INCLUDE: THE IMPORTANCE AND  
SOURCES OF WATER, MATHEMATICS, BASIC HYDRAULICS, CHEMISTRY,  
MICROBIOLOGY, BASIC ELECTRICITY, CONTRACT DOCUMENTS FOR  
INTERPRETATION OF CONSTRUCTION DRAWING AND SPECIFICATION,  
AERATION, COAGULATION-SEDIMENTATION, FILTRATION,  
DISINFECTION, IRON AND MANGANESE REMOVAL, SOFTENING AND  
STABILIZATION, TASTE AND ODOR, FLUORIDATION, EMERGENCY  
TREATMENT, BASIC MATERIALS, INSTALLATION-TRANSMISSION LINES,  
INSTALLATION-DISTRIBUTION, INSTALLATION-SERVICES, PUMPING,  
THE STORAGE OF POTABLE WATER, METERING, INSTRUMENTATION,  
DISTRIBUTION SYSTEM MAPS AND RECORDS, CROSS-CONNECTIONS,  
REPAIR AND MAINTENANCE, FIRE PROTECTION, CORROSION CONTROL,  
FINANCING, PUBLIC RELATIONS, SAFETY IN WATER UTILITIES,  
MANAGEMENT AND SUPERVISION, AND LONG RANGE PLANNING FOR  
WATER UTILITIES.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, SOUTHWEST 8  
TEXAS WATER WORKS JOURNAL, P.O. BOX 769, TEMPLE, TX 76501

INSTITUTION NAME: SOUTHWEST SECTION, AMERICAN WATER WORKS  
ASSOCIATION.

IRIS ACCESSION NUMBER: EW005725

PUBLICATION DATE: 79

TITLE: TOXIC CHEMICAL AND EXPLOSIVES FACILITIES.

PERSONAL AUTHOR: SCOTT, RALPH A., JR.

DESCRIPTOR: \*COST EFFECTIVENESS; \*CARCINOGENS; \*DESIGN;  
\*EXPLOSIVE FACILITIES; \*ENGINEERING; \*HAZARDOUS MATERIALS;  
\*REGULATIONS; \*SYMPOSIA; \*TOXIC SUBSTANCES; TOXICOLOGY

DESCRIPTIVE NOTE: 352P. PRICE: \$32.00

ABSTRACT: THIS VOLUME IS BASED ON A SYMPOSIUM SPONSORED BY  
THE DIVISION OF CHEMICAL HEALTH AND SAFETY OF THE AMERICAN  
CHEMICAL SOCIETY. IT CONTAINS INFORMATION ON THE LATEST

MEANS FOR CLASSIFICATION, MEASUREMENT, AND CONTROL OF HAZARDOUS EXPLOSIVES AND TOXIC SUBSTANCES, INCLUDING THE MULTILEVEL REGULATORY CONTROLS WHICH HAVE BEEN ESTABLISHED ACCORDING TO THE AMOUNT OF TOXICOLOGICAL INFORMATION AVAILABLE. METHODS FOR DEVELOPING AND SUBSEQUENTLY IMPLEMENTING RELEVANT ENGINEERING DESIGN CRITERIA THAT ARE MOST EFFICIENT AND COST EFFECTIVE FOR BOTH FACILITIES ARE ALSO PRESENTED.

AVAILABILITY: AMERICAN CHEMICAL SOCIETY, SPECIAL ISSUES SALES, 1155 SIXTEENTH ST., N.W., WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW005726

PUBLICATION DATE: 78

TITLE: SOLID WASTES AND RESIDUES.

PERSONAL AUTHOR: JONES, JERRY L.; RADDING, SHIRLEY B.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*BIOLOGICAL SCREENING; \*CHEMICALS; \*CARCINOGENICITY; ENVIRONMENT; \*MONITORING; \*MUTAGENICITY; \*SYMPOSIA; \*TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 421P. PRICE: \$30.75

ABSTRACT: THIS VOLUME IS BASED ON A SYMPOSIUM SPONSORED BY THE DIVISION OF INDUSTRIAL AND ENGINEERING CHEMISTRY OF THE AMERICAN CHEMICAL SOCIETY. IT CONTAINS DESCRIPTIONS OF THE MOST WIDELY RECOGNIZED STATE-OF-THE-ART TECHNIQUES FOR THE RAPID BIOLOGICAL SCREENING OF CHEMICAL SUBSTANCES FOR POTENTIAL MUTAGENICITY AND CARCINOGENICITY, AND SURVEYS PRESENT INSTRUMENTAL ANALYTICAL TECHNIQUES FOR MONITORING TOXIC SUBSTANCES.

AVAILABILITY: AMERICAN CHEMICAL SOCIETY, SPECIAL ISSUES SALES, 1155 SIXTEENTH ST., N.W., WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW005729

PUBLICATION DATE: JUL 77

TITLE: CASCADE WATER REUSE.

PERSONAL AUTHOR: SCHMIDT, CURTIS J.; AND OTHERS

DESCRIPTOR: \*COST EFFECTIVENESS; FACILITIES; \*MILITARY FACILITIES; \*MODELS; \*RECYCLING; \*WASTEWATER COLLECTION; \*WATER RESOURCES; \*WATER CONSERVATION; WATER QUALITY; \*WASTEWATER TREATMENT; \*WATER SUPPLY

DESCRIPTIVE NOTE: 84P. PRICE: \$8.00

ABSTRACT: THE WATER REUSE MODEL DESCRIBED IN THIS REPORT WAS DEVELOPED TO ASSIST AIR FORCE PERSONNEL IN REUSING WASTEWATER ON AIR FORCE BASES. THE MODEL AIDS IN SELECTING THE MOST COST EFFECTIVE NETWORK FOR WASTEWATER COLLECTION, TREATMENT AND REUSE IN BASE ACTIVITIES

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285

PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW005730

PUBLICATION DATE: 79

TITLE: GENERAL COUNSEL OPINIONS, VOLUMES 1 AND 2.

DESCRIPTOR: AIR POLLUTION; \*ENVIRONMENTAL PROTECTION; \*ENVIRONMENTAL LEGISLATION; \*ENVIRONMENTAL PROTECTION AGENCY; \*FEDERAL REGULATIONS; \*JUDICIAL DECISIONS; \*LAW; \*LEGAL OPINIONS; LANDUSE; NOISE; PESTICIDES; REGULATIONS; RADIATION; SOLID WASTES; WATER POLLUTION

DESCRIPTIVE NOTE: 1992P. PRICE: \$150.00

ABSTRACT: THIS PUBLICATION CONTAINS THE LEGAL OPINIONS OF THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY (EPA) GENERAL COUNSEL AND IS DESIGNED TO BE A REFERENCE WORK TO GUIDE THE USER THROUGH THIS COMPLEX AREA OF LAW. THE OPINIONS OF THE GENERAL COUNSEL REPRESENT INTERPRETATIONS OF EPA'S STATUTES AND REGULATIONS AT THE TIME THE OPINIONS WERE WRITTEN. SUBSEQUENT CHANGES IN THE STATUTES AND REGULATIONS AND SUBSEQUENT JUDICIAL DISCUSSIONS HAVE SUPERSEDED SOME OF THESE OPINIONS, IN WHOLE OR IN PART. IN MANY INSTANCES, A NOTE INDICATING THE SUBSEQUENT DEVELOPMENT HAS BEEN INCLUDED.

AVAILABILITY: NILS PUBLISHING COMPANY, 20675 BAHAMA STREET, CHATSWORTH, CA 91311

INSTITUTION NAME: THE EDITORIAL STAFF OF THE ENVIRONMENTAL LAW PUBLISHING SERVICE.

IRIS ACCESSION NUMBER: EW005731

PUBLICATION DATE: 74

TITLE: BASIC BLUEPRINT READINGS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*BLUEPRINTS; \*DRAWINGS; \*ENGINEERING DRAWINGS; \*INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING MANUAL; \*TRAINING PROGRAM; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75, \$267.50 COMPLETE COURSE 1503

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON HOW TO READ AND INTERPRET ENGINEERING PLANS AND DRAWINGS. THE TOPICS OF THE TEN LESSONS ARE: INTRODUCTION TO BLUEPRINTS, ELEMENTS OF MACHINE DRAWINGS, HYDRAULIC AND PNEUMATIC DRAWINGS, MACHINE DRAWINGS, BUILDING DRAWINGS, ELECTRICAL DRAWINGS, PIPE-SYSTEM DRAWINGS, SHEET METAL DRAWINGS, SHOP MATH, AND SKETCHING. EACH LESSON CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING

SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

(312) 381-1840

IRIS ACCESSION NUMBER: EW005732

IRIS ACCESSION NUMBER: EW005734

PUBLICATION DATE: 74

PUBLICATION DATE: 74

TITLE: READING SCHEMATIC & SYMBOLS.

TITLE: MEASUREMENT.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*DIAGRAMS; \*INDIVIDUALIZED INSTRUCTION;  
\*INSTRUCTIONAL MATERIALS; PROGRAMMED INSTRUCTION; \*SCHEMATIC  
DIAGRAMS; SKILL DEVELOPMENT; \*SYMBOLS; \*TRAINING PROGRAMS;  
WORKBOOK

DESCRIPTOR: \*INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL  
MATERIALS; \*MEASUREMENT; \*MEASUREMENT TECHNIQUES; \*METRIC  
SYSTEM; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING  
PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75, \$267.50 COMPLETE  
COURSE 1503

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE 1503

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON  
UNDERSTANDING ELECTRICAL, MECHANICAL, AND FLUID SYSTEMS  
THROUGH THE USE OF SCHEMATIC DIAGRAMS AND SYMBOLS. THE  
TOPICS OF THE TEN LESSONS ARE: INTRODUCTION TO SCHEMATICS,  
INTRODUCTION TO SYMBOLS, GUIDELINES FOR READING SCHEMATICS,  
ELECTRICAL SYMBOLS, ELECTRICAL DIAGRAMS, PIPING SYMBOLS,  
PIPING SCHEMATICS, FLUID POWER SYMBOLS, FLUID POWER  
SCHEMATICS, AND WELDING SYMBOLS. EACH LESSON INCLUDES A  
PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A  
COMPLETION QUIZ.

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON THE  
METHODS OF DETERMINING WEIGHTS, PRESSURES, LENGTHS, AND  
VOLUMES, AND METRIC CONVERSION. THE TOPICS OF THE TEN  
LESSONS ARE: UNITS OF MEASUREMENT, METRIC MEASUREMENT,  
LINEAR MEASUREMENT, COMPARISON AND SURFACE MEASUREMENT, BULK  
MEASUREMENT, MOTION MEASUREMENT, FORCE MEASUREMENT,  
TEMPERATURE MEASUREMENT, FLUID MEASUREMENT, AND ELECTRICAL  
MEASUREMENT. EACH LESSON CONTAINS A PRESENTATION OF THE  
MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
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AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:  
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IRIS ACCESSION NUMBER: EW005733

IRIS ACCESSION NUMBER: EW005735

PUBLICATION DATE: 76

PUBLICATION DATE: 74

TITLE: BASIC SHOP MATH.

TITLE: METAL MATERIALS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*GEOMETRY; \*INDIVIDUALIZED INSTRUCTION;  
\*INSTRUCTIONAL MATERIALS; MATHEMATICAL APPLICATIONS;  
\*MATHEMATICS; \*MATHEMATICS EDUCATION; PROGRAMMED  
INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING PROGRAMS; WORKBOOK

DESCRIPTOR: \*ALLOYS; \*INDIVIDUALIZED INSTRUCTION;  
\*INSTRUCTIONAL MATERIALS; \*METALLURGY; \*METALS; PROGRAMMED  
INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING PROGRAMS;  
WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75, \$267.50 COMPLETE  
COURSE 1503.

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE 1503

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON  
BASIC SHOP MATH. THE TOPICS OF THE TEN LESSONS ARE: NUMBERS,  
FRACTIONS, DECIMALS, ALGEBRA AND FORMULAS, RATIO AND  
PERCENTAGE, POWERS AND ROOTS, PRACTICAL GEOMETRY, AREA AND  
VOLUME, WORKING WITH TRIANGLES, AND USING THE SLIDE RULE.  
EACH LESSON CONTAINS A PRESENTATION OF THE LITERATURE,  
PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON THE  
CHARACTERISTICS AND USES OF METALS AND ALLOYS FOR IN-PLANT  
APPLICATIONS. THE TOPICS OF THE TEN LESSONS ARE: PHYSICAL  
STRUCTURE OF METALS, PROPERTIES OF METALS, HEAT TREATMENT,  
MANUFACTURING PROCESSES, IRON, STEEL, CARBON, ALUMINUM,  
MAGNESIUM, TITANIUM, COPPER, LEAD, NICKEL, TIN, AND ZINC.  
EACH LESSON CONTAINS A PRESENTATION OF THE MATERIAL,  
PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
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IRIS ACCESSION NUMBER: EW005736

PUBLICATION DATE: 74

TITLE: NONMETAL MATERIALS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: CHEMICALS; \*INDIVIDUALIZED INSTRUCTION;  
\*INSTRUCTIONAL MATERIALS; \*NONMETAL MATERIALS; PAINTS;  
PLASTICS; PROGRAMMED INSTRUCTION; RUBBER; SKILL DEVELOPMENT;  
\*TRAINING PROGRAMS; WOOD; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE 1503

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON THE  
CHARACTERISTICS AND USES OF NONMETAL MATERIALS FOR IN-PLANT  
APPLICATION. THE TOPICS OF THE TEN LESSONS ARE: INTRODUCTION  
TO NONMETALS, PLASTICS, RUBBER, CARBON, INDUSTRIAL  
CHEMICALS, PAINTS AND COATINGS, WOOD, CONSTRUCTION  
MATERIALS, INSULATING MATERIALS, AND ADHESIVES AND TAPES.  
EACH LESSON CONTAINS A PRESENTATION OF THE MATERIAL,  
PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005737

PUBLICATION DATE: 74

TITLE: HAND TOOLS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: EQUIPMENT OPERATION; \*HAND TOOLS;  
\*INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS;  
PROGRAMMED INSTRUCTION; \*SAFETY; SKILL DEVELOPMENT; \*TOOLS;  
\*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE 1503

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON  
SELECTING, USING, AND CARING FOR HAND TOOLS. THE TOPICS OF  
THE TEN LESSONS ARE: MEASURING TOOLS, WRENCHES AND  
SCREWDRIVERS, PIPEFITTING TOOLS, PLUMBING TOOLS, WOODWORKING  
TOOLS, SHEET METAL TOOLS, METALWORKING TOOLS, AND HOISTING  
AND PULLING TOOLS. EACH LESSON CONTAINS A PRESENTATION OF  
THE MATERIALS, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005738

PUBLICATION DATE: 74

TITLE: PORTABLE POWER TOOLS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*EQUIPMENT; EQUIPMENT OPERATION;  
\*INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS;  
\*POWER TOOLS; PROGRAMMED INSTRUCTION; \*SAFETY; SKILL  
DEVELOPMENT; \*TOOLS; \*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE 1503

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON SAFE  
PRACTICES FOR THE CARE AND HANDLING OF PORTABLE POWER TOOLS  
ON THE JOB. THE TOPICS OF THE TEN LESSONS ARE: ELECTRICAL  
DRILLS, ELECTRIC HAMMERS, ELECTRIC CIRCULAR SAWS, LINEAR  
MOTION SAWS, ROUTERS AND PLANES, ELECTRIC SANDERS, POWER  
SCREWDRIVERS AND WRENCHES, PNEUMATIC DRILLS AND HAMMERS,  
GRINDERS AND SHEARS, AND TOOL SHARPENING. EACH LESSON  
CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED  
EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005739

PUBLICATION DATE: 74

TITLE: PLANT SAFETY.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL  
MATERIALS; \*OCCUPATIONAL SAFETY AND HEALTH ACT; \*PLANT  
SAFETY; PROGRAMMED INSTRUCTION; \*SAFETY; SKILL DEVELOPMENT;  
\*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE 1503

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON  
PLANT SAFETY, AND UNDERSTANDING SAFETY STANDARDS APPROVED BY  
OSHA. THE TOPICS OF THE TEN LESSONS ARE: MAKING SAFETY WORK,  
WORK AREA SAFETY, SAFE MATERIAL HANDLING, TOOL AND EQUIPMENT  
SAFETY, MACHINERY SAFEGUARDS, PERSONAL PROTECTION,  
ELECTRICAL SAFETY, HAZARDOUS MATERIALS AND OPERATIONS, FIRE  
PREVENTION, AND UNDERSTANDING OSHA. EACH LESSON CONTAINS  
PRESENTATION OF MATERIAL, PROGRAMMED EXERCISES, AND A  
COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

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IRIS ACCESSION NUMBER: EW005740

PUBLICATION DATE: 74

TITLE: DEVELOPING TROUBLESHOOTING SKILLS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; \*MAINTENANCE; PROBLEM SOLVING; \*PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING PROGRAMS; \*TROUBLESHOOTING; WORKBOOK

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50 COMPLETE COURSE 1503

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON DEVELOPING TROUBLESHOOTING SKILLS. THE TOPICS OF THE TEN LESSONS ARE: YOUR JOB IN MAINTENANCE, DEVELOPING GOOD WORKING HABITS, TROUBLESHOOTING TECHNIQUES, AIDS TO TROUBLESHOOTING, TROUBLESHOOTING WITH SCHEMATICS, BREAKDOWN MAINTENANCE, PREPARATIONS FOR TROUBLESHOOTING, SOLVING MECHANICAL PROBLEMS, SOLVING ELECTRICAL PROBLEMS, AND PLANNED MAINTENANCE. EACH LESSON CONTAINS A PRESENTATION OF MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005741

PUBLICATION DATE: 74

TITLE: SUPERVISORS MATERIAL FOR TPC TRAINING PROGRAMS. FUNDAMENTALS-COMplete COURSE 1503.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*FACILITIES; HAND TOOLS; \*INSTRUCTIONAL MATERIALS; \*JOB SKILLS; \*MAINTENANCE; MATHEMATICS; MEASUREMENT; SAFETY; \*TEACHING GUIDES; \*TRAINING MANUALS; \*TRAINING PROGRAMS

DESCRIPTIVE NOTE: PRICE: \$15.75

ABSTRACT: THIS PACKET CONTAINS THE NECESSARY MATERIALS TO CONDUCT A TRAINING PROGRAM IN PLANT MAINTENANCE. INCLUDED ARE: INFORMATION ON IMPLEMENTING THE TRAINING PROGRAM, SUPERVISORS UNIT GUIDE TO TOPICS, UNIT TESTS, ANSWER SHEETS, AUTOMATIC ANSWER KEY, PROGRESS CHARTS, UNIT COMPLETION CERTIFICATES, AND REQUEST FOR COMPLETION CERTIFICATES. TOPICS INCLUDED IN THIS TRAINING PROGRAM ARE: BASIC BLUEPRINT READING, READING SCHEMATICS AND SYMBOLS, BASIC SHOP MATH, MEASUREMENT, METAL MATERIALS, NON-METAL MATERIALS, HAND TOOLS, PORTABLE POWER TOOLS, PLANT SAFETY, AND DEVELOPMENT TROUBLESHOOTING SKILLS.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO GROVE, BARRINGTON, IL 60010, TELEPHONE:

IRIS ACCESSION NUMBER: EW005742

PUBLICATION DATE: 74

TITLE: UNDERSTANDING INDUSTRIAL POLLUTION CONTROL.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*AIR POLLUTION CONTROL; \*INDIVIDUALIZED INSTRUCTION; INDUSTRIAL WASTES; \*INSTRUCTIONAL MATERIALS; \*NOISE; \*POLLUTION CONTROL; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*SOLID WASTES; \*TRAINING PROGRAMS; \*WATER POLLUTION CONTROL; WORKBOOKS

DESCRIPTIVE NOTE: 80P. PRICE: \$18.75, COURSE 1508

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS FIVE LESSONS ON THE BASICS OF AIR, WATER, SOLID WASTE, AND NOISE POLLUTION CONTROL. THE TOPICS OF THE FIVE LESSONS ARE: INTRODUCTION TO POLLUTION CONTROL, CONTROLLING AIR POLLUTION, CONTROLLING WATER POLLUTION, CONTROLLING SOLID WASTE POLLUTION, AND CONTROLLING NOISE POLLUTION. EACH LESSON CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO GROVE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005743

PUBLICATION DATE: 74

TITLE: SUPERVISORS MATERIAL FOR TPC TRAINING PROGRAM-COURSE 1508. INDUSTRIAL POLLUTION CONTROL.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: AIR POLLUTION; EVALUATION; \*INDUSTRIAL POLLUTION; \*INSTRUCTIONAL MATERIALS; NOISE POLLUTION; \*POLLUTION CONTROL; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; SOLID WASTES; \*TEACHING GUIDES; \*TRAINING MANUALS; \*TRAINING PROGRAMS; WATER POLLUTION

DESCRIPTIVE NOTE: PRICE: \$15.75

ABSTRACT: THIS PACKET CONTAINS SUPERVISORS MATERIAL FOR A TRAINING PROGRAM IN INDUSTRIAL POLLUTION CONTROL. INCLUDED IN THE PACKET ARE: SUPERVISORS UNIT GUIDE, UNIT TESTS, ANSWER SHEETS, AUTOMATIC ANSWER KEYS, PROGRESS CHARTS, UNIT COMPLETION CERTIFICATES, AND REQUESTS FOR COMPLETION CERTIFICATES. TOPICS IN THE TRAINING UNIT INCLUDE: AIR, WATER, SOLID WASTE, AND NOISE POLLUTION AND POLLUTION CONTROL.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO GROVE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005744

PUBLICATION DATE: 74

TITLE: HOW POWER PLANTS WORK.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: ENERGY; \*INDIVIDUALIZED INSTRUCTION;  
\*INSTRUCTIONAL MATERIALS; OPERATIONS; \*POWER PLANTS;  
PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*STEAM GENERATING  
SYSTEMS; \*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 80P. PRICE: \$18.75 SEPARATE, \$56.25  
COMPLETE COURSE 1509

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS FIVE LESSONS ON THE  
BASIC STEAM GENERATING SYSTEM. THE TOPICS OF THE FIVE  
LESSONS ARE: STEAM THE PRIMARY FORCE, HOW HEAT IS CONVERTED  
TO POWER, POWER PLANT EFFICIENCY, HANDLING WATER, FUEL, AND  
WASTES, AND POWER PLANT OPERATION AND CONTROL. EACH LESSON  
CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED  
EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005745

PUBLICATION DATE: 74

TITLE: GENERATING STEAM IN THE POWER PLANT.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*BOILERS; ENERGY CONSERVATION; \*INDIVIDUALIZED  
INSTRUCTION; \*INSTRUCTIONAL MATERIALS; MAINTENANCE; \*POWER  
PLANTS; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*STEAM  
GENERATING SYSTEMS; \*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 80P. PRICE: \$18.75 SEPARATE, \$56.25  
COMPLETE COURSE 1509

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS FIVE LESSONS ON  
CONSERVING ENERGY THROUGH IMPROVED COMBUSTION CONTROL,  
BOILER OPERATION, AND MAINTENANCE. THE TOPICS OF THE FIVE  
LESSONS ARE: TRANSFORMING ENERGY INTO WORK, BOILER  
OPERATION, BOILER MAINTENANCE, COMBUSTION AND HOW IT WORKS,  
AND STEAM GENERATION. EACH LESSON CONTAINS A PRESENTATION OF  
THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005746

PUBLICATION DATE: 74

TITLE: USING STEAM IN THE POWER PLANT.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*ENERGY CONSERVATION; FACILITIES;  
\*INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS;  
\*POWER PLANTS; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT;  
\*STEAM GENERATING SYSTEMS; \*TRAINING PROGRAMS; TURBINES;  
WORKBOOKS

DESCRIPTIVE NOTE: 80P. PRICE: \$18.75 SEPARATE, \$56.25  
COMPLETE COURSE 1509

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS FIVE LESSONS ON  
CONSERVING ENERGY THROUGH EFFICIENT USE OF STEAM IN  
TURBINES, AUXILIARIES, ELECTRIC POWER GENERATION, AND AIR-  
CONDITIONING SYSTEMS. THE TOPICS OF THE FIVE LESSONS ARE:  
TURBINES, BOILER INSTRUMENTATION, CONTROLS AND SAFETY,  
ELECTRICAL POWER FUNDAMENTALS, ELECTRICAL SYSTEMS ANALYSIS,  
AND AIR-CONDITIONING SYSTEMS. EACH LESSON CONTAINS A  
PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A  
COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005747

PUBLICATION DATE: 74

TITLE: SUPERVISORS MATERIAL FOR TPC TRAINING PROGRAM-COURSE  
1509.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: ENERGY; EVALUATION; \*INSTRUCTIONAL MATERIALS;  
POWER PLANTS; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT;  
STEAM GENERATION; \*TEACHING GUIDES; \*TRAINING MANUALS;  
\*TRAINING PROGRAMS; \*UTILITIES

DESCRIPTIVE NOTE: PRICE: \$15.75

ABSTRACT: THIS PACKET CONTAINS SUPERVISORS MATERIALS FOR A  
TRAINING PROGRAM IN UTILITIES AND POWER PRODUCTION. INCLUDED  
IN THE PACKET ARE: SUPERVISORS UNIT GUIDE, UNIT TESTS,  
ANSWER SHEETS, AUTOMATIC ANSWER KEYS, PROGRESS CHARTS, UNIT  
COMPLETION CERTIFICATES, AND REQUESTS FOR COMPLETION  
CERTIFICATES. TOPICS IN THE TRAINING UNIT INCLUDE: HOW POWER  
PLANTS WORK, GENERATING STEAM IN THE POWER PLANT, AND USING  
STEAM IN THE POWER PLANT.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005748

PUBLICATION DATE: 74

TITLE: SEMICONDUCTORS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*CIRCUITS; ELECTRICAL DEVICES; \*ELECTRONICS;  
INDIVIDUALIZED INSTRUCTION; INDUSTRIAL TECHNOLOGY;  
\*INSTRUCTIONAL MATERIALS; OPERATIONS; PROGRAMMED  
INSTRUCTION; \*SEMICONDUCTORS; SKILL DEVELOPMENT; \*TRAINING  
PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 80P. PRICE: \$18.75 SEPARATE, \$93.75  
COMPLETE COURSE 2002

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS FIVE LESSONS ON THE  
OPERATION AND REPLACEMENT OF SEMICONDUCTORS FROM DIODES TO  
ICS, AND THEIR USE IN PRINTED CIRCUIT SUBASSEMBLIES. THE  
TOPICS OF THE FIVE LESSONS ARE: INTRODUCTION TO  
SEMICONDUCTORS, TRANSISTORS, INTEGRATED CIRCUITS, PRINTED  
CIRCUIT BOARDS, AND HOW TO RECOGNIZE AND REPLACE  
SEMICONDUCTOR PACKAGES. EACH LESSON CONTAINS A PRESENTATION  
OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION  
QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005749

PUBLICATION DATE: 74

TITLE: POWER SUPPLIES.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*ELECTRICAL SYSTEMS; \*ELECTRONICS;  
\*ELECTRICITY; INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL  
MATERIALS; INDUSTRIAL TECHNOLOGY; MAINTENANCE; \*POWER  
SUPPLIES; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT;  
\*TRAINING PROGRAMS; TROUBLESHOOTING; WORKBOOKS

DESCRIPTIVE NOTE: 80P. PRICE: \$18.75 SEPARATE, \$93.75  
COMPLETE COURSE 2002

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS FIVE LESSONS ON  
UNDERSTANDING, MAINTAINING, AND TROUBLESHOOTING POWER  
SUPPLIES. THE TOPICS OF THE FIVE LESSONS ARE: INTRODUCTION  
TO POWER SUPPLIES, RECTIFIERS, FILTERS, VOLTAGE REGULATORS,  
AND TROUBLESHOOTING POWER SUPPLIES. EACH LESSON CONTAINS A  
PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A  
COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005750

PUBLICATION DATE: 74

TITLE: AMPLIFIERS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*AMPLIFIERS; ELECTRICAL DEVICES; \*ELECTRONICS;  
INDIVIDUALIZED INSTRUCTION; \*INDUSTRIAL TECHNOLOGY;  
\*INSTRUCTIONAL MATERIALS; MAINTENANCE; PROGRAMMED  
INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING PROGRAM;  
TROUBLESHOOTING; WORKBOOKS

DESCRIPTIVE NOTE: 80P. PRICE: \$18.75 SEPARATE, \$93.75  
COMPLETE COURSE 2002

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS FIVE LESSONS ON  
UNDERSTANDING, MAINTAINING, AND TROUBLESHOOTING INDUSTRIAL  
AMPLIFIERS. THE TOPICS OF THE FIVE LESSONS ARE: INTRODUCTION  
TO AMPLIFIERS, SINGLE STAGE AMPLIFIERS, MULTISTAGE  
AMPLIFIERS, OPERATIONAL AMPLIFIERS, AND TROUBLESHOOTING  
AMPLIFIERS. EACH LESSON CONTAINS A PRESENTATION OF THE  
MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005751

PUBLICATION DATE: 74

TITLE: OSCILLATORS AND MULTIVIBRATORS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: ELECTRICAL CIRCUITS; \*ELECTRONICS;  
\*ELECTRICITY; INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL  
MATERIALS; MAINTENANCE; \*MULTIVIBRATORS; \*OSCILLATORS;  
PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING  
PROGRAM; TROUBLESHOOTING; WORKBOOKS

DESCRIPTIVE NOTE: 80P. PRICE: \$18.75 SEPARATE, \$93.75  
COMPLETE COURSE 2002

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS FIVE LESSONS ON  
UNDERSTANDING, MAINTAINING, AND TROUBLESHOOTING OSCILLATOR  
AND MULTIVIBRATOR CIRCUITS. THE TOPICS OF THE FIVE LESSONS  
ARE: OSCILLATORS, INVERTERS AND CONVERTERS, MULTIVIBRATORS,  
WAVE SHAPING AND PULSE GENERATING, AND TROUBLESHOOTING  
OSCILLATORS AND MULTIVIBRATORS. EACH LESSON CONTAINS A  
PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A  
COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005752  
PUBLICATION DATE: 74  
TITLE: LOGIC CIRCUITS.  
PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR  
DESCRIPTOR: \*ELECTRONICS; INDIVIDUALIZED INSTRUCTION;  
\*INDUSTRIAL TECHNOLOGY; \*INSTRUCTIONAL MATERIALS; \*LOGIC  
CIRCUITS; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT;  
\*TRAINING PROGRAMS; WORKBOOKS  
DESCRIPTIVE NOTE: 80P. PRICE: \$18.75 SEPARATE, \$93.75  
COMPLETE COURSE 2002

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS FIVE LESSONS ON  
UNDERSTANDING LOGIC CIRCUITS, THEIR FUNCTIONAL GROUPING AND  
INDUSTRIAL APPLICATIONS. THE TOPICS OF THE FIVE LESSONS ARE:  
BASIC DIGITAL ICS, LOGIC BUILDING BLOCKS, MEDIUM AND LARGE  
SCALE ICS, FUNCTIONAL LOGIC SYSTEMS, AND TROUBLESHOOTING  
LOGIC CIRCUITS. EACH LESSON CONTAINS A PRESENTATION OF THE  
MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005753

PUBLICATION DATE: 74

TITLE: SUPERVISORS MATERIAL FOR TPC TRAINING PROGRAM-COURSE  
2002-INDUSTRIAL ELECTRONICS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*ELECTRICAL DEVICES; \*ELECTRONICS; EVALUATION;  
INDUSTRIAL TECHNOLOGY; \*INSTRUCTIONAL MATERIALS; PROGRAMMED  
INSTRUCTION; SKILL DEVELOPMENT; \*TEACHING GUIDES; \*TRAINING  
MANUALS; \*TRAINING PROGRAMS

DESCRIPTIVE NOTE: PRICE: \$15.75

ABSTRACT: THIS PACKET CONTAINS SUPERVISORS MATERIALS FOR A  
TRAINING PROGRAM IN INDUSTRIAL ELECTRONICS. INCLUDED IN THE  
PACKET ARE: SUPERVISORS UNIT GUIDE, UNIT TESTS, ANSWER  
SHEETS, AUTOMATIC ANSWER KEYS, PROGRESS CHARTS, UNIT  
COMPLETION CERTIFICATES, AND REQUESTS FOR COMPLETION  
CERTIFICATES. TOPICS IN THIS TRAINING UNIT INCLUDE:  
SEMICONDUCTORS, POWER SUPPLIES, AMPLIFIERS, OSCILLATORS, AND  
MULTIVIBRATORS, AND LOGIC CIRCUITS.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005754

PUBLICATION DATE: 74

TITLE: INTRODUCTION TO ELECTRICITY & ELECTRONICS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: CIRCUITS; CONDUCTORS; \*ELECTRICITY;  
\*ELECTRONICS; INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL  
MATERIALS; MAGNETISM; PROGRAMMED INSTRUCTION; SKILL  
DEVELOPMENT; \*TRAINING PROGRAM; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON A  
BASIC NON-MATHEMATICAL APPROACH TO UNDERSTANDING ELECTRICITY  
AND ELECTRONICS. THE TOPICS OF THE TEN LESSONS ARE:  
ELECTRICAL ENERGY, STATIC ENERGY, SOURCES OF ELECTRICITY,  
MAGNETISM, VOLTAGE, CURRENT AND RESISTANCE, ELECTRICAL  
COMPONENTS, BASIC ELECTRONICS, CONDUCTORS, D-C CIRCUITS, AND  
A-C CIRCUITS. EACH LESSON CONTAINS A PRESENTATION OF THE  
MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005755

PUBLICATION DATE: 74

TITLE: BATTERIES AND D-C CIRCUITS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*BATTERIES; \*D-C CIRCUITS; \*ELECTRICAL SYSTEMS;  
\*ELECTRICITY; INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL  
MATERIALS; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT;  
\*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON THE  
APPLICATION AND MAINTENANCE OF BATTERIES, AND UNDERSTANDING  
D-C CIRCUITS. THE TOPICS OF THE TEN LESSONS ARE:  
ELECTROCHEMICAL ACTION, BATTERY CHARACTERISTICS, TYPES OF  
BATTERIES, BATTERY MAINTENANCE, BATTERY CHARGING AND  
RECORDS, D-C CIRCUIT FUNDAMENTALS, D-C SERIES CIRCUITS, D-C  
PARALLEL CIRCUITS, SERIES-PARALLEL CIRCUITS, AND APPLICATION  
OF D-C CIRCUITS. EACH LESSON CONTAINS A PRESENTATION OF THE  
MATERIAL, PROGRAMMED EXERCISES AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

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170



177

IRIS ACCESSION NUMBER: EW005756

PUBLICATION DATE: 74

TITLE: TRANSFORMERS & A-C CIRCUITS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*A-C CIRCUITS; \*ELECTRICAL SYSTEMS; \*ELECTRICITY; INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; MAINTENANCE; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRANSFORMERS; \*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50 COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON A-C CIRCUITS, AND THE APPLICATION AND MAINTENANCE OF TRANSFORMERS. THE TOPICS OF THE TEN LESSONS ARE: PRINCIPLES OF ALTERNATING CURRENT, SINE WAVE FUNDAMENTALS, INDUCTANCE AND INDUCTIVE REACTANCE, CAPACITANCE AND CAPACITIVE REACTANCE, IMPEDANCE, A-C POWER, THREE-PHASE CIRCUITS, PRINCIPLES OF TRANSFORMERS, TRANSFORMER CONNECTIONS AND APPLICATIONS, AND TRANSFORMER MAINTENANCE. EACH LESSON CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO GROVE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005757

PUBLICATION DATE: 74

TITLE: ELECTRICAL MEASURING INSTRUMENTS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*ELECTRICAL DEVICES; \*ELECTRICITY; INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; \*MAINTENANCE; \*MEASUREMENT INSTRUMENTS; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50 COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON HOW TO SELECT, OPERATE, AND CARE FOR ELECTRICAL MEASURING EQUIPMENT. THE TOPICS OF THE TEN LESSONS ARE: PRINCIPLES OF ELECTRICAL INSTRUMENTS, D-C INSTRUMENTS, RESISTANCE MEASUREMENTS, A-C METER PRINCIPLES, A-C MEASUREMENTS, POWER MEASURING INSTRUMENTS, SPECIAL INSTRUMENTS, INDICATING INSTRUMENTS, RECORDING INSTRUMENTS AND INSTRUMENT CARE, AND ELECTRONIC INSTRUMENTS. EACH LESSON CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO GROVE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005758

PUBLICATION DATE: 74

TITLE: ELECTRICAL PROTECTIVE DEVICES.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: CIRCUIT BREAKERS; \*ELECTRICAL DEVICES; \*ELECTRICAL RELAYS; \*ELECTRICITY; FUSES; INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; \*NATIONAL ELECTRICAL CODE; PROGRAMMED INSTRUCTION; SAFETY; SKILL DEVELOPMENT; \*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75, SEPARATE, \$267.50 COMPLETE SET

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON HOW TO SELECT FUSES, CIRCUIT BREAKERS, OVERLOAD RELAYS, AND HOW TO INTERPRET THE NATIONAL ELECTRICAL CODE. THE TOPICS OF THE TEN LESSONS ARE: FUSES, CIRCUIT BREAKERS, OVERLOAD RELAYS, APPLICATION OF PROTECTIVE DEVICES, GROUNDING, THE NATIONAL ELECTRICAL CODE, ELECTRICAL CALCULATIONS, WIREWAYS, INDUSTRIAL ILLUMINATION, AND MAINTENANCE AND SAFETY. EACH LESSON INCLUDES A PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO GROVE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005759

PUBLICATION DATE: 74

TITLE: D-C EQUIPMENT & CONTROLS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*D-C EQUIPMENT; \*ELECTRICAL EQUIPMENT; \*ELECTRICAL SYSTEMS; \*ELECTRICITY; INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; MAINTENANCE; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING PROGRAM; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50 COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON THE OPERATION AND MAINTENANCE OF INDUSTRIAL D-C EQUIPMENT. THE TOPICS OF THE TEN LESSONS ARE: D-C POWER IN INDUSTRY, ELECTROMAGNETISM, D-C GENERATORS, D-C MOTORS, D-C ARMATURES, D-C RELAYS, D-C CONTROLLERS, D-C POWER SUPPLIES, SCR PRINCIPLES, AND D-C MAINTENANCE PRACTICES. EACH LESSON CONTAINS A PRESENTATION OF THE MATERIALS, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO GROVE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005760

PUBLICATION DATE: 74

TITLE: SINGLE PHASE MOTORS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*ELECTRICAL SYSTEMS; INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; MAINTENANCE; \*MOTORS; PROGRAMMED INSTRUCTION; \*SKILL DEVELOPMENT; SINGLE-PHASE MOTORS; \*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50 COMPLETE COURSE

ABSTRACT: THIS TRAINEES GUIDE CONTAINS TEN LESSONS ON THE OPERATING CHARACTERISTICS AND MAINTENANCE OF SINGLE-PHASE MOTORS. THE TOPICS OF THE TEN LESSONS ARE: OPERATING PRINCIPLES, SPLIT-PHASE MOTORS, CAPACITOR MOTORS, REPULSION MOTORS, UNIVERSAL MOTORS, SPECIAL MOTORS, SYNCHROS, SERVOS, STARTING AND PROTECTING, AND MOTOR MAINTENANCE. EACH LESSON CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005761

PUBLICATION DATE: 74

TITLE: THREE-PHASE SYSTEMS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*ELECTRICAL SYSTEMS; ELECTRICITY; GENERATORS; INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; MAINTENANCE; \*MOTORS; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*THREE-PHASE SYSTEMS; \*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50 COMPLETE COURSE

ABSTRACT: THIS TRAINEES GUIDE CONTAINS TEN LESSONS ON THE OPERATION AND MAINTENANCE OF THREE-PHASE INDUCTION MOTORS AND IN-PLANT POWER DISTRIBUTION SYSTEMS. THE TOPICS OF THE TEN LESSONS ARE: THREE-PHASE MOTOR PRINCIPLES, INDUCTION MOTORS, SYNCHRONOUS MOTORS, MULTIPLE-SPEED DUAL VOLTAGE MOTORS, THREE-PHASE MOTOR MAINTENANCE, A-C MOTOR STARTING PRINCIPLES, THREE-PHASE MOTOR CONTROLLERS, ALTERNATORS, AUXILIARY GENERAL SYSTEMS, AND POWER DISTRIBUTION SYSTEMS. EACH LESSON INCLUDES A PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005762

PUBLICATION DATE: 74

TITLE: A-C CONTROL EQUIPMENT.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*ELECTRICAL EQUIPMENT; \*ELECTRICAL SYSTEMS; ELECTRICITY; INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; MAINTENANCE; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; SWITCHES; \*TRAINING PROGRAMS; WIRING; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50 COMPLETE COURSE

ABSTRACT: THIS TRAINEES GUIDE CONTAINS TEN LESSONS ON ELECTRICAL CONTROL SYSTEM OPERATIONS AND MAINTENANCE. THE TOPICS OF THE TEN LESSONS ARE: MOTOR STARTERS, PUSHBUTTON CONTROL STATIONS, LIMIT SWITCHES, SPECIAL CONTROL SWITCHES, TIMERS AND COUNTERS, CONTROL RELAYS, HAZARDOUS LOCATION EQUIPMENT, SPECIAL MOTOR CONTROL, MOTOR CONTROL CENTERS, AND CONTROL PANEL WIRING. EACH LESSON INCLUDES A PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005763

PUBLICATION DATE: 74

TITLE: ELECTRICAL TROUBLESHOOTING.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*ELECTRICAL EQUIPMENT; \*ELECTRICAL SYSTEMS; ELECTRICITY; INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; \*MAINTENANCE; PROBLEM SOLVING; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING PROGRAMS; TROUBLESHOOTING; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50 COMPLETE COURSE

ABSTRACT: THIS TRAINEES GUIDE CONTAINS TEN LESSONS ON THE STEP-BY-STEP APPROACH TO ELECTRICAL MAINTENANCE PROBLEM SOLVING. THE TOPICS OF THE TEN LESSONS ARE: TROUBLESHOOTING WITH ELECTRICAL SCHEMATICS, TROUBLESHOOTING WITH BUILDING DRAWINGS, TROUBLESHOOTING WITH CONTROL CIRCUITS, TROUBLESHOOTING COMBINATION STARTERS, TROUBLESHOOTING CONTROL DEVICES, TROUBLESHOOTING SPECIAL CONTROLS, TROUBLESHOOTING A-C MOTORS, TROUBLESHOOTING LIGHTING SYSTEMS, AND CUTTING TROUBLESHOOTING TIME. EACH LESSON CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO GROVEE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005764

PUBLICATION DATE: 74

TITLE: SUPERVISORS MATERIAL FOR TPC TRAINING PROGRAM-COURSE 2502 0 ELECTRICAL MAINTENANCE.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: A-C CIRCUITS; D-C CIRCUITS; \*ELECTRICAL EQUIPMENT; \*ELECTRONICS; \*ELECTRICITY; EVALUATION; \*INSTRUCTIONAL MATERIALS; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TEACHING GUIDES; \*TRAINING MANUALS; \*TRAINING PROGRAM

DESCRIPTIVE NOTE: 160P. PRICE: \$15.75

ABSTRACT: THIS PACKET CONTAINS SUPERVISORS MATERIALS FOR A TRAINING PROGRAM IN ELECTRICAL MAINTENANCE. INCLUDED IN THE PACKET ARE: SUPERVISORS UNIT GUIDE, UNIT TESTS, ANSWER SHEETS, AUTOMATIC ANSWER KEYS, PROGRESS CHARTS, UNIT COMPLETION CERTIFICATES, AND REQUESTS FOR COMPLETION CERTIFICATES. TOPICS IN THIS TRAINING UNIT INCLUDE: INTRODUCTION TO ELECTRICITY AND ELECTRONICS, BATTERIES AND D-C CIRCUITS, TRANSFORMERS AND A-C CIRCUITS, ELECTRICAL MEASURING INSTRUMENTS, ELECTRICAL PROTECTIVE DEVICES, D-C EQUIPMENT AND CONTROLS, SINGLE-PHASE MOTORS, THREE-PHASE SYSTEMS, A-C CONTROL EQUIPMENT, AND ELECTRICAL TROUBLESHOOTING.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO GROVE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005765

PUBLICATION DATE: 74

TITLE: ELEMENTS OF MECHANICS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: HAND TOOLS; \*INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; MEASUREMENT; \*MECHANICS; \*PHYSICS; POWER TOOLS; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50 COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON AN INTRODUCTION TO BASIC MECHANICAL FUNCTIONS, MOTION, AND FORCE. THE TOPICS OF THE TEN LESSONS ARE: FORCES, MOTION, WORK AND ENERGY, SIMPLE MACHINES, USEFUL WORK, AREA AND VOLUME MEASUREMENT, HANDTOOLS, POWER TOOLS, FASTENERS, AND FRICTION. EACH LESSON CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:

(312) 381-1840

IRIS ACCESSION NUMBER: EW005766

PUBLICATION DATE: 74

TITLE: LUBRICATION.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*GREASES; \*INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; \*LUBRICATION; \*OILS; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50 COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON THE PROPER SELECTION AND USE OF LUBRICANTS WITHIN THE PLANT. THE TOPICS OF THE TEN LESSONS ARE: PRINCIPLES OF LUBRICATION, LUBRICANT CHARACTERISTICS, ADDITIVES, LUBRICATING ACTION, AND BEARING LUBRICATION; OILS AND THEIR APPLICATIONS, GENERAL PURPOSE GREASES, SPECIAL PURPOSE GREASES, LUBRICATING COMPOUNDS, LUBRICATION SYSTEMS AND METHODS, AUTOMATIC LUBRICATION METHODS, AND LUBRICANT STORAGE AND HANDLING. EACH LESSON CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840

IRIS ACCESSION NUMBER: EW005767

PUBLICATION DATE: 74

TITLE: DRIVE COMPONENTS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*CLUTCHES; \*COUPLINGS; \*DRIVE COMPONENTS; \*GEARS; \*INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50 COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON THE APPLICATION OF COUPLINGS, CLUTCHES, GEARS, AND OTHER DRIVE ELEMENTS. THE TOPICS OF THE TEN LESSONS ARE: COMMON COUPLINGS, SPECIAL COUPLINGS, CLUTCHES, V-BELT DRIVES, CHAIN DRIVES, SPEED REDUCERS PARTS I AND II, GEARS, VARIABLE SPEED REDUCERS, AND BRAKES AND MOTORS. EACH LESSON CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED ACTIVITIES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE: (312) 381-1840



IRIS ACCESSION NUMBER: EW005768

PUBLICATION DATE: 74

TITLE: BEARINGS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*BEARINGS; FRICTIONLESS BEARINGS;  
\*INDIVIDUALIZED INSTRUCTION; INSTALLATION; \*INSTRUCTIONAL  
MATERIALS; INSPECTION; JOURNAL BEARINGS; \*MAINTENANCE;  
PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING  
PROGRAMS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON THE  
PROPER INSTALLATION, INSPECTION, AND MAINTENANCE OF JOURNAL  
AND FRICTIONLESS BEARINGS. THE TOPICS OF THE TEN LESSONS  
ARE: PRINCIPLES OF BEARINGS AND SHAFTS, PLAIN JOURNAL  
BEARINGS PARTS I AND II, ANTI-FRICTION BEARINGS PARTS I AND  
II, BALL AND ROLLER BEARINGS, SPECIALIZED BEARINGS, BEARING  
SEALS, LUBRICATION, AND BEARING MAINTENANCE. EACH LESSON  
CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED  
ACTIVITIES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005769

PUBLICATION DATE: 74

TITLE: PUMPS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: CENTRIFUGAL PUMPS; \*INDIVIDUALIZED INSTRUCTION;  
\*INSTRUCTIONAL MATERIALS; MAINTENANCE; PROGRAMMED  
INSTRUCTION; \*PUMPS; SKILL DEVELOPMENT; \*TRAINING PROGRAMS;  
\*WATER PUMPS; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON THE  
OPERATING PRINCIPLES AND MAINTENANCE OF POSITIVE  
DISPLACEMENT AND CENTRIFUGAL PUMPS. THE TOPICS OF THE TEN  
LESSONS ARE: PUMP APPLICATIONS, PUMP SELECTION, CENTRIFUGAL  
PUMPS, PROPELLER AND TURBINE PUMPS, ROTARY PUMPS,  
RECIPROCATING PUMPS, METERING PUMPS, SPECIAL PURPOSE PUMPS,  
PACKINGS AND SEALS, AND PUMP MAINTENANCE. EACH LESSON  
CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED  
ACTIVITIES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005770

PUBLICATION DATE: 74

TITLE: PIPING SYSTEMS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: FILTERS; \*HYDRAULICS; \*INDIVIDUALIZED  
INSTRUCTION; \*INSTRUCTIONAL MATERIALS; \*PIPE FITTINGS;  
\*PIPES; PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING  
PROGRAM; VALVES; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50.  
COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON THE  
TYPICAL IN-PLANT APPLICATIONS OF PIPING, TUBING, HOSE, AND  
FITTINGS. THE TOPICS OF THE TEN LESSONS ARE: PIPING SYSTEMS,  
METAL PIPING, NONMETALLIC PIPING; TUBING; HOSES, FITTINGS,  
COMMON VALVES, SPECIALIZED VALVES, STRAINERS, FILTERS, AND  
TRAPS, AND ACCESSORIES. EACH LESSON CONTAINS A PRESENTATION  
OF THE MATERIAL, PROGRAMMED EXERCISES, AND A COMPLETION  
QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005771

PUBLICATION DATE: 74

TITLE: BASIC HYDRAULICS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*FLUIDS; \*HYDRAULICS; \*INDIVIDUALIZED  
INSTRUCTION; \*INSTRUCTIONAL MATERIALS; MOTORS; \*PIPES;  
PROGRAMMED INSTRUCTION; \*PUMPS; SKILL DEVELOPMENT; \*TRAINING  
PROGRAMS; VALVES; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON THE  
PRINCIPLES AND OPERATING CHARACTERISTICS OF HYDRAULIC  
SYSTEMS AND COMPONENTS. THE TOPICS OF THE TEN LESSONS ARE:  
PRINCIPLES OF HYDRAULICS, HYDRAULIC FLUIDS, STRAINERS AND  
FILTERS, RESERVOIRS AND ACCUMULATORS, HYDRAULIC PUMPS,  
PIPING, TUBING, AND FITTINGS, DIRECTIONAL CONTROL VALVES,  
PRESSURE CONTROL VALVES, CYLINDERS, AND HYDRAULIC MOTORS.  
EACH LESSON CONTAINS A PRESENTATION OF THE MATERIAL,  
PROGRAMMED ACTIVITIES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

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IRIS ACCESSION NUMBER: EW005772

PUBLICATION DATE: 74

TITLE: HYDRAULIC TROUBLESHOOTING

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*HYDRAULICS; \*INDIVIDUALIZED INSTRUCTION;  
INSTALLATION; \*INSTRUCTIONAL MATERIALS; \*PIPES; PROGRAMMED  
INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING PROGRAMS;  
\*TROUBLESHOOTING; VALVES; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON HOW  
TO DIAGNOSE HYDRAULIC SYSTEM PROBLEMS AND PROPERLY INSTALL  
COMPONENTS. THE TOPICS OF THE TEN LESSONS ARE: HYDRAULIC  
SYSTEMS, HYDRAULIC SCHEMATIC DIAGRAMS, INSTALLING HYDRAULIC  
COMPONENTS, INSTALLING PIPES AND TUBES, SELECTING HYDRAULIC  
FLUIDS, PLANNING SYSTEM MAINTENANCE, TROUBLESHOOTING  
SYSTEMS, TROUBLESHOOTING VALVES, TROUBLESHOOTING CYLINDERS,  
TROUBLESHOOTING PUMPS AND MOTORS. EACH LESSON INCLUDES A  
PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A  
COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005773

PUBLICATION DATE: 74

TITLE: BASIC PNEUMATICS.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*AIR TREATMENT; \*COMPRESSORS; \*INDIVIDUALIZED  
INSTRUCTION; \*INSTRUCTIONAL MATERIALS; \*PNEUMATICS;  
PROGRAMMED INSTRUCTION; SKILL DEVELOPMENT; \*TRAINING  
PROGRAMS; VALVES; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON THE  
PRINCIPLES AND OPERATING CHARACTERISTICS OF COMPRESSED AIR  
SYSTEMS AND COMPONENTS. THE TOPICS OF THE TEN LESSONS ARE:  
PNEUMATIC PRINCIPLES; PRIMARY AIR TREATMENT; SECONDARY AIR  
TREATMENT; PIPING, HOSES, AND FITTINGS; CONTROL VALVES;  
PRESSURE RELIEF VALVES; CYLINDERS; AND MOTORS. EACH LESSON  
CONTAINS A PRESENTATION OF THE MATERIAL, PROGRAMMED  
EXERCISES, AND A COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO. GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005774

PUBLICATION DATE: 74

TITLE: PNEUMATIC TROUBLESHOOTING.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: \*AIR COMPRESSORS; HYDRAULIC SYSTEMS;  
INDIVIDUALIZED INSTRUCTION; \*INSTRUCTIONAL MATERIALS;  
MAINTENANCE; \*PNEUMATICS; PROGRAMMED INSTRUCTION; SKILL  
DEVELOPMENT; \*TRAINING PROGRAMS; \*TROUBLESHOOTING; WORKBOOKS

DESCRIPTIVE NOTE: 160P. PRICE: \$26.75 SEPARATE, \$267.50  
COMPLETE COURSE

ABSTRACT: THIS TRAINEE'S GUIDE CONTAINS TEN LESSONS ON HOW  
TO DIAGNOSE COMPRESSED AIR SYSTEM PROBLEMS AND PROPERLY  
INSTALL COMPONENTS. THE TOPICS OF THE TEN LESSONS ARE:  
PNEUMATIC SYSTEMS; PNEUMATIC SCHEMATIC DIAGRAMS,  
INSTALLATION OF SYSTEM COMPONENTS, SYSTEM MAINTENANCE,  
DETERMINING SYSTEM FAILURES, TROUBLESHOOTING CONTROL VALVES,  
TROUBLESHOOTING CYLINDERS, TROUBLESHOOTING AIR MOTORS, AND  
PNEUMATIC/HYDRAULIC SYSTEMS. EACH LESSON INCLUDES A  
PRESENTATION OF THE MATERIAL, PROGRAMMED EXERCISES, AND A  
COMPLETION QUIZ.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005775

PUBLICATION DATE: 74

TITLE: SUPERVISORS MATERIAL FOR TPC TRAINING PROGRAMS-  
COURSE 3507-MECHANICAL MAINTENANCE.

PERSONAL AUTHOR: JANSEN, RALPH F., DIRECTOR

DESCRIPTOR: EVALUATION; \*HYDRAULICS; \*INSTRUCTIONAL  
MATERIALS; MAINTENANCE; \*MECHANICS; \*PNEUMATICS; PROGRAMMED  
INSTRUCTION; SKILL DEVELOPMENT; \*TEACHING GUIDES; \*TRAINING  
MANUALS; \*TRAINING PROGRAMS

DESCRIPTIVE NOTE: 160P. PRICE: \$15.75

ABSTRACT: THIS PACKET CONTAINS SUPERVISORS MATERIALS FOR A  
TRAINING PROGRAM IN MECHANICAL MAINTENANCE. INCLUDED IN THE  
PACKET ARE: SUPERVISORS UNIT GUIDE, UNIT TESTS, ANSWER  
SHEETS, AUTOMATIC ANSWER KEYS, PROGRESS CHARTS, UNIT  
COMPLETION CERTIFICATES, AND REQUESTS FOR COMPLETION  
CERTIFICATES. TOPICS IN THE TRAINING UNIT INCLUDE: ELEMENTS  
OF MECHANICS, LUBRICATION, DRIVE COMPONENTS, BEARINGS,  
PUMPS, PIPING SYSTEMS, BASIC HYDRAULICS, HYDRAULIC  
TROUBLESHOOTING, BASIC PNEUMATICS, AND PNEUMATIC  
TROUBLESHOOTING.

AVAILABILITY: TECHNICAL PUBLISHING COMPANY (TPC) TRAINING  
SYSTEMS, 1301 SO GROVE, BARRINGTON, IL 60010, TELEPHONE:  
(312) 381-1840

IRIS ACCESSION NUMBER: EW005776

V52, N11

PUBLICATION DATE: NOV 80

TITLE: SEPTAGE AND WASTEWATER TREATMENT IN THE ACTIVATED SLUDGE PROCESS.

PERSONAL AUTHOR: SEGALL, BURTON A.; OTT, CHARLES R.

DESCRIPTOR: \*ACTIVATED SLUDGE; CLARIFICATION; \*DESIGN; MUNICIPALITIES; \*OPERATIONS (WASTEWATER); \*SEPTAGE; SEPTIC TANKS; \*SLUDGE; UTILITIES; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2655-2665P.

ABSTRACT: LARGE QUANTITIES OF SEPTAGE WERE FED TO A CONVENTIONAL ACTIVATED SLUDGE PLANT LOCATED AT MARLBOROUGH, MASSACHUSETTS. THE WASTE WAS FED ON BOTH CONTINUOUS AND SHOCKING LOAD SCHEDULES. PROCESS CHARGES, ALONG WITH WASTEWATER AND SEPTAGE CHARACTERISTICS, WERE MONITORED. CRITICAL CONSIDERATIONS FOR TREATMENT PLANT DESIGN AND OPERATION ARE PRESENTED AND THE EFFECTS OF VARIOUS LOADING LEVELS IS SHOWN. GRAVITY FLOW IN LARGE CONDUITS OR INTERMITTENT SEPTAGE PUMPING IS RECOMMENDED TO DIMINISH OPERATIONAL PROBLEMS. SEPTAGE TREATMENT COSTS ARE SIGNIFICANTLY REDUCED WHEN BIOLOGICAL TREATMENT IS BYPASSED AND THE WASTE IS SUBJECTED TO DEWATERING PROCESSES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N11

IRIS ACCESSION NUMBER: EW005777

PUBLICATION DATE: NOV 80

TITLE: CASE STUDY OF PREDICTION OF SULFIDE GENERATION AND CORROSION IN SEWERS.

PERSONAL AUTHOR: MEYER, WALTER J.

DESCRIPTOR: \*CORROSION; \*CASE STUDIES; \*HYDROGEN SULFIDE; MODELS; \*PREDICTION; RESEARCH; \*SULFIDES; \*SEWERS; \*WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 2666-2674P.

ABSTRACT: A CASE STUDY WAS PERFORMED TO CORRELATE PREDICTIONS OF SULFIDE GENERATION AND CORROSION EQUATIONS WITH OBSERVED CONDITIONS IN A TRUNK SEWER SYSTEM. PREDICTED SULFIDE LEVELS, USING POMEROYS LESS-CONSERVATIVE EQUATIONS, COMPARED WELL WITH OBSERVED CONCENTRATIONS WHEN THE DILUTION AT JUNCTIONS WAS CONSIDERED. THE HYDRAULIC AND WASTEWATER CHARACTERISTICS WERE AVERAGED OVER 5-YEAR INCREMENTS AND THE PREDICTED CORROSION WAS CALCULATED AND COMPARED WITH THE OBSERVED CORROSION. THE RESULTS OF THE STUDY ESTABLISH WITH CONFIDENCE THAT EQUATIONS FOR PREDICTING SULFIDE GENERATION AND CORROSION OF SEWERS MAY BE USED IN SEWER DESIGN TO ASSURE ADEQUATE SERVICE LIFE. THE STUDY INDICATES MEANS OF APPLYING THE DATA AND USING THE EQUATIONS TO ACCOUNT FOR VARIABLE FACTORS FOR MORE ACCURATE PREDICTIONS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION,

IRIS ACCESSION NUMBER: EW005778

PUBLICATION DATE: NOV 80

TITLE: MICROBIAL ECOSYSTEMS RESPONSIBLE FOR ANAEROBIC DIGESTION AND COMPOSTING.

PERSONAL AUTHOR: FINSTEIN, M. S.; AND OTHERS

DESCRIPTOR: \*ANAEROBIC DIGESTION; BIOLOGICAL TREATMENT; \*COMPOSTING; \*ECOSYSTEMS; \*ECOLOGY; \*MICROBIOLOGY; \*OPERATIONS (WASTEWATER); \*SLUDGE; SLUDGE MANAGEMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2675-2685P.

ABSTRACT: WITHIN THE LAST FEW YEARS, COMPOSTING HAS EMERGED AS AN ALTERNATIVE TO ANAEROBIC DIGESTION FOR THE TREATMENT OF WASTEWATER SLUDGE. THESE BIOLOGICAL PROCESSES ARE EXAMINED AND COMPARED FROM THE FUNDAMENTAL PERSPECTIVE OF THEIR UNDERLYING MICROBIAL ECOSYSTEMS. THE STRENGTHS AND WEAKNESSES OF THE PROCESSES ARE EXPLORED RELATIVE TO CONTEMPORARY NEEDS IN SLUDGE MANAGEMENT.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N11

IRIS ACCESSION NUMBER: EW005779

PUBLICATION DATE: NOV 80

TITLE: COMPARATIVE PERFORMANCE OF ROTATING BIOLOGICAL CONTACTORS USING AIR AND PURE OXYGEN.

PERSONAL AUTHOR: HUANG, JU-CHANG

DESCRIPTOR: ALGAE; \*BIOLOGICAL CONTACTORS; CIVIL ENGINEERING; \*DESIGN; \*EVALUATION; \*OPERATIONS (WASTEWATER); \*OXYGEN; \*ROTATING BIOLOGICAL FILTERS; \*SLUDGE; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2686-2703P.

ABSTRACT: COMPARISON IS MADE OF THE PERFORMANCE OF THREE PARALLEL ROTATING BIOLOGICAL CONTACTORS IN TREATING A SYNTHETIC MILK WASTE BY USING AIR AND PURE OXYGEN UNDER ATMOSPHERIC OR PRESSURIZED CONDITIONS. PURE OXYGEN UNDER PRESSURE IS FOUND TO INCREASE THE THICKNESS OF BIOFILMS DEVELOPED ON THE DISK SURFACE, WHICH IN TURN IMPROVES THE CHEMICAL OXYGEN DEMAND REDUCTION, PROVIDED THAT THE WASTE STRENGTH IS HIGH AND THE BIOFILMS DO NOT BRIDGE OVER THE DISK CLEARANCE. USE OF PURE OXYGEN ALSO GREATLY IMPROVES THE SLUDGE SETTLEABILITY AND REDUCES THE FILAMENTOUS GROWTH. HOWEVER, LABORATORY DATA APPEAR TO INDICATE THAT AN EXCESSIVELY HIGH CONCENTRATION OF DISSOLVED OXYGEN HAS AN INHIBITORY EFFECT ON BIOLOGICAL NITRIFICATION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION,

IRIS ACCESSION NUMBER: EW005780

PUBLICATION DATE: NOV 80

TITLE: PERFORMANCE OF A LARGE ADVANCED WASTE TREATMENT PLANT.

PERSONAL AUTHOR: ECKMANN, DONALD E.; ZIMMERMAN, HAROLD S.

DESCRIPTOR: \*ACTIVATED SLUDGE; \*ADVANCED WASTEWATER TREATMENT; BIOCHEMICAL OXYGEN DEMAND; \*COSTS; \*EFFICIENCY; EFFLUENTS; \*EVALUATION; FILTRATION; NITROGEN; \*OPERATIONS (WASTEWATER); PHOSPHOROUS; SUSPENDED SOLIDS; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2717-2725P.

ABSTRACT: THE ARTICLE DESCRIBES THE OPERATIONAL ACTIVITIES OF THE ROANOKE ADVANCED WASTEWATER TREATMENT PLANT. THE PLANT CONSISTS OF THE ACTIVATED SLUDGE PROCESS FOLLOWED BY NITRIFICATION, FLOCCULATION, COAGULATION, FILTRATION, AND DISINFECTION FACILITIES. THE QUALITY OF THE EFFLUENT UNDER AVERAGE AND MAXIMUM CONDITIONS, THE EFFECT OF EACH PROCESS UPON THE OVERALL TREATMENT, AMOUNT OF SLUDGE GENERATED, CHEMICALS USED, AND OTHER MAJOR PARAMETERS OF EACH PROCESS WITH SPECIAL EMPHASIS ON FILTRATION, AS WELL AS CONSTRUCTION AND OPERATIONAL COSTS ARE PRESENTED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION,  
V52 N11

IRIS ACCESSION NUMBER: EW005781

PUBLICATION DATE: NOV 80

TITLE: TRADE-OFFS IN SLUDGE THICKENING AND TRANSPORT/REUSE SYSTEMS.

PERSONAL AUTHOR: LEININGER, KURT V.; AND OTHERS

DESCRIPTOR: \*COSTS; \*DESIGN; DEWATERING; ECONOMICS; \*EVALUATION; \*OPERATIONS (WASTEWATER); PILOT STUDIES; \*REUSE; \*RECYCLING; \*SLUDGE; \*SLUDGE THICKENING; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2771-2779P.

ABSTRACT: THIS ARTICLE DESCRIBES THE PILOT TESTING AND COST ANALYSIS OF ALTERNATIVE SLUDGE THICKENING PROCESSES WHICH WERE CARRIED OUT AS A PART OF A PREDESIGN STUDY. TEST RESULTS AND COST ANALYSES ARE SUMMARIZED, AND SOME OF THE VARIABLES AND THEIR EFFECTS ON SYSTEM COSTS ARE DISCUSSED. COSTS OF THICKENING ARE A MAJOR COMPONENT OF OVERALL SYSTEM COSTS FOR THE REUSE PROGRAM. THERE ARE DEFINITE TRADE-OFFS TO BE MADE BETWEEN THICKENING AND TRANSPORT/REUSE COSTS. IN PARTICULAR, THE COST OF PROVIDING NEW THICKENING CAPABILITIES IS NOT NECESSARILY LESS THAN THE SAVINGS THAT WOULD BE REALIZED IN TRANSPORT/REUSE COSTS.

IRIS ACCESSION NUMBER: EW005782

PUBLICATION DATE: NOV 80

TITLE: AN OVERVIEW OF EUROPEAN WATER TREATMENT PRACTICE.

PERSONAL AUTHOR: KNOPPERT, P. L.; AND OTHERS

DESCRIPTOR: \*BIOLOGICAL TREATMENT; \*CHEMICAL TREATMENT; \*EUROPE; FACILITIES; \*MANAGEMENT; \*OPERATIONS (WATER); \*PHYSICAL TREATMENT; WATER QUALITY; \*WATER TREATMENT; WATER POLLUTION; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 592-599P.

ABSTRACT: THE PHILOSOPHY BEHIND NEW TREATMENT DESIGNS IN EUROPE IS TO REMOVE TOTAL ORGANIC CARBON AND SYNTHETIC ORGANIC CONTAMINANTS IN SUCCESSIVE TREATMENT STEPS-STORAGE, FLOCCULATION, SETTLING, OZONATION, RAPID AND SLOW SAND FILTRATION, AND GRANULAR ACTIVATED FILTRATION - RATHER THAN ONLY IN THE FILTERS. THE IDEA IS TO COMBINE PHYSICAL, CHEMICAL, AND BIOLOGICAL REMOVAL MECHANISMS IN AN INTEGRATED SYSTEM TO ACHIEVE OPTIMUM REMOVAL OF MICROPOLLUTANTS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72  
N11

IRIS ACCESSION NUMBER: EW005783

PUBLICATION DATE: NOV 80

TITLE: TAPPING DRINKING WATER DATA: A PROTOTYPE SYSTEM.

PERSONAL AUTHOR: DEININGER, ROLF A.

DESCRIPTOR: \*DRINKING WATER; \*DATA MANAGEMENT; \*DATABASES; \*INFORMATION DISSEMINATION; \*MANAGEMENT SYSTEMS; PUBLIC WATER SYSTEMS; RESEARCH; \*STANDARDS; \*UTILITIES; \*WATER QUALITY; \*WATER SUPPLY

DESCRIPTIVE NOTE: 600-603P.

ABSTRACT: AS DECISIONS ON NEW WATER QUALITY STANDARDS ARE MADE, IT IS IMPERATIVE THAT INFORMATION BE AVAILABLE ON HOW MANY PUBLIC WATER SYSTEMS ARE AFFECTED AND TO WHAT EXTENT. A RECENTLY DEVELOPED PROTOTYPE DATA ANALYSIS AND MANAGEMENT SYSTEM WITH ONLINE INTERACTIVE CAPABILITIES WOULD PERMIT AUTHORIZED USERS TO INTERROGATE THE SYSTEM AND ANALYZE DATA ON UNITED STATES UTILITIES AND SELECTED WATER QUALITY PARAMETERS.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72  
N11

METHOD FOR HANDLING WASTE WATER TREATMENT ARE VISITED. INTERVIEWS ARE CONDUCTED WITH KEY PERSONNEL RESPONSIBLE FOR THE ESTABLISHMENT AND OPERATION OF THE WASTEWATER TREATMENT FACILITIES. THE FILM STRESSES THE NEED FOR CONSERVING AND RECYCLING DWINDLING WATER RESOURCES.

AVAILABILITY: MODERN TALKING PICTURE SERVICE, 5000 PARK STREET NORTH, ST. PETERSBURG, FL 33709

IRIS ACCESSION NUMBER: EW005791

TITLE: FLOW, VOLUME - PART 1: FLOW CHARACTERISTICS.

PERSONAL AUTHOR: DOWDELL, RODGER B.

DESCRIPTOR: FLOW CHARACTERISTICS; FLUID FLOW; \*FLUID DYNAMICS; \*HYDRAULICS; \*MEASUREMENT; \*PIPELINE FLOWS

DESCRIPTIVE NOTE: 48P. PRICE: \$40.00 EACH, \$110.00 COMPLETE SET OF 3 BOOKS

ABSTRACT: THIS VOLUME IS PART ONE OF A THREE PART SERIES ON FLOW TECHNOLOGY BASED UPON THE PROCEEDINGS OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS FLUIDS ENGINEERING CONFERENCE. THIS VOLUME EXPLAINS FLUID BEHAVIORAL PROPERTIES THAT DETERMINE POSSIBLE FLUID METERING METHODS IN SOME CASES, CONSTRAINTS TO FLUID METERING IN OTHERS. ADDITIONAL TOPICS COVER OPEN CHANNELS - BOTH SHALLOW AND DEEP AND WITH BROAD VELOCITY RANGES, FLOWING FLUIDS THAT ARE HOMOGENEOUS AND NON-HOMOGENEOUS, TURBULENT TO NON-TURBULENT, HIGH TO VERY LOW TEMPERATURES, STEADY STATE TO PULSATING. FLOW SITUATIONS INCLUDE PIPELINE FLOW, MOISTURE FLOW THROUGH SOIL, TIDAL CURRENTS, CRYOGENIC FLUID TRANSFER, AND ATMOSPHERIC TURBULENCE. THIS VOLUME ALSO CONTAINS PAPERS DEALING WITH VELOCITY AND PRESSURE MEASUREMENTS, AND MEASUREMENTS IN FLUID MECHANICS.

AVAILABILITY: INSTRUMENT SOCIETY OF AMERICA, P. O. BOX 34093P, PITTSBURG, PA 15230

IRIS ACCESSION NUMBER: EW005792

TITLE: FLOW, VOLUME 1 - PART 2: FLOW MEASURING DEVICES.

PERSONAL AUTHOR: DOWDELL, RODGER B.

DESCRIPTOR: CALIBRATION; \*FLOWMETERS; \*FLUID FLOW; \*HYDRAULICS; \*INSTRUMENTATION; \*MEASUREMENT; \*TECHNOLOGY

DESCRIPTIVE NOTE: 68P. PRICE: \$40.00 EACH, \$110.00 COMPLETE 3 BOOK SET

ABSTRACT: THIS VOLUME IS PART TWO OF A THREE PART SERIES ON FLOW TECHNOLOGY BASED UPON THE PROCEEDINGS OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS FLUIDS ENGINEERING CONFERENCE. THIS VOLUME IS CONCERNED WITH THE PHENOMENA THAT CAN BE EXPLOITED FOR MEASUREMENT PURPOSES, AND THE INSTRUMENTS BASED ON THOSE PHENOMENA. FROM DESIGN TO CALIBRATION TO APPLICATIONS, PAPERS FOCUS ON VIRTUALLY EVERY KIND OF VELOCITY AND VOLUMETRIC FLOWMETER: ORIFICE, TURBINE,

ELECTROMAGNETIC, THERMAL, VORTEX, MASS, ULTRASONIC AND OTHER TYPES.

AVAILABILITY: INSTRUMENT SOCIETY OF AMERICA, P. O. BOX 3409P, PITTSBURGH, PA 15230

IRIS ACCESSION NUMBER: EW005793

TITLE: FLOW, VOLUME 1 - PART 3: FLOW MEASUREMENT AND CONTROL, BIOLOGICAL FLUID FLOWS.

PERSONAL AUTHOR: DOWDELL, RODGER B.

DESCRIPTOR: \*BIOLOGICAL FLUID FLOWS; \*CONTROL VALVES; \*FLUID FLOW; \*HYDRAULICS; \*MEASUREMENT; SYSTEM DESIGN; TECHNOLOGY; \*VALVES

DESCRIPTIVE NOTE: 45P. PRICE: \$40.00 EACH, \$110.00 COMPLETE SET OF 3 BOOKS

ABSTRACT: THIS VOLUME IS PART THREE OF A THREE PART SERIES ON FLOW TECHNOLOGY BASED UPON THE PROCEEDINGS OF THE AMERICAN SOCIETY OF MECHANICAL ENGINEERS FLUIDS ENGINEERING CONFERENCE. THIS VOLUME INVESTIGATES PRESENT KNOWLEDGE OF FLOW CONTROL, INCLUDING THE EFFECTS OF CONTROL VALVE SIZING, SYSTEM DESIGN AND APPLICATION, AND CONTROL VALVE NOISE. PAPERS ALSO COVER THE FLUID POWER CONTROL ASPECTS OF SYSTEM DESIGN AND VALUE CHARACTERISTICS, AS WELL AS THE PRINCIPLES AND PRACTICE IN FLOW BENCHMARKS.

AVAILABILITY: INSTRUMENT SOCIETY OF AMERICA, P. O. BOX 34093P, PITTSBURGH, PA 15230

IRIS ACCESSION NUMBER: EW005796

PUBLICATION DATE: DEC 80

TITLE: GUIDELINES FOR DATA ACQUISITION AND DATA QUALITY EVALUATION IN ENVIRONMENTAL CHEMISTRY.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*ANALYTICAL CHEMISTRY; CHEMISTRY; \*DATA ACQUISITION; \*DATA QUALITY; \*ENVIRONMENTAL CHEMISTRY; \*GUIDELINES; \*LABORATORY TECHNIQUES; \*MEASUREMENT; RISKS; \*SAMPLING; STANDARDS

DESCRIPTIVE NOTE: 2242-2249P.

ABSTRACT: THIS ARTICLE CONTAINS A SET OF GUIDELINES THAT WERE DEVELOPED UNDER THE AMERICAN CHEMICAL SOCIETY'S COMMITTEE ON ENVIRONMENTAL ANALYTICAL CHEMISTRY TO IMPROVE THE OVERALL QUALITY OF ENVIRONMENTAL ANALYTICAL MEASUREMENTS. THE GUIDELINES PROVIDE FOR DEVELOPMENT OF RELIABLE CHEMICAL ANALYSIS OF ENVIRONMENTAL SAMPLES AND ALLOW MORE CONFIDENT INTERLABORATORY USE OF THE DATA.

AVAILABILITY: ANALYTICAL CHEMISTRY, V52 N14

IRIS ACCESSION NUMBER: EW005802

PUBLICATION DATE: 80

TITLE: PRIORITY TOXIC POLLUTANTS, HEALTH IMPACTS AND ALLOWABLE LIMITS

PERSONAL AUTHOR: SITTIG, MARSHALL

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*ENVIRONMENTAL HEALTH; \*ECONOMICS; \*INDUSTRIAL POLLUTION; \*PUBLIC HEALTH; \*REGULATIONS; \*STANDARDS; \*TOXIC SUBSTANCES; \*WATER POLLUTION CONTROL; \*WATER QUALITY

DESCRIPTIVE NOTE: 370P. PRICE: \$54.00

ABSTRACT: THIS BOOK IS A PRACTICAL MANUAL OF PRIORITY TOXIC POLLUTANTS ARRANGED ALPHABETICALLY IN ENCYCLOPEDIA FORM. IT IS INTENDED TO PROVIDE INSTANT INFORMATION FOR THE CHARACTERIZATION AND IDENTIFICATION, AS WELL AS THE ALLOWABLE LEVELS, OF 65 PRIORITY TOXIC POLLUTANTS (ACTUALLY REFLECTING 129 INDIVIDUAL COMPOUNDS), THEIR DERIVATIVES, DEGRADATION PRODUCTS, OR INTERMEDIATE TRANSFERS

AVAILABILITY: NOYES DATA CORPORATION, PUBLICITY DEPARTMENT, MILL ROAD AT GRAND AVE., PARK RIDGE, NJ 07656

IRIS ACCESSION NUMBER: EW005803

PUBLICATION DATE: 78

TITLE: RECOMMENDED STANDARDS FOR SEWAGE WORKS, 1978 EDITION.

DESCRIPTOR: \*DESIGN; \*ENGINEERING; \*FACILITIES; \*OPERATIONS (WASTEWATER); \*STANDARDS; \*WASTE DISPOSAL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 118P. PRICE: \$1.75

ABSTRACT: THIS REPORT BY THE COMMITTEE OF THE GREAT LAKES - UPPER MISSISSIPPI RIVER BOARD OF STATE SANITARY ENGINEERS DEALS WITH POLICIES FOR THE REVIEW AND APPROVAL OF PLANS AND SPECIFICATIONS FOR SEWAGE COLLECTION AND TREATMENT. THE FOLLOWING TOPICS ARE DISCUSSED IN THE TEXT: ENGINEERING, SEWER DESIGN, SEWAGE PUMPING STATIONS, SEWAGE TREATMENT WORKS, SCREENING, SETTLING, SLUDGE HANDLING, BIOLOGICAL TREATMENT, DISINFECTION, LAGOONS AND SUPPLEMENTAL TREATMENT PROCESSES.

AVAILABILITY: HEALTH EDUCATION SERVICE, INC., P. O. BOX 7126, ALBANY, NY 12224

INSTITUTION NAME: GREAT LAKES - UPPER MISSISSIPPI RIVER BOARD OF STATE SANITARY ENGINEERS.

IRIS ACCESSION NUMBER: EW005804

PUBLICATION DATE: 76

TITLE: RECOMMENDED STANDARDS FOR WATER WORKS, 1976 EDITION.

DESCRIPTOR: \*DESIGN; \*FACILITIES; \*PUBLIC WATER SUPPLIES; \*PLANNING; \*STANDARDS; \*SPECIFICATIONS; \*WATER TREATMENT; \*WATER DISTRIBUTION; \*WATER WORKS

DESCRIPTIVE NOTE: 104P. PRICE: \$1.50

ABSTRACT: THIS REPORT BY THE COMMITTEE OF THE GREAT LAKES - UPPER MISSISSIPPI RIVER BOARD OF STATE SANITARY ENGINEERS DEALS WITH POLICIES FOR THE REVIEW AND APPROVAL OF PLANS AND SPECIFICATIONS FOR PUBLIC WATER SUPPLIES. IT DEALS WITH SUBMISSION OF PLANS, GENERAL DESIGN CONSIDERATIONS, SOURCE DEVELOPMENT, TREATMENT, CHEMICAL APPLICATION, PUMPING FACILITIES, FINISHED WATER STORAGE AND DISTRIBUTION SYSTEMS.

AVAILABILITY: HEALTH EDUCATION SERVICE, INC., P. O. BOX 7126 ALBANY, NY 12224

INSTITUTION NAME: GREAT LAKES - UPPER MISSISSIPPI RIVER BOARD OF STATE SANITARY ENGINEERS.

IRIS ACCESSION NUMBER: EW005805

PUBLICATION DATE: 80

TITLE: RECOMMENDED STANDARDS FOR INDIVIDUAL SEWAGE SYSTEMS, 1980 EDITION.

DESCRIPTOR: ABSORPTION SYSTEMS; DISCHARGING SYSTEM; \*GREAT LAKES; \*INDIVIDUAL SEWAGE SYSTEMS; \*STANDARDS; \*SEWAGE SYSTEMS; SITE EVALUATION; TREATMENT TANKS; \*WASTEWATER TREATMENT; WASTE STABILIZATION LAGOONS

DESCRIPTIVE NOTE: 60P. PRICE: \$1.50

ABSTRACT: THIS REPORT BY THE COMMITTEE OF THE GREAT LAKES - UPPER MISSISSIPPI RIVER BOARD OF STATE SANITARY ENGINEERS DEALS WITH POLICIES FOR THE REVIEW AND APPROVAL OF PLANS AND SPECIFICATIONS FOR INDIVIDUAL SEWAGE SYSTEMS. IT CONTAINS DISCUSSIONS AND EVALUATIONS OF SITE ANALYSIS, TREATMENT TANKS, HOUSE OR BUILDING SEWERS, ABSORPTION SYSTEMS, DISCHARGING SYSTEMS AND SINGLE RESIDENCE WASTE STABILIZATION LAGOONS.

AVAILABILITY: HEALTH EDUCATION SERVICE, INC., P. O. BOX 7126, ALBANY, NY 12224

INSTITUTION NAME: GREAT LAKES - UPPER MISSISSIPPI RIVER BOARD OF STATE SANITARY ENGINEERS.

IRIS ACCESSION NUMBER: EW005806

PUBLICATION DATE: 78

TITLE: RECOMMENDED STANDARDS FOR SWIMMING POOLS, 1978

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EDITION.

DESCRIPTOR: \*CONSTRUCTION; \*DESIGN; FILTRATION; \*PUBLIC SWIMMING POOLS; PLANNING; \*STANDARDS; \*SWIMMING POOLS; \*SANITARY ENGINEERING; SAFETY; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 32P. PRICE: \$1.50

ABSTRACT: THIS MANUAL CONTAINS RECOMMENDED DESIGN AND CONSTRUCTION STANDARDS FOR PUBLIC SWIMMING POOLS WHICH WERE DEVISED BY THE GREAT LAKES / UPPER MISSISSIPPI RIVER BOARD OF STATE SANITARY ENGINEERS. IT CONTAINS INFORMATION ON PLANNING, CONSTRUCTION, DESIGN, SAFETY REQUIREMENTS, LIGHTING, ELECTRICITY, VENTILATION, ACOUSTICAL REQUIREMENTS, WATER SUPPLY, WASTEWATER DISPOSAL, RECIRCULATION SYSTEMS, FILTRATION, AND DISINFECTION

AVAILABILITY: HEALTH EDUCATION SERVICE, INC., P. O. BOX 7126, ALBANY, NY 12224

INSTITUTION NAME: GREAT LAKES - UPPER MISSISSIPPI RIVER BOARD OF STATE SANITARY ENGINEERS.

IRIS ACCESSION NUMBER: EW005807

TITLE: A SHOCKING STORY.

DESCRIPTOR: \*ACCIDENT PREVENTION; \*AUDIOVISUAL AIDS; \*ELECTRICAL HAZARDS; ELECTRICAL SYSTEMS; \*INDUSTRIAL SAFETY; \*INSTRUCTIONAL MATERIALS; SAFETY; SAFETY EDUCATION

DESCRIPTIVE NOTE: 30 SLIDES, SCRIPT, CASSETTE. PRICE: MEMBER

ABSTRACT: THIS AUDIOVISUAL PACKAGE EXPLAINS ELECTRICAL SHOCKS AND HOW TO AVOID THEM.

AVAILABILITY: NATIONAL SAFETY COUNCIL, 444 NORTH MICHIGAN AVE., CHICAGO, IL 60611; TELEPHONE (312) 527-4800

IRIS ACCESSION NUMBER: EW005808

TITLE: LOCKOUT.

DESCRIPTOR: \*ACCIDENT PREVENTION; \*ELECTRICAL DEVICES; ELECTRICAL SYSTEMS; \*INSTRUCTIONAL MATERIALS; \*SAFETY; \*SLIDES; \*VISUAL AIDS

DESCRIPTIVE NOTE: 30P. SLIDES

ABSTRACT: THIS SET OF SLIDES ILLUSTRATES LOCKOUT SYSTEMS AND TELLS ABOUT TYPICAL DEVICES AND SAFEGUARDS USED.

AVAILABILITY: NATIONAL SAFETY COUNCIL, 444 NORTH MICHIGAN AVE., CHICAGO, IL 60611; TELEPHONE (312) 527-4800

IRIS ACCESSION NUMBER: EW005809

TITLE: FIRE PROTECTION GUIDE - MANUAL.

DESCRIPTOR: ACCIDENT PREVENTION; EQUIPMENT; \*FIRE PROTECTION; HAZARDS; \*INDUSTRIAL SAFETY; INSPECTIONS; \*INSTRUCTIONAL MATERIALS; \*PROGRAM GUIDES; \*REFERENCE MATERIALS; \*SAFETY

DESCRIPTIVE NOTE: 36P. PRICE: MEMBER: 1 EA - \$7.10, 10 EA - \$6.60, 100 EA - \$5.90; NONMEMBER: 1 EA - \$8.90, 10 EA - \$8.30, 100 EA - \$7.40

ABSTRACT: THIS REFERENCE MANUAL IS DESIGNED FOR DEVELOPING A FIRE PROTECTION PROGRAM. IT COVERS FIRE FIGHTING EQUIPMENT, INSPECTIONS, HAZARDS, AND OTHER FIRE SAFETY CONSIDERATIONS

AVAILABILITY: NATIONAL SAFETY COUNCIL, 444 NORTH MICHIGAN AVE., CHICAGO, IL 60611; TELEPHONE (312) 527-4800

IRIS ACCESSION NUMBER: EW005810

TITLE: MANUAL OF INSTRUCTION FOR WATER TREATMENT PLANT OPERATORS.

DESCRIPTOR: CHEMISTRY; CHLORINATION; FACILITIES; \*INSTRUCTIONAL MATERIALS; LABORATORY TECHNIQUES; MAINTENANCE; MANUALS; MATHEMATICS; MICROBIOLOGY; \*OPERATIONS (WATER); \*TEACHING GUIDES; WATER QUALITY; \*WATER TREATMENT

DESCRIPTIVE NOTE: 308P. PRICE: \$2.50 - SINGLE COPY, 15 OR MORE COPIES - \$1.50 EACH

ABSTRACT: THIS TEXT WAS DESIGNED FOR USE IN INSTRUCTIONAL COURSES FOR WATER TREATMENT PLANT OPERATORS. IN ADDITION TO SERVING AS A TEXT, THE MANUAL SHOULD BE USEFUL AS A REFERENCE BY PERSONS INTERESTED IN THE FIELD OF WATER TREATMENT. CHAPTERS INCLUDE: WATER SOURCES AND WATER USES, HYDRAULICS AND ELECTRICITY, WATER CHEMISTRY, MICROBIOLOGY, WATER QUALITY, CHEMICAL COAGULATION, SEDIMENTATION, FILTRATION, CHLORINATION, SOFTENING, AERATION, IRON AND MANGANESE, TASTE AND ODOR CONTROL, CORROSION AND CORROSION CONTROL, FLUORIDATION, PROTECTION OF TREATED WATER, RECORDS AND REPORTS, TREATMENT PLANT MAINTENANCE AND ACCIDENT PREVENTION, MATHEMATICS, AND LABORATORY EXAMINATION OF WATER.

AVAILABILITY: HEALTH EDUCATION SERVICE, P. O. BOX 7126, ALBANY, NY 12224

IRIS ACCESSION NUMBER: EW005811

PUBLICATION DATE: 74

TITLE: HANDBOOK OF ENVIRONMENTAL CONTROL, VOLUME IV: WASTEWATER: TREATMENT AND DISPOSAL.

PERSONAL AUTHOR: BOND, RICHARD G.; STRAUB, CONRAD P.

DESCRIPTOR: \*DATA; EUTROPHICATION; \*HANDBOOKS; \*INDUSTRIAL WASTES; LAKES; NUTRIENTS; RESEARCH REVIEWS; RIVERS; \*SEWAGE; SLUDGE; \*WASTEWATER; \*WASTEWATER TREATMENT; \*WASTEWATER DISPOSAL; WATER POLLUTION

DESCRIPTIVE NOTE: 905P. PRICE: \$59.95

ABSTRACT: THIS HANDBOOK PRESENTS SELECT TABULAR DATA RELATING TO THE OVERALL PROBLEM OF WASTEWATER FROM SOURCE TO REUSE. THE DATA PRESENTED PROVIDE INFORMATION ON THE SOURCES, CHARACTERISTICS, FACTORS RELATING TO COLLECTION, QUANTITIES, AND METHODOLOGY FOR TREATMENT. THIS HANDBOOK IS PRIMARILY CONCERNED WITH THE EFFECTS OF THE VARIETY OF MATERIALS RELEASED ON THE SUBSEQUENT USE OF THE RECEIVING ENVIRONMENT - FROM THE STANDPOINT OF HEALTH AS WELL AS ECOLOGICAL CONTROL. THE INFORMATION COMPILED IN THIS VOLUME SHOULD BE OF USE TO THE MULTIDISCIPLINARY WORKER WITHIN THE BROAD SCOPE OF ENVIRONMENTAL MANAGEMENT: INCLUDING ECOLOGY, EARTH SCIENCES, ENGINEERING, RESOURCES, RECREATION, AND ENVIRONMENTAL DESIGN AND PROTECTION. THE FOUR MAJOR SECTIONS OF DATA ARE: DOMESTIC SEWAGE, INDUSTRIAL WASTES, RIVER WATERS: OXYGEN BALANCE, AND NUTRIENTS, LAKES, AND EUTROPHICATION.

AVAILABILITY: CRC PRESS, INC.; 2000 NW 24TH STREET, BOCA RATON, FL 33431

IRIS ACCESSION NUMBER: EW005813

PUBLICATION DATE: 78

TITLE: THE RESOURCE CONSERVATION AND RECOVERY ACT.

DESCRIPTOR: \*CONSERVATION; \*ENERGY CONSERVATION; FINANCIAL ASSISTANCE; \*FEDERAL LEGISLATION; FEDERAL REGULATIONS; \*HAZARDOUS WASTES; \*LEGISLATION; \*MANAGEMENT; \*PLANNING; \*REGULATIONS; \*RESOURCE RECOVERY; \*RESOURCE CONSERVATION AND RECOVERY ACT; TECHNICAL ASSISTANCE; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 46P. CPO 824-568-1

ABSTRACT: THIS PAMPHLET CONTAINS THE FULL TRANSCRIPT OF THE 1976, RESOURCE CONSERVATION AND RECOVERY ACT. THE INTENTIONS OF THE ACT WERE TO PROVIDE TECHNICAL AND FINANCIAL ASSISTANCE FOR THE DEVELOPMENT OF MANAGEMENT PLANS AND FACILITIES FOR THE RECOVERY OF ENERGY AND OTHER RESOURCES FROM DISCARDED MATERIALS, FOR THE SAFE DISPOSAL OF DISCARDED MATERIALS, AND TO REGULATE THE MANAGEMENT OF HAZARDOUS WASTE.

AVAILABILITY: U. S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW005814

PUBLICATION DATE: JUL 79

TITLE: ON THE NEED TO EVALUATE OPERATIONAL WEATHER MODIFICATION PROJECTS.

PERSONAL AUTHOR: HUFF, F. A.; AND OTHERS.

DESCRIPTOR: ASSESSMENT; CLOUD SEEDING; \*EVALUATION METHODS; \*METEOROLOGY; \*OPERATION ANALYSIS; \*PROJECT EVALUATION; \*RESEARCH; \*WATER RESOURCES; \*WEATHER; \*WEATHER MODIFICATION

DESCRIPTIVE NOTE: 5P. PRICE: \$5.25

ABSTRACT: USE OF WEATHER MODIFICATION BY FARM GROUPS, STATE AGENCIES, AND POWER COMPANIES TO PERFORM OPERATIONAL PROJECTS CONTINUES TO EXPAND. THE MAJOR STAKEHOLDERS--THOSE PAYING, THOSE PERFORMING THE SEEDING, AND THE SCIENTIFIC COMMUNITY--HAVE ALL CONVERGED ON THE NEED TO EVALUATE OPERATIONAL PROJECTS. MAJOR ASSESSMENTS OF THE NATIONAL SITUATION HAVE RECOMMENDED THAT CAREFULLY CONDUCTED OPERATIONAL PROJECTS CAN BE A SOURCE OF USEFUL SCIENTIFIC INFORMATION IF DESIGNED, OPERATED, AND EVALUATED PROPERLY. A PROJECT HAS BEEN LAUNCHED TO DEVELOP STATISTICAL-PHYSICAL EVALUATION TECHNIQUES FOR OPERATIONAL PROJECTS.

AVAILABILITY: ILLINOIS STATE WATER SURVEY, URBANA, IL 61801

IRIS ACCESSION NUMBER: EW005815

PUBLICATION DATE: 80

TITLE: SLUDGE--HEALTH RISKS OF LAND APPLICATION.

PERSONAL AUTHOR: BITTON, G.; AND OTHERS

DESCRIPTOR: AGRICULTURE; \*HEALTH RISKS; \*LAND APPLICATION; \*MUNICIPALITIES; MICROBIOLOGY; OCCUPATIONAL HAZARDS; \*PUBLIC HEALTH; PARASITES; PATHOGENS; REGULATIONS; \*SLUDGE; TOXIC METALS; \*WASTE DISPOSAL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 367P. PRICE: \$37.50

ABSTRACT: THESE PROCEEDINGS REPRESENT AN ASSESSMENT OF THE HEALTH RISKS ASSOCIATED WITH ANIMAL FEEDING AND/OR LAND APPLICATION OF MUNICIPAL SLUDGE. THE PAPERS DEAL WITH FOUR SPECIFIC TOPICS: HEALTH RISKS ASSOCIATED WITH SPECIFIC AGENTS IN MUNICIPAL SLUDGE, HEALTH RISKS ASSOCIATED WITH USING MUNICIPAL SLUDGE FOR PRODUCTION OF FOOD CHAIN SUBSTANCES, OCCUPATIONAL HAZARDS ASSOCIATED WITH MUNICIPAL SLUDGE AND MAJOR FINDINGS FROM THREE SLUDGE PROJECTS

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., P. O. BOX 1425, ANN ARBOR, MI 48106

IRIS ACCESSION NUMBER: EW005816

PUBLICATION DATE: NOV 80

TITLE: GROUNDWATER PROTECTION.

PERSONAL AUTHOR: DAVIS, JOSEPH A., EDITOR; SPEICHER, KENN, ASSOCIATE EDITOR

DESCRIPTOR: CASE STUDIES; \*DRINKING WATER; \*GROUNDWATER; HAZARDOUS WASTES; \*HYDROLOGY; \*MANAGEMENT; \*PLANNING; \*POLLUTION CONTROL; RESOURCE RECOVERY; SOLID WASTES; \*WATER

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RESOURCES; WASTE DISPOSAL; \*WATER POLLUTION CONTROL; \*WATER QUALITY

DESCRIPTIVE NOTE: 36P.

ABSTRACT: THIS WATER QUALITY MANAGEMENT REPORT DISCUSSES THE VARIOUS ASPECTS OF GROUNDWATER PROTECTION, IDENTIFIES THE MOST SIGNIFICANT THREATS TO GROUNDWATER QUALITY, AND EXAMINES SOME OF THE MAJOR TOOLS, THAT WATER QUALITY MANAGEMENT PERSONNEL HAVE TO WORK WITH. AMONG THE TOPICS DISCUSSED ARE: THE AVAILABILITY AND QUALITY OF U.S. GROUNDWATER, SOLID AND HAZARDOUS WASTES, THE RESOURCE CONSERVATION AND RECOVERY ACT, TRICHLOROETHYLENE, ONSITE WASTEWATER DISPOSAL SYSTEMS, GROUNDWATER PROTECTION PROGRAMS, AND THE FUTURE OF U.S. GROUNDWATER.

AVAILABILITY: WOM REPORTS, ENVIRONMENTAL PROTECTION AGENCY, 401 M STREET, SW, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW005818

PUBLICATION DATE: 78

TITLE: THE USE OF HIGH-PURITY OXYGEN IN THE ACTIVATED SLUDGE PROCESS, VOLUME II.

PERSONAL AUTHOR: MCWHIRTER, J. R., EDITOR

DESCRIPTOR: \*ACTIVATED SLUDGE; DESIGN CONSIDERATIONS; \*OPERATIONS (WASTEWATER); OXYGENATION EQUIPMENT; \*OXYGEN; PURIFICATION; POLLUTION CONTROL TECHNOLOGY; SEWAGE; \*SLUDGE; \*WATER POLLUTION CONTROL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 292P. PRICE: \$59.95; OUTSIDE US \$68.95, CATALOG NO. 5102EA

ABSTRACT: THIS VOLUME DEALS WITH WATER POLLUTION CONTROL TECHNOLOGY AND CONTAINS A COMPREHENSIVE STATE-OF-THE-ART REPORT ON THE USE OF PURIFIED OXYGEN IN THE ACTIVATED SLUDGE WASTEWATER TREATMENT PROCESS. IT IS INTENDED TO ACT AS A REFERENCE MANUAL FOR DESIGN ENGINEERS, PLANNERS, AND MANAGERS IN INDUSTRY AND GOVERNMENT

AVAILABILITY: CRC PRESS, INC., 2000 NW 24TH STREET, BACARATON, FL 33431

IRIS ACCESSION NUMBER: EW005827

TITLE: MANUAL OF INSTRUCTION FOR WASTEWATER TREATMENT PLANT OPERATORS, VOLUMES I AND II.

DESCRIPTOR: BIOLOGY; CHEMISTRY; DISINFECTION; HYDRAULICS; INDUSTRIAL WASTES; \*INSTRUCTIONAL MATERIALS; MAINTENANCE; MANUALS; \*OPERATIONS (WASTEWATER); SAFETY; SAMPLING; SOLID WASTES; TESTING; \*TEXTBOOKS; WASTEWATER DISPOSAL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 250P. PRICE: \$2.00 PER COPY; 15 OR MORE COPIES \$1.50 EACH

ABSTRACT: THIS MANUAL OFFERS WASTEWATER TREATMENT PLANT OPERATORS AND STUDENTS A SINGLE, COMPACT REFERENCE TO THE VARIOUS TOPICS. TABLES, FIGURES, AND A LIST OF REFERENCES ACCOMPANY THE DISCUSSION IN EACH CHAPTER. TITLES ARE: WASTEWATER, WASTEWATER TREATMENT METHODS AND DISPOSAL, PRELIMINARY TREATMENT, PRIMARY TREATMENT, SECONDARY TREATMENT, DISINFECTION OF WASTEWATER, SOLIDS HANDLING AND DISPOSAL, INDUSTRIAL WASTEWATERS, ADVANCED WASTEWATER TREATMENT, SAMPLING AND TESTING PROCEDURES, RECORDS AND REPORTS, MAINTENANCE OF PLANT AND EQUIPMENT, TREATMENT PLANT SAFETY, HYDRAULICS AND ELECTRICITY, CHEMISTRY, AND BIOLOGY/MICROBIOLOGY.

AVAILABILITY: HEALTH EDUCATION SERVICE, INC., P.O. BOX 7126, ALBANY, NY 12224

IRIS ACCESSION NUMBER: EW005828

PUBLICATION DATE: DEC 80

TITLE: EXPLORE THE BENEFITS OF DISTRIBUTED CONTROL.

PERSONAL AUTHOR: KAISER, CHARLES B., JR.; SHIFRIN, WALTER C.

DESCRIPTOR: \*AUTOMATION; \*DISTRIBUTED CONTROL; \*FACILITIES; \*INSTRUMENTATION; INDUSTRIAL WASTES; MUNICIPALITIES; \*OPERATIONS (WASTEWATER); \*SEWAGE; ULTITATES; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 14-17P.

ABSTRACT: THIS ARTICLE DESCRIBES THE MULTISTAGE EXPANSION OF A SEWAGE TREATMENT PLANT IN ST. LOUIS. AUTOMATION WAS CONSIDERED ESSENTIAL, AND AFTER CONSIDERING THE ALTERNATIVES, A DISTRIBUTED CONTROL SYSTEM WAS CHOSEN DUE TO ITS FLEXIBILITY AND OPERATING EASE.

AVAILABILITY: WATER & WASTES ENGINEERING, V17 N12

IRIS ACCESSION NUMBER: EW005829

PUBLICATION DATE: DEC 80

TITLE: COMPARE NITRATE REMOVAL METHODS.

PERSONAL AUTHOR: SORG, THOMAS J.

DESCRIPTOR: AGRICULTURE; \*CONTAMINATION; COST EFFECTIVENESS; ECONOMICS; GROUNDWATER; ION EXCHANGE; \*NITRATES; POLLUTION; \*WATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 26-31P.

ABSTRACT: THIS ARTICLE ANALYZES THE COST EFFECTIVENESS AND EFFICIENCY OF PHYSICAL, BIOLOGICAL AND CHEMICAL METHODS FOR TREATING NITRATE-CONTAMINATED GROUNDWATER. THE AUTHOR CONCLUDES THAT FOR SOME COMMUNITIES ION EXCHANGE MAY BE THE MOST ECONOMICAL, PRACTICAL METHOD FOR DEALING WITH NITRATE

POLLUTED WATERS.

AVAILABILITY: WATER & WASTES ENGINEERING, V17 N12

IRIS ACCESSION NUMBER: EW005830

PUBLICATION DATE: DEC 80

TITLE: STORM SEWER REDESIGN ADDS CAPACITY.

PERSONAL AUTHOR: PETTIT, C. GENE

DESCRIPTOR: \*DESIGN; \*MODELS; \*STORM SEWERS; \*SEWERS;  
\*STORM RUNOFF; \*WATER COLLECTION; \*WATER RESOURCES

DESCRIPTIVE NOTE: 32-33P

ABSTRACT: THE PERMANS RUN ENCLOSURE IN STEUBENVILLE, OHIO, WAS ORIGINALLY DESIGNED FOR A 25 YEAR FREQUENCY STORM. WHEN REGULATION REQUIRED IT TO CONTAIN A 100 YEAR STORM, SEVERAL DESIGN CHANGES WERE NEEDED. THIS ARTICLE DEALS WITH THE DESIGN PROBLEMS WHICH WERE ENCOUNTERED AND THE FINAL REDESIGN OF THE STORM SEWER.

AVAILABILITY: WATER & WASTES ENGINEERING, V17 N12

IRIS ACCESSION NUMBER: EW005831

PUBLICATION DATE: DEC 80

TITLE: TRACE ANALYSIS OF ENVIRONMENTAL POLLUTANTS.

PERSONAL AUTHOR: MILLER, STANTON

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*CHEMICAL ANALYSIS;  
CHEMISTRY; \*DATA COLLECTION; \*DATA EVALUATION; ENVIRONMENT;  
\*GUIDELINES; MEASUREMENTS; POLLUTANTS; QUALITY CONTROL;  
\*RESEARCH REPORTS; TRACE ANALYSIS

DESCRIPTIVE NOTE: 1434P

ABSTRACT: THIS ARTICLE REPORTS ON A STUDY COMPLETED BY THE AMERICAN CHEMICAL SOCIETY COMMITTEE ON ENVIRONMENTAL IMPROVEMENT. THE STUDY, "GUIDELINES FOR DATA ACQUISITION AND DATA QUALITY EVALUATION IN ENVIRONMENTAL CHEMISTRY" WAS CONDUCTED TO PROVIDE GUIDANCE IN DEVELOPING RELIABLE CHEMICAL ANALYSIS OF ENVIRONMENTAL SAMPLES AND ALLOW MORE CONFIDENT INTERLABORATORY USE OF THE DATA

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V14 N12

IRIS ACCESSION NUMBER: EW005832

PUBLICATION DATE: DEC 80

TITLE: ANALYTICAL ISSUES IN COMPLIANCE MONITORING.

PERSONAL AUTHOR: RICE, JAMES K.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; COMPLIANCE;  
\*ENVIRONMENTAL PROTECTION AGENCY; \*ENVIRONMENTAL  
REGULATIONS; \*EVALUATION; LABORATORY TECHNIQUES;  
MATHEMATICS; \*MONITORING; POLLUTANTS; \*REGULATIONS;  
SAMPLING; \*STANDARDS

DESCRIPTIVE NOTE: 1455-1457P.

ABSTRACT: THIS ARTICLE CONTENDS THAT THE EPA'S METHODS FOR VERIFYING THE ADHERENCE OF A WATER DISCHARGER TO THE TERMS OF HIS PERMIT DO NOT ENSURE ACCURATE RESULTS. SOME MODIFICATIONS ARE SUGGESTED FOR REMEDYING THIS SITUATION. IN ADDITION, A REACTION BY THE EPA TO THIS CLAIM IS INCLUDED

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V14 N12

IRIS ACCESSION NUMBER: EW005833

PUBLICATION DATE: 79

TITLE: SAFE WATER. A FACTBOOK ON THE SAFE DRINKING WATER ACT FOR NON-COMMUNITY WATER SYSTEMS.

DESCRIPTOR: BACTERIA; \*DRINKING WATER; \*GUIDES; LABORATORY  
PROCEDURES; MANAGEMENT; MONITORING; NITRATES; PUBLIC HEALTH;  
\*RECORD KEEPING; \*SAFE DRINKING WATER ACT; SAMPLING;  
\*TESTING; TURBIDITY; \*WATER SUPPLY; \*WATER QUALITY

DESCRIPTIVE NOTE: 42P. PRICE:

ABSTRACT: THIS PUBLICATION HAS BEEN PREPARED TO PROVIDE INFORMATION ON THE SAFE DRINKING WATER ACT TO PERSONS RESPONSIBLE FOR THE MANAGEMENT OR OPERATION OF INDUSTRIAL FIRMS, BUSINESS ESTABLISHMENTS, OR OTHER PUBLIC ACCOMMODATIONS THAT HAVE THEIR OWN DRINKING WATER SUPPLIES AND ARE CLASSIFIED AS NON-COMMUNITY WATER SYSTEMS. THE MATERIAL DISCUSSES THE MONITORING REQUIRED TO ENSURE THAT SAFE WATER IS BEING PROVIDED TO EMPLOYEES AND THE PUBLIC. SAMPLING, TESTING, AND RECORDED-KEEPING PROCEDURES ARE COVERED FOR BACTERIA, NITRATE, AND TURBIDITY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION, 6666 QUINCY AVENUE, DENVER, CO 80235

IRIS ACCESSION NUMBER: EW005837

PUBLICATION DATE: DEC 80

TITLE: RECENT DEVELOPMENTS IN FILTRATION SYSTEM DESIGN.

PERSONAL AUTHOR: TRUSSELL, R. RHODES; AND OTHERS

DESCRIPTOR: \*DESIGN; \*EFFICIENCY; EFFLUENTS; FILTERS;  
\*FILTRATION; \*OPERATIONS (WASTEWATER); \*PERFORMANCE  
CRITERIA; RESEARCH; TECHNOLOGICAL ADVANCEMENTS; TURBIDITY;  
\*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 705-710P.

ABSTRACT: THE TRADITIONAL MEASURE USED BY TREATMENT PLANT

OPERATORS AND DESIGNERS FOR EVALUATING THE OVERALL EFFICIENCY OF A WATER FILTRATION OPERATION HAS BEEN THE LENGTH OF A FILTER RUN. A LOOK AT RECENT FILTER DESIGN DEVELOPMENTS REVEALS THAT FILTRATION RATE AND BACKWASH VOLUME ARE ALSO ESSENTIAL CONSIDERATIONS FOR GAUGING FILTER PRODUCTIVITY. DATA HAVE BEEN ACCUMULATED THAT SUGGEST THAT ON-OFF CYCLES FOR FILTRATION OPERATIONS USUALLY RESULT IN A SHORT-TERM DEGRADATION IN EFFLUENT QUALITY AND THAT RATES IN EXCESS OF THOSE CONVENTIONALLY EMPLOYED CAN BE USED WITHOUT ADVERSE EFFECTS ON THE PROCESS OF FILTRATION

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N12

IRIS ACCESSION NUMBER: EW005844

PUBLICATION DATE: NOV 80

TITLE: ENERGY CONSERVATION UNITS REPLACE OIL AT SOUTHERLY WASTEWATER TREATMENT CENTER.

PERSONAL AUTHOR: STANKUNAS, JOHN J.

DESCRIPTOR: COST EFFECTIVENESS; DESIGN; \*ENERGY CONSERVATION; \*ENERGY; \*FACILITIES; HEAT PUMPS; INCINERATORS; \*SLUDGE; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 26-27,56-68P.

ABSTRACT: THIS ARTICLE DESCRIBES THE ENERGY CONSERVATION MEASURES WHICH WERE BUILT INTO THE UPGRADING AND EXPANSION OF CLEVELAND'S SOUTHERLY WASTEWATER TREATMENT CENTER. THE FOUR DESIGN COMPONENTS ARE: (1) USING HEAT PUMPS TO GENERATE BUILDING HEAT FROM PLANT EFFLUENT; (2) USING ENERGY WHEELS TO GENERATE BUILDING HEAT FROM BUILDING EXHAUST AIR; (3) PROCESSING STEAM FOR SLUDGE CONDITIONING FROM INCERATOR WASTE-HEAT RECOVERY; AND (4) PROCESSING STEAM FOR SLUDGE CONDITIONING FROM SKIMMININGS-FIRED BOILERS.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N11

IRIS ACCESSION NUMBER: EW005845

PUBLICATION DATE: NOV 80

TITLE: SOLIDS-CONTACT CLARIFICATION BRINGS OUT BEST OF TRICKLING FILTERS.

PERSONAL AUTHOR: NORRIS DAN F.

DESCRIPTOR: \*CLARIFICATION; COST EFFECTIVENESS; ENERGY CONSERVATION; EFFICIENCY; \*OPERATIONS (WASTEWATER); \*PILOT TESTS; \*SOLIDS CONTACT CLARIFICATION; \*SLUDGE; \*TRICKLING FILTERS; \*WASTEWATER TREATMENT; WASTE DISPOSAL

DESCRIPTIVE NOTE: 28-29,59-60P.

ABSTRACT: THIS ARTICLE DESCRIBES PLANT-SCALE TESTS AT COR OREGON WHICH INVESTIGATED THE POTENTIAL OF USING FILTERS PLUS SOLIDS CONTACT CLARIFICATION IN

WASTEWATER TREATMENT. THE RESULTS INDICATE THAT THE PROCESS IS EXCEPTIONALLY STABLE AND REQUIRES FAR LESS ENERGY EQUIPMENT, ELECTRICAL CONTROL, AND OPERATOR ATTENTION THAN THAT FOR ACTIVATED SLUDGE, WHILE PRODUCING A DENSE SLUDGE THAT IS REMOVABLE IN THE PRIMARY CLARIFIERS WITHOUT SEPARATE THICKENING.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N11

IRIS ACCESSION NUMBER: EW005846

PUBLICATION DATE: NOV 80

TITLE: LOS ANGELES TO MEET RECS WITH ENERGY-MISER SLUDGE PROCESSOR.

PERSONAL AUTHOR: TILLMAN, DONALD C.

DESCRIPTOR: \*COST EFFECTIVENESS; \*ENERGY CONSERVATION; \*OPERATIONS (WASTEWATER); \*REGULATIONS; RESOURCE RECOVERY; \*SLUDGE; \*THERMAL SLUDGE DISPOSAL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 30-32,62P.

ABSTRACT: THIS ARTICLE DESCRIBES AN INNOVATIVE LOW-COST, LOW-ENERGY CONSUMING METHOD OF SLUDGE TREATMENT THAT HAS BEEN CHOSEN BY THE CITY OF LOS ANGELES FOR ITS HYPERIOR PLANT. THE SYSTEM (CALLED THERMAL SLUDGE DISPOSAL) INVOLVES THE THERMAL EVAPORATION OF THE SLUDGE WATER BY HEAT EXCHANGE AND THE THERMAL DESTRUCTION OF SLUDGE SOLIDS BY PYROLYSIS.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N11

IRIS ACCESSION NUMBER: EW005847

PUBLICATION DATE: NOV 80

TITLE: PROCESSES--NOT PRODUCTS--BIGGEST ENERGY-SAVING FACTORS.

DESCRIPTOR: ENERGY; \*ENERGY CONSERVATION; \*EFFICIENCY; \*EQUIPMENT; \*OPERATIONS (WASTEWATER); \*SYSTEMS ANALYSIS; \*WATER TREATMENT; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 43,62P.

ABSTRACT: THIS ARTICLE STRESSES HOW ENERGY CONSERVATION MEASURES ARE OFTEN MISMANAGED IN THE WATER AND WASTEWATER TREATMENT INDUSTRY. THE MAIN PROBLEM CITED IS THAT ENERGY CONSERVATION SYSTEMS ARE OFTEN DESIGNED AROUND EFFICIENT EQUIPMENT THAT WORKS INEFFICIENTLY AS A SYSTEM.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N11

IRIS ACCESSION NUMBER: EW005848

PUBLICATION DATE: NOV 80

TITLE: DICESTER METHANE UTILIZATION CAN BE OPTIMIZED.

PERSONAL AUTHOR: BAUMANN, PETER C.

DESCRIPTOR: \*DIGESTER GAS; DESIGN; \*ENERGY CONSERVATION;  
\*HEAT RECOVERY; \*METHANE; \*OPERATIONS (WASTEWATER);  
PLANNING; \*RESOURCE RECOVERY; \*RECYCLING; \*WASTEWATER  
TREATMENT

DESCRIPTIVE NOTE: 44-45,66-68P.

ABSTRACT: THE EXPENSE OF EXPLOITING DICESTER GAS AS AN ENERGY SOURCE NOW CAN BE JUSTIFIED ESPECIALLY IF DICESTER HEATING REQUIREMENTS ARE REDUCED. IN THE PAST, THE GAS WAS SEEN AS A FREE FUEL SOURCE AND LITTLE EFFORT WAS MADE TO REDUCE THE ENERGY REQUIRED FOR DICESTER HEATING. THE SMALL AMOUNT OF GAS AVAILABLE AFTER MEETING THE DICESTER HEATING REQUIREMENTS WASN'T WORTH EXPLOITING AND WAS BURNED TO THE ATMOSPHERE. HOWEVER, NOW SOUND PLANNING IN THE EARLY PHASE OF THE DESIGN CAN OPTIMIZE DICESTER GAS.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N11

IRIS ACCESSION NUMBER: EW005849

PUBLICATION DATE: NOV 80

TITLE: ENERGY SAVINGS CAN FIT YOUR BUDGET.

PERSONAL AUTHOR: SAXON, TREVOR

DESCRIPTOR: \*BUDGETS; \*DESIGN; \*ENERGY CONSERVATION;  
\*FACILITIES; \*OPERATIONS (WASTEWATER); \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 46-48P.

ABSTRACT: THIS ARTICLE CONTAINS DESCRIPTIONS OF POSSIBLE ENERGY CONSERVATION MEASURES AT WASTEWATER TREATMENT PLANTS. THE ENERGY-SAVING TECHNIQUES ARE SUB-DIVIDED UNDER THREE HEADINGS: (1) NO COST; (2) LOW CAPITAL COST; AND (3) LARGE CAPITAL COST. ALL THREE CATEGORIES INVOLVE MODIFICATION OF TREATMENT PROCESSES, ARCHITECTURAL DESIGN AND HEATING, VENTILATING, AIR CONDITIONING AND ELECTRICAL SYSTEMS.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N11

IRIS ACCESSION NUMBER: EW005850

PUBLICATION DATE: NOV 80

TITLE: SELECTING PIPELINES TO ACHIEVE EFFECTIVE ENERGY CONSERVATION.

PERSONAL AUTHOR: REID, T. ANTHONY

DESCRIPTOR: \*DESIGN; \*ENERGY CONSERVATION; \*ENGINEERING;

\*ENERGY; \*PIPES; \*PIPELINES; \*PLANNING; \*WASTEWATER TREATMENT.

DESCRIPTIVE NOTE: 53-54,64-65,74P.

ABSTRACT: THE RAPID INCREASE IN THE COST OF ENERGY IN RECENT YEARS JUSTIFIES A MORE RIGOROUS PROCEDURE FOR SELECTING PIPELINES BASED ON THE TOTAL ENERGY REQUIREMENTS OVER THE LIFE OF THE PIPELINE. THIS PAPER PRESENTS AN APPROPRIATE MATHEMATICAL PROCEDURE.

AVAILABILITY: WATER & SEWAGE WORKS, V127 N11

IRIS ACCESSION NUMBER: EW005851

PUBLICATION DATE: 78

TITLE: DISPOSAL AND DECONTAMINATION OF PESTICIDES.

PERSONAL AUTHOR: KENNEDY, MAURICE V.

DESCRIPTOR: CHEMICALS; \*DECONTAMINATION; DETOXIFICATION;  
HAZARDOUS WASTES; \*PESTICIDE DISPOSAL; PHOTODECOMPOSITION;  
RESEARCH; TECHNOLOGY; \*WASTE PESTICIDES

DESCRIPTIVE NOTE: 158P. PRICE: \$20.00

ABSTRACT: THE PAPERS IN THIS VOLUME RELATE TO SEVERAL METHODS FOR THE DISPOSAL OF PESTICIDES. TOPICS INCLUDE THE PHOTOCHEMICAL DESTRUCTION OF CHLORODIOXINS AND HALOCENATED XANTHENE DYES, THE MICROWAVE PLASMA PROCESS, AND CATALYTIC HYDRODECHLORINATION AS WELL AS PYROLYSIS OF MIREX RESIDUES AND DIELDRIN ELIMINATION. THIS BOOK ALSO PRESENTS A STATE-OF-THE-ART REPORT ON PESTICIDE DISPOSAL RESEARCH AND INFORMATION ON THE DEVELOPING TECHNOLOGY FOR DETOXIFICATION OF PESTICIDES AND OTHER UNWANTED HAZARDOUS MATERIAL.

AVAILABILITY: AMERICAN CHEMICAL SOCIETY, 1155 SIXTEENTH STREET, NW, WASHINGTON, DC 20036

IRIS ACCESSION NUMBER: EW005852

PUBLICATION DATE: 79

TITLE: ENERGY CONSERVATION AT WASTEWATER TREATMENT PLANTS.

DESCRIPTOR: CASE STUDIES; \*ENERGY CONSERVATION; \*ENERGY;  
ECONOMICS; \*FACILITIES; \*MAINTENANCE; \*MANAGEMENT;  
OPERATIONS (WASTEWATER); PLANNING; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 23P. PRICE: \$4.00

ABSTRACT: THIS PUBLICATION ENCOURAGES ENERGY CONSERVATION IN THE OPERATION, MAINTENANCE, AND MANAGEMENT OF WASTEWATER TREATMENT PLANTS. IT AIMS TO MAKE SUPERVISORS, OPERATORS, AND ENGINEERS AWARE OF THE OPPORTUNITIES FOR CONSERVING ENERGY, OUTLINE A PROGRAM FOR IDENTIFYING AND PURSUING CONSERVATION OPPORTUNITIES, AND PROVIDE SPECIFIC RELEVANT EXAMPLES OF CONSERVATION PRACTICES.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION,  
PUBLICATION ORDER DEPARTMENT, 2626 PENNSYLVANIA AVENUE, NW,  
WASHINGTON, DC 20037

INSTITUTION NAME: TASK FORCE ON ENERGY CONSERVATION.

IRIS ACCESSION NUMBER: EW005855

PUBLICATION DATE: 80

TITLE: SLUDGE THICKENING.

DESCRIPTOR: \*AIR FLOTATION THICKENING; \*CENTRIFUGAL  
THICKENING; ECONOMICS; \*GRAVITATIONAL THICKENING;  
\*OPERATIONS (WASTEWATER); \*SLUDGE; \*SLUDGE THICKENING;  
\*WATER POLLUTION CONTROL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 163P. PRICE: \$16.00

ABSTRACT: THIS MANUAL OF PRACTICE ATTEMPTS TO CONSOLIDATE  
IN A SINGLE VOLUME THE WEALTH OF INFORMATION AVAILABLE  
CONCERNING SLUDGE THICKENING PRACTICES. COMPREHENSIVE  
DISCUSSIONS OF GRAVITATIONAL, FLOTATIONAL, CENTIFUGAL  
THICKENING PROCESSES WHICH ARE WIDELY ACCEPTED AND APPLIED  
ARE INCLUDED. NEWER THICKENING METHODS SUCH AS THE USE OF  
DRUM, AND CANE THICKENERS, ARE ALSO ADDRESSED. SUPPORT  
PROCESSES AND CONTROLS ARE DISCUSSED WHEN APPROPRIATE.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION,  
PUBLICATION ORDER DEPARTMENT, 2626 PENNSYLVANIA AVENUE, NW,  
WASHINGTON, DC 20037

INSTITUTION NAME: TASK FORCE ON SLUDGE THICKENING.

IRIS ACCESSION NUMBER: EW005856

PUBLICATION DATE: 80

TITLE: PROCEEDINGS OF THE RESEARCH SYMPOSIA\*

DESCRIPTOR: ACTIVATED SLUDGE; CLARIFIERS; \*CONFERENCE  
PROCEEDINGS; FIXED FILM PROCESSES; INDUSTRIAL WASTES; LAND  
TREATMENT; \*OPERATIONS (WASTEWATER); POLLUTION CONTROL;  
\*RESEARCH; \*RESEARCH REVIEWS; SORPTION PROCESSES; \*SYMPOSIA;  
\*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 375P. PRICE: \$40.00

ABSTRACT: THIS PUBLICATION CONTAINS THE PROCEEDINGS OF THE  
RESEARCH SYMPOSIA CONDUCTED AT THE 53RD ANNUAL CONFERENCE OF  
THE WATER POLLUTION CONTROL FEDERATION. THE PAPERS ARE  
GROUPED INTO THE FOLLOWING EIGHT SECTIONS: CLARIFIER DESIGN  
AND OPERATION, FIXED FILM PROCESSES, INDUSTRIAL WASTE  
RESEARCH, LAND TREATMENT, SORPTION PROCESS, ACTIVATED  
SLUDGE, GENERAL RESEARCH, AND CHEMICAL INTERACTIONS.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION,  
PUBLICATION ORDER DEPARTMENT, 2626 PENNSYLVANIA AVENUE, NW,  
WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW005857

PUBLICATION DATE: 80

TITLE: PROCEEDINGS OF THE INDUSTRIAL WASTES SYMPOSIA.

DESCRIPTOR: CASE HISTORIES; \*CONFERENCE PROCEEDINGS;  
EFFLUENTS; ENERGY; \*INDUSTRIAL WASTES; MANAGEMENT; OPERATION  
(WASTEWATER); POLLUTION CONTROL; PRETREATMENT; \*RESEARCH  
REPORTS; \*SYMPOSIA; TECHNOLOGICAL ADVANCEMENT; \*WASTE  
DISPOSAL; \*WASTEWATER TREATMENT; WATER QUALITY

DESCRIPTIVE NOTE: 375P. PRICE: \$40.00

ABSTRACT: THIS PUBLICATION CONTAINS THE PROCEEDINGS OF THE  
INDUSTRIAL WASTES SYMPOSIA CONDUCTED AT THE 53RD ANNUAL  
CONFERENCE OF THE WATER POLLUTION CONTROL FEDERATION. THE  
PAPERS ARE GROUPED INTO THE FOLLOWING EIGHT SECTIONS: WATER  
RELATED ASPECTS OF HAZARDOUS WASTE DISPOSAL, INDUSTRIAL  
EXPERIENCE WITH INNOVATIVE TECHNOLOGY, INDUSTRIAL WASTEWATER  
TREATMENT PLANT OPERATION, PRETREATMENT, WASTEWATER ASPECTS  
OF ENERGY PRODUCTION, EFFLUENT LIMITATIONS AND ALTERNATIVE  
APPROACHES, BEST MANAGEMENT PRACTICES AND SPCC PLANS, AND  
CASE HISTORIES.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION,  
PUBLICATION ORDER DEPARTMENT, 2626 PENNSYLVANIA AVENUE, NW,  
WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW005858

PUBLICATION DATE: 80

TITLE: ABSTRACTS OF TECHNICAL PAPERS 53RD ANNUAL CONFERENCE  
WATER POLLUTION CONTROL FEDERATION 1980.

DESCRIPTOR: \*ABSTRACTS; \*CONFERENCE \*REPORTS; DESIGN;  
EQUIPMENT; FACILITIES; MANAGEMENT; \*OPERATIONS (WASTEWATER);  
\*POLLUTION CONTROL; RESEARCH REVIEWS; \*TECHNICAL REPORTS;  
WASTE DISPOSAL; \*WASTEWATER TREATMENT; \*WATER POLLUTION

DESCRIPTIVE NOTE: 205P. PRICE: \$3.00

ABSTRACT: THIS PUBLICATION IS A COMPILATION OF ABSTRACTS  
FROM PAPERS PRESENTED AT THE 53RD ANNUAL CONFERENCE OF THE  
WATER POLLUTION CONTROL FEDERATION, SEPTEMBER 28 - OCTOBER  
3, 1980, LAS VEGAS, NEVADA. AMONG THE TOPICS COVERED BY THE  
205 PAPERS WERE: ENERGY AND WASTE CONTROL, COLLECTION  
SYSTEMS - COMBINED SEWERS, CLARIFIER DESIGN AND OPERATION,  
HAZARDOUS WASTE DISPOSAL, ANAEROBIC SYSTEMS, PLANT  
OPERATIONS, MANAGEMENT, INDUSTRIAL WASTES, ECONOMICS,  
RESOURCE CONSERVATION AND RECOVERY ACT, PLANT OPERATIONS  
RESEARCH, PUBLIC EDUCATION, FACILITIES DESIGN, HEALTH AND  
SAFETY, INNOVATIVE AND ALTERNATIVE TECHNOLOGIES, SEWER  
SYSTEMS, PROCESS DESIGN, LAND TREATMENT, REUSE AND  
RECYCLING, SORPTION PROCESSES, USER CHARGE SYSTEMS,  
ACTIVATED SLUDGE, AND WATER QUALITY.

AVAILABILITY: WATER POLLUTION CONTROL FEDERATION,  
PUBLICATION ORDER DEPARTMENT, 2626 PENNSYLVANIA AVENUE, NW,  
WASHINGTON, DC 20037

IRIS ACCESSION NUMBER: EW005860

PUBLICATION DATE: 69

TITLE: SAFETY IN SEWERS AND AT SEWAGE WORKS.

DESCRIPTOR: \*ACCIDENT PREVENTION; \*EMERGENCIES; FACILITIES; MAINTENANCE; MANHOLES; \*OCCUPATIONAL SAFETY; PUMPING STATIONS; \*SAFETY; SAFETY EQUIPMENT; \*SEWERS; \*SEWAGE WORKS; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 57P. PRICE: \$1.75

ABSTRACT: THIS REPORT DEALS WITH THE RISKS TO WHICH WORKERS ARE EXPOSED IN SEWERAGE SYSTEMS AND AT SEWAGE TREATMENT WORKS. IT IS INTENDED PRIMARILY FOR THOSE RESPONSIBLE FOR THE DESIGN AND MANAGEMENT OF SEWERAGE AND SEWAGE DISPOSAL SYSTEMS. RECOMMENDATIONS ARE GIVEN ON SAFETY MEASURES CONCERNED WITH DESIGN, OPERATION, AND MAINTENANCE OF SUCH SYSTEMS, AND ON PRECAUTIONS TO BE TAKEN BY MEN WORKING IN THEM, TO ELIMINATE OR MINIMIZE THE LIKELY RISKS. THE REPORT INDICATES SOME SUITABLE TYPES OF SAFETY APPARATUS, AND SUGGESTS THE ACTION NECESSARY TO MAINTAIN SAFETY AT WORK AND EFFICIENCY IN ANY RESCUE OPERATIONS.

AVAILABILITY: AMERICAN SOCIETY OF CIVIL ENGINEERS, 345 EAST 47TH STREET, NEW YORK, NY 10017

INSTITUTION NAME: THE INSTITUTION OF CIVIL ENGINEERS, MINISTRY OF HOUSING AND LOCAL GOVERNMENT.

IRIS ACCESSION NUMBER: EW005861

PUBLICATION DATE: DEC 80

TITLE: RELATIVE HEALTH RISKS OF ACTIVATED SLUDGE TREATMENT AND SLOW-RATE LAND TREATMENT.

PERSONAL AUTHOR: UICA, ANIS; CRITES, RONALD W.

DESCRIPTOR: \*ACTIVATED SLUDGE; EVALUATION; \*HEALTH RISKS; LAGOONS; \*LAND APPLICATION; OCCUPATIONAL HEALTH; \*OPERATIONS (WASTEWATER); \*PUBLIC HEALTH; RESEARCH; SLUDGE; \*SLUDGE TREATMENT; \*WASTEWATER TREATMENT; WATER RESOURCES

DESCRIPTIVE NOTE: 2865-2874P.

ABSTRACT: A COMPARISON IS MADE OF THE POTENTIAL HEALTH EFFECTS OF ACTIVATED SLUDGE AND LAND TREATMENT SYSTEMS. REMOVAL MECHANISMS AND THEIR EFFECTIVENESS ARE REVIEWED. FACTORS NEEDED TO PROVIDE AN EVALUATION METHOD, INCLUDING CONTACT WITH A SUSCEPTIBLE HOST AND CONCENTRATION OF HEALTH-AFFECTING WASTEWATER CONSTITUENTS, ARE THEN ADDRESSED. BOTH TREATMENT SYSTEMS ARE EFFECTIVE IN MINIMIZING HEALTH RISKS. LAND TREATMENT SYSTEMS PROVIDE EQUAL OR GREATER REMOVAL OF VARIOUS WASTEWATER CONSTITUENTS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N12

IRIS ACCESSION NUMBER: EW005862

PUBLICATION DATE: DEC 80

TITLE: TREATABILITY OF TYPE A ZEOLITE IN WASTEWATER - PART I.

PERSONAL AUTHOR: KING, JAMES E.; AND OTHERS

DESCRIPTOR: ACTIVATED SLUDGE; BIODEGRADATION; CHEMICAL TREATMENT; \*COLLECTION SYSTEMS; DETERGENTS; \*PRIMARY TREATMENT; RESEARCH; \*SECONDARY TREATMENT; TRICKLING FILTERS; \*WASTEWATER TREATMENT; WATER QUALITY; \*ZEOLITE

DESCRIPTIVE NOTE: 2875-2886P.

ABSTRACT: THE TREATMENT OF TYPE A ZEOLITE, A SYNTHETIC ALUMINOSILICATE THAT HAS BEEN DEVELOPED FOR USE AS A BUILDER IN DETERGENTS, WAS STUDIED IN COLLECTION SYSTEMS FOR WASTEWATER AND IN MODELS OF PRIMARY SEDIMENTATION AND WASTEWATER TREATMENT FACILITIES. THE STUDIES INDICATED NO SUBSTANTIAL LONG-TERM ACCUMULATION OF THE ZEOLITE IN COLLECTION SYSTEMS AND NO IMPAIRMENT OF FLOW. BOTH STATIC AND DYNAMIC SETTLING TESTS INDICATED THAT THE ZEOLITE WAS REMOVED LIKE OTHER SUSPENDED SOLIDS. THE ZEOLITE DID NOT INTERFERE WITH CHEMICAL TREATMENT FOR THE REMOVAL OF PHOSPHOROUS, AND THE CHEMICAL TREATMENT ENHANCED REMOVAL OF THE ZEOLITE. THE PRESENCE OF ZEOLITE HAD NO EFFECT ON THE RATE OR EXTENT OF THE BIODEGRADATION OF AN ANIONIC SURFACTANT IN ACTIVATED SLUDGE. IN STUDIES WITH SEMI-CONTINUOUS ACTIVATED SLUDGE, CONTINUOUS SLUDGE, AND TRICKLING FILTER PROCESSES, TREATMENT EFFICIENCIES WERE NOT ADVERSELY AFFECTED AND EFFLUENT CONCENTRATIONS OF METALS WERE NOT ALTERED BY THE ZEOLITE. REMOVAL OF THE ZEOLITE IN THESE PROCESSES WAS 80% OR MORE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N12

IRIS ACCESSION NUMBER: EW005863

PUBLICATION DATE: DEC 80

TITLE: TREATABILITY OF TYPE A ZEOLITE WASTEWATER -- PART II.

PERSONAL AUTHOR: HOLMAN, WILLIAM F.; HOPPING, WILLIAM D.

DESCRIPTOR: ACTIVATED SLUDGE; COLLECTION SYSTEMS; DEWATERING; \*LABORATORY TESTING; \*OPERATIONS (WASTEWATER); PERCOLATION; RESEARCH; \*SEPTIC SYSTEMS; \*SEPTIC TANKS; \*SLUDGE; \*WASTEWATER TREATMENT; \*ZEOLITE

DESCRIPTIVE NOTE: 2887-2905P.

ABSTRACT: TYPE A ZEOLITE IS A SYNTHETIC ALUMINOSILICATE WHICH HAS BEEN DEVELOPED FOR USE AS A BUILDER IN DETERGENTS. THE EFFECT OF THE ZEOLITE ON VARIOUS PROCESSES USED TO TREAT SLUDGE AND ON-TREATMENT SYSTEMS FOR HOME WASTEWATER WAS EVALUATED. LABORATORY SIMULATIONS OF SLUDGE THICKENING, ANAEROBIC DIGESTION, AND DEWATERING WERE USED TO TEST ZEOLITE AT REALISTIC AND EXAGGERATED CONCENTRATIONS.

REALISTIC CONCENTRATIONS OF THE ZEOLITE HAD NO EFFECT ON THE EFFICIENCY OF THESE TREATMENT PROCESSES FOR SLUDGE. EXAGGERATED CONCENTRATIONS OF THE ZEOLITE IMPROVED SLUDGE SETTLING AND DEWATERING PROPERTIES. THE ZEOLITE HAD NO EFFECT ON THE PERFORMANCE OF LABORATORY SEPTIC TANKS OR ON THE QUALITY OF EFFLUENT FROM INDIVIDUAL HOME SEPTIC TANK AND AEROBIC SYSTEMS. THE ADDITION OF THE ZEOLITE DID NOT SIGNIFICANTLY INCREASE THE VOLUME OF SEPTIC TANK SLUDGE; THE PERCOLATION RATE OF EFFLUENT FROM SEPTIC TANKS IN SAND COLUMNS WAS NOT ALTERED BY THE PRESENCE OF REALISTIC CONCENTRATIONS OF THE ZEOLITE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N12

IRIS ACCESSION NUMBER: EW005864

PUBLICATION DATE: DEC 80

TITLE: CONTROL OF SLUDGE BULKING IN THE BREWING INDUSTRY.

PERSONAL AUTHOR: SCHWARTZ, HENRY G., JR.; AND OTHERS

DESCRIPTOR: ACTIVATED SLUDGE; \*BREWING INDUSTRY; \*CASE STUDIES; DESIGN; FOOD PROCESSING; \*INDUSTRIAL WASTES; \*OPERATIONS (WASTEWATER); \*SLUDGE; \*SLUDGE BULKING; \*WASTE DISPOSAL; \*WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 2977-2993P.

ABSTRACT: TWO YEARS OF FULL SCALE OPERATIONS OF A BREWERY WASTE TREATMENT PLANT ARE ANALYZED TO DEMONSTRATE HOW THE PLANT OVERCAME THE PROBLEMS OF BULKING SLUDGE TYPICAL IN THE INDUSTRY. MAJOR FACTORS CONTRIBUTING TO BULKING SLUDGE CONDITIONS ARE EXAMINED ALONG WITH THE STEPS TAKEN TO OVERCOME THEM.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V52 N12

IRIS ACCESSION NUMBER: EW005865

PUBLICATION DATE: NOV 80

TITLE: IS THE WATER GETTING CLEANER? (A SURVEY OF WATER QUALITY IN THE TENNESSEE VALLEY - 1980).

PERSONAL AUTHOR: CLARK, LARRY R.; AND OTHERS

DESCRIPTOR: NATURAL RESOURCES; \*RESEARCH; RESERVOIRS; RIVERS; \*SURVEYS; STREAMS \*TENNESSEE VALLEY AUTHORITY; WATER QUALITY PROBLEMS; \*WATER QUALITY; \*WATER RESOURCES; \*WATER MANAGEMENT

DESCRIPTIVE NOTE: 33P.

ABSTRACT: THIS REPORT CONTAINS THE RESULTS OF A SURVEY OF THE WATER QUALITY OF THE TENNESSEE VALLEY. IT IDENTIFIES THE VALLEY'S CRITICAL AND SERIOUS WATER PROBLEMS, CHARTS THE PROGRESS HAS BEEN MADE, AND SUGGESTS POSSIBLE

SOLUTIONS.

AVAILABILITY: DIVISION OF WATER RESOURCES, OFFICE OF NATURAL RESOURCES, TENNESSEE VALLEY AUTHORITY, 116 EVANS BUILDING, KNOXVILLE, TN, 37901

IRIS ACCESSION NUMBER: EW005866

PUBLICATION DATE: NOV 78

TITLE: SAFETY TRAINING: HAZARDOUS SUBSTANCES.

DESCRIPTOR: ACCIDENT PREVENTION; \*AUDIOVISUAL AIDS; \*HAZARDOUS MATERIALS; INDUSTRIAL SAFETY; \*INSTRUCTIONAL MATERIALS; OCCUPATIONAL SAFETY; \*SAFETY; SAFETY/EDUCATION; STUDENT GUIDES; \*TEACHING GUIDES; \*TOXIC SUBSTANCES; WORKBOOKS

DESCRIPTIVE NOTE: PRICE: \$395.00 VIDIOCASSETTE, \$1,400.00 TOTAL SET, \$45.00 PRE UNIT TO PREVIEW, STUDENT AND INSTRUCTOR'S GUIDES INCLUDED

ABSTRACT: THIS HAZARDOUS SUBSTANCES TRAINING UNIT IS COMPOSED OF A ONE-HOUR VIDEOTAPE PRESENTATION, A STUDENT MANUAL WITH AN ACCOMPANYING TEXT, AND AN INSTRUCTOR'S GUIDE. THE VIDEOTAPE PROGRAM IS DIVIDED INTO SEVEN SEGMENTS, AND THE TEXT CORRESPONDS TO THE TAPE IN BOTH ORGANIZATION AND BASIC CONTENT. THE SEVEN SECTIONS INCLUDE: COMMON INDUSTRIAL HAZARDS; CHLORINE; ACIDS AND CAUSTICS; FLAMMABLE, EXPLOSIVE, AND RADIOACTIVE HAZARDS; PAINTS AND ADHESIVES; DUSTS AND GASES; AND METALLIC SUBSTANCES. BOTH THE STUDENT AND INSTRUCTOR'S GUIDES CONTAIN SECTION SUMMARIES, QUIZZES, AND A LIST OF TERMS.

AVAILABILITY: NUS CORPORATION, TRAINING SERVICES DIVISION, 4 RESEARCH PLACE, ROCKVILLE, MD 20850, ATTENTION: D. ZEZZO

IRIS ACCESSION NUMBER: EW005867

PUBLICATION DATE: SEP 20

TITLE: SAFETY TRAINING: RESPIRATORY PROTECTION.

DESCRIPTOR: ACCIDENT PREVENTION; APPARATUS; \*AUDIOVISUAL AIDS; INDUSTRIAL SAFETY; \*INSTRUCTIONAL MATERIALS; OCCUPATIONAL HEALTH; \*RESPIRATORS; \*RESPIRATORY PROTECTION; \*SAFETY; SAFETY EDUCATION; STUDENT GUIDES; \*TEACHING GUIDES; WORKBOOKS

DESCRIPTIVE NOTE: PRICE: \$395.00 VIDIOCASSETTE, \$1400.00 TOTAL SET, \$445.00 16MM, \$45.00 PER UNIT TO PREVIEW, STUDENT AND INSTRUCTOR'S GUIDES INCLUDED

ABSTRACT: THIS RESPIRATORY PROTECTION TRAINING UNIT IS COMPOSED OF A ONE-HOUR VIDEOTAPE PRESENTATION, A STUDENT MANUAL WITH AN ACCOMPANYING TEXT, AND AN INSTRUCTOR'S GUIDE. THE VIDEOTAPE PROGRAM IS DIVIDED INTO FIVE SEGMENTS, AND THE TEXT CORRESPONDS TO THE TAPE IN BOTH ORGANIZATION AND BASIC CONTENT. THE FIVE SECTIONS INCLUDE: RESPIRATORY HAZARDS, AIR PURIFYING RESPIRATORS, AIR SUPPLIED RESPIRATORS, FITTING OF

RY APPARATUS, AND USE AND CARE OF RESPIRATORY  
BOTH THE STUDENT AND INSTRUCTOR'S GUIDES CONTAIN  
SUMMARIES, QUIZZES, AND A LIST OF TERMS.

ITY: NUS CORPORATION, TRAINING SERVICE DIVISION, 4  
PLACE, ROCKVILLE, MD 20850, ATTENTION: D. ZEZZO

SSION NUMBER: EW005868

ON DATE: JUL 78

SAFETY TRAINING: FIRE SAFETY.

R: ACCIDENT PREVENTION; \*AUDIOVISUAL AIDS; \*FIRE  
N: \*FIRE PROTECTION; FIRES; INDUSTRIAL SAFETY;  
TIONAL MATERIALS; OCCUPATIONAL SAFETY; \*SAFETY;  
EDUCATION; STUDENT GUIDES; \*TEACHING GUIDES;

VE NOTE: PRICE: \$445.00 VIDEOCASSETTE, \$1400.00  
ET. \$45.00 PER UNIT TO PREVIEW, STUDENT AND  
S GUIDES INCLUDED

THIS FIRE SAFETY TRAINING UNIT IS COMPOSED OF A  
VIDEOTAPE PRESENTATION, A STUDENT MANUAL WITH AN  
ING TEXT, AND AN INSTRUCTOR'S GUIDE. THE VIDEOTAPE  
E DIVIDED INTO SEVEN SEGMENTS. THE TEXT CORRESPONDS  
APE IN BOTH ORGANIZATION AND BASIC CONTENT. THE  
IONS ARE: FIRE CHEMISTRY, TYPES OF FIRES, PORTABLE  
ING EQUIPMENT, BUILT-IN EXTINGUISHING SYSTEMS,  
E TO A FIRE EMERGENCY, FIRE PREVENTION AT HOME, AND  
VENTION ON THE JOB. BOTH THE STUDENT AND  
S GUIDES CONTAIN SECTION SUMMARIES, QUIZZES, AND  
TERMS.

TY: NUS CORPORATION, TRAINING SERVICES, 4  
PLACE, ROCKVILLE, MD 20850, ATTENTION: D. ZEZZO

SSION NUMBER: EW005868

ON DATE: AUG 78

FETY TRAINING: PERSONAL SAFETY.

: ACCIDENT PREVENTION; \*AUDIOVISUAL AIDS;  
INDUSTRIAL SAFETY; \*INSTRUCTIONAL MATERIALS;  
NAL SAFETY; \*SAFETY; SAFETY EDUCATION; \*SAFETY  
\*TEACHING GUIDES; WORKBOOKS

E NOTE: PRICE: \$345.00 VIDIOCASSETTE, \$1,400.00  
\$395.00 16MM, \$45.00 PER UNIT TO PREVIEW, STUDENT  
CTOR'S GUIDES INCLUDED

THIS PERSONAL SAFETY TRAINING UNIT IS COMPOSED OF  
R VIDEOTAPE PRESENTATION, A STUDENT MANUAL WITH AN  
ING TEXT, AND AN INSTRUCTOR'S GUIDE. THE VIDEOTAPE  
IS DIVIDED INTO SIX SEGMENTS, AND THE TEXT  
S TO THE VIDEOTAPE IN ORGANIZATION AND BASIC  
THE SIX SECTIONS INCLUDE: BASIC PROTECTION, SAFETY  
PART I, SAFETY HAZARDS - PART II, SAFETY EQUIPMENT,

GOOD HOUSEKEEPING, AND LIFTING. BOTH THE STUDENT AND  
INSTRUCTOR'S GUIDES CONTAIN SECTION SUMMARIES, QUIZZES, AND  
A LIST OF TERMS.

AVAILABILITY: NUS CORPORATION, TRAINING SERVICES DIVISION,  
4 RESEARCH PLACE, ROCKVILLE, MD 20850, ATTENTION: D. ZEZZO

IRIS ACCESSION NUMBER: EW005872

PUBLICATION DATE: DEC 78

TITLE: FIELD TESTING AND REVISIONS OF A COMPETENCY-BASED  
CURRICULUM FOR UPGRADING WATER TREATMENT TECHNICIANS.

PERSONAL AUTHOR: KINCAID, G. DAVID

DESCRIPTOR: COMPETENCY BASED INSTRUCTION; \*CURRICULUM  
DEVELOPMENT; CURRICULUM GUIDES; \*EDUCATIONAL RESEARCH;  
\*EVALUATION; \*FIELD TESTING; \*INSTRUCTIONAL MATERIALS;  
OPERATORS; \*POST SECONDARY EDUCATION; \*SKILL DEVELOPMENT;  
\*WATER TREATMENT

DESCRIPTIVE NOTE: 22P.

ABSTRACT: THE PURPOSE OF THIS PROJECT WAS TO FIELD TEST AND  
REVISE A SET OF 12 CURRICULUM MANUALS WHICH HAD BEEN  
PREVIOUSLY DEVELOPED FOR UPGRADING WATER TREATMENT PLANT  
OPERATOR SKILLS. THE MANUALS ARE WRITTEN IN COMPETENCY-BASED  
FORMAT, ARE MUTUALLY INDEPENDENT, AND ARE DESIGNED FOR SELF  
INSTRUCTION BY THE STUDENT. THE FIELD TEST INVOLVED A TOTAL  
OF 42 STUDENT OPERATORS AT 15 WATER SUPPLIES IN FIVE  
COUNTIES IN WEST VIRGINIA. THE STUDENT OPERATORS WERE  
EMPLOYED AT THESE SUPPLIES AS OPERATORS-IN-TRAINING OR AS  
CLASS I OPERATORS.

AVAILABILITY: WEST VIRGINIA RESEARCH COORDINATING UNIT FOR  
VOCATIONAL EDUCATION, MARSHALL UNIVERSITY, HUNTINGTON, WV  
25701

IRIS ACCESSION NUMBER: EW005873

PUBLICATION DATE: JAN 81

TITLE: ASSESSING COSTS, BENEFITS AND PRODUCTIVITY IN  
TRAINING SYSTEMS.

PERSONAL AUTHOR: KEARSLEY, GREG; COMPTON, TERRY

DESCRIPTOR: COST/BENEFIT ANALYSIS; \*COST EFFECTIVENESS;  
\*EFFICIENCY; \*EVALUATION; \*INSTRUCTION; \*MODELS; PERSONNEL  
MANAGEMENT; PRODUCTIVITY; \*TRAINING; \*TRAINING PROGRAMS

DESCRIPTIVE NOTE: 52-61P.

ABSTRACT: THIS ARTICLE DISCUSSES FOUR APPROACHES TO  
ASSESSING TRAINING EFFECTIVENESS AND EFFICIENCY: RESOURCE  
REQUIREMENT MODELS, LIFE CYCLE MODELS, BENEFIT MODELS, AND  
PRODUCTIVITY MODELS. THESE FOUR APPROACHES REPRESENT  
DIFFERENT WAYS OF ADDRESSING THE COST/BENEFITS ISSUE WHICH  
MAY OR MAY NOT BE USEFUL FOR A PARTICULAR TRAINING



SITUATION. THE READER MUST DECIDE WHICH MODEL ADDRESSES THEIR CURRENT PLANNING OR DECISION-MAKING NEEDS.

AVAILABILITY: TRAINING AND DEVELOPMENT JOURNAL, V35 N1

IRIS ACCESSION NUMBER: EW005877

PUBLICATION DATE: 78

TITLE: BIOASSAY OF PESTICIDES IN THE LABORATORY.

PERSONAL AUTHOR: BANKI, L.

DESCRIPTOR: \*ANALYTICAL TECHNIQUES; \*BIOASSAY; \*LABORATORY PROCEDURES; \*MEASUREMENT; \*PESTICIDES

DESCRIPTIVE NOTE: 489P. PRICE: \$34.50

ABSTRACT: THE PRINCIPAL AIM OF THE PRESENT BOOK IS TO GIVE COMPREHENSIVE INFORMATION ON THE METROLOGICAL, BIOLOGICAL, LOGICAL AND BIOMETRICAL MEASUREMENT OF BIOACTIVITY WITHIN A CLOSED SYSTEM, GIVING IN EVERY CASE THE PRECISE DEFINITION OF THE CONCEPTS. THE LARGE NUMBER OF EXAMPLES IN THE APPENDIX HELP MAKE THE MEASUREMENT AND CALCULATION METHOD INTELLIGIBLE.

AVAILABILITY: HEYDEN AND SONS, INC., 247 SOUTH 41ST STREET, PHILADELPHIA, PA 19104

IRIS ACCESSION NUMBER: EW005878

PUBLICATION DATE: AUG 79

TITLE: MOVEMENT OF HAZARDOUS SUBSTANCES IN SOIL-A BIBLIOGRAPHY. VOLUME#2. PESTICIDES.

PERSONAL AUTHOR: COPENHAVER, EMILY D.; WILKINSON, BENITA K.

DESCRIPTOR: \*BIBLIOGRAPHY; HAZARDOUS MATERIALS; \*HAZARDOUS SUBSTANCES; LAND APPLICATION; \*METALS; ORGANIC COMPOUNDS; \*PESTICIDES; \*POLLUTION; PUBLIC HEALTH; \*SOILS; \*WASTE DISPOSAL

DESCRIPTIVE NOTE: 228P. PRICE: \$14.00

ABSTRACT: THIS BIBLIOGRAPHY IS INTENDED FOR USE BY PERSONNEL CONCERNED WITH THE DISPOSAL OF HAZARDOUS WASTES, OTHER THAN SEWAGE SLUDGE, ON LAND. IT IS THE RESULT OF A SEARCH OF RECENT LITERATURE (1970 THROUGH 1974) AND INCLUDES INFORMATION ON THE TRANSPORT, TRANSFORMATION, AND SOIL RETENTION OF ARSENIC, ASBESTOS, BERYLLIUM, CADMIUM, CHROMIUM, COPPER, CYANIDE, LEAD, MERCURY, SELENIUM, ZINC, HALOGENATED HYDROCARBONS, PESTICIDES, AND OTHER HAZARDOUS SUBSTANCES. THIS VOLUME CONTAINS THE PESTICIDE CITATIONS.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

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*AIR POLLUTION	(2)	EW005085	EW005589					
AIR POLLUTION	(5)	EW004893	EW004944	EW005147	EW005730	EW005743		
*AIR POLLUTION CONTROL	(2)	EW005590	EW005742					
AIR POLLUTION CONTROL	(1)	EW005703						
*AIR TREATMENT	(1)	EW005773						
*ALABAMA	(1)	EW005506						
ALFALFA	(1)	EW005543						
ALGAE	(1)	EW005779						
*ALKALINITY	(1)	EW005677						
*ALLOYS	(1)	EW005735						
*ALTERNATIVE ENERGY SOURCES	(1)	EW005629						
ALTERNATIVE TECHNOLOGY	(1)	EW005697						
ALTERNATIVE WASTEWATER SYSTEMS	(1)	EW005579						
*ALUM	(1)	EW005190						
ALUM	(1)	EW005517						
AMANA REFRIGERATION, INC.	(1)	EW005572						
*AMBIENT WATER QUALITY	(1)	EW004629						
*AMBIENT WATER QUALITY CRITERIA	(2)	EW004804	EW004805					
*AMMONIA	(1)	EW005670						
AMMONIA	(1)	EW005633						
AMMONIATION	(1)	EW005538						
AMPHIBOLES	(1)	EW005662						
*AMPLIFIERS	(1)	EW005750						
ANAEROBIC DEGRADATION	(1)	EW005486						
*ANAEROBIC DIGESTION	(1)	EW005778						
*ANAEROBIC PROCESSES	(1)	EW005486						
*ANALYTICAL CHEMISTRY	(1)	EW005796						
*ANALYTICAL TECHNIQUES	(35)	EW004587	EW004642	EW004742	EW004743	EW004889	EW004890	EW004911
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		EW005674	EW005675	EW005676	EW005677	EW005678	EW005679	EW005680
		EW005682	EW005683	EW005684	EW005687	EW005692	EW005694	EW005726
		EW005802	EW005831	EW005832	EW005877			EW005796
ANALYTICAL TECHNIQUES	(7)	EW004560	EW004741	EW004888	EW004962	EW005587	EW005618	EW005705



*ANNOTATED BIBLIOGRAPHIES	(2)	EW004944	EW005107						
*ANODIC STRIPPING VOLTAMMETRY	(1)	EW005674							
APPARATUS	(1)	EW005867							
*APPLICATION	(1)	EW005500							
APPLICATION	(1)	EW005505							
*APPLICATION TECHNIQUES	(1)	EW005650							
*APPROPRIATE TECHNOLOGY	(1)	EW005658							
APPROPRIATE TECHNOLOGY	(1)	EW005461							
*AQUACULTURE	(1)	EW003555							
*AQUATIC ENVIRONMENTS	(1)	EW005679							
AQUATIC LIFE	(2)	EW004804	EW005508						
AQUATIC SYSTEMS	(1)	EW005587							
*AQUATIC TOXICOLOGY	(1)	EW005534							
AQUATIC VEGETATION	(1)	EW005586							
AQUEOUS SYSTEMS	(1)	EW005705							
*ARBITRATION	(1)	EW003667							
*ARID REGIONS	(1)	EW005103							
*ARSENIC	(3)	EW004804	EW005130	EW005642					
*ASBESTOS	(2)	EW005510	EW005662						
ASSESSMENT	(3)	EW004587	EW004974	EW005814					
*ATOMIC ABSORPTION SPECTROSCOPY	(1)	EW005673							
ATTITUDES	(2)	EW005648	EW005649						
*AUDIOVISUAL AIDS	(34)	EW005073	EW005074	EW005500	EW005529	EW005575	EW005576	EW005577	
		EW005578	EW005664	EW005665	EW005666	EW005667	EW005669	EW005671	EW005672
		EW005673	EW005674	EW005676	EW005677	EW005679	EW005680	EW005681	EW005682
		EW005683	EW005684	EW005685	EW005686	EW005688	EW005790	EW005807	EW005866
		EW005867	EW005868	EW005869					
AUDIOVISUAL AIDS	(6)	EW005663	EW005668	EW005670	EW005675	EW005678	EW005687		
*AUTOINSTRUCTIONAL PROGRAMS	(1)	EW004886							
*AUTOMATIC SAMPLERS	(1)	EW005627							
*AUTOMATION	(3)	EW004734	EW005189	EW005828					
AUTOMATION	(1)	EW005514							
BAC	(2)	EW005525	EW005664						

*BACTERIA	(4)	EW004965	EW005656	EW005686	EW005687
BACTERIA	(1)	EW005833			
BACTERIAL INJURY	(1)	EW004965			
BACTERIAL SUPPLEMENTATION	(2)	EW004772	EW004773		
*BACTERIOLOGY	(4)	EW004773	EW004774	EW004775	EW004776
*BASELINE DATA	(1)	EW005709			
*BATTERIES	(1)	EW005755			
*BEARINGS	(2)	EW005529	EW005768		
BELTS	(1)	EW005488			
*BENEFIT-COST ANALYSIS	(1)	EW005652			
BENEFIT-COST RATIOS	(1)	EW005652			
*BENEFITS	(1)	EW005573			
*BENZENE	(1)	EW004805			
*BENZIDINE	(1)	EW005133			
*BEST MANAGEMENT PRACTICES	(4)	EW004740	EW004810	EW004818	EW005090
*BIBLIOGRAPHIES	(3)	EW004944	EW005103	EW005128	
BIBLIOGRAPHIES	(1)	EW005534			
*BIBLIOGRAPHY	(2)	EW005697	EW005878		
*BIOASSAY	(1)	EW005877			
*BIOAUGMENTATION	(2)	EW004772	EW004773		
BIOCHEMICAL OXYGEN DEMAND	(1)	EW005780			
BIOCHEMISTRY	(1)	EW005656			
*BIODEGRADATION	(1)	EW005486			
BIODEGRADATION	(1)	EW005862			
BIOLOGICAL ANALYSIS	(1)	EW004743			
*BIOLOGICAL CONTACTORS	(1)	EW005779			
*BIOLOGICAL CONTROL	(3)	EW004774	EW004775	EW004776	
*BIOLOGICAL CONTROLS	(1)	EW005543			
*BIOLOGICAL EFFECTS	(1)	EW004944			
*BIOLOGICAL FLUID FLOWS	(1)	EW005793			
*BIOLOGICAL INDICATORS	(1)	EW005656			
BIOLOGICAL MONITORING	(1)	EW004642			

*BIOLOGICAL SCIENCES	(1)	EW005588		
*BIOLOGICAL SCREENING	(1)	EW005726		
*BIOLOGICAL TREATMENT	(2)	EW005554	EW005782	
BIOLOGICAL TREATMENT	(1)	EW005778		
BIOLOGY	(1)	EW005827		
*BIOTA	(1)	EW004977		
*BLUEPRINTS	(1)	EW005731		
*BOILERS	(1)	EW005745		
*BOOK PUBLISHERS	(1)	EW005625		
*BREWING INDUSTRY	(1)	EW005864		
BROMINE	(1)	EW004881		
*BRUCINE METHOD	(1)	EW005678		
*BUDGETS	(1)	EW005849		
*BULKING	(1)	EW005630		
BUREAU OF RECLAMATION	(1)	EW005652		
BY-PRODUCTS	(1)	EW004953		
*CADMIUM	(2)	EW005487	EW005643	
*CALCIUM CARBONATE	(1)	EW004733		
*CALCIUM HARDNESS	(1)	EW005684		
*CALCULATIONS	(1)	EW005613		
CALIBRATION	(1)	EW005792		
*CALIFORNIA	(1)	EW004976		
CALIFORNIA	(3)	EW005490	EW005573	EW005612
*CANCER	(1)	EW005616		
*CARBON	(1)	EW005260		
*CARCINOGENICITY	(1)	EW005726		
CARCINOGENICITY	(2)	EW004804	EW004805	
*CARCINOGENS	(1)	EW005725		
*CARIBBEAN	(1)	EW005521		
*CASE HISTORIES	(1)	EW005581		
CASE HISTORIES	(2)	EW005632	EW005857	
*CASE STUDIES	(7)	EW005491	EW005530	EW005570
		EW005614	EW005700	EW005777
				EW005864

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	(16)	EW004948	EW005490	EW005520	EW005536	EW005537	EW005568	EW005575
		EW005576	EW005577	EW005578	EW005619	EW005704	EW005706	EW005713
		EW005852						EW005816
	(1)	EW005580						
PUMPS	(1)	EW005769						
THICKENING	(1)	EW005855						
ION	(1)	EW004534						
ON	(3)	EW004532	EW004560	EW005500				
	(1)	EW005603						
ALYSIS	(2)	EW005692	EW005831					
ALYSIS	(8)	EW004587	EW004743	EW004890	EW004975	EW005261	EW005587	EW005605
		EW005617						
YGEN DEMAND	(1)	EW005487						
ECIPITATION	(1)	EW005190						
ACTIONS	(1)	EW005705						
ACTIONS	(2)	EW005541	EW005592					
	(1)	EW005726						
	(3)	EW005602	EW005736	EW005851				
CHNOLOGY	(2)	EW005550	EW005554					
TAMENT	(3)	EW003783	EW005530	EW005782				
TAMENT	(2)	EW005657	EW005862					
STUDY	(1)	EW005602						
TES	(1)	EW005152						
	(4)	EW004965	EW005098	EW005128	EW005260			
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	(5)	EW004886	EW004888	EW005587	EW005616	EW005647		
	(5)	EW004878	EW005538	EW005618	EW005654	EW005810		
	(4)	EW004886	EW005538	EW005587	EW005680			
	(2)	EW004878	EW004881					
ORITE PROCESS	(1)	EW005592						

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*CHLORINE DIOXIDE	(1)	EW005592	
CHLORINE DIOXIDE	(1)	EW004881	
*CHLOROBACTERIA	(1)	EW005656	
CHLOROFUOROCARBONS	(1)	EW005650	
CHLOROFORM	(2)	EW005538	EW005617
CHLOROHYDROCARBONS	(1)	EW004878	
*CHOKING	(1)	EW005665	
*CHROMIUM	(1)	EW005645	
CIRCUIT BREAKERS	(1)	EW005758	
*CIRCUITS	(1)	EW005748	
CIRCUITS	(1)	EW005754	
*CITIZEN PARTICIPATION	(1)	EW005700	
CITIZEN PARTICIPATION	(1)	EW005671	
*CITIZEN ROLE	(1)	EW005700	
CIVIL DEFENSE	(1)	EW005518	
CIVIL ENGINEERING	(1)	EW005779	
*CIVIL RIGHTS	(1)	EW005649	
*CLARIFICATION	(1)	EW005845	
CLARIFICATION	(1)	EW005776	
CLARIFICATION (WATER)	(1)	EW005517	
*CLARIFIERS	(1)	EW004978	
CLARIFIERS	(1)	EW005856	
*CLEAN WATER ACT	(2)	EW005628	EW005629
CLOTHING	(1)	EW005505	
CLOUD SEEDING	(1)	EW005814	
*CLUTCHES	(1)	EW005767	
COAGULATION	(2)	EW005517	EW005570
COAL	(1)	EW004893	
COAL GASIFICATION	(1)	EW004587	
COAL GASIFICATION WASTEWATERS	(1)	EW004587	
COAL WASTES	(1)	EW005486	
COKE	(1)	EW005486	

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(1) EW005686  
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(1) EW005862  
(2) EW005697 EW005863  
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(1) EW005773  
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(2) EW005655 EW005688  
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(7) EW004371 EW004602 EW005121 EW005515 EW005516 EW005856 EW005857  
(4) EW004888 EW005587 EW005713 EW005858

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CONFERENCE REPORTS	(1)	EW005569							
*CONFERENCES	(1)	EW005515							
CONNECTIONS	(1)	EW005540							
*CONSERVATION	(3)	EW004602	EW005461	EW005813					
CONSERVATION	(6)	EW005090	EW005520	EW005553	EW005573	EW005579	EW005790		
*CONSERVATION (ENVIRONMENT)	(1)	EW005081							
CONSERVATION (ENVIRONMENT)	(1)	EW005700							
*CONSTRUCTION	(6)	EW005009	EW005309	EW005548	EW005585	EW005693	EW005806		
CONSTRUCTION	(6)	EW004962	EW005493	EW005494	EW005584	EW005655	EW005658		
*CONSULTANTS	(3)	EW004974	EW005610	EW005785					
*CONSUMER EDUCATION	(1)	EW005671							
*CONTAMINANTS	(4)	EW005147	EW005704	EW005705	EW005555				
*CONTAMINATION	(4)	EW004794	EW005581	EW005604	EW005829				
*CONTRACTS	(2)	EW004974	EW005626						
*CONTROL SYSTEMS	(1)	EW004811							
*CONTROL VALVES	(1)	EW005793							
*CONVERSION FACTORS	(1)	EW005685							
*COPPER	(1)	EW005640							
CORPS OF ENGINEERS	(1)	EW005652							
*CORROSION	(1)	EW005777							
CORROSION	(1)	EW005669							
*CORROSION CONTROL	(1)	EW004733							
CORROSION CONTROL	(1)	EW004535							
*COST	(1)	EW005571							
*COST ANALYSIS	(1)	EW004894							
COST ANALYSIS	(1)	EW005114							
*COST-BENEFIT ANALYSIS	(1)	EW005086							
*COST EFFECTIVENESS	(8)	EW005189	EW005516	EW005573	EW005584	EW005725	EW005729	EW005846	
COST EFFECTIVENESS	(17)	EW005873							
			EW003555	EW004535	EW004878	EW005098	EW005490	EW005492	EW005520

	EW005537	EW005568	EW005571	EW005589	EW005614	EW005626	EW005784	EW005829
	EW005844	EW005845						
*COST ESTIMATES	(1)	EW004894						
*COSTS	(6)	EW004793	EW004961	EW005530	EW005532	EW005780	EW005781	
COSTS	(9)	EW004948	EW004974	EW005485	EW005512	EW005516	EW005574	EW005591
	EW005608	EW005615						
*COST STUDIES	(1)	EW004960						
COTTON	(1)	EW005543						
*COUPLINGS	(1)	EW005767						
COURSE EVALUATION	(1)	EW004886						
*CRITERIA	(1)	EW005659						
*CROSS CONNECTIONS	(1)	EW005664						
CRYSTALLOGRAPHY	(1)	EW005510						
CULVERTS	(1)	EW005655						
*CURRICULUM	(1)	EW005085						
*CURRICULUM DEVELOPMENT	(1)	EW005872						
CURRICULUM GUIDES	(1)	EW005872						
*DAIRY INDUSTRY	(1)	EW005104						
*DATA	(1)	EW005811						
*DATA ACQUISITION	(1)	EW005796						
DATA ANALYSIS	(1)	EW005709						
DATA BASES	(2)	EW005623	EW005624					
*DATA COLLECTING SYSTEMS	(1)	EW004532						
*DATA COLLECTION	(1)	EW005891						
*DATA EVALUATION	(1)	EW005831						
*DATA MANAGEMENT	(1)	EW005783						
*DATA QUALITY	(1)	EW005796						
*D-C CIRCUITS	(1)	EW005755						
D-C CIRCUITS	(1)	EW005764						
*D-C EQUIPMENT	(1)	EW005759						
*DECHLORINATION	(1)	EW004878						

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*DECISION MAKING	(1)	EW004975							
DECISION MAKING	(3)	EW005117	EW005659	EW005700					
*DECONTAMINATION	(1)	EW005851							
DEFINITIONS	(1)	EW005698							
*DEMONSTRATION PROJECTS	(1)	EW005534							
DENTAL HEALTH	(1)	EW005519							
*DEPOSITION	(1)	EW004733							
*DESIGN	(37)	EW004371	EW004735	EW004811	EW004820	EW004908	EW005188	EW005493	
		EW005494	EW005512	EW005525	EW005539	EW005542	EW005568	EW005571	EW005572
		EW005585	EW005606	EW005608	EW005612	EW005630	EW005634	EW005654	EW005655
		EW005658	EW005693	EW005713	EW005725	EW005776	EW005779	EW005781	EW005803
		EW005804	EW005806	EW005830	EW005837	EW005849	EW005850		
DESIGN	(19)	EW003783	EW004978	EW005098	EW005490	EW005516	EW005520	EW005530	
		EW005535	EW005547	EW005575	EW005576	EW005578	EW005615	EW005629	EW005657
		EW005844	EW005848	EW005858	EW005864				
*DESIGN CONSIDERATIONS	(1)	EW004793							
DESIGN CONSIDERATIONS	(1)	EW005818							
*DESIGN CRITERIA	(2)	EW005532	EW005547						
*DETENTION TIME	(1)	EW005186							
DETERGENTS	(1)	EW005862							
DETOXIFICATION	(1)	EW005851							
*DEWATERING	(2)	EW005488	EW005635						
DEWATERING	(3)	EW005517	EW005781	EW005863					
*DEWATERING FACILITIES	(1)	EW005634							
*DIAGRAMS	(1)	EW005732							
DIALYSIS	(1)	EW005550							
*DICHLOROBENZIDINE	(1)	EW004629							
*DIGESTER GAS	(1)	EW005848							
*DIRECTORIES	(4)	EW004404	EW005623	EW005625	EW005705				
*DISASTERS	(1)	EW004976							
DISCHARGING SYSTEM	(1)	EW005805							
*DISCIPLINE	(1)	EW005667							
DISCIPLINE	(1)	EW005649							
DISEASE	(1)	EW005658							

*DISEASE CONTROL	(1)	EW005607							
*DISEASES	(1)	EW005586							
*DISINFECTION	(9)	EW004878	EW004881	EW004888	EW005538	EW005587	EW005592	EW005616	
		EW005647	EW005680						
DISINFECTION	(5)	EW004886	EW005617	EW005654	EW005715	EW005827			
*DISPERSION	(1)	EW005636							
DISPOSAL SYSTEMS	(1)	EW005697							
*DISSOLVED OXYGEN	(3)	EW004946	EW005508	EW005694					
DISSOLVED OXYGEN	(1)	EW005614							
*DISSOLVED SOLIDS	(1)	EW005638							
*DISTRIBUTED CONTROL	(1)	EW005828							
DISTRIBUTIVE EDUCATION	(1)	EW004404							
*DPD METHOD	(1)	EW005680							
DRAINAGE	(1)	EW005121							
*DRAWINGS	(1)	EW005731							
*DRINKING WATER	(22)	EW004881	EW004888	EW004960	EW004961	EW005263	EW005490	EW005519	
		EW005523	EW005541	EW005570	EW005592	EW005616	EW005617	EW005618	EW005620
		EW005621	EW005666	EW005668	EW005671	EW005783	EW005816	EW005833	
DRINKING WATER	(7)	EW004975	EW005522	EW005542	EW005569	EW005587	EW005605	EW005659	
*DRIVE COMPONENTS	(1)	EW005767							
*DROUGHTS	(1)	EW005711							
*DUAL DISTRIBUTION SYSTEMS	(1)	EW005520							
*DUAL WATER SYSTEMS	(1)	EW005520							
DUST	(1)	EW004893							
*EARTHQUAKES	(1)	EW004976							
*ECOLOGY	(2)	EW005506	EW005778						
ECOLOGY	(1)	EW005656							
*ECONOMIC ANALYSIS	(1)	EW005532							
*ECONOMIC FACTORS	(3)	EW005516	EW005615	EW005651					
ECONOMIC FACTORS	(2)	EW005571	EW005573						
*ECONOMIC IMPACTS	(1)	EW004889							
*ECONOMIC IMPACT STUDIES	(1)	EW005086							
*ECONOMICS	(9)	EW004371	EW004467	EW004810	EW004961	EW005009	EW005086	EW005114	
		EW005189	EW005708						

ECONOMICS	(12)	EW004535	EW004602	EW004818	EW005518	EW005620	EW005650	EW005781
		EW005790	EW005802	EW005829	EW005852	EW005855		
*ECOSYSTEMS	(2)	EW004887	EW005778					
ECOSYSTEMS	(2)	EW005581	EW005588					
*EDUCATIONAL NEEDS	(1)	EW005521						
EDUCATIONAL PROBLEMS	(1)	EW005523						
*EDUCATIONAL PROGRAMS	(2)	EW005521	EW005787					
EDUCATIONAL PROGRAMS	(3)	EW004886	EW005461	EW005522				
*EDUCATIONAL RESEARCH	(1)	EW005872						
*EFFICIENCY	(4)	EW005780	EW005837	EW005847	EW005873			
EFFICIENCY	(6)	EW005187	EW005188	EW005589	EW005592	EW005784	EW005845	
*EFFLUENTS	(3)	EW004741	EW004893	EW005098				
EFFLUENTS	(14)	EW004773	EW004948	EW005104	EW005128	EW005530	EW005568	EW005576
		EW005605	EW005628	EW005651	EW005657	EW005780	EW005837	EW005857
EFFLUENT STANDARDS	(1)	EW005086						
ELECTRICAL CIRCUITS	(1)	EW005751						
*ELECTRICAL DEVICES	(4)	EW005753	EW005757	EW005758	EW005808			
ELECTRICAL DEVICES	(2)	EW005748	EW005750					
*ELECTRICAL EQUIPMENT	(4)	EW005759	EW005762	EW005763	EW005764			
*ELECTRICAL HAZARDS	(1)	EW005807						
ELECTRICAL POWER PLANTS	(1)	EW004893						
*ELECTRICAL RELAYS	(1)	EW005758						
*ELECTRICAL SYSTEMS	(9)	EW005512	EW005749	EW005755	EW005756	EW005759	EW005760	EW005761
		EW005762	EW005763					
ELECTRICAL SYSTEMS	(2)	EW005807	EW005808					
*ELECTRICITY	(9)	EW005512	EW005749	EW005751	EW005754	EW005755	EW005756	EW005757
		EW005758	EW005764					
ELECTRICITY	(5)	EW005715	EW005759	EW005761	EW005762	EW005763		
ELECTROCHEMICAL MEASUREMENT	(1)	EW005694						
ELECTROLYTIC PROCESSES	(1)	EW005550						
ELECTRON DIFFRACTION	(1)	EW005662						
*ELECTRONIC CONTROL	(2)	EW005191	EW005514					

*ELECTRONIC INFORMATION EXCHANGE SYSTEM	(1)	EW003787							
*ELECTRONIC INSTRUMENTATION	(1)	EW003191							
*ELECTRONICS	(8)	EW005748	EW005749	EW005750	EW005751	EW005752	EW005753	EW005754	
		EW005764							
*ELECTRON IRRADIATION	(1)	EW003555							
*ELECTRON MICROSCOPY	(1)	EW005662							
*EMERGENCIES	(3)	EW004976	EW005603	EW005860					
EMISSIONS	(1)	EW004535							
*EMPLOYEE RELATIONS	(1)	EW003619							
EMPLOYER EMPLOYEE RELATIONSHIPS	(3)	EW005117	EW005619	EW005667					
*EMPLOYMENT PROJECTIONS	(1)	EW004979							
*ENERGY	(8)	EW005187	EW005188	EW005551	EW005594	EW005629	EW005844	EW005850	
		EW005852							
ENERGY	(5)	EW005588	EW005744	EW005747	EW005847	EW005857			
*ENERGY CONSERVATION	(18)	EW004535	EW005187	EW005188	EW005461	EW005512	EW005551	EW005593	
		EW005594	EW005629	EW005746	EW005813	EW005844	EW005846	EW005847	EW005848
		EW005849	EW005850	EW005852					
ENERGY CONSERVATION	(7)	EW005189	EW005571	EW005589	EW005590	EW005745	EW005790	EW005845	
ENERGY EFFICIENCY	(1)	EW005568							
ENERGY RECOVERY	(1)	EW005551							
*ENGINEERING	(6)	EW004811	EW005085	EW005657	EW005725	EW005803	EW005850		
ENGINEERING	(12)	EW004894	EW004976	EW005485	EW005518	EW005554	EW005555	EW005571	
		EW005606	EW005610	EW005613	EW005620	EW005693			
*ENGINEERING DRAWINGS	(1)	EW005731							
*ENGINEERING HANDBOOK	(1)	EW003783							
*ENGINEERS	(1)	EW005610							
ENGINEERS	(1)	EW005512							
ENVIRONMENTAL EFFECTS	(1)	EW005133							
*ENVIRONMENT	(7)	EW004731	EW004820	EW005543	EW005552	EW005695	EW005698	EW005703	
ENVIRONMENT	(7)	EW005006	EW005153	EW005500	EW005581	EW005588	EW005661	EW005831	
*ENVIRONMENTAL ASSESSMENT	(1)	EW005147							
*ENVIRONMENTAL BIOLOGY	(1)	EW005588							
*ENVIRONMENTAL CHEMISTRY	(1)	EW005796							
*ENVIRONMENTAL CONTROL	(1)	EW005009							

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ENVIRONMENTAL EDUCATION	(1)	EW005700						
*ENVIRONMENTAL EFFECTS	(1)	EW005130						
ENVIRONMENTAL EFFECTS	(1)	EW004602						
*ENVIRONMENTAL ENGINEERING	(1)	EW005085						
ENVIRONMENTAL ENGINEERING	(2)	EW004803	EW004948					
*ENVIRONMENTAL FACTORS	(1)	EW005708						
*ENVIRONMENTAL HEALTH	(1)	EW005802						
*ENVIRONMENTAL IMPACT	(3)	EW004735	EW005589	EW005590				
ENVIRONMENTAL IMPACT	(3)	EW004587	EW005515	EW005651				
*ENVIRONMENTAL IMPACT ASSESSMENT	(1)	EW004946						
ENVIRONMENTAL IMPACT STATEMENTS	(1)	EW005695						
*ENVIRONMENTAL INFLUENCES	(2)	EW004944	EW004972					
*ENVIRONMENTAL LAW	(1)	EW005695						
*ENVIRONMENTAL LEGISLATION	(1)	EW005730						
ENVIRONMENTAL LEGISLATION	(1)	EW005089						
*ENVIRONMENTAL MANAGEMENT	(1)	EW005200						
ENVIRONMENTAL POLICY ACT	(1)	EW005695						
*ENVIRONMENTAL PROTECTION	(2)	EW005700	EW005730					
ENVIRONMENTAL PROTECTION	(3)	EW005517	EW005653	EW005703				
*ENVIRONMENTAL PROTECTION AGENCY	(6)	EW005263	EW005569	EW005581	EW005628	EW005730	EW005832	
ENVIRONMENTAL PROTECTION AGENCY	(13)	EW005543	EW005552	EW005584	EW005620	EW005621	EW005631	EW005637
		EW005630	EW005639	EW005640	EW005641	EW005642	EW005643	
*ENVIRONMENTAL REGULATIONS	(2)	EW005569	EW005832					
ENVIRONMENTAL REGULATIONS	(3)	EW004908	EW005574	EW005698				
*ENVIRONMENTAL RISK ASSESSMENT	(1)	EW005582						
*ENVIRONMENTAL RISKS	(1)	EW005582						
*ENVIRONMENTAL TECHNOLOGISTS	(1)	EW005085						
*EQUATIONS	(1)	EW005613						
*EQUIPMENT	(15)	EW003783	EW004733	EW004743	EW004911	EW004978	EW005098	EW005494
		EW005528	EW005534	EW005537	EW005539	EW005627	EW005647	EW005738
								EW005847
EQUIPMENT	(25)	EW004734	EW004886	EW004976	EW005107	EW005188	EW005488	EW005491
		EW005505	EW005519	EW005525	EW005526	EW005531	EW005570	EW005572
								EW005583

	EW005585 EW005809	EW005608 EW005858	EW005609	EW005612	EW005654	EW005664	EW005699	EW005785
*EQUIPMENT EVALUATION	(4)	EW005535	EW005609	EW005611	EW005627			
EQUIPMENT EVALUATION	(2)	EW005488	EW005533					
EQUIPMENT MAINTENANCE	(1)	EW005488						
*EQUIPMENT MANUFACTURERS	(1)	EW005533						
EQUIPMENT OPERATION	(2)	EW005737	EW005738					
EQUIPMENT REPAIR	(1)	EW005583						
*EQUIPMENT SELECTION	(1)	EW005627						
*EQUIPMENT SUPPLIERS	(1)	EW005785						
EROSION	(5)	EW004810	EW004813	EW004820	EW004972	EW005114		
*EROSION CONTROL	(1)	EW004793						
*EUROPE	(1)	EW005782						
EUTROPHICATION	(1)	EW005811						
*EVALUATION	(13)	EW004560 EW005779	EW004978 EW005781	EW005524 EW005832	EW005615 EW005872	EW005619 EW005873	EW005636	EW005709
EVALUATION	(10)	EW004960 EW005764	EW004965 EW005861	EW004974	EW005653	EW005743	EW005747	EW005753
*EVALUATION METHODS	(1)	EW005814						
EVALUATION METHODS	(1)	EW005619						
*EXCAVATIONS	(1)	EW005009						
*EXPLOSIVE FACILITIES	(1)	EW005725						
*FACILITIES	(36)	EW003783 EW005189 EW005584 EW005629 EW005804	EW004371 EW005493 EW005585 EW005634 EW005828	EW004476 EW005528 EW005595 EW005661 EW005849	EW004735 EW005568 EW005605 EW005713 EW005852	EW004773 EW005572 EW005606 EW005741	EW005186 EW005576 EW005608 EW005790	EW005187 EW005579 EW005612 EW005803
FACILITIES	(20)	EW003555 EW005191 EW005746	EW004532 EW005533 EW005810	EW004772 EW005636 EW005856	EW004886 EW005651 EW005860	EW004962 EW005657	EW004976 EW005715	EW005117 EW005729
*FEASIBILITY STUDIES	(1)	EW005114						
*FECAL COLIFORM	(1)	EW005686						
*FEDERAL AGENCIES	(1)	EW005652						
*FEDERAL CRITERIA	(11)	EW005089 EW005643	EW005637 EW005645	EW005638 EW005646	EW005639	EW005640	EW005641	EW005642
FEDERAL GOVERNMENT	(3)	EW004803	EW005073	EW005461				

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*FEDERAL LEGISLATION	(5)	EW005461	EW005620	EW005621	EW005706	EW005813		
FEDERAL LEGISLATION	(9)	EW005604	EW005628	EW005629	EW005707	EW005708	EW005709	EW005710
		EW005711	EW005712					
*FEDERAL POLICIES	(1)	EW005153						
*FEDERAL PROGRAMS	(4)	EW005153	EW005569	EW005622	EW005653			
FEDERAL PROGRAMS	(2)	EW005492	EW005579					
*FEDERAL PROJECTS	(1)	EW005652						
*FEDERAL REGULATIONS	(3)	EW005009	EW005574	EW005730				
FEDERAL REGULATIONS	(2)	EW005698	EW005813					
FEDERAL STANDARDS	(1)	EW005508						
FEDERAL STATE RELATIONSHIPS	(2)	EW005461	EW005653					
FEDERAL STATUTES	(1)	EW005698						
FEDERAL WATER POLLUTION CONTROL ACT	(1)	EW005631						
*FERTILIZERS	(1)	EW004953						
FERTILIZERS	(1)	EW003555						
*FIELD TESTING	(1)	EW005872						
FIELD TESTS	(1)	EW005524						
*FILMS	(13)	EW005575	EW005576	EW005577	EW005578	EW005663	EW005664	EW005665
		EW005666	EW005667	EW005668	EW005669	EW005671	EW005790	
*FILMSTRIPS	(3)	EW005670	EW005686	EW005687				
FILMSTRIPS	(13)	EW005672	EW005673	EW005675	EW005676	EW005677	EW005678	EW005679
		EW005680	EW005681	EW005682	EW005683	EW005684	EW005685	
*FILTER MEDIA	(1)	EW004534						
FILTERS	(3)	EW005490	EW005770	EW005837				
*FILTER SYSTEMS	(2)	EW004534	EW005490					
FILTRATION	(3)	EW004534	EW005488	EW005837				
FILTRATION	(2)	EW005780	EW005806					
FINANCIAL ASSISTANCE	(1)	EW005813						
FIRE PREVENTION	(1)	EW005868						
FIRE PROTECTION	(2)	EW005809	EW005868					
FIRE PROTECTION	(1)	EW005518						
FIRES	(1)	EW005868						
FIRST AID	(1)	EW005665						
	(2)	EW004642	EW005128					

FISH	(1)	EW005586	
FITTINGS	(1)	EW005540	
FIXED FILM PROCESSES	(1)	EW005856	
FLOOD CONTROL	(1)	EW005114	
*FLOODING	(1)	EW005631	
FLOODING	(1)	EW004820	
FLOOD MANAGEMENT	(1)	EW005121	
FLORIDA	(1)	EW005537	
*FLOW CAPACITY	(1)	EW005669	
FLOW CHARACTERISTICS	(1)	EW005791	
*FLOW CHARTS	(1)	EW004380	
*FLOW EQUALIZATION	(1)	EW005608	
*FLOW MEASURING DEVICES	(1)	EW005533	
*FLOWMETERS	(2)	EW005609	EW005792
*FLOW PREDICTION	(1)	EW005631	
*FLUID DYNAMICS	(1)	EW005791	
*FLUID FLOW	(2)	EW005792	EW005793
FLUID FLOW	(2)	EW004534	EW005791
*FLUIDS	(1)	EW005771	
*FLUORIDATION	(1)	EW005519	
FLUORIDE	(1)	EW005541	
*FLUORINE	(1)	EW005519	
FOOD PROCESSING	(1)	EW005864	
FORECASTING	(1)	EW004803	
*FOREST MANAGEMENT	(1)	EW005602	
*FORESTRY	(5)	EW004740	EW004887 EW005081 EW005506 EW005602
FORESTRY	(1)	EW004944	
FOUNDATIONS	(1)	EW005494	
*FREEZE-UPS	(1)	EW005611	
FRICTIONLESS BEARINGS	(1)	EW005768	



FUEL CONSUMPTION	(1)	EW005187			
FUELS	(1)	EW004535			
*FUGITIVE EMISSIONS	(1)	EW004893			
FUNDING	(1)	EW005384			
FUSES	(1)	EW005738			
*GAS CHROMATOGRAPHY	(1)	EW005675			
GAS CHROMATOGRAPHY	(1)	EW004742			
*GEARS	(1)	EW005767			
GENERATORS	(1)	EW005761			
*GEOMETRY	(1)	EW005733			
*GLOSSARIES	(1)	EW005698			
GOVERNMENT	(1)	EW005461			
*GOVERNMENT ROLE	(1)	EW005461			
GOVERNMENT ROLE	(2)	EW005695	EW005700		
GRANT PROCESSING	(1)	EW005509			
GRANTS	(1)	EW005509			
GRANTS PROGRAMS	(1)	EW005509			
GRANULAR ACTIVATED CARBON	(2)	EW005532	EW005570		
GRAVITATIONAL THICKENING	(1)	EW005855			
GRAVITY SEWERS	(1)	EW005697			
GREASES	(3)	EW005766	EW004774	EW005679	
GREASES	(1)	EW004776			
GREAT LAKES	(1)	EW005805			
GROUNDWATER	(5)	EW004975	EW005816	EW004908	EW005009 EW005604
GROUNDWATER	(3)	EW004972	EW005121	EW005829	
GUIDELINES	(5)	EW005534	EW005547	EW005574	EW005796 EW005831
GUIDES	(4)	EW005579	EW005619	EW005633	EW005833
GUIDES	(1)	EW005627			
HANDBOOKS	(4)	EW005605	EW005653	EW005695	EW005811
HANDBOOKS	(1)	EW005509			

*HAND TOOLS	(1)	EW005737							
HAND TOOLS	(2)	EW005741	EW005765						
*HARDNESS	(1)	EW005684							
HAZARDOUS CHEMICALS	(1)	EW005602							
*HAZARDOUS MATERIALS	(5)	EW005510	EW005543	EW005603	EW005725	EW005866			
HAZARDOUS MATERIALS	(1)	EW005078							
*HAZARDOUS SUBSTANCES	(1)	EW005078							
*HAZARDOUS WASTES	(7)	EW005152	EW005552	EW005554	EW005555	EW005581	EW005661	EW005813	
HAZARDOUS WASTES	(4)	EW005590	EW005695	EW005816	EW005851				
HAZARDS	(2)	EW005809	EW005869						
*HEALTH	(3)	EW005073	EW005074	EW005582					
HEALTH	(3)	EW004371	EW005648	EW005649					
HEALTH EDUCATION	(1)	EW005665							
*HEALTH EFFECTS	(3)	EW005587	EW005616	EW005789					
HEALTH EFFECTS	(4)	EW004602	EW005130	EW005133	EW005666				
HEALTH HAZARDS	(1)	EW005525							
*HEALTH RISKS	(3)	EW005607	EW005815	EW005861					
HEALTH RISKS	(2)	EW004888	EW005616						
HEALTH SERVICES	(1)	EW005663							
HEART MUSCLES	(1)	EW004642							
HEAT PUMPS	(1)	EW005844							
*HEAT RECOVERY	(1)	EW005848							
*HEAVY METALS	(10)	EW005487	EW005589	EW005637	EW005639	EW005640	EW005642	EW005643	
		EW005672	EW005673	EW005674					
HEAVY METALS	(5)	EW005152	EW005572	EW005590	EW005614	EW005645			
*HEINLICH MANEUVER	(1)	EW005665							
HEMODIALYSIS	(1)	EW005550							
*HIGHER EDUCATION	(1)	EW005588							
HIGHER EDUCATION	(1)	EW005085							
*HISTORY	(1)	EW005153							
*HOLDING PONDS	(1)	EW004775							
HOUSEHOLD SEWAGE	(1)	EW005658							
HUMAN HEALTH	(2)	EW004804	EW004805						

*HUMAN RELATIONS	(1)	EW005649							
HUMAN RELATIONS	(1)	EW005648							
*HYDROLOGY	(1)	EW005103							
*HYDRAULICS	(8)	EW005009	EW005770	EW005771	EW005772	EW005775	EW005791	EW005792	
		EW005793							
HYDRAULICS	(4)	EW005655	EW005693	EW005715	EW005827				
HYDRAULIC SYSTEMS	(1)	EW005774							
*HYDROGEN PEROXIDE	(1)	EW003703							
HYDROGEN PEROXIDE	(1)	EW004881							
*HYDROGEN SULFIDE	(1)	EW005777							
HYDROGEN SULFIDE	(2)	EW003733	EW005633						
*HYDROLOGY	(9)	EW004813	EW004972	EW004975	EW005515	EW005708	EW005710	EW005711	
		EW005712	EW005816						
HYDROLOGY	(6)	EW004810	EW005114	EW005121	EW005699	EW005707	EW005709		
*HYPOCHLORINATION	(1)	EW004806							
*IDAHO	(1)	EW005611							
*IDENTIFICATION	(1)	EW005510							
ILLINOIS	(1)	EW005536							
*IMPLEMENTATION	(1)	EW005525							
IMPLEMENTATION	(1)	EW005532							
*INCINERATION	(2)	EW005589	EW005590						
INCINERATION	(1)	EW005152							
INCINERATORS	(2)	EW004535	EW005044						
*INDEPENDENT STUDY	(2)	EW005648	EW005649						
INDEPENDENT STUDY	(1)	EW004886							
*INDICATOR BACTERIA	(1)	EW004965							
*INDIVIDUALIZED INSTRUCTION	(23)	EW005731	EW005732	EW005733	EW005734	EW005735	EW005736	EW005737	
		EW005738	EW005739	EW005740	EW005742	EW005744	EW005745	EW005746	EW005765
		EW005766	EW005767	EW005768	EW005769	EW005770	EW005771	EW005772	EW005773
INDIVIDUALIZED INSTRUCTION	(15)	EW005748	EW005749	EW005750	EW005751	EW005752	EW005754	EW005756	
		EW005757	EW005758	EW005759	EW005760	EW005761	EW005762	EW005763	EW005774
*INDIVIDUAL SEWAGE SYSTEMS	(1)	EW005805							
INDUSTRIAL EFFLUENTS	(1)	EW005487							
INDUSTRIAL HAZARDS	(1)	EW004944							

*INDUSTRIAL POLLUTION	(1)	EW005743						
INDUSTRIAL POLLUTION	(1)	EW005802						
*INDUSTRIAL SAFETY	(2)	EW005807	EW005809					
INDUSTRIAL SAFETY	(5)	EW005663	EW005866	EW005867	EW005868	EW005869		
*INDUSTRIAL TECHNOLOGY	(2)	EW005750	EW005752					
INDUSTRIAL TECHNOLOGY	(4)	EW004587	EW005740	EW005749	EW005753			
*INDUSTRIAL WASTES	(14)	EW004535	EW004893	EW004908	EW005098	EW005104	EW005128	EW005552
		EW005554	EW005572	EW005604	EW005651	EW005811	EW005857	EW005864
INDUSTRIAL WASTES	(6)	EW005486	EW005654	EW005742	EW005827	EW005828	EW005856	
INDUSTRIAL WASTEWATER	(1)	EW005261						
*INDUSTRIAL WASTEWATER	(1)	EW004776						
*INDUSTRIES	(1)	EW005550						
*INDUSTRY	(2)	EW004908	EW005593					
INFECTIOUS DISEASES	(1)	EW005607						
*INFILTRATION	(2)	EW005536	EW005631					
INFILTRATION	(3)	EW004820	EW005537	EW005608				
*INFLOW	(3)	EW005536	EW005608	EW005631				
*INFORMATION CENTERS	(2)	EW005623	EW005624					
*INFORMATION DISSEMINATION	(2)	EW005783	EW005787					
INFORMATION SPECIALISTS	(1)	EW005624						
*INFORMATION SYSTEMS	(3)	EW004532	EW005263	EW005787				
INNOVATIVE SYSTEMS	(1)	EW005697						
INPOUNDMENTS	(1)	EW005604						
*INSECTICIDE RESISTANCE	(1)	EW005650						
*INSECTICIDES	(1)	EW005789						
*INSERVICE EDUCATION	(1)	EW005321						
*INSPECTION	(1)	EW005324						
INSPECTION	(4)	EW005325	EW005339	EW005540	EW005768			
INSPECTORS	(1)	EW005548						
*INSTALLATION	(2)	EW005606	EW005655					
INSTALLATION	(4)	EW005494	EW005715	EW005768	EW005772			



*INSTRUCTIONAL FILMS	(5)	EW004404	EW004560	EW005263	EW005521	EW005873		
	(1)	EW005664						
*INSTRUCTIONAL MATERIALS	(121)	EW004476	EW004563	EW004734	EW004886	EW004948	EW004962	EW004972
		EW005073	EW005074	EW005090	EW005500	EW005518	EW005519	EW005522
		EW005526	EW005527	EW005528	EW005529	EW005541	EW005540	EW005549
		EW005585	EW005587	EW005588	EW005605	EW005619	EW005633	EW005647
		EW005649	EW005650	EW005651	EW005654	EW005655	EW005657	EW005663
		EW005665	EW005666	EW005667	EW005668	EW005669	EW005670	EW005671
		EW005673	EW005674	EW005675	EW005676	EW005677	EW005678	EW005679
		EW005681	EW005682	EW005683	EW005684	EW005685	EW005686	EW005687
		EW005699	EW005715	EW005731	EW005732	EW005733	EW005734	EW005735
		EW005737	EW005738	EW005739	EW005740	EW005741	EW005742	EW005743
		EW005745	EW005746	EW005747	EW005748	EW005749	EW005750	EW005751
		EW005753	EW005754	EW005755	EW005756	EW005757	EW005758	EW005759
		EW005761	EW005762	EW005763	EW005764	EW005765	EW005766	EW005767
		EW005769	EW005770	EW005771	EW005772	EW005773	EW005774	EW005775
		EW005807	EW005808	EW005809	EW005810	EW005827	EW005866	EW005867
		EW005869	EW005872					
INSTRUCTIONAL MATERIALS	(1)	EW005521						
*INSTRUMENTATION	(11)	EW004642	EW004734	EW004911	EW005191	EW005512	EW005514	EW005535
		EW005662	EW005705	EW005792	EW005828			
INSTRUMENTATION	(3)	EW005634	EW005692	EW005712				
INSURANCE	(1)	EW005510						
*INTEGRATED PEST MANAGEMENT	(1)	EW005543						
INTERDISCIPLINARY RESEARCH	(1)	EW005621						
*INTERNATIONAL EDUCATION	(1)	EW005521						
IODINE	(1)	EW004881						
ION EXCHANGE	(1)	EW005829						
*ION-EXCHANGE BEDS	(1)	EW005531						
IONIZING RADIATION	(1)	EW004881						
*IOWA	(1)	EW005572						
*IRON	(1)	EW005646						
*IRRIGATION	(1)	EW005103						
IRRIGATION	(3)	EW005261	EW005490	EW005373				
JOB ANALYSIS	(1)	EW005619						
*JOB SKILLS	(1)	EW005741						
*JOB TRAINING	(1)	EW005527						
JOB TRAINING	(4)	EW005485	EW005522	EW005523	EW005626			

PRINCIPAL DECISIONS	(1)	EW005768							
	(1)	EW005730							
REL	(1)	EW005618							
	(1)	EW005486							
EQUIPMENT	(1)	EW004642							
PERSONNEL	(1)	EW004560							
PROCEDURES	(8)	EW004741	EW004890	EW004965	EW004977	EW005526	EW005534	EW005694	
		EW005877							
PROCEDURES	(7)	EW005487	EW005531	EW005617	EW005668	EW005670	EW005715	EW005833	
TECHNIQUES	(26)	EW004534	EW004560	EW004587	EW004742	EW004743	EW004977	EW005526	
		EW005662	EW005670	EW005672	EW005673	EW005674	EW005675	EW005676	EW005677
		EW005678	EW005679	EW005680	EW005681	EW005682	EW005683	EW005684	EW005686
		EW005687	EW005692	EW005796					
TECHNIQUES	(6)	EW005522	EW005523	EW005570	EW005668	EW005810	EW005832		
TESTING	(2)	EW004890	EW005863						
TESTING	(3)	EW004587	EW005510	EW005526					
TESTS	(1)	EW005107							
	(1)	EW004803							
ATION	(1)	EW005492							
	(1)	EW005555							
	(2)	EW004878	EW005861						
MS	(1)	EW004773							
	(1)	EW005811							
ATION	(8)	EW004887	EW004908	EW004948	EW005491	EW005553	EW005790	EW005815	
		EW005861							
ATION	(3)	EW005578	EW005579	EW005878					
	(1)	EW004965							
MENT	(1)	EW004820							
L	(1)	EW005604							
L	(1)	EW005152							
	(1)	EW005555							
	(2)	EW005574	EW005578						
ENT	(1)	EW005700							
S	(1)	EW005121							



*LAND RECLAMATION	(1)	EW005491						
*LAND TREATMENT	(2)	EW004908	EW005790					
LAND TREATMENT	(1)	EW005856						
*LAND USE	(5)	EW004794	EW004813	EW004908	EW005090	EW005578		
LAND USE	(5)	EW004820	EW005553	EW005573	EW005579	EW005695		
LAND UTILIZATION	(1)	EW005492						
LAS VEGAS	(1)	EW005568						
*LAW	(2)	EW005695	EW005730					
LAWS	(1)	EW004818						
LEAD	(1)	EW005672						
*LEADERSHIP	(1)	EW005648						
LEADERSHIP TRAINING	(1)	EW004404						
*LEARNING ACTIVITIES	(1)	EW005527						
LEGAL ACTION	(1)	EW004974						
LEGAL ASPECTS	(2)	EW004820	EW004948					
LEGAL FACTORS	(1)	EW004602						
LEGAL IMPLICATIONS	(2)	EW004793	EW005620					
*LEGAL OPINIONS	(1)	EW005730						
*LEGAL REQUIREMENTS	(1)	EW004960						
LEGISLATION	(11)	EW005073	EW005074	EW005153	EW005552	EW005628	EW005695	EW005703
		EW005707	EW005710	EW005711	EW005813			
LEGISLATION	(7)	EW004810	EW005081	EW005505	EW005605	EW005622	EW005700	EW005706
LIBRARIES	(1)	EW005623						
LIBRARIES	(1)	EW005624						
LIFTING	(1)	EW005663						
LIMNOLOGY	(1)	EW005406						
LITERATURE REVIEWS	(1)	EW005098						
LITERATURE REVIEWS	(1)	EW005633						
LOGGING	(1)	EW004965						
LOGIC CIRCUITS	(1)	EW005752						
LUBRICATION	(2)	EW005529	EW005766					
MACHINERY	(1)	EW005634						

MAGNESIUM HARDNESS	(1)	EW005684							
MAGNETISM	(1)	EW005754							
*MAINTENANCE	(23)	EW004476	EW004563	EW004733	EW004774	EW005493	EW005518	EW005525	
		EW005529	EW005536	EW005537	EW005542	EW005549	EW005571	EW005583	EW005606
		EW005647	EW005669	EW005740	EW005741	EW005757	EW005765	EW005768	EW005852
MAINTENANCE	(29)	EW004772	EW004811	EW004962	EW004974	EW004979	EW005519	EW005532	
		EW005535	EW005574	EW005575	EW005610	EW005654	EW005715	EW005745	EW005749
		EW005750	EW005751	EW005756	EW005759	EW005760	EW005761	EW005762	EW005769
		EW005774	EW005775	EW005784	EW005810	EW005827	EW005860		
*MAINTENANCE (PREVENTATIVE)	(1)	EW005611							
MAINTENANCE TRAINING	(1)	EW005529							
*MANAGEMENT	(42)	EW004300	EW004404	EW004563	EW004793	EW004794	EW004803	EW004810	
		EW004811	EW004818	EW004960	EW004961	EW004974	EW004975	EW005074	EW005090
		EW005117	EW005187	EW005492	EW005506	EW005509	EW005518	EW005521	EW005536
		EW005572	EW005577	EW005603	EW005610	EW005619	EW005622	EW005626	EW005648
		EW005649	EW005650	EW005653	EW005661	EW005667	EW005713	EW005715	EW005782
		EW005813	EW005816	EW005852					
MANAGEMENT	(15)	EW004962	EW004976	EW004979	EW005493	EW005530	EW005532	EW005554	
		EW005569	EW005581	EW005585	EW005612	EW005615	EW005833	EW005857	EW005858
*MANAGEMENT ALTERNATIVES	(1)	EW005590							
*MANAGEMENT DEVELOPMENT	(1)	EW004404							
*MANAGEMENT EDUCATION	(2)	EW004404	EW005117						
*MANAGEMENT REPORTS	(1)	EW004467							
*MANAGEMENT SYSTEMS	(2)	EW005610	EW005783						
MANAGEMENT SYSTEMS	(1)	EW005117							
*MANAGERS	(1)	EW005692							
MANHOLE REPAIR	(1)	EW005536							
MANHOLES	(2)	EW005699	EW005860						
MANPOWER DEVELOPMENT	(1)	EW004404							
*MANPOWER NEEDS	(4)	EW004532	EW004803	EW004979	EW005626				
MANPOWER UTILIZATION	(4)	EW004974	EW004976	EW004979	EW005571				
*MANUAL LABOR	(1)	EW005663							
*MANUALS	(2)	EW005542	EW005715						
MANUALS	(3)	EW005610	EW005810	EW005827					
*MANUFACTURERS	(1)	EW005785							
MANUFACTURERS	(1)	EW005627							
MANUFACTURING	(1)	EW004811							
MARKETING	(1)	EW004371							



NETS	(1)	EW005540							
	(1)	EW005616							
TROMETRY	(1)	EW004732							
HANDLING	(1)	EW005632							
CAL APPLICATIONS	(2)	EW005613	EW005685						
CAL APPLICATIONS	(2)	EW004975	EW005733						
CAL MODELING	(1)	EW004893							
CAL MODELS	(3)	EW004975	EW005489	EW005613					
CS	(2)	EW005685	EW005733						
CS	(5)	EW005527	EW005715	EW005741	EW005810	EW005832			
CS EDUCATION	(1)	EW005733							
NT	(10)	EW005514	EW005685	EW005694	EW005699	EW005734	EW005791	EW005792	
		EW005793	EW005796	EW005877					
NT	(4)	EW004734	EW005541	EW005741	EW005765				
NT INSTRUMENTS	(3)	EW005533	EW005699	EW005757					
NT TECHNIQUES	(6)	EW004893	EW005668	EW005683	EW005684	EW005699	EW005734		
NT TECHNIQUES	(1)	EW005533							
MERIT	(1)	EW004894							
STRY	(1)	EW005104							
MAINTENANCE	(1)	EW005529							
	(2)	EW005765	EW005775						
	(1)	EW005550							
FILTER TEST	(2)	EW005606	EW005687						
	(1)	EW005550							
	(1)	EW005637							
	(1)	EW005735							
	(3)	EW005646	EW005735	EW005878					
	(1)	EW004743							
COVERY	(1)	EW005651							
	(1)	EW005814							
	(1)	EW005533							

AGENCIES

SYSTEM

LOGY

LOGY

INSTRUMENTS

INSTRUMENTS

TESTS

FACILITIES

TESTS

PERSONNEL

OPERATIONS

ENVIRONMENTAL CONTROLS

FACTORS

ACTIVITIES

ACTIVITIES

- (1) EW005848
- (1) EW004535
- (1) EW005694
- (1) EW004978
- (2) EW005685 EW005734
- (3) EW004965 EW004977 EW005778
- (6) EW004887 EW004944 EW005594 EW005715 EW005810 EW005815
- (1) EW005630
- (1) EW004772
- (1) EW004977
- (1) EW005729
- (1) EW004890
- (1) EW005604
- (1) EW004890
- (1) EW004977
- (1) EW005635
- (2) EW005103 EW005704
- (11) EW004813 EW004889 EW004946 EW005186 EW005261 EW005631 EW005636  
EW005708 EW005729 EW005830 EW005873
- (2) EW005582 EW005777
- (1) EW005568
- (10) EW004642 EW004741 EW004890 EW004911 EW005656 EW005692 EW005694  
EW005699 EW005726 EW005832
- (4) EW004587 EW005535 EW005582 EW005833
- (1) EW005535
- (1) EW005648
- (2) EW005760 EW005761
- (1) EW005771
- (1) EW005089
- (1) EW005751
- (4) EW004371 EW004532 EW005593 EW005815
- EW004806 EW005551 EW005553 EW005577 EW005584 EW005693 EW005828

EWAGE	(1)	EW004887				
EWAGE	(1)	EW004774				
WASTES	(3)	EW004535	EW005574	EW005575		
WASTES	(3)	EW004953	EW005572	EW005576		
WASTEWATER	(1)	EW005509				
WASTEWATER	(1)	EW005629				
Y	(1)	EW005726				
Y	(1)	EW004805				
ASSESSMENT	(6)	EW005706	EW005707	EW005708	EW005710	EW005711 EW005712
ELECTRICAL CODE	(1)	EW005758				
SOURCES	(2)	EW005103	EW005651			
SOURCES	(2)	EW005582	EW005865			
	(1)	EW005090				
	(2)	EW005530	EW005568			
ROGEN	(1)	EW005678				
	(1)	EW005829				
	(1)	EW005833				
ON	(1)	EW005407				
	(1)	EW005670				
	(1)	EW005700				
	(1)	EW005742				
	(2)	EW005695	EW005730			
TION	(1)	EW005743				
TION CONTROL	(1)	EW005703				
	(1)	EW005613				
TY WATER SYSTEMS	(1)	EW005542				
TERIALS	(1)	EW005736				
LLUTION	(2)	EW005090	EW005506			
SOURCE POLLUTION	(3)	EW004740	EW004B13	EW004889		
SOURCES	(1)	EW005090				

WATER	(1)	EW005659				
DEVICES	(1)	EW005602				
NA	(1)	EW005617				
R PLANTS	(1)	EW004890				
NOVAL	(1)	EW005190				
	(4)	EW005811				
HAZARDS	(1)	EW005815				
HEALTH	(4)	EW005089	EW005607	EW005861	EW005867	
SAFETY	(6)	EW005073	EW005074	EW005607	EW005663	EW005860 EW005869
SAFETY	(3)	EW005789	EW005866	EW005868		
SAFETY AND HEALTH ACT	(1)	EW005739				
SAFETY AND HEALTH ACT	(1)	EW005703				
	(1)	EW003555				
	(3)	EW005592	EW005633	EW005636		
	(3)	EW004775	EW005633	EW005636		
TION	(1)	EW005633				
	(1)	EW005527				
	(3)	EW005098	EW005107	EW005679		
	(1)	EW004731				
N CONTROL	(1)	EW005107				
	(1)	EW005098				
	(1)	EW005107				
	(1)	EW004731				
PARATORS	(2)	EW005098	EW005107			
SAL	(1)	EW005713				
MENT	(1)	EW005595				
WATER SYSTEMS	(1)	EW005713				
WATER TREATMENT	(2)	EW004972	EW005585			
WATER TREATMENT	(1)	EW005713				

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COSTS	(1)	EW005547							
	(1)	EW004894							
AL TECHNOLOGY	(1)	EW005529							
ANALYSIS	(1)	EW005874							
S	(2)	EW005571	EW005610						
S	(3)	EW005585	EW005744	EW005748					
S (FORESTRY)	(1)	EW005506							
S MANUALS	(1)	EW004380							
(WASTEWATER)	(51)	EW003783	EW004476	EW004560	EW004587	EW004741	EW004743	EW004772	
		EW004773	EW004886	EW004978	EW005104	EW005117	EW005188	EW005261	EW005485
		EW005526	EW005527	EW005528	EW005530	EW005572	EW005576	EW005594	EW005626
		EW005630	EW005634	EW005635	EW005636	EW005647	EW005654	EW005657	EW005776
		EW005778	EW005779	EW005780	EW005781	EW005803	EW005818	EW005827	EW005828
		EW005837	EW005845	EW005846	EW005847	EW005848	EW005849	EW005855	EW005856
		EW005858	EW005861	EW005863	EW005864				
(WASTEWATER)	(5)	EW004979	EW005608	EW005651	EW005713	EW005852			
(WATER)	(26)	EW004560	EW004563	EW004733	EW004734	EW004743	EW004811	EW004888	
		EW004962	EW005490	EW005493	EW005517	EW005519	EW005522	EW005526	EW005527
		EW005528	EW005532	EW005542	EW005549	EW005583	EW005587	EW005605	EW005612
		EW005715	EW005782	EW005810					
(WATER)	(3)	EW005492	EW005547	EW005591					
EQUIREMENTS	(1)	EW005408							
	(1)	EW005872							
RAINING	(1)	EW005485							
EMISTRY	(1)	EW004888							
MPOUNDS	(3)	EW005147	EW005260	EW005554					
MPOUNDS	(2)	EW004742	EW005878						
ULINC	(1)	EW005531							
ADING	(1)	EW005630							
	(1)	EW005370							
STES	(2)	EW004953	EW005554						
ON	(1)	EW004380							
ONAL ALTERNATIVES	(1)	EW005652							

*OSCILLATORS	(1)	EW005751			
*OWNER-BUILT SYSTEMS	(1)	EW005658			
OXIDATION	(1)	EW005592			
OXIDATION TECHNIQUES	(1)	EW004888			
*OXYGEN	(3)	EW005508	EW005779	EW005818	
OXYGEN	(1)	EW004741			
OXYGENATION EQUIPMENT	(1)	EW005818			
*OXYGEN DEMAND	(1)	EW004741			
OZONATION	(1)	EW005570			
*OZONE	(2)	EW004888	EW004944		
OZONE	(2)	EW004878	EW004881		
PACKAGING	(1)	EW005540			
PAINTS	(1)	EW005736			
*PAPER INDUSTRY	(1)	EW005128			
*PAPER MILLS	(1)	EW005488			
PAPER WASTES	(1)	EW004953			
*PARKS	(1)	EW005595			
PATHOGENS	(2)	EW003555	EW005815		
PENNSYLVANIA	(1)	EW005421			
*PEOPLE MANAGEMENT	(1)	EW005649			
PERCOLATION	(1)	EW005863			
*PERFORMANCE CRITERIA	(2)	EW005627	EW005837		
*PERFORMANCE EVALUATION	(1)	EW004911			
PERFORMANCE RATINGS	(1)	EW005649			
*PERFORMANCE REVIEW	(1)	EW005619			
*PERMANGANATE	(1)	EW005617			
*PERSONNEL	(5)	EW004388	EW005485	EW005619	EW005626
PERSONNEL	(3)	EW004979	EW005518	EW005610	EW005648
*PERSONNEL MANAGEMENT	(2)	EW005117	EW005667		
PERSONNEL MANAGEMENT	(1)	EW005873			
*PEST CONTROL	(1)	EW005586			
PEST CONTROL	(1)	EW005500			

PROPOSAL  
LEFT

MULATIONS

SONING

DUES

(1) EW005851  
(1) EW005602  
(1) EW005500  
(1) EW005500  
(1) EW005650  
(9) EW005500 EW005505 EN005543 EW005602 EW005650 EW005675 EW005789  
EW005877 EW005878  
(4) EW005130 EW005614 EW005695 EW005730  
(1) EW004893  
(1) EW005486  
(2) EW005190 EW005681  
(1) EW005681  
(1) EW005780  
  
(1) EW005851  
(2) EW004977 EW005510  
(1) EW005656  
(1) EW005782  
(1) EW005765  
(2) EW004944 EW005656  
  
(1) EW005490  
(1) EW005260  
(2) EW005532 EW005781  
(2) EW005531 EW005845  
(1) EW005770  
(1) EW005791  
(1) EW005850  
(1) EW005669  
(2) EW005536 EW005537  
(12) EW004811 EW005525 EW005540 EW005613 EW005655 EW005669 EW005688  
EW005693 EW005770 EW005771 EW005772 EW005850  
(2) EW005536 EW005549

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*PIPES (WATER)	(1)	EW005611							
*PLANNING	(31)	EW004467	EW004332	EW004793	EW004803	EW004806	EW004813	EW004820	
		EW004946	EW004972	EW004976	EW004979	EW005114	EW005117	EW005153	EW005261
		EW005492	EW005493	EW005509	EW005521	EW005568	EW005591	EW005622	EW005628
		EW005707	EW005708	EW005709	EW005710	EW005711	EW005804	EW005813	EW005850
PLANNING	(17)	EW004735	EW004811	EW005090	EW005518	EW005542	EW005549	EW005574	
		EW005575	EW005579	EW005629	EW005654	EW005706	EW005712	EW005806	EW005816
		EW005848	EW005852						
*PLANT OPERATIONS	(1)	EW005626							
PLANT OPERATORS	(1)	EW005493							
*PLANT PERFORMANCE	(1)	EW005530							
*PLANT SAFETY	(1)	EW005739							
*PLASTIC PIPE	(1)	EW005693							
PLASTICS	(1)	EW005736							
*PNEUMATICS	(3)	EW005773	EW005774	EW005775					
POISONS	(1)	EW005505							
POLAROGRAPHIC DETECTORS	(1)	EW005694							
*POLICIES	(2)	EW004380	EW005653						
*POLICY	(2)	EW005622	EW005709						
POLICY	(1)	EW004889							
POLICY RESEARCH	(2)	EW005620	EW005621						
POLITICAL SCIENCE	(1)	EW005700							
*POLLUTANTS	(1)	EW005510							
POLLUTANTS	(3)	EW005679	EW005831	EW005832					
*POLLUTION	(8)	EW004731	EW004890	EW005147	EW005552	EW005553	EW005638	EW005656	
		EW005878							
POLLUTION	(14)	EW004774	EW004894	EW004908	EW004965	EW005130	EW005261	EW005581	
		EW005637	EW005639	EW005640	EW005641	EW005642	EW005643	EW005829	
POLLUTION ABATEMENT	(1)	EW004818							
*POLLUTION CONTROL	(20)	EW004742	EW004775	EW004820	EW004889	EW004893	EW004894	EW005089	
		EW005104	EW005147	EW005187	EW005509	EW005590	EW005614	EW005632	EW005651
		EW005698	EW005742	EW005743	EW005816	EW005858			
POLLUTION CONTROL	(13)	EW003555	EW004803	EW005085	EW005492	EW005517	EW005551	EW005575	
		EW005576	EW005578	EW005695	EW005703	EW005856	EW005857		
POLLUTION CONTROL TECHNOLOGY	(1)	EW005818							
*POLLUTION INDICATORS	(1)	EW004813							
*POLLUTION MEASURES	(1)	EW005656							



*POLLUTION STANDARDS	(10)	EW005637	EW005638	EW005639	EW005640	EW005641	EW005642	EW005643
		EW005644	EW005645	EW005646				
*POLLUTION TECHNOLOGY	(2)	EW005554	EW005555					
*POLYMER CONDITIONING	(1)	EW005635						
*POLYMERS	(1)	EW005635						
*POLYVINYLCHLORIDE PIPE	(1)	EW005693						
*PONDS	(1)	EW004775						
*POST SECONDARY EDUCATION	(2)	EW005527	EW005872					
*POTABLE WATER	(2)	EW005103	EW005592					
POTABLE WATER	(6)	EW005519	EW005520	EW005525	EW005659	EW005664	EW005666	
POTASSIUM PERMANGANATE	(1)	EW004881						
*POTONIC RIVER	(1)	EW005577						
*POULTRY INDUSTRY	(1)	EW005104						
*POWDERED ACTIVATED CARBON	(1)	EW005570						
*POWER PLANTS	(3)	EW005744	EW005745	EW005746				
POWER PLANTS	(1)	EW005747						
*POWER SUPPLIES	(1)	EW005749						
*POWER TOOLS	(1)	EW005738						
POWER TOOLS	(1)	EW005765						
*PRECHLORINATION	(1)	EW005538						
PRECURSOR REDUCTION	(1)	EW005538						
*PREDICTION	(2)	EW005709	EW005777					
PREDICTION	(1)	EW005618						
PREFABRICATED COATING	(1)	EW005540						
PRESSURE SEWERS	(1)	EW005697						
*PRETREATMENT	(1)	EW005617						
PRETREATMENT	(1)	EW005857						
*PRIMARY TREATMENT	(1)	EW005862						
PRIVATE OWNERSHIP	(1)	EW005572						
PROBABILITY	(1)	EW005582						
PROBLEM ANALYSIS	(1)	EW005706						
PRO VINING	(5)	EW005530	EW005571	EW005622	EW005740	EW005763		
PROCESSING	(1)	EW005591						

PRODUCTIVITY  
\*PROGRAM DESCRIPTIONS  
\*PROGRAM GUIDES  
\*PROGRAMMED INSTRUCTION  
PROGRAMMED INSTRUCTION

(1)	EW005873							
(3)	EW004404	EW004560	EW005085					
(2)	EW004404	EW005809						
(1)	EW005740							
(13)	EW004886	EW005731	EW005732	EW005733	EW005734	EW005735	EW005736	
	EW005737	EW005738	EW005739	EW005742	EW005743	EW005744	EW005745	EW005746
	EW005747	EW005748	EW005749	EW005750	EW005751	EW005752	EW005753	EW005754
	EW005755	EW005756	EW005757	EW005758	EW005759	EW005760	EW005761	EW005762
	EW005763	EW005765	EW005766	EW005767	EW005768	EW005769	EW005770	EW005771
	EW005772	EW005773	EW005774	EW005775				

\*PROJECT EVALUATION  
PROJECTIONS  
\*PROTECTIVE BARRIERS  
\*PROTECTIVE CLOTHING

(1)	EW005814							
(6)	EW005706	EW005707	EW005708	EW005710	EW005711	EW005712		
(1)	EW005555							
(1)	EW005505							

\*PUBLIC HEALTH  
PUBLIC HEALTH

(5)	EW004629	EW004887	EW005582	EW005802	EW005861			
(18)	EW004733	EW004742	EW004804	EW004805	EW005510	EW005525	EW005586	
	EW005587	EW005602	EW005620	EW005621	EW005658	EW005659	EW005661	EW005665
	EW005692	EW005833	EW005878					

\*PUBLIC PARTICIPATION

(2)	EW005700	EW005787						
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\*PUBLIC RELATIONS

(1)	EW005615							
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\*PUBLIC RELATIONS

(2)	EW004563	EW005518						
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\*PUBLIC SWIMMING POOLS

(1)	EW005806							
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\*PUBLIC WATER SUPPLIES

(1)	EW005804							
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\*PUBLIC WATER SYSTEMS

(1)	EW005542							
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PUBLIC WATER SYSTEMS

(1)	EW005703							
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\*PUBLISHERS

(1)	EW005625							
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\*PULP INDUSTRY

(1)	EW005128							
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\*PULPING WASTES

(1)	EW005128							
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\*PUMPING STATIONS

(1)	EW005606							
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PUMPING STATIONS

(1)	EW005860							
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\*PUMPS

(3)	EW005613	EW005769	EW005771					
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PUMPS

(1)	EW004734							
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\*PURIFICATION

(1)	EW005550							
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PURIFICATION

(1)	EW005818							
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*QUALIFICATIONS	(1)	EW004560							
*QUALITY CONTROL	(2)	EW005514	EW005633						
QUALITY CONTROL	(3)	EW004371	EW005592	EW005831					
QUALITY CRITERIA	(7)	EW005637	EW005638	EW005639	EW005640	EW005641	EW005642	EW005643	
*QUANTITATIVE ASSAY	(1)	EW005694							
RADIATION	(1)	EW005730							
*RATE STRUCTURES	(1)	EW005615							
RECLAMATION	(1)	EW005152							
RECOMMENDATIONS	(1)	EW005610							
*RECORD KEEPING	(2)	EW005583	EW005833						
RECORD KEEPING	(4)	EW005524	EW005526	EW005493	EW005548				
*RECORDS	(2)	EW004467	EW005524						
*RECREATION AREAS	(2)	EW004794	EW005595						
*RECYCLING	(12)	EW004535	EW004602	EW005261	EW005573	EW005593	EW005651	EW005657	
RECYCLING	(2)	EW005659	EW005729	EW005781	EW005790	EW005848			
RECYCLING	(2)	EW004803	EW005188						
REFERENCE MANUALS	(1)	EW005549							
*REFERENCE MATERIALS	(2)	EW005623	EW005809						
REFUSE DISPOSAL	(1)	EW005578							
*REGIONAL PLANNING	(1)	EW004889							
*REGIONAL PROGRAMS	(1)	EW005509							
*REGULATIONS	(24)	EW004804	EW004805	EW005073	EW005074	EW005081	EW005086	EW005089	
REGULATIONS	(8)	EW005508	EW005541	EW005584	EW005603	EW005637	EW005638	EW005639	EW005640
REGULATIONS	(8)	EW005642	EW005643	EW005695	EW005703	EW005725	EW005802	EW005813	EW005832
REGULATIONS	(8)	EW005846							
REGULATIONS	(8)	EW004810	EW004818	EW005518	EW005605	EW005622	EW005651	EW005730	
REGULATIONS	(8)	EW005815							
REPAIR	(2)	EW005383	EW005669						
REPORTS	(1)	EW005787							
*REPROCESSING	(1)	EW004953							
REPRODUCTION	(1)	EW005508							
*RE	(1)	EW004979							

*RESEARCH	(1)	EW004741	EW005260	EW005570	EW005614	EW005616	EW005618	EW005814
		EW005856	EW005865					
RESEARCH	(21)	EW004878	EW004965	EW004977	EW005543	EW005586	EW005607	EW005617
		EW005706	EW005707	EW005708	EW005709	EW005710	EW005711	EW005712
		EW005783	EW005837	EW005851	EW005861	EW005862	EW005863	
RESEARCH ACTIVITIES	(1)	EW005152						
*RESEARCH FACILITIES	(1)	EW005534						
RESEARCH NEEDS	(1)	EW005569						
*RESEARCH PRIORITIES	(1)	EW005121						
*RESEARCH REPORTS	(2)	EW005831	EW005857					
RESEARCH REPORTS	(1)	EW005587						
*RESEARCH REVIEWS	(2)	EW005543	EW005856					
RESEARCH REVIEWS	(3)	EW005659	EW005811	EW005858				
RESERVOIRS	(2)	EW005114	EW005865					
*RESIDUAL CHLORINE	(1)	EW005680						
*RESIDUES	(1)	EW005676						
RESINS	(1)	EW005531						
RESORTS	(1)	EW004735						
*RESOURCE CONSERVATION	(1)	EW004953						
*RESOURCE CONSERVATION AND RECOVERY ACT	(2)	EW005661	EW005813					
RESOURCE CONSERVATION AND RECOVERY ACT	(1)	EW005695						
RESOURCE MANAGEMENT	(1)	EW005103						
*RESOURCE RECOVERY	(6)	EW004803	EW004806	EW005593	EW005651	EW005813	EW005848	
RESOURCE RECOVERY	(3)	EW005703	EW005816	EW005846				
RESPIRATION	(1)	EW005588						
*RESPIRATORS	(1)	EW005867						
*RESPIRATORY PROTECTION	(1)	EW005867						
*REUSE	(3)	EW005573	EW005657	EW005781				
*REVEGETATION	(1)	EW005491						
REVEGETATION	(1)	EW004887						
REVENUE REQUIREMENTS	(1)	EW005615						
*RISK ASSESSMENT	(1)	EW005502						
RISK ASSESSMENT	(1)	EW005602						
*RISK EVALUATION	(1)	EW005582						

*RISK FACTORS	(1)	EW005074							
RISK MANAGEMENT	(1)	EW005582							
*RISKS	(1)	EW005382							
RISKS	(1)	EW005796							
*RIVER QUALITY ASSESSMENT	(1)	EW005515							
*RIVERS	(1)	EW005515							
RIVERS	(4)	EW005577	EW005622	EW005811	EW005865				
*ROTATING BIOLOGICAL FILTERS	(1)	EW005779							
RUBBER	(1)	EW005736							
*RULES	(1)	EW005001							
*RUNOFF WATERS	(1)	EW005489							
*RURAL AREAS	(3)	EW005492	EW005579	EW005595					
RURAL AREAS	(1)	EW005713							
*SAFE DRINKING WATER ACT	(7)	EW004960	EW004961	EW005620	EW005621	EW005666	EW005671	EW005833	
SAFE DRINKING WATER ACT	(1)	EW005703							
*SAFETY	(20)	EW005073	EW005074	EW005500	EW005505	EW005512	EW005583	EW005632	
		EW005650	EW005663	EW005737	EW005738	EW005739	EW005789	EW005808	EW005809
		EW005860	EW005866	EW005867	EW005868	EW005869			
SAFETY	(16)	EW004886	EW005518	EW005519	EW005526	EW005538	EW005570	EW005648	
		EW005649	EW005661	EW005703	EW005715	EW005741	EW005758	EW005806	EW005807
		EW005827							
SAFETY EDUCATION	(5)	EW005807	EW005866	EW005867	EW005868	EW005869			
*SAFETY EQUIPMENT	(1)	EW005869							
SAFETY EQUIPMENT	(1)	EW005860							
SAMPLE PRESERVATION	(1)	EW004587							
*SAMPLING	(5)	EW004741	EW004794	EW005627	EW005668	EW005796			
SAMPLING	(6)	EW004962	EW004965	EW005541	EW005827	EW005832	EW005833		
*SAMPLING METHODS	(1)	EW004587							
*SANITARY ENGINEERING	(2)	EW005524	EW005806						
*SANITARY FACILITIES	(1)	EW005658							
SANITARY SEWAGE SYSTEMS	(1)	EW005547							
SANITARY SEWERS	(1)	EW005548							
*SANITARY SURVEYS	(2)	EW005522	EW005523						
*S	(2)	EW005524	EW005658						

*SCHEMATIC DIAGRAMS	(1)	EW005732							
SCRAPING	(1)	EW004978							
SCREENS	(1)	EW005613							
*SEAFOOD INDUSTRY*	(1)	EW005104							
*SECONDARY TREATMENT	(1)	EW005862							
SECONDARY TREATMENT	(2)	EW004772	EW005594						
SECURITY	(1)	EW005648							
SEDIMENT	(1)	EW004810							
*SEDIMENTATION	(1)	EW004820							
*SEDIMENT CONTROL	(1)	EW004793							
*SEDIMENTS	(2)	EW005704	EW005705						
SEISMIC INVESTIGATIONS	(1)	EW004976							
*SEMIARID REGIONS	(1)	EW005103							
*SEMICONDUCTORS	(1)	EW005748							
*SEMINAR PROCEEDINGS	(1)	EW004818							
SEMINARS	(2)	EW005522	EW005523						
*SEPARATION METHODS	(1)	EW004731							
*SEPARATION PROCESSES	(1)	EW004534							
*SEPTAGE	(1)	EW005776							
*SEPTIC SYSTEMS	(2)	EW005579	EW005863						
*SEPTIC TANKS	(1)	EW005863							
SEPTIC TANKS	(4)	EW004972	EW005595	EW005697	EW005776				
*SEWAGE	(9)	EW004820	EW004807	EW004965	EW005589	EW005606	EW005614	EW005627	
		EW005811	EW005828						
SEWAGE	(3)	EW004735	EW005713	EW005818					
SEWAGE TREATMENT	(1)	EW005593							
*SEWAGE WORKERS	(1)	EW005607							
*SEWAGE WORKS	(1)	EW005860							
*SEWERS	(10)	EW004774	EW005186	EW005536	EW005537	EW005547	EW005548	EW005631	
		EW005777	EW005830	EW005860					
SEWERS	(5)	EW005114	EW005575	EW005579	EW005655	EW005693			
*SEWER SYSTEMS	(2)	EW005575	EW005805						

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*SILVICULTURE	(2)	EW004740	EW005506					
*SIMULATION	(2)	EW004813	EW005114					
SIMULATION	(1)	EW005186						
SINGLE-PHASE MOTORS	(1)	EW005760						
*SITE EVALUATION	(1)	EW004948						
SITE EVALUATION	(2)	EW005585	EW005805					
SITE SELECTION	(1)	EW005574						
*SKILL DEVELOPMENT	(6)	EW004404	EW005670	EW005672	EW005673	EW005760	EW005872	
SKILL DEVELOPMENT	(53)	EW005571	EW005674	EW005675	EW005677	EW005679	EW005680	EW005681
		EW005682	EW005683	EW005684	EW005731	EW005732	EW005733	EW005734
		EW005736	EW005737	EW005738	EW005739	EW005740	EW005742	EW005743
		EW005745	EW005746	EW005747	EW005748	EW005749	EW005750	EW005751
		EW005753	EW005754	EW005755	EW005756	EW005757	EW005758	EW005759
		EW005762	EW005763	EW005764	EW005765	EW005766	EW005767	EW005768
		EW005770	EW005771	EW005772	EW005773	EW005774	EW005775	EW005769
*SLIDE PROGRAMS	(18)	EW005670	EW005672	EW005673	EW005674	EW005675	EW005676	EW005677
		EW005678	EW005679	EW005680	EW005681	EW005682	EW005683	EW005684
		EW005686	EW005687	EW005688				EW005685
SLIP LINING	(1)	EW005536						
*SLUDGE	(26)	EW003555	EW004971	EW004806	EW004887	EW004973	EW005188	EW005488
		EW005517	EW005553	EW005574	EW005589	EW005590	EW005593	EW005634
		EW005778	EW005779	EW005781	EW005815	EW005818	EW005844	EW005845
		EW005855	EW005863	EW005864				EW005846
SLUDGE	(7)	EW004978	EW005491	EW005554	EW005576	EW005605	EW005811	EW005861
*SLUDGE BULKING	(1)	EW005864						
SLUDGE DEWATERING	(1)	EW005488						
*SLUDGE DISPOSAL	(6)	EW003555	EW004806	EW005553	EW005574	EW005591	EW005657	
SLUDGE DISPOSAL	(2)	EW005491	EW005576					
*SLUDGE DRYING	(1)	EW005593						
SLUDGE MANAGEMENT	(1)	EW005778						
*SLUDGE REMOVAL	(2)	EW004978	EW005517					
*SLUDGE SETTLABILITY	(1)	EW005630						
*SLUDGE THICKENING	(2)	EW005781	EW005855					
*SLUDGE TRANSPORTATION	(1)	EW004806						
*SLUDGE TREATMENT	(2)	EW005594	EW005861					
SLURRY TREATMENT	(2)	EW005591	EW005654					

SLUDGE UTILIZATION	(1)	EW005574							
*SMALL COMMUNITIES	(2)	EW005492	EW005579						
SMALL COMMUNITIES	(1)	EW005697							
*SMALL FLOWS	(1)	EW005697							
*SMALL WATER SYSTEMS	(1)	EW005542							
*SOCIAL FACTORS	(1)	EW005700							
SOCIAL IMPACTS	(1)	EW004889							
SOIL CONSERVATION	(1)	EW005090							
SOIL CONSERVATION SERVICE	(1)	EW005652							
*SOILS	(3)	EW004908	EW004948	EW005078					
SOILS	(2)	EW004793	EW005713						
SOLAR ENERGY	(1)	EW005461							
SOLIDIFICATION PROCESSES	(1)	EW005152							
*SOLIDS	(1)	EW005630							
*SOLIDS CONTACT CLARIFICATION	(1)	EW005845							
SOLIDS HANDLING	(1)	EW004476							
SOLIDS PROCESSING	(1)	EW005634							
*SOLID WASTE DISPOSAL	(1)	EW005578							
*SOLID WASTES	(6)	EW004803	EW005551	EW005581	EW005591	EW005603	EW005742		
SOLID WASTES	(3)	EW004535	EW004806	EW005604	EW005695	EW005730	EW005743	EW005816	
		EW005827							
SORPTION PROCESSES	(1)	EW005856							
SOYBEANS	(1)	EW005543							
*SPECIAL LIBRARIES	(1)	EW005623							
SPECIAL LIBRARIES	(1)	EW005624							
*SPECIFICATIONS	(1)	EW005804							
*SPECTROPHOTOMETRY	(1)	EW005672							
*SPILLS	(1)	EW005603							
*STAFF	(1)	EW004979							
STAFF IMPROVEMENT	(1)	EW004974							
STAFF SELECTION	(1)	EW004979							
*STAGNANT WATER	(1)	EW004775							



*STAINING TECHNIQUES	(1)	EW004977							
*STANDARDS	(17)	EW004629	EW004804	EW004961	EW005089	EW005539	EW005540	EW005551	EW005552
		EW005569	EW005584	EW005628	EW005783	EW005802	EW005803	EW005804	EW005805
		EW005806	EW005832						
STANDARDS	(14)	EW004974	EW004975	EW005130	EW005492	EW005508	EW005518	EW005530	
		EW005532	EW005568	EW005604	EW005618	EW005622	EW005659	EW005796	
*START-UP	(1)	EW005634							
STATE AGENCIES	(1)	EW005621							
*STATE CRITERIA	(10)	EW005637	EW005638	EW005639	EW005640	EW005641	EW005642	EW005643	EW005644
		EW005644	EW005645	EW005646					
STATE GUIDELINES	(1)	EW005520							
*STATE OF THE ART REVIEWS	(1)	EW005622							
STATE PLANNING	(1)	EW004803							
*STATE PROGRAMS	(1)	EW005509							
STATE STANDARDS	(1)	EW005508							
*STATISTICS	(2)	EW004975	EW005631						
*STATUS ASSESSMENT	(2)	EW005130	EW005133						
*STATUTES	(1)	EW005703							
*STEAM GENERATING SYSTEMS	(3)	EW005744	EW005745	EW005746					
STEAM GENERATION	(1)	EW005747							
*STEEL PIPES	(1)	EW005540							
*STORAGE FACILITIES	(1)	EW005547							
STORAGE RESERVOIRS	(1)	EW005577							
*STORM RUNOFF	(1)	EW005830							
*STORM SEWERS	(1)	EW005830							
STORM SEWERS	(4)	EW005114	EW005547	EW005548	EW005575				
*STORMWATER	(4)	EW004810	EW004818	EW005489	EW005614				
STORMWATER	(1)	EW004793							
*STREAMFLOW	(1)	EW005712							
*STREAMS	(6)	EW004893	EW004946	EW004965	EW005506	EW005552	EW005712		
STRIP-MINED LANDS	(1)	EW005491							
STRUCTURAL DESIGN	(1)	EW005494							
STUDENT GUIDES	(3)	EW005866	EW005867	EW005868					

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STUDY GUIDES	(1)	EW005526							
*SUBPOTABLE WATER	(1)	EW005261							
SUCTION	(1)	EW004978							
*SULFIDES	(1)	EW005777							
*SULFUR BACTERIA	(1)	EW005656							
*SUPERVISION	(2)	EW005648	EW005649						
*SUPERVISORY TRAINING	(1)	EW005667							
*SUPPORT STRUCTURES	(1)	EW005494							
SURFACE CHEMISTRY	(1)	EW005260							
*SURFACE RUNOFF	(1)	EW004740	EW004813	EW004818	EW004820	EW004946	EW005114	EW005121	
		EW005614							
SURFACE RUNOFF	(1)	EW004972							
*SURFACE WATER	(3)	EW005644	EW005645	EW005646					
SURFACE WATER	(7)	EW005637	EW005638	EW005639	EW005640	EW005641	EW005642	EW005643	
SURVEYING	(1)	EW005548							
*SURVEYS	(2)	EW005524	EW005865						
*SUSPENDED MATTER	(1)	EW005683							
SUSPENDED SOLIDS	(2)	EW005654	EW005780						
*SWIMMING POOLS	(1)	EW005806							
*SWIN-CHECK VALVES	(1)	EW005539							
SWITCHES	(1)	EW005762							
*SYMBOLS	(1)	EW005732							
*SYMPOSIA	(5)	EW005659	EW005725	EW005726	EW005856	EW005857			
*SYMPOSIA PROCEEDINGS	(2)	EW004772	EW004878						
	(1)								
SYNTHETIC ORGANIC CHEMICALS	(1)	EW005570							
*SYNTHETIC ORGANIC POLYMERS	(1)	EW005635							
SYSTEM DESIGN	(1)	EW005793							
*SYSTEMS ANALYSIS	(1)	EW005847							
TABLES (DATA)	(1)	EW005699							
TALC	(1)	EW005510							
*TAPE COATINGS	(1)	EW005540							

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TAPES	(1)	EW005500						
*TAPPING	(1)	EW005608						
TASTE	(1)	EW005617						
*TASTE CONTROL	(1)	EW005592						
*TAXES	(1)	EW004467						
*TEACHING GUIDES	(11)	EW005741	EW005743	EW005747	EW005753	EW005764	EW005775	EW005810
		EW005866	EW005867	EW005868	EW005869			
TEACHING GUIDES	(2)	EW005522	EW005523					
TEAM TRAINING	(1)	EW005263						
TECHNICAL ASSISTANCE	(1)	EW005813						
*TECHNICAL COOPERATION	(1)	EW005521						
TECHNICAL PUBLICATIONS	(1)	EW005785						
*TECHNICAL REPORTS	(1)	EW005858						
TECHNOLOGICAL ADVANCEMENTS	(4)	EW005535	EW005787	EW005837	EW005857			
*TECHNOLOGY	(5)	EW005514	EW005550	EW005593	EW005629	EW005792		
TECHNOLOGY	(4)	EW005551	EW005616	EW005793	EW005851			
*TEMPERATURE	(1)	EW005644						
*TEMPERATURE PROBES	(1)	EW005611						
*TERMINOLOGY	(1)	EW005698						
*TERTIARY TREATMENT	(1)	EW005576						
TERTIARY TREATMENT	(1)	EW004476						
*TESTING	(1)	EW005833						
TESTING	(7)	EW004587	EW004978	EW005530	EW005539	EW005540	EW005668	EW005827
TESTING METHODS	(1)	EW005570						
*TEXAS	(1)	EW005621						
TEXAS	(1)	EW005489						
*TEXTBOOKS	(5)	EW005587	EW005588	EW005605	EW005657	EW005827		
*TEXTILE INDUSTRY	(1)	EW004908						
*THERMAL SLUDGE DISPOSAL	(1)	EW005846						
*THREE-PHASE SYSTEMS	(1)	EW005761						
TIMBER PRODUCTION	(1)	EW005081						

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*TOILETS	(1)	EW005658							
*TOOLS	(2)	EW005737	EW005738						
*TOTAL COLIFORM	(1)	EW005687							
*TOTAL ORGANIC CARBON	(1)	EW005535							
*TOXIC CHEMICALS	(2)	EW005130	EW005133						
*TOXICITY	(5)	EW005120	EW005487	EW005505	EW005705	EW005789			
TOXICITY	(1)	EW005704							
*TOXIC MATERIALS	(1)	EW005555							
TOXIC METALS	(1)	EW005815							
*TOXICOLOGY	(4)	EW004804	EW004805	EW004944	EW005534				
TOXICOLOGY	(1)	EW005725							
TOXIC STANDARDS	(1)	EW005628							
*TOXIC SUBSTANCES	(10)	EW004804	EW004805	EW004944	EW005510	EW005641	EW005725	EW005726	
		EW005789	EW005802	EW005866					
TOXIC SUBSTANCES	(7)	EW005089	EW005130	EW005487	EW005614	EW005666	EW005695	EW005703	
*TOXIC WASTES	(4)	EW005152	EW005553	EW005554	EW005555				
TRACE ANALYSIS	(1)	EW005831							
*TRACE CHEMICALS	(1)	EW005692							
TRACE ELEMENTS	(1)	EW005646							
TRACE METALS	(1)	EW005692							
*TRAINING	(6)	EW004560	EW004803	EW005485	EW005610	EW005647	EW005873		
TRAINING	(6)	EW004404	EW004974	EW005518	EW005521	EW005626	EW005648		
*TRAINING MANUALS	(15)	EW004476	EW005522	EW005523	EW005526	EW005548	EW005549	EW005583	
		EW003741	EW005743	EW005747	EW005753	EW005764	EW005775	EW005528	EW005731
*TRAINING MATERIALS	(1)	EW005647							
*TRAINING NEEDS	(1)	EW004532							
*TRAINING PROGRAMS	(50)	EW005263	EW005485	EW005521	EW005732	EW005733	EW005734	EW005735	
		EW005736	EW005737	EW005738	EW005739	EW005740	EW005741	EW005742	EW005743
		EW005744	EW005745	EW005746	EW005747	EW005748	EW005749	EW005752	EW005753
		EW005755	EW005756	EW005757	EW005758	EW005760	EW005761	EW005762	EW005763
		EW005765	EW005766	EW005767	EW005768	EW005769	EW005771	EW005772	EW005773
		EW005774	EW005775	EW005873	EW005529	EW005731	EW005750	EW005751	EW005754
		EW005759	EW005764	EW005770					
TRAINING PROGRAMS	(1)	EW005670							



*TRANSFORMERS	(1)	EW005756		
*TRANSPORT	(1)	EW005704		
TRANSPORTATION	(1)	EW005505		
TRANSPORTATION SYSTEM	(1)	EW005578		
TREATMENT ALTERNATIVES	(1)	EW005595		
TREATMENT TANKS	(1)	EW005805		
*TRICKLING FILTERS	(1)	EW005845		
TRICKLING FILTERS	(1)	EW005862		
*TRICHALOMETHANE	(3)	EW005538	EW005617	EW005618
TRICHALOMETHANE	(1)	EW005616		
*TRICHALOMETHANES	(1)	EW005570		
*TROUBLESHOOTING	(3)	EW005740	EW005772	EW005774
TROUBLESHOOTING	(4)	EW005749	EW005750	EW005751 EW005763
*TUBERCULATION	(1)	EW005669		
*TURBIDITY	(1)	EW005682		
TURBIDITY	(2)	EW005833	EW005837	
TURBINES	(1)	EW005746		
*ULTRAFILTRATION	(1)	EW005550		
ULTRAVIOLET LIGHT	(1)	EW004801		
ULTRAVIOLET RADIATION	(1)	EW004878		
UNIONS	(1)	EW005649		
UNITED STATES	(1)	EW005622		
*UNITS OF MEASUREMENT	(1)	EW005605		
*URANIUM	(1)	EW004890		
URANIUM ORES	(1)	EW004890		
URANIUM TAILINGS	(1)	EW005152		
*URBAN AREAS	(6)	EW004813	EW004818	EW005114 EW005121* EW005489 EW005784
URBAN AREAS	(3)	EW004735	EW005186	EW005636

MENT

(2) EW004972 EW005614  
 (1) EW004793  
 (1) EW005650  
 (2) EW004810 EW005489  
 (1) EW005261  
 (12) EW004532 EW004962 EW005188 EW005189 EW005190 EW005191 EW005514  
 EW005518 EW005524 EW005554 EW005747 EW005783  
 (6) EW004960 EW005152 EW005512 EW005551 EW005553 EW005569

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ICES

(1) EW005516  
 (1) EW005697  
 (1) EW005571  
 (2) EW005539 EW005793  
 (4) EW005770 EW005771 EW005772 EW005773

ERING

(1) EW005529

(1) EW005485

(1) EW004794

(1) EW005808

OUNDS

(1) EW004742

(1) EW005694

(4) EW005575 EW005576 EW005577 EW005578

DC

(1) EW004953

SION

(37) EW004371 EW004535 EW004806 EW004908 EW004948 EW004965 EW005104  
 EW005107 EW005128 EW005152 EW005491 EW005517 EW005551 EW005553  
 EW005554 EW005555 EW005574 EW005578 EW005581 EW005509 EW005591  
 EW005593 EW005603 EW005604 EW005630 EW005634 EW005651 EW005658 EW005661  
 EW005803 EW005813 EW005815 EW005857 EW005864 EW005878

AL

(10) EW003555 EW004962 EW005186 EW005461 EW005505 EW005514 EW005654  
 EW005816 EW005845 EW005858

AL

(3) EW005152 EW005590 EW005651

MENT

(1) EW005574

MENT

(1) EW005098

EATMENT

(1) EW005851

IDES

(1) EW004535

SING

(1) EW005551

SING

(1) EW005658

ING

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*WASTE REPROCESSING	(1)	EW004953							
*WASTES	(2)	EW005553	EW005555						
WASTE STABILIZATION LAGOONS	(1)	EW005805							
*WASTE TREATMENT	(2)	EW004908	EW005658						
WASTE TREATMENT	(2)	EW005574	EW005604						
*WASTE UTILIZATION	(1)	EW004535							
*WASTEWATER	(6)	EW004741	EW004887	EW005188	EW005190	EW005697	EW005811		
WASTEWATER	(3)	EW005657	EW005676	EW005681					
*WASTEWATER ANALYSIS	(1)	EW004587							
*WASTEWATER COLLECTION	(15)	EW004735	EW004774	EW004979	EW005186	EW005191	EW005536	EW005537	
		EW005547	EW005548	EW005575	EW005614	EW005627	EW005631	EW005729	EW005777
*WASTEWATER DISPOSAL	(3)	EW005585	EW005595	EW005811					
WASTEWATER DISPOSAL	(1)	EW005827							
*WASTEWATER MANAGEMENT	(1)	EW005492							
*WASTEWATER POLLUTION CONTROL	(1)	EW004948							
*WASTEWATER SLUDGE	(1)	EW005491							
*WASTEWATER TREATMENT	(104)	EW003535	EW003783	EW004476	EW004532	EW004560	EW004587	EW004602	
		EW004772	EW004773	EW004776	EW004806	EW004878	EW004886	EW004908	EW004948
		EW004972	EW004974	EW004977	EW004978	EW004979	EW005098	EW005104	EW005117
		EW005186	EW005187	EW005188	EW005109	EW005190	EW005191	EW005261	EW005405
		EW005406	EW005509	EW005514	EW005526	EW005527	EW005528	EW005530	EW005531
		EW005533	EW005552	EW005553	EW005554	EW005568	EW005571	EW005572	EW005574
		EW005576	EW005579	EW005584	EW005585	EW005591	EW005593	EW005594	EW005595
		EW005606	EW005607	EW005608	EW005626	EW005628	EW005629	EW005630	EW005632
		EW005634	EW005635	EW005636	EW005647	EW005651	EW005654	EW005657	EW005713
		EW005729	EW005776	EW005778	EW005779	EW005780	EW005781	EW005790	EW005803
		EW005805	EW005806	EW005811	EW005815	EW005818	EW005827	EW005828	EW005837
		EW005844	EW005845	EW005846	EW005847	EW005848	EW005849	EW005850	EW005852
		EW005855	EW005856	EW005857	EW005858	EW005860	EW005861	EW005862	EW005863
		EW005864							
WASTEWATER TREATMENT	(5)	EW005487	EW005488	EW005492	EW005529	EW005782			
WASTEWATER TREATMENT FACILITIES	(1)	EW005529							
WASTEWATER TREATMENT PERSONNEL	(1)	EW005529							
WASTEWATER TREATMENT SYSTEMS	(1)	EW005697							
*WATER ANALYSIS	(18)	EW004888	EW004890	EW005670	EW005672	EW005673	EW005674	EW005675	
		EW005676	EW005677	EW005678	EW005679	EW005680	EW005681	EW005682	EW005683
		EW005684	EW005686	EW005687					

*WATER CHEMISTRY	(1)	EW005541						
*WATER COLLECTION	(1)	EW005830						
*WATER CONSERVATION	(11)	EW004602	EW005103	EW005653	EW005706	EW005707	EW005708	EW005710
		EW005711	EW005712	EW005729	EW005790			
WATER CONSERVATION	(3)	EW005090	EW005658	EW005709				
*WATER DISTRIBUTION	(16)	EW004733	EW004734	EW004735	EW004811	EW004960	EW004961	EW005525
		EW005540	EW005542	EW005548	EW005611	EW005612	EW005664	EW005669
		EW005804						
WATER DISTRIBUTION	(1)	EW005715						
*WATER DISTRIBUTION SYSTEMS	(4)	EW004563	EW005547	EW005549	EW005583			
*WATER DISTRICTS	(1)	EW004976						
*WATER EROSION	(1)	EW004793						
*WATER EROSION CONTROL	(1)	EW004793						
*WATER MAINS	(3)	EW005548	EW005549	EW005693				
*WATER MANAGEMENT	(8)	EW005706	EW005707	EW005708	EW005709	EW005710	EW005711	EW005712
		EW005865						
*WATER MEASUREMENT	(1)	EW005609						
*WATER METERS	(1)	EW005609						
*WATER PIPES	(1)	EW005669						
*WATER POLICY	(6)	EW005706	EW005707	EW005708	EW005710	EW005711	EW005712	
WATER POLICY	(1)	EW005621						
*WATER POLLUTION	(16)	EW004741	EW004775	EW004813	EW004818	EW004965	EW004972	EW005085
		EW005128	EW005130	EW005147	EW005581	EW005604	EW005614	EW005656
		EW005858						EW005679
WATER POLLUTION	(11)	EW004806	EW004962	EW005133	EW005506	EW005589	EW005658	EW005666
		EW005730	EW005743	EW005782	EW005811			
*WATER POLLUTION CONTROL	(38)	EW004731	EW004740	EW004774	EW004776	EW004809	EW004893	EW004972
		EW005086	EW005098	EW005104	EW005114	EW005128	EW005130	EW005187
		EW005506	EW005552	EW005577	EW005631	EW005633	EW005637	EW005638
		EW005640	EW005641	EW005642	EW005643	EW005644	EW005645	EW005646
		EW005664	EW005692	EW005742	EW005802	EW005816	EW005818	EW005855
WATER POLLUTION CONTROL	(19)	EW003783	EW004818	EW004820	EW005153	EW005485	EW005486	EW005487
		EW005489	EW005509	EW005514	EW005535	EW005554	EW005559	EW005585
		EW005628	EW005629	EW005703	EW005829			EW005595
*WATER PROBLEMS	(1)	EW005121						
*WATER PUMPS	(1)	EW005769						
*WATER PURIFICATION	(1)	EW005550						





\*WATER QUALITY

(46)	EW004629	EW004642	EW004740	EW004794	EW004804	EW004805	EW004809
EW004890	EW004911	EW004946	EW004962	EW004965	EW004972	EW004975	EW005090
EW005114	EW005121	EW005490	EW005506	EW005508	EW005569	EW005577	EW005584
EW005587	EW005614	EW005616	EW005617	EW005618	EW005620	EW005628	EW005637
EW005638	EW005639	EW005640	EW005641	EW005642	EW005643	EW005644	EW005645
EW005646	EW005659	EW005666	EW005783	EW005816	EW005833	EW005865	

WATER QUALITY

(30)	EW004563	EW004602	EW004733	EW004810	EW004813	EW004887	EW004888
EW005103	EW005261	EW005489	EW005515	EW005520	EW005525	EW005549	EW005560
EW005570	EW005573	EW005583	EW005593	EW005604	EW005622	EW005653	EW005670
EW005729	EW005782	EW005784	EW005802	EW005810	EW005857	EW005862	

\*WATER QUALITY CRITERIA

(1) EW004629

WATER QUALITY PROBLEMS

(1) EW005865

\*WATER QUALITY STANDARDS

(11)	EW005584	EW005637	EW005638	EW005639	EW005640	EW005641	EW005642
EW005643	EW005644	EW005645	EW005646				

\*WATER RATES

(2) EW005516 EW005615

\*WATER RATE SCHEDULES

(1) EW005516

\*WATER RESEARCH CENTER

(1) EW004642

\*WATER RESOURCE COUNCIL

(2) EW005707 EW005708

\*WATER RESOURCE PROJECTS

(1) EW005652

\*WATER RESOURCES

(39)	EW004560	EW004602	EW004741	EW004946	EW004976	EW005081	EW005183
EW005121	EW005153	EW005514	EW005515	EW005520	EW005521	EW005573	EW005577
EW005620	EW005621	EW005622	EW005652	EW005653	EW005659	EW005662	EW005699
EW005704	EW005705	EW005706	EW005707	EW005708	EW005709	EW005710	EW005711
EW005712	EW005729	EW005705	EW005790	EW005814	EW005816	EW005830	EW005865

WATER RESOURCES

(7) EW004820 EW005522 EW005523 EW005552 EW005506 EW005604 EW005861

\*WATER RESOURCES COUNCIL

(4) EW005706 EW005710 EW005711 EW005712

WATER RESOURCES COUNCIL

(1) EW005652

\*WATER REUSE

(4) EW004602 EW005261 EW005573 EW005659

\*WATER SAMPLES

(1) EW005662

\*WATERSHEDS

(2) EW004794 EW004965

WATER STORAGE

(2) EW005494 EW005583

\*WATER STORAGE FACILITIES

(1) EW005547

\*WATER SUPPLY

(28)	EW004563	EW004733	EW004734	EW004881	EW004888	EW004960	EW004961
EW005263	EW005490	EW005516	EW005518	EW005520	EW005522	EW005523	EW005524
EW005540	EW005542	EW005577	EW005606	EW005615	EW005616	EW005620	EW005621
EW005671	EW005729	EW005703	EW005704	EW005833			

WATER SUPPLY

(9) EW005666 EW005668 EW005706 EW005707 EW005708 EW005709 EW005710

WATER SUPPLY PRODUCTS

(1) EW005785

WATER SUPPLY SERVICES

(1) EW005705

WATER SUPPLY SYSTEMS

(1) EW005547



*WATER TREATMENT	(47)	EW004532	EW004560	EW004563	EW004734	EW004881	EW004888	EW004960
		EW004961	EW004962	EW005189	EW005493	EW005494	EW005517	EW005519
		EW005522	EW005526	EW005528	EW005532	EW005538	EW005539	EW005541
		EW005549	EW005550	EW005570	EW005587	EW005591	EW005592	EW005605
		EW005617	EW005618	EW005620	EW005621	EW005632	EW005666	EW005668
		EW005715	EW005782	EW005784	EW005804	EW005810	EW005829	EW005847
WATER TREATMENT	(3)	EW003783	EW005527	EW005659				
WATER TREATMENT PLANTS	(1)	EW005538						
WATER USE	(6)	EW005706	EW005707	EW005708	EW005710	EW005711	EW005712	
*WATER UTILITIES	(7)	EW004467	EW004563	EW004734	EW004960	EW004961	EW005615	EW005715
WATER UTILITIES	(1)	EW005583						
WATER UTILITY COUNCIL	(1)	EW005569						
*WATER WELLS	(1)	EW005009						
*WATER WORKS	(2)	EW004734	EW005804					
*WATERWORKS CHEMISTRY	(1)	EW005541						
*WATERWORKS EQUIPMENT	(1)	EW005539						
*WEATHER	(1)	EW005814						
*WEATHER MODIFICATION	(1)	EW005814						
*WEED CONTROL	(1)	EW005586						
WELLS	(3)	EW004975	EW005542	EW005699				
*WILDLIFE MANAGEMENT	(1)	EW005081						
*WIND EROSION	(1)	EW004793						
*WIND EROSION CONTROL	(1)	EW004793						
WIRING	(1)	EW005762						
WOOD	(1)	EW005736						
WORKBOOK	(3)	EW005732	EW005733	EW005740				
*WORKBOOKS	(2)	EW004886	EW005526					
WORKBOOKS	(40)	EW005731	EW005734	EW005735	EW005736	EW005737	EW005738	EW005739
		EW005742	EW005744	EW005745	EW005746	EW005748	EW005749	EW005750
		EW005752	EW005754	EW005755	EW005756	EW005757	EW005758	EW005759
		EW005761	EW005762	EW005763	EW005765	EW005766	EW005767	EW005768
		EW005770	EW005771	EW005772	EW005773	EW005774	EW005866	EW005867
		EW005869						EW005868
*WORK ENVIRONMENT	(1)	EW005648						
WORKER SELECTION	(1)	EW005648						
*ZEOLITE	(2)	EW005862	EW005863					
*ZINC	(1)	EW005639						

