Compiled are abstracts and indexes to selected print and non-print materials related to wastewater treatment and water quality education and instruction, as well as materials related to pesticides, hazardous wastes, and public participation. Sources of abstracted/indexed materials include all levels of government, private concerns, and educational institutions. Title, author(s), publication date, cross-references, descriptors, and availability are provided for each entry. 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 of their programs. This publication supplements and does not replace "Water Quality Instructional Resources Information System (IRIS): A Compilation of Abstracts to Water Quality and Water Resources Materials" or IRIS Supplements I-VIII. (Author/JN)
Water Quality Instructional Resources Information System

WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS)

A Compilation of Abstracts to Water Quality and Water Resources Materials

Supplement IX (1982)
March, 1982
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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 Instructional Resources Center
1200 Chambers Road, Room 310
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 Instructional Resources Center (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 Instructional Resources Center 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 Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212

Materials are reviewed by the project staff. Availability of the materials 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 Instructional Resources Center 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 Instructional Resources Center. After the free copies of the compilations are gone, copies will be available for purchase from the EPA Instructional Resources Center.

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 Instructional Resources Center. A subscription to the quarterly supplements for 1981-82 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 searching through the Bibliographic Retrieval Services, Inc., (BRS) and with Dialog. Any search service that currently subscribes to BRS or Dialog 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 or Dialog and do their own searches if they desire.

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

Information regarding Dialog may be obtained by writing or phoning Dialog Information Retrieval Service, 3460 Hillview Avenue, Palo Alto, CA 94304, (415) 858-3775.

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 Instructional Resources Center.
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
(202) 783-3238

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 Instructional Resources Center 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, 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 Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212
(614) 422-6717

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 Instructional Resources Center for 3¢ per page plus $1.00 per document.

For information about locations of ERIC microfiche sites in your state, contact the EPA Instructional Resources Center.
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
(602) 254-6156

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
(313) 761-4700

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 into 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 in ERIC

a. IRIS NUMBER: EW 006 023
b. PUBLICATION DATE: FEB 81
c. TITLE: PROGRAMMED APPROACH TO WATER/MASS ANALYSES.
d. PERSONAL AUTHOR: SPENCE, GEORGE R., JR.
e. DESCRIPTOR: *DESIGN; *ENGINEERING; *EQUIPMENT; *MASS BALANCE; *PROJECT DESIGN; *POLLUTION ENGINEERING; *PIPES; *WATER RESOURCES

f. DESCRIPTIVE NOTE: 30-33P.
g. ABSTRACT: DURING THE ENGINEERING PHASE OF A PROJECT DESIGN WATER REQUIREMENTS OFTEN CHANGE AS NEW INFORMATION BECOMES AVAILABLE. THIS ARTICLE DETAILS A PROGRAMMED APPROACH TO CALCULATION OF A WATER/MASS BALANCE WHICH PROVIDES THE USER WITH THE ABILITY TO READILY ASSESS THE IMPACT OF VARYING WATER QUALITIES, FLOW PATTERNS, AND FLOW RATES. THIS INFORMATION IS THEN USED IN DETERMINING PIPE AND EQUIPMENT SIZES.

h. AVAILABILITY: POLLUTION ENGINEERING, V13 N2

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 ACCESSION NUMBER: EW006664

PUBLICATION DATE: 80

TITLE: RESOURCE DEVELOPMENT OF WATERSHED LANDS: A SIX WEEK SHORT COURSE.

_DESCRIPTOR: ADMINISTRATION; ECOLOGICAL FACTORS; ECONOMIC FACTORS; INSTRUCTIONAL MATERIALS; *LAND USE; NATURAL RESOURCES; *POST SECONDARY EDUCATION; *TECHNICAL EDUCATION; *WATER RESOURCES; HYDROLOGY; NATURAL RESOURCES MANAGEMENT; WATER QUALITY; *WATERSHEDS

b. DESCRIPTIVE NOTE: EDRS PRICE: MF01 PLUS POSTAGE–NOT AVAILABLE IN HARD COPY DUE TO MARGINAL LEGIBILITY OF ORIGINAL DOCUMENT

ABSTRACT: THIS COURSE WAS DESIGNED TO PROVIDE THE WATER RESOURCE TECHNICIAN OR MANAGER WITH INFORMATION WHICH WILL AID IN THE IMPLEMENTATION OF IMPROVEMENTS OF PRESENT LAND USE PRACTICES AND TO ILLUSTRATE ALTERNATIVE CONCEPTS AND TECHNIQUES IN LAND AND WATER USE FOR INCREASING AND IMPROVING THE MULTIPLE PRODUCTS OF WATERSHED LANDS. (ED 197 941)

a. AVAILABILITY: ERIC, DOCUMENT REPRODUCTION SERVICE, P. O. BOX 190, ARLINGTON, VA 22210
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.

b. **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 Instructional Resources Center.
B. How to Locate Desired Materials

Users can identify materials of interest by scanning the resume listings, or using the Subject Index, Author Index, or Institutional 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.
III. Correcting an Existing IRIS Record

The IRIS database will be updated on a quarterly basis. Corrections will be made to the database 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 Instructional Resources Center
1200 Chambers Road, Room 310
Columbus, Ohio 43212
(614) 422-6717

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 IkIS, 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 Instructional Resources Center. 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 Instructional Resources Center. 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
   (518) 374-5011

3. Subscribing to Dialog for computer searching of IRIS.

   Contact: Dialog Information Retrieval Service
   3460 Hillview Avenue
   Palo Alto, California 94304
   (415) 858-3775

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

   The EPA Instructional Resources Center 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 Instructional Resources Center plans to develop some user service products in selected areas in 1982.

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 on Adult, Career, and Vocational Education
The Ohio State University
National Center for Research in 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
2108 School of Education
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 and Early Childhood Education
   University of Illinois
   College of Education
   805 West Pennsylvania Avenue
   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
   Library, Room 108
   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
130 Huntington Hall
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
96 Powell Library Building
405 Hilgard Avenue
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
3520 Prospect Street, N.W.
Washington, DC 20007
Telephone: (202) 296-9292

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 and 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
The Ohio State University
1200 Chambers Road - Room 310
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
Social Science Education Consortium, Inc.
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, Suite 610
Washington, DC 20036
Telephone: (202) 293-2450

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
Rosedale Road
Princeton, New Jersey 08541
Telephone: (609) 734-5180

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

P. ERIC Clearinghouse on Urban Education
Columbia University
Teachers College
Box 40
525 West 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
   1200-19th Street, N.W.
   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. or Dialog. 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 or Dialog, 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 on the following pages.
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.
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.

VIII. 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 or purchased from the EPA Instructional Resources Center. Most items previously available from the NTOTC office will be available after November 1, 1981 from the EPA Instructional Resources Center at The Ohio State University. For further information write or call.

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
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Arlington, Virginia 22210
(703) 841-1212

C. The EPA Instructional Resources Center will provide xerox copies of materials that are not copyrighted for $1.00 per document plus $0.03 per page.

If you cannot obtain materials that are listed or have difficulty obtaining materials, please contact the EPA Instructional Resources Center. We can provide assistance in obtaining materials from some sources. If materials become unavailable, we will remove them from the IRIS data base.
RESUME SECTION
IRIS ACCESSION NUMBER: EW001785
PUBLICATION DATE: JUN 74
TITLE: CONTROL OF OIL AND OTHER HAZARDOUS MATERIALS - TRAINING MANUAL.
DESCRIPTOR: *CONTINGENCY PLANS; FEDERAL LEGISLATION; *HAZARDOUS MATERIALS; *INSTRUCTIONAL MATERIALS; *OIL; *OIL SPILLS; *PETROLEUM INDUSTRY; *POST SECONDARY EDUCATION; REGULATIONS; *TRAINING; *WATER POLLUTION CONTROL
DESCRIPTIVE NOTE: 177P. PRICE: $1.00 PLUS $.03 PER PAGE.
ABSTRACT: PRESENTED IS THE TRAINING MANUAL FOR A COURSE OFFERED TO EMPLOYEES OF REGULATORY AGENCIES WHO ARE ASSIGNED DIRECT RESPONSIBILITY FOR RESPONSE TO NONRECURRING DISCHARGES OF OIL. THE COURSE IS DESIGNED TO FAMILIARIZE STUDENTS WITH ALTERNATIVES IN SPILL CONTROL AND PROVIDE OPPORTUNITY TO PRACTICE RESPONSE UNDER REALISTIC CONSTRAINTS AND MEASURES OF SUCCESS. TOPICS INCLUDE HAZARDOUS MATERIALS; OIL SPILL PROBLEMS; OIL CHARACTERISTICS; OIL SPILL PREVENTION, CONTROL AND TREATMENT; AND LEGAL RESPONSE.
AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW005077
PUBLICATION DATE: SEP 78
TITLE: ENVIRONMENTAL EDUCATION PROGRAMS FOR WATER SUPPLY AND WASTEWATER TREATMENT IN NEW ENGLAND.
DESCRIPTOR: *CORRESPONDENCE COURSES; *ENVIRONMENT; *NEW ENGLAND; *PROFESSIONAL ORGANIZATIONS; *POST SECONDARY EDUCATION; *STATE AGENCIES; *TRAINING PROGRAMS; UTILITIES; *WATER POLLUTION CONTROL; *WATER SUPPLY; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 69P.
ABSTRACT: THIS BOOKLET CONTAINS COURSES AND PROGRAMS OFFERED BY ALL TYPES OF POST-SECONDARY SCHOOLS, PROFESSIONAL ORGANIZATIONS AND STATE AGENCIES IN NEW ENGLAND, AS WELL AS CORRESPONDENCE COURSE SPONSORED BY COLLEGES OUTSIDE OF THE REGION. THE INFORMATION PROVIDED INCLUDES A BRIEF DESCRIPTION OF THE PROGRAM. THE COURSES OFFERED IN WASTEWATER TREATMENT AND/OR WATER SUPPLY, TUITION, NUMBER OF GRADUATES, AND THE CONTACT PERSON FOR EACH PROGRAM. IN ADDITION, THERE ARE THREE APPENDICES WHICH PROVIDE INFORMATION ON TEXTBOOKS GENERALLY USED IN WATER SUPPLY AND WASTEWATER TREATMENT COURSES, INDIVIDUALS WITHIN STATE AGENCIES AND PROFESSIONAL ORGANIZATIONS WHO CAN BE CONTACTED FOR FURTHER INFORMATION, AND A LISTING BY CATEGORY OF BOTH WATER SUPPLY AND WASTEWATER TREATMENT COURSES.
AVAILABILITY: UNITED STATES ENVIRONMENTAL PROTECTION AGENCY, JOHN F. KENNEDY FEDERAL BUILDING, GOVERNMENT CENTER, BOSTON, MA 02263

IRIS ACCESSION NUMBER: EW006185
PUBLICATION DATE: AUG 80
TITLE: PLANNING WASTEWATER MANAGEMENT FACILITIES FOR SMALL COMMUNITIES.
PERSONAL AUTHOR: DEESE, PATRICIA L.; HUDSON, JAMES F.
DESCRIPTOR: *ALTERNATIVE TECHNOLOGIES; *FACILITIES; *MANAGEMENT; *PLANNING; *PUBLIC PARTICIPATION; *PROGRAM PLANNING; *SEWAGE; *SMALL COMMUNITIES; *WASTEWATER TREATMENT; WASTE DISPOSAL
DESCRIPTIVE NOTE: 158P.
ABSTRACT: THIS MANUAL PRESENTS A SET OF PROCEDURES FOR PLANNING WASTEWATER MANAGEMENT FACILITIES FOR SMALL COMMUNITIES, AND IS DIRECTED AT AREAS WITH POPULATIONS OF UNDER 10,000. IT IS DESIGNED TO AID ENGINEERS AND THE COMMUNITIES THEY SERVE IN EVALUATING VARIOUS OPTIONS FOR TREATMENT AND DISPOSAL OF WASTEWATER. PART 1 OF THE MANUAL WAS PREPARED TO GIVE AN OVERVIEW OF THE PLANNING PROCESS AND THE REGULATORY CONTEXT UNDER WHICH IT FITS, AND IS LIKELY TO BE USEFUL FOR LOCAL OFFICIALS, CONCERNED CITIZENS, AND ENGINEERS ACTIVE IN WASTEWATER PLANNING. PART 2 IS A TECHNICAL REFERENCE, SHOWING DETAILS OF THE PLANNING PROCESS WITH EXAMPLES FROM CASE STUDIES.
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW006282
PUBLICATION DATE: SPR 81
TITLE: PREDICTING POLLUTION EFFECTS IN THE MARINE ENVIRONMENT.
PERSONAL AUTHOR: CAPUZZO, JUDITH M.
DESCRIPTOR: *AQUATIC ENVIRONMENTS; *AQUATIC ORGANISMS; *ASSESSMENT; *BEHAVIORAL RESPONSES; BIOASSAYS; BIOCHEMISTRY; *BIOLGICAL CELLS; *ENVIRONMENTAL INSECTS; *MARINE ENVIRONMENT; *ORGANISMS; *POLLUTANTS; POPULATION DYNAMICS; TESTING; WATER POLLUTION
DESCRIPTIVE NOTE: 25-33P.
ABSTRACT: THIS ARTICLE DISCUSSES METHODS USED TO PREDICT OVERALL IMPACT OF POLLUTANT DISCHARGES IN THE MARINE ENVIRONMENT. IN ADDITION TO BIOASSAYS, ATTENTION IS FOCUSED ON APPROACHES THAT INVESTIGATE IMPACTS AT THE FIVE FOLLOWING ORGANIZATIONAL LEVELS: BIOCHEMICAL-CELLULAR, ORGANISMAL, SIMULATED COMMUNITY, POPULATION DYNAMICS, AND COMMUNITY DYNAMICS AND STRUCTURE.
AVAILABILITY: OCEANUS, V24 N1
IRIS ACCESSION NUMBER: EW006283
PUBLICATION DATE: SPR 81
TITLE: ECOLOGICAL EFFECTS OF OCEAN SEWAGE OUTFALLS: OBSERVATIONS AND LESSONS.
PERSONAL AUTHOR: NEARNS, ALAN J.
DESCRIPTOR: *AQUATIC ORGANISMS; *CALIFORNIA; *COASTAL ZONES; *ECOLOGICAL FACTORS; *ENVIRONMENTAL IMPACTS; *MARINE ENVIRONMENT; *OCEANS; *RESEARCH REPORTS; *SEWAGE; *SEWAGE OUTFALLS; SLUDGE; *WASTE DISPOSAL; WATER QUALITY
DESCRIPTIVE NOTE: 45-54P.
AVAILABILITY: OCEANUS, V24 N1

IRIS ACCESSION NUMBER: EW006284
PUBLICATION DATE: SPR 81
TITLE: THE OCEANS AND U.S. SEWAGE SLUDGE DISPOSAL STRATEGY.
PERSONAL AUTHOR: VACCARO, RALPH; AND OTHERS
DESCRIPTOR: *LEGAL ASPECTS; LEGISLATION; *MANAGEMENT; *MARINE ENVIRONMENT; *OCEANS; *POLICY; *RESEARCH NEEDS; *SEWAGE SLUDGE; *SLUDGE DISPOSAL; *WASTE DISPOSAL; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 55-59P.
AVAILABILITY: OCEANUS, V24 N1

IRIS ACCESSION NUMBER: EW006679
PUBLICATION DATE: JUL 81
TITLE: "CONTRACTOR" INSPECTIONS BY EPA.
PERSONAL AUTHOR: DELAND, MICHAEL R.
DESCRIPTOR: *ENVIRONMENT; *FEDERAL LEGISLATION; *FACILITIES; *GUIDELINES; *INSPECTION; *INDUSTRY; *MONITORING; *POLLUTION; *REGULATIONS
DESCRIPTIVE NOTE: 739P.
ABSTRACT: STRESSED IS THE CLARIFICATION OF LEGISLATION THAT REQUIRES ONSITE COMPLIANCE CHECKS. PREVENTION OF THE DISCLOSURE OF COMPANY TRADE SECRETS BY AUTHORIZED INSPECTORS IS QUESTIONED.
AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N7

IRIS ACCESSION NUMBER: EW006682
PUBLICATION DATE: JUL 81
TITLE: DETERMINATION OF THE BIODEGRADABILITY OF ORGANIC COMPOUNDS.
PERSONAL AUTHOR: LIU, DICKSON; AND OTHERS
DESCRIPTOR: ANALYTICAL TECHNIQUES; ACTIVATED SLUDGE; *ENVIRONMENT; *ORGANIC COMPOUNDS; *RESEARCH; *TOXICITY; *WATER SUPPLY; *WATER QUALITY; *WASTEWATER
DESCRIPTIVE NOTE: 788-793P.
ABSTRACT: THE EFFECTS OF BIODEGRADATION OF ORGANIC COMPOUNDS WHICH ENTER THE AQUATIC ENVIRONMENT BY USE OR DISPOSAL IS ADDRESSED. DESCRIBED IS THE DEVELOPMENT OF A STANDARD PROCEDURE AND APPARATUS FOR DETERMINING THE RELATIVE PERSISTENCE OF ORGANIC COMPOUNDS UNDER CONTROLLED LABORATORY CONDITIONS.
AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N7

IRIS ACCESSION NUMBER: EW006683
PUBLICATION DATE: JUL 81
TITLE: DOUBLE ACTIVATION ANALYSIS. THE SIMULTANEOUS USE OF RADIOTRACERS AND ACTIVABLE TRACERS IN A STREAM MICROCOSM.
PERSONAL AUTHOR: KNAUS, RONALD M.
DESCRIPTOR: *ANALYTICAL TECHNIQUES; *ENVIRONMENTAL RESEARCH; *INSTRUMENTATION; *RESEARCH; *RADIOISOTOPES; *TRACERS
DESCRIPTIVE NOTE: 809-812P.
ABSTRACT: DOUBLE ACTIVATION ANALYSIS AS CONCERNED WITH THE SHORT-TERM AND THE LONG-TERM DYNAMICS OF A TRACER ELEMENT IN AN ECOSYSTEM IS DISCUSSED. DESCRIBED IS THE USE OF A COMBINATION OF A SHORT-TERM RADIOISOTOPE WITH STABLE ISOTOPES OF THE SAME ELEMENT TO PERFORM ECOLOGICAL STUDIES.
AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N7

IRIS ACCESSION NUMBER: EW006684
PUBLICATION DATE: JUL 81
TITLE: ESTIMATING EQUILIBRIUM ADSORPTION OF ORGANIC COMPOUNDS ON ACTIVATED CARBON FROM AQUEOUS SOLUTION.
PERSONAL AUTHOR: ARBUCKLE, WILLIAM BRIAN
DESCRIPTOR: *ACTIVATED CARBON; ADSORPTION; *COST EFFECTIVENESS; *HAZARDOUS MATERIALS; *INDUSTRIAL WASTES; MATHEMATICAL MODELS; *ORGANIC COMPOUNDS; *THERMODYNAMICS
DESCRIPTIVE NOTE: 612-619P.
ABSTRACT: PROPOSED ARE METHODS USING RELATIVE ADSORPTION OF SPECIFIC COMPOUNDS ON ACTIVATED CARBON. THE APPLICABILITY OF THE METHODS FOR USE BY ENGINEERS IS EVALUATED.
AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N7

IRIS ACCESSION NUMBER: EW006685
PUBLICATION DATE: JUL 81
TITLE: AMMONIA TOXICITY TO FISHES. EFFECT OF pH ON THE TOXICITY OF THE UN-IONIZED AMMONIA SPECIES.
PERSONAL AUTHOR: THURSTON, ROBERT V.; RUSSO, ROSEMARIE C.
DESCRIPTOR: *ANALYTICAL TECHNIQUES; AQUATIC ENVIRONMENT; *AMMONIA; ALKALINITY; *FISH; *LIMNOLGY; *RESEARCH; *TOXICITY; TEMPERATURE; *TOXIC SUBSTANCES; *WATER QUALITY
DESCRIPTIVE NOTE: 837-840P.
ABSTRACT: A REVISION OF WATER QUALITY CRITERIA TO BE BASED EITHER ON UN-IONIZED AMMONIA IN COMBINATION WITH pH OR ON TOTAL AMMONIA IN ADDITION TO UN-IONIZED AMMONIA IS RECOMMENDED.
AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N7

IRIS ACCESSION NUMBER: EW006814
PUBLICATION DATE: AUG 81
TITLE: ODOR SCRUBBER ENDS "STINKY POINT" LABEL.
PERSONAL AUTHOR: LITTLE, HARRY L.; MALTER, EDWARD G.
DESCRIPTOR: *ACTIVATED SLUDGE; CHLORINATION; *EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); *ODOR SCRUBBERS; *ODORS; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 41-42P.
ABSTRACT: DESCRIBED IS THE USE OF A CHLORINE AIR SCRUBBER SYSTEM AND HOUSEKEEPING PROCEDURE TO PREVENT ODOR GENERATION AT A WASTEWATER TREATMENT FACILITY. THE PROBLEMS AND OPERATIONS OF AN AUTOMATED GRIT AND SCREENINGS DEBRIS HANDLING SYSTEM ARE ADDRESSED.
AVAILABILITY: AMERICAN CITY & COUNTY, V96 N8

IRIS ACCESSION NUMBER: EW006851
PUBLICATION DATE: 80
TITLE: DIRECTORY OF SILVER SERVICES.
DESCRIPTOR: *DIRECTORIES; EQUIPMENT; *INFORMATION SOURCES; *MANUFACTURERS; *PHOTOGRAPHY; *RESOURCE RECOVERY; *SILVER; *SILVER RECOVERY
DESCRIPTIVE NOTE: 22P.
ABSTRACT: THIS DIRECTORY CONTAINS THE NAMES AND LOCATIONS OF, AS WELL AS SERVICES AVAILABLE FROM, SILVER-RECOVERY FIRMS THROUGHOUT THE UNITED STATES AND CANADA. A LIST OF MANUFACTURERS OF SILVER-RECOVERY EQUIPMENT IS ALSO INCLUDED.
AVAILABILITY: CONSUMER/PROFESSIONAL 8 FINISHING MARKETS DIVISION, EASTMAN KODAK COMPANY, ROCHESTER, NY 14650

IRIS ACCESSION NUMBER: EW006852
PUBLICATION DATE: JAN 81
TITLE: TREATMENT OF PRIMARY EFFLUENT BY RAPID INFILTRATION.
PERSONAL AUTHOR: HARTMAN, R. B.; AND OTHERS
ABSTRACT: This study assessed the capability of a rapid infiltration system for upgrading primary effluent from a municipal wastewater treatment plant, and compared the performance with that obtained earlier on secondary effluents. This was done by monitoring the influent and effluent quality variations at a rapid infiltration demonstration facility over a period of one year. Results were favorable for general operation, hydraulic response, organic removals, phosphate levels, and bacteria removal.

AVAILABILITY: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

IRIS ACCESSION NUMBER: EW006853
PUBLICATION DATE: MAY 81
TITLE: WASTEWATER REUSE - STATE OF THE ART
PERSONAL AUTHOR: MIDDLEBROOKS, E. JOE

ABSTRACT: Following a state-of-the-art review of water and wastewater reuse, multidisciplinary authorities survey major areas of water and wastewater reuse from the points of engineering, design, plant performance, detailed data on trace organics, viral and microbiological analyses and legal and institutional constraints. Also considered are the following concerns of wastewater reuse facilities: health and safety; social; administrative; engineering; monitoring; and marketing.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBNUR, MA 01801

IRIS ACCESSION NUMBER: EW006876
PUBLICATION DATE: APR 81
TITLE: WASTEWATER DISCHARGES FROM WATER TREATMENT PLANTS, A STUDY

ABSTRACT: Data on wastewater discharges from 15 water treatment plants in the Ohio River basin were provided to the Ohio River Valley Water Sanitation Commission (ORSANCO) for use in the ongoing revision of ORSANCO effluent standards, slated for completion in 1982. The report compiles ORSANCO and federal regulations and policies on this issue, as well as those of the eight states forming the ORSANCO compact. Disposal alternatives for these discharges are presented as well as representative costs. Potential environmental impacts of these discharges to land and water are given along with a characterization of existing conditions along the Ohio River mainstem.

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

IRIS ACCESSION NUMBER: EW006854
PUBLICATION DATE: MAY 81
TITLE: DECOMPOSITION OF TOXIC AND NON-TOXIC ORGANIC COMPOUNDS IN SOILS
PERSONAL AUTHOR: OVERCASH, MICHAEL R.; PAL, DHIRAJ

ABSTRACT: Decomposition, adsorption, and ecological effects of toxic and non-toxic organic compounds in soils are discussed. The effects of these compounds on soil microorganisms and plants are also considered.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBNUR, MA 01801

IRIS ACCESSION NUMBER: EW006877
PUBLICATION DATE: FEB 81
TITLE: COMPARISON OF CROB CLOSED-LOOP-STRIPPING ANALYSIS (CLSA) TO OTHER TRACE ORGANIC METHODS

ABSTRACT: The comparison of the CROB Closed-Loop-Stripping Analysis (CLSA) to other trace organic methods is presented. The CLSA method is found to be more effective and accurate than other methods for determining trace organics in water and wastewater.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161
ABSTRACT: THIS PAPER PRESENTS A COMPARISON OF EXPERIMENTAL RESULTS FROM THE ANALYSIS OF DRINKING WATER BEFORE AND AFTER USE OF 1 MILLION GALLON PER DAY (MGPD) GRANULAR ACTIVATED CARBON (GAC) CONTACTORS AT THE CINCINNATI WATER WORKS. THE FOLLOWING METHODS OF ORGANIC ANALYSIS WERE USED: (1) CROM CLS STRIPPING ANALYSIS (CLSA) USING CAPILLARY GC/MS/DS; (2) BELLAR PURGE AND TRAP (PBPT) USING PACKED COLUMN GC/HALL/DS; (3) EPA METHOD 601; (4) batch liquid - liquid extraction (BLE) USING CAPILLARY GC/MS/DS; AND (5) XAD-2 absorption - ethyl ether elution (XAD-EEE) CAPILLARY GC/MS/DS. AT LEAST TWICE AS MANY CONSERVATIVE ORGANICS (23) AND THE 'EPA OFFICE OF DRINKING WATER CHEMICAL INDICATORS OF INDUSTRIAL CONTAMINATION' (16) WERE MEASURED BY CROM CLSA THAN BY BELLAR PBPT, BLE, AND XAD-EEE ANALYSES. FURTHERMORE, CROM CLSA PRODUCED THIS SUPERIOR ANALYSIS AT A LOW COST-PER-COMPOND-ANALYZED FIGURE.

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

ABSTRACT: THE PRIMARY REASON FOR CONCERN ABOUT DRINKING WATER CONTAINING ASBESTOS FIBERS IS THE ASSOCIATION BETWEEN OCCUPATIONAL ASBESTOS EXPOSURE AND GASTROINTESTINAL CANCER SHOWN IN A NUMBER OF OCCUPATIONAL EPIDEMIOLOGY STUDIES. ALTHOUGH THE ASBESTOS WORKER IS EXPOSED TO AIRBORNE ASBESTOS, IT HAS BEEN CLEARLY DEMONSTRATED THAT A HIGH PERCENTAGE OF INHALED FIBERS DEPOSITED IN THE LUNG ARE CLEARED AND SWALLOWED. SO, THEY ARE ALSO EXPOSED TO INGESTED FIBERS. THERE HAVE BEEN A NUMBER OF RECENT STUDIES WHICH HAVE SHOWN THAT ASBESTOS FIBERS CAN PENETRATE THE DIGESTIVE TRACT AND ARE EXCRETED THROUGH THE URINE. AVAILABLE STUDIES AND ONGOING RESEARCH ARE REVIEWED.

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

ABSTRACT: THIS PUBLICATION CONTAINS THE RESULTS OF AN EFFORT TO ASSESS THE CURRENT STATUS OF AQUACULTURE TECHNOLOGIES FOR WASTEWATER TREATMENT. THIS ASSESSMENT INCLUDES AN OVERVIEW AND INDIVIDUAL ENGINEERING ASSESSMENTS COVERING VARIOUS WASTEWATER AQUACULTURE SYSTEMS INVOLVING WETLANDS PROCESSES, AQUATIC PLANT PROCESSES, AND COMBINED AQUATIC PROCESSES.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161
ABSTRACT: THIS THREE-PART REPORT OUTLINES RESULTS OF EXPERIMENTAL RESEARCH AIMS AT ESTABLISHING THE EFFECTS OF WATER SOFTENER BACKWASH WATER AND REGENERATION WASTES ON THE PERFORMANCE OF ORTITE SEWAGE DISPOSAL SYSTEMS OR SEPTIC TANKS. PART I DESCRIBES SEPTIC TANK OPERATIONS, STATES THE RESEARCH PROBLEM, AND EXPLAINS RESULTS IN LAWN'S TERMS. PART II EXAMINES A STUDY THAT EVALUATES THE EFFECT OF WATER SOFTENER REGENERATIONAL EFFLUENT ON PRIVATE SEPTIC TANK SOIL ABSORPTION WASTE DISPOSAL SYSTEMS. PART III DETAILS THE RESULTS OF A STUDY THAT DETERMINES THE EFFECT OF SOFTENER REGENERANT EFFLUENT ON AEROBIC-TYPE TREATMENT SYSTEMS.

AVAILABILITY: WATER QUALITY RESEARCH COUNCIL, 477 EAST BUTTERFIELD ROAD, SUITE 110, LOMBARD, IL 60148.
IRIS ACCESSION NUMBER: EN006901
PUBLICATION DATE: SEP 81
TITLE: COME WATCH WATER TAKE A BATH.
PERSONAL AUTHOR: Pirozzolo, Dick D.; Elkerton, Stanley
DESCRIPTOR: *ATTITUDES; *COMMUNITY RELATIONS; *CONSTRUCTION; *FACILITIES; MEDIA; OPERATIONS (WASTEWATER); PLANNING; *PROGRAM DESCRIPTIONS; *PUBLIC INFORMATION; *PUBLIC RELATIONS; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 121-122, 125-126P.
ABSTRACT: THIS ARTICLE DESCRIBES HOW A PUBLIC INFORMATION/PUBLIC RELATIONS PROGRAM CAN WIN GENERAL PUBLIC APPROVAL AND SUPPORT FOR A WASTEWATER TREATMENT PLANT. THE ARTICLE DISCUSSES THE MULTIFACETED APPROACH TAKEN FOR A PLANT RECENTLY CONSTRUCTED AT FOND DU LAC, WISCONSIN. TOURS OF THE FACILITY AND MEDIA COVERAGE ARE DISCUSSED IN DETAIL.
AVAILABILITY: CONSULTING ENGINEER, V57 N3

IRIS ACCESSION NUMBER: EN006911
PUBLICATION DATE: SEP 81
TITLE: ADVANCES IN THE IDENTIFICATION AND ANALYSIS OF ORGANIC POLLUTANTS IN WATER - VOLUME 1.
PERSONAL AUTHOR: Keith, Lawrence H.
DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DRINKING WATER; *IDENTIFICATION; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *ORGANIC COMPOUNDS; *POLLUTANTS; *POST SECONDARY EDUCATION; *SAMPLING; *STATE-OF-THE-ART REVIEWS; *WASTEWATER ANALYSIS; *WATER QUALITY
ABSTRACT: THIS TEXT PRESENTS A STATE-OF-THE-ART REVIEW OF THE METHODOLOGY FOR THE ANALYSIS OF ORGANIC COMPOUNDS IN ALL TYPES OF WATER SAMPLES INCLUDING PURE DRINKING WATER AND UNTREATED INDUSTRIAL WASTEWATERS. MAJOR SECTIONS IN THIS VOLUME INCLUDE: COMPUTERIZED DATA, GROB CLOSED-LOOP-STRIPPING, SPECIALIZED PURGING TECHNIQUES, DRINKING WATER ANALYSES, SURFACE WATER ANALYSES, AND INDUSTRIAL WASTEWATER ANALYSIS.
AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EN006912
PUBLICATION DATE: SEP 81
TITLE: ADVANCES IN THE IDENTIFICATION AND ANALYSIS OF ORGANIC POLLUTANTS IN WATER - VOLUME 2.
PERSONAL AUTHOR: Keith, Lawrence H.
DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DRINKING WATER; *IDENTIFICATION; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *ORGANIC COMPOUNDS; *POLLUTANTS; *POST SECONDARY EDUCATION; *SAMPLING; *STATE-OF-THE-ART REVIEWS; *WASTEWATER ANALYSIS; *WATER QUALITY
ABSTRACT: THIS TEXT PRESENTS A STATE-OF-THE-ART REVIEW OF THE METHODOLOGY FOR THE ANALYSIS OF ORGANIC COMPOUNDS IN ALL TYPES OF WATER SAMPLES INCLUDING PURE DRINKING WATER AND UNTREATED INDUSTRIAL WASTEWATERS. MAJOR SECTIONS IN THIS VOLUME INCLUDE: COMPUTERIZED DATA, GROB CLOSED-LOOP-STRIPPING, SPECIALIZED PURGING TECHNIQUES, DRINKING WATER ANALYSES, SURFACE WATER ANALYSES, AND INDUSTRIAL WASTEWATER ANALYSIS.
AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBURN, MA 01801
IRIS ACCESSION NUMBER: EW006924
PUBLICATION DATE: SEP 81
TITLE: JOB INSTRUCTION: FOUR STEPS TO SUCCESS.
PERSONAL AUTHOR: GOLD, LEON
DESCRIPTOR: #EDUCATIONAL PROGRAMS; #EDUCATIONAL STRATEGIES; #INSTRUCTION; #JOB TRAINING; #POST SECONDARY EDUCATION; #SUPERVISION; #SUPERVISORY TRAINING; #TRAINING
DESCRIPTIVE NOTE: 28-32P.
ABSTRACT: THIS ARTICLE PRESENTS A METHODOLOGY FOR A JOB INSTRUCTION PROGRAM FOR SUPERVISORS. THE FOUR STEP METHOD IN THIS ARTICLE COVERS PLANNING, ASSESSING TRAINING NEEDS, APPLICATION OF TRAINING PROGRAM, AND GENERAL EVALUATION. THE BASICS OF EDUCATION AND INSTRUCTION ARE ALSO EXAMINED.
AVAILABILITY: TRAINING & DEVELOPMENT JOURNAL, V35 N9

IRIS ACCESSION NUMBER: EW006925
PUBLICATION DATE: SEP 81
TITLE: PERFORMANCE-BASED LINE SUPERVISOR TRAINING.
PERSONAL AUTHOR: CRUMB, C. V.
DESCRIPTOR: #CERTIFICATION; #EDUCATIONAL STRATEGIES; #INSTRUCTION; #JOB SKILLS; #JOB TRAINING; #MANAGEMENT; #POST SECONDARY EDUCATION; #SUPERVISION; #SUPERVISORY TRAINING; #TRAINING PROGRAMS
DESCRIPTIVE NOTE: 44-47P.
ABSTRACT: THIS ARTICLE PRESENTS AN ANALYSIS OF THE TRAINING NEEDS OF LINE SUPERVISORY PERSONNEL AND THE SUBSEQUENT DEVELOPMENT OF TRAINING PROGRAMS TO MEET THOSE NEEDS. THE TRAINING EFFORTS INVOLVE THE AREAS OF ORIENTATION IN THE USE OF STAFF SUPPORT, A CERTIFICATION OF THE KNOWLEDGE AND SKILLS REQUIRED, AND AN UPGRADING IN SUPERVISORY SKILLS IN VARIOUS JOB PERFORMANCE AREAS.
AVAILABILITY: TRAINING & DEVELOPMENT JOURNAL, V35 N9

IRIS ACCESSION NUMBER: EW006926
PUBLICATION DATE: SEP 81
TITLE: SUPERVISORY SKILL DEVELOPMENT.
PERSONAL AUTHOR: TAUBER, MARK S.
DESCRIPTOR: #EDUCATIONAL STRATEGIES; #INSTRUCTION; #JOB SKILLS; #MANAGEMENT; #POST SECONDARY EDUCATION; #SKILL DEVELOPMENT; #SUPERVISION; #SUPERVISORY TRAINING; #TRAINING PROGRAMS
DESCRIPTIVE NOTE: 63-66P.
ABSTRACT: THIS ARTICLE PRESENTS A RATIONALE FOR THE USE OF SIMULATION GAMES IN INSTRUCTION. GUIDELINES FOR THEIR USE, AND AN EXPLANATION OF HOW LEARNING IS FACILITATED THROUGH THE USE OF SIMULATION GAMES. EVIDENCE IS GIVEN TO SUGGEST THAT GAMES CAN CHANGE ATTITUDES, DEVELOP INTERPERSONAL SKILLS, AND ACHIEVE READY ACCEPTANCE BY TRAINEES.
AVAILABILITY: TRAINING & DEVELOPMENT JOURNAL, V35 N9
FOUR METHODS OF JOB ANALYSIS.

Abstract: This article discusses four methods of job analysis. These are: observation, interview, jury of experts, and questionnaire. The focus is on basic characteristics of these methods and a detailed description of each is given including guidelines for application.

Availability: Training & Development Journal, V35 N9

DETOIT'S WWTP: ONE OF THE WORLD'S BIGGEST.

Abstract: This article examines Detroit, Michigan's wastewater treatment plant facilities. Included are discussions on sewage systems, wastewater collection, historical perspectives, operating capacities, design, training programs, solids disposal, and operations.

Availability: Water Engineering & Management, V128 N9

REACTION KINETICS IN BIOCHEMICAL OXIDATION PLANTS.

Abstract: This article examines the relationship between flow reactors and reaction kinetics as it pertains to the design of biochemical treatment facilities. Included are examples of a practical design concept which can be used for varying wastewater flows.

Availability: Water Engineering & Management, V128 N9

MANAGING A PUMP GANG FOR LONG LIFE.

Abstract: This article discusses various aspects of the management of a gang of five main sewage pumps for an Elizabeth, New Jersey wastewater treatment plant. The pumps handle 75 MGD of primary effluent, lifting the process flow from primary to secondary treatment. With enclosed, non-clog impellers, they are providing maintenance-free service and are expected to do so over a long service life.

Availability: Water Engineering & Management, V128 N9
IRIS ACCESSION NUMBER: EW006934

PUBLICATION DATE: SEP 81

TITLE: COOPERATIVE PLANNING SMOOTHES WAY AHEAD FOR HOUSTON.

PERSONAL AUTHOR: MANNING, MARTIN J.; AND OTHERS

DESCRIPTOR: *ADMINISTRATION; *CASE STUDIES; CONSTRUCTION; DESIGN; EQUIPMENT; *FACILITIES; *MANAGEMENT; *OPERATIONS (WASTEWATER); *PLANNING; SEWAGE; SLUDGE; *TEXAS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 70-76P.


AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V128 N9

IRIS ACCESSION NUMBER: EW006935

PUBLICATION DATE: SEP 81

TITLE: SIMULATING EFFECTS OF COMBINED SEWER OVERFLOWS.

PERSONAL AUTHOR: SHAPIRO, HOWARD M.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CASE STUDIES; *COMBINED SEWER OVERFLOWS; *DATA ANALYSIS; DESIGN; *FACILITIES; *MODELING; MODELS; *PLANNING; SURFACE RUNOFF; *SEWERS; *STORMWATER; *WASTEWATER COLLECTION; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 79-84P.

ABSTRACT: THIS ARTICLE EXAMINES THE PLANNING PROCESS THAT THE COUNTY OF CHEMUNG, NEW YORK UNDERTOOK FOR UPGRADING THEIR WASTEWATER TREATMENT FACILITIES. OF PRIME CONCERN WAS THE EFFECT OF COMBINED SEWER OVERFLOW. SPECIFIC REQUIREMENTS DICTATED THE USE OF A CONTINUOUS, DYNAMIC, MULTIPLE EVENT SIMULATION MODEL. THE STORM-WHORES PACKAGE, DEVELOPED BY THE CORPS OF ENGINEERS, WAS CHOSEN. THE USE OF THIS MODEL FOR CHEMUNG COUNTY IS DISCUSSED IN DETAIL.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V128 N9

IRIS ACCESSION NUMBER: EW006936

PUBLICATION DATE: SEP 81

TITLE: CHEMICAL ENGINEERING ADVANCES IN WAT.

PERSONAL AUTHOR: WIRSIG, O. ALAN

DESCRIPTOR: *DEWATERING; *EQUIPMENT; *FILTERS; *GUIDELINES; *OPERATIONS (WASTEWATER); *PRECOATING; *SLUDGE; *SLUDGE TREATMENT

DESCRIPTIVE NOTE: 100-102P.
ABSTRACT: This article presents guidelines on the proper precleancoat methods and materials to aid in sludge dewatering. Specifically addressed are the following recommendations: clean filter cloths, cloths with proper opening size, correct grade of precleancoat, and correct precleancoat amount and concentration.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, v128 n9

IRIS ACCESSION NUMBER: EW006939
PUBLICATION DATE: SEP 81
TITLE: FILTERED VERSUS NON-FILTERED ALGAE COUNTS.
PERSONAL AUTHOR: LIN, S. D.; AND OTHERS
DESCRIPTOR: *ALGAE; *ALGAL COUNTS; *ANALYTICAL TECHNIQUES; *DATA COLLECTION; *FILTERS; *FILTERATION; *MATHEMATICAL APPLICATIONS; *RESEARCH REPORTS; *SAMPLING; *WATER SUPPLY; *WATER TREATMENT
DESCRIPTIVE NOTE: 105-106P.
ABSTRACT: This article reports on research on evaluation of various methods for counting algae in a waterwork system. Findings reveal that the techniques of concentrating by filtration gave more algal species and higher total algal density than the non-filtered technique. The direct Sedgwick-Rafter (non-filtered) counting method is not recommended when algal counts are less than 3,000 per ml.
AVAILABILITY: WATER ENGINEERING & MANAGEMENT, v128 n9

IRIS ACCESSION NUMBER: EW006944
TITLE: GLOSSARY: WATER AND WASTEWATER CONTROL ENGINEERING.
DESCRIPTOR: CHEMISTRY; *DEFINITIONS; *ENGINEERING; *GLOSSEARIES; HYDROLOGY; *INDEXES; *REFERENCE MATERIALS; WATER; *WATER SUPPLY; WASTEWATER TREATMENT; *WATER TREATMENT
DESCRIPTIVE NOTE: 456P. PRICE: $17.50 MEMBER; $25.00 NON-MEMBER.
ABSTRACT: This revised edition presents up-to-date definitions relating to the water and wastewater professions. The focus is to eliminate obsolete terms and reflect the great impact that chemical and chemical engineering have had on the field. Terms regularly used by scientists and engineers are alphabetically listed for convenient reference.
AVAILABILITY: AWWA DATA PROCESSING DEPT., 6666 WEST QUINCY AVENUE, DENVER, CO 80233

IRIS ACCESSION NUMBER: EW006947
TITLE: COMMUNITY RELATIONS PROGRAM - WATERSHED PLAN.
DESCRIPTOR: *CANADA; *COMMUNITY RELATIONS; *CONSERVATION; *CONSERVATION EDUCATION; *COSTS; ENVIRONMENTAL EDUCATION; *FACILITIES; LAND MANAGEMENT; *MANAGEMENT; *PROGRAM DESCRIPTIONS; PUBLIC RELATIONS; RECREATION; *WATER RESOURCES; *WATERSHEDS
DESCRIPTIVE NOTE: 20P.
ABSTRACT: This publication discusses the community relations program for the water resources and watershed management plan of the metropolitan Toronto and Region Conservation Authority. Sections include: problems and implications; policy; program details; and, costs and implications. Each of these topics is examined in relation to conservation and public information, and conservation education for school children.
AVAILABILITY: THE METROPOLITAN TORONTO AND REGION CONSERVATION AUTHORITY, 5 SHORELINE DRIVE, DOWNSVIEW, M3N 1S4, CANADA

IRIS ACCESSION NUMBER: EW006948
PUBLICATION DATE: 81
TITLE: ADSORPTION OF INORGANICS AT SOLID-LIQUID INTERFACES.
PERSONAL AUTHOR: ANDERSON, MARC A.
DESCRIPTOR: *ADSORPTION; *CHEMICAL REACTIONS; *CHEMISTRY; COLLOID CHEMISTRY; *ENGINEERING; *HIGHER EDUCATION; *INSTRUCTIONAL MATERIALS; IONS; *MODELS; *SILTS; *STATE-OF-THE-ART REVIEWS; *WATER CHEMISTRY
DESCRIPTIVE NOTE: 357P. PRICE: $39.95
ABSTRACT: This book is designed to compare and contrast the behavior of inorganic ions adsorbed at the solid-liquid interface. It serves as an up-to-date review on the subject of adsorption and concentrates on the present mechanisms and models ascribed to these reactions. The book is intended for water chemists, sanitary engineers, and soil and colloid chemists.
AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW006949
PUBLICATION DATE: OCT 81
TITLE: HYDRAULIC TABLES.
PERSONAL AUTHOR: BOUTHILLIER, PATRICK H.
DESCRIPTOR: *DESIGN; *DRAINS; *GUIDES; HANDBOOKS; 3
DESCRIPTIVE NOTE: 150P.  PRICE:  $12.95

ABSTRACT: THIS BOOK CONTAINS HYDRAULIC TABLES FOR USE WITH THE S.I. (METRIC) SYSTEM OF UNITS. PROVIDED ARE HYDRAULIC TABLES FOR WATER-LINES, SEWERS, DRAINS, AND PLASTIC PIPES. THESE TABLES USE THE RESISTANCE CONCEPT FOR USE IN HYDRAULIC PROBLEMS INVOLVING PIPES CARRYING WATER. ALSO DISCUSSED IS THE HYDRAULICS OF COPPER PIPING AND PLUMBING DESIGN.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW006950

PUBLICATION DATE: OCT 81

TITLE: FLUID FLOW: PUMPS, PIPES AND CHANNELS.

PERSONAL AUTHOR: CHERENISINOFF, NICHOLAS P.

DESCRIPTOR: CHANNELS; *DESIGN; *ENGINEERING; *FLUID DYNAMICS; *FLUIDS; *FLUID FLOW; *HIGHER EDUCATION; *INSTRUCTIONAL MATERIALS; *MATHEMATICAL APPLICATIONS; *PIPES; *PROBLEM SOLVING; *PUMPS; *REFERENCE MATERIALS; *WATER DISTRIBUTION

DESCRIPTIVE NOTE: 700P.  PRICE:  $34.95

ABSTRACT: THIS REFERENCE BOOK IS DESIGNED TO SOLVE SPECIFIC PROCESS FLOW PROBLEMS AND AS A REVIEW OF FLUID DYNAMICS. IT Combines CALCULATION METHODS, DESIGN PRACTICES, AND APPLICATION WITH BASIC THEOREMS AND DEFINITIONS. THE BOOK IS DIVIDED INTO TWO SECTIONS. THE FIRST IS DEVOTED TO A THOROUGH REVIEW OF THE BASIC PRINCIPLES OF FLUID MECHANICS. THE SECOND PART APPLIES THESE PRINCIPLES TO SPECIFIC PROBLEM-SOLVING SITUATIONS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., THE BUTTERWORTH GROUP, 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW006956

PUBLICATION DATE: AUG 78

TITLE: DETERMINATION OF RESIDUAL CHLORINE AND TURBIDITY IN DRINKING WATER: STUDENT MANUAL.

PERSONAL AUTHOR: PFaffen, Jack

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CHLORINE; *DRINKING WATER; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *SAMPLEING; STUDY GUIDES; TESTING; *TURBIDITY; *WATER QUALITY

DESCRIPTIVE NOTE: 36P. PB81-226938

ABSTRACT: THIS CLASSROOM/LABORATORY MANUAL IS FOR USE BY OPERATORS OF DRINKING WATER PLANTS WHO MUST ANALYZE SAMPLES FOR RESIDUAL CHLORINE AND TURBIDITY. IT CONTAINS BACKGROUND INFORMATION ON BOTH TESTS; E.G., FEDERAL REQUIREMENTS FOR COMPLIANCE ON RESIDUAL CHLORINE AND TURBIDITY, PRINCIPLES INVOLVED IN THE TESTS, AND FACTORS AFFECTING TEST RESULTS. IT ALSO CONTAINS LABORATORY PROCEDURES FOR CONDUCTING THE TWO TESTS, REAGENT PREPARATION AND INSTRUMENT CARE ARE INCLUDED. MISCELLANEOUS OTHER ITEMS ARE IN THE MANUAL: AN AGENDA, IF THE MANUAL IS TO BE USED IN THE PRESENTATION OF A TRAINING COURSE, A PRE- AND POST-COURSE TEST, AND A COPY OF THE FEDERAL REGISTER WHICH RELATES TO THE MEASUREMENT OF RESIDUAL CHLORINE AND TURBIDITY. FOR THOSE WHO DESIRE TO PRESENT INSTRUCTION IN THESE TWO DETERMINATIONS, THERE IS AN ASSOCIATED INSTRUCTOR'S MANUAL PB81-226946, TITLED AS ABOVE.

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

IRIS ACCESSION NUMBER: EW006957

PUBLICATION DATE: JUL 81

TITLE: DETECTION OF OIL IN WATER BY A FLAME EMISSION TECHNIQUE.

PERSONAL AUTHOR: Pragar, Manfred, Stainken, D.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *FLAME EMISSION TECHNIQUE; *INSTRUMENTATION; *LABORATORY TECHNIQUES; MEASUREMENT; *OIL; *OIL DETECTION; *PETROLEUM; *WATER POLLUTION CONTROL; *WATER QUALITY

DESCRIPTIVE NOTE: 32P. PB81-226185

ABSTRACT: A FLAME EMISSION TECHNIQUE AND BASIC INSTRUMENT DESIGN IS PRESENTED FOR MEASURING LOW CONCENTRATIONS OF OIL IN OIL-CONTAMINATED WATER. THE FLAME EMISSION INSTRUMENT DEVELOPED IN THIS REPORT WOULD BE USEFUL AS A DETECTOR FOR PETROLEUM OILS. INTERFERENCE OF METAL IONS IS AVOIDED BY EMPLOYING STEAM DISTILLATION AND CONDENSATION TECHNIQUES TO VAPORIZE OIL FROM SAMPLE SOLUTIONS. THE PROTOTYPE INSTRUMENT SUCCESSFULLY DETECTED OIL CONCENTRATIONS DOWN TO 10 µM FOR OILS WITH VAPOR PRESSURE EQUAL TO OR HIGHER THAN NO. 4 FUEL OILS.

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

IRIS ACCESSION NUMBER: EW006959

PUBLICATION DATE: NOV 80

TITLE: FOUR MINUTES TO SURVIVAL.

PERSONAL AUTHOR: *AUDIOVISUAL AIDS; *FILMS; *INSTRUCTIONAL MATERIALS; JOB SKILLS; *OCCUPATIONAL SAFETY; *SAFETY; SAFETY EDUCATION; SEWER SYSTEMS; *UTILITIES

DESCRIPTIVE NOTE: PURCHASE PRICE: $270.00 PLUS SHIPPING; RENTAL PRICE: $75.00 PLUS SHIPPING; FILM SYNOPSIS - RUNNING TIME: 13 1/2 MINUTES.
ABSTRACT: THIS 16-MM COLOR FILM COVERS VARIOUS ASPECTS OF JOB SAFETY THROUGH STAGED ACCIDENT SITUATIONS. THIS IS A HIGHLY MOTIVATIONAL FILM THAT EMPHASIZES WHY SAFETY RULES AND REGULATIONS MUST BE ENFORCED.

AVAILABILITY: LINDY PRODUCTIONS, INC., 4724 NORTH HIGH STREET, COLUMBUS, OH 43214

IRIS ACCESSION NUMBER: EW006960
PUBLICATION DATE: AUG 81

TITLE: SOLID WASTE DATA: A COMPILATION OF STATISTICS ON SOLID WASTE MANAGEMENT WITHIN THE UNITED STATES.

DESCRIPTOR: *DATA COLLECTION; EMPLOYMENT; *HAZARDOUS WASTES; *INFORMATION SOURCES; *MANAGEMENT; *RESEARCH REPORTS; SLUDGE; *SOLID WASTES; *STATISTICS; *SURVEYS; *WASTE DISPOSAL

DESCRIPTIVE NOTE: 73P.

ABSTRACT: THIS REPORT REPRESENTS A COMPREHENSIVE COMPILATION OF THE MOST CURRENT (1981) AVAILABLE INFORMATION ON SOLID WASTE MANAGEMENT IN THE UNITED STATES. THIS INFORMATION IS PRESENTED IN TABULAR FORM AND ORGANIZED BY GENERAL CATEGORIES FOR EASE OF REFERENCE. THE CATEGORIES ARE: GENERATION, EMPLOYMENT, COMPOSITION, COLLECTION, TRANSPORTATION, PROCESSING, DISPOSAL, RURAL WASTE, RESOURCE RECOVERY, MUNICIPAL SLUDGE, HAZARDOUS WASTE, AND MISCELLANEOUS INFORMATION.

AVAILABILITY: JRD ASSOCIATES, 8400 WESTPARK DRIVE, MCLEAN, VA 22102

IRIS ACCESSION NUMBER: EW006961
TITLE: POTABLE WATER FROM WASTEWATER.

PERSONAL AUTHOR: GILLIES, M. T.

DESCRIPTOR: AQUIFERS; CASE STUDIES; CONTAMINANTS; GROUNDWATER; HEALTH EFFECTS; *INSTRUCTIONAL MATERIALS; *POST SECONDARY EDUCATION; *POUTABLE WATER; PURIFICATION; RECYCLING; *TECHNOLOGICAL ADVANCEMENTS; TESTING; *WASTEWATER TREATMENT; *WATER QUALITY; *WATER REUSE

DESCRIPTIVE NOTE: 504P. PRICE: $42.00

ABSTRACT: THIS TEXT DESCRIBES SIGNIFICANT ADVANCES IN WASTEWATER TREATMENT TECHNOLOGY WHICH HAVE MADE POTABLE WATER FROM WASTEWATER TECHNICALLY FEASIBLE. CHAPTERS COVER INDIRECT POTABLE USES OF WASTEWATER, INCLUDING DISCHARGE INTO UNDERGROUND SYSTEMS, GROUNDWATER RECHARGE, AQUIFER RECHARGE, AND SHALLOW WELL AND BASIN RECHARGE; SMALL-SCALE PURIFICATION SYSTEMS; INTERNATIONAL DEVELOPMENTS IN WATER REUSE; CASE STUDIES; TREATMENT TECHNIQUES FOR WASTEWATER SCHEDULED FOR REUSE; CONTAMINANTS ASSOCIATED WITH REUSE OF MUNICIPAL WASTEWATER; TESTING METHODS; AND, HEALTH EFFECTS OF WASTEWATER REUSE.

AVAILABILITY: ROYES DATA CORP., MILL ROAD AT GRAND AVENUE, PARK RIDGE, N.J. 07656

IRIS ACCESSION NUMBER: EW006992
PUBLICATION DATE: SEP 80
TITLE: TELECOMMUNICATIONS: A PRISM OF ACCESS FOR ADULT LEARNING.

PERSONAL AUTHOR: LUSKIN, BERNARD J.

DESCRIPTOR: *ADULT EDUCATION; *AUDIOVISUAL AIDS; *AUDIOVISUAL INSTRUCTION; *EDUCATIONAL MEDIA; EDUCATIONAL TECHNOLOGY; *INSTRUCTION; *POST SECONDARY EDUCATION; *STATE-OF-THE-ART REVIEWS; *TELECOMMUNICATIONS; *TELEVISION; *VIDEO TAPE

DESCRIPTIVE NOTE: 43-50P.

ABSTRACT: THIS ARTICLE EXAMINES THE STATE-OF-THE-ART OF TELECOMMUNICATIONS WITH IMPLICATIONS FOR THE FUTURE OF ADULT LEARNING. CONSIDERED IN THIS ARTICLE ARE BROADCAST TELEVISION, CABLE TV, INSTRUCTIONAL TV (FIXED SERVICE, ITFS, AND POINT-TO-POINT; MICROWAVE AND CASSETTE DATA/COMPUTER NETWORKS, SATELLITE, RADIO, AND THE VARIOUS SUBGROUPS UNDER EACH OF THESE TECHNOLOGIES.

AVAILABILITY: THE JOURNAL, V7 N5

IRIS ACCESSION NUMBER: EW007022
PUBLICATION DATE: JAN 78
TITLE: THE TRANSFER OF ENVIRONMENTAL INFORMATION VIA THE COOPERATIVE EXTENSION SERVICE.

PERSONAL AUTHOR: FITE, ROBERT; AND OTHERS

DESCRIPTOR: *COOPERATIVE EXTENSION SERVICE; *ENVIRONMENTAL EDUCATION; *INFORMATION DISSEMINATION; INFORMATION NETWORKS; *INFORMATION SYSTEMS; MANAGEMENT; *POLLUTION CONTROL; *PROGRAM DESCRIPTIONS; *RESEARCH REPORTS; WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 70P.

ABSTRACT: THIS RESEARCH REPORT COVERS WORK DONE ON THE DEVELOPMENT OF AN ENVIRONMENTAL INFORMATION TRANSFER SYSTEM. THE SYSTEM USED THE DELIVERY CAPABILITIES OF THE COOPERATIVE EXTENSION SERVICE. INFORMATION WAS DISSEMINATED VIA A SLIDE TAPE PROGRAM WITH ACCOMPANYING PRINTED MATERIAL. PRESENTED IN THIS REPORT ARE SPECIFIC DETAILS ON THE OPERATION OF THE SYSTEM, DISCUSSION OF THE INFORMATION PACKAGES, AND AN EVALUATION OF THE PROJECT.

AVAILABILITY: ENVIRONMENTAL EXTENSION PROJECT, OKLAHOMA STATE UNIVERSITY, STILLWATER, OKLAHOMA 74074
ABSTRACT: DOCUMENTED IN THIS 16-MM COLOR SOUND MOTION PICTURE ARE HAZARDOUS WASTE MANAGEMENT OPERATIONS. EMPHASIS IS PLACED ON INDUSTRIAL CHEMICALS AND NOT ON RADIOACTIVE WASTES. THE FILM WAS MADE AT THE FACILITIES OF NINE MAJOR HAZARDOUS WASTE SERVICE COMPANIES AND INCLUDES SUCH PROCESSES AS RECYCLING, WASTE TREATMENT, LANDFILLING, INCINERATION, DEEP-WELL INJECTION AND LAND TREATMENT. ALSO COVERED ARE OPERATIONAL PROCEDURES, HAZARDOUS WASTE REPORTING SYSTEMS, AND OPTIONS AVAILABLE TO HAZARDOUS WASTE MANAGERS IN INDUSTRY.

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

IRIS ACCESSION NUMBER: EW007028
PUBLICATION DATE: MAR 81
TITLE: WITHOUT WATER.
DESCRIPTOR: *AUDIOVISUAL AIDS; *DROUGHT; *FILMS; *WATER SUPPLY; *WATER RESOURCES; *WATER USE
DESCRIPTIVE NOTE: 16-MM FILM, COLOR, 5 1/2 MINUTES.
ABSTRACT: THIS SHORT FILM DRAMATIZES EVERYDAY LIFE WITHOUT WATER. BY FOCUSING ON A TYPICAL HOME SETTING, CONNECTIONS ARE MADE BETWEEN WATER AND OBJECTS SUCH AS ORANGE JUICE, BATH, MAGAZINES, GASOLINE, AND CLOTHES AND THE AMOUNT OF WATER USED FOR EACH.
AVAILABILITY: AWWA TECHNICAL LIBRARY, 6666 W. QUINCY AVE., DENVER, CO 80235

IRIS ACCESSION NUMBER: EW007048
PUBLICATION DATE: 77
TITLE: PUBLIC INFORMATION HANDBOOK.
DESCRIPTOR: *COMMUNICATIONS; *EDUCATIONAL PROGRAMS; *GUIDELINES; *HANDBOOKS; *INDUSTRIES; *INSTRUCTION; *INSTRUCTIONAL MEDIA; *NEWS REPORTING; *POLLUTION CONTROL; *PUBLIC RELATIONS; *WATER POLLUTION
DESCRIPTIVE NOTE: 40P. PRICE: $8.00
ABSTRACT: THIS HANDBOOK IS DESIGNED TO HELP WATER POLLUTION CONTROL ORGANIZATIONS COMMUNICATE THE OBJECTIVES, PROBLEMS, AND SOLUTIONS OF THE WATER POLLUTION CONTROL INDUSTRY. THIS REVISED EDITION INCORPORATES THE LATEST METHODS OF TEACHING BASIC PUBLIC INFORMATION TECHNIQUES TO NON-PROFESSIONALS. TOPICS DISCUSSED INCLUDE: NEWSWRITING, NEWS MEDIA, SPEECHWRITING AND PUBLIC SPEAKING, PUBLIC RELATIONS, AND THE DEVELOPMENT OF AN OFFICE OF INFORMATION SERVICES.
AVAILABILITY: WATER POLLUTION CONTROL FEDERATION, 2626 PENNSYLVANIA AVENUE, N.W., WASHINGTON, D.C. 20037
IRIS ACCESSION NUMBER: EW007067
PUBLICATION DATE: NOV 81
TITLE: A CRITICAL REVIEW OF WATER QUALITY MODELING FOR WASTE LOAD ALLOCATION.
PERSONAL AUTHOR: ZIGLER, FRED G.
DESCRIPTOR: *ANALYTICAL TECHNIQUES; DATA ANALYSIS; DESIGN; *EFfluENTS; *MATHEMATICAL MODELING; *MODELING; *STANDARDS; *WASTE LOAD ALLOCATION; *WASTEWATER TREATMENT; *WATER QUALITY
DESCRIPTIVE NOTE: 3-11P.
ABSTRACT: THIS ARTICLE REVIEWS THE REQUIREMENTS FOR A PROPERLY DEVELOPED MATHEMATICAL MODEL FOR DETERMINING WASTE LOAD ALLOCATIONS FOR WASTE SYSTEMS. THE ARTICLE DESCRIBES AND GIVES EXAMPLES OF THE FOLLOWING 8 STEPS IN BASIC MODELING: DEFINE WATER QUALITY PROBLEM; SELECT METHODS OF ANALYSIS; EVALUATE EXISTING DATA; PERFORM PRELIMINARY MODELING; CALIBRATION AND VERIFICATION; CONDUCT SENSITIVITY ANALYSIS; APPLY MODEL TO DETERMINE ALLOWABLE WASTE LOAD; AND, MONITOR WATER QUALITY AND REFIN MODEL.
AVAILABILITY: ENVIRONMENTAL REGULATION ANALYST, V2 N12

IRIS ACCESSION NUMBER: EW007067
PUBLICATION DATE: NOV 81
TITLE: A CRITICAL REVIEW OF WATER QUALITY MODELING FOR WASTE LOAD ALLOCATION.
PERSONAL AUTHOR: ZIGLER, FRED G.
DESCRIPTOR: *ANALYTICAL TECHNIQUES; DATA ANALYSIS; DESIGN; *EFfluENTS; *MATHEMATICAL MODELING; *MODELING; *STANDARDS; *WASTE LOAD ALLOCATION; *WASTEWATER TREATMENT; *WATER QUALITY
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ABSTRACT: THIS ARTICLE REVIEWS THE REQUIREMENTS FOR A PROPERLY DEVELOPED MATHEMATICAL MODEL FOR DETERMINING WASTE LOAD ALLOCATIONS FOR WASTE SYSTEMS. THE ARTICLE DESCRIBES AND GIVES EXAMPLES OF THE FOLLOWING 8 STEPS IN BASIC MODELING: DEFINE WATER QUALITY PROBLEM; SELECT METHODS OF ANALYSIS; EVALUATE EXISTING DATA; PERFORM PRELIMINARY MODELING; CALIBRATION AND VERIFICATION; CONDUCT SENSITIVITY ANALYSIS; APPLY MODEL TO DETERMINE ALLOWABLE WASTE LOAD; AND, MONITOR WATER QUALITY AND REFIN MODEL.
AVAILABILITY: ENVIRONMENTAL REGULATION ANALYST, V2 N12

IRIS ACCESSION NUMBER: EW007081
PUBLICATION DATE: MAY 81
TITLE: CONSTRUCTION GRANTS PROCESS FOR AGENCY PERSONNEL - VIDEOTAPE INSTRUCTOR MANUAL.
DESCRIPTOR: *AUDIOVISUAL AIDS; *CONSTRUCTION GRANTS; *DESIGN; *FACILITIES; *FEDERAL ROLE; *INSTRUCTIONAL MATERIALS; *INSTRUCTION; *PLANNING; *POST SECONDARY EDUCATION; *PROJECT PLANNING; *REGULATIONS; *STATE AGENCIES; *STUDY GUIDES; *TEACHING GUIDES; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 185P. PRICE: $1.00 PLUS $.03 PER PAGE.
ABSTRACT: THIS INSTRUCTOR MANUAL HAS BEEN PREPARED TO AID INSTRUCTORS IN THE PLANNING AND DELIVERY OF TRAINING FOR THE ADMINISTRATION OF THE CONSTRUCTION GRANTS PROGRAM USING PREPARED VIDEOTAPE. THE COURSE IS DESIGNED AS AN INTRODUCTION TO THE CONSTRUCTION GRANTS PROCESS AND IS GEARED TOWARD NEW STATE AGENCY PERSONNEL. SECTIONS IN THIS MANUAL COVER COURSE PLANNING, COURSE DELIVERY, AND LESSON PLANS.
AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007082
PUBLICATION DATE: MAY 81
TITLE: CONSTRUCTION GRANTS PROCESS FOR STATE AGENCY PERSONNEL - STUDENT MANUAL.
DESCRIPTOR: *ADMINISTRATION; *CONSTRUCTION GRANTS; *DESIGN; *FACILITIES; *FEDERAL ROLE; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *POST SECONDARY EDUCATION; *PROJECT PLANNING; *REGULATIONS; *STATE AGENCIES; *STUDY GUIDES; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 131P. PRICE: $1.00 PLUS $.03 PER PAGE.
ABSTRACT: THIS STUDENT MANUAL HAS BEEN PREPARED TO AID STUDENTS IN UNDERSTANDING THE CONSTRUCTION GRANTS PROCESS. THE COURSE IS DESIGNED AS AN INTRODUCTION TO THE CONSTRUCTION GRANTS PROGRAM AND IS GEARED TOWARD NEW STATE AGENCY PERSONNEL. THE SUBJECT OF THE COURSE IS THE MANAGEMENT AND ADMINISTRATION BY STATE AGENCIES OF THE PROGRAM. IT ALSO ADDRESSES TECHNICAL ISSUES TO BE CONSIDERED IN THE PLANNING AND DESIGN OF TREATMENT FACILITIES.
AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007128
PUBLICATION DATE: NOV 81
TITLE: OPERATORS SPEAK OUT ABOUT TRAINING.
PERSONAL AUTHOR: ALLOWAY, RAWLE; BOE, OWEN
DESCRIPTOR: *EDUCATIONAL NEEDS; *EDUCATIONAL PROGRAMS; *NEEDS ASSESSMENT; OPERATORS; *OPERATOR TRAINING; *PROGRAM DESCRIPTIONS; SURVEYS; *TRAINING PROGRAMS; *TRAINING; *WASTEWATER TREATMENT

ABSTRACT: THIS ARTICLE EXAMINES A PROJECT DESIGNED TO ASSESS TRAINING NEEDS AND DEVELOP AN EFFECTIVE OPERATOR EDUCATION ORGANIZATION THROUGH SURVEYING OPERATORS. WASTEWATER TREATMENT PERSONNEL IDENTIFIED WHAT THEY PERCEIVED AS THEIR OWN TRAINING NEEDS AND A TRAINING PROGRAM WAS THEN DEVELOPED AROUND THE CONCEPT OF A REGIONAL COORDINATOR OF TRAINING SERVICES. THE SURVEY RESULTS AND THE TRAINING PROGRAM ARE DISCUSSED IN DETAIL.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V128 N11

IRIS ACCESSION NUMBER: EW007129
PUBLICATION DATE: NOV 81
TITLE: FIXING FAULTY O & M TRAINING PROGRAMS.

PERSONAL AUTHOR: WESTON, THOMAS, SR.; KELLOGG, STEPHEN R.
DESCRIPTOR: *EDUCATIONAL NEEDS; *INSTRUCTION; *MAINTENANCE; NEEDS ASSESSMENT; OPERATIONS (WASTEWATER); *OPERATOR TRAINING; *RECOMMENDATIONS; *TRAINING PROGRAMS; *TRAINING; *WASTEWATER TREATMENT

ABSTRACT: THIS ARTICLE DISCUSSES VARIOUS METHODS FOR IMPROVING OPERATIONS AND MAINTENANCE TRAINING PROGRAMS. THE ARTICLE FOCUSES ON RECOMMENDATIONS FOR THE FOLLOWING: (1) INEXPERIENCED INSTRUCTORS, (2) LACK OF TRAINING AT APPROPRIATE LEVEL, (3) LACK OF COMMUNICATION BETWEEN INSTRUCTORS AND CLASS, AND (4) POOR TIMING OF TRAINING PROGRAMS.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V128 N11

IRIS ACCESSION NUMBER: EW007130
PUBLICATION DATE: NOV 81
TITLE: WASTEWATER TREATMENT PLANT FEATURES NEW TECHNOLOGY.

PERSONAL AUTHOR: ALEXANDER, M.
DESCRIPTOR: *DESIGN; EQUIPMENT; *FACILITIES; *MICHIGAN; MUNICIPALITIES; *OPERATIONS (WASTEWATER); *SEWAGE TREATMENT; *SLUDGE; *TECHNOLOGICAL ADVANCEMENTS; *WASTEWATER TREATMENT

ABSTRACT: THIS ARTICLE DISCUSSES A NEW MUNICIPAL SEWAGE TREATMENT PLANT IN BANGOR TOWNSHIP, MICHIGAN WHICH FEATURES ADVANCED SLUDGE HANDLING, DRYING AND DISPOSAL TECHNIQUES. INCLUDED ARE PROCESS DESCRIPTIONS, OPERATIONAL ASPECTS, AND A DISCUSSION ON SLUDGE CONDITIONING, AND SITE PLANS AND FLOW SCHEMATICS.

AVAILABILITY: PUBLIC WORKS, V112 N11

IRIS ACCESSION NUMBER: EW007131
PUBLICATION DATE: NOV 81
TITLE: MAKING SUPERVISORY MANAGEMENT TRAINING PAY OFF.

PERSONAL AUTHOR: VAN DAM, DORIS
DESCRIPTOR: ADMINISTRATION; *COMMUNICATIONS; *EMPLOYEE RELATIONS; *MANAGEMENT; *SUPERVISION; *TRAINING

ABSTRACT: THIS ARTICLE DISCUSSES VARIOUS TECHNIQUES FOR MANAGING A FACILITY STAFF. SEVERAL FACTORS IN SUPERVISORY MANAGEMENT ARE EXAMINED. THESE INCLUDE: COMMUNICATIONS, ACHIEVEMENT OF GOALS, WORK MOTIVES, INTERPERSONAL RELATIONSHIPS, THE CONCEPTS OF DIRECTING AND CONTROLLING, PERFORMANCE STANDARDS, CONTROL DEVICES, AND ORGANIZATIONAL SYSTEMS.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V128 N11

IRIS ACCESSION NUMBER: EW007132
PUBLICATION DATE: NOV 81
TITLE: WASTEWATER TREATMENT PLANT FEATURES NEW TECHNOLOGY.

PERSONAL AUTHOR: ALEXANDER, M.
DESCRIPTOR: *DESIGN; EQUIPMENT; *FACILITIES; *MICHIGAN; MUNICIPALITIES; *OPERATIONS (WASTEWATER); *SEWAGE TREATMENT; *SLUDGE; *TECHNOLOGICAL ADVANCEMENTS; *WASTEWATER TREATMENT

ABSTRACT: THIS ARTICLE DISCUSSES A NEW MUNICIPAL SEWAGE TREATMENT PLANT IN BANGOR TOWNSHIP, MICHIGAN WHICH FEATURES ADVANCED SLUDGE HANDLING, DRYING AND DISPOSAL TECHNIQUES. INCLUDED ARE PROCESS DESCRIPTIONS, OPERATIONAL ASPECTS, AND A DISCUSSION ON SLUDGE CONDITIONING, AND SITE PLANS AND FLOW SCHEMATICS.

AVAILABILITY: PUBLIC WORKS, V112 N11

IRIS ACCESSION NUMBER: EW007133
PUBLICATION DATE: NOV 81
TITLE: PINPOINTING SOURCES OF MASSIVE INFILTRATION/INFLOW.
DESCRIPTORS: *CASE STUDIES; *INFILTRATION; *INFLOW; *INSPECTION; *MISSOURI; *PIPES; *SEWER SYSTEMS; *TELEVISION; VIDEO TAPES; *WASTEWATER TREATMENT; *WASTEWATER COLLECTION

ABSTRACT: THIS ARTICLE DISCUSSES THE USE OF TELEVISION INSPECTION FOR INFILTRATION/INFLOW PROBLEMS IN SANITARY SEWER SYSTEMS. THIS CASE STUDY OF THE JOPLIN, MISSOURI SANITARY SEWER SYSTEM EXAMINES CONDITIONS PRIOR TO INSPECTION, WORK PROCEDURES, AND FINAL ANALYSIS OF DATA.

AVAILABILITY: PUBLIC WORKS, V112 N11

IRIS ACCESSION NUMBER: EW007134
PUBLICATION DATE: NOV 81
TITLE: HOW DO YOU BUILD WHEN SEWERS ARE INADEQUATE?
PERSONAL AUTHOR: STEGMANN, NORMAN K.
DESCRIPTOR: *CASE STUDIES; *FACILITIES; *INFILTRATION; *INFLOW; *INSPECTION; *MANAGEMENT; *MUNICIPALITIES; *NEW JERSEY; *PLANNING; *REGULATIONS; *REHABILITATION; *SEWER SYSTEMS; *SEWERS; *WASTEWATER COLLECTION

ABSTRACT: THIS ARTICLE DISCUSSES ALTERNATIVES TO A SEWER SYSTEM WHICH INCLUDES REHABILITATION OF EXISTING SYSTEMS AND STUDIES TO DETECT INFILTRATION/INFLOW PROBLEMS. ATTENTION IS FOCUSED ON A CASE STUDY IN WAYNE, NEW JERSEY.

AVAILABILITY: PUBLIC WORKS, V112 N11

IRIS ACCESSION NUMBER: EW007135
PUBLICATION DATE: NOV 81
TITLE: RECOMMENDATIONS FOR REGULATORY MODIFICATIONS: THE USE OF WASTE STABILIZATION POND SYSTEMS.
PERSONAL AUTHOR: GLOYN, EARNEST F.; TISCHLER, LIAL F.
DESCRIPTOR: ACTIVATED SLUDGE; *ALGAE; *INFILTRATION; *INFLOW; *INSPECTION; *METHODOLOGY; *MODELING; *PERFORMANCE EVALUATION; *PIPS; *REGULATIONS; *RECOMMENDATIONS; *SEWER BASES; *SEWERS; *SEWER SYSTEMS; *STABILIZATION PONDS; SUSPENDED SOLIDS; *WASTEWATER COLLECTION

ABSTRACT: THIS DOCUMENT WAS PREPARED TO DEVELOP A POSITION ON THE REGULATION OF WASTE STABILIZATION POND SYSTEMS, INCLUDING LIMITATIONS ON TOTAL SUSPENDED SOLIDS. THE DATA BASE FOR THE POSITION INCLUDED: EVALUATION OF EXISTING WASTE STABILIZATION POND SYSTEMS; COMPARISON OF WASTE STABILIZATION SYSTEMS WITH EXEMPLARY ACTIVATED SLUDGE SYSTEMS; AND STUDIES OF ALGAL METABOLISM AS IT MAY RELATE TO RECEIVING WATERS. THE STUDY SUPPORTS THE POSITION THAT GENERALLY ALGAL CELLS SHOULD BE EXCLUDED FROM THE TOTAL SUSPENDED SOLIDS LIMITATIONS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N11

IRIS ACCESSION NUMBER: EW007136
PUBLICATION DATE: NOV 81
TITLE: PROJECT OUTCOMES CORRELATE WITH PUBLIC PARTICIPATION VARIABLES.
PERSONAL AUTHOR: ELLIS, RICHARD A.; DISINGER, JOHN F.
DESCRIPTOR: *MANAGEMENT; *PERFORMANCE EVALUATION; *PLANNING; *PROJECT PLANNING; *PUBLIC PARTICIPATION; *RESEARCH REPORTS; *WASTEWATER TREATMENT

ABSTRACT: THIS ARTICLE REPORTS ON A STUDY WHICH WAS UNDERTAKEN TO ANALYZE PUBLIC PARTICIPATION VARIABLES -- SUCH AS METHODS OF INVOLVING THE PUBLIC AND SOCIAL FACTORS SURROUNDING PROJECT PLANNING -- FOR THEIR RELATIONSHIP TO PROJECT OUTCOMES. A CORRELATION TABLE IS PROVIDED FOR 11 DEPENDENT VARIABLES AND 52 INDEPENDENT VARIABLES TO ILLUSTRATE THE RELATIONSHIPS ENCOUNTERED IN THE CASE STUDIES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V53 N11

IRIS ACCESSION NUMBER: EW007137
PUBLICATION DATE: NOV 81
TITLE: PROCEDURES FOR ESTIMATING DRY WEATHER POLLUTANT DEPOSITION IN SEWER SYSTEMS.
PERSONAL AUTHOR: PISANO, WILLIAM C.; AND OTHERS
DESCRIPTOR: *COLLECTION SYSTEMS; *MATHEMATICAL MODELS; *METHODOLOGY; *MODELING; *PIPES; *RESEARCH REPORTS; *SEWER SYSTEMS; *SOLIDS; WASTEWATER

ABSTRACT: A SIMPLIFIED METHODOLOGY WAS PREPARED FOR PROVIDING FIRST-CUT ASSESSMENTS OF THE TOTAL AMOUNTS OF SOLIDS THAT DEPOSIT IN A SEWER COLLECTION SYSTEM, AND THE EXTENT TO WHICH THE DEPOSITION TAKES PLACE. STATISTICAL ANALYSES OF SEWER SYSTEM PIPE SLOPES REVEALED THAT COLLECTION SYSTEM PIPE SLOPES MAY BE REPRESENTED BY AN EXPONENTIAL PROBABILITY MODEL. ANALYSIS OF THE DISTRIBUTION OF LOADS DEPOSITED VERSUS CUMULATIVE PIPE LENGTH LED TO THE DEVELOPMENT OF GENERALIZED CURVES AS A FUNCTION OF COLLECTION SYSTEM MEAN SLOPE FOR ESTIMATING THE TOTAL FRACTION OF COLLECTION SYSTEM PIPE FOOTAGE OVER WHICH A GIVEN PERCENTAGE OF THE TOTAL LOADS DEPOSITED.

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AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V33 N11
IRIS ACCESSION NUMBER: EW007138
PUBLICATION DATE: NOV 81
TITLE: OBTAINING HIGH-LEVEL WASTEWATER DISINFECTION WITH OZONE.
PERSONAL AUTHOR: STOVER, ENOS L.; JAMS; ROBERT W.
DESCRIPTOR: BACTERIA; *CASE STUDIES; *DISINFECTION; *OZONATION; *OZONE; *PILOT PLANTS; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY
DESCRIPTIVE NOTE: 1637-1647P.
ABSTRACT: RECENTLY, SOME STATES (FOR EXAMPLE, MARYLAND AND CALIFORNIA) HAVE ADOPTED MORE STRINGENT DISINFECTION REQUIREMENTS THAN 70 MPN PER 100 ML FOR MEAN EFFLUENT TOTAL COLIFORM LEVELS, AS DEFINED BY THE 1964 NATIONAL SHELLFISH SANITATION WORKSHOP FOR BACTERIOLOGICAL WATER QUALITY FOR APPROVED SHELLFISH AREAS. THE FEASIBILITY OF OZONE TO DISINFECT TO HIGH LEVELS (2.2 AND 70 TOTAL COLIFORMS PER 100 ML) WAS INVESTIGATED IN A 0.26-M3/MIN (98-GAL/DAY) PILOT PLANT UTILIZING FULLSCALE OZONE SYSTEM ON FILTER SECONDARY AND NITRIFIED DOMESTIC WASTEWATER AT MALBOROUGH, MASS.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V33 N11
IRIS ACCESSION NUMBER: EW007139
PUBLICATION DATE: NOV 81
TITLE: DISCUSSION OF: PERFORMANCE OF ACTIVATED SLUDGE PROCESSES AND RELIABILITY-BASED DESIGN.
PERSONAL AUTHOR: AVENDT, RAYMOND J.
DESCRIPTOR: *ACTIVATED SLUDGE; *DESIGN; *EVALUATION; MATHEMATICAL APPLICATIONS; *MODELING; *OPERATIONS (WASTEWATER); *PERFORMANCE; SLUDGE; STATISTICS; WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 1638-1639P.
ABSTRACT: THE PURPOSE OF THIS ARTICLE IS TO PRESENT THE RESULTS OF A STUDY OF STATISTICAL MODELING OF TREATMENT PLANT DATA TO DETERMINE THE EFFECTS OF DESIGN AND OPERATING PARAMETERS ON THE PERFORMANCE AND RELIABILITY OF VARIOUS TREATMENT UNIT PROCESSES. THE DATA WERE TAKEN FROM 17 MAJOR TREATMENT FACILITIES OVER A 2 YEAR PERIOD.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V33 N11
IRIS ACCESSION NUMBER: EW007140
PUBLICATION DATE: NOV 81
TITLE: OPERATION REPORTS - EAST BAY MUNICIPAL DISTRICT (SD NO. 1), CALIFORNIA.
DESCRIPTOR: *CALIFORNIA; *CASE STUDIES; DESIGN; *FACILITIES; *MAINTENANCE; *MANAGEMENT; *OPERATIONS (WASTEWATER); *UTILITIES; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 1660-1664P.
ABSTRACT: THIS ARTICLE REPORTS ON THE OPERATIONS OF SPECIAL DISTRICT NO. 1 OF THE EAST BAY MUNICIPAL UTILITY DISTRICT, CALIFORNIA. VARIOUS FACETS OF THE DISTRICT'S OPERATIONS ARE EXAMINED INCLUDING WASTEWATER TREATMENT SECTION, MAINTENANCE SECTION, INTERCEPTOR SECTION, AND PLANT PROCESSING. A COMPLETE TABLE OF OPERATING DATA IS PROVIDED.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V33 N11
IRIS ACCESSION NUMBER: EW007175
PUBLICATION DATE: MAR 77
TITLE: PESTICIDE PROTECTION - A TRAINING MANUAL FOR HEALTH PERSONNEL.
PERSONAL AUTHOR: DAVIES, JOHN E.
DESCRIPTOR: *AUDIOVISUAL AIDS; HAZARDOUS MATERIALS; *HEALTH PERSONNEL; *INSTRUCTIONAL MATERIALS; OCCUPATIONAL HEALTH AND SAFETY; *PESTICIDES; POISONING; *POST SECONDARY EDUCATION; *PUBLIC HEALTH; *TRAINING PROGRAMS
ABSTRACT: THIS TRAINING PROGRAM PRESENTS MATERIAL ON PESTICIDE PROTECTION DESIGNED FOR HEALTH PERSONNEL. TOPICS INCLUDE: PESTICIDES; PESTICIDE HAZARDS AND HOW EXPOSURE OCCURS; SYSTEMATIC ORGANOPHOSPHATE AND CARBAMATE POISONING; MISCELLANEOUS POISONINGS; TOPICAL EFFECTS; PESTICIDE EPIDEMIOLOGY; METHODS OF PREVENTION AND ACUTE PESTICIDE POISONING VERIFICATION. THIS PROGRAM CONTAINS: SLIDES, CASSETTE TAPES, SCRIPT, TRAINEES MANUAL, PRE AND POST TESTS AND ANSWER SHEETS, HANDOUT MATERIALS, INSTRUCTIONS TO THE TRAINER, AND CORE MANUAL.
AVAILABILITY: OFFICE OF PESTICIDE PROGRAMS, OPERATIONS DIVISION, ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC 20462
IRIS ACCESSION NUMBER: EW007185
PUBLICATION DATE: AUG 81
TITLE: DEVELOPMENT OF METHODOLOGY FOR DETERMINING RISK ASSESSMENT WHEN SLUDGE IS APPLIED TO LAND.
PERSONAL AUTHOR: JUTRO, PETER R.; NERODE, ANIL
ABSTRACT: THIS BULLETIN WAS WRITTEN TO PROVIDE GUIDANCE FOR THE DESIGN AND OPERATION OF SEWAGE SLUDGE COMPOSTING FACILITIES. IT ALSO WILL SERVE AS AN AID IN THEIR EFFECTIVE ESTABLISHMENT AND WILL HELP ALLEVIATE PROBLEMS THAT MAY ARISE DURING EVERYDAY NORMAL OPERATION. THE GUIDANCE CONSISTS PRIMARILY OF RECOMMENDED OPERATIONAL PROCEDURES AND PERFORMANCE LEVELS RELATED TO THE COMPOSTING FACILITIES. THE PERFORMANCE LEVELS, RECOMMENDED WITHIN THIS BULLETIN, ARE FLEXIBLE TO MAKE ALLOWANCES FOR INNOVATION IN COMPOSTING SYSTEM DESIGNS. THE RECOMMENDATIONS WILL ALSO ASSURE THAT ADEQUATE SLUDGE STABILIZATION AND DISINFECTION (PATHOGEN REDUCTION) ARE ACHIEVED.

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

IRIS ACCESSION NUMBER: EW007187
PUBLIC DATE: SEP 79

TITLE: LANDSAT SUPPORTS DATA NEEDS FOR EPA 208 PLANNING.

DESCRIPTOR: *DATA ACQUISITION; *DATA ANALYSIS; *ENVIRONMENTAL PROTECTION AGENCY; GRANT PROGRAMS; *LANDSAT; *LEGISLATION; *MANAGEMENT; *NEVoir POINT POLLUTION; *PLANNING; *POLUTION REGULATIONS; *REMOTE SENSING; *WASTE DISPOSAL; *WATER QUALITY

DESCRIPTIVE NOTE: 193P. PB81-240509

ABSTRACT: EXCERPTS FROM FEDERAL LEGISLATION AND REGULATIONS MANDATING AREAWIDE WASTE TREATMENT MANAGEMENT AS A MEANS OF PROTECTING THE WATER QUALITY OF THE NATION. THIS REPORT MODELS THE INTEGRATION OF THE NATIONAL WATER AREAS FOR WATER QUALITY PLANNING. MANAGEMENT, AND ENFORCEMENT USING LANDSAT TO IDENTIFY NONPOINT SOURCES OF WATER POLLUTION AS WELL AS LAND-USE/LAND COVER FEATURES IN SOUTHDAKOTA, KENTUCKY, GEORGIA, NEW JERSEY, AND TEXAS ARE DESCRIBED. PRESENT ACTIVITIES SUGGEST THAT THIS TYPE OF REMOTE SENSING IS AN EFFICIENT, EFFECTIVE TOOL FOR AREAWIDE WATER QUALITY PLANNING. INTERACTION WITH COGNIZANT FEDERAL, STATE, AND LOCAL GOVERNMENT PERSONNEL INVOLVED IN DATA ACQUISITION 208 PLANNING ACTIVITIES CAN GUIDE THE DEVELOPMENT OF NEW CAPABILITIES AND ENHANCE THEIR UTILITY AND PROSPECT FOR USE.

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

IRIS ACCESSION NUMBER: EW007190
PUBLIC DATE: MAY 72

TITLE: WASTEWATER MANAGEMENT BY DISPOSAL ON THE LAND.

DESCRIPTOR: *DATA ACQUISITION; *DATA ANALYSIS; *ENVIRONMENTAL PROTECTION AGENCY; GRANT PROGRAMS; *LANDSAT; LEGISLATION; MANAGEMENT; NEVoir POINT POLLUTION; *PLANNING; POLLUTION REGULATIONS; *REMOTE SENSING; *WASTE DISPOSAL; *WATER QUALITY

DESCRIPTIVE NOTE: 36P. PB81-10148

ABSTRACT: EXCERPTS FROM FEDERAL LEGISLATION AND REGULATIONS MANDATING AREAWIDE WASTE TREATMENT MANAGEMENT AS A MEANS OF PROTECTING THE WATER QUALITY OF THE NATION. THIS REPORT MODELS THE INTEGRATION OF THE NATIONAL WATER AREAS FOR WATER QUALITY PLANNING. MANAGEMENT, AND ENFORCEMENT USING LANDSAT TO IDENTIFY NONPOINT SOURCES OF WATER POLLUTION AS WELL AS LAND-USE/LAND COVER FEATURES IN SOUTHDAKOTA, KENTUCKY, GEORGIA, NEW JERSEY, AND TEXAS ARE DESCRIBED. PRESENT ACTIVITIES SUGGEST THAT THIS TYPE OF REMOTE SENSING IS AN EFFICIENT, EFFECTIVE TOOL FOR AREAWIDE WATER QUALITY PLANNING. INTERACTION WITH COGNIZANT FEDERAL, STATE, AND LOCAL GOVERNMENT PERSONNEL INVOLVED IN DATA ACQUISITION 208 PLANNING ACTIVITIES CAN GUIDE THE DEVELOPMENT OF NEW CAPABILITIES AND ENHANCE THEIR UTILITY AND PROSPECT FOR USE.

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

IRIS ACCESSION NUMBER: EW007190
PUBLIC DATE: MAY 72

TITLE: WASTEWATER MANAGEMENT BY DISPOSAL ON THE LAND.

DESCRIPTOR: *DATA ACQUISITION; *DATA ANALYSIS; *ENVIRONMENTAL PROTECTION AGENCY; GRANT PROGRAMS; *LANDSAT; LEGISLATION; MANAGEMENT; NEVoir POINT POLLUTION; *PLANNING; POLLUTION REGULATIONS; *REMOTE SENSING; *WASTE DISPOSAL; *WATER QUALITY
ABSTRACT: THIS TECHNICAL REPORT PRESENTS AN INTEGRATED DISCUSSION OF DISPOSAL TECHNIQUES AND ECOSYSTEM RESPONSES. THREE BASIC LAND DISPOSAL TECHNIQUES ARE EXAMINED: SPRAY IRRIGATION, OVERLAND RUNOFF, AND RAPID INFILTRATION. CHAPTERS INCLUDE: SECONDARY TREATMENT PROCESSES; ROLE OF SOIL CHEMICAL PROCESSES IN RECLAMATION OF WASTEWATER APPLIED TO LAND; MICROBIOLOGICAL RESPONSES TO LAND DISPOSAL OF SECONDARY-TREATED MUNICIPAL-INDUSTRIAL WASTEWATER; BOTANICAL COMPONENTS INVOLVED IN LAND DISPOSAL OF WASTEWATER EFFLUENT; PHYSIOLOGICAL ASPECTS OF WASTEWATER DISPOSAL ON LAND; IMPACT OF CLIMATOLOGY AND METEOROLOGY ON LAND DISPOSAL; HEALTH AND HYGIENE ASPECTS OF SPRAY IRRIGATION; RESPONSE OF RECEIVING WATERS TO LAND DISPOSAL EFFLUENT; AND, ALTERNATIVE PROCESSES AND COMBINATIONS.

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

IRIS ACCESSION NUMBER: EW007193
PUBLICATION DATE: DEC 76
TITLE: NONPOINT SOURCE CONTROL GUIDANCE CONSTRUCTION ACTIVITIES.
DESCRIPTOR: *CONSTRUCTION; *FACILITIES; *MANAGEMENT; *NONPOINT SOURCES; PLANNING; *POLLUTION CONTROL; *RECOMMENDATIONS; *TECHNICAL REPORTS; *WATER QUALITY
DESCRIPTIVE NOTE: 115P.
ABSTRACT: THIS NONPOINT SOURCE CONTROL DOCUMENT PROVIDES THEORETICAL INFORMATION ON FACTORS RELATING TO CONSTRUCTION OF POLLUTION CONTROL DEVICES. PRESENTED IS INFORMATION ON THE IDENTIFICATION AND ASSESSMENT OF EXISTING CONSTRUCTION NONPOINT SOURCE PROBLEMS; ANALYSIS AND PROCEDURES NEEDED FOR SELECTION OF CONTROLS; DESCRIPTIONS OF INDIVIDUAL AND SYSTEMS OF BEST MANAGEMENT PRACTICES, WITH A METHOD FOR DETERMINING THEIR EFFECTIVENESS; AND SEVERAL METHODS FOR PREDICTING POTENTIAL POLLUTION PROBLEMS FROM FUTURE CONSTRUCTION ACTIVITIES.

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

IRIS ACCESSION NUMBER: EW007194
PUBLICATION DATE: 68
TITLE: BASIC PRINCIPLES OF SUPERVISORY MANAGEMENT - SECOND EDITION.
DESCRIPTOR: AUTOINSTRUCTIONAL PROGRAMS; *CASE STUDIES; COMMUNICATIONS; DECISION MAKING; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *POST SECONDARY EDUCATION; PROGRAMMED INSTRUCTION; *SUPERVISION
ABSTRACT: THE PROGRAMMED SELF-INSTRUCTION TEXT AND NOTEBOOK ARE COMPONENTS OF A TRAINING COURSE ON THE BASIC PRINCIPLES OF SUPERVISORY MANAGEMENT. THE STEP-BY-STEP CHAPTERS
COMMUNITIES OF INDIGENOUS AQUATIC ORGANISMS.

TITLE:

PUBLICATION DATE:

AVAILABILITY:

AMERICAN STANDARDS; COMMUNICATIONS; MOTIVATION; AND DECISION-MAKING.

FROUDWATER DATA MANAGEMENT; MONITORING DISPOSAL WELLS; AND, METHODOLOGY; SEPTIC WASTE APPLICATIONS FOR MONITORING TECHNIQUES, INCLUDING HAZARDOUS ADDROUNDWATER CONSTRAINTS METHODOLOGY, INCLUDING BOON METHODOLOGY.

ABSTRACT:

PERSONAL AUTHOR:

IRIS ACCESSION NUMBER: EWO07198

PUBLICATION DATE: 81

TITLE: ECOLOGICAL ASSESSMENTS OF EFFLUENT IMPACTS ON COMMUNITIES OF INDIGENOUS AQUATIC ORGANISMS.

PERSONAL AUTHOR: BATES, J. M.; WEBER, C. I.

DESCRIPTOR: *AQUATIC ENVIRONMENT; COMPUTERS; *ECOLOGY; *ENVIRONMENTAL ASSESSMENT; MEASUREMENT TECHNIQUES; *MICROBIOLOGY; *MODELS; SAMPLING; *STREAMS; WATER POLLUTION CONTROL; *WATER QUALITY; *WATER RESOURCES

DESCRIPTIVE NOTE: 335P. PRICE: $32.50

ABSTRACT: PRESENTED IS A COMPILATION OF 17 PAPERS ADDRESSING SUCH INFORMATION AS COMPUTER-BASED PREDICTIVE COSTS/WATER MODELS, SCALE-MODEL STREAMS, SELECTION OF TARGET SPECIES, EFFLUENT AND/OR RECEIVING WATER SPECIFICATIONS, AND ALGAL PERiphyton IN STREAM ASSESSMENTS AND SAMPLING. CASE HISTORIES ARE ALSO PRESENTED.

AVAILABILITY: AMERICAN SOCIETY FOR TESTING AND MATERIALS, 1916 RACE ST., PHILADELPHIA, PA 19103

IRIS ACCESSION NUMBER: EWO07199

PUBLICATION DATE: 81

TITLE: GROUNDWATER MONITORING.

PERSONAL AUTHOR: EVERETT, LOUIE G.

DESCRIPTOR: *CASE STUDIES; COST EFFECTIVENESS; DESIGN; EVALUATION; *GROUNDWATER; *HANDBOOKS; *MANAGEMENT; *MONITORING; POLLUTANTS; *WATER QUALITY; *WELLS

DESCRIPTIVE NOTE: 529P. PRICE: $150.00

ABSTRACT: THIS HANDBOOK DESCRIBES A COST-EFFECTIVE, GENERIC METHODOLOGY FOR MONITORING THE QUALITY OF GROUNDWATER. THE BOOK PROVIDES A COMPREHENSIVE DESCRIPTION OF THE METHODOLOGY, INCLUDING THE NEEDS, OBJECTIVES, AND CONSTRAINTS OF SUCH A PROGRAM. THE CONSTITUENTS OF GROUNDWATER POLLUTION ARE DISCUSSED, AS WELL AS THE SOURCES AND CAUSES OF SUCH POLLUTANTS. ALSO EXAMINED ARE MANY APPLICATIONS FOR MONITORING TECHNIQUES, INCLUDING HAZARDOUS WASTE DISPOSAL, ENERGY EXTERIORITY, LANDFILL LEACHATE, AND SEPTIC FIELDS. CHAPTERS INCLUDE: GROUNDWATER MONITORING METHODOLOGY; GROUNDWATER MONITORING METHODS AND COSTS; GROUNDWATER DATA MANAGEMENT; MONITORING DISPOSAL WELLS; AND, ILLUSTRATIVE EXAMPLES.

AVAILABILITY: GENERAL ELECTRIC COMPANY, BUSINESS GROWTH SERVICES, 120 ERIE BLVD., DEPT. 551, SCHENECTADY, NY 12305

IRIS ACCESSION NUMBER: EWO07200

PUBLICATION DATE: DEC 80

TITLE: NATIONAL SURVEY OF WATER AND WASTEWATER DESALTING PLANT OPERATOR CERTIFICATION PROGRAMS.

DESCRIPTOR: *CERTIFICATION; *DESALTING; *EDUCATIONAL NEEDS; *OPERATOR TRAINING; *STATE PROGRAMS; *SURVEYS; *TRAINING PROGRAMS; *WASTEWATER TREATMENT; *WATER TREATMENT

DESCRIPTIVE NOTE: 12P. PB81-185308

ABSTRACT: THIS STATE-BY-STATE SURVEY EXAMINES THE EXTENT TO WHICH EXISTING STATE WATER AND WASTEWATER TREATMENT OPERATOR CERTIFICATION PROGRAMS INCORPORATE DESALTING WITHIN THE OTHER ELEMENTS OF WATER SCIENCES. THE SURVEY SHOWS A LACK OF INVOLVEMENT AND AWARENESS TO THE GROWING IMPORTANCE OF DESALTING EXPERTISE FOR OPERATORS OF WATER AND WASTEWATER FACILITIES.

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

IRIS ACCESSION NUMBER: EWO07212

PUBLICATION DATE: 75

TITLE: HINTS FOR MANAGERS.

DESCRIPTOR: *AUDITIAL AIDE; *AUDIO TAPES; *DECISION MAKING; FACILITIES; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *OPERATIONS (WASTEWATER); *OPERATIONS (WATER); PLANNING; *POST SECONDARY EDUCATION; *SUPERVISION; *UTILITIES; *WATER TREATMENT; *WASTEWATER TREATMENT

ABSTRACT: PRESENTED IS AN AUDIO-TAPE SUPPLEMENT TO A HOME STUDY COURSE ON MANAGEMENT PRINCIPLES FOR WATER/WASTEWATER UTILITY PLANT MANAGERS. A GROUP OF SPECIALISTS AND EXPERTS IN MANAGEMENT, PARTICULARLY AS RELATED TO WATER/WASTEWATER PLANT OPERATION, DISCUSS MANAGERIAL FUNCTIONS, PERSONNEL SELECTION, BASIC CONCEPTS OF COMMUNICATION, PROBLEM SOLVING AND MOTIVATION.

AVAILABILITY: INSTRUCTIONAL MEDIA CENTER, MICHIGAN STATE UNIVERSITY, LANSING, MI

IRIS ACCESSION NUMBER: EWO07213

PUBLICATION DATE: 80

TITLE: OIL SPILL RESPONSE TRAINING PROGRAM.

DESCRIPTOR: *AUDITIAL AIDE; *FIRES; GOVERNMENT POLICY; *INDUSTRY; *INSTRUCTIONAL MATERIALS; *OIL; *OIL SPILLS; *PETROLEUM INDUSTRY; *POST SECONDARY EDUCATION; *TRAINING; *TRAINING PROGRAMS;
WASTE DISPOSAL

ABSTRACT: THIS TRAINING PROGRAM IS INTENDED TO INDOCTRINATE PERSONNEL IN THE PREVENTION OF OIL SPILLS THAT MAY OCCUR DURING THE EXTRACTION, REFINING, DISTRIBUTION AND USE OF PETROLEUM PRODUCTS. MANAGEMENT AND CORPORATE OFFICERS WHO ARE RESPONSIBLE FOR CORPORATE RESPONSE TO AN OIL SPILL AS WELL AS FIELD PERSONNEL WHO ARE REQUIRED TO PREPARE FOR AND COMBAT SKILLS ALL RECEIVE APPROPRIATE TRAINING FROM THIS PROGRAM. THE FIVE SERIES OF THE PROGRAM ARE: GOVERNMENT POLICIES, OIL SPILL CONTINGENCY PLANNING, SPILL CONTAINMENT AND REMOVAL, MARINE SALVAGE, BLOWOUTS, PIPELINES, AND FIRE FIGHTING. THE PRIMARY INSTRUCTION TOOL IS VIDEOTAPE IN THIS MULTI-MEDIA PROGRAM.

AVAILABILITY: NUS CORPORATION, HEADQUARTERS, 4 RESEARCH PLACE, ROCKVILLE, MD 20850

IRIS ACCESSION NUMBER: EW007236

PUBLICATION DATE: AUG 77

TITLE: OPERATOR CERTIFICATION 1975 STATUS REPORT

DESRIPTOR: #ADMINISTRATION; #CERTIFICATION; #CLASSIFICATION; #OPERATIONS; #OPERATOR TRAINING; #PERSONNEL; #PROGRAM DESCRIPTIONS; #STATE PROGRAMS; #SURVEYS; #TRAINING PROGRAMS; #WASTEWATER TREATMENT; #WATER TREATMENT


AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION

IRIS ACCESSION NUMBER: EW007239

PUBLICATION DATE: DEC 81

TITLE: A CONSTRUCTION GRANTS PROGRAM SUCCESS STORY

PERSONAL AUTHOR: BOETTCHER, GREG

DESRIPTOR: #CASE STUDIES; #CONSTRUCTION GRANTS; #COSTS; #DESIGN; #EQUIPMENT; #FACILITIES; #OPERATIONS (WASTEWATER); #WASTEWATER TREATMENT

ABSTRACT: THIS ARTICLE REPORTS ON THE SUCCESS THAT JAMESTOWN, RHODE ISLAND HAS EXPERIENCED WITH THE CONTRACT OPERATION OF THEIR 750,000 GPD WASTEWATER TREATMENT PLANT AND THREE PUMPING STATIONS. IN ADDITION, SUCCESSFUL OPERATIONS AND MAINTENANCE PRACTICES ARE PRESENTED.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N12

IRIS ACCESSION NUMBER: EW007241

PUBLICATION DATE: DEC 81

TITLE: DISINFECTION, THE PROJECT, BUILT UNDER THE CONSTRUCTION GRANTS PROGRAM, HAD COSTS WITHIN INITIAL ESTIMATES, PROJECT SCHEDULES WHICH WERE MET, OPERATING COSTS AS WERE ESTIMATED, AND PLANT PERFORMANCE WHICH EXCEEDS DESIGN PARAMETERS.

AVAILABILITY: PUBLIC WORKS, V112 N12

IRIS ACCESSION NUMBER: EW007240

PUBLICATION DATE: DEC 81

TITLE: CONTRACT OPERATION SERVICE HELPS A SMALL COMMUNITY

PERSONAL AUTHOR: SUTTON, ROBERT; JOHNSON, DONALD

DESRIPTOR: #CASE STUDIES; #CONTRACT OPERATIONS; #COST EFFECTIVENESS; #DESIGN; #ECONOMIC FACTORS; #FACILITIES; #MAINTENANCE; #OPERATIONS (WASTEWATER); #WASTEWATER TREATMENT

ABSTRACT: THIS ARTICLE DESCRIBES THE SUCCESS THAT JAMESTOWN, RHODE ISLAND HAS EXPERIENCED WITH THE CONTRACT OPERATION OF THEIR 750,000 GPD WASTEWATER TREATMENT PLANT AND THREE PUMPING STATIONS. IN ADDITION, SUCCESSFUL OPERATIONS AND MAINTENANCE PRACTICES ARE PRESENTED.

AVAILABILITY: PUBLIC WORKS, V112 N12

IRIS ACCESSION NUMBER: EW007241

PUBLICATION DATE: DEC 81

TITLE: TRACE ANALYSES FOR WASTEWATERS

PERSONAL AUTHOR: GLASER, JOHN A.; AND OTHERS

DESRIPTOR: #ANALYTICAL TECHNIQUES; #CHEMICAL ANALYSIS; #DETECTION; #LABORATORY TECHNIQUES; #POLLUTANTS; #TRACE ANALYSIS; #TRACE ELEMENTS; #WASTEWATER

ABSTRACT: THIS ARTICLE DISCUSSES A NEW PERFORMANCE CRITERION FOR CHEMICAL ANALYSES OF WASTEWATER CALLED METHOD DETECTION LIMIT. THIS TECHNIQUE IS DEFINED AS THAT CONCENTRATION OF THE ANALYTE THAT CAN BE DETECTED AT A SPECIFIC CONFIDENCE LEVEL. BOTH THEORY AND APPLICATIONS FOR RELIABLE ANALYSES OF PRIORITY POLLUTANTS ARE DISCUSSED IN DETAIL.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V15 N12

IRIS ACCESSION NUMBER: EW007241
IRIS ACCESSION NUMBER: EW007242

PUBLICATION DATE: 81

TITLE: MANUAL OF GROUND-WATER SAMPLING PROCEDURES.

PERSONAL AUTHOR: SCALF, MARTON R.; AND OTHERS

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DATA COLLECTION; *GROUNDWATER; *HYDROLOGY; *MANUALS; *MONITORING; *POLLUTANTS; *SAMPLING; *WATER QUALITY; *WELLS

DESCRIPTIVE NOTE: 93P. PRICE: $12.00 FOR MEMBERS; $15.00 FOR NON-MEMBERS.

ABSTRACT: THIS REPORT IS A SUMMARY OF SEVERAL PROCEDURES CURRENTLY USED BY THE GROUNDWATER COMMUNITY TO COLLECT GROUNDWATER QUALITY DATA. TOPICS INCLUDE: THE OBJECTIVES OF GROUNDWATER SAMPLING; PRELIMINARY EVALUATIONS OF POLLUTANTS; THE NATURE OF POLLUTION SOURCES; HYDROGEOLOGIC CONSIDERATIONS; CONSTRUCTION OF MONITORING WELLS; COLLECTION OF GROUNDWATER SAMPLES; SAMPLING SUBSURFACE SOLIDS; AND RECORD KEEPING.

AVAILABILITY: MAIL ORDER DEPARTMENT, NATIONAL WATER WELL ASSOCIATION, 300 W. WILSON BRIDGE ROAD, SUITE 135, WORTHINGTON, OH 43085

IRIS ACCESSION NUMBER: EW007244

PUBLICATION DATE: AUG 80

TITLE: CHANGING ONE TON CONTAINERS.

DESCRIPTOR: *AUDIOVISUAL AIDS; *CHLORINE; *DISINFECTION; *EQUIPMENT; *FACILITIES; GAS CHLORINATION; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; WATER QUALITY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: INCLUDES PRE-TEST, STUDENT WORKBOOK, INSTRUCTOR'S GUIDE, AND POST-TEST.

ABSTRACT: CONTAINED IN THIS INSTRUCTIONAL PACKAGE ON CHANGING A ONE-TON CHLORINE CONTAINER ARE 118 SLIDES, A CASSETTE TAPE, PRE AND POST-TESTS, A STUDENT WORKBOOK AND AN INSTRUCTOR'S GUIDE. STRESS ARE SAFETY AND CHANGING A ONE-TON CHLORINE CONTAINER IN LESS THAN ONE HOUR.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROOM 310, COLUMBUS, OH 43212-1792

IRIS ACCESSION NUMBER: EW007245

PUBLICATION DATE: DEC 81

TITLE: WHEN A WATER SUPPLY WENT BAD.

DESCRIPTOR: *CASE STUDIES; *CONTAMINATION; *DRINKING WATER; *GRANULAR ACTIVATED CARBON; *GROUNDWATER; *TOXIC CHEMICALS; *TOXIC SUBSTANCES; *WATER QUALITY; *WATER SUPPLY; *WATER TREATMENT

DESCRIPTIVE NOTE: 33-36P.

ABSTRACT: THIS ARTICLE EXAMINES HOW TWO NEW JERSEY COMMUNITIES DEALT WITH CONTAMINATION OF THEIR GROUNDWATER SUPPLIES BY TOXIC CHEMICALS WITH THE ASSISTANCE OF AN ACTIVATED CARBON TREATMENT SYSTEM. ALSO DISCUSSED IS TRANSPORTABLE GRANULAR ACTIVATED CARBON EQUIPMENT AND AN INTERVIEW WITH THE MAYORS OF THE TWO COMMUNITIES.

AVAILABILITY: AMERICAN CITY & COUNTY, V96 N12

IRIS ACCESSION NUMBER: EW007246

PUBLICATION DATE: DEC 81

TITLE: INSTRUMENT INSIGHTS.

PERSONAL AUTHOR: WILLIAMS, CLAUDE N.; MANROSS, ROBERT C.

DESCRIPTOR: *EQUIPMENT; *INSTALLATION; *INSTRUMENTATION; *MAINTENANCE; *METERS; *SENSORS; *SUSPENDED SOLIDS; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 16P.

ABSTRACT: THIS ARTICLE FOCUSES ATTENTION ON THE INSTALLATION AND MAINTENANCE OF ON-LINE SUSPENDED SOLIDS METERS. A CHECKLIST IS PROVIDED WHICH EXAMINES: LOCATION, MOUNTING, ELECTRICAL CONNECTIONS, CLEANING, CALIBRATION, AND SERVICING.

AVAILABILITY: POLLUTION ENGINEERING, V13 N12

IRIS ACCESSION NUMBER: EW007247

PUBLICATION DATE: DEC 81

TITLE: SODIUM BOROHYDRIDE CONTROLS HEAVY METAL DISCHARGE.

PERSONAL AUTHOR: COOK, MICHAEL M.; LANDER, JOSEPH A.

DESCRIPTOR: *CHEMICAL TREATMENT; *COST EFFECTIVENESS; *EFFLUENTS; *HEAVY METALS; *LEAD; *MERCURY; *RECYCLING; *RESOURCE RECOVERY; *SILVER; *SODIUM BOROHYDRIDE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 36-38P.

ABSTRACT: THIS ARTICLE EXAMINES IN DETAIL THE USE OF SODIUM BOROHYDRIDE AS AN ALTERNATIVE CHEMICAL TREATMENT. THE ADVANTAGES OF THIS TREATMENT METHOD INCLUDE LOW COSTS AND ENERGY USE IN ADDITION TO EFFECTIVE TREATMENT OF HEAVY METALS. SPECIFIC ATTENTION IS FOCUSED ON THE REMOVAL AND RECOVERY OF LEAD, MERCURY, AND SILVER.

AVAILABILITY: POLLUTION ENGINEERING, V13 N12
IRIS ACCESSION NUMBER: EW007248
PUBLICATION DATE: DEC 81
TITLE: ROTARY KILN INCINERATORS FOR SLUDGE DISPOSAL.
PERS ONAL AUTHOR: KENSON, ROBERT E.
DESCRIPTOR: *DESIGN; *EQUIPMENT; *INCINERATION; *INCINERATORS; MAINTENANCE; *OPERATIONS (WASTEWATER); *ROTARY KILN INCINERATORS; *SLUDGE; *SLUDGE DISPOSAL; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 44-45P.
ABSTRACT: THIS ARTICLE EXAMINES THE USE OF ROTARY KILN INCINERATORS FOR SLUDGE DISPOSAL. SPECIFIC ATTENTION IS FOCUSED ON DESIGN AND PLANNING CRITERIA AND OPERATIONS AND MAINTENANCE.
AVAILABILITY: POLLUTION ENGINEERING, VOL 13, No 12

IRIS ACCESSION NUMBER: EW007249
PUBLICATION DATE: 78
TITLE: FUNDAMENTALS OF PNEUMATICS - PART 1 THEORY.
DESCRIPTOR: *AUDIOVISUAL AIDS; *INSTRUCTIONAL MATERIALS; *PNEUMATICS; *POST SECONDARY EDUCATION; *THEORIES
DESCRIPTIVE NOTE: 24P.
ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON THE BASIC PRINCIPLES OF PNEUMATICS. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: HISTORY, RELATIONSHIP TO HYDRAULICS, PRESSURE, HEAT, JU NIDITY, FLOW, AND VACUUM.
AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007250
PUBLICATION DATE: 78
TITLE: FUNDAMENTALS OF PNEUMATICS - PART 2 COMPONENTS.
DESCRIPTOR: *AUDIOVISUAL AIDS; *COMPONENTS; DEVICES; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *PNEUMATICS; *POST SECONDARY EDUCATION
DESCRIPTIVE NOTE: 53P.
ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON THE BASIC PRINCIPLES OF COMPONENT OPERATION. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: COMPRESSORS, COOLERS, RECEIVERS, DRYERS, DISTRIBUTION SYSTEMS, FILTERS, LUBRICATORS, FRL SYSTEM, VALVES, ACTUATORS, AND MUFFLERS.
AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007252
PUBLICATION DATE: 78
TITLE: FUNDAMENTALS OF PNEUMATICS - PART 4 SYMBOLS.
DESCRIPTOR: *AUDIOVISUAL AIDS; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *PNEUMATICS; *POST SECONDARY EDUCATION; *SYMBOLS
DESCRIPTIVE NOTE: 21P.
ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON THE USE OF BASIC GRAPIC SYMBOLS IN PNEUMATICS. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: LINES, ADJUSTABLE COMPONENTS, COMPRESSORS AND VACUUM PUMPS, COOLERS, FILTERS, RECEIVERS, GAUGES, DRYERS, LUBRICATORS, FRL SYSTEMS, PRESSURE CONTROL VALVES, FLOW CONTROL VALVES, DIRECTIONAL CONTROL VALVES, ACTUATORS, MUFFLERS, AND COMPLETE SYSTEMS.
AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007253
PUBLICATION DATE: 78
TITLE: FUNDAMENTALS OF PNEUMATICS - INSTRUCTOR'S GUIDE.
DESCRIPTOR: *AUDIOVISUAL AIDS; COURSE CONTENT; EQUIPMENT; *INSTRUCTIONAL MATERIALS; *PNEUMATICS; *POST SECONDARY EDUCATION; *SYMBOLS; *TEACHING GUIDES; THEORY; TROUBLESHOOTING
DESCRIPTIVE NOTE: 8P.
ABSTRACT: THIS INSTRUCTOR'S MANUAL PROVIDES COURSE INFORMATION AND LESSON PLANS FOR A FOUR PART AUDIOVISUAL COURSE ON THE FUNDAMENTALS OF PNEUMATICS. THE FOUR TOPICS COVERED ARE: THEORY, COMPONENTS TROUBLESHOOTING, AND SYMBOLS. BACKGROUND MATERIAL, A PROGRAM OUTLINE, AND A UNIT TEST ARE PROVIDED FOR EACH TOPIC.
AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007254
PUBLICATION DATE: 78
TITLE: PRACTICAL ELECTRICITY - PART I VOLTS, O HMS, AMPS, INDUCTION.
DESCRIPTOR: *AUDIOVISUAL AIDS; *ELECTRICAL SYSTEMS; *ELECTRICITY; *ELECTROMAGNETISM; *GUIDES; *INSTRUCTIONAL
THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON THE BASIC PRINCIPLES OF ELECTRICITY. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: ELECTRICAL THEORY; MEASUREMENT OF ELECTRICAL ENERGY; BASIC ELECTRICAL CIRCUITS; ELECTROMAGNETISM; AND, TRANSFORMERS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007255

PUBLICATION DATE: 78

TITLE: PRACTICAL ELECTRICITY - PART II ELECTROCHEMICAL AND MECHANICAL COMPONENTS.

DESCRIPTOR: *AUDIOVISUAL AIDS; ELECTRICAL SYSTEMS; ELECTRICITY; EQUIPMENT; GUIDES; INSTRUCTIONAL MATERIALS; POST SECONDARY EDUCATION

DESCRIPTIVE NOTE: 26P.

ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON THE OPERATION OF ELECTROMECHANICAL AND ELECTROCHEMICAL COMPONENTS. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: GENERATORS, MOTORS, SOLENOIDS, SWITCHES, CIRCUIT BREAKERS, GROUND-FAULT CIRCUIT INTERRUPTERS, AND BATTERIES.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007256

PUBLICATION DATE: 78

TITLE: PRACTICAL ELECTRICITY - PART III SOLID-STATE COMPONENTS.

DESCRIPTOR: *AUDIOVISUAL AIDS; ELECTRICAL SYSTEMS; ELECTRICITY; INSTRUCTIONAL MATERIALS; POST SECONDARY EDUCATION; SOLID STATE COMPONENTS

DESCRIPTIVE NOTE: 24P.

ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON SOLID-STATE COMPONENTS. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: CONDUCTORS, INSULATORS, SEMI-CONDUCTOR THEORY, DIODES, TRANSISTOR, SILICON-CONTROLLED RECTIFIERS, AND TRIALS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007257

PUBLICATION DATE: 78

TITLE: PRACTICAL ELECTRICITY - PART IV ELECTRICAL SCHEMATICS.

DESCRIPTOR: *AUDIOVISUAL AIDS; ELECTRICAL SYSTEMS; ELECTRICITY; EQUIPMENT; INSTRUCTIONAL MATERIALS; POST SECONDARY EDUCATION; SCHEMATICS; SYMBOLS

DESCRIPTIVE NOTE: 24P.

ABSTRACT: THIS GUIDE PRESENTS THE SCRIPT FOR A SLIDE-TAPE PROGRAM ON THE USE OF THE BASIC GRAPHIC SYMBOLS EMPLOYED IN THE ELECTRICAL INDUSTRY. THIS AUDIOVISUAL INSTRUCTIONAL PROGRAM COVERS THE FOLLOWING TOPICS: USE OF SCHEMATICS, SOURCES OF ELECTRICAL ENERGY, CONNECTIONS, RESISTORS, CAPACITORS, DIODES, SILICON CONTROLLED CRYSTALS AND INTEGRATED CIRCUITS, SWITCHES, ELECTROMAGNETIC COMPONENTS, CIRCUIT BREAKERS AND FUSES, COMMON ELECTRICAL DEVICES, AND CIRCUITS.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007258

PUBLICATION DATE: 78

TITLE: PRACTICAL ELECTRICITY - INSTRUCTOR'S GUIDE.

DESCRIPTOR: *AUDIOVISUAL AIDS; COURSE CONTENT; DEVICES; ELECTRICITY; EQUIPMENT; INSTRUCTIONAL MATERIALS; POST SECONDARY EDUCATION; SOLID STATE COMPONENTS; TEACHING GUIDES

DESCRIPTIVE NOTE: 8P.

ABSTRACT: THIS INSTRUCTOR'S MANUAL PROVIDES COURSE INFORMATION AND LESSON PLANS FOR A THREE-PART AUDIO-VISUAL COURSE ON PRACTICAL ELECTRICITY. THE THREE TOPICS COVERED ARE: VOLTS, OHMS, AMPS, AND INDUCTION; ELECTRICAL COMPONENTS; AND, SOLID STATE COMPONENTS. BACKGROUND MATERIAL, A PROGRAM OUTLINE, AND A UNIT TEST IS PROVIDED FOR EACH TOPIC.

AVAILABILITY: INDUSTRIAL MEDIA, INC., 6303 28TH ST., SE, GRAND RAPIDS, MI 49506

IRIS ACCESSION NUMBER: EW007259

PUBLICATION DATE: 78

TITLE: THE DESIGN OF LOW-MAINTENANCE, TECHNOLOGY-SIMPLE WASTEWATER TREATMENT SYSTEMS TO MEET THE 1977 EFFLUENT STANDARDS.

PERSONAL AUTHOR: RICH, LINVIL G.
ABSTRACT: THIS REPORT DESCRIBES THE RATIONAL DESIGN OF SEVERAL TYPES OF LOW-MAINTENANCE, TECHNOLOGY-SIMPLE SYSTEMS THAT CAN PROVIDE RELIABLE TREATMENT FOR DOMESTIC WASTEWATER DISCHARGES. TOPICS DISCUSSED INCLUDE: FLOW EQUALIZATION, BIO-CONVERSION, BIO-FLOCCULATION, SOLIDS SEPARATION, SOLIDS STABILIZATION, EFFLUENT POLISHING, AND AERATED LAGOONS.

AVAILABILITY: COLLEGE OF ENGINEERING, CLEMSON UNIVERSITY, CLEMSON, SC

IRIS ACCESSION NUMBER: EW007265
PUBLICATION DATE: 75

TITLE: AN ANALYSIS OF THE WASTEWATER TREATMENT MAINTENANCE MECHANIC OCCUPATION.

PERSONAL AUTHOR: CLARK, ANTHONY B.; AND OTHERS

DESCRIPTOR: ENVIRONMENTAL TECHNICIANS; JOB ANALYSIS; JOB SKILLS; MAINTENANCE; MECHANICS; OCCUPATIONAL INFORMATION; OCCUPATIONAL SURVEYS; TASK ANALYSIS; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 101P.


AVAILABILITY: ERIC DOCUMENT REPRODUCTION SERVICE, P. O. BOX 199, ARLINGTON, VA 22215

IRIS ACCESSION NUMBER: EW007270
PUBLICATION DATE: APR 76

TITLE: ABC A CLASSIFICATION SYSTEM FOR WATER AND WASTEWATER FACILITIES AND PERSONNEL PART 3--EXISTING EXAMINATION SYSTEMS: A CURRENT STATUS REPORT.

PERSONAL AUTHOR: SEIDEL, HARRIS F.

DESCRIPTOR: CERTIFICATION; CLASSIFICATION; EVALUATION; EXAMINATIONS; OPERATOR TRAINING; PERSONNEL; PROGRAM DEVELOPMENT; RECOMMENDATIONS; STATE-OF-THE-ART REVIEW; TESTING: UTILITIES (WATER): WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 32P.

ABSTRACT: THIS REPORT EXAMINES EFFORTS TO DEVELOP BASELINE DATA AND EVALUATION PROCEDURES THAT CAN BE USED TO IMPROVE EXISTING OR DEVELOP NEW WATER AND WASTEWATER OPERATOR CERTIFICATION PROGRAMS. SECTIONS INCLUDE: SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS; EXAMINATION SURVEY RESULTS; EXAMINATION ADMINISTRATIVE PROCEDURES AND THE EEoC REQUIREMENTS; THE ABC EXAMINATION SYSTEM; EXAMINATION DEVELOPMENT; EXISTING EXAMINATIONS; OCCUPATIONAL LICENSING AND PUBLIC POLICY; AND THE PROPOSED ABC EXAMINATION SYSTEM.

AVAILABILITY: U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER PROGRAM OPERATIONS, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW007271
PUBLICATION DATE: JUL 75

TITLE: ABC A CLASSIFICATION SYSTEM FOR WATER AND WASTEWATER FACILITIES AND PERSONNEL - PART 2 -- PERSONNEL CERTIFICATION AND EXAMINATION SYSTEM.

PERSONAL AUTHOR: VUBBEN, ROBERT L.

DESCRIPTOR: ABC; CERTIFICATION; CLASSIFICATION; EXAMINATIONS; OPERATORS; OPERATOR TRAINING; PERSONNEL; PROGRAM DESCRIPTIONS; RECOMMENDATIONS; TRAINING PROGRAMS; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 59P.

ABSTRACT: THE BASIC ELEMENTS OF THIS REPORT ARE: (1) IDENTIFICATION OF PERSONNEL REQUIRING CERTIFICATION BY LAW OR REGULATION; (2) IDENTIFICATION OF PERSONNEL WHO SHOULD BE ENCOURAGED TO BE CERTIFIED TO IMPROVE THE FACILITY OPERATION AND TO ENSURE A METHOD OF ENTRY INTO THE FIELD; (3) A STANDARD DEFINITION OF THE TERM "RESPONSIBLE CHARGE"; (4) A METHOD OF CLASSIFICATION COMPARISON BETWEEN ABC AND INDIVIDUAL CERTIFICATION PROGRAMS BASED ON EDUCATION AND EXPERIENCE REQUIREMENTS; AND (5) AN EXAMINATION SYSTEM AND INITIAL EXAMINATION CRITERIA BASED ON A MODULAR PLAN.

AVAILABILITY: U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF WATER PROGRAM OPERATIONS, WASHINGTON, DC 20460
IRIS accession number: EW007272

Publication date: Jul 76

Title: ABC Roles and Responsibilities for Developing a Comprehensive State Water and Wastewater Operator Training Program.

Personal author: Wubena, Robert L.

Description: Educational Programs; Educational Needs; Management; Operator Training; Program Descriptions; Recommendations; Surveys; State Programs; Training Needs; Training Programs; Utilities; Wastewater Treatment

Descriptive note: 37P.

Abstract: This study is the first nationwide comprehensive analysis of the availability of training and problems associated with the development of effective state programs. Based on the analysis of four state programs and a survey of the other states and 10 provinces, this report identifies the roles and responsibilities for utility management, educational institutions, regulatory agencies, consulting engineers, professional organizations and others. Sections include: Basis for Effective Training Programs; Establishment of a Basis for Training; Development of Existing Guidelines and Methods; Standardized Delivery Systems; and Means to Provide Coordination and Control.

Availability: Office of Water Programs Operations, U.S. Environmental Protection Agency, Washington, DC 20460

IRIS accession number: EW007275

Publication date: Oct 80

Title: Section 404 Program Strategy.

Description: Clean Water Act; Dredging; Environmental Impact; Federal Legislation; Legislation; Program Descriptions; Regulations; Rivers; Standards; Water Quality; Waterways; Wetlands

Descriptive note: 12P.

Abstract: This publication outlines various aspects of Section 404 of the Clean Water Act which pertains to regulation of dredge and fill operations. Discussed in this document are U.S.E.P.A.'s policies, goals, objectives, and strategies for meeting its 404 program responsibilities under the Act.

Availability: U.S. Environmental Protection Agency, Office of Water Regulations and Standards, Criteria and Standards Division, Washington, DC 20460

IRIS accession number: EW007276

Publication date: Nov 79

Title: Wastewater Treatment Plant Continuing Training Program.

Personal author: Davanzo, A. C.

Description: Curricula; Educational Programs; Instructional Materials; Manpower Development; Michigan; Operator Training; Secondary Education; Program Descriptions; Training Programs; Wastewater Treatment

Abstract: The permanent training program described in the Detroit Water and Sewerage Department's Consent Decree (DWS&D) is the Michigan Department of Natural Resources' (M.N.R.) part of a Consent Judgment Resulting in Litigation Against DWS&D. Required in the Consent Judgment was the Development of a Permanent On-Going Training Program for the Detroit Water and Sewerage Treatment Plant. Discussed are program goals and objectives, training needs, role of the training program, program evaluation, staff, curriculum development, and the wastewater plant operator apprenticeship program.

Availability: Detroit Water and Sewerage Department, Detroit, MI 48207-2892

IRIS accession number: EW007277

Publication date: Feb 80

Title: Recreation and Land Use: The Public Benefits of Clean Water.

Description: Citizen Participation; Conservation

Abstract: This handbook presents guidelines for the use of the best available and practical forest management practices for the control of soil erosion and water pollution on logging operations. Included are guidelines for truck haul roads, skid roads and trails, filter strips, landings and concentration yards, seeding mixes, and techniques and pesticides.

Availability: EPA Instructional Resource Center, 1200 Chambers Road, Room 310, Columbus, OH 43212-1792
ABSTRACT: THE PURPOSE OF THIS PUBLICATION IS TO PRESENT AN OVERVIEW OF THE RECREATION AND LAND USE BENEFITS EMERGING FROM WATER QUALITY IMPROVEMENTS. IT OUTLINES STEPS THAT CAN BE TAKEN BY INTERESTED CITIZENS AND PUBLIC OFFICIALS TO OBTAIN PUBLIC BENEFITS FROM COORDINATING RECREATION AND WATER CLEANUP PROGRAMS. SECTIONS INCLUDE: ENLISTING GOVERNMENT AND OTHER HELP; WATER CLEANUP, RECREATION, AND CONSERVATION OPPORTUNITIES; AND, WATER CLEANUP AND LAND USE.

AVAILABILITY: U.S. ENVIRONMENTAL PROTECTION AGENCY, OFFICE OF ENVIRONMENTAL REVIEW, WASHINGTON, DC 20460

IRIS ACCESSION NUMBER: EW007300
PUBLICATION DATE: DEC 81
TITLE: INTERNATIONAL NUTRIENT CONTROL TECHNOLOGY FOR MUNICIPAL EFFLUENTS.
PERSONAL AUTHOR: BARTH, EDWIN F.; STERSEL, R. DAVID
DESCRIPTOR: *ACTIVATED SLUDGE; COSTS; DESIGN; EFFLUENTS; INTERNATIONAL PROGRAMS; LOCALITIES; NITRIFICATION; HYDROGEN; NUTRIENTS; OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; PHOSPHORUS; SEMINARS; TECHNOLOGICAL ADVANCEMENTS; WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 1691-1701P.

ABSTRACT: A SUMMARY OF DESIGN, PERFORMANCE, OPERATIONAL CHARACTERISTICS, AND COSTS IS PRESENTED FOR NUMEROUS FULL-SCALE PLANTS REPORTED ON IN AN INTERNATIONAL SEMINAR ON NUTRIENT CONTROL TECHNOLOGY FOR MUNICIPAL EFFLUENTS SPONSORED BY THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA).

AVAILABILITY: JOURNAL OF WATER POLLUTION CONTROL FEDERATION, V53 N12

IRIS ACCESSION NUMBER: EW007301
PUBLICATION DATE: DEC 81
TITLE: MATERIALS BALANCE IN AERATED STATIC PILE COMPOSTING.
PERSONAL AUTHOR: SIKORA, L. J.; AND OTHERS
DESCRIPTOR: *COMPOSTING; COSTS; DESIGN; EXTENDED AERATION; MATERIAL BALANCE; SLUDGE; WASTE DISPOSAL; WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 1702-1707P.

ABSTRACT: A MATERIALS BALANCE EXPERIMENT WAS CONDUCTED ON THE BELTSVILLE AERATED PILE METHOD FOR STATIC PILE WASTEWATER SLUDGE COMPOSTING TO DETERMINE WEIGHTS, VOLUMES, AND LOSSES OF INPUT AND OUTPUT MATERIALS UNDER A STEADY-STATE CONDITION.

AVAILABILITY: JOURNAL OF WATER POLLUTION CONTROL FEDERATION, V53 N12

IRIS ACCESSION NUMBER: EW007302
PUBLICATION DATE: DEC 81
TITLE: EXAMINATION OF PROCESS PARAMETERS AFFECTING SLUDGE DEWATERING WITH A DIAPHRAGM FILTER PRESS.
PERSONAL AUTHOR: PIETILA, KENNETH A.; JOUBERT, PAUL J.
DESCRIPTOR: DIAPHRAGM FILTER PRESSES; EQUIPMENT; FILTER PRESSES; FILTERS; PERFORMANCE EVALUATION; PILOT TESTS; POLYMERS; PROCESS OPTIMIZATION; RESEARCH REPORTS; SLUDGE
DESCRIPTIVE NOTE: 1708-1716P.

ABSTRACT: THIS PAPER EXAMINES THE PROCESS PARAMETERS INFLUENCING THE PERFORMANCE OF FILTER PRESSES BASED ON PILOT TESTING. ONE OF THE KEY PARAMETERS EXAMINED WAS THE FEED SOLIDS CONCENTRATION AND ITS EFFECT ON YIELD, CHEMICAL REQUIREMENT, CYCLE TIME, AND CAKE SOLIDS CONCENTRATION. AS A RESULT OF THE TESTING AND DATA ANALYSIS, A HIGH DEGREE OF CONFIDENCE CAN BE PUT ON THE DATA FOR SIZING FILTER PRESSES. CONTINUED TESTING ALSO INDICATES THE PROCESS FLEXIBILITY AVAILABLE WITH DIAPHRAGM FILTER PRESSES NOT PRESENT WITH CONVENTIONAL TYPE PRESSES.

AVAILABILITY: JOURNAL OF WATER POLLUTION CONTROL FEDERATION, V53 N12

IRIS ACCESSION NUMBER: EW007303
PUBLICATION DATE: DEC 81
TITLE: SEPTIC LEACHATE SURVEYS FOR LAKESIDE SEWER NEEDS EVALUATION.
PERSONAL AUTHOR: KERFOOT, WILLIAM B.; SKINNER, STUART M., JR.
DESCRIPTOR: ALGAE; GROUNDWATER; LEACHING; PERFORMANCE EVALUATION; SEPTIC SYSTEMS; SEWERS; WASTEWATER TREATMENT; WATER POLLUTION
DESCRIPTIVE NOTE: 1717-1725P.

FROM INDIVIDUAL SEPTIC UNITS SUGGEST THAT FAR MORE ATTENTION SHOULD BE PAID TO GROUNDWATER FLOW PATTERNS FOR ON-LOT SYSTEM DESIGN.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V33 N12

IRIS ACCESSION NUMBER: EW007304

PUBLICATION DATE: DEC 81

TITLE: SETTLEABILITY OF URBAN RUNOFF POLLUTION.

PERSONAL AUTHOR: WHIPPLE, WILLIAM, JR.; HUNTER, JOSEPH V.

DESCRIPTION: DETENTION BASINS; HEAVY METALS; NONPOINT POLLUTION; PARTICULATES; RESEARCH; RETENTION; RUNOFF; SETTLING; STORMWATER; URBAN AREAS; WATER RESOURCES

DESCRIPTIVE NOTE: 1726-1731P.

ABSTRACT: WITH THE GROWING INTEREST IN STORMWATER MANAGEMENT, AND PARTICULARLY OF THE POSSIBILITY OF USING DETENTION BASINS FOR REMOVING PARTICULATE POLLUTION, IT IS IMPORTANT TO DETERMINE THE EFFECTIVENESS OF SUCH BASINS FOR REMOVAL OF VARIOUS POLLUTING SUBSTANCES IN THE STUDY. SAMPLES OF URBAN RUNOFF WERE ALLOWED TO SETTLE IN A LARGE TUBE, AND THE QUANTITY OF EACH POLLUTANT SETTLING IN A GIVEN PERIOD WAS DETERMINED. RESULTS INDICATE THE PROBABLE EFFECTIVENESS OF RETENTION OF STORM WATERS/ IN REMOVING PARTICULATE POLLUTANTS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V33 N12

IRIS ACCESSION NUMBER: EW007305

PUBLICATION DATE: DEC 81

TITLE: ECONOMIC AND EFFECTIVE PHOSPHORUS CONTROL AT A DOMESTIC-INDUSTRIAL WASTEWATER PLANT.

PERSONAL AUTHOR: VAN DAN, DORIS

DESCRIPTION: ACTIVATED SLUDGE; CASE STUDIES; CHROMIUM; DOMESTIC WASTES; ECONOMIC FACTORS; EVALUATION; FACILITIES; INDUSTRIAL WASTES; PHOSPHORUS; PICKLING; TANNING; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1732-1737P.

ABSTRACT: THE GRAND HAVEN, MICH., WASTEWATER PLANT WAS DESIGNED TO ACCOMMODATE THE DOMESTIC WASTEWATER FROM GRAND HAVEN AND THE ADJACENT VILLAGE OF SPRING LAKE, AS WELL AS A SIGNIFICANT CONTRIBUTION OF WASTES FROM A LOCAL CHROME AND TANNING TREATING OPERATION. FIVE-YEAR OPERATING RESULTS AND COST EXPERIENCE OF PHOSPHORUS CONTROL WITH THE ADDITION OF A SILENT PICKLE LIQUOR TO PRIMARY SETTLING TANK INFLOW. FOLLOWED BY ACTIVATED SLUDGE TREATMENT IS SHOWN. NEW CONCENTRATED SIDE STREAMS FROM HEAT TREATMENT SUPERHATRAT

MUST BE CONSIDERED IN OVERALL PLANT EFFICIENCY IS ALSO DISCUSSED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V33 N12

IRIS ACCESSION NUMBER: EW007328

PUBLICATION DATE: DEC 81

TITLE: I N HIBITION OF NITROGENOUS BOD AND TREATMENT PLANT PERFORMANCE EVALUATION.

PERSONAL AUTHOR: DACE, RICHARD E.

DESCRIPTION: ANALYTICAL TECHNIQUES; BACTERIA; BIOCHEMICAL OXYGEN DEMAND; EFFLUENTS; INHIBITION; NITRIFICATION; NITROGEN; OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 1738-1741P.

ABSTRACT: REPORTS OF THE PAST 35 YEARS DEMONSTRATE THE NEED TO INHIBIT NITRIFICATION IN THE BIOCHEMICAL OXYGEN DEMAND (BOD) TEST ON SECONDARY EFFLUENTS FROM TREATMENT PLANTS WITH PARTIAL NITRIFICATION. SUCH PLANTS CONTAIN NITRIFYING BACTERIA AS A PART OF THE SUSPENDED SOLIDS IN THE EFFLUENT. THE USE OF THE STANDARD UNINHIBITED BOD TEST TO ASSESS THE PERFORMANCE OF WASTEWATER TREATMENT PLANTS HAS SERIOUS CONSEQUENCES. A PLANT ACHIEVING PARTIAL NITRIFICATION WILL SEEM TO BE DOING MORE POORLY THAN A PLANT THAT IS NOT NITRIFYING, FROM THE STANDPOINT OF TOTAL OXYGEN DEMAND SATISFIED. JUST THE OPPOSITE IS TRUE. ANOTHER SERIOUS CONSEQUENCE IS THE GENERATION OF FALSE PERFORMANCE DATA THAT ARE LATER USED BY DESIGN ENGINEERS TO SELECT AND SIZE TREATMENT SYSTEMS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V33 N12
ADDITIONAL REFERENCES ARE PROVIDED.

AVAILABILITY: EPA SMALL WASTEWATER FLOWS CLEARINGHOUSE, 258 STEWART STREET, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV 26506

IRIS ACCESSION NUMBER: EW007329

PUBLICATION DATE: 81

TITLE: COST EFFECTIVENESS ANALYSIS.

DESCRIPTOR: ANALYTICAL TECHNIQUES; CASE STUDIES; COST EFFECTIVENESS; COSTS; DESIGN; ECONOMICS; ORAL WASTEWATER SYSTEMS; OPERATIONS (WASTEWATER); WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 48P.

ABSTRACT: THIS REPORT PRESENTS THE GENERAL COST-EFFECTIVENESS ANALYSIS PROCEDURES APPROPRIATE TO SMALL COTERIAL AND ORAL WASTEWATER TREATMENT SYSTEMS DESIGN. COST COMPONENTS OF THE ANALYSIS IS DEFINED AND THE GENERAL PROCEDURES FOR THEIR DETERMINATION OUTLINED. THREE EXAMPLES ON THE APPLICATION OF THE ANALYSIS IS PRESENTED IN A CASE STUDY.

AVAILABILITY: EPA SMALL WASTEWATER FLOWS CLEARINGHOUSE, 258 STEWART STREET, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV 26506

IRIS ACCESSION NUMBER: EW007330

PUBLICATION DATE: 81

TITLE: NOVEL ALTERNATIVES SMALL ALTERNATIVE WASTEWATER SYSTEMS WORKSHOPS.

DESCRIPTOR: AQUACULTURE; AQUATIC ENVIRONMENTS; ALTERNATIVE TECHNOLOGIES; DESIGN; FACILITIES; MANSIONS; PONDS; SMALL WASTEWATER FLOWS; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 60P.

ABSTRACT: THIS SECTION OUTLINES NOVEL ALTERNATIVES FOR TREATMENT OF SMALL WASTEWATER FLOWS, AND EMPHASIZES THE USE OF AQUACULTURE BASED SYSTEMS. TOPICS INCLUDE: AQUACULTURE SYSTEMS; COMBINED AQUATIC PLANTS; MEADOW-PONDS AND MARSH-POND SYSTEMS; MIXED AQUACULTURE; PEAT BEDS; FISH AQUACULTURE; VASCULAR AQUATIC PLANTS; AND, EXISTING NATURAL WETLANDS.

AVAILABILITY: EPA SMALL WASTEWATER FLOWS CLEARINGHOUSE, 258 STEWART STREET, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV 26506

IRIS ACCESSION NUMBER: EW007331

PUBLICATION DATE: 81

TITLE: SEPTAGE MANAGEMENT.

DESCRIPTOR: CASE STUDIES; COST EFFECTIVENESS; COSTS; DESIGN; FACILITIES; MAINTENANCE; MANAGEMENT; ORAL WASTEWATER SYSTEMS; SEPTAGE; SLUDGE; TECHNOLOGICAL ALTERNATIVES; WASTE DISPOSAL; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 51P.

ABSTRACT: THIS REPORT PROVIDES AN INTRODUCTION AND COMPARATIVE DISCUSSION OF MAJOR SEPTAGE TREATMENT AND DISPOSAL ALTERNATIVES. COST EFFECTIVE COMPARISONS OF ALTERNATIVES ARE PROVIDED IN A CASE STUDY AND A MORE DETAILED DESCRIPTION OF ONE COST EFFECTIVE SOLUTION, INCLUDING CAPITAL AND OPERATION AND MAINTENANCE COST ESTIMATES, IS PRESENTED.

AVAILABILITY: EPA SMALL WASTEWATER FLOWS CLEARINGHOUSE, 258 STEWART STREET, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV 26506

IRIS ACCESSION NUMBER: EW007334

PUBLICATION DATE: MAR 81

TITLE: SUMMARY OF STATE GUIDELINES AND REGULATIONS FOR SMALL WASTEWATER FLOWS.

DESCRIPTOR: GUIDELINES; LEGISLATION; MANUALS; ORAL DISPOSAL; POLICIES; REGULATIONS; SMALL WASTEWATER FLOWS; STATE REGULATIONS; WASTE DISPOSAL; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 60P.

ABSTRACT: THE PURPOSE OF THIS INFORMATION PACKET IS TO PROVIDE AN UPDATED LISTING OF STATE LAWS, REGULATIONS, GUIDELINES AND MANUALS THAT PERTAIN TO ORAL WASTEWATER DISPOSAL SYSTEMS. THE LISTINGS WERE ASSEMBLED FROM THE DATA FILES OF THE SMALL WASTEWATER FLOWS CLEARINGHOUSE AND FROM QUESTIONNAIRES ADDRESSED TO WASTEWATER AGENCIES AND LAND- GRANT UNIVERSITY EXTENSION SPECIALISTS.

AVAILABILITY: EPA SMALL WASTEWATER FLOWS CLEARINGHOUSE, 258 STEWART STREET, WEST VIRGINIA UNIVERSITY, MORGANTOWN, WV 26506

IRIS ACCESSION NUMBER: EW007336

PUBLICATION DATE: MAR 81

TITLE: FLOW REDUCTION METHODS ANALYSIS PROCEDURES, EXAMPLES.

DESCRIPTOR: ANALYTICAL TECHNIQUES; CASE STUDIES; COMMUNITIES; COST EFFECTIVENESS; COSTS; DESIGN; FACILITIES;
FLOW REDUCTION; MEASUREMENT; PROGRAM PLANNING; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 91 P.

ABSTRACT: THIS IS THE FIRST OF A THREE-VOLUME SERIES TITLED "WASTEWATER FLOW REDUCTION ANALYSIS AND PROGRAM PLANNING," PART I OF THIS VOLUME PROVIDES BACKGROUND INFORMATION ON FLOW REDUCTION, INCLUDING ITS ROLE IN FACILITIES PLANNING. ITS RELATIONSHIP TO OTHER WASTEWATER PROGRAMS, AND CASE EXAMPLES OF COMMUNITIES WHICH HAVE IMPLEMENTED PROGRAMS. PART II PROVIDES A STEP-BY-STEP METHODOLOGY TO SERVE AS A GUIDE IN CARRYING OUT THE FLOW REDUCTION ANALYSIS. DESCRIPTIONS OF VARIOUS FLOW REDUCTION MEASURES ARE INCLUDED ALONG WITH AN ASSESSMENT OF THEIR COST EFFECTIVENESS.

AVAILABILITY: GENERAL SERVICES ADMINISTRATION, CENTRALIZED MAILING LISTS SERVICES, BLDG. 41, DENVER RESEARCH CENTER, DENVER, CO 80225

IRIS ACCESSION NUMBER: EW007337
PUBLICATION DATE: JUN 81
TITLE: COMPOSTING PROCESSES TO STABILIZE AND DISINFECT MUNICIPAL SEWAGE SLUDGE.
DESCRIPTOR: *COSTS; *COST EFFECTIVENESS; *COMPOSTING; *DESIGN; *DISINFECTION; *FACILITIES; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *SEWAGE; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 43 P. MCD-79
ABSTRACT: THIS TECHNICAL BULLETIN IS INTENDED TO PROVIDE GUIDANCE FOR THE DESIGN AND OPERATION OF SEWAGE SLUDGE COMPOSTING FACILITIES. THE FOCUS IS ON THE COST-EFFECTIVE DESIGN AND OPERATION OF COMPOSTING FACILITIES. THE ADEQUATE REDUCTION OF PATHOGENS IN THE FINISHED COMPOST, AND THE ASSURANCE OF AESTHETICALLY ACCEPTABLE AND SAFE WORKING CONDITIONS FOR SITE EMPLOYEES AND NEARBY RESIDENTS. CHAPTERS INCLUDE: USE OF THE PERFORMANCE RECOMMENDATIONS; CURRENT STATUS OF CONSTRUCTION GRANTS FUNDING; PERFORMANCE RECOMMENDATIONS; BACKGROUND OR PRESENT PRACTICE IN THE UNITED STATES; AND DETAILED GUIDANCE FOR EFFECTIVE OPERATION OF COMPOSTING SYSTEMS.

AVAILABILITY: GENERAL SERVICES ADMINISTRATION, CENTRALIZED MAILING LISTS SERVICES, BLDG. 41, DENVER RESEARCH CENTER, DENVER, CO 80225

IRIS ACCESSION NUMBER: EW007338
PUBLICATION DATE: JAN 81
TITLE: NPDES COMPLIANCE EVALUATION INSPECTION MANUAL.
DESCRIPTOR: *COMPLIANCE; *EFFLUENTS; *ENFORCEMENT; *INSPECTION; *MANUALS; *MONITORING; *NPDES; PERMITS; *POLLUTION CONTROL; *REGULATIONS; *WATER QUALITY
DESCRIPTIVE NOTE: 111 P. FRD-21
ABSTRACT: THIS REPORT PRESENTS THE RESULTS OF A STUDY OF THE COSTS FOR CONSTRUCTION OF MUNICIPAL OWNED WASTEWATER COLLECTION SYSTEMS. ALL DATA ARE FROM GRAVITY SEWER SYSTEMS
INCLUDING THOSE FROM SMALL COMMUNITIES. INFORMATION ON 777 COLLECTION SYSTEM PROJECTS IS REPORTED. THE REPORT CONTAINS A DETAILED BREAKDOWN OF ALL COSTS OF VARIOUS PROJECT PHASES AND PARAMETERS.

AVAILABILITY: GENERAL SERVICES ADMINISTRATION, CENTRALIZED MAILING LISTS SERVICES, BLDG. 41, DENVER RESEARCH CENTER, DENVER, CO 80225

IRIS ACCESSION NUMBER: EW007343
PUBLICATION DATE: JUL 81
TITLE: CROPPING SYSTEMS FOR TREATMENT AND UTILIZATION OF MUNICIPAL WASTEWATER AND SLUDGE.
PERSONAL AUTHOR: ELLIS, BOYD C.; AND OTHERS
DESCRIPTOR: *AGRICULTURAL PRACTICES; *HEAVY METALS; *LAND APPLICATION; *MANAGEMENT; MUNICIPALITIES; *NITROGEN; PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SLUDGE; *WASTE DISPOSAL; WASTEWATER TREATMENT
DESCRIPTIVE NOTE: PB31-107254
ABSTRACT: THIS RESEARCH REPORT DISCUSSES A STUDY THAT ATTEMPTED TO DEVELOP MORE EFFECTIVE CROP MANAGEMENT SYSTEMS TO REMOVE NITROGEN FROM WASTEWATER OVER A LONGER PERIOD OF TIME DURING THE GROWING SEASON. MIXED CROPPING OF CORN AND SEVERAL FORAGES WERE EVALUATED FOR THEIR NITROGEN REMOVAL EFFICIENCY AND EFFECT ON TOTAL YIELD. IN ADDITION, SLUDGE COMPATIBILITY AND METAL CONTAMINATED SLUDGE STUDIES WERE CONDUCTED TO DETERMINE THE FEASIBILITY OF APPLYING SLUDGE TO LAND WHICH IS BEING USED IN A WASTEWATER TREATMENT SYSTEM. THE STUDIES EXAMINED THE EFFECTS OF APPLICATIONS OF METAL CONTAMINATED SLUDGE. RECOMMENDATIONS FOR MANAGEMENT PRACTICES FOR NITROGEN CONTROL ARE PROVIDED.
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SYSTEM, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007344
PUBLICATION DATE: JUL 81
TITLE: WASTEWATER TREATMENT BY ROOTED AQUATIC PLANTS IN SAND AND GRAVEL TRENCHES.
PERSONAL AUTHOR: POPE, PAMELA R.
DESCRIPTOR: *ALTERNATIVE TECHNOLOGY; *AQUATIC PLANTS; *EFFLUENTS; INDUSTRIAL WASTES; MUNICIPALITIES; *OPERATIONS (WASTEWATER); *RESEARCH REPORTS; TRENCHES; WASTEWATER TREATMENT; WATER QUALITY
DESCRIPTIVE NOTE: PB31-21324J
ABSTRACT: A PATENTED PROCESS DEVELOPED BY THE MAX PLANCK INSTITUTE (MPI) OF WEST GERMANY TO TREAT INDUSTRIAL WASTES WAS EVALUATED AS AN ENERGY-EFFICIENT METHOD TO TREAT MUNICIPAL WASTEWATER. THE MAJOR GOAL WAS TO ACHIEVE EFFLUENTS MEETING THE U.S. FEDERAL EFFLUENT STANDARDS USING THIS NOVEL BIOLOGICAL TREATMENT PROCESS THAT REQUIRES A MINIMAL AMOUNT OF MECHANICAL EQUIPMENT AND MANPOWER FOR NORMAL OPERATION. THE MOUTON NIGUEL WATER DISTRICT (MNWD) OF LAGUNA, CALIFORNIA, CONSTRUCTED AND OPERATED AN EARTHEN TRENCH SYSTEM USING ROOTED AQUATIC PLANTS FOR THE TREATMENT OF WASTEWATER. AN 11-MONTH STUDY DEMONSTRATED THAT RAW SCREENED WASTEWATER APPLIED TO THE TRENCH SYSTEM AT A RATE NOT EXCEEDING 95 MG/D (25,000 GPD) QUALITY, SPATIAL REQUIREMENTS WERE ABOUT THE SAME AS FOR A SEPTIC TANK SYSTEM.
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007345
PUBLICATION DATE: MAY 81
TITLE: HIGH-LEVEL OZONE DISINFECTION OF MUNICIPAL WASTEWATER EFFLUENTS.
PERSONAL AUTHOR: STOVER, ENOS L.; AND OTHERS
DESCRIPTOR: *COSTS; *DISINFECTION; *EFFLUENTS; ENGINEERING; *FACILITIES; MUNICIPALITIES; OZONE; OPERATIONS (WASTEWATER); RESEARCH REPORTS; WASTEWATER TREATMENT; WATER QUALITY
DESCRIPTIVE NOTE: PB31-172272
ABSTRACT: A 20-MONTH OPERATING EXPERIMENTAL PROGRAM CONDUCTED AT MARLBOROUGH, MASSACHUSETTS, EVALUATED THE FEASIBILITY, ENGINEERING, AND ECONOMIC ASPECTS OF ACHIEVING HIGH-LEVEL EFFLUENT DISINFECTION WITH OZONE. IMPACTS OF CARRIER GAS OZONE CONCENTRATION, CARRIER GAS FLOW RATE, CARRYO- LIQUID RATIO, AND APPLIED OZONE DOSE ON CONTAMINANT TRANSFER EFFICIENCIES AND ABSORBED OZONE CONCENTRATIONS ARE KEY FACTORS AFFECTING DISINFECTION PERFORMANCE THAT MUST BE EVALUATED FOR EFFICIENT DESIGN OF OZONE DISINFECTION SYSTEMS. GENERATOR AND CONTACTOR MONITORING OR MAPPING PROCEDURES AND RESULTS USING BOTH AIR AND OXYGEN CARRIER CASES ARE PRESENTED AS AN APPROACH FOR DETERMINING THE ECONOMICAL OZONE GENERATOR OPERATING RANGE AND OPTIMAL OZONE TRANSFER EFFICIENCY.
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007346
PUBLICATION DATE: MAR 81
TITLE: BIOASSAYS FOR TOXIC AND HAZARDOUS MATERIALS - TRAINING HANUAL PRINCIPLES AND PROCEDURES OF AQUATIC TOXICOLOGY.
PERSONAL AUTHOR: MEDEIROS, C.; AND OTHERS
ABSTRACT: THIS MANUAL PRESENTS THE PROCEDURES WHICH ARE USED TO EVALUATE THE TOXICITY OF CHEMICAL SUBSTANCES TO MOLLUSC LIFE. SECTIONS INCLUDE: STATIC TOXICITY TESTS; FLOW-TERM TOXICITY TESTS; RENAL TOXICITY TESTS; SELECTION OF SPECIES; PREPARATION AND ACCLIMATION OF TEST FISH; SELECTION AND PREPARATION OF EXPERIMENTAL WATERS; CALCULATIONS AND REPORTING; INTERPRETATION OF TOXICITY TESTS; EVALUATION OF SIMPLE TOXICITY: LAB PROCEDURE-Screening Tests; Determination of the 24-HOUR LC50 AND TOXICITY THRESHOLD USING THE IN VITRO JAR TEST; AND, CONCURRENT TESTING DURING TIME-CONSTRAINED LABORATORY EXERCISES.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD - ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007348
PUBLICATION DATE: 77
TITLE: SELF-MONITORING PROCEDURES: BASIC PARAMETERS FOR MUNICIPAL EFFLUENTS.

ABSTRACT: THIS IS ONE OF SEVERAL SHORT-TERM COURSES DEVELOPED BY THE EPA ENVIRONMENTAL PROTECTION AGENCY AND ASSOCIATED EDUCATION INSTITUTIONS. THIS INSTRUCTOR’S GUIDE IS INTENDED TO ASSIST OTHER TRAINING ORGANIZATIONS IN CONDUCTING TRAINING OF WASTEWATER TREATMENT PLANT PERSONNEL. PART I OF THIS MANUAL IS CONCERNED WITH ADMINISTRATIVE ASPECTS OF PLANNING, PREPARING, AND CONDUCTING THE COURSE. PART II CONTAINS COURSE CONTENT, LEARNING OBJECTIVES, AND LESSON GUIDES.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS RD., COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007349
PUBLICATION DATE: SEP 81
TITLE: HAZARDOUS WASTE FACILITIES WITH INTERIM STATUS MAY ENDANGER PUBLIC HEALTH AND THE ENVIRONMENT.
ABSTRACT: THIS REPORT SUMMARIZES THE RESULTS OF A REVIEW OF THE USEPA AND STATE PROGRAMS TO ENFORCE PESTICIDE LAWS, AND SUGGESTS WAYS TO IMPROVE PROGRAM ACTIVITIES. EXAMINED ARE PESTICIDE ENFORCEMENT PROGRAMS, MANAGEMENT, AND PESTICIDE REGISTRATION PROGRAMS. THE REVIEW FOUND THAT STRONGER ENFORCEMENT IS NEEDED AGAINST MISUSE OF PESTICIDES.

AVAILABILITY: U.S. GENERAL ACCOUNTING OFFICE, DOCUMENT HANDLING AND INFORMATION SERVICES FACILITY, P.O. BOX 6015, GAITHERSBURG, MD 20760

IRIS ACCESSION NUMBER: EW007352

PUBLICATION DATE: 73

TITLE: A COURSE ON OPERATIONAL CONSIDERATIONS IN WASTEWATER TREATMENT PLANT DESIGN - STUDENT MANUAL.

DESCRIPTOR: *DESIGN; *FACILITIES; *INSTRUCTIONAL MATERIALS; *MODIFICATIONS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *STUDY GUIDES; UPGRADING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 325P. PRICE: $1.00 PER DOCUMENT PLUS $.03 PER PAGE.

ABSTRACT: THE MAIN PURPOSES OF THIS MANUAL ARE TO EXAMINE 14 AREAS OF CONSIDERATION FOR UPGRADING THE DESIGN OF WASTEWATER PLANT FACILITIES, AND TO SERVE AS A REFERENCE FOR ESTABLISHING CRITERIA FOR UPGRADING WASTEWATER TREATMENT PLANTS. THE MANUAL ALSO FURNISHES INFORMATION FOR MODIFYING PLANT DESIGN TO COMPENSATE FOR CURRENT ORGANIC AND HYDRAULIC OVERLOADS AND/OR TO MEET MORE STRINGENT FUTURE TREATMENT REQUIREMENTS.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD - ROOM 310, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007354

PUBLICATION DATE: 78

TITLE: LOW PRESSURE SEWER SYSTEMS.

DESCRIPTOR: *DESIGN; *EQUIPMENT; *HYDRAULICS; *INSTRUCTIONAL MATERIALS; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *PRESSURE SEWERS; PUMPS; SEWERS; WASTEWATER COLLECTION; WASTEWATER TREATMENT; WASTE DISPOSAL; WORKSHOPS

DESCRIPTIVE NOTE: 60P.

ABSTRACT: PRESENTED IS THE CONTEXT MATERIAL NEEDED TO DEVELOP A WORKSHOP ON THE TYPES OF EQUIPMENT AVAILABLE FOR LOW PRESSURE SEWERS AND THE HYDRAULIC METHODS USED TO DESIGN SUCH SYSTEMS.

AVAILABILITY: EPA SMALL WASTEWATER FLOWS CLEARING HOUSE, 258 STEWART STREET, WEST VIRGINIA UNIVERSITY, HUNTINGTON, WV 25755

IRIS ACCESSION NUMBER: EW007366

PUBLICATION DATE: JAN 82

TITLE: THE CHLORINATION QUESTION.

PERSONAL AUTHOR: HILEMAN, BETTE

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *AQUATIC ENVIRONMENTS; *CHEMISTRY; *CHLORINATION; *CHLORINE; *CONFERENCE REPORTS; *DRINKING WATER; *DISINFECTION; *HEALTH EFFECTS; *PUBLIC HEALTH; RESEARCH REPORTS; *WATER QUALITY

DESCRIPTIVE NOTE: 15A-18AP.

ABSTRACT: THIS ARTICLE REPORTS ON A CONFERENCE ON THE USE OF CHLORINE IN DRINKING WATER AND ITS IMPACTS. AMONG THE ISSUES REPORTED ARE: ALTERNATIVE DISINFECTANTS, HEALTH EFFECTS OF CHLORINATION, POPULATION STUDIES, COST-BENEFIT ANALYSES, ANALYTICAL MEASUREMENTS, THE CHEMISTRY OF CHLORINATION, AND AQUATIC ECOSYSTEMS.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V16 N1

IRIS ACCESSION NUMBER: EW007367

PUBLICATION DATE: JAN 82

TITLE: HUMIC SUBSTANCES.

PERSONAL AUTHOR: JOSEPHSON, JULIAN

DESCRIPTOR: *AQUATIC ENVIRONMENTS; *BIOCHEMISTRY; *CHEMISTRY; *DRINKING WATER; HUMIC SUBSTANCES; RESEARCH NEEDS; RESEARCH REPORTS; STATE-OF-THE-ART REVIEWS; *TERRESTRIAL ENVIRONMENTS; *WATER QUALITY

DESCRIPTIVE NOTE: 20A-24AP.

ABSTRACT: THIS ARTICLE EXAMINES THE CHEMISTRY AND BIOCHEMISTRY OF HUMIC SUBSTANCES. RESEARCH INVESTIGATIONS ARE REPORTED AND LEADING EXPERTS IN THE FIELD OF HUMIC MATERIALS GIVE THEIR PERCEPTIONS OF THE PROBLEMS AND FUTURE RESEARCH NEEDS. ALSO REPORTED IS THE FORMATION OF THE INTERNATIONAL HUMIC SUBSTANCES SOCIETY.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V16 N1

IRIS ACCESSION NUMBER: EW007368

PUBLICATION DATE: DEC 81

TITLE: ARE YOU AN INFORMED CONSUMER OF TRAINING?

PERSONAL AUTHOR: SIMPSON, DONALD T.

DESCRIPTOR: *CONSUMER EDUCATION; *ECONOMIC FACTORS; *EVALUATION; *GUIDES; *MANAGEMENT; *MODELS; *NEEDS ASSESSMENT; *PLANNING; *SUPERVISION; *TRAINING MATERIALS; *TRAINING PROGRAMS; *TRAINING
DESCRIPTIVE NOTE: 34-36, 40P.

ABSTRACT: THIS ARTICLE PRESENTS A BASIC PLANNING GUIDE DESIGNED TO HELP PROFESSIONAL TRAINERS EVALUATE THEIR REAL NEEDS BEFORE PURCHASING TRAINING PACKAGES. ALSO EXAMINED IS A SYSTEMATIC METHOD FOR EVALUATING TRAINING PROGRAMS AGAINST ORGANIZATIONAL NEEDS.

Availability: Training & Development Journal, V35 N12

IRIS Accession Number: EW007369

Publication Date: Dec 81

Title: APPLYING A SYSTEMS APPROACH TO PERSONNEL ACTIVITIES.

Personal Author: Hyman, William C.

Descriptors: *EVALUATION; *JOB ANALYSIS; *MANAGEMENT; *PERSONNEL; *SUPERVISION; *SYSTEMS APPROACH; *TRAINING; *TRAINING METHODS; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 60-65P.

ABSTRACT: THIS ARTICLE IS THE FIRST OF THREE TO EXPLORE THE ADVANTAGES OF APPLYING A SYSTEMS APPROACH TO VARIOUS TRAINING ACTIVITIES. THIS ARTICLE EXPLORES THE CONCEPT OF A SYSTEM INTERLOCKING MANY OF THE MAJOR PERSONNEL ACTIVITIES. ALL THREE ARTICLES FOCUS ON THE STEPS NECESSARY TO MAKE PROGRAMS AND SYSTEMS JOB-RELATED AND THUS ACCEPTABLE TO THE WORKING GROUP IN METHODOLOGY AND DOCUMENTATION.

Availability: Training & Development Journal, V35 N12

IRIS Accession Number: EW007370

Publication Date: Dec 81

Title: THE VERTEAN CIRCLE.

Personal Author: Netz, Edmund J.

Descriptors: *EMPLOYEE RELATIONS; *INDUSTRY; *MANAGEMENT; *MODELS; ORGANIZATIONS; *PLANNING; *PROBLEM SOLVING; *PRODUCTIVITY; *QUALITY CIRCLE; *SUPERVISION; *TRAINING; *TRAINING PROGRAMS; *VERTICAL CIRCLE

DESCRIPTIVE NOTE: 70-85P.

ABSTRACT: THIS ARTICLE EXAMINES A NEW PROGRAM CALLED THE QUALITY CIRCLE WHICH HAS BEEN ADOPTED BY SOME ORGANIZATIONS TO HELP MEET THE CHALLENGE OF DECLINING PRODUCTIVITY AND INCREASED EXPECTATIONS OF EMPLOYEE PARTICIPATION. SPECIFIC ATTENTION IS FOCUSED ON THE MAJOR ISSUES WHICH WILL AFFECT ORGANIZATIONS IN THE 1980'S AND THE EVOLUTIONARY ADAPTATIONS OF QUALITY CIRCLES NEEDED TO MEET THESE NEW CHALLENGES.

Availability: Training & Development Journal, V35 N12

IRIS Accession Number: EW007371

Publication Date: Jan 82

Title: ASSESSING TRAINING RESULTS: IT'S TIME TO TAKE THE PLUNGE!

Personal Author: Zenger, John H.; Hargis, Kenneth

Descriptors: *ASSESSMENT; *EVALUATION; *MANAGEMENT; *POST SECONDARY EDUCATION; *PROGRAM EVALUATION; *RESEARCH NEEDS; *STATE-OF-THE-ART REVIEWS; *SUPERVISION; *TRAINING;

DESCRIPTIVE NOTE: 10-16P.

ABSTRACT: THIS ARTICLE PRESENTS A STATE-OF-THE-ART REVIEW OF TRAINING EVALUATION RESEARCH. A SUMMARY OF RESEARCH IN A VARIETY OF ORGANIZATIONAL SETTINGS IS PRESENTED ALONG WITH GUIDELINES AND CRITERIA FOR GOOD EVALUATION. A CONCLUSION IS REACHED WHICH CALLS FOR GREATER INVOLVEMENT IN EVALUATION RESEARCH BOTH BY TRAINING SUPERVISORS AND RESEARCHERS.

Availability: Training & Development Journal, V36 N1

IRIS Accession Number: EW007372

Publication Date: Jan 82

Title: SIMULATION: BALANCING THE PROS AND CONS.

Personal Author: Waddell, Geneva

Descriptors: *EVALUATION; EVALUATION CRITERIA; GAMES; *MANAGEMENT; *MANAGEMENT GAMES; *POST SECONDARY EDUCATION; *SIMULATION; *SUPERVISION; *TRAINING; *TRAINING PROGRAMS

DESCRIPTIVE NOTE: 30-82P.

ABSTRACT: THIS ARTICLE CRITICALLY EXAMINES THE USE OF SIMULATION IN THE TRAINING OF SUPERVISORS AND MANAGERS. THE PROS AND CONS AND THE VARIABLES ASSOCIATED WITH THE USE OF SIMULATIONS OR GAMES ARE DISCUSSED. ALSO INCLUDED IS A CHECKLIST FOR DESIGNING SIMULATIONS AND A LIST OF CRITERIA FOR EVALUATING SIMULATIONS.

Availability: Training & Development Journal, V36 N1

IRIS Accession Number: EW007373

Publication Date: Jan 82

Title: COST-EFFECTIVENESS ANALYSIS FOR ON-SITE WASTEWATER TREATMENT ALTERNATIVES.

Personal Author: Klink, Robert E.; Pirrung, Donald F.

Descriptors: *COST EFFECTIVENESS; COSTS; *DESIGN; *ECONOMIC FACTORS; FACILITIES; *MAINTENANCE; *ONSITE SYSTEMS; *OPERATIONS (WASTEWATER); *WASTEWATER TREATMENT
ABSTRACT: THIS ARTICLE PRESENTS AN EXAMINATION OF THE COSTS ASSOCIATED WITH ALTERNATIVE TREATMENT FACILITIES WHERE SOIL CONDITIONS ARE UNSUITABLE FOR SEPTIC SYSTEMS. VARIOUS ALTERNATIVE WASTEWATER SYSTEMS ARE EXAMINED IN TERMS OF CAPITAL AND OPERATIONS AND MAINTENANCE COSTS.

AVAILABILITY: PUBLIC WORKS, V113 N1

IRIS ACCESSION NUMBER: EW007374

PUBLICATION DATE: JUN 82

TITLE: WATERBORNE GIARDIASIS--AN OVERVIEW.

PERSONAL AUTHOR: GERARDI, MICHAEL H.

DESCRIPTION: TA CONTAMINATION; T DISEASES; T DRINKING WATER; FILTRATION; T GIARDIASIS; MICROBIOLOGY; POTABLE WATER; T PUBLIC HEALTH; SAMPLING; UNITED STATES; T WATER QUALITY; T WATER TREATMENT

DESCRIPTION: 51-54P.

ABSTRACT: THIS ARTICLE PRESENTS AN OVERVIEW OF GIARDIASIS, AN INTESTINAL DISEASE CAUSED BY THE FLAGELLATED PROTOZOAN GIARDIA LAMBILA. INFORMATION IS PRESENTED ON THE LIFE CYCLE OF THE ORGANISM. DIAGNOSIS AND SAMPLING. SYMPTOMS OF GIARDIASIS. WATER SYSTEM DEFICIENCIES RESPONSIBLE FOR OUTBREAKS OF GIARDIASIS IN THE UNITED STATES. AND METHODS OF ORGANISM REMOVAL.

AVAILABILITY: PUBLIC WORKS, V113 N1

IRIS ACCESSION NUMBER: EW007376

PUBLICATION DATE: 01

TITLE: METHODS FOR ECOLOGICAL TOXICOLOGY -- A CRITICAL REVIEW OF LABORATORY MULTISPECIES TESTS.

PERSONAL AUTHOR: BROWN, MICHAEL D.; AND OTHERS

DESCRIPTION: T ANALYTICAL TECHNIQUES; T CHEMISTRY; T ECOLOGY; T EVALUATION; T HAZARDOUS MATERIALS; T LABORATORY PROCEDURES; T MATHEMATICAL MODELS; T MEASUREMENT; T RECOMMENDATIONS; T RESEARCH; T TESTING; T TOXICOLOGY

DESCRIPTION: 307P. PRICE $29.95

ABSTRACT: THIS REPORT CRITICALLY EVALUATES SELECTED LABORATORY METHODS FOR MEASURING ECOLOGICAL EFFECTS AND RECOMMENDS TESTS CONSIDERED MOST SUITABLE FOR RESEARCH AND DEVELOPMENT FOR USE IN PREDICTING THE EFFECTS OF CHEMICAL SUBSTANCES ON INTERSPECIFIC INTERACTIONS AND ECOSYSTEM PROPERTIES. THE ROLE OF MATHEMATICAL MODELS IN CHEMICAL HAZARD ASSESSMENT IS ALSO DISCUSSED. ABOUT 850 REFERENCES ARE CITED. A BIBLIOGRAPHY OF MORE THAN 700 REFERENCES IS PROVIDED.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007377

PUBLICATION DATE: 81

TITLE: SOLID WASTE TRANSFER FUNDAMENTALS.

PERSONAL AUTHOR: BROWN, MICHAEL D.; AND OTHERS

DESCRIPTION: T EQUIPMENT; T FACILITIES; T INSTRUCTIONAL MATERIALS; MANUAlS; T OPERATIONS; RECYCLING; T RESOURCE RECOVERY; T SOLID WASTES; T TRANSPORTATION; WASTE DISPOSAL; T WASTE HANDLING

DESCRIPTION: 69P. PRICE $39.95

ABSTRACT: THIS MANUAL IS INTENDED TO ACQUAINT THE READER WITH THE FUNDAMENTALS OF SOLID WASTE TRANSFER -- THE CONSOLIDATION OF REFUSE COLLECTED BY A NUMBER OF SMALL VEHICLES INTO LARGE VOLUME TRAILERS FOR EFFICIENT TRANSPORTATION. CHAPTERS INCLUDE: WHY TRANSFER? DEVELOPING BASIC INFORMATION; TRANSFER STATION TYPES; FAMILIARIZATION WITH THE EQUIPMENT; OPERATION; RECYCLING AND RESOURCE RECOVERY IMPLEMENTATION; AND, A CASE STUDY.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007378

PUBLICATION DATE: 77

TITLE: TRACE METALS IN THE ENVIRONMENT. VOLUME 2-SILVER.

PERSONAL AUTHOR: SMITH, IVAN C.; CARSON, BONNIE L.

DESCRIPTION: T EPIDEMIOLOGY; GEOLoGY; T HEALTH EFFECTS; T INdUSTRIAL WASTES; T METALS; T POLLUTION CONTROL; T RESEARCH REPORTS; T SILVER; SLUDGE; T TOXICOLOGY; T TOXIC SUBSTANCES; T TRACE METALS; T WASTE DISPOSAL

DESCRIPTION: 469P. PRICE $29.50

ABSTRACT: THIS STUDY EXAMINES SILVER CONTAMINATION IN THE ENVIRONMENT AND INCLUDES IN-DEPTH DISCUSSIONS ON DISTRIBUTION LEVELS, NATURAL AND MAN-MADE SOURCES, USES AND DISPOSAL PRACTICES, AND PHYSIOLOGICAL EFFECTS OF SILVER AND ITS COMPOUNDS. THIS REPORT IS INTENDED FOR USE BY GEOLOGISTS, CHEMISTS, EPIDEMIOLOGISTS, TOXICOLOGISTS, BIOLoGISTS, AND INDUSTRIAL AND POLLUTION CONTROL ENGINEERS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801
ABSTRACT: THIS BOOK CONTAINS PAPERS PRESENTED AT A SYMPOSIUM THAT WAS ORGANIZED TO EMPHASIZE THE VALUE OF UNDERSTANDING THE BIOCHEMICAL EFFECTS OF ENVIRONMENTAL POLLUTANTS. TRACE METAL AND OXIDANT POLLUTANT TOXICOLOGY ARE PRIMARILY ADDRESSED. OTHER TOPICS Examined ARE OZONE, POLLUTANT DAMAGE TO LUNGS, CELLULAR REACTIONS, AND SULFUR DIOXIDE.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

ABSTRACT: THE TOPIC OF THIS BOOK IS THE DECOMPOSITION OF ORGANIC WASTES WHICH CAN PRODUCE CASES WHOSE MAJOR CONSTITUENT IS METHANE. THE PURPOSE OF THIS BOOK IS TO ESTABLISH AN OVERVIEW OF RECOVERY PROCESSES WHICH ULTIMATELY DEPEND ON BIOLOGICAL ACTIVITY. CHAPTERS INCLUDE: MICROBIOLOGY AND BIOCHEMISTRY; FACTORS AFFECTING THE ANAEROBIC PROCESS; DENITRIFICATION; PROCESS KINETICS; APPLICATIONS; ANAEROBIC DIGESTER DESIGN; OFFGAS MEASUREMENT OF ANAEROBIC DIGESTERS; AND, SLUDGE TREATMENT -- SOIL CONDITIONING AND COMPOSTING.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

ABSTRACT: THE OBJECTIVE OF THIS HANDBOOK IS TO PRESENT A COMPREHENSIVE LIST OF VARIABLES FOR ADDRESSING THE PHYSICAL- CHEMICAL, BIOLOGICAL, AND ESTHETIC FEATURES OF THE ENVIRONMENT. THE VARIABLES ARE ORGANIZED ACCORDING TO THE EQ ACCOUNT FOR WATER RESOURCES PROJECTS. USE OF THE VARIABLES IN THIS HANDBOOK WILL ENABLE A SYSTEMATIC CONSIDERATION AND EVALUATION OF THE ENVIRONMENTAL CONSEQUENCES OF PROJECT DEVELOPMENT AND OPERATION. VARIABLES ARE GROUPED INTO THE FOLLOWING CATEGORIES: TERRESTRIAL, AQUATIC, AIR, AND HUMAN INTERFACE.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

ABSTRACT: THE OBJECTIVES OF THIS BOOK WERE TO COLLECT, SYNTHESIZE AND CRITICALLY REVIEW CHLORINE DATA RELATED TO BIOFOULING CONTROL IN THERMOELECTRIC POWER PLANTS. MAJOR AREAS INVESTIGATED WERE THE CHEMISTRY OF CHLORINE IN FRESH- ESTUARINE AND MARINE WATERS; THE TOXICITY OF CHLORINE AND CHLORINE-INDUCED OXIDANTS TO AQUATIC BIOTA; AND THE EFFECTS OF CHLORINE ON POPULATION, COMMUNITY AND ECOSYSTEM LEVELS. THE PRIMARY OBJECTIVE WAS TO IDENTIFY DEFICIENCIES IN AVAILABLE INFORMATION AND ONGOING RESEARCH PROGRAMS IN ORDER TO RECOMMEND FUTURE RESEARCH ON THE ECOLOGICAL EFFECTS OF POWER PLANT COOLING WATER CHLORINATION.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801
TITLE: PHYSICAL AND CHEMICAL CHARACTERISTICS OF AQUATIC HUMUS.

PERSONAL AUTHOR: GJESSING, EGIL T.

DESCRIPTOR: ANALYTICAL TECHNIQUES; AQUATIC HUMUS; AQUATIC ENVIRONMENT; BIOCHEMISTRY; CHEMISTRY; HUMUS; INSTRUCTIONAL MATERIALS; POST SECONDARY EDUCATION; RESEARCH REPORTS; SOILS; WATER RESOURCES

DESCRIPTIVE NOTE: 126P. PRICE: $29.95

ABSTRACT: THE PURPOSE OF THIS BOOK IS TO REVIEW THE RESEARCH ON AQUATIC HUMUS DONE AT THE NORWEGIAN INSTITUTE FOR WATER RESEARCH SINCE 1962. CHAPTERS INCLUDE: ORIGIN, FLOW, AND DISTRIBUTION OF HUMUS; NATURAL CHANGES; QUANTITATIVE AND QUALITATIVE ANALYTICAL METHODS; CHEMICAL COMPOSITION; PROPERTIES, AND CHARACTERISTICS; AND, METHODS FOR THE REMOVAL OF HUMUS FROM WATER.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EU907397

PUBLICATION DATE: 76

TITLE: THE CLEAN WATER ACT SHOWING CHANGES MADE BY THE 1977...

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, 1200 CHAMBERS ROAD, ROCH 310, COLUMBUS, OH 43212-1792

IRIS ACCESSION NUMBER: EU907399

PUBLICATION DATE: 77

TITLE: ORGANIC ANALYSES FOR PERMIT COMPLIANCE - TRAINING MANUAL.

DESCRIPTOR: ANALYTICAL TECHNIQUES; CHEMICAL ANALYSIS; INSTRUCTIONAL MATERIALS; LABORATORY PROCEDURES; MATERIALS; ORGANIC COMPOUNDS; PERMIT COMPLIANCE; PERMITS; TRAINING; WATER QUALITY

DESCRIPTIVE NOTE: 133P. PRICE: $1.00 PER DOCUMENT PLUS .03 PER PAGE

ABSTRACT: THIS TRAINING MANUAL IS DESIGNED FOR A COURSE FOR CHEMISTS OR TECHNICIANS WHO WILL PERFORM CHEMICAL ANALYSES FOR ORGANIC WATER POLLUTANTS. PRESENTED ARE THE THEORETICAL CONCEPTS AND LABORATORY EXERCISES PERTAINING TO THE FOLLOWING: FIVE-DAY BIOCHEMICAL OXYGEN DEMAND; DISSOLVED OXYGEN; CHEMICAL OXYGEN DEMAND; TOTAL ORGANIC CARBON; OIL AND GREASE; SURFACTANTS; TOTAL KJELDAHL ORGANIC NITROGEN; PHENOL; POLYCHLORINATED BIphenYLS; AND PESTICIDES.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EU907393

PUBLICATION DATE: 79

TITLE: ASSESSING TOXIC EFFECTS OF ENVIRONMENTAL POLLUTANTS.

PERSONAL AUTHOR: LEE, G. D.; HUBB, J. BRIAN

DESCRIPTOR: ANALYSIS; BIOCHEMISTRY; CHEMICALS; ENVIRONMENTAL RESEARCH; HEALTH EFFECTS; INSTRUCTIONAL MATERIALS; LABORATORY TESTING; POLLUTANTS; POST SECONDARY EDUCATION; RESEARCH REPORTS; TOXICITY; TOXIC SUBSTANCES; TOXICOLGY

DESCRIPTIVE NOTE: 306P. PRICE: $39.95

ABSTRACT: THIS BOOK INTRODUCES MATERIAL OF INTEREST TO PEOPLE OF MANY DISCIPLINES OF CHEMISTRY AND BIOLOGY WHO ARE CONCERNED WITH DELETERIOUS CHEMICALS IN THE ENVIRONMENT. THE VOLUME IS ON PUBLIC HEALTH COVERING RESEARCH WITH HUMAN SUBJECTS AND MONKEY MONKEYS, AND DISCUSSING THE DIFFICULTIES OF ASSESSING HUMAN TOXICITY ON THE BASIS OF TESTS USING LABORATORY ANIMALS. WHILE REVIEWING PROGRESS IN THE AREAS OF TOXICOLOGY, NEW AND SPECIFIC RESEARCH DATA ARE PRESENTED.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EU907407

PUBLICATION DATE: 76

TITLE: MARINE AND SHORELAND RESOURCES MANAGEMENT.

DESCRIPTOR: COASTAL ZONES; INSTRUCTIONAL MATERIALS; LAND MANAGEMENT; LAND USE; LOCAL GOVERNMENT; MANAGEMENT; NATURE; NATURE RESOURCES; SOCIOECONOMY; PLANNING; PROGRAM DESCRIPTIONS; SHORELINES; STATE GOVERNMENT; STATE PROGRAMS; WATER QUALITY; WETLANDS

DESCRIPTIVE NOTE: 216P. PRICE: $33.95

ABSTRACT: THE OBJECTIVE OF THIS BOOK IS TO INTRODUCE STUDENTS AND THE PUBLIC TO SOME OF THE MAJOR COASTAL MANAGEMENT PROGRAMS OF STATE AND LOCAL GOVERNMENTS. CHAPTERS INCLUDE: THE FEDERAL COASTLINE MANAGEMENT PROGRAM; COASTAL LAND USE REGULATION; MANAGEMENT OF SHORE EROSION AND FLOOD PREVENTION; SHELLFISH MANAGEMENT; WETLANDS MANAGEMENT; EDUCATION AND ACCESS TO THE SHORE; WILDLIFE MANAGEMENT; ENERGY PRODUCTION; AND, THE NEW YORK STATE APPROACH TO COASTAL PROGRAM DEVELOPMENT.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EU907403

PUBLICATION DATE: 30

TITLE: HARBOR AND SHORELAND RESOURCES MANAGEMENT.

PERSONAL AUTHOR: METROPOULOS, JOSEPH H.

DESCRIPTOR: CASE STUDIES; COASTAL ZONES; INSTRUCTIONAL MATERIALS; LAND MANAGEMENT; LAND USE; LOCAL GOVERNMENT; MANAGEMENT; NATURE; NATURE RESOURCES; SOCIOECONOMY; PLANNING; PROGRAM DESCRIPTIONS; SHORELINES; STATE GOVERNMENT; STATE PROGRAMS; WATER QUALITY; WETLANDS

DESCRIPTIVE NOTE: 216P. PRICE: $33.95

ABSTRACT: THE OBJECTIVE OF THIS BOOK IS TO INTRODUCE STUDENTS AND THE PUBLIC TO SOME OF THE MAJOR COASTAL MANAGEMENT PROGRAMS OF STATE AND LOCAL GOVERNMENTS. CHAPTERS INCLUDE: THE FEDERAL COASTLINE MANAGEMENT PROGRAM; COASTAL LAND USE REGULATION; MANAGEMENT OF SHORE EROSION AND FLOOD PREVENTION; SHELLFISH MANAGEMENT; WETLANDS MANAGEMENT; EDUCATION AND ACCESS TO THE SHORE; WILDLIFE MANAGEMENT; ENERGY PRODUCTION; AND, THE NEW YORK STATE APPROACH TO COASTAL PROGRAM DEVELOPMENT.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801
ABSTRACT: Presented is a partial text of the federal water pollution control act (P.L. 92-500) as amended by the Clean Water Act of 1977 (P.L. 93-217). Not all of the provisions of Public Law 92-500 are set forth in this document. Sections 3-13 of P.L. 92-500 are technically part of the federal water pollution control act. Only section 2 of P.L. 92-500 is set forth in this document. Sections 3-13 of P.L. 92-500 have been omitted. The document is divided into five sections: Research and Related Programs, Grants for Construction of Treatment Works, Standards & Enforcement, Penalties and Licenses, and General Provisions.


IRIS ACCESSION NUMBER: EW007409
PUBLICATION DATE: APR 74
TITLE: General Plan to Determine a Curriculum for a Bachelor of Technology in Design, Operations and Maintenance of Wastewater Treatment Plants.

DESCRIPTOR: *Course Descriptions; *Curriculum, Design; *Higher Education; *Instruction; Maintenance; Management; Operations (Wastewater); *Program Descriptions; Technology; *Undergraduate Study; *Wastewater Treatment

DESCRIPTIVE NOTE: 77P.

ABSTRACT: This publication presents course descriptions, curriculum development, and qualifications for graduation for a four-year wastewater technologist training program. The program described could be applied to the development of curricula for a variety of environmental personnel, technicians, scientists, engineers, and other professionals.

AVAILABILITY: Department of Environmental Systems Engineering, Clemson University, Clemson, SC 29631

IRIS ACCESSION NUMBER: EW007410
PUBLICATION DATE: OCT 81
TITLE: Hazards of Past Low-Level Radioactive Waste Ocean Dumping Have Been Overemphasized.

DESCRIPTOR: *Environmental Impacts; *Evaluation; *Hazardous Materials; *Ocean Dumping; Oceans; Policy; *Public Health; *Pollution; *Radioactive Wastes; *Recommendations; *Regulations; *Waste Disposal; *Water Quality

DESCRIPTIVE NOTE: 27P.

ABSTRACT: This report discusses the results of an evaluation of the environmental and public health consequences of past ocean dumping of low-level radioactive waste. The report examines federal efforts to (1) identify the extent of past ocean dumping, (2) assure that it poses neither an environmental nor public health hazard, and (3) insure that any possible future dumping is conducted safely and in an environmentally acceptable manner.

AVAILABILITY: U.S. General Accounting Office, Document Handling and Information Services Facility, P.O. Box 6015, Gaithersburg, MD 20760

IRIS ACCESSION NUMBER: EW007411
PUBLICATION DATE: MAY 81
TITLE: Procedures for Handling and Chemical Analysis of Sediment and Water Samples.

PERSONAL AUTHOR: Plumb, Russell H., Jr.

DESCRIPTOR: *Analytical Techniques; *Chemical Analysis; *Federal Legislation; *Guidelines; *Laboratory Procedures; *Operations (Dredging); *Operations (Filling); Regulations; *Sampling; Sampling Techniques; *Sediments; *Water Pollution Control; Water Quality

DESCRIPTIVE NOTE: 50P. AD-A103 758/6

ABSTRACT: Presented is a State-of-the-Art Handbook on the Subjects of Sampling, Preservation and Analysis of Dredged and Fill Material. The Manual is designed for use as an aid in the regulatory process, specifically the interpretation of section 404(b) of Public Law 92-500 (Federal Water Pollution Control Act Amendments of 1972) which requires an ecological evaluation of proposed dredging and filling operations as they may impact navigable waters of the United States. The guidance presented should be viewed as second generation interim guidance in the continuing process of procedure development, refinement and evaluation.

AVAILABILITY: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

IRIS ACCESSION NUMBER: EW007415
PUBLICATION DATE: AUG 78
TITLE: Water and Wastewater Chemistry.

DESCRIPTOR: *Analytical Techniques; *Chemical Analysis; *Chemical Reactions; *Chemistry; *Instructional Materials; *Post Secondary Education; *Water Treatment; *Wastewater;
ABSTRACT: PRESENTED IS A COMPILATION OF A SERIES OF ARTICLES FROM A TEXT ON WATER AND WASTEWATER CHEMISTRY. PART I COVERS APPLICABLE NATURAL LAWS, SYMBOLOGY, TERMINOLOGY, AND THE MATHEMATICS NEEDED FOR CHEMISTRY. PART II DESCRIBES PHOTOMETRIC RELATIONSHIPS, THE SPECIAL PROPERTIES OF WATER AND WASTEWATER, AND THE CHEMICAL REACTIONS INVOLVED IN TREATMENT. PART III DISCUSSES SOFTENING, CORROSION CONTROL, AND ANALYTICAL TECHNIQUES.

AVAILABILITY: PUBLIC WORKS MAGAZINE, P.O. BOX 668, RIDGEWOOD, NJ 07450

IRIS ACCESSION NUMBER: E007418

TITLE: EXTERNAL WATER.

DESCRIPTORS: *AUDIOVISUAL AIDS; *CONSERVATION (ENVIRONMENT); *CONSERVATION EDUCATION; *FILES; *INSTRUCTIONAL MATERIALS; *PLANT; *SPECIALITY, POST SECONDARY EDUCATION; *RECYCLING; *WATER CONSERVATION; *WATER POLLUTION CONTROL; *WATER RESOURCES; *WATER RICHES

DESCRIPTIVE NOTE: 16MIN 13/28 MINUTES/COLOR/OPTICAL SOUND.

ABSTRACT: ADDRESSED IN THIS FILM IS THE SUBJECT OF WATER CONSERVATION INCLUDING THE HISTORIC USES OF WATER RESOURCES, THE NEED FOR MORE EFFICIENT USES OF WATER RESOURCES, ALSO DESCRIBED ARE WATER CONSERVATION METHODS INCLUDING RECYCLING WASTEWATER, BETTER IRRIGATION SYSTEMS, AND POLLUTION CONTROL.

AVAILABILITY: MAR CHUCK FILM INDUSTRIES, INC., P.O. BOX 61, EMPIRE DRIVE, FLORENCE, KY 41042

IRIS ACCESSION NUMBER: E007419

PUBLICATION DATE: 01

TITLE: AEROBIC TREATMENT MANUAL.

DESCRIPTORS: *AEROBIC; *DIGESTION; *AEROBIC PROCESSES; *INDUSTRY; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *PROCESS CONTROL; *WASTES; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 300P. PRICE: $100.00

ABSTRACT: PRESENTED ARE THE PROCEEDINGS OF THE 1981 INTERNATIONAL SEMINAR ON AEROBIC WASTEWATER TREATMENT AND ENERGY RECOVERY. INVITED AUTHORITY LECTURES ON TOXICITY AND ACCLIMATION; NUTRIENTS AND ALKALINITY REQUIREMENTS; GLYCOLYSIS PRODUCTION; TEMPERATURE EFFECTS; TREATABILITY TOOLS; SCALE UP; AND DESIGN PROCEDURES. VARIOUS PROCESS CONFIGURATIONS WERE POSITIONED. ENERGY RECOVERY AND CONVERSION PRACTICES AND THEIR FULL SCALE INDUSTRIAL APPLICATIONS ARE DISCUSSED. START-UP AND OPERATIONAL PROCEDURES ARE GIVEN FOR INDUSTRIAL AND MUNICIPAL DIGESTERS.

AVAILABILITY: DUNCAN, LACHERESE & ASSOCIATES, INC., 3186 BALDWIN BLVD., PITTSBURG, PA 15237, ATTN: AEROBIC SEMINAR

IRIS ACCESSION NUMBER: E007420

TITLE: NATURAL SYSTEMS FOR WATER POLLUTION CONTROL.

PERSONAL AUTHOR: DINGES, RAY

DESCRIPTORS: *ALTERNATIVE SYSTEMS; *BIOLOGY; *DRINKING WATER; *ECOLOGY; *ENVIRONMENTAL PROBLEMS; *NATURAL SYSTEMS; *POLLUTION; *RECYCLING; *STABILIZATION VOLUMES; *WATER RESOURCES; *WASTEWATER TREATMENT; *WATER POLLUTION CONTROL; *WETLANDS

DESCRIPTIVE NOTE: 264P. PRICE: $22.50

ABSTRACT: PRESENTED ARE LOW-COST ALTERNATIVES TO ENGINEERED SOLUTIONS OF ENVIRONMENTAL PROBLEMS. A WIDE VARIETY OF NATURAL SYSTEMS THAT COMPLETELY UPGRADE WATER OR REJECT WASTEWATER THAT HAS UNDERGONE PRELIMINARY TREATMENT ARE EXAMINED. THESE SYSTEMS INCLUDE WETLANDS, FLOATING PLANTS, AND STABILIZATION PONDS. INFORMATION ON INTEGRATING PRELIMINARY TREATMENT SYSTEMS, RECYCLING ORGANIC WASTES AND RETURNING MINERAL NUTRIENTS TO THE SOIL, AND IMPLEMENTING LARGE-SCALE INTEGRATED WASTE REDEMPTION AND POWER GENERATION CENTERS ARE INCLUDED.

AVAILABILITY: VAN ROOSTRAND REINHOLD, 7625 EMPIRE DRIVE, FLORENCE, KY 41042

IRIS ACCESSION NUMBER: E007421

TITLE: ENVIRONMENTAL RISK ANALYSIS FOR CHEMICALS.

PERSONAL AUTHOR: CONWAY, RICHARD A.

DESCRIPTORS: *CHEMICALS; *ENVIRONMENT; *ENVIRONMENTAL ASSESSMENT; *ENVIRONMENTAL IMPACT; *HAZARDOUS MATERIALS; *INDUSTRY; *MODELS; *PESTICIDES; *RISK ANALYSIS; *WASTE DISPOSAL; *WASTES

DESCRIPTIVE NOTE: 583P. PRICE: $37.50

ABSTRACT: DISCUSSED ARE METHODS FOR ANALYZING THE HAZARDS OF INDUSTRIAL SUBSTANCES. PROCEDURES ARE DETAILED FOR CONDUCTING RATE ANALYSIS IN SOILS; MATHEMATICALLY MODELING THE TRANSPORT AND TRANSFORMATION OF DANGEROUS MATERIALS; AND DESIGNING AND USING MICROBIAL AND MODEL ECO SYSTEMS. INFORMATION ON WASTE AND SITES SPECIFIC STUDIES FOR SETTING LIMITS ON SOIL POLLUTANT LEVELS AND DESCRIPTIONS OF NON-LINEAR REGRESSION MODELS, DEVELOPED UNDER USEPA AUSPICES, FOR PREDICTING BIOACUMULATION AND OTHER ECO SYSTEM EFFECTS FOR BIRDS, BIRDS, AND TERRESTIAL PLANTS ARE PROVIDED.

AVAILABILITY: VAN ROOSTRAND REINHOLD, 7625 EMPIRE DRIVE,
IRIS ACCESSION NUMBER: EW007425
PUBLICATION DATE: SEP 81
TITLE: DENSITY LEVELS OF PATHOGENIC ORGANISMS IN MUNICIPAL WASTEWATER SLUDGE: A LITERATURE REVIEW.
PERSONAL AUTHOR: PEDERSEN, DANA C.
DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *INDICATOR ORGANISMS; *LITERATURE REVIEWS; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *PATHOGENS; PUBLIC HEALTH; *RESEARCH; *SEPTAGE; *SLUDGE; SLUDGE DEWATERING; SLUDGE STABILIZATION; *WASTE DISPOSAL; *WASTEWATER TREATMENT; WATER QUALITY
DESCRIPTIVE NOTE: 298P. PB82-102286
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007426
PUBLICATION DATE: OCT 81
DESCRIPTOR: *ANNOTATED BIBLIOGRAPHIES; *BIODEGRADATION; *CHLORINATION; *EFFLUENTS; HAZARDOUS MATERIALS; *INDUSTRIAL WASTES; *LABORATORY PROCEDURES; *PAPER PULP; *PAPER INDUSTRY; PUBLIC HEALTH; *TOXIC SUBSTANCES; *WASTE DISPOSAL; *WASTEWATER TREATMENT; WATER QUALITY
DESCRIPTIVE NOTE: 96P. PB82-833433
ABSTRACT: PRESENTED ARE 64 CITATIONS COVERING PROBLEMS, RESOLUTIONS, AND EVALUATIONS OF THE BIOTREATMENT OF BIODEGRADABLE TOXIC EFFLUENTS FROM PULP MILLS. MUTAGENIC CHARACTERISTICS OF WASTE FROM THE CHLORINATION OF MOST PULPS ARE DISCUSSED RELATIVE TO THE RISKS INVOLVED TO PLANT AND ANIMAL LIFE. INCLUDED ARE LABORATORY MEASUREMENTS DETERMINING THE TOXICITY OF EFFLUENTS AND VARIOUS INDUSTRIAL BIODEGRADATION PROCESSES.
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161
IRIS ACCESSION NUMBER: EW007427

TITLE: AMERICA'S WETLANDS.

DESCRIPTORS: #AUDIOVISUAL AIDS; #ECOLOGY; ENVIRONMENT; ENVIRONMENTAL EDUCATION; #INSTRUCTIONAL MATERIALS; #LAND USE; LAND MANAGEMENT; #NATURAL RESOURCES; #POST SECONDARY EDUCATION; #SCIENCE EDUCATION; #SECONDARY EDUCATION; #WATER RESOURCES; #WETLANDS; #WILDLIFE

DESCRIPTIVE NOTE: 16 MIN, 28 HOURS, COLOR.

ABSTRACT: DISCUSSED IN THIS COLOR FILM ARE WETLANDS. THEIR NATURAL BENEFITS TO WILDLIFE AND HUMANS, AND IMPACTS ASSOCIATED WITH THEIR LOSS.

AVAILABILITY: U.S. EPA AUDIOVISUAL LENDING LIBRARY, 26 WEST 37TH STREET, CINCINNATI, OH 45268

IRIS ACCESSION NUMBER: EW007428

TITLE: LAKES AND WATER QUALITY.

DESCRIPTORS: #AUDIOVISUAL AIDS; #ECOLOGY; ENVIRONMENTAL EDUCATION; #EUTROPHICATION; #INSTRUCTIONAL MATERIALS; #LAKES; #POST SECONDARY EDUCATION; #WATER QUALITY; #WATER RESOURCES

DESCRIPTIVE NOTE: 90 MINUTE, 66 SLIDE SHOW; AVAILABLE ON LOAN; COST: $5.00 FOR POSTAGE AND HANDLING CHARGES.

ABSTRACT: PRESENTED IS A NON-TECHNICAL, SYNCHRONIZED SLIDE-TAPE PRESENTATION THAT DISCUSSES LAKES AS ECOSYSTEMS, WATER QUALITY PROBLEMS, CAUSES OF EUTROPHICATION, AND LONG AND SHORT TERM METHODS FOR CONTROL OF CULTURAL EUTROPHICATION.

AVAILABILITY: NR, 334 NATURAL RESOURCES BUILDING, MICHIGAN STATE UNIVERSITY, EAST LANSING, MI 48824; (517) 353-3742

IRIS ACCESSION NUMBER: EW007429

PUBLICATION DATE: 81

TITLE: OZONE TREATMENT OF INDUSTRIAL WASTEWATER.

PERSONAL AUTHOR: RICE, R. G.; BROWNING, H. E.

DESCRIPTORS: #ALTERNATIVE TECHNOLOGY; #BIOCHEMICAL ACTIVATED CARBON; #DISINFECTION; #INDUSTRIAL WASTEWATER; #INDUSTRY; ORGANICS; #OZONE; SOURCE; #TECHNOLOGY; #WASTEWATER TREATMENT; #WATER POLLUTION CONTROL; #WATER QUALITY; #WATER TREATMENT

DESCRIPTIVE NOTE: 371P.; PRICE: $32.00

ABSTRACT: FOLLOWING INTRODUCTORY CHAPTERS ON OXIDATION PROCESSES AND THE FUNDAMENTAL PRINCIPLES OF OZONE TECHNOLOGY, EIGHT HOURS OF OZONE FOR TREating WATERS AND WASTEWATERS FOR 20 CATEGORIES OF INDUSTRIES ARE DESCRIBED.

THESE INDUSTRIAL CATEGORIES INCLUDE ELECTROPLATING, FOOD PRODUCTS, HOSPITALS, HUNTING, PAINTS AND VARNISHES, PETROLEUM REFINERIES, PHARMACEUTICALS, PHOTO PROCESSING, PLASTICS AND RESINS, SOAPS AND DETERGENTS, AND TEXTILES. CHAPTERS ON THE OXIDATION PRODUCTS OF ORGANIC MATERIALS AND BIOLOGICAL ACTIVATED CARBON ARE ALSO INCLUDED.

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

IRIS ACCESSION NUMBER: EW007431

PUBLICATION DATE: 81

TITLE: HANDBOOK OF TOXIC AND HAZARDOUS CHEMICALS.

PERSONAL AUTHOR: SITTING, HARSHALL

DESCRIPTORS: #CARCINOGENS; #CHEMICALS; #HANDBOOKS; #HAZARDOUS MATERIALS; #HAZARDOUS WASTES; #HEALTH; #INFORMATION SOURCES; #MANAGEMENT; #MEASUREMENT TECHNIQUES; #SAFETY; #TOXIC SUBSTANCES; #WASTE DISPOSAL; #WASTES

DESCRIPTIVE NOTE: 729P.; PRICE: $36.00

ABSTRACT: PRESENTED IS A NON-TECHNICAL, SYNCHRONIZED SLIDE-TAPE PRESENTATION THAT DISCUSSES LAKES AS ECOSYSTEMS, WATER QUALITY PROBLEMS, CAUSES OF EUTROPHICATION, AND LONG AND SHORT TERM METHODS FOR CONTROL OF CULTURAL EUTROPHICATION.

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

IRIS ACCESSION NUMBER: EW007432

PUBLICATION DATE: 81

TITLE: DESALINATION OF SEA WATER BY REVERSE OSMOSIS.

PERSONAL AUTHOR: SCOTT, JEANETTE

DESCRIPTORS: #CONSTRUCTION COSTS; #DESALINATION; #DEMONSTRATION; #DEMONSTRATION COSTS; #DEMONSTRATION DESIGN; #EQUIPMENT; #FACTORIES; #MAINTENANCE; #MEMBRANE SYSTEMS; #OPERATIONS; #REVERSE OSMOSIS; #TECHNOLOGY; #WATER SUPPLY; #WATER TREATMENT

DESCRIPTIVE NOTE: 61P.; PRICE: $39.00

ABSTRACT: OFFERED IS A STUDY OF THE REVERSE OSMOSIS TECHNOLOGY INVOLVED WITH THE DESALTING OF SEA WATER. THE CURRENT TECHNOLOGY IS REVIEWED, WITH 155 PROCESSES DESCRIBED IN DETAIL. EMPHASIS IS PLACED ON THE COMPOSITION OF THE MEMBRANES FROM NATURAL AND SYNTHETIC MATERIALS, MEMBRANE CONFIGURATIONS INCLUDING THE TUBULAR AND HOLLOW FIBER UNITS, SUPPORTS, MEMBRANE MAINTENANCE TO INSURE TROUBLE-FREE PRODUCTION, AND MODIFIED REVERSE OSMOSIS TECHNIQUES WITH
OTHER ENERGY SOURCES. COST ESTIMATES AND ANALYSES FOR CONSTRUCTION AND OPERATION OF 0.01 TO 5 MGD CAPACITY DESALTING PLANTS ARE PROVIDED.

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

IRIS ACCESSION NUMBER: EW007433
PUBLICATION DATE: DEC 81
TITLE: IMPROVING PRODUCTIVITY THROUGH WORK MEASUREMENT.
PERSONAL AUTHOR: PARSONS, RALPH C.
DESCRIPTION: COSTS; ECONOMIC FACTORS; MANAGEMENT; MANPOWER NEEDS; MEASUREMENT; PERFORMANCE EVALUATION; PRODUCTIVITY; TASK ANALYSIS; UTILITIES; WORK MEASUREMENT
DESCRIPTIVE NOTE: 610-613P.
ABSTRACT: NEW TECHNIQUES FOR IMPROVING PRODUCTIVITY CAN MEASURE WORK BASED ON A COMMON UNIT OF WORK PRODUCED -- THE NUMBER OF "STANDARD HOURS" PRODUCED IN A WEEK. THE STANDARD IS DEFINED BY THE AVERAGE TIME IT TAKES TO COMPLETE A SPECIFIC TASK BY A QUALIFIED WORKER EQUIPPED WITH APPROPRIATE TOOLS AND EQUIPMENT. PREDETERMINED TIME STANDARDS ARE ESSENTIAL FOR EFFECTIVE MANAGEMENT OF WORKER PRODUCTIVITY. THE INTELLIGENT USE OF MEASUREMENT STANDARDS HAS INCREASED WORKER PRODUCTIVITY BY 15 TO 50 PERCENT.
AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V73 N12

IRIS ACCESSION NUMBER: EW007436
PUBLICATION DATE: DEC 81
TITLE: PREVENTIVE MAINTENANCE PROGRAMS--MUST A SYSTEM BE AUTOMATED?
PERSONAL AUTHOR: JORDAN, JAMES K.
DESCRIPTION: CASE STUDIES; ECONOMIC FACTORS; MAINTENANCE; MANAGEMENT; MANPOWER NEEDS; OPERATIONS (WASTEWATER); PROGRAM DESCRIPTIONS; RECORDS; RECORDKEEPING; UTILITIES; WASTEWATER TREATMENT...
ABSTRACT: THE WASHINGTON SUBURBAN SANITARY COMMISSION HAS RECENTLY IMPLEMENTED A SIMPLE MANUALLY CONTROLLED PREVENTIVE MAINTENANCE PROGRAM THAT IS THE FORERUNNER OF AN AUTOMATED SYSTEM. THE SYSTEM DEPENDS ON CLERICAL RECORDS AND HANDWRITTEN FIELD CHECK LISTS. NEVERTHELESS, FOR THE FIRST TIME THE UTILITY HAS A SYSTEMATIC PROGRAM TO ENSURE THAT BASIC PREVENTIVE MAINTENANCE IS DONE ON SCHEDULE AND THAT MAINTENANCE HAS THE NECESSARY INFORMATION.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V73 N12

IRIS ACCESSION NUMBER: EWO7437
PUBLICATION DATE: DEC 81
TITLE: PRODUCTIVITY GAINS THROUGH JOB REORGANIZATION AND ROTATION.
PERSONAL AUTHOR: MCCUIRE, JOHN H.
DESCRIPTOR: CASE STUDIES; INCENTIVES; JOB SATISFACTION; MANAGEMENT DEVELOPMENT; PERFORMANCE EVALUATION; PRODUCTIVITY; PROGRAM DESCRIPTION; TASK ANALYSIS; UTILITIES; WATER TREATMENT
DESCRIPTIVE NOTE: 623-623P.

ABSTRACT: ALONG THE SANTA CRUZ (CALIF.) WATER DEPARTMENT'S DISTRIBUTION DIVISION EMPLOYEES, PRODUCTIVITY HAD DECLINED BY 21 PERCENT BETWEEN THE LAST QUARTER OF 1977 AND THE LAST QUARTER OF 1978. A SYSTEM FOR MEASURING PRODUCTIVITY WAS DEVELOPED AS THE FIRST STEP IN AN INCENTIVE PROGRAM. EACH TAKER WAS ASSIGNED A NUMERIC VALUE ON A SCALE OF 0.5 TO 10 ACCORDING TO THE DEGREE OF DIFFICULTY IN ORDER TO PROVIDE PRODUCTIVITY INFORMATION FOR MANAGEMENT. ATTEMPTS WERE MADE TO INCREASE JOB SATISFACTION BY HEARS OF JOB ROTATION AND SMALLER CRIB, AND REGULARLY PRODUCTIVITY REVIEW MEETINGS WERE HELD. AFTER THE PROGRAM WAS IMPLEMENTED, AVERAGE PRODUCTION GAVE 25 PERCENT, AND MANAGEMENT DISCOVERED THAT THE PROGRAM WAS SUCCESSFUL IN MAINTAINING DAY-BY-DAY PRODUCTIVITY.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V73 N12

IRIS ACCESSION NUMBER: EWO7438
PUBLICATION DATE: DEC 81
TITLE: WATER REPRESENTATIVES PROVIDE A SYSTEMATIC APPROACH TO WATER READING.
PERSONAL AUTHOR: FRESHMAN, JOHN S.
DESCRIPTOR: CASE STUDIES; COMMUNICATIONS; EFFICIENCY; JOB SATISFACTION; JOB SKILLS; HUMANPOWER DEVELOPMENT; METER READING PERFORMANCE EVALUATION; PROGRAM DESCRIPTION; TRAINING; TASK ANALYSIS; UTILITIES;

*WATER DISTRIBUTION
DESCRIPTIVE NOTE: 624-626P.
ABSTRACT: BEFORE 1976, WATER METER READING EFFICIENCY AND ACCURACY IN ALBUQUERQUE, N.M., SUFFERED BECAUSE OF LOW EMPLOYEE MORALE AND RESULTED IN MANY BILLING ERRORS. TWO YEARS LATER, A PLAN WAS DEVELOPED TO TRAIN METER READERS TO TAKE RESPONSIBILITY FOR COMMUNICATION WITH CUSTOMERS REGARDING BILLING PROBLEMS, TO REPORT SEVERE METER PROBLEMS PROMPTLY, AND TO TAKE CARE OF METER REPAIRS THEMSELVES. METER READERS WERE RENAMED WATER REPRESENTATIVES, AND THEIR SALARIES WERE INCREASED ACCORDINGLY. THE SUCCESS OF THE PROGRAM, IMPLEMENTED IN 1978, IS PROVEN BY THE FACT THAT CUSTOMER COMPLAINTS HAVE DECREASED FROM 12,000 ANNUALLY TO ABOUT 600. THE PUBLIC IMAGE OF THE UTILITY HAS OBVIOUSLY IMPROVED.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V73 N12

IRIS ACCESSION NUMBER: EWO7439
PUBLICATION DATE: DEC 81
TITLE: OPERATOR CERTIFICATION: 1980 STATUS REPORT.
DESCRIPTOR: CERTIFICATION; EDUCATIONAL NEEDS; EMPLOYEES; FACILITIES; HUMANPOWER NEEDS; OPERATORS; PROGRAM DESCRIPTIONS; REQUIREMENTS; STATE PROGRAMS; STATUS REPORTS; SURVEYS; TRAINING; WASTEWATER TREATMENT; WATER TREATMENT
DESCRIPTIVE NOTE: 627-635P.

ABSTRACT: THE 1980 STATUS REPORT ON CERTIFICATION FOR WATER DISTRIBUTION AND WASTEWATER COLLECTION OPERATORS IN THE UNITED STATES AND CANADA IS ESSENTIALLY A REPORT ON GROWTH AND SOPHISTICATION. THE NUMBER OF CERTIFIED OPERATORS HAS GROWN 2.5 TIMES BETWEEN 1976 AND 1980; THE NUMBER OF PROGRAMS PROVIDING FOR SEPARATE CATEGORIES OF CERTIFICATION FOR WATER DISTRIBUTION AND WASTEWATER COLLECTION HAS DOUBLED SINCE 1976. STAFFING FOR AGENCIES THAT ABHORR THE CERTIFICATION PROGRAMS HAS INCREASED BY ONE THIRD TO IS STILL SOMEWHAT BELOW ONE STAFF POSITION PER 1000 OPERATORS, INDICATING THAT THIS IS A CONTINUING NEED. IN 1980 THERE WERE APPROXIMATELY 16X,000 CERTIFIED OPERATORS IN THE UNITED STATES AND CANADA.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V72 N12

IRIS ACCESSION NUMBER: EWO7440
PUBLICATION DATE: DEC 81
TITLE: SPECIFIC AND CHELATE EXCHANGERS: NEW FUNCTIONAL POLYMER FOR WATER AND WASTEWATER TREATMENT.
PERSONAL AUTHOR: CALDER, C.
Abstract: Ion exchange processes have proved effective for removing impurities from water for specific industrial uses such as boiler feedwater where water must be as free of impurities as possible. However, new types of exchangers that are selective for a particular ion are needed. Some resins have a high degree of specificity or selectivity. A chelate resin, which is an insoluble polymeric chelate that can bond metal cations to form a ring incorporating metals, but since a chelate exchange involves both an ion exchange and a chemical reaction, there is a reduction in the rate of reaction. Also, special operating procedures during elution of ions are a limiting factor.

Availability: American Water Works Association Journal, V73 N12

Iris Accession Number: EW007441

Publication Date: Jan 81

Title: Equivalent Hydraulic Pipe for Parallel Pipes.

Personal Author: Jeppson, Roland W.

Descriptor: Computer applications; Cost effectiveness; Hydraulics; Mathematical models; Pipes; Water flow; Water pipes

Abstract: Methods are defined for reducing two or more parallel pipes to a single hydraulically equivalent pipe for analysis using the Darcy-Weisbach equation that allows the friction factor to depend upon the flow conditions in the pipe as well as the roughness of the pipe wall. The motivation for reducing groups of parallel pipes to single equivalent pipes is to reduce computer costs associated with analyses of large piping networks. Comparisons of the saving in computer execution time achieved in network analysis by using the equivalent pipe technique are given for different methods of solving large networks. For the real system used in this comparison one method of solution required only one-quarter of the time if parallel pipes were formed first. The recommendation is that existing network analysis computer programs incorporate in their code the creation of hydraulic equivalent pipes for all groups of parallel pipes.

Availability: Journal of the Hydraulics Division, V108 N1

Iris Accession Number: EW007443

Publication Date: Jan 81

Title: Developing an Effective Maintenance Program.

Personal Author: Freiberg, George R.; Thompson, William B.

Descriptor: Equipment; Evaluation; Facilities; Maintenance; Maintenance (Preventative); Management; Manpower utilization; Operations (Wastewater); Planning; Program Descriptions; Program Development; Wastewater treatment

Abstract: This article reports on a study at the 105 MGD Norris Forhan Wastewater Treatment Plant in Louisville, Kentucky to develop evaluation and implementation procedures for establishing or upgrading maintenance systems. Focus is on preventative maintenance with specific program evaluation and implementation steps explained.

Availability: Water Engineering & Management, V129 N1

Iris Accession Number: EW007444

Publication Date: Jan 82

Title: Storm and Combined Sewers: Part of the Treatment Process.

Personal Author: Field, Richard

Descriptor: Design; Equipment; Facilities; Maintenance; Water distribution; Water systems

Abstract: An essential first step in the design of a municipal water distribution system is the determination of the locational placement or layout of the links of pipe that will form the system. A two-level hierarchically integrated system of models is developed for the layout of both single and multiple source water distribution systems. The first level, a nonlinear programming model, selects an economical tree layout for the major pipe links. The second level, an integer programming model, chooses the loop-forming links to add to the first level tree layout in order to minimize the cost of providing a specified level of reliability in case of failure of the larger first level links. The system of models is applied to an example two-source water distribution system layout problem.

Availability: Journal of the Hydraulics Division, V108 N1

Iris Accession Number: EW007445

Publication Date: Jan 81

Title: Obtaining Layout of Water Distribution Systems.

Personal Author: Rowell, William F.; Barnes, J. Wesley

Descriptor: Design; Hydraulics; Mathematical models; Municipalities; Water systems; Water distribution; Water pipes

Abstract: Suitable first step in the design of a municipal water distribution system is the determination of the locational placement or layout of the links of pipe that will form the system. A two-level hierarchically integrated system of models is developed for the layout of both single and multiple source water distribution systems. The first level, a nonlinear programming model, selects an economical tree layout for the major pipe links. The second level, an integer programming model, chooses the loop-forming links to add to the first level tree layout in order to minimize the cost of providing a specified level of reliability in case of failure of the larger first level links. The system of models is applied to an example two-source water distribution system layout problem.

Availability: Journal of the Hydraulics Division, V108 N1
MANAGEMENT; OPERATIONS (WASTEWATER); SEWER SYSTEMS; STORM SEWER; STORMWATER COLLECTION; WASTEWATER TREATMENT

DESCRIPITVE NOTE: 98-99, 99P.

ABSTRACT: THIS ARTICLE EXAMINES OPERATIONAL PARAMETERS OF DRAINAGE Where COLLECTION SYSTEMS ARE DESIGNED AND OPERATED FOR THE DUAL PURPOSES OF DRAINAGE AND POLLUTION CONTROL. ADDRESSING INSPECTION AND MAINTENANCE ISSUES, NEW SEWER DESIGN, SEWER FLUSHING, POLYMER INJECTION, INFILTRATION/INFLOW CONTROLS, UPSTREAM STORAGE/ATTENUATION, FLOW ROUTING AND IN-Pipe STORAGE, NEW TYPES OF FLOW REGULATORS, AND THE DUCK BILL TIDE GATE.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V129 N1

IRIS ACCESSION NUMBER: E1007447
PUBLICATION DATE: JAN 81
TITLE: DUAL DISTRIBUTION SYSTEM SOLVES PELICAN BAY'S WATER SUPPLY PROBLEMS.
PERSONAL AUTHOR: WRIGHT, ROBERT R.; BIERY, P. FRED
DESCRIPTOR: #COSTS; #DESIGN; #EQUIPMENT; #FACILITIES; #IRRIGATION; #NON-POTABLE WATER; #POTABLE WATER; #WATER DISTRIBUTION; #WATER QUALITY; #WATER SUPPLY
DESCRIPTIVE NOTE: 46-49P.

ABSTRACT: THIS ARTICLE DISCUSSES THE APPROACH THAT ONE FLORIDA COASTAL COMMUNITY TOOK IN SUPPLYING FRESHWATER AT TWO DIFFERENT QUALITY LEVELS: ONE FOR RESIDENTIAL AND COMMERCIAL USE, AND ONE FOR IRRIGATION PURPOSES. EXPLAINED IS THEIR DUAL WATER SYSTEM CONSISTING OF TWO SEPARATE AND USUALLY PARALLEL PIPE LINES AND THE REQUIRED PUMPS, VALVES, AND TREATMENT EQUIPMENT.

AVAILABILITY: WATER ENGINEERING & MANAGEMENT, V129 N1

IRIS ACCESSION NUMBER: E1007448
PUBLICATION DATE: JAN 82
TITLE: DATA BASES FOR ENVIRONMENTAL ENGINEERS.
PERSONAL AUTHOR: CHERRY, KENNETH F.
DESCRIPTOR: #COMPUTER APPLICATIONS; #COMPUTERS; #DATA BASES; #ENGINEERING; #ENVIRONMENTAL ENGINEERING; #GUIDES; #INFORMATION NETWORKS; #INFORMATION SOURCES
DESCRIPTIVE NOTE: 30-31P.

ABSTRACT: THIS ARTICLE PRESENTS AN OVERVIEW OF DATA BASE SERVICES AVAILABLE TO ENVIRONMENTAL ENGINEERS. INCLUDED IS A SAMPLING OF DATA BASE AND INFORMATION SERVICES AND RATES FOR TEN MAJOR DATA BASES.

AVAILABILITY: POLLUTION ENGINEERING, V14 N1

IRIS ACCESSION NUMBER: E1007449
PUBLICATION DATE: JAN 82
TITLE: INDUSTRIAL WASTE EXCHANGES.
PERSONAL AUTHOR: MOORE, LARRY E.
DESCRIPTOR: #CHEMICALS; #EXCHANGES; #GUIDES; #INDEXES (LOCATORS); #INDUSTRIAL WASTES; #RECYCLING; #RESOURCE RECOVERY; #WASTE EXCHANGES; #WASTE MANAGEMENT
DESCRIPTIVE NOTE: 33P.
ABSTRACT: PRESENTED IS A GUIDE TO 30 INDUSTRIAL WASTE EXCHANGES IN 23 STATES. INCLUDED IS: COMPANY NAME, CONTACT PERSON, ADDRESS, AND TELEPHONE NUMBER.

AVAILABILITY: POLLUTION ENGINEERING, V14 N1

IRIS ACCESSION NUMBER: EW007450

PUBLICATION DATE: JAN 82

TITLE: NATIONAL AND INTERNATIONAL ASSOCIATIONS DEALING WITH ENVIRONMENTAL INFORMATION.

DESCRIPTOR: *ENVIRONMENTAL EDUCATION; *ENVIRONMENTAL QUALITY; *ENVIRONMENTAL ORGANIZATIONS; NATURAL RESOURCES; POLLUTION CONTROL

DESCRIPTIVE NOTE: 37P.

ABSTRACT: PRESENTED IS A GUIDE TO 43 NATIONAL AND INTERNATIONAL ORGANIZATIONS DEALING WITH ENVIRONMENTAL INFORMATION. INCLUDED IS: NAME OF ORGANIZATION, ADDRESS, AND TELEPHONE NUMBER.

AVAILABILITY: POLLUTION ENGINEERING, V14 N1

IRIS ACCESSION NUMBER: EW007451

PUBLICATION DATE: JAN 82

TITLE: STATE ENVIRONMENTAL PROTECTION AGENCIES.

DESCRIPTOR: *DIRECTORIES; ENVIRONMENTAL PROTECTION AGENCY; ENVIRONMENTAL QUALITY; GUIDES; INDEXES; NATURAL RESOURCES; POLLUTION CONTROL; PUBLIC HEALTH; STATE AGENCIES

DESCRIPTIVE NOTE: 38-39P.

ABSTRACT: PRESENTED IS A GUIDE TO STATE ENVIRONMENTAL PROTECTION AGENCIES. INCLUDED IS: AGENCY NAME, ADDRESS, AND TELEPHONE NUMBER.

AVAILABILITY: POLLUTION ENGINEERING, V14 N1

IRIS ACCESSION NUMBER: EW007452

PUBLICATION DATE: JAN 82

TITLE: CONTRACT OPERATIONS FOR POTWS: PITFALLS AND PROFITS FOR THE PRIVATE SECTOR.

PERSONAL AUTHOR: JENSEN, MARGARET SLAJCHERT; MCMAHON, ROBERT F.

DESCRIPTOR: *CONSULTING FIRMS; *CONTRACTS; *MAINTENANCE; *OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; POLICIES

PUBLIC WORKS; RESEARCH REPORTS; SERVICE CONTRACTS; SURVEYS; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 11-15P.

ABSTRACT: THIS PAPER PRESENTS THE FINDINGS OF RESEARCH CONDUCTED BY THE AUTHORS FOR THE U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) ON THE EXTENT OF PRIVATE SECTOR INVOLVEMENT IN THE OPERATION AND MAINTENANCE (O&M) OF PUBLICLY OWNED TREATMENT WORKS (POTWS). BASED ON INTERVIEWS WITH WASTEWATER O&M CONSULTING FIRMS AND THEIR CLIENTS, THE FACTORS AFFECTING THE SUPPLY AND DEMAND FOR AND QUALITY OF CONTRACT OPERATIONS ARE EXAMINED.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N1

IRIS ACCESSION NUMBER: EW007453

PUBLICATION DATE: JAN 82

TITLE: AIR DRYING LIQUID ANAEROBICALLY DIGESTED SLUDGE IN EARTHEN DRYING BASINS.

PERSONAL AUTHOR: BAXTER, JOHN C.; MARTIN, WILLIAM J.

DESCRIPTOR: *EQUIPMENT; *FACILITIES; *OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; RESEARCH REPORTS; SEWAGE; SLUDGE DRYING; WASTE DISPOSAL; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 16-26P.

ABSTRACT: THE METROPOLITAN DENVER SEWAGE DISPOSAL DISTRICT NO. 1 IS PLANNING CONSTRUCTION OF A SLUDGE DRYING AND DISTRIBUTION CENTER. THIS PLAN ENTAILS PUMPING LIQUID ANAEROBICALLY DIGESTED SLUDGE THROUGH A 40-KM PIPELINE AND AIR DRYING THE SLUDGE IN EARTHEN DRYING BASINS. STUDIES WERE INITIATED TO EXAMINE THE MOST EFFICIENT DEPTHS OF SLUDGE APPLICATION TO THE EARTHEN DRYING BEDS THAT WOULD ENHANCE DRYING RATES AND STILL LIMIT THE POTENTIAL FOR GROUNDWATER DEGRADATION FROM LEACHING OF NITRATES FROM THE SLUDGE. IT WAS FOUND THAT APPROXIMATELY 990 METRIC TONS OF SLUDGE PER HECTARE COULD BE DRIED TO A 40% MOISTURE CONTENT IN A YEAR'S TIME WITHOUT LEACHING SIGNIFICANT QUANTITIES OF NITRATES TOWARDS THE GROUND WATER.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N1

IRIS ACCESSION NUMBER: EW007454

PUBLICATION DATE: JAN 82

TITLE: VACUUM FILTRATION OF SEPTAGE.

PERSONAL AUTHOR: OTT, CHARLES R.; SEGALL, BURTON A.

DESCRIPTOR: *FILTRATION; *OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; RESEARCH REPORTS; SEPTAGE
ABSTRACT: Extensive field tests were conducted prior to the selection of microscreens with ultrafine polyester media to upgrade a wastewater stabilization lagoon system in Camden, SC. Summaries of the process design criteria, unit process sizing requirements, and cost-effective analysis are included. This lagoon upgrading, utilizing microscreens for algae removal, will be the first system of its kind in the U.S.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N1
ABSTRACT: In 1972, Congress mandated that wastewater management plans be completed for each area in the nation. One such area is Nassau County in Long Island, NY, where—in compliance with the federal guidelines—a study was undertaken utilizing a mixed integer model to screen wastewater management alternatives. This study resulted in a least-cost wastewater management plan that specified location, expansion, and upgrading for 25 wastewater treatment plants in the region. The model and its validation are discussed and conclusions are presented.

AVAILABILITY: Journal Water Pollution Control Federation, V54 N1

IRIS accession number: EW007460

Publication date: Jan 82

Title: Treatment of high-strength fatty amines wastewater—a case history.

Personal author: Huff, James E.; Muchmore, Charles B.

Descriptor: *amines; *case studies; *equipment; *facilities; *fatty acids; *industrial wastes; *irrigation systems; *operations (wastewater); *performance evaluation; *wastewater treatment

Abstract: A fatty amines plant in operation since 1974 was designed initially with primary, secondary, and tertiary treatment facilities to handle a high-strength amines waste. The facilities were found to be inadequate, primarily because of no winter storage and excessive hydraulic, organic, and nitrogen loads on the spray field. Laboratory and pilot testing on rotating biological contractors, activated sludge, and chemical treatment with flotation were performed. Ultimately, a new spray irrigation system was selected. Other improvements included the use of supplemental bacteria in the aerated lagoons and a fat recovery chamber with fat recycle in the raw material area.

Availability: Journal Water Pollution Control Federation, V54 N1

IRIS accession number: EW007461

Publication date: Jan 82

Title: Operation reports—City of Midland, Michigan.

Descriptor: *case studies; chemicals; *costs; *facilities; *maintenance; *Michigan; *operations (wastewater); *performance evaluation; sanitary sewers; storm sewers; *wastewater treatment

Abstract: This article presents operation information for the wastewater treatment facilities of Midland, Michigan. Specific data are presented for sanitary and storm sewer collection, plant maintenance, chemical costs, and general operating parameters.

Availability: Journal Water Pollution Control Federation, V54 N1

IRIS accession number: EW007471

Publication date: Feb 82

Title: What you should know about industrial wastewater surveys.

Personal author: Tutein, Thomas R.

Descriptor: *analytical techniques; *costs; *effluents; *flow rates; *industrial wastes; *operations (wastewater); *sampling; *surveys; *wastewater treatment; *water quality

Abstract: This article discusses various aspects of industrial wastewater surveys as they pertain to diagnosing problems and identifying water quality parameters. The article examines pre-survey procedures, flow metering and sampling techniques, dye tracing, individual process flow rates, and cost estimates.

Availability: Pollution Engineering, V14 N2

IRIS accession number: EW007472

Publication date: 81

Title: Windrow composting municipal sewage wastes for land application.

Personal author: Chesnin, Leon

Descriptor: *composting; equipment; *land application; *municipal wastes; *operations (wastewater); *performance evaluation; *research reports; sewage; sludge; *wastewater treatment; *waste disposal; waste treatment; windrow composting

Abstract: Windrow composting of municipal sewage wastes involves the mixing of denatured (filtered) sewage sludge or sewage slurry with an organic drying bulking agent. The mixture, with a moisture content below 60%, is placed in a long pile (Windrow). A computer program was developed by the author for the use in determining the amounts of drying bulking agent and sewage sludge or slurry required to obtain an optimum mixture for composting. The amounts of the...
MIXTURE COMPONENTS ARE DEPENDENT ON TEMPERATURE AND DIFFER IN THE WARM OR COLD SEASONS OF THE YEAR. Windrow composting is an aerobic process that depends on the diffusion of air into the pile to supply the oxygen needed by the microbial population. Modified farm manure spreaders, hydraulic feed mixing wagons and front-end loaders have been used to mix the compost components. The drying-bulking agents that have been used are: sawdust, leaves, racehorse bedding (straw), feedlot manure and ground corn cobs and shucks. High rates of application of compost to agricultural soils reduced soil density and the fuel requirements for tillage operations. Organic amendments increased the hydraulic conductivity and water infiltration rate of soils. Composting sewage sludge greatly increases the availability of the nitrogen present in an organic form.

AVAILABILITY: THE ENVIRONMENTAL PROFESSIONAL, V3 N1/2

IRIS ACCESSION NUMBER: EW007473
PUBLICATION DATE: 01
TITLE: SELECTED UNIVERSITY RESEARCH AND EDUCATIONAL PROGRAMS IN TOXICOLOGY.
PERSONAL AUTHOR: ZIMMER, KYLE; HIRST, KRIS
DESCRIPTOR: #COLLEGE PROGRAMS; #GRADUATE STUDY; #HIGHER EDUCATION; #PROGRAM DESCRIPTIONS; RESEARCH PROGRAMS; #SURVEYS; #TOXICOLOGY; #UNIVERSITIES
DESCRIPTIVE NOTE: 177-184P.

ABSTRACT: THIS ARTICLE REVIEWS REPORTS ON 12 SELECTED UNIVERSITY PROGRAMS IN TOXICOLOGY. DESCRIPTIONS OF GRADUATE PROGRAMS IN TOXICOLOGY ARE PROVIDED FOR: UNIVERSITY OF ARIZONA; UNIVERSITY OF CALIFORNIA - DAVIS; UNIVERSITY OF IOWA; JOHN HOPKINS UNIVERSITY; KANSAS STATE UNIVERSITY; UNIVERSITY OF MICHIGAN; UNIVERSITY OF MISSOURI; NEW YORK UNIVERSITY; PURDUE UNIVERSITY; STATE UNIVERSITY OF NEW YORK AT STONY BROOK; WASHINGTON STATE UNIVERSITY/UNIVERSITY OF IDAHO; AND, THE UNIVERSITY OF WISCONSIN.

AVAILABILITY: THE ENVIRONMENTAL PROFESSIONAL, V3 N1/2

IRIS ACCESSION NUMBER: EW007474
PUBLICATION DATE: 01
TITLE: GRADUATE PROGRAMS IN TOXICOLOGY.
DESCRIPTOR: #COLLEGE PROGRAMS; #DIRECTORIES; #GRADUATE STUDY; #GUIDES; #HIGHER EDUCATION; #INDEXES; #RESEARCH PROGRAMS; #TOXICOLOGY; #UNIVERSITIES
DESCRIPTIVE NOTE: 185-189P.

ABSTRACT: THIS IS A LIST OF SCHOOLS PROVIDING GRADUATE TRAINING IN TOXICOLOGY. DEPARTMENT PROGRAMS, ADDRESSES, AND CONTACT PERSONS ARE GIVEN FOR 103 PROGRAMS IN 31 STATES.
IRIS ACCESSION NUMBER: EW007477
PUBLICATION DATE: WIN 82
TITLE: MONITORING IN THE VADOSE ZONE: PART II.
PERSONAL AUTHOR: WILSON, L. C.
DESCRIPTOR: #FLOW MEASUREMENT; #FLOW RATES; #GROUNDWATER; #INFILTRATION; #LIQUID WASTES; #MEASUREMENT; #MONITORING; #PERCOLATION; #RESEARCH REPORTS; #VANDOSE ZONE; #WASTE DISPOSAL; #WASTEWATER
DESCRIPTIVE NOTE: 31-42P.
ABSTRACT: THE THREE PAPERS IN THIS SERIES CONSTITUTE AN ELEMENTARY EXPOSITION OF METHODS FOR VADOSE ZONE MONITORING. THIS PART, THE ARTICLE DISCUSSES METHODS FOR CHARACTERIZING THE TRANSMISSION OF LIQUID WASTES IN THE VADOSE ZONE. TOPICS ADDRESSED INCLUDE: INFILTRATION, PERCOLATION, AND FIELD METHODS FOR DETERMINING THE RATE OF WATER MOVEMENT IN THE VADOSE ZONE. ALSO PRESENTED IS A CATALOG OF METHODS FOR ESTIMATING VADOSE ZONE FLOW RATES.
AVAILABILITY: GROUND WATER MONITORING REVIEW, V2 N1

IRIS ACCESSION NUMBER: EW007478
PUBLICATION DATE: WIN 82
TITLE: SURFACE GEOPHYSICAL TECHNIQUES IN GROUNDWATER MONITORING PART II.
PERSONAL AUTHOR: YAZICIGIL, HASAN; SENDLEIN, LYLE V. A.
DESCRIPTOR: #ANALYTICAL TECHNIQUES; #AQUIFERS; #ELECTRICAL RESISTIVITY; #GEOLOGY; #GEOPHYSICS; #GROUNDWATER; #HYDROGEOLOGY; #MAPPING; #MONITORING; #RESEARCH REPORTS; #THERMAL METHODS
DESCRIPTIVE NOTE: 56-62P.
ABSTRACT: THIS IS THE SECOND PART OF A TWO-PART ARTICLE IN WHICH SURFACE GEOPHYSICAL METHODS FOR GROUNDWATER MONITORING ARE REVIEWED. THE USE OF ELECTRICAL RESISTIVITY AND THERMAL METHODS ARE DISCUSSED IN DETAIL. BOTH METHODS ARE DESCRIBED, CODED, AND APPLIED TO FIELD SITUATIONS.
AVAILABILITY: GROUND WATER MONITORING REVIEW, V2 N1

IRIS ACCESSION NUMBER: EW007479
PUBLICATION DATE: WIN 82
TITLE: TWO GAS-DRIVE SAMPLING DEVICES
PERSONAL AUTHOR: ROBIN, MICHAEL J. L.; AND OTHERS
DESCRIPTOR: #EQUIPMENT; #CAS-DRIVE SAMPLERS; #GROUNDWATER; #HYDROLOGY; #MONITORING; #PERFORMANCE EVALUATION; PIEZOMETERS; #SAMPLING; #WATER QUALITY; WELLS
DESCRIPTIVE NOTE: 23-24, 26P.
ABSTRACT: THIS ARTICLE DISCUSSES EFFORTS TO IDENTIFY INFILTRATION/INFLOW SOURCES AND TO EVALUATE SEVERAL METHODS OF SOURCE DETECTION. THIS STUDY FOUND THAT, WHILE RELIABLE FOR FINDING INFILTRATION/INFLOW SOURCES, SMOKE TESTING CANNOT BE USED TO QUANTIFY RESULTS WITHOUT LEADING TO EXAGGERATED ESTIMATES. SUPPLEMENTAL DYED-WATER TESTING OFFERED A WAY TO SET MORE REALISTIC I/I FIGURES AND REHABILITATION COSTS.

IRIS ACCESSION NUMBER: EW007480
PUBLICATION DATE: WIN 82
TITLE: PROBLEMS OF MONITORING NETWORK DESIGN TO DETECT UNANTICIPATED CONTAMINATION.
PERSONAL AUTHOR: PFANNKUCH, HANS-OLAF
DESCRIPTOR: #ACCIDENTAL SPILLS; #CONTAMINATION; #GROUNDWATER; #HYDROGEOLOGY; #MANAGEMENT; #MONITORING; #POLLUTION ABATEMENT; #WATER QUALITY
DESCRIPTIVE NOTE: 67-76P.
ABSTRACT: THIS ARTICLE DESCRIBES A MONITORING SYSTEM DESIGNED TO MEET THE SPECIAL NEEDS OF MANAGING ACCIDENTAL SPILLS ALONG EXTENDED ROUTES AND CONTAMINANT DETECTION FROM UNKNOWN SOURCES. TOPICS DISCUSSED INCLUDE: MONITORING IN THE GENERAL POLLUTION CONTROL CONTEXT, CONTAMINANT RELEASE INTO THE ENVIRONMENT, CONTAMINANT PROPAGATION IN SHALLOW AQUIFER SYSTEMS, AND FIELD EXAMPLES AND APPLICATIONS.
AVAILABILITY: GROUND WATER MONITORING REVIEW, V2 N1

IRIS ACCESSION NUMBER: EW007481
PUBLICATION DATE: FEB 82
TITLE: INFILTRATION/INFLOW ANALYSIS: FINDING THE SOURCE.
PERSONAL AUTHOR: HOLMES, KENNETH T.; AND OTHERS
DESCRIPTOR: #CASE STUDIES; #CROSS CONNECTIONS; #DETECTION TECHNIQUES; #DYED WATER TESTING; #INFILTRATION; #INFLOW; #PERFORMANCE EVALUATION; #SEWER SYSTEMS; #SMOKE TESTING; #WASTEWATER COLLECTION
DESCRIPTIVE NOTE: 23-24, 26P.
ABSTRACT: THIS ARTICLE DISCUSSES EFFORTS TO IDENTIFY INFILTRATION/INFLOW SOURCES AND TO EVALUATE SEVERAL METHODS OF SOURCE DETECTION. THIS STUDY FOUND THAT, WHILE RELIABLE FOR FINDING INFILTRATION/INFLOW SOURCES, SMOKE TESTING CANNOT BE USED TO QUANTIFY RESULTS WITHOUT LEADING TO EXAGGERATED ESTIMATES. SUPPLEMENTAL DYED-WATER TESTING OFFERED A WAY TO SET MORE REALISTIC I/I FIGURES AND REHABILITATION COSTS.
AVAILABILITY: AMERICAN CITY & COUNTY, V97 N2

IRIS ACCESSION NUMBER: EW007482

PUBLICATION DATE: FEB 82

TITLE: SMOKE TESTING: IT'S NOT ALWAYS AS EASY AS IT SEEMS.

PERSONAL AUTHOR: HOLLENBECK, ALAN J.; JANKOVIC, MICHAEL J.

DESCRIPTOR: *INFILTRATION; *INFLOW; *MAINTENANCE; *PERFORMANCE EVALUATION; SAFETY; SANITARY SEWERS; *SEWER SYSTEMS; *SMOKE TESTING; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 24-25P.

ABSTRACT: THIS ARTICLE DISCUSSES VARIOUS ASPECTS OF SMOKE TESTING FOR INFILTRATION/INFLOW SOURCES. THIS ARTICLE REPORTS THAT CLOSE ATTENTION TO THE FIELD PROCEDURE USED FOR SMOKE TESTING OF SANITARY SEWERS WILL HELP LOCATE MANY I/I SOURCES. MAINTENANCE OF SMOKE TESTING EQUIPMENT, SAFETY PRECAUTIONS IN THE FIELD, AND PUBLIC RELATIONS WITH RESIDENTS IS ALSO DISCUSSED.

AVAILABILITY: AMERICAN CITY & COUNTY, V97 N2

IRIS ACCESSION NUMBER: EW007483

PUBLICATION DATE: FEB 82

TITLE: TRY CHEMICAL TESTS IF INDUSTRIAL WASTES ARE STRONG.

PERSONAL AUTHOR: BRADSTREET, KENNETH A.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CASE STUDIES; *CHEMICAL DILUTION; *FLOW MEASUREMENT; INDUSTRIAL WASTES; *INFILTRATION; *INFLOW; *PERFORMANCE EVALUATION; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 26-27P.

ABSTRACT: THIS ARTICLE PRESENTS A CASE STUDY OF ATTEMPTS TO EVALUATE AN INFILTRATION/INFLOW PROBLEM WHERE TRADITIONAL FLOW MEASURING TECHNIQUES WOULDN'T WORK. FACED WITH A SURCHARGED SEWER SYSTEM, CONNECTICUT ENGINEERS TURNED TO A CHEMICAL DILUTION FLOW MEASUREMENT METHOD TO FIND OUT HOW MUCH INFILTRATION AND INFLOW WERE ADDING TO A TREATMENT PLANT'S LOAD.

AVAILABILITY: AMERICAN CITY & COUNTY, V97 N2

IRIS ACCESSION NUMBER: EW007484

PUBLICATION DATE: FEB 82

TITLE: HOW TO GET SEWER MAINTENANCE UNDER REAL CONTROL.

PERSONAL AUTHOR: MONCK, JOHN W.

DESCRIPTOR: *CASE STUDIES; *INSPECTION; *MAINTENANCE; *MANAGEMENT; HARPOWER UTILIZATION; MONITORING; *OPERATIONS (WASTEWATER); PLANNING; PROBLEM SOLVING; *PROGRAM DESCTIONS; SCHEDULING; *SEWERS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 29-30P.

ABSTRACT: THIS ARTICLE PRESENTS A CASE STUDY OF HOW ONE CITY DEVELOPED AND MANAGED A SEWER MAINTENANCE PROGRAM. THE STUDY FOUND THAT TO MAXIMIZE PRODUCTION AND MINIMIZE COSTS THE DEPARTMENT HEAD MUST HAVE ACCURATE INFORMATION ON WHICH TO BASE HIS/HER DECISIONS AND FEEDBACK OF RESULTS FOR TIMELY ADJUSTMENTS AND SCHEDULE FLEXIBILITY. INFORMATION COLLECTION, INCLUDING TV INSPECTION, IS DISCUSSED.

AVAILABILITY: AMERICAN CITY & COUNTY, V97 N2

IRIS ACCESSION NUMBER: EW007485

PUBLICATION DATE: FEB 82

TITLE: IN-PLACE SEWER RECONSTRUCTION PROVES COST-EFFECTIVE.

PERSONAL AUTHOR: THOMASSON, RICHARD O.

DESCRIPTOR: *CASE STUDIES; *COST EFFECTIVENESS; *EQUIPMENT; *INSITUFORM; *MAINTENANCE; *PERFORMANCE EVALUATION; *PIPS; *SEWER REPLACEMENT; *SEWERS; *TECHNOLOGICAL ADVANCEMENTS; *WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 31-32P.

ABSTRACT: THIS ARTICLE DESCRIBES A NEW SEWER REPLACEMENT PROCESS WHICH MINIMIZES EXCAVATION AND SURFACE REPAIRS AND IS SUBSTANTIALLY FASTER THAN WASHINGTON SUBURBAN SANITARY DISTRICT'S EXISTING SEWER REPLACEMENT PROCESS CALLED "INSITUFORM" AND CONSISTS OF THE INSERTION OF AN IMPERMEABLE, CORROSION-RESISTANT LINING INSIDE EXISTING SEWER MAINS.

AVAILABILITY: AMERICAN CITY & COUNTY, V97 N2

IRIS ACCESSION NUMBER: EW007486

PUBLICATION DATE: JAN 82

TITLE: CONSERVING WATER THROUGH PRICING.

PERSONAL AUTHOR: RENSHAW, EDWARD F.

DESCRIPTOR: *CONSERVATION; *COSTS; *ECONOMIC FACTORS; *MANAGEMENT; *POTABLE WATER; *RATE STRUCTURES; *WATER RATES; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTIVE NOTE: 2-5P.

ABSTRACT: CONSERVING TREATED WATER AS AN ECONOMIC ALTERNATIVE TO INCREASING CAPACITY IS RECEIVING MORE AND MORE SERIOUS ATTENTION. THE EFFECT OF CHARGING PROGRESSIVELY HIGHER RATES FOR HIGH USAGE, ESPECIALLY USAGE BY INDUSTRIES.
IS UNACCEPTABLE AND WOULD FORCE BUSINESSES THAT FORM THE ECONOMIC BACKBONE OF SOME COMMUNITIES TO RELOCATE. THE AUTHOR OF THIS ARTICLE PROPOSES AN INCENTIVATIVE WATER EXCISE TAX TO INCENTIVIZE CONSERVATION BY CONSUMERS, BOTH LARGE AND SMALL. ADDITIONAL COSTS FOR LARGE BUILDINGS, SUCH AS PROPERTY TAXES ON BUSINESSES, COULD BE IMPLEMENTED TO INCENTIVIZE HIGHER WATER RATES. THE PROGRAM COULD ALSO BE DESIGNED TO INCLUDE RELATE TO NONPROFIT INSTITUTIONS AND NEEDY HOUSEHOLDs.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N1

IRIS ACCESSION NUMBER: EW007487
PUBLICATION DATE: JAN 82
TITLE: MARGINAL COST AND SEASONAL PRICING OF WATER SERVICE.
PERSONAL AUTHOR: HANN, PATRICK C.; SCULLEN, DONALD L.
DESCRIPTION: *CONSERVATION; *COSTS; *ECONOMIC FACTORS; *MANAGEMENT; *MARGINAL COST; *REVENUE COLLECTION; *SEASONAL RATES; *WATER RATES; *WATER RESOURCES; *WATER SUPPLY
DESCRIPTIVE NOTE: 6-11P.
ABSTRACT: ALTHOUGH MANY DIFFICULTIES ARE INVOLVED IN APPLYING ECONOMIC THEORIES TO WATER RATE DESIGN, INNOVATIVE PRICING SHOULDN'T BE UNDERSTOOD AND CONSIDERED BY WATER UTILITY MANAGERS. THIS ARTICLE DESCRIBES THE PROBLEMS ASSOCIATED WITH IMPLEMENTING RATES BASED ON MARGINAL COST (I.E., THE OPERATING COSTS ASSOCIATED WITH CHANGING RATES OF USE OF EXISTING CAPACITY OR THE COSTS OF EXPANDING TREATMENT CAPACITY AND THE CHANGES IN OPERATING COSTS CAUSED BY SEASONAL HIGH DEMAND. THE ADVANTAGE OF SUCH PRICING IS THAT CUSTOMERS ARE CHARGED PRICES REFLECTING THE COST OF THEIR DECISIONS.
AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N1

IRIS ACCESSION NUMBER: EW007488
PUBLICATION DATE: JAN 82
TITLE: COSTS FOR SMALL SYSTEMS TO MEET THE NATIONAL INTERIM DRINKING WATER REGULATIONS.
PERSONAL AUTHOR: STEVIE, RICHARD G.; CLARK, ROBERT M.
DESCRIPTION: *COSTS; *DRINKING WATER; *ECONOMIC FACTORS; *REGULATIONS; *REVENUE COLLECTION; *SMALL SYSTEMS; *STANDARDS; *UTILITIES; *WATER RESOURCES; *WATER SUPPLY; *WATER TREATMENT
DESCRIPTIVE NOTE: 13-17P.
ABSTRACT: BECAUSE THE SMALL WATER UTILITIES--THOSE SERVING LESS THAN 10,000 PEOPLE--CANNOT MAKE ECONOMIC SCALING EFFECTS, THE COSTS OF MEETING THE NATIONAL INTERIM PRIMARY DRINKING WATER REGULATIONS (HRIPPER) WILL HAVE A GREATER EFFECT ON EACH CUSTOMER OF THESE UTILITIES THAN ON THOSE SERVED BY LARGE UTILITIES. THIS ARTICLE REPORTS ON A SURVEY THAT IDENTIFIED SOME TYPICAL MARGINAL COSTS OF SMALL UTILITIES, STUDIED THE ADDITIONAL COSTS OF THE REGULATIONS. THE ADVANTAGE OF THE REGULATIONS ON THE 95 PERCENT OF ALL WATER UTILITIES THAT ARE CLASSIFIED AS "SMALL" WILL FORCE MORE RESEARCH ON THE CONSEQUENCES OF THE REGULATIONS AND WILL REQUIRE CLOSE COOPERATION BETWEEN WATER UTILITIES AND FEDERAL, STATE, AND LOCAL GOVERNMENTS.
AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N1

IRIS ACCESSION NUMBER: EW007489
PUBLICATION DATE: JAN 82
TITLE: A SPATIAL COSTING SYSTEM FOR DRINKING WATER.
PERSONAL AUTHOR: CLARK, ROBERT M.; AND OTHERS
DESCRIPTION: *CASE STUDIES; *COMPUTER APPLICATIONS; *COSTS; *DATA COLLECTION; *DRINKING WATER; *ECONOMIC FACTORS; *MANAGEMENT; *MODELING; *REGULATIONS; *STANDARDS; *UTILITIES; *WATER SUPPLY; *WATER TREATMENT; *WATER DISTRIBUTION
DESCRIPTIVE NOTE: 18-26P.
ABSTRACT: THE COSTING SYSTEM DESCRIBED IN THIS ARTICLE WAS FIRST TESTED THEORETICALLY BY COMPUTER MODEL AND THEN APPLIED IN A CASE STUDY TO THE ARKANSAS COUNTY WATER DISTRICT. THE OBJECTIVES WERE TO IDENTIFY THE COSTS ASSOCIATED WITH TREATMENT MODIFICATIONS, PARTICULARLY THOSE NECESSARY TO MEET THE REQUIREMENTS OF THE SAFE DRINKING WATER ACT. THE AUTHORS FOUND THAT MOST WATER UTILITIES KEEP FINANCIAL RECORDS FOR ACCOUNTING PURPOSES ONLY, WITH LITTLE OR NO MEANS OF CATEGORIZING COSTS. THE TECHNIQUE DESCRIBED IN THIS ARTICLE PROVIDES A MEANS OF COLLECTING THE DATA NEEDED FOR COMPREHENSIVE COST ANALYSES. MANAGERIAL INFORMATION, AND FINANCIAL REPORTING TO THE PUBLIC. COSTS AND SUBCOSTS ASSOCIATED WITH THE ACQUISITION, TREATMENT, AND DELIVERY OF DRINKING WATER CAN BE IDENTIFIED. THE SUCCESS OF THE CASE STUDY INDICATES THE SUITABILITY TO THE NEEDS OF OTHER WATER SYSTEMS, SOME OF WHICH ARE CURRENTLY INSTITUTING THE MODEL COSTING SYSTEM.
AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL V74 N1

IRIS ACCESSION NUMBER: EW007490
PUBLICATION DATE: JAN 82
TITLE: FINAL REPORT ON METRIC UNITS AND SIZES.
DESCRIPTION: *GUIDELINES; *MEASUREMENTS; *METRIC SYSTEM; *SPECIFICATIONS; *STANDARDS; *TECHNOLOGY; *WATER DISTRIBUTION; *WATER SUPPLY; *WATER TREATMENT
ABSTRACT: This updated report of the metrification committee incorporates comments and developments that have occurred since the first report was published in the February 1978 Journal. The subject of the report directly affects standards and has been approved by the standards council as well as the technical and professional council.

Availability: American Water Works Association Journal V74 N1

IRIS accession number: EW007491

Publication date: Jan 82

Title: Laboratory testing of ozonation systems prior to pilot-plant operations.

Personal author: Chrostowski, Paul C.; and others

Descriptor: *design; *disinfection; health effects; *laboratory testing; *ozonation; *pretreatment; *research reports; *water treatment

Abstract: Ozonation has been used empirically in water treatment processes since the turn of the century. Even though concepts relating to the properties of ozone are not widely understood, if ozonation is under consideration as part of a water utility's treatment train, a rational design method is needed. The design system is tailored to the particular system's water source. The experimental protocol reported in this article, found by bench-scale experiments, can lead to a coherent design for an ozonation system as well as a means of predicting the effects of ozone on a particular water supply.

Availability: American Water Works Association Journal V74 N1

IRIS accession number: EW007492

Publication date: Jan 82

Title: Water reuse planning by means of an input-output table.

Personal author: Klooze, Daniel; Hendricks, David W.

Descriptor: *analytical techniques; *case studies; *conservation; *input-output models; *planning; *research reports; *recycling; *water demand; *water resources; *water reuse; *water supply

Abstract: Water reuse for both potable and nonpotable needs has always been practiced, particularly in the semi-arid west. The authors of this article have developed an orderly format so complex water systems can be easily understood both structurally and operationally. New projects can be evaluated in terms of meeting new demands and their effects on the remainder of the system. The input-output table provides a simple means of understanding a complete water resource system so that the most appropriate reuse opportunities can be compared and identified. The table would also be a useful tool in reaching agreement among various water users.

Availability: American Water Works Association Journal V74 N1

IRIS accession number: EW007493

Publication date: Feb 82

Title: The cost and effectiveness of public notification of MCL violations.

Personal author: Stegman, Charles E.; Schneider, Georgia

Descriptor: *cost effectiveness; *drinking water; *maximum contaminant levels; *public notification; *public relations; *safe drinking water act; standards; statistics; surveys; *violations; *water treatment; *water quality

Abstract: A statistical study of the public notification requirements of the Safe Drinking Water Act (SDWA) was performed by means of data from specific methods of notification of bacteriologic and turbidity violations of maximum contaminant levels. The survey also tabulated the effectiveness of public notification in gaining citizen support for upgrading treatment facilities. Information furnished by operators of 164 small, medium-sized, and large water systems located in 14 states was assembled for this comprehensive analysis of the public notification provisions in the SDWA.

Availability: American Water Works Association Journal V74 N2

IRIS accession number: EW007494

Publication date: Feb 82

Title: Planning maintenance management.

Personal author: Burney, Christopher M.

Descriptor: *case studies; *equipment; *guidelines; *maintenance; *management; *planning; *administration; *program descriptions; *utilities

Abstract: Preventive maintenance programs, if they are to...
COMMUNICATING WITH WATER UTILITY CUSTOMERS.

ABSTRACT: Communication, by the author's definition, is the process of transferring an idea or a thought from one person's mind to another's. Most water utilities have never gone beyond issuing information, which is no longer adequate communication. Consequently, most consumers ignore or take their water suppliers for granted. The author of this article has specific suggestions that management can easily adopt to improve community relations and support for the water industry.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V74 N2

IRIS ACCESSION NUMBER: EW007495
PUBLICATION DATE: FEB 82
TITLE: COMMUNICATING WITH WATER UTILITY CUSTOMERS.
PERSONAL AUTHOR: KUTCHINS, KAY
DESCRIPTORS: *COMMUNICATIONS; *COMMUNITY INVOLVEMENT; *CONSUMER AFFAIRS; *GUIDELINES; *MANAGEMENT; *PROGRAM ADMINISTRATION; *PUBLIC RELATIONS; REGULATIONS; *UTILITIES; *WATER RESOURCES; *WATER SUPPLY
DESCRIPTIVE NOTE: 72-77P.

PROCEDURES FOR ANALYZING ORGANIC CONTAMINANTS IN DRINKING WATER.

ABSTRACT: Water utilities must be knowledgeable about the techniques, equipment, and expertise needed to meet the standards USEPA sets for the control of organic chemicals in drinking water. This article discusses the levels of organic contaminants that are detectable with currently available equipment and the advantages and disadvantages of alternative techniques. Gas chromatography provides a greater degree of certainty in identifying compounds than conventional detectors. USEPA is developing a laboratory certification program for the personnel who will be responsible for analyzing regulated compounds.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V74 N2

IRIS ACCESSION NUMBER: EW007497
PUBLICATION DATE: FEB 82
TITLE: PORTABLE WATER--WASTES LABORATORY HIGHLIGHTS BENEFITS OF NEW NITROGEN ANALYZING SYSTEMS.
PERSONAL AUTHOR: WANG, JOSEPH
DESCRIPTORS: *ANALYTICAL TECHNIQUES; *KJELDAHL ANALYSIS; *LABORATORY EQUIPMENT; *LABORATORIES; *NITROGEN; *TESTING; *WATER TREATMENT; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 34 NEWS-36 NEWS.

ABSTRACT: This article reports on the use of a new nitrogen analyzing system for portable laboratories. The Buchi-Brinkmann Kjeldahl nitrogen analyzer is a hoodless, table-top system that features push-button or fully automated operation, 50 percent reduction in size, much greater speed, enhanced safety, energy conservation, and the inclusion of built-in water and base reservoirs.

AVAILABILITY: AMERICAN WATER WORKS ASSOCIATION JOURNAL, V74 N2

IRIS ACCESSION NUMBER: EW007498
PUBLICATION DATE: FEB 82
TITLE: ANODIC STRIPPING VOLTAMETRY AS AN ANALYTICAL TOOL.
PERSONAL AUTHOR: WANG, JOSEPH
DESCRIPTORS: *ANALYTICAL TECHNIQUES; *ANODIC STRIPPING VOLTMETRY; *ELECTROANALYTICAL TECHNIQUES; *HEAVY METALS; *LABORATORY TECHNIQUES; *MEASUREMENTS; *PERFORMANCE EVALUATION; *TRACE METALS; *WATER QUALITY
DESCRIPTIVE NOTE: 104A-109AP.

ABSTRACT: This article examines in detail the technique of anodic stripping voltammetry. Specific attention is focused on its use in detecting trace metals in water samples and other applications in environmental surveillance. The basic working principles behind anodic stripping measurements are also discussed.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V16 N3
This article reviews various steps in the transformation of the concepts of acid precipitation from the domain of scientific curiosity to the domain of public concern and debate. Among the issues examined are how the transition occurred, who was responsible, and what factors of scientific awareness and public perception have influenced the course of research on acid precipitation.

Availability: Environmental Science & Technology, V16 N2

IRIS ACCESSION NUMBER: EW007500
PUBLICATION DATE: FEB 82
TITLE: Trace Analysis of the Dioxins.
PERSONAL AUTHOR: Karasek, F. W.; Onuska, F. I.
DESCRIPTOR: *Analytical Techniques; *Chemical Analysis; Chemistry; *Dioxins; Gas Chromatography; *Hazardous Materials; *Laboratory Techniques; *Toxic Substances; *Trace Analysis
DESCRIPTIVE NOTE: 309A-324AP.
ABSTRACT: The analytical chemistry of the polychlorinated dibenzo-P-dioxins, of interest due to their high toxicity, is described in this article. Topics addressed include: Radioimmunoassay screening method; Gas Chromatography with Electron Capture; The GC/MS Technique using High-Resolution CC (HRCC) and Low-Resolution HS (LRHS); Ultratrace Analysis; and new analytical techniques.
Availability: Analytical Chemistry, V54 N2

IRIS ACCESSION NUMBER: EW007503
PUBLICATION DATE: FEB 82
TITLE: Land Disposal of Sludge.
PERSONAL AUTHOR: Cormack, Jack W.; and others
DESCRIPTOR: *Case Studies; *Land Application; Landfills; Land Spreading; Monitoring; *Operations (Wastewater); *Performance Evaluation; Site Selection; Sludge Sewage; *Waste Disposal
DESCRIPTIVE NOTE: 42-44P.
ABSTRACT: This article reports how the Lake County, Illinois Sanitary District uses landfilling and land spreading techniques for an economically and environmentally sound means of sewage sludge disposal. Information is presented on site selection, operations, and monitoring.
Availability: Environmental Science & Technology, V16 N2
AVAILABILITY:  PUBLIC WORKS, V113 N2

IRIS ACCESSION NUMBER: EW007504
PUBLICATION DATE:  FEB 82
TITLE:  WINNING THE PUBLIC TO ENERGY CONSERVATION.
PERSONAL AUTHOR:  BOSCH, MARY; DEBO, THOMAS N.
DESCRIPTOR:  *ATTITUDES; *CASE STUDIES; *CONSERVATION; FLOW RESTRICTIONS; *GEORGIA; PLANNING; *PROGRAM DESCRIPTIONS; *PUBLIC OPINION; RESIDENTIAL USES; *SURVEYS; *WATER CONSERVATION; *WATER RESOURCES; *WATER USE
DESCRIPTIVE NOTE:  43-49P.
ABSTRACT:  THIS ARTICLE DISCUSSES THE EXPERIENCE THAT ATLANTA, GEORGIA WATER OFFICIALS HAD WITH THE "LOW COST/NO COST RESIDENTIAL CONSERVATION PROGRAM." INCLUDED ARE RESULTS OF A PUBLIC SURVEY ASSESSING ATTITUDES AND WILLINGNESS TO PARTICIPATE IN A WATER CONSERVATION PROGRAM. PROGRAM RECOMMENDATIONS AND MARKETING STRATEGIES ARE ALSO DISCUSSED.

AVAILABILITY:  PUBLIC WORKS, V113 N2

IRIS ACCESSION NUMBER: EW007505
PUBLICATION DATE:  FEB 82
TITLE:  FIRST TRIPLE-USE STRUCTURE FOR ELEVATED WATER STORAGE.
PERSONAL AUTHOR:  GRAHAM, JACK M.
DESCRIPTOR:  *ARCHITECTURE; *CONSTRUCTION; *DESIGN; *ELEVATED RESERVOIRS; *LAND USE; *PLANNING; *RESERVOIRS; *WATER STORAGE
DESCRIPTIVE NOTE:  50-51P.
ABSTRACT:  THIS ARTICLE REPORTS ON THE CONSTRUCTION OF AN ELEVATED WATER STORAGE RESERVOIR THAT ALSO HOUSES A FIRE STATION AND OFFICE SPACE. THIS TWO MILLION GALLON STORAGE FACILITY HAS WON PRIZES FOR APPEARANCE AND HAS SERVED A MULTIPLE PURPOSE FOR HALTOL CITY, TEXAS.

AVAILABILITY:  PUBLIC WORKS, V113 N2

IRIS ACCESSION NUMBER: EW007506
PUBLICATION DATE:  FEB 82
TITLE:  SUBMERSIBLE MIXERS HELP WASTEWATER PLANT COPE WITH DISPOSAL OF SLUDGE.
DESCRIPTOR:  *CASE STUDIES; *EQUIPMENT; *FACILITIES; *MIXERS; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *SUBMERSIBLE MIXERS; SLUDGE; *SLUDGE DISPOSAL; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE:  125-128P.
ABSTRACT:  THIS REPORT WAS DEVELOPED BY THE WPCF TOXIC SUBSTANCES COMMITTEE TO IDENTIFY THE EQUIPMENT AND RESOURCES REQUIRED FOR MONITORING TOXIC MATERIALS IN WASTEWATER EFFLUENTS AND NATURAL WATER SYSTEMS. THE SAMPLING COSTS FOR
OF OTHER INVESTIGATORS' DATA, COMPARED WELL WITH THE RESULTS OBTAINED BY REANALYSIS OF EXPERIMENTAL DATA PRESENTED.

DESCRIPTIVE NOTE: 129-134P.

ABSTRACT: EFFLUENT BOD AND SUSPENDED SOLIDS CONCENTRATION DATA FROM 11 TRICKLING FILTER PLANTS WERE ANALYZED TO DETERMINE WHETHER TRICKLING FILTER DATA HAVE THE SAME STATISTICAL CHARACTERISTICS AS THE DATA OF ACTIVATED SLUDGE PROCESSES. LOGNORMAL DISTRIBUTION REASONABLY FITS REPORTED EFFLUENT BOD AND SUSPENDED SOLIDS DATA OF TRICKLING FILTERS. BECAUSE THE PREVIOUS RELIABILITY AND STABILITY MODELS DEVELOPED FOR ACTIVATED SLUDGE PROCESSES ALSO FIT TRICKLING FILTER DATA QUITE WELL, THOSE MODELS MAY BE USED EITHER IN DESIGNING A TRICKLING FILTER PROCESS EXPECTED TO PERFORM AT A CERTAIN RELIABILITY OR TO ESTIMATE THE RELIABILITY AND STABILITY OF A TRICKLING FILTER PLANT ALREADY IN OPERATION.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2

IRIS ACCESSION NUMBER: EW007510

PUBLICATION DATE: FEB 82

TITLE: KINETIC MODELING OF THE OXIDATION OF PHENOL IN WATER.

PERSONAL AUTHOR: ROTH, JOHN A.; AND OTHERS

DESCRIPTOR: *CHEMICAL REACTIONS; *KINETICS; *MATHEMATICAL MODELLING; *OXIDATION; *PHENOLS; *REACTION KINETICS; *RESEARCH REPORTS; *STOICHIOMETRY; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 135-139P.

ABSTRACT: A MODEL OF THE GAS-LIQUID REACTION RATE BETWEEN OZONE AND PHENOL FROM BENCH-SCALE PROTOTYPE STUDIES IS PRESENTED. CONSISTENT RESULTS IN THE LITERATURE, THE EXPERIMENTAL DATA SHOW FIRST-ORDER DEPENDENCE ON RESPECT TO PHENOL. THE MODEL WAS FIT TO DATA OBTAINED FROM BOTH SEMI-BATCH MODE AND CONTINUOUS STIRRED TANK REACTOR MODE OPERATION. PARAMETERS FOR THIS MODEL, OBTAINED BY REANALYSIS OF OTHER INVESTIGATORS' DATA, COMPARED WELL WITH THE RESULTS OF THIS INVESTIGATION. AN OVERALL STOICHIOMETRIC RELATIONSHIP DEVELOPED FROM THE CONTINUOUS STIRRED TANK REACTOR EXPERIMENTS, WAS CONSISTENT WITH THE LITERATURE RESULTS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2

IRIS ACCESSION NUMBER: EW007512

PUBLICATION DATE: FEB 82

TITLE: IMPROVED THERMAL SLUDGE CONDITIONING BY TREATMENT WITH ACIDS AND BASES.

PERSONAL AUTHOR: ALSOP, G. MICHAEL; CONWAY, RICHARD A.

DESCRIPTOR: *ACIDS; *BASES; *CHEMICAL REACTIONS; *DEWATERING; *ECONOMIC FACTORS; *FLOCCULATION; *HEAT; *OPERATIONS (WASTEWATER); *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *SLUDGE; *SLUDGE CONDITIONING; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 146-152P.

ABSTRACT: TO PREPARE SLUDGE FOR DewaterING, A PROCESSING SEQUENCE OF EASIC CONDITIONS FOLLOWED BY ACIDIC CONDITIONS AVOIDS THE DRAWBACKS WHILE RETAINING THE ADVANTAGES OF CONVENTIONAL HEAT TREATMENT. CONDITIONS ARE OPTIMIZED FOR...
TREATING AN OTHERWISE NONTOXIC ORGANIC WASTE, THE SYSTEM IS
ABSTRACT: CYANIDE,
DESCRIPTIVE NOTE: WASTEWATER TREATMENT;
METABOLISM;
DESCRIPTOR: PERSONAL AUTHOR: PROCESS.
PUBLICATION DATE: FEB 82
AVAILABILITY: OPERATING COSTS.' RELATIVE
SOME AND TO CAUSTIE, THEREAS THE SECOND MODIFIES THE CELL SURFACE
EACH SLUDGE. THE FIRST STEP PRESUMABLY EXTRACTS POLYMERS
FROM THE CELLS, WHEREAS THE SECOND MODIFIES THE CELL SURFACE
AND CAUSES FLOCCULATION USING THE EXTRACTED POLYMERS. THE
FOLLOWING ARE KEY FEATURES AND ADVANTAGES OF THIS PROCESSING
SEQUENCE: (1) TEMPERATURE, PRESSURE, AND REACTION TIME ARE
MUCH LESS THAN IN CONVENTIONAL HEAT TREATMENT (ORGANIC
SOLUBILIZATION IS NOT A PROBLEM); (2) DISINFECTION CAN BE
ACCOMPLISHED; (3) THE SLUDGE IS WELL CONDITIONED (FOR
EXAMPLE, Dewatering AT 10 PSIG ON A DELT PRESS TO 20 TO 307. SOLIDS IS POSSIBLE); (4) CONDITIONS MAY BE ADJUSTED TO ACCOMMODATE A RANGE OF DIFFICULT-TO-Dewater BIOLoGICAL SLUDGES; (5) COAGULANTS AND
HEAT TREATMENT (ORGANIC WASTE) ARE NOT ADDITIONAL; (6) CONDITIONING OPERATION IS CLOSED, AND CONDITIONED SLUDGE CAN BE STORED WITHOUT ODORS; AND (7) SOME METALS REDUCTION, ESPECIALLY OF CALCIUM, RESULTS.
PRELIMINARY ECONOMIC STUDIES ALSO INDICATE FAVORABLE
OPERATING COSTS.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2
IRIS ACCESSION NUMBER: EW007513
PUBLICATION DATE: FEB 82
TITLE: TREATMENT OF CYANIDE WASTE BY THE EXTENDED AERATION
PROCESS.
PERSONAL AUTHOR: CAUDY, A. F.; AND OTHERS
DESCRIPTOR: #AERATION; #CYANIDE; #EXTENDED AERATION;
#MEtabOLISM; #INOPERATIONS; #PERFORMANCE EVALUATION;
#RESEARCH REPORTS; #SLUDGE; SLUDGE TREATMENT;
#WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 153-164P.
ABSTRACT: CYANIDE, AT 10, 15, AND 20 MG/L, WAS FED WITH
READILY DEGRADABLE SYNTHETIC WASTE TO LABORATORY-SCALE
EXTENDED AERATION UNITS OPERATED WITH AND WITHOUT THE
HYDROLYTIC ASSIST. PLANT EFFICIENCY AND THE RATE OF
CYANIDE WERE ASSESSED,ALTHOUGH CYANIDE WASTES PRETREATED TO
20 MG/L CAN BE ACCOMMODATED BY AN EXTENDED AERATION PROCESS
TREATING AN OTHERWISE NONTOXIC ORGANIC WASTE. THE SYSTEM IS
NOT STABLE TO VARIATIONS IN CYANIDE CONCENTRATION.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2
IRIS ACCESSION NUMBER: EW007514
PUBLICATION DATE: FEB 82
TITLE: ALTERNATIVE APPROACH TO ASSESSING WATER QUALITY
IMPACT OF WASTEWATER EFFLUENTS.
PERSONAL AUTHOR: LEE, G. FRED; AND OTHERS
DESCRIPTOR: #AMMONIA; #CHLORINE; #CONTAMINANTS; #EFFLUENTS;
#HAZARD ASSESSMENT APPROACH; RESIDUALS; #STANDARDS;
#WASTEWATER; #WATER QUALITY
DESCRIPTIVE NOTE: 165-175P.
ABSTRACT: AS PART OF IMPLEMENTING PL92-500, A NUMBER OF
STATES ARE ASSESSING WATER QUALITY BY MEASURING THE TOTAL
CONCENTRATION OF CONTAMINANTS IN A WATER SAMPLE. WATER
QUALITY SHOULD INSTEAD BE JUDGED BY THE CONDITIONS OF THE
CONTAMINANT ON THE DESIRED BENEFICIAL USES OF A PARTICULAR
WATER BODY THROUGH DEFINING THE RELATIONSHIPS BETWEEN
CONTAMINANT LOAD AND WATER QUALITY RESPONSE. SPECIFICALLY,
THE AUTHORS DISCUSS A HAZARD ASSESSMENT APPROACH THAT HAS
BEEN FOUND TO BE SUITABLE FOR ASSESSING THE IMPACT OF
AMMONIA AND CHLORINE RESIDUAL IN DOMESTIC WASTEWATERS. THIS
APPROACH ALSO IS APPROPRIATE FOR DETERMINING THE SIZE OF A
SUITE MIXING ZONE.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2
IRIS ACCESSION NUMBER: EW007515
PUBLICATION DATE: FEB 82
TITLE: CHEMICAL FRACTIONATION OF HEAVY METALS IN WASTEWATER-
AFFECTED SOILS.
PERSONAL AUTHOR: SCHALSCIA, E. B.; AND OTHERS
DESCRIPTOR: COPPER; #HEAVY METALS; #LAND TREATMENT; #LAND
APPLICATION; MANGANESE; #METALS; #RESEARCH REPORTS; #SOILS;
#WASTEWATER TREATMENT; ZINC
DESCRIPTIVE NOTE: 175-180P.
ABSTRACT: DURING LAND TREATMENT OF WASTEWATER, SIGNIFICANT
AMOUNTS OF HEAVY METALS MAY BE INTRODUCED INTO THE SOIL
SYSTEM. CHEMICAL FORMS OF THE DEPOSITED METAL ELEMENTS WOULD
AFFECT THEIR REACTIVITIES AND POLLUTION POTENTIAL IN THE
ENVIRONMENT. ATTEMPTS WERE MADE TO FRACTIONATE HEAVY METALS
IN THE SOIL USING THREE ESTABLISHED CHEMICAL EXTRACTION
PROCEDURES. RESULTS INDICATED CONSISTENTLY HIGHER METAL
RECOVERY PERCENTAGES IN THE WASTEWATER-AFFECTED SOILS.
ALTHOUGH CONSIDERABLE AMOUNTS OF HEAVY METALS IN THE
WASTEWATER WERE CHEMICALLY SOLUBLE, EXCHANGEABLE, AND
ABSORBED, MOST OF THE ACCUMULATED METALS WERE PRESENT IN THE
SOIL IN ORGANIC FORM (SUCH AS Cd) OR AS INORGANIC PRECIPITATES
(SUCH AS Zn). THE LACK OF SOLUBLE AND EXCHANGEABLE METALS IN THE
SOIL SIGNIFICANTLY REDUCES THE DOWNWARD LEACHING POTENTIAL OF
DEPOSITED METALS. HOWEVER, THE LABILE NATURE OF THE ACCUMULATED METAL ELEMENTS WOULD ENRICH THE SOIL WITH PLANT-AVAILABLE HEAVY METAL ELEMENTS FOR A LONG TIME TO COME.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N2
ABSTRACT: CULTURES OF SELERINGRSM CAPRICORNUTUM WERE MONITORED FOR CELL NUMBER, PHOEPHYTIN A, AND CORRECTED CHLOROPHYLL A. DRY WEIGHT DERIVED FROM CELL COUNTS INCREASED THROUGHOUT THE 45-DAY EXPERIMENT WHILE CHLOROPHYLL A AND PHOEPHYTIN A INCREASED UP TO DAY 11 AND THEN RAPIDLY DECREASED. THE EVER-INCREASING DRY WEIGHT CURVES WERE ATTRIBUTED TO THE PARTICLE COUNTER'S INABILITY TO DISTINGUISH LIVE ALGAL CELLS FROM DEBRIS, CELL FRAGMENTS, AND DEAD CELLS. IT IS SUGGESTED THAT MONITORING ALGAL GROWTH POTENTIAL (AGP) CULTURES WITH A PARAMETER SENSITIVE TO CULTURE SEEDNESS WILL AID THE PARTICLE COUNTER USER IN DECIDING WHEN TO TERMINATE AGP ASSAYS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION V54 N2
ABSTRACT: This article discusses the problems associated with setting environmental quality standards and also reports on a seminar on standards assessment and development which was sponsored by George Washington University. Participants at the seminar suggested ways that peer-review scientific data could balance value judgments and legislative and regulatory fiat. Also presented are suggestions for standards development, and discussion of criteria, rationale, and single-species testing.

AVAILABILITY: ENVIRONMENTAL SCIENCE & TECHNOLOGY, V16 N3
TREATMENT

SECONDARY EDUCATION; *FACILITIES; *DESCRIPTORS; *PERSONAL AUTHOR: ARTHUR, ROBERT M.

ABSTRACT: CONCEPTS AND PRACTICES IN ACTIVATED SLUDGE PROCESS CONTROL.

DESCRIPTORS: *ACTIVATED SLUDGE; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *INSTRUMENTATION; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *PROCESS CONTROL; *SLUDGE; *WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 125P.

ABSTRACT: THIS TEXT PRESENTS A DIFFERENT APPROACH TO THE STUDY OF ACTIVATED SLUDGE PROCESS CONTROL, ONE IN WHICH BIOLOGICAL AS WELL AS PHYSICAL PARAMETERS ARE EXAMINED. CHAPTERS INCLUDE: CONTROLLABLE ELEMENTS IN WASTEWATER TREATMENT; INSTRUMENTATION AND PROCESS CONTROL SYSTEMS; THEORETICAL BASIS FOR SELECTION OF SENSORS, SENSORS AND THEIR APPLICATION TO THE ANALYSIS AND CONTROL OF ACTIVATED SLUDGE; AND CONTROL SCHEMES.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007534

PUBLICATION DATE: 80

TITLE: AQUALINE THEASARUS.

PERSONAL AUTHOR: SMITH, JOYCE G.; RUSSELL, PETER J.

DESCRIPTORS: *AQUATIC ENVIRONMENTS; *ENGINEERING; *ENVIRONMENT; *INDEXES; *POLLUTION CONTROL; *TECHNOLOGY; *THESAURUS; *WASTEWATER TREATMENT; *WATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 664P. PRICE: $45.00

ABSTRACT: THIS THESAURUS CONTAINS APPROXIMATELY 70,000 INDEX TERMS RELATED TO WATER AND WASTEWATER TREATMENT, ENGINEERING, AND SCIENTISTS, AND ANYONE CONCERNED WITH WATER POLLUTION AND ENVIRONMENTAL PROTECTION. IN ADDITION, TERMS ARE INCLUDED FOR PLANTS, ANIMALS, SPECIFIC CHEMICALS, CHEMICAL CLASSES, AND INSTRUMENTATION AND ANALYTICAL TECHNIQUES RELATING TO WORK IN THE WATER INDUSTRY.

AVAILABILITY: ELLIS HORWOOD LTD., MARKET CROSS HOUSE, COOPER STREET, CHICHESTER, WEST SUSSEX, P. O. BOX 19, 'IEB, ENGLAND

IRIS ACCESSION NUMBER: EW007535

PUBLICATION DATE: 80

TITLE: METHANE GENERATION AND RECOVERY FROM LANDFILLS.

DESCRIPTORS: *GAS; *INSTRUCTIONAL MATERIALS; *LANDFILLS; *METHANE; *METHANE GENERATION; *METHANE RECOVERY; *POST SECONDARY EDUCATION; *RESOURCE RECOVERY; *WASTE DISPOSAL.

DESCRIPTIVE NOTE: 139P. PRICE: $14.95

ABSTRACT: THIS TEXT REVIEWS AVAILABLE LITERATURE PERTINENT TO LANDFILL GAS PRODUCTION AND RECOVERY AND SUMMARIZES THIS INFORMATION, EMphasizing CURRENTLY USED THEORIES AND APPROACHES RATHER THAN ATTEMPTING A COMPREHENSIVE REVIEW OF METHODOLOGY IN THE FIELD. CHAPTERS INCLUDE: METHANE FERMENTATION PROCESSES; COMPOSITION OF MUNICIPAL REFUSE; ESTIMATION OF THEORETICAL MAXIMUM YIELD; TIME DEPENDENCY OF GAS PRODUCTION; CERFAX FLUX IN LANDFILLS; FIELD TESTING OF GAS RECOVERY FROM LANDFILLS; AND, UTILIZATION AND PROCESSING OF
LANFILL GAS.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER OFFICE PARK, NOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007536
PUBLICATION DATE: 81
TITLE: DESIGN CALCULATIONS IN WASTEWATER TREATMENT.
PERSONAL AUTHOR: WILSON, F.
DESCRIPTOR: DESIGN; EFFLUENTS; ENGINEERING; INSTRUCTIONAL MATERIALS; MATHEMATICAL APPLICATIONS; MATHEMATICS; OPERATIONS (WASTEWATER); POST SECONDARY EDUCATION; SEWAGE; STORMWATER; WASTEWATER TREATMENT; WATER QUALITY
DESCRIPTIVE NOTE: 236P. PRICE: $14.95
ABSTRACT: THIS TEXTBOOK PRESENTS APPLIED THEORY AND ACTUAL DESIGN CALCULATIONS FOR WASTEWATER TREATMENT PROCESSES. THE TEXT COVERS THE WATER CYCLE FROM THE PRECIPITATION AND COLLECTION OF STORMWATER, THROUGH THE VARIOUS CONVENTIONAL SEWAGE TREATMENT PROCESSES, TO THE EFFECTS OF EFFLUENT DISCHARGE ON THE RIVER SYSTEM. IN ADDITION TO THE MORE COMMON LARGE SCALE TREATMENT PROCESSES, THE TEXT ALSO COVERS THE DESIGN OF ROTATING DISC UNITS, OXIDATION PONDS, AND OXIDATION DITCHES.
AVAILABILITY: METHUEN, INC., 733 THIRD AVENUE, NEW YORK, NY 10164

IRIS ACCESSION NUMBER: EW007537
PUBLICATION DATE: FALL 80
TITLE: LAYPERSON'S GUIDE TO GROUNDWATER.
DESCRIPTOR: CALIFORNIA; CONSERVATION; GROUNDWATER; GUIDES; LEGISLATION; MANAGEMENT; POLICY; WATER RESOURCES; WATER SUPPLY; WATER USE
DESCRIPTIVE NOTE: 16P. PRICE: $2.50
ABSTRACT: THIS GUIDE ATTEMPTS TO PRESENT THE FACTS SURROUNDING CALIFORNIA'S GROUNDWATER IN A SIMPLE AND OBJECTIVE MANNER. SECTIONS INCLUDE: CALIFORNIA'S WATER PICTURE; THE GROUNDWATER RESOURCE; OVERDRAFT AND ITS PROBLEMS; GROUNDWATER LAW; GROUNDWATER MANAGEMENT; AND, PLANS AND POLICIES.
AVAILABILITY: WESTERN WATER EDUCATION FOUNDATION, 1107 NINTH STREET, SUITE 618, SACRAMENTO, CA 95800
IRIS ACCESSION NUMBER: EW007540
PUBLICATION DATE: JAN 82
TITLE: WATER REUSE - JANUARY 1982
PERSONAL AUTHOR: MIDDLEBROOKS, E. JOE
DESCRIPTOR: *CASE HISTORIES; *CONSERVATION; *DESIGN; *FACILITIES; *HEALTH EFFECTS; *INDUSTRY; *INSTRUCTIONAL MATERIALS; *LEGAL FACTORS; *MUNICIPALITIES; *NATURAL RESOURCES; *POST SECONDARY EDUCATION; *RECYCLING; *STATE-OF-THE-ART REVIEWS; *TECHNOLOGICAL ADVANCEMENTS; *WATER RESOURCES; *WASTEWATER TREATMENT; *WASTE DISPOSAL
ABSTRACT: THIS TEXT PRESENTS A COMPREHENSIVE EXAMINATION OF WASTEWATER REUSE DESIGN DATA, CASE HISTORIES, PERFORMANCE DATA, MONITORING INFORMATION, HEALTH INFORMATION, SOCIAL APPLICATIONS, LEGAL AND ORGANIZATIONAL STRUCTURES, AND BACKGROUND INFORMATION NEEDED TO ANALYZE THE DESIRABILITY OF WATER REUSE ARE PRESENTED. THE BOOK IS INTENDED FOR CONSULTING ENGINEERS, ENVIRONMENTAL SCIENTISTS, SOCIAL SCIENTISTS, REGULATORY PERSONNEL, AND ACADEMIC INSTITUTIONS.
AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007541
PUBLICATION DATE: 32
TITLE: LAND TREATMENT OF MUNICIPAL WASTEWATER - VEGETATION SELECTION AND MANAGEMENT
PERSONAL AUTHOR: D'ITRI, FRANK M.
DESCRIPTOR: *AGRICULTURE; *GUIDELINES; *IRRIGATION; *INSTRUCTIONAL MATERIALS; *LAND APPLICATION; *LAND TREATMENT; *MANAGEMENT; *MUNICIPAL WASTEWATER; *POST SECONDARY EDUCATION; *RESEARCH; *WASTEWATER TREATMENT; *VEGETATION SELECTION; *WASTE DISPOSAL
ABSTRACT: PRESENTED IS AN EFFORT TO COMPIL DATA FROM STATE AND FEDERAL RESEARCH PROJECTS IN THE NORTH CENTRAL REGION OF THE UNITED STATES INTO A SET OF GUIDELINES FOR THE REGIONAL SELECTION AND MANAGEMENT OF VEGETATION FOR LAND TREATMENT OF MUNICIPAL WASTEWATER BY SLOW RATE OR OVERLAND FLOW SYSTEMS.
AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007542
PUBLICATION DATE: 82
TITLE: HAZARDOUS WASTES PROCESSING TECHNOLOGY
PERSONAL AUTHOR: KIANG, YEN-HSIUNG; METRY, AMIR A.
DESCRIPTOR: *HAZARDOUS WASTES; *INSTRUCTIONAL MATERIALS; *MANAGEMENT; *POST SECONDARY EDUCATION; *SOLID WASTES; *STATE-OF-THE-ART REVIEWS; *TECHNOLOGY; *TECHNICAL PROGRESS; *TOXIC SUBSTANCES; *WASTE DISPOSAL; *WASTE TREATMENT
ABSTRACT: IT IS THE OBJECTIVE OF THIS BOOK TO CONSOLIDATE STATE-OF-THE-ART HAZARDOUS WASTE PROCESSING TECHNOLOGIES INTO ONE COMPREHENSIVE VOLUME. PART ONE DISCUSSES THERMAL PROCESSING TECHNOLOGIES AND EXAMINES TECHNIQUES, REQUIREMENTS, FUNDAMENTAL, EQUIPMENT, SPECIAL TOPICS, PERIPHERAL SYSTEMS, AND MISCELLANEOUS AND DEVELOPING TECHNOLOGIES. PART TWO DISCUSSES TREATMENT TECHNOLOGIES AND EXAMINES PROCESS AND SITE SELECTION REQUIREMENTS, PHYSICAL TREATMENT, CHEMICAL TREATMENT, AND BIOLOGICAL TREATMENT.
AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS, INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801
ABSTRACT: THE AIM OF THIS BOOK IS TO EXPOSE THE BASIC IDEA THAT ANALYTICAL CHEMISTRY IS AN INDEPENDENT SCIENCE, AS WELL AS TO EMPHASIZE THE ROLE OF TEACHING AND OF EDUCATION IN ANALYTICAL CHEMISTRY AND CHEMICAL ANALYSIS. SPECIFIC ATTENTION IS FOCUSED ON TEACHING METHODS AND PREPARATION. IT IS DESIGNED FOR TEACHERS AND LECTURERS IN ANALYTICAL CHEMISTRY AND ALL ITS RELATED DISCIPLINES, IN UNIVERSITIES, TECHNICAL COLLEGES, AND OTHER EDUCATIONAL INSTITUTIONS.

AVAILABILITY: JOHN WILEY & SONS, INC., PUBLISHERS, 605 THIRD STREET, NEW YORK, NY 10158

IRIS ACCESSION NUMBER: EW007545

PUBLICATION DATE: JUN 82

TITLE: HOW TO FIND CHEMICAL INFORMATION - A GUIDE FOR PRACTICING CHEMISTS, TEACHERS, AND STUDENTS.

PERSONAL AUTHOR: MAIZELL, ROBERT E.

DESCRIPTOR: CHEMICAL ENGINEERING; CHEMISTRY; GUIDES; INDEXES; INFORMATION CENTERS; INFORMATION RETRIEVAL; INFORMATION SOURCES; RESEARCH

DESCRIPTIVE NOTE: 261P.

ABSTRACT: THIS BOOK PRESENTS: (1) THE MOST IMPORTANT AND ENDURING OF THE CLASSICAL TOOLS OF CHEMICAL INFORMATION; (2) THE MORE SIGNIFICANT NEWER TOOLS; AND, (3) THE UNDERLYING METHODS, PRINCIPLES, AND KEYS THE CHEMIST AND ENGINEER NEED TOcope WITH THE CONSTANTLY CHANGING ARRAY OF CHEMICAL INFORMATION SOURCES AND TOOLS. CHAPTERS INCLUDE: BINARY CONCEPTS; INFORMATION FLOW AND COMMUNICATION PATTERNS IN CHEMISTRY; SEARCH STRATEGY; KEEPING UP-TO-DATE - CURRENT AWARENESS PROGRAMS; HOW TO GET ACCESS TO ARTICLES, BOOKS, PATENTS, AND OTHER DOCUMENTS QUICKLY AND EFFICIENTLY; THE CHEMICAL ABSTRACTS SERVICE; OTHER ABSTRACTING AND INDEXING SERVICES; COMPUTER-BASED ON-LINE AND OFF-LINE INFORMATION RETRIEVAL SYSTEMS AND SERVICES; REVIEWS; ENCYCLOPEDIAS AND OTHER MAJOR REFERENCE BOOKS; PATENTS; SAFETY AND RELATED TOPICS; LOCATING AND USING PHYSICAL PROPERTY AND RELATED DATA: CHEMICAL MARKETING AND BUSINESS INFORMATION SOURCES; AND PROCESS INFORMATION.

AVAILABILITY: JOHN WILEY & SONS, INC., 605 THIRD AVENUE, NEW YORK, NY 10158

IRIS ACCESSION NUMBER: EW007546

PUBLICATION DATE: MAR 82

TITLE: SEWER NETWORK ROUTING BY DYNAMIC WAVE CHARACTERISTICS.

PERSONAL AUTHOR: SEVUK, A. SUBA; YEN, BEN CHIE

DESCRIPTOR: DYNAMIC WAVE MODELS; FLOW RATES; HYDRAULICS; MODELING; RESEARCH REPORTS; SEWER SYSTEMS; SEWERS; STORMWATER; WASTEWATER COLLECTION

DESCRIPTIVE NOTE: 379-398P.


AVAILABILITY: JOURNAL OF THE HYDRAULICS DIVISION, V108 N3

IRIS ACCESSION NUMBER: EW007561

PUBLICATION DATE: MAR 82

TITLE: 'COMPUTERIZED' MEANS COST-EFFECTIVE FOR SEWAGE TREATMENT.

PERSONAL AUTHOR: DAVIS, ROBERT A.; DAUGHERTY, JAMES L.

DESCRIPTOR: CASE STUDIES; COMPUTER APPLICATIONS; COMPUTERS; COSTS; COST-EFFECTIVENESS; EQUIPMENT; MANAGEMENT; OPERATIONS (WASTEWATER); PERFORMANCE EVALUATION; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 39-44P.


AVAILABILITY: AMERICAN CITY & COUNTY, V97 N3
ABSTRACT: This article is a summary of the conclusions drawn by the report of the Subcommittee on Public Works and Transportation of the U.S. House of Representatives after it investigated the construction grants program. Twenty-two specific recommendations are given regarding the redirection of the construction grants program and the clean water act.

AVAILABILITY: American City & County, V97 N3
INSPECTIONS. THE TRAINING MODULE IS ON SAMPLING PROCEDURES.

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

IRIS ACCESSION NUMBER: EW007575
PUBLICATION DATE: JUN 81
TITLE: NPDES COMPLIANCE MONITORING INSPECTOR TRAINING: BIOMONITORING.
DESCRIPTOR: *BIOMONITORING; *COMPLIANCE; *INSPECTION; *INSTRUCTORS; *INSTRUCTIONAL MATERIALS; *MONITORING; *NPDES; POLLUTION CONTROL; *POST SECONDARY EDUCATION; *TRAINING PROGRAMS; *WATER QUALITY
DESCRIPTIVE NOTE: 97P. PB82-136367
ABSTRACT: THIS DOCUMENT IS PART OF A SET OF FIVE DOCUMENTS WHICH MAKE UP THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) COMPLIANCE MONITORING TRAINING PROGRAM. THE TRAINING MODULES WERE DEVELOPED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA), OFFICE OF WATER ENFORCEMENT AND PERMITS (OWEP), TO INSTRUCT NPDES INSPECTORS IN VARIOUS ASPECTS OF CONDUCTING NPDES COMPLIANCE MONITORING INSPECTIONS. THE TRAINING MODULE DESCRIBES BIOMONITORING PROCEDURES.

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

IRIS ACCESSION NUMBER: EW007576
PUBLICATION DATE: JUN 81
TITLE: NPDES COMPLIANCE MONITORING INSPECTOR TRAINING: LEGAL ISSUES.
DESCRIPTOR: *COMPLIANCE; *ENFORCEMENT; *INSPECTION; *INSTRUCTORS; *INSTRUCTIONAL MATERIALS; *LEGAL ASPECTS; *MONITORING; *NPDES; POLLUTION CONTROL; *POST SECONDARY EDUCATION; *TRAINING PROGRAMS; *WATER QUALITY
DESCRIPTIVE NOTE: 97P. PB82-136339
ABSTRACT: THIS DOCUMENT IS PART OF A SET OF FIVE DOCUMENTS WHICH MAKE UP THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) COMPLIANCE MONITORING TRAINING PROGRAM. THE TRAINING MODULES WERE DEVELOPED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA), OFFICE OF WATER ENFORCEMENT AND PERMITS (OWEP), TO INSTRUCT NPDES INSPECTORS IN VARIOUS ASPECTS OF CONDUCTING NPDES COMPLIANCE MONITORING INSPECTIONS. THE TRAINING MODULE DESCRIBES THE LEGAL ISSUES.

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

IRIS ACCESSION NUMBER: EW007577
PUBLICATION DATE: JUN 81
TITLE: NPDES COMPLIANCE MONITORING INSPECTOR TRAINING: LABORATORY ANALYSIS.
DESCRIPTOR: *ANALYTICAL TECHNIQUES; *COMPLIANCE; *INSTRUCTORS; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *MONITORING; *NPDES; POLLUTION CONTROL; *POST SECONDARY EDUCATION; *TRAINING PROGRAMS; *WATER QUALITY
DESCRIPTIVE NOTE: 166P. PB82-136383
ABSTRACT: THIS DOCUMENT IS PART OF A SET OF FIVE DOCUMENTS WHICH MAKE UP THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) COMPLIANCE MONITORING TRAINING PROGRAM. THE TRAINING MODULES WERE DEVELOPED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA), OFFICE OF WATER ENFORCEMENT AND PERMITS (OWEP), TO INSTRUCT NPDES INSPECTORS IN VARIOUS ASPECTS OF Conducting NPDES COMPLIANCE MONITORING INSPECTIONS. THE TRAINING MODULE DESCRIBES PROCEDURES FOR LABORATORY ANALYSIS.

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

IRIS ACCESSION NUMBER: EW007578
PUBLICATION DATE: JUN 81
TITLE: NPDES COMPLIANCE MONITORING INSPECTOR TRAINING: OVERVIEW.
DESCRIPTOR: *COMPLIANCE; *INSTRUCTIONAL MATERIALS; *MONITORING; *NPDES; POLLUTION CONTROL; *POST SECONDARY EDUCATION; *TRAINING PROGRAMS; *WATER QUALITY
DESCRIPTIVE NOTE: 66P. PB82-136342
ABSTRACT: THIS DOCUMENT IS PART OF A SET OF FIVE DOCUMENTS WHICH MAKE UP THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) COMPLIANCE MONITORING TRAINING PROGRAM. THE TRAINING MODULES WERE DEVELOPED BY THE ENVIRONMENTAL PROTECTION AGENCY (EPA), OFFICE OF WATER ENFORCEMENT AND PERMITS (OWEP), TO INSTRUCT NPDES INSPECTORS IN VARIOUS ASPECTS OF CONDUCTING NPDES COMPLIANCE MONITORING INSPECTIONS. THE REPORT IS AN OVERVIEW WHICH EXAMINES COMPLIANCE INSPECTIONS.

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

IRIS ACCESSION NUMBER: EW007579
PUBLICATION DATE: SEP 81
TITLE: NPDES COMPLIANCE FLOW MEASUREMENT MANUAL.
PERSONAL AUTHOR: GUTHRIE, DAVID L.

DESCRIPTOR: *COMPLIANCE; *FLOW HYDRAULICS; *FLOW MEASUREMENT; *GUIDES; *HYDRAULICS; *MANUALS; *MEASUREMENT; *NPDES; *WATER RESOURCES

DESCRIPTIVE NOTE: 149P. PB82-131178

ABSTRACT: This flow measurement manual is designed to furnish information on flow hydraulics.

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

IRIS ACCESSION NUMBER: EW007582

PUBLICATION DATE: MAR 81

TITLE: SOUTHEASTERN SOIL EROSION CONTROL AND WATER QUALITY WORKSHOP, NOVEMBER 19-21, 1980, NASHVILLE, TENNESSEE.

DESCRIPTOR: *AGRICULTURAL PRACTICES; AGRICULTURE; *CONFERENCE PROCEEDINGS; *ECOLOGY; *EROSION CONTROL; *GUIDES; *LEGISLATION; NO-TILL FARMING; *SOIL EROSION; *WATER RESOURCES

DESCRIPTIVE NOTE: 116P. PB82-139502

ABSTRACT: This report includes papers presented at a workshop on soil erosion control and water quality which was held in Nashville, Tennessee, on November 19-21, 1980. Topics include: soil erosion and water quality from the farmers viewpoint, legislation, no tillage farming, and economics.

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

IRIS ACCESSION NUMBER: EW007583

PUBLICATION DATE: DEC 80

TITLE: TREATABILITY STUDIES OF PESTICIDE MANUFACTURING WASTEWATERS: ETHYLENEBISDITHIOCARBAMATE FUNGICIDES.

PERSONAL AUTHOR: ZWEIDINGER, RUTH A.; AND OTHERS

DESCRIPTOR: *ABSTRACTS; *BIBLIOGRAPHIES; *CHEMICAL ANALYSIS; *CHEMICAL DEGRADATION; *DECONTAMINATION FOR LAND DISPOSAL; *DILUTION; *DIGESTION; *ECOLOGICAL FACTORS; *ECOLOGY; *ENVIRONMENTAL ENGINEERING; *EROSION CONTROL; *GUIDES; *HYDRAULICS; *LAND APPLICATION; *LEGISLATION; *MANUALS; *MEASUREMENT; *NPDES; *POLLUTION CONTROL; *QUALITY ASSURANCE; *SLUDGE; *SLUDGE DISPOSAL; *SLUDGE TREATMENT; *WASTEWATER TREATMENT; *WASTE DISPOSAL; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 356P. PB82-802935

ABSTRACT: Citations of federally-funded research on sludge digestion, irradiation, digestion, dewatering, decontamination for land disposal, recycling, incineration, and ocean disposal are presented. The effect of sewage sludge disposal on water pollution, ecosystems, and the environment is also covered. Studies on regulations, legislation, costs, and planning are included. (This updated bibliography contains 346 citations, 34 of which are new entries to the previous edition.)

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

IRIS ACCESSION NUMBER: EW007584

PUBLICATION DATE: DEC 80

TITLE: TREATABILITY STUDIES OF ETHYLENEBISDITHIOCARBAMATE FUNGICIDES.

PERSONAL AUTHOR: GUTHRIE, DAVID L.

DESCRIPTOR: *ABSTRACTS; *BIBLIOGRAPHIES; *HYDRAULICS; *LAND APPLICATION; *LEAD; *LOGIN; *MANUALS; *MEASUREMENT; *NPDES; *POLLUTION CONTROL; *SLUDGE; *SLUDGE DISPOSAL; *SLUDGE TREATMENT; *WASTEWATER TREATMENT; *WASTE DISPOSAL; *WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 356P. PB82-802935

ABSTRACT: This report gives results of laboratory and pilot studies on the biological treatability of wastewaters from the manufacture of ethylenebisdithiocarbamate (EBDC) fungicide. At concentration levels representative of EBDC production units and total plant wastewaters discharged to publicly owned treatment works (POTWs) (1 mg/L), results indicate little reduction in EBDC levels or in ethylene thiourea (ETU), an important decomposition product of EBDC as a result of biological treatment. Results of algal
(Selenastrum capricornutum) and fish (Daphnia magna) bioassays on the treated wastewater indicated inhibition of algal growth and fish mobility, although little toxicity was indicated. Chemical oxygen demand (COD) removal by the biological (activated sludge) treatment unit was unaffected by the fungicide in the wastewater, although nitrification was reduced or absent in these units.

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

Iris Accession Number: E4007504
Publication Date: Nov 81
Title: Wastewater Treatment Using Flocculation, Coagulation, and Flotation. 1976-October, 1981. (Citations from the NTIS Data Base.)

Abstract: Flocculation, coagulation, and flotation studies for sewage and industrial waste treatment processes are cited in this bibliography of federally-funded research. The processes, flocculants, coagulants, performance, and effectiveness are covered. (This updated bibliography contains 257 citations, 25 of which are new entries to the previous edition.)

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

Iris Accession Number: E4007505
Publication Date: Nov 81
Title: Wastewater Effluent Guidelines and Performance Standards Using Best Technology. 1964-November, 1981. (Citations from the NTIS Data Base.)

Abstract: The citytions describe wastewater effluent limitation guidelines and their development, standards of performance, and pretreatment standards for industries. Some citytions may be added to future sections of the Federal Water Pollution Control Act Amendments of 1972. Effluent limitation guidelines are set forth for the degree of pollution reduction achievable through the application of the best technology, economically achievable, which must be achieved by existing point sources by July 1, 1977 and July 1, 1983 respectively. Studies are included on the economic and environmental impacts of these guidelines on industries and their surroundings. (This updated bibliography contains 197 citations, 26 of which are new entries to the previous edition.)

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

Iris Accession Number: E4007506
Publication Date: Dec 81
Title: Wastewater Treatment by Reverse Osmosis and Membrane Processing. 1975-November, 1981. (Citations from the NTIS Data Base.)

Abstract: Citations of federally-funded research cover the treatment of sewage and industrial wastes by reverse osmosis, ultrafiltration, electrodialysis, and other osmotic processes. Desalting of ground, surface, and sea waters is excluded. (This updated bibliography contains 126 citations, 33 of which are new entries to the previous edition.)

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

Iris Accession Number: E4007507
Publication Date: Dec 81
Title: Metal Containing Liquid Wastes. June, 1970-December, 1981. (Citations from the Engineering Index Data Base.)

Abstract: Citations in this bibliography cover techniques and technology for the control, treatment, and disposal of metal containing liquid wastes as well as for the recovery or reclamation of metals from these wastes (especially electroplating wastes). Some consideration is given to specific processes. (This updated bibliography contains 201 citations, 163 of which are new entries to the previous edition.)

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161
PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007588

PUBLICATION DATE: DEC 81
TITLE: NITROGEN REMOVAL IN SEWAGE TREATMENT SYSTEMS. 1978-NOVEMBER, 1981. (CITATIONS FROM THE NTIS DATA BASE.)
DESCRIPTOR: #ABSTRACTS; #BIBLIOGRAPHIES; CHLORINATION; #DENITRIFICATION; MICROBIOLOGY; NITRIFICATION; #NITROGEN; #OPERATIONS (WASTEWATER); #PROCESS DESIGN; #SEWAGE; TERTIARY SEWAGE TREATMENT; WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 205P. PB82-002653
ABSTRACT: MOST ASPECTS OF THE REMOVAL OF NITROGEN COMPOUNDS IN SEWAGE TREATMENT SYSTEMS ARE COVERED IN THESE CITATIONS. STUDIES ON BREAKPOINT CHLORINATION, DENITRIFICATION, NITRIFICATION MICROBIOLOGY, TERTIARY SEWAGE TREATMENT, AERONIA STRIPPING, AND PROCESS DESIGN ARE INCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 149 CITATIONS, 49 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007589
PUBLICATION DATE: JUL 81
TITLE: REMOVING TRIHALOMETHANES FROM DRINKING WATER - AN OVERVIEW OF TREATMENT TECHNIQUES.
PERSONAL AUTHOR: SIMONS, JAMES M.; AND OTHERS
DESCRIPTOR: ACTIVATED CARBON; CLARIFICATION; #DISINFECTION; DRINKING WATER; OXIDATION; OZONE; PUBLIC HEALTH; #RESEARCH REPORTS; #TRIHALOMETHANE; #WATER TREATMENT; WATER QUALITY
DESCRIPTIVE NOTE: 12P. PB82-132572
ABSTRACT: IN 1974 TRIHALOMETHANES (CHLOROFORM, BROMOFORM, BROMODICHLOROMETHANE, AND BROMODICHLOROMETHANE) WERE DISCOVERED TO BE FORMED DURING THE DISINFECTION STEP OF DRINKING WATER IF FREE CHLORINE WAS THE DISINFECTANT. FOR TRIHALOMETHANE PRECURSOR CONTROL, EFFECTIVE PROCESSES ARE: (1) OXIDATION BY OZONE OR CHLORINE DIOXIDE; (2) CLARIFICATION BY COAGULATION, SETTLING AND FILTRATION; PRECIPITATIVE SOFTENING, OR DIRECT FILTRATION; OR (3) ABSORPTION BY FROREED ACTIVATED CARBON OR GRANULAR ACTIVATED CARBON. IN ADDITION, SOME HODEST REMOVAL OR DSTRUCTION OF TRIHALOMETHANE PRECURSORS CAN BE ACHIEVED BY OXIDIZATION WITH POTASSIUM PERMANGANATE LOWERING THE PB, OR INCAN THE POINT OF CHLORINATION TO THE CLARIFIED WATER. LOWERING OF TRIHALOMETHANE PRECURSOR CONCENTRATIONS HAS THE ADDITIONAL ADVANTAGE OF REDUCING OVERALL DISINFECTANT REQUIRE, THEREBY REDUCING THE POSSIBILITY OF THE FORMATION OF ALL DISINFECTION BYPRODUCTS. NEITHER CHLORINE DIOXIDE, NOR OZONE, NOR CHLORAMINES PRODUCE TRIHALOMETHANES AT SIGNIFICANT CONCENTRATIONS WHEN USED ALONE AS DISINFECTANTS. FURTHERMORE, THE COST OF ANY OF THESE UNIT PROCESSES IS VERY LOW. THE MAJOR DISADVANTAGE OF USING ALTERNATE DISINFECTANTS FOR TRIHALOMETHANE CONTROL RELATES TO THE LACK OF ANY PRECURSOR REMOVAL.
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007590
PUBLICATION DATE: FEB 81
TITLE: CAPDET (COMPUTER ASSISTED PROCEDURES FOR THE DESIGN AND EVALUATION OF WASTEWATER TREATMENT SYSTEMS.)
PERSONAL AUTHOR: TINKHAM, SHARIE L.; GREEN, JOYCE
DESCRIPTOR: #CAPDET; #COMPUTER APPLICATIONS; #COMPUTER PROGRAMS; COSTS; #DECISION MAKING; #DESIGN; #EVALUATION; #FACILITIES; #PLANNING; #WASTEWATER TREATMENT
DESCRIPTIVE NOTE: MAC TAPE - EPA/DF-81-008; PB82-138520
ABSTRACT: THE CAPDET PROGRAM PROVIDES A STATE-OF-THE-ART TECHNIQUE FOR SCREENING WASTEWATER TREATMENT ALTERNATIVES AND FOR PRELIMINARY COST ESTIMATING AND USER CHARGE ASSESSMENT. THE BASIC OBJECTIVE IS PROVIDING A SCREENING TOOL CAPABLE OF SIMULTANEOUSLY DESIGNING A NUMBER OF WASTEWATER TREATMENT SYSTEM ALTERNATIVES MEETING SPECIFIED EFFLUENT CRITERIA AND SUBSEQUENTLY RANKING THEM ON THE BASIS OF THEIR PRESENT WORTH COST FROM LOWEST TO HIGHEST. CONVEYANCE COSTS ARE NOT CONSIDERED. SOFTWARE DESCRIPTION: THE MODEL IS WRITTEN IN FORTRAN FOR IMPLEMENTATION ON AN IBM 370/168 COMPUTER UNDER OS/V32.
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007591
PUBLICATION DATE: JAN 82
DESCRIPTOR: #ABSTRACTS; #AQUATIC ENVIRONMENTS; #BIBLIOGRAPHIES; #CHEMISTRY; #ECOLOGY; #EUPTROPHICATION; #LAKES; #MATHEMATICAL MODELING; #NUTRIENTS; #POLLUTION CONTROL; #RESEARCH REPORTS; #STREAMS; #WATER POLLUTION CONTROL; #WATER QUALITY
DESCRIPTIVE NOTE: 26P. PB82-083511
ABSTRACT: THE SELECTED ABSTRACTS COVER ALL ASPECTS OF EUPTROPHICATION, INCLUDING RESEARCH ON PRIMARY PRODUCTIVITY, WATER CHEMISTRY, ECOLOGY, THE INFLUENCE AND IMPACT OF NUTRIENTS ON LAKES AND STREAMS, CONTROL TECHNIQUES, AND MATHEMATICAL MODELING.
ABSTRACT: THE SELECTED CITATIONS COVER HERBICIDE AND BIOLOGICAL WEED CONTROL. THE EFFECTS ON WATER QUALITY AND ECOLOGY ARE DISCUSSED, AS IS THE HARVESTING OF THESE WEEDS. 40 TYPES OF WEEDS ARE COVERED INCLUDING ALGAE BLOOMS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 299 CITATIONS, 74 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007592
PUBLICATION DATE: JAN 82
DESCRIPTOR: $ABSTRACTS; ALGAE; $AQUATIC PLANTS; $BIBLIOGRAPHIES; $ECOLOGICAL FACTORS; $ENVIRONMENTAL IMPACTS; $HERBICIDES; $PESTICIDES; $RESEARCH REPORTS; $WATER QUALITY; $WEED CONTROL
DESCRIPTIVE NOTE: 296 P. PB82-883644

ABSTRACT: THE SELECTED CITATIONS COVER HERBICIDE AND BIOLOGICAL WEED CONTROL. THE EFFECTS ON WATER QUALITY AND ECOLOGY ARE DISCUSSED, AS IS THE HARVESTING OF THESE WEEDS. 40 TYPES OF WEEDS ARE COVERED INCLUDING ALGAE BLOOMS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 299 CITATIONS, 74 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007593
PUBLICATION DATE: DEC 81
DESCRIPTOR: $ABSTRACTS; $BIBLIOGRAPHIES; $EFFLUENTS; $INDUSTRIAL WASTES; $OPERATIONS (WASTEWATER); $RECYCLING; $TECHNOLOGY; $WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 126 P. PB82-859612

ABSTRACT: THIS BIBLIOGRAPHY COVERS METHODS AND TECHNOLOGY FOR THE TREATMENT AND PURIFICATION OF INDUSTRIAL EFFLUENTS AND THE RECYCLING OF VARIOUS EFFLUENT COMPONENTS. EFFLUENTS FROM HINING AND RELATED ACTIVITIES ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 126 CITATIONS, 37 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007594
PUBLICATION DATE: DEC 81
DESCRIPTOR: $ABSTRACTS; $BIBLIOGRAPHIES; $EFFLUENTS; $INDUSTRIAL WASTES; $OPERATIONS (WASTEWATER); $RECYCLING; $TECHNOLOGY; $WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 122 P. PB82-156068

ABSTRACT: THIS IS A HIGH PERFORMANCE LIQUID CHROMATOGRAPHIC (HPLC) METHOD APPLICABLE TO THE DETERMINATION OF CARBENDAZIM AND BENOMYL IN INDUSTRIAL AND MUNICIPAL WASTEWATER. METHODS COVER TECHNIQUES FOR THE TREATMENT OF INDUSTRIAL EFFLUENTS AND THE RECYCLING OF VARIOUS EFFLUENT COMPONENTS. EFFLUENTS FROM HINING AND RELATED ACTIVITIES ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 126 CITATIONS, 37 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007596
PUBLICATION DATE: FEB 82
PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.
DESCRIPTOR: $ANALYTICAL TECHNIQUES; $CARBAMATE; $CARBENDAZIM; $DETECTION; $EFFLUENTS; $INDUSTRIAL WASTES; $INSTRUCTIONAL MATERIALS; $LABORATORY PROCEDURES; $MUNICIPAL WASTES; $RESEARCH REPORTS; $WASTEWATER TREATMENT; $WATER QUALITY
DESCRIPTIVE NOTE: 19 P. PB82-156068

ABSTRACT: THIS IS A HIGH PERFORMANCE LIQUID CHROMATOGRAPHIC (HPLC) METHOD APPLICABLE TO THE DETERMINATION OF CARBENDAZIM AND BENOMYL IN INDUSTRIAL AND MUNICIPAL WASTEWATER. METHODS COVER TECHNIQUES FOR THE TREATMENT OF INDUSTRIAL EFFLUENTS AND THE RECYCLING OF VARIOUS EFFLUENT COMPONENTS. EFFLUENTS FROM HINING AND RELATED ACTIVITIES ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 126 CITATIONS, 37 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007596
PUBLICATION DATE: FEB 82
PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.
DESCRIPTOR: $ANALYTICAL TECHNIQUES; $CARBAMATE; $CARBENDAZIM; $DETECTION; $EFFLUENTS; $INDUSTRIAL WASTES; $INSTRUCTIONAL MATERIALS; $LABORATORY PROCEDURES; $MUNICIPAL WASTES; $RESEARCH REPORTS; $WASTEWATER TREATMENT; $WATER QUALITY
DESCRIPTIVE NOTE: 19 P. PB82-156068

ABSTRACT: THIS IS A HIGH PERFORMANCE LIQUID CHROMATOGRAPHIC (HPLC) METHOD APPLICABLE TO THE DETERMINATION OF CARBENDAZIM AND BENOMYL IN INDUSTRIAL AND MUNICIPAL WASTEWATER. METHODS COVER TECHNIQUES FOR THE TREATMENT OF INDUSTRIAL EFFLUENTS AND THE RECYCLING OF VARIOUS EFFLUENT COMPONENTS. EFFLUENTS FROM HINING AND RELATED ACTIVITIES ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 126 CITATIONS, 37 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007596
PUBLICATION DATE: FEB 82
PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.
DESCRIPTOR: $ANALYTICAL TECHNIQUES; $CARBAMATE; $CARBENDAZIM; $DETECTION; $EFFLUENTS; $INDUSTRIAL WASTES; $INSTRUCTIONAL MATERIALS; $LABORATORY PROCEDURES; $MUNICIPAL WASTES; $RESEARCH REPORTS; $WASTEWATER TREATMENT; $WATER QUALITY
DESCRIPTIVE NOTE: 19 P. PB82-156068

ABSTRACT: THIS IS A HIGH PERFORMANCE LIQUID CHROMATOGRAPHIC (HPLC) METHOD APPLICABLE TO THE DETERMINATION OF CARBENDAZIM AND BENOMYL IN INDUSTRIAL AND MUNICIPAL WASTEWATER. METHODS COVER TECHNIQUES FOR THE TREATMENT OF INDUSTRIAL EFFLUENTS AND THE RECYCLING OF VARIOUS EFFLUENT COMPONENTS. EFFLUENTS FROM HINING AND RELATED ACTIVITIES ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 126 CITATIONS, 37 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007596
PUBLICATION DATE: FEB 82
PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.
DESCRIPTOR: $ANALYTICAL TECHNIQUES; $CARBAMATE; $CARBENDAZIM; $DETECTION; $EFFLUENTS; $INDUSTRIAL WASTES; $INSTRUCTIONAL MATERIALS; $LABORATORY PROCEDURES; $MUNICIPAL WASTES; $RESEARCH REPORTS; $WASTEWATER TREATMENT; $WATER QUALITY
DESCRIPTIVE NOTE: 19 P. PB82-156068
ABSTRACT: This is a high performance liquid chromatographic (HPLC) method applicable to the determination of selected pesticides in municipal and industrial discharges as provided under 40 CFR 136.1. A sample is solvent extracted with methylene chloride using a separatory funnel. The extract is exchanged to methanol or acetonitrile during concentration. HPLC conditions are described which permit measurement with an ultraviolet detector. A total of 21 pesticides are included in the method scope.

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

IRIS ACCESSION NUMBER: EWO97599

PUBLICATION DATE: FEB 82

TITLE: THE DETERMINATION OF CYANAZINE IN INDUSTRIAL AND MUNICIPAL WASTEWATER

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *CYANAZINE; *DETECTION; *EFFLUENTS; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *MUNICIPAL WASTES; *PESTICIDES; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 20P. PB82-155993

ABSTRACT: This is a colorimetric method applicable to the determination of selected pesticides in municipal and industrial discharges as provided under 40 CFR 136.1. A sample is digested with acid to yield carbon disulfide by hydrolysis of dithiocarbamates. The evolved CS₂ is trapped in a color reagent and absorbance is measured at 380 and 435 nm. The compounds included in the method scope are: ADFAN, BUSAN 46, BUSAN 85, FERBA, FERBA 45, NACOZEB, NACOZEB, NITRAZID, POLYRAM, POLYRAM, SODIUM DIMETHYLDITHIOCARBAMATE, THIRAM, ZINEB, and ZIRAN.

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

IRIS ACCESSION NUMBER: EWO97600

PUBLICATION DATE: FEB 82

TITLE: THE DETERMINATION OF ORGANOCHLORINE PESTICIDES IN INDUSTRIAL AND MUNICIPAL WASTEWATER

PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.

DESCRIPTOR: *ANALYTICAL TECHNIQUES; *DETECTION; *EFFLUENTS; *INDUSTRIAL WASTES; *INSTRUCTIONAL MATERIALS; *LABORATORY PROCEDURES; *MUNICIPAL WASTES; *ORGANOCHLORINE PESTICIDES; *PESTICIDES; *RESEARCH REPORTS; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 20P. PB82-155979
ABSTRACT: THIS IS A GAS CHROMATOGRAPHIC (GC) METHOD APPLICABLE TO THE DETERMINATION OF SELECTED PESTICIDES IN MUNICIPAL AND INDUSTRIAL WASTEWATERS AS PROVIDED UNDER 40CFR 136.1. A SAMPLE IS SOLVENT EXTRACTED WITH Methylene Chloride IN HEXANE USING A SEPARATORY FUNNEL. THE EXTRACT IS CONCENTRATED, THEN ANALYZED BY GC WITH A FLAME PHOTOMETRIC OR PHOSPHORUS/NITROGEN DETECTOR. THE COMPOUNDS INCLUDED IN THE METHOD SCOPE ARE: AZINPHOS Methyl, DIAZINON, Dichlorofenthion, DIOXATHION, DISULFOTON, ETHION, MALATHION, PARATHION ETHYL, AND PARATHION Methyl.

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

IRIS ACCESSION NUMBER: E3007603
PUBLICATION DATE: FEB 82
PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.
DESCRIPTOR: #ANALYTICAL TECHNIQUES; #DETECTION; #EFFLUENTS; #INDUSTRIAL WASTES; #LABORATORY PROCEDURES; #MUNICIPAL WASTES; #ORGANOPHOSPHORUS PESTICIDES; #PESTICIDES; #RESEARCH REPORTS; #WASTEWATER TREATMENT; #WATER QUALITY
DESCRIPTIVE NOTE: 25P. P892-156027

ABSTRACT: THIS IS A GAS CHROMATOGRAPHIC (GC) METHOD APPLICABLE TO THE DETERMINATION OF SELECTED PESTICIDES IN MUNICIPAL AND INDUSTRIAL DISCHARGES AS PROVIDED UNDER 40CFR 136.1. A SAMPLE IS SOLVENT EXTRACTED WITH METHYLENE CHLORIDE IN HEXANE USING A SEPARATORY FUNNEL. THE EXTRACT IS CONCENTRATED, THEN ANALYZED BY GC WITH A FLAME PHOTOMETRIC OR PHOSPHORUS/NITROGEN DETECTOR. THE COMPOUNDS INCLUDED IN THE METHOD SCOPE ARE: AZINPHOS Methyl, DIAZINON, Dichlorofenthion, DIOXATHION, DISULFOTON, ETHION, MALATHION, PARATHION ETHYL, AND PARATHION Methyl.

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

IRIS ACCESSION NUMBER: E3007602
PUBLICATION DATE: FEB 82
TITLE: THE DETERMINATION OF ORGANOPHOSPHORUS PESTICIDES IN INDUSTRIAL AND MUNICIPAL WASTEWATER: METHOD 617.
PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.
DESCRIPTOR: #ANALYTICAL TECHNIQUES; #DETECTION; #EFFLUENTS; #INDUSTRIAL WASTES; #LABORATORY PROCEDURES; #MUNICIPAL WASTES; #ORGANOPHOSPHORUS PESTICIDES; #PESTICIDES; #RESEARCH REPORTS; #WASTEWATER TREATMENT; #WATER QUALITY
DESCRIPTIVE NOTE: 35P. P892-156691

ABSTRACT: THIS IS A GAS CHROMATOGRAPHIC (GC) METHOD APPLICABLE TO THE DETERMINATION OF SELECTED PESTICIDES IN MUNICIPAL AND INDUSTRIAL DISCHARGES AS PROVIDED UNDER 40CFR 136.1. A SAMPLE IS SOLVENT EXTRACTED WITH Methylene Chloride IN HEXANE USING A SEPARATORY FUNNEL. THE EXTRACT IS CONCENTRATED, THEN ANALYZED BY GC WITH AN ELECTRON CAPTURE DETECTOR. THE COMPOUNDS INCLUDED IN THE METHOD SCOPE ARE: AZINPHOS Methyl, DIAZINON, Dichlorofenthion, DIOXATHION, DISULFOTON, ETHION, MALATHION, PARATHION ETHYL, AND PARATHION Methyl.

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

IRIS ACCESSION NUMBER: E3007601
PUBLICATION DATE: JAN 82
TITLE: THE DETERMINATION OF ORGANOPHOSPHORUS PESTICIDES AND COMPOUNDS IN INDUSTRIAL AND MUNICIPAL WASTEWATER: METHOD 617.
PERSONAL AUTHOR: PRESSLEY, THOMAS A.; LONGBOTTOM, JAMES E.
DESCRIPTOR: #ANALYTICAL TECHNIQUES; #DETECTION; #EFFLUENTS; #INDUSTRIAL WASTES; #INSTRUCTIONAL MATERIALS; #LABORATORY MATERIALS; #MUNICIPAL WASTES; #ORGANOPHOSPHORUS PESTICIDES; #PESTICIDES; #WASTEWATER TREATMENT; #WATER QUALITY
DESCRIPTIVE NOTE: 25P. P892-156691
Abstract: This is a gas chromatographic (GC) method applicable to the determination of selected pesticides in municipal and industrial discharges as provided under 40 CFR 136.1. A sample is solvent extracted with ethylene chloride using a separatory funnel. The extract is concentrated, then analyzed by GC with a nitrogen-specific detector. The compounds included in the method scope are: bromacil, deet, terbacl, triadinefon, and trietazinone.

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

Iris Accession Number: EW007605

Publication Date: Feb 82

Title: The determination of triazine pesticides in industrial and municipal wastewater: Method 619.

Personal Author: Pressley, Thomas A.; Longbottom, James E.

Abstract: This is a gas chromatographic (GC) method applicable to the determination of selected pesticides in municipal and industrial discharges as provided under 40 CFR 136.1. A sample is solvent extracted with ethylene chloride using a separatory funnel. The extract is concentrated and analyzed by GC using a nitrogen/phosphorus or reductive electrocyclic conductivity detector. The compounds included in the method scope are: atrazine, atraton, atrazine, proetor, proetryne, propazine, securoheon, simazine, terbutylazine, and terbutryn.

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

Iris Accession Number: EW007606

Publication Date: Nov 81

Title: Planning and management of water resource programs, June, 1980-October, 1981. (Citations from the NTIS data base.)

Descriptor: Abstracts; Bibliographies; Conservation; Cont.; Drinking Water; Groundwater; Irrigation; Management; Planning; Program Administration; Water Quality; Water Resources

Abstract: The cited studies cover planning and management of water resource programs and projects at the local, regional, state and national level. Water quality, drinking water, irrigation water, and industrial water studies of specific localities are included, if they are applicable to other areas. The topics concern the impact and benefits of water resource development, water costs, water conservation, ground water management, decision making, and modeling. (This updated bibliography contains 88 citations, all of which are new entries to the previous edition.)

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

Iris Accession Number: EW007608

Publication Date: Nov 81

Title: Activated carbon: Other uses. July, 1980-October, 1981. (Citations from the Engineering Data Base.)

Descriptor: Abstracts; Activated Carbon; Air Pollution; Bibliographies; Chemistry; Industry; Laboratory Equipment; Mining; Radioactive Wastes; Research Reports; Waste Treatment

Abstract: The bibliography contains citations from a worldwide literature survey pertaining to the uses of activated carbon in industry as well as in the laboratory, including its use in air pollution, chemical adsorption, radioactive waste adsorption, electrochemistry, industrial waste treatment, and the mining industry. (This updated bibliography contains 106 citations, 14 of which are new entries to the previous edition.)

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

Iris Accession Number: EW007607

Publication Date: Nov 81

Title: Activated charcoal: 1978-October, 1981. (Citations from the Engineering Data Base.)

Descriptor: Abstracts; Activated Charcoal; Air Pollution; Bibliographies; Chemistry; Industry; Laboratory Equipment; Mining; Radioactive Materials; Research Reports; Waste Treatment

Abstract: The bibliography contains citations from a worldwide literature survey pertaining to the uses of activated charcoal in industry as well as in the laboratory, including its use in air pollution, chemical adsorption, radioactive waste adsorption, electrochemistry, industrial waste treatment, and the mining industry. (This updated bibliography contains 106 citations, 14 of which are new entries to the previous edition.)

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

Iris Accession Number: EW007607

Publication Date: Nov 81

Title: Activated carbon: Other uses. July, 1980-October, 1981. (Citations from the Engineering Data Base.)

Descriptor: Abstracts; Activated Carbon; Air Pollution; Bibliographies; Chemistry; Industry; Laboratory Equipment; Mining; Pollution Control; Radioactive Materials; Research Reports; Waste Treatment

Abstract: The uses of activated carbon for other than industrial waste treatment are covered in this bibliography of worldwide research. The citations cover the use of activated carbon in air pollution, textiles processing, absorption of chemicals and radioactive isotopes, drinking water treatment, the mining industry, and electrochemistry.
ABSTRACT: THIS BIBLIOGRAPHY CITÉS REPORTS ON SEWAGE AND INDUSTRIAL WASTE WATER TREATMENT USING ACTIVATED CARBON. THERE HAVE BEEN SEPARATED FROM OTHER USES OF ACTIVATED CARBON. THE FIRST PART CONTAINS BOTH LABORATORY-AS WELL AS FIELD STUDIES, THE SECOND PART COVERS OTHER REPORTS ON ACTIVATED CARBON INCLUDING RESEARCH ON ITS PROPERTIES AND ITS USE IN AIR POLLUTION CONTROL, GAS AND WATER ANALYSIS, AND ABSORPTION OF CHEMICALS AND RADIOACTIVE ISOTOPES. ACTIVATION BY USING A BIBLIOGRAPHY CONTAINS 179 CITATIONS, 165 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.

ABSTRACT: THIS REPORT DESCRIBES THE SYSTEMATIC EVALUATION OF A SERIES OF PARAMETERS LEADING TO THE DEVELOPMENT OF A TEST PROCEDURE FOR VOLATILE PRIORITY POLLUTANTS IN WASTEWATER. A STUDY OF THE EFFECT OF PH, TEMPERATURE, RESIDUAL CHLORINE ON THE EQUILIBRIUM STABILITY OF THE COMPOUNDS LEAD TO RECOMMENDED PRESERVATION TECHNIQUES. THE STUDY INCLUDED THE FOLLOWING COMPOUNDS: BENZENE, CHLOROBENZENE, TOLUENE, ETHYLBENZENE, CARBON TETRACHLORIDE, 1,2-DICHLOROETHANE, 1,1,1-TRICHLOROETHANE, 1,1-DICHLOROETHANE, 1,1,2,2-TETRACHLOROETHANE, CHLOROETHANE, CHLOROPHEN, 1,1-DICHLOROETHANE, 1,2-DICHLOROETHANE, 1,2-DICHLOROPROPANE, 1,3-CIS-DICHLOROPROPANE, 1,3-TRANS-DICHLOROPROPANE, METHYLENE...
CLORIDE, METHYL CHLORIDE, MENTHYL BROMIDE, BROMOFORM, DICHLOROBENZENETHANE, TRICHLOROFLUOROMETHANE, CHLORODICHLOROMETHANE, TETRACLOROETHANE, VINYL CHLORIDE, 2-CHLOROETHYVINYL ETHER, 2,3-DICHLOROPROPENE, DIBROMOMETHANE, 1-CHLOROCYCLOXEXENNE, P-DICHLORODIMETHYLACETYLENE, ACROLEIN, ACRYLONITRILE, DICHLORODIFLUOROMETHANE.

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

IRIS ACCESSION NUMBER: EW007613
PUBLICATION DATE: OCT 81

DESCRIPTOR: #ABSTRACTS; #ANALYTICAL TECHNIQUES; #BIBLIOGRAPHIES; CARCINOGENS; DETECTION; #ENVIRONMENTAL IMPACTS; #HEALTH EFFECTS; #MINING; HIRING; OPERATIONS (WASTEWATER); #RESEARCH REPORTS; STANDARDS; #TOXICITY; #TOXIC SUBSTANCES; #WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 110P. PB82-800798
ABSTRACT: THESE REPORTS COVER TOPICS ON GROUND WATER QUALITY, MODELING, HYDROLOGY, POLLUTION FROM LANDFILLS AND INJECTION WELLS, AQUIFER POLLUTION, SOURCES, MINE ACID MINEWATER, HYDROLOGY, AND POLLUTION ABATEMENT PLANNING. (THIS UPDATED BIBLIOGRAPHY CONTAINS 102 CITATIONS, ALL OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007614
PUBLICATION DATE: OCT 81

DESCRIPTOR: #ABSTRACTS; #ANALYTICAL TECHNIQUES; #BIBLIOGRAPHIES; CARCINOGENS; DETECTION; #ENVIRONMENTAL IMPACTS; #HEALTH EFFECTS; NICKEL; OCCUPATIONAL HAZARDS; #POLLUTION; #RESEARCH REPORTS; STANDARDS; #TOXICITY; #TOXIC SUBSTANCES; #WASTEWATER TREATMENT; #WATER QUALITY

DESCRIPTIVE NOTE: 139P. PB82-854191
ABSTRACT: THESE REPORTS COVER THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER HAZARDS AND ADVERSE EFFECTS OF MANGANESE. THE DETECTION, CHARACTERIZATION, ANALYTICAL METHODS, STANDARDS, AND REMOVAL FROM THE ENVIRONMENT ARE REPORTED. THESE ASPECTS OF MANGANESE ARE COVERED AS AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING HUMANS, AND IN SUCH AREAS AS MINING OPERATIONS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 85 CITATIONS, 13 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007615
PUBLICATION DATE: OCT 81

DESCRIPTOR: #ABSTRACTS; #ANALYTICAL TECHNIQUES; #BIBLIOGRAPHIES; CARCINOGENS; DETECTION; #ENVIRONMENTAL IMPACTS; #HEALTH EFFECTS; #MINING; HIRING; OPERATIONS (WASTEWATER); #RESEARCH REPORTS; STANDARDS; #TOXICITY; #TOXIC SUBSTANCES; #WASTEWATER TREATMENT; #WATER QUALITY

DESCRIPTIVE NOTE: 119P. PB82-854209
ABSTRACT: THESE REPORTS COVER THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER HAZARDS AND ADVERSE EFFECTS OF MANGANESE. THE DETECTION, CHARACTERIZATION, ANALYTICAL METHODS, STANDARDS, AND REMOVAL FROM THE ENVIRONMENT ARE REPORTED. THESE ASPECTS OF MANGANESE ARE COVERED AS AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING HUMANS, AND IN SUCH AREAS AS MINING OPERATIONS. (THIS UPDATED BIBLIOGRAPHY CONTAINS 85 CITATIONS, 20 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007616
PUBLICATION DATE: OCT 81

DESCRIPTOR: #ABSTRACTS; #ANALYTICAL TECHNIQUES; #BIBLIOGRAPHIES; CARCINOGENS; DETECTION; #ENVIRONMENTAL IMPACTS; #HEALTH EFFECTS; NICKEL; OCCUPATIONAL HAZARDS; #POLLUTION; #RESEARCH REPORTS; STANDARDS; #TOXICITY; #TOXIC SUBSTANCES; #WASTEWATER TREATMENT; #WATER QUALITY

DESCRIPTIVE NOTE: 152P. PB82-834175
ABSTRACT: THESE REPORTS COVER THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION AND OTHER HAZARDS AND ADVERSE EFFECTS OF NICKEL. THE DETECTION, CHARACTERIZATION, ANALYTICAL METHODS, STANDARDS, AND REMOVAL FROM THE ENVIRONMENT ARE REPORTED. THESE ASPECTS OF NICKEL ARE COVERED AS AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING HUMANS, AND IN SUCH AREAS AS OCCUPATIONAL EXPOSURES. (THIS UPDATED BIBLIOGRAPHY CONTAINS 98 CITATIONS, 29 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)
AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161

IRIS ACCESSION NUMBER: EW007617

PUBLICATION DATE: OCT 81


DESCRIPTOR: ABSTRACTS; ANALYTICAL TECHNIQUES; BIBLIOGRAPHIES; CARCINOGENS; DETECTION; ENVIRONMENTAL IMPACTS; OCCUPATIONAL HAZARDS; POLLUTION; RESEARCH REPORTS; STANDARDS; TOXICITY; TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 137P. PB82-854183

ABSTRACT: THESE REPORTS COVER THE TOXICITY, CARCINOGENICITY, ENVIRONMENTAL POLLUTION, AND OTHER HAZARDS AND ADVERSE EFFECTS OF NICKEL. THE DETECTION, CHARACTERIZATION, ANALYTICAL METHODS, STANDARDS, AND REMOVAL FROM THE ENVIRONMENT ARE REPORTED. THESE ASPECTS OF NICKEL ARE DEALT WITH IN RELATION TO AQUATIC AND TERRESTRIAL FLORA AND FAUNA, INCLUDING HUMANS, AND IN SUCH AREAS AS OCCUPATIONAL EXPOSURES. (THIS UPDATED BIBLIOGRAPHY CONTAINS 151 CITATIONS, 45 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007619

PUBLICATION DATE: OCT 81


DESCRIPTOR: ANALYTICAL TECHNIQUES; AQUATIC ENVIRONMENTS; BIBLIOGRAPHIES; HEALTH EFFECTS; MONITORING; RESEARCH REPORTS; TOXICITY; TOXIC SUBSTANCES

DESCRIPTIVE NOTE: 229P. PB82-854225

ABSTRACT: THIS BIBLIOGRAPHY COVERS TRANSPORT IN THE ENVIRONMENT, AND TOXIC DOSAGE OF ZINC IONS. HEALTH EFFECTS RELATED TO ZINC UPTAKE ARE DISCUSSED IN STUDIES OF AQUATIC ENVIRONMENT, AERIAL TESTS, AND HUMAN POPULATIONS. SOME ABSTRACTS DISCUSS EMISSIONS IN THE ATMOSPHERE, OF TRACE ELEMENT ZINC, INCLUDING MONITORING TECHNIQUES AND EVENTUAL ACCUMULATIONS IN THE ENVIRONMENT. (THIS UPDATED BIBLIOGRAPHY CONTAINS 159 CITATIONS, 25 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007620

PUBLICATION DATE: JAN 82

TITLE: OIL SPILL REMOVAL TECHNIQUES AND EQUIPMENT. 1976-NOVEMBER, 1981. CITATIONS FROM THE NTIS DATA BASE.)

DESCRIPTOR: BIBLIOGRAPHIES; COSTS; EQUIPMENT; FACILITIES; OIL SPILL REMOVAL; OIL SPILLS; POLLUTION; RESEARCH REPORTS; TECHNIQUES; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 165P. PB82-083172

ABSTRACT: THE REMOVAL PROCESSES COVER OIL WATER SEPARATORS, SKIMMERS, DISPERSANTS, ADSORBENTS, FLOTATION AND COBUSTION, RELATED STUDIES ON OIL SPREADING, DROPLET ENTRAINMENT, PROTOTYPE REMOVAL SYSTEMS, EQUIPMENT AND COSTS ARE ALSO PRESENTED. OIL WATER SEPARATORS DESIGNED ONLY FOR TANKER BALLAST WATER CLEANSING ARE EXCLUDED. (THIS UPDATED BIBLIOGRAPHY CONTAINS 158 CITATIONS, 27 OF WHICH ARE NEW ENTRIES TO THE PREVIOUS EDITION.)

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

IRIS ACCESSION NUMBER: EW007621

PUBLICATION DATE: JAN 82


DESCRIPTOR: BIBLIOGRAPHIES; DREDGING; INDUSTRIAL WASTES

DESCRIPTIVE NOTE: 66P. PB82-084172
The main topics cover the ocean disposal of radioactive materials, sludge, and dredged material. Although reports on the disposal of radioactive wastes, brines, and industrial wastes are also included, the ecological effects are given as is research on the pollution of the New York River. However, studies on the discharge of heated effluents are excluded. This updated bibliography contains 175 citations, all of which are new entries to the previous edition.

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

Iris Accession Number: EWO07622

Publication Date: Jun 81

Title: The feasibility of converting the small biological wastewater treatment plants into physical-chemical plants.

Personal Author: Long, David A.; White, Frederick E.

Descriptor: Biological Treatment; Costs; Design; Equipment; Facilities; Operations (Wastewater); Performance Evaluation; Physical Chemical Treatment; Pilot Plants; Wastewater Treatment

Abstract: Many parks and recreation areas have installed wastewater treatment plants using the extended aeration activated sludge process. Because of extreme load variations and periodic low flows, biological systems often do not treat these wastewaters sufficiently to meet current discharge requirements. As an alternative, the physical-chemical treatment (PCT) process offers the advantage of on-site or variable rate operation with no appreciable loss in treatment quality. Pilot plant studies were run in order to confirm the potential use of the PCT process and to obtain information for design purposes. The projected capital cost is $5,800 for converting a 100,000 GPD conventional biological plant to a scheme including chemical coagulation, sedimentation, filtration, and an annual cost basis. The conversion to a PCT plant is cost effective.

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

Iris Accession Number: EWO07623

Publication Date: Sep 81

Title: Performance of activated sludge processes: reliability, stability and variability.

Personal Author: Niku, Salar; and Others

Descriptor: Activated Sludge; Design; Mathematical Models; Operations (Wastewater); Performance Evaluation; Research Reports; Wastewater Treatment

Abstract: The objective of this research study was to statistically analyze the performance of a large number of activated sludge processes and to develop methods and procedures for introducing reliability and stability concepts into design and operation of treatment plants. The proposed model can be used in design of a treatment process expected to perform at a certain reliability and/or to estimate the reliability of an operating treatment plant. The stability of various activated sludge processes was examined using several statistical measures. The standard deviation was found to be the most appropriate indicator of stability. Plants with effluent values below 10 mg/l are considered unstable. The use of the geometric mean as a measure of central tendency of daily effluent quality data was recommended for setting discharge standards. An approach is proposed that can be used to design a process stochastically when the effluent standards are deterministic in nature.

Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

Iris Accession Number: EWO07624

Publication Date: Oct 81

Title: Toxicity of Cobalt, January, 1970-October, 1981 (Citations from the NTIS Data Base.)

Descriptor: Abstracts; Analytical Techniques; Bibliographies; Carcinogens; Cobalt; Detection; Environmental Impacts; Health Effects; Pollution; Research Reports; Standards; Toxicity; Toxic Substances; Water Quality

Abstract: This bibliography cites reports concerning the toxicity, carcinogenicity, environmental pollution, and other adverse effects of cobalt. The detection, analytical methods, and standards are considered, and methods of removal from the environment are discussed. The effects on aquatic and terrestrial flora and fauna, including humans, are considered. (This updated bibliography contains 49 citations, 18 of which are new entries to the previous edition.)
IRIS accession number: EW007625
Publication date: OCT 81
Title: Biological Effects of Mercury Pollution. June, 1980-September, 1981. (Citations from the NTIS Data Base.)
Descriptor: *animals; *abstracts; *bibliographies; *biological effects; *bioaccumulation; *environmental impacts; *health effects; *humans; mercury; microbiology; occupational hazards; *plants; *research reports; *toxicity; *toxic substances
Descriptive note: GIP. PB82-800889
Abstract: The selected abstracts cover mercury toxicity, poisoning, absorption, excretion, bioaccumulation, and concentration levels in various plants, animals, microorganisms, and humans. Topics also include toxic hazards, occupational safety and health, microbial degradation and environmental health. This updated bibliography contains 56 citations, all of which are new entries to the previous edition.
Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

IRIS accession number: EW007626
Publication date: JUL 81
Descriptor: *municipalities; *operations (wastewater); planning; problem solving; *requirements; *research needs; *state-of-the-art; *reviews; *strategies; *technology; *wastewater treatment
Descriptive note: 241P. PB82-120106
Abstract: The purpose of this document is to identify the requirements for research development support of program operators. Activities and the present how and is responding on intended to respond to the identified requirements. Both short-term requirements and research responses and long-range research planning are presented. These plans are based on perceptions of research necessary to address anticipated problems or technology needs at the time of the report. This document resulted from the efforts of the Municipal Wastewater Research Committee. It represents a consensus view of the research and development relating to municipal wastewater needs.
Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

IRIS accession number: EW007627
Publication date: 81
Title: Analytical Methods Evaluation for Applicability in Leachate Analysis.
Personal author: Dewalle, Fope B.; and others
Descriptor: *analytical techniques; *evaluation; *laboratory procedures; *laboratory techniques; *research reports; *statistical analysis
Descriptive note: PB81-172306
Abstract: Thirty-two laboratories in the United States and Canada conducted round-robin analyses of leachate samples. Samples were analyzed for up to 28 parameters to evaluate accuracy and precision of the methods employed. The 28 parameters included physical parameters (pH, oxidation reduction potential, conductivity, turbidity, and solids), organics (chemical oxygen demand, total organic carbon, organic nitrogen, and free volatile fatty acids), anions (sulfate, phosphate, chloride, nitrate, and bicarbonate), and cations (alkali metals, alkaline earth metals, transition metals, and heavy metals). The most applicable method for analysis of each parameter is recommended. Use of the standard addition technique is required in each laboratory to determine the matrix depression or enhancement for each type of leachate sample. The accuracy (i.e., agreement between measured and actual amounts) and reproducibility of different analytical methods were evaluated in depth. Thirty-two laboratories submitted final analytical results.
Availability: National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161

IRIS accession number: EW007628
Publication date: 81
Title: Electroplating Wastewater Sludge Characterization.
Personal author: Meredith, J. W.; and others
Descriptor: *analytical techniques; *chemical analysis; *electroplating; *heavy metals; *industrial wastes; *leaching; *performance evaluation; *research reports; *sludge; *wastewater analysis; *wastewater treatment; water quality
Descriptive note: PB81-199928
Abstract: This project was initiated to provide information concerning the physical and chemical characteristics of electroplating wastewater treatment sludges and their performance in a leaching environment. Two variables were found to have a major effect on the toxicity of the sludge: the composition and amount of free and interstitial wastewater present in the sludge, and the pH of the final extract. In general, it...
ABSTRACT: This report documents the successful use of lime to stabilize sludge at 26 municipal wastewater treatment plants. Sludge stabilized with lime can be simple and inexpensive, and can be used as a backup or interim system, or to upgrade a system, or instituted as a less costly system. Bacterial analyses demonstrated that liming a sludge to pH 12 is an effective means of inactivating total and fecal coliform. Although organisms can regrow as the pH drops in stockpiled sludge, the lime-stabilized product can be landfilled, land applied as a liquid sludge or as a cake, or stockpiled before landfilling or land application.

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

IRIS ACCESSION NUMBER: E19367633
PUBLICATION DATE: 81
TITLE: FACULTATIVE LAUGOON EFFLUENT POLISHING USING PHASE ISOLATION PONDS
PERSONAL AUTHOR: MCGRiff, E. Corbin, JR.

ABSTRACT: The performance of "phase isolation" lagoons was investigated at Clinton, Mississippi, from May 1978 to May 1979. The study system consisted of two facultative lagoons arranged in series followed by two isolation ponds used alternately for final polishing. The isolation ponds were operated on a fill-and-draw basis with isolation periods varying from 20 to 44 days. The study indicated that phase isolation would not consistently meet the national permit discharge effluent system (NPDES) limitations of 15 mg/L-BODS, 35 mg/L-TSS, and 5 mg/L-TKN-N established for Clinton. The isolation process did, however, demonstrate its ability to produce the following average effluent: Pond 1, 11 mg/L-BODS, 39 mg/L-TSS, and 3.7 mg/L-TKN-N; and Pond 2, 13 mg/L-BODS, 36 mg/L-TSS, and 3.9 mg/L-TKN-N.

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

IRIS ACCESSION NUMBER: E19367633
PUBLICATION DATE: 81
TITLE: CONTROL OF SEWER OVERFLOWS BY POLYMER INJECTION
PERSONAL AUTHOR: OTOSKI, ROBERT M.

ABSTRACT: This report documents the successful use of lime to stabilize sludge at 26 municipal wastewater treatment plants. Sludge stabilized with lime can be simple and inexpensive, and can be used as a backup or interim system, or to upgrade a system, or instituted as a less costly system. Bacterial analyses demonstrated that liming a sludge to pH 12 is an effective means of inactivating total and fecal coliform. Although organisms can regrow as the pH drops in stockpiled sludge, the lime-stabilized product can be landfilled, land applied as a liquid sludge or as a cake, or stockpiled before landfilling or land application.

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

IRIS ACCESSION NUMBER: E19367633
PUBLICATION DATE: 81
TITLE: FACULTATIVE LAUGOON EFFLUENT POLISHING USING PHASE ISOLATION PONDS
PERSONAL AUTHOR: MCGRiff, E. Corbin, JR.

ABSTRACT: The performance of "phase isolation" lagoons was investigated at Clinton, Mississippi, from May 1978 to May 1979. The study system consisted of two facultative lagoons arranged in series followed by two isolation ponds used alternately for final polishing. The isolation ponds were operated on a fill-and-draw basis with isolation periods varying from 20 to 44 days. The study indicated that phase isolation would not consistently meet the national permit discharge effluent system (NPDES) limitations of 15 mg/L-BODS, 35 mg/L-TSS, and 5 mg/L-TKN-N established for Clinton. The isolation process did, however, demonstrate its ability to produce the following average effluent: Pond 1, 11 mg/L-BODS, 39 mg/L-TSS, and 3.7 mg/L-TKN-N; and Pond 2, 13 mg/L-BODS, 36 mg/L-TSS, and 3.9 mg/L-TKN-N.

AVAILABILITY: NATIONAL TECHNICAL INFORMATION SERVICE, 5285 PORT ROYAL ROAD, SPRINGFIELD, VA 22161
ABSTRACT: SUGGESTED IN THIS RESEARCH REPORT IS A POSSIBLE ALTERNATIVE SYSTEM FOR INCREASING THE CAPACITY OF A SEWER BY THE INJECTION OF FRICTION-REDUCING CHEMICALS TO REDUCE TURBULENT FRICTION AND PREVENT OR LIMIT OVERFLOW IN A WORKING SEWER LINE. THE REPORT SUGGESTS ESTABLISHING AN AUTOMATIC INJECTION SYSTEM FOR THE MATERIALS. DISCUSSION ARE INCLUDED ON THE PROPERTIES, POLYMER TYPES, AND MIXING PROPERTIES, AND PROBLEMS LIMITING THE USEFULNESS OF POLYMER INJECTION.

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

IRIS ACCESSION NUMBER: EW007635

PUBLICATION DATE: APR 76

TITLE: PROCESS DESIGN MANUAL FOR PHOSPHORUS REMOVAL.

DESCRIPTORS: CHEMICAL PRECIPITATION; CHEMICAL REACTIONS; COST; DESIGN; EQUIPMENT; EUTROPHICATION; FACILITIES; LIQUID OPERATIONS (WASTEWATER); PERFORMANCE DATA; PHOSPHORUS REMOVAL; UTILITIES; WASTE DISPOSAL; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 290P.

ABSTRACT: DISCUSSIONS ARE PHOSPHORUS REMOVAL METHODS FOUND TO BE EFFECTIVE AND PRACTICAL FOR USE AT TREATMENT PLANTS. ALL OF THE METHODS INVOLVE CHEMICAL PRECIPITATION OF THE PHOSPHORUS AND REMOVAL OF THE RESULTANT PRECIPITATE. PRECIPITANTS INCLUDE SALTS OF ALUMINUM, IRON, AND LIME.

INCLUDED IS A DISCUSSION OF EACH TREATMENT METHOD ARE A DESCRIPTION OF THE METHOD, PILOT OR FULL-SCALE PERFORMANCE DATA, EQUIPMENT REQUIREMENTS, DESIGN PARAMETERS, AND COSTS.

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

IRIS ACCESSION NUMBER: EW007636

PUBLICATION DATE: SEP 79

TITLE: PROCESS DESIGN MANUAL - SLUDGE TREATMENT AND DISPOSAL.

DESCRIPTORS: DESIGN; DESIGN METHODOLOGY; MUNICIPALITIES; OPERATIONS (WASTEWATER); PROCESS CONTROL; SLUDGE; SLUDGE MATER; SLUDGE TREATMENT; SOLID WASTES; TECHNOLOGY; COSTS; DISPOSAL; WASTEWATER TREATMENT; WATER POLLUTION CONTROL

DESCRIPTIVE NOTE: 1132P.

ABSTRACT: PRESENTED IS A CONTEMPORARY REVIEW OF SLUDGE TREATMENT TECHNOLOGY WITH PARTICULAR EMPHASIS ON DESIGN METHODOLOGY. INCLUSION ARE CHAPTERS ON DESIGN APPROACH, SLUDGE SOLIDS PRODUCTION AND CHARACTERIZATION, THICKENING, STABILIZATION, DISINFECTION, CONDITIONING, Dewatering, HEAT DRYING, HIGH TEMPERATURE PROCESSES, COMPOSTING, TRANSPORTATION, STORAGE, SIDE STREAMS FROM SOLIDS TREATMENT PROCESSES, INSTRUMENTATION, UTILIZATION, AND DISPOSAL TO LAND. EMPHASIS IS PLACED ON THE TREATMENT AND DISPOSAL OF MUNICIPAL WASTEWATER SOLIDS, INCLUDING CLAY, SCUM, SCREENINGS, PRIMARY SLUDGES, BIOLOGICAL SLUDGES, CHEMICAL SLUDGES AND SEPTAGE. DESIGN EXAMPLES ARE USED TO ILLUSTRATE DESIGNS.

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

IRIS ACCESSION NUMBER: EW007640

PUBLICATION DATE: 82

TITLE: PURDUE 36TH INDUSTRIAL WASTE CONFERENCE PROCEEDINGS.

DESCRIPTORS: AGRICULTURE; CHEMICALS; CONFERENCE PROCEEDINGS; FOODS; HAZARDOUS MATERIALS; INDUSTRIAL WASTES; METALS; RESEARCH REPORTS; TECHNICAL PAPERS; TOXIC SUBSTANCES; UTILITIES; WASTE DISPOSAL; WASTES

DESCRIPTIVE NOTE: 997P. PRICE: 569.95

ABSTRACT: COLLECTED IN THIS VOLUME ARE 95 TECHNICAL PAPERS PRESENTED AT THE 36TH INDUSTRIAL WASTE CONFERENCE SPONSORED BY THE SCHOOL OF CIVIL ENGINEERING OF PURDUE UNIVERSITY. THE PAPERS ARE GROUPED INTO 26 SECTIONS ACCORDING TO SPECIFIC CATEGORIES OF INDUSTRIAL WASTES. INCLUDED ARE AGRICULTURAL WASTES, CHEMICAL WASTES, FOOD WASTES, METAL WASTES AND POWER PLANT WASTES.

AVAILABILITY: ANN ARBOR SCIENCE PUBLISHERS INC., 10 TOWER OFFICE PARK, WOBURN, MA 01801

IRIS ACCESSION NUMBER: EW007641

PUBLICATION DATE: 82

TITLE: WATER RESOURCE MANAGEMENT.

PERSONAL AUTHOR: NEWELL, R. A.; AND OTHERS

DESCRIPTORS: ANNOTATED BIBLIOGRAPHIES; COMPUTERS; DEVELOPING NATIONS; FISHERIES; INFORMATION SOURCES; IRRIGATION; MANAGEMENT; MODELS; NATURAL RESOURCES; SANITATION; SYSTEM APPROACH; WATER RESOURCES; WATER SUPPLY

DESCRIPTIVE NOTE: 71P. PRICE: 010.00

ABSTRACT: PROVIDED IS AN INFORMATION SOURCE ON COMPUTER AIDED WATER RESOURCE DEVELOPMENT AND MANAGEMENT TECHNIQUES THAT HAVE BEEN, OR COULD BE, USED IN LESS DEVELOPED COUNTRIES. REFERENCES LISTED ARE GENERALLY FOR THE TIME PERIOD 1977-1982; BUT, SOME IMPORTANT EARLIER TITLES HAVE BEEN INCLUDED. THE CITATIONS ARE GROUPED INTO 13 SUBJECT
ABSTRACT: A STUDY CONDUCTED BY THE GENERAL ACCOUNTING OFFICE TO DETERMINE THE EFFECTIVENESS OF THE USE OF PCB'S AND THE SAFE USE AND PROPER DISPOSAL OF PCB'S AND IMPROVING USEPA PROGRAM DIRECTION.

DESCRIPTION: ADMINISTRATION; EQUIPMENT MAINTENANCE; INSTRUCTIONAL MATERIALS; JOB TRAINING; LEARNING MODULES; POSTSECONDARY EDUCATION; UTILITIES; WASTEWATER TREATMENT; WATER DISTRIBUTION; WATER QUALITY MANAGEMENT; WATER TREATMENT

DESCRIPTIVE NOTE: SUBSCRIPTION: $12.00; $4.00 EACH

ABSTRACT: THIS INSTRUCTOR'S MANUAL COVERS A SERIES OF EIGHT TRAINING MODULES DEVELOPED TO PROVIDE BASIC TRAINING TO WATER DISTRIBUTION SYSTEM PERSONNEL. THE TRAINING MODULES INCLUDE: (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. EACH MODULE CONTAINS INSTRUCTIONAL OBJECTIVES, GLOSSARY, REFERENCES, AND A SELF-TEST.

AVAILABILITY: MINNESOTA DEPARTMENT OF HEALTH, DIVISION OF ENVIRONMENTAL HEALTH, SECTION OF WATER SUPPLY AND GENERAL ENGINEERING, 717 S.E. DELAWARE STREET, MINNEAPOLIS, MN 55440
TO PESTICIDES, HAZARDOUS WASTES, AND PUBLIC PARTICIPATION.

ALSO INCLUDED ARE PROCEDURES TO ILLUSTRATE HOW INSTRUCTORS AND CURRICULAR DEVELOPERS IN THE WATER QUALITY CONTROL FIELD CAN USE THE WATER QUALITY INSTRUCTIONAL RESOURCES INFORMATION SYSTEM (IRIS) TO LOCATE INSTRUCTIONAL MATERIALS TO MEET VERY GENERAL OR HIGHLY SPECIFIC REQUIREMENTS IN THEIR PROGRAMS. (SEE ED 192 111, ED 193 485-486, ED 199 076, ED 200 456, AND ED 209 104)

AVAILABILITY: EPA INFORMATION DISSEMINATION PROJECT, 1200 MCKINLEY RD., 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007663
PUBLIC ID DATE: JUN 31


DESCRIPTOR: AUDIOVISUAL AIDS; CITIZEN PARTICIPATION; CURRICULUM DEVELOPMENT; INFORMATION DISSEMINATION; INSTRUCTIONAL MATERIALS; PESTICIDES; SECONDARY SCHOOL; SCIENCE EDUCATION; TECHNICAL EDUCATION; WASTE DISPOSAL; WATER POLLUTION; WATER RESOURCES; HAZARDOUS MATERIALS; WASTEWATER TREATMENT; WATER QUALITY; WATER SUPPLY

ABSTRACT: THIS ARTICLE REPORTS ON THE USE OF A DUAL-FLOW DESIGNED 160-MGD SEWAGE TREATMENT STATION. THE SEWAGE RECEIVING BASIN IS SPLIT INTO TWO IDENTICAL SPLIT WELLS EACH WITH ACCOMPANYING PUMPS AND PIPES. THIS DESIGN LETS HALF OF THE STATION BE SHUT DOWN WHEN REPAIRS ARE NEEDED.

AVAILABILITY: AMERICAN CITY & COUNTY, V97 N4

IRIS ACCESSION NUMBER: EW007678
PUBLICATION DATE: MAR 82
TITLE: EVALUATION OF ENVIRONMENTAL ASSESSMENT METHODS.
PERSONAL AUTHOR: NICHOLS, ROBERT; HYMAN, ERIC
DESCRIPTOR: ANALYTICAL TECHNIQUES; DECISION MAKING; ENVIRONMENTAL ASSESSMENT; ENVIRONMENTAL QUALITY; EVALUATION; MANAGEMENT; PLANNING

DESCRIPTIVE NOTE: 87-105F.

ABSTRACT: TWELVE REPRESENTATIVE METHODS FOR ENVIRONMENTAL ASSESSMENT ARE DESCRIBED, EVALUATED, AND COMPARED IN TERMS OF THE FOLLOWING SEVEN EVALUATION CRITERIA: TREATMENT OF THE PROBABILISTIC NATURE OF ENVIRONMENTAL QUALITY, INCORPORATION OF INDIRECT AND FEEDBACK EFFECTS, DYNAMIC CHARACTERISTICS, MULTIPLE-OBJECTIVES APPROACH TO SOCIAL WELFARE, CLEAR SEPARATION OF FACTS AND VALUES, FACILITATION OF PARTICIPATION, AND EFFICIENCY IN RESOURCE AND TIME REQUIREMENTS.

AVAILABILITY: JOURNAL OF THE WATER RESOURCES PLANNING AND MANAGEMENT DIVISION, V108 N1

IRIS ACCESSION NUMBER: EW007679
PUBLICATION DATE: MAR 82
TITLE: WATER LAW PRIMER.
PERSONAL AUTHOR: COX, WILLIAM E.
DESCRIPTOR: LAW; LEGISLATION; MANAGEMENT; REGULATIONS; WATER QUALITY; WATER RESOURCES; WATERWAYS

DESCRIPTIVE NOTE: 107-122F.

ABSTRACT: AN OVERVIEW OF LEGAL PRINCIPLES CONTROLLING WATER RESOURCES USE AND DEVELOPMENT IS PROVIDED. THE BODY OF LEGAL PRINCIPLES IN A DESCRIPTION OF FEDERAL AND STATE LAW, WITH FEDERAL LAW GENERALLY HAVING A GREATER ROLE WITH RESPECT TO WATER QUALITY PROTECTION THAN WITH RESPECT TO ALLOCATION WHICH PRIMARILY HAS BEEN A STATE FUNCTION. THE BASIC PATTERN OF WATER LAW EVOLUTION IS GIVEN, WITH SEPARATE CONSIDERATION GIVEN TO WATER SOURCES, GROUND WATER, AND DIFFUSED SURFACE WATER. WITHIN EACH OF THESE AREAS, CONCERN LAW DOCTRINES AND LEGISLATIVE DEVELOPMENTS ARE DISCUSSED. CURRENT WATER MANAGEMENT PROBLEMS AND DISSATISFACTIIONS WITH WATER LAW
WHICH LIKELY WILL RESULT IN CONTINUING CHANGE ARE CONSIDERED.

AVAILABILITY: JOURNAL OF THE WATER RESOURCES PLANNING AND MANAGEMENT DIVISION, V1011 N1

IRIS ACCESSION NUMBER: EW007680
PUBLICATION DATE: APR 82
TITLE: INVESTIGATIONS SUBCOMMITTEE RECOMMENDS REFORMS FOR CONSTRUCTION GRANTS PROGRAM.
PERSONAL AUTHOR: FELICIANO, D. V.
DESCRIPTOR: *CLEAN WATER ACT; *CONGRESS; *CONSTRUCTION GRANTS; COSTS; ENFORCEMENT; ENVIRONMENTAL PROTECTION AGENCY; *EVALUATION; *HEARINGS; *INVESTIGATIONS; LEGISLATION; PERFORMANCE EVALUATION; *PUBLIC WORKS; WASTEWATER TREATMENT; *WATER QUALITY
DESCRIPTIVE NOTE: 323-327P.
ABSTRACT: THIS ARTICLE SUMMARIZES THE FINDINGS OF THE INVESTIGATIONS AND OVERSIGHT SUBCOMMITTEE OF THE HOUSE COMMITTEE ON PUBLIC WORKS AND TRANSPORTATION CONCERNING THE EXTENT TO WHICH THE PUBLIC INVESTMENT IN THE CONSTRUCTION GRANTS PROGRAM IS PRODUCING CLEAN WATER. THE SUBCOMMITTEE GAVE HIGH MARKS TO WASTEWATER TREATMENT BUT ALSO FOUND SERIOUS PERFORMANCE PROBLEMS REPRESENTING A WASTE OF PUBLIC DOLLARS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4
IRIS ACCESSION NUMBER: EW007681
PUBLICATION DATE: APR 82
TITLE: NEW DEFINITION OF SECONDARY TREATMENT CAUSES PRIMARY CONCERN.
PERSONAL AUTHOR: FLYNN, K. C.
DESCRIPTOR: *CONSTRUCTION GRANTS; EFFLUENTS; *ENVIRONMENTAL PROTECTION AGENCY; EQUIPMENT; *EVALUATION; *FACILITIES; POLLUTION CONTROL; *SECONDARY TREATMENT; *STANDARDS; TECHNOLOGY; *WASTEWATER TREATMENT; *WATER QUALITY
DESCRIPTIVE NOTE: 328-330P.
ABSTRACT: PROMPTED BY A NEW LAW FOR CONSTRUCTION GRANTS (P.L. 97-117) AND A NEW EMPHASIS ON COST-EFFECTIVE WASTEWATER TREATMENT, USEPA IS NOW CONSIDERING A NEW AND LESS STRINGENT DEFINITION OF SECONDARY TREATMENT. THIS ARTICLE PRESENTS A NEW DEFINITION AND PROVIDES CRITERIA AND RATIONALE.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4
IRIS ACCESSION NUMBER: EW007682
PUBLICATION DATE: APR 82
TITLE: PRESS RELATIONS FOR PUBLICLY OWNED TREATMENT WORKS.
PERSONAL AUTHOR: FORCE, JAMES M.; BERGER, THOMAS J.
DESCRIPTOR: COMMUNICATIONS; *COMMUNITY RELATIONS; *MANAGEMENT; *NEWS MEDIA; OPERATIONS (WASTEWATER); *PRESS RELATIONS; *PUBLIC RELATIONS; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 331-334P.
ABSTRACT: THIS ARTICLE EXAMINES THE PUBLIC RELATIONS PROGRAM INITIATED BY THE MANAGEMENT OF A WAUSAU, WISCONSIN, WASTEWATER TREATMENT PLANT. SPECIAL REPORTS WERE PREPARED AND RELEASED WHEN THE TREATMENT PLANT UNDERWENT REPAIRS AND OTHER POTENTIALLY DISRUPTIVE PROJECTS. IN ADDITION, NEWS REPORTERS WERE ENCOURAGED TO VISIT THE PLANT, LEARN ABOUT THE TREATMENT PROCESSES, AND DISCUSS OPERATIONAL PROBLEMS AND CHALLENGES WITH PLANT STAFF.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4
IRIS ACCESSION NUMBER: EW007683
PUBLICATION DATE: APR 82
TITLE: UPGRADING OPERATOR RESPONSIBILITIES FOR NEW FACILITIES.
PERSONAL AUTHOR: RICHARDSON, GARY R.; JAHESSON, GUY M.
DESCRIPTOR: COMMUNICATIONS; *FACILITIES; *JOB TRAINING; LABOR; *MANAGEMENT; *OPERATORS; *OPERATIONS (WASTEWATER); *PERSONNEL; *PLANNING; *TRAINING; UNIONS; *WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 335-338P.
ABSTRACT: THE SANITATION DISTRICT NO. 1 OF CAMPBELL AND KENTON COUNTIES SUCCESSFULLY ADDRESSED SEVERAL LABOR MANAGEMENT RELATIONS PROBLEMS COINCIDENTAL WITH THE PHASE-OUT OF AN OLD PRIMARY WASTEWATER TREATMENT PLANT. MANAGEMENT HAS BEEN ABLE TO WORK WITH LABOR TO DEVELOP A PROFICIENT OPERATING STAFF DURING THE CHANGEOVER FROM THE OLD TO THE NEW PLANT. THE NEW JOB DESCRIPTIONS, CLASSROOM ORIENTATION, AND ON-THE-JOB TRAINING HAVE RESULTED IN CHANGES THAT REFLECT BOTH GOOD FISCAL MANAGEMENT AND OPERATING EFFICIENCY. AT THE SAME TIME, LABOR HAS BEEN KEPT INFORMED OF MANAGEMENT'S PLANS AND HAS PARTICIPATED EXTENSIVELY IN DEVELOPMENT OF THE APPROPRIATE CHANGES.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4
IRIS ACCESSION NUMBER: EW007684
PUBLICATION DATE: APR 82
TITLE: IMPACT OF PRETREATMENT ON SLUDGE CONTENT OF HEAVY METALS.
PERSONAL AUTHOR: KOCH, CARL M.; AND OTHERS
DESCRIPTOR: #CADMIUM; #HEAVY METALS; #INDUSTRIAL WASTES; #LAND APPLICATION; #MUNICIPAL WASTES; #PRETREATMENT; #SECONDARY TREATMENT; #SLUDGE; WASTE DISPOSAL; #WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 339-343P.
ABSTRACT: THE CAMDEN COUNTY MUNICIPAL UTILITIES AUTHORITY (CCUWA) IS EXPANDING AND UPGRADED ITS WASTEWATER TREATMENT FACILITIES TO SECONDARY TREATMENT. THE CONCENTRATION OF HEAVY METALS IN THE MUNICIPAL SLUDGE IS CRITICAL IN DETERMINING THE ENVIRONMENTAL ACCEPTABILITY OF LAND-BASED SLUDGE DISPOSAL ALTERNATIVES AND IN ASSESSING SUITABLE LAND APPLICATION RATES. AN EXTENSIVE INDUSTRIAL SURVEY AND AN INDUSTRIAL AND STORMWATER SAMPLING PROGRAM WERE CONDUCTED FOR CADMIUM, CHROMIUM, COPPER, LEAD, MERCURY, NICKEL, AND ZINC. CADIUM WAS THE ONLY METAL FOUND TO BE CONTRIBUTED PRIMARILY FROM INDUSTRIAL SOURCES, AND THEREFORE THE ONLY METAL WOULD BE SIGNIFICANTLY REMOVED BY INDUSTRIAL PRETREATMENT.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4

IRIS ACCESSION NUMBER: EW007685
PUBLICATION DATE: APR 82
TITLE: FATE OF NITROGEN IN AEROBIC SLUDGE DIGESTION.
PERSONAL AUTHOR: MAVINIC, D. S.; KOERS, D. A.
DESCRIPTOR: #ACTIVATED SLUDGE; #AEROBIC DIGESTION; #DESIGN; #NITRIFICATION; #NITROGEN; #PERFORMANCE EVALUATION; #PROCESS DESIGN; #RESEARCH REPORTS; #SLUDGE; WASTE DISPOSAL; #WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 352-360P.
ABSTRACT: A STUDY WAS UNDERTAKEN TO DEVELOP LOW-TEMPERATURE, OPERATING AND PERFORMANCE GUIDELINES FOR AEROBIC DIGESTION OF WASTE-ACTIVATED SLUDGE. IT WAS FOUND THAT THE ORGANIC NITROGEN PORTIONS OF THE MIXED LIQUOR ARE BIOCHEMICALLY CONSUMED PER UNIT OF CELL MASS FOR ALL SYSTEMS AND SLUDGE AGES; THAT IS, 0.86O G N/G VSS. IN ADDITION, THE ABSENCE OF ORGANIC NITROGEN IN THE SUPERNATANTS INDICATED THAT VOLATILE SOLIDS DESTRUCTION DURING AEROBIC DIGESTION RESULTS IN ALMOST 100% NITRIFICATION OF ORGANIC NITROGEN TO TANION AIN SOLUTION. CONSIDERABLE NITRIFICATION/DENITRIFICATION OCCURRED IN ALL SYSTEMS AND AT ALL TEMPERATURES, DESPITE PB VALUES AS LOW AS 4.0.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4

IRIS ACCESSION NUMBER: EW007686
PUBLICATION DATE: APR 82
TITLE: NONGRAPHS FOR RAPID SOLUTIONS FOR THE STREETER-PHELPS EQUATIONS.
PERSONAL AUTHOR: MCBRIDE, G. B.
DESCRIPTOR: #BOD; #DISSOLVED OXYGEN; #MATHEMATICAL MODELS; #MODELING; #MONOGRAPHS; POLLUTION CONTROL; #RIVERS; #STREETER-PHELPS EQUATIONS; #WATER QUALITY
DESCRIPTIVE NOTE: 378-384P.
ABSTRACT: PUBLISHED SOLUTIONS TO THE STREETER-PHELPS MODEL EQUATIONS ALLOW CALCULATION OF THE CONCENTRATION OF RIVER BIOCHEMICAL OXYGEN DEMAND (BOD) AND DISSOLVED OXYGEN DEFICIT (DOD) DOWNSTREAM OF SOME INITIAL POINT AT WHICH THE RIVER BOD AND DOD ARE KNOWN. THE PAPER PRESENTS SOLUTIONS IN SIMPLE MONOGRAPHS FORM FOR THE LOCATION AND MAGNITUDE OF THE MAXIMUM DOWNSTREAM RIVER DOD. ALSO GIVEN IS A MONOGRAPHS FOR CALCULATING THE MAXIMUM PERMISSIBLE INITIAL RIVER BODS, GIVEN THE INITIAL RIVER DOD AND THE MAXIMUM PERMISSIBLE DOWNSTREAM DOD. THESE MONOGRAPHS MAKE POSSIBLE RAPID CALCULATIONS AND INVOLVE ONLY THE SIMPLEST COMPUTATIONS. THEY SHOULD BE PARTICULARLY USEFUL WHERE PREDICTIONS ARE REQUIRED QUICKLY, AS IN THE CASE OF AN EMERGENCY SPILLAGE OF OXYGEN-DEMANDING LIQUID. IT SHOULD BE NOTED THAT CALCULATIONS WILL BE ONLY APPROXIMATE FOR RIVERS TO WHICH THE STREETER-PHELPS MODEL DOES NOT APPLY.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N4

IRIS ACCESSION NUMBER: EW007691
PUBLICATION DATE: APR 79
TITLE: INSPECTORS GUIDE FOR EVALUATION OF MUNICIPAL WASTEWATER TREATMENT PLANTS.
PERSONAL AUTHOR: HINRICHS, DANIEL J.
DESCRIPTOR: CHECKLISTS; #EVALUATION; #FACILITIES; #GUIDELINES; #INSTRUCTIONAL MATERIALS; #MAINTENANCE; #MANAGEMENT; #MUNICIPALITIES; #OPERATIONS (WASTEWATER); #POST SECONDARY EDUCATION; #SAFETY; #UNIT PROCESSES; #WASTEWATER TREATMENT; #WATER POLLUTION CONTROL
DESCRIPTIVE NOTE: 360P. PRICE: $1.00 PLUS $.03 PER PAGE.
ABSTRACT: PRESENTED IS AN INSPECTOR'S GUIDE DESIGNED TO PROVIDE STATE AND EPA INSPECTORS WITH THE BACKGROUND NECESSARY TO EVALUATE THE OPERATION AND MAINTENANCE OF WASTEWATER TREATMENT PLANTS. THE GUIDE PROVIDES THE INFORMATION NECESSARY TO MAKE THE SUBJECTIVE JUDGMENTS REQUIRED FOR PLANT EVALUATION AND INCLUDES CHECKLISTS FOR INDIVIDUAL UNIT PROCESSES, SUCH AS PUMPING STATIONS, SCREENING, CRIT REMOVAL, ACTIVATED SLUDGE, TRICKLING FILTERS AND LAGOONS, OVERALL PLANT MANAGEMENT, SAFETY, PLANT HYDRAULICS, AND THE COMPATIBILITY OF UNIT PROCESSES ARE
EMPHASIZED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007733

PUBLICATION DATE: AUG 80
TITLE: CHANGING 150-LB CHLORINE SUPPLIES - STUDENT WORKBOOK, INSTRUCTOR GUIDE, PRE-TEST AND POST-TEST.

DESCRIPTOR: *AUDIOVISUAL AID; *CHLORINATION; *DISINFECTION; *EQUIPMENT; *INSTRUCTIONAL MATERIALS; *MAINTENANCE; *OPERATIONS (WASTEWATER); *OPERATIONS (WATER); *POST SECONDARY EDUCATION; *TRAINING; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 20P. PRICE: $1.00 PLUS $.03 PER PAGE.

ABSTRACT: PRESENTED ARE THE PRINT MATERIALS FOR AN INSTRUCTIONAL UNIT ON GAS CHLORINATION, 150 LB CYLINDERS. THIS UNIT EMPHASIZES CHANGING A 150-LB CHLORINE SUPPLY SAFELY AND WITHOUT LEAKS IN LESS THAN ONE HOUR. INCLUDED IN THE MATERIALS ARE AN INSTRUCTOR GUIDE, STUDENT WORKBOOK, AND PRE-TEST AND POST-TESTS. AN INSTRUCTIONAL APPROACH IS SPECIFIED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007734

PUBLICATION DATE: SEP 73
TITLE: RETURN SLUDGE FLOW CONTROL.

PERSONAL AUTHOR: WEST, ALFRED W.

DESCRIPTOR: *ACTIVATED SLUDGE; *CLARIFIERS; *FACILITIES; *INSTRUCTIONAL MATERIALS; *INSTRUMENTATION; *LABORATORY TRAINING; *MEASUREMENT TECHNIQUES; *OPERATIONS (WASTEWATER); *OPERATIONS (WATER); *POST SECONDARY EDUCATION; *PROCESS CONTROL; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 14P. PRICE: $1.50

ABSTRACT: DISCUSSED ARE CLARIFIER SLUDGE FLOW CONTROL PROCEDURES FOR THE ACTIVATED SLUDGE PROCESS. EMPHASIS IS PLACED ON THE USE OF BASIC DATA TO CALCULATE THE CLARIFIER SLUDGE FLOW RATE NEEDED TO MAINTAIN OR RESTORE PROCESS EQUILIBRIUM.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007735

TITLE: ACTIVATED SLUDGE QUALITY AND PROCESS BALANCE.

PERSONAL AUTHOR: WEST, ALFRED W.

DESCRIPTOR: *ACTIVATED SLUDGE; *FACILITIES; *INSTRUCTIONAL MATERIALS; *LABORATORY TRAINING; *MEASUREMENT TECHNIQUES; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *PROCESS CONTROL; *SLUDGE; *WASTE DISPOSAL; *WASTEWATER TREATMENT; *WATER QUALITY

DESCRIPTIVE NOTE: 3SP. PRICE: $1.00 PLUS $.03 PER PAGE.

ABSTRACT: DISCUSSED ARE TWO CONCEPTS ASSOCIATED WITH THE OPERATIONAL CONTROL PROCEDURES FOR THE ACTIVATED SLUDGE PROCESS. USING STANDARD ROUTINE CONTROLS TEST INFORMATION, THIS PAPER DETAILS THE PREPARATION OF A DYNAMIC SLUDGE AGE (DSA) VALUES AND ALSO ILLUSTRATES THE CALCULATION OF THE FINAL CLARIFIER SLUDGE BLANKET THICKNESS (BLT) VERSUS CLARIFIER SLUDGE FLOW PERCENTAGE CURVES. GUIDELINES FOR USING THIS INFORMATION TO DETERMINE THE PROPER SLUDGE WASTING AND RETURN SLUDGE FLOW RATES NEEDED TO MEET THE INTERRELATED REQUIREMENTS OF THE VARIABLE SEWAGE FLOWS, ORGANIC LOADINGS, AND SLUDGE QUALITY CHARACTERISTICS ARE PRESENTED.

AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007736

PUBLICATION DATE: DEC 77
TITLE: INSTRUCTOR'S GUIDE FOR WATER QUALITY MANAGEMENT WORKSHOP.

DESCRIPTOR: *AUDIOVISUAL AIDS; *CERTIFICATION; *CONSTRUCTION GRANTS; *CURRICULUM DEVELOPMENT; *FACILITIES; *FEDERAL LEGISLATION; *INDUSTRY; *INSTRUCTIONAL MATERIALS; *MANPOWER DEVELOPMENT; *MUNICIPALITIES; *OPERATIONS (WASTEWATER); *POST SECONDARY EDUCATION; *TRAINING; *WASTEWATER TREATMENT; *WATER QUALITY; *WORKSHOPS

DESCRIPTIVE NOTE: 207P.

ABSTRACT: PRESENTED IS THE INSTRUCTOR'S GUIDE FOR A VIDEO TAPED WATER QUALITY MANAGEMENT WORKSHOP DESIGNED TO ASSIST USEPA REGIONAL PERSONNEL IN DEVELOPING WATER QUALITY WORKSHOPS WITHIN THE REGIONS. THE MATERIAL IS CONSISTENT WITH CONTROL ACT OF 1972 (PL 92-500) BUT HAS NOT BEEN MODIFIED TO BE CONSISTENT WITH THE NEW REQUIREMENTS OF THE CLEAN WATER ACT OF 1977 (PL 95-217). TOPICS DISCUSSED INCLUDE STATE AND AREA/WIDE WATER QUALITY MANAGEMENT PROGRAMS, MUNICIPAL CONSTRUCTION GRANTS, 0 & 1 HR TREATMENT FACILITIES, NON-POINT SOURCE CONTROLS, INDUSTRIAL EFFLUENT LIMITATIONS, PRETREATMENT, NFDES PERMITS AND ENFORCEMENT, MANPOWER PLANNING AND TRAINING, AND OPERATOR CERTIFICATION.

AVAILABILITY: U. S. ENVIRONMENTAL PROTECTION AGENCY, WASHINGTON, DC 20460.
TITLE: WATER CONSERVATION DEVICES: RESIDENTIAL WATER CONSERVATION - WATER RESEARCH CAPSULE REPORT.

DESCRIPTION: *APPLIANCES; *CONSERVATION; COST EFFECTIVENESS; *ECONOMIC FACTORS; *EQUIPMENT; *PERFORMANCE EVALUATION; *PLUMBING EQUIPMENT; *RESEARCH REPORTS; *RESIDENTIAL USE; *WATER CONSERVATION; *WATER USE

DESCRIPTION NOTE: 9P. STOCK NO. 024-000-0837-1

ABSTRACT: THIS REPORT HIGHLIGHTS FINDINGS OF RESEARCH PROJECTS INVOLVING EVALUATION OF RESIDENTIAL WATER CONSERVATION DEVICES. AMONG THE DEVICES EXAMINED ARE: TOILET INSERTS; IMPROVED BALLCOCKS; DUAL FLUSH CYCLE MODIFICATIONS; WATER SAVING TOILETS; FAUCET AERATORS; SPRAY TAPS; FLOW CONTROL DEVICES; PRESSURE REDUCING VALVES; WATER CONSERVING APPLIANCES; LANDSCAPE IRRIGATION EQUIPMENT; AND OTHER WATER CONSERVATION INNOVATIONS.

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

IRIS ACCESSION NUMBER: E007740

PUBLICATION DATE: 77

TITLE: SCALE-FREE-VAPOR-COMPRESSION EVAPORATION - WATER RESEARCH CAPSULE REPORT.

DESCRIPTION: *DESIGN; *ECONOMIC FACTORS; *EQUIPMENT; *FACILITIES; *INDUSTRIAL WASTES; *PERFORMANCE EVALUATION; *PILOT PLANTS; *RESEARCH REPORTS; *TECHNOLOGICAL ADVANCEMENTS; *VAPOR-COMPRESSION EVAPORATOR; *WASTEWATER CONCENTRATION; *WASTEWATER TREATMENT

DESCRIPTION NOTE: 9P. STOCK NO. 024-000-00839-8

ABSTRACT: THIS REPORT DESCRIBES THE DEVELOPMENT AND APPLICATIONS OF A TUBE-IN-SHELL, VAPOR-COMPRESSION EVAPORATOR (BRINE CONCENTRATOR) USING A SEED-SLURRY PROCESS FOR SCALE CONTROL. PILOT STUDIES SHOW THIS TECHNOLOGY TO BE A LOW-ENERGY, HIGH-RECOVERY MEANS OF CONCENTRATING WASTEWATERS. INFORMATION IS PRESENTED ON CONFIGURATION DEVELOPMENT, ECONOMICS, CURRENT APPLICATIONS, AND POTENTIAL APPLICATIONS.

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

IRIS ACCESSION NUMBER: E007741

PUBLICATION DATE: 77

TITLE: REVERSE OSMOSIS - WATER RESEARCH CAPSULE REPORT.

DESCRIPTION: *ECONOMIC FACTORS; *PERFORMANCE EVALUATION; *RESEARCH REPORTS; *REVERSE OSMOSIS; *TECHNOLOGICAL ADVANCEMENTS; *TECHNOLOGY; *WASTEWATER TREATMENT; *WATER CONSERVATION; *WATER RESOURCES; *WATER REUSE; *WATER TREATMENT

DESCRIPTION NOTE: 15P. STOCK NUMBER 024-000-00854-1

ABSTRACT: THIS REPORT EXAMINES THE USE OF REVERSE OSMOSIS AS A TECHNOLOGY TO PURIFY SUBSTANDARD OR POLLUTED WATER ECONOMICALLY AND TO ALLOW MULTIPLE REUSE OF ALL AVAILABLE WATER. ATTENTION IS FOCUSED ON THE SIGNIFICANCE OF REVERSE OSMOSIS, A DESCRIPTION OF THE TECHNOLOGY, ECONOMIC AND POWER DEMANDS, PERFORMANCE EVALUATION, AREAS OF APPLICATION, AND FUTURE DEVELOPMENTAL EFFORTS.

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

IRIS ACCESSION NUMBER: E007743

PUBLICATION DATE: 79

TITLE: CONSERVATION OF WATER, CHEMICALS, AND ENERGY IN DYEING NYLON CARPET - WATER RESEARCH CAPSULE REPORT.

DESCRIPTION: *CHEMICALS; *CARPET MANUFACTURING; *DYEING; *ENERGY CONSERVATION; *INDUSTRY; *RECYCLING; *RESEARCH REPORTS; *TEXTILE INDUSTRY; *WATER CONSERVATION; *WATER RESOURCES; *WATER USE

DESCRIPTION NOTE: 11P. STOCK NUMBER 024-000-00852-5

ABSTRACT: THIS REPORT DEMONSTRATES HOW TEXTILE MANUFACTURING CAN REDUCE ITS WATER CONSUMPTION BY PROCESS MODIFICATION AND AT THE SAME TIME SUBSTANTIALLY REDUCE ITS ENERGY USE AND CHEMICAL REQUIREMENTS. THE REPORT FOCUSES ON THE DYEING OF CARPETS AND EXAMINES THE PROCESS MODIFICATIONS IN DETAIL AND DISCUSSES ITS ADVANTAGES AND APPLICATIONS IN OTHER AREAS.

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

IRIS ACCESSION NUMBER: E007744

PUBLICATION DATE: 79

TITLE: ELECTRODIALYSIS TECHNOLOGY - WATER RESEARCH CAPSULE REPORT.

DESCRIPTION: *DISTILLATION; *DRINKING WATER; *ECONOMIC FACTORS; *ELECTRODIALYSIS; *EQUIPMENT; *PERFORMANCE EVALUATION; *PURIFICATION; *RESEARCH REPORTS; *SALINE WATER; *TECHNOLOGICAL ADVANCEMENTS; *TECHNOLOGY; *WATER QUALITY; *WATER RESOURCES; *WATER SUPPLY

DESCRIPTION NOTE: 15P. STOCK NUMBER 024-000-00855-0

ABSTRACT: THIS REPORT EXAMINES ELECTRODIALYSIS AS A LOW TRANSFER MEMBRANE SEPARATION TECHNIQUE FOR PROVIDING PURIFIED DRINKING OR INDUSTRIAL PROCESS WATER FROM SALINE SUPPLIES.
The costs of land treatment of wastewater are analyzed using a computer simulation model. Six alternative techniques for land application are examined. Variations in costs are studied using cost estimates and cost elasticity estimates. Assuming that the soil requirements are met, infiltration basing are the least cost technique for land application. Center pivot irrigation is the least cost irrigation alternative examined. Analysis of treatment economies of size indicates that cost of land treatment increases as facility size increases.

Abstract: This report highlights a water treatment facility of the Orange County Water District, which integrates the cost of advanced full-scale treatment technology currently available into the world's largest water reclamation system. Detailed descriptions are provided for the facility's design, equipment, process performance, and economic aspects.


IRIS Accession Number: EW007745
Publication Date: 79

Abstract: This report highlights a water treatment facility of the Orange County Water District, which integrates the cost of advanced full-scale treatment technology currently available into the world's largest water reclamation system. Detailed descriptions are provided for the facility's design, equipment, process performance, and economic aspects.


IRIS Accession Number: EW007746
Publication Date: Nov 76
Title: The Cost of Land Application of Wastewater: A Simulation Analysis.

Abstract: Land treatment of wastewater is a cost effective method for advanced treatment of municipal sewage. Costs of land treatment of wastewater are analyzed using a computer simulation model. Six alternative techniques for land application are examined. Variations in costs are studied using cost estimates and cost elasticity estimates. Assuming that the soil requirements are met, infiltration basing are the least cost technique for land application. Center pivot irrigation is the least cost irrigation alternative examined. Analysis of treatment economies of size indicates that cost of land application increases as facility size increases.


IRIS Accession Number: EW007747
Publication Date: Sep 78
Title: Land Application of Wastewater: A Cost Analysis.

Abstract: This report looks at the economic factors concerning land application of wastewater. It states that this technique is a cost effective method for advanced wastewater treatment. Other factors analyzed include land costs, effluent transmission, public health constraints, storage, and the application rate.

Availability: United States Department of Agriculture, Washington, D.C. 20250

IRIS Accession Number: EW007748
Publication Date: Feb 81

Abstract: Participants at the national conference on meeting environmental workforce needs met in response to a growing concern about the future availability of a trained workforce capable of dealing with present and future environmental problems. Thirty-nine papers presented at this conference are included which address the following issues: future job opportunities, programs and curricula for occupational training, ability of educational and training institutions to meet anticipated needs, guidance and counseling, jobs for minorities, connections between educators and industry.

Availability: United States Department of Agriculture, Natural Resource Economics Division, Washington, DC 20250
GOVERNMENT AND LABOR; WORKFORCE PLANNING FOR STATE ENVIRONMENTAL AGENCIES; AND CO-OP PROGRAMS TO MEET STATE AND LOCAL SHORTAGES.

AVAILABILITY: INFORMATION DYNAMICS, INC., 111 CLAYBROOK DR., SILVER SPRING, MD 20902

IRIS ACCESSION NUMBER: EW007749
PUBLICATION DATE: 79
TITLE: HAZARDOUS CHEMICALS: A MANUAL FOR SCHOOLS AND COLLEGES.
DESCRIPTOR: *CHEMISTRY; ELEMENTARY SCHOOL SCIENCE; SECONDARY EDUCATION; FIRST AID; *GUIDELINES; *LABORATORY SAFETY; *LABORATORY MATERIALS; *SAFETY; SCIENCE EDUCATION; SCIENCE LABORATORIES; SECONDARY SCHOOL SCIENCE
DESCRIPTIVE NOTE: 240P.
ABSTRACT: COMPILED AS AN IMMEDIATE SOURCE OF REFERENCE AND GUIDANCE, THIS MANUAL WAS PUBLISHED BY THE SCOTTISH SCHOOLS SCIENCE EQUIPMENT RESEARCH CENTRE TO PROVIDE THE FOLLOWING INFORMATION ABOUT ALPHABETICALLY LISTED CHEMICALS CONSIDERED TO BE HAZARDOUS: (1) THE HAZARDS; (2) INCOMPATIBILITY WITH OTHER AGENTS; (3) METHODS FOR HANDLING, STORAGE, DISPOSAL AND SPILLAGE; AND (4) FIRST AID TECHNIQUES FOR EYES, LUNGS, SKIN. AN INTRODUCTION DESCRIBES GENERAL SAFETY RULES FOR THE USE OF CHEMICALS IN SCIENCE LABORATORIES.

AVAILABILITY: LONGMAN INC., 19 W. 44TH ST., NEW YORK, NY 10036

IRIS ACCESSION NUMBER: EW007750
PUBLICATION DATE: 80
TITLE: BASIC LABORATORY SKILLS FOR WATER AND WASTEWATER ANALYSIS. REPORT NO. 125.
PERSONAL AUTHOR: CLARK, DOUGLAS W.
DESCRIPTOR: *CHEMISTRY; COLLEGE SCIENCE; ENVIRONMENTAL EDUCATION; ENVIRONMENTAL TECHNICIANS; HIGHER EDUCATION; JOB SKILLS; LABORATORY EQUIPMENT; LABORATORY PROCEDURES; LABORATORY SAFETY; POST SECONDARY EDUCATION; SCIENCE EDUCATION; SECONDARY SCHOOL SCIENCE; SKILL DEVELOPMENT; TECHNICAL EDUCATION; WASTE DISPOSAL; WATER RESOURCES; WASTEWATER; WATER ANALYSIS
DESCRIPTIVE NOTE: 72P. PRICE: FREE.
ABSTRACT: DESIGNED FOR INDIVIDUALS WANTING TO ACQUIRE AN INTRODUCTORY KNOWLEDGE OF basic skills necessary to function in water or wastewater laboratory. This handbook emphasizes current use of routine equipment and proper procedures, explanations and illustrations focus on underlying principles and techniques rather than procedures for conducting specific tests. Chapter one discusses the purpose, procedures, and potential problems of ten basic laboratory techniques and equipment. The next three chapters focus on measuring weights and volumes, and miscellaneous measurements including temperature, electrical properties, and pH. Final chapters deal with safety, record keeping, and principles of laboratory analysis. While intended for water or wastewater laboratory personnel, much of the information is applicable to other laboratory settings.

AVAILABILITY: NEW MEXICO WATER RESOURCES RESEARCH INSTITUTE, CAMPUS BOX 5167, NEW MEXICO STATE UNIVERSITY, LAS CRUCES, NM 88003

IRIS ACCESSION NUMBER: EW007751
PUBLICATION DATE: AUG 79
TITLE: INSTRUCTOR TRAINING SEMINARS: A MANUAL FOR STATE TRAINING SUPERVISORS.
DESCRIPTOR: *INSERVICE EDUCATION; LESSON PLANS; OBJECTIVES; PLANNING; POST SECONDARY EDUCATION; SEMINARS; TRAINERS; TRAINING; WATER RESOURCES; DRINKING WATER; WATER SUPPLY; WATER TREATMENT
DESCRIPTIVE NOTE: 336P. EDRS PRICE: MF01/PC14 PLUS POSTAGE
ABSTRACT: THIS MANUAL IS DESIGNED TO HELP STATE AND REGIONAL WATER SUPPLY TRAINING PERSONNEL CONDUCT SEMINARS FOR INSTRUCTORS OF WATER PLANT OPERATORS. THE PURPOSE IS TO HELP STATE SUPERVISORS UPGRADE THE QUALITY OF TRAINING GIVEN TO THE PLANT OPERATORS BY THEIR INSTRUCTORS. SINCE A SURVEY INDICATED THAT OPERATOR TRAINING INSTRUCTORS ARE TECHNICALLY COMPETENT, THE FOCUS IS ON TRAINING RATHER THAN CONTENT OR OPERATING SKILLS. SECTION I OUTLINES THE PROCEDURES INVOLVED IN PLANNING A SEMINAR FOR OPERATOR TRAINING INSTRUCTORS, DESCRIBES THE TASK OF AN INSTRUCTOR, AND PROVIDES AN OVERVIEW OF THE SEMINAR FORMS AND QUESTIONNAIRES, AND AGENDAS. SECTION II CONTAINS 13 COMPLETE LESSON PLANS, EACH OF WHICH HAS THREE PARTS, LESSON PLAN COVER SHEETS, AND INSTRUCTIONAL MATERIALS. EIGHT OF THE LESSONS ADDRESS THE DEVELOPMENT AND PREPARATION OF A GOOD TRAINING PROGRAM INCLUDING CONTENT, OBJECTIVES, METHODS, AND PREPARING LESSON PLANS. FIVE LESSONS FOCUS ON CLASSROOM DELIVERY TECHNIQUES, SUCH AS GROUP DISCUSSION AND DEMONSTRATION. (ED 209 076)

AVAILABILITY: ERIC DOCUMENT REPRODUCTION SERVICE, P.O. BOX 190 ARLINGTON, VA 22210

IRIS ACCESSION NUMBER: EW007752
PUBLICATION DATE: 81
TITLE: WORKING FOR CLEAN WATER, 1: CITIZEN HANDBOOKS. AN INFORMATION PROGRAM FOR ADVISORY GROUPS.
PERSONAL AUTHOR: STOLTZFUS, LORNA CHR., ED.
DESCRIPTOR: *ADVISORY COMMITTEES; *CITIZEN PARTICIPATION;
ABSTRACT: PRESENTED IS MATERIAL FROM AN INFORMATION PROGRAM DESIGNED TO HELP CITIZEN ADVISORY GROUPS AND LOCAL OFFICIALS IMPROVE DECISION-MAKING IN WATER QUALITY PLANNING. THIS PROGRAM IS AIMED AT HELPING PEOPLE FOCUS ON ESSENTIAL ISSUES AND QUESTIONS BY PROVIDING MATERIALS SUITABLE FOR PERSONS WITH NON-TECHNICAL BACKGROUND. THE FOLLOWING TOPICS ARE INCLUDED: (1) INNOVATIVE AND ALTERNATE TECHNOLOGIES; (2) WATER CONSERVATION AND REUSE; (3) LAND TREATMENT; (4) COST-EFFECTIVENESS ANALYSIS; (5) ENVIRONMENTAL ASSESSMENT; AND (6) FINANCIAL MANAGEMENT. THE VOLUME CONTAINS READING MATERIAL AND SELECTED REFERENCES.

AVAILABILITY: INFORMATION REFERENCE CENTER (ERIC/IRC), THE OHIO STATE UNIVERSITY, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007753

DESCRIPTIVE NOTE: 111P. PRICE: $6.00

ABSTRACT: PRESENTED IS MATERIAL FROM AN INFORMATION PROGRAM DESIGNED TO HELP CITIZEN ADVISORY GROUPS AND LOCAL OFFICIALS IMPROVE DECISION-MAKING IN WATER QUALITY PLANNING. THIS PROGRAM IS AIMED AT HELPING PEOPLE FOCUS ON ESSENTIAL ISSUES AND QUESTIONS BY PROVIDING MATERIALS SUITABLE FOR PERSONS WITH NON-TECHNICAL BACKGROUND. THE FOLLOWING TOPICS ARE INCLUDED: (1) ROLE OF ADVISORY GROUPS; (2) PUBLIC PARTICIPATION; (3) FACILITY PLANNING IN THE CONSTRUCTION CHARTS’ PROGRAM; (4) MUNICIPAL WASTEWATER PROCESSES, AN OVERVIEW; (5) MUNICIPAL WASTEWATER PROCESSES, DETAIL; AND (6) SMALL SYSTEMS. THE VOLUME CONTAINS READING MATERIAL AND SELECTED REFERENCES.

AVAILABILITY: INFORMATION REFERENCE CENTER (ERIC/IRC), THE OHIO STATE UNIVERSITY, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW007782

DESCRIPTIVE NOTE: 253P. PRICE: $1.00 PLUS $.03 PER PAGE

ABSTRACT: DESIGNED AS AN OPERATIONAL AND MAINTENANCE GUIDE OR REFERENCE MANUAL FOR USE BY OPERATING PERSONNEL. THIS DOCUMENT PROVIDES THE GUIDANCE TO OPERATE AND MAINTAIN VARIOUS SLUDGE PROCESSING, CONDITIONING, AND DISPOSAL SYSTEMS AT WASTEWATER TREATMENT PLANTS. EMPHASIS IS PLACED ON THE ESTABLISHMENT OF GOOD OPERATIONAL PROCEDURES, TESTING AND EFFECTIVE MEASURES FOR DETECTION AND CORRECTION OF OPERATIONAL PROBLEMS. THE PROCESSING AND DISPOSAL SYSTEMS PRESENTED INCLUDE THOSE DESIGNED TO TREAT THE VARIOUS TYPES OF SLUDGE GENERATED FROM PRIMARY, SECONDARY, AND CHEMICAL WASTEWATER TREATMENT PROCESSES. INCLUDED ARE ALL OF THE PRINCIPLE SLUDGE UNIT PROCESSES AND UNIT OPERATIONS SUCH AS SLUDGE THICKENING, STABILIZATION AND CONDITIONING, AND HEAT Dewatering, HEAT Drying, AND ULTIMATE DISPOSAL SYSTEM.

AVAILABILITY: INFORMATION REFERENCE CENTER (ERIC/IRC), THE OHIO STATE UNIVERSITY, 1200 CHAMBERS RD., 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: EW00253P
AVAILABILITY: EPA INSTRUCTIONAL RESOURCES CENTER, THE OHIO STATE UNIVERSITY, 1200 CHAMBERS ROAD - 3RD FLOOR, COLUMBUS, OH 43212

IRIS ACCESSION NUMBER: E007792
PUBLICATION DATE: MAY 82
TITLE: MUNICIPAL POLLUTION ABATEMENT REPORT CARD: SIGNIFICANT PROGRESS.
PERSONAL AUTHOR: CHISHOLM, JAMES A.
DESCRIPTOR: #COMPARATIVE ANALYSIS; #CONSTRUCTION GRANTS; #COSTS; #EPA; #FACILITIES; #MUNICIPALITIES; #PERFORMANCE EVALUATION; #POLLUTION CONTROL; PROGRAM DESCRIPTIONS; #STATUS REPORTS; #SURVEYS; #WASTEWATER TREATMENT; #WATER QUALITY
DESCRIPTIVE NOTE: 422-427P.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N5

IRIS ACCESSION NUMBER: E007793
PUBLICATION DATE: MAY 82
TITLE: CHEMOMETRIC MODELING OF WASTEWATER TREATMENT PROCESSES.
PERSONAL AUTHOR: SCHUETZLE, DENNIS; AND OTHERS
DESCRIPTOR: #ANALYTICAL TECHNIQUES; #BACTERIA; #BOD; #CHEMOMETRIC TECHNIQUES; #MATHEMATICAL MODELS; #OPERATIONS (WASTEWATER); #PERFORMANCE EVALUATION; #PROCESS DESCRIPTION; #RESEARCH REPORTS; #STATISTICAL ANALYSIS; #WASTEWATER TREATMENT; #WATER QUALITY
DESCRIPTIVE NOTE: 457-465P.
ABSTRACT: CHEMOMETRIC TECHNIQUES USING A SYSTEM OF CHEMICAL RECOGNITION AND MULTIVARIATE DATA ANALYSIS HAVE BEEN USED TO MODEL AN EXPERIMENTAL WASTEWATER TREATMENT PROCESS CONSISTING OF A PRIMARY TREATMENT PROCESS AND TWO LAGGERS MODIFIED TO SIMULATE A SECONDARY TREATMENT FACILITY. BOTH GRAPHICAL AND MATHEMATICAL MODELS WERE USED TO DESCRIBE THE WASTEWATER TREATMENT SYSTEM, AND TO DETERMINE WHAT CHEMICAL PARAMETERS SHOULD BE MAINTAINED TO OPTIMIZE BODS REDUCTION.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N5

IRIS ACCESSION NUMBER: E007794
PUBLICATION DATE: MAY 82
TITLE: ORGANIC COMPOSITION OF AEROBIC, ANAEROBIC, AND COMPOST-STABILIZED SLUDGES.
PERSONAL AUTHOR: HIGGINS, A. J.; AND OTHERS
DESCRIPTOR: #AEROBIC PROCESSES; #ANAEROBIC PROCESSES; #ANAEROBIC DIGESTION; #COMPOSTING; #OPERATIONS (WASTEWATER); #ORGANIC COMPOUNDS; #PERFORMANCE EVALUATION; #RESEARCH REPORTS; #SLUDGE; #WASTE DISPOSAL; #WASTEWATER TREATMENT
DESCRIPTIVE NOTE: 466-473P.
AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, V54 N5

IRIS ACCESSION NUMBER: E007795
PUBLICATION DATE: MAY 82
TITLE: STATISTICAL ANALYSIS TO DERIVE IMPROVED STORMWATER QUALITY MODELS.
PERSONAL AUTHOR: JEWEY, THOMAS K.; ADRIAN, DONALD DEAN
DESCRIPTOR: #DATA ANALYSIS; #GUIDES; #MATHEMATICAL MODELS; #RESEARCH REPORTS; #STATISTICAL ANALYSIS; #STORMWATER; #SURFACE RUNOFF; #URBAN AREAS; #WATER COLLECTION; #WASTEWATER COLLECTION
DESCRIPTIVE NOTE: 480-499P.
ABSTRACT: RESEARCHERS AND CONSULTANTS HAVE USED SIMULATION MODELS TO PREDICT THE QUANTITY AND QUALITY OF URBAN STORMWATER RUNOFF. THE QUALITY PORTIONS OF THESE MODELS, HOWEVER, HAVE NOT FOSTERED CONFIDENCE IN THEIR PREDICTIVE CAPABILITIES. LACK OF CONFIDENCE HAS BEEN ENGENDERED BY THE USE OF UNVERIFIED MODELS AND BY THE VARIABILITY OF MEASURED STORMWATER POLLUTION DATA. ANALYSIS OF AVAILABLE STORMWATER DATA FROM SEVERAL GEOGRAPHIC AREAS INDICATES THAT NO ONE MODEL CAN BE FOUND THAT ADEQUATELY PORTRAYS STORMWATER POLLUTANT WASHOFF PROCESSES FOR ALL BASINS. EVEN WHEN THE SAME MODEL IS SUPERIOR OVER OTHERS FOR MORE THAN ONE BASIN WITHIN THE SAME GEOGRAPHICAL AREA, THE ESTIMATED
PARAMETERS VARY SIGNIFICANTLY AMONG THE BASINS. THUS, IT IS CONCLUDED THAT LOCAL DATA SHOULD BE GATHERED FOR EACH BASIN TO BE MODELED AND A REPRESENTATIVE MODEL DEVELOPED USING MULTIPLE REGRESSION ANALYSIS.

AVAILABILITY: JOURNAL WATER POLLUTION CONTROL FEDERATION, 1993 NO

IRIS ACCESION NUMBER: EW007797

PUBLICATION DATE: SEP 81

TITLE: TECHNICAL REPORT: OPERATION AND MAINTENANCE COSTS FOR MUNICIPAL WASTEWATER FACILITIES.

DESCRIPTOR: ADMINISTRATION; *COSTS; *ECONOMIC FACTORS; FACILITIES; MAINTENANCE; MANAGEMENT; MUNICIPALITIES; OPERATIONS (WASTEWATER); STAFFING; SLUDGE HANDLING; WASTEWATER DISTRIBUTION; WASTEWATER TREATMENT

DESCRIPTIVE NOTE: 13P. FRD-22

ABSTRACT: THIS REPORT PRESENTS THE RESULTS OF A COMPREHENSIVE EFFORT TO OBTAIN AND ANALYZE OPERATIONS AND MAINTENANCE COSTS FOR SEPARATE SEWER SYSTEMS, AND FOR SECONDARY, ADVANCED SECONDARY, AND ADVANCED WASTEWATER TREATMENT PLANTS SERVED BY SEPARATE SEWER SYSTEMS. DATA IS GATHERED FOR MORE THAN 900 TREATMENT PLANTS AND ALMOST 500 SEWER SYSTEMS. INCLUDED IS INFORMATION ON ADMINISTRATIVE COSTS, SLUDGE HANDLING COSTS, AND STAFFING.

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

IRIS ACCESION NUMBER: EW007803

PUBLICATION DATE: 81

TITLE: RETAINING ADULT STUDENTS. INFORMATION SERIES NO. 225.

PERSONAL AUTHOR: DARNENWALD, GORDON C.

DESCRIPTOR: ACADEMIC PERSISTENCE; *ADULT DROPOUTS; *ADULT EDUCATION; ADULT STUDENTS; DROPOUT CHARACTERISTICS; DROPOUT PREVENTION; DROPOUT RATE; DROPOUT RESEARCH; *SCHOOL HOLDING POWER; *STUDENT ATTRACTION; *WITHDRAWAL (EDUCATION)

DESCRIPTIVE NOTE: 27P. PRICE: 82.69

ABSTRACT: THIS PAPER PROVIDES A SYNTHESIS OF RESEARCH AND THEORY DIRECTLY RELATED TO RETENTION OF ADULT STUDENTS. IN THE FIRST OF FIVE MAJOR SECTIONS, READERS ARE PROVIDED WITH A BRIEF DISCUSSION OF THE NATURE AND SIGNIFICANCE OF THE DROPOUT-RETENTION PROBLEM. SECTION 2 REVIEWS RESEARCH FINDINGS RELATING TO WHO DROPS OUT AND WHY. DEMOGRAPHIC, PSYCHOLOGICAL, SITUATIONAL, AND TEACHING-LEARNING FACTORS ARE EXAMINED IN THIS SECTION. THEORETICAL PERSPECTIVES ON DROPOUTS AND DETENTION ARE REVIEWED IN THE THIRD SECTION. THEORETICAL MODELS REVIEWED INCLUDE THE CONGRUENCE MODEL, EXPECTANCY-VALENCE MODEL, REINFORCEMENT OF ATTENDANCE MODEL, AND COST-BENEFIT MODEL. SECTION 4 OUTLINES A GENERAL THEORETICAL MODEL OF THE DROPOUT-PERSISTENCE PROCESS IN ADULT EDUCATION. THE FINAL SECTION DISCUSSES GENERAL GUIDELINES FOR PROMOTING ADULT STUDENT RETENTION.


IRIS ACCESION NUMBER: EW007864

PUBLICATION DATE: DEC 81

TITLE: PROPOSED: A NATIONAL INSTITUTES OF ENGINEERING.

PERSONAL AUTHOR: MCGEE, THOMAS D.

DESCRIPTOR: COLLEGE SCIENCE; ENGINEERING; *ENGINEERING EDUCATION; HIGHER EDUCATION; INSTITUTIONAL ADMINISTRATION; INSTITUTIONAL CHARACTERISTICS; INSTITUTIONAL COOPERATION; INSTITUTIONAL ROLE; *ORGANIZATIONAL OBJECTIVES; *ORGANIZATIONS (GROUPS); *RESEARCH AND DEVELOPMENT CENTERS; SCIENCE EDUCATION; TECHNOLOGY

DESCRIPTIVE NOTE: 31-33P.

ABSTRACT: TO IMPROVE AMERICA'S TECHNOLOGICAL BASE, A NATIONAL ORGANIZATION THAT WOULD SUPPORT THE PHYSICAL SCIENCES IN MUCH THE SAME WAY THAT THAT THE NATIONAL INSTITUTES OF HEALTH HAVE SUPPORTED HEALTH SCIENCES IS CALLED FOR. INCLUDES PROPOSED ORGANIZATIONAL STRUCTURE AND FUNCTIONS OF A NATIONAL INSTITUTES OF ENGINEERING.
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POLLUTANTS

*POLLUTION

(POLLUTION ABATEMENT

*POLLUTION CONTROL

*POLYCHLORINATED BIPHENYLS

*POLYMER INJECTION

*POLYMERS

*Ponds

POPULATION DYNAMICS

*POST SECONDARY EDUCATION

*POTABLE WATER

*POWER PLANTS

*PRECOATING

PRESS RELATIONS

PRESSURE SEWERS

PRETREATMENT

PRETREATMENT

*PRIORITY POLLUTANTS

*PROBLEM SOLVING

PROBLEM SOLVING
**Pumps**

Pumps

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- Quality Circle
- Radioactive Materials
- Radioactive Wastes
- Radioisotopes
- Rapid Infiltration
- Rate Structures
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- WATER POLLUTION CONTROL
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- WATER PROJECTS
  - (1) EW007350

- WATER QUALITY
  - (34) EW006283 EW006878 EW006879 EW006899 EW006900 EW007080

- WATER QUALITY MANAGEMENT
  - (1) EW007647

- WATER RATES
  - (2) EW007486 EW007487

- WATER RESOURCES
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- WATER RESOURCES EDUCATION
  - (1) EW007752 EW007753 EW007754

- WATER REUSE
  - (8) EW007745

- WATER RIGHTS
  - (1) EW007418

- WATERSHEDS
  - (1) EW007192

- WATER SOFTENERS
  - (1) EW006895

- WATER STORAGE
  - (2) EW007505 EW007507

- WATER SUPPLY
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**Notes:**

- *WATER POLLUTION* (1)
- *WATER POLLUTION CONTROL* (13)
- *WATER PROJECTS* (1)
- *WATER QUALITY* (34)
- *WATER QUALITY MANAGEMENT* (1)
- *WATER RATES* (2)
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- *WATER STORAGE* (2)
- *WATER SUPPLY* (26)

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**Additional Information:**

- WATER POLLUTION CONTROL (8)
- WATER QUALITY (85)
- WATER QUALITY MANAGEMENT (1)
- WATER RESOURCES (10)
- WATER RESOURCES EDUCATION (1)
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