

NATIONAL AGRICULTURAL LIBRARY ARCHIVED FILE

Archived files are provided for reference purposes only. This file was current when produced, but is no longer maintained and may now be outdated. Content may not appear in full or in its original format. All links external to the document have been deactivated. For additional information, see <http://pubs.nal.usda.gov>.

Water Quality Information Center of the National Agricultural Library
Agricultural Research Service, U.S. Department of Agriculture

**Constructed Wetlands Bibliography, Part IV:
Basic and General**

This file, "Constructed Wetlands Bibliography, Part IV: Basic and General" is one section of a seven-part constructed wetlands bibliography on using constructed wetlands for wastewater treatment. The bibliography was compiled by United States Department of Agriculture staff from the Ecological Sciences Division of the Natural Resources Conservation Service, formerly the Soil Conservation Service, and the Water Quality Information Center at the National Agricultural Library. The complete bibliography can be accessed as either a single large (450K) file containing more than 600 citations or in parts organized by topic.

To locate a publication cited in this bibliography, please contact your local, state, or university library. If you are unable to locate a particular publication, your library can contact the National Agricultural Library (see instructions given at the end of this file).

For WWW access to these files: point your browser at
http://www.nal.usda.gov/Constructed_Wetlands_all/index.html

BG
CATEGORY BG
SUBCATEGOR

TITLE A desert wetland created by wastewater flows: current trends
and problems.
AUTHOR Morris, F.A. and L.J. Paulson.
SOURCE Wetlands, Vol. 2.
PUBLISHER
PAGES pp. 191-206
DATE 1982
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE A new concept in treating wastewater--constructed wetlands.
AUTHOR Karathanasis, A.D.
SOURCE Soil Science News & Views, Cooperative Extension Service and
Univ. of Kentucky, College of Agriculture, Dept of Agronomy.
1991. v.12 (3) 3p.

PUBLISHER
PAGES 3p.
DATE 1991
CALLNUM DNAL S591.55.K4S64
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Abstracts of symposium: innovative applications of
constructed wetlands.
AUTHOR Kentucky Academy of Science.
SOURCE Univ. of Kentucky, College of Agriculture. (July 24-25,
1990).

PUBLISHER
PAGES
DATE 1990
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Aquatic plants improve wastewater treatment.
AUTHOR Pullin, B.P. and D.A. Hammer.
SOURCE Water Environment & Technology, Vol. 3, No. 3.
PUBLISHER
PAGES pp. 36-40
DATE 1991, March
CALLNUM TD419 W37
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Artificial marshes for wastewater treatment.
AUTHOR Wolverton, B.C.
SOURCE Aquatic Plants for Wastewater Treatment and Resource
Recovery.
PUBLISHER Orlando, FL: Magnolia Publishing Inc.

PAGES pp. 141-152.
DATE 1987
CALLNUM TD 475 C65 1986
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Artificial wetlands for wastewater treatment.
AUTHOR Wood, A. and M. Rowley.
SOURCE Paper presented at the Symposium Ecology and Conservation of
Wetlands in South Africa
PUBLISHER October 15-16, 1987.
PAGES
DATE
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Assessing the use of aquatic plants for wastewater treatment
in a high elevation tropical lake.
AUTHOR Riviera, R.C., et al.
SOURCE Internationale Vereinigung fuer Theoretische und Angewandte
Limnologie. Verhandlungen, Vol. 24, No. 2.
PUBLISHER
PAGES pp. 1178-1182
DATE 1991, March
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Constructed wetlands handle waste.
AUTHOR Taylor, S.
SOURCE Soil & Water Conservation News, USDA, Soil Cons. Service.
March/April 1991. v. 11 (8) p. 5-6
PUBLISHER
PAGES pp. 5-6
DATE 1991
CALLNUM TD755 U74 1980
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Constructed wetlands treatment will be a first for Colorado.
AUTHOR _____.
SOURCE US Water News
PUBLISHER
PAGES
DATE 1990, May
CALLNUM TD370 U57
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Constructed wetlands--a low cost reliable alternative for
waste water treatment.
AUTHOR Griggs, J.
SOURCE J. Soil & Water Cons. 21(4):13 (1988).
PUBLISHER
PAGES
DATE 1988
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Constructed wetlands--technology provides opportunities and
challenges for contractors.
AUTHOR Hammer, D.A.
SOURCE Land and Water Conservation
PUBLISHER
PAGES
DATE 1990, Feb/Mar
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Cumulative impacts on water quality functions of wetlands.
AUTHOR Hemond, H.F. and J. Benoit.
SOURCE Cumulative Effects on Landscape Systems of Wetlands.
PUBLISHER
PAGES
DATE 1988, June

CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Herculean labors to clean wastewater.
AUTHOR Hawley, T.M.
SOURCE Oceanus, Vol. 33, No. 2.
PUBLISHER
PAGES pp. 72-75
DATE 1990, Summer
CALLNUM GC1 035
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Land application of wastewater.
AUTHOR Zirschky, J. and A.R. Abernathy.
SOURCE Water Pollution Control Federation. JWPFA5 60(6):857-858
PUBLISHER
PAGES
DATE June 1988.
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Low-cost and energy-saving wastewater treatment technology.
AUTHOR Wang, B. Z. et al, (eds.)
SOURCE Water Science and Technology, Vol. 24, No. 5. Proceedings
of ISLEWTT Harbin '90, Harbin Institute of Architecture and
Civil Engineering., Harbin, China, 6-10 August 1990.
PUBLISHER
PAGES 256p
DATE 1991
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Made-to-order-wetlands.

AUTHOR Oertel, B.
SOURCE Land and Water Conservation. October 1990.
PUBLISHER
PAGES
DATE 1990, October
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Mechanisms of water quality improvement in wetland treatment systems.
AUTHOR Kadlec, R.H. and H. Alvord, Jr.
SOURCE Wetlands: Concerns and Successes.
PUBLISHER Bethesda, MD: AWRA
PAGES
DATE 1989.
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Mississippi Agricultural and Forestry Experiment Station (MAPES) on solid ground with wastewater cleanup project.
AUTHOR Drapala, P.
SOURCE MAPES Research Highlights. December 1991. v. 54 (12) p. 5.
PUBLISHER
PAGES pp 5
DATE 1991
CALLNUM 100 M69MI
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Nationwide inventory: constructed wetlands for wastewater treatment.
AUTHOR Reed, S.C.
SOURCE Biocycle. 32(1):44-49
PUBLISHER
PAGES
DATE 1991, January
CALLNUM DNAL 57.8-C734
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Natural systems for waste management and treatment.
AUTHOR Reed, S.C., et al.
SOURCE
PUBLISHER New York, NY: McGraw Hill Book Co.
PAGES
DATE 1988
CALLNUM TD645 R44
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Natural systems for wastewater treatment and water reuse for
space and earthly applications.
AUTHOR Wolverton, B.C.
SOURCE Water Reuse Conference, Denver, CO, August 2-7, 1987, AWWA
Research Foundation.
PUBLISHER
PAGES
DATE 1987
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Natural systems for wastewater treatment, manual of practice
FD-16.
AUTHOR Water Pollution Control Federation.
SOURCE
PUBLISHER Alexandria, VA: WPCF.
PAGES
DATE 1990
CALLNUM TD745 N37
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Natural systems vs. the 'black box'.
AUTHOR _____.
SOURCE BioCycle, Vol. 30, No. 6.
PUBLISHER

PAGES pp. 68-69
DATE 1989
CALLNUM 57.8 C734
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Natural wastewater treatment systems.
AUTHOR Jensen, R.
SOURCE Texas Water Resources. 1988. v. 14 (2).
PUBLISHER
PAGES
DATE 1988
CALLNUM TD 224 T4T42
ANNOTATION Some of the natural systems that show considerable promise in providing cost-effective treatment of domestic and industrial wastewater include floating aquatic plants, artificial wetlands, and systems combining aquatic plants and animals. Although these systems offer potential alternative to conventional wastewater treatment, more information is needed. Natural systems must be properly designed to prevent problems with the release of pathogens, heavy metals, and other pollutants into the environment.

CATEGORY BG
SUBCATEGOR

TITLE Overview and future directions.
AUTHOR Zedler, J.B. and M.W. Weller.
SOURCE Wetland Creation and Restoration: The Status of the Science.
PUBLISHER Island Press
PAGES pp 405-14
DATE 1990
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Porewater chemistry of natural and created marsh soils.
AUTHOR Craft, C.B., E.D. Seneca, and S.W. Broome.
SOURCE Journal of Experimental Marine Biology and Ecology JEMBAM, Vol. 152, No.2
PUBLISHER
PAGES pp 187-200
DATE 1991, October 11
CALLNUM QH91A1J6

ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Root-water-sediment interface processes.
AUTHOR Good, B.J. and W.H. Patrick, Jr.
SOURCE Aquatic Plants for Water Treatment and Reasourse Recovery.
PUBLISHER Orlando, FL: Magnolia Publishing Inc.
PAGES pp. 359-371
DATE 1987
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE State-of-the-art utilization of aquatic plants in water
pollution control.
AUTHOR Reddy, K.R. and T.A. DeBusk.
SOURCE Water Science and Technology, Vol. 19, No. 10.
PUBLISHER
PAGES pp. 61-79
DATE 1987
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Status of current technology on constructed wetlands.
AUTHOR Cooper, C.M.
SOURCE Submitted to the DEC Task Force, Natn. Sedimentation Lab.,
USDA-ARS, Oxford, MS.
PUBLISHER
PAGES
DATE 1989
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE The use of wetland treatment processes in water reuse.
AUTHOR Gearheart, R.J. et al.

SOURCE Proceedings of the Water Reuse Symposium III, San Diego, CA,
August 26-31, 1984. v. 2. p. 617-638.
PUBLISHER
PAGES pp 617-38
DATE 1984
CALLNUM TD429 W3 1984
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE The use of wetlands for treating wastes--wisdom in
diversity?
AUTHOR Blumer, K.
SOURCE Paper presented at the Symposium on Freshwater Wetlands,
Tallahassee, FL, March 2, 1978. Brookhaven Natn. Laboratory
BNL-24611
PUBLISHER
PAGES 26p.
DATE 1978
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE The use of wetlands for water pollution control.
AUTHOR Chan, E., et al.
SOURCE USEPA, Municipal Environmental Research Laboratory, Research
and Development, EPA-600/S2-82-088.
PUBLISHER
PAGES
DATE 1982, November.
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Treating wastewater in constructed wetlands.
AUTHOR Huack, R.D.
SOURCE Biocycle Vol. 33 (9), Sept 1992, P72
PUBLISHER
PAGES pp 72
DATE 1992
CALLNUM 57.8 C734
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Treatment of wastewater in the rhizosphere of wetland
plants--the root-zone method.
AUTHOR Brix, H.
SOURCE Water Science and Technology. 1987. v. 19 (1-2) p. 107-118.
PUBLISHER
PAGES
DATE 1987
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Use of wetlands for wastewater treatment.
AUTHOR Sereico, P. and C. Larneo.
SOURCE Civil Engineering Practice. Volume 5: Water
Resources/Environmental.
PUBLISHER Lancaster, PA: Technomic Publishing Co., Inc.
PAGES pp. 767-787
DATE 1988
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Washing up with wetlands.
AUTHOR _____.
SOURCE Country Journal, Vol. 16 (Sept./Oct. 1989)
PUBLISHER
PAGES p. 28
DATE 1989
CALLNUM S 521. C65
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Wastewater treatment by artificial wetlands.
AUTHOR Gersberg, R.M., B.V. Elkins and C.R. Goldman.
SOURCE Water Science Technology. 17:443-50
PUBLISHER

PAGES
DATE 1984
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Wastewaters: a perspective.
AUTHOR Smith, A.J.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal,
Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp. 3-4
DATE 1989
CALLNUM TD 756. 5C66
ANNOTATION The water quality protection field is undergoing major changes.
Both the reduction in available federal dollars and increasing
focus on water quality underscore the need for a continual
effort to identify and encourage technologies that provide
effective-low-cost treatment. Wetlands may effectively balance
the need for reliable wastewater treatment with need for minimal
cost.

CATEGORY BG
SUBCATEGOR

TITLE Water improvement functions of natural and constructed
wetlands.
AUTHOR Hammer, D.A.
SOURCE Proceedings Newman Teleconference Seminar Series -
Protection and Management Issues for South Carolina
Wetlands, Clemson University, March 28, 1990.
PUBLISHER
PAGES pp. 129-157
DATE 1990
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Wetland systems.
AUTHOR Knight, R.L.
SOURCE Natural Systems for Wastewater Treatment, Manual of
Practices FD-16.
PUBLISHER Water Pollution Control Federation
PAGES

DATE 1990
CALLNUM TD 745 N37
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Wetlands ecosystems: natural water purifiers?
AUTHOR Hammer, D.A. and R.K. Bastian.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal,
Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES p. 5-19
DATE 1989
CALLNUM TD 756.5 C66
ANNOTATION There is no single correct-all-purpose definition of a wetland.
Most definitions of wetland are in terms of soil characteristics
and type of vegetation. In this article, the authors discuss
wetland dynamics, functions of natural wetlands, and the
applicability of constructed wetlands to treat polluted water.

CATEGORY BG
SUBCATEGOR

TITLE Wetlands-Increasing Our Resources.
AUTHOR Steiner, G.R., J.T. Watson and D.A. Hammer.
SOURCE
PUBLISHER Washington, DC: National Wildlife Federation
PAGES
DATE 363p.
CALLNUM QH87.4 W47 1987
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Wetlands.
AUTHOR Rucker, D.J.
SOURCE IMPACT--TVA Natural Resources and the Environment,
March/June 1988
PUBLISHER
PAGES
DATE 1988
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR

TITLE Yesterday's swamp.
AUTHOR Austin, T.
SOURCE Civil Engineering. 60(8):36-39(Aug. 1990)
PUBLISHER
PAGES
DATE 1990
CALLNUM 290.8 C49
ANNOTATION

CATEGORY BG
SUBCATEGOR abstract/proceedings

TITLE Constructed wetlands for wastewater treatment: An overview
of an emerging technology.
AUTHOR Hammer, D.A.
SOURCE Program with abstracts--Geological Association of Canada,
Mineralogical Association of Canada, Canadian Geophysical
Union, Joint Annual Meeting, 1990. v. 15 p. 53.
PUBLISHER
PAGES
DATE 1990
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR abstracts/bibliographies

TITLE International conference on constructed wetlands for
wastewater treatment: abstracts.
AUTHOR _____.
SOURCE Chattanooga, TN Trade and Convention Center, June 13-17
1988.
PUBLISHER
PAGES
DATE 1988
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR abstracts/bibliographies

TITLE Sewage and industrial waste treatment: wetlands (Jan 77-Dec
89).

AUTHOR _____.
SOURCE NTIS Accession No. PB90-853722
PUBLISHER
PAGES 78p.
DATE 1989
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR abstracts/bibliographies

TITLE Wetland creation and restoration in the United States from
1970 to 1985: an annotated bibliography.
AUTHOR Wolf, R.B., L.C. Lee and R.R. Sharitz.
SOURCE Wetlands, Special Issue. 6(1):88
PUBLISHER
PAGES
DATE
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR abstracts/proceedings

TITLE Constructed Wetlands in Water Pollution Control:
AUTHOR Cooper, P.F. and B.C. Findlater, eds.
SOURCE Proceedings of the international conference on the use of
constucted wetlands in water pollution control, held in
Cambridge, UK, 24-28 September 1990.
PUBLISHER Oxford, UK: Pergamon Press.
PAGES 605p.
DATE 1990
CALLNUM DNAL TD756.5.I57-1990
ANNOTATION There is a growing interest in the use of hydrophyte-based
systems for treating sewage and mining and industrial
wastewater. This book includes reports of practical
experience and the latest research results from Australasia,
South Africa, North America and China as well as all across
Europe, and provides an essential guide to one of the most
promising water pollution control options.

CATEGORY BG
SUBCATEGOR abstracts/proceedings/bibliographies

TITLE Wetlands areas: natural water treatment systems (Jan 78 -
Aug 89). citations from the pollution abstracts database.
AUTHOR Davis Associates, Inc.
SOURCE NTIS Accession No. PB90-862244

PUBLISHER
PAGES pp 99.
DATE 1990
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR ancillary benefits

TITLE Ancillary benefits of wetlands constructed primarily for
wastewater treatment.

AUTHOR Sather, J.H.

SOURCE Constructed Wetlands for Wastewater Treatment: Municipal,
Industrial and Agricultural.

PUBLISHER Chelsea, MI: Lewis Publishers, Inc.

PAGES pp. 353-358

DATE 1989

CALLNUM TD 756. 5 C66

ANNOTATION A highly diversified wetland ecosystem may not only handle a
greater variety of wastewater substances but may attract and
support wildlife for human enjoyment and provide various
visual-cultural benefits. Full manifestation of ancillary
benefits in constructed wetlands is contingent upon species
composition and degree of interspersions of plant communities,
location with respect to human population centers, and location
with respect to other wetlands.

CATEGORY BG
SUBCATEGOR ancillary benefits

TITLE Developing artificial wetlands to benefit wildlife and
livestock.

AUTHOR Olson, R.

SOURCE Bull. Wyo. Univ. Coop. Ext. Serv. Laramie, WY: The Service
May 1990 (938) 21p.

PUBLISHER Laramie, WY: The Service

PAGES 21p.

DATE 1990

CALLNUM DNAL 275.29-W99B

ANNOTATION

CATEGORY BG
SUBCATEGOR ancillary benefits

TITLE Some ancillary benefits of a natural land treatment system.

AUTHOR Schwartz, L.A. and R.L. Knight.

SOURCE Constructed Wetlands for Wastewater Treatment: Municipal,
Industrial and Agricultural.

PUBLISHER Chelsea, MI: Lewis Publishing, Inc.
PAGES pp. 643-645
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION The Grand Strand Water and Sewer Authority is conducting studies in riverine wetlands and Carolina Bays to treat domestic wastewater. These wetlands will help confirm long-term feasibility and the integrity of using natural systems to treat wastewater. Visitors will have the opportunity to venture into the heart of Carolina Bays or into a swamp to view plant and animal natural habitats.

CATEGORY BG
SUBCATEGOR ancillary benefits

TITLE Wetlands: the lifeblood of wildlife.
AUTHOR Feierabend, J.S.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp 107-118
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION Naturally occurring wetlands are usually attractive to wildlife. Constructed or man made wetlands have the potential to attract wildlife. The author gives an overview on the importance of wetland ecosystems as a wildlife habitat and the types of wildlife associated with them.

CATEGORY BG
SUBCATEGOR aquaculture

TITLE Aquaculture in resource recovery.
AUTHOR Golueke, C.G.
SOURCE Compost Science/Land Utilization. 1979. v. 20 (3) p. 16-23.
PUBLISHER
PAGES
DATE
CALLNUM 57.8 C734
ANNOTATION

CATEGORY BG
SUBCATEGOR aquaculture

TITLE Engineering assessment of aquaculture systems for wastewater treatment: an overview.
AUTHOR Reed, S.C., R. Bastian and W. Jewel.
SOURCE Aquaculture Systems for Wastewater Treatment. Seminar

Proceedings and Engineering Assessment, Sept. 11-12, 1979,
University of California--Davis.

PUBLISHER
PAGES
DATE 1979
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR aquaculture

TITLE Engineers assess aquaculture systems for wastewater
treatment.

AUTHOR Bastian, R.K., W.J. Jewell and S.C. Reed.
SOURCE Civil Engineering ASCE

PUBLISHER
PAGES pp. 64-67
DATE 1981, July
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR aquaculture

TITLE The use of aquatic plants and animals for the treatment of
wastewater: an overview.

AUTHOR Tchobanoblous, G., et al.
SOURCE Presented at A Seminar on Aquaculture Systems for Wastewater
Treatment, Davis, CA, Sept. 11-12, 1979.

PUBLISHER
PAGES 21p.
DATE 1979
CALLNUM TD 755 U74 1980
ANNOTATION Aquatic wastewater treatment systems treat wastewater at a slow
rate in an essentially unmanaged environment compared to
conventional wastewater systems which treat wastewater rapidly
in highly managed environments. The major stimulus for further
research into design and management of aquatic systems is the
potential for reducing the construction, operation, and
maintenance costs for wastewater treatment. This paper presents
the general concepts involved in the design and use of aquatic
systems and an overview of their implications.

CATEGORY BG
SUBCATEGOR aquaculture--nutrient removal

TITLE Aquatic crops of economic value for removing N and P from
nutrient-enriched waters in the everglades.

AUTHOR Snyder, G.H. and C.A. Sanchez.
SOURCE Soil and Crop Science Society, Florida Proceedings.
PUBLISHER
PAGES
DATE 1990
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR case studies--western USA (CA)

TITLE The use of artificial wetlands for water treatment in high elevation, cold regions of California.
AUTHOR Goldman, C.R.
SOURCE Rep-Calif-Water-Resour-Cent-Univ-Calif. December 1987. p. 68.
PUBLISHER
PAGES p. 68
DATE Dec 1987
CALLNUM 292.9 C12182
ANNOTATION

CATEGORY BG
SUBCATEGOR case study

TITLE Wetlands and wastewater: Kinross, Michigan.
AUTHOR Kadlec, R.H. and F.B. Bevis.
SOURCE Journal of the Society of Wetland Scientists, Vol. 10, No. 1.
PUBLISHER
PAGES
DATE 1990, June
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR chemical aspects

TITLE Quantitative assessment of natural purification in wetlands for linear alkylbenzenesulfonates.
AUTHOR Inaba, K.
SOURCE Water Res. 1992, 26(7) 893-8
PUBLISHER
PAGES pp 893-898
DATE 1992
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR chemical aspects--transformations

TITLE Transformation of manganese in a waterlogged soil as
affected by redox potential and pH.
AUTHOR Gotoh, S. and W.H. Patrick.
SOURCE Soil Sci. Soc. Am. J. 1972. v. 36 p. 1738-1742.
PUBLISHER
PAGES
DATE 1972
CALLNUM 56.9 S03
ANNOTATION

CATEGORY BG
SUBCATEGOR design

TITLE Constructed wetlands design--the first generation.
AUTHOR Reed, S.C. and D.S. Brown.
SOURCE Water Environment Research Sept/Oct 1992. v. 64 (6) p.
776-781.
PUBLISHER
PAGES pp 776-781
DATE 1992
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR design

TITLE Technical summary--a guide to wetland functional design.
AUTHOR US Dept. of Transportation.
SOURCE Publication No. FHWA-IP-90-010, US Dept. of Transportation,
Federal Highway Administration.
PUBLISHER
PAGES
DATE 1990, July
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR design considerations

TITLE Basic design rationale for artificial wetlands.
AUTHOR Zirschky, J.
SOURCE Contract Report 68-01-7108

PUBLISHER Washington, DC:
PAGES
DATE 1986, June
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR design considerations

TITLE Configuration and substrate design considerations for constructed wetlands wastewater treatment.
AUTHOR Steiner, G.R. and R.J. Freeman.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishing, Inc.
PAGES pp 363-377
DATE 1989
CALLNUM TD 756. 5C66
ANNOTATION Depending on specific pollutant removal needs and other factors, a variety of configurations and substrates can be used for a constructed wetland. Major pollutant removal mechanisms include sedimentation and filtration, precipitation and adsorption, and bacterial metabolism. Constructed wetland systems can be designed to achieve various levels of secondary and advanced level treatment for biochemical oxygen demand, suspended solids, nutrients, pathogens, metals, and other substances.

CATEGORY BG
SUBCATEGOR design considerations

TITLE Constructed wetland design--the second generation.
AUTHOR Reed, S.C. and D. Brown.
SOURCE S.C. Reed, E.C.C. , RR 1 Box 572, Norwick, VT 05055
PUBLISHER
PAGES
DATE
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR design considerations

TITLE Design and use of artificial wetlands.
AUTHOR Wile, I., G. Miller and S. Black.
SOURCE Ecological Considerations in Wetland Treatment of Municipal Wastewaters.
PUBLISHER New York: Van Nostrand Reinhold
PAGES pp 26-7.

DATE 1985.
CALLNUM QH 545 .549 E3
ANNOTATION Artificial wetlands offer greater scope for use as sewage treatment systems than natural wetlands. They can be constructed on a variety of sites and problems associated with the use of natural wetlands can be minimized. Key design considerations for continuous flow systems in cold climates include: hydraulic loading rates and associated and requirements, system configuration, degree of pretreatment of raw wastewater and selection of appropriate vegetation.

CATEGORY BG
SUBCATEGOR design considerations

TITLE Design principles for wetlands treatment systems.
AUTHOR Hammer, D.A. and R.H. Kadlec.
SOURCE Available from NTIS as PB83-188722
PUBLISHER
PAGES
DATE 1983
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR design considerations

TITLE Preliminary considerations regarding constructed wetlands for wastewater treatment.
AUTHOR Wieder, R.K., G. Tchobanoglous and R.W. Tuttle.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishing, Inc.
PAGES pp. 297-305
DATE 1989
CALLNUM TD 756.5 C66
ANNOTATION Preliminary design factors are important in considering constructed wetland treatment of municipal wastewaters and coal mine drainage. In addition, the importance of maximizing aesthetics without compromising treatment effectiveness is discussed as a key component of preliminary design.

CATEGORY BG
SUBCATEGOR design considerations

TITLE Project summary--design principles for wetland treatment systems.
AUTHOR Hammer, D.A. and R.H. Kadlec.
SOURCE EPA Report 600/S2-83-026

PUBLISHER
PAGES
DATE 1983
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR design considerations

TITLE Wetland systems for wastewater treatment: operating mechanisms and implications for design.

AUTHOR Heliotis, F.D.
SOURCE Report 117
PUBLISHER Institute of Environmental Studies
PAGES
DATE 1982
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR design considerations--hydraulics--reed bed

TITLE Hydraulic considerations and the design of a reed bed treatment system.

AUTHOR Hobson, J.A.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp. 628-635
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION All of the information in this paper deals with reed bed treatment systems planted with *Phragmites australis*. The paper concentrates on the hydraulics of reed beds and possible mechanisms for wastewater treatment.

CATEGORY BG
SUBCATEGOR design considerations--plants

TITLE Considerations and techniques for vegetation establishment in constructed wetlands.

AUTHOR Allen, H.H., G.J. Pierce and R. van Wormer.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp 405-415
DATE 1989
CALLNUM TD 756. 5 C66

ANNOTATION The author describes considerations and techniques relating to domestic wastewater treatment in constructed wetlands. It focuses on herbaceous macrophytes and in-situ substrates.

CATEGORY BG
SUBCATEGOR design considerations--site selection

TITLE Selection and evaluation of sites for constructed wastewater treatment wetlands.

AUTHOR Brodie, G.A.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp. 307-317
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION Constructed wetlands are practical alternatives to conventional treatment of liquid agricultural wastes, storm water runoff, acid mine drainage, and domestic and municipal wastewater. Siting a constructed wetland is often dictated by the location of the wastewater source, geological, geotechnical, hydrological, and other environmental information.

CATEGORY BG
SUBCATEGOR design--economic aspects

TITLE The economic and environmental feasibility of using constructed wetlands for treatment of municipal wastewater in small communities in maine.

AUTHOR Hesheth, P.S.
SOURCE M.S. Thesis in Agricultural and Resource Economics, Univ. of Maine, Orono, ME, 1990.
PUBLISHER
PAGES
DATE 1990
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR ecology

TITLE Aging phenomenon in wastewater wetlands.

AUTHOR Kadlec, R.H.
SOURCE Ecological Considerations in Wetlands Treatment of Municipal Wastewaters.
PUBLISHER New York: Van Nostrand Reinhold, Co.
PAGES pp. 338-347
DATE 1985

CALLNUM QH 545 549E3
ANNOTATION

CATEGORY BG
SUBCATEGOR ecology

TITLE Ecological features of an artificial wetlands area.
AUTHOR Magmedov, V.G. and L.I. Yakovleva.
SOURCE Proceedings of the International Symposium on the Hydrology
of Wetlands in Temperate and Cold Regions. Joensuu, Finland,
6-8 June 1988, Vol. 1. The Academy of Finland, Helsinki,
Finland.

PUBLISHER
PAGES pp. 72-75
DATE 1988
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR ecology

TITLE Ecological limitations on wetland use for wastewater
treatment.
AUTHOR Guntenspergen, G.R. and F. Stearns.
SOURCE Wetland Values and Management.
PUBLISHER St. Paul, MN: Water Planning Board
PAGES pp. 273-284.
DATE 1981

CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR ecology

TITLE Ecological perspectives on wetland systems.
AUTHOR Guntenspergen, G.R. and F. Stearns.
SOURCE Ecological Considerations in Wetlands Treatment of Municipal
Wastewaters.

PUBLISHER New York: Van Nostrand Reinhold Company
PAGES pp. 69-97
DATE 1985
CALLNUM QH 545 549E3
ANNOTATION

CATEGORY BG

SUBCATEGOR ecology

TITLE Natural and artificial wetland ecosystems: ecological opportunities and limitations.

AUTHOR Richardson, C.J. and J.A. Davis.

SOURCE Aquatic Plants for Water Treatment and Resource Recovery.

PUBLISHER Orlando: Magnolia Publishing Inc.

PAGES pp 819-54.

DATE 1987.

CALLNUM

ANNOTATION Natural and artificial wetland capabilities and weaknesses to filter, transform, and store nutrients are presented with an analysis of the mechanisms controlling nutrient cycling and retention of nitrogen and phosphorus. Management guidelines for the selection and potential utilization of natural wetlands for effluent treatment as well as the impacts of using wetland systems for wastewater are also presented.

CATEGORY BG

SUBCATEGOR ecology

TITLE Responses of wetlands and neighboring ecosystems to wastewater.

AUTHOR Ewel, K.C.

SOURCE Ecological Considerations in Wetlands Treatment of Municipal Wastewaters.

PUBLISHER New York: Van Nostrand Reinhold, Co.

PAGES pp. 435-438

DATE 1985

CALLNUM QH 545 549E3

ANNOTATION

CATEGORY BG

SUBCATEGOR ecology

TITLE Some chemical aspects of wetland ecology.

AUTHOR Gorham, E.

SOURCE Tech. Mem No. 90, 12th Ann. Muskeg. Res. Conf.

PUBLISHER

PAGES

DATE 1967

CALLNUM

ANNOTATION

CATEGORY BG

SUBCATEGOR engineering considerations

TITLE Aquatic plant systems for wastewater treatment: engineering

considerations.
AUTHOR Tchobanoglous, G.
SOURCE Aquatic Plants for Water Treatment and Resource Recovery.
PUBLISHER Orlando, FL: Magnolia Publishing, Inc.
PAGES PP. 27-48
DATE 1987
CALLNUM
ANNOTATION This paper presents a review of important engineering considerations in the design of aquatic plant systems used for the treatment of wastewater. Special attention is focused on odor control techniques, mosquito control strategies, and contaminant removal kinetics as they affect the physical design and management of aquatic plant-based wastewater treatment systems. Based on an evaluation of these and other considerations, some alternative physical designs and operating strategies are proposed.

CATEGORY BG
SUBCATEGOR engineering considerations

TITLE Hydraulics and solids accumulation in a gravel bed treatment wetland.

AUTHOR Kadlec, R.H. and J.T. Watson.
SOURCE Constructed Wetlands for Water Quality Improvement
PUBLISHER CRC Press, Inc.
PAGES pp 227-235
DATE 1993
CALLNUM

ANNOTATION The design of a subsurface gravel bed permits only one flow rate if the water surface remains parallel to the gravel surface. The front twenty percent of the gravel bed (gravel cell Number 3 at Benton, KY) was found to be partly plugged with a gelatinous (80% inorganic) mud which caused major flow alterations. The downstream zones of the gravel were dry to a depth of many centimeters and the downstream vegetation was changing to a terrestrial mix.

CATEGORY BG
SUBCATEGOR engineering considerations

TITLE Operations optimization.

AUTHOR Girts, M.A. and R.L. Knight.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp 417-429
DATE 1989
CALLNUM TD 756. 5 C66

ANNOTATION Optimizing constructed wetland to minimize expense and maximize treatment efficiency is a compromise between system design and operations management. The authors examine conditions under

which flexibility in operation improves treatment efficiency and longevity of a well-designed system; methods by which operation changes can help a system adapt to unanticipated demands; and associated labor requirements.

CATEGORY BG
SUBCATEGOR engineering considerations

TITLE Wetland systems for wastewater treatment in cold climates--an engineering assessment.

AUTHOR Tchobanoglous, G.
SOURCE US Army Corps of Engineers, Hanover, NH.
PUBLISHER
PAGES
DATE
CALLNUM

ANNOTATION The purpose of this paper is to present an engineering assessment of the use of both natural and artificial wetlands for the treatment and disposal of wastewater. Another objective is to answer the question of whether the technology of using natural and artificial wetlands for the treatment of wastewater is ready for widespread use and what must be done remove uncertainties from the design.

CATEGORY BG
SUBCATEGOR engineering considerations

TITLE Wetland systems for wastewater treatment: engineering applications.

AUTHOR Hantzsche, N.N.
SOURCE Ecological Considerations in Wetlands Treatment of Municipal Wastewaters.
PUBLISHER New York: Van Nostrand Reinhold
PAGES pp 7-25
DATE 1985
CALLNUM QH 545 549E3

ANNOTATION

CATEGORY BG
SUBCATEGOR engineering considerations--hydraulics

TITLE Hydraulic design considerations and control structures for constructed wetlands wastewater treatment.

AUTHOR Watson, J.T. and J.A. Hobson.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES 379-391

DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION Performance of constructed wetlands is based on first-order plug flow equations. The objectives of this paper are to summarize information on these parameters, identify considerations for each parameter importance to performance of wetlands systems, and identify the type and general design of structures needed to establish and control the hydraulic regime.

CATEGORY BG
SUBCATEGOR engineering considerations--hydrology

TITLE Hydrologic factors in wetland water treatment.
AUTHOR Kadlec, R.H.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp. 21-40
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION The purpose of this paper is to present the hydrologic factors in wetland treatment processes. Water movement in these systems is affected by precipitation, evapotranspiration, infiltration, and plant vegetation density.

CATEGORY BG
SUBCATEGOR engineering considerations--performance

TITLE Performance expectations and loading rates for constructed wetlands.
AUTHOR Watson, J.T., et al.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishing, Inc.
PAGES pp. 319-351
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION Constructed wetlands technology is emerging as a low-key, easily operated, and efficient wastewater treatment system. This paper presents an overview on normally regulated parameters, loading factors of existing systems, and reaction kinetics. Summaries for performance expectations and loading rates are also presented.

CATEGORY BG
SUBCATEGOR harvesting

TITLE Wetland harvesting with cable systems.

AUTHOR Aulerich, S.P.
SOURCE ASAE Winter Meeting, Dec. 18-21, 1990, Paper No. 907574.
PUBLISHER
PAGES
DATE 1990
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR hydrology

TITLE Hydrologic processes in a southern Ontario wetland.
AUTHOR Gehrels, J. and G. Mulamoottil
SOURCE Hydrobiologia. 208(3): 221-234
PUBLISHER
PAGES 221-234
DATE 1990, Dec. 10
CALLNUM 410 H992
ANNOTATION

CATEGORY BG
SUBCATEGOR hydrology

TITLE Storm event effects on constructed wetlands discharges.
AUTHOR Taylor, H.N., K.D. Choate and G.A. Brodie.
SOURCE Constructed Wetlands for Water Quality Improvement
PUBLISHER CRC Press, Inc.
PAGES pp 139-145
DATE 1993
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR hydrology--nutrient cycling

TITLE Significance of hydrology to wetland nutrient processing.
AUTHOR Hemond, H.F. and W. Nuttle.
SOURCE Ecological Considerations in Wetlands Treatment of Municipal Wastewater.
PUBLISHER Van Nostrand Reinhold, Co.
PAGES pp. 190-195
DATE 1985
CALLNUM QH 545 549E3
ANNOTATION

CATEGORY BG
SUBCATEGOR microbial ecology

TITLE Microbial populations and decomposition activity in three subsurface flow constructed wetlands.

AUTHOR Hatano, K., et al.

SOURCE Constructed Wetlands for Water Quality Improvement

PUBLISHER CRC Press, Inc.

PAGES pp 541-547

DATE 1993

CALLNUM

ANNOTATION

CATEGORY BG
SUBCATEGOR microbiology

TITLE Evaluation of specific microbiological assays for constructed wetlands wastewater treatment management.

AUTHOR Portier, R.J.

SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.

PUBLISHER Chelsea, MI: Lewis Publishing, Inc.

PAGES pp 515-524

DATE 1989

CALLNUM TD 756. 5 C66

ANNOTATION

CATEGORY BG
SUBCATEGOR microbiology

TITLE Wetlands microbiology: form, function, processes.

AUTHOR Portier, R.J. and S.J. Palmer.

SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.

PUBLISHER Chelsea, MI: Lewis Publishing, Inc.

PAGES pp 89-105

DATE 1989

CALLNUM TD 756. 5 C66

ANNOTATION This paper presents an overview of important microbial processes of waste water treatment in constructed wetlands. Bacterial processes are the primary focus but fungal and actinomycetous contributions are also discussed. Information on microbial transformation processes, fate of anthropogenic organics, metals metabolism, and habitat for optimal microbial enzymology in a constructed wetland is also presented.

CATEGORY BG
SUBCATEGOR nutrient cycling

TITLE A conceptual model of nutrient cycling in wetlands used for
wastewater treatment: a literature analysis.
AUTHOR Heliotis, F.D. and C.B. DeWitt.
SOURCE Wetlands: Vol. 3, pp. 134-152, 1983
PUBLISHER
PAGES pp. 134-152
DATE 1983
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR nutrient cycling

TITLE Decomposition in wastewater wetlands.
AUTHOR Kadlec, R.H.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal,
Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishing, Inc.
PAGES pp 459-468
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION The role of biomass accretion and decomposition for water
quality improvement in constructed municipal wastewater wetlands
is very important. The key biomass processes of accumulation,
dieback, litterfall, litter accumulation, litter leaching,
decomposition, and soil accretion are presented.

CATEGORY BG
SUBCATEGOR nutrient cycling

TITLE Managing landscapes for humanity and nature; the role of
wetlands in regional nutrient dynamics.
AUTHOR Brown, M.T.
SOURCE Wetlands of the Chesapeake. Proceedings of the Conference
April 9-11, 1985, Easton, Maryland.
PUBLISHER
PAGES pp 63-75
DATE 1985
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR nutrient cycling

TITLE Modeling nutrient behavior in wetlands.
AUTHOR Kadlec, R.H. and D.E. Hammer.
SOURCE 189th National Meeting of the American Chemical Society.

PUBLISHER Washington: ACS
PAGES pp 244-246.
DATE 1985.
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR nutrient cycling

TITLE Phosphorus accumulation-discharge cycles in marshes.
AUTHOR Spangler, F.L., C.W. Fetter and W.E. Sloey.
SOURCE Water Resources Bulletin, Vol. 13, No. 6.
PUBLISHER
PAGES pp. 1191-1201
DATE 1977, Dec.
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR nutrient removal

TITLE A mass balance method for assessing the potential of
artificial wetlands for wastewater treatment.
AUTHOR Breen, P.F.
SOURCE Water Research. 24:689-98(1990).
PUBLISHER
PAGES
DATE 1990
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR nutrient removal

TITLE An assessment of wetlands management and sediment phosphorus
inactivation Kezar Lake, New Hampshire.
AUTHOR New Hampshire Dept. of Environmental Services.
SOURCE NH Dept. of Environmental Services, Water Supply Pollution
Control Division, Biology Bureau.
PUBLISHER
PAGES
DATE 1989, Feb.
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR nutrient removal

TITLE Nutrient removal from effluents by an artificial wetland:
influence of rhizosphere aeration and preferential flow
studied using bromide and dye tracers.
AUTHOR Bowmer, K.H.
SOURCE Water Research. 21(5):591-600(1987).
PUBLISHER
PAGES
DATE 1987
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR nutrient removal N,P

TITLE Use of shallow reservoir and flooded organic soil systems
for wastewater treatment: nitrogen and phosphorus
transformations.
AUTHOR Graetz, D.A. and K.R. Reddy.
SOURCE Journal of Environmental Quality, Vol. 10, No. 1
PUBLISHER
PAGES pp. 113-119
DATE 1981
CALLNUM QH 540 H6
ANNOTATION Under simulated conditions, the use of a shallow reservoir (with
a marly clay loam bottom) and flooded organic soil (Histosol)
for inorganic nitrogen and ortho-P removal from wastewater
(agricultural drainage effluent) was evaluated. Both the
shallow reservoir and flooded soils were effective in removing
inorganic nitrogen. However, ortho-P removal was found to be
effective in the marly clay loam bottoms and ineffective in the
flooded organic soils.

CATEGORY BG
SUBCATEGOR nutrient removal, Cu--plants

TITLE Removal and uptake of copper (II) by *Salvinia natans* from
waste water.
AUTHOR Sen, A.K. and N.G. Mondal.
SOURCE Water, Air and Soil Pollution, Vol. 49, No. 1/2.
PUBLISHER
PAGES pp. 1-6
DATE 1990, January
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR nutrient removal, N

TITLE Nitrogen removal from freshwater wetlands:
nitrification-denitrification coupling potential.

AUTHOR Hsieh, Y.P. and C.L. Coultas.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal,
Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp 493-500
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION Wetlands may be an economically and ecologically feasible
alternatives to removing nitrogen and other nutrients from
secondary wastewater. The existence of heterogeneous microsities
or layers in soil systems permits the coexistence
of the nitrogen and denitrification processes. However,
biological and/or chemical denitrification are key processes of
long-term nitrogen removal.

CATEGORY BG
SUBCATEGOR nutrient removal, N

TITLE Nitrogen removal in experimental wetlands treatment system:
evidence for the role of aquatic plants.

AUTHOR Rodger, K.H., P.F. Breen and A.J. Chick.
SOURCE Research Journal of the Water Pollution Control Federation:
63:7 p934-941, 1991

PUBLISHER
PAGES pp 934-941
DATE 1991
CALLNUM TD419 R47
ANNOTATION

CATEGORY BG
SUBCATEGOR nutrient removal, N

TITLE Pilot-scale nitrification studies using vertical flow and
shallow horizontal flow constructed wetland cells.

AUTHOR Watson, J.T. and A.J. Danzig.
SOURCE Constructed Wetlands for Water Quality Improvement
PUBLISHER CRC Press, Inc.
PAGES pp 301-313
DATE 1993
CALLNUM
ANNOTATION A pilot-scale, shallow horizontal and vertical flow cells have
been built in Kentucky to develop design information for
full-scale constructed wetlands systems for removing
ammonia-nitrogen. Variables include hydraulic loading rates and
different sizes and depths of sand and gravel. The initial
operation of these facilities are presented in this paper.

CATEGORY BG
SUBCATEGOR nutrient removal--hydraulics

TITLE Model of flow and nutrient absorption in artificial wetland systems.
AUTHOR Hearn, C.J., J.M. Chambers and A.J. McComb.
SOURCE Applied Mathematical Modelling. 15(5): 267-273.
PUBLISHER
PAGES
DATE 1991, May
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR nutrient removal--plants

TITLE Nutrient removal of selected aquatic macrophytes.
AUTHOR Reddy, K.R. and W.F. DeBusk.
SOURCE Journal of Environmental Quality, Vol. 14, No. 4, Oct/Dec 1985.
PUBLISHER
PAGES
DATE 1985
CALLNUM QH 540. J6
ANNOTATION

CATEGORY BG
SUBCATEGOR nutrient removal--reed bed

TITLE Nutrient removal in a reed bed system.
AUTHOR Haberl, R. and R. Perfler.
SOURCE Water Science and Technology, Vol. 23, No. 4/6.
PUBLISHER
PAGES pp. 729-737.
DATE 1991
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR nutrient removal--water hyacinths

TITLE Nutrient removal by water hyacinths.
AUTHOR Cornwell, D.A., et al.
SOURCE Journal WPCF, January 1977

PUBLISHER
PAGES pp. 57-65
DATE 1977, Jan.
CALLNUM 293. 8 SE8
ANNOTATION The use of aquatic plants for nitrogen and phosphorous removal is not a new concept. The authors' research concluded that nutrient removal capability of water hyacinths was directly related to the pond surface area. In designing a nutrient removal system with water hyacinths, the depth and the detention time in the pond must be set so as to provide a given amount of surface area per unit flow through the pond.

CATEGORY BG
SUBCATEGOR pathogens/vectors

TITLE Insecticides for insect pest control in constructed wetlands for wastewater treatment: a dilemma.
AUTHOR Snoddy, E.L. and J.C. Cooney.
SOURCE Pesticides in Terrestrial and Aquatic Environments. Proceedings of a National Research Conference. Blacksburg, VA.
PUBLISHER Virginia Water Resources
PAGES
DATE 1989, May 11-12
CALLNUM QH545.P4P4844
ANNOTATION

CATEGORY BG
SUBCATEGOR pathogens/vectors

TITLE Mosquito considerations in the design of wetland systems for the treatment of wastewaters.
AUTHOR Stowell, R., et al.
SOURCE Ecological Considerations in Wetlands Treatment of Municipal Wastewaters.
PUBLISHER New York: Van Nostrand Reinhold Company
PAGES pp. 38-47.
DATE 1985
CALLNUM QH 545 549E3
ANNOTATION

CATEGORY BG
SUBCATEGOR pathogens/vectors

TITLE Pathogen removal in constructed wetlands.
AUTHOR Gersberg, R.M., R.A. Gearheart and M. Ives.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.

PUBLISHER Chelsea, MI: Lewis Publishing, Inc.
PAGES pp. 431-445
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION This article focuses on human health risks associated with constructed wetlands that are used to treat municipal wastewater. The overall objectives were to study the degree of removal of fecal contamination and viral pollution from two constructed wetlands in California.

CATEGORY BG
SUBCATEGOR pathogens/vectors--mosquitos

TITLE California's experience with mosquitos in aquatic wastewater treatment systems.

AUTHOR Martin, C.V. and B.F. Eldridge.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp. 393-398
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION Aquatic macrophytes added to oxidation ponds improved wastewater treatment. However, with the introduction of macropyhtes, the mosquitoes population increased. Careful design before construction and monitoring after construction can keep mosquito breeding within acceptable levels.

CATEGORY BG
SUBCATEGOR pathogens/vectors--mosquitos

TITLE Production and suppression of pest mosquitos in constructed wetlands.

AUTHOR Tennessen, K.J.
SOURCE Constructed Wetlands for Water Quality Improvement
PUBLISHER CRC Press, Inc.
PAGES pp 591-601
DATE 1993
CALLNUM
ANNOTATION Two types of wastewater wetlands constructed in the Tennessee Valley region were sampled for mosquito species composition and population levels. In wetlands receiving acidic runoff from coal mining operations, there were relatively few mosquito species while high levels of mosquito production occurred in wetlands treating domestic sewage. Therefore, recognition of potential mosquito problems in organically laden wetlands should be taken into consideration during the planning stages for both construction and operation.

CATEGORY BG
SUBCATEGOR pathogens/vectors--mosquitos

TITLE Wastewater wetlands: user friendly mosquito habitats.
AUTHOR Dill, C.H.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal,
Industrial and Agricultural
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp. 664-667
DATE 1989
CALLNUM TD 756.5 C66
ANNOTATION Early input by mosquito-control professionals can keep wetlands
from becoming a public health risk. Mosquito problems can be
minimized with a good preventive design coupled with water
management, vegetation control, and biological control.

CATEGORY BG
SUBCATEGOR pathogens/vectors/pests

TITLE Fate of viruses in artificial wetlands.
AUTHOR Gersberg, R.M., et al.
SOURCE Applied Environmental Microbiology. 53:731-736
PUBLISHER
PAGES
DATE 1987
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR Performance

TITLE Wastewater treatment using artificial wetlands: The
hydrology and treatment performance of horizontal and
vertical flow systems.
AUTHOR Breen, P.F. and A.J. Chick.
SOURCE Proceedings of 13th federal convention, Australian Water and
Waste Association,
PUBLISHER Canberra, Australia, 1990.
PAGES
DATE 1990
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR performance (limitations)

TITLE The performance limitations of wetland treatment systems--a

discussion.
AUTHOR Hiley, P.D.
SOURCE Use of Constructed Wetlands in Water Pollution Control.
PUBLISHER
PAGES
DATE 1990
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE A constructed wetland with a declining growth gradient of soft-stem bulrush (*Scirpus validus*) plants.

AUTHOR Edwards, M.E., K.C. Brinkmann and J.T. Watson.
SOURCE Constructed Wetlands for Water Quality Improvement
PUBLISHER CRC Press, Inc.
PAGES pp 415-425
DATE 1993

CALLNUM
ANNOTATION A constructed wetland cell with gravel substrate, designed to polish subsurface flowing effluent from a package treatment plant, was planted exclusively with soft-stem bulrush. In the second year of plant growth, quantitative procedures were undertaken to determine if a plant growth gradient existed along the path of wastewater flow. Because of the declining growth gradient, bulrush plants grew most in the influent end, less in the middle section, and least in the effluent end of the wetland cell.

CATEGORY BG
SUBCATEGOR plants

TITLE A study of soft-stem bulrush (*Scirpus validus*) growth in a constructed wetland, Hardin, Kentucky.

AUTHOR Edwards, M.E.
SOURCE Report prepared for the TVA
PUBLISHER
PAGES
DATE 1990, December

CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Analysis of survival and condition of planted vegetation at the Benton, Hardin, and Pembroke, Kentucky constructed

wetland treatment systems.
AUTHOR Knight, R.L.
SOURCE Report prepared for the TVA by CH2MHill
PUBLISHER
PAGES
DATE 1991, November
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Aquatic plant wastewater treatment systems.
AUTHOR Wolverton, B.C.
SOURCE Mobile Bay Audubon Society, May 6, 1988.
PUBLISHER
PAGES
DATE 1988
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Aquatic plants for wastewater treatment: an overview.
AUTHOR Wolverton, B.C.
SOURCE Aquatic Plants for Wastewater Treatment and Resource
Recovery.
PUBLISHER Orlando, FL: Magnolia Publishing Inc.
PAGES pp. 3-15.
DATE 1987
CALLNUM TD 475 C65 1986
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Aquatic plants for water treatment and resource recovery.
AUTHOR Reddy, K.R. and W.H. Smith. (Eds.)
SOURCE
PUBLISHER Orlando, FL: Magnolia Publishing.
PAGES 1032p.
DATE 1987
CALLNUM TD475 C65 1986
ANNOTATION This book contains papers selected by a review panel from those
presented at an International Conference on Research and
Recovery. Much of the attention focused on vascular aquatic
plants has been directed primarily toward their elimination

from water bodies. Sufficient biological, engineering, economic, ecologic and environmental data are now emerging to make possible the design and operation of water treatment/ resources systems using aquatic plants.

CATEGORY BG
SUBCATEGOR plants

TITLE Effects of Phragmites australis roots and rhizomes on redox potentials, nitrification, and bacterial numbers in the sediment.
AUTHOR Hansen, J.I. and F.O. Andersen.
SOURCE Proceedings of the 9th Nordic Symposium on Sediments.
PUBLISHER Norr Malmo, Sweden: Scripta Limnologica
PAGES pp. 72-88
DATE 1981
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Evaluation of aquatic plants for constructed wetlands.
AUTHOR Surrency, D.
SOURCE USDA, Soil Conservation Service, Athens, GA. 30601
PUBLISHER
PAGES 14p.
DATE 1991
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE High hopes for cattails.
AUTHOR Dawson, B.
SOURCE Civil Engineering
PUBLISHER
PAGES
DATE 1989, May
CALLNUM 290.8 C49
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Plants that purify.
AUTHOR Hallowell, C.
SOURCE Audubon, Vol. 94 (Jan./Feb. 1992)
PUBLISHER
PAGES pp. 76-80
DATE 1992
CALLNUM S900 A8
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Preliminary survey of vegetative growth and survival factors
in constructed wetlands, selected TVA projects.
AUTHOR Edwards, M.E.
SOURCE Report prepared for the TVA
PUBLISHER
PAGES
DATE 1990, Sept.
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Propagation of wetland species.
AUTHOR Brumback, W.E.
SOURCE Combined Proceedings - International Plant Propagator's
Society:40: p507-511, 1990, publ. 1991
PUBLISHER
PAGES pp 507-511
DATE 1991
CALLNUM 451 P692
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Relative radial oxygen loss in five wetland plants.
AUTHOR Michaud, S.C. and C.J. Richardson.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal,
Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES WRA - WETLANDS.DOC -EPA S
DATE pp 501-507.
CALLNUM TD 756. 5 C66
ANNOTATION Obtaining reproducible toxic chemical impact in aquatic/marine

environments is a major difficulty for assessing field test information. This paper presents economical in-situ approaches for evaluating wastewater impacts and effects on constructed wetlands soil/sediment microenvironments.

CATEGORY BG
SUBCATEGOR plants

TITLE Response of wetland plants to effluents in water and sediment.
AUTHOR Walsh, G.E., D.E. Weber, M.T. Nguyen and L.K. Esry.
SOURCE Environmental and Experimental Botany, Vol. 31, No. 3.
PUBLISHER
PAGES pp. 351-358
DATE 1991, July
CALLNUM 450 R11
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Role of aquatic plants in wastewater treatment by artificial wetlands.
AUTHOR Gersberg, R.M., B.V. Elkins, S.R. Lyon and C.R. Goldman.
SOURCE Water Research. 20(3):363-368
PUBLISHER
PAGES
DATE 1986
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Selection and evaluation of plant materials for constructed wetlands.
AUTHOR Surrency, D.
SOURCE Soil and Water Conservation Society 47th Annual Meeting, Aug. 9-12, 1992, Baltimore, MD.
PUBLISHER
PAGES
DATE 1992
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Soil oxygenation in constructed reed beds: the role of macrophyte and soil-atmosphere interface on oxygen transport.

AUTHOR Brix, H. and H.H. Schierup.

SOURCE Constructed Wetlands in Water Pollution Control.

PUBLISHER Pergamon Press, Inc.

PAGES pp. 53-66

DATE 1989

CALLNUM TD 756. 5 I57

ANNOTATION The flux of metabolic gases through the soil-atmosphere interface and through the hollow reed (*Phragmites australis*) columns was quantified. The respiratory oxygen consumption of roots and rhizomes almost perfectly balanced the oxygen influx through the columns leaving only 0.02 grams of oxygen per day to be released to the surrounding soil. Therefore, the macrophyte-induced rhizosphere oxygenation was of no quantitative importance for aerobic biochemical oxygen demand degradation and microbial degradation.

CATEGORY BG
SUBCATEGOR plants

TITLE The role of heavy metals and toxic materials in the physiological ecology of submerged macrophytes.

AUTHOR Guilizzoni, P.

SOURCE Aquatic Biology, Vol. 41.

PUBLISHER

PAGES

DATE 1991

CALLNUM

ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE The use of duckweed for wastewater treatment.

AUTHOR Zirschky, J. and S.C. Reed.

SOURCE J. Water Pollution Control Federation. 60(7):1253-58.

PUBLISHER

PAGES

DATE 1988

CALLNUM

ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Thermoosmotic air transport in aquatic plants affecting growth activities and oxygen diffusion in wetland soil.
AUTHOR Grosse, W.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp. 469-476
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION Many water lily species are cultivated in lakes and constructed ponds as ornamental plants. Diffusion through the plant's aerenchyma can supply atmospheric air to a depth of four meters. For greater depths, plants with aerial or floating leaves generate a ventilating airflow by thermodiffusion.

CATEGORY BG
SUBCATEGOR plants

TITLE Treating wastewater with hyacinths.
AUTHOR Doersam, J.
SOURCE BioCycle. August 1987.
PUBLISHER
PAGES pp. 30-32
DATE 1987, August
CALLNUM
ANNOTATION To protect vegetation from freezing, a natural treatment system (treating wastewater) consisting of three parallel hyacinth ponds was enclosed in a five acre greenhouse to provide for year-round operation. The system has been effective in removing 80% of total suspended solids and 40-50% effective in removing biochemical oxygen demand. The hyacinths are harvested to help facilitate the removal of nitrogen and phosphorus the system.

CATEGORY BG
SUBCATEGOR plants

TITLE Vegetation dynamics in relation to wetland creation.
AUTHOR Niering, W.A.
SOURCE
PUBLISHER Island Press
PAGES
DATE 1990
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Vegetation in wetlands receiving sewage effluent: the importance of the seed bank.
AUTHOR Whigham, D.
SOURCE Paper presented at conference "Ecological considerations in wetlands treatment of municipal wastewater, Univ. of Mass., June 24-25, 1982.
PUBLISHER
PAGES 13p.
DATE 1982
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR plants

TITLE Water hyacinths--not just a pretty plant.
AUTHOR _____.
SOURCE BioCycle, ??
PUBLISHER
PAGES pp. 40-42
DATE ??
CALLNUM 57.8 C734
ANNOTATION For some southern wastewater treatment facilities, the water hyacinth is a good filtration system for primary effluent. The plants adsorb harmful by-products and significantly reduce nitrogen and phosphorus levels in sewage. Keeping the crop healthy and weed-free and harvesting the hyacinth requires much of the operator's time.

CATEGORY BG
SUBCATEGOR plants

TITLE Wetland vegetation.
AUTHOR Guntenspergen, G.R., F. Stearns and J.A. Kadlec.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp 73-88
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION Any one type of artificial wetland may be unable to treat all contaminants coming into it, so a variety of plant species are used in constructed wetland systems to address this situation. In this paper the authors discuss major wetland vegetational categories, physiological adaptations to environmental gradients, and the abilities of plants to affect their environment to transform different types of wastewater.

CATEGORY BG
SUBCATEGOR plants--aquaculture

TITLE Harvesting reed sweetgrass *Glyceria-maxima* poaceae effects on growth and rhizome storage of carbohydrates.
AUTHOR Sundblad, K. and K. Robertson.
SOURCE Economic Botany ECON BOT 42 (4). 1988. 495-502.
PUBLISHER
PAGES pp 495-502
DATE 1988
CALLNUM 450 Ec7
ANNOTATION

CATEGORY BG
SUBCATEGOR plants--microbes

TITLE Microorganisms and higher plants for wastewater treatment.
AUTHOR Wolverton, B.C., R.C. McDonald and W.R. Duffer.
SOURCE Journal of Environmental Quality, Vol. 12, No. 2.
PUBLISHER
PAGES
DATE 1983
CALLNUM QH 540 J6
ANNOTATION

CATEGORY BG
SUBCATEGOR plants--typha--bioaccumulation--zinc

TITLE Distribution and accumulation of zinc in *Typha latifolia*.
AUTHOR Blake, G., et al.
SOURCE Proc. Seminar on Aquatic Plants for Water Treatment and Resource Recovery. Orlando. FL, 20-24 July 1986
PUBLISHER
PAGES
DATE 1986
CALLNUM
ANNOTATION The use of the rooted macrophyte *Typha latifolia* in metal water treatment is presented. The authors studied the distribution and the accumulation of Zinc-65 ($ZnCl_2$ and Zn-EDTA) in plants grown in batch tank experiments. Highest concentration of the metal are found in underground parts of the plant.

CATEGORY BG
SUBCATEGOR plants--water hyacinths

TITLE Influence of potassium supply on growth and nutrient storage

by water hyacinth.
AUTHOR Reddy, K.R., M. Agami, E.M. D'Angelo and J.C. Tucker.
SOURCE Bioresource Technology, Vol. 37, No. 1.
PUBLISHER
PAGES pp. 79-84
DATE 1991
CALLNUM TD930 A32
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal--metals

TITLE Bioaccumulation of selected heavy metals by the water fern,
Azolla filiculoides lam. in a wetland ecosystem affected by
sewage, mine and industrial pollution.

AUTHOR De Wet, L.P.D., H.J. Schoonbee and J. Pretorius.
SOURCE Water SA WASADV. 16(4): 281-286, October 1990
PUBLISHER
PAGES
DATE 1990, October
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR policy

TITLE Practices, EPA policies for wastewater-wetlands project
evolve.

AUTHOR Bastian, R.
SOURCE Water Environment and Technology. v. 1 (4)
PUBLISHER
PAGES p. 483-485.
DATE
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR policy

TITLE States' activities, attitudes and policies concerning
constructed wetlands for wastewater treatment.

AUTHOR Slayden, R.L. and L.N. Schwartz.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal,
Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishing, Inc.
PAGES pp. 279-286
DATE 1989
CALLNUM TD 756. 5 C66

ANNOTATION This paper presents a cross section of current activities, attitudes, and policies of individual states concerning constructed wetlands for wastewater treatment. Few states have hard-and-fast policies or criteria on this technology which leads to a wide spectrum of activities and attitudes concerning constructed wetlands.

CATEGORY BG
SUBCATEGOR policy

TITLE U.S. Environmental Protection Agency's SITE emerging technology.
AUTHOR Bates, E.R., et al.
SOURCE Journal of the Air Pollution Control Association. July 1989. v. 39 (7). p. 927-35.
PUBLISHER
PAGES
DATE 1989
CALLNUM 449. 9 Ai7
ANNOTATION

CATEGORY BG
SUBCATEGOR policy

TITLE Use of wetlands for water quality improvement under the USEPA region V clean lakes program.
AUTHOR Landers, J.C. and B.A. Knuth.
SOURCE Environmental Management. 15(2): 151-162.
PUBLISHER
PAGES
DATE
CALLNUM HC 79 E5E5
ANNOTATION

CATEGORY BG
SUBCATEGOR policy

TITLE Wetland treatment systems--FY 91-96 research plan for the USEPA wetlands research program.
AUTHOR _____.
SOURCE NSI Technology Services Corp, Corvallis, OR
PUBLISHER
PAGES
DATE 1990, October
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR policy

TITLE Wetlands and water quality: EPA's research and monitoring implementation plan for the years 1989-1994.

AUTHOR Adamus, P.R. and E. Preston.

SOURCE EPA, Environmental Research Laboratory, Office of Research and Development, Corvallis, OR 97333.

PUBLISHER
PAGES 53p.
DATE 1989, March
CALLNUM
ANNOTATION The EPA wishes to demonstrate that existing surface water quality criteria for protecting the chemical, hydrological, and biological integrity of wetland resources is adequate. The agency wishes to develop technical information to support designation of particular wetlands for certain "uses"; estimate the limits of different wetland types, both constructed and natural, for intentionally or passively assimilating nutrients and contaminants.

CATEGORY BG
SUBCATEGOR policy, institution

TITLE Use of wetlands for wastewater treatment and effluent disposal: institutional constraints.

AUTHOR Rusincovitch, F.

SOURCE Ecological Considerations in Wetlands Treatment of Municipal Wastewaters.

PUBLISHER New York: Van Nostrand Reinhold, Co.

PAGES pp. 427-432

DATE 1985

CALLNUM QH 545 549E3

ANNOTATION

CATEGORY BG
SUBCATEGOR policy/perception

TITLE Human perception of utilization of wetlands for waste assimilation, or how do you make a silk purse out of a sow's ear.

AUTHOR Smardon, R.C.

SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.

PUBLISHER Chelsea, MI: Lewis Publishing, Inc.

PAGES 18 ref. WRA - WETLANDS.DO

DATE pp 287-295.

CALLNUM TD 756. 5 C66

ANNOTATION Recent emphasis on ecological values and multifunctional aspects

of wetlands have improved the public's image of wetlands; however, loading wetlands with wastewater risks resensitizing all the historical negative imagery. This paper will present human perception of wetlands from a historical perspective; review the literature on how people perceive environmental quality in relation to odor, water quality, and wetland quality; and outline a data gathering framework to assess public perceptions on the role of wetlands in water quality enhancements.

CATEGORY BG
SUBCATEGOR pollutant removal

TITLE Aquatic plants for pH adjustment and removal of toxic chemicals and dissolved minerals from water supplies.
AUTHOR Wolverton, B.C. and B.K. Bounds.
SOURCE Journal of the Mississippi Academy of Science, Vol. 33, 1988.

PUBLISHER
PAGES
DATE 1988
CALLNUM 500 m697
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal

TITLE Aquatic plants for removal of mevinphos from the aquatic environment.
AUTHOR Wolverton, B.C. and D.D. Harrison.
SOURCE Jour. Miss. Acad. Sci., 19: 84-88.
PUBLISHER
PAGES
DATE 1975
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal

TITLE Purification efficiency of planted soil filters for wastewater treatment.
AUTHOR Netter, R.
SOURCE Water Science and Technology v 26 n 9-11 1992. pp 2317-2320.
PUBLISHER
PAGES pp 2317-2320
DATE 1992
CALLNUM

ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal

TITLE Water quality functions of wetlands: natural and manmade systems.

AUTHOR Bastian, R.K. and J. Benforado.

SOURCE Proceedings of the International Symposium on Ecology and Management of Wetlands--Vol. 1: Ecology of Wetlands.

PUBLISHER Kent, UK: Croom Helm

PAGES pp. 87-97

DATE 1988

CALLNUM

ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal N,P

TITLE Amplification of total dry matter, nitrogen, and phosphorus removal from stands of Phragmites australis by harvesting and reharvesting regenerated shoots.

AUTHOR Suzuki, T., W.G.A. Nissanka and Y. Kurihara.

SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.

PUBLISHER Chelsea, MI: Lewis Publishing, Inc.

PAGES pp 530-535

DATE 1989

CALLNUM TD 756. 5 C66

ANNOTATION Investigations have shown the Phragmites austrails are effective in removing nitrogen and phosphorus from wastewater. Harvesting the shoots could remove a large quantity of these nutrients. The experiment was designed to establish the best timing for harvesting and reharvesting the regenerated shoots and to amplify removal of total dry matter, nitrogen and phosphorus.

CATEGORY BG
SUBCATEGOR pollutant removal, BOD

TITLE Vegetated submerged beds with artificial substrates. I: BOD removal.

AUTHOR Burgoon, P.S., T.A. Debusk, K.R. Reddy and B. Koopman.

SOURCE Journal of Engineering Mechanics, Vol. 117, No. 8.

PUBLISHER

PAGES pp. 394-407

DATE 1991, August.

CALLNUM 290. 9 AM3PS (EM)

ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal, metals

TITLE Uptake and losses of heavy metals in sewage sludge by a New
England salt marsh.
AUTHOR Giblin, A.E., A. Bourg, I. Valiela and J.M. Teal.
SOURCE American Journal of Botany. 1980. v. 67 p. 1059-1068.
PUBLISHER
PAGES
DATE 1980
CALLNUM 450 Am36
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal, N

TITLE Denitrification in artificial wetlands.
AUTHOR Stengel, E. and R. Schultz-Hock.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal,
Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishing, Inc.
PAGES Enviroline - WETLANDS.DOC
DATE pp 484-92.
CALLNUM TD 756. 5 C66
ANNOTATION Small artificial wetlands were examined for their potential to
purify nitrate contaminated water into potable water.
Macrophytes were used for denitrification because of the low-
oxygen content of wetland water. Denitrification in relation to
oxygen concentration, organic carbon sources, and temperature;
and oxygen conditions in the root horizon is presented in
this paper.

CATEGORY BG
SUBCATEGOR pollutant removal, N

TITLE Dentrification in wetlands as a means of water quality
improvement.
AUTHOR Graetz, D.A., et al.
SOURCE Publication No. 48
PUBLISHER Gainesville, FL: University of Florida
PAGES
DATE 1980
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal, N

TITLE Nitrogen removal in artificial wetlands.
AUTHOR Gersberg, R.M., B.V. Elkins and C.R. Goldman.
SOURCE Water Research. 17(9):1009-1014
PUBLISHER
PAGES
DATE 1983
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal, N

TITLE Use of artificial wetlands to remove nitrogen from
wastewater.
AUTHOR Gersberg, R.M., B.V. Elkins and C.R. Goldman.
SOURCE Journal of the Water Pollution Control Federation.
56(2):152-156
PUBLISHER
PAGES
DATE 1984, February
CALLNUM 293.8 SE8
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal, N,P

TITLE Vegetated submerged beds with artificial substrates. II: N
and P removal.
AUTHOR Burgoon, P.S., K.R. Reddy, T.A. DeBusk and B. Koopman.
SOURCE Journal of Engineering Mechanics (ASCE), Vol. 117, No. 8.
PUBLISHER
PAGES pp. 408-424
DATE 1991, August
CALLNUM 290. 9 AM3PS (EM)
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal, N--hydraulics

TITLE Hydraulic conductivity and nitrogen removal in an artificial
wetland system.
AUTHOR McIntyre, B.D. and S.J. Riha.
SOURCE Journal of Environmental Quality. 20(1): 259-263.
PUBLISHER 2 fig, 2tab, 16 ref. CWET.TXT

PAGES
DATE
CALLNUM DNAL QH540.J6
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal, P

TITLE Particulate phosphorous removal via wetland filtration: An
examination of potential for hypertrophic lake restoration.
AUTHOR Lowe, E.F., et al.
SOURCE Environmental Management. Jan/Feb 1992. v. 16 (1) p. 67-74.
PUBLISHER
PAGES pp 67-74
DATE 1992
CALLNUM HC79 E5E5
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal, P

TITLE Phosphorus removal efficiency of a constructed wetland
treatment system.
AUTHOR Mann, R.A.
SOURCE M. App. Sci. (Thesis)
PUBLISHER 1990.
PAGES
DATE
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal, P

TITLE Removal of phosphorus from wastewater by soil under aerobic
and aerobic conditions.
AUTHOR Hill, D.E. and B.L. Sawhney.
SOURCE J. Environ. Qual. 10:401-405.
PUBLISHER
PAGES
DATE 1981
CALLNUM QH 540 J6
ANNOTATION

CATEGORY BG

SUBCATEGOR pollutant removal--metals
TITLE Comparisons of the processing of elements by ecosystems II:
Metals.
AUTHOR Giblin, A.E.
SOURCE Ecological Considerations in Wetlands Treatment of Municipal
Wastewaters.
PUBLISHER New York: Van Nostrand Reinhold
PAGES pp. 158-179.
DATE 1985.
CALLNUM QH 545 549E3
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal--metals
TITLE Removal of heavy metals by artificial wetlands.
AUTHOR Gersberg, R.M., S.R. Lyon, B.V. Elkins and C.R. Goldman.
SOURCE Future of Water Reuse. Vol. 2.
PUBLISHER Denver, CO: American Water Works Association
PAGES pp. 639-648
DATE 1984
CALLNUM TD 429. W3 1984
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal--metals, Cd--plant--water hyacinth
TITLE Incorporation of cadmium by water hyacinth.
AUTHOR Blake, G., B. Kaigate, A. Fourcy and C. Boutin.
SOURCE Wat. Sci. Tech. 19 (10), 123-128
PUBLISHER
PAGES
DATE 1987
CALLNUM TD420 A1P7
ANNOTATION

CATEGORY BG
SUBCATEGOR pollutant removal--plants
TITLE Biotransformation of priority pollutants using biofilms and
vascular plants.
AUTHOR Wolverton, B.C. and R.C. McDonald-McCaleb.
SOURCE Journal of the Mississippi Academy of Science, Vol. 31.
PUBLISHER
PAGES
DATE 1986
CALLNUM 500 M697

ANNOTATION

CATEGORY BG
SUBCATEGOR proceedings/abstracts/bibliographies

TITLE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.
AUTHOR Hammer, D.A., ed.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial, and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES 831p.
DATE 1989
CALLNUM DNAL TD756.5.C66
ANNOTATION This volume contains the proceedings from the first comprehensive conference on constructed wetlands for water quality improvement. It represents the state-of-the-art in 1988; however, as new developments occur the information presented in this book will need revising. The goal of this book is to provide information to improve acceptance and increase application of constructed wetlands for water quality improvements.

CATEGORY BG
SUBCATEGOR proceedings/abstracts/bibliographies

TITLE Constructed wetlands for water quality improvement.
AUTHOR _____.
SOURCE Paper Presented at the International Symposium on Constructed Wetlands for Water Quality Improvement, Pensacola, FL, October 2.
PUBLISHER
PAGES pp 10
DATE 1991
CALLNUM
ANNOTATION The author identifies various components of agricultural wastewater and compiles and evaluates the parameters that need to be considered in treating agricultural wastewaters in wetlands. Some of the various components of agricultural wastewater include milk house wastewater, barnyard runoff, roof and upstream runoff, barn/confined animal flush water, leachate from stacked manure systems, silage leachate, nonpoint surface runoff from cropland, and tile drainage water. Each of the components possesses unique characteristics which creates specific problems for treatment.

CATEGORY BG
SUBCATEGOR reed beds--design/operation

TITLE Draft design and operations guidelines for reed bed treatment system.
AUTHOR Cooper, P.F.
SOURCE Draft WRC Report
PUBLISHER April 1989.
PAGES
DATE
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR root zone method

TITLE An assessment of the root zone method of wastewater treatment.
AUTHOR Conley, L.M., et al.
SOURCE Journal of the Water Pollution Control Federation.
63(3):239-48(May-June 1991).
PUBLISHER
PAGES
DATE 1991, May/June
CALLNUM TD419 R47
ANNOTATION

CATEGORY BG
SUBCATEGOR soils

TITLE Physical and chemical characteristics of freshwater wetlands soils.
AUTHOR Faulkner, S.P. and C.J. Richardson.
SOURCE Constructed Wetlands for Wastewater Treatment: Municipal, Industrial and Agricultural.
PUBLISHER Chelsea, MI: Lewis Publishers, Inc.
PAGES pp. 41-72
DATE 1989
CALLNUM TD 756. 5 C66
ANNOTATION The chemical and physical parameters of soils, particularly freshwater wetland soils, influence their ability to effectively treat wastewater. This article describes soil properties, soil classifications, and saturated soil chemical processes of wetlands.

CATEGORY BG
SUBCATEGOR thesis

TITLE Aspects of wetlands treatment.
AUTHOR Greaves, J.

SOURCE MSc Thesis
PUBLISHER
PAGES
DATE 1989
CALLNUM
ANNOTATION

CATEGORY BG
SUBCATEGOR water hyacinths--pollutant removal, NH4

TITLE Use of water hyacinth aquatic treatment systems for ammonia control and effluent polishing.

AUTHOR Hauser, J.R.

SOURCE Journal of the Water Pollution Control Federation.
56:219-226

PUBLISHER

PAGES

DATE 1984

CALLNUM 293. 8 SE8

ANNOTATION This paper presents the results of a 2-year pilot program investigating the use of water hyacinth aquatic treatment systems for ammonia removal and effluent polishing at a wastewater treatment plant. The aims of the pilot investigation were to determine if water hyacinth aquatic treatment systems could be used successfully for ammonia control, effluent polishing and to gain actual operational experience that could be used in a full-scale system design.

NOTE: THE FOLLOWING CITATIONS ARE AN UPDATE AS OF OCTOBER 24, 1995, TO THE ORIGINAL DOCUMENT AND THEREFORE ARE IN A DIFFERENT FORMAT.

1 NAL Call No.: 290.9-Am32P
A modified procedure for design of constructed wetlands.
Chen, S.; Malone, R. F.; Fall, L.
Paper American Society of Agricultural Engineers. St. Joseph, Mich. :
American Society of Agricultural Engineers,. Winter 1992. (92-4527) 19 p.
Paper presented at the "1992 International Winter Meeting sponsored by the
American Society of Agricultural Engineers," December 15-18, 1992,
Nashville, Tennessee.

Descriptors: waste water treatment; wetlands; construction;
design-calculations; models

2 NAL Call No.: aQK130.R48--1992
A Review of literature concerning the establishment and maintenance of
constructed wetlands using Scirpus, Sparganium, and other wetland species.
Mandel, R.; Koch, P. L.; United States. Soil Conservation Service.
[Washington, D.C.? : U.S. Dept. of Agriculture, Soil Conservation
Service], 1992. iii, 114 p..
Cover title.

Descriptors: Wetland plants Great Lakes Region; Constructed wetlands Great Lakes Region

3 NAL Call No.: 290.9-Am32T

A theoretical approach for minimization of excavation and media costs of constructed wetlands for BOD5 removal.

Chen, S.; Malone, R. F.; Fall, L. J.

Transactions of the ASAE v.36, p.1625-1632. (1993).

Includes references.

Descriptors: wetlands; design; waste water treatment; biochemical oxygen demand; hydraulics; subsurface drainage; artificial wetlands; subsurface flow

Abstract: A modified procedure for minimizing excavation and media costs for subsurface constructed wetland design for BOD5 removal is presented. Based upon the assumptions of first order BOD5 removal kinetics, a plug-flow reactor, and hydraulics governed by Darcy's law for a constructed wetland, this procedure incorporates the currently available theory into a unique systematic design approach. The modified procedure suggests that a small slope and a small aspect ratio (length/width) should be used whenever possible. This design procedure provides an optimization rationale for each design step and relates the primary design parameters to excavation and media material costs. Operational parameters that determine the performance of constructed wetlands are more clearly defined than before based on the theoretical treatment presented. Using this design procedure, cost reductions are demonstrated for two examples.

4 NAL Call No.: TD756.5.M67--1993

Constructed wetlands for water quality improvement.

Moshiri, G. A.

Boca Raton : Lewis Publishers, c1993. 632 p. : ill., maps.

Papers presented at the Pensacola conference.

Descriptors: Constructed wetlands-Congresses; Water quality management Congresses; Constructed wetlands-Case studies-Congresses

5 NAL Call No.: TD420.A1P7

Design criteria and practice for constructed wetlands.

Crites, R. W.

Water science and technology: a journal of the International Association on Water Pollution Research and Control v.29, p.1-6. (1994).

In the series analytic: Wetlands systems in water pollution control / edited by H.J. Bavor and D.S. Mitchell. Australia.

Descriptors: waste water treatment; wetlands; design; water flow; hydrology; biological treatment; aquatic plants; artificial wetlands

6 NAL Call No.: TD420.A1P7

Designing constructed wetlands for nitrogen removal.

Hammer, D. A.; Knight, R. L.

Water science and technology: a journal of the International Association on Water Pollution Research and Control v.29, p.15-27. (1994).

In the series analytic: Wetlands systems in water pollution control / edited by H.J. Bavor and D.S. Mitchell. Australia.

Descriptors: waste water treatment; biological treatment; wetlands;

design; nitrification; denitrification; nitrogen; removal; ammonium; anaerobic conditions; aerobiosis; aerobic treatment; anaerobic treatment; aquatic plants; nutrient uptake; artificial wetlands

7 NAL Call No.: QH545.A1E58
Effects of acidification on metal accumulation by aquatic plants and invertebrates. 1. Constructed wetlands.
Albers, P. H.; Camardese, M. B.
Environmental toxicology and chemistry v.12, p.959-967. (1993).
Includes references.

Descriptors: aquatic plants; aquatic insects; uptake; aluminum; cadmium; calcium; copper; iron; lead; magnesium; manganese; nickel; zinc; acidification; wetlands; pollution; ph; adverse effects; freshwater biology; maryland

8 NAL Call No.: TD420.A1P7
Establishing wetland plants in artificial systems.
Chambers, J. M.; McComb, A. J.L.
Water science and technology: a journal of the International Association on Water Pollution Research and Control v.29, p.79-84. (1994).
In the series analytic: Wetlands systems in water pollution control / edited by H.J. Bavor and D.S. Mitchell. Australia.

Descriptors: waste water treatment; biological treatment; wetlands; aquatic plants; rhizomes; transplanting; seed germination; establishment; western australia; constructed wetlands; artificial wetlands; macrophytes

9 NAL Call No.: TD756.5.E97--1990
European design and operations guidelines for reed bed treatment systems.
Cooper, P. F. P. F.; Water Research Centre (Great Britain). Swindon : Water Research Centre, 1990. viii, 27, 10 p. (1 folded) : ill..
Rev. Dec. 1990.

Descriptors: Constructed wetlands; Water Purification

10 NAL Call No.: TD420.A1P7
Flow characteristics of planted soil filters.
Netter, R.
Water science and technology: a journal of the International Association on Water Pollution Research and Control v.29, p.37-44. (1994).
In the series analytic: Wetlands systems in water pollution control / edited by H.J. Bavor and D.S. Mitchell. Australia.

Descriptors: waste water treatment; biological treatment; wetlands; water flow; measurement; aquatic plants; tracers; constructed wetlands; artificial wetlands

11 NAL Call No.: TD420.A1P7
Functions of macrophytes in constructed wetlands.
Brix, H.
Water science and technology: a journal of the International Association on Water Pollution Research and Control v.29, p.71-78. (1994).
In the series analytic: Wetlands systems in water pollution control / edited by H.J. Bavor and D.S. Mitchell. Australia.

Descriptors: waste water treatment; biological treatment; wetlands;

aquatic plants; hydraulic conductivity; nutrient uptake; artificial wetlands

12 NAL Call No.: 290.9-Am32P
Hydraulic properties of bed media for constructed wetlands.
Turner, G. A.; Lesikar, B. J.; Fipps, G.
Paper American Society of Agricultural Engineers. St. Joseph, Mich. :
American Society of Agricultural Engineers, . Summer 1994. (94-1075/94-
2020) 14 p.
Paper presented at the "1994 International Summer Meeting sponsored by The
American Society of Agricultural Engineers," June 19-22, 1994, Kansas
City, Missouri.

Descriptors: wetlands; hydrological factors

13 NAL Call No.: TD420.A1P7
Inventory of constructed wetlands in the United States.
Brown, D. S.; Reed, S. C.
Water science and technology: a journal of the International Association
on Water Pollution Research and Control v.29, p.309-318. (1994).
In the series analytic: Wetlands systems in water pollution control /
edited by H.J. Bavor and D.S. Mitchell. Australia.

Descriptors: waste water treatment; biological treatment; wetlands;
surveys; sewage effluent; usa; artificial wetlands

14 NAL Call No.: QH540.E23
Limited response of cordgrass (*Spartina foliosa*) to soil amendments in a
constructed marsh.
Gibson, K. D.; Zedler, J. B.; Langis, R. Ecological applications v.4,
p.757-767. (1994).
Includes references.

Descriptors: spartina; ammonium sulfate; straw; alfalfa; organic
amendments; green manures; decomposition; biomass production; plant
density; nitrogen; nutrient availability; soil fertility; sandy soils;
nutrient uptake; salt marshes; wetlands; dry matter accumulation; salt
marsh soils; california; constructed wetlands

15 NAL Call No.: 290.9-Am32P
Phosphorus retention and distribution in constructed wetlands.
Cronk, J. K.; Mitsch, W. J.
Paper American Society of Agricultural Engineers. St. Joseph, Mich. :
American Society of Agricultural Engineers, . Winter 1993. (932579) 10 p.
Paper presented at the "1993 International Winter Meeting of the American
Society of Agricultural Engineers," December 14-17, 1993, Chicago,
Illinois.

Descriptors: wetlands; pollution; phosphorus

16 NAL Call No.: QH540.J6
Phosphorus retention by wetland soils used for treated wastewater
disposal.
Gale, P. M.; Reddy, K. R.; Graetz, D. A.
Journal of environmental quality v.23, p.370-377. (1994).
Includes references.

Descriptors: wetland soils; phosphorus; sorption; kinetics; sorption isotherms; physicochemical properties; waste water treatment

Abstract: Wetlands function as buffers for nutrients loaded from terrestrial ecosystems through drainage and surface discharges. The objectives of our study were to (i) determine the P retention capacity of representative wetlands soils being used for disposal of treated wastewater and (ii) relate P retention characteristics to selected physicochemical properties to evaluate likely of P removal in the soils. Intact soil cores (0-40 cm) and bulk soil samples (0-15 cm) were collected from a system of natural and constructed wetlands currently being used for disposal of treated wastewater. Floodwater P concentrations of the intact soil cores were monitored over time to determine the rate of P removal. Batch experiments were conducted to determine maximum P retention capacity of the soils. Soil samples were analyzed for inorganic P pool sizes, and selected properties. During a 21 d hydraulic retention time, the constructed wetlands (sandy, low organic matter soils) retained 52 to 66% of added P, as compared with 46 to 47% retained by the natural wetlands (high organic matter soils). The P retention as estimated using the Langmuir model, ranged from 196 to 1821 mg P kg⁻¹ (aerobic incubations) and from 32 to 1415 mg P kg⁻¹ (anaerobic incubations). The P sorption maximum for the soils could be by batch equilibration with a single high P solution. Anaerobic conditions increased P solubility. Organic P pools and the Fe-Al-bound fraction seemed to control P chemistry in these natural and wetlands.

17 NAL Call No.: TD420.A1P7

Potential use of constructed wetlands for wastewater treatment in Northern environments.

Jenssen, P. D.; Maehlum, T.; Krogstad, T.

Water science and technology: a journal of the International Association on Water Pollution Research and Control v.28, p.149-157. (1993).

Proceedings of the 2nd International Conference on, "Design and Operation of Small Wastewater Treatment Plants," June 28-30, 1993, Trondheim, Norway / edited by H. Odegaard.

Descriptors: wetlands; waste water treatment; cold zones; temperate climate; aquatic plants; freezing; purification; biodegradation-; constructed wetlands

18 NAL Call No.: TD899.C59K37--1993

Project end report, development of high mountain plant communities as wetland mitigation systems for copper mine effluent.

Kastning Culp, N.; Lockwood, J. A. 1.; DeBrey, L.; University of Wyoming. Dept. of Plant, S. a. I. S. [Laramie] : Dept. of Plant, Soil and Insect Sciences, University of Wyoming, [1993] viii, 141 p. : ill. (some col.).

Cover title.

19 NAL Call No.: TD756.5.C67-1987

State of knowledge on reed bed treatment systems : October 1987.

Cooper, P. F. P. F.; Hobson, J. A.; Water Research Centre (Great Britain). [England? : WRC?, 1987?] 1 v. (unpaged) : ill..

Cover title.

Descriptor: Constructed wetlands

20 NAL Call No.: TD756.5.R44--1993
Subsurface flow constructed wetlands for wastewater treatment : a technology assessment.
Reed, S. C. Washington, D.C. : U.S. Environmental Protection Agency, Office of Water, [1993] 1 v. (various pagings) : ill..
"Mr. Sherwood C. Reed ... was the principal author and editor of this document"--P. I.

Descriptor: Constructed wetlands

21 NAL Call No.: MeU Univ.-1990-H461
The economic and environmental feasibility of using constructed wetlands for treatment of municipal wastewater in small communities in Maine.
Hesketh, P. S. 1. Orono, Me., 1990. viii, 256 leaves : ill..
Includes vita. 1990.

22 NAL Call No.: TP248.2.B562
The use of macrophytes in bioremediation.
Wood, B.; McAtamney, C.
Biotechnology advances v.12, p.653-662. (1994).
In the special issue: Biotechnology and industry: Present and future / edited by C.R. Barnett, J.S.G. Dooley, A.P. McHale, and P.G. McKenna.

Descriptors: waste water treatment; bioremediation; wetlands; reviews; reed bed systems; constructed wetlands

23 NAL Call No.: TD755.T68-1980
Toward the rational design of aquatic treatment systems.
Stowell, R. E. Davis, Calif. : Dept. of Civil Engineering, University of California, [1980] 59 p. : ill..
"Presented at the American Society of Civil Engineers Spring Convention, Portland, Oregon, April 14-18, 1980."

Descriptors: Sewage Purification- Biological treatment; Constructed wetlands; Wetlands

24 NAL Call No.: TD420.A1P7
Use of artificial wetlands for the treatment of recreational wastewater.
Vincent, G.
Water science and technology: a journal of the International Association on Water Pollution Research and Control. v.29, p.67-70. (1994).
In the series analytic: Wetlands systems in water pollution control / edited by H.J. Bavor and D.S. Mitchell. Australia.

Descriptors: water purification; wetlands; biological treatment; aquatic plants; nutrient uptake; phosphorus; nitrogen; nitrate; lakes; water-recreation; beaches ; waste water; waste water treatment; quebec; constructed-wetlands; artificial-lakes

25 NAL Call No.: TD420.A1P7--v.29-no.4
Wetland systems in water pollution control : proceedings of the IAWQ 3rd International Specialist Conference on Wetland Systems in Water Pollution Control, held in Sydney, Australia, 23-25 November, 1992. 1st ed.
Bavor, H. J.; Mitchell, D. S.;
International Specialist Conference on Wetland Systems in Water Pollution Control (3rd : 1992 : Sydney, A. Oxford, U.K. ; Tarrytown, N.Y. : Pergamon : Elsevier Science, 1994. x, 336 p. : ill., maps.

On cover: IAWQ, International Association on Water Quality.

Descriptors: Water Pollution-Congresses; Wetlands-Congresses; Constructed wetlands-Congresses; Water quality management-Congresses

PLEASE NOTE: The information on document delivery services, interlibrary loan requests and copyright restrictions that follows is also appended to the "Constructed Wetlands Bibliography" files. If "Constructed Wetlands Bibliography" files are copied and/or distributed, please include this information in all copies.

NAL DOCUMENT DELIVERY SERVICES

February 1995

United States Department of Agriculture
National Agricultural Library
Public Services Division
Document Delivery Services Branch
Beltsville, Maryland 20705-2351

The National Agricultural Library has established document delivery service policies for three user categories. They are 1) individuals; 2) libraries, other information centers, and commercial organizations; and 3) foreign libraries, information centers, and commercial organizations. Available services for each user category are given below. For information on electronic access for interlibrary loan requests, see the "Interlibrary Loan" file.

1) DOCUMENT DELIVERY SERVICES TO INDIVIDUALS

The National Agricultural Library (NAL) supplies agricultural materials not found elsewhere to other libraries.

Filling requests for materials readily available from other sources diverts NAL's resources and diminishes its ability to serve as a national source for agricultural and agriculturally related materials. Therefore, NAL is viewed as a library of last resort. SUBMIT REQUESTS FIRST TO LOCAL OR STATE LIBRARY SOURCES PRIOR TO SENDING TO NAL. In the United States, possible sources are public libraries, land-grant university or other large research libraries within a state. In other countries submit requests through major university, national, or provincial institutions.

If the needed publications are not available from these sources, submit requests to NAL with a statement indicating their non-availability. Submit one request per page following the instructions for libraries below.

NAL'S DOCUMENT DELIVERY SERVICE INFORMATION FOR THE LIBRARY

The following information is provided to assist your librarian in

obtaining the required materials.

LOAN SERVICE -- Materials in NAL's collection are loaned only to other U.S. libraries. Requests for loans are made through local public, academic, or special libraries.

The following materials are not available for loan: serials (except USDA serials); rare, reference, and reserve books; microforms; and proceedings of conferences or symposia. Photocopy or microform of non-circulating publications may be purchased as described below.

DOCUMENT DELIVERY SERVICE -- Photocopies of articles are available for a fee. Make requests through local public, academic, or special libraries. The library will submit a separate interlibrary loan form for each article or item requested. If the citation is from an NAL database (CAIN/AGRICOLA, "Bibliography of Agriculture," or the NAL Catalog) and the call number is given, put that call number in the proper block on the request form. Willingness to pay charges must be indicated on the form. Include compliance with copyright law or a statement that the article is for "research purposes only" on the interlibrary loanform or letter. Requests cannot be processed without these statements. Please read copyright notice below.

CHARGES:

- * Photocopy, hard copy of microfilm and microfiche - \$5.00 for the first 10 pages or fraction copied from a single article or publication. \$3.00 for each additional 10 pages or fraction.
- * Duplication of NAL-owned microfilm - \$10.00 per reel.
- * Duplication of NAL-owned microfiche - \$ 5.00 for the first fiche and \$.50 for each additional fiche per title.

BILLING -- Charges include postage and handling, and are subject to change. Invoices are issued quarterly by the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161. Establishing a deposit account with NTIS is encouraged.

DO NOT SEND PREPAYMENT.

SEND REQUESTS TO:

USDA, National Agricultural Library
Document Delivery Services Branch, PhotoLab
10301 Baltimore Blvd., NAL Bldg.
Beltsville, Maryland 20705-2351

Contact the Head, Document Delivery Services Branch in writing or by calling (301) 504-5755 with questions or comments about this policy.

- 2) DOCUMENT DELIVERY SERVICES AVAILABLE TO LIBRARIES, OTHER INFORMATION CENTERS AND COMMERCIAL ORGANIZATIONS.

The National Agricultural Library (NAL) accepts requests from

libraries and other organizations in accordance with the national and international interlibrary loan code and guidelines. In its national role, NAL supplies copies of agricultural materials not found elsewhere. Filling requests for materials readily available from other sources diverts NAL's resources and diminishes its ability to serve as a national source for agricultural and agriculturally related materials. Therefore, NAL is viewed as a library of last resort.

Submit requests to state/region/network sources prior to sending to NAL. Within the United States, possible sources are public libraries, land-grant university libraries or other large research libraries within a state. In other countries submit requests to major university, national or provincial institutions. If the needed publications are not available from these sources, submit requests to NAL with a statement indicating their non-availability.

REQUESTS -- Submit on the American Library Association (ALA) or the International Federation of Library Associations and Institutions (IFLA) interlibrary loan form or via electronic mail or telefacsimile (see over for more details). Include the complete name of the person authorizing the request on each form; the standard bibliographic source which lists the title as owned by NAL; and the call number if the citation is from an NAL database (CAIN/AGRICOLA, "Bibliography of Agriculture," or the NAL catalog).

LOAN SERVICE -- Materials in the NAL collection are loaned only to U.S. libraries. The loan period is one month.

The following materials are not available for loan: serials (except for USDA serials); rare, reference, and reserve books; microforms; and proceedings of conferences or symposia. Photocopy or microform of the non-circulating publications is supplied automatically (as described below) when the requesting organization indicates that photocopy is acceptable on the loan form.

AUDIOVISUALS (AVs) -- Order at least 3-4 weeks before the intended show date. Give show date and alternate show date when requesting specific titles. Request specific format needed if more than one format is given in the citation.

DOCUMENT DELIVERY SERVICE -- Submit a separate completed interlibrary loan form for each article required. Indicate willingness to pay charges on the form and compliance with copyright law or include a statement that the article is for "research purposes only." Requests are not processed without these statements. Please read copyright notice below.

CHARGES:

- * Photocopy, hard copy of microfilm and microfiche - \$5.00 for the first 10 pages or fraction copied from a single article or publication. \$3.00 for each additional 10 pages or fraction.

- * Duplication of NAL-owned microfilm - \$10.00 per reel.
- * Duplication of NAL-owned microfiche - \$5.00 for the first fiche and \$.50 for each additional fiche per title.

BILLING - Charges include postage and handling, and are subject to change. Invoices are issued quarterly by the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161. Establishing a deposit account with NTIS is encouraged. DO NOT SEND PREPAYMENT.

Send Requests to:

USDA, National Agricultural Library
Document Delivery Services Branch, ILL, PhotoLab
10301 Baltimore Blvd., NAL Bldg.
Beltsville, Maryland 20705-2351

Contact the Head, Document Delivery Services Branch in writing or by calling (301) 504-5755 with questions or comments about this policy.

3) DOCUMENT DELIVERY SERVICES AVAILABLE TO FOREIGN LIBRARIES, INFORMATION CENTERS AND COMMERCIAL ORGANIZATIONS.

The National Agricultural Library (NAL) accepts requests from libraries and other organizations in accordance with the national and international interlibrary loan code and guidelines.

In its national role, NAL supplies copies of agricultural materials not found elsewhere. Filling requests for materials readily available from other sources diverts NAL's resources and diminishes its ability to serve as a national source for agricultural and agriculturally related materials. Therefore, NAL is viewed as a library of last resort.

Submit requests to major university libraries, national or provincial institutions or network sources prior to sending requests to NAL. If the needed publications are not available from these sources, submit requests to NAL with a statement indicating their non-availability.

AGLINET -- Requesters in countries with an AGLINET library are encouraged to make full use of that library and its networking capabilities. As an AGLINET participant, NAL provides free document delivery service for materials published in the United States to other AGLINET participants.

REQUESTS -- Submit requests on the American Library Association (ALA) or the International Federation of Library Associations and Institutions (IFLA) interlibrary loan form or via electronic mail or telefacsimile (see over for more details). Include the complete name of the person authorizing the request on each form; the standard bibliographic source which lists the title as owned by NAL; and the call number if the citation is from an NAL database (CAIN/AGRICOLA, "Bibliography of Agriculture", or the NAL catalog).

DOCUMENT DELIVERY SERVICE -- Submit a separate completed interlibrary loan form for each article requested. Indicate willingness to pay charges on the form, and compliance with copyright law or include a statement that the article is for "research purposes only". Requests cannot be processed without these statements. Please read copyright notice below.

CHARGES:

- * Photocopy, hard copy of microfilm and microfiche - \$5.00 for the first 10 pages or fraction copied from a single article or publication. \$3.00 for each additional 10 pages or fraction.
- * Duplication of NAL-owned microfilm - \$10.00 per reel.
- * Duplication of NAL-owned microfiche - \$5.00 for the first fiche and \$.50 for each additional fiche per title.

BILLING - Charges include postage and handling, and are subject to change. Invoices are issued quarterly by the National Technical Information Service (NTIS), 5285 Port Royal Road, Springfield, VA 22161. Establishing deposit account with NTIS is encouraged. Annual billing is available to foreign institutions on request by contacting NAL at the address below. DO NOT SEND PREPAYMENT.

Send Requests to:

USDA, National Agricultural Library
Document Delivery Services Branch, ILL, PhotoLab
10301 Baltimore Blvd., NAL Bldg.
Beltsville, Maryland 20705-2351

Contact the Head, Document Delivery Services Branch at (301) 504-5755 with questions or comments about this policy.

ELECTRONIC MAIL ACCESS FOR INTERLIBRARY LOAN (ILL) REQUESTS

February 1995

The National Agricultural Library (NAL), Document Delivery Services Branch accepts ILL requests from libraries via several electronic services. All requests must comply with established routing and referral policies and procedures. A sample format for ILL requests is printed below along with a list of the required data/format elements.

ELECTRONIC MAIL - (Sample form below)

SYSTEM	ADDRESS CODE
INTERNET.	LENDING@NALUSDA.GOV
OCLC	NAL's symbol AGL need only be entered once, but it must be the last entry.

SAMPLE ELECTRONIC MAIL REQUEST

=====

AG University/NAL	ILLRQ 231	1/10/95	NEED BY: 2/15/95
-------------------	-----------	---------	------------------

Interlibrary Loan Department
Heartland, IA 56789
Agriculture

Dr. Smith Faculty Ag School

Canadian Journal of Soil Science 1988 v 68(1): 17-27
DeJong, R. Comparison of two soil-water models under semi-arid growing
conditions

Ver: AGRICOLA Remarks: Not available at AU or in region.
NAL CA: 56.8 C162 Auth: C. Johnson CCL Maxcost: \$15.00

Ariel IP = 111.222.333.444.555 Or Fax To 123-456-7890

=====

TELEFACSIMILE - Telephone number is 301-504-5675. NAL accepts ILL requests via telefacsimile. Requests should be created on standard ILL forms and then faxed to NAL. NAL fills requests via FAX as an alternative to postal delivery at no additional cost. If you want articles delivered via fax, include your fax number on your request. NAL will send up to 30 pages per article via fax. If the article length exceeds 30 pages NAL will ship the material via postal service. All requests are processed within our normal timeframes (no RUSH service).

ARIEL - IP Address is 198.202.222.162. NAL fills ILL requests via ARIEL when an ARIEL address is included in the request. NAL treats ARIEL as an alternative delivery mechanism, it does not provide expedited services for these requests. NAL will send up to 30 pages per article via Ariel. If the article length exceeds 30 pages or cannot be scanned reliably, NAL will deliver the material via fax or postal service.

REQUIRED DATA ELEMENTS/FORMAT

1. Borrower's address must be in block format with at least two blank lines above and below so form may be used in window envelopes.
2. Provide complete citation including verification, etc. and NAL call number if available.
3. Provide authorizing official's name (request will be rejected if not included).
4. Include statement of copyright compliance (if applicable) and willingness to pay NAL charges.

Please read copyright notice below.

Photocopy Warning:

NOTICE WARNING CONCERNING COPYRIGHT RESTRICTIONS

The copyright law of the United States (Title 17, United States Code) governs the making of photocopies or other reproductions of copyrighted material.

Under certain conditions specified in the law, libraries and archives are authorized to furnish a photocopy or other reproduction. One of these specific conditions is that the photocopy or reproduction is not to be "used for any purpose other than private study, scholarship, or research." If a user makes a request for, or later uses, a photocopy or reproduction for purposes in excess of "fair use," that user may be liable for copyright infringement.

This institution reserves the right to refuse to accept a copying order if, in its judgement, fulfillment of the order would involve violation of copyright law.

37 C.F.R. 201.14

The United States Department of Agriculture (USDA) prohibits discrimination in its programs on the basis of race, color, national origin, sex, religion, age, disability, political beliefs, and marital or familial status. (Not all prohibited bases apply to all programs). Persons with disabilities who require alternative means for communication of program information (braille, large print, audiotape, etc.) should contact the USDA Office of Communications at (202) 720-5881 (voice) or (202) 720-7808 (TDD). To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call (202) 720-7327 (voice) or (202) 720-1127 (TDD). USDA is an equal employment opportunity employer.

=====END=====

Return to Constructed Wetlands Bibliography

Return to the Water Quality Information Center at the National Agricultural Library.

Last update: April 27, 1998

The URL of this page is http://www.nal.usda.gov/wqic/Constructed_Wetlands_all/cwbg.html

J. R. Makuch /USDA-ARS-NAL-WQIC/ wqic@ars.usda.gov