

National Decentralized Water Resources Capacity Development Project

Executive Summary



Creative Community Design and Wastewater Management

University of Rhode Island Cooperative Extension
Kingston, Rhode Island

March 2004

Creative Community Design and Wastewater Management

**Submitted by the
University of Rhode Island
Cooperative Extension
Kingston, RI**

NDWRCDP Project Number: WU-HT-00-30

National Decentralized Water Resources Capacity Development Project
(NDWRCDP) Research Project

Final Report, March 2004

DISCLAIMER

This work was supported by the National Decentralized Water Resources Capacity Development Project (NDWRCDP) with funding provided by the U.S. Environmental Protection Agency through a Cooperative Agreement (EPA No. CR827881-01-0) with Washington University in St. Louis. This report has been reviewed by a panel of experts selected by the NDWRCDP. The contents of this report do not necessarily reflect the views and policies of the NDWRCDP, Washington University, or the U.S. Environmental Protection Agency, nor does the mention of trade names or commercial products constitute endorsement or recommendation for use.



CITATIONS

This report was prepared by

Lorraine Joubert, Peter Flinker, George Loomis, David Dow, Art Gold, Diana Brennan,
and Justin Jobin
University of Rhode Island Cooperative Extension
Coastal Institute in Kingston
Kingston, RI 02881

The final report was edited and produced by ProWrite Inc., Reynoldsburg, OH.

This report is available online at www.ndwrcdp.org. This report is also available through the

National Small Flows Clearinghouse
West Virginia University/NRCCE
P.O. Box 6064
Morgantown, WV 26506-6065
Tel: (800) 624-8301
WWCDMG27

This report should be cited in the following manner:

Joubert, L., P. Flinker, G. Loomis, D. Dow, A. Gold, D. Brennan, and J. Jobin. 2004. *Creative Community Design and Wastewater Management*. Project No. WU-HT-00-30. Prepared for the National Decentralized Water Resources Capacity Development Project, Washington University, St. Louis, MO, by University of Rhode Island Cooperative Extension, Kingston, RI.



ACKNOWLEDGEMENTS

The authors would like to recognize the many individuals who contributed examples of projects that use decentralized systems to support creative development designs, those who provided supporting information on wastewater treatment technologies or land use issues, and others who generously assisted in reviewing this document. These contributors include:

RI Coastal Resources Management Council
Ken Anderson

RI Office USDA NRCS
Joseph Bachand,

Mount Hope Engineering
Todd Chaplin

Planning Director, North Kingstown, RI
Marilyn Cohen

F. R. Mahoney & Associates
Keith Dobie

Shannock Woods
William Faulkner

Portsmouth, RI
Robert Gilstein, Town Planner

Glocester, RI
Ray Goff, Town Planner

Jamestown, RI
Steven Goslee, Public Works Director

Crossman Engineering, Inc.
Bruce Hagerman

Aquidneck Place Marketing Director
Mary Ellen Horan

Portsmouth Abbey School
Paul Jestings, Director of Operations

Sakonnet Vineyards, Little Compton, RI
Joetta Kirk

RIDEM ISDS section
Deborah Knauss

Charlestown, RI
James Lamphere, Town Planner

North Kingstown, RI
Susan Licardi, Director Water Department

Aquapoint, Inc.
Craig Lindell

Community Development Consortium
Geoffrey Marchant, Director

RI Department of Environmental
Management Sustainable Watersheds Office
Scott Millar, Administrator

RIDEM ISDS Section
Brian Moore, Supervisor

SFM Associates
Scott Moorehead,

South Kingstown, RI
Vincent Murray, Planning Director

Acknowledgements

South Kingstown, RI
Ray Nickerson, Environmental Planner

South Kingstown, RI
Jon Schock, Public Services Director

Jamestown, RI
Wastewater Treatment Facility
Douglas Ouellette, Superintendent

Homecrafters, Inc.
M. Shepard Spear, Londonderry

Special thanks to the West Virginia University National Small Flows Clearinghouse for use of wastewater treatment system illustrations; Gary Blazejewski and Kaytee Manchester, URI Natural Resources Science, for assistance in graphics and final report preparation; and to Cathy Curtin Miller and Meredith Curfman Silvia, College of the Environment and Life Sciences, for general project management assistance.

Several of the example onsite and cluster decentralized wastewater treatment systems shown in this manual are demonstration systems constructed by the University of Rhode Island Cooperative Extension Onsite Wastewater Training Center as repairs for research, training, and outreach.

Construction and monitoring of these systems was funded by the RI AquaFund, the National Onsite Demonstration Project, Phase II; the EPA Block Island and Green Hill Pond National Community Decentralized Wastewater Treatment Demonstration Project; the RI DEM Nonpoint Pollution Program (section 319), and the Town of Gloucester, RI.

These are all functioning systems in regular use located on private residential or commercial property. We recognize the extra care and attention taken to design and construct these innovative wastewater treatment systems by the members of the RI Independent Contractors and Associates. We also thank the RI Coastal Resource Management Council and the RI Department of Environmental Management for their cooperation in demonstration system permitting and for their support for use of decentralized wastewater treatment systems to protect water resources and promote sustainable development.

Appreciation is also expressed to the NDWRCDP for their support of this work:

Principal Investigator

Jay R. Turner, D.Sc., Washington University

Project Coordinator

Andrea L. Shephard, Ph.D.

NDWRCDP Project Steering Committee:

Coalition for Alternative Wastewater Treatment

Valerie I. Nelson, Ph.D.

Consortium of Institutes for Decentralized Wastewater Treatment

Ted L. Loudon, Ph.D., P.E.

Electric Power Research Institute

Raymond A. Ehrhard, P.E.

Tom E. Yeager, P.E.

National Onsite Wastewater Recycling Association

Jean Caudill, R.S.

National Rural Electric Cooperative Association

Steven P. Lindenberg

Scott Drake, P.E.

Water Environment Research Foundation

Jeff C. Moeller, P.E.

Members-At-Large:

James F. Kreissl

Richard J. Otis, Ph.D., P.E.

Jerry Stonebridge

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ABSTRACT


This manual demonstrates how advanced decentralized wastewater treatment systems can be used to support more compact land use patterns that would otherwise be infeasible with conventional wastewater treatment systems. Without rigid design restrictions and often with smaller land area requirements, alternative wastewater treatment systems can free land use planners and engineers to let land use goals and resource protection needs guide land development design. Properly managed alternative and cluster systems enable communities to remediate failing or substandard systems, revitalize traditional development, and direct investment to new growth centers. Perhaps most importantly, these approaches offer a practical alternative to conventional sewers, which enables communities to avoid the three most commonly associated pitfalls: high cost of sewers, loss of control over land use with intensified development pressures, and associated environmental impacts of urbanization, including dramatic increases in stormwater runoff and loss of groundwater recharge.

Written for planners and local officials, this guide is designed to show how decentralized technologies can be powerful tools in directing sustainable community development while protecting local water resources. Developers, wastewater treatment system designers and installers, and homeowners will also find ideas on fitting septic systems into landscapes in a way that retains natural features and unique architectural elements of a community and adds value to property.

This manual builds on the *South County Design Manual*, a handbook on applying conservation development techniques to southern New England landscapes developed for the Rhode Island Department of Environmental Management. This companion publication uses artists' renderings to help local officials better visualize how a parcel of land might appear if developed using conventional versus alternative and more flexible ordinances.

Here the authors carry the design process a step further to illustrate realistic decentralized wastewater treatment options that can be used to accommodate future growth scenarios. This next step is critical since many of the alternative land development patterns simply cannot be built using only conventional septic systems. For each design alternative, we have identified and illustrated practical wastewater treatment options using a range of technologies. Supporting technical information on decentralized wastewater treatment options is included, along with numerous case studies illustrating practical use of alternative systems to achieve the goals of better land use design, sustainable development, and improved water resource protection.

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 Printed on recycled paper in the United States of America.

WU-HT-00-30

NDWRCDP

Washington University, Campus Box 1150, One Brookings Drive, Cupples 2, Rm. 11, St. Louis, Missouri 63130-4899 • USA

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National Small Flows Clearinghouse • West Virginia University/NRCCE, P.O. Box 6064, Morgantown, WV 26506-6064 • USA
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