CONTENTS

126A EDITOR’S DESK
Does community-supported agriculture support conservation?
Mark Anderson-Wilk, editor

130A HOME FRONT
A very good year
Craig A. Cox, executive director of the Soil and Water Conservation Society

131A VIEWPOINTS
Conservation issues of yesterday, today, and tomorrow
Maurice G. Cook

133A Rising to the challenge of Hugh Hammond Bennett
David Sanders

135A CONSERVATIONIST PROFILE
Thaler Land and Livestock, Wyoming

136A IN THE NEWS
Runoff from potato farms blamed for fish kills on Canadian island
Kathy Birt

137A CONSERVATION IN ACTION
Heron Lake watershed conservation strip tillage demonstration
Melanie Luinenburg

138A IDEAS & INNOVATIONS
Ancient water systems provide lessons for today
Michael Kenneth Cowan

139A FEATURES
Soils and runaway global warming: Terra incognita
Philippe C. Baveye

144A TECH TRANSFER BRIEFING
Is setting aside highly erodible cropland for carbon storage economically viable?
Mark Sperow

149A Changes in carbon storage in inland saline-alkalined wetlands
Junhong Bai

150A Phosphorus-based management challenges and strategies for poultry farming
Andrew N. Sharpley, Sheri Herron, and Tommy Daniel

151A The capacity of forested filter strips to retain sediment
Lawrence A. Morris

152A Evaluation of erosion control methods for storm water quality
L. Britt Faucette, Jason Governo, Carl F. Jordan, B. Graeme Lockaby, Honorio F. Carino, and Robin Governo

On the Cover
Fall color of paper birch and red maple in northern Wisconsin.
Photo by Steven Katovich, USDA Forest Service.
Predictors of field-scale variation of soil phosphorus
Sheilah C. Nolan, Joanne L. Little, Janna P. Casson, Frank J. Hecker, and Barry M. Olson

An integrated economic-hydrologic framework for evaluating environmental effects and cost effectiveness of conservation programs and management practices
Wanhong Yang, Alain N. Rousseau, and Peter Boxall

Can the Soil Conditioning Index be successfully used for semiarid, hot, sandy soils?
Ted. M. Zobeck

The profitability factor of controlled drainage implementation
Adela P. Nistor and Jess Lowenberg-DeBoer

IMPLEMENTATION UPDATE

Modifying erosion control structures for ecological benefits
F. Douglas Shields Jr., Peter C. Smiley Jr., and Charles M. Cooper

A model for reducing soil erosion by tillage
Lorenzo Borselli and Dino Torri

APPLIED RESEARCH

The marginal costs of carbon sequestration: Implications of one greenhouse gas mitigation activity
M Sperow

Overcoming the challenges of phosphorus-based management in poultry farming
A.N. Sharpley, S. Herron, and T. Daniel

Annual distribution of rainfall erosivity in western Andalusia, southern Spain
L. Dominguez-Romero, J.L. Ayuso Muñoz, and A.P. García Marín

Erosion control and storm water quality from straw with PAM, mulch, and compost blankets of varying particle sizes

Field-scale variation of soil phosphorus within small Alberta watersheds

An integrated economic-hydrologic modeling framework for the watershed evaluation of beneficial management practices
W. Yang, A.N. Rousseau, and P. Boxall

Investigation of Soil Conditioning Index values for Southern High Plains agroecosystems

Drainage water management impact on farm profitability
A.P. Nistor and J. Lowenberg-DeBoer

Soil organic carbon contents of two natural inland saline-alkaline wetlands in northeastern China
J. Bai, C. Baoshan, W. Deng, Z. Yang, Q. Wang, and Q. Ding

Sediment retention by forested filter strips in the Piedmont of Georgia

VOLUME 62 (2007) INDEX
NEW MINDSET NEEDED FOR MANAGING OUR SOIL

I recently read *Managing Agricultural Landscapes for Environmental Quality* and greatly appreciated the insightful articles. But I must say that I read very little about leading a change in managing our soil.

We seem to continue the old mindset of focusing on the loss of the soil particle. We need a new direction that focuses on maintaining the pore space and thus soil health. It is disappointing that the USDA Natural Resources Conservation Service and soil conservation districts have all kinds of practices/standards such as conservation crop rotation, cover crops, and residue and tillage management yet we fail to have a standard or at least a guideline for soil management. We spend money and time on erosion and poor drainage, etc., but we cannot cost share on soil management, the practice that would sustain the physical, chemical, and biological functions.

We don’t have to be rocket scientists to know we have a problem and don’t need costly equipment to measure compaction—ask any farmer who drives fence posts or tills hard/dense worn-out soil. Try driving a metal rod in the soil. If you have difficulty, how do you think the roots feel that are trying to penetrate the hard soil?

So my question is, when will we adopt a new mindset and use our tax dollars for the farm bill more effectively?

David Friedman
Director of the Ocean County Soil Conservation District, New Jersey

ANOTHER CHAPTER IN LIFE-LONG LEARNING

Thank you for your review of the book *Dirt: The Erosion of Civilizations*. I read the book and found it quite interesting, educational, eye opening, and just a bit alarming. David R. Montgomery sure packed a lot in it. There’s much I wish I had known when I started with the USDA Soil Conservation Service back in 1966. I’m retired now, but although I’m no longer a “fed,” I’m still a conservationist and I’m involved in conservation in other ways now. I’m convinced of the importance of life-long learning.

Many years ago I was introduced to the book *Topsoil and Civilization* by Vernon Gill Carter and Tom Dale published in 1955 and updated in 1974. After reading that book, it became early “assigned reading” for all new trainees that came to my office. Now, if I had trainees the assigned reading would be *Dirt*. Both are good, but considering that “soil science” really didn’t become a science until about 100 years ago, *Dirt* has about twice as many years of research knowledge to call upon.

Of course, we have to thank Walter C. Lowdermilk for his work in the early part of the 20th century for beginning to pull back the shroud and give us a peek at the relationships of civilizations and natural resources over 7,000 years.

Daniel F. Kesselring
Past president,
SWCS Michigan Chapter
Marshall, Michigan
ANSWERS SOUGHT FOR FLOODPLAIN MANAGEMENT

Your recent journal issue was exceptional in terms of the information it provided of surface water management.

Our situation with our tributary streams in southeastern Minnesota and the management of their floodplains has been a concern, particularly with the impact of the very severe storms that now seem to occur more frequently. These floodplains in many areas are now no longer pastured and have been taken over by dense invasive wooded vegetation. A question that could be addressed by the *Journal of Soil and Water Conservation* is, what is the impact on the flow characteristics of these streams, especially as it relates to downstream flooding?

A study on the Coon Creek area of Wisconsin reported by Stan Trimble in *Science* indicated a widening of the stream channels in the wooded parts of the floodplain. He was looking more at the effects of sedimentation and wasn’t able to address the effects of flooding or flowage from storm events.

My question is, are we seeing an accelerated rate of flowage in these areas because more of these flood waters are now directed to the channel of the floodplain and maybe are somewhat stalled in these dense wooded areas? Is this also causing a “venturi effect” where the velocities within the channels are significantly increased and could be more damaging in the way of downstream flooding?

Trimble indicates that there are no or limited federal programs to address this situation because many of these areas are noncropped and are not eligible for any type of program consideration. If these unmanaged floodplains are contributing to a flooding problem, maybe it is time to rethink some of our policies.

George Poch
Rochester, Minnesota
STATEMENT OF OWNERSHIP, MANAGEMENT, AND CIRCULATION

1. Publication Title: Journal of Soil and Water Conservation.
2. Publication Number: 0282-8800.
4. Issue Frequency: Bimonthly (January/February, March/April, May/June, July/August, September/October, November/December).
5. Number of Issues Published Annually: Six (6).
7. Complete Mailing Address of Known Office of Publication: 945 SW Ankeny Road, Ankeny, IA 50023, USA.
8. Complete Mailing Address of the Headquarters of General Business Offices of Publisher: 945 SW Ankeny Road, Ankeny, IA 50023, USA.
9. Full Names and Complete Addresses of Publisher, Editor, and Managing Editor: Publisher: Soil and Water Conservation Society, 945 SW Ankeny Road, Ankeny, IA 50023, USA. Editor: Mark Anderson-Wilk, Soil and Water Conservation Society, 945 SW Ankeny Road, Ankeny, IA 50023, USA. Owner: Soil and Water Conservation Society, 945 SW Ankeny Road, Ankeny, IA 50023, USA.
10. Known Bondholders, Mortgagees, and Other Security Holders Owning or Holding 1 Percent or More of Total Amount of Bonds, Mortgages, or Other Securities: None.
11. Tax Status: The purpose, function, and nonprofit status of this organization and the exempt status for federal income tax purposes has not changed during preceding 12 months.

12. Publication Title: Journal of Soil and Water Conservation.
13. Issue Date for Circulation Data Below: July/August 2007.
15. Extent and Nature of Circulation:

<table>
<thead>
<tr>
<th>Description</th>
<th>Average no. copies each issue during preceding 12 months</th>
<th>No. copies of single issue published nearest to filing date</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Total No. Copies Printed (net press run)</td>
<td>6,142</td>
<td>6,100</td>
</tr>
<tr>
<td>B. Paid Circulation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Mailed Outside-County Paid Subscriptions</td>
<td>5,312</td>
<td>5,117</td>
</tr>
<tr>
<td>2. Mailed In-County Paid Subscriptions</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. Paid Distribution Outside the Mails Including Sales Through Dealers and Carriers, Street Vendors, Counter Sales, and Other Paid Distribution Outside USPS</td>
<td>408</td>
<td>368</td>
</tr>
<tr>
<td>4. Paid Distribution by Other Classes of Mail Through the USPS</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>C. Total Paid Distribution</td>
<td>5,720</td>
<td>5,485</td>
</tr>
<tr>
<td>D. Free or Nominal Rate Distribution</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Outside-County</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2. In-County</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3. Other Classes Mailed Through USPS</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>E. Total Free or Nominal Rate Distribution</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>F. Total Distribution</td>
<td>5,720</td>
<td>5,485</td>
</tr>
<tr>
<td>G. Copies Not Distributed</td>
<td>422</td>
<td>615</td>
</tr>
<tr>
<td>H. Total</td>
<td>6,142</td>
<td>6,100</td>
</tr>
<tr>
<td>I. Percent Paid</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

16. Publication of Statement of Ownership: This publication is a general publication. Publication of this statement is required and will be printed in the November/December 2007 issue of this publication.
17. Signature and Title of Editor, Publisher, Business Manager, or Owner: Mark Anderson-Wilk, Editor, Soil and Water Conservation Society. I certify that all information furnished on this form is true and complete. I understand that anyone who furnishes false or misleading information on this form or who omits material or information requested on the form may be subject to criminal sanctions (including fines and imprisonment) and/or civil sanctions (including civil penalties).