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Cover
Big bluestem, growing on grassland in South Dakota.
Soil Conservation Service
Photo by Tim McCabe.
The mission of the Soil and Water Conservation Society is to advocate the conservation of soil, water, and related natural resources. As a multidisciplinary organization, SWCS synthesizes the results of research, experience, and custom in developing a knowledge base that is communicated worldwide. Through education and example, SWCS promotes a stewardship ethic that recognizes the interdependence of people and natural resources.

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**Pen Points**

**Districts, sustainability, and the Palouse**

Following are comments on several items in the March-April 1992 issue of the *JWSC*.

It has long been evident that what was needed in soil conservation was the help of down-to-earth, both-feet-on-the-ground, clear-thinking sociologists and students of human motivation and behavior. The mission of getting soil conservation practices adopted and installed has not ever been at its roots only a matter of agronomy and engineering. It is good that we have among our colleagues one Pete Nowak, who writes challenging, thought-provoking articles such as “The Role and Capacity of Conservation Districts...” [March-April 1992, p. 152].

It is to be hoped that Cooperative Extension and other relevant agencies will do all they can to help those key conservation district staff personnel and district supervisors develop leadership skills and not just leave them out there turning and twisting in the winds of change and bureaucratic conflict.

I read with much interest and empathy Joe Friend’s essay on “Achieving Soil Sustainability,” [March-April 1992, p. 156] the necessary concomitant or precursor to agricultural sustainability. However, some definition of what the writer meant by “soil formation” would have been helpful. Is it the weathering of parent material resulting in residual soil solum material or the transformation of mineral soil solum material to organic-enriched topsoil or some combination of both?

Also, at the risk of belaboring what should be obvious, soil loss prediction, such as by use of the USLE, has no bearing on determining rates of soil formation, however that formation might be defined. A soil loss rate estimate may be either larger or smaller than the rate of soil formation, assuming someone can figure out what that is.

A self-convened “steering committee” of seven Palouse-region farmers have abandoned their attempt to form a tri-state Agricultural Conservation and Production Coalition as a base for protest against the conservation compliance requirements of the 1985 and 1990 farm bills. The February 2, 1992 meeting of more than 100 farmers, which was mentioned in your “In the News” section [March-April 1992, p. 169] (and which I also attended), did not result in endorsement of the coalition. Rather, in the typical mode of wisely skeptical farmers, they came, listened, and departed with little or no reaction. My assessment is that probably no more than 25 farmers (plus one highly biased local agricultural news reporter) were ever strongly committed to the aims of the coalition sponsors.

Leonard Johnson
Troy, Idaho

---

**Using proper soil taxonomy**

It has been nearly a year since I wrote to you about my favorite subject, soil resources. At that time, I recommended that authors of articles submitted for publication in the *JWSC* share with readers soil resource information, including soil type and full taxonomy class—and to make that a requirement for manuscript acceptance for the journal.

I was happy to see the requirement in the revised Editorial Policy [see pages 347-348]. My response is “thank you” for making this a reality. I have noticed an increase in the sharing of soil resource information in recent issues. Keep up the good work.

---

**Example of a soil taxonomy**

<table>
<thead>
<tr>
<th>Soil Type</th>
<th>Taxonomy</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Routon silt loam</td>
<td>Fine-silty, mixed</td>
<td>Typic Ochraqualfs</td>
</tr>
<tr>
<td></td>
<td>thermic</td>
<td>Alfisols</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Ochridic</td>
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</tbody>
</table>

The mean annual soil temperature is between 15-22 °C or 57-59°F and is measured at 50 cm or 20" below the soil surface.

The profile texture has between 18-35% clay and less than 15% sand, with the remainder being silt, or 50-82%.
and ranchers be exposed to, and get some training in interpreting soil information. It is technical, but it can be explained in general terms and/or a few technical terms. This is shown in the accompanying figure for the Routon silt loam (TN). Explaining the taxonomy, step by step, in this way makes it rather simple.

This idea should not be new. I think we have slipped into a rut because of policy and the way soils descriptions have been done for years. We have not kept up with passing technology on to the user.

We have been very good at promoting completion of soil surveys. We promoted the comprehensive modern surveys to replace the single-farm surveys in the early part of the soil conservation district movement. The general descriptions done in those early days (1940-1960) are still being done today, even though we have used the comprehensive system since 1965 and it was supposedly fully implemented by 1968.

To fully implement the soil survey and promote its use to the fullest, we must bring our thinking to match that of soil taxonomy. Yes, we can express ourselves in common everyday terms when thinking technologically. Let's use the term, coarse-loamy, if that's what it is, along with fragipans, Alfisols, etc.

Wendell Berry stated it very well when he said, "Land cannot be properly cared for by those who do not know it intimately." Yes, one can know it intimately by knowing and using the Soil Survey to obtain the maximum benefits and plan for maximum use.

Martin C. Urka
Englewood, Florida

Pen Points is a forum for readers to comment on material that has been published in the JSWC or on land and water management issues in general. Readers are invited to express their views in a letter to the editor. Letters are judged on their clarity and pertinence to natural resource issues. Long letters may be shortened. Send letters to Editor, JSWC, 7515 Northeast Ankeny Road, Ankeny, Iowa 50021-9764; fax (515) 289-1227. — Editor.

Water Resources Management: In Search of an Environmental Ethic is an excellent book on water policy in the United States. Its central concern is the need for reform in the way water policy is made and implemented. Feldman methodically leads the reader from our current situation, and why it is as it is, to specific suggestions for reform. He believes that serious crises confront our society's use and abuse of water.

The book traces the U.S. government's involvement in water resources management from its inception, about 1800. State and regional conflicts and the lack of comprehensive water resources planning led the federal government to create the Water Resources Council in 1960. While our nation's best effort to date, the council was abolished in 1981. In actual practice, the council's planning process was a disappointment. Had the council been retained, however, a process for forcing a meeting of the minds on appropriate goals for U.S. water policy might have been possible.

Feldman's purpose is to show how our most severe water resource problems are caused by a reliance upon narrow and often inappropriate acquisitive values that do not satisfy a wide range of human needs and are harmful to nature. In the United States, decision makers have traditionally chosen development-oriented policies on the basis of the improved economic efficiency they offer. Even the notion of "efficiency" is misleading in Feldman's view, because it is narrowly defined by engineers, planners, and water project beneficiaries whose guiding principle is "cost benefit analysis." One result is short-term economic gain for some regions, at the expense of long-term economic benefit and ecological stability for society in general.

He contends that current policies do not adequately consider the environmental and social costs of water projects, or sufficiently encompass democratic representation and participation. His thesis is that our public policies should be defended on ethical grounds, represented by principles including the equitable distribution of natural resources, the protection of plants and animals, political feasibility, and the fulfillment of human needs. Current established policies pit region against region, resist centralized national management, are powerful linked to conventional notions of private property, and require a formal ethic or obligation in decision making to ensure the account-ability of government to its citizens.

He goes on to argue that in historical perspective many Corps of Engineers and Bureau of Reclamation projects (and I presume the same would apply to projects of other federal developmental agencies) are only explainable in the politically narrow struggle for bureaucratic survival and interest group satisfaction. Such constituency-based decision making has resulted in building dams and other public works projects that fuel regional economic growth. In spite of numerous reforms in the process by which water policy is made, federal agencies continue to resist these challenges and rely on structural solutions.

Feldman does not seem to be aware that some federal development agencies, the Department of Agriculture's Soil Conservation Service for example, have changed with time. SCS has approved water resource plans that rely on non-structural solutions. It has also used the "Environmental Quality" and "Other Social Effects" accounts from the "Principles and Guidelines" (Economic and Environmental Principles and Guidelines for Water and Related Environmental Ethic, March 1983) for project justification.

Feldman believes that an ethically defensible natural resources policy is one that satisfies a broad range of human needs, and that the idea of justice encompasses natural resources as well as people. A balance of nature is essential for us as humans. The resources, though, rely on protection by the policy choices humans make. He thinks the best way for protecting nature in our society is using some form of a social contract among reasonable people with some tangible elements to it. Such a contract could comprise tacit agreements based upon mutual understanding and logical deductions concerning the conditions necessary for "justice."

The text's treatment of the idea of a social contract is somewhat abstract, however, and while Feldman does describe some of the features such a contract might contain, for example, the rights of other living creatures. How this might be accomplished is not clear. Some decision rules for this social contract also are suggested.

The historic effect of U.S. water law on water policy, as well as the historic decision making criteria including benefit-cost analysis, are treated thoroughly in the book. Feldman believes water law has proved inadequate, and benefit-cost analysis has been inappropriately applied. His view is that proper comparison of policy alternatives using benefit-cost analysis would require that efficiency and equity be tied to one another. Feldman is critical of planners and engineers, saying they are ill-equipped by training to solve ethical problems. He also says that civil servants invested with authority to regulate natural resources are generally viewed as squanderers of resources and, at times, dishonest. I believe Feldman is unduly harsh in this regard and I would hope, not accurate.

Feldman defends his case with some examples, including the Garrison Diversion Project in North Dakota and the Blue Ridge Pumped Storage Power Project in North Carolina. His description of these projects is interesting and educational.

Finally, Feldman suggests that a point of departure for change would be a nationwide system of regional, self-sustaining, water management authorities. These authorities would be established in a combined political-hydrological framework and make their own decisions. He uses an example (one with more limited objectives, however), France's River Basin organizations, which were established in 1964. France's basin agencies are empowered to help meet national water quality standards only, and the national government rarely interferes.

While Feldman is much more critical, particularly of engineers, planners, and the law than I believe is deserved, his book is an excellent discussion of a very important and timely topic. I encourage anyone seriously interested in water resources management to read it. His conclusion that we consider a nationwide system of regional water management authorities supports the same conclusion reached by others. One is a discussion paper from Harvard's John F. Kennedy School entitled Federal Water Policy: Toward an Agenda for


Land Use


The Conservation Easement Stewardship Guide. Land Trust Alliance, Washington, D.C. 20006-2501. $11.00, plus $3.00 shipping and handling.

Law, Legislation, Politics

Managing Interjurisdictional Waters in Canada: A Constitutional Analysis. By Steven Rennette. 238 pp., 1991. Canadian Institute of Resources Law, University of Calgary, Calgary, Alberta, T2N 1N4. $26.00, Canada, plus 7 percent tax; $28.00, USA.


Agriculture


Farm Payments: Effectiveness of Efforts to Reduce Farm Payments Has Been Limited. 32 pp., 1991. U.S. General Accounting Office, Gaithersburg, Maryland 20877.


Forests

Pesticides and Ground-Water Resources

Pollution


Water Resources


Turning the Tide: Saving the Chesapeake Bay. By Tom Horton and William M. Eichbaum. 321 pp., illus., refs., gloss., apps., index, 1991. Island Press, Covelo, California 95428-9901. $22.95, cloth; $14.95 paper. The Snake River: Window to the West. By Tim Palmer. 320 pp., illus., refs., index, 1991. Island Press, Covelo, California 95428-9901. $34.95, cloth; $17.95, paper.

ASTM Standards on Soil Compaction. 192 pp., 1992. ASTM, Philadelphia, Pennsylvania 19103-1187. $45.00; $41.00, ASTM Members.


Waste Management
Correction

Several columns of data were misaligned in Table 3, page 114, of the article “Benefits of Wheat Stubble Strips for Conserving Snow in Southwestern Saskatchewan” [JSWC, January-February 1992, Vol. 47(1): 112-115]. The table is reprinted below in its correct form. The JSWC editors and the authors regret the error. If readers would like a reprint of the entire article with the corrected table in place, please write JSWC, 7515 N.E. Ankeny Road, Ankeny, Iowa 50021.

Table 3. Conservation and intake efficiency of fall and winter precipitation as affected by stubble height and year.

<table>
<thead>
<tr>
<th>Season</th>
<th>Precipitation* Received</th>
<th>Available Water in Soil†</th>
<th>Water Conserved (0-120 cm)</th>
<th>Additional Water Conserved (Tall compared to Short)</th>
<th>Efficiency of Intakes of Precipitation</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Fall to Spring Tall</td>
<td>Fall Tall</td>
<td>Short Tall</td>
<td>Short</td>
<td>Tall</td>
</tr>
<tr>
<td>1981-1982</td>
<td>132</td>
<td>-10</td>
<td>-10</td>
<td>38</td>
<td>28</td>
</tr>
<tr>
<td>1982-1983</td>
<td>93</td>
<td>80</td>
<td>87</td>
<td>111</td>
<td>93</td>
</tr>
<tr>
<td>1983-1984</td>
<td>64</td>
<td>14</td>
<td>22</td>
<td>58</td>
<td>42</td>
</tr>
<tr>
<td>1984-1985</td>
<td>131</td>
<td>-1</td>
<td>0</td>
<td>82</td>
<td>56</td>
</tr>
<tr>
<td>1985-1986</td>
<td>63</td>
<td>30</td>
<td>16</td>
<td>39</td>
<td>33</td>
</tr>
<tr>
<td>1986-1987</td>
<td>75</td>
<td>41</td>
<td>45</td>
<td>83</td>
<td>80</td>
</tr>
<tr>
<td>1988-1989</td>
<td>123</td>
<td>9</td>
<td>6</td>
<td>37</td>
<td>29</td>
</tr>
<tr>
<td>1989-1990</td>
<td>85</td>
<td>37</td>
<td>33</td>
<td>63</td>
<td>58</td>
</tr>
<tr>
<td>1990-1991</td>
<td>75</td>
<td>-15</td>
<td>-19</td>
<td>100</td>
<td>47</td>
</tr>
<tr>
<td>Mean</td>
<td>89</td>
<td>19</td>
<td>17</td>
<td>63</td>
<td>48</td>
</tr>
</tbody>
</table>

Significance levels:
- Stubble height: NS 0.01 0.01 0.01
- Year: 0.01 0.01 0.01
- Height x year: NS 0.01 0.01

*Fall samples were taken between late September and mid-October and spring samples between April and mid-May.
†Available water = water held by soil at potentials above -4 MPa; at -4 MPa this soil retains 154 mm of water in the 120 cm depth.
‡Interstrip and trap strips.