

sand filters, irrigation, losing apparatus, and disinfection. The sewage-disposal engineer must take his choice of one or of a combination of from two to a half dozen of these devices to meet his complicated and ever-varying problems.

The book contains a wealth of data gleaned from American and foreign literature, from the extensive engineering practice of the authors, and from American, British, French and German correspondents. It is well illustrated. It has that crowning glory, a serviceable index. With the previous volumes—"Design" and "Construction" (see NATIONAL MUNICIPAL REVIEW, October, 1915)—this one on "Disposal" makes up a worthy and unsurpassed treatise on American sewerage practice.

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SWAMP LAND DRAINAGE WITH SPECIAL REFERENCE TO MINNESOTA. By Ben Palmer, M.A., LL.B., Minneapolis: University of Minnesota. 138 pp.

This is not a treatise on technical methods of draining, but a brief for the drainage idea and an account of the area of land reclaimed with lengthy and learned discussion of the legal aspects of the question in the several states, and of the means by which results are accomplished by public and private co-operation. It has innumerable data and references to authorities.

The case for drainage in its broad lines can hardly be better presented than by quoting from the first two paragraphs of the book:

"It has been estimated that there are in the United States to-day approximately 80,000,000 acres of swamp and overflowed lands, an area of unproductive land greater than the Philippine Islands and nearly three times as large as Great Britain and Ireland. When we consider that these wet lands are so vast in extent, that they are unproductive and an economic waste, and that they are in many states so productive of malarial diseases as to constitute a serious and ever present menace to the

lives and health of the people, the importance of the problem of land drainage in the United States is apparent. If—using the suggestion of Chief Hydrographer Leighton of the U. S. geological survey—this land were suddenly acquired as an outlying possession, there is no doubt that there would be a great movement for its exploitation. . . . If there lay off our coast such a wonderously fertile country inhabited by a pestilent and marauding people who every year invaded our shores and killed and carried away thousands of our citizens, and each time shook their fists beneath our noses and cheerfully promised to come again, how the country would go to arms, the treasury be thrown open, and how quickly that people would be subjugated!" And yet that is just the situation which our swamp lands, with their great possibilities for development as additional territory for our people and with their cost to the United States in lives annually lost by malarial fevers, present to us.

The benefits to be derived from land drainage are many. The removal of surplus waters results in (1) a greater certainty of a full crop on agricultural lands because of a reduction of the damaging effect of frost on vegetation; (2) an increase in the yield per acre, with a corresponding permanent increase in the market value of the land; (3) improvement of public highways; (4) benefits to transportation companies because of the increase in freight tonnage due to the raising of more agricultural products; (5) benefits to towns near drained districts because of increased business; (6) benefits to railroad companies due to decrease in cost of maintaining trackage, as result of lessening of damages caused by floods and by softening of roadbeds; (7) improvement in public health due to the elimination of fever and disease breeding swamps and marshes.

The drainage question in this country is but another instance of our neglect and waste of natural resources. Swamp reclamation is usually completely under the control of private individuals, and the work shows the inevitable lack of forethought and organization for the common

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good and blind waste on the part of legislatures. Thus of 2,700,000 acres of swamp land in Georgia almost none has been reclaimed; in Mississippi very little of 5,760,200 acres has been reclaimed. The great St. Francis swamp in Arkansas was once covered with a fine growth of hardwood. It was sold by the state to lumber companies for 50 cents an acre which took out the lumber. Similarly in Missouri, swamp lands sold by the state for a few cents an acre are now, after reclamation, worth from \$60 to \$100 an acre.

When swamps near centres of population are such an obvious nuisance that they must be reclaimed, the result is usually brought about by dumping refuse until the surface is high and dry and solid. By this simple process the thick black muck, the deposit of ages, which under proper treatment becomes most valuable agricultural land, is forever buried out of sight and reach, and can only be restored to fertility by stripping some other piece of land of its clothing of productive soil. This kind of thing is going on in all directions in the 75 square miles or so of tidewater swamp in New York City and within 15 miles of city hall.

The whole book is a convincing argument for the direct or indirect public control of drainage of extensive swamps. The author presents a strong case for control by the federal government as the only power able to handle the conflicting private interests where swamp areas extend over the borders of adjoining states; thus, the policy of the federal government of granting to new states all the swamp lands within their borders is mistaken, and should be changed.

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A BIBLIOGRAPHY OF MUNICIPAL GOVERNMENT IN THE UNITED STATES. By William Bennett Munro. Cambridge: Harvard University Press. \$2.50.

At the opening of a great Scottish library Lord Rosebery disconcerted his audience by remarking that the occasion depressed

him. Such miles of shelves, such multitudes of books! Somewhat in the same way the student of municipal government is disturbed by the appalling mass of literature which confronts him. Hitherto his way has been uncharted; he has done his exploration more or less haphazard. For it is now a decade and a half since the bibliography of Professor Brooks appeared. In that interval has come the awakening of American opinion to the deficiencies of city government and to the indefinite possibilities of constructive advance; our cities have been, in a measure, transformed; and this growth of public interest, this gradual, but extensive achievement has found expression in numberless publications. To offer guidance through such a labyrinth required a very specialized acquaintance with the subject and at the same time courage to face hard work and inevitable criticism. As one of the chief authorities in the field, Professor Munro was admirably equipped for the task; he had also the co-operation of the Harvard bureau of research in municipal government which he himself had developed. The volume may fairly be regarded as indispensable.

Its scope has been conceived broadly. Of course, as the title indicates, attention is fixed upon American municipalities. But where European experience and practice seem to bear more or less directly upon American problems, references are given. Thus, under the subject of finance 5 per cent of the references are to European literature; under the subject of municipal ownership, more than 40 per cent. Professor Munro has not, in the old fashion, emphasized the political side. He has very properly taken the view that interest nowadays has shifted largely from political machinery and municipal organization to the community service which government should perform. For the former, therefore, two chapters, or eighty-odd pages, suffice. The great bulk of the volume considers functions: finance, city planning, public utilities, sanitation, public safety, education, social betterment. "The city is becoming our premier philanthropist," as Professor Munro phrases it.