Report T-501

A Bibliography of the Hydrology of the Everglades and the Big Cypress Swamp, Florida
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Introduction

The intent of this report is to provide a bibliography of the hydrologic literature, both historic and current, concerning the Everglades area, which includes the Conservation Areas and Everglades National Park, and the Big Cypress Swamp, which includes the Big Cypress National Preserve (Figure 1 and 2). These areas represent the southern portion of the Kissimmee River - Lake Okeechobee Watershed, with the Conservation Areas and the Big Cypress providing the bulk of the overland flow into the Park (Figure 3).

The hydrology of the basin is a system of complex relationships, and determines the unique ecological environment of the area. Through man's manipulations in his efforts to farm, urbanize and industrialize South Florida, he has altered the historic flow regime of the area. This in turn affected the biological environment in a chain reaction attendant to such a sensitive, interdependent system.

Purpose

It is hoped that this report will provide a useful tool for water management planning in these critical areas. Moreover, this record of existing literature would give to those interested a grasp of the historical background and climate of evolution of the present situation in South Florida.

Method

Included in the term "hydrologic literature" are topics that deal with water such as level, discharge, quality, law, dynamics, legislation, precipitation, hydrobiology, hydrography, and hydrogeology. The literature cited herein includes both published and unpublished material and ranges from research reports, position
Figure 1. Area map (adapted from McPherson, 1976)
Figure 2. Everglades National Park and Conservation Areas (adapted from McPherson, 1976)
Figure 3. Drainage patterns of southeastern Florida (adapted from Tabb, 1963)
papers and environmental impact statements to pertinent legislation, newspaper and magazine articles, news releases and in-house memos. The majority are governmental; a few are by private corporations, individuals and universities. The information in the literature includes raw data, analyzed data, opinions, predictions and suggestions.

The bibliography was researched in large part from the following:

Everglades National Park library
Everglades National Park hydrology files
University of Miami library
Durbin Tabb publications:

1. A survey of the literature relating to the South Florida ecosystems.
2. A summary of existing information on the fresh-water and brackish-water and marine ecology of the Florida Everglades region in relation to fresh-water needs of Everglades National Park.

Computerized Search Service, National Resources Library, Research Service Branch, Washington, D.C.

Further information was obtained from the multitude of references listed in the literature itself.

While certainly not complete, the bibliography does contain the bulk of the pertinent material written about the Park and its related areas, thus, providing a base upon which additional literature can be added.
In several instances, the agency listed as author had a name change through time. These include:

1. The Central and Southern Florida Flood Control District was authorized in 1972 to become the South Florida Water Management District, effective July 1, 1975.


3. The Florida State Board of Conservation is now the Florida State Department of Natural Resources.

In each of these cases, the name of the agency at the time the material was written is given as the author.

Discussion

A survey of the 400 pieces of literature cited in this bibliography provides the following breakdown:

<table>
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<tr>
<th>Area</th>
<th>Number</th>
<th>Percent</th>
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<tr>
<td>Everglades and Everglades National Park</td>
<td>254</td>
<td>63.50</td>
</tr>
<tr>
<td>South Florida</td>
<td>84</td>
<td>21.00</td>
</tr>
<tr>
<td>Big Cypress</td>
<td>45</td>
<td>11.25</td>
</tr>
<tr>
<td>Conservation Areas</td>
<td>17</td>
<td>4.25</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>400</strong></td>
<td><strong>100.00</strong></td>
</tr>
<tr>
<td>Subject</td>
<td>Number</td>
<td>Percent</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------</td>
<td>---------</td>
</tr>
<tr>
<td>Water quantity</td>
<td>185</td>
<td>46.25</td>
</tr>
<tr>
<td>Water quality</td>
<td>75</td>
<td>18.75</td>
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<tr>
<td>General ecology</td>
<td>100</td>
<td>25.00</td>
</tr>
<tr>
<td>Hydrobiology</td>
<td>28</td>
<td>7.00</td>
</tr>
<tr>
<td>Remote sensing</td>
<td>12</td>
<td>3.00</td>
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<tr>
<td><strong>Total</strong></td>
<td>400</td>
<td>100.00</td>
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<table>
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<tr>
<th>Time Period</th>
<th>Number</th>
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<tbody>
<tr>
<td>No date</td>
<td>3</td>
<td>.75</td>
</tr>
<tr>
<td>1800's</td>
<td>2</td>
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<td>1900-1939</td>
<td>17</td>
<td>4.25</td>
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<tr>
<td>1940-1949</td>
<td>31</td>
<td>7.75</td>
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<tr>
<td>1950-1959</td>
<td>21</td>
<td>5.25</td>
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<tr>
<td>1959-1969</td>
<td>147</td>
<td>36.75</td>
</tr>
<tr>
<td>1970-1977</td>
<td>179</td>
<td>44.75</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>400</td>
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</table>

A quick glance reveals that most of the literature, 44.75 percent, was written in the last seven years, with almost all of it, 81.5 percent written in the last 17 years. The major thrust of the literature dealt with the Everglades area and Everglades National Park, 63.5 percent, the amount of water these areas receive, 46.25 percent, and the effect it has on the ecological regime, 25 percent.
Of further note, though not reflected in the tables, almost all of the literature concerning the Big Cypress and the Conservation Areas was written in the last decade. It is obvious that there has been a growing concern for the quality of the environment in all these areas. The use of modern technology in the form of remote sensing is just recently being recognized as an effective tool in water resources management as indicated by three percent of the literature.

I wish to express sincere gratitude to Dr. Peter Rosendahl, Mr. Frank Nix and Mr. Paul Rose who so graciously reviewed this paper and offered constructive comments.
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