



*FCD EMPLOYEES RECEIVE AWARDS – Two FCD engineering employees receive certificates of merit and checks for coming up with original ideas that will save the State of Florida money. The awards are made under the state suggestion system and the amount of money reflects a percentage of anticipated*

*savings the state will obtain from adopting their ideas. At left, Board Chairman Robert W. Padrick presents check in the amount of \$225 to Charles Duerson for suggesting fencing instead of guard rails at highway bridges. At right Chairman Padrick presents \$100 check to Hans Ihle for proposals on re-coloring right-of-way maps.*

## COMPUTER

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elevations, soil moisture content, reservoir capacity, evaporation, transpiration, wind and temperature, structure characteristics, channel characteristics, reservoir stages, precipitation forecasts, structure stages and discharges, inlet channel characteristics, water withdrawal observations, past hydrometeorological data, topography, vegetation, water quality, and numerous other items that are available.

In the past if water stages were extremely high and a hurricane threatened off the coast, someone had to make a decision with few facts to work on. With the computer, the same decisions will have to be made, but management will then have a valuable tool that can help in making such decisions. In the future when a storm approaches, the computer will whirl into activity, and will, in a matter of hours, come up with valuable information that would have been impossible, or have taken days to obtain by means of slide rule and other mathema-

tical means.

As the FCD's work moves from flood control into water management, the District will move away from this inflexible, single-purpose management plan. Present information is not detailed enough to help make these decisions and further sophisticated models will be developed to help make these judgements.

With the first (PHYSICAL SYSTEM MODEL), it will be comparatively easy to accurately predict what would happen in certain instances. As an example, the computer operator can feed the machine with specific information as to rainfall, water stages, etc., and could determine the results that will occur by making certain changes, such as opening up specific structures. By obtaining several such examples, management will be able to choose the best method for these particular conditions.

The second model (PREDICTION MODEL) will be more complicated and will enter into the prediction field. This model will be based on the statistical analysis of past weather data and would supply predicted weather data to the first or physical system model. This will be ne-

cessary to enable projections to be made for any time period other than the immediate future.

Dependent upon the success achieved with the first two model attempts, and feasibility studies at that time, two further models may be considered.

The first would be an optimization mechanism that would operate the physical system model in such a manner as to develop "optimum" operations for the conditions existing at a particular point in time, according to a set of overall operational policies or criteria.

The other possibility is an economic model that will help provide the criteria basis for the optimization of the physical model. It will also provide economic data for other purposes of the District, particularly in terms of the economic consequences of certain types of policy decisions.

The proposed plan has already aroused considerable interest in the State of Florida. However, Storch points out that the new program is now only in the "creeping stage" and it will be more than one year before any technical information will be available to interested persons.