

Who Needs Weeds ?

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Who needs weeds? — Certainly not the Southwest Florida Water Management District. Our foremost responsibility is flood control. Therefore, we must try to control noxious aquatics to keep our waterways open. None of us need our waterways so clogged with weeds that we can't get our boats away from the docks. None of us need weeds in such masses that the fish population is endangered. It is becoming more apparent that we do not need these noxious aquatic weeds that are invading our waters. Now we must face the question — Can we meet the challenge confronting all of us by accepting greater roles in our own phases of weed control? I am sure we can if we all cooperate. This is the primary reason for the organization of the Hyacinth Society.

We have both "Hydrilla" (*Hydrilla verticillata* Gsp.) and "Eurasian Watermilfoil" (*Myriophyllum spicatum* L.) in our Water Management District. The Watermilfoil is presently within the confines of Citrus County. The Crys-

tal, Homosassa and Chassahowitzka Rivers are established waters where pollution infractions have provided fertile grounds for the establishment of undesirable aquatic weeds. Motor boat movements, water fowl flights and hurricanes contribute to aquatic weed transportation. This causes rapid encroachment into uninfested waters. The new encroachment into the headwaters of the Crystal and Homosassa Rivers has increased 35-40 percent within a one year period. The value of land may depend entirely on freedom of movement in the adjacent water.

We have taken these problems as a challenge. Our staff, and that of Citrus County, are working cooperatively in the areas of serious infestation. Last November, with new encroachments of Eurasian Watermilfoil into the headwaters of the three major rivers, it was evident that an attempt should be made to unite our forces with those of Citrus County to try to get some control of the submersed weeds. Management, planning and procedure had to be

developed. Budgets had to be considered and keyed to the problem of opening waterways for boating, swimming and for "just fishin'". Working maps were drawn to scale, with length, width and average depth plotted on them to determine the rate of application of herbicides.

We started our first phase of "Operation Clean-Up" on April 14, 1969, and completed it in five days. Herbicides had to be carefully selected due to climatology variables to be considered, as well as manpower. This responsibility had to be given to staff people of the two agencies. Because of the heavy flow of springs in the Crystal and Homosassa Rivers, and because of the tidal fluctuations ranging from 1 to 3½ feet, four different herbicides were selected. Their use was based entirely on position of the tide, location of the area to be treated, and the amount needed for the depth and flow of water. We had learned in our earlier field tests that if we worked with Mother Nature she would prove to be a friend indeed.

Four herbicides were selected (1) Copper Sulfate, medium course crystals, a product of Copper Hill Tennessee Corporation. This material was applied by spin disk applicator and air boat. It had enough weight density to carry it to the bottom of the rivers and canals which had a heavy flow of water. This material was applied by the County staff into the main channels of the river simultaneously with our staff people applying (2) 2,4-D 20% granules, a product of Amchem Corporation and (3) Aquathol Plus, a Pennwalt Corporation product. Both of these materials were systemic type herbicides. (4) Hydrothol 191 was used in three small canals. This was also a Pennwalt Corporation product. These canals were completely clogged with Hydrilla growth, giving no aesthetic value to the waterfront property. We experienced a small fish kill with this application, due mainly to the oxygen sag caused by rapid decomposition of the elodea plant because of the dense weed growth.

The effective control of our first phase of "Operation Clean-Up" and the selection of the four herbicides used was attributed to pre-conference planning and the experience and application judgment of Mr. Andy L. Price, Aquatic Biologist of Pennwalt Corporation. The cost of treatment with the combination of herbicides used are based on surface acre cost.

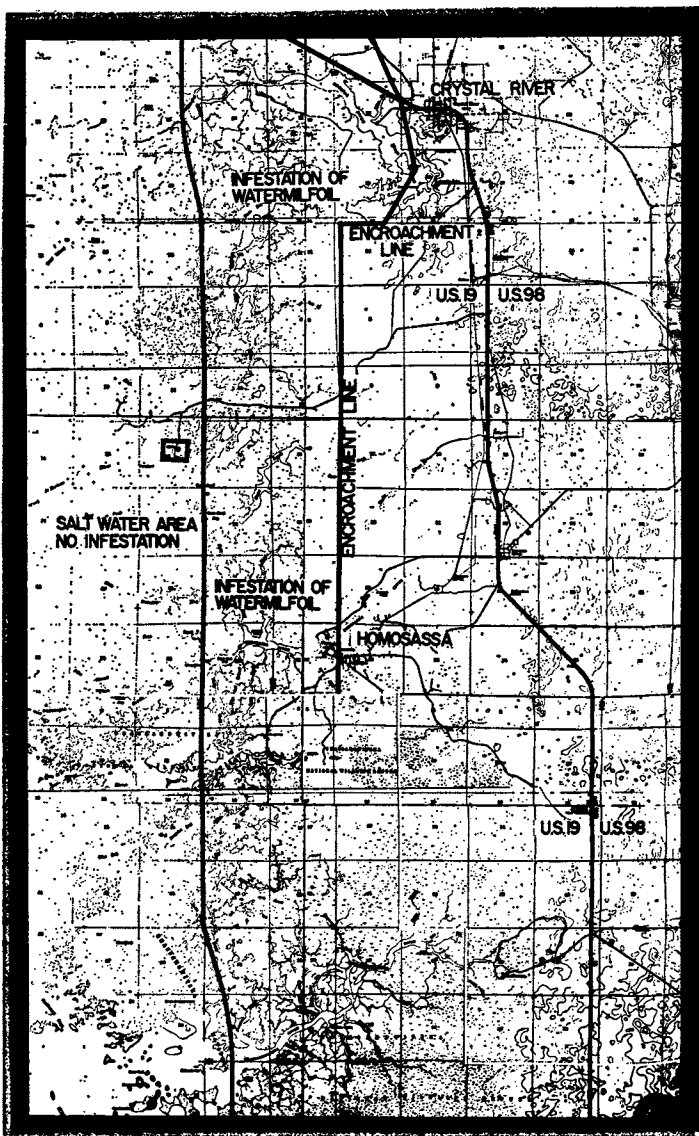
- Crystal River – Treated 172 acres.
Cost per surface acre \$38.21
- Homosassa River – Treated 115 acres.
Cost per surface acre 44.85
- Chassahowitzka River – Treated 30 acres.
Cost per surface acre 26.80

With the changing of the tides and the variation of some areas having tremendous natural spring flow, surface acre cost can only be considered related to parts per million in acre feet to determine approximate material to be used. A 30 day evaluation of the operation showed that we had achieved better than 80% control.

"Operation Clean-Up" proved to be quite exciting. In the succeeding thirty days following this treatment we saw a lot of good things happen in the headwaters of these rivers. The life blood of the waterfront community of Crystal River received new vigor as weeds died and several "For Sale" signs came down on property that had been offered for sale because of the weed infestation. Several new commercial businesses are being planned and real estate developments valued up to two and a half million dollars are going ahead now. Contractors have many new residences under construction. All of this is due to the fact that traffic lanes for boating are open once again.

It is our feeling that except for some small spot treating, that we will not have to go back for our second phase of this operation until early August, and then with a conservative rate of application of herbicides. Certainly this operation had a cost ratio benefit of at least 6 to 1 for dollars spent. The residents and sportsmen in these areas have expressed their gratitude for the efforts put forth by all people involved. "Enthusiasm is the fuel that stokes the engine of success."

So, as this paper indicates, "Who Needs Weeds?" — with proper communication, common sense and the enthusiasm to tackle the problem, we can prove that we don't need them. We will bring these waters back to the people.



Survey of April, 1969 of major encroachment of "Eurasian Water-milfoil" presently confined to Citrus County.