

that Interior is expected to set an example in this government-wide effort. The agencies have been directed to submit for FWPCA review all proposed regulations for water pollution control. This would apply to leases, licenses, and permits issued by the Department of the Interior as well as loans, grants, and contracts.

Current plans now call for control of pollution from all existing Federal installations within five years.

Mr. FULTON. The other point is on the historic use of certain waters. What effect does the historic use of waters have on the clearing up of pollution and waste? For example, on the Musatox you might have a person who would rather have birds, bees, or flowers. To what limits of the historic water doctrine are we bound because some areas may now be industrial with certain customary results of the industrial use of the water?

Dr. WEINBERGER. I will supply that for the record.

(The information requested is as follows:)

The Federal Water Pollution Control Act, in Section 10(a), makes the pollution of interstate or navigable waters, which endangers the health or welfare of any persons, subject to abatement. The historic use of any such waters for a certain purpose or purposes does not as a consequence convey any prescriptive right to pollute. Pollution resulting from the established use of such waters, which endangers the health or welfare of any persons, is fully subject to the abatement authority conferred by the Act.

Mr. DADDARIO. We are running a little behind time so we better speed things up.

Dr. WEINBERGER. Let me just conclude my presentation by referring to figures 2 and 3 which I think are the two most important figures to explain the scientific and technical basis for controlling water pollution.

Figure 2 (p. 194) which is labeled "Effects on Water Use by Pollutants" indicates that for any water pollutant that has an adverse effect on any water use, it is one probably of function of the time of exposure.

Let me consider for a moment and use for example a toxic material. We will consider a metal, copper, and its effect on fish.

The concentration in the water and the time that the fish is exposed to that concentration will produce certain effects. If the level is low enough it may produce no effect. If it is too high, and this would be to the right of the figure, there would be death of the fish. Between no effect and the death, there would be various other detrimental effects, including such things as the inhibition of reproduction, the fish may not be as large, it may actually result in certain behavioral aberrations. These can become quite important if the fish is unable to compete for food.

One of the major research efforts that we have underway is to determine the relationship between specific impurities under various water users. This will end up with a series of curves as illustrated by figure 2.

We must do this, not only for each individual pollutant but for combinations of pollutants. For example, again speaking of fish, and fish turn out to be a much better animal to do research with than man, there is the relationship between a heavy metal and let's say a pesticide or the thermal effects or any other impurity or pollutant going into our stream. But, nonetheless, through research and development we are trying to obtain this kind of information, and we must obtain this information, which indicates the relationship between concentration