

## THE SOCIAL BENEFITS OF NATURAL RESOURCES DEVELOPMENT

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Our hosts suggested that I discuss "The Social Benefits of Natural Resources Development."

### "Social" Benefits Mean What?

A luncheon is no place for definitions. But to focus on this intangible subject, we need ask: "What are 'social benefits'?" Some resource analysts duck the question by saying: "To hell with social benefits! Confine yourself to the economic benefits of water programs; they develop the social benefits."

Do you feel that social benefits exist only through a stream of dollars? If so you have company--Dollars are the only measure of benefits in the benefit-to-cost ratio. So, I could stop this talk with.."Social benefits are to be ignored."

However, the Congress and the Administration thought differently; they did not buy "dollars only." Their Water Resources Planning Act goes beyond economics, it says: "...plans...shall be reviewed for contributions.... in obtaining the Nation's economic and social goals."\* Contributions toward social goals are therefore benefits..the Act does not discriminate between economic and social. Since we have got social benefits into our act -- water development -- let's look at social goals.

### Social Goals -- Results We Want!

Jobs, for example -- In the late 1940's the Nation said: in a law -- we want "conditions to create jobs" for everybody willing to work! Therefore, water projects which create conditions which create jobs - (for people who need them) - contribute to a legally stated National goal. Under the Planning Act, such contributions--jobs and job-training -- from water projects are a value to be reviewed!

Even so, some economists ignore jobs created by water development. They argue: the stimulative effects of water projects are indistinguishable from those of any other employment of resources.\*\*

That is, no matter how Uncle Sam spends his dough, the jobs created and other stimulative effects will be the same..so don't consider them! As presented, that means: \$80 millions to build a multi-purpose dam on the Potomac River should have the same "stimulative effects" as an \$80

\*The term "goals" is used interchangeably with objectives, in this paper, rather than in the Budget sense that objectives are directed towards goals.  
\*\*Report on North Dakota Wetlands, 1969, by Stanford Research Institute.

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million civic center! Do you believe it? How many plants will be erected, how many new products transported, as secondary effects from romping downtown to see Bolshoi Ballet or burlesque at a new civic center?

#### Social Goals, Besides Jobs and Business

For other social goals, how about water projects which: ...save lives -- community as well as individual -- by controlling floods? ...catalyze community plans into actions by providing the essential: assured water supply, during months of low run-off, during years of drouth, for all purposes! ...raise the quality of rivers by providing the water NECESSARY to mix with effluent discharged from modern treatment plant.

Maybe, you don't believe that effluent from modern treatment plant needs an assured water supply either (a) to move effluent to the next guy, or (b) to raise the quality higher than practicable by modern treatment?

If you have not accepted that storage is part of water quality in most river basins, please read carefully the facts on both sides of a paper available here at the podium. It is the paper with a graph, or chart on one side -- the side to be read first.

Would you go for using water development as a base for creating new towns-- as on the shores of Lake Havasu -- to spread out the population? A new Lake? ...How about -- as a social goal -- stabilizing river banks to avoid the streams's cutting new channels -- as nature likes to do?

Besides direct effects on society, such actions and others depend upon water resources can entice people away from centers where man has stifled nature's regenerative powers; water developments do lure people to areas where Nature can work with man for a better environment!

#### Social Goals Stymied

Even if you don't accept all those social goals in terms other than dollars, let us at least assume you agree that the nation pursues conditions to create employment, to provide good communities, to use land well, to care for water resources.

So also the Nation should avoid conditions which work against such pursuits. Therefore, pursuit and avoidance are twins in planning and construction projects for water care. Evaluation of projects should consider the effect of either providing stimulus or avoiding constraint!

Sometimes community plans--sponsored by Federal social programs --- cannot lead to effective actions because of water resource problems. A broad range of Federal-State programs are constrained just because approved water projects are not built! Removal of that constraint becomes the over-riding social and economic goal of the community!

## Quality as a Social Goal

Quality of water -- a Social Goal -- was the Big Issue in water care during 1969. It was a band-wagon issue, laid on with lots of emotion and little balance. The thrust appeared to be at Water Quality in rivers and lakes-- but actually the thrust was at quality of municipal sewage effluent, under techniques on the drawing boards, with the plant operating skills to be on hand. Municipal waste treatment will not of itself, make polluted rivers and lakes fit to swim in!\*

## Quality for man, versus Quality of nature

What sacrifices in daily living will campaigners make for the qualities of water, or the environment, for which they exert pressures?

Last summer, householders campaigning for bringing to life rivers and lakes were helping to kill rivers and lakes by buying high-cleansing detergents (replacing high-foaming detergents). Such detergents are high in phosphates -- as high as 43% -- which contribute to the algal blooms which lead to "dead" lakes, dead rivers, and dead fish. And most waste treatment plants to be built by the \$1 billion sought will NOT remove the phosphates which householders are dumping into the systems.

..Moreover, at a conference on Great Lakes pollution, a marketing authority stated his conclusion - after study - that ladies are going to buy the product which gets clothes cleanest, whether or not it contributes to algal bloom! This is a nice lesson in real action -- spelled without an "X" -- as contrasted with ideas about social preferences. Clean clothes do come before clean water.

Another example of quality for man versus nature's quality: At a public hearing on Air Pollution, an advocate advised that no one in California be allowed to drive an auto of more than 60 HP and 2500 pounds. Asked about his own car, he said "Oh, I drive a 1969 Buick Wildcat!"

We find that in billions of choices millions of people aspire to more products of, or from, natural resources. Among these people are many "reservationists" who are against further use of resources, except that by their aspirations they are resource developers, de facto! For a better tomorrow, people seek products from natural resources -- their private roads to Quality are paved with quantities!

\*"The combining of primary, secondary and tertiary treatment in total represents one of the most modern concepts in sewage treatment. Nevertheless, after completion of the process the effluent would still essentially be sewage and as such would be unsuitable for human consumption without additional treatment. This is primarily due to bacteria and virus contamination and the presence of undesirable inorganics such as chlorides and heavy metals. With suitable dilution it will not have a detrimental effect on the receiving stream." 1969 report by Stevens, Thompson & Runyan, Inc., to Washington County, Oregon

## Balance

Last Fall the Public demanded -- in the environment of a fight for a sound dollar, and with many communities constrained by lack of water -- that the Senate provide \$550 millions more than the House for waste treatment plant. But the House had reported that its Bill would have provided all the funds that more than half the States were prepared to spend in FY 1970 ... it was a balanced proposal.

Had the Public wanted to spend still more for Clean Water, they could have had better balance by funding delayed water development! The House report just mentioned said about water development projects:

...One hundred and thirty-nine projects under construction have been delayed and stretched out!

...On just 23 of those projects, delays will result in estimated cost increases of \$162 millions. Estimated losses in revenue would enlarge the total loss of \$280 millions!

That is only dollar loss -- the total harm reached deeply into social progress. In fact, that harm was so extensive the House used nearly two thousand pages of fine print to report it.

As one example of water quality -- and other social objectives -- stymied for lack of water, I offer you a fact sheet about one water project that not get development dollars, even as the Public pushed upward the funds for waste treatment. It shows how balance -- Quality and Quantity -- is important.

## Quality of water may depend on Quantity

Were Clean Water to be of Higher priority than adequate water (silly, isn't it!), our means for Clean Water should at least be consistent. To direct Federal funds for water quality primarily to waste treatment plant -- while shorting water storage projects eligible in the same appropriation bill -- is inconsistent, and sometimes futile, because: ...in most river basins of the United States\*, "water is needed for mixing with the discharge of effluent from waste treatment plants. Water that carries human and organic wastes undergoes chemical change, even if complete sewage treatment is rendered... Since under present technology additional regulation of flow for all purposes is achieved mainly by surface storage, the BASIC NATIONAL WATER RESOURCES PROGRAM BECOMES, IN EFFECT, A PROGRAM OF RESERVOIRS AND WASTE TREATMENT PLANTS."

## Environmental Quality

Our double cue for care of water -- quantity and quality--may also apply to care of MAN's environment.

\* Report of Resources for the Future to the Senate Select Committee on Water Resources - 1960

About the environment, men advocate a new search for balance in this world, our home. Some seek balance by restricting man's actions these ways:

reserving vast natural resource areas, where only nature can devastate.

Constraining man's appetite for things, so that each man will use less of the products of earth, air, and water.

Slowing man's reproduction of himself, so fewer numbers will strive for use of natural resources.

I take no issue with the proposals--they would enhance some aspects of the quality of nature's environment. But in man's environment, quality is not the same for everybody. For instance: the low man on the consumers' totem pole may see environment like this: He is real tired of his rented, ramshackle shelter; of a shortage of johns; of enjoying neither automatic heat, nor hot water, nor air conditioning. He would like steak, once in a while, and a Buick Wildcat new, rather than a few knocks away from the wrecking yard...For him and others who "have less", quality of environment is in large part quantities of things -- tangibles called consumer goods.

But goods do impact on nature, and in a double-dealing way. First, for acquisition of materials, manufacture, and delivery. Second, in removal and disposal. Thus --- economic goals of some people do clash with social goals of others.

The quantities demanded by consumers comprising the "have-less" population, will -- if supplied -- enlarged the quality problems for the "stop the world" advocate. Elements of society are in conflict...and balance is not being sought.

As more resources are locked up or used to raise quality in nature's environment, the effect on things sought by people needs careful consideration.

In this, let us be careful that a large segment of our people do not sacrifice prospective "goodies" for degrees of restoration -- (and reservation) -- beyond the general ability to enjoy, or even to perceive. Let us look for balance among programs to develop and those to correct.

Let us devise means to use better the recuperative powers of nature, and also the vast lands from which people are moving. And let us recall that achieving "concepts" of quality in nature is but part of the National goal for enhancing the general welfare -- for still more people!

Words complemented by a case study gain more significance, and stay longer with us. Therefore -- as an appendix -- I offer these data about a project for water care. The data do not come from "dam-building" agencies. They are from County officials elected to safeguard their citizens' welfare, and from consultants.

### CONDITIONS

The project lies in northwestern United States; annual rainfall averages fifty inches. But:

- ...only 3% of the run-off occurs during the growing season.
- ...a river which floods houses and barns hip-deep can be carried, at low flow, in a six-inch pipe.
- ...the river valley is not densely settled...nearly half the County is in farms (458 thousand acres; 137 thousand people).
- ...Dairy and other agricultural products are supplied to the city of Portland.
- ...the potential of ground water is minor. Exploration and study indicate plans should not be based on ground water.

### PROBLEMS

- ...the disposal of treated sewage -- and also water supply for new businesses and population growth -- are serious problems because of low river flow in summer.
- ...the obvious measure of storing surface water formed the basis of agreement that the best all-around plan hinges on Federal-State multi-purpose dams. But restraints have held back progress and;
- ...long delays are stopping economic growth, wasting human and natural resources, and antagonizing a critical health problem!

Social  
and  
Economic  
Impacts

- ...There were 12 food-processing plants in the area in the 1940's. Now there are five.
- ...an agri-business firm proposing to encourage orchards and to build processing plants withdrew after finding -- thru expensive drilling and otherwise -- no adequate water supply.
- ...a new secondary sewage treatment plant is prohibited from operating because the river cannot take further treatment wastes.

Few  
Job  
Opportunities  
in the  
Area

- ...The project will provide new opportunities for employment at home so our youth will not be forced to migrate to our already crowded urban centers.
- ...Our high schools graduated 2,500 youth last year. Over 1,100 were thrown into the job market. Over two-thirds by survey would have preferred jobs at home, yet a high percentage had to leave for metropolitan areas to seek jobs.

Reduce  
Unemployment  
--Provide  
Training  
Opportunity

- ...New industries are needed to help provide equal job opportunities for our migrant population so they may become permanent members of our communities. They are rapidly being forced out of agriculture because of mechanization. A social minority of Mexican-Americans are now seeking to make this area their home.

SOCIAL AND ECONOMIC OBJECTIVES

The project provides for municipal and industrial water supplies for five towns and communities located within the watershed.

With the project in operation, production from the area will be an aid in supporting the value of the dollar because it is located near a modern port facility with the opportunity for export to Japan and other countries whose economy is rising.

The project would:

- ....Store winter excess run-off
- ....Aid in controlling floods.
- ....Provide water for municipalities and industry
- ....Provide water for a year-round live stream.
- ....Provide water for irrigation
- ....Will be the basis of a new water-based recreational area.
- ....Create a climate that will generate new jobs
- ....Reverse the degeneration of our environment
- ....Strengthen the economy
- ....Create a more liveable area
- ....Permit the use of waste-treatment plant now prohibited from discharging effluent.

CONCLUSIONS

Local people have made great efforts and strides towards solving local problems. The solutions to problems of environment require big efforts beyond the financial abilities of a community.

The project is an opportunity for our Federal Government to demonstrate that they are, in fact, able to be relevant to today's problems...it is also an opportunity for developing a showcase of Federal-local action in solving a common problem.

Prepared as an Appendix to "The Social Benefits of Natural Resources Development"; Speech delivered to the New Mexico Water Conference, University of New Mexico March 12, 1970

## LOWER MISSISSIPPI RIVER REGION

### FLOW-STORAGE RELATIONSHIP

based on this fact:

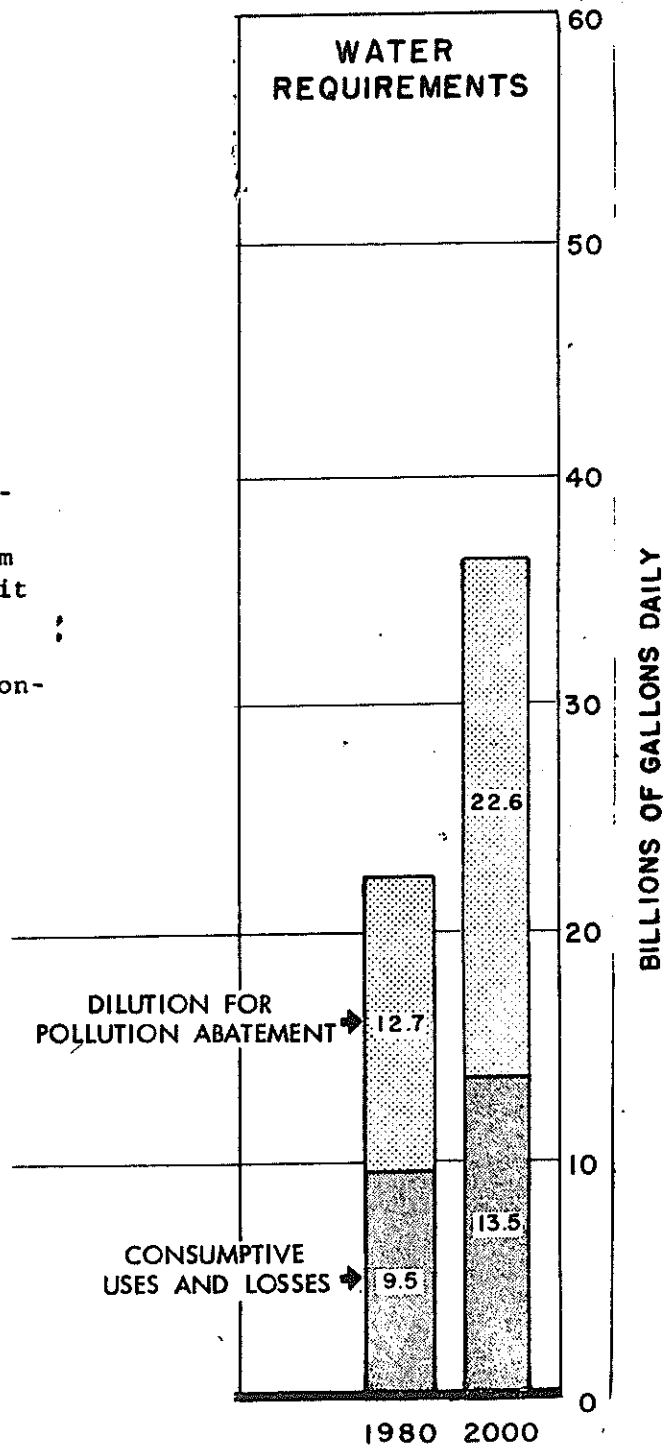
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"..water is needed for mixing with the discharge of effluent from waste treatment plants. Water that carries human and organic wastes undergoes chemical change even if complete sewage treatment is rendered.

"Under present technology of waste treatment, unless the treated sewage effluent can be mixed with water of higher quality, stream quality will deteriorate to the point where it will be incapable of maintaining desirable aquatic life, will be inferior for domestic supply and may detrimentally influence environmental conditions.

\*\* "Several characteristics of our model should be noted at this point. First, by relating surface flow to level of waste treatment, both of these become intrinsic elements of a "water resource program".

"Since under present technology additional regulation of flow for all purposes is achieved mainly by surface storage, the BASIC NATIONAL WATER RESOURCES PROGRAM BECOMES, IN EFFECT, A PROGRAM OF RESERVOIRS AND WASTE-TREATMENT PLANTS."



Data prepared under direction of Resources for the Future, for the Senate Select Committee on National Water Resources; 1960.