

By

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"We travel together, passengers on a little space-ship; dependent on its vulnerable reserve of air and soil; all committed for our safety to its security and peace; preserved from annihilation only by the care, the work, and the love we give to our craft."

Adlai Stevenson

The 1969 Federal, and in California, the 1970 State Legislation made mandatory Environmental Impact Statements (E.I.S.) on all public work projects. However, this was not deemed sufficiently inclusive by those "environmentally" concerned citizens and by court litigation in 1972 they won a decision of the California Supreme Court "Friends of Mammoth vs. Board of Supervisors of Mono County" that imposed the requirement that public agencies prepare an E.I.S. on all private, as well as public, projects having significant effect on the environment "for which a permit or other similar entitlement is required".

"Thus it seems that the "Friends" of Mammoth successfully pursuing this case have generated a potential stack of paper which will require, both in its production and eventual disposal, an environmental impact a thousand times greater than the project they temporarily frustrated" (3).

The Environment is a subject of close interest and concern to members of the Western Snow Conference. It was that interest that originally brought me into the field of snow surveying and in turn into contact with the W.S.C. Most of its members are environmentally concerned and have been in the forefront of the battle for a better environment.

Most here would share with me the conviction that without construction of reservoirs to better regulate the vagaries of nature, the environment would have been the loser - and those who have been privileged to read some of the project reports for dams built during the last 30 years have appreciation for the environmental concern of the engineers in their planning and project reports. It was with their efforts that the "non-essential" features of multipurpose reservoir came into existence, secondary benefits to the primary purposes of the projects.

The interrelationship of man, water and his environment were best brought home to me by an engineering report published more than fifty years ago:

"Man, in common with all other life on this earth, is born, passes his entire existence and dies without ever emerging from water in which he is surrounded ---, this fluid fills the lower depressions of the earth's surface in the liquid form but above the sea and the land, it wraps the entire globe in an all pervailing sheath of water-vapor that mingles with the atmosphere. --- In the cold of the polar regions this water blanket is rigid and solid, and mantles the earth with ice floes which attain the dimensions of continents." (4)

But although environmental knowledge and concern had been well demonstrated by engineers, the economic price for maintaining or improving the environment often precluded the necessary action. Pollution, in its many forms, had impacted upon too many facets of

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human life (as well as nature's) and an awakening of the public's concern resulted. Candidates for public office realized "environmental concern" were the magic words for voter approval and out did themselves in the proposing of "controls" to assure protection of the environment, and even more hopefully, its improvement.

The National Environmental Protection Act of 1969 referred to as NEPA, and the California Environmental Quality Act of 1970, referred to as CEQA, outlined (or designated agencies to formulate) guidelines for preparation of environmental impact statements. Thus, thousands of acres of forests a year were doomed for use in pulp mills just to meet the paper requirements of the acts.

Procedures for evaluating environmental impact are not keyed to the size of the proposed project. A minor project may well require as much detail in the preparation of the EIS as would be required for a major project.

A number of agencies have prepared suggestions, procedures and/or outlines for preparing EIS statements. One of the more interesting, "A Procedure for Evaluating Environmental Impact" (5) included the form for a Matrix evaluation of a project allowing for 85 inputs on the vertical scale of Environment Characteristics and Conditions and 108 inputs on the horizontal scale of actions which may cause environmental impact. Each of these squares may involve an evaluation with 100 possible shadings of weight. This results in 9,000 plus spaces for entering data which can have a numerical value of 100 various combinations. This form is suggested for use in evaluating each of the separate alternatives for a given project and each of the alternatives must in turn be considered in varying size. Thus, if we would assume that due consideration is given for three sizes of each alternative for a project where 10 different alternatives are considered and the numerical value determined for the possible 100 different combinations of weight, and each such weighing would involve only one minute's time (a very short time allowance if due and knowledgeable consideration are given to each of the possible variations), and each of the 9,000 plus blocks are to be completed, there would be 2.5 man years of calculation prior to the preparation of the text of the environmental impact assessment. (This time calculation does not allow for coffee or rest room breaks, which are substantial in today's environment).

It is then suggested that the text include:

"- - - a discussion of individual boxes marked with the larger numerical values for magnitude and importance. Additionally, those columns which cause a large number of actions to be marked, regardless of their numerical values, should be discussed in detail. Likewise, those elements of the environment (rows) which have relatively large numbers of boxes marked, should be addressed. The discussion of these items should cover the following points - -;

- (i) a description of the proposed action including information and technical data adequate to permit careful assessment of impact.
- (ii) the probable impact of the proposed action on the environment
- (iii) any probable adverse environmental effects which cannot be avoided
- (iv) alternatives to the proposed action
- (v) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity
- (vi) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented, and
- (vii) where appropriate, a discussion of problems and objections raised by other Federal, State, and local agencies and by private organizations and individuals in the review process and the disposition of the issues involved."

If one would assume that the text for a given project would involve only three times as much preparation as the Matrix computation, the total time for the EIS of the project would involve 10 plus man years of effort. However, due to the need for reducing the total time necessary for preparing an EIS, environmental characteristics and conditions must be evaluated in terms of physical and chemical characteristics, biological conditions and ecological relationships which involves separate scientific disciplines, the man hour requirements will be increased. The experts in the various fields and other members of the EIS preparation team must all have a fundamental understanding of the proposed project, its nine possible alternatives and the three different sizings of each alternative. So the man-hours requirements will probably double.

But once the environmental impact statement has been prepared, copies must then be routed to all other public agencies that would be involved or impacted by the proposed construction, and a waiting period of 30 days would be required before public hearings can be held for input by interested parties. Following the public hearings, it then becomes necessary for the preparer of the EIS to review the input received, and then to adjust and/or modify the project, if necessary, and prepare a final environmental impact report. This, in turn, must be published and another 30-day waiting period transpire before another public hearing be held for interested parties to make further comment. After this, the go ahead may be given to the start of the proposed project.

Even after start of construction, if any particular individual felt that his comments had not been given due consideration, he would then have the right of appeal to the courts for remedy, and this usually is in the form of securing an injunction to impede further construction.

Examples are all too readily available. For a very small filing fee, advanced by the "concerned citizen", injunctions have been granted even though the building permit had been issued months previously and construction had been advanced on projects involving many dollars of expenditure. Thanks to court action no further advancement of the work can be done until the Court either lifts the injunction or review by the courts has been completed. Hopefully, the projects may finally receive favorable approval by the Courts. However, those paying for the project will never be reimbursed for the cost occasioned by the delay. I doubt if the individual who has successfully stalled a project will be truly concerned about those losses. Rather, I would assume that such an individual would find that the first calendar dates for the court hearing are inconvenient to his schedule and would promote delays that would extend the court processing to two or three years at a minimum.

Those aware of the tactics of that segment of the environmentally concerned will realize that this procedure for bankrupting new developments is a weapon of devastating potential. Unfortunately, such a weapon has been provided without any reasonable restraint having been placed on its use.

Other procedures have been advanced by those dealing with water quality management planning. The booklet "Environmental Assessments For Effective Water Quality Management"(6) includes consideration of environmental effect of construction practices used in the building of a treatment plant. The accompanying figure (Plate 1) shows the spider web of inter-relationships associated with proposed construction activities. If this much consideration is given to the construction activities, and means for stalling a project are not limited by legislation, how easy it will be to select the "do nothing" alternative!

I personally do not consider the "do nothing" approach is an answer to meeting the ever increasing demands of a population that still continues to grow and where higher living standards are desired. But the "do nothing" approach can also stall a proposed improvement to clean up pollution that often results from the vagaries of nature. Salt water during the low flows of dry years formerly intruded much further into the Sacramento-San Joaquin River deltas than is the case today. But thanks to construction prior to the EIS requirements, that pollution has been allivated. All of us who have watched (and some of us have marched behind) horses in a parade, know that nature does not always provide its own methods for improving the environment! And hopefully - the sanitary forces will not be delayed while some character that thinks horse droppings should remain in the street undisturbed processes the matter through the Courts.

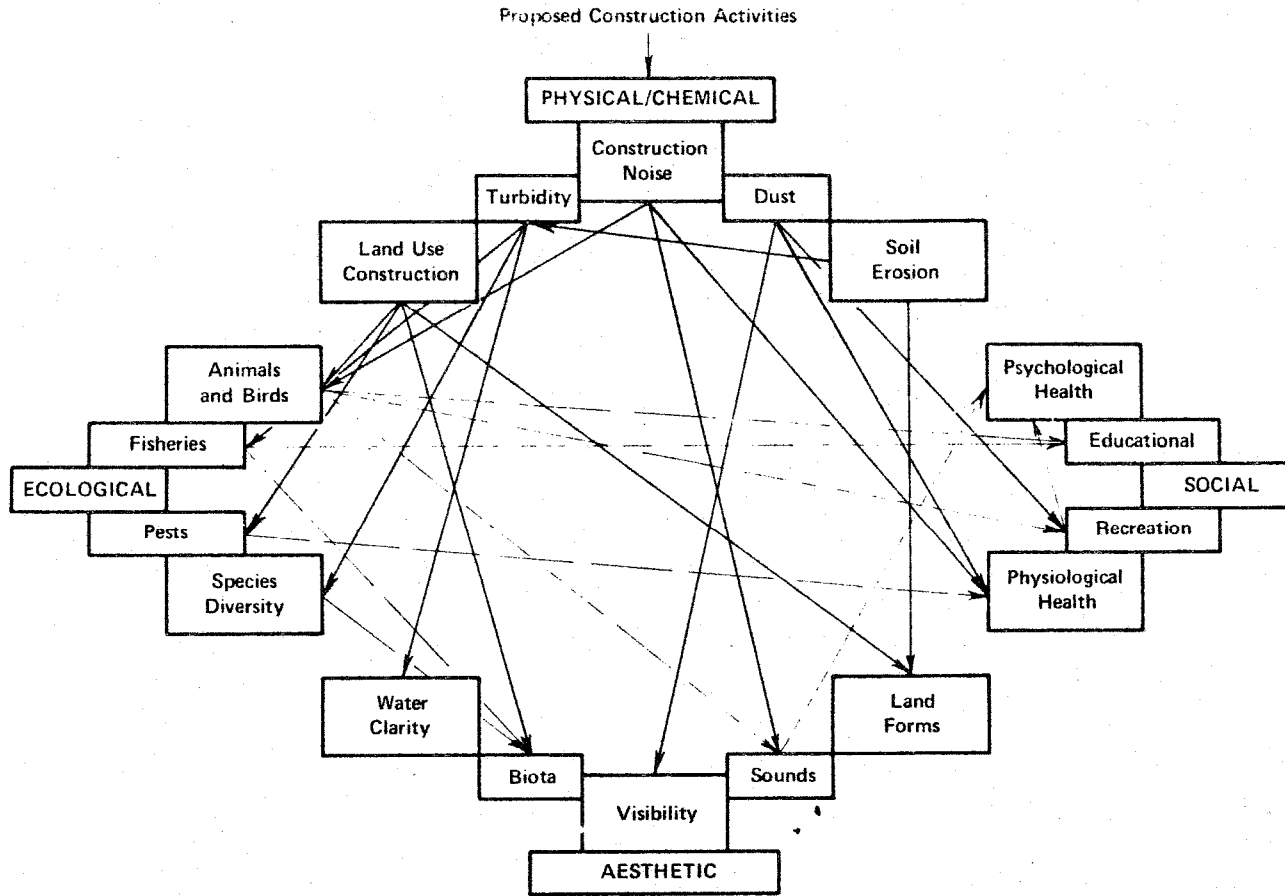


FIGURE 3. ENVIRONMENTAL IMPACTS AND INTERRELATIONSHIPS ASSOCIATED WITH PROPOSED CONSTRUCTION ACTIVITIES RESULTING FROM WATER QUALITY MANAGEMENT PLANS

PLATE 1

Taken from "Environmental Assessments For Effective Water Quality Management Planning" -- Published by the U. S. Environmental Protection Agency, April 1972.

It is often stated that the pendulum swings both ways. The environmental kick has driven the pendulum far too far past center. There is need for a rational approach. The time has come for each of us to let our legislators know that the way to a better environment is not to be made by erecting barriers to progress.

It is beyond the time limitation allotted for this presentation to speak of the many examples where the pendulum appears to have swung too far - and I realize many of you would question whether that is the case, which only proves the difficult era that we are entering.

William Ruckelshaus, the administrator of the U. S. Environmental Protection Agency in an address last October 7 spoke of the "explicit intent of the National Environmental Policy Act" that "made instant hash of California building permit practices". He advocates that "the states - - - - be empowered to override local government whenever its land-use decisions would have more than local significance". He states this "- - - - does recognize that the great majority of such decisions are of purely local character and therefore should be made in the community".

This definition reminds me of the husband on his golden wedding anniversary explaining why he and his wife had never had an argument. "We agreed that she would make all the minor decisions and I would make all the major decisions, and this has worked perfectly - possibly because we've never had need for a major decision." "More than local significance" is built into every issue - when one considers the all inclusiveness of the term Environment. Land, air, water, minerals, flora, fauna, ambient noise, objects of historic or aesthetic significance are all included. Mitigating measures and growth inducing impact are required in the California (CEQA) reports and any conservationist would quickly point out that these are issues of more than "local significance".

The California coastal initiative passed in November, 1972 illustrates how far the pendulum can swing and has swung. There are numerous illustrations of how people who have paid taxes for years on their lot, reserved for their dream house of the future, that now cannot build their dream house by the sea thanks to "a moratorium on new water hookups"(7) etc.

Those using the E.I.S. as a means of implementing their pet theories cannot be bothered by giving approval to the alternatives - they'll fight those when they are proposed. Thus, they would kill each proposal in turn. An end to urban sprawl and a limit on the use of the automobile would indicate a vertical plan for our cities, but no - high rise is out (8). The Sierra Club for years opposed hydro-electric projects - would harness the rivers, opposed conventional thermal plants (fossil and atomic fueled) too dirty, and when pressed for alternatives, pointed out that geothermal plants had not been fully considered. But when application was made for a geothermal license, there again was the Sierra Club to oppose the proposal.

The recent words of a federal judge best sums up this practice:

"The Court is concerned with the failure of plaintiffs, which is assumed to be inadvertent, to make a complete disclosure of their position with respect to alternate sources of supply. Plaintiffs point to the Auburn-Folsom South Project as one such alternative (to the New Melones Project) while they have both publicly opposed and sued to enjoin construction of that project and, in so opposing, have offered the New Melones Project as an alternate source of supply."

"However, before this court they did not disclose that they sued to enjoin construction of the Auburn-Folsom South Project nor did they disclose in their opposition to the Auburn-Folsom South Project that they also sued to enjoin the New Melones Project. The Court disapproves the practice in which one project is played against another, without complete disclosure of plaintiff's opposition to both projects. The Court does not question plaintiffs' good faith in opposing both projects, only their apparent inadvertent failure to so disclose."(9)

Recently, David Brower, President of the "Friends of the Earth" wrote California Governor Reagan suggesting that E.I.S. be required on the California Water Project, a 3 billion dollar project now 97% complete. He advocated a construction moratorium "until the E.I.S. had been fully processed". Fortunately, the Governor saw the game plan - first the public hearing and then the Court intervention - and did not go along.

Congress now seems to have second thoughts about the delay built into NEPA. The growing energy crisis and inability to get the Alaskan pipe line under construction has threatened to awake too many of our citizens who have been sleeping through this period of awakening of "Environmental Awareness". And it is the citizen that must be considered in the long term. Deprived of too many of his presently accepted conveniences of life - unrestricted use of the automobile, electricity at any time when the switch is thrown, are two instances close to the heart of most Americans, and he will revise the rules.

In 210 B. C., Petronius Arbitrator wrote, "We trained hard - - - but every time we were beginning to form up into teams, we would be reorganized. I was to learn later in life that we tend to meet any new situation by reorganizing - - - and a wonderful method it can be for creating the illusion of progress while producing confusion, inefficiency, and demoralization."

The confusion is here - it was brought home to me by the concerned environmentalist speaking adverse to the S.S.T. program. He mentioned something about the atmospheric or stratospheric pollution that would cause increased temperature to the planet earth. But I couldn't see his point through the cigar smoke he was allowing to drift into my eyes.

Which brings me to the point - We all have our environmental concerns. Competition is great among us all; considering our pet concern - the other persons is only superficial. Governmental boards and agencies, local, state, and federal join in this competition for the exercise of control and the expansion of their delegated powers, and unfortunately, everybody wants to get in the act!

This helps to explain why I chose the word "Omniscient" as a part of my title. "All knowledgeable" is a broad term. It requires broad scope of input - yes, and also of purpose. Man is capable of much that he has not been allowed to practice up till this time, if only because of the past lack of concern, which prevented the financing of environmentally necessary phases of past progress. But man can control his environment, as demonstrated by his progress to the moon, made in a totally man-made environment. Not alone can man now make long strides in cleaning up the environment, but given the funding, he can continue towards achieving ever higher standards as his knowledge grows. Thus, "Omniscient" in the title of this paper was chosen to convey that continuing drive towards a better understanding of our environment and that we will never be able to smugly rest as has happened in the past, while our progress is marked by unwarranted pollution.

I only partially share Rachel Carson's "the control of nature is a phrase conceived in arrogance, born of the Neanderthal age of biology and philosophy, when it was supposed that nature exists for the convenience of man". I do believe that man has come a long way and that his present environmental concern is a measure of that progress. And that progress will continue towards an infinitely distant goal.

"We travel together, passengers on a little spaceship; dependent on its vulnerable reserve of air and soil; all committed for our safety to its security and peace; preserved from annihilation only by the care, the work, and love we give to our craft."

I would suggest that the passengers aboard our craft not be allowed to impede the crew from performing its vital function, and that the spaceship be kept pointed in the direction of progress in keeping with the majority desire of its passengers, that we may all reach our goal of a better life for us, our children, and our children's children. Actually, isn't it their environment that we're all concerned about?

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