

# ADVISING LOCAL ELECTED OFFICIALS IN WATER RESOURCES ISSUES: USING KNOWLEDGE IN "SPEAKING TRUTH TO POWER"

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**Abstract.** Despite the increasing amount of information available to those advising decision-makers about environmental issues, there are many confounding obstacles to its effective application. Likewise, we are all aware of seemingly obvious solutions to conflicts, such as those arising between developers and environmental interests, which are neglected or scorned because of overriding political interests, whether or not these are accurately perceived by those having the authority to determine how resources are used. In this paper the author discusses various pitfalls and dilemmas commonly encountered in the practice of providing environmental consultation to local elected officials, and recommends analytical devices and strategic practices for reducing or avoiding these problems.

## ORIGINS AND OBJECTIVES

The author's observations and opinions are derived from nearly 20 years' experience in various aspects of local and regional planning. Much of this work has involved both the interpretation of technical information and its attempted use in advising local government officials.

Unfortunately, its lessons have been taught more by the failure of rationality than through successful and timely decisions, all too often lacking in the public sector.

Before attempting to provide advice of any kind, it is worthwhile to consider the objectives of the various parties involved in the issues at hand. The prevailing concern of local elected officials is usually the political consequence of the position taken on a given issue. Openly identifying and evaluating these political factors is rare. Rather, positions taken are often implicitly dominated by unrelated or irrelevant apprehensions and alliances. Those supporting or opposing a particular position -- permit applicants, landowners, local residents, business owners, etc. -- each have their own objectives, which upon further analysis may not be as conflicting (or as complementary) as they first appear. Sorting out the causes and consequences of proposed actions affecting water resources such as land development, road construction or "improvement," or new regulatory measures may be a very complex task. In any case, at least rudimentary assessment must be done in order to reduce avoidable conflicts created by misinformation, hidden agendas, or personalities (e.g., past scores to settle), and so forth.

Clearly, the primary objective of providing advice is to reduce uncertainty, contributing to the creation of order out of chaos. Improving the predictability, reliability, and timing of actions needed to lead toward desired outcomes is fundamental to the

professional's role in advising decisionmakers. The result of effective consultation will be to reduce long-term costs with minimum exposure to short-term risks, however "costs" and "risks" may be defined. Above all, effective advice must be presented in the most constructive, least threatening manner possible -- which is the crux of the challenge in ensuring appropriate use of information within a political context. Because of this, one of the most important roles for the environmental professional may be as a mediator, helping to disentangle complex concerns, thereby reducing the decision at hand to choices among clearly understandable alternatives, each with identifiable known or probable consequences.

## OBSTACLES

In addition to innumerable forms of political conflicts, environmental issues are rife with other sources of misinformation, which can be thought of as variations on the notion that "Truth is elusive." And the more complex the physical, social, economic, and cultural context of the issue in question, the more elusive truth becomes. For one thing, current science itself may be anecdotal or inconclusive, leaving concerned parties in doubt about the correct choice, or even lacking a clear understanding of what the alternatives are.

### **Inconclusiveness Undermines Credibility**

Whenever there is "reasonable doubt" about the environmental consequences of a proposed action, there will likely be at least some interest in ignoring advice from those who speak with some credibility about environmental concerns. Even if such experts suggest that there are strong indications of significant long-term costs (whether scenic/aesthetic, economic, or health related), there may be overwhelming support for the proposed action because of perceived short-term benefits.

One major reason for the inconclusiveness of environmental science is the complex and sometimes counter-intuitive nature of cumulative and interactive effects of multiple activities over time, including attempts to intervene by mitigating past environmental damage. Drainage systems, retention and detention ponds, stormwater collection systems, and other engineering devices conceived as a means of solving one problem, usually within a limited area, may, over time, create still greater problems, often with a broader spatial and temporal distribution. Use of increasingly complex technology in analyzing or mitigating environmental problems may also reduce the level of understanding and credibility of proposed corrections or

regulatory prohibitions. This is especially true if the proposed approaches, in effect, can be argued to pose unprecedented threats to prevailing interests such as property or development rights. Of course, perceived threats are typically more likely when applying new technologies if only because there is no history of their legal, economic, or distributional effects on various stakeholders -- e.g., fear of the unknown.

### **Commitment to Obsolete Investments**

Similarly, as technology changes, markets and related "sunk costs" in marginally efficient infrastructure may result in irrational decisions affecting resources. For example, we are all well aware of the "runaway effects" of motorized transportation and the vast network of highways required to support it. Planning literature is replete with case studies of the unpredicted, yet often rather predictable, consequences of highways in bringing undesired changes in land use, air pollution, destruction of farm land, forests, and open space, and the virtual "grid lock" created by attempts to accommodate ever larger volumes of traffic. Similar consequences may result from premature rezonings and construction of water and sewer systems intended to serve future needs, thereby unwittingly triggering rapid generation of markets which quickly absorb many years worth of capacity at previous growth rates.

### **Circumvention of Controversial Implications**

Inherent to these kinds of problems is often a failure to accurately account for the true costs of a given course of action and to artificially constrain the range of analysis used to support resource policies and related decisions. A noteworthy example appeared in a recent paper released by the Georgia Environmental Protection Division (EPD) which outlined three basic management alternatives for the Floridan aquifer. The first two alternatives proposed a reduction in the rate of water withdrawal, differing mainly in how the burden of conservation is to be distributed.

The third alternative, entitled the "rational use approach," presented an arrangement for essentially mining the aquifer until the additional costs of treating the increasingly salt-contaminated water exceeds the benefits of using it, compared with costs of using other sources, primarily surface water. What the paper failed to explain was that in the process of reaching this point of trade-off, the Floridan aquifer may thereby be permanently damaged, creating, in effect, infinite costs, for which, logically, there are no reasonably proportional benefits. Because this alternative included the creation of a trust fund supported by user fees applied to Floridan water withdrawals, which would subsidize the infrastructure costs of converting to surface water, it appealed to those whose primary concern in the issue is the "hardware" cost. Since no warning of the environmental consequences was given, some readers were naively led to conclude that this was the best solution to managing the aquifer.

The ground water paper's conspicuous absence of important information about consequences in the presentation of management alternatives suggests another common problem -- the avoidance of unwanted facts. If facts or overwhelming expert opinion would lead objective parties away from otherwise

preferred choices or toward greater controversy, decision makers may ignore or suppress such information. This is the institutional equivalent of "What they don't know won't hurt them." If unwanted opinions or facts surface, they may be discredited by conflicting opinion or criticism of the sources or methods used. Those providing such information should be prepared to defend their sources and methods against attacks resulting from this phenomenon.

### **Empty Promises and Inadequate Authority**

There are two additional tendencies related to institutional processes applied in managing resources which may subtly create or prolong problems in trying to resolve environmental issues. First is what may be called "the sound-bite barrier," the tendency to substitute words or other artifices for actions. There have been many instances where the existence of an institutional pretext for addressing an identified problem has prevented more effective action from being taken. It makes little difference if the pretext is intended to be a ruse (usually as a political expedient) or if, with the best of intentions, there is a defacto effect caused by inadequate or over-compromised solutions. This pretext may be in the form of a new organization or agency, a piece of legislation, a plan or strategy, or merely a study or public statement intended to address the issue at hand.

Congress and other legislative bodies, as well as both public and private executive administrations, have often been cited for committing this error, usually because of studying a problem, passing a bill, or creating an agency as a means to appease public concern about an issue without producing any real results. It may be years later before an objective assessment or catastrophic event refocuses public attention on the matter, bringing the realization that the original problem was never solved or even significantly affected. Worse still, because such phantom solutions do little or nothing to mitigate circumstances while distorting public perception of the problem in question and what is being done about it, they may contribute to environmental conditions becoming far more severe. This could be said of Georgia's pretense to meet the federal requirements of the Clean Water Act for many years while failing to make significant progress toward the appropriate criteria.

Finally, the institutional entity charged with the task of resolving water quality problems may not have either the authority or the resources needed-- that is, the scale of the problem may exceed the capacity or jurisdiction of the organization. Local governments' role in enforcing the Soil Erosion & Sedimentation Act regulations is often an example of a failure caused by inadequate resources applied to the task. Similarly, state planning requirements under the Georgia constitution are inherently limited in the implementation mandates imposed on local government because of "home rule" provisions, revealing the source of a commonly discussed frustration caused by the failure to use local comprehensive plans. Lingering doubts about the relevance of the Part 5 Environmental Planning Criteria are also caused by this legal limitation.

TIMING

Everyone is aware of the importance of timing in human events-- political and scientific history, drama, and reports of business fortunes (their accumulation and loss) are full of examples. Intervention by environmental professionals in decision making is no exception. Generally, the matter can be reduced to intervening early enough to be pre-emptive (and therefore effective), but late enough so that uncertainty is reduced or risk-taking motivation elevated to compel majority support of the proposed action(s). The most successful programs and projects are those which have been introduced and promoted at a time when either individuals having authority or those influencing the decisionmakers (their constituencies) were ready to accept recommended initiatives. Conversely, planners, environmental advisors, and public administrators have all experienced cases where a good study or plan fails to be used to support effective action because the timing is wrong.

To some extent perceptive professionals can increase their effectiveness by observing various factors which may influence the appropriateness of timing. Election cycles, regional and national events, and seemingly unrelated political affiliations can present unique timing advantages.

## VISION AND VALUATION

No matter what the issue or the nature of one's involvement, it is wise to periodically review objectives, and if necessary, revise them based upon new information or insights. For instance, the original scope of a problem's definition may be too large or too restricted to ensure intended results. Moreover, initial attempts to structure an approach to studying an issue or implementing solutions may prove to be either too fragmented or too monolithic to be effective. For example, the trend in watershed studies and watershed-wide planning is a result of the increasing recognition of the limitations of piecemeal approaches, especially as the focus has shifted from point-source to non-point-source pollution. In spite of this trend and its justifications, there still may be instances where prevailing issues of legal control and regulatory authority, or simply public support, may suggest a smaller domain for a particular study or project.

### Images, Messages, and Motives

It is also recommended that environmental professionals continually ask themselves about their credibility-- how their motives, methods, and advice are perceived by various parties vital to their success. No matter how objective and rationally complete an advisor's arguments, these may be rejected or underrated for reasons that are far more subjective. For example, by appearing to be excessively impassioned or overzealous, regardless the merits of the position, one can undermine his/her own objectives. Further, selective use of terminology and local examples (of past problems and/or solutions) can be crucial to convincing others in successfully forging a consensus supporting recommendations.

In addition to avoiding unnecessarily technical terms, one should deliberately associate recommendations being made with benefits and costs that are difficult to challenge. For example, rather than arguing in favor of a position or action on the basis of "protecting the environment"

or "reducing risks to endangered species" (no matter how legitimate these concerns may be), it is usually more useful to speak in terms of improving factors affecting human health. Even if data are incomplete or examples are anecdotal, most audiences can relate more readily to problems of public health than to environmental issues isolated from their human consequences.

Similarly, the economic and fiscal (taxing) effects of recommendations may often matter far more to the interest groups involved in an issue than non-market costs and benefits. To the greatest extent possible, professionals are advised to analyze relationships between environmental problems and economic trends and risks. As the service economy continues to outpace growth in the production of material goods, the value of scenic and historic resources, water and air quality, and other measures of "quality of life" have become vital to many economic decisions and business opportunities. These should be thoroughly investigated and explicitly evaluated in presenting reasons for supporting recommendations.

### Distribution of Consequences

Other dimensions of values attributed to environmental policies, programs, and projects should also be kept in mind. Priorities and outcomes should be assessed at least in part on their distributional effects. By "distributional" I mean not only spatially-- such as downstream consequences of activities affecting water resources-- but also temporal and socio-economic effects. For example, one of the most common reasons for deferring actions to control or eliminate sources of environmental degradation is that there are significant short-term costs, which are often of far greater concern than long-term benefits, no matter how great. Those who make decisions in the public interest may reason that because benefits may be some time in coming, it is not in their political interest to risk exposure to criticism for supporting short-term expenditures. To some extent this inertia can be overcome by convincing key interest groups that the future is quickly upon us and that the costs of mitigation often rise exponentially over time-- meaning that the sooner corrective or pre-emptive action is taken, the less it will cost. Again, costs should be carefully examined for health and economic consequences, too.

Socio-economic effects of a given course of action may be more subtle but can be crucial in winning support. If convincing arguments can be made that other alternatives for addressing an issue, including doing nothing, will impose disproportionate economic or health risks on a certain segment of the population, recommendations may win greater support on the basis of "environmental justice" issues. If the at-risk groups are politically weak, case law may have to be referenced as a means to persuade reluctant decision-makers that "doing the right thing" is in their best interest, if only because of large legal settlement costs and "bad press" when principles alone are not enough to convince them.

## TRIAGE AND RISK ASSESSMENT

At various stages in the preparation and presentation of environmental analysis, it is often advisable to perform triage, a

term and concept derived from emergency treatment of victims of accident and battle. Under this approach, the analyst and those advising him/her should assess levels of urgency, importance, and risk applicable to the situation and its resolution. For instance, some mitigating intervention may be needed immediately, without which unacceptable risk may be likely, as in the case of waste or chemical containment following a spill or discovery of a hazardous material site. Certain components of the problem may require further analysis, which should be provided when there is no significant additional risk exposure, even though key factors in the situation are considered extremely important. In such cases, the additional time used for data collection and analysis may produce advantages of accuracy and reliability in recommendations which far outweigh any costs encountered in the interim. Costs and benefits, no matter how crudely estimated because of time constraints, should encompass all relevant dimensions-- physical (including chemical and biological), social, political, economic, health, quality-of-life, etc.

### Differentiating And Rationalizing Aspects of Risk

When time is available to perform more exhaustive analysis of the problem and structuring alternative responses, certain aspects of risk should be evaluated more completely. Unfortunately, in many instances risk cannot be eliminated or even reduced to a "comfortable" level-- often because of inconclusive data describing cumulative and interactive effects of many parameters affecting the problem under review. The environmental analyst must be prepared to accept risk, since it may be inevitable and, further, to structure the proposed recommendations - at least in part- on the basis of making unavoidable risks acceptable to decisionmakers.

Many planners and other environmental professionals seem to be reluctant to deal with risk and even more hesitant to take calculated risks in exercising their judgment in advising others. Since there are few instances in environmental planning and management when risk can be ignored, whether these are part of the problem or part of the solution (or both), I urge fellow professionals to embrace risk as a fundamental characteristic of the problems they analyze.

Conveying the inevitability of risk to those who must suffer public scrutiny in making decisions can be difficult, especially in a politically charged setting. Acceptance of calculated risk may involve both objective and rational aspects mixed with intuitive and subjective factors. To the extent that the environmental professional can do so, both types of judgment should be solicited. Beyond the more obvious cost/benefits analysis of identified alternatives, value-laden associative factors should be thoroughly considered. For instance, recent local or regional issues related to use of public funds, protection of community character, promotion of economic opportunities, or providing overdue help to disenfranchised groups may considerably influence the outcome of decisions affecting environmental resources.

As part of the strategy used in considering risk, it is advisable to openly recognize the approximate or inconclusive nature of what is known. Rather than jeopardizing the acceptance of a position being advocated, this may contribute to the credibility of the professional who presents it. The approximate costs of

gaining greater reliability through additional data gathering and research should be determined if it is likely that this will be considered by the clients. Most importantly, risks that are already being encountered due to current circumstances (i.e., degraded resources, increasing exposure to contaminants in surface or ground water, sensitive ecosystems threatened by continuing development, etc.) may far exceed risks introduced by corrective measures having calculated unknowns.

Another facet of risk assessment and risk-taking is that of reversibility, i.e., whether a given course of action has effects which can be readily corrected. The most common trade-off in this regard is the known and controllable cost of regulation and enforcement compared with the often rapidly increasing cost of resource depletion, degradation, or destruction. If it can be convincingly argued that, without intervention, current conditions or trends will result in unacceptable costs, proposed actions may seem far more acceptable.

### CONCLUSION

There are innumerable pitfalls and obstacles to the appropriate, rational use of information in making decisions affecting water resources. Because of the convoluted nature of the institutional and political settings in which decisions are made, as well as the complexity of environmental systems, truth is often elusive, at least partly subjective, and strongly influenced by values associated -- justifiably or not -- with alternative courses of action. Among the most important functions of the environmental professional in advising the public and its elected representatives are to (1) clarify understanding about current conditions, (2) identify and assess probable consequences of known alternatives, and (3) present well-reasoned rationale for recommended initiatives. Inherent in every stage of analysis is the importance of recognizing that knowledge is a social and cultural construct, and that to be effectively applied, information must become knowledge, which can be achieved, in part, through conscious, strategic efforts.

Equally essential is the identification and assessment of risk, both in problem/issue evaluation and in structuring, presenting, and promoting recommendations for corrective action. Risk must be addressed not only in terms of environmental factors within the physical boundaries of the problem being analyzed, but also in terms of the social, economic, political, and institutional factors bearing on the perception of the problem and its solution(s). Moreover, risk may be a factor in shaping the strategy and role of the environmental professional as advocate. Careful assessment of such risks and their consequences are often fundamental to the successful transformation of information into knowledge in "speaking truth to power."

### LITERATURE CITED

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