Productive Uses of Environmental Data (Newsletter)*

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The relationship between a company requiring environmental permits and environmental regulators is equivalent to that of a prospective house buyer and a real estate agent. Until the early 1990s all real estate agents and brokers were required by statute to represent only the seller's interests; most still are. This means a buyer has to be aware of the agent's agenda (get more money for the seller and his commission) and act to protect his interests.

Like the real estate agent representing the seller's interest, the regulator represents the state's interest, not yours. The state's interest in water quality is commonly determined by comparing single constituent concentrations to a maximum concentration limit (MCL). This simplistic approach is scientifically and statistically incorrect and does not accurately assess a project's role in the environment, or whether it adversely impacts a specific designated beneficial use. Because the regulator's interests are not aligned with the permittee's best interests, the latter's should be protected by using all available environmental data to define inherent natural variability and whether adverse project impacts can be identified. Analyzing all environmental data is one way to make productive use of these data for compliance reporting.

Permit application approvals, especially for NEPA documents, can require very long times (a decade is not unusual) and cost millions of dollars. Environmental impact assessments include comprehensive descriptions of existing environments: natural, economic, and social. Natural environment components are highly complex and interact in multiple ways. It is understandable for decision-makers to want a summarizing number that can be compared to a threshold value. But, there is no single number that validly quantitatively summarizes and characterizes the complexities of natural ecosystems and their variabilities at different temporal and spatial scales. Hence, the application consideration process is long and expensive.

Permit application review time and expense could be decreased by appropriate analysis of historical environmental data collected from mining districts or the entire state. These data are highly productive when used to set the project's environment in a historical context. Comparing the proposed project

to histories of prior projects and other environmental data (e.g., those of the US Geological Survey and the Environmental Protection Agency) by applying appropriate statistical models would provide decision-makers with confidence in selecting a preferred alternative and supporting the FONSI or Record of Decision. Reduced time and costs lowers lost opportunity costs for the project's proponent.

Natural resource companies are expected to operate sustainably and be good stewards of the environments in which they are located. A highly productive use of environmental data is quantifying environmental stewardship and sustainability by applying advanced statistical models to describe, summarize, and characterize natural and anthropogenic environments. Objectively quantifying changes (or their lack) due to project operations provides technically sound and legally defensible support for the operation's sustainability and the company's environmental stewardship.

There are other ways to put existing environmental data to productive use. These data are a valuable resource for companies desiring to benefit from what they, and others, have paid money to acquire. Recognizing environmental data as an investment in the company's (and project's) future rather than a cost to be tolerated can lead to valuable productive benefits.

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