

Preface

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I was born in the South Bronx in 1943, about a ten-minute walk from the old and new Yankee Stadiums. When I was seven years old, I had a bout with asthma, and as I grew older I developed serious pollen and some food allergies. Automobile traffic was growing, and filled the air with fumes that made my allergies worse. Our organic trash was burned in the apartment house incinerator, sending large clusters of ash through our apartment, if we (usually I) neglected to close the windows. Several nearby electricity-generating stations emitted foul-looking particles. When there was an air inversion in the fall, clouds of cough-inducing materials would hang in the air. The sewage from our area went untreated into the Hudson River, a fact I learned when I tried to fish in the East River. When I traveled to nearby coal mine areas in eastern Pennsylvania, I saw areas devoid of trees, enormous slag piles dumped in two adjacent valleys, and I could feel the heat from underground fires that had been burning for years. In short, before I was ten years old, I knew that we needed some strong government environmental actions; leaving environmental protection to the market meant more coughing and sneezing.

In 1969, I heard rumors that legislation was pending that would assert that the United States recognized the importance of environment. My first reaction was to not believe it. My second reaction was joy. When I read the law, my ambivalent reactions continued. I was impressed by the words, and yet the document offered little detail about implementation.

Forty years after the National Environmental Policy Act (NEPA) was passed, the ambivalence has not entirely disappeared. I have worked on some environmental impact statements, read sections of many, conversed with people who prepare them, and those who have reacted to them. I try to read books and regularly keep up with the *Environmental Impact Assessment Review*. And, when Congress decides to do a periodic review of NEPA, I read the reports. I'm not unhappy with the books, papers, and reports about NEPA. Yet, collectively, they have not "scratched my itch" about uses of the law. This is because evaluations of NEPA come across, whether intentionally or not, as polarized advocacy, not evaluation. For me, the arguments advanced are much too black-or-white and not sufficiently shades of gray. Many of the witnesses who have testified for or against the law appear to me to have been chosen because they

advocate a particular position. And while their testimony is insightful, the evidence they present is too general for someone like me. I am used to reading tables of data and/or lengthy case studies and illustrations as evidence. I find the NEPA evaluation literature to be limited with regard to specific examples. I am used to reading environmental and risk evaluations that are painted in shades of gray. The worst EISs I have read still presented some useful information, and the best I have read have holes. When I talk about the EIS process in class, the students invariably, and I think appropriately, sit there waiting for me to go from generalizations to specifics. They want to know what was wrong with the noise impact analysis. When they search for examples, typically what they find are cases in which the courts played a major role. Evaluating the EIS process through court cases is like evaluating dentistry through implant or root canal surgery; only the rare case actually goes to court, and decisions from legal findings by definition are black or white.

In my personal experience, the EIS process is mostly a mundane planning process that generates a lot of information for decision-makers, some kernels of which are useful and thereby cause decision-makers to tweak their plans or dig their heels in and ignore the suggestions. I see the EIS process as a chameleon that changes form to suit the needs of the federal agency. I never thought that the US Department of Energy's EISs for nuclear weapons sites should be the same as the National Park Service's for a national park in the middle of the Great Plains. However, every EIS should be based on a consistent, multi-stage effort to obtain some consistent types of information, and this information should be presented in a way that is comprehensible to a reader without an advanced degree in science.

After forty years of puzzling about NEPA and the EIS process, I decided to conduct my own evaluation based on my understanding of NEPA, which has been strongly influenced by the literature and my own work. After thinking about the idea and doing initial designs, I identified three challenges. One issue is which EISs should be examined. The obvious solution is to conduct a random sample of projects. The problem with that approach is that I would need to have sufficient expertise on all the conceivable subject matter to understand the documents, which I do not have. Part of my solution was to interview at least one expert who was involved with each project. However, even the experts cannot remember all the details of a large EIS. Accordingly, I had to have sufficient expertise to understand the subject matter. Therefore the case studies I chose were those I felt sufficiently comfortable with.

A second challenge was evaluation criteria. My evaluations required strict adherence to a set of criteria. This is because there are so many environmental impact analyses about almost every conceivable subject. I needed to pick the most important criteria; ignore the idiosyncratic elements, unless somehow they truly were critical; and, most important, not get lost in every detail of every EIS. I settled on five standard questions about each EIS.

During my career, the vast majority of my publications were written for technical experts. This book is aimed primarily at students and their faculty

teaching a class that is entirely, or has a section, on EISs. Students in environmental or civil engineering, environmental biology and chemistry, environmental planning and management, political science, environmental law, and other upper-level undergraduate and graduate courses are likely to be somewhat familiar with NEPA. However, they are unlikely to have any real examples that they can sink their teeth into, nor will they have exposure to how these cases exemplify, or fail to exemplify, what the creators of NEPA sought when the legislation and rules were written. I do not, however, want to exclude experts, such as some of my former students who have spent decades working on environmental impact assessments. Many of them tell me that they have become too specialized in one kind of assessment (for example, transportation impacts, or cultural or water quality analyses), and they also tell me they do not have the time to keep up with the ongoing assessment of the legislation. This book would allow them to broaden their understanding of the challenges to NEPA in the context of specific cases.

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