

ALASKAN RESOURCES DEVELOPMENT: ISSUES FOR THE 1980s.

Edited by THOMAS A. MOREHOUSE. Boulder, CO: Westview Press, 1984. (5500 Central Avenue, Boulder, CO 80301, U.S.A.) xvii + 212 p. incl. index, maps, tables. Hardbound. US \$20.00.

The topic of Alaskan resources development is broad and complex, and includes social, economic, and environmental issues; however, it cannot be completely separated from value judgments. In general, where human observation and analysis enter the picture, different individuals can reach different conclusions using the same data. This book is a good example of a reasonably thorough analysis, but appears to support a particular policy outcome. Perhaps its major contribution is the discussion of a policy continuum.

The book is divided into six substantive chapters, each by a different author (including the book's editor), and an Introduction and Conclusion by the editor. The topics include land policy, petroleum-based economy, non-fuel minerals and coal, renewable resources, environmental issues, and management of Alaska's wealth.

From a general-interest standpoint, much of the book provides a good review and analysis of resource policy in Alaska. I was particularly impressed with Cooley's chapter on the evaluation of Alaska land policy and Weeden's chapter on environmental issues. Richard Cooley's presentation of the diminishing role of the U.S. Bureau of Land Management as the chief federal land manager and the increasing roles of the U.S. Fish and Wildlife Service and National Park Service was of particular interest. The shift can be seen as away from multiple use toward more restrictive protection of the natural environment. My impression of this chapter was modified somewhat in the last few pages: Cooley concludes by indicating that a pro-development stance on the part of Alaska's state government could be economically wasteful and cause damage to the environment. He develops this point with little supporting material, thus providing a conclusion before the analysis is complete. The chapter ends on the contentious theme that Alaskan resources are economically depleted.

Robert Weeden emphasizes four themes relative to environmental issues: trade-offs between development and conservation, colonialism, rural vs. urban Alaska, and anti-government reaction to environmental regulation. Weeden concludes by indicating that expansionist public policy will create environmental conflicts, and that an alternative approach emphasizing education, research, maintenance of infrastructure, and better stewardship of resources will not (this implies a high savings potential by the Alaska state government). A strong bias is apparent toward the latter approach.

Arlon Tussing discusses the petroleum-based economy, and unfortunately develops too broad an analysis. My preference would have been to develop the case for petroleum by examining past policies and then discussing resource decisions. Tussing attempts to do this while delving into topics such as economic-base analysis, crude-materials processing, and "the emergence of Alaska as a cultural entity". I would have appreciated more detail, and I believe the topics should have been developed in two chapters. Tussing also emphasizes the decline of world oil prices and the potential impact of oil revenues on the Alaska state government. It should be noted that Tussing is a leading spokesman for this minority view of world oil prices. There are other petroleum economists (particularly in the Alaska Department of Revenue) using similar data, who have a more positive view.

A key point in Tussing's chapter is the examination of Ugnu, a heavy-oil field on the North Slope near Prudhoe Bay. He indicates that if technology can be developed to tap this field by the time the main Prudhoe Bay oil field declines, "...it is likely to displace Prudhoe Bay as the largest oil field ever found in the United States or Canada." The possibility of such technology being developed does not appear all that remote, although, as Tussing notes, the higher cost of production in Alaska makes such an oil field marginal.

The non-fuel minerals chapter by Brad Tuck makes a strong case for the market-test argument. In essence, government subsidizing of mineral development is not economically efficient. Based on economic theory, Tuck has a point, except that he seems to indicate that distribution and equity questions are secondary to economic efficiency. In other words, it is more important to obtain maximum return on investment than to provide for more equitable distribution of resources in society (e.g., regional employment). Economic theory offers a neat framework for efficiency evaluation, but has a less satisfactory analytical structure for equity questions. Using economic-efficiency criteria as the policy benchmark assumes that present ownership of resources and wealth by permanent Alaska residents will continue as it is. Tuck's implicit value judgment follows the pattern that occurs throughout this book; i.e., the authors favor efficiency-based answers to policy questions.

Renewable resources are covered in one chapter by Matthew Berman. He begins by attempting to make a case for biological constraints on the development of renewable resources at high latitudes. I found his supporting material for this assertion to be meager. Biological constraints of various types exist in

every forest, agricultural, and fishing region in the world. Farming in Alaska, with its short (based on frost-free days) growing season, is probably no more difficult than in Australia's successful agricultural areas where moisture stress is often a major problem.

The highlight of Berman's chapter is an informative discussion of common property resources in Alaska. This is the problem associated with public ownership and management of renewable natural resources. Generally speaking, federal and state governments have not given ownership of publicly owned resources to harvesting interests; they have only given harvest rights, e.g., for timber or fish. As the state population has grown, non-commercial, non-consumptive, and other commercial user groups have become more vocal in proclaiming their rights to these resources. The outcome is a growing government "bureaucracy to referee user claims".

I was particularly unimpressed with Berman's discussion of agriculture. He seems to have read few, if any, of the myriad of studies on Alaskan agricultural development conducted in the past 10 years. Finally, he argues that growth in renewable resources depends on increasing "subsidization of submarginal activities". These are value-laden terms needing stronger support than is provided in this chapter.

Thomas Morehouse, in his chapter on Alaska wealth management, suggests a major relationship between economic growth and expenditures by the State of Alaska. He cites sources which indicate that 50% of current employment and business activity in Alaska is related to Prudhoe Bay. With the downturn in oil production that will likely occur some time in the next decade, coupled with low world oil prices, revenues to the state will be greatly reduced. These lost revenues cannot be replaced by other resource-development schemes in Alaska (an argument which recurs throughout the book), so a large economic contraction will occur.

This bleak scenario is based on conservative estimates of future events. It should be remembered that this is only one of several possibilities including development of the Ugnu field, a rise in oil prices, the discovery of another Prudhoe Bay-sized field onshore or offshore on state-owned submerged lands. Each of these scenarios has a probability greater than zero. But assuming the worst, or the Morehouse *et al.* outcome, what should the state government do with its royalties and taxes as long as Prudhoe Bay production lasts? The answer is based on value judgments and will be decided through public-policy decisions.

Morehouse provides a good analysis of the end points of a policy continuum. At one end is the economic-efficiency approach: the state should save and invest as much as possible in a portfolio which will maximize return for predetermined levels of risk. Resource development that does not meet the market test would not be subsidized. Such a strategy would tend to favor state and local-government employees, businesses dependent on government (state or local) business, and long-term residents. At the other end of the policy continuum is a pro-spending approach. State support for resource development, and high operating and capital budgets, would keep economic activity in Alaska at a high level for the next 5-20 years. This would directly benefit construction firms, resource-development interests, short-term residents (who stay in Alaska for the high salaries), and newcomers to the state.

The issue is that there are other groups, probably a large percentage of Alaska residents, who have sympathy with both extremes of the policy continuum. I expect that state government policy on this topic will be somewhere between the two end points, and will vary from year to year depending on new estimates of state revenues. Thus economic efficiency and distribution issues will both be considered in the policy process.

The book is nicely bound and has few typographical errors. One problem is the type size used: it is too small for easy reading. I understand that a soft-bound version has been printed with larger type size.

I found the book both interesting and somewhat provocative. It is valuable reading for those who wish to better understand Alaskan resource issues. It is essential to remember, however, that the interpretation of economic data relative to future events is, to a degree, in the eye of the beholder.

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Paleoecology of Beringia, a collection of 24 edited papers, is the result of a symposium organized by its editors, held in June 1979 at Burg Wartenstein,