Chapter 13
The Ethics of Regional Water Planning:
Planning and Management of Water Resources in a Growth Region

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ABSTRACT

Providing water infrastructure in times of accelerating climate change presents interesting new problems. Expanding demands must be met or managed in contexts of increasingly constrained sources of supply, raising ethical questions of equity and participation. Loss of agricultural land and natural habitats, the coastal impacts of desalination plants and concerns over re-use of waste water must be weighed with demand management issues of water rationing, pricing mechanisms and inducing behavior change. This case study examines how these factors impact on infrastructure planning in South East Queensland, Australia: a region with one of the developed world's most rapidly growing populations, which has recently experienced the most severe drought in its recorded history. Proposals to match forecast demands and potential supplies for water over a 20 year period are reviewed by applying ethical principles to evaluate practical plans to meet the water needs of the region's activities and settlements.

INTRODUCTION

Regional water management has multiple facets which include planning, designing, constructing, operating and maintaining the infrastructure associated with water supply. There are also questions of allocating costs across a multitude of uses. This implies a need to produce balanced water solutions in situations of variable needs and values, which are in turn shaped by physical, social and historical contexts. Rather than concentrating on purely scientific or technical analyses of these issues, this chapter aims to provide an ethical analysis of water infrastructure planning which examines how decisions about water planning and management are made and justified in these wider contexts. The importance of integrating an ethical analysis into water

planning frameworks is that it provides us with a way of assessing how our practical solutions fare, and how they might be modified to ensure equity and social justice in distributing water resources among human and non-human uses.

This chapter specifically focuses on issues of water infrastructure planning in South East Queensland (SEQ), Australia, a region experiencing unprecedented population growth, at the same time as emerging from the most severe and protracted drought in its recorded history. In these contexts, water security has been identified as a vital aim in achieving long term and effective regional water planning solutions (Queensland Government, 2005a, 2005b). Thus, there are two major challenges to be addressed in SEQ. First, securing the region's water supply, and second, managing growth in demand for water and associated infrastructure. In addressing these challenges of balanced planning, it is also critical to adopt ethical standards so as to preserve equity and participation in our planning processes, not only in the immediate future but also for the longer term future of the region.

Ethical Water Planning

It is clear there are a myriad of competing water supply and demand issues that need to be managed to ensure sustainable water planning for SEQ. Equally important, however, is understanding how to incorporate an ethical approach to determining the most appropriate solutions for the region. In the first instance, we have the concept of water scarcity. Scarcity has been brought about by a range of factors and while current thinking remains heavily focused on physical scarcity brought about by climate change (Cullen, 2007), and on economic scarcity reflected by inadequate development of water infrastructure, water scarcity can also be created as a result of socio-political processes (Mehta, 2006). This kind of socio-political water scarcity is linked to the idea that our social and institutional processes have the potential to cre-

ate and exacerbate water scarcity, and this notion directly affects issues of demand management, water equity and water justice. In understanding how best to respond to water scarcity, our planning processes must consider not only the critical physical and infrastructure conditions, but also the broader social frameworks in which water planning occurs and how these frameworks impact upon the community of users.

But why do we need ethical frameworks? According to Callicott (1994, 5), 'ethics exert palpable influence on human behavior' because they exist as ideals or shared norms of human behavior. A good example of ethics in action has been the change in behavior of domestic water users in the SEQ area over the period 2005-2007 when daily per capita water use dropped from 300 liters to 140 liters in response to worsening drought conditions. Thus, ethics serve as standards or benchmarks of practice that show us how we ought to live.

Furthermore, ethical water planning embodies a unique blend of environmental and social ethics. While social ethics prescribe limitations or recommendations for human interaction, environmental ethics are concerned with human behavior in relation to nature. In considering the importance of environmental concerns in water management, this chapter will remain focused on a version of qualified anthropocentrism. While we recognize the importance of approaches such as deep green ecology and eco-feminism in emphasizing the importance of ecological concerns (Beatley, 1994; Dryzek, 1997; Tong, 1998; Leopold, 2002), our concern in this chapter is to explore how we as humans respond to our ethical responsibilities, both to nature and to each other. It is across this range of concerns that planning solutions must not only address the core issues of supply and demand, but also bring an ethical balance to these delicate negotiations.

In thinking about how we might address and preserve these ethical considerations in the context of water infrastructure planning, there are a

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