River Dunes Case Study

This case illustrates on-the-ground practices that can lessen the impact that development has on sensitive coastal areas. This case also illustrates how planning, partnerships, and innovation can lead to economically viable sustainable development.

Summary

About ten years ago Weyerhaeuser Real Estate Development Company became interested in building a large housing development on pine forest lands it owned along the Neuse River in Pamlico County. The company knew its 1,350- acre property with over 14 miles of waterfront was located in an environmentally sensitive area, and it understood that simply meeting minimum environmental federal, state and local environmental standards would not adequately protect coastal resources. The company also recognized that the Neuse River was suffering environmental declines, and that its potential customers reflected a growing market demand for environmentally sensitive communities.

The Company sought out the help of the North Carolina Coastal Federation to help it devise a land use plan for its project that would be compatible with the environment. At the suggestion of the Federation, it hired Land Ethics, Inc. to develop a low impact development site plan that balanced economic viability and environmental protection. This plan started by first identifying the most environmentally sensitive areas within the property, and it sought to avoid and minimize any disturbance to these fragile areas. This resulted in a parallel effort by the Federation and the Neuse River Foundation to completely protect portions of the property that were identified by the plan as being possible to develop under existing environmental standards, but which everyone agreed would be better to set aside to buffer wetlands and water quality. The two groups collaborated with Weyerhaeuser and submitted a grant application to the Clean Water Management Trust Fund to create a 238 acre conservation easement on the site that was purchased from the company through a $1.25 million grant.

The proposed site plan included a combination of large residential waterfront homesites and clustered village style homesites resulting in a total of 600 single family homesites. An upland marina basin was allowed in return for a commitment not to build individual docks for boats along the rest of the project's waterfront. The 238- acre conservation easement provides a large natural area that will eventually become a recreational amenity for the community

The project manager then convened environmental groups with local, state and federal regulators to review the draft site plan before any permit applications were prepared. Based upon the pre-application consultations that occurred, the process of obtaining permit approvals for the project took place without any significant delays or legal challenges. The development, which is now known as River Dunes, has found that the environmental aspects of the project have become vital to the brand, attracting buyers who recognize the value added, both to their lifestyle and the long term value of their property. Many buyers are looking to align their values toward protecting the environment with a developer who shares the same values.

Strategies and Tools

In designing a development, there are some common environmental challenges on the coast that River Dunes illustrates. These include: (1) the value of anticipating early in the development process the benefits of **conserving critical natural areas and wetlands**; (2) strategies for and benefits of **preventing and controlling stormwater** using low impact development measures; (3)

the importance of **maintaining natural vegetated buffers** along the shoreline and (4) ways of **minimizing impacts to water quality and habitat**:

1. **Conserving critical natural areas and wetlands:** Much of Gum Thicket Creek shoreline and a large portion of the Neuse River shoreline was determined to be too fragile for development and the area was preserved under a conservation easement using funding from the Clean Water Management Trust Fund. The NC Clean Water Management Trust Fund and the North Carolina Coastal Federation hold the easement jointly. In addition, jurisdictional 404 wetlands were simply avoided by the site plan, eliminating the need to obtain permits from the Army Corps of Engineers and the Division of Water Quality for upland development activities.

2. **Preventing and controlling stormwater:** The development implemented two low impact development techniques: reducing the density over much of the development to below 10%, and designing areas of high density development so that runoff was directed away from surface waters and into bio-retention areas.

3. **Maintaining natural vegetated buffers:** The development had to comply with the Neuse buffer rules, and was designed to meet these standards. Given the amount of land available and the higher market demand for waterfront lots (not interior) the developers could move building components back from the waters edge and breakup the major mass of the dwelling, detaching garages and other out buildings placing them away from the waterside of the structure.

4. **Minimizing impacts to water quality and habitat:** Since current state regulations allow property owners to build a dock for every waterfront lot, River Dunes could have had hundreds of docks covering more than 14 miles of shoreline. During the preliminary planning consultations, all parties agreed that it would be better to have an upland marina basin to accommodate boat owners within River Dunes and protect the estuarine shoreline and waters.

   Another water quality and habitat protection strategy comes through the development's requirement for buffered shorelines that will be kept natural, meaning that most of the shoreline will not need bulkheads or any form of stabilization.

   River Dunes is hooking up to the Bay River Sewer District, and has helped to finance the sewer improvements. If the sewer authority did not exist the development would likely have had a combination of septic tanks for the single- family houses and package treatment plants for the higher density areas. In this case, hooking up to an existing sewer system reduces the potential for generating on-site pollution and potential contamination of estuarine waters.

Lessons Learned

1. It is important to anticipate environmental needs and issues very early in the development process, and not as an after thought. The Company sought out the involvement of local, state, and federal environmental agencies *before* they had begun to design their development, which led them to avoid developing environmentally sensitive areas, rather than trying to minimize the environmental impacts. While the developer of River Dunes initiated this process, local governments can ensure this kind of collaboration by requiring pre-application meetings through their land use plans, development ordinances, and project review procedures.

2. Anticipating environmental issues early in the development process may provide additional economic opportunities that will enhance the value of the real estate project. In the case of River

Dunes, the North Carolina Clean Water Management Trust Fund paid the developer for a conservation easement that they had never anticipated creating in the early stages of its project. The purchase price of the easement provided an early infusion of capital into the project that helped with development costs. The easement became a natural amenity for the community, and helped the developers to market the project as being a "sustainable – low impact community" to its environmentally concerned customers. While there are not sufficient grants available for every new development, economic studies have shown that the incorporation of low impact development measures into project designs can lower development costs, increase lot yields, and bring higher values to real estate purchases. There are also federal and state tax benefits that may be obtained by preserving land through a conservation easement or donation.

Panelists

Todd Miller, Director of the North Carolina Coastal Federation
E-mail: toddm@nccoast.org Phone: 252-393-8185

Ed Mitchell, President of River Dunes Corporation
E-mail: ed.mitchell@riverdunes.com Phone: 252-670-7760

Bill Holman, Director of State Policy for the Nicholas Institute for Environmental Policy Solutions at Duke University
E-mail: weh9@duke.edu Phone: 919-613-8737

Jayne Robb, County Planner/Economic Developer, Pamlico County
E-mail: pcplanner@pamlico.net Phone: 252-745-3081

Resources

"Growing Greener: Putting Conservation into Local Plans and Ordinances" by Randall Arendt (1999). This book outlines a four-step approach to designing conservation subdivisions; describes how to conduct a community resource inventory; includes extensive model language for comprehensive plans, subdivision ordinances, and zoning ordinances; and offers design principles for hamlets, villages, and traditional town neighborhoods. Lavishly illustrated, the book also features two group participation exercises and case studies of 11 conservation developments in nine states.

"Better Site Design: A Handbook for Changing Development Rules in Your Community" from the Center for Watershed Protection (1998). This handbook outlines 22 guidelines for better developments and provides detailed rationale for each principle. Better Site Design also examines current practices in local communities, details the economic and environmental benefits of better site designs, and presents case studies from across the country. It includes a sample Codes & Ordinances Worksheet. Available as a free download or for purchase ($35) at: http://www.cwp.org/PublicationStore/bsd.htm