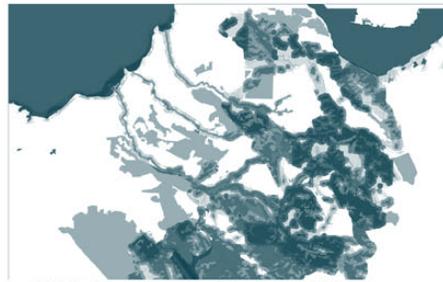
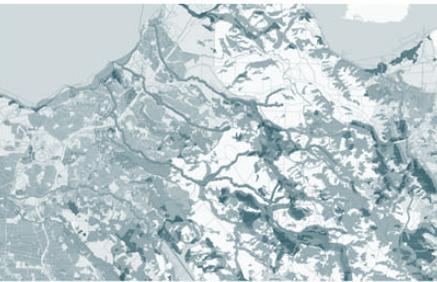
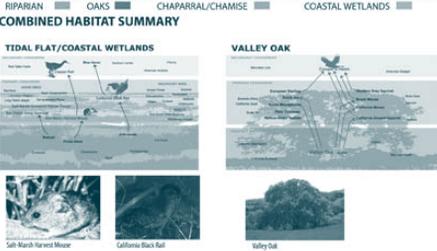


Habitat Group presentation



The decay rate of urban infrastructure demands that we address future issues associated with the ecology of place in present-day planning efforts.



BY ANDREA GAFFNEY, M.C.P. AND M.L.A. 2009

ECOLOGICAL FACTORS IN URBAN LANDSCAPE DESIGN

The Fall 2007 studio Ecological Factors in Urban Landscape Design, taught by Rob Thayer, Michelle Dubin, Joe McBride, Matt Kondolf and Graduate Student Instructor Andrea Gaffney led graduate students from Landscape Architecture and Environmental Planning to propose visions for the future of three watersheds in Contra Costa County along San Pablo Bay. Eight teams of students combined their skills in quantitative spatial analysis and three-dimensional creative synthesis to incorporate ecological processes into a variety of infrastructure vision plans on the following subjects: alternative transportation, municipal-scale renewable energy production, habitat conservation for animal and plant species, urban forestry as a mechanism for community development, creek management proposals for a gra-

dient of development typologies, coastal waterfront planning for urban ecological diversity, human ecology habitat restoration, and watershed trail planning. Each of these visions promotes awareness on a variety of ecological processes, thereby increasing the legibility of the watershed as a sustainable unit of land planning and management.

The Energy Group (Nicholas Curtis, Robert D. Lemon, Francesca Francia, Chris Fullmer, and Tim Mollette-Parks) proposed a framework in which a local municipal utility can meet 100% of the current and future energy demands of the population with renewable energy located in the landscape of the three watersheds.

The Watershed Group (Nathaniel Behrends, Rachel Edmonds, Ben Jackson, Kristen Podolak, Jane Wardani) designed a framework, which trans-

formed the fragmented hydrologic system of Rodeo Creek into a well-functioning, restored system that reconnected the community with this natural system.

The Habitat Group (Christopher Moi, Cliff Sorrell, Nick Glase, Nicole Cousino, Ye Kang Ko) designed a conservation reserve network that enhances biodiversity and associated human land uses for the long-term future of the Pinole, Refugio and Rodeo Creek watersheds.

In the Summer of 2008, The Restoration Design Group presented the studio's material to the Rodeo community as project ideas associated with the restoration of Rodeo Creek. ^{FW}

Andrea Gaffney (M.C.P. and M.L.A. 2009) was recently honored by the Landscape Architecture Foundation as the first national Olmsted Scholar.

A Renewable Vision

4 steps to 100% renewable energy for the Pinole, Rodeo and Refugio watersheds

1 Analyze current conditions

Energy needs of the three watersheds are now met by imported energy, mostly from non-renewable sources.

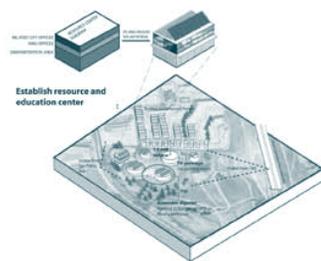


Hercules currently has a municipal utility district

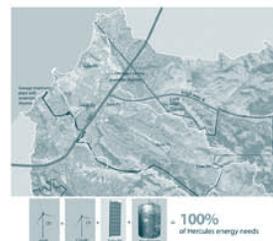


2 Use HMU as an incubator for renewable energy

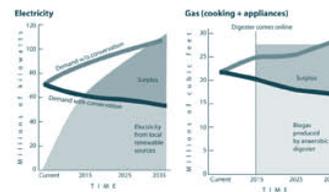
Encourage efficiency and conservation



A renewable Hercules

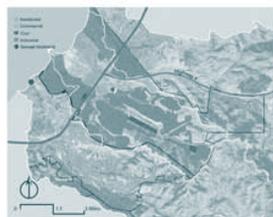


Meet or beat future demands with renewables

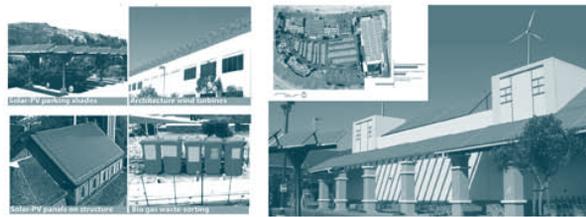


3 Identify renewable energy patterns to apply to land use types

Look for common land use types



Example: Commercial site



4 Apply the HMU model and patterns to the other 3 watersheds

Look for common land use types



Develop a matrix of patterns

Land Use Type	Pattern 1	Pattern 2	Pattern 3	Pattern 4	Pattern 5	Pattern 6	Pattern 7	Pattern 8	Pattern 9	Pattern 10
Commercial	[Image]									
Industrial	[Image]									
Residential	[Image]									
Public	[Image]									

Establish phasing

