

University of Oregon

# SOLAR INCIDENTS

The Newsletter of the Solar Information Center

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## What is the Solar Information Center?

It is a student run organization sponsored by the ASUO and EWEB. The purpose of the center is to serve as a research, education, and information center on solar energy and alternative energies, and their applications in architecture and technology. One of its vital functions is to sponsor a lecture series on local, regional and global energy issues to promote a higher awareness toward conservation and renewable energy. The center also provides an in-house information source of books, periodicals, abstracts, proceedings, topic-files, and product-files.

**SPECIAL THANKS TO EWEB FOR THEIR CONTINUED SUPPORT!**



## Bioregionalism in the Realm of Architecture, Part II

By Mark Serhus

*The more artificial a human environment becomes, the more the word "natural" becomes a term of value. --Wendell Berry*

This is the second part of a three part series on bioregionalism and architecture. Part one of "Bioregionalism in the Realm of Architecture", which appeared in the last issue of *Solar Incidents* (F'95) documented the broad base of bioregionalism. In this part I would like to ask some difficult questions, mention a couple of architects, and survey styles and types of architecture that are, in part or, wholly bioregional. In part three, I will discuss the bioregional economics of materials selection in architectural design.

### Definitions of Bioregionalism

A bioregion is a whole life-place, a distinct area with coherent and interconnected plant and animal communities, often defined by a watershed. --Planet Drum Foundation

Bioregionalism is neither a clearly delineated ideology with a creed, assented to by a cluster of self-conscious adherents, nor is it a simple ideologically neutral 'research tool'. --W. Donald McTaggart

Bioregionalism is a contemporary North American ecological movement committed to developing communities integrated with ecosystems. --Stephen Frenkel

*Continued on p. 4*

## The Presidio

### A Model of Sustainability for the World Community By Matthew Swett

*Professionals, students, officials, and concerned citizens gathered from all over the U.S. to discuss the future of the Presidio this Fall. As is commonly known, the Presidio was retired from its military career as an army base and gifted to the National Park Service this past year. What is not commonly known however, is the intention of the Park Service to make the Presidio a model of sustainability for the world community. Thus, the purpose of the conference that took place October 27-29 was to determine how the Presidio might achieve this goal.*

The Presidio is part of the Golden Gate National Recreation Area, and of the twenty two million people that visit it annually, the Presidio hosts an average of eight million people per year. This makes it a very strong candidate for world education and the foundation of the Park Service's vision. In addition, the Presidio has many other qualities that aid it in achieving this goal. It is located near the heart of San Francisco; a major metropolitan area, and yet still retains its environmental and historic connections. It holds within it

a diverse ecosystem that extends from the wind swept coastline of the Pacific Ocean to dense woodlands of eucalyptus forest. Free running water and wetlands flow through the park and provide habitat for numerous native animal and plant species. Further still, it has a diverse cultural environment which is also integral to the vision of sustainability.

The history of the Presidio is unique and fascinating. A visitor can lose themselves in the documents of the visitor's center or the displays of the history museum for some

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Aerial perspective of the Presidio

and within them are links to our cultural past. These links provide health and diversity as the Presidio moves forward into the future. It is these two issues: the preservation of the cultural and the preservation of the ecological environments that were discussed in great detail.

The term "conference" depicts a very well behaved and choreographed meeting. This was not the flavor of our gathering this Fall. Titled: the "Greening of the Presidio Environmental Design Charette," the gathering was a forum for ideas, participation, and involvement. It encouraged those who were there to speak out and even to disagree so long as all ideas presented were striving to achieve the same vision. The Charette (a French term describing a short intensive design session) was sponsored cooperatively by the National Park Service and the American Institute of Architects (AIA). Its purpose was to elaborate upon the already existing initiatives of *The Presidio Plan* enacted by the Park Service and to provide strategies for its implementation. This focus was coupled with an additional factor however, that of economics. Congress has mandated that the Presidio must raise the revenue to pay for its own management and expenses. This differentiates it from any other National Park, but is considered

justifiable due to the unique location and characteristics of the Presidio. It was with these two intertwined agendas that we began the Charette, and the pursuit of ideas.

The framework of the Charette, was to divide the participants into six different teams related to their area of knowledge and interest. This broke the overall group down from its combined total of 100-150 to manageable group sizes of 10-30. These teams conceptually, were representatives of the varying parts and needs of the Presidio. They are respectively: the Community Site Team, the Transportation Team, the Natural Resources Team, the Waste Management

Team, the Residential Architecture Team, and the Non-Residential Architecture Team. These teams were divided, but not isolated. Members of each team made it a point to establish linkages with other groups addressing related issues and sit in on their idea session for periods of time. This resulted quite effectively in the cross-pollination of ideas and issues throughout the various groups.

The suggestions, ideas, and potential directions of the Presidio that were developed by these groups were based in premise upon the *Presidio Plan*. It is important for the sake of understanding to place these ideas within this context. The following section is a summary of the *Presidio Plan* and its proposed initiatives. The 13 areas that follow are distinguished from one another for planning purposes due to their differing characters. This information will help to clarify the suggestions made at the Charette as well as illuminate the tangible steps that are already being taken at the Presidio. For visual reference, a map of the Presidio has been included. The numbers of each of the following subsections corresponds to locations on this map.

### The Presidio Plan

1. Main Post: Heart of the Presidio  
As the visitor activity and global center, this area will house visitor services, public events, and international, environmen-

tal, and cultural programs. Historic buildings will be rehabilitated and the main parade ground restored to create an open space for events. A visitor center, museums, and transportation hub will be located here as will the headquarters of the Sixth U.S. Army.

2. The Golden Gate/Fort Point: Symbolic and Scenic Site  
The heavily used Golden Gate plaza will be redesigned to enhance visitor enjoyment, provide better visitor services, and improve pedestrian and vehicle safety. Additional open space will be created through relocation of Golden Gate Bridge maintenance facilities. The Park Service will continue to preserve Fort Point and interpret its historic importance as defender of the Golden Gate.

3. Fort Winfield Scott: Conference and Training Ground  
At this secluded, campus-like setting, historic buildings will be rehabilitated for conference and training use and overnight accommodations. A National Park Service training and development center will be located here.

4. Letterman Complex: Scientific Research and Education Center  
The Letterman complex will be dedicated to scientific research and education focusing on issues of human health and the environment. The historic complex of buildings and landscape features will be rehabilitated. The 10-story Letterman hospital will be removed if a suitable tenant for the existing structure is not located.

5. Cavalry Stables: Skills Workshop Center  
The stables will be used primarily for hands-on training in resource stewardship and innovative technologies. One stable and paddock will be rehabilitated to house Park Service mounted police horses and to interpret the Army's mounted patrol service in California's early national parks.

6. Public Health Service Hospital: Residential Education and Conference Center.  
The 1930's hospital will be rehabilitated to accommodate educational activities and lodging. Its non-historic facade will be removed. Much of the pavement around the hospital will be removed and newly created open space will be revegetated with native plants.

7. East Housing Area: Educational and Residential Neighborhood  
Classrooms and residences for overnight

educational programs and housing for park partner, military, and park staff will be established here. El Polin Spring and adjacent Historic Lovers Lane will be rehabilitated.

8. Crissy Field: Bayfront Recreation and Resource Preservation  
Redesign efforts will balance preservation with public use. Wetlands, riparian corridors, and dunes will be restored, recreational facilities expanded, and bicycle routes, boardsailing access, and pedestrian paths improved.

9. Presidio Hill: Recreational Open Space  
The area will continue to provide recreational opportunities for golfers, bikers, and others. The golf course will be open to the public. Buildings in the Wherry housing area will be used by the military on an interim basis. When vacated, the buildings will be removed to restore the historic forest and native plant habitat.

10. Lobos Creek Valley: Quiet Natural Refuge.  
Lobos Creek will be restored as a naturally flowing stream. A dune community and other native habitats will be protected and expanded. The historic water treatment plant will be rehabilitated. Visitors will be able to learn about and participate in habitat restoration and natural resource management activities.

11. Coastal Bluffs: Wild Coast  
The coastal bluffs will be preserved as the wildest part of the Presidio, with visitor access limited to developed trails, such as the Coastal Trail. Baker Beach will continue to be maintained as an easy to reach coastal site.

12. Presidio Forest: A Woodland Retreat  
The mature 300-acre forest is in critical condition and will require extensive management and replanting to survive. Portions of the forest which have overgrown their original boundaries will be removed and native plant communities and scenic vistas restored. A new forest trail system will be developed.

13. National Cemetery: Historic Memorial Landscape  
The Veterans Administration will continue to manage the cemetery as a quiet

place for remembrance and reflection. Visitors will be able to walk through the cemetery but there will be no new facilities or services.

### Charette Results

The results of the Charette were broad, imaginative, and filled with opportunity. Deep connections were established between the teams and their selectively different topics. Linkages wove through the room like a spider web. Ideas tossed about like fireworks, exploded, enlightened and began again.

Early on, the group decided not to try and redefine the term "sustainability." This difficult hurdle has hindered many valiant efforts to pursue visions in the past. With it out of the way, ideas were able to flow freely without needing to fit into a prescribed definition.

The overall vision of the group became clarified through discussion. Making the Presidio into a "model of sustainability for the world community" was elaborated upon and further broken down into three sub parts. Foremost, the vision of the Presidio is to become a "working laboratory of sustainability." Second, it desires to provide "learning experiences that lead to practical applications." And finally, it seeks to "serve as a model for other parks and communities." In this way, the park seeks to increase awareness of issues related to sustainability, holistically, through the three different aspects of application, education, and inspiration. In doing so, those people who interact with the Presidio will see works in progress, will understand them, and will then be able to apply them in their own communities.

What then are the messages that are most important to communicate? This question also surfaced early on in the discussion and resulted in surprisingly clear answers. Although more possibilities were mentioned, the following "take home messages" represent the overall ideas

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## Compost—Renewing the Spirit in the Soil

By Michelle Summers

### ASUO Grants SIC's Special Request for Increased Funding

The Student Senate of the Associated Students of the University of Oregon granted the majority of the budget increase that the SIC requested for director stipends, workstudy wages and reference materials at a November 1st hearing. These funds are greatly appreciated and have already been put to good use.

*Are you looking for ways to live in greater harmony with the Earth?*

Jude Hobbs and Stephen Clarke will be teaching a weekend Permaculture Design Workshop at Lost Valley Educational Center in Dexter, OR

**January 26-28, 1996.** This course will teach the use of ecology as the basis for designing integrated systems of food production, housing, technology and community development. Fee is \$150 - \$200 on a sliding scale. For more information, contact Jude Hobbs at (541) 342-1160.

Lost Valley also hosts one-day Introduction to Permaculture courses as well as 2-week intensive Permaculture Design Courses. For more information contact Larry Kaplowitz at (541) 937-3351.

Compost is a word that takes on almost mystical connotations for the organic gardener or farmer. While the concept is simple, composting can be done in a myriad of different ways.

Since the question "What is composting" is so common I'll offer an attempt at an answer. Composting is a transformation of organic material into a soil-like substance called *humus*. Humus is the result of massive numbers of microscopic critters eating at the raw organic materials, transforming the substance in their bodies, and depositing their waste product, which happens to be a rich fertilizer for plants. The quality of the final product, the finished compost, is dependent on the types of materials used and the *climate* of the compost heap.

First some ideas on materials. "You are what you eat" is an appropriate old wives/husbands comment. The idea is to provide a well-balanced meal for the microbial farm workers who produce the compost. From the pile of sources I have on composting, generally they all agree on a 25:1 carbon:nitrogen ratio. This translates into about equal amounts of dried brown material and fresh green material. In the brown camp things like dead leaves, dried grass clipping, straw or hay, well cut up semi-woody materials are found. The green camp rallies around ingredients like freshly mown grass, fruit and vegetable kitchen scraps, newly pulled weeds, and old flowers. Many more types of material can fit into either of these camps and there are bookloads of things to say about what different materials adds to the finished compost.

Next, we need to provide a home for these microbes so a thin layer of soil, about 1 inch, is added to the compost ingredients. Soil can be well composted material from your oldest pile or good soil you might find close at hand. The microbes and worms who live in your pile will breed, rest, and frolic in this soil layer so add it to keep them happy!

Now on to the process:  
The metaphysics of compost 101:

*Earth my body  
Water my blood  
Air my breath, and  
Fire my spirit.*

I use this little verse to help me keep in mind the need of a good compost pile. I don't know where this song comes from, but people all over the country know it or some variation of it.

How does this song relate to compost?

*Earth* is the raw material that is transformed by the composting process. The leaves, the grass, the animal manure, the soil—all these elements are the matter from which earth is made.

*Water* reminds us of the type of *weather* our microbial workers enjoy. They like their piles to be the consistency of a wrung-out sponge, moist but not soggy. If the compost is too wet or dry the pile will smell bad or never heat up.

*Air* is necessary for aerobic transformation. The sweet smelling microbes thrive in a pile that gets good aeration. Turning the pile helps this process and keeps the pile from putrefying.

*Fire* is the glorious result of happy microbes industriously at work. If all the factors mentioned earlier are balanced successfully, the compost pile will heat up to 130 degrees or more. This is proof that the organisms are changing the ingredients into the perfect food for plants.

Some final ideas on the subject: Composting can be done on a small scale such as a 1-foot square bin in a apartment to farmscale mountain ranges. Compost piles can be composed of a variety of materials and in a variety of ways. Experience and innovation come from trying different techniques. Composting is an ancient art and nature makes it easy for the novice to be successful. •

### EWEB Solar Hot Water Update

EWEB Solar Water Heater Rebate Program left forward in 1995, installing 115 new systems, bringing their overall total to 400 since the program started. For more information, contact EWEB Energy Management at 484-1125.

## Bioregionalism

Continued from p. 1.

### Architects and Bioregionalism

Bioregionalism ideologically rose out of the ecological movement of the 70's and was reinforced through the "think globally, act locally" political action of the 80's. Today, bioregionalism provides an effective grassroots approach to ecology that emphasizes sustainability, community self-determination and regional self-reliance (Planet Drum Foundation).

Bioregionalists, in fact, appear to be among the leaders of a sweeping revolution to change many interconnected aspects of how our society works today. The activities of agriculture, economics, geography, political science, planning, social policy and water resources management are all being re-defined in the language of ecology and environmental awareness.

Although all these disciplines are on board to change the world, per se, the question I keep asking is: Where are "the stewards of our built environment"? Is it because architects have been increasingly taught to focus on the design merits of artistic abstraction, structural exploration, advanced materials technology and economy—but not how the un-built world works?.

I have searched in architectural journals, but there is very little that directly mentions or even refers to bioregionalism. Where are the architects in this bioregional picture? If our traditional ways of functioning in society are changing as we speak, why aren't we part of the bioregional movement? Aren't we the builders and designers of society?

Gary Lawless, poet, farmer and an organizer of the fourth North American Bioregional Congress, contends that although bioregionalism's mission is self-evident, "we're not talking about how to actually live out that platform (Garbage, 3/92)". Bioregionalism in architecture has come of age: it is time for the stewards of the built environment to lead, or at least join the parade.

Granted, we haven't been entirely static. Today architects, architectural educators, critics and planners are espousing ecological paradigms in the design field to consciously and deliberately forestall impending global doom. We are reeducating ourselves, questioning conventions, forcing issues and anxiously looking for ways to solve the problems in the field of building, design and planning. And yet it is almost as if bioregionalism as an idea pertinent to architecture has remained unexamined.

### Is Bioregionalism Eco-Regionalism?

When I try to imagine what "bioregional architecture" might be the term "regionalism", as in architectural regionalism, has at least one ready meaning.

There is modern regionalism, where the word "regionalism" was used for lack of a better word, in the Post-Modern architectural movement. There is an earlier "regionalism"—defined in the 1920's by Lewis Mumford, a visionary architect, planner and social reformer—which I will refer to as Mumford's regionalism. With regard to modern regionalism, I only know what is not: is not bioregionalism sans ecology—"bioregionalism" minus the prefix. Mumford's regionalism can be seen as the ideological base of bioregionalism before our society's current facile acquaintance with ecology.

I presumed to "quote" Lewis Mumford on the subject of [bio]regionalism in the preceding issue (SIC Newsletter, Fall 1995). This ruse resulted partially from the lack of sources on this topic but mostly because I think I see architecture, and bioregionalism for that matter, as Mumford saw it. Bioregionalism and architecture are thoroughly interdependent (or at least interrelated) in countless disciplines.

Mumford, understatedly, was a man before his time—in essence the forefather of bioregionalism. To Mumford, [bio]regionalism "is a complex of geographic, economic, and cultural elements. Not found as finished product in nature, not solely the creation of human will and fantasy, the region, like its corresponding artifact, the city, is a collective work of art". Bioregionalism is the ecological extension of Mumford's early 20th century regionalism.

Susannah Hagan, in a recent article of *The Architectural Review* (Feb. '94) titled "Whatever Happened to Regionalism", declares that modern "regionalism is at best an irrelevance, at worst, a regression". She clarifies by postulating, "Is [regionalism] in fact historicism by another name?"

A recent commentary titled "Regional Meaning" from the same publication tries to bring modern regionalism closer to Mumford's regionalism. The editorial states that they "believe that architecture should grow out of a very deep understanding of local need and local circumstance. True regionalism in art is far deeper than eclectic

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copying of the past. It strives to establish an imaginative response to particular place

and to traditional ways of doing things which are conditioned by factors as fundamental as climate, vegetation and topography (AR, 11/90)"

### Bioregional Architecture

What is the image of bioregional architecture? According to Kirkpatrick Sale, the political scientist and ecologist, a bioregion "is a region governed by nature." If one takes this definition and couples it with Mumford's definition, one would see distinct geographical areas with a built environment that could be called bioregional architecture. Bioregional architecture would (1) reflect local resources, be (2) built to benefit from the climate (not just withstand it), (3) embrace a local culture, and would (4) stylistically reflect resources, climate and culture in much the same way that vernacular architecture has done.

As ecologically educated designers, we should be able to make buildings which respond to a respective bioregion and to deduce how an existing or ancient example of the built environment could be interpreted—and more significantly, redefined as bioregional architecture.

The fact that vernacular buildings of ancient cultures are fully integrated with bioregionalism is indisputable, while the vernacular buildings of modern times are more a commitment to a clearly discernible style, and most unfortunately, to speculated economic gain.

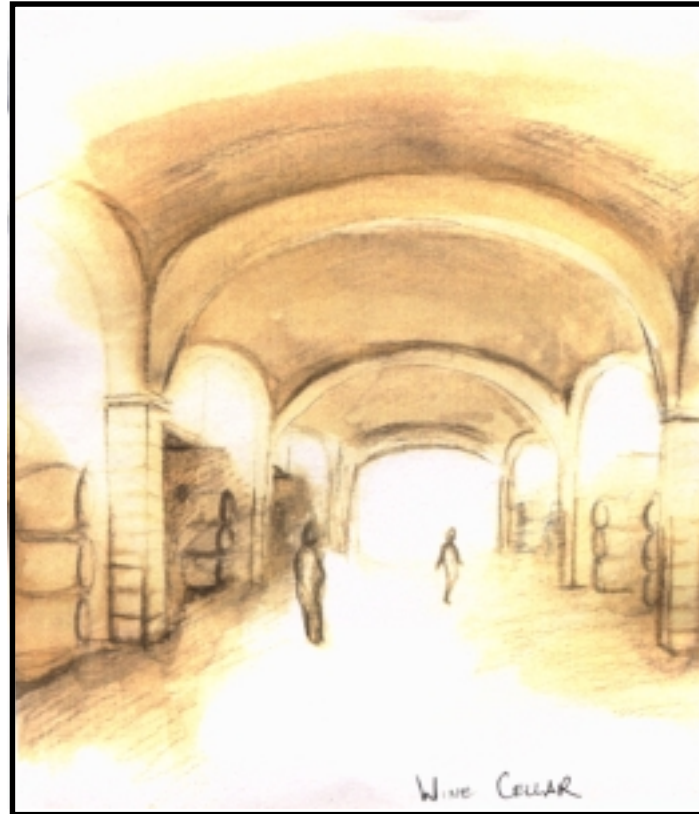
### Bioregionalism, the 21st Century Vernacular Architecture

Are the stylistic vernacular buildings of modern times a clue for a modern bioregional architecture? In order to understand what modern bioregional architecture could be stylistically, we must understand our origins.

A survey of vernacular buildings in our country, such as in *A Field Guide to American Houses*, would be a place to start. On any page of images of vernacular houses in this book, and one would be hard pressed to pinpoint the exact bioregion (or city, state) where these houses originated. In this book, images of distinct vernacular buildings are separated by their stylistic identity (e.g., Colonial, Ro-



(f) SOLAR ACCESS



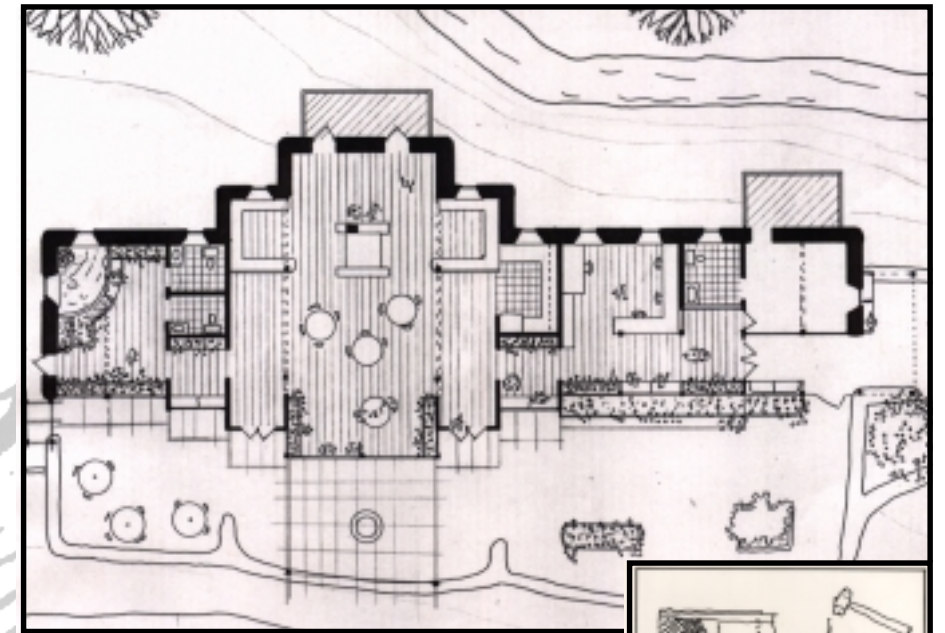
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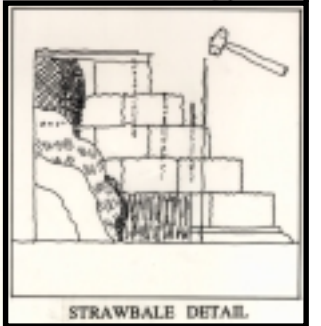
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(a)



(b)



(b)

## Solar and Sustainable Design Showcase - Fall 1995

The first quarterly Solar and Sustainable Design Showcase includes a wide range of designs, from passive solar co-housing with integrated active solar systems to a theater that uses a water wall for passive heating and rainwater collection. Sustainability is promoted in these designs primarily through resource efficiency. This includes the reduction of energy use in buildings as one example that is beneficial to this mission. On the whole, these buildings demonstrate positive steps towards designing for a sustainable future.

The Showcase is a quarterly event that was conceived to encourage and recognize the pursuit of sustainability in the University of Oregon architectural design studios. These projects will help to educate through the dissemination of ideas in *Solar Incidents* and on the World Wide Web. All Solar Advisors were invited to evaluate the entries. In the future, one project will be picked to fill these pages; two others will be selected for our web site. We encourage submissions for the winter quarter. Please check our web site to see more of the drawings from the Fall quarter.

**Deadline for winter quarter submissions is March 18.**

### (a) Theater in Alton Baker Park - Eric Navkkas

This building utilizes a steel frame with straw bale infill. The south wall of the greenroom is a trombe wall filled with water. The solarium, angled at the equinoxes, is adjustable for thermal lag times and acts as a shading device for summer months. Reflective panels bring south light into the north offices. Rainwater is collected to water the nearby fields of poppies. This natural symbol, the poppy flower, is the theme throughout the building.

### (b) A Home in the Weaver Village - Jason McLennan

The straw bale construction of the walls of this house utilizes a regional material with a super insulative R-value of 50. This is helpful in conserving the heat that is gained through the expanse of southern glass in this passive solar design.

### (c) Housing at 12th and Willamette, Eugene - Ross Leventhal

Passive and active solar design help this co-housing community in its quest for resource independence. An urban farm and rooftop greenhouse produce food for this community. Proximity to downtown and bike path encourage walking and biking as primary modes of transportation. Rainwater is collected and stored in a cistern. Sewage is decomposed in a greenhouse dedicated to a living system. A series of cylinders are filled with water and a variety of plant, fish and microbial life. Passing through the system decomposes the sewage of the housing, producing fertilizer for the urban farm.

### (d) Housing at 10th and Willamette, Eugene - Sandra Leibowitz

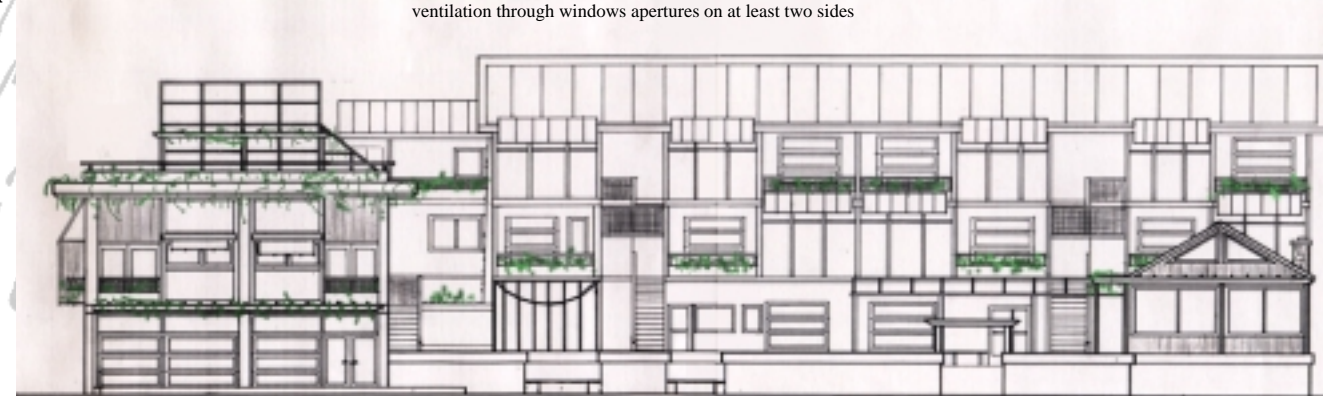
The form of this building is cut away to allow southern exposure to all living spaces, as well as to create sunny outdoor decks in the center. The co-housing framework encourages the sharing of facilities through the generous provisions of common space, thus decreasing the need for individual ownership. Energy conservation is encouraged by features such as a covered clothes drying deck and a bicycle storage room. Existing brick walls are reused in the new construction.

### (e) Willamette Valley Winery - Valerie Wedel

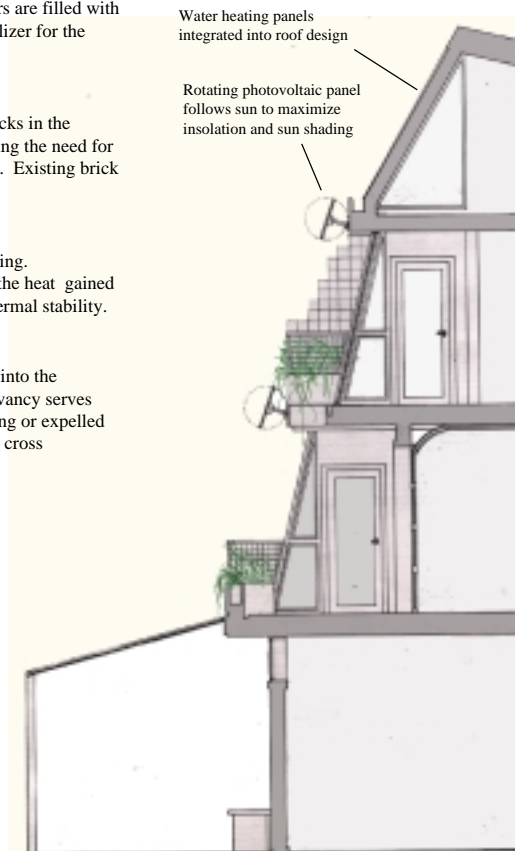
The slope of the site is used to facilitate the gravity-flow processing of the grapes into wine, eliminating the need for pumping. Daylighting is maximized through the use of a light court and oculus. The thermal mass of the interior masonry walls, is used to store the heat gained through southern glazing and to help keep spaces cool in the summer. Earth sheltering of the wine aging areas is useful in providing thermal stability.

### (f) Housing at 7th and Oak, Eugene - Colin Brandt

The entire roof of this structure channels rainwater into a glass covering of the North-South circulation, bringing the water into the building by the southern entry. Water is stored for usage in an attached nature conservancy. The large greenhouse of the nature conservancy serves both heat collection and retention. Heat is stored in the thermal mass of the greenhouse, to either be transferred further into the building or expelled to the nighttime air, as the climactic conditions demand. Individual units have solar access with heat storage in trombe walls, as well as cross ventilation through windows apertures on at least two sides.



(c)



(c)

# W

## Solar Info Center now on the World Wide Web

You can find us at <http://darkwing.uoregon.edu/~sic/>

At our Web site you can find the full contents of our newsletter but with some distinct advantages not possible in the printed form :

- 1) Updates to our lecture series calendar when there are last minute changes or cancellations
- 2) Better graphic capabilities - the photos we publish in the newsletter appear on the Web not only with clearer resolution but also in color when possible.
- 3) If we know that you can access the newsletter on the Web, we can cut down on our printing and mailing costs as well as save trees.

Also at the Web site you will find past copies of our newsletter, a listing of the books in our library available to be checked out. We have over 170 listings on passive solar, renewable energy, photovoltaics, bioregionalism, community planning and related topics. For the winter term we will also add a page with links to related sites which will be useful for those looking for information on solar and renewable energy. Your comments and suggestions are always welcomed. We are looking for ways that we can utilize the resources of the Internet.

One thing that we request of our readers is that they send us their **e-mail addresses**. An e-mailing is a very fast, cheap and conservation minded way of letting people know about things like events, lecture schedule changes, design competitions and other information. We promise not to sell this list to AT&T, MCI or Publishers Clearinghouse Sweepstakes. •

## New Environmental Studies Major Boosts SIC's Internship Program

By Sandra Leibowitz

The undergraduate major in Environmental Studies at the University of Oregon has finally arrived—not a moment too soon for the hundreds of eager students enrolled in the program. These students, many of whom transferred from other departments at the U of O, enter a challenging curriculum of interdisciplinary coursework, selecting among classes in anthropology, biology, geography, geology, architecture, economics, engineering, history, international studies, landscape architecture, physics, leisure studies & services, planning, public policy & management, political science, and sociology—a most impressive list!

The breadth of this educational base is true testimony to the growing importance of creating interdisciplinary approaches to the great problems that face us today. There is no doubt that students choosing this program will develop unique skills in understanding the complexity of these problems and in pursuing resourceful solutions within many fields of professional work.

"Introduction to the Environment: Social Science", the first in a series of core requirements for the major, was taught this fall by Dr. John Baldwin, professor of Planning, Public Policy & Management, and Director of the Institute for a Sustainable Environment at the U of O. Baldwin demonstrated his belief in the necessity for practical application of university education by requiring a 40-hour internship in an environmental organizations as an alternative to a final research paper. Students in this course, with an anticipated enrollment of 307, contacted different campus and local organization to offer their time to fulfill this requirement. Several students contacted the SIC, tripling our typical internship program and allowing us to focus on many previous backburner projects:

**Coryon Redd** helped make the **World Wide Web home-page** a reality, entering and formatting some of the materials now available on our website, including our library book list as well as back issues of our newsletters.

**Becky Prins** and **Andy Davis** created display boards demonstrating **renewable energy principles for children**. These boards, including moving parts that illustrate the basics of different renewable energy sources, can be brought to 4th - 6th grade classrooms in local elementary schools for feature lessons in science classes.

**Arienne Buffum** compiled lists of publishers to be contacted for participation in our upcoming **book review program** (watch for it in our next issue of *Solar Incidents*). This regular feature will allow us to offer our readers useful synopses of current texts while allowing us to expand our library with complementary or at-cost review copies. Arienne also worked on layout of our event posters and assisted us in general office management.

**Curt Jensch** designed and built a sculptural, **solar-powered display board** to advertise upcoming events in the Erb Memorial Union courtyard. This "sandwich board" uses photovoltaics to power a moving, attention-grabbing display within the sculpture. Curt also staffed the SIC office and helped with general support work.

**David Beer** gathered essential data for an SIC proposed project to **pump the U of O Cascade Fountain with solar-power**. This highly visible demonstration program will use photovoltaics, mounted on a sculptural base selected from entries in a future SIC sponsored design competition. Future work on this project will involve sizing the photovoltaic system to meet the energy requirements of the pump and creating the formal proposal to the U of O Physical Plant.

### Many thanks to these interns for their dedicated work!

For more information on the Environmental Studies Program, please call 346-5006. •

## THE SOLAR INFORMATION CENTER LECTURE SERIES & EVENTS CALENDAR

These events are free and open to the public. For more information, please contact us at 346-3696.

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## The 1996 Eco-Design Arts Conference

HOPES, an interdisciplinary group of students from Architecture, Landscape Architecture, Historic Preservation, Fine Arts, Environmental Studies, and Planning Public Policy & Management, is building upon last year's phenomenally successful conference, *Visions for a Sustainable Future*, held at the School of Architecture and Allied Arts at the University of Oregon. Last April, over 450 participants, including 63 lecturers from around the country, spent three days in panels, workshops and lectures discussing the issues related to the creation of regenerative communities.

The 1996 Eco-Design Arts Conference: *Changing Paradigm, Changing Place* (April 11-14) promises to expand the forum even further. This year's theme will focus on aesthetics and ecology in the process of making Place. Inspired by James Hubbell's discussions on "the role of beauty in sustainability" at the conference last year, the visions of fine artists will be intermingled with more technical approaches in an attempt to find solutions that are not only scientifically sound, but which also speak to people's cultural and spiritual needs.

Spread over four days, additions to this year's conference will include more workshops, new panel topics, an art exhibition and the presentation of papers selected by peer review. Our Call for Abstracts will be announced in the coming month, pre-registration information will be available in Winter. To be included on our mailing list, to volunteer, or to make a tax-deductible donation, please contact the HOPES office in Lawrence Hall, Rm. 272, (541) 346-0719. You can also visit our World Wide Web site: <http://gladstone.uoregon.edu/~hopes/> •

**Thursday, February 8, 7:30 pm, room 177 Lawrence Hall, U of O**  
**"Designing with Permaculture—An Introduction"**

**By Rick Valley**

Rick Valley has been teaching permaculture, a sustainable approach to environmental design, for nearly ten years. Permaculture incorporates regionally-derived wisdom in the realms of food production, ecological restoration and management, and appropriate technology, to name only a few, linked by the ethical principles of caring for the earth and creating sustainable living systems and community patterns. A grassroots movement born in Tasmania, permaculture has spread rapidly around the world and has gained particular momentum in the Northwest United States. Rick Valley's own permaculture experience ranges from passive solar building construction to agroecology and garden design. Among current projects, he is a land consultant for a co-housing community in Portland.

**Friday, February 9, 12:00 pm, room 286 Lawrence Hall**  
**Brown Bag Forum:**

Rick Valley will lead a discussion on specific problems in permaculture design and practice.

**Thursday, February 15, 7:30 pm, room 177 Lawrence Hall**

**"Bioregional Architecture and Planning - An Insight Into the Ways of the Pacific Northwest"**

**By Davidya Kasperzyk of Sustainable Seattle**

Davidya Kasperzyk is an architect, bioregional planner, author and civic advocate who is an original trustee of Sustainable Seattle. His professional design practice has been focused on an ecological approach to regional settlement patterns and public policy, and utilizes an interactive citizen based planning model. He has engaged such diverse issues as: neighborhood greening plans; affordable housing and mixed use buildings; energy resource conservation and generation; statewide growth management strategies; regional ecosystem conservation; economic development; and citywide design guidelines. His past work is extensive including such projects as: The Pioneer Square Vision Community-Urban Designer, Seattle WA; Shelton Town Plan- Project Director; Mercer Island Central Business District- Design Consultant; and Lead Architect for the Mt. St. Helens National Volcanic Monument. Among his many community involvements, he is chair of the Regional Planning and Design Committee of the Seattle chapter of the AIA, and advisor to Sustainable Urban Neighborhoods (S.U.N.S.).

**Friday, February 16, 12:00 pm, room 231 Lawrence Hall**

**Brown Bag Forum:**

Davidya Kasperzyk will lead a discussion of bioregional issues related to architecture and planning.

**Thursday, February 22, 12:30 pm, room 286 Lawrence Hall**

**Video Brown Bag:**

**"Building to Save the Earth: Land Resources/ The Urban Ecology"**

Part 3 of 4, filmed at a 1993 American Institute of Architects Conference. 85 minutes.

**Thursday, February 29, 12:30 pm, room 286 Lawrence Hall**

**Video Brown Bag:**

**"Building to Save the Earth: Land Resources/ The Urban Ecology"**

Part 4 of 4 (see above). 88 minutes.

**Thursday, February 29, 7:00 pm, room 177 Lawrence Hall**

**"The 1996 Regional Power Plan"**

**By The Northwest Electric Power and Conservation Planning Council**  
This Portland-based, interstate agency, works with the state governments of Idaho, Montana, Oregon and Washington and local utilities on regional power planning and fish and wildlife issues in the Columbia River Basin. Its main goals include encouraging cost-effective conservation and renewable energy in the Northwest, protecting fish and wildlife while assuring an adequate, efficient and reliable power system for its residents. Their 1996 Plan will be the subject of this lecture and discussion session.

*Note: This lecture has been rescheduled from the Fall 1995 Lecture Series.*

### News from the Solar Info Center Resource Library

We are currently in the process of expanding and updating the Center's Library. We have added over 20 new book titles to our collection this fall and we plan to acquire more titles this winter. We are also in the process of developing a collection of videos which we hope will further increase our ability to provide you all with information on solar and sustainability issues. Here's a list of titles in our emerging video collection:

\*\* Bright Power - narrated by Dennis Weaver, this video explores the multiple uses of photovoltaics around the country. (VHS 12 mins. 1993)

\*\* Proven excellence in passive solar water heating - informational video on solar water heating with a focus on the design of the Copper Cricket solar water heating system. (VHS 15 mins. 1992)

\*\* Metro's Resourceful Renovation - this video details the adaptive reuse of Metro's headquarters in Portland. (VHS 13 mins. 1993)

\*\* Tomorrow's Energy Today - this video showcases current applications of renewable energy sources. Produced by the U.S. Department of Energy. (VHS 23 mins. 1993)

\*\* Tomorrow's Energy Today: the Energy Efficiency Option - Also produced by the U.S. Department of Energy, this video

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they belong?

There are a few exceptions, the most apparent of which are the folk houses of the Native American Indians. The style of their buildings directly reflected the demands of their bioregions: The round plan, tipi and wigwam structures of the nomadic tribes; the rectangular, wood frame structures of the sedentary, agrarian societies; the round plan, dome lodge structures of the treeless plains and arctic tribes; and the masonry, earth-wall pueblo buildings in the arid Southwest. The monumental adobe architecture of the Southwest represented a sustained, communal society. The complex design of the pueblos was indicative of the sophisticated programmatic, environmental and social needs of its people.

There is only one style of the Post-Columbian, historically accurate types of houses which does not share more than one bioregion: the Dutch Colonial of the Lower Hudson River Valley. This style was limited by the relatively brief presence of the Dutch fur traders in the early 1600's. These stone folk builders found a rich source of indigenous materials that reflected the bioregion of their homeland. Did this settlement, although short-lived, flourish due to the availability of stone as the essential building envelope material?

A couple of proud examples of relatively distinct vernacular styles originally concentrated in a singular bioregion were the Richardson Romanesque and the Prairie style. The former was an elaboration of an old-world style while the latter was copied in the pattern books and popular magazines of that time. While the prairie style has proven to be fairly enduring and influential, I still wonder what the designer was thinking in a bioregional sense. This is mostly because I see style in architecture often as being transparent--vulnerable to style for the sake of style itself.

Two folk house types which

appeared in the Grasslands Bioregion were the sod house and earthen dugout. The sod house was ingenious adaptation, typical of colonial houses except that sod replaced wood. The dugout was a rectilinear interpretation of the Native American earthen structures seen on the nearby landscape. All three were bioregional responses to the marginal tree growth of the grasslands. A still more obscure type with similar origins is the plastered straw bale house.



*Cache block and straw bale walls, Austin, TX.*

### Straw Bale: A Bioregional Architecture?

Nebraska farmers used mules a newly developed machines to bale straw left after harvesting their crops. Much as with sod houses, they interlocked the bales to make walls, but then plastered over them to make them weather resistant and to give them structural rigidity--an ingenious bioregional response. But all three non-wood types (e.g., dugout, sod, and straw bale) were soon forgotten due to the westward expansion of the railroad. This expansion permitted (even required) the vigorous importing of lumber from the eastern and mid western U.S. and eventually decimated the virgin forests of these Eastern Forest bioregions. In response to further exploitation of Americans forests, there is currently a remarkable renaissance of the straw bale house type today.

Across the globe thousands of people--contractors, architects and communities of people--are building with straw bales. Equally significant, more thousands are eagerly learning about this still marginal technology through workshops, the press and tele-

vision. Straw bale construction is a direct bioregional response to the field-burning that places carbon particulates into the atmosphere and advances the greenhouse effect.

Straw bale house building and other straw building products have been fostered in areas such as the United Kingdom where a moratorium was placed on field burning. New Mexico, the only state in our country where adobe construction is permitted, is also supporting the efforts of straw bale builders. In some parts of Arizona where there is no building code jurisdiction, common people are building their own homes with straw bale. Besides community building, straw bale has offered a welcome alternative to high building costs for ordinary people.

Although straw bale architecture is not a purely indigenous, bioregional response it is certainly an attractive answer to field burning and preserving American forests. Straw bale architecture (1) is highly insulative (2) uses an annually renewable agricultural by-product (3) prevents tons of air pollutants from being carried into the atmosphere (4) allows common people



*Exterior of straw bale wall, Austin, TX.*

to build a modern folk architecture and (5) suggests a distinct style which, to some, is spiritually empowering and visually poetic. All of these aspects are embodied in the tenets of bioregionalism.

### Bioregional Architects

There are a few exceptional architects who are developing bioregional architecture. Pliny Fisk, who founded the Cen-



*Recycled materials in Green Builder Demonstration Home, Austin TX.*

ter for Maximum Potential Building Systems in Austin, Texas, has done extensive research in bioshifts, biotechnologies, resource responsiveness and appropriate technology (see previous issue of this publication). Fisk has developed a housing model with the City of Austin Green Builders Program which is designed to reintegrate the relationship between natural and human-made processes. This house model uses renewable energy, is built from

indigenous materials, uses waste products as a resource, and uses the strong Texas sun and rains to shape architectural systems.

Another architect worth mention is Dennis Sun Rhodes, of AmerINDIAN Architecture in Saint Paul, Minnesota. Rhodes, who served as Chief of the Northern Araphoe Tribe, sees the past influx of European culture ruinous to the indigenous, bioregional architecture of the Native American cultures. Their architecture was symbolic, respectful, and highly spiritual. Rhodes is working to restore the cultural identity, symbolism, and architectural heritage with a modern version of bioregional architecture.

### A Call to Bioregionalism

Jim Olsen, a Seattle architect who has been working at sustainable design since the 1960's, believes our culture is at a turning point as we begin to shift our roles from consumers of limited resources to stewards of the planet (PA, 6/94).

Green architecture and sustainable design are highly visible movements in the design world today. While the gap between architecture and ecology is narrowing, there is a notably missing link with respect to bioregionalism in architecture. We need to declare our commitment to bioregionalism and, by implication, our bioregion--our source of life.

Humankind with its elaborate built environment resides atop of the com-

highlights the benefits of energy efficiency in housing, industry and transportation. (VHS 26 mins. 1993)

We also have some past lectures on tape including:

\*\* Dr. Donald Aitken: "Transition to a Renewable Energy Economy" (VHS)

\*\* Tom Bender: "The Heart of Place" (8mm Video)

\*\* Sandra Mendler: "Greening the Mainstream" (VHS)

\*\* Mike Pease: "Cities without cars: can we do it?" (8mm Video)

\*\* Dr. Michael Seal: "Solar & Hybrid-Solar Electric Cars" (VHS)•

We encourage you to drop by the Center (**219 Pacific Hall**) to browse through our current collection of books, periodicals, and other resources. You can pick up a copy of our updated book list at the Center or you can request a copy electronically by e-mailing us at:

[sic@aaa.uoregon.edu](mailto:sic@aaa.uoregon.edu) or by visiting our Home Page at <http://darkwing.uoregon.edu/~sic/>

Also, if you have any suggestions regarding video and/or book titles which we should add to our collections or questions regarding our resource-lending policy please don't hesitate to e-mail or call us at **346-3696** with your recommendations or questions. Hope to see you at the Center this winter!

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## Bioregionalism

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plex biotic pyramid of life. All things natural have until recently been seen as subordinate and sustaining elements in a pyramid, with humanity at the top. But the pyramid, if it exists, is deteriorating from the bottom up--resources are being depleted, societies are economically impoverished and species are vanishing from the face of the earth. Ironically, the pyramid has historically been used as the symbol of eternal permanence. As architects of the 21st century, we need to learn to rest more lightly on the top of the pyramid of life if we are to survive. Perhaps bioregional architecture will return us to spiritual meaning, identifiable place, authentic style and ecological grace. •

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# W

## Presidio

Continued from p. 3.

of the group.

"Sustainability is a process, not a product."  
-this focuses on a way of thinking, rather than providing absolute answers.

"I am a participant in this process."  
-this focuses the design effort on interactive experiences and encourages self-directed learning.

"There are elements of what I'm doing here that apply to my everyday life."  
-this focuses the interpretive elements and design on helping people make connections to their lives rather than focusing on the "things" or "facts."

With this understanding: of sustainability as a "process," the way in which the Presidio may become an example to the world community becomes clearer. By involving participants in the Presidio's process, instead of providing a final product for them to experience, the vision becomes tangible. Group discussions, with this in mind, revealed many variations on the *Park Plan*. What follows, is a handful of these ideas.

• The Community Site Team sought to broaden its educational goals. In addition to the Park Partners program, in which volunteers from the community share in the responsibility of the Park, and the educational outreach that teaches through field studies and historic tales, the Community Site Team is considering implementing an educational center at the Presidio to coordinate residence programs, interns, classes, workshops, and many other events. In this way, ample opportunities are created to involve interested parties in the happenings and issues of the Presidio.

• The Natural Resources Team discussed the need to restore Mountain Lake and the native species that dwell there. It recommended involving participants in this effort. Restoration and maintenance of these areas is an ongoing process and will continue to involve and educate those who participate as long as they are willing. Thus, through

the restoration of the native and historic ecology, participants become more in touch with their own environments and their natural cycles.

• The Architecture Teams suggested that the building renovation taking place at the Presidio throughout the foreseeable future become one of the attractions and educational aspects. In so doing, Presidio participants may be involved in the process of building restoration and reuse. In addition, the Team suggested that the process and educational value of the renovation be ongoing. "Truth windows," or apertures that reveal the building's past are one such method of accomplishing this.

• The Waste Management Team, (nicknamed the "No" Waste Management



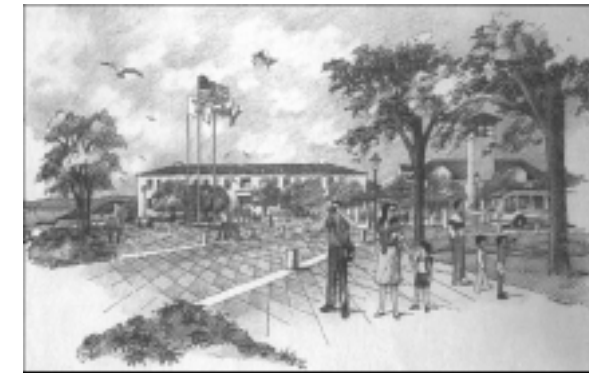
The Design Charrette at the Golden Gate Club

team) made it clear that there is in fact, "no such thing as waste." Among their recommendations was a desire to increase park users' understanding and value of waste. Composting and vermiculture are noteworthy examples, for they represent how biodegradable objects can very quickly become a resource of nutrient rich soil. Through the offering of these and other waste management solutions, people using the park are encouraged to think consciously about what happens to their waste, and how it can be integrated into nature's existing cycles of decomposition and re-use.

• The Transportation Team suggested that the Park Service use alternative fuel vehicles for all of its transportation needs. In addition, they supported the idea of implementing an alternative fuel bus route through the Presidio. This would allow for local commuting and mass transit

needs. Finally, they proposed that other means of transportation be adopted. These included making provisions for bicycle, pedestrian, and ferry travel. In this way, people could experience the process of travel, be it through the open air, or the vistas of San Francisco, windsurfers, and salt spray that surrounded them.

In all, these are only but a smattering of the numerous valuable ideas that were generated during the course of the Charette. Over the three day period, the Golden Gate Club (a rather substantial building) was wallpapered with suggestions, ideas, and comments. The imaginations that came together for this event were fruitful and filled with electricity. Thus it is important to mention that the material that was generated during that time is being gathered, sifted through, valued, and compiled for future publication. Through this process, the Park Service is not only assimilating the wealth of ideas generated, but is involving the rest of the world in its pursuit of sustainability. •



Artist sketch of future transit stop area.

Additional information on this event, or other issues related to the Presidio may be obtained by contacting the National Park Service at:

(415) 556-3111  
National Park Service  
Presidio Project Office  
P.O. Box 29022  
Presidio of San Francisco, CA 94129



A field study group at Crissy Field.

# CALENDAR

**Thursday, February 8**  
*"Designing with Permaculture: An Introduction"*  
 by Rick Valley  
 7:30 pm in 177 Lawrence Hall

**Thursday, February 15**  
*"Bioregional Architecture & Planning"*  
 by Davidia Kasperzyk  
 7:30 pm in 177 Lawrence Hall

Video: *"Building to Save the Earth: Land Use"*

**Thursday, February 22 Part 3**  
**Thursday, February 29 Part 4**  
 12:30 pm in 286 Lawrence Hall

**Thursday, February 29**  
*"The 1996 Regional Power Plan"*  
 by the Northwest Power Planning Council  
 7:00 pm in 177 Lawrence Hall

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## SOLAR INFORMATION CENTER

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