

ECOLIBRIUM®

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A BETTER ENVIRONMENT FOR BUSINESS.



Photo courtesy of Yellowstone National Park

NEWHOUSE™

REDEFINING ATTAINABLE HOUSING IN THE NORTHERN ROCKIES

Ecolibrium® Corporate Headquarters

2185 Lomas Drive Bozeman, Montana 59715
Telephone 1.800.475.2599 Facsimile 1.612.851.0140 URL www.ecolibrium.com

INTRODUCTION TO THE NEWHOUSE™ CONCEPT

The resort/lifestyle communities of the northern Rocky Mountain West provide a unique challenge for community planners. While much of the housing market in the scenic intermountain west is being driven by wealthy individuals creating second and third homes, the working people who help form the foundation of the community are often driven from the area by increasingly unaffordable housing costs. The median home price in these communities often far exceeds the median income. Descendents of long-term residents are driven from their home-towns for the same reason. Planners often react to these conditions by mandating the development of “affordable” housing into development planning.

Too often, in these communities, “attainable” means undesirable; uninspired design and sub-standard construction. Yet, in many areas, the market for this housing is unlike even the market for attainable housing in many other areas. The communities, lacking the industrial and commercial sectors that provide for a healthy middle class, often generate a service economy that attracts a unique work force.

Often, well-educated, upscale young adults and families have made a decision to trade income potential for lifestyle. Waiters with Masters degrees are not uncommon. Ski instructors from Ivy League schools, landscapers with business degrees as well as seniors, young professionals, and singles; all make up an economic segment unique to the West. Traditionally low paying, high worth jobs in teaching and other human service sectors suffer as well, setting up situations where communities are unable to attract the quality and quantity of personnel that matches the community’s values and needs.



Photo courtesy of Jackson Hole Community Housing Trust

THE ATTAINABLE HOUSING MARKET NEEDS NEW OPTIONS. WELL-DESIGNED, WELL PLANNED, WELL EXECUTED ATTAINABLE HOUSING COMMUNITIES ARE A CRITICAL NEED IN THE ROCKY MOUNTAIN WEST. THE NEWHOUSE CONCEPT IS JUST SUCH A SOLUTION, PROVIDING COMMUNITIES WITH ATTAINABLE DEVELOPMENTS THAT PROVIDE:

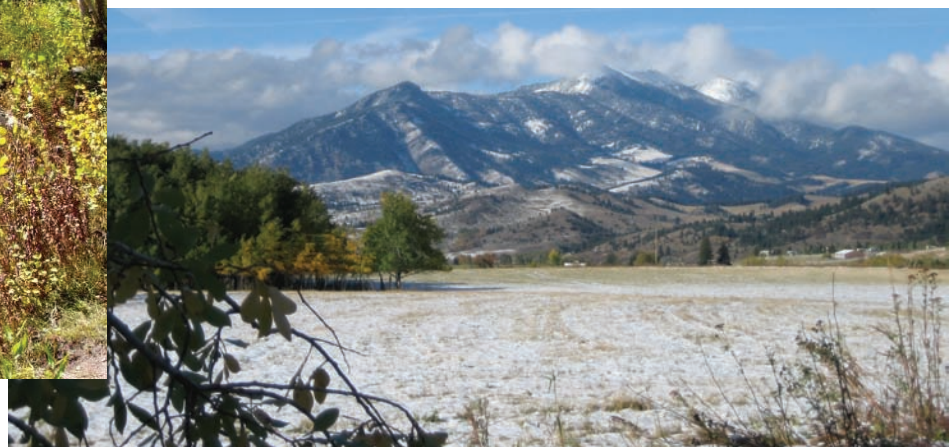
- WELL-DESIGNED, ENERGY EFFICIENT HOMES DESIGNED FOR THE UNIQUE PEOPLE, LIFESTYLES, ECOSYSTEMS AND CLIMATES OF THE NORTHERN ROCKIES;
- LAND USE PLANNING PRINCIPLES THAT EMPHASIZE COMMUNITY OVER TRADITIONAL, ISOLATED SUBURBAN/EXURBAN DEVELOPMENT PLANS;
- SUSTAINABLE BUILDING PRINCIPLES THAT PROVIDE TANGIBLE ADVANTAGES OVER TIME, NOT JUST AT THE TIME OF CONSTRUCTION;
- ATTAINABLE HOUSING OPTIONS THAT STRESS QUALITY OF LIFE AND INNOVATION IN CONCERT WITH ECONOMY AND ENVIRONMENTAL SUSTAINABILITY – HOUSING THAT ENHANCES MOUNTAIN LIVING, NOT HOUSING THAT PEOPLE “SETTLE FOR.”



The West needs new ways to grow. The pressures of resort area growth are being felt in mountain communities across the region. Rapidly increasing housing costs and resulting land costs, increased energy costs, rapidly growing transportation costs; all are combining to make the West unattainable to all but the wealthy.

As the growth communities of the Rocky Mountain West proliferate, demand for two types of housing are growing dramatically. On the one end, high end “trophy homes” are being developed in resort communities and gated neighborhoods all over the west. Often, with over 7,000 square feet, and occupied less than 30 days a year, these homes are placing great strains on their local communities, driving up housing costs, and forcing many residents out of their communities. Consider:

- The average price of a home in Bozeman has grown from \$195,000 to \$260,000 in three years, reaching an average price of \$291,000 in August of 2005.
- The Housing and Rural Development Corporation of Bozeman defines federally supported affordable housing to be about \$154,000 with 3 bedrooms and 2 baths. The lower range of building lots in the area range from approximately \$55,000 to \$85,000.
- The median price of a home in Jackson, WY in 2005 was \$1.2MM. The average cost of new home construction in Jackson is \$350/sq. ft. and can reach \$600/sq. ft. It is estimated that over 60% of the homes in Jackson are occupied less than 3 weeks a year.
- 30% of the homes built in Jackson are built “on spec.”
- Worker housing is at such an acute shortage in Teton County, WY that workers are commuting up to 2 hours each way to work there.





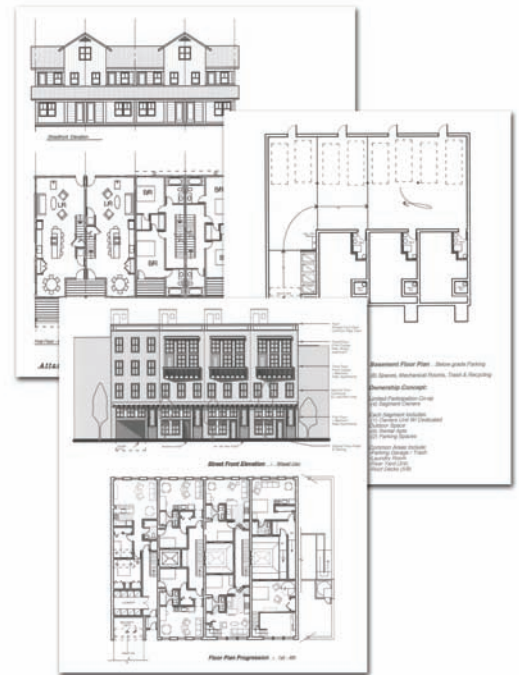
These communities share problems of other cities and towns across the country, albeit more acutely. For example:

- The recent hurricane damage in the Gulf Coast have created shortages of lumber and a variety of building materials, resulting in higher costs and delayed availabilities, to markets that already pay for increased shipping costs to remote locales. Attainable housing, which is based on fixed, targeted end-prices, must adapt to these higher costs, typically through compromised quality, size and essential quality of life standards.
- Energy costs continue to rise. Recent increases in oil prices have increased prices on a variety of other fuels as well, including heating oil, natural gas, propane and electric. While the ubiquity of SUV's have come to symbolize energy gluttony in the US and especially the West, in reality, home heating constitutes 57% of US energy consumption, versus 10% from automobiles. While much has been written about the impact of rising gas prices on consumer confidence and consumer behavior, rising home heating prices can cause infinitely greater impacts on the cost of living. For those living in "attainable housing," these impacts in mountain regions with extended winter seasons can be enormous. With increasing energy prices expected in the foreseeable and long-term future, it is critical that attainable housing integrate considerably greater energy efficiency into design and construction to meet its goals.
- Labor costs increase with scarcity. While many mountain communities have started with lower wages for tradesmen than typically unionized urban areas, the demand for highly skilled trades has dramatically increased the cost and availability of qualified tradesmen in most markets. Lower cost, attainable housing as a category is least able to afford qualified tradesmen, resulting in greater disparities in housing standards for attainable housing units.
- Many people move to the Rocky Mountain West for a unique quality of life. Open space, view sheds and a home that integrates the surrounding natural environment are desirable elements. Yet many of the developments in rapidly growing western communities provide anything but these amenities, in many cases replicating the worst of suburban sprawl found in other markets. Attainable housing elements of these developments simply cram more, smaller, substandard housing into less space. This is undesirable in both market and attainable developments.
- Many mountain communities are new, young communities. For example, the median age of Gallatin Valley has declined in the past 10 years. The new residents are often well educated, from decidedly upscale backgrounds and add greatly to the vibrancy of the communities they inhabit, yet have lower earning potential based on lifestyle decisions and their life stage. This can set up significant, largely artificial class distinctions that can impede the furthering of community values. Attainable housing can play a large role in either reinforcing or diminishing these distinctions.
- Also, with the influx of baby boomers, there is a trend towards smaller, easier to maintain housing with an enhanced degree of functionality.

THE NEWHOUSE™ SOLUTION

The NewHouse™ Model is a proprietary, fully integrated planning, design and building program created to develop a new model for attainable housing in the Rocky Mountain West.

Combining underutilized existing technology and planning principles with innovative design and planning, along with new route-to-market technology and processes, the NewHouse™ Model provides a completely turnkey solution to communities and developers who wish to provide high quality attainable housing options.



The NewHouse™ Model delivers on this bold promise, utilizing the following elements in our process:

- Innovative designs from a team of the region's leading architects specializing in working with small space living, sustainable construction, energy efficiency, and attainable housing.
- Site planning, utilizing clustered community housing and open space planning that integrates the surrounding environment.
- Modular construction, utilizing Structural Insulated Panel (SIP) technology and modular components for superior quality, fast on-site construction and superior energy efficiency without compromising living space design and amenities.
- The Newhouse™ Model provides the capacity to add custom features, if desired, to personalize the home at an affordable price. The goal, like all of the features of the NewHouse™ designs, is a home homeowners can be proud of, not a home they have to settle for.
- Optional add-ons that permit even greater energy saving options, including energy-saving solar, heat pump technology and other options.



Photos courtesy of BigSky R-Control



THE NEWHOUSE™ PROGRAM

The NewHouse™ program will emphasize several critical elements:

- Reverse engineering the design and development process to achieve a target home price, then applying innovative design to create distinctive living spaces;
- When evaluating and planning a site, we will evaluate the attainable development site as a whole, not simply as individual lots. This provides many options to, for example, cluster home sites and provide green space and shared community areas, similar to the Cottage Community approach developed in Seattle's Whidbey Island area. While this process will require zoning variances in some communities, we believe it is critical to the continuing evolution of desirable attainable communities in the West.
- The program will integrate a variety of modular, pre-fabricated design and engineering techniques, combined with LEEDS certified, sustainable construction materials and processes to maximize efficient use of materials and minimize waste.
- This program will be continually evaluated and refined. We anticipate testing this model in at least one pilot project in Gallatin valley and perhaps in one other location. We propose having this model fully operational within two years. We are seeking to work with land owners and developers to find suitable pilot projects to help fine tune the design, planning and construction processes.
- We will develop a proprietary brand identity applicable to this process and the resulting developments. This will help us seek out and partner with developers and communities with needs that align with our program and will allow us to amortize our investment in the development of the designs and processes over time.



ECOLIBRIUM® NewHouse™ PROJECT TEAM

Elizabeth Schuyler Scholl, Chairman and Chief Executive Officer
escholl@ecolibrium.com

Before founding Ecolibrium®, Ms. Scholl was Executive Director for the Yellowstone Business Partnership, a non-profit linking business to the growing conservation ethic in communities surrounding the Grand Teton and Yellowstone National Parks toward ensuring sustainable development. Ms. Scholl was formerly Director of Community Relations for Allina Health System, a system of hospitals, doctors and health plans with annual revenue of \$3.2 billion serving more than 16 million people in the Upper Midwest. She designed and implemented community partnership programs that enhanced Allina's ability to achieve improved community health outcomes, and advised the executive office on key community initiatives. She led Allina's nationally recognized Violence Prevention Initiative. She designed and implemented corporate charitable giving and sponsorship programs and company-wide employee involvement programs. In recognition for the success of these programs, she received the organization's coveted Key Contributor Award.

Previously, Ms. Scholl served as Division Director of Resource Development for the United Way of the Minneapolis Area, raising more than \$3.5 million annually. Prior to her staff role at United Way, she helped launch the new Leaders in Giving Program as a loaned executive from Honeywell, Inc. She directed programs in the Department of Public and Education Affairs for Honeywell, Inc., including the Minneapolis area design and implementation of the America 2000 Education Initiative. This six-year effort brought diverse opinion, education and government leaders together who helped improve educational outcomes of local youth.

Ms. Scholl studied acting at Carnegie Mellon University. She has performed in professional theater, and has owned and operated two successful businesses in New York State. An enthusiastic traveler, she has journeyed extensively throughout the world, devoting much of her attention to countries with emerging economies.

Robert A. Degenhardt, President and Chief Operations Officer
rdegenhardt@ecolibrium.com

Mr. Degenhardt brings to Ecolibrium® the commitment to facilitate solid integrated and collaborative teams to work on unique client projects. Mr. Degenhardt most recently served as Senior Vice President and Board Director with 3D/International, Inc., a large international construction management and design firm. Mr. Degenhardt previously served as the Chief Executive Officer of Ellerbe Becket, one of the largest architecture, engineering and construction management firms in the world, designing \$1.2 billion dollars of construction annually. While at Ellerbe Becket, he was recognized as an industry champion for creating integrated teams that collaborated to improve design and construction results for their customers while significantly reducing the industry-infamous high level of litigation. During Degenhardt's tenure, Ellerbe Becket achieved the highest revenue and profit volumes in its 90 year history. Mr. Degenhardt was a commissioned officer in the United States Army and served in Vietnam. He graduated from the University of Nebraska with a Bachelor of Science in Mechanical Engineering and a Master of Science in Mechanical Engineering. He holds memberships in the national honorary societies for mechanical engineering and science. He is a registered professional engineer and has served as Board Director for all employers since 1974.

Dave Sollitt, Vice President of Strategic Marketing and Communications
dsollitt@ecolibrium.com

Mr. Sollitt comes to Ecolibrium® out of his commitment to develop brand around a cause that delivers a return on investment for clients while improving the consumer's understanding and behavior choices surrounding that cause. He believes that by bringing the proven skill sets of his industry to bear on environmental, cultural and historic causes, desired results can be accelerated and the preservation of assets related to the cause can be realized.

Before owning his own advertising and marketing agency in Jackson Hole, Dave Sollitt spent a 20-year career creating, building, and growing large and small brands in the US and overseas. He began his career at Backer & Spielvogel in New York, working on various brands for the Miller Brewing Company. He worked on two of the most famous ad campaigns of all time, the "Miller Time" campaign for Miller High Life and the "Tastes great, less filling" campaign for Miller Lite.

Mr. Sollitt is a graduate of Arizona State University and holds a Masters Degree in Advertising from Northwestern University. He is a founder of a non-profit organization, The Cathedral Group, which brokers pro bono marketing, communications and advertising talent to non-profit, conservation programs worldwide.

Scott Gillilan
Vice President Project Development and Conservation and Natural Resources
sgillilan@ecolibrium.com

Mr. Gillilan provides Ecolibrium clients with vast experience in the field of natural resources that includes aquatic and terrestrial restoration, conservation planning, water resources, land value assessments and conservation based development. He excels in identifying added-value opportunities for investors intent on establishing new land utilization and inhabitation models in rapidly changing rural and near-urban land economies. This includes the identification of under-potential, degraded and/or threatened rural properties and the generation of fiscally responsible sustainable development plans. His work is informed by over 16 years of projects across the US, from urban settings to large land holdings.

Previously Mr. Gillilan co-founded a successful commercial composting business integrating agricultural waste streams with high-end compost markets in up-scale private recreational developments. He also co-founded an ongoing full-service biological and natural resources consulting business that remains a regional leader in the field. Mr. Gillilan began his professional career working almost exclusively for some of the largest non-extractive industry private landowners in the US designing and implementing wildlife enhancement and land restoration projects.

Mr. Gillilan has published extensively on the topics of professional restoration standards, natural channel design and floodplain management. He holds a Bachelor of Science (Biology) from Lewis and Clark College and Masters of Science (Hydrology) from Oregon State University.

OUR PROJECT PARTNERS

Architecture and Land Planning -- Clark Stevens, AIA, APA, New West Land Company

Clark Stevens is President of New West Land Company of Livingston, MT and Topanga, CA, and co-owner of RoTo Architects in Los Angeles, CA. His professional honors include selection in 1995 to the Architectural League of New York's "40 under 40" list of the nation's most accomplished young architects. His work has been exhibited internationally, including selection for the 2004 Biennale di Venezia, featured in the Los Angeles and New York Times, Vanity Fair, on the cover of Architectural Digest and Dwell, and appeared on the A&E, Travel, and HGTV networks. The June 2004 issue of Architecture features New West Land Company's strategic methodology of place-appropriate development. He is a regular lecturer and workshop facilitator on conservation development, is the author of several professional articles, and developed a rural conservation design course at Montana State University as a visiting faculty member. He has led community design charrettes in Montana, California, and Hawaii, and his land restoration and interpretive design experience includes riparian areas in Montana and California, tropical dry forest in Hawaii, and coastal wetlands at Topanga, Malibu, and Huntington Beach.

Mr. Stevens holds a BS in Architecture from the University of Michigan, and a Master of Architecture with Distinction from Harvard University's Graduate School of Design.

Green Building -- Mark Frankel, Technical Director, New Buildings Institute, RA, LEED Accredited Professional

Mr. Frankel has been consulting on sustainable design and energy efficiency for 15 years and is currently the Technical Director of the New Buildings Institute, which researches, develops and implements energy efficiency and high performance building programs across the country. His work has encompassed a broad range of technical topics, including building and site design, energy use, occupant health, daylighting, high performance mechanical systems, stormwater management, efficient irrigation strategies, and others. This work has included extensive evaluation of comparative life cycle costs of high performance building strategies for a range of public and private development models. Mark has consulted on hundreds of capital projects, ranging in scale from single and multi-family residential projects to very large commercial office buildings all over the country.

Mr. Frankel also has extensive experience with the United States Green Building Council's (USGBC) LEED program, both as consultant to projects successfully seeking LEED ratings, and as a technical consultant to the USGBC on development and implementation of the LEED program. He has participated as a consultant on the project team for over 15 LEED projects, and evaluated over 100 projects for the USGBC. He is currently serving on the Board of Directors of the Cascadia Chapter of the USGBC.

Mark has developed training curriculum and conference seminars on a range of topics related to sustainable design, and presented this material to architecture and engineering audiences of all sizes. Mark also participated in the development of the LEED accredited professional exam for the USGBC.

Mr. Frankel holds a Master of Architecture, University of Utah, Salt Lake City, Utah, and Bachelor of Arts, Environmental Policy, Pomona College, Claremont, CA.

Residential Energy Efficiencies -- Bob Davis, Ecotope, Inc

Mr. Davis is Research Engineer for Ecotope, Inc. (ecotope.com), a nationally-recognized energy consulting firm specializing in sustainable design innovations in residential buildings. They consult on site design, water conservation and reclamation strategies, passive and alternative energy systems, daylighting, building material content, performance and longevity, indoor air quality and building commissioning.

Mr. Davis has written numerous field protocols, trained HVAC and weatherization technicians and others in the use of field testing protocols, including real-time heating system distribution system efficiency tests, specialized HVAC equipment testing protocols, and infiltration/ventilation testing. His current research projects include residential heat pumps and commercial rooftop units. Mr. Davis is a board member of Affordable Comfort Inc, a national energy -efficiency education nonprofit that brings together experts in home performance several times a year to conduct training.

Mr. Davis attended Deep Springs College and Stanford University before graduating with a B. S. in Chemistry and Energy Systems from The Evergreen State College.

Structural Insulated Panel (SIP) design integration – Greg Werner, Director of Development, Big Sky R-Control

Founded in 1977, Big Sky R-Control has built a solid business around manufacturing Expanded Polystyrene products for the construction industry. Located in Belgrade Montana, the company has continually improved the equipment and capabilities of the plant's people to offer state-of-the-art capabilities into the production process. We were pioneers in the development of structural insulated panels (SIPS) in the early 1980's and from that time we have made improvements in design and fabrication of the panels that have deeply impacted the industry in our region.

In 2003, Big Sky R-Control became one of two SIPS manufacturers in the country to install a fully automated, computer controlled panel fabrication cutter manufactured in Germany. The accuracy of the cutter is an unsurpassed 1/8" and can produce straight or compound angle cuts to match your required geometry. Your project design is used in the creation of a 3D shop design used by the cutter to create the panels for your project.

Time after time customers tell us that our people are what set us apart from other SIPS manufactures. We work hard to earn and keep your trust. Exceptional customer service joined with superior product offerings continue to set us apart in the industry.

Sustainable design – Paul Duncker, HandsOn Design

Paul Duncker is a Jackson architect who has specialized in a variety of housing, from large scale luxury homes to small scale affordable housing. He is the President and owner of Hands On Design. HandsOn Design began based on the unique characteristics of the Jackson Hole market in 2001 as a design/build partnership with Knoke Builders Inc. of Wilson Wyoming. Design/build projects have included a guest house, workshop addition and limited remodel, a modular house, garage and guest house, and renovations to the Old Wilson Schoolhouse Community Center. In October 2002 HandsOn Design received the commission to design a set of 28 affordable housing units for the Jackson Hole Community Housing Trust on two sites on East Kelly Avenue. Since this was a long-term project which didn't include construction, HandsOn Design evolved into a purely architectural firm, and Knoke Builders Inc. continued to provide general contracting services on its own. The project won the national AIA AIA Certificate of Recognition for Design Excellence in Affordable Green Housing in 2005.

Paul and his wife Peggy, also an award-winning architect, live in one of his finest works, the Red House project in Wilson, WY with their two children. The home, which has been featured in Fine Homebuilding, Residential Architect and Builder magazines and won the Wyoming AIA Award of Honor. Paul is a graduate of the Cooper Union School of Architecture in New York and is a registered architect in Wyoming, New York and New Jersey.