

## Waldsee BioHaus FACT SHEET

Waldsee BioHaus serves as a living and learning facility where students and visitors are immersed in the German language, culture and the study of sciences through world-class design. It brings to life the Concordia Language Villages' mission – “to prepare young people for responsible citizenship in our global community.”

While it is part of the German Language Village, Waldsee BioHaus benefits the entire community of Concordia Language Villages, giving it the physical space it needs to serve more villagers as well as expanding the ability of Concordia Language Villages to teach environmental studies, conduct outreach and provide a look into modern German culture.

As the first certified Passivhaus in North America, Waldsee BioHaus' cutting-edge design facilitates environmental living and learning. The building showcases new approaches to energy conservation and innovations in sustainable building design, including:

- Energy-standard-based design using the German Passivhaus (Passive-house) standard, the world's premier test of energy efficiency
- Use of alternative and renewable energy resources
- Extensive green roof
- Low impact and healthy building materials
- Simple building design and technology
- Low-energy-use mechanical equipment and appliances

**OPENED** August 11, 2006

**LOCATION** Waldsee German Language Village  
Concordia Language Villages  
Bemidji, MN 56601

Waldsee BioHaus is the first Passivhaus built in such a cold winter climate.

- more -

## Building Details

	Area [m <sup>2</sup> ]	Area [sft]
<b>Dormitories</b>		
Number of Dorms	4	4
Size of Dorm	17,85	192
<b>Total</b>	<b>71,40</b>	<b>768</b>
<b>Circulation Area</b>		
Lounge / Hall — Lower Floor	35,70	384
Foyer / Hall — Upper Floor	35,70	384
<b>Total</b>	<b>71,40</b>	<b>768</b>
<b>Bathroom Facilities</b>		
Toilets / Shower	8	8
Size total	27,60	297
<b>Total</b>	<b>27,50</b>	<b>297</b>
<b>Small Apartment</b>		
Bedrooms	2	2
Bedrooms total	26,00	280
Living/Dining	28,30	304
Bathroom	3,70	40
<b>Total</b>	<b>58,00</b>	<b>624</b>
<b>Common Room / Studio</b>		
Common Room	85,50	920
Studio	25,70	276
Kitchen	19,30	208
Storage	4,00	43
<b>Total</b>	<b>134,50</b>	<b>1,447</b>
<b>Mechanical Room</b>		
Mechanical Room	101,10	1,088
<b>Total</b>	<b>101,10</b>	<b>1,088</b>
<b>Total Area</b>	<b>464,00</b>	<b>4,992</b>

- more -

## WALDSEE BIOHAUS DESIGN

Waldsee BioHaus design combines two main elements:

- Private areas containing dormitories and an apartment at the base or rear of the building as represented by the areas finished in blue stucco and its massive walls
- Public areas for gathering, playing and learning located in the areas finished in the light-reflective aluminum siding with thinner walls, that rate at essentially the same R-value as thicker walls due to the application of innovative insulation materials.

Stephen Tanner, the architect of record, from INTEP, LLC, worked with three core themes, *Durchblick*, *Einblick* and *Ausblick*, all which are based on his vision of immersion learning, inside/outside relationships and establishing an understanding of nature.

### ***Durchblick***

Upon entering the building, one experiences the *Durchblick* – “seeing through” the building from west to east toward the lake. The immediate sensation is one of experiencing the building’s transparency. In a more figurative sense, *Durchblick* refers to a deeper understanding one gains of a subject or life in general, or in this case, a deeper immediate understanding of Waldsee BioHaus.

### ***Ausblick***

*Ausblick* is the view “seeing out” into the forest to the south from the large windows in the Common Room and the Studio. The term *Ausblick* also refers to the outlook one gains on life or an issue. In the case of Waldsee BioHaus, it may refer to the new perspective, the new understanding a visitor may gain by “looking inside” first.

### ***Einblick***

*Einblick* or “seeing into” is reflected in a small, elongated window in the Studio and reflects the task of exploring something in detail. *Einblick* plays on the ideas of being able to “look in” and to gain insight into the inner works of Waldsee BioHaus.

## FEATURES/ SPECIFICATIONS

Mechanical room that showcases the building’s technology.

- Building management system that monitors the building’s vital signs in real time and online ([www.waldseebiohaus.com](http://www.waldseebiohaus.com)).
- Environmental learning studio
- Lower level lounge
- Solar powered showers
- Low-emission building products, materials and chemicals.
- 100 percent fresh-air; no re-circulated indoor air is used to heat or cool the building.
- Environmental-friendly building products and materials used in the construction of Waldsee BioHaus.
- Full range of communications systems including data networks and WiFi.
- Green roof planted with low-growing, sun-and drought-resistant ground cover.

- more -

**CONCORDIA  
LANGUAGE  
VILLAGES**

**Christine Schulze**

Executive Director/CEO, Concordia Language Villages  
Vice President for International Development, Concordia College

**PROJECT  
TEAM**

Christine has been the executive director and CEO of Concordia Language Villages since 1989. In 2006, she was appointed vice president for international development at Concordia College, Moorhead, MN. She has been a Concordia Language Villages staff member for 32 years and was a Spanish villager for one year. She served as dean of Lac du Bois, the French Language Village, and directed the French Village Weekends for six years. Schulze also was the first leader of French Voyageurs and co-led an abroad program to Switzerland. She is fluent in French and has studied German and Spanish. She has presented extensively nationally and internationally on language and global education.

Christine graduated from Concordia College, Moorhead, with majors in French, history-political science and a minor in German with secondary education certification. She studied in Rennes, France, and taught French at Concordia for a year. She attended an international law study program in Lyon, France, and earned a juris doctorate from the University of Minnesota Law School. She was admitted to the State Bar of Minnesota.

**Dan Karl Hamilton**

Dean of Waldsee, German Language Village

Dan has been engaged with Concordia Language Villages since 1968. With strong dedication, creativity and energy he has led Waldsee particularly in curricular and staff development, program innovation, fundraising and outreach. He holds a Ph.D. and MA with distinction from Johns Hopkins, a B.S. from Georgetown University, and a Doctor of Humanities h.c. from Concordia College, Moorhead, MN.

Dan has served in a variety of functions in the U.S. Department of State and now serves as the Richard von Weizsäcker professor and the director of the Center for Transatlantic Relations at SAIS as well as the executive director of the American Consortium on European Union Studies. He serves on a number of boards, has been awarded Germany's Federal Order of Merit (*Bundesverdienstkreuz*), and is a regular media commentator on international relations and education.

**Martin Graefe**

Director of Year-round Programs  
Concordia Language Villages

Martin is the director for year-round programs. Graefe has been on staff at Concordia Language Villages for 19 years, including 10 years as the associate director for operations. He is a native of Germany and has studied French. He met his wife Lisa at Waldsee, the German Language Village; their three sons have been villagers at Waldsee, Skogfjorden and Lac du Bois. The family resides in Bemidji, MN and has attended all Waldsee family weekends, which Lisa coordinates and leads.

Graefe received his bachelor's degree from the University of North Dakota, Grand Forks, ND, and a masters degree in business administration from the Carlson School of Management at the University of Minnesota.

Since joining the Villages he has been involved with Rotary International and the American Camp Association, occasionally presenting at its national conference.

Martin's involvement with the Waldsee BioHaus started in the fall of 2004 and included the selection of the architectural firm, attending the Passivhaus conference in the spring of 2005 and contributing to the overall planning team throughout the construction process.

**Edwin Dehler-Setzer**

Environmental Education/Natural Resource Management Specialist  
Concordia Language Villages

A native of Fulda, Germany, Edwin is a widely recognized expert in the field of environmental education and immersion learning. He has led the environmental program at Waldsee and Concordia Language Villages for 18 years. He holds an M.S. in environmental studies with specialization in environmental biology from the Antioch New England Graduate School in Keene, New Hampshire, and acquired his teacher certification in biology and physical education from the University of Regensburg, Germany.

Edwin's early dreams of a residence at Waldsee that focuses on community living inspired what now has become Waldsee BioHaus. His enthusiasm for learning, education, and environmental stewardship has spread into an unmatched passion for every aspect related to using the BioHaus as the educational tool it is envisioned to be. His construction journal on Waldsee BioHaus can be found at [www.ConcordiaLanguageVillages.org](http://www.ConcordiaLanguageVillages.org) (click on German – das BioHaus – Construction Journal).

**CONCORDIA  
LANGUAGE  
VILLAGES**

**Architect of Record**  
**Stephan Tanner, AIA**  
INTEP, LLC; Minneapolis, MN

**DESIGN  
TEAM**

Stephan has won several national and international awards for designs in housing, commercial and institutional planning projects in Switzerland. He's also led planning and design projects for a variety of high-performance real estate projects in the U.S., Europe, China and Korea. Now a licensed architect in Minnesota, Stephan continues to pursue his passion for people and their diverse ways of "place-making" through innovative projects like Waldsee BioHaus.

**Mechanical Concept**  
**Rene Sigg, PE**  
**Petra Benkhoff, PE**  
INTEP, GmbH, München, Zürich

**Sustainability**  
**Thomas Rühle, PE**  
INTEP, GmbH  
München, Zürich

**Joel Schurke, Principal**  
INTEP, LLC  
Minneapolis, MN

**Structural Concept**  
**David Morris, PE**  
**David Morris Structural**  
Eden Prairie, MN  
Construction Team

**General Contractor**  
**Howie Zetah and Doug Pearson**  
Zetah Construction  
Bemidji, MN

**Plumbing**  
Wes' Plumbing  
Bemidji, MN

**Heating & Ventilation**  
Peterson Sheet Metal  
Bemidji, MN

**Electrical**  
Wiebolt Electric  
Bemidji, MN

**Insulation**  
North Country Insulation  
Bemidji, MN

**TECHNOLOGY/  
MATERIALS  
PARTNERS**

**Amvic**  
www.amvicsystem.com  
Products:  
Insulated Concrete forms (ICF)  
Expanded polystyrene insulation (EPS)

**Emory Knoll Farms**  
www.greenroofplants.com  
Products:  
Extensive green roof plants

**INTEP, LLC**  
Minneapolis, München, Zürich  
www.intep.com  
Services:  
Architect of Record  
Sustainability concept and passive house  
standard implementation

**Optiwin/Müller Fensterbau**  
www.optiwin.net/de/  
Products:  
Passive house certified wood windows  
and doors

**OTHER KEY  
BUILDING  
COMPONENTS/  
SERVICES:**

**Icynene**  
www.icynene.com  
Product: Spray foam insulation

**Industry & Design Light, Inc.**  
www.dl-lighting.us  
Product: Lighting

**Luefta GmbH**  
www.luefta.de  
Product: Heat recovery unit

**REHAU (+ REHAU North America), Energy  
Dynamics/Hydron Module and Euroline  
Windows**

www.rehau-na.com/  
www.energy-dynamics.com/  
www.euroline-windows.com/  
Products:  
AWADUCT®: Earth-tube collector  
RAUSOLAR Solarthermal hot water system  
RAUGEO® + Hydron Module®; Ground source  
heat pump system  
Radiant floor heating system  
Domestic water and wastewater piping systems  
Euroline Windows

**Siemens and Staefa Controls**  
www.siemens.com  
www.staefa.com  
Products:  
Kitchen and building monitoring/control systems

**Sto**  
www.stocorp.com  
Products:  
Sto-Guard®, Building Wrap/Air Barrier System  
EIFS NExT®, Exterior Insulated Wall Cladding  
System

**Porextherm Dämmstoffe GmbH**  
www.porextherm.com  
Product: Vacuum Insulated Panels

**Sarnafil**  
www.sarnafilus.com  
Product: Roof membrane

**WAREMA Renkhoff GmbH**  
www.warema.com/en  
Product: Shading device

###