Topical Lunch – Norm Scott
"Building" a Sustainable Community

June 28, 2010
12:00 – 1:00 PM
300 Rice Hall

<u>Attendees</u>:

Host – Norman Scott, nrs5

Helene Schember, hrs6
David Dieterich, dd355
Mark Lawrence, mal64
Monica Touesnard, mat59
Mark Milstein, mm462
Chuck Greene, chg2
Joe Regenstein, jmr9
Dennis Miller, ddm2
Jeff Tester, jwt54
Katherine A. McComas, kam19
David Kay, dlk2
Max Zhang, kz33
Lindsay Anderson, cla28
Bernd Blossey, bernd.blossey@cornell.edu
Mary Lou Zeemen, mlzeeman@bowdoin.edu
David McCobb, dpm9
Mike Walter, mfw2
Al George, arg2
Jonathan Russell-Anelli, jmr5
Pike Oliver, hpo3
Kifle Gebremedhin, kgg1
Laura Voss, Bowdoin College

Sustainable Communities for Montana
presented by Norm Scott, BEE

- **Brief Background**

- **Site Details**

- **Vision for Site (sustainable community)**

- **Process for Student Engagement**

- **Comments, Questions, Suggestions & Interest in Participation**

Background (Aspen Trails Ranch) Helena, MT

- **Managing Member, Richard G. Bowen, C&EE'63 and MBA '64 (Cornell alum)**

- **266-acres about a mile+ north of Helena and just north of Helena airport**

- **Much site planning work completed, including an engineering design (for 325 lots w/ roads, utilities, drainage, etc.) and geo-tech site analysis**

- **Supreme Court of MT voids preliminary plat (April 14, 2010)**

Sustainable Communities:Live,Work & Play

Will embody the characteristics of:

- renewable energy systems to meet all energy needs
- high level of energy conservation
- targets for distributed energy generation
- materials recycling (industrial ecology)
- close–proximity relationship for work and living to minimize transportation
- efficient water use and recycling
- food production

Sustainable Communities (cont.)

- efficient waste management and recycling (including human)
- a basic infrastructure (including Internet)
- minimal carbon footprint
- minimal gaseous emissions
- effective communication systems (Internet)
- "healthy" & energy efficient (LEED) buildings
- excellent governance
- active and thriving businesses (jobs)
- excellent educational opportunities

Sustainable Communities (cont.)

- **Intergenerational environment**
- **Assisted living facility**
- **Community center**
- **Lower income housing opportunities**
- **Walking & biking trails**
- **Shuttle (&/or car-share/bike –share program) transportation system**
- **Plug-in electric vehicles**
- **Facilities for storage**
- **Others ??**

Objective

Develop multidisciplinary student project teams (primarily Master's level but also including some upper level undergraduates) to develop a detailed site plan incorporating the characteristics of a sustainable community which meets the broad goals of environmental, economic and social responsibility (equity).

Role of University ??

- **Multidisciplinary student teams w/ faculty participation**
- **Diverse teams focused on specific issues**
- **Special course to provide academic credit for team exercise (weekly meeting to coordinate, BEE4970/BEE6970)**
- **Connection with existing courses (Chem. E., Communication, C&EE, others??)**
- **Outreach/engagement with community via a design charrette – numerous stakeholders (in Helena, possibly January intercession)**
- **Develop an assessment & evaluation report at end of academic year (end May 2011)**

Comments, Questions, Suggestions, Interest in Participation (?)

- Would there be food processing on site? – consider a small facility
- Integrate food/water/energy/waste management – opportunity to bring together a disparate group, leverage the strengths of Cornell
- Can we leverage knowledge gained from Eco-Village, Kendal, Oberlin College? … (particularly lessons learned and the process used to address social issues)
- Points of connection: SNES colloquium; architecture design courses
- Consider what crop production the local soils would support. Animals?
- Must evaluate the economics, market demand, size of market
- Water rights will be an important topic
- Consider the relationship of the community with Helena – outside support structure, e.g. transportation
- Subsystems within a larger system – opportunity to learn by taking a small first step
- Cornell getting into sustainable communities/longer range/ program development
- Not a stand-alone, self-sustained community … an element within a larger system
- Consider Ithaca as an alternative demonstration and research community? Potential local resources: Park Foundation? Triad Foundation.
- Could conduct conceptual design competitions. A spring competition?
- Real customer and community engagement needed for success
- Potential for two reports: one on the outcome; the second on the process deployed