Strategic Plan
School of Forest Resources and Environmental Science

MichiganTech

2-6-11 to be reviewed & updated in Spring, 2013
A report card should be generated by the Dean, faculty, and staff every year

(Text in **Bold** is from Michigan Tech's 2009 Strategic Plan)

The School of Forest Resources and Environmental Science was founded in 1936 with the mission to: a) provide the state of Michigan and our stakeholders with skilled foresters and wood scientists; and b) provide our stakeholders and the state of Michigan with research results to better inventory, maintain, and grow our State's forests. Since then, we have expanded our programs to not only include our past forestry program but also educational and research programs in applied ecology, wildlife ecology, genomics, and biotechnology. Our location, adjacent to Lake Superior and in one of the largest and finest expanses of northern hardwoods in the nation, provides students, faculty, staff, alumni, and friends with many opportunities for experiential learning and scholarly efforts. The U.J. Noblet building, with over 67,000 sq feet of classrooms, labs, and offices, contains state-of-the-art instructional and research equipment. Our 5,500 acre Ford Research Forest and Center allows us to provide students and faculty with living examples of conservation and management practices in hardwood, softwood, and wetland ecosystems and to extend our educational programs to many others. We pride ourselves on the quality of faculty and staff we employ, the students we educate, the scholarly questions we ask, and the respect we have for each other.

MISSION
Michigan Tech's mission is to prepare students to create the future.

The School's mission is: "We foster excellence in forestry and ecological science"

VISION
Michigan Tech will grow as a premier technological research university of international stature, delivering education, new knowledge, and innovation for the needs of our world.

The School's Visions are:
* "We will be a premier community of scholars who investigate ecological processes from molecular to global scales and their relationship to society."
* "We strive to be internationally recognized educators of creative scientists and those who develop both technologies and strategies for sustainable natural resource management."
* "We educate students in the maintenance of healthy ecosystems through intensive field-based training and cutting-edge interdisciplinary research programs."

OUR FUTURE
The future of the University and the School will be driven by the quality of faculty, staff, and students we attract, the quality of the education we provide, the ability to place our graduates in the workforce, and the capacity to make significant contributions to scientific and professional communities, and our stakeholders. Significant financial impacts, such as reduced state funding and lack of additional endowments and gifts, will influence our capacity to control the above-mentioned drivers.

The School's education and research programs are directed at instruction and science as they relate to future natural resource management within the state, nation, and world. To strategically plan, the following "future" will drive the School's education and research efforts:
* Human demography and development will cause more environmental changes and influence our ability to sustainably manage natural landscapes.
* Global climate change and loss of biodiversity will impact ecosystem functions.

- Urban settings and large federal, state, corporate, and non-profit land holdings will increasingly be used for recreation and/or preservation.
- Increased utilization of real-time, computer based technologies such as GIS, GPS and remotely-sensed images will improve our knowledge of resource availability and use.
- Forests in the US and in other countries will be more intensely used
- Biotechnological and genomic advances will improve natural and plantation resource management and enhance the world's knowledge of key characteristics that control plant and animal functions.
- Invasive species will significantly alter natural and manmade landscapes.
- Globalization will influence the use of forests and change career opportunities for natural resource graduates.
- Environmental restoration in degraded areas will be ecologically and economically important
- Fragmentation and parcelization will drive public policy and how we manage our lands in the US and around the world
- Managing natural resources in urban areas will become increasingly important.

CORE AND ASPIRATIONALVALUES
The principles that guide us and influence our decisions are based on the following core values:
- We serve Michigan's economic development through our quality forestry, ecology, quantitative, and biotechnology educational and research programs, with emphasis on sustainable land use decisions to maintain a quality of life.
- We strongly influence society now and into the future, through the principles students learn in our classes, the mentoring we provide, and the respect for others' ideas and cultures.
- We inspire thought by how we teach, and are committed to providing an exceptional educational experience at both the undergraduate and graduate levels.
- We have a passion for science. Scholarly efforts are viewed by all as a creative extension of continuous learning and are rooted in everything we do.

The values to which we aspire are:
- We strive to continuously be conscious of the global connectedness of our decisions.
- We recognize the importance of a diverse faculty, staff, and student community.
- We foster stronger leadership and communication among faculty, staff, and students.

GOALS
Michigan Tech will enrich lives and improve our world through interdisciplinary endeavors that span engineering, sciences and arts, technology, forestry, and business. Society demands sustainable economic prosperity, improved health and safety, ethical conduct, and responsible use of natural resources. Michigan Tech will be a leader in responding creatively to these challenges in Michigan, the nation, and the world. We will attract exceptional faculty, staff, and students who understand, develop, apply, manage, and communicate science and technology – all with the goal of a prosperous, sustainable world.

Our success will be measured by the national and international impact of our research and scholarly activities, and by the leadership, service and reputation of our faculty, staff, and graduates. Michigan Tech will be respected and recognized by leaders in science and engineering, government, business, and society for our ability to educate, advance knowledge, innovate, and foster economic growth.

The three main goals of the University's strategic plan are related to people (Goal 1), education (Goal 2), and research (Goal 3). To this end, the School's specific topic areas and goals are given below:

GOAL 1: Attract, retain, and support a world-class and diverse faculty, staff, and student population.

1.1 Attract and retain high quantity and quality of undergraduate students

1.2 Attract and retain high quantity and quality of graduate students.

1.3 Educate and promote diversity and its importance to our faculty, staff, and students, providing a framework for successfully attracting and retaining a diverse faculty, staff, and student body.

GOAL 2: Deliver a distinctive and rigorous discovery-based learning experience grounded in science, engineering, technology, sustainability, the business of innovation, and an understanding of the social and cultural contexts of our contemporary world.

2.1 Increase the level of discovery-based and active learning in SFRES programs.

GOAL 3: Establish world-class research, scholarship, innovation, and creative work that promotes sustainable economic and social development in Michigan, the nation, and the world.

3.1 Develop world-class facilities for research and scholarship

3.2 Areas for research expansion
The School's potential areas for research expansion will be concentrated in the following areas:

(2007-2010)
- *Genomics (Biomass utilization, Biotechnology, Ecological Genomics)*
- *Global Climate Change*
- *Sustainable Ecosystem Management (Wildlife Ecology, Bioenergy, Invasive Species, Social and Spatial Context)*

(2011-2013)
- *Urban Ecology*
- *Animal Physiology*
- *Forest Economics/Mgt.*
- *Fire Ecology*
- *Ecosystem Modeling - Biogeochemical*
- *Natural Resources Communications*