Ames Laboratory submits an annual Diversity Plan to the Department of Energy. Information provided for this report has been taken from plans submitted in 2008 and 2009, with information added for 2010.

I. Diversity Commitment/Vision

**Ames Laboratory’s statement of commitment to diversity:**
It is Ames Laboratory’s vision to create an environment that utilizes the talents and capabilities of a diverse workforce by recognizing and including a multitude of viewpoints and approaches in organizational decision making and laboratory practices.

Underlying this concept is Iowa State University’s and the Laboratory’s policy of no tolerance for discrimination or harassment of our employees or users of the Laboratory. Our effort to respond to the changing nature of our workforce include the continual assessment of our policies, practices and values to ensure proper alignment with and effective support of our vision. It is our belief that such a culture of diverse awareness, consideration and inclusion will improve the total quality of the organization.

**Ames Laboratory leadership’s vision for diversity:**
A diverse work force and an accepting environment contribute to the vitality of the Laboratory. Supportive surroundings create feelings of individual worth. Positive effects resulting from the promotion of the EEO/AA Policy include boosted employee morale, increased employee productivity, and enhanced employee pride in the Laboratory and the work they perform. In summary, EEO/AA leads to a more enjoyable and productive workplace.

**Diversity Focus Areas with Goals and Strategies**

In this section, specific diversity focus areas are addressed. Each diversity focus area has established goals and strategies.

A. Workforce

- **Goals – Recruitment:** Ames recognizes that it does not come close to matching the diversity seen across the country. Because of its location, attracting minorities to Iowa has proven to be very challenging, especially in attracting those with the scientific and technical skills needed at a laboratory such as Ames. In addition, women and minority scientists are in great demand across the country, with competition coming from other laboratories, from universities, and from industry.

  - **Strategies:**
    - To improve the minority prospects, the Ames contacts a series of minority and women professional societies and universities when key openings occur.
    - Broaden applicant pools through increased advertisement in minority related professional journals, periodicals, and newspapers and/or websites and establish contact with a series of minority and women professional societies when key openings occur.
    - Expand upon seed funding program that targets junior faculty members to increase leadership funded projects by women and minorities.
    - Require hiring supervisors to complete an online training on “Invite Diversity” at least once every two years.
Goals – Retention/Development: Recognize and develop talent from within the Laboratory. Motivate and encourage people to develop and expand their areas of expertise.

- Strategies:
  - Build diversity competency for improved teamwork and performance through training and education. This includes regular training on non-discrimination and harassment policies, both in person and online.
  - Increase opportunities to mentor and be mentored.
  - Ensure individuals have the opportunity for development and designate managers with responsibility for identifying those opportunities.

B. Educational Outreach and Community Involvement

- Goals: As evidenced by our mission statement, Ames Laboratory is committed to educating the next generation of scientists through community involvement and outreach. In the long run, the Laboratory firmly believes that engaging youth in science and engineering at an early age and keeping them engaged through their college degree is the best means to provide the next generation of scientists.

- Strategies:
  - Continue to be a recognized leader in the educational community to provide programs, resources and enrichment activities for students such as High School and middle school science bowl, Science Undergraduate Leadership Program (SULI), Academies Creating Teacher Scientist (ACTS), and Elementary School Science Night Programs.
  - Attract participation from diverse and underrepresented groups in programs in educational programs.
  - Support volunteerism opportunities for employees

C. Subcontracting

- Goals: Ames Laboratory will continue to maintain and enhance a subcontracting program that encourages participation of small, small disadvantaged and women owned business.

- Strategies:
  - Continue yearly designation of a Small Business Liaison Officer with overall responsibility for small business subcontracting activities
  - Seek opportunities to use various small businesses in the overall contract scope of work
  - Evaluating procurement opportunities for potential small business participation
  - Monitoring the Lab’s performance and making any adjustments necessary to achieve procurement goals.
  - Consistently meet or exceed goals for small disadvantaged, women owned HUBZone, veteran-owned and service disabled small businesses.

D. Economic Development and Technology Transfer

- Goals: Ames Laboratory is committed to developing and transferring technologies. This is most often achieved through Creative Research and Development Agreements (CRADA’s) and Work for
Others agreements. Additional partnership opportunities include technical consulting, user facility agreements and personnel exchanges.

- **Strategies:**
  - Continue to develop additional partnership opportunities with small businesses and industrial partners.

E. Prevention of Profiling Based on Race or National Origin

Profiling refers to the practices that scrutinize, target or treat employees/applicants for employment differently, or single them out for unjustified additional scrutiny based on race or national origin.

- **Goals:** Encourage equitable and decent treatment of all current and future employees in an accepting environment.

  - **Strategies:**
    - Employees will be encouraged to utilize ISU’s Equal Opportunity and Diversity Program and Human Resources to investigate complaints of profiling and discrimination.
    - Address prevention of profiling and discrimination with supervisors and managers.

II. Diversity Efforts/Report of Major Accomplishments April 2008 – March 2010

Workforce Accomplishments

- As the result of targeted advertisements, improved the overall diversity of applicants in our pools for open positions. The increase in the diversity of pools can be directly attributed to the increased number of sites in which the Laboratory is advertising its open positions. The 37 open positions in 2008-2010 were advertised in nearly 40 different publications including professional journals, websites and printed media.

- Ames Laboratory is committed to diversity within its workforce. In comparing employment numbers over the last three years (December, 2007, 2008, and 2009) Ames Laboratory was able to increase its number of African American employees from 3 to 4, and was able to increase its number of Hispanic employees from 0 to 3 employees.

- In conjunction with ISU, Ames Laboratory participated in three Iowa Career Fairs to increase exposure and awareness of open positions at the Lab.

- 100% of hiring managers completed the on-line training on “Invite Diversity”. Ames Laboratory hiring managers are required to complete this course once every two years. The course is designed to help search committee members understand the importance of diversity and steps on how to diversify their applicant pools.

- During 2009 Ames Laboratory developed and implemented a mentoring program which includes 28 participants. The mentoring program has been implemented for 100% of critical positions with a 67% participation rate. This participation rate exceeds the goal of 30% of critical positions established in 2008 Department of Energy Performance Measures. Of the 28 participants, there are 15 mentees and 13 mentors. 50% of the participants are female. Participants are spending 2-4 hours/month interacting on various topics including career and personal development, shared experiences and knowledge. Program activities are monitored on a quarterly basis to evaluate the success of the program.
Educational Outreach and Community Involvement

- Sponsored high school and middle science bowl programs in 2009. 48 teams or 240 students plus coaches make up the High School Science bowl competition and 16 teams, 80 students participate in the Middle School Science Bowl. The events also bring together 150+ volunteers to support the yearly science bowls. Volunteers include Ames Lab staff and students as well as ISU student groups. Our interaction with the National Organization for the Professional Advancement of Black Chemists and Chemical Engineers (NOBCChE) grew with the expansion on the number of student volunteers working at Science Bowl from this organization. Also in 2009, we worked with the Sigma Phi Epsilon fraternity, which is a fraternity whose members are science and engineering majors, to provide volunteers for Science Bowl. We will be looking for growth in both of these relationships in the years ahead. High school and middle school Science Bowl students were also provided opportunities to experience ISU through visits to college and department displays that were staffed by ISU personnel during the academic competitions. Display providers in 2009 included Admissions, LAS, Math, Geology and Meteorology, and LAS. Math and Meteorology’s displays were new additions in 2009. Ames Lab again held its High School and Middle School Science Bowls in January and February 2010, respectively.

- Once again in 2008, Ames Laboratory hosted the annual Middle School Science Bowl Teacher Workshop in preparation for the 2009 Middle School Science Bowl fuel-cell car race. The workshop is designed to teach middle school teachers about hydrogen fuel cells so they can take this knowledge back with them to their schools and explain the same to their student teams who will build model cars for the hydrogen fuel-cell car race portion of the Middle School Science Bowl. Approximately 16 teachers participated in the workshop. Teachers are encouraged to extend the knowledge they gained about hydrogen fuel cells to all students in their classrooms.

- In 2009 Ames Laboratory personnel participated in the DOE National High School and Middle School Science Bowl competition held in Washington, D.C. Two teams from Iowa, Central Academy of Des Moines and Eleanor Roosevelt Middle School of Dubuque participated in the event. Ames Laboratory Director Alex King served as a moderator and judge for the academic competition. Midwest Forensics Resource Center Director David Baldwin gave a Science Day presentation to students. Public Affairs Director Steve Karsjen served on the Media Committee. Two other Ames Laboratory staff members served on the logistics team.

- Ames Lab once again sponsored the Student Undergraduate Laboratory Internship program in 2009. Seventeen students worked with scientist/mentors on 10-week internships at the Lab during the summer of 2009. The 2009 program included 10 females and 7 males. The program included one female African American student and one female Hispanic student. The participation rate of 2009 of 17 students was an increase from previous years (11 students in 2007 and 13 students in 2008).

- Ames Lab sponsored the DOE Academies Creating Teacher Scientists (ACTS) program, which was launched 2007. Eighteen teachers from Iowa and surrounding states participated in the program for a period of four to six weeks in the summer of 2009. For some of the teachers, 2009 marked the third and final year of their commitment to the ACTS program at the Lab. For ten of the teachers, it began the first year of their 3-year commitment. Teachers were involved in a variety of activities from training, lectures and workshops presented by Ames Laboratory scientist and staff. ACTS participants also conducted their own small research projects under the mentorship of Ames Lab and ISU scientist to investigate topics in the physical sciences.

- Spring semester 2009 marked the launch of a new education program sponsored by the Ames Laboratory call Pre-Service Teachers, or PST. The program provided Iowa State University pre-service science
teachers a chance to work in a research lab and gain first-hand experience that will equip them with a better understanding of the scientific research process. They will then be able to carry their experiences to the classroom. The teachers are mentored by Ames Laboratory scientists.

- Ames Laboratory will launch its first Faculty and Student Teams, or FaST, program in 2010. Members of the FaST team will include a faculty member and three students from Prairie View A&M University in Prairie View, Texas. Program will consist of a 10-week internship at the Lab in summer 2010. The team will work with Ames Lab Associate Scientist Javier Vela.

- Two Iowa State University undergraduates working with Ames Laboratory researchers were among the 23 ISU students who presented posters on their research at the Iowa State Capitol on March 9, 2009. Student Daniel Stoecklein, Lakeville, Minn., works with Ames Lab mentor Physicist Ruslan Prozorov and Charles Fisher, Mount Auburn, works with Ames Lab Scientist Scott Chumbley.

- Kurt Brorsen, a doctoral student in chemistry at the U.S. Department of Energy’s Ames Laboratory and at Iowa State University, recently received the DOE’s Computational Science Graduate Fellowship. The award is funded by the DOE’s Office of Science and national Nuclear Security Administration and intended to help bolster the ranks of talented scientists working in the United States. Mark S. Gordon, director of the Applied Mathematics and Computational Sciences program at the Ames Laboratory, will serve as Brorsen’s doctoral advisor. Gordon is also an Ames Lab Senior Chemist and ISU Distinguished Professor of Liberal Arts and Sciences.

- Ames Lab employees raised $3,657 for the Bethesda Community Food Pantry through their annual holiday auction and celebration. The Bethesda Community Clothing Closet was also the recipient of donations to the hat and scarf tree, and collected food items were also donated to the Bethesda Community Food Pantry. In 2009, the auction raised $3,700 for the Story County Winter Weatherization Challenge and Bethesda Community Food Pantry.

- Ames Laboratory provided a number of educational opportunities through community outreach programs including:

  Elementary Science Night Activities – an interactive display teaching the principles of light and reflection. Approximately 350 local elementary school students attend per year.

  A new Story County 4-H club and workshop sponsored by Ames Laboratory and Iowa State University Extension 4-H Youth Development was launched in 2009. Tinkering with Science began May 3 with a seven-week workshop on Sunday evenings in May and June from 4 to 7 p.m. Youth in grades six to nine were eligible to participate. The youth experimented and observed in the course. Programmatic thrust varied throughout the program. For example, students learned about sensors and transducers so that they can build simple systems to make measurements. They also used the latest software to design their own sensor system on a printed circuit board that will be fabricated by a professional manufacturer.

  Over 100 Participants in the Third International Conference on Magnetic Refrigeration at Room Temperature toured Ames Laboratory in May 2009. Scientists Karl Gschneider, Vitalij Pecharsky and Bill McCallum hosted the tours of their labs. The guests also toured the Materials Preparation Center.

  Hands-on Science – middle school students participating in ISU’s Educational Talent Search had the opportunity to brush up on some science concepts in a fun way – by getting involved with toys, mirrors and pop cans that drive home some basic scientific concepts. Educational Talent Search is a college preparatory program for potential first-generation college students below certain income guidelines.

  Shadow a Scientist – a senior at a local high school job shadowed Ames Laboratory scientist Emily Smith
and her graduate students to learn more about the life a scientist.

Save the Power – a publicity campaign in local elementary schools to promote DOE’s Lose your Excuse Web site, with energy-saving ideas for kids.

Where Science and Law Enforcement Meet – Iowa Central Community College criminal justice students visited to learn more about the Lab’s forensics science research.

Professional Development for Science Teachers – a day-long professional development event for local physics teachers. Ames Lab associate Alex Travesset organized the event. Ames Lab was a sponsor. In 2010, the event was expanded to include high school physics students, and approximately 40 students toured several Ames Laboratory physicists’ laboratories.

High school chemistry students from Mason City toured Victor Lin’s labs and learned about biofuel catalysts.

Subcontracting

The Ames Laboratory sets annual socio-economic goals for conducting business with the following vendor types: Small Business, Small Disadvantaged Business, Women-Owned Business, HUBZone Business, Veteran Owned Small Business, and Service Disabled Veteran-Owned Business. In 2008 and 2009 goals for Small Business, Small Disadvantaged Business, and Women-Owned Business were exceeded. Effort is continued to strive for achieving goals in other areas. The following chart shows the most recent numbers in these areas.

<table>
<thead>
<tr>
<th>Vendor Type</th>
<th>FY 2009 Goal</th>
<th>FY 2009 Achieved</th>
</tr>
</thead>
<tbody>
<tr>
<td>Small Business</td>
<td>50%</td>
<td>53.1%</td>
</tr>
<tr>
<td>Small Disadvantaged Business</td>
<td>8%</td>
<td>8.6%</td>
</tr>
<tr>
<td>Women-Owned Business</td>
<td>6.0%</td>
<td>8.4%</td>
</tr>
<tr>
<td>HUBZone Small Business</td>
<td>3.0%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Veteran Owned Small Business</td>
<td>3.0%</td>
<td>2.2</td>
</tr>
<tr>
<td>Service Disabled Veteran-Owned Business</td>
<td>3.0%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>

Economic Development and Technology Transfer

- Ames Laboratory is committed to developing and transferring technologies. This is most often achieved through Cooperative Research and Development Agreements (CRADA’s) and Work for Others agreements. Additional partnership opportunities include technical consulting, providing research materials worldwide through the Materials Preparation Center and personnel exchanges. Iowa State University Research Foundation performs our patenting and licensing activities under “privately funded technology transfer.” They receive on average 5-10 patents per year derived from Ames Laboratory DOE
supported research and they enter into on average five licenses and/or options to license Ames Laboratory technology per year.

- During the period April 1, 2008 through March 31, 2009, 57% of the Lab’s CRADA’s were with small businesses and 30% of Work for Other agreements were with non-federal partners; of which 17% of those were with small business companies.

- During the period April 1, 2009 through March 31, 2010, 33% of the Lab’s CRADA’s were with small businesses and 12.5% of Work for Other agreements were with non-federal partners; of which 36% of those were with small business companies.

**Interaction with Iowa State University**

- In support of inter-group and intra-group relations with ISU, the Ames Laboratory has provided funding for ISU faculty members and projects throughout the year. Using royalty income, which can be used in support of science, education and technology transfer, Ames Laboratory has established a research seed fund. This fund’s purpose is to provide proof of concept funds for new, early conceptual ideas that address the missions of DOE and Ames Laboratory; specifically in the fields of energy and materials. The goal being that the principal investigator will, if successful with the proof of concept, apply to DOE for follow-on funding through Ames Laboratory. These projects may be funded up to 24 months at a level not to exceed $55K, though there may be exceptions. In FY2009, and FY2010, the Laboratory funded eight projects that were proposed by ISU faculty members:
<table>
<thead>
<tr>
<th>PI</th>
<th>Amount</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2009</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gene Takle</td>
<td>$50,000</td>
<td>Wind and Biomass (Agronomy &amp; Geol. &amp; Atm. Sci.)</td>
</tr>
<tr>
<td>Jennifer O’Donnell</td>
<td>$34,000</td>
<td>Synthesis and Self-Assembly of Lithium Salt Copolymer Electrolytes With Controlled Molecular Architectures (Chem &amp; Bio Eng)</td>
</tr>
<tr>
<td>Steve Martin</td>
<td>$50,000</td>
<td>Preparation and Characterization of new in situ Carbon Coated nanometric Core-Shell Intermetallic Particulate Alloys as High Capacity Reversible Li Anodes (MSE)</td>
</tr>
<tr>
<td>Alan Russell</td>
<td>$70,400</td>
<td>Investigation of Al/Fe deformation-processed Metal-metal composites for long-distance, high-voltage power transmission (MSE)</td>
</tr>
<tr>
<td><strong>2010</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marna Yandeau-Nelson, Basil Nikolau</td>
<td>$52,500</td>
<td>Optimizing the Biological Production of hydrocarbons for Biofuels by Harnessing the Genetic and Biochemical Diversity of Maize (Biochemistry/Biophysics &amp; Molc Biol-AGLS)</td>
</tr>
<tr>
<td>Olga Zabotina</td>
<td>$55,000</td>
<td>Enhancement of Plant Root Systems as a Carbon Sequestration Source against Climate Change (Biochemistry/Biophysics &amp; Molc Biol-AGLS)</td>
</tr>
<tr>
<td>Erin MacDonald</td>
<td>$55,000</td>
<td>Effect of Homeowner Preferences on Wind Farm Optimization: Quantification and Modulation (MSE)</td>
</tr>
<tr>
<td>Zhiqun Lin</td>
<td>$55,000</td>
<td>Low-Cost, High-Efficiency Solar Cells based on Copper Zinc Tin Sulfide Nanocrystals (Physics)</td>
</tr>
</tbody>
</table>

### III. Best Practices/Final Comments

The Ames Laboratory recognizes the benefits from its location and affiliation with Iowa State University. During the 2008 – 2010 reporting period we have leveraged both Ames Laboratory and ISU resources to the benefit of both entities. This is most evident in Goal 5 – Inter-group and Intra group Relations. As an organization the Ames Laboratory excels at providing educational opportunities as documented in Section II, specific examples include:

- Over $400,000 in seed funding to eight ISU faculty members in support of new, early conceptual ideas that address the mission of DOE and Ames Laboratory; specifically in the fields of energy and materials.
- Funding to support an average of 92 graduate assistant positions within Ames Laboratory each year. The majority of these appointments are in conjunction with Chemistry, Physics and MSE departments on campus.
• Funding to support an average of 49 postdoc positions within the Ames Laboratory each year.
• Use of ISU student volunteers to support high school and middle school science bowl programs. Ames Laboratory has partnered with the National Organization for the Professional advancement of Black Chemists and Chemical Engineers as well as the Sigma Phi Epsilon fraternity to provide volunteers for the Science Bowl completions.
• Along with Ames Laboratory scientists, the utilization of ISU scientists as mentors for various DOE programs including the ACTS and SULI programs.

Ames Laboratory complies with policies and procedures established by Iowa State University and benefits from training opportunities. As an organization, Ames Laboratory faces difficulty in diversity due to the lack of diversity in the community/state. The Ames Laboratory is, however, attracting candidates as graduate students, postdocs, and visiting scientists on a regular basis; which enhances the diversity of our workforce.

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