

NPPR P2 Intern Workgroup

Call Notes

November 9, 2010

Mission statement:

The P2 intern work group's mission is to serve as an information and resource sharing group that supports and assists state programs with the development and growth of their P2 intern programs. The work group may also provide an expanded network for P2 interns to share information and technology assessments.

Welcome and Introductions

Nancy Larson, Kansas, Co-Chair
Cathy Colglazier, Kansas, NPPR Workgroup Liaison
Stephanie D'Agostino, New Hampshire
Erica Cruden, New York
Ida Potter, New York
Katherine Walsh, Ohio
Krysta Larson, Minnesota
Marcus Rivas, EPA Region 7
Stacey Hawkey, Nebraska
Marie Steinwachs, Missouri
Leah Christian, Missouri

Featured topic or speaker

Intern and Host Company Recruiting –

Four programs (New York, Kansas, Iowa, and Missouri) submitted written comments prior to the call – the comments are included in these notes:

New York P2 Intern Recruiting Summary

Erica B. Cruden, P.E.
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Recruiting students is easy. I am at the threshold of getting too many student applications! Got 97 last year, most were qualified. I use Experience - they will post the internship on up to 10 college recruitment sites for a very small fee. I organize applications in an excel spreadsheet.

Recruiting companies is getting easier. The web site is a tremendous help. I had some good success last year by targeting companies specifically via email with a link to the web page. What I am getting better at is getting companies to define/refine the project scope. I had 2 or 3 companies that applied but could not narrow down exactly what they wanted or how they were going to get the project done, and they wound up withdrawing their applications or I just never heard from them again. Which is fine, because if there is a problem defining the project, there will be bigger problems when the student gets there - and I will not get meaningful results to report to EPA.

Applications are due from both host companies and interns in mid-February. They will post the applications over the holidays and start contacting companies.

Missouri P2 Intern Recruiting Summary

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- We widely promote the report-outs from the intern program across campuses using mass email, bulletins and other communication so that students get to hear what the intern experience is like.
- We use mass email on campus and fliers to encourage students to sign up for the required course and apply for the internship.
- We give presentations to many engineering classes – we are a popular “fill in” for when instructors can’t be there to teach.
- Sign up information is on our website
- Booths at student environmental and engineering activities
- Direct contact with professors who have sent us students in the past
- We contact the student Veterans Center for engineering students
- Articles in student publications
- Direct contact with Engineering programs on other MO campuses (UMKC, MO S&T, and Washington U)

Company recruiting

- We promote the summer intern results to the Chamber of Commerce, Associated Industries, Dept. of Economic Development, Regional Planning Commissions, MU Alumni News, Extension publications,
- We issue articles in local newspapers through MU news services (but mostly we do direct mail)
- Direct mail and direct email to targeted companies, including those that participate in the career fairs, manufacturing businesses in the SBTDC database, industry conference mailing lists and anything else we can find
- We do presentations and booths at the MU Engineering Industry Expo, environmental regulatory conferences sponsored by the Chamber and REGFORM, Extension conferences and other industry-attended venues.
- Alerts to the Extension business network to be on the lookout for companies that could benefit from an intern

What does not seem to work?

- The Career Fairs do not seem to work for us as recruiters and students already seem to have an idea of what sort of work they want to do, and P2 is not fully integrated. We are still working to strengthen this tie, but we don’t purchase a \$300 booth!

What does work?

- Students talking to students! Word of mouth is increasing our student interest.

Kansas P2 Intern Recruiting Summary

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Intern Recruiting:

1. Webinars: conduct at least two webinars advertised through Kansas colleges and universities Career and Employment Services
2. Schedule presentations with departmental and student groups (e.g., Society of Manufacturing Engineers, Engineering Student Council, Students for Environmental Action)
3. E-mails –to faculty and student listserves, student groups, engineering professors.
4. Generally receive anywhere from 60 – 130 applicants.

Company Recruiting:

1. Webinars: conduct at least two webinars targeted towards companies attending university and college career fairs
2. Personally meet with a number of different companies to share information on the intern program.
3. E-mails
 - a. Kansas Chambers of Commerce (ask them to send an e-mail to all of their members, as well as to other chambers of commerce asking them to relay the information to all of their members)
 - b. Send an e-mail to university and college Career and Employment Services and ask to relay the information to the companies that sign up for their career fairs
 - c. E-mails to all of our past intern companies, and to all of our SBEAP clients through what we call “E-tips”.
4. Presentations, presentations, presentations – We conduct presentations at the Kansas Environmental Conference and any other conference we can afford to attend, even if it’s for just 10-15 minutes. Even if we don’t present, we can sometimes provide poster presentations.
5. Finally, each of the SBEAP specialist contact specific industries they meet through their site assessments and technical assistance.

What didn’t work?

Interns – attending career fairs was not an efficient use of time; very few students came by and we had to pay to attend the fair.

Host companies – webinars weren’t well attended, and we didn’t receive any applicants from those companies that did attend. However, there isn’t a great deal of time invested, so I will repeat these this year.

Applications for both interns and businesses are due January 30 of each year.

Iowa P2 Intern Program Recruiting and Marketing Flyer

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Recruiting is a major task, for sure! One of the main efforts in Iowa to build awareness of our program is a large mailing in the fall to remind companies of our services and notify them when we are recruiting intern projects for the next summer. I have attached one of our general flyers used in this mailing. We customize more formal letters for companies we have worked with in the past, career placement contacts and students. In addition to the intern program, our technical team offers confidential, non-regulatory assistance to facilities year round. Some of the services we offer are assessments, either facility-wide or focused to a specific process, EMS development and workshops, to help companies identify opportunities to reduce operating costs by implementing environmental improvements. Each time we are in contact with a company, we talk about our services including the intern program. Often, while on-site our tech team will help identify potential intern projects and plant seeds with the environmental managers. Our goal is to build relationships with the companies so they see us as a resource for guidance with their environmental projects.

For getting the message to out to students we distribute a fact sheet (next page) that explains our program and a cd with past intern projects and an application form. Our 2011 recruiting fact sheet is attached to this e-mail. To recruit interns we obviously have to go to the colleges and universities with programs that develop the skills students will need to complete the projects. In addition to the career fairs, we also post to the colleges career web-sites and work closely with the career placement centers on-campus. Our most productive mechanism is presentations to student organizations. With the Iowa program being based with the Department of Natural Resources, students often have a misunderstanding of what an internship with Pollution Prevention Services entails. We take this presentation opportunity to introduce the concepts of pollution prevention, give some examples of how they can integrate P2 into their areas of career interest and then briefly discuss the internship opportunity we offer to gain hands-on experience in the field.

Iowa continued....

\$\$\$ Gearing Up...to Achieve Economic and Environmental Results \$\$\$

Non-regulatory and confidential technical assistance is available to Iowa business and industry, hospitals, colleges and universities, and government agencies to achieve economic savings while improving environmental performance. Participants save money, increase profits, operate more efficiently and reduce their environment footprint by integrating pollution prevention practices. Technical assistance available through Pollution Prevention Services includes:

- Focused or facility-wide assessments;
- Pollution Prevention Intern Program;
- Environmental Management Systems development assistance; and
- Workshops and training.

Pollution prevention methodologies work in harmony with existing initiatives such as Six Sigma, Lean Manufacturing, Environmental Management Systems and Preventative Maintenance programs to enhance environmental and economic performance. The Pollution Prevention Intern Program places graduate and upper level undergraduate students in Iowa businesses to identify, evaluate and implement feasible solutions within their discipline to achieve positive environmental results for the host company. Identifying improvement opportunities and implementing best practices will help a company optimize their bottom line.

Case summaries document over \$1.38 million in savings implemented this summer, bringing the cumulative 10-year total to over 62.6 million dollars. Participation in the Pollution Prevention Intern Program enhances students' professional development and technical skills. Companies realize increased economic potential while reducing environmental impact. The enclosed case summary booklet outlines the projects completed by the 2010 Pollution Prevention Interns and highlights the environmental benefits and cost savings to the host companies.

Cumulative 10-year environmental savings:

- Conserved over 1.04 billion gallons of water
- Avoided over 197,940 tons of solid and special waste
- Reduced hazardous waste by 1.39 million gallons and 335 tons
- Saved more than 286.8 million kWh and 6.1 million therms of energy

No cost to first-time host companies of the intern program; Pollution Prevention Services covers the intern salary and worker's compensation, and provides a staff engineer for technical advice and support. Participating companies are required to provide safety equipment, a computer with internet capability and an e-mail account, a telephone and on-site supervision for the intern. Additional participation information and forms are available on the website at www.iowap2services.com.

To be considered for a summer of 2011 Pollution Prevention Intern, project requests are due by:
November 19, 2010

New Hampshire (Stephanie D'Agostino) – Their program is small and a lot of their issues have already been mentioned. They usually have enough interns and companies – the problem is more with matching the appropriate intern with the appropriate company. They currently recruit from only one campus and a lot of the students live out of state during the summer so trying to find a way to keep them in the state and finding suitable housing is the biggest problem at this time. They are looking to expand to other universities. They use direct mailing, website, press releases, and word of mouth to advertise.

Applications are due around the first of the year. The training program starts in late January/early February. They usually have at least 6 – 12 applicants, mostly from chemical engineering program but some environmental conservation students and other engineering areas. A chemical engineering professor took interest in the program and tends to recruit from his department. They do need to broaden to other disciplines.

Ohio (Katherine Walsh) – They run into the same struggles and successes. They recruit specifically with universities in Ohio. One of the biggest challenges is getting companies to plan for the summer and get them on board. They have had some repeat host companies. Business applications are due the end of January and student applications close the end of February.

Minnesota (Krysta Larson) – They most recently received 150 applications for 8 projects. They recruit all over the Midwest. Student applications are due early march.

Recruiting companies is difficult. They promote thru site visits and press releases. They do have a unique partnership with Xcel Energy. Xcel is mandated by the state to reduce energy sales. They can't count the savings unless they pay for it (rebate, etc.), so the company "bought" two interns – they paid the full amount of the intern. Then the account rep pounded the pavement to get the best companies into the program – they received 10 applications they wouldn't have had. They have started pitching this idea to other utilities. A copy of the proposal to Xcel is included in Attachment A.

Nebraska (Stacey Hawkey) – For their business recruiting, the first year they provide a short-term, no-cost mini technical assistance project to businesses that have indicated some interest but aren't really familiar with the program to understand the benefits. Interns spend 2 weeks on a project – not much depth – for example, replacing exit lights or changing the way they dry hands in the restroom, faucet aerators, etc. Something pretty formulaic to demonstrate to the business they can achieve better results with longer term interns that can get more involved in energy efficiency or process analysis work. This usually pulls in 1 – 2 a summer that come because they've seen how successful it can be.

Relationships are what bring in clients and the best students. They use past students to recruit the next crop of students. The same goes for businesses. Businesses listen to other businesses. They use these two methodologies to get the best of the best.

Student applications are due February 1 and business applications are open ended until they spend all of the money or fill the needs.

EPA Region 7 (Marcus Rivas) – Things that are very good at getting your feet in the door, especially with companies, is the publication that programs put out – in particular the IDNR booklet they produce each year on their case summaries. The booklet does a good job of giving folks quick exposure. It's an easy way for a business to see what another business did. Very clearly showing what the student does. Good marketing to businesses and students – more so for businesses.

Future meeting ideas:

Suggested topics or speakers –

- ✓ Training programs – completed March 2010
- ✓ Energy/GHG calculators and other tools – completed May 2010
- ✓ GHG calculator – completed in July 2010
- ✓ Recruiting tips – completed in November 2010

- Database tools for tracking/assessing multi-year interns
- Liability issues
- Contracts or agreements requested by industry
- What do states require for written reports?
- Administrative questions for developing programs
- Pay rate and process – lump sum, hourly
- Measures – what do we track? Output and outcomes, QAPPs?

Next call meeting date:

- January 11, 2011 at 11:00 AM Central (Steve will host this call)
- The topic will be *Administrative Issues*
 - Employment contracts and agreements –
 - Liability issues
 - How do you pay people and the process
 - Tracking applicants and interns

DRAFT
Pilot Project Proposal to Xcel Energy
Energy Conservation Interns to Encourage Implementation

Background

For the past 25 years, MnTAP has been providing highly qualified student interns to manufacturing and healthcare facilities to manage pollution prevention projects and recommend site-specific solutions. MnTAP recruits businesses to participate in the program; recruits, interviews, and hires students to fill the positions; and provide staff engineers and scientists who serve as advisors for the students. Businesses provide an on-site day-to-day contact for the student and contribute \$2,500 (1/3 cost-share) to the students' salaries.

MnTAP funds approximately six intern projects each year which have focused primarily on pollution prevention projects until recently. However, during the past six years, MnTAP internships have begun to include energy efficiency. Interns have evaluated energy used in the manufacturing process and made recommendations to increase process energy efficiency in a variety of facilities. Often, the energy efficiency projects are supplementary to the pollution prevention project. To date, eighteen intern projects have included at least some aspect of energy efficiency in the past six years. Some of these projects and results are listed below.

Company	Project	Results	
		Energy Reduced	Cost Savings
Rock-Tenn	Insulate steam and condensate lines	> 300,000 therms	\$171,000
Nordic Ware	Examine current use of air make-up units, spray booth exhaust procedures, and boiler efficiency	~80,000 therms	\$72,000
MCES (2006 project)	Improve aeration process (phase 1)	~14 million kWh	\$600,000
Tennant	Implement low-temperature conversion coating	~23,000 therms	\$18,000
Arctic Cat	Make improvements to air compressor system	~380,000 kWh	\$21,000

Overall, the 18 energy projects have had the following results:

Task	Recommended	Implemented*
kWh	35,324,776	14,917,491
therms	4,495,203	255,955
Savings	\$2,240,746	\$893,555

**Implementation for projects held in 2007, 2008, and 2009 are still being followed-up with and additional savings are anticipated.*

Proposed Pilot Project

This pilot project will provide two student interns during summer 2010 in two different Xcel Energy customers to focus solely on recommending and implementing energy efficiency projects. Xcel Energy will pay the full cost of each intern (\$7,500) and the company would not be required to cost-share. MnTAP will coordinate the pilot project including recruiting businesses, identifying projects, recruiting and hiring students, training interns, advising interns, and reporting results.

Objective

The objective of this project is to pilot an opportunity for Xcel Energy customers to take advantage of a student intern to evaluate and implement process-related energy efficiency opportunities that could lead to the company's participation in the Xcel rebate program.

Scope of Work

1. Recruit Businesses to Participate

MnTAP will work with Xcel Energy account representatives to identify facilities that would benefit from an energy efficiency intern. Engineers and scientists from MnTAP will be available to work with account representatives and companies on developing projects and determining project feasibility. MnTAP engineers and scientists will be available and encouraged to conduct site visits with Xcel account representatives at facilities that are interested in the program.

Ultimately, MnTAP will evaluate applications from Xcel customers and determine which projects are most promising. Those companies will be selected by MnTAP and Xcel for the pilot program. According to Xcel Energy, the study funding preapproval is based on approximately 75% of the potential rebate of a project. Using this percentage and the assumption that the projects would be custom in nature each project would need to result in approximately 40 kW in electric demand reduction or 3,000 dkt natural gas savings.

Companies that are not selected for the Xcel intern program may be approached for inclusion in MnTAP's traditional program and will be asked to contribute \$2,500 for cost-share.

2. Prepare Projects for Success.

MnTAP's engineers and scientists will work with the selected companies and their Xcel account representatives to develop a scope of work and schedule for the intern. This may be done through another site visit. The scope of work will be used to develop an agreement between MnTAP and the company regarding the project. This will help the intern manage the project effectively.

3. Recruit and Hire Students

The MnTAP intern coordinator will recruit, hire, and train student interns for the Xcel pilot facilities alongside the traditional MnTAP interns. This includes:

- Developing job descriptions/advertisements
- Working with a variety of universities and their career services offices to reach students
- Evaluating student applications and interviewing qualified candidates
- Selecting highly qualified students
- Training students on energy efficiency measures and opportunities during a one-day orientation

4. Advise Student Interns Throughout the Summer Project

Each intern will be assigned to a MnTAP engineer/scientist who will serve as his/her advisor. Each advisor will meet with the intern regularly (on-site at least 1 time per month) and will discuss findings, questions, and solutions with the intern on a weekly basis. Additionally, the MnTAP intern coordinator will visit the intern on-site to check-in halfway through the internship and to take photos for publicity purposes. Both the MnTAP intern coordinator and intern advisor will work with the student on his/her final report and presentation to ensure that all information in the report is accurate and useful for Xcel and the company. Also, the MnTAP intern advisor will work with the intern to document potential and actual energy conservation and cost savings.

5. Provide Publicity Opportunities

MnTAP requires that each intern present his/her findings at a public presentation event held in August near the culmination of the project. Additionally, each intern will present the information at the company in an attempt to encourage implementation. MnTAP will develop press releases for each project early in the summer. Finally, once follow-up has ended with the company and/or the project has been completed,

MnTAP will develop an intern summary to share the results of the project with others who may benefit from the information.

6. Provide Continued Follow-up and Assistance

MnTAP will follow up for at least two years with the companies participating in the pilot program to help guide them toward implementation. In 2010, MnTAP will follow-up with the companies in December. Thereafter, MnTAP will check in at least every six months to track implementation and provide additional information if needed. MnTAP scientists and engineers will work with Xcel account representatives to provide rebate information to facilities as needed. When conducting follow-up, MnTAP will verify potential and implemented energy conservation and cost savings.

7. Evaluate the Pilot Project

Throughout the project, the MnTAP intern coordinator will work closely with Xcel Energy to evaluate how the program is operating and if any changes could improve the project. Following the first year (2010) of Xcel interns, MnTAP will work with Xcel to determine if there is interest to continue this partnership and potentially expand into a Co-Op program or into additional industrial facilities.

According to Xcel Energy, if the project is successful, adding this component to Process Efficiency would:

- Provide additional technical resources to help our industrial customers drive conservation.
- Assist in the development of a green workforce. These internships should help educate students with strong technical aptitude on energy efficiency plus it they will become established with our industrial customer base.
- Help drive the creation of energy efficiency related positions in our industrial market. The savings these internships generate for the customer will be proof that creation of this type of position can not only fund itself but generate a positive cash flow.
- Create additional conservation driven by Xcel Energy.

Deliverables

MnTAP will submit the following deliverables to Xcel Energy:

- Final reports from the interns including Energy Conservation Opportunities (ECO) forms as needed
- Verified energy savings from project implementation including cost savings
- A final report that documents the results of this pilot project
- Final presentations (at facility and at University of Minnesota) – Xcel representatives will be invited to participate
- Mid-point check-in with Xcel on project progress

Proposed Budget (2 interns)

Task	Cost
Intern salary (\$13.06/hr for 536 hrs x 2 interns)	\$14,000
MnTAP advisor salary (25 hrs x 2 advisors x \$60/hr)	\$3,000
Intern fringe (.08 for students x 2 interns)	\$1,120
Advisor fringe (.32)	\$960
Subtotal	\$19,080
Indirect (.30)	\$5,724
TOTAL	\$24,804