



## Regional Internships in Science & Engineering

A component of the Milwaukee Metropolitan Sewerage District -Workforce Development Training & Placement Program

During the summer of 2009, the Milwaukee Metropolitan Sewerage District (MMSD or the District) officially launched the newest element of the Workforce Development Training and Placement Program. The pilot initiative, appropriately labeled the RISE Program for “Regional Internships in Science and Engineering,” is a career and personal development program.

The program was patterned after other successful private sector college intern talent development programs, as listed in [princetonreview.com](http://princetonreview.com)'s “Best Internships in America,” [Vault.com](http://Vault.com)'s list of “Best Internships” and others. The initiative is managed and was created by Prism Technical, whose CEO benefited from such a program - INROADS, Inc.

RISE addresses the under representation of some ethnic minorities in the science and engineering industry sectors. While all students are welcome, the program targets talented students of color, who were Sewer Service Area (SSA) residents at the time of their high school graduation, and are currently engaged in science or engineering coursework at an institution in the United States, ultimately leading to a Bachelor of Science degree or higher.

The SSA includes the City of Milwaukee and several surrounding suburban communities. Selected students are placed in paid summer internships with engineering firms, project consultants and contractors affiliated with the District. Students are not required, however, to work on MMSD projects.

### TWO YEAR PROGRAM

The program goal is to have a two year internship experience for students and employers leading to a professional relationship upon graduation. While encouraged, there are no requirements for students or employers to maintain their affiliation.

### INTERNSHIP ELIGIBILITY

- I. Academics - Intern Candidates applying for RISE must meet the following academic criteria to compete for a RISE Internship:
  - A. Must be enrolled full-time in an accredited college or university program in the USA.
  - B. Must be a candidate for a Bachelor or Master of Science Degree, or as approved by MMSD.
  - C. Must be enrolled in an MMSD approved curriculum, including, but not limited to:
    1. Architectural Engineering
    2. Civil Engineering
    3. Construction Engineering
    4. Construction Management
    5. Electrical Engineering
    6. Engineering Management
    7. Mechanical Engineering
    8. Process Controls
    9. Structural Engineering
  - D. Minimum 2.4 cumulative GPA on a 4.0 scale.
  - E. Sophomore or greater standing: Must have completed a minimum of 50% of the credits necessary for graduation.
- II. Residency - Candidates must be able to prove residency in the MMSD Sewer Service Area (see map on page 4).
- III. Citizenship - Intern candidates must be citizens of the USA.

### THE FABULOUS FIVE

Intern programs such as this would not be possible without the generous support of private sector entities like those that stepped up to support this initiative and our local students. The inaugural five employers are classified as the Fabulous Five, for taking the time to interview and make a place for our first five interns, in what is admittedly the worst economy in a life time.

The employers (in alphabetical order) are:

**AECOM** AECOM is a global provider of professional technical and management support services to a broad range of markets, including transportation, facilities, environmental and energy.

**DONOHUE ASSOCIATES** Donohue & Associates is an employee-owned consulting firm specializing in municipal and industrial wastewater, transportation, drinking water, and general municipal engineering services.

**MECHANICAL** Mechanical Inc. is consistently recognized as one of the top 50 mechanical contractors in the United States, offering a full range of mechanical design and construction services.



Ward Komorowski, PE (back to camera) is Director of Facilities Building Services for Johnson Controls. He takes time on a Saturday to show RISE interns around Johnson Control's LEED certified Platinum facility. Ward also teaches at the Milwaukee School of Engineering, Architectural Engineering program.



Pieper Electric is a dynamic 60 year old electrical and mechanical construction company serving residential, commercial and industrial clients throughout the state of Wisconsin and Minnesota.

Short Elliott Hendrickson Inc. (SEH®) is



a multidisciplined, single-source consulting firm of engineers, architects, planners and scientists. They specialize in civil works, transportation, environmental, and energy work.

### STUDENT TRAINING

Students interested in becoming interns received four hours of resume and interview preparation at Prism Technical Institute. Perhaps the greatest lesson learned was the importance of being on time, as those in attendance watched as two students were turned away because they were late.

Following the selection of five interns, the students received an additional 32 hours of training over two Friday-Saturday training sessions held mid- and late-summer. The interns toured the MMSD Jones Island facility and the new Johnson Controls - LEED Platinum campus; received classroom and hands on lessons using Microsoft Project Management software; communications; goal setting and the impact of being proactive; the importance of speaking up, listening and consensus building; Assertiveness Training and more.

### STUDENT EVALUATIONS

The Fabulous Five employers completed mid- and end of summer evaluations of their interns, and the results are in; the employers think the five students selected are fairly spectacular as well.

All students received above average to exceptional ratings from their employers. Some students are working during the school year, and all employers have indicated they intend to participate in the RISE program next year and offer their students additional employment next summer.

Mr. Jon Christiansen, Jr.  
Civil Engineering  
Marquette University



*"When I received an e-mail from my advisor at Marquette back in June about the possibility of getting a summer internship position through the MMSD RISE program, I thought it was a long shot, but went ahead with the application process. I was one of the lucky ones to get a position, and the experience has been a very positive one for me.*

*My supervisors at AECOM developed a program where I could gain experience assisting others and performing a variety of engineering related processes, including bridge coring, storm water outfall testing, surveying, and infrared bridge scanning. My co-workers were friendly and organized, and in fact they had a schedule for me that outlined my planned activities for nearly each day my entire internship.*

*I became comfortable at AECOM very early, had my own cubicle and attended the company's annual picnic. The RISE program was also very beneficial for me. I learned how to handle interviews with more confidence, how to be a better employee, and how to communicate more efficiently. The combination of working for AECOM with assistance from the Milwaukee Metropolitan Sewerage District's RISE program was a valuable experience and reinforced my goal to get a degree in civil engineering."*

Mr. Kelvin Pettis  
Electrical Engineering  
University of Wisconsin Platteville



*"I am a senior electrical engineering major with an emphasis in power and controls at UW-Platteville. I interned at Donohue & Associates. My assignments included assisting with instrumentation and controls (I & C), maintenance of the company computer system and archiving company projects.*

*My experience at Donohue from the first day until the last date was pleasant, educational, and confidence building. I received warm welcomes from all of the employees and administrators. Shortly after introductions, I started learning the software program AutoCAD. The software skills I learned allowed me to design and draft various I & C projects.*

*During the summer, I traveled to the Sheboygan Waste Water Treatment Facility (WWTF). I was excited to go to the Sheboygan WWTF. It afforded an opportunity to see the site where my drafting plans would be implemented.*

*This experience has inspired me to continue to learn more about the waste water treatment field."*



Mr. Zeke Tessmer  
Architectural Engineering  
Milwaukee School of Engineering



*"I could not have dreamed up a better work experience than what I experienced with Mechanical Incorporated this summer. In looking for an internship, I knew I wanted to work with a firm involved in building environmental systems. When I interviewed with Mechanical, they seemed to be very close to what I was looking for. But, not until after I began work with Mechanical did I realize how lucky I was to be working there.*

*I have worked very closely with very intelligent, hardworking people, with an enormous amount of related experience in a field that I am extremely interested in learning. As a result, every day I gain increasingly more knowledge.*

*While I've worked with and learned from others, I have also been able to take on several project responsibilities individually. Projects have ranged from pump replacements, steam condensate utility lines, internal building pipe repairs, evaluations of commercial air handling units for building efficiency, and a very large amount of Waste Water Treatment Facility upgrades. I have gained knowledge on everything from the application of specific valves, to ways to address important project issues regarding schedules, money, and safety."*



Mr. Christopher Johnson  
Electrical Engineering  
University of Wisconsin Milwaukee



*"If you would have told me 3 months ago that I would be working for an electrical construction firm, I would've said you were crazy. However, I would have been wrong.*

*Working for Pieper Electric this summer has given me a look into a completely different aspect of engineering that I never knew existed. I've learned a variety of things from my internship at Pieper through visiting job sites and working alongside electricians -- pulling wire through a conduit, to estimating and planning a job. I've even learned how to write work authorizations, requisitions, and purchase orders.*

*Working at Pieper has also given me an opportunity to meet a wide range of people -- both within the company, and from other construction and engineering concerns -- including but not limited to staff from the Milwaukee Metropolitan Sewerage District (MMSD) and the Occupational Health and Safety Administration (OSHA). Moreover, I can honestly say that this summer will undoubtedly be a defining moment in helping me choose my future career path."*



Ms. Jade Woodruff  
School of Architecture  
University of Wisconsin Milwaukee

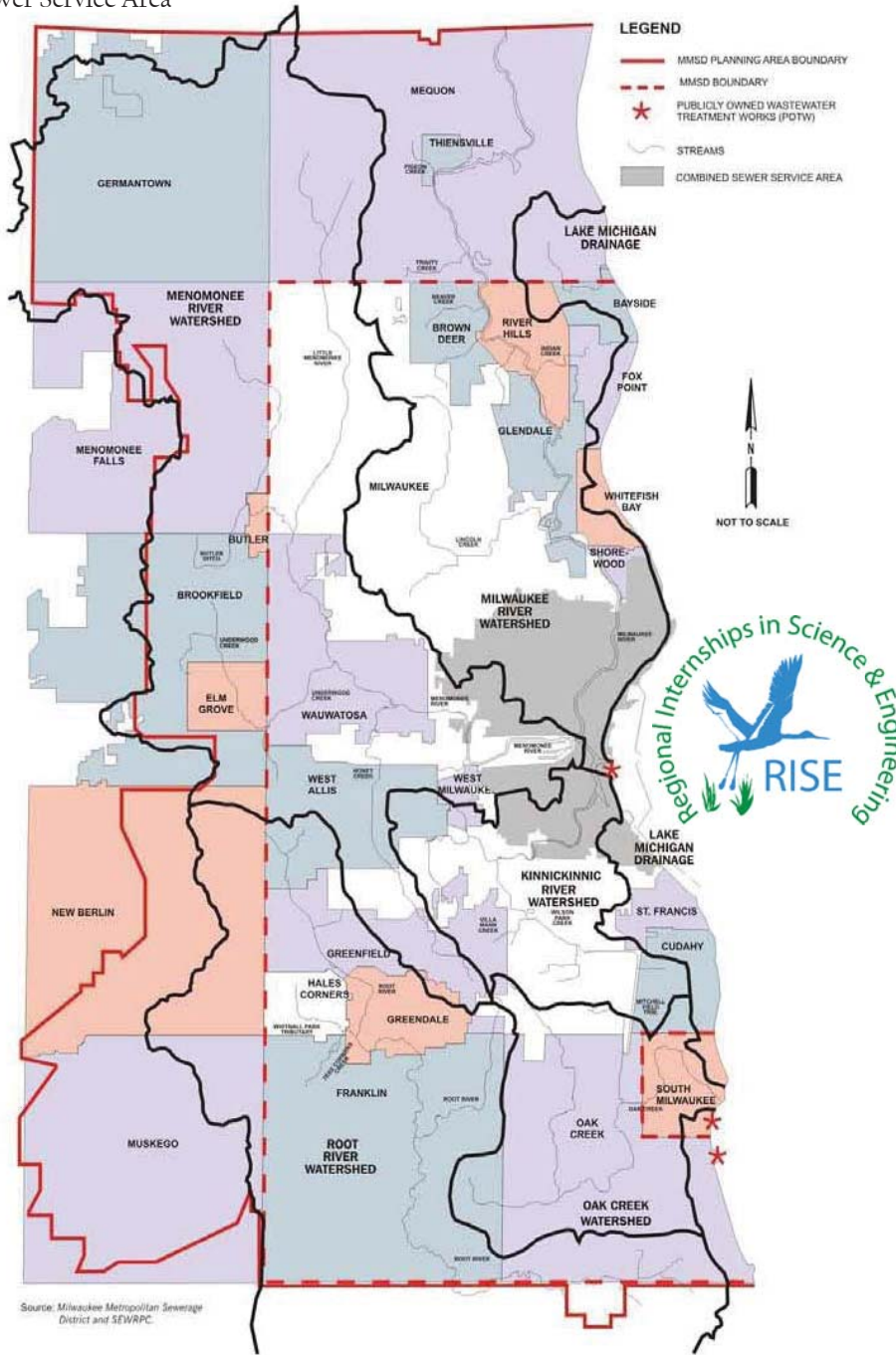


*"When I found out about the opportunity in the Milwaukee Metropolitan Sewerage District RISE program, I was ecstatic.*

*Although I am an architecture major, I am looking to also graduate with a minor in structural engineering. I have always had a passion for math and science and knew that I wanted to explore the engineering field. Within my major I hear stories of the stressed relationship that often develops between architects and engineers, but I want to change all that. I was originally looking for this internship to give me an "introduction," so to speak, into engineering. I can honestly say that I experienced more than I could have ever imagined. The internship with Short Elliott Hendrickson Inc. has given me a number of opportunities. I've had the chance to work on highway designs, to study and do field work with local rivers and creeks and also work on a construction site. My supervisors have gone above and beyond to introduce me to the different aspects this company offers, including meeting and working with architects in another branch office. Everyone has been constantly looking for ways to teach me about what it is that they do and to share with me life lessons as well. I am extremely grateful to have worked with such great people. Overall, this summer has been an incredible experience!"*



Sewer Service Area



Source: Milwaukee Metropolitan Sewerage District and SEWRPC

EMPLOYER QUOTES

The following comments are from four employers concerning their students. The student names have been replaced by \*\*\*.

“\*\*\* has done a very good job this summer learning new systems and procedures. The rate that \*\*\* learned these new systems and procedures has allowed \*\*\* to be billable on a number of projects, as well as making positive contributions under some difficult deadlines.”

“We literally look at hundreds of interns-coops each year and typically hire approximately 10-20 interns. So we are looking for a select number of interns with potential to be long term high level employees...”

That being said, we were very pleased with the results of the RISE program. We employed a quality individual from the local area who may not have received this opportunity without the RISE program...”

“I think \*\*\* might have been an anomaly. I believe this kid is one in a million and would stand out in any crowd. The issue was for us to find someone we did not have to “babysit.” \*\*\* worked very well on his/her own with little direction. \*\*\* asked good questions when he/she did ask questions, but for the most part \*\*\* just figured things out...”

When responding to an evaluation question - FOR OUR COMPANY, OR FOR ME, THE RISE EXPERIENCE WAS: “Exceptional. If you are able to find more students like \*\*\*, the RISE program is sure to be a success.”

FINAL COMMENTS

This concludes the first report on the first summer of the RISE program. The pilot program has proven to be very successful and rewarding for all involved.

We are very thankful for the support of our inaugural employers, students and especially the Milwaukee Metropolitan Sewerage District.



RISE student Jade Woodruff, working for Short Elliott Hendrickson, visits a watercourse project.



For additional information, contact Prism Technical Institute  
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