

CITY OF RAPID CITY
TRAVEL REQUEST

Person requesting travel Theresa Buttsma Department 7073

I hereby request permission to travel for the following purpose: (Give specific nature of business and interest of the City to justify cost involved.)

Biological Nutrient Removal Short Course

List all other City employees, if any, making the trip for the same purpose: _____

Place of meeting or destination: Denver, CO

Date of meeting MAY 15-17, 2007

Date trip to begin MAY 14, 2007 Date trip will end MAY 18, 2007

Method of transportation requested OWN Vehicle

Estimated transportation cost \$ 180⁰⁰

Meals 155⁰⁰

Lodging 4 days 556⁰⁰

Other costs - description Registration 795⁰⁰

Total estimated cost of trip \$ 1686⁰⁰

Signed Dan W. Claus Date 2-15-07 Dirk Johnson Date 2/19/07
(person requesting travel) (Department Head)

When the cost of the trip will exceed \$500, per employee, this section must be signed.

In accordance with the provisions of Rapid City ordinances and travel regulations, consent is hereby given for travel as requested in the foregoing application. Maximum cost of trip authorized is \$ _____

Approved: Jim Straas Date 2-19-07
Mayor

When the cost of the trip will exceed \$1,500, per event, Council approval is required.

Approved by Common Council on _____ (Date)

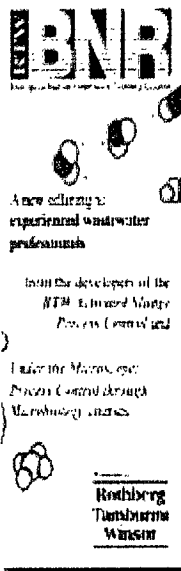
White copy - Mayor

Yellow copy - Finance

Gold copy - Department copy

**Rothberg
Tamburini
Winsor** Professional Engineers & Consultants

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Biological Nutrient Removal (BNR) 2007 with On-Site Visit: WWTP- Denver

When students were asked what they would like added to RTW's BNR courses, more troubleshooting and hands-on applications were requested. This expanded **Biological Nutrient Removal 2007 with On-Site Visit** course is an advanced three-day class with more integrated troubleshooting workshops designed for mid- to high-level wastewater professionals. In days one and two, participants will learn how to monitor and control nutrient removal processes including nitrification, denitrification, and enhanced biological phosphorus removal. Participants will further gain insight into the potential benefits of implementing these processes through the 3rd day's Onsite plant tour & hands-on BNR problem-solving at the Plum Creek Wastewater Treatment Plant just south of Denver, Colorado. This expanded BNR class will offer managers, superintendents, operators, engineers, and lab personnel the opportunity to gain 21+ contact hours of continuing education, plus the opportunity to see and understand a working plant that employs BNR solutions. Real-world operations strategies, nitrogen & phosphorus removal, and troubleshooting workshops will allow students to return to their facilities with realistic examples and procedures they may integrate into their own advanced treatment technologies.

Other BNR Courses:

Biological Nutrient Removal without onsite visit - Denver, CO

Biological Nutrient Removal with onsite visit - WWTP & WPCF - Las Vegas, NV

***Note:**Each BNR course offers the same high quality curriculum, while the 3 day courses with tours offer added hands-on troubleshooting and additional contact hours.

[Return to Schedule.](#)

What People Are Saying...

"Outstanding presenters as always" –ASPC student, 2006

Who Should Attend?

Personnel seeking advanced BNR troubleshooting, previous attendees of RTW's traditional ASPC and BNR courses, Wastewater operators & engineers seeking continuing education.

Learn more about [RTW ASPC Diploma tool](#)

[Register NOW!](#)

Dates: May 15-16, 2007-Denver and May 17, 2007-Plum Creek WWTP (SC8844TR)

Tentative Schedule:

Day One	Day Two	Day Three
Introduction	Workshop- Nitrogen Control problem	Intro
Workshop-Chemistry for BNR	Intro to Biological Phosphorus Removal	Workshop- Bio-P problems
Overview-Nitrogen Removal	Microbiology of Phosphorus Removal	Hands-on/Plant tour
Workshop- Microbiology Review	Process Configurations for Bio-P	Lunch
Bacterial Growth & Its Measurement	Process Configurations for N & P Removal	Hands-on/Plant Tour
Nitrification		Summary & Next Steps
Denitrification		
Workshop-Alkalinity & O2 Transfer		
Process Configurations		
Process Control for Nitrogen Removal		

Real World Examples

Where: Denver, Colorado

Tuition: \$795 (inc. transportation to/from Plum Creek WWTP)

Save \$50 if registered 60 days prior.

Contact Hours*: 21+

(Day Three: Off-site tours preclude early departures. Students to return to DT Denver late afternoon. Out-of-town students should not have flights prior to 7pm from DIA)

Your Instructors: Ronald G Schuyler, P.E., B.C.E.E.

Register NOW!

**Upon completion of a class, RTW will mail a Certificate of Completion and the number of professional contact (education) hours completed by the student. The C.E.U. or C.U. hours or credits accepted by each state's licensing or certification boards may vary, and students should submit within their own state for credit. Some classes are already approved in different states. For more information, and to contact the appropriate agency in your state, visit: Wastewater Certification Information or Water Certification Information.*

Contact Info

For more information, contact RTW Training at (303) 825-5999, (800) 473-5999, or email, Training@RTWeng.com. Pricing, dates and availability subject to change. Contact RTW Training for more information.

Register NOW! or use the Printable Registration Form.

Learn more about an RTW Diploma!

View the Biological Nutrient Removal (BNR) training course brochure in Adobe Acrobat PDF format.



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RTW

Biological Nutrient Removal Training Course

Is This Class For Me?

The RTW Biological Nutrient Removal (BNR) Training Course is an advanced two-day class with integrated troubleshooting workshops designed for municipal and industrial wastewater professionals who are experienced in activated sludge processes and who possess a basic understanding of advanced treatment technologies:

- Mid- to high-level operations staff
- Plant managers and superintendents
- Laboratory personnel
- Engineers
- Chemical sales representatives

What Will I Learn?

Participants will learn how to monitor and control nutrient removal processes including nitrification, denitrification, and enhanced biological phosphorus removal.

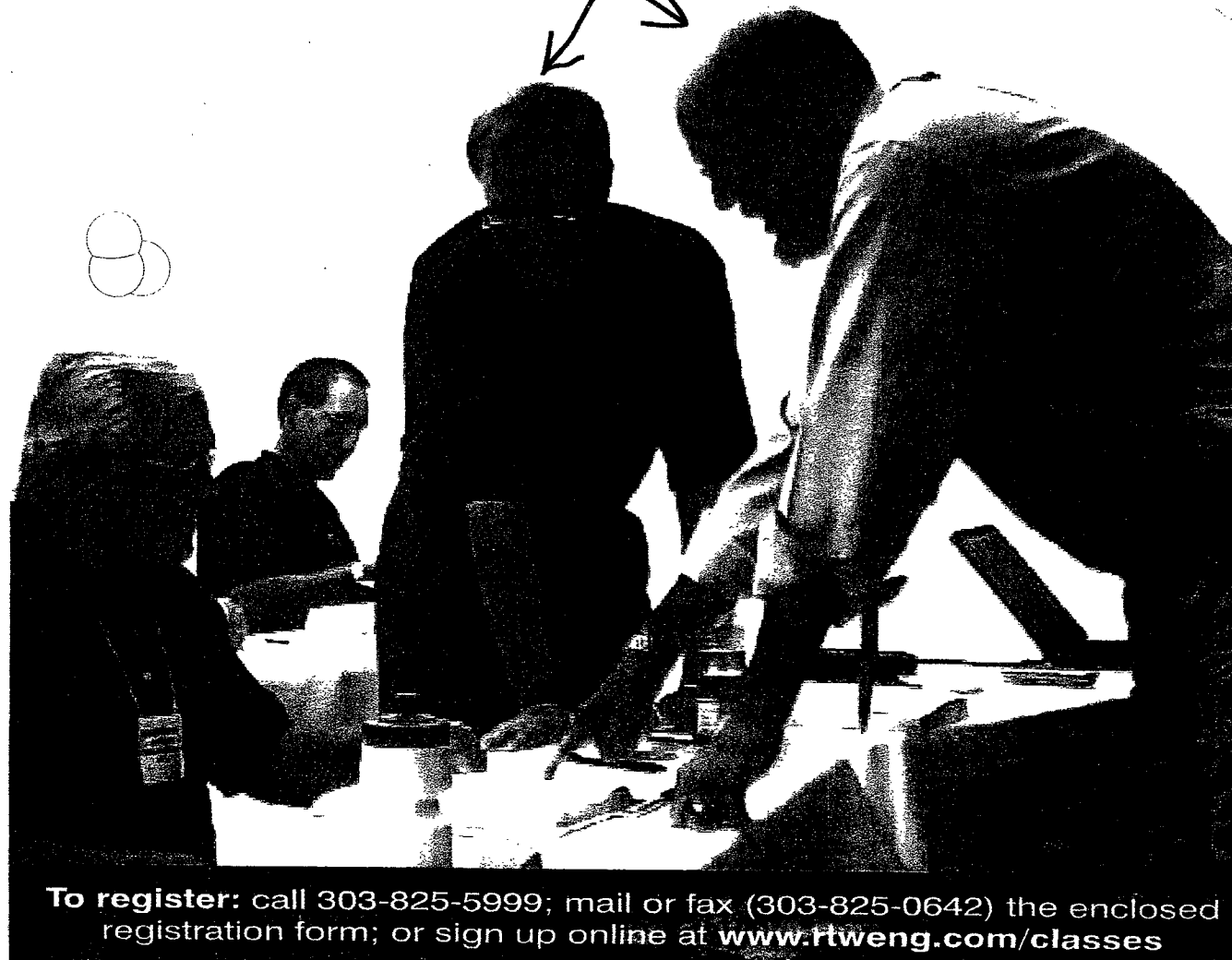
- Relevant and appropriate nitrogen (N) and phosphorus (P) chemistry
- Biochemistry and microbiology related to nitrification, denitrification, and enhanced biological phosphorus removal
- Operation strategies and configurations for N removal, P Removal, and N & P removal
- Troubleshooting workshops

"THIS COURSE WAS AMAZING... I HAD SOME OF THE PIECES,
BUT NEEDED TO ADD THE MISSING PIECES AND PUT IT ALL TOGETHER.

- KATHERINE GOSSEN, CITY OF SASKATOON

Ron Schuyler, P.E., D.E.E., is a licensed professional environmental engineer and microbiologist who specializes in training, facility optimization, and troubleshooting. Ron has taught biological wastewater process control to operators and engineers for over 35 years and is a Certified Water and Wastewater Treatment Plant Operator.

Seth Terry, Ph.D. specializes in biological nutrient removal processes and aqueous chemistry. Seth also performs laboratory analyses and filament identifications as part of RTW's activated sludge troubleshooting function. Seth has been instructing college undergraduates, graduates, and operators for nearly 10 years.



To register: call 303-825-5999; mail or fax (303-825-0642) the enclosed registration form; or sign up online at www.rtweng.com/classes

14 CONTACT HOURS TOWARD YOUR CONTINUING EDUCATION

Finally, a class worth your time as you earn credit toward your continuing education. A certificate for approximately 14 contact hours of attendance will be issued to each person after completion of the course. These contact hours may be submitted to individual accreditation agencies for CEU credits.

ABOUT THE RTW FIRM

The staff at Rothberg, Tamburini & Winsor, Inc. Professional Engineers & Consultants includes nationally known experts in process microbiology and control who possess over thirty years of classroom and hands-on training experience. For more than twenty years, RTW has provided specialized expertise in project planning, process engineering, facilities design, instrumentation & control, and construction engineering. Our experts and engineers can assist operators in defining process control sampling & testing procedures, developing process control spreadsheets & trend charts, and implementing process control and management procedures to **minimize operations cost** by decreasing use of chemicals and energy. RTW is founded on the philosophy of a Project Approach where direct client participation in each phase of the design process provides meaningful guidance to the project.

RTW

To register: call 303-825-5999; mail or fax (303-825-0642) the enclosed registration form; or sign up online at www.rtweng.com/classes

✓ OPTIMIZE PROCESS CONTROL
✓ SAVE COSTS
✓ RAISE EFFLUENT QUALITY
✓ IMPROVE SLUDGE SETTLABILITY

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