



No-Dig North

NEWSLETTER OF THE GREAT LAKES AND ST. LAWRENCE CHAPTER OF THE NASTT

NO-DIG '98 Albuquerque, New Mexico

by Grant Murphy

The sunny American Southwest greeted visitors to this year's North American NO-DIG conference, held in Albuquerque, New Mexico. The session papers and the exhibits were well done and provided a good chance to for attendees to learn about new techniques available in Trenchless Technology.

In NASTT there are a variety of Working Committees dealing with issues pertinent to sewers, water mains, gas, microtunnelling, etc. At this conference a new format was used in the Committee meetings to generate discussion and ideas for upcoming events.



Conference attendees enjoy the Los Amigos Round-Up social evening

Instead of the usual committee meeting style, a facilitated discussion group setup was established that generated a variety of great ideas and additional participation from the attendees.

These ideas will be applied to a new format to be unveiled in Orlando, Florida at next year's NO-DIG conference. The various committee meetings will be transformed into workshops where a specific topic will be addressed by a panel of industry leaders; this format will be regarded more as a learning experience with more to offer conference attendees.

An "All Chapter" meeting proved once again vital to ensuring that our Chapter is providing a high level of service to our Chapter membership. It provided an opportunity to talk with other Chapters across Canada and the United States, and to discover some of the activities they are involved in on behalf of their membership. It is worthwhile to say that we have much to be proud about our Chapters here in Canada.



As usual American hospitality shone through, with a great evening at the Los Amigos Round-Up, where New Mexican food and dance were the order of the evening. Once again it offered the chance to meet up with old friends and make new acquaintances. Strong bonds were forged with the Northwest Chapter with carousing into the wee hours, but the next day I wasn't so sure that was such a good thing! See you next year in Orlando!

Mark your calendars!

NO-DIG 99 May 23-26

Orlando, Florida

NO-DIG 2000 April 7-12

Anaheim, California

1998 Board of Directors

Harry Baker	NRC
Don Gunn	Region of Hamilton-Wentworth
Tim Dennis	City of Toronto
Bill Garibaldi	City of Waterloo
Joseph Loiacono	CERIU
Brad Johns	City of Thunder Bay
Piero Salvo	Warren, Salvo Associates
Ernie Ting	City of Markham
Grant Murphy	Toronto Hydro-Electric Commission (ex-officio)

1998 Executive Committee

Chair	Joseph Loiacono
Treasurer	Bill Garibaldi
Secretary	Bill Garibaldi
Executive Director	Tim Dennis
Past Chair	Grant Murphy

FIRST NASTT SCHOLARSHIP AWARDED



The first NASTT Scholarship for Research in Trenchless Technology was presented at No-Dig '98 to Erez Allouche of the University of Alberta by Marlin Gonzales, NASTT Chair. Allouche's thesis advisor is Dr. Sam Ariaratnam.



From the Chair

by Joe Loiacono, P. Eng., CERIU



Since our last No-Dig North newsletter, a new Board of Directors for the Great Lakes and St. Lawrence Chapter has been elected by the membership. The new board has some new faces as well as some familiar old faces in the Trenchless Technology industry: Ernie Ting, Bill Garibaldi, Harry Baker, Piero Salvo, Joseph Loiacono, Tim Dennis, Brad Johns, and Don Gunn. I would like to welcome both Brad and Don to the Board and look forward to working with them over the next year.

Before looking at what goals we have planned for 1998 I would like to thank Grant Murphy, on behalf of the Board of Directors, for the tremendous amount of work he has completed as Chapter Chair. His leadership and dedication to the Trenchless Technology cause have helped our Chapter achieve the goals we set out for 1997. Fortunately, Grant will still be participating on the 1998 Chapter Board as Past-Chair. We also would like to thank our outgoing board members, Charles Hamilton and Ralph Davidson, for their hard work and contribution over these past years. Let's not forget to congratulate Tim Dennis for his appointment to the position of Treasurer of NASTT for 1998.

At our last meeting, held during our Annual General Meeting on March 13th, the Board set out its 1998 goals. Here is a quick review of what's going on in the various Chapter Committees - Education, Publications, and Rehabilitation. The Chapter will continue to hold regional conferences which have proven to be very popular. Ernie Ting, who chairs the Education Committee, is contacting other organizations to explore the possibility of them collaborating with the Chapter on some of these conferences.

Congratulations are in order for Harry Baker and his local organizing committee for the great success of the Ottawa Conference, presented in collaboration with CATT, CERIU and NRC on February 11th.

A Montreal conference is scheduled for November 24th, in conjunction with the CERIU's Infrastructure Week. If you are interested in running a Trenchless Technology conference in your area, contact Ernie Ting at (905) 477-7000.

Donald Gunn, who has recently taken over as Chair of the Publication Committee, and our editor Emma Walker have contributed many hours in publishing this issue of our newsletter and have already started to work on the next one. Of course, they are always in search of new ideas and articles (project case studies, upcoming activities, etc.). So please send your articles and photographs directly to Emma by e-mail at ewalker@ch2m.com or call Don with your story ideas.

Don is also working on a Chapter directory to be sent to all our members by early fall. So don't be surprised if Don asks you to send him your revised coordinates and e-mail address.

Pat Cheung of F.J. Reinders and Associates Canada Limited and myself will investigate the possibility of setting up a web site for our Chapter by the end of this year.

Piero Salvo, who chairs the Rehabilitation Committee, is waiting for the results of the NASTT Water & Sewer Committee meetings that were held at No-Dig '98 before presenting any initiatives in that respect. So I'm sure we will hear more from Piero in the next newsletter.

Finally, on behalf of the current Board of Directors, we wish you much success on all of your trenchless projects in 1998 and if you have any suggestions regarding what the Chapter can do for you please feel free to contact me by e-mail at jl@ceriu.qc.ca.

On The Net with Harry Baker

New Canadian Infrastructure Technology Assessment Centre (CITAC)
<http://www.nrc.ca/ccmc/citacE.html>

No Dig International Journal
<http://www.mining-journal.com/mj>

NASSCO Calendar of Trenchless Events
<http://www.microsol.net/nassco/calendar>

NASTT Membership Application Form
<http://www.bc.irap.nrc.ca/nodig/appmem.htm>

**Moving? Have a new email address?
Let us know!**

Send any changes to No-Dig North, 211 Island Road, Toronto, Ontario M1C 2R1 or via email to grant.murphy@sympatico.ca



The Great Lakes and St. Lawrence Chapter of the NASTT would like to thank CH2M Gore & Storrie Limited for their assistance in printing this newsletter.

THE CATT REPORT

by Lynette Snelgrove



Spring is upon us and the Centre for Advancement of Trenchless Technologies (CATT) at Waterloo has been busy preparing for upcoming events and new initiatives.

This January, three CATT/University of Waterloo researchers participated in a research colloquium to discuss current and future issues in trenchless construction. Hosted by the Trenchless Technology Center (TTC) at Louisiana Tech University, 28 participants from six countries participated in the week-long event. The colloquium's purpose was to assemble leading researchers from around the world and municipal engineers to increase awareness of each other's research projects, to discuss trenchless construction research issues, and to promote collaboration for future research programs.

As a colloquium follow-up, CATT's technical committee is planning a similar event for Canadian researchers and municipal decision-makers. The Technical committee also hosted a successful rehabilitation workshop at the University of Waterloo on March 4, 1998 with over 80 participants from all industry sectors.

Research at CATT has moving along. The successful assembly of 13 CATT members to form the Horizontal Directional Drilling Consortium saw two fully monitored pulls at the University of Waterloo last fall. The focus of the consortium research is to accurately determine, through field and laboratory research, the construction loads experienced by pipe during the back reaming process of horizontal directional drilling. Marc Gelinis, a M.A.Sc. student, has been responsible for the monitoring and analysis of the data for this project. A paper providing the initial analysis was also presented at No-Dig '98. The HDD consortium is working in conjunction with the ongoing HDPE research effort under Drs. McKim, Knight and Polak supported by a grant from ESTAC and NSERC. This work is continuing throughout 1998.

A second research initiative underway at CATT is video image recognition project for pipeline assessment. The objective of this project is to develop an automated system for assisting in the assessment of the structural integrity of sewer pipes by distinguishing between mild cracks, severe cracks, service laterals and joints. The research sponsors are NSERC, Liqui-Force Services & CORE Corp and the work is being carried out under the guidance of Drs. Fieguth, McKim and Stacey.

The Seminar Committee is off to a running start in 1998. CATT has coordinated two seminars to date in 1998. In early February, the first seminar was held in Ottawa and was co-sponsored with the NASTT-Great Lakes and St. Lawrence Chapter, NRC, and CERIU. Sudbury was the site of a mid-April seminar and the next seminar is scheduled for May 27 in Ajax. Additional regional seminars are planned for Windsor, Barrie and Kingston throughout 1998. The Seminar committee is also busy with the planning of the 1998 Bi-Annual Conference and Exposition to be held in late September.

As a final note a Memorandum of Understanding has been signed between CATT and the Association of Pipeline Inspectors of Ontario (APIO). This agreement welcomes APIO as a new committee of CATT.

CASE STUDY SPOTLIGHT

Pipe Bursting in Niagara-on-the-Lake
Fer-Pal Construction Ltd.

The Regional Municipality of Niagara looked to trenchless technologies to address concerns about a recent project in the Town of Niagara-on-the-Lake.

The Project:

To select the most appropriate method to upgrade an existing forcemain from 100 mm to 150 mm in diameter, with a total replacement length of approximately 600 metres.

The Concerns:

Concerns related primarily to pumping station operations and the location of the work. Greg Dixon, Project Manager for the Region of Niagara, explains.

"The most important factor affecting the decision was the Ricardo Street Pumping Station. The method had to ensure that interruption to the pumping station would be kept at an absolute minimum."

Geoff Burn, B.Eng. P.Eng., of Acres and Associated, the consulting engineer, agreed and specified the job. The forcemain location was also a cause for concern, given its close proximity to a historical cemetery and a recently-paved road. From an archaeological perspective, the Region of Niagara wanted to avoid excavation in the areas surrounding the cemetery and to minimize damage to the roadway.

The Solution:

Given the concerns, the pipe-bursting method emerged as the trenchless technology of choice. Pipe bursting allowed for forcemain upsizing without interfering with the historical cemetery or the roadway. It also minimized disturbance to the residences and businesses along Ricardo Street, and most importantly, kept pumping station interruptions to a minimum.

Construction:

The contract was awarded to Fer-Pal Construction Ltd. In December 1997, with work scheduled to commence on January 5, 1998. It was imperative to complete the pipe bursting process within a very strict timeframe. The connections and control of the pumping stations were accomplished with the assistance of Regional Public Works Department staff. Once the sewer was bypassed, the upgrade process began.

The pipe bursting method was utilized on 430 metres of the upgrade length. To accommodate sewer cleanouts the upgrade was accomplished in four bursts. The sending and receiving pits were excavated, sheeted, and shored. The existing 100 mm PVC forcemain was upsized to 150 mm SDR17 DIPS HDPE using a pneumatic TT Technology's tool.

All fusion was performed by Fer-Pal's forces, including 6" D.I. size fusion couplings. Sandale Utility Products supplied all HDPE pipe and fittings.

Fer-Pal Construction Ltd. completed the sanitary forcemain upgrade in 11 days, with sanitary pumps off for only seven days. The HDPE pipe was tested and back in service with minimal disruption to the Town's residents and businesses

Adapted from a Fer-Pal Construction Ltd. press release

URBAN INFRASTRUCTURE WEEK 1998 Let's Share Our Know-How



LA SEMAINE DES INFRASTRUCTURES URBAINES 1998 Pour mieux partager notre savoir-faire

For the past few weeks, the **Center for Expertise and Research on Infrastructures in Urban Areas (CERIU)** has been working intensely on the planning and organization of this year's Urban Infrastructure Week, INFRA' 98. This year the honorary chairmanship will be shared by three mayors representing various regions of Quebec.

INFRA' 98 will be held from November 24th to 26th at the Montreal Convention Center with the theme «*Let's Share Our Know-How*». We are expecting about 1000 participants from the municipal engineering field to come together to acquire knowledge and know-how, share their experiences, and keep abreast of the latest innovations in the field.

INFRA' 98 is three days of activity covering areas such as *Trenchless Technologies, Roads, Structures, Public Utilities, Performance Oriented Contracts, and Experimental Projects*.

Speakers are expected from Quebec, other Canadian provinces, the United States and Europe to conduct high quality presentations. Among other points of interest - the presentation of the Municipal Affairs Ministry's Prize, the joint CERIU/NASTT workshop, door prizes, a lunch-conference with public personalities and more...some 50 exhibitors will also be on site to display their new products and services. Something new this year - Infrasculpture.

INFRA' 98 is a unique gathering for Consulting Engineers, Municipal Engineers, Ministry Representatives, Manufacturers, Suppliers, General and Specialized Contractors, Researchers, Technicians, and Superintendants.

Here's a look at the activities for the underground infrastructure sector.

NOVEMBER 24TH

Joint workshop NASTT / CERIU

NOVEMBER 25TH

Concurrent sessions CERIU and Réseau environnement (AQTE)

NOVEMBER 26TH

CERIU session

To receive additional information regarding the event, contact Joseph Loiacono at (514) 848-9885 or via e-mail at jl@ceriu.qc.ca

Note : Simultaneous translation will be available/Un service de traduction simultanée sera disponible

Depuis plusieurs semaines déjà, le **Centre d'expertise et de recherche en infrastructures urbaines (CERIU)** travaille intensément à la planification et à l'organisation de la Semaine des infrastructures urbaines 1998, INFRA '98. Cette année, c'est sous la présidence d'honneur de trois maires représentatifs des régions du Québec que se déroulera la 4^e édition de *INFRA*.

Sous le thème «*Partageons notre savoir-faire*», INFRA '98 se tiendra du 24 au 26 novembre au Palais des congrès de Montréal. Nous y attendons environ plus de 1000 intervenants du milieu de l'ingénierie urbaine qui se réuniront pour acquérir connaissances et savoir-faire, partager leurs expériences et demeurer à l'affût des dernières tendances dans ce secteur. INFRA '98 propose trois journées d'activité qui aborderont les thèmes portant entre autres sur les *technologies sans tranchée, les chaussées, les ouvrages d'art, les réseaux techniques urbains, les contrats à obligation de performance et les projets d'expérimentation*.

Pour l'occasion, des conférenciers de chez nous, des autres provinces canadiennes, des États-Unis et de l'Europe seront présents pour livrer des conférences riches en contenu.

Parmi les autres points saillants : la remise du Prix du ministère des Affaires municipales, une journée conjointe NASTT/CERIU, des prix de présence, un déjeuner-causerie avec des têtes d'affiche et plus encore. Aussi, près de 50 exposants profiteront de l'exposition *INFRA-EXPO* pour présenter leurs nouveaux produits et services. Une nouveauté cette année : Infrasculptures. INFRA '98, rappelons-le, se veut un lieu de rassemblement unique pour les ingénieurs-conseils, les ingénieurs municipaux, les représentants de ministères, les fabricants, les fournisseurs, les entreprises de travaux, les chercheurs, les contremaîtres, et les surintendants. Voici le scénario préliminaire des activités pour le secteur souterrain.

24 NOVEMBRE

Conférence conjointe NASTT / CERIU

25 NOVEMBRE

Conférences parallèles : CERIU et Réseau environnement (AQTE)

26 NOVEMBRE

Conférence : CERIU

Pour toute information supplémentaire, veuillez communiquer avec Joseph Loiacono, au (514) 848-9885 ou par courrier électronique à jl@ceriu.qc.ca