



**MEETING MINUTES**  
**January 20, 2009**

**Attendees:**

Allan Law	City of Oakland	atlaw@oaklandnet.com
Alex Christensen	Black & Veatch	christensenas@bv.com
Andrew Landgraf	CCCSD	alandgraf@centralsan.dst.ca.us
Ashley Smith	CDM	smithap@cdm.com
Bob Allan	CDM	allenrob@cdm.com
Cara Ingebrigtsen	Brown & Caldwell	cingebrigtsen@brwncald.com
Catherine Wong	CDM	wongcc@cdm.com
Chris Lyne	P&F Distributors	chris@pfdistributors.com
Cindy Preuss	Harris & Associates	cpreuss@harris-assoc.com
Colin Dudley	Brown & Caldwell	cdudley@brwncald.com
Cynthia Cano	Carollo	ccano@carollo.com
Erik Zalkin	Brown & Caldwell	ezalkin@brwncald.com
Jimmy Dang	Kennedy Jenks	jimmydang@kennedyjenks.com
Jonathan Lee	WVSD	jlee@westvalleysan.org
Katherine Hayden	Brown & Caldwell	khayden@brwncald.com
Ken Cook	WCWD	kcook@wcwd.org
Mar Gelinias	DCM GeoEngineers	mgelinias@geoengineers.com
Patrick Treanor	Kennedy Jenks	patricktreanor@kennedyjenks.com
Paul Winnicki	WCWD	pwinnicki@wcwd.org
Richard Barge	Insituform	rbarge@insituform.com
Rita Cheng	CCCSD	rcheng@centralsan.dst.ca.us
Roberts McMullin	URS Corporation	rob_mcmullin@urscorp.com
Sandie De Medeiros	CDM	demedeirosl@cdm.com
Sasha Mestetsky	CCCSD	smestets@centralsan.dst.ca.us
Stan Shogren	Kennedy Jenks	stanshogren@kennedyjenks.com
Ted Hopkins	Shannon Wilson	twh@shanwil.com

**Presentation:** *Horizontal Directional Drilling Technology* by Rick Evans, Vice President of Engineering and Estimating from the HDD Company, Inc.

Rick gave an outstanding presentation covering:

1. Equipment
2. The HDD Process
3. Design Issues

Highlights of the presentation include:

- HDD drill rigs consist of three types:
  - Mini – 10 to 30,000 lbs pullback
  - Midi – 40 to 90,000 lbs pullback

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- Maxi – 100,000 to 1.2 million lbs pullback
- A bentonite slurry is used during the HDD process using mud pumps, mud tanks, and solids control equipment. Bentonite provides stabilization of HDD wall, suspension of cuttings, and cooling of drilling tools.
- Changes in the HDD alignment can be obtained using a planer jet bits or bent housing.
- There are three categories of drill bits used for (1) soft formations, (2) moderate to hard formations, and (3) very hard formations.
- There are three methods for steering the HDD system, which include:
  - Walkover (Sonde) – receiver is located above transmitter during drilling.
  - EM Wire-line – magnetic sensor located behind bit or motor establishes location.
  - Gyro laser – accurate but very expensive to operate and insure.
- Rock drilling involves the use of a split or standard bit for creating a hole opening.
- Geotechnical investigation soil borings provide crucial data required before using the HDD process.
- Common pipes used with HDD are HDPE, Fusible PVC, Steel, and Ductile Iron. HDPE is the more commonly used pipe material because it is easy to handle and indestructible.
- A problem during HDD is drilling fluid frac out, which is when the annular pressures exceed the strength of the ground formation above the drill bit. It is a fractured area of the subsurface that causes drilling fluid to rise to the surface due to great pressures of the HDD unit.
- Heave occurs during a frac out under asphalt or concrete.
- Subsidence is a result of uphill exit locations, loose sandy soils, or excessive pump rates due to over excavation.
- Design radius include:
  - Steel pipe – 100 times the diameter (inch) of the pipe.
  - Plastic pipe – provided by manufacturer maximum allowable bend radius.

Handouts included:

- Rick provided CD's of the presentation and project photographs to the Board.

Thank you Rick for an informative presentation!

#### **General:**

***January 16, 2008 Meeting Minutes:*** A motion was made to approve the minutes, which was seconded and minutes are approved with no corrections.

***Financial Statement:*** The PUG Board noted that PUG has a total of \$48,000 in the bank as of December 2009. PUG received a net profit of approximately \$6,000 from the CIPP course back in October 2008.

***By-Laws Update:*** Current changes to non-profit organizations required the existing PUG By-Laws to be revised. PUG previously met with consultants to review the existing PUG Bylaws. Board members reviewed a formal draft of the revised By-Laws and produced comments.

***Website Update:*** PUG board members completed and executed a contract with a website development consultant to ameliorate the current Northern California PUG website. A tutorial of the new website will be available for Board review. Board members anticipate launch by the March.

***Announcements:*** Please submit your 2008/2009 membership renewals. Remember that membership has numerous benefits, such as discounts for courses and conferences, participation in raffles held at random monthly meetings, discounts on attending the annual seminar, etc. Get your renewals and/or new member applications in today.

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Underground Infrastructure Management (UIM) will be hosting a free webinar on overcoming the challenges of paying for water/wastewater infrastructure. The first webinar is scheduled for **Tuesday, January 27, 2009** at 11AM PST and will focus on the EPA's drinking water and clean water state revolving funds. The second webinar is scheduled for **Tuesday, February 3, 2009** at 11AM PST and will focus on the crisis of infrastructure funding and renewable energy.

Insituform will be hosting a free webinar on manhole rehabilitation as part of the 2009 Trenchless Technologies Educational Webinar series. This webinar is scheduled for **Thursday, January 29, 2009** at 11AM PST. For more information on this webinar or future ones, please visit the following website:  
[http://www.insituform.com/content/544/manhole\\_rehabilitation\\_webinar.aspx](http://www.insituform.com/content/544/manhole_rehabilitation_webinar.aspx)

The 17<sup>th</sup> Annual PUG Sharing Technologies Seminar 2009 will be held **Thursday, February 19, 2009** at Hs. Lordship's in Berkeley. Registration forms will be sent soon. Please sign up for an outstanding day full of informative presentations and great door raffle prize. The moderators for this year's seminar will be Rolf Ohlemutz in the morning and Mike Oriol in the afternoon. The topic of the keynote speaker will be aging water infrastructures.

The 2009 Big Show Expo by the National Utility Contractors Association will be held **March 4 through 6, 2009** in Phoenix, Arizona. For more information and registration, please see [www.nuca.com](http://www.nuca.com).

The 2009 International No-Dig Show by NASTT will be held **March 29 through April 3, 2009** in Toronto, Canada. Come and join the PUG Board to this amazing event. Please see [www.nodigshow.com](http://www.nodigshow.com) for more information and registration.

SSC issues The Boring Bulletin covering boring, drilling, and vacuum excavation applications. Lunch & learn classes are offered monthly at the SSC headquarters and online from 10:30AM to 12:00PM Pacific Standard Time, see [www.sscboring.com/education](http://www.sscboring.com/education) for more information. The classes include:

- Trenchless Excavation Design – **February 5, 2009**
- Vacuum Technology – **March 12, 2009**
- Intro to Pipe Bursting & Ramming – **April 2, 2009**
- HDD Intro & Applications – **May 7, 2009**
- Large Diameter Boring Projects – **June 4, 2009**

WEF Specialty Conferences 2009 include the following:

- Disinfection 2009 Conference in Atlanta, Georgia – **February 28 – March 3, 2009**
- AWWA/WEF Information Management & Technology Conference and Expo in Charlotte, North Carolina – **March 1 – 4, 2009**
- Collection Systems 2009 Conference in Louisville, Kentucky – **April 19 – 22, 2009**
- CWEA Conference in Palm Springs, California – **April 28 – May 1, 2009**
- Pipeline 2009 Conference in San Diego, California – **August 16 – 19, 2009**
- WEFTEC Exhibition & Conference in Orlando, Florida – **October 10 – 14, 2009**

**Social Event:** The PUG Board is trying to organize a social event to help promote group activity. The Board is currently working to setup a Pyramid Brewing "Hangout Night" in Walnut Creek or Berkeley sometime in the near future. See [www.pyramidbrew.com](http://www.pyramidbrew.com).

**Project Discussions:** Jonathan Lee discussed a two month major repair project that involved a sanitary sewer pipe between an abandoned bridge abutment and a box culvert. The existing pipe had to be repaired for an approximate length of 35 linear feet for a total of \$475,000. A

follow up sanitary project will focus on the replacement of one mile of sanitary sewer upstream of the repair.

The previously discussed Ameron project that involves 12 miles of 54" CCP and WSP for the City of Stockton Water as part of the Delta Water Supply is currently in progress. The project will involve some microtunneling.

**Next Meeting:** Next month is the 17<sup>th</sup> Annual PUG Sharing Technologies Seminar 2009 on **Thursday, February 19, 2009** at Hs. Lordship's in Berkeley. The next general meeting will be held **Tuesday, March 17, 2009** at the offices of [Brown & Caldwell](#) located at [201 N. Civic Dr., Suite 300, Walnut Creek, CA](#). The topic will be on **Pipe Bursting with VCP given by Collins Orton of TT Technologies, Inc.** Please call 510-874-3102 or email [rob\\_mcmullin@urscorp.com](mailto:rob_mcmullin@urscorp.com) to RSVP or for additional information on this month's meeting minutes.