

# ESI

ESI CONSULTANTS, LTD  
Excellence, Service, Integrity  
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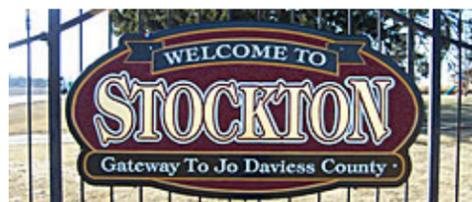
- Transportation Engineering
- Municipal Engineering
- Water/Wastewater Engineering
- Structural Engineering
- Construction Engineering
- Civil/Site Engineering
- Natural Resources

## What's New...



Cook, Vice President of Danville Stadium Operations, Steve Lane, Superintendent of Special Services and Mr. Doug Ahrens, Director of Public Works. Accepting the award for ESI Consultants, Ltd. were David Clark, P.E., Vice President and Joe Hickox.

ESI Consultants also received a Merit Award for the Long Grove Village Historic Downtown Master Plan from ACEC of Illinois at a luncheon held on February 12<sup>th</sup>, 2010 in Springfield. Brian Witkowski, P.E. of ESI Consultants, Ltd. accepted this award on behalf of the Village of Long Grove.



As of June 14<sup>th</sup>, 2010 our Elizabeth branch office will be relocating to Stockton, Illinois in Jo Daviess County. Our new phone number and address can be found on the front page of the newsletter.

The beginning of 2010 was heralded by some new accolades for ESI Consultants. This included an award from ACEC of Illinois for Danville Stadium Improvements and Parking Lot Reconstruction for Engineering Excellence on the project. The stadium may be best known for being used in the filming of "The Babe".

Accepting the award on behalf of the City of Danville were Mayor Scott Eisenhauer, Ms. Jeanie

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Spring 2010

ESI Consultants, Ltd.

## A Message from Joe...

I hope you are enjoying your Spring. I know that I am and I truly look forward to summer this year. The classic joke about there being just two seasons, "Winter and Construction" seems appropriate now as any drive seems to take me past some construction zone.

While many commuters and travelers bemoan construction zones, I suspect most people in our industry wish there were more and look forward to "construction season" -- I know I do.

And having worked in those construction zones and also having served as an expert witness on construction zone crashes I can appreciate how important safety can be as well as the inherent dangers of any work site. So as a friendly reminder, please be careful and drive safely around those construction sites. (This concludes our public service announcement.....)

We recently had our annual company-wide meeting(s) in April. At least once a year, every year, we have taken the time to update all employees on how the past years performance compared to our goals, to review our goals for the coming year, and just to kick back and enjoy an afternoon together. This year for the first time we split the meeting up to 2 locations. In Naperville after our meeting and lunch we enjoyed a table tennis tournament (who knew Ben would be so competitive or that Ben would be willing to risk life and limb diving across the room for one point!) Since the ping pong table did not fit well into the car, we swapped table tennis for Bocce Ball at the Charleston meeting. I've played a little Bocce ball in my time, but I was surprised to see how well TD Clark played until I learned he had actually

taken a class in school on Bocce Ball -- somehow I missed that one. Suffice it to say TD Clark handily won our Bocce ball tourney -- (rumor has it he is now considering entering the Bocce Ball draft early).

And finally, a special thanks to all our fellow ESI employees, especially those that have recently celebrated their 5 years with us this Spring. As we all know, a lot can change in five years (just ask a few of us whose daughter's were recently married). The familiarity of working together as a team is one of the great pleasures of our business. It is great to work with all of you.



## Celebrate...



ESI Consultants, Ltd. would like to take this opportunity to recognize our employees celebrating their five year anniversary with us this Spring.

Above from left to right: Don Naughton, Mike Davison, Michelle Perry, Dave Clark and Brian Witkowski.



Thank you for 5 years of excellence in the services you have provided on behalf of ESI Consultants.

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# Sanitary Sewers Evaluation Surveys



Many citizens do not realize the multi-million dollar public asset that is right under their nose. A well run sanitary sewer system provides one of the most important utilities a municipality can offer its constituents. Unlike a pothole that needs filling or a street needing resurfacing, most people are unaware of its condition until a catastrophic loss has occurred. Many times these catastrophic losses occur at inopportune times and locations and often become extremely expensive. Every sanitary sewer collection system experiences infiltration and inflow (I/I) during wet weather events. I/I consists of groundwater and stormwater that enter into dedicated sanitary sewer systems. It takes over valuable hydraulic capacity within sewer pipes and treatment capacity at the wastewater treatment facility. The Illinois Environmental Protection Agency (IEPA) is beginning to require communities to commit resources to remove I/I from their systems as part of their NPDES Discharge Permit renewal process. In many instances, the IEPA is evaluating Wastewater Facility Plan Updates to ensure that Designated Management Authorities are working to improve their collection systems before they are allowed to participate in the IEPA Low-Interest Loan Program. The days of simply increasing wastewater plant treatment capacity to accommodate I/I are gone. The Federal EPA is considering objecting to state permits that allow wastewater dischargers to avoid fully treating wastewater during wet weather events. Essentially, wastewater treatment operators are allowed to blend fully treated

wastewater with partially treated wastewater provided the blended effluent meets discharge standards. Changes to the current "blending rules" will have a major impact on wastewater utilities. Understanding this regulatory environment, many communities face the challenge of where to concentrate their rehabilitation efforts to get the most "bang for their buck" within their collection system. Developing a comprehensive SSES (Sanitary Sewer Evaluation Survey) is a logical place to begin their efforts.

These surveys typically begin with a community systematically breaking down their collection system into drainage basins that can be studied in greater detail. These basins can then be surveyed through video sewer inspections, manhole inspections, smoke testing, simulated rainfall testing, as well as flow metering and sewer modeling to identify areas for improvement. These techniques also allow the municipality to determine the value and condition of their system. Once the condition has been assessed and the drainage basins have been evaluated, the community can best determine where and how to spend their resources to eliminate problem areas. There are many engineers and contractors that can provide these investigative services and experienced vendors that are continually developing better methods to inspect and rehabilitate sanitary sewer infrastructure. For many communities, the first step towards improved sanitary sewer infrastructure is to educate their customers and elected officials of the importance of a well operating sewer system. Regardless of the intensity or duration of a wet weather event, flooded basements and sewage running down streets do not reflect well on any community. The process of developing a comprehensive SSES program allows the community to value their asset and best determine how their sewer user rate system addresses the operation, maintenance, and replacement costs necessary to ensure a sustainable utility while exhibiting their commitment to their customers and the environment. *Mark Eddington, P.E.*

# Handling Erosion Control Challenges



As we are in the middle Spring and past the "melting" season it becomes ever more important to keep up with the erosion and sediment control measures for our construction sites. ESI Consultants is challenged to fulfill these requirements from both the enforcement aspect representing a municipality and from the preventative outlook representing a developer or contractor.

As the economy has declined, there have been many entities left holding the bag of erosion and sediment control if you will. Whether you are a bank that has foreclosed on a property, a municipality that has been forced to pull a letter of credit for a development, or a citizen that was building their dream home only to find that your builder has disappeared, there are still environmental requirements for which you might be responsible.

New regulations passed by the United States Environmental Protection Agency became effective December 1, 2009. These new regulations mark the first time that the EPA has imposed enforceable stormwater effluent limits. These limits affect construction sites that are impacting 10 acres or more at one time. These limits will be phased in over a four year period starting on August 2, 2011 when the requirements will be applicable to sites disturbing 20 acres. On February 2, 2014 these regulations will be applicable to sites disturbing 10 acres or more. In addition to making effluent limitations, this action will also impose mandatory best management practices for all sites that require a permit, meaning all sites that will disturb one acre or more.

Although these regulations may seem like they are a long way off, they still could affect plans that are being prepared today. Engineers should be working now to make this easier on the municipalities / agencies and contractors working in the field. In general the sediment and erosion control regulations are often counter to efficient construction activities. But with some forethought and planning this does not need to be the case. The first thing many contractors want to do on every construction site is strip the topsoil and place it in a stock pile that they can either save for later, sell to other contractors, or use on a separate project. Clearly the 10 acre limit of disturbance is encouraging the industry to think about this in a different light. Proper phasing of construction projects will help keep costs lower by minimizing the amount of disturbed area while still accommodating efficient operations. A simple change in the staging can allow more effective erosion control while still accommodating construction operations. It may also reduce the need for larger earth moving equipment, and it will require less complicated erosion and sediment control measures thus allowing for quicker and easier inspections.

By implementing changes in the engineering of projects in planning and design to address these issues now, it will help contractors make the transition to environmentally friendly construction practices before the financial burden of violations are felt by the owners and municipalities. *Brian Witkowski, P.E. CPESC*

