

Pinnacle Maintains Continuity For Dredging Project

WINONA COMMERCIAL HARBOR DREDGING BEGINS

Pinnacle has been working with the Winona Port Authority since 2002 in preparation for the dredging of the Winona Commercial Harbor. The dredging project is critical for the enhancement of barge fleet operations in the harbor, and the dredging is scheduled to begin in early May. The project involves dredging in excess of 16 acres (over 350,000 cubic yards) of "open water" area in a backwater channel of the Mississippi River.

Pinnacle prepared bid specifications for the dredging project, and Brennan Marine of La Crosse, Wisconsin was selected as the dredge contractor. In addition to preparing bid specs, Pinnacle worked with the Minnesota Pollution Control Agency, US Army Corps of Engineers, Minnesota Department of Natural Resources and the Wisconsin Department of Natural Resources in obtaining permits for the project.

The project has been complicated by wetland rules, which changed mid-stream during the project. Since the dredging will deepen shallow waters currently two feet deep to a depth of about 12 feet, the new rules require that these impacted areas be mitigated. The primary mitigation area for the wetlands is situated on City property on Prairie Island.

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CEO'S CORNER

Energy Costs

What will the future hold?

By Jim Holland, President/CEO



The days of cheap oil and hence cheap energy are gone. The fact that is being faced all over the world is that we can no longer continue our wasteful ways when it comes to energy use. With the world economy becoming much more global, more humans are chasing the same finite supply of oil that is currently available.

As the President of a growing Engineering firm, energy costs present obstacles and opportunities. The obstacles are obvious, higher costs for energy means higher prices for virtually all products and services we consume on a daily basis. Higher energy costs for heating, cooling and driving necessitates higher employee wages to allow them to maintain

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Wind Energy

Can it become a serious contender in power generation?

Wind Power is surprisingly coming of age – but the big question is can it sustain its usefulness in the volatile energy market?



The U.S. wind energy industry easily broke annual installed capacity records last year, in 2005, installing nearly 2,500 megawatts or over \$3 billion worth of new generating equipment in 22 states, according to the Washington, D.C. based American Wind Energy Association (AWEA). Instead of the slow year that has previously followed boom years for the industry,

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2006 is expected to be even bigger, with installations topping 3,000 MW.

The United States is third in installed wind power capacity with 9,149 megawatts (MW), behind Spain with 10,027 MW, and Germany with more than twice the capacity of the U.S. at 18,428 MW. Finishing out the top five wind power world markets are the countries of India (4,430 MW) and Denmark (3,122 MW).

So, why has the demand for wind power suddenly picked up speed? Wind power provides a hedge against rising energy costs because wind energy production is immune from fuel price spikes. AWEA estimates that an installed capacity of 9,149 MW of wind power will save over half a billion cubic feet of natural gas per day (Bcf/day) in 2006, alleviating a portion of

the supply pressure that is now facing the natural gas industry and is driving prices upward. In addition, wind power is clean energy — meaning energy is generated without the use of additional fuels.

Who is demanding wind power and why? Utility companies are not only purchasers of wind power as a source of reserve energy, but many have constructed their own wind power plants and distribute wind power to other consumers as well. Wind energy facilities now installed in the U.S., AWEA said, will produce as much electricity annually as 2.3 million average American households use, and will displace emissions of more than 15 million tons of carbon dioxide (the leading greenhouse gas) annually.

Why should people of Minnesota take note? Minnesota is number 9 in the top 10 list of states with the greatest wind energy potential.

California is still the state with the most wind power installed, with 2,150 MW, but Texas is gaining fast with 1,995 MW and more proposed for 2006. Iowa remains in third place with 836 MW installed. Minnesota is in fourth with 744 MW, and Oklahoma moves into fifth place with 475 MW.

How does wind power work and how dependable is this form of energy? The electricity generated by a utility-scale wind turbine is normally collected and fed into utility power lines, where it is mixed with electricity from other power plants and delivered to utility customers. The exact amount of capacity value that a given wind project provides depends on a number of factors, including the average wind speeds at the site



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During the environmental review process, the Minnesota DNR identified the potential for the presence of the Northern Cricket Frog, a threatened and endangered species, in the mitigation area. The DNR stipulated that construction of the wetland would be restricted to winter months; therefore, the wetland mitigation will be completed this winter.

In addition to replacement of the impacted wetland area at a 2:1 ratio, the Minnesota and Wisconsin DNR desired replacement of the functions and values of the wetland. In order to replace the values of the shallow water wetlands impacted by dredging, a special project was created to breach an old railroad bed that has isolated a backwater portion of the Mississippi River to the east of downtown Winona. Breaching the railroad bed will open the isolated backwater to nutrients from the river, as well as provide new and improved habitat for fish and waterfowl. Construction of the breach requires an individual permit from the Wisconsin DNR. In addition, Pinnacle conducted an Environmental

Assessment to evaluate potential concerns associated with the breach construction activities.



As the dredging project progresses to a successful completion, Pinnacle will continue maintaining an oversight role, as needed, to assist the City in complying with the terms of the various permits for the project.



For additional information pertaining to this project, contact Mike Hultgren, Project Manager, or Scott Thelen, our Natural Resources Specialist, at 763-315-4501.

Promoting Greener Practices

More and more businesses, communities and developers are realizing direct and indirect benefits from embracing greener practices.

A business may reduce its regulatory burden and operating costs by decreasing its environmental emissions or discharges through reduced quantity or toxicity of inputs and wastes. Communities may watch property values increase and quality of life improve with enhanced or restored green space and thoughtfully designed public buildings. Developers may realize higher rents and municipalities may realize lower overhead due to decreased costs in operating and maintaining a green or high-performance site and building.

Strictly speaking, to promote Greener Practices means to practice "pollution prevention". Pollution prevention means to reduce the quantity or toxicity of wastes or inputs at the source (source reduction), reusing wastes, as well as recycling. In addition to source reduction, the US EPA considers eliminating pollution through increased efficiency in the use of raw materials, energy and water, and the protection of natural resources by conservation to be pollution prevention.

Some examples of integrated preventive approaches are listed below:

- increasing the useable life span of a product
- changing procurement and waste-generation habits for greater source reduction

- utilizing by-product limes in land application
- reducing the volume of solid waste going to a landfill through recycling
- selecting cleanup remedies that use natural systems (e.g., reclaimed/constructed wetlands) or less energy
- restoring, replacing or enhancing habitat (e.g., natural resource damages at Superfund sites)
- preventing storm water pollutants from entering lakes, streams or groundwater using infiltration/filtration methods
- promoting high-performance building design and low-impact transit lighting and natural vegetation for landscapes.

Pollution prevention, resource and energy conservation, environmental restoration and enhancement are all practices used to sustain or promote a greener, healthier environment. For assistance or additional information on this voluntary program, contact **Jim Holland** or **Eric Hansen** at Pinnacle - 763-315-4501.



CEO'S CORNER **Energy Costs** continued

their standards of living. As we all know this is a viscous circle that left unchecked will cause incredible havoc on the world economy.

With the cost of oil tripling over the recent past, any number of alternative energy sources are suddenly viable or bordering on becoming viable as energy costs continue to spiral. From an engineers perspective, this is an incredible opportunity.

As Pinnacle continues to grow and change, we find ourselves in the midst of the rapid growth of the renewable energy market here in the Midwest. As many of you know, Pinnacle has grown a significant practice in the Ethanol

market. This market is growing exponentially and the need for engineering resources has grown along with the market. Pinnacle now provides services to the Ethanol market in 6 Midwestern states. Our services center around assisting these facilities in obtaining Environmental permits for starting up operations. Pinnacle provides on-going environmental compliance and permitting experience to these facilities as they ramp up production and expand.

During the last half of 2005 and now in 2006, Pinnacle has provided services to the developing Wind Farm market in the upper Midwest. Our services are similar to the Ethanol market in that we assist

the developing industry in obtaining environmental permits and regulatory approvals for their Wind Farms. Did you know that Minnesota is the 4th largest generator of Wind Power in the nation? This is a home grown resource and the entrepreneurial spirit of Minnesotans is providing the State with an incredible amount of Wind Farms that are being developed very rapidly. See the Wind Power article in this issue of the Pinnacle Perspective for more information on this rapidly growing industry.

I think each of us realizes that we need to find alternative, renewable sources of energy if our planet is to survive and thrive. The oil reserves

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June 2006 - November 2006 Minnesota Regulatory Deadlines*

June 2006							July 2006						
Su	Mo	Tu	We	Th	Fri	Sat	Su	Mo	Tu	We	Th	Fri	Sat
				1	2	3							1
4	5	6	7	8	9	10	2	3	4	5	6	7	8
11	12	13	14	15	16	17	9	10	11	12	13	14	15
18	19	20	21	22	23	24	16	17	18	19	20	21	22
25	26	27	28	29	30		23	24	25	26	27	28	29
							30	31					

August 2006							September 2006						
Su	Mo	Tu	We	Th	Fri	Sat	Su	Mo	Tu	We	Th	Fri	Sat
		1	2	3	4	5						1	2
6	7	8	9	10	11	12	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23
27	28	29	30	31			24	25	26	27	28	29	30

October 2006							November 2006						
Su	Mo	Tu	We	Th	Fri	Sat	Su	Mo	Tu	We	Th	Fri	Sat
1	2	3	4	5	6	7				1	2	3	4
8	9	10	11	12	13	14	5	6	7	8	9	10	11
15	16	17	18	19	20	21	12	13	14	15	16	17	18
22	23	24	25	26	27	28	19	20	21	22	23	24	25
29	30	31					26	27	28	29	30		

Regulatory Due-Dates and Description of Reports Due

June 30 - MCES Industrial Wastewater Sampling, (Metro area semi-annual reporters), and USDOT Hazardous Materials Federal Registration (State registration follows Federal approval)

July 1 - TRI (Form R/A) Reporting and Pollution Prevention Progress Report (Form R reporters)

July 30 - Air Emissions Deviation Report (State and Federal permit holders)

July 31 - MCES Industrial Wastewater Report (Metro area semi-annual reporters)

August /September - No Regulatory Deadlines for MN

October 24 - Hennepin County Grant Program application deadline

November 1 - Metropolitan Council Brownfield Grant deadline, MN Trade & Economic Development Grant application deadline and AST Upgrade Requirement—Rule 7151 deadline

DISCLAIMER: There may be additional regulation deadlines that are not listed on this calendar. Review your specific applications and reports to determine special requirements and due dates. *Subject to change based on government regulator posted deadlines specific to report.

Pinnacle Receives MNDOT Pre-Qualification

Pinnacle's consultant services have met MNDOT's approval. As of April 28, 2006, Pinnacle is a qualified consultant for MNDOT Contaminated Property Investigation projects under their Consultant Pre-qualification Program. This program allows Pinnacle the opportunity to bid on MNDOT contaminated property investigation work.

Pinnacle is currently pursuing additional qualification in the service areas of air quality analysis, wetland services, rare and endangered species, environmental documentation and others.



Upcoming Events:

- **WindPower 2006 Conference & Exhibition** June 4-7, 2006, Pittsburgh, PA
- **2006 Fuel Ethanol Workshop & Expo** June 20 -23, 2006, Midwest Airlines Center, in Milwaukee, WI. Visit our booth. See vendor and workshop information at web site www.fuelethanolworkshop.com.
- **2006 AEC Ethanol Conference & Tradeshow** - August 8-10, 2006, Kansas City, MO

PinPoint Allows Clients Real-Time Data Access at Fingertips

Earlier this year Pinnacle introduced **PinPoint**, a web-based information management tool used to simplify the day-to-day requirements of tracking, managing and reporting compliance data.

Clients access their PinPoint website using a standard Internet browser - no special software is required. The site is customized to meet their own unique needs with the flexibility to encompass everything from historical data and reports to project scheduling. Company personnel simply log into their website to review new data, access reports, and manage projects.

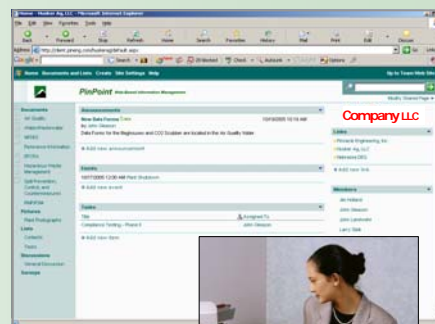
PinPoint development begins with a secure internet site to store and manage your data. The site is populated with current and historical compliance records, equipment specifications, data forms, employee correspondence, and other company information used to maintain plant operations. The compliance data is then uploaded to the website on a timely basis, allowing for day-to-day input and review of data.

A long-time Pinnacle client, a nationwide telecommunications company, is

using PinPoint to encompass a wide variety of communication and reporting requirements. The client logs into the secure site to view and edit schedules, review completed work and access project reports that have been uploaded to the web site. According to Matt Bartus, Pinnacle's client contact and project facilitator, "One of the key time-saving factors of this data base is the real-time access to project status and reference information. Client reports previously mailed and filed by Pinnacle can be uploaded to the web site data base for future reference. If I am away from the office, our client can log-on for updates any time of day".

For another client in the renewable fuels market, the PinPoint system is a web-based compliance management system used to simplify compliance with state and federal environmental regulations. The website facilitates daily compliance requirements such as equipment O&M and process recordkeeping, and longer term compliance issues such as emission inventories and performance (stack) testing. The

client can log into the secure site to access data, reports, and permit records.



As Pinnacle's CEO Jim

Holland points out, "Our main goal with PinPoint is project accountability. Information necessary for reporting permit requirements can be produced easily on-the-fly. The data site allows real-time interaction for all users, keeping important information easily accessible".

For more information or an in-house demonstration contact John Gleason or Jim Holland at 763-315-4501.

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that are being consumed at such a rapid pace need to be treated with care and held in reserve to the extent possible. I personally believe that mankind has only scratched the surface of the possible uses of oil.

As my son is nearing his college years I find myself telling him to get involved in the energy field. I believe we have only begun to scratch the surface of what alternative energy holds as possibilities. I encourage each of you to think about this each time you fill up your vehicle with fuel it took hundreds of millions of years to make.

Personnel Highlights

CONGRATULATIONS to Bridget McShane our, Business Manager! She is a New Mom to Thomas John, born earlier than expected on April 21st, weighing in at 5lbs. 6 oz.

CONGRATULATIONS to Chrystal Nelson, our "former" receptionist! She received a promotion to Executive Assistant.

WELCOME to Greg Glitto, our new Geotech - Senior Project Manager. Greg comes to Pinnacle with over 15 years experience in the areas of deep foundations, construction observation, materials testing, and as-built documentation.

WELCOME to Lindsey Renstrom, our summer intern. She is in her 2nd year of college majoring in civil engineering.

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and the match between wind patterns and utility load (demand) requirements. It also depends on how dispersed geographically wind plants on a utility system are, and how well-connected the utility is with neighboring systems that may also have wind generators. The broader the wind plants are scattered geographically, the greater the chance that some of them will be producing power at any given time based on wind conditions.



One drawback is that wind plants cannot generate energy as needed. The energy generated at any given time is based on the wind speed, or lack of it, making quantity predictions for wind energy over any time period very difficult. Thus, when searching for sources of reserve power,

utility companies may not see wind power as the most attractive alternative compared with other options. However, they are finding that wind energy can be a very viable addition to their portfolio of energy providers. The key may be having enough wind farms across the country to

Did you know...?

- A single wind turbine can provide \$2,000-\$4,000 each year in farm or ranch income and only use 2-5% of the land for the turbine and access road.
- To generate the same amount of electricity as a single 1-megawatt (MW) wind turbine, a traditional fossil fuel or nuclear power plant requires, on average, withdrawing about 60 million gallons of water per year from a stream or river.
- As many as 215,000 new jobs would be created by adding 50,000 MW of new wind installations in the U.S. - a \$50 billion investment that could provide electricity for as many as 15 million homes with 39 million people.

support the need at any given time. Here again, the reasoning for the increase in the interest and development of wind farms.

Pinnacle Engineering has approached the wind power market with anticipation. Following the same approach we have used with the telecommunications market, our services adapt well to the needs of the developing wind farming market - providing site assessment, site investigation and property transfer services for land acquisition, and construction management and geotechnical services for tower construction. Feel free to contact Jim Holland with any questions regarding Pinnacle's services for wind power.

(Information for this article was taken from the following web sites; ifnotwind.org, awea.org, and treia.org)



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