

# PLANNING AHEAD

Notes for the Planning and Policy  
Community



US Army Corps  
of Engineers

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## ***A Note from the Leader of The Planning Community of Practice***

The pace continues to be frantic as we make preparations for budget (FY 06) testimony in early March. Efforts are also under way on the Hill to develop a WRDA 2005. California is getting record rains, the Missouri basin is still dry. A normal week in the Corps. While some of the activity is of our own making, Mother Nature is still running the show in water resources. Our role continues to try to anticipate these challenges and develop robust plans and programs that can help the Nation meet these challenges.

We will be issuing new guidance to help improve our accountability and quality of our decision documents. We are looking at a way to improve peer review as well as our internal independent technical review. We will be providing summaries in Planning Ahead to alert you to the formal distribution of new guidance about this. As is generally the case, these improvements will be incremental but it will be vital for all of us in the Planning Community to look at this new guidance carefully and start to implement it with care but also in ways fitting with the situation. Constructive feedback will allow us to refine and improve our approaches.

Harry Kitch  
Deputy, Planning Community of Practice  
[harry.e.kitch@usace.army.mil](mailto:harry.e.kitch@usace.army.mil)

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## Words from the Editor

The *Planning Ahead* Team presents another great issue we hope you will enjoy reading as much as we have enjoyed creating it. A special thanks is given to the New York District and Seattle District for passing along interesting and informative articles from their field offices. To continue our goal of sharing information and resources in the planning community, 2 new monthly columns are on the rise for March 2005!

I'm excited about introducing a new addition in next month's *Planning Ahead*: 1-900-Planner! This section will tackle any planning-related questions you may have. Send your questions to me and I will forward them to the "world's greatest planner," (I have been ordered to never reveal their identity.) When you receive *Planning Ahead* the following month, look for the 1-900-Planner column, and your answers will appear!"

The second addition to *Planning Ahead* originated as a result observing some efforts to integrate and network Geographic Information Systems (GIS) among planners and other areas of expertise within the Corps. It may be necessary to feature a column devoted to promoting the utilization of GIS throughout the Corps. The column will discuss current and ongoing projects incorporating the use of geospatial tools, as well as valuable products and data sources available. *This column is highly dependent upon reader feedback.* Tell us about projects you are involved in that use GIS for planning, including tools and products that have been developed, but you feel are not being publicized or effectively utilized, or links to sources for data. This will help to identify needs of the GIS users' community with particular attention to planning. I have been involved in GIS projects here at the Institute for Water Resources. Sometimes it seems as though finished products are not well marketed to convey its relevance to current research and studies conducted throughout the Corps. Featuring this information in *Planning Ahead* may be one mechanism to try and accomplish this goal.

I look forward to hearing from you and hope that you are as enthusiastic as I am in making these new columns a success.

Monica Franklin, Editor  
Institute for Water Resources  
[Monica.A.Franklin@usace.army.mil](mailto:Monica.A.Franklin@usace.army.mil)

## FEATURED ARTICLES

### ***Racehorse Farm Makes Strides to Protect New York City Drinking Water***

*JoAnne Castagna, Ed.D. --New York District*

A gathering of thoroughbred racehorses quietly graze on a pasture on the Akindale horse farm, 45 miles north of New York City in Dutchess County. Some of them are in training to be gold cup winners, but their farm is already receiving high points for the Best Management Practices it's performing to protect New York City's drinking water, under a program being funded by the U.S. Army Corps of Engineers, New York District.

#### **New York City Watershed System**

"The Corps' New York City Watershed Environmental Assistance Program, is an inter-agency effort that, assists in the implementation of projects that protect the water quality of New York State's watersheds that provide drinking water to nearly half of New York State, including primarily New York City residents," said Rifat Salim, Project Manager, USACE, New York District. "The program aims to do this without harming the economy of the communities," she added.

The inter-agency team includes the U.S. Army Corps of Engineers, New York State Department of Environmental Conservation and the New York City Department of Environmental Protection.

A watershed is an area of land that catches rain and snow and drains or seeps into a marsh, stream, river, lake or groundwater. Watersheds come in all shapes and sizes and are usually part of a larger watershed system. This water eventually gets stored in reservoirs, a place where water is collected and kept for use when wanted, such as to supply a city.



**Horses on Akindale Farm**

The New York City watershed region encompasses approximately 2,000 square miles and includes three watershed systems - The Catskill, Delaware, and Croton Systems and they are all located north of New York City in the counties of Delaware, Greene, Schoharie, Ulster, Sullivan, Westchester, Putnam, and Dutchess.

### **Whole Farm Planning**

One of the projects that the Corps' program supports is the Watershed Agricultural Council's (WAC) Whole Farm Planning program, which the Akindale Farm is taking part in. There are many farms located throughout the New York City watershed region making the watersheds potentially vulnerable to non-point source pollution.

"Non-point source pollution is contamination that is not directly placed in the water," said Douglas Leite, Project Advisor, USACE, New York District. "For example, storm water passing through barnyards can transport the phosphorus and pathogens, or parasites, which are present in animal manure and deliver them to the streams that flow into the reservoirs. Algae can feed off these nutrients and deplete the water's oxygen, adversely affecting water quality."

The Watershed Agricultural Council's Whole Farm Planning program is a voluntary program that works with farmers located in the watershed region to create and implement methods to improve how their farms are operated in order to protect the watersheds from non-point source pollution without compromising the farm's business.

Under the Whole Farm Planning program, a team of WAC specialists visits farms and identifies and assesses potential sources of pollutants, reviews existing farm operations and works with the farmer to develop new operational strategies and Best Management Practices (BMPs) for decreasing impacts to the environment and improving water quality in the watersheds.

The new operational strategies and BMP recommendations or "Whole Farm Plan" is then developed in a team approach with the farmer, WAC and in some cases the local County Soil and Water Conservation District. The farmer then signs an agreement to implement the BMPs listed in the plan with assistance from the WAC team.

Presently, approximately 300 WAC approved Whole Farm Plans have been created. One of these is with the Akindale Farm that is proving to be an example of the program's success.

"The Akindale Farm project demonstrates an excellent example of a local, regional and federal partnership," said Michael Saviola, WAC, East of Hudson Program Manager. Akindale Farm is a 358-acre horse farm located in the Town of Pawling in Dutchess County, on the Croton Watershed. Horses represent a large investment in livestock inventory and equine infrastructure and occupy most of the agricultural land use in this region.

Akindale Farm produces high quality thoroughbred racehorses and provides training for horses both owned and boarded at the farm. The farm breeds and trains approximately 26 thoroughbred race horses and also has 45 mature horses, 30 young horses, and 6 Holstein Steers. Approximately 200-acres of the land is permanent pasture and 100 acres is forest land.

In 1998 the farm created a Whole Farm Plan in collaboration with the Dutchess County Soil & Water Conservation District. So far several of the plan's BMPs have been successfully completed.



**One of several streams that flows through the Akindale Farm**

### **Best Management Practices**

One of the most successful BMPs implemented on the farm included using exclusion methods to keep livestock away from streams. "Exclusion fencing was installed on one of the farm's pastures to limit the access of brood mares and foals, or young horses, to a nearby stream that runs adjacent to the farm," said Saviola. "By keeping the animals away from the stream we are preventing potential animal pathogens from entering the water supply."

Saviola continued, "Since we excluded the animals from their primary watering source, we had to provide the animals an alternative water source in an area that was not wet or deemed 'hydrologically active.' We designed and constructed a winterized animal watering system so that the horses no longer had to rely on the nearby stream as a watering source."

Another BMP measure that was recently performed and funded by the U.S. Army Corps of Engineers was the redesign of the farm's manure composting facility. "The farm has a compost facility designed to treat potential parasites and alleviate the need for and the operating expense associated with transporting manure for off-site utilization and/or disposal," said Saviola.

The farm collects manure and straw bedding from foals, or young horses, and temporarily stores it on an outside 100 x 200-foot asphalt compost pad with a reinforced concrete push wall, a filter field and diversion. The farm's manure compost facility was improved to prevent any potential pathogens from migrating from the pad to a nearby watercourse during heavy rainfall.

"Although the compost facility was just completed, already the compost pad made the farm's manure handling and composting system 1,000 times better," said Saviola. "It was designed to be a more stable surface with a grass filter area which was created on the down slope side of the compost pad to intercept and treat any storm water that happens to run off the pad during intense rainfall events."

Other BMPs in progress on the farm include measures to control the distribution of manure. One way the farm is doing this is by executing a Comprehensive Nutrient Management Plan that will recommend the proper type and amount of fertilizer needed to sustain good vegetative cover in pastures and to prevent excess nutrients from entering the water supply. Another measure includes a prescribed grazing plan to rotate livestock to reduce soil compaction and improve the quality of the pasture grasses.



**Compost pad funded by Corps**

Storm water runoff, which may carry manure, into the streams is also being controlled by BMPs. The farm is installing a barnyard water management system designed to divert clean water away from any potential agricultural pollutant sources. Stream banks are also being stabilized with vegetation to prevent soil and manure from running off of the banks into the streams. In addition, the farm is improving access road construction to limit diffuse sources of sediment from the roads to streams.

Best management practices that don't involve managing manure, excess nutrients or sediment are also being implemented. The farm is making sure that all fuel products are stored away from streams to prevent water contamination.

Best management practices not only protect drinking water, but also support the local economy and survival of wildlife habitats. According to WAC, well-managed farms keep space open, provide refreshing destinations for tourists and provide food and fiber for the community. In addition, they can improve the habitats of local wildlife, in particular fish species.



**Area map of the New York City Watershed System**

## To Learn More

Farmers and others interested in learning more about WAC's Whole Farm Planning program should visit: [www.nycwatershed.org](http://www.nycwatershed.org) or call 914-962-6355. Those interested in the Corps' New York City Watershed Environmental Assistance Program should contact the author at: [Joanne.castagna@usace.army.mil](mailto:Joanne.castagna@usace.army.mil)

Dr. JoAnne Castagna is a technical writer with the U.S. Army Corps of Engineers in New York City.

\*All images provided by the Watershed Agricultural Council

## **Seahurst park Seawall Goes Down**

*Andrea Takash, Seattle District*

The armored seawall that stood guard for 30 years protecting the trail that winds along the southern portion of Seahurst Park in Burien, Wash. came crashing down December 20, 2004. The removal of the 1,400 foot seawall is the focal point of the \$1.5 million Seahurst Park Shoreline Restoration project, which broke ground December 6, 2004.

"The gabion seawall, which is a pile of metal-meshed rock baskets, was in disrepair threatening the beach with further degradation," said Lori Morris, Corps project manager.

Not only did the Corps remove the seawall and associated riprap but they also added sand and gravel to supplement and regrade the beach to more natural conditions, Morris said.

They also reconnected two natural drainages to Puget Sound.

"This will directly benefit salmonids that skirt the nearshore during migration and acclimation to salt water," Morris said. "The eelgrass beds located directly offshore should expand after construction and provide a nursery for juvenile salmonids."

"Seahurst Park is a critical and unique ecosystem restoration project that will have immediate ecosystem benefits to an important area of Puget Sound," she said. "The project is designed to restore the natural functions and historic estuarine habitat of the Puget Sound nearshore."

The citizens of Burien will also benefit from this project.

"The community understands the environmental benefit and that there will still be good recreational use after the project is finished," said Larry Fetter, Burien city parks and recreation director.

The Corps and the city of Burien worked closely together to ensure minimal disruption to the public. "For public safety purposes, the beach near the construction site was closed during construction," Morris said. "Also to minimize public disturbance and property damage, our contractor, MarVac, used a barge to remove the riprap and bring in the sand and gravel."



**Demolition began late December when the park has the least visitors. The seawall was located on the south end of Seahurst Park. (Photo by Andrea Takash)**



**Col. Debra M. Lewis, District Commander and Lori Morris, Corps project manager go over documents at the park. (Photo by Maria Or)**

This project has been in the works for many years, said Noel Gibb, mayor of Burien.

"It has required the combined efforts of local, county, state, federal and tribal government to begin this first phase of beach restoration and for the purpose of restoring salmon habitat in Puget Sound," Gibb said.

"This is a monumental project as the first of several to be constructed under Section 544 Puget Sound and Adjacent Waters Restoration program," said Bernie Hargrave, Corps program manager. "Washington state's congressional delegates, Patty Murray, Maria Cantwell and Jim McDermott, have been very supportive."

Look for more Puget Sound restoration projects to follow in the upcoming months and years under this program, Hargrave said.

## ***Workshop on Valuing Environmental Benefits-Where Do We Go From Here?***

*Susan Durden, Institute for Water Resources*

On 31 January 05 the Institute for Water Resources hosted a half day workshop presented by Drs. Len Shabman and Jim Boyd of Resources for the Future. The workshop explored valuation of environmental benefits in the context of National Economic Development (NED), i.e., willingness to pay. What does this mean? How does it relate to monetizing environmental benefits? Should it relate to environmental benefits?

What does this mean? The NED account defines benefits in monetary terms. This dollar measure is the benefits half of the benefit-cost ratio. When benefits and costs are both expressed in dollar terms, projects can be easily compared. The dollar measure provides a common base for comparing projects in different parts of the country or different business lines. Dollars reflect the value to society. However, as stressed by Dr. Shabman, monetary values are not all created equal, i.e., Corps analysis relies on willingness to pay--a market based concept of value. The cost of the most likely alternative is a monetary value but it is not necessarily a measure of willingness to pay.

How does it relate to monetizing environmental benefits? Dr. Shabman's hypothesis was that if dollar values are placed on environmental benefits those benefits by definition become NED benefits.

Should it relate to environmental benefits? There is no clear answer. "Collapsing" all benefits in one account represented by a single dollar figure is appealing--from completeness, simplicity, familiarity. An all inclusive NED account is also uncomfortable--is the uniqueness and quality of environmental benefits lost? Is it ethically acceptable to reduce these benefits to a dollar value? Dr. Shabman expanded beyond the mechanics of monetizing environmental services to discuss the role of such values in collaborative decision making.

The answer? Developing monetary values for environmental services is not solely good or bad. It is critical that the purpose be clearly established, techniques be sound and what the dollar value represents be clearly understood.

Dr. Jim Boyd presented a framework for displaying and evaluating biophysical indicators using economic principles. This approach does not provide a definitive answer but employs concepts of scarcity and available alternatives to rank resources being evaluated. It links ecology and economics to give complete view of the value of resources and the services that they provide. This results in more informed decision-making.

The presentations stimulated lively discussion on policy and decision making. Attendees included members of the Environmental Advisory Board, other Federal agencies, the Institute for Water Resources and Headquarters staff and other invited guests. The slides from the presentation are posted at <http://www.iwr.usace.army.mil/iwr/plannersweb>. Dr. Shabman is the Maass-White scholar at IWR. His email address is [shabman@rff.org](mailto:shabman@rff.org) To read related papers by Drs. Shabman and Boyd, check the listings at [www.rff.org](http://www.rff.org)

## ***Water Supply Database 2004 Survey***

*Ted Hillyer, Institute for Water Resources*

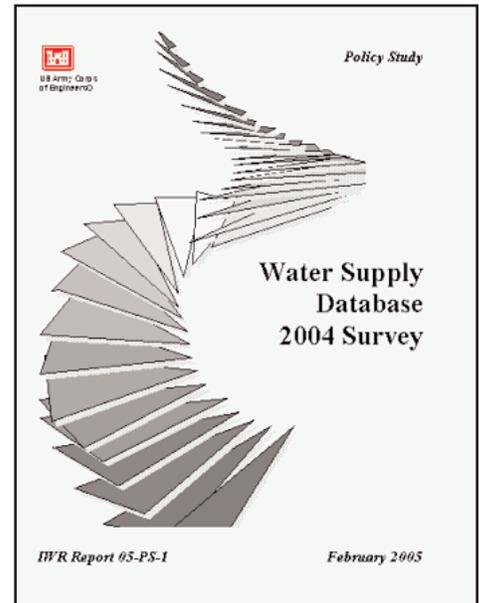
Municipal and industrial (M&I) water supply was established as one of the eight business lines for Corps' budgeting purposes in the fiscal year 2005 budget. In order to manage this business line properly it was necessary to update certain data and develop new data that can be used to assess business line performance. The previous water supply database was limited to storage space and costs. By memorandum dated 6 May 2004, the Chief of the Programs, Directorate of

Civil Works called for an update of this 1996 data as well as the collection of new data on M&I water supply. This new data included information on: reallocations, water supply studies underway, revenues received and the costs of collection, type of local sponsor and project yields.

The new 2004 data shows there are 134 Corps reservoir projects that contain a total of 9.86 million acre-feet of storage space for M&I water supply with a repayment value of \$1.48 billion. Of this total storage space, 92 percent is under contract for repayment in 295 water supply agreements. The 134 projects are located in 25 states plus Puerto Rico and are in 23 of our 38 districts. For irrigation water supply, there are approximately 57 million acre-feet (56 million of which is joint use with other purposes) in 48 projects in 14 states in 9 of our western districts with a total Federal investment of about \$1.71 billion. Seven of our projects contain both M&I as well as irrigation water.

The summary of the new data collected is as follows:

- **Reallocations.** The national summary of our reallocations shows that 15 of our districts have performed reallocations since 1953. These reallocations have been performed in 47 different projects and have resulted in 117 water supply agreements totaling 1.18 million acre-feet of storage space at a reimbursement cost of \$191 million. The majority of these reallocations have been from flood control (49) followed by hydropower at 35. However the majority of reallocated storage has been from hydropower, followed by water quality and then flood control.
- **Studies.** In 2004, the survey indicated 13 of our districts had a total of 33 water supply studies underway at a total cost of \$24.5 million. The majority of these studies (19) were being funded from operation and maintenance funds, but the majority of the cost (\$19.0 million) was from general investigation funds.
- **Revenues received and cost of collection.** For the most recent year available, the districts reported they collected a total of \$26.794 million in revenues at a cost of collection of \$1.253 million. In addition, \$176.2 million in principal and interest payments have already been received for those projects that were repaid during construction and where all the investment costs have been repaid over a period of years and there are no more annual principle and interest payments being received.
- **Type of local sponsor.** The 295 M&I water supply agreements are with all varieties of local interests. Thirty three percent of our contracts are with cities, 23 percent with states and 18 percent are with counties. The remaining 26 percent are with industries, private citizens, Federal/Interstate compacts, a county/city, corporations and Federal/Tribe. The vast majority of the storage space under contract, however, is with states (51 percent) and cities (35 percent), with counties counting for 9 percent and the remainder, just 5 percent.
- **People served.** The Corps sells storage space and not water. However, knowing project yields and the storage space available, it is possible to develop the million gallons per day that it is possible for our projects to deliver. The new data collected shows that the 7.0 million acre-feet of M&I storage under contract for present use produces some 3,362 million gallons of water per day. Assuming it takes about 1,200 gallons of water per person per day to meet the needs of farmers, factories, electrical utilities and the many other organizations that make it possible for us to have food on our table and power for our home; this water is sufficient to meet the needs of 2.8 million people. This differs from what the typical household uses in water per day, which runs from 50 to 85 gallons, or an average of 67.5 gallons per day. Based on this ratio, Corps projects are theoretically capable of meeting the personal needs of about 47.8 million households. Based on United States Geologic Survey estimated offshore withdrawals of 76 billion gallons per day for M&I use, Corps present use contracts can account for about 4.4 percent of the nations M&I need.



A 79-page report on this new 2004 data has been developed and published as IWR Report 05-PS-1, Water Supply Database 2004 Survey, February 2005. This report is available on the IWR reports web page at: <http://www.iwr.usace.army.mil/iwr/pdf/WSDDataUpdateFinalReportRev05ps1.pdf>

***EPA's Valuation of Ecological Benefits Workshop***  
*Susan Durden, Institute for Water Resources*

The Environmental Protection Agency's (EPA) Environmental Policy and Economics Workshop Series held a session "Valuation of Ecological Benefits: Improving the Science Behind Policy Decisions" on October 26 and 27, 2004. The pro-

ceeding are now available.

The workshop was co-sponsored by EPA's National Center for Environmental Economics and National Center for Environmental Research. It highlighted results from EPA Science to Achieve Results (STAR) grants and other projects related to methods, models and empirical estimates to improve the valuation of ecological endpoints. Investigators presented research on methodological improvements and ways to incorporate non-monetizable or non-quantifiable ecological information into environmental policy decisions. Other topics included research on the benefits of improved coastal water quality, the value of improved fresh water quality, advances in the stated preference valuation method, balancing conservation and urban growth, and valuing wildlife health and biodiversity.

To obtain a copy of the proceedings, click on the following link and scroll to the bottom of the page.

<http://yosemite.epa.gov/ee/epa/eerm.nsf/vwSER/96291273F5DF6C2085256F9B00733175?OpenDocument>

If you have any questions, please contact, Shannon Price at ([price.shannon@epa.gov](mailto:price.shannon@epa.gov)) or William Wheeler ([wheeler.william@epa.gov](mailto:wheeler.william@epa.gov)).

### **Report on the Contribution of Tributaries to the Traffic on Main Stem Waterways**

*Arlene L. Dietz, Institute for Water Resources*

The tonnage and trip ton-mile contributions of tributaries to the main stems of the U.S. Inland Waterway System, defined as a collective of the Mississippi River, Ohio River and the Gulf Intracoastal Waterway, have averaged 69% for tons and 56% for trip ton-miles over the latest 5 year statistical period, 1999-2003. The shares have been quite stable over this period.

The table below displays the contributions of the tributaries to the main stem by commodity group. The main stem's dependency for the commodity groups ranges from 46% to 100% on a tonnage basis. These findings were developed by Navigation Data Center's Waterborne Commerce Statistics Center, and were replicated by the Tennessee Valley Authority. Point of contact for this analysis is Jay Wieriman at 504-862-1402.

<b>Tributary Waterborne Tonnage That is Shipped OR Received on Other Than the Mississippi River, Ohio River, or the Gulf Intracoastal Waterway CY1999 - 2003 Average - Inland Traffic Only (Internal and Local)</b>			
<b>Commodity</b>	<b>Tributary Tons</b>	<b>Total Tons</b>	<b>Percent</b>
Coal, Lignite & Coal Coke	117,148,880	189,296,151	61.9%
Petroleum and Petroleum Products	160,403,399	193,659,078	82.8%
Chemicals and Related Products	47,431,022	60,641,662	78.2%
Crude Materials, Inedible Except Fuels	89,894,782	130,681,880	68.8%
Primary Manufactured Goods	18,204,433	31,353,444	58.1%
Food and Farm Products	40,971,032	90,057,101	45.5%
All Manufactured Equipment, Machinery, etc.	9,700,016	9,760,377	99.4%
Waste Material; Garbage, Landfill, Sewage	3,211,986	3,468,681	92.6%
Unknown or Not Elsewhere Classified	2,518	2,518	100.0%
<b>Total</b>	<b>486,968,069</b>	<b>708,920,892</b>	<b>68.7%</b>
<b>Commodity</b>	<b>Tributary Trip-Ton-Miles</b>	<b>Total Trip-Ton-Miles</b>	<b>Percent</b>
Coal, Lignite & Coal Coke	32,573,208,605	60,622,453,049	53.7%
Petroleum and Petroleum Products	29,559,286,691	39,144,045,663	75.5%
Chemicals and Related Products	21,137,934,894	30,417,892,868	69.5%
Crude Materials, Inedible Except Fuels	29,695,645,131	48,811,438,493	60.8%
Primary Manufactured Goods	14,121,261,817	25,011,010,597	56.5%
Food and Farm Products	38,725,009,211	91,107,089,182	42.5%
All Manufactured Equipment, Machinery, etc.	768,683,402	824,124,647	93.3%
Waste Material; Garbage, Landfill, Sewage	225,659,739	270,152,198	83.5%
Unknown or Not Elsewhere Classified	119,192	119,192	100.0%
<b>Total</b>	<b>166,806,808,682</b>	<b>296,208,325,888</b>	<b>56.3%</b>
Source: U.S. Army Corps of Engineers - Navigation Data Center			

### ***Opportunities With Nonstructural Measures in Flood Damage Reduction***

This nation is moving more and more to nonstructural measures for solving flood damage problems. This is because citizens, communities, groups, etc. are demanding more and more that flood sources such as rivers and streams are not altered by structural projects such as dams, levees, concrete lined channels, etc., that have historically been acceptable but today are increasingly considered as not acceptable. This does not mean that those entities do not want flood damage problems resolved. What it does mean is that they want new, 21st Century type thinking applied to those problems so the problems are solved and other opportunities are realized! We, the Corps, have the opportunity to respond to this movement by incorporating more nonstructural measures in our plan formulation process than we have in the past. Last month I talked about requirements in legislation and regulation that the Corps consider nonstructural measures. This month, I will focus on some of the opportunities that exist with implementing nonstructural measures to achieve flood damage reduction.

**Tool Box** - A basic opportunity with full consideration of nonstructural measures is that we have more "tools" in the "flood damage reduction tool box" to use to solve problems. As experts in flood damage reduction, the Corps should always have some recommendations to give to a community to reduce flood damage problems. Far too often, we have told a community "sorry, we realize you have a problem but we have nothing to offer you." In many cases, this is because we have not used all the "tools" in the "tool box" and we have not applied the thought process completely to see how all these "tools" can be applied.

**Cost** - Many of the nonstructural measures are lower cost to implement and are lower cost to operate and maintain than structural measures.

**Flood Plain Development** - Nonstructural measures do not promote subsequent flood plain development like occurs in areas removed from the 100-year flood plain by structural measures.

**Cost Sharing** - Cost sharing for nonstructural measures is 65/35 whereas for structural measures this may range between 65/35 and 50/50.

**No Adverse Impacts [NAI]** - With the basic nonstructural measures, the characteristics of the flood are essentially unchanged. In terms of adverse flood plain management related impacts and environmental related impacts, enlarged flood boundaries, increased flood depths, increased flood velocities, and loss of environmental habitat that can occur with structural projects does not occur with non structural projects.

**National Flood Insurance Program [NFIP]** - Nonstructural measures are a "natural fit" with the NFIP because of such opportunities as reducing flood damages while achieving NAI. Structural measures, on the other hand, generally are not a "natural fit" with the NFIP because of adverse impacts with structural projects that require mitigation to become in compliance with the NFIP.

**E.O.11988** - Nonstructural measures meet the intent of the executive order by reducing the risk of flood loss, minimizing the impact of floods, and restoring and preserving the natural and beneficial values of flood plains.

**Partnering** - Opportunities exist for partnering with nonstructural measure implementation. Many agencies and groups that have historically opposed structural measures strongly embrace nonstructural measures. Instead of using project funds to respond to and mitigate for issues and impacts respectively identified by agencies and groups as a consequence of structural measures, funds for nonstructural projects can be complemented by support from these agencies and groups.

**Ecosystem Restoration and Recreation** - The nonstructural measures of relocation and buyout [evacuating the flood plain] offer tremendous opportunities that previously most Corps relocation/buyout projects ignored. That opportunity is "new uses of the evacuated flood plain!" This is an extremely powerful tool! The typical new uses are ecosystem restoration and recreation. Not only does "new uses of the evacuated flood plain" allow greatly enhanced project justification but it greatly enhances partnering opportunities and it greatly enhances the support from the local sponsor/community. The strong positive values to the local community of public access to streams, rivers, and coastlines to enjoy restored ecosystems and recreation complimentary with restored ecosystems gets most communities past the old problem of "lost tax base" when evacuating flood plains.

Environmental Operating Principles [EOP] - Nonstructural measures, especially relocation and buyout with ecosystem restoration as a "new use of the evacuated flood plain," meet the EOP by achieving "environmental sustainability," achieving "balance and synergy among human development activities and natural systems," and achieving "innovative win-win solutions to the nation's problems that also protect and enhance the environment." Nonstructural measures in flood damage reduction clearly meet the EOP!

Civil Works Strategic Plan [CWSP] - Nonstructural measures support very well the CWSP. Review the challenges, emphasis, and goals of the CWSP while thinking of nonstructural measures. You will see a good match!

The future for flood damage reduction is greater emphasis on nonstructural measures and greater incorporation of the related opportunities. The Nation wants Corps leadership in the use of nonstructural measures so that all tools in the flood damage reduction toolbox are fully used. Some skeptics may say that we simply cannot justify nonstructural measures or that too much innovation and "thinking outside the box" may be needed to implement some nonstructural measures. To leaders, those are challenges that lead to change. When leaders are in action, changes occur and what is considered innovative or "outside the box" today becomes standard operating procedure tomorrow. Use nonstructural measures and realize the opportunities! Join the excitement!

Larry Buss can be contacted by e-mail at [larry.s.buss@usace.army.mil](mailto:larry.s.buss@usace.army.mil) or by phone at 402-221-4417.

## PLANNING CENTERS OF EXPERTISE

In previous issues of Planning Ahead, some of our Planning Centers of Expertise have been highlighted. In this month's issue, I would like to introduce you to the staffs at the Engineering Research and Development Center (ERDC) and the Institute for Water Resources (IWR) who have been established to assist these centers.

Joan Pope coordinates ERDC support to the Centers of Expertise, while at IWR, Ken Orth as the IWR Lead for Planning Community of Practice, heads this effort. Together with these two individuals, the following points of contact have been selected to provide support to the National Planning Centers.

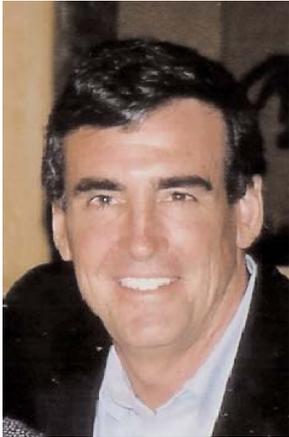
### Engineering Research & Development Center and Institute for Water Resources Technical Points of Contact

National Planning Center	ERDC	IWR
Inland Navigation (Lakes and River Division)	Sandra Knight: CEERD-HC-T (601/634-2693)	Keith Hofseth: CEIWR-GR (703/428-6468)
Deep Draft Navigation (South Atlantic Division)	Sandra Knight: CEERD-HC-T (601/634-2693)	Ian Mathis: CEIWR-GI (703/428-7275)
Flood Damage Reduction (South Pacific Division)	Jack Davis: CEERD-HC-T (601/634-3006)	Chris Dunn: CEIWR-HEC-WR (530/756-1104)
Hurricane and Storm Damage Prevention (North Atlantic Division)	Joan Pope: CEERD-ZB-A (703/428-6867)	Charley Chesnutt: CEIWR-GI (703/428-9085)
Ecosystem Restoration (Mississippi Valley Division)	Al Cofrancesco: CEERD-EE-A (601/634-3182)	Rich Fristik: CEIWR-GR (703/428-8066)
Water Management and Reallocation (Southwestern Division)	Darryl Calkins: CEERD-RV-T (603/646-4304)	Ted Hillyer: CEIWR-GR (703/428-6140)

I would also like to call to your attention to the fact that the Flood Damage Reduction Center of Expertise' website is up and running at: <http://www.iwr.usace.army.mil/floodweb/>

For additional information on the Planning Centers of Expertise or to offer to provide an article on the Centers, please contact Ted Hillyer at: [Theodore.m.hillyer@usace.army.mil](mailto:Theodore.m.hillyer@usace.army.mil).

## PLANNING LEADERS' CORNER



This month Planning Ahead spoke to Mr. Tom Kendall, Chief of the Corps of Engineers' San Francisco District Planning Branch. Tom received both his undergraduate and graduate degrees in Civil Engineering from the University of California, Berkeley. After graduation he worked briefly for the University and for an offshore engineering consulting firm before starting his career with the San Francisco District in 1984. Tom has been involved with the District's Civil Works Planning mission in various capacities over the years: coastal engineer, study planner, project manager, Chief of the Water Resources Branch, Acting Chief and Assistant Chief of Planning/Engineering Division, Acting Chief of Engineering Branch and Acting Assistant Chief of Engineering & Technical Services Division.

Tom is a registered Civil Engineer in California and a member of the American Society of Civil Engineers (serving on the Rubble Mound Structures Committee), the Executive Officer for the District's Engineering Explorer Post under the Learning for Life Program, and a member of the American Shore & Beach Preservation Association (Director, California Chapter 1989 -1995, National Treasurer 1994 - 2003). He has served as Career Program Manager for the District's Engineers & Scientists program and as a member of Corps South Pacific Division's Leadership Development Program Steering Committee. He was recognized as the South Pacific Division Engineer of the Year in 2002 and received a 2003 Civilian of the Year award from the Association of the US Army.

Planning Ahead: *What excites you about being a leader in the Planning Community of Practice?*

Being surrounded by the bright group of energetic, well-educated young planners that have joined our community in recent years. I get to come to work everyday and work with and learn from these wonderful professionals. Most have truly taken ownership of their work and I feel honored to support them however I can. I have had great informal mentors throughout my career and many of them I still have access to; the vertical team is very alive in the Planning Community today.

Yes, it's a murky business we work in; but that's part of what makes it exciting. I love public service and problem solving and that's what this job is.

Planning Ahead: *What has been the most significant event or phase in your career, and why was it important?*

Probably my most recent acting phase, which speaks to a period between 1995 and 2000 when I wore more acting hats than permanent ones. It was a period of great challenge and change within our District and for me personally. I was sort of like a utility player in baseball, playing wherever I was most needed. Sometimes that was leading a Division; sometimes that was leading a Section. Inevitably, a "regular starting player" would return or join the line up and assume a duty that I once had. This gave me a chance to learn from these "starting players" and to be a resource, or at least a bit of institutional knowledge, to them.

I learned during this time the importance of relationships to a productive work environment. While we will always have organizations with some structure to them, our working relationships are not completely defined by that structure. Structures and roles will change; relationships need to transcend them - I've heard some say that that's the whole point of "2012".

Planning Ahead: *If you could pass along one best piece of career advice to aspiring planners, what would it be?*

Be a contributor. Focus your energies where you feel you can contribute. That may be a moving target and, as a planner, it may be a bigger arena than you realize. Planners are constantly working within the framework of rules established by evolving laws and policies. Don't hesitate to question whether one of those rules is ripe for changing - it could happen. And, along the way, you'll have a career. As has often been said, take full responsibility for your career decisions. In this public service area that we work in there are plenty of career broadening opportunities available. If you are not happy with your current sense of contribution, seek to change it where you are or look for opportunities elsewhere. Stay stoked about being part of something bigger.

Planning Ahead: *Thank you, Tom.*

### ***DC - Here They Come !!!***

The third adventure for the 2005 Planning Associates (PAs) is fast approaching. Headquarters and the Institute for Water Resources are working diligently for an approximately 3-week session in Washington DC with the PAs. Being the course manager for the DC Experience, I can give a few tidbits of what's in store for them.

First of all, we always start with an all day bus tour of the DC area to include several sites in northern Virginia. Classroom activities include hearing from guest speakers and panel discussions, such as: Who's Who, Authorization, Appropriations, Interest Groups, Senior Corps Leaders Panel, a Storyteller, Civics, Federal Agency Panel, The Press, Government Relations, Corps History, Shadow Stories, Risk Communication, and Media Training. The PAs will also be on the road quite a bit while in DC, and will have the opportunity to visit the GAO Building (HQ), the Pentagon for a tour and meet ASA(CW) staff, OMB to meet budget examiners, "The Hill" to talk with staff on the House and Senate, attend hearings, tour the Capitol and meet their respective representatives and Senators. Each PA will get to shadow a Senior Leader for a day. A trip to IWR will finish out the DC Experience. Cathy Shuman from the Los Angeles District will fill you in more detail of the DC Experience in next month's issue of Planning Ahead.



**Lincoln Memorial**



**Class of 2004 on "The Hill". Left to Right: Kevin Knight, Mike Greer, Andrea Walker, Susan Smith, Barton Rogers, Matt Rea, Lonnie Mettler, Beth Faber, Wayne Crayton, Lanora Wright, Dan Abecassis, and Tammy Conforti.**

### ***Team Building, Leadership Development and Communication Skills Session***

Pat Fitzgerald of the Alaska District wrote this month's article about the PAs latest adventure or session.

The Planning Associates Class of 2005 recently completed its first full working session in Fort Lauderdale, Florida. This session focused on team building and development of leadership and communication skills. It was stressed to the PA's that the program would be a lot of hard work, but also a lot of fun. This session was all of that and more.

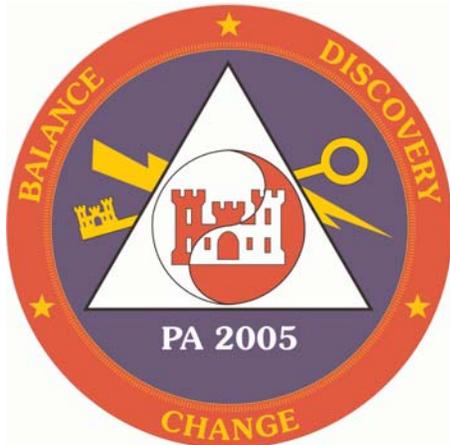
The team building exercises, which featured raft building (Photo 1) and GPS navigating, were some of the highlights of our session. These exercises provided us the opportunities to apply some of the leadership and communication skills that we discussed in the classroom. Equally important, these exercises gave us the chance to develop as a team and build relationships that will last a lifetime.

Development of our class purpose was a significant learning experience. Previously we had established norms for how we would communicate and make decisions as a team. Yet during this task we struggled to adhere to our norms and became an ineffective "storming" team. It was during this storming stage of our development that we grew the most. We are proud that we learned from our mistakes and changed for the better to become a highly performing team. Our class purpose is to act as a catalyst to positively shape the Corps culture by applying leadership, communication, teamwork, and technical skills combined with a broader perspective of the civil works missions and planning processes.

We also developed a team logo (Photo 2), which captures the goals of our class -- balance, change, and discovery. The Castle is centered within the logo to reflect our commitment to the U.S. Army Corps of Engineers. Surrounding the castle

is the Eastern symbol of the Tao, which represents balance and the appreciation of diversity. This rests within a Delta, the Greek symbol for change, reflecting both the strength of the triangle and a commitment to positive change. The remaining two symbols, the Key and Lightning Bolt, represent discovery, and a commitment to learning, empowerment, and action.

Our next Planning Associate session will be held in Washington D.C. We eagerly await our D.C. experience.



PA Class of 2005 Team Logo



Planning Associates Program Class of 2005. Standing left to right: Jenny Owens, Valerie Hansen, Steve Kopecky, Craig Evans, Boni Bigornia, Patrick Fitzgerald, Steve Yamamoto, Mitch Laird, and Bob Heinly. Kneeling left to right: Amy Frantz, Cathy Shuman, and Jodi Staebell



Steve Pugh,  
Baltimore District,  
Class of 2003

*Where are they now?*

Steve Pugh of the Baltimore District, graduate of 2003, is our featured Planning Associate for this section.

"One of my goals while entering the Planning Associates Program was to get a "Big Picture" view of the Corps on a National level. I was not disappointed! As a PA, I was able to get a hands-on experience of many of the services that the Corps provides for our country. During the program my classmates and I visited a wide range of places from a grain elevator in Texas, to locks & dams along the Upper Mississippi River, to hydropower dams in Oregon. Each place we visited provided just a little more insight into how the Corps touches the lives of the American people. Also, as an ecologist, the program helped me to grow in my appreciation for the diversity of the natural systems in our country and the challenges we face in implementing our Environmental Operating Principles."

"Since graduation, I have been working at the Baltimore District on several watershed studies throughout the Chesapeake Bay region including the Anacostia River Comprehensive Plan in Washington, D.C. In addition, as a result of being in the PA Program, I have had the opportunity to work on a number of new initiatives such as: developing environmental criteria for performance based budgeting, developing and teaching the new PROSPECT course on Planning Ecosystem Restoration Projects and revamping the National Planning Awards."

## PLANNING WEBS AHEAD

### Communication Plans

Web pages are a useful tool for successfully completing a public decision process, such as a Corps' feasibility study. The Public Involvement and Teaming in Planning Course Reader provides practical advice for developing communication plans. Identifying stakeholders that must participate in the process for the decision to "count" is a good starting point. For a public project to be implementable, these conditions must be met: public awareness of the problem and need for the study,

legitimate planning process, exchange of information, tradeoff analysis, and acceptance of the final decision. Planning study web pages may be effective in meeting all these conditions. "Strong sponsor support with public participation involves getting information out to the public and getting back the public's ideas, issues, and concerns. It is two-way communication involving information and participation techniques." An effective Corp informational web page is the Little Rock District's Springfield Missouri Feasibility Study. The Jacksonville District's collaboration with the South Florida Water Management District is a notable web based participation technique.

#### Reference Links

1) Public Involvement and Teaming in Planning Course Reader:

[http://www.spd.usace.army.mil/cwpm/public/plan/pdguide/general/table\\_of\\_contents.htm](http://www.spd.usace.army.mil/cwpm/public/plan/pdguide/general/table_of_contents.htm).

[http://www.spd.usace.army.mil/cwpm/public/plan/pdguide/general/decision\\_count/what\\_makes\\_count.htm](http://www.spd.usace.army.mil/cwpm/public/plan/pdguide/general/decision_count/what_makes_count.htm), and

[http://www.spd.usace.army.mil/cwpm/public/plan/pdguide/general/part\\_techniques.htm](http://www.spd.usace.army.mil/cwpm/public/plan/pdguide/general/part_techniques.htm),

2) Little Rock District's Springfield Missouri Feasibility Study: <http://www.swl.usace.army.mil/planning/feasibilitystudy/>,

3) Jacksonville District and the South Florida Water Management District's:

[http://www.evergladesplan.org/get\\_involved/landing\\_get\\_involved.cfm](http://www.evergladesplan.org/get_involved/landing_get_involved.cfm)

#### ***Can't Get There From Here!***

Two Internet gorillas-Amazon's A9 search engine and GoogleMaps-have tendered beta sites that help surfers navigate the physical world. Many are accustomed to finding directions on the Internet, but now A9 also offers destination photographs, where one can even "go" up and down the block!

<http://a9.com/restaurant?ypLoc=94105>,

<http://maps.google.com/>

Still waiting for those topo sheets? Try using the satellite imagery available at TerraServer USA.

<http://terraserver.microsoft.com>

## **PLANNING TECHNICAL SPECIALISTS**

### ***Planning on the Front Lines: Introducing Bill Frechione***

Hello, I am pleased to be the reporter for this column of Planning Ahead. Each month the column will feature a Regional Technical Specialist sharing his or her experiences. I welcome volunteers who would like to be featured in the column.

Susan Durden, Institute for Water Resources

[susan.e.durden@usace.army.mil](mailto:susan.e.durden@usace.army.mil)

#### **Key Words:**

Inland Navigation Economist

Project Reliability Analysis

#### **Professional Biography**

I received a BS degree in economics from the University of Pittsburgh and a MS from Louisiana State University. In between schooling, I served in the Army. My career with the Corps began in 1977 in the Galveston District, where I was involved in deep draft studies. I left Galveston in 1980 for the Huntington District. In Huntington I was one of the first people hired in the newly established Navigation Support Center, which provided plan formulation and economic evaluation support for studies in the Division focused on inland navigation problems and needs. In 1990 I accepted a position in the Pittsburgh District. I was designated as a Regional Technical Specialist in inland navigation economics in 2002.

*"Tell me about your job."*

Inland navigation economics is my specialty, although I am involved in enough other types of studies to keep things interesting. My job includes doing analysis in support of studies, with the analysis often in areas not often thought of when people think of economics. For example, in the Ohio Mainstem study I was responsible for doing a study on traffic management, which is mentioned but not really described in the regulations. A second area of specialization is simulation modeling and reliability analysis. If a project is considered to be in poor shape I will assist in the evaluation by modifying an in-house simulation model to simulate failures and estimate the consequences of failures. I have assisted numerous other

Districts in these and other types of studies.

*As a Regional Technical Specialist (RTS) what is the most important, challenging, exciting thing you have done?*

I find them all challenging and exciting but if forced to name one I would name a study that predates my status as an RTS: the Johnstown Flood Control Project reliability study. I mention the Johnstown study for two reasons: 1) it was the first major project where I was largely on my own in terms of responsibility for the economic evaluation; and 2) it was one of the first studies that required the application of a new evaluation technique - reliability analysis. Early on in the study we made a decision to develop a simulation model that fit the problem rather than format the data to fit off-the-shelf models and programs. The model allowed us to represent the area as it existed and not how it must appear to satisfy an on-the-shelf model. The recommended improvements to the project were approved. The model has since been modified, sometimes substantially, for use in other studies throughout the Corps.

*What lesson learned would you like to pass on?*

Learning is a life-long process.. In Galveston, I learned computer modeling. In Huntington, I learned the art of planning. In Pittsburgh, I learned how to tell the story. All of these, along with a lot of luck, allowed me to participate in some of the most interesting studies conducted by the Corps.

*Who do you want to say hello to?*

All the fine people with whom I worked or who I met at the training courses at the Inland Navigation Economics session.

## PLANNING CoP CALENDAR

**Planning Advisory Board Conference call**.....second and fourth Fridays every month.

**Planning Ahead submission deadline**.....third Thursday every month

**American Planning Association Annual Conference, San Francisco**.....March 2005

**2004 Planning Award winners selected**.....April 2005

**Planning Centers of Expertise Leaders' Meeting**.....Spring 2005

**Request for 2006 Planning Associate nominations**.....June 2005

If you would like to post an item to the monthly calendar, please contact Monica Franklin at [Monica.A.Franklin@usace.army.mil](mailto:Monica.A.Franklin@usace.army.mil).

## ANNOUNCEMENTS

### ***Jacksonville District***

This announcement is open to individuals with government status and individuals eligible for special hiring programs. This announcement is not open to the general public.

Announcement No: SCGV05435498

**Opening Date:** 10 February 2005

**Closing Date:** 09 March 2005

**Title, Series, and Grade:** GS-15; Community Planner (0020), Social Scientist (0101), Economist (0110), Biologist (0401), Landscape Architect (0807), Civil Engineer (0810), Environmental Engineer (0819), Physical Scientist (1301), Hydrologist (1315)

**Organization:** US Army Engineer Dist, Jacksonville, Planning Division, Jacksonville, FL 32232

**Duty Station:** Jacksonville, FL

The address for the Army's Civilian Personnel Online (CPOL) Vacancy Announcements is:  
<http://cpol.army.mil/va/scripts/public.html>

This announcement is issued by the Southcentral CPOC, in Redstone Arsenal, AL. Individuals interested in applying should review the instructions on how to apply that are in the announcement posted on CPOL.

Contact Patti Curbow, 904-232-1623 for additional information.

### **Northwestern Division**

**Vacancy Announcement Numbers:** WTHE05457882 and WTHE05000003

**Opening Date:** February 28, 2005

**Closing Date:** March 28, 2005

**Position:** GS-13, Social Scientist (0101), Regional Economist (0110), Landscape Architect (0807), Civil Engineer (0810), Physical Scientist (1301), General Biologist (0401), Fishery Biologist (0482), Ecologist (0408). NOTE: Community Planners (0020) must apply under Vacancy Announcement Number WTHE05000003.

**Place of Work:** Northwestern Division, Directorate of Programs, Portland, Oregon

**Duties:** Serves as staff consultant performing duties as plan formulation program manager and technical specialist in the Plan Formulation Branch. Responsible for Division-level management, direction and coordination of General Investigation (GI) Program studies and reports, including reconnaissance, feasibility, and planning, engineering and design (when reformulation of authorized project is required). Provides preauthorization for civil works project, such as, navigation, flood control, and related water resources planning expertise and guidance to key operating officials and counterparts at the District level, higher headquarters, other government agencies and private interests. Manages preparation of public notices of study completion and findings for issuance by Division Commander. Briefs Division Commander, notifies members of Congress, and directs notification of news media. Responsible for responding to and resolving all issues.

**How to Apply:** You may send your resume via surface mail to: Department of the Army, Central Resume Processing Center, 314 Johnson Street, Aberdeen Proving Ground, MD 21005-5283. If your resume is currently in Army Resume Builder you may self-nominate.

## **WANT TO CONTRIBUTE TO *PLANNING AHEAD*?**

This newsletter is designed to improve the communication among all the planners and those we work with throughout the Corps. We hope that future editions will have mostly information and perspective from those of you on the front lines in the districts. We hope that these notes become a forum for you to share your experiences to help all of us learn from each other. We can't afford to reinvent the wheel in each office. We welcome your thoughts, questions, success stories, and bitter lessons so that we can share them on these pages. The articles should be short (2-3 paragraphs) except in some cases where you just have to say more, and should be a MS Word document. We highly encourage that you send pictures to accompany your article.

**The deadline for material for the next issue is 24 March 2005.**

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## **WANT TO SUBSCRIBE TO *PLANNING AHEAD*?**

To subscribe to our distribution list, send an e-mail message to [majordomo@lst.usace.army.mil](mailto:majordomo@lst.usace.army.mil) with no subject line and only a single line of text in the message body. That single line of text should be: "**subscribe ls-planningahead**"

(Editor's Note: In the email address, the character following the @ sign is a lowercase "l". This is also true for the sin-

gle line of text. The character immediately following “subscribe” is also a lowercase “L”. If these are not typed correctly, you will receive an error message.)

To obtain a 'help' file, send only the word 'help' in the text of the message (nothing in the subject line) and address it to [majordomo@usace.army.mil](mailto:majordomo@usace.army.mil) .

## THE PLANNING AHEAD TEAM

Harry Kitch	Publisher	Headquarters
Monica Franklin	Editor	Institute for Water Resources
Larry Buss	<i>Nonstructural News</i>	Omaha District
James Conley	<i>Planning Webs Ahead</i>	South Pacific Division
Susan Durden	<i>Regional Technical Specialist</i>	Institute for Water Resources
Monica Franklin	<i>Announcements, Planning CoP Calendar</i>	Institute for Water Resources
Ted Hillyer	<i>Planning Centers of Expertise</i>	Institute for Water Resources
Joy Muncy	<i>Planning Associates Update</i>	Institute for Water Resources
Patricia Mutschler (beginning March 2005)	<i>1-900-Planner</i>	Headquarters
Darrell Nolton	<i>Masters Program</i>	Institute for Water Resources
Ken Orth	<i>Planning Leaders' Corner</i>	Institute for Water Resources
Paul Rubenstein (currently on TDY in Iraq)	<i>Cultural Resources</i>	Headquarters

To read past issues of Planning Ahead, visit:  
<http://www.usace.army.mil/inet/functions/cw/cecwp/news/news1.htm>