



US Army Corps
of Engineers®
San Francisco District

SPN **Surveyor**



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RACING to save coho

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COMMANDER'S CORNER

Building a GREAT engineering force starts with YOU

By Lt. Col. Torrey A. DiCiro
San Francisco District Commander

By now, you should all be familiar with the USACE vision of building a GREAT engineering force. HQ, USACE lays out this vision in four distinct goals under its Campaign Plan. It gets further broken down into the division's IPLAN with 13 regional actions. Supporting the IPLAN is our district's OPLAN — which is where YOU fit in.

Building a GREAT engineering force starts with highly-disciplined people — individuals like yourselves who bring a vast set of talents and experiences to the table. Here's how you can get involved and support the USACE vision.

IPLAN to OPLAN to MYPLAN

Last year in October, members of our Corporate Board began formulating our strategic goals for the current fiscal year. These goals were reviewed by Col. (P) Mike Wehr, the SPD Commander, during a 90-day assessment. The end result was a revisit of our district's OPLAN.

I asked each division chief to begin reworking their section's support tasks and objectives. Once they are finalized and approved by the Corporate Board, we will begin posting these FY12 targets on posters in the various conference rooms. A copy of the entire OPLAN will also be uploaded to our district SharePoint site. All this should be completed in the coming weeks.

What I want YOU to do is sit down with your supervisor and go over the OPLAN



for your section. Be familiar with your team's objectives. Find ways that you can marry up your talents to these fiscal year targets and make sure they are reflected in your TAPES for your next rating period. Developing your TAPES, or "MYPLAN," while keeping an eye on the goals of the district OPLAN, will ensure everyone is working toward the USACE vision of building a GREAT engineering force.

New Deployment Opportunities

Despite officially withdrawing our forces from Iraq in December 2011, we are still a nation at war. With work still to be done, our district team members continue to step up and fill critical jobs in our nation's fight to rebuild Afghanistan. We currently have

four members of our workforce deployed, with four more on the way. In February, we will send off project managers Irene Lee and Karen Rippey, as well as Tricia Yates, our baseyard's automation clerk. Volunteering to deploy in April is Jeff Ide, Civil Design Section chief.

Deploying overseas is a tremendous way to build your career and contribute to the USACE vision. Jobs are open in Project Management, Construction Rep. QA and Admin. Services. If you are interested in contributing your talents overseas, talk with your supervisor and then contact Wayne Brandt, our district security manager. Benefits of deploying include invaluable experience, career growth incentives and financial perks. Plus, supporting our nation's Overseas Contingency Operations is Goal #1 of the Campaign Plan.

Yammer Now Available

Finally, I ask all of you to join our new district Yammer site. It's a great way to network and share ideas across our various project teams. This professional networking tool was researched and implemented last year by nine members of our Leadership Development Program. In the coming weeks, they will be offering brown bag seminars on utilizing Yammer for your needs. In the meantime, go to www.yammer.com, enter your USACE email address and click "Sign Up" to create a profile. It's that easy.

I encourage you to share your ideas and get involved as we continue to move the district towards GREATness in 2012.

District Commander

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SPN Surveyor

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National Midwinter Bald Eagle Survey



Beach
A bald eagle is spotted near the entrance to Lake Sonoma during the 2010 survey.

Torrie McAllister
South Pacific Division Public Affairs

A key annual event in the recovery of Bald Eagle populations takes place Jan. 4-18, when hundreds of citizen scientists take to the field for the 34th annual Midwinter Bald Eagle Survey.

“The survey is a true public-private partnership with hundreds of volunteer citizen scientists taking part, in addition to federal, state and NGO biologists. Forty-three states continue to actively participate, with over 740 standardized survey routes across the country,” said Wade Eakle, the 2012 national survey coordinator and an ecologist for the U.S. Army Corps of Engineers South Pacific Division.

The data are collected during a two-week window every year, then sent to a national database set up to monitor eagle populations in the lower 48 states. It is part of a national effort to identify important winter habitat and develop a total population index for the wintering eagle population.

Read the full version of this story on www.army.mil.

On the cover

Rory Taylor, a fisheries biologist with the U.S. Army Corps of Engineers San Francisco District, transports coho salmon into Salmon Creek as part of a recovery program which seeks to boost numbers of coho salmon in the Russian River Watershed. In December 2011, biologists funded by the U.S. Army Corps of Engineers counted a record number of wild juvenile coho salmon in the downstream portions of the Russian River system in western Sonoma County. (Photo by JC Delgadillo)

Oyster Point Harbor Project



[Top] A concrete breakwater protects the Oyster Point Marina, but more protection from wave action at the harbor entrance is needed.

[Right] SPN's Irene Lee, back right, points out on a map where a floating breakwater system which will buffer ferries and other vessels from the effects of wave action at Oyster Point Marina will be located.



Project to protect marina moves forward

Story & photos by JC Delgadillo
District Public Affairs Office

Nature's forces can subject marinas and harbors to extremely high stresses. Since protection from waves and wind is one important feature boaters seek, authorities work hard to control wave action in harbors and marinas.

When the need to provide more protection from waves arose at the Oyster Point Marina, San Mateo County's Harbor District looked to San Francisco District's Programs and Project Management Division's Irene Lee for support.

The City of South San Francisco owns Oyster Point Marina and Park, a 600-berth recreational and commercial marina located about two miles north of San Francisco International Airport. The 46-acre facility includes picnic areas, jogging trails, a recreational fishing pier, bait shop, small boat marine service and sales center, existing and proposed hotels, restaurants and offices.

A concrete breakwater protects the marina now, but more protection from wave

Southeast storms which have produced swells as high as six feet can pose a navigational hazard.

action at the harbor entrance is needed, said Peter Grenell, general manager at the San Mateo County Harbor District, the agency with jurisdiction over Oyster Point.

Southeast storms which have produced swells as high as six feet can pose a navigational hazard to small vessels and could even prohibit ferries from safely accessing the marina. New ferry routes are expected to begin in the spring of 2012, including a route from South San Francisco to Oakland with terminals at Oyster Point and Jack London Square. The ferry terminal construction at Oyster Point is currently under construc-

tion, and it is expected to be completed in January, said Grenell.

The Army Corps of Engineers will oversee the installation of an in-based floating breakwater system which will buffer ferries and other vessels from the effects of wave action. Lee, a mechanical engineer by education who also holds a project management professional certification, will serve as the project manager for the project.

After much modeling, the floating breakwater was determined to be the best option, said Lee.

"I could not ask for a better sponsor," said Lee. "This project has taken a really long time, and I am grateful to Peter and the (Harbor) District for being patient. Everyone is committed to seeing this project through."

We've learned to be patient, admits Grenell. We want this done right and are excited to be moving forward.

The Oyster Point Harbor Project, Project Cooperation Agreement Amendment, signaling the way ahead for the installation of the floating breakwater system, was signed mid-December in San Francisco.

SPN reduces hazardous shoal in Suisun Bay

By Brandon Beach

District Public Affairs Office

Crew members from the *M/V John A. B. Dillard, Jr.* conducted knockdown dredging at the western end of Suisun Bay late last year in an effort to remove a navigational hazard caused by shoaling.

This was the first time the *Dillard*, a U.S. Army Corps of Engineers San Francisco District command and control vessel, had been used to perform such an operation.

Knockdowns typically involve dragging a bar behind a boat along the ocean floor in order to smooth out a shoal, an area where sediment builds up to form a high spot.

Think of it as a drag mat used on baseball diamonds, said Jessica Burton Evans, SPN Navigation Program manager (interim).

While the *Dillard* was not initially equipped for knockdown dredging, crew members had to be creative.

Time, of course, was of the essence. The shoal was first discovered on Nov. 14, following a condition survey of the area by SPN.

"Between the post-dredge survey we did in August [following annual maintenance dredging], and the condition survey we did in November, this shoal showed up of two-in-a-half feet high," said Burton Evans.

The authorized depth of Suisun Bay is minus 35 feet.

The crew didn't have a lot of time, so they were limited to the materials on hand.

Jessica Burton Evans
SPN Navigation Program

In response to the discovery of the shoal, bar pilots issued a draft restriction to all vessels traversing this portion of Suisun Bay, known as Bulls Head Reach. It is the main channel to ports at West Sacramento and Stockton.

Complicating matters further was the environmental window for all dredging activities in the bay was due to close on Nov. 30. That left SPN planners just 15 days to coordinate with the resource agencies for authorization to dredge and outfit the *Dillard*.

"The crew didn't have a lot of time, so they were really limited to the materials on hand at the baseyard," said Burton Evans, referring to SPN's baseyard in Sausalito.

In order to create an apparatus capable of performing knockdown dredging, *Dillard* crew members took a large chain net off the bow of the *Raccoon*, a SPN debris-removal



Beach

The "*Dillard*," a SPN command and control vessel, was outfitted with a large chain net to perform knockdown dredging in Suisun Bay.

vessel, folded it in half, so the bars were stacked on top of each other, and welded the pieces together. This doubled the bar's thickness.

While crew members worked to outfit the ship on their end, Burton Evans and several SPN environmental managers began coordination with the various resource agencies including the San Francisco Bay Conservation and Development Commission, National Marine Fisheries, U.S. Fish and Wildlife Service and others.

"One of the concerns here are salmonids. There are several species [of fish] that go through this part of the bay. We have steelhead [trout] and Chinook salmon returning to spawn," said Burton Evans. "There's also Delta smelt, which don't migrate out of the bay, but use this part as their habitat during different times of the year."

The *Dillard* crew traveled to Bulls Head Reach a total of six times to perform knockdown dredging over a three-week period begin-

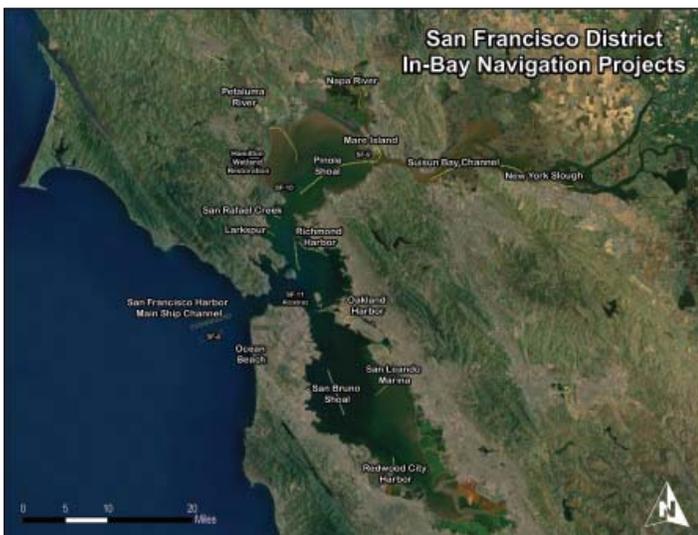
ning on Nov. 28.

Each dredging episode was followed by an in-progress survey by members of the SPN Hydro-Survey Section, who were onboard the *Dillard*. Such a survey was completed on Nov. 30 and revealed the area had reshooled requiring dredging operations beyond the Nov. 30 environmental window.

Foggy conditions on several of the days in early December curtailed attempts to perform any knockdown dredging in the a.m. hours, when conditions are ideal as tides are ebbing.

The final knockdown though took place on Dec. 16. Overall, the *Dillard* crew was able to reduce the shoal by nearly a foot in depth. The draft restriction is still in effect but is considerably less severe for vessels.

In the coming months, SPN plans to study the hydrodynamics at Bulls Head Reach to determine the reasons behind the frequency of shoaling in the area.



The illustration above depicts the San Francisco District's numerous in-bay navigation projects. (Courtesy of the SPN Geospatial Section)

Collaboration key to coho resurgence

A recently-released coho salmon explores the waters of Salmon Creek, its new environment. For three years, this fish has been reared in the U.S. Army Corps of Engineers Don Clausen Hatchery at Lake Sonoma as part of a captive broodstock program. (Photo by Andrew Hugan, CDFG)

Story & photos by JC Delgadillo
District Public Affairs Office

They race along the windy road above the narrow sandy beaches and rocky Sonoma coastline, bound to live free or die. For three years, their guardians have carefully tended to their every need, but now the time has come for these coho salmon to be returned to the wild to thrive, at least that's the hope.

Three fish-hauling trucks filled with 175 adult coho salmon approach Chanslor Ranch in Occidental, Calif. A portion of Salmon Creek located near the ranch was determined to be the best place to release the fish. At the bottom of a narrow, steep dirt road lays the release point where dozens of local residents including families with children eagerly wait to assist with the release. Had it not been for a coalition of government agencies, scientists, private landowners and citizens dedicated to coho salmon conservation, this event might never have happened.

For generations, coho salmon prospered in the Russian River which winds its way through California's wine country en route to the Pacific Ocean. Dramatic declines in the coho salmon population due to both natural and human-induced factors resulted in NOAA's National Marine Fisheries Service declaring the species endangered in the 1990s. A variety of conservation ef-

forts including captive-rearing in hatcheries, removal and modification of flood-control structures that obstruct salmon migration, restoration of degraded habitat and acquisition of key environments has resulted in a promising milestone: In the winter of 2011, biologists funded by the U.S. Army Corps of Engineers counted a record number of wild juvenile coho salmon in the downstream portions of the Russian River system in western Sonoma County. Adult coho also appear to be reproducing in some of their historical tributaries for the first time since large-scale monitoring of the species began in 2005.

This is promising news to those enthusiastic about recovery efforts, including the men and women who dedicate their life's work to conservation in the local region.

"A dozen years ago nobody quite knew what to do," said California De-



SPN Fisheries Biologist Ben White hands a net filled with coho salmon to an assistant who will deposit the fish into the water.

partment of Fish and Game's Brett Wilson about the declining numbers of the species. "So I headed on a road trip to Oregon and Washington, to Manchester

Continued next page

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Coho continued ...

Research Station in Puget Sound, to start-ups everywhere in the Pacific Northwest. I came back with some really good ideas. We were going to need intense collaboration with key agencies, the best science and bucket loads of common sense,” said Wilson, now a senior hatchery supervisor at Lake Sonoma.

Key collaboration would be found with several groups including NOAA’s National Marine Fisheries Service, experts at the University of California Cooperative Extension and The Sonoma County Water Agency. The water agency had also investigated recovery efforts in the Pacific Northwest at the same time as the California Department of Fish and Game had. Dave Manning, now a senior environmental specialist at The Sonoma County Water Agency, was a young staffer in the early days of recovery efforts.

“We laid a lot of the groundwork for our partners to expand on,” said Manning.

Along with personnel from the UC Cooperative Extension, Gold Ridge Resource Conservation District and others, The Sonoma County Water Agency presently provides monitoring of the fish throughout the watershed. The agency also provides funding, personnel and has been instrumental in restoration of habitat including areas in Dry Creek.

While Wilson was proven correct in his assessment that recovery would require intense collaborations with key agencies, the best science and bucket loads of common sense, he was well aware recovery would also require a lot of funding. Cali-



A mother and her son assist with the release of coho salmon into Salmon Creek Dec. 19.

fornia was undergoing intense budget constraints, and the California Department of Fish and Game looked to the U.S. Army Corps of Engineers for support. The Corps did not let them down, said Wilson.

“There is absolutely no way we could have had such tremendous recovery without the Corps of Engineers believing this was the right thing to do,” said Wilson.

The U.S. Army Corps of Engineers maintains the captive broodstock program at the state-of-the-art Don Clausen Hatchery at Warm Springs Dam Lake Sonoma where the coho salmon are reared. Its personnel, including Supervisory Fisheries Biologist Ben White, have made it their

mission to nurture coho salmon back from the brink of extinction with the hope of removing the species from endangered classification all together.

“It’s quite the group we have working together,” said White of the coalition to restore coho salmon. “You’ve got the best scientific knowledge in the region and people with a deep passion for coho recovery. You’ve got leaders among their peers working this issue, and I’m proud to be a part of it. You wouldn’t be in this field if you didn’t care about these fish, and everybody involved wants to see them recover.”

At the banks of Salmon Creek atop a truck, White uses nets with long-handles attached to remove the fish from a tank and hands the nets to eager biologists as well as local residents. They race down the bank with nets to the creek and deposit the fish into the water. Some fish take to the water quickly; others seem a bit lost and try to swim back to land, but with a gentle nudge they return to the creek and begin exploring their new environment.

The water agency, UC Cooperative Extension, Gold Ridge Resource Conservation District and other groups will monitor the fish over the next few months. Data obtained will reveal untold amounts of data about the fish.

“The hatchery has done a phenomenal job breeding these fish,” said Manning. “The challenge now for everyone who cares about these fish is improving habitat...making sure the right habitat exists for these coho salmon to take hold and become self-sustaining is key. The hatchery is the seed, but improved habitat is really where the population is going to grow.”



A new facility for rearing and monitoring coho salmon, as part of a USACE-funded captive broodstock program, opened last year at the Don Clausen Fish Hatchery at Lake Sonoma.

AROUND THE DISTRICT

SPD, SPN welcome Chinese delegation at Bay Model

Story & photos by **Brandon Beach**
District Public Affairs Office

Nine members of a Chinese delegation met with water resources experts from the Corps' South Pacific Division and San Francisco District Nov. 22 at the Bay Model Visitor Center in Sausalito, Calif.

Paul Robershotte, Special Advisor to the Commander, led a discussion on SPD's Integrated Water Resources Program. His brief was followed by Mike Dillabough, SPN Operations and Readiness Division Chief, who discussed water operations at Lake Sonoma and Lake Mendocino. A local interpreter from San Jose, Calif., facilitated the discussion.

The visit concluded with a tour of the Bay Model Visitor Center led by Ranger Bill Cope.

The delegates, all of whom were water resources experts, were from the Xingjiang Province of China.

In a display of appreciation, the nine delegates presented Robershotte and Dillabough with a painting, hand-crafted by a local artist from Xingjiang Province. It is on display in the SPN Executive Office.



[Above] Ranger Bill Cope gives delegates a tour of the Bay Model.

[Right] Delegation members from China's Xingjiang Province stand in front of the Bay Model Visitor Center alongside Corps personnel Nov. 22.



Grants help improve recreation opportunities at Corps lakes

By **JC Delgadillo**
District Public Affairs Office

As budget constraints make it increasingly clear that government alone cannot meet the continually growing demands for services, smart rangers at Lakes Mendocino and Sonoma look for support from other sources including grant-making foundations, local agencies and citizens groups focused on conservation and recreation.

"It's really about leveraging partnerships to make great things happen," said Charlie Fenwick, senior district ranger and natural resource program manager/ chief of interpretive services for USACE San Francisco District.

Projects at Lakes Mendocino and Sonoma were recent-

ly awarded two "handshake grants" that will improve recreation experiences at the lakes.

A handshake grant offers a source of seed money to Corps installations for worthwhile partnership projects. The intent of the handshake grant program is to initiate new or enhance existing recreation and natural resources management opportunities. The grants are intended to encourage local organizations to partner with the Corps to construct, operate and maintain local projects.

Lake Sonoma was awarded a \$30,000 handshake grant, and Lake Mendocino was awarded an \$8,500 grant.

At Sonoma, the \$30,000 grant will be added to a \$20,000 grant awarded by the Sonoma County Water Agency to pro-



Beach

A new theater is set to open at the Don Clausen Fish Hatchery.

duce a documentary about the Russian River Coho Salmon Captive Broodstock Program which is credited with increasing the numbers of coho, an endangered species, in the Russian River watershed. Since

2001, Lake Sonoma and the Don Clausen Fish Hatchery have been leading the charge in one of the most innovative fisheries restoration programs

Continued next page

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EMPLOYEE NEWS

2011 SPN Honorary Awards presented



Bay Model Visitor Center
Team of the Year

DiCiro

Congratulations to our 2011 individual awardees

Jessica Burton Evans

District Employee of the Year

Carlos Hernandez

District Engineer of the Year

Dr. Robin Liffmann

Commander's Leadership Award

Rachel Coyner

District New Employee of the Year

SPN employees retiring in 2011

Dave Ammerman, Joy Arnold,
Herb Cheong, Roger Fernwood,
Robert Garcia, Ilse Gonzales,
Merle Griffin, Tom Hall,
Jake Jacobson, Robert Kwan,
Rodney Mitchell, Tina Patrick,
Victoria Plummer, John Robinson,
Robert Smith, Mary Wilson

Grant continued

in the west. Due to the sensitive rearing conditions of the fish and the laboring and machinery involved, no public tours of the hatchery are allowed. A documentary to be played at a visitor center currently under renovation will connect viewers to this important project that is bringing coho back from the edge of extinction, said Fenwick. The grant will also partially fund construction of the new Coho Theater on the grounds of the hatchery where the documentary will be showcased.

At Lake Mendocino, the modest \$8,500 grant will go a mighty long way thanks to

*It's about
leveraging great
partnerships
to make things
happen.*

Charlie Fenwick
USACE Senior Ranger

support from dedicated volunteers and partners who are donating time and labor to develop a new day-use camp site in the Miti Campground area

located in a more remote part of the Lake Mendocino recreation site. Volunteers with the newly-formed Friends of Lake Mendocino and California Department of Forestry and Fire Protection will build the day-use area which will include a covered picnic pavilion, fire ring, barbecue and corral for horses.

Smaller budgets call for creative means of developing new as well as improving existing recreation opportunities at U.S. Army Corps of Engineers lakes. The two projects at Lakes Mendocino and Sonoma showcase rangers' creativity at finding ways to do more with less.

Service Awards

The following SPN employees were presented with "Length of Service" certificates in 2011.

10 Years

Gregory Altman
Linda Clapp
Kenneth Clark
Nicole Davidson
Blair Jackson
Michael Jones
Joseph Lishka
Margot Royal

15 Years

Gregory Brown
Sandra Dowdy
Ricardo Galdamez
Fernando Garcia
J.D. Hardesty
Peter Ho
Jeffrey Ide
Julian Navarro
Lance Pool
Gerardo Prado
Philip Shannin
A.R. Smith

Barbara Garcia-Wafer

20 Years

Syed Burney
Therisa Edwards
James Howells
John McCoy
Debra O'Leary
Mark Weichmann

25 Years

Gwendolyn Davis
James Garror
Adrian Humphrey
Suzanne Pereira

Letitia Ponciano-Galapia

30 Years

Eric Behn
Corazon Delago
Daniel Denofrio
Merry Goodenough
Dennis Johnson
Timothy Kelleher
Irene Lee
Ceasar Martinez
Scott Mochizuki
Rosemarie Ramos
Dillie Rapley
David Serafini
Robert Smith
Kenneth Thompson

35 Years

Olivia Grate
John Jacobson
Yvonne Letellier

45 Years

John Robinson



1

More than 140 San Francisco District employees rang in the holiday season with an afternoon luncheon Dec. 14. Held at the district's headquarters building on Market Street, the two-hour event was capped with live music, an international buffet, an assortment of sweets from a district-wide cookie contest, and an appearance by Mrs. Claus. It was hosted by the SPN Activities Council.

[1] Phillip Shannin and Merry Goodenough join members of the SPN band Dec. 14. [2] Suzanne Pereira, left, and Mei Lee, total the results of the district-wide cookie contest. [3] Maria Dabney, left, and Terry Reyes show off their holiday smiles. [4] Rod DiCiro, left, Sarah Mello and Michelle Arakaki draw numbers during the door prize giveaway event. (Photos by Brandon Beach)

The District Commander thanks the members of the Activities Council and the many volunteers for making this a truly special event.



2



3



4

ENGINEERING CHALLENGE

Take on the engineering challenge in this month's SPN Surveyor. The first to solve this problem will receive a commander's coin, with the results being published in the March/April 2012 issue.

The Problem

A segment of interstate highway requires the construction of an embankment of 500,000 yd³. The embankment fill is to be compacted to a minimum of 90% of Modified Proctor maximum dry density.

A source of suitable borrow has been located for construction of the embankment. Assume that there is no soil loss in transporting the soil from the borrow pit to the embankment.

The following data apply:

- Dry unit weight of soil in borrow pit 113.0 pcf
- Moisture content in borrow pit 16%
- Specific gravity of the soil particles 2.65
- Modified Proctor optimum moisture content 13.0%
- Modified Proctor maximum dry density 120.0 pcf

Assuming each truck holds 5.0 yd³, and the void ratio of the soil is 1.30 during transport, the minimum number of truckloads of soil from the borrowed pit that is required to construct



Courtesy

the embankment is most nearly:

- (A) 100,000
- (B) 150,000
- (C) 200,000
- (D) 250,000

Submit your answers via e-mail to Lyn Gillespie at Lyn.Gillespie@usace.army.mil.

(This challenge was submitted by Rachel Coyner, a SPN civil engineer.)



Postcard from Afghanistan



Boonchan (Mike) Pornnang – San Francisco District



How has your experience in Afghanistan working for the Corps affected you?

I am honored to be part of a talented team of individuals who have stood up the Transatlantic Division Afghanistan (TAD-AFG) in August 2011. This opportunity has allowed me to work with upper management to make a positive impact at the Division level as the organization continues to evolve and meet stakeholder's expectations. Also this deployment has given me the opportunity to become multi-functional in my career field in a joint contingency operation. So, consider deploying to fully experience an overseas contingency if the opportunity arises.

What have you learned?

This tour is more challenging than my previous tour in Afghanistan. As the G4-Logistics Officer, I have learned that you can't always choose the roles you play in life, but you can choose the way in which you play them. To stand up a new organization requires a lot of trial and error in everything I do, from the smallest supply request to the large scales endeavors. In order to be successfully, I have to gain a deeper insight to predict demands and become proactive in the way I deliver logistical support to our military and civilian forces throughout Afghanistan.

What were your expectations and what is the reality of being in Afghanistan?

My expectations are to meet the commander's intent by focusing on people, process, and communications. The reality of being in an overseas contingency operation is very different; you can't run your daily business process as if you were in a peace time operation. You must be ready to adapt and overcome obstacles as they arise. Without support from my family and colleagues at San Francisco District this would not be possible, because it's not always easy to leave the comforts of home; to leave family, friends and loved ones and deploy overseas into an austere environment. Essayons.