News Release

US Army Corps
Of Engineers
Los Angeles District
Public Affairs Office
P.O. Box 532711
Los Angeles, CA 90053-2325

03-11 June 17, 2003 Immediate
Release No. Date For Release

Mike Tharp (213) 452-3922
Contact publicaffairs-spl@usace.army.mil Telephone

VANDENBERG'S BRIDGE TO THE 21ST CENTURY COMBINES NATIONAL DEFENSE WITH NATURAL RESOURCE PROTECTION

Los Angeles -- What do a red-legged frog, a Cal Poly University-bound civil engineering student, a beaver, a former recon infantryman in Vietnam, a stickleback fish and a Chumash Indian expert all have in common?

A bridge.

Specifically, a missile transport bridge at Vandenberg Air Force Base in Central Coastal California. On a late May morning, all these disparate folk and fauna have congregated to prove a point: That a crucial part of America's defense system can coexist on sound terms with the Army Corps of Engineers' commitment to environmental protection and preservation. "This is an environmental project that just happens to have a bridge running through it," says L.A. District Project Engineer Jim Mills.

Ever since Dec. 16, 1958, when a Thor intermediate range ballistic missile arced over the Pacific Ocean from the base, Vandenberg has had the Right Stuff for the nation's military (and later civilian) space program. The names Atlas, Titan, Minuteman, Peacekeeper, Pegasus and Delta became familiar ones among the more than 1,800 orbital and ballistic launches from Vandenberg. In this century, the base has emerged as a front-line player in national missile defense testing.

The traditional coda has missiles launched from north base, rockets from the south; military launches from the north, commercial from the south, according to District Resident Engineer John Hetager.

For all their high-tech heraldry, however, the missiles sometimes needed to travel overland from one end of the base to another on an old-fashioned flatbed truck. And part of that journey meant jouncing over a bridge at the bottom of an often mist-shrouded low spot on ultra-rural El Rancho Road.

Weakened by *El Nino* floods and with silt inching up its abutments, the old bridge, which spanned San Antonio Creek, needed to be replaced. It crossed a low-lying wetland teeming with wildlife and plants,

including at least two endangered species—the red-legged frog and the unarmored three-spined stickleback fish. Beavers, miffed at incursions onto their turf, also have attacked the bridge.

Clearly, the $12 million missile transport bridge project poses formidable challenges. Scott Adamson, project manager for contractor Straub Construction, recently worked on projects in five western states and Illinois. "This is my first brush with having to do something as messy and challenging as a bridge without stepping on plants, animals and amphibians," he says. "We've set the bar very high, and everybody's living up to that bar."

The project involves removing the old bridge, installing a temporary one and building a new one—all within a year and all without fooling Mother Nature.

To see this delicate dynamic in action, 38 members of the Advanced Placement calculus class from Santa Maria, Calif.'s St. Joseph's High School took a rare field trip to Vandenberg. Their teacher, Greg Sarkisian, had brought his class to a Corps project three years earlier and believed a re-run would prove motivational. At least 10 of his students already are headed to college engineering majors, and "others might be prompted by finding out that creating and constructing are cool," Sarkisian says.

As Mills and Adamson explain what's going on at the site, the students pay surprisingly close attention. Rachael Severn, a senior who's headed to Cal Poly University at San Luis Obispo to study civil engineering, is undaunted by the fact that only 16% of students in that five-year course are female. "That would make it easy to get discouraged, but I'm not going to let them do it," she asserts. "Girls can do it too. I like math and science and want to build big stuff. I'm really interested in materials, forms, concrete, and I'm going to take classes in environmental engineering because California has such strict environmental laws."

Another senior, Michael Everett, will attend the University of California at San Diego to study aerospace engineering. He credits a grandfather who "built rockets at Rockwell" for his interest in engineering. "It's nice to be out here and see how it all works, all the little parts," he says. "The way they pump concrete, how it can mix with water—all the processes and steps are interesting."

As part of what they call "situational management," Mills and Adamson have on call or on hand a biologist, archaeologist, environmentalists and cultural representatives; Hetager, the resident engineer who came to Vandenberg last summer after more than 20 years in Omaha District, notes that the archaeologist and cultural experts must be on site "while we're digging," and the biologist has to be there "while we're working." (The digging is expected to be finished in July.)

If a problem in their bailiwick suddenly confronts the project team, the specialists are consulted. "The dadgummed beavers attack about once a week," muses Mills, "so the biologist can net and relocate those critters when necessary."

Adds Adamson: "The environmental aspect is extremely challenging because doing construction involves a certain amount of destruction. To keep the area around the bridge habitable to endangered species has been a complete and total team effort. Without them, this would have been an insurmountable test."

Mike Lopez is one of the cultural reps and is also an expert on the Chumash Indians, the original inhabitants of these foggy coastal reaches. He spends nearly all his daylight hours at the project site and many of his nighttime ones playing music in nearby venues.

Contract archaeologist Mark Linder and biologist Jeff Trow also have been called out for duty. To protect endangered species, Trow and Richard Montijo, two senior biologists for environmental contractor Amec Inc., first erected a fine-mesh fence for 2,100 feet through the project to divide resources on one side from construction activities on the other.

By hand, they netted and relocated nearly 3,000 stickleback fish and three dozen red-legged frogs to another habitable site a quarter-mile away. "We have to make sure that when they're (crews) are digging, they don't impact the resources," says Montijo.

Project Manager Mills, who spent 1969-70 in Vietnam on dozens of dangerous patrols as an Army combat infantryman, today is content to do battle with the thousand-and-one issues that arise during such a complex project. (His daughter Erin, on her way to the University of California/Irvine on a water polo scholarship, is along on the calculus class field trip.) Mills says the bridge is going to, well, bridge the gap between environmental laws and military missions "and allow for all the critters to live in the area totally unmolested."

He was responsible for setting up the students' field trip, and calc teacher Sarkisian is grateful. "I really appreciate Jim Mills letting our kids see the theories at work," he says. "It's a really good experience for them."

Just before everyone repairs up the hill for a lunch of special Santa Maria barbecued beef (grilled over red oak coals), baked *poquito* beans and potato salad, Mills addresses the students as they stand under a six-story-tall red crane. "You've heard of Murphy's Law?" he asks them. "Whatever can go wrong will go wrong? Out here we say Murphy's an optimist. You know from experience that things can go bad. But so far, we've been really, really lucky—but luck has more to do with planning."

Just ask the sticklebacks, frogs and beavers.

###