



US Army Corps
of Engineers®

2008

Chief of Engineers Design and Environmental Awards Program



Message from the Chief



Congratulations to the winners of this year's Chief of Engineers Design and Environmental Awards Program, for their innovation and pursuit of excellence. Their world-class designs are indicative of the contributions that make our Nation great, and they enhance the quality of support we provide to the armed forces and the Nation.

The Chief of Engineers Design and Environmental Awards Program recognizes the design excellence of projects accomplished by U.S. Army Corps of Engineers (USACE) teammates working in partnership with the private sector design and construction community. A jury composed of nationally recognized design and environmental professionals selected eleven projects for awards from the twenty-five entries submitted by USACE. Four of the awards were given to designs completed by our own professional staff and include two of the Honor Awards. The number and level of awards given by the juries indicate the high standard of work produced by every team who entered.

The winning projects, shown in this brochure, demonstrate the diversity of skills USACE offers its customers. I want to thank the jury members who gave enthusiastically of their time and expertise to make this program a success. Finally, I wish to extend my thanks to everyone who participated this year. You are helping us go from 'good to great!' I look forward to more excellent results in the 2010 program. Keep up the great work - I could not be more proud!

Essayons! Army Strong!

A handwritten signature in black ink that reads "R. L. Van Antwerp".

R. L. Van Antwerp
Lieutenant General, US Army
Commanding

Program History

The Chief of Engineers Design and Environmental Awards Program (DEAP) was created in 1965 to recognize and promote excellence in design achievements by the U.S. Army Corps of Engineers and its professional partners. Over its 43 year history, the program has presented a total of 494 awards in the 31 times it has been judged. The program presents four types of awards:

THE CHIEF OF ENGINEERS AWARD OF EXCELLENCE is the highest award. Only one award may be given for an entry in each of the two primary categories. This award requires the unanimous decision of the jury for an entry that truly exhibits excellence in all major professional design disciplines. The jury is not obligated to nominate any entry for this award.

HONOR AWARDS are also given in both primary categories to entries that demonstrate or stimulate excellence in each of the design disciplines. The jury determines the number of awards. An honor award is given to an entry based on a majority decision of the jury with no juror casting a dissenting vote.

MERIT AWARDS are given for projects that may be related to individual disciplines (e.g., landscape architecture, interior design, planning, historic preservation, adaptive reuse, sustainable design, discipline specific engineering, etc). The jury determines the number and types of merit awards. A merit award is given to an entry based on the recommendation of at least two jurors with no juror casting a dissenting vote.

USACE DESIGN TEAM OF THE YEAR AWARD is awarded to the design team of the in-house designed project that achieves the highest-level award in the Chief of Engineers Design and Environmental Awards Program. In the event that more than one in-house designed project receives the same level award, multiple awards will be given.

Program Credits

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Jury Photography



Design Awards



HONOR AWARD

Chicago Lock Control House

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Arvin Cadet Physical Development Center

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HONOR AWARD

Fort Jackson Avenue 300 Person Barracks

USACE Design Team of the Year Award

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Lewis and Clark Center

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MERIT AWARD (INTERIORS)

Missouri River Project Office

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MERIT AWARD (INTERIORS)

1LT Joseph Terry CBRN Responder Training Facility

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HONOR AWARD

Chicago Lock Control House
Chicago, Illinois



DESIGN FIRM:**Consoer Townsend Envirodyne, Engineers, Inc., Chicago, Illinois****DESIGN DISTRICT:****Chicago District, U.S. Army Corps of Engineers****OWNER:****Chicago District, U.S. Army Corps of Engineers**

Safety and functionality were the primary goals in reconstructing the Control House for the Chicago Lock, a heavily-trafficked navigational gateway on Chicago's lakeshore that provides passage to more than 50,000 boats and 900,000 passengers each year. The new Control House significantly improves safe, reliable use of the lock – by, for instance, allowing a single operator to have unobstructed views of the entire lock chamber – while dramatically improving the visual appeal and workplace environment of the facility.

Because the lock is located in downtown Chicago adjacent to Navy Pier – one of the city's premiere tourist attractions – visual aesthetics were a high priority in its design and construction. The building's curved footprint, its tiled walls, zinc cladding and choice of exterior all reflect its marine setting, while softening the overall appearance of the site. Compatible with the entire surrounding area, not just the existing control buildings, the structure sports a low profile so as not to overwhelm the older structures, lending it a contemporary air appealing from all sides of the site.

Improving the lock operator's ability to see and control the entire lock chamber during operation – a key design requirement – was accomplished by relocating the lock chamber to the center of the lock wall and elevating the control room some 40 feet above the water surface. Supporting this structure without impacting the integrity of the existing lock wall – a 70-year old gravel filled cellular pile cofferdam – was an additional challenge.

By selecting small diameter, drilled-in-place battered micropiles as foundation and locating them within the open cells of the existing lock walls, project designers were able to anchor the new structure deep in the surrounding bedrock, while minimizing disturbances to the current lock.

Together, these improvements add considerably to both the visual aesthetic of the facility, as well as the safer, sounder operation of the lock for commercial and recreational navigation.

THIS NEW LOCK CONTROL HOUSE, LOCATED IN A HIGHLY VISIBLE LOCATION ON THE CHICAGO WATERFRONT, IS A VISUALLY STUNNING DESIGN. IT RESPECTS ITS CONTEXT, USING A SHIP METAPHOR FOR THE BASE AND "HIGH RISE" DETAILING FOR THE UPPER CONTROL ROOM.

JURY COMMENT



HONOR AWARD

Arvin Cadet Physical Development Center West Point, New York



Operating within a confined site with unique challenges, and charged with the responsibility to honor and maintain the Academy's historic designation, the repair and reconstruction of the Arvin Cadet Physical Development Center at the United States Military Academy is a model display of up-to-the-moment design and engineering working in tandem with a sincere respect for the facility's historic mission. After undergoing a combination of renovation and new construction, the completed CPDC facility now totals 450,000 square feet, and features multiple pools, gymnasiums, basketball and racquetball courts, combative sports rooms, a climbing wall, sports medicine suite and support offices.

To meet the program's requirements, a phased approach to the demolition and new construction of the center was employed while the final design was being completed. Unique design elements were incorporated to salvage historic features of the original architecture – such as arts and crafts lanterns and decorative iron grills within the building entrance – to honor West Point's classification as a national historic landmark. Furthermore, seismic and other structural design challenges were managed to meet design codes, as well as the architectural demands of the program spaces. Finally, the design incorporated emerging technology to create innovative training spaces designed to enhance the overall cadet experience.

The Arvin CPDC project achieved a Silver SPIRiT rating, and was designed in accordance with the established standards of the United States Military Academy. The use of oversized brick with differing colors was selected as a visual bridge between the granite used on the central post and the Superintendent's house adjacent to this facility. Other design highlights include an atrium along the central spine of the building, capped by a continuous skylight comprised primarily of translucent panels providing an even wash of natural light, as well as clear glass allowing natural light for accent purposes.

This project brings together all elements of a successful project, resulting in a distinctive facility, constructed from durable and environmentally sound materials. It is a design that makes a strong impression on the first-time visitor, and represents a powerful key component of the cadet training experience.



DESIGN FIRMS:

Sasaki Associates, Watertown, Massachusetts
Cosentini Associates, Cambridge, Massachusetts
LeMessurier Consultants, Cambridge, Massachusetts

DESIGN DISTRICT:

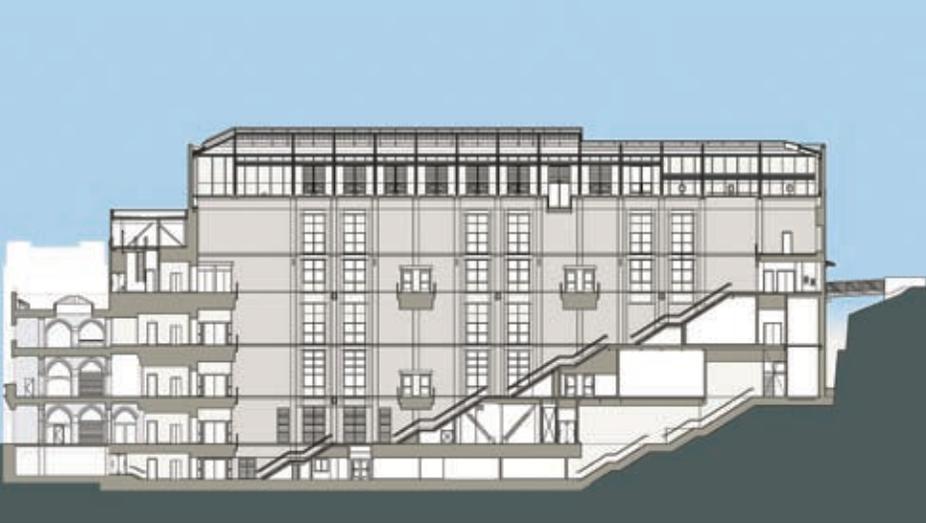
New York District, U.S. Army Corps of Engineers

OWNER:

United States Military Academy-Directorate of Housing and Public Works

THE ARVIN CADET PHYSICAL DEVELOPMENT CENTER TAKES THE HISTORIC PHYSICAL EDUCATION BUILDING INTO THE 21ST CENTURY BY DRAMATICALLY EXPANDING THE FACILITIES WHILE MAINTAINING THE HISTORIC CONTEXT. THE JURY PARTICULARLY LIKED THE UNIFYING EFFECT OF THE ATRIUM GRAND STAIRWAY TO BRING TOGETHER THE FIVE LEVELS OF THE BUILDING AND BRING LIGHT INTO THE CENTER OF THE FACILITY. INTERIORS ARE ELEGANT AND DURABLE WHILE INCORPORATING HISTORIC ELEMENTS.

JURY COMMENT



HONOR AWARD & USACE DESIGN TEAM OF THE YEAR AWARD
Jackson Avenue 300 Person Barracks (FY-06)
Fort Lewis, Washington



DESIGN FIRM:

Seattle District, U.S. Army Corps of Engineers

DESIGN DISTRICT:

Seattle District, U.S. Army Corps of Engineers

OWNER:

Directorate of Public Works, Fort Lewis, WA.

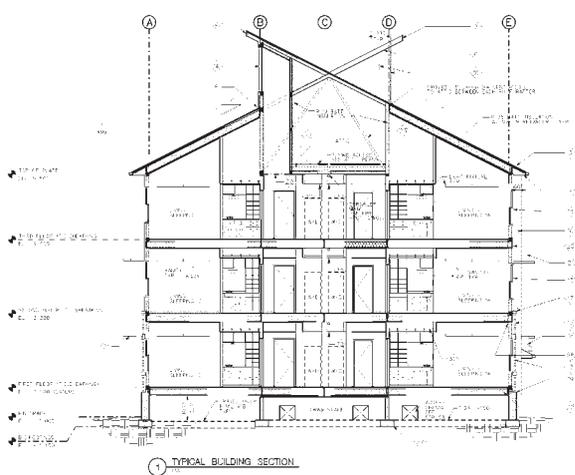
Enhancing the quality of life for soldiers was the fundamental design objective for the MCA-funded Jackson Avenue Barracks Complex renewal project at Ft. Lewis, Washington. The specific challenge for the project design team lay in maximizing the visual and acoustic privacy, security and comfort of the living spaces, while maintaining the overall construction economy and ease of maintenance typical of on-post housing. Their choice of a “garden apartment” configuration for the new barracks allowed them to capture additional room module area from space that would ordinarily be needed for building circulation, thereby creating living conditions similar to those in private, off-post apartments.

Once complete, the 300-person Jackson Ave. Barracks represented several “firsts” for an in-house team of U.S. Army Corps of Engineers designers. It was the first wood-framed, Type V construction designed by the Corps to meet Anti-Terrorist/Force Protection criteria, and the first designed with 3D Building Information Modeling (BIM) software. In addition, it was the first “Northwest Contemporary” style building at Ft. Lewis, a post more typified by Neo-Georgian, concrete and steel structures. Located in a heavily wooded site with an informal, perimeter street grid system, the Jackson Ave. Barracks are constructed on a more human scale to create a campus-like feel amongst the surrounding trees. Rather than housing all soldiers in a single building, with a double-loaded corridor, the barracks were divided into 4 separate buildings, each served by multiple stairway modules, so a maximum of only 24 soldiers need share any single communal stair.

This project was designed to meet a LEED Gold rating, employing sustainability strategies such as daylighting and lighting control, 95% diversion of construction waste from the landfill, use of recycled content in structural and architectural materials, reduction in and treatment of stormwater runoff, low-flow plumbing fixtures for water conservation and a 50% sourcing of wood from sustainably-managed forests. A showcase for on-post livability, the Jackson Ave. Barracks have proven to be an outstanding success for both its in-house designers and current users.

THIS PROJECT SERVES AS AN OUTSTANDING INTERPRETATION OF STANDARD BARRACKS CRITERIA WHILE RESPECTING THE NATURAL ENVIRONMENT. THE DESIGN SOLUTION IS SIMPLE, BUT ALLOWS FOR A SOLID SENSE OF PLACE. IT ACKNOWLEDGES THE SIGNIFICANCE OF PROVIDING QUALITY HOUSING FOR SOLDIERS.

JURY COMMENT



MERIT AWARD - DESIGN

Lewis and Clark Center Fort Leavenworth, Kansas



Arguably the most technologically advanced higher education facility in the United States, the Lewis and Clark Center at Fort Leavenworth represents a giant “leap ahead” both in classroom functionality and in the innovative use of technology in support of the educational mission. In addition to 96 VTC-equipped and networked classrooms, the Center contains a variety of specialized computer and language labs, 2,000-seat and 750-seat auditoriums, a briefing room, smaller meeting areas, as well as 400 staff and faculty offices, student lounges, book store, barber/beauty shop and food service court.

A major focus of the design was on establishing seamless digital and A/V connectivity between instructor and student...between classrooms in the building...and among classrooms and the outside world. Touch-screen instructor modules and advanced video and network systems permit the kind of fully synchronous student-to-instructor linkages that are critical for the use of improved man-in-the-loop battle command and control systems. Raised access flooring and flexible wall systems – plus a centralized technical support facility providing remote diagnostics and system upgrades – enable future growth while dramatically minimizing life-cycle costs to a level never before achieved.

Sited to avoid a natural riparian area and to limit cut and fill, the facility was designed to achieve a SPiRiT Gold rating, with a point capture of 52. Design energy use was reduced 14% by adding an extremely efficient heat pump mechanical system and low-e glazing, as well as by increasing R-values in the exterior closure. Building energy use is metered and CO₂ is monitored in the Auditorium.

Located within the historic section of Fort Leavenworth, the Lewis and Clark Center features a durable, brick-and-stone façade that evokes the permanence and elegance of the post, while the interior architecture creates an open, airy, sophisticated space that speaks to the history of the Command & General Staff College. Much historic memorabilia has been relocated to the new facility, including stained-glass windows that were refurbished and incorporated into the new fenestration systems. In this way, both tradition and innovation are integrated seamlessly and efficiently in the Center's unique design.



DESIGN FIRM:

The Benham Companies, LLC, Oklahoma City, Oklahoma

DESIGN DISTRICT:

Kansas City District, U.S. Army Corps of Engineers

OWNER:

Directorate of Logistics/Directorate of Public Works
Fort Leavenworth, Kansas

THE LEWIS AND CLARK CENTER IS COMMENDED FOR ITS AESTHETIC EXPRESSION OF THE COMMAND AND STAFF COLLEGE. THE ENTRY EXPERIENCE IS AN IMPRESSIVE ONE WITH THE HISTORIC ROLE OF COMMAND THROUGH THE ORGANIZATION OF HISTORIC ELEMENTS IN THE ATRIUM. CLASSROOMS PROVIDE FOR STATE OF THE ART TRAINING IN AN EXECUTIVE COMMAND ENVIRONMENT.

JURY COMMENT



MERIT AWARD - INTERIORS

Missouri River Project Office
Omaha, Nebraska



DESIGN FIRMS:

Kenneth Hahn Architects, Omaha, Nebraska
 Nielsen Baumert Engineering, Omaha, Nebraska
 Farris Engineering, Omaha, Nebraska

OWNER:

Missouri River Project Office,
 U.S. Army Corps of Engineers

DESIGN DISTRICT:

Omaha District, U.S. Army Corps of Engineers

THIS PROJECT HAS PROVIDED A PLEASANT, PICTURESQUE SPACE FOR ITS OCCUPANTS ON A LIMITED BUDGET. THE USE OF CLERESTORY WINDOWS AND EXPOSED NATURAL WOOD ROOF FRAMING RESULTS IN AN OPEN AND SPACIOUS ENVIRONMENT.

JURY COMMENT

Designed to replace an aging structure at the Missouri River Boatyard, just north of Omaha, the newly completed Missouri River Project Office now houses the administration and natural resources staff that manage the river for the Omaha District Corps of Engineers. Located by the edge of the lagoon that connects to the river by an inlet, the building offers water views to the north, east and south, with a tall, wooded hillside forming a green backdrop to the west.

The design criteria for this project – arrived at through a design charrette with building users – included open office work areas for the natural resource staff, administrative offices, break room, as well as a conference and display area for staff and visitors. That functionality is clearly visible from the building's exterior, with administrative staff located at the north end, natural resources staff at the south end, and in the center, a high-roofed entry, display space and conference facility anchoring the design. Wood beams support the roof at the entry, their columns – as well as the north portion of the building adjacent to the entry – clad with natural-looking, split-face concrete masonry in a pattern to resemble natural stone. Asphalt shingles are a weathered wood color. At the middle of the building, interior spaces are lofty, with clerestory glass allowing light and vision to pass from room to room. Natural wood roof framing materials are exposed and serve as the interior finish. Such details as using thinner walls in exterior window modules, monolithic joining of exterior wall panels using special trim and the rhythmic use of batten strips on the exterior contribute to the building's specially-tailored appearance.

Environmentally sustainable techniques used included sourcing exterior materials from manufacturers within a 500 mile radius, preserving the existing asphalt drives and parking lot and constructing the large reception counter from wheatboard – a composite of recycled wheat chaff and sunflower seed shells. To the building's users, the finished Missouri River Project Office is a place of pride, symbolizing the work they do each day in the natural environment.



MERIT AWARD - INTERIORS

1LT Joseph Terry CBRN Responder Training Facility Fort Leonard Wood, Missouri



In times of external threat to the security of our citizens, those taking on the role of first responder merit the very best tools and training we as a nation can provide. The newly constructed 1st LT. Joseph Terry Chemical, Biological, Radiological, and Nuclear Responder Training Facility at Ft. Leonard Wood is a state-of-the-art resource for those men and women serving our country in that critically important task. An annual student population of more than 35,000 Department of Defense and civilian first response forces will build necessary skills within the facility's virtual reality training simulator bays and classrooms, as well as on the urban exercise training grounds also located within the complex.

Working to address the needs of multiple project stakeholders, the Project Delivery Team solicited their input through a weeklong design charrette, in which more than 50 attendees were able to synthesize a unified vision for the finished facility. Combining traditional installation influences with modern technology and aesthetics, the layout of this facility lends itself to sustainable solutions such as day lighting and energy conservation. Room locations were chosen based on traffic and energy use requirements, with more heavily occupied rooms positioned on the cooler, north side of the building, where less air conditioning is required. In addition, natural light is utilized throughout the building, with strategically placed daylight sensors to automatically maintain a constant illumination level in response to ambient lighting conditions. Interior finishes provide high durability, low maintenance and aesthetics that reflect a combination of the building's industrial, institutional and administrative functions.

Through its innovative design, the facility has become a striking, yet fully compatible addition to Ft. Leonard Wood. Nestled into the hilly terrain common to the Ozark region, the CRBN structure screens the training areas beyond with a contemporary façade, incorporating the traditional finishes of brick and standing seam metal found throughout Ft. Leonard Wood, with more modern forms and technologies. The linear layout of the building reflects its focus on functionality, while the soaring gabled roof that seems to float above the primary entrance communicates a powerful sense of movement within the structure. The contemporary aesthetics of the facility, the logical organization of its training spaces, as well as its exceptional flexibility of use contribute to the CRBN's status as the nation's premier facility for first response training.



DESIGN FIRM:

Kansas City District, U.S. Army Corps of Engineers

DESIGN DISTRICT:

Kansas City District, U.S. Army Corps of Engineers

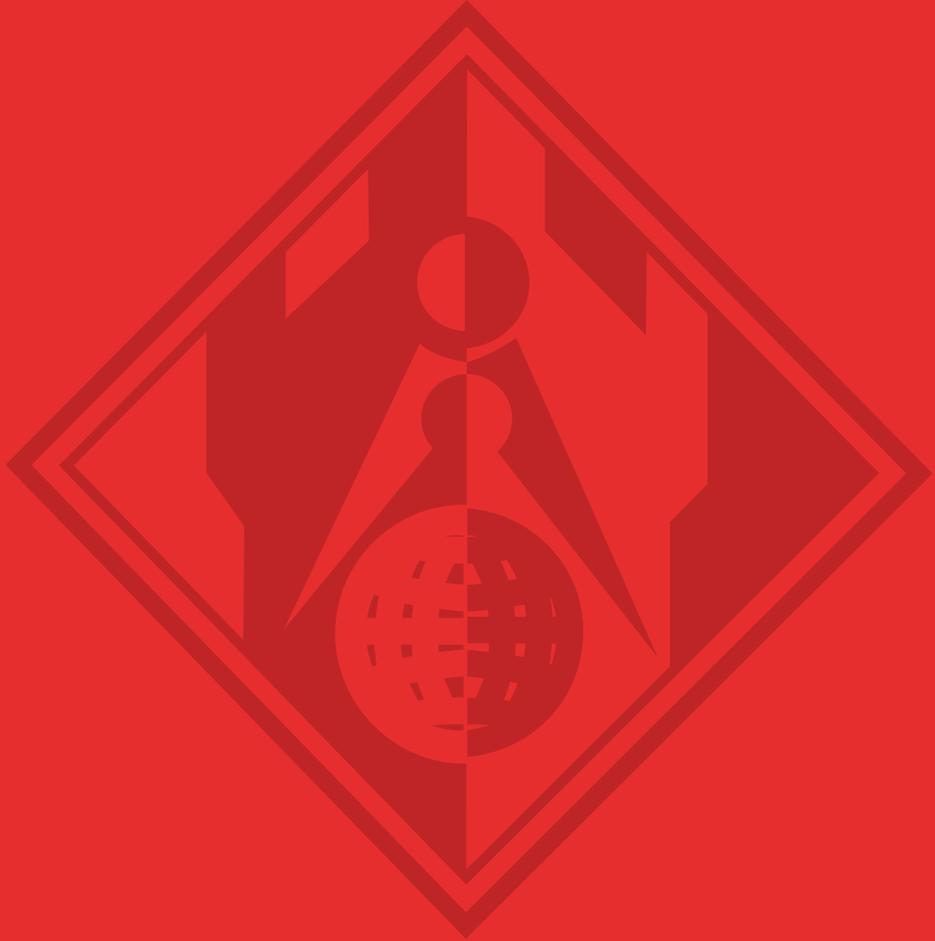
OWNER:

The Maneuver Support Center, Fort Leonard Wood, Missouri

THE EXTERIOR OF THIS FACILITY IS SIMPLE IN ITS USE OF MATERIALS AND COMPOSITION, AND THE INTERIOR'S PALLET OF MATERIALS IS VARIED AND RICH. THE EXPOSED CEILINGS PROVIDE HEIGHT, INTEREST IN FORM, AND NATURAL LIGHT.

JURY COMMENT





Environmental Awards



CHIEF OF ENGINEERS AWARD OF EXCELLENCE

Rio Salado Environmental Restoration Project

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HONOR AWARD

The Big Dam Bridge

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HONOR AWARD

Grand Forks, ND / East Grand Forks, MN

Flood Damage Reduction Project

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HONOR AWARD

Water Level Management for Ecosystem Restoration in Pool 5 Upper Mississippi River System

USACE Design Team of the Year Award

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MERIT AWARD (RESEARCH AND DEVELOPMENT)

McNary Temporary Spillway Weir

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CHIEF OF ENGINEERS AWARD OF EXCELLENCE

Rio Salado Environmental Restoration Project
Phoenix, Arizona



DESIGN FIRM:

CH2MHill, Tempe, Arizona

DESIGN DISTRICT:

Los Angeles District, U.S. Army Corps of Engineers

OWNER:

City of Phoenix, Arizona

Little more than a dream for some 40 years, the Phoenix Reach of the Rio Salado Environmental Restoration Project is currently the standard and model for riparian and wetland habitat restitution within the heavily-stressed Sonoran Desert ecosystem. Due to the combined efforts of the City of Phoenix, the Corps of Engineers and a wide range of supporters, where a trash and debris-strewn landscape once stood, there is today a beautiful and self-sustaining natural habitat, providing both recreational opportunities for residents and a home for countless desert birds and mammals.

One of the first restorations of its kind to be attempted in the desert southwest, the Rio Salado project faced daunting obstacles at its outset, with more than 90% of the area's original native habitat long ago destroyed, and replaced with hundreds of tons of building debris, old tires and other pollutants, all of which needed to be removed and mitigated before construction could even begin. Adding to the task was the team's need to ensure that the river's flow continue to protect the city against flood at the 100-year level. Bringing together a team of diverse disciplines working to create a design never before attempted in such an arid environment, the project has achieved outstanding results, and marked it as a world-class model for similar habitat restoration projects.

The removal of debris from the site – including 600 tons of discarded tires alone – was a substantial task. Along with vegetating the restored habitat with drought-resistant native plants, the project team also needed to provide a self-sustainable supply of water for those plants, utilizing existing sources like dry weather flows and captured storm water, while protecting against groundwater contamination. This was achieved through the construction of a low-flow channel, 4 drop structures, 36 guide dikes, 12 monitoring wells and a water distribution system designed to harvest moisture from the water table directly underneath the river, thereby eliminating the need to purchase and pump in water from outside sources. Any negative impact to the water table is carefully monitored and limited through the use of impermeable liners and groundwater recharge techniques.

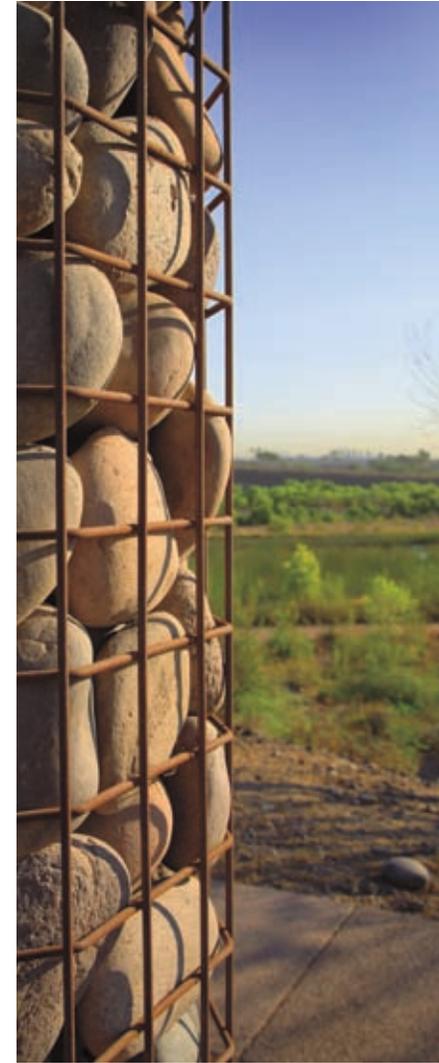
THIS PROJECT SERVES AS A MODEL FOR ENVIRONMENTAL RESTORATION AND SETS A STANDARD FOR URBAN SUSTAINABILITY, BENEFITING BOTH HUMANS AND WILDLIFE WHILE SERVING AS A CATALYST FOR COMMUNITY REVITALIZATION. WITH CULTURAL REFERENCES TO NATIVE POPULATIONS, DRAMATIC GATEWAY ARCHITECTURE THAT LANDMARKS THE RIVER, AND PARTNERSHIPS THAT BROUGHT TOGETHER DIVERSE AGENCIES AND INTEREST, THE RIVER ENVIRONMENT IS NOW A PLACE TO SEEK OUT AND LEARN ABOUT DESERT RIPARIAN SPACES.

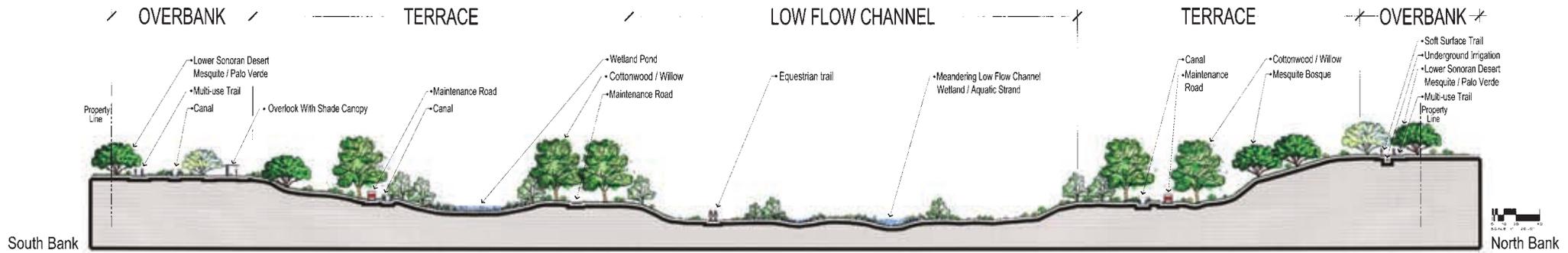
JURY COMMENT



The native vegetation now in place has been proven to withstand both long periods of drought and high-flow flood events. In addition, since being established, the plants are on a natural regeneration cycle, no longer requiring new plantings. Just as important, the project was successful in its flood-protection goals, effectively carrying storm releases of up to 12,200 cubic feet per second along 5 miles of the river and under 5 bridges, while limiting vector infestation and the resultant spread of disease.

The cleaned and restored river habitat now provides Phoenix with opportunities for recreation, wildlife observation and education. The city and school district use the project's gateway staging area and outdoor classrooms for school programs and community activities. Recycled concrete rubble, rock and other debris excavated from the site now serve as benches, shade structures and slope protection. The project includes 10 miles of recreational trails, picnic areas and outdoor classrooms, with ADA accessible pathways through habitat demonstration and interpretive displays. These new recreational opportunities, improved pedestrian and bicycle connections and enhanced habitat and wildlife corridors have dramatically contributed to the area's quality of life. Located in the middle of a densely populated urban area, the newly restored habitat offers the public unprecedented opportunities to view wildlife and native bird species, exercise and escape the confines of the city, bringing new levels of revitalization to these once-blighted, economically depressed areas of South Phoenix.





HONOR AWARD
The Big Dam Bridge
Pulaski County, Arkansas



DESIGN FIRMS:**Garver Engineers, Little Rock, Arkansas****John Rogers Design, North Little Rock, Arkansas****DESIGN DISTRICT:****Little Rock District, U.S. Army Corps of Engineers****OWNER:****Pulaski County, Arkansas**

Gracefully spanning the Arkansas River, Little Rock's Big Dam Bridge is considered the world's longest bridge specifically constructed for pedestrians and bicyclists. Built atop the existing Murray Lock and Dam, it links two major bike trails on either side of the river, combining beauty and functionality in an innovative design that today draws thousands of users and visitors daily.

Disturbing the existing environment as little as possible, the form of the bridge blends in well with the existing structures and gives the impression of being designed and constructed as part of the original lock and dam. At 72 feet above the water surface, the bridge provides awesome views both upstream and downstream. An innovative LED pier lighting system greets viewers with a colorful array of light focusing on the bridge's main horizontal and vertical aspects. The addressable light fixtures are wirelessly controlled and are capable of automatically changing hue, intensity and contrast through pre-programmed shows, using a palette of more than 16 million colors.

With no pedestrian bridge of this size existing as a model, the team worked closely with recreation, bicycle and hiking organizations to design a curvature and railing features, as well as to choose decking and surfacing materials that best met the community's needs. The decision to build the Big Dam Bridge on top of the existing dam saved an estimated \$10 million in construction costs, and resulted in no adverse impact on the environment. In fact, the project received one of just 8 national Exemplary Human Environment Initiatives Awards given in 2007 to transportation projects that are both effective and innovative in how they adapt to and enhance the human environment. To prove the overall success of the project, one need only see the many parents with strollers, bicyclists, runners, pet lovers and physically challenged citizens who enjoy it daily. The bridge and its associated trails connect over 7,000 acres of city, county, state and Federal park land, and today, city parks officials on both sides of the river report increased usage of the parks since the bridge opening.

BY COMBINING A COMMUNITY NEED FOR CONNECTION AND RECREATION, THE BRIDGE OVERLAYS A RIVER FLOW UTILITY, THE LOCK, WITH A CULTURALLY SENSITIVE STRUCTURE THAT HAS BECOME A REGIONAL ICON WHERE RECREATION PROGRAMS AND AN APPRECIATION OF THE RIVER CAN BE CELEBRATED.

JURY COMMENT

HONOR AWARD

Flood Damage Reduction Project Grand Forks, ND and East Grand Forks, MN

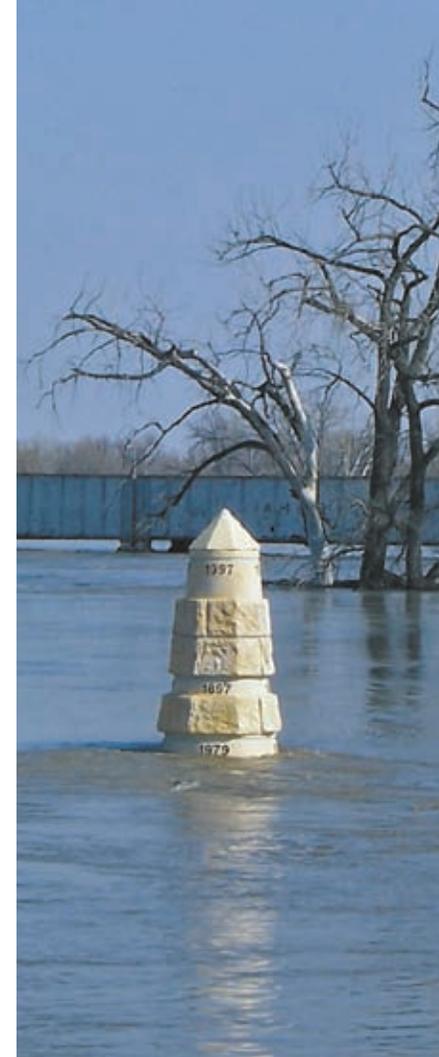


In the spring of 1997, a combination of snowmelt and late blizzard caused a massive flood on Nebraska's Red River, devastating the cities of Grand Forks and East Grand Forks, forcing the evacuation of 52,000 citizens and causing more than \$1 billion in damage. Today, little more than 10 years after the disaster, both cities once again thrive, beneficiaries of the Grand Forks and East Grand Forks Flood Damage Reduction Project and its Greenway – an unobstructed, 2,200 acre floodway that, together with other state-of-the-art flood abatement measures, now safeguard the two cities at a certified, 100-year flood protection level.

Both cities and the Corps moved quickly after the 1997 flood to establish a new line of protection on higher ground away from the river. The planning involved numerous community meetings and difficult decisions to remove entire neighborhoods. In addition to creating the Greenway, the project's flood protection measures also include 17,000 lineal feet of floodwall and 28 miles of levee construction, as well as 22 railroad and road closures and 23 pumping stations.

Some of the many challenges faced by the project team included the unique clay soils common to the Red River basin, which required building a cylinder pile wall of 95-foot-long, 6-foot-diameter reinforced concrete shafts, closely drilled to retain active landslides. This technique allowed construction of floodwalls closer to the river, saving numerous historic properties from demolition.

As a result of the Greenway's creation, the citizens of both cities now also benefit from an environmentally pristine recreational area that boasts 20 miles of paved multi-use trail, 8 trailheads and 33 access points, all of which are handicap-accessible. A recent report by American Rivers cites the Grand Forks/East Grand Forks project as a case study in how natural flood protection can work. "These communities," the report concludes, "have reduced or eliminated flood disasters while preserving the environment for present and future generations. They are now safer, healthier and more livable."



DESIGN FIRMS:

Stanley Consultants, Muscatine, Iowa
HDR Engineering, Minneapolis, Minnesota
Short Elliott Hendrickson, St. Paul, Minnesota
Ayres Associates, Eau Claire, Wisconsin

DESIGN DISTRICT:

St. Paul District, U.S. Army Corps of Engineers

OWNER:

Cities of East Grand Forks, Minnesota &
Grand Forks, North Dakota

HEALING TWO DAMAGED COMMUNITIES, THIS PROJECT IS A MODEL FOR THE DESIGN OF FLOOD DAMAGE REDUCTION PROJECTS: IT RESTORES FLOODPLAIN, PROVIDES COMMUNITY GREENSPACE, AND PRESENTS FUNCTIONAL INFRASTRUCTURE AS CIVIC AMENITY.

JURY COMMENT



HONOR AWARD & USACE DESIGN TEAM OF THE YEAR AWARD

Water Level Management for Ecosystem Restoration Pool 5, Upper Mississippi River System
States of Minnesota & Wisconsin



DESIGN FIRM:

St. Paul District, U.S. Army Corps of Engineers

DESIGN DISTRICT:

St. Paul District, U.S. Army Corps of Engineers

OWNER:

St. Paul District, U.S. Army Corps of Engineers

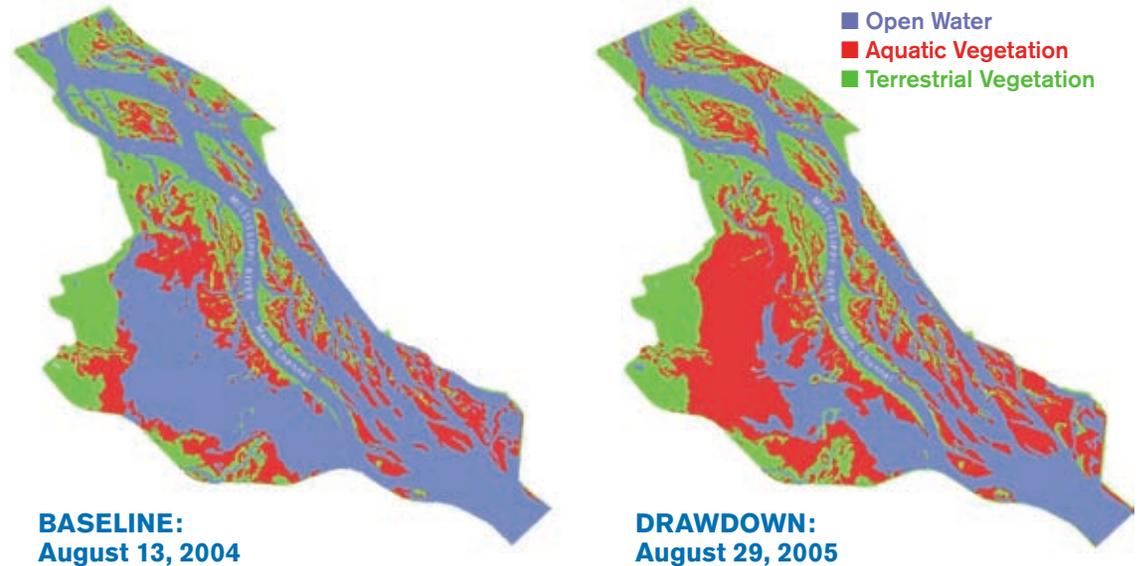
Since the construction of the lock and dam commercial navigation system on the Upper Mississippi River System in the 1930s, there has been a gradual decline in the diversity and functionality of the river ecosystem. Through the effects of impoundment, river regulation, sedimentation and degraded water quality, Pool 5, like many other UMRS pools, has experienced reduced habitat diversity, loss of aquatic vegetation and a reduced population of fish and wildlife. The scientific consensus suggests that this ecosystem will only continue to decline should the existing water level operating regime remain in place.

As a result, drawdowns of entire navigation pools have recently been pursued, with the goal of improving aquatic vegetation growth and restoring degraded habitat by allowing lower water levels during the summer growing season. Prior to a drawdown, advance dredging of the navigation channel is needed to ensure that adequate depth is maintained for commercial navigation. Goals and objectives for the Pool 5 ecosystem were established, and monitoring was conducted prior to, during and after the drawdowns to determine if the goals were met. Lessons learned from previous drawdowns were incorporated into planning process. Variables such as the depth and rate of drawdown, start and end date, location of needed advance dredging, vegetation types targeted for restoration, projected number of acres exposed at various drawdown depths and impacts on sensitive species such as freshwater mussels were evaluated. The resulting data were used to improve the environmental and engineering approach, as well as to refine quantitative ecosystem objectives for subsequent drawdowns. This knowledge was widely shared with other entities considering water level management on large river systems.

The results of the Pool 5 drawdown were impressive indeed. The pool experienced growth of new aquatic vegetation on approximately 2,000 acres, arising from seeds that had lain dormant in the river sediments for more than 70 years. The vigorous vegetation response resulted, in turn, in increased populations of shorebirds, water fowl and other wildlife, which has increased opportunities for hunting, fishing and birdwatching.

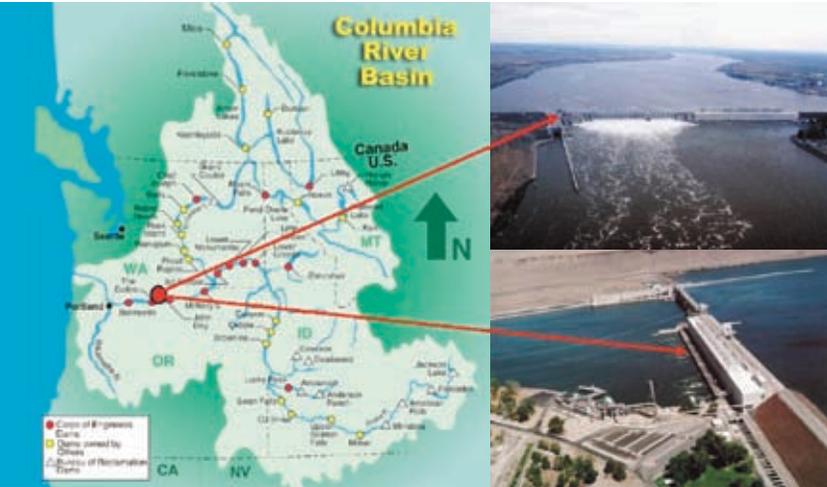
THE RESTORATION OF POOL 5 HAS SIGNIFICANTLY NURTURED WILDLIFE AND ENHANCED OPPORTUNITIES FOR COMMUNITY RECREATION. RESEARCH INTO THE ECOLOGY OF POOL 5 HAS EXPANDED KNOWLEDGE OF THE VEGETATIVE IMPACT OF DORMANT SEEDS, NOW ACTIVELY PRODUCING A WIDE VARIETY OF NEW VEGETATIVE GROWTH, AND THE SURPRISINGLY LARGE EXPANSION OF THE MUSSEL POPULATION – NOW ESTIMATED AT SOME 180 MILLION MUSSELS – WHICH ARE CRITICAL TO THE OVERALL FOOD CHAIN OF THE REGION.

JURY COMMENT



MERIT AWARD – RESEARCH & DEVELOPMENT

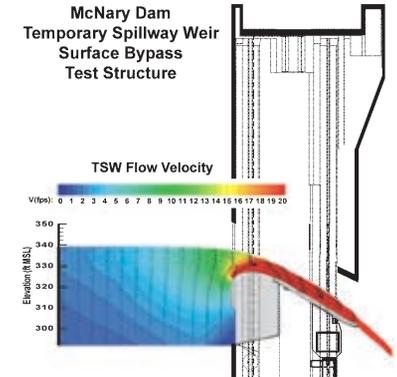
McNary Temporary Spillway Weir Umatilla, Oregon



The goal of maximizing downstream survival of salmon migrating through the Snake and mid-Columbia River systems – while minimizing loss of potential hydroelectric power during mandatory spill conditions – is now within reach thanks to the development of the Temporary Spillway Weir currently in use at McNary Dam. The TSW is an innovative, efficient, reliable and relatively low-cost alternative to constructing permanent surface passage systems, which can take a year of more and cost many millions of dollars to build and install.

The relatively small and mobile TSW, developed in a joint effort with a wide range of federal, state and tribal organizations, can be fabricated in a matter of months and installed in less than a day, utilizing existing spillway gate bulkhead slots and requiring minimal manpower. The structure – built at just 5% of the cost of a more permanent surface passage system – can be easily moved to alternate spillway bays in order to optimize downstream migration and upstream attraction, while maintaining required flow conditions. In addition, the TSW serves as a powerful tool allowing engineers and biologists to study fish behavior under different conditions, so that they may determine the most favorable configuration for safely and efficiently passing juvenile fish at dams throughout the Snake and Columbia River basins. Even after installation, the shape of the structure's crest can be easily modified in place, to reduce the potential of fish injury.

The TSW is unique in that it uses only the dam's existing infrastructure, requiring no permanent changes to the dam and fully maintaining its aesthetic integrity. Tucked beneath the spillway deck and veiled by a cascading waterfall, the TSW eliminates the need for locating equipment in the forebay or on the upstream face of the dam. By playing a major role in the development of a better surface passage structure, the TSW will reduce the potential energy loss during times of high power demand, while improving the number of fish passing over the spillway instead of through the generator intakes.



DESIGN FIRM:

Walla Walla District, U.S. Army Corps of Engineers

DESIGN DISTRICT:

Walla Walla District, U.S. Army Corps of Engineers

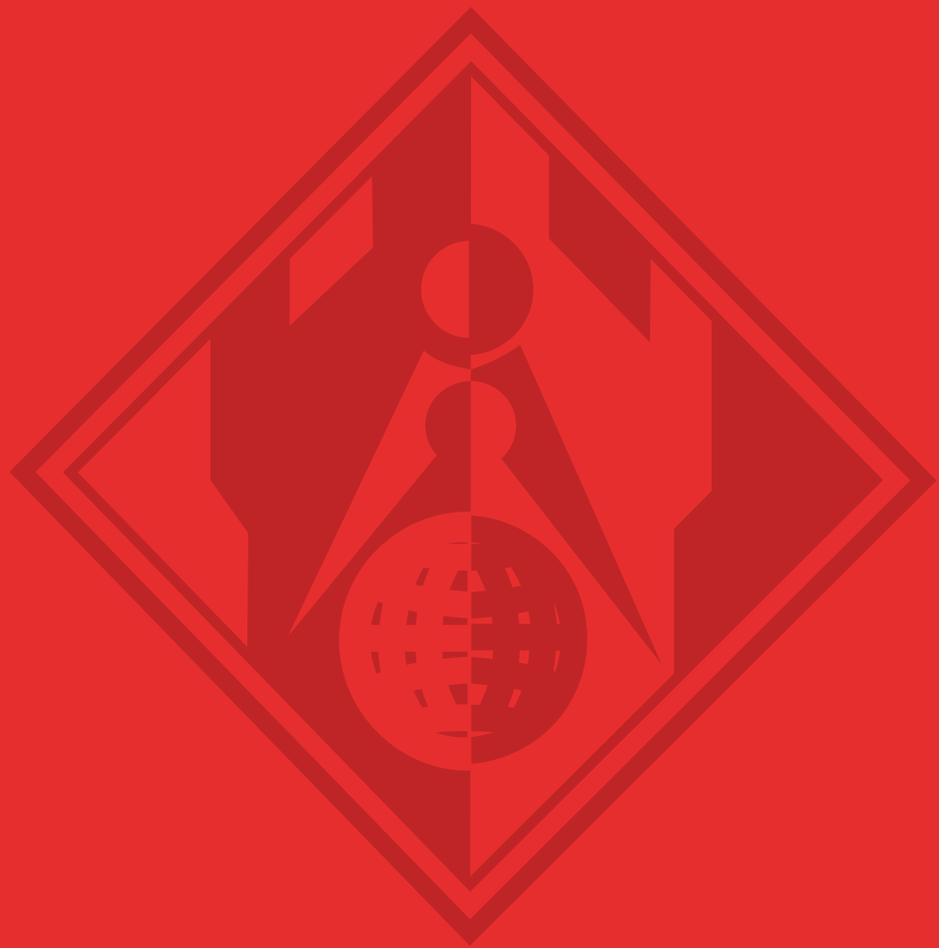
OWNER:

Walla Walla District, U.S. Army Corps of Engineers

THIS PROJECT ADDRESSES A CRITICAL ENVIRONMENTAL ISSUE IN THE PACIFIC NORTHWEST – THE FUTURE SUSTAINABILITY OF THE SALMON RUNS. THE RESULTS OF THIS TESTING SHOULD SERVE AS A MODEL FOR FUTURE SPILLWAY DESIGNS.

JURY COMMENT





The Jury

Jury from Left

RICHARD L. HAYES, PHD, AIA, CAE
Managing Director of Knowledge Resources
American Institute of Architects

CHRISTIAN HOLMES
Senior Vice President for Program Development
Global Environment & Technology Foundation

KEVIN S. HOLDEN, RLA, ASLA
USACE Landscape Architect of the Year
2006-2007

ANGELA D. DYE, RIA, ASLA, APA
President (Elect)
American Society of Landscape Architects

JANE ANN CARTER, LID
USACE Interior Designer of the Year 2006-2007

BRUCE D. HALE, AIA
USACE Architect of the Year 2006-2007

FRANK A. NORCROSS, IIDA, AIA
President
International Interior Design Association
Mid-Atlantic Chapter





The Jury



RICHARD L. HAYES, PHD, AIA, CAE

Dr. Richard L. Hayes is Managing Director of Knowledge Resources for the American Institute of Architects (AIA) in Washington DC where he develops, directs, and manages programs, and identifies new and emerging topics for the profession of architecture. Recent projects include The Architect's Handbook of Professional Practice, and Architectural Graphic Standards. Currently he is working on the next edition of Residential Graphic Standards and overseeing the practice research program as well as content for AIA's knowledge website, Soloso. His past professional work experience includes being with the Center for Public Buildings of The Georgia Institute of Technology on assignment to the Naval Facilities Engineering Command Headquarters serving as their Chief Historic Architect. He has also been the Director of an Architecture Department for a private sector firm and a Research Architect for the Construction Engineering Research Laboratory of Champaign, Illinois.



CHRISTIAN HOLMES

Mr. Christian Holmes is the Senior Vice President for Program Development at the Global Environment & Technology Foundation (GETF). His environmental protection experience spans government, business, academia and civil society. At the U.S. Environmental Protection Agency, he served as its third ranking official, Chief Financial Officer and Assistant Administrator for Administration; U.S. EPA Deputy Assistant Administrator for Federal Facilities Enforcement; and Principal Deputy Assistant Administrator for Solid Waste and Emergency Response. His assignments in academia and civil society include: Executive Director of Rice University's Shell Center for Sustainability and Vice President for Strategic Conservation Initiatives at the World Wildlife Fund. Mr. Holmes is a member of the Environmental Protection Agency's National Environmental Justice Advisory Council; Board of Directors, Enterprise Works/VITA (global non-profit organization committed to small business development); Advisory Board, Duke University Nicholas School of the Environment and Earth Sciences; and Board of Trustees, Webb School of California/Aif Museum of Paleontology.



KEVIN S. HOLDEN, RLA, ASLA

Mr. Kevin S. Holden is a licensed Landscape Architect in the state of Illinois and the USACE Landscape Architect of the Year for 2006-2007. His primary responsibilities include a variety of planning, design and technical management functions in support of both Military and Civil Works projects, including development of Corps of Engineers and Department of Defense design standards and criteria. Additional responsibilities include service to the USACE Architectural Community of Practice, presentation of technical subject matter at professional conferences, and service as a Mission Manager for the USACE temporary housing mission supporting federal disaster response. Mr. Holden received a Bachelor of Landscape Architecture degree (with distinction) from Iowa State University, and a Masters in Landscape Architecture degree from the Harvard University Graduate School of Design. He is a member of the American Society of Landscape Architects, and a past member of the Society of American Military Engineers.



ANGELA D. DYE, RIA, ASLA, APA

Ms. Angela D. Dye is a licensed landscape architect in Arizona and Utah with 25 plus years of professional experience. She is the President (Elect) of the American Society of Landscape Architects and the founder of A DYE DESIGN, a landscape architecture firm specializing in context sensitive design, urban design, pedestrian and transit oriented design, landscape architecture and public participation. Angela and A DYE DESIGN specialize in projects that feature the pedestrian such as downtown redevelopment, transit centers, light rail transit, college campuses, streetscapes, and neighborhood traffic calming. Recent projects include the Arizona State Route 179 scenic road improvement project, Phoenix Municipal Courthouse, the West Fifth Street Traffic Calming and Pedestrian Enhancements project in Tempe, and the Central Phoenix/East Valley Light Rail Project in Phoenix, Tempe and Mesa, Arizona.



JANE ANN CARTER, IID

Ms. Jane Ann Carter is a licensed Interior Designer in the District of Columbia. She has been employed by the Corps of Engineers, Omaha District, for 25 years and worked in private industry for three years prior. She received a Bachelor of Arts in Interior Design in 1980 from the University of Nebraska in Lincoln. Jane Ann is the USACE Interior Designer of the Year for 2006-2007 and has worked as the lead interior designer on many military construction projects. She provides technical support to HQUSACE, and revises and develops guide specifications as part of the Interior Design Directory of Expertise for the Corps of Engineers. Her most recent project involved the design of interior finishes, and the layout and design of furniture for the renovation of the offices of the Omaha District. This project involved furniture accommodations for 760 employees and almost 6 million dollars worth of furniture.



BRUCE D. HALE, AIA

Mr. Bruce D. Hale is a licensed architect in the State of Washington with over 25 years of professional experience. He is the USACE Architect of the Year for 2006-2007 and has worked as a Project Architect in the Seattle District for the past 5 years, leading an in-house design team for several multi-million dollar design projects at Ft. Lewis, WA. Prior to his coming to the U.S. Army Corps of Engineers, he worked in private practice for 13 years and in Europe for 8 years. In Europe, his experience was focused on master planning with the European District, U.S. Army Corps of Engineers and at the Armed Forces Recreation Center in Garmisch. He received his Bachelors of Architecture from Washington State University in 1981.



FRANK A. NORCROSS, IIDA, AIA

Mr. Frank A. Norcross is a registered architect in Virginia and is currently serving as the President of the Mid-Atlantic Chapter of the International Interior Design Association. Frank retired from Headquarters, U.S. Army Corps of Engineers after 38.5 years of federal service. In his twenty years at Headquarters he served as Interior Design and Historic Preservation Proponents as well as proponent for a number of facility types. He managed the Chief of Engineers Design and Environmental Awards Program since 1998 and managed the Architect, Landscape Architect, and Interior Designer of the Year Program since 2000. Frank started his career with the Corps as a design architect with the Norfolk District from 1978-1987. Prior to joining the Corps, Frank worked with a variety of public construction and engineering agencies including the Air Combat Command, U.S. Air Force; Atlantic Division, Naval Facilities Engineering Command; and Assistant Resident Architect for Old Dominion University.

