INTRODUCTION

History & Background of the Sites

The stories of these two parks in Yuma, Arizona, reflect the historic interplay of the federal, state and local governments during westward expansion and development over the past 160 years.

- Local citizens’ groups, such as the Yuma Crossing Park Council, led efforts in the 1980s to convert the Quartermaster Depot from an operations center for the canal system to an historic park. They were successful in securing federal funds for the relocation of the Yuma Crossing National Heritage Area, and the Yuma Visitors Bureau partnered to assume local management of the facility. Since then, with financial support from Arizona State Parks and the National Park Service, major roof and adobe restoration took place on some of the oldest adobe structures in the State of Arizona. While the focus of the plan will include major historic restoration needs, it is worth noting that much has already been accomplished.

- The Yuma Territorial Prison closed its doors in 1909. It was used as the local high school from 1910-1914. However, the facility began to suffer serious deterioration in the 1920s. The realignment of the main line of the Southern Pacific Railroad across the Colorado River resulted in the destruction of one third of the Prison. The Depression brought further deterioration as building materials were stolen and hobos began living on the site. In 1931, 22 local community groups partnered with the city government to post a guard and to work to turn the facility into a tourist attraction. In 1939-40, the City of Yuma secured funds from the National Youth Administration to put unemployed youth to work building the existing Prison museum. The City ran the museum from 1940 to 1961, when Arizona State Parks assumed management of it as one of its first state parks. Arizona State Parks undertook major construction projects, such as the Guard Tower, Entrance Building and realignment of the park entrance. State budget cuts over the last decade reduced the level of maintenance at the park.

An equally significant part of the history is the effort at all levels — particularly, the local level — to preserve these key historic resources, often well before the National Historic Preservation Act was enacted in the 1960s:

- Local citizens’ groups, such as the Yuma Crossing Park Council, led efforts in the 1980s to convert the Quartermaster Depot from an operations center for the canal system to an historic park. They were successful in securing federal funds for the relocation of the Yuma Crossing National Heritage Area, and the Yuma Visitors Bureau partnered to assume local management of the facility. Since then, with financial support from Arizona State Parks and the National Park Service, major roof and adobe restoration took place on some of the oldest adobe structures in the State of Arizona. While the focus of the plan will include major historic restoration needs, it is worth noting that much has already been accomplished.

- The Yuma Territorial Prison closed its doors in 1909. It was used as the local high school from 1910-1914. However, the facility began to suffer serious deterioration in the 1920s. The realignment of the main line of the Southern Pacific Railroad across the Colorado River resulted in the destruction of one third of the Prison. The Depression brought further deterioration as building materials were stolen and hobos began living on the site. In 1931, 22 local community groups partnered with the city government to post a guard and to work to turn the facility into a tourist attraction. In 1939-40, the City of Yuma secured funds from the National Youth Administration to put unemployed youth to work building the existing Prison museum. The City ran the museum from 1940 to 1961, when Arizona State Parks assumed management of it as one of its first state parks. Arizona State Parks undertook major construction projects, such as the Guard Tower, Entrance Building and realignment of the park entrance. State budget cuts over the last decade reduced the level of maintenance at the park.
In January 2010, Arizona State Parks announced that it was no longer able to operate the park and scheduled it for closure on April 1, 2010. At this point in the recession, the City of Yuma was unable to assist financially. However, the community raised $30,000 in 60 days to help save the park. Combined with a commitment of National Park Service funds through the Yuma Crossing National Heritage Area, the funding was in place to operate the facility as a state park under local management. With continued local fundraising, National Park Service funding, and Arizona State Park capital funds, major improvements to the facility have taken place, particularly the restoration of the original adobe Sally Port.

It is also worth noting that the Yuma Crossing National Historic Landmark (NHL) and Associated Sites was one of the earlier nominations for landmark status in the 1960s, with these two sites being pillars of the nomination. However, the decline of Yuma’s downtown, a greater intrusion of the City’s water treatment plant into the core of the site, and the blighted nature of Yuma’s riverfront resulted in a “threatened” status being placed on the NHL in the 1990s. The course of the last 20 years has reversed that decline, and the NHL is no longer considered threatened.

A Summary of the Ownership History & Historic Covenants

THE YUMA TERRITORIAL PRISON was city-owned property until it was deeded to the State in 1961. It has since remained state-owned property, although it has been leased back to the City of Yuma for consecutive three-year terms since 2010. A longer-term agreement is being contemplated.

THE YUMA QUARTERMASTER DEPOT is a much more complicated site in terms of property ownership. The land was originally the property of the United States government as a military and then a Bureau of Reclamation facility. As the Yuma Project proceeded, land parcels became separated by the creation of canals. The City of Yuma, which had secured ownership of the QMD offices and officers’ quarters, in turn deeded those properties to the State of Arizona in 1969. Thereafter, Arizona State Parks operated these historic buildings even while the Yuma County Waters Users Association maintained its operations center on the remainder of the property. In the 1980s, the Yuma community worked with the Arizona Congressional delegation to relocate the Yuma County Water Users, freeing up the remainder of the site for redevelopment as an historic site. This work culminated in the late 1990s with an agreement between the federal government and Arizona State Parks, to quitclaim the remaining QMD property to Arizona State Parks with an historic covenant and approved Program of Preservation and Utilization. The construction of the park and other major improvements thereafter were completed in accordance with this mandate. This historic preservation requirement is monitored and maintained by both the Arizona State Historic Preservation Office and the National Park Service.
Master-Planning Efforts

A major reason for this new master-planning effort is to align the thinking of the local, state and federal governments (as well as the local community) concerning any new proposed major improvements. With the changes of management and the shift of focus from simply “keeping the doors open,” a review of prior planning efforts is in order.

THERE HAVE BEEN VARYING EFFORTS TO MASTER-PLAN BOTH OF THESE PARKS. Arizona State Parks undertook major improvements at the Yuma Territorial Prison in the 1980s, based on a vision that balanced the need for preservation with the need to make the facility a strong attraction. In 1994, Arizona State Parks completed a major study entitled “Historic Building Assessment, Structural Evaluation, and Drainage Analysis,” which raised issues such as building stabilization, vibration, standing water, and public safety.

The study also noted the mixture of restorations, replicas, reconstructions and repairs that had occurred over time, which tended to cloud the issue of the site’s authenticity. A major challenge was to regain the sense of the whole site (much of which had been destroyed over time) while avoiding the trap of re-creating “faux” history. However, the continuing reductions in state funding meant that maintenance was substantially deferred and ultimately, the facility was slated for closure in 2010.

Since then, local management has worked with Arizona State Parks to address with considerable success a number of serious and imminent building issues. The Sally Port was completely restored, with the technical assistance of the National Park Service’s Vanishing Treasures program, capital funding from Arizona State Parks, and project management expertise from the Yuma Crossing National Heritage Area. The Vanishing Treasures report, entitled “Trip Report and Preliminary Treatment Recommendations,” dated January 2011, addressed other preservation issues (such as the Cell Block and Caliche Hill) and will be referenced later in this document.

The National Park Service, Vanishing Treasures Program

The planning for the Quartermaster Depot was guided initially by the report, “A Master Plan for the Yuma Crossing National Historic Landmark,” completed by Gerald A. Doyle and Associates in 1984. The plan proposed to create a setting for a “living history” military post, which was attempted in the early 1990s by the Yuma Crossing Foundation. Local funding sources were inadequate to fund this ambitious program, and the effort was abandoned.

In its place, the City of Yuma and Arizona State Parks collaborated to make considerable improvements to the site, with the City of Yuma investing $1 million of its own funds. In 1993, the Quartermaster Depot opened as the “Yuma Crossing State Historic Park.” From an interpretive standpoint, the park attempted to bring the many transportation stories of the Yuma Crossing to this site, whether or not those stories took place on the site. The City provided operating assistance to Arizona State Parks from 1997-2009, which was crucial as the park attracted only 10,000 visitors in 2008.

“An Historic Building Analysis of the Corral House” was completed in 1994, followed up by “A Building Conservation Assessment of the Yuma Quartermaster Depot Storehouse” in 2000, which provides good documentation of key historic resources.

The Congressional authorization of the Yuma Crossing National Heritage Area in 2000 brought forth a new round of planning. The Management Plan of the Yuma Crossing National Heritage Area envisioned telling the many Yuma Crossing stories in their appropriate locations. Thus, the main focus for this park would be the Quartermaster story of the 19th century and Reclamation story of the 20th century. In 2007, Arizona State Parks and the Yuma Crossing National Heritage Area partnered to complete an interpretive master plan with only these two interpretive themes for this park.

In 2008, the 1907 Baldwin locomotive located at the QMD was relocated onto the original historic rail alignment along Madison Avenue as part of the Pivot Point Interpretive Plaza project. In 2009, at the depths of the recession, the local community assumed management of the park to avoid its closure. Funds from many sources were cobbled together to keep the park open. The City of Yuma continued to provide operating assistance and the Heritage Area accessed its National Park Service funding. The Yuma Visitors Bureau moved its Arizona Welcome Center into the main entrance building, which helped attract a much larger attendance of 80,000 annually.

From 2009 through 2014, considerable progress was made to address deferred maintenance issues as well as the lack of interpretation of the Bureau of Reclamation story.

Based on the Vanishing Treasures report, many of the historic buildings (except the Storehouse and Corral House) benefited from major roof reconstruction and adaptive restoration in 2011-2012. New exhibits on the Yuma Siphon, the Yuma Project, and the Yuma East Wetlands were installed in 2010. The Storehouse was used for a traveling exhibit on Alcatraz from the National Park Service. The Heritage Area also experimented in providing additional traveler services by opening a coffee and pie shop in portions of the Corral House building.

While this flurry of activity has certainly brought the facility back to life, all parties — the Heritage Area, Arizona State Parks, and the City of Yuma — are concerned that these “ad hoc” changes, often forced by budget constraints, pressing maintenance needs, and economic circumstances, were not the best way to shape the long-term future of these parks. Thus, the commitment to complete this new master plan...
Proposed Master-Planning Framework

This master-planning effort faces budget and economic realities that will test the collective abilities of the partners to ensure sustainable parks. There are some incontrovertible facts:

- With these facilities being the key elements of the National Historic Landmark, the highest priority of the master plan should be the preservation and interpretation of the historic assets contained with the parks.
- Given today's budget realities, governmental resources from all levels will be constrained and will be insufficient to meet all of the parks' operating and capital needs.
- To supplement public funds, these parks must generate operating revenues, with a dedicated mindset of being “attractions.” An attraction is defined by five key characteristics: quality, authenticity, uniqueness, drawing power, and activity options. In addition, there are some more subtle factors:
  - An attraction must make sense to the visitor by presenting a “perceived order”.
  - An attraction must offer “potential for exploration with variety and mystery”.
  - An attraction must permit role choices.

This Master Plan for both parks is driven by this singular emphasis on “attractions” and therefore is set forth in the following sections:

1. Business Planning: Assess the market appeal and define the marketing approach
   a. The Yuma Territorial Prison has demonstrated its market appeal with increased admission and retail revenues, making the park operationally self-sufficient. The focus should be to continually improve the visitor experience with quality, authenticity, and activity options.
   b. The Quartermaster Depot, however, will need to develop a different model for operational sustainability, as it currently does not have sufficient market appeal.
2. Address basic conservation/preservation needs of historic buildings and assets
3. Define the interpretive goals of each park and upgrade exhibits with state-of-the-art technology
4. Upgrade buildings/infrastructure for operational efficiency and public safety

A general note on the preservation and interpretive challenges facing both parks and a proposed approach

The master plan is divided into two sections. The Quartermaster Depot plan is focused on a major interpretive overhaul of the entire facility, including the construction of a new building to tell the story of the future of the Colorado River. The plan for the Yuma Territorial Prison instead builds upon the progress made to date and seeks to mitigate the loss of historic context and authenticity.

YUMA QUARTERMASTER DEPOT — The first challenge is that there are two competing themes and eras: the 19th century military era and the 20th century Reclamation era. Neither, however, is compelling enough to carry the story of this park. The second challenge is the complete loss of historic context as it relates to the park’s connection to the Colorado River. If one stands at the north end of the Storehouse, it is literally impossible to imagine steamboats unloading their cargo right there. The Colorado River is now a shadow of its former self, just a minor stream as it wends its way past Yuma. It makes the Quartermaster story even more difficult to tell than it already is.

The recommendation is to change the overarching theme to “the Colorado River: its past, present and future,” and propose a name change to “The Colorado River State Historic Park.” By so doing, the theme subsumes both the Quartermaster Depot and Reclamation stories, and can use these two eras to trace the evolution of the river. The park can also become a forum for an ongoing dialogue about the future of the Colorado River, a very critical and timely subject. This evolution of the river can also be reflected in the preservation philosophy and interpretation of the historic resources. There will be no attempt to bring the historic resources to one era or one point in time. Instead, the approach throughout will be interpret the evolution of the Colorado River — and how the site responded to and affected those changes over time — not only through exhibits but with the buildings themselves.
Yuma Territorial Prison — The overarching thematic challenges facing the Prison are to explain and interpret the considerable loss of the original Prison structures as well as to come to grips with the multiple “preservation philosophies” that over time have resulted in reconstructions, replicas, restorations and subsequent — but now “historic” — construction. As the facility only operated as a prison for 33 years of its 138-year history, the issue is how to interpret the facility over time.

The proposed approach is born from a certain preservation philosophy and practical reality. Given budget realities, there is no possibility of reconstructing the entire prison facility, especially with 60 trains a day passing on Union Pacific Railroad’s main line directly adjacent to the park. It is important as well to accept the Prison as it is, but find ways to interpret the evolution of the facility over time from prison to museum. In this plan, interpretive exhibits will be part of the approach, but there is also a proposal to outline long-lost buildings with metal frameworks and other architectural “clues” so that the visitor can get an idea of what the prison was like in its heyday. A major focus is to give a “sense of confinement” and of the scale and size of the prison without attempting to rebuild the original complex of buildings.
Business Planning: Assess the market appeal and define the marketing approach

The Yuma Territorial Prison has strong natural market appeal. In the early 1990s, attendance was as high as 100,000 visitors annually. There was a gradual decline to about 50,000 by 2009, as Arizona State Parks did not have the resources to reinvest in and market the park. However, site improvements and a strong joint marketing campaign with the Yuma Visitors Bureau have increased attendance and revenues to the point where the park is operationally self-sufficient.

The community continues to support the park through an annual fundraiser and a large staff of volunteers. Over the past five years, there has been a steady increase in attendance and revenues, as set forth in the chart below. The question, of course, is how long can this rate of growth be sustained by “doing the basics well”? A strategic plan for continually refreshing the visitor experience and for building the market is needed.

There are three proposed avenues for growth in revenues for the Prison:

1. Revolutionizing the Visitor Experience — It will be critical to take advantage of 21st century technology. The setting — cell blocks, dark cell — can make use of advanced audio and visual technology to heighten the experience. This is particularly important as much of the original historic buildings and context are gone, and must be supplemented with advanced exhibits. These improvements can then be marketed to the general public for new and repeat business through advertising and public relations.

2. Tour Business — Rebuilding tour bus business is a long and gradual process, and will need to be a joint effort between the Heritage Area and the Yuma Visitors Bureau. It may require joint funding for a sales position to ensure a sustained effort.

3. Special Events — There is a very strong interest and demand for facility rentals for catered receptions and special events. However, the facility’s infrastructure is grossly undersized for this purpose. Any master plan should address these needs, as people want to have events at the Prison and are willing to pay top dollar.

YUMA TERRITORIAL PRISON STATE HISTORIC PARK

YUMA TERRITORIAL PRISON

Entrance Fees & Merchandise Sales by Calendar Year

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Address basic conservation/preservation needs of historic buildings and assets

**CELL BLOCK: ROOF**
The basic issue is that the second-floor hospital above the cell block was removed and no roof was ever built to replace it. The structure has held up very well given the century of deterioration. Any roof needs to have a very slight slope, consistent with the original construction.

**MUSEUM: REPAIR OF THE 1940 ADOBE BUILDING WALL AND WINDOWS**
An assessment of the repairs was completed in 2012 and indicated work needed of about $40,000.

**CALICHE HILL: PRESERVATION**
There are exterior and interior issues associated with the Caliche Hill. The simplest and most durable way to protect the exterior is to use gunite, as has been done in the past. However, this was opposed by DWL Associates in 1994 for aesthetic reasons. All of the other alternatives considered in the report were unsatisfactory. What appeared to be acceptable was to fence the hill off on the south side to prevent further degradation of the hill and for safety purposes. A chain link fence accomplished these ends, but something more aesthetically pleasing is proposed.

Appendantly, prior excavation of the south side of the hill has reduced the thickness of the wall at the back of the Dark Cell, and may be why other cells in the area are not open to the public. One suggestion is that a replica of the cage in the Dark Cell be built that also could be designed to help reinforce the ceiling.

**DRAINAGE ISSUES**
The 1994 report noted that ponding of water after rains is a considerable inconvenience, but does not appear to be seriously compromising the structural integrity of the surrounding buildings. After an extensive review of options, it appeared that the most feasible were (i) No action — Simply add a more efficient pumping system to move the water; (ii) Area or floor drains — While this would require staff to sweep standing water into the drains attached to and sump pump and pipes, these shallow drains could be installed in such a way to avoid archaeological impact. The trenching required would be shallow and narrow and the archaeological monitoring would be manageable.

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Outline interpretive goals and upgrade exhibits with state-of-the-art technology

The raw natural appeal of the Prison is a good foundation upon which to build. There are a number of initiatives which will greatly enhance the visitor experience.

**CREATING A “SENSE OF CONFINEMENT”**
The loss of so much of the original historic context makes it difficult to appreciate what prisoners faced. Then, there was literally “no escape,” but today there is an openness to the park contradicting that experience. The plan proposes improvements to help recreate that key “sense of confinement”:

- Extension of the prison walls on either side of the Sally Port, which the visitor will experience upon entering the park
- Construction of higher walls along the east and west sides of the park from the museum to the south end of the park, with murals to give the visitor a sense of the buildings that populated the western and eastern portions of the prison
"ABSTRACTING" THE LOST HISTORIC BUILDINGS

While it is neither desirable nor possible to recreate the entire prison complex of 1900, there are a variety of locations where architectural cues could be used to give visitors a better idea of what came before. The best example of this approach is the proposed treatment of the hospital that sat atop the double-sided cell block area. The proposed design will add the form of the peaked roof of the old hospital at either end of the cell block. The area just to the east of the single cell block — which used to be the boiler room/laundry/library — will be incorporated into the park and will interpret those functions, complete with the kind of architectural cues featured throughout the park.

Interpreting the Hospital: This conceptual design is intended to show that the prison hospital was located atop the double cell block. The approach is not to reconstruct lost buildings, but to provide architectural "cues" of the Prison's history.

MUSEUM EXHIBITS

While the 2010 update of the museum was a major improvement, there must be a continuing commitment to museum upgrades. Some of the ideas include:

- A digital model of the evolution of the Prison's complex of buildings, especially with the impact of the Southern Pacific Railroad intrusion.
- A computerized file of all prisoners, accessible by visitors and researchers
- A computerized file of all Yuma High School annuals, accessible by visitors and alumni
- A video exhibit featuring movie trailers and segments of the movies that made the Prison famous — and infamous
- Additional interactive digital exhibits about the Prison

CELL BLOCK AREA

The cells can be brought to life with the voices of the prisoners who were incarcerated there. The audio can be developed from available prison diaries and journals. Over time, even more high-tech media can be brought into play.

DARK CELL

There is an interest in adding a cage back into this area, which will give a sense to visitors of what the experience was like for those sentenced to time there. The metalwork should be so designed to make clear to the visitor that it is a modern recreation.

View of the cell block area looking from the southeast circa, 1900 and 2013

The Ghost Train. Yuma addressed a similar issue of loss of historic context at the Madison Avenue rail alignment through the use of laser technology. Since the rail bridge and rail line had disappeared decades ago, Yuma relocated a 1907 Baldwin locomotive onto the original rail alignment and projected two lasers across the river where the bridge once stood.

The Ghost Train.
NEW YARD

The New Yard has little in the way of interpretation to explain its use and purpose to visitors. A ramada whose architecture hints at the prior building could also serve as an interpretive area, provide much-needed shade, and be used for special events.

ABOVE: View of the New Yard, circa 1900.
BELOW: Proposed New Yard ramada development.

Upgrade buildings/infrastructure for operational efficiency and public safety

EXPAND ENTRANCE BUILDING, WITH NEW RESTROOMS, RETAIL SPACE AND STORAGE

The vigorous growth of retail revenues has led to a need for both more retail floor space and inventory storage in the main entrance building. The addition of more public restrooms has been a longstanding need. The proposed design incorporates those needs, while keeping the building’s distance from the Guard Tower, which rightly should predominate.
GENERAL IMPROVEMENTS


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CROSSING NATIONAL HERITAGE AREA

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AZ STATE PARKS MASTER PLAN

YUMA CROSSING NATIONAL HERITAGE AREA

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YUMA CROSSING NATIONAL HERITAGE AREA

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AZ STATE PARKS MASTER PLAN

YUMA CROSSING NATIONAL HERITAGE AREA

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YUMA CROSSING NATIONAL HERITAGE AREA
One recurring request from the public is for additional shaded areas for people to sit and relax. The master plan attempts to integrate the addition of shade ramadas for special events, but only on the front lawn outside of the prison walls. Comments from both the National Park Service and Arizona SHPO made it clear that any such amenities should not intrude on and detract from the authentic visitor experience. The only exception is in the New Yard, where a structure reminiscent of what was once there will be built.
COLORADO RIVER STATE HISTORIC PARK

Telling the story of a river under stress.
Executive Summary

In 2007, the Yuma Crossing National Heritage Area collaborated with Arizona State Parks on an interpretive master plan for the Yuma Quartermaster Depot State Historic Park. The plan focused primarily on telling the story of the military and Bureau of Reclamation uses of site.

The deep recession of 2008-9 precipitated a rethinking of the park on a variety of levels. With Arizona State Parks’ plans to close the park due to state budget cuts, the City of Yuma leased the park and engaged the Yuma Crossing National Heritage Area to operate it. The Heritage Area invited the Yuma Visitors Bureau to relocate its Visitor Information Center into the park, which provided both rental income and staff to support the park.

In 2013, the Heritage Area led a review of operations and concluded that the park’s theme should be broadened to “the story of the past, present, and future of the Colorado River” in order to attract greater public and foundation interest in the park. The Walton Family Foundation funded this update of the interpretive plan.

Much of the 2007 plan has been incorporated into this plan. What is new, however, is the focus on the future of the Colorado River. In particular, a new building, called “The Center for the Future of the Colorado River” is envisioned, which explains how the river has been used and diminished over time and what can be done to assure its long-term sustainability. The center will take advantage of the latest in technology to tell this story. In addition, an expansion of the park’s entrance building allows the visitor to be introduced to this story, being met by an animatronic John Wesley Powell, a legendary figure on the Colorado River.

The goal is to engage its visitor with the power and significance of the Colorado River story, and how all of us have a stake in preserving it for future generations.

Introduction

During the 20th Century, the entire Southwestern United States has relied on the Colorado River for its ability to grow and prosper. Dams have practically eliminated the threat of flooding, generated “green” hydropower, and provided a stable source of water for cities and farms. The Colorado River made the “Sunbelt” possible.

Those who helped forge this bright future could not have foreseen the challenges now ahead. The river’s ecosystems are under great stress. The Sunbelt’s explosive growth has led to an unquenchable thirst for more and more water. By the end of the 21st Century, the Colorado River will not be able to meet the many demands placed on it.

To meet these challenges, we must understand the river’s past, present, and future. What better place to tell these stories than in Yuma, Arizona: a place where the entire watershed flowed through on its way to Mexico, once a place to safely cross the river for Americans heading west; a confluence for Native American, Anglo, and Hispanic cultures; and now a community at the cutting edge of solutions for our environmental and water supply challenges.

The former locations of the U.S. military’s Quartermaster Depot and Bureau of Reclamation’s headquarters for dam and canal building is now a state historic park. It is at this site that we will also explore the river’s future.

This interpretive plan intends to explain how and why we have managed the Colorado River as we have — and how we may, together, find a way forward to a sustainable future in the Southwest.
The Yuma Crossing National Heritage Area adopted a management plan in 2000 (approved by the Secretary of the Interior) which focused on the revitalization of the Lower Colorado River through environmental restoration, riverfront park and trail development, and enhancement of the National Historic Landmark (including the state historic parks). The Heritage Area restored 350 acres of wetlands in the Yuma East Wetlands under very challenging circumstances, which is now considered a model for restoration in the Southwest.

The Heritage Area also assumed management of the two state historic parks in 2010 when Arizona State Parks planned to close them due to severe state budget cuts. After three years of local operations, Arizona State Parks, the City of Yuma, and the Yuma Crossing agreed in principle to the concept of a longer-term partnership for the parks, and agreed that a new strategic plan for the parks was necessary.

The Yuma Territorial Prison State Historic Park (top, right) has achieved operational self-sufficiency, and the planning for that park will focus on conserving the historic resources and improving the interpretive experience of a story that has ready market appeal.

The Yuma Quartermaster Depot State Historic Park (top, left) while sustained financially primarily by the City of Yuma, the Heritage Area, and the Yuma Visitors Bureau, does not have a similar visitor appeal and simply does not generate the admission revenues needed to operate. The two stories told at the park are (1) the provisioning of the western military forts via steamboats during the period 1850-1880 and (2) the development of the dam and canal system on the Colorado River by the Bureau of Reclamation in the 20th century. Both stories are historically important, but neither is compelling enough to draw large visitation.
THE OVERALL MESSAGE:
“The Past, Present and Future of the Colorado River”
The focus of the exhibits is the Lower Colorado River from the Hoover Dam to Yuma

SPECIFIC GOALS:
- Enhance interpretation of the historic uses and elements of the Quartermaster Depot
- Interprete the history of water use of the lower Colorado River and potential users
- Create a first class state historic park which is on the cutting edge of the conversation about the future of the Colorado River
- Create a dynamic meeting place to have conferences about the river, on the river
- Create an educational environment to learn about the Colorado River and water
- Tell the whole water story of the Colorado River – using simple explanations that respect the complexity of the story
- Foster cooperation to find long-term solutions to river issues
- Find solutions that balance all the stakeholders’ need
- Develop new exhibits about water and integrate them into the current historic site located on the river

METHODS TO ACHIEVE GOALS:
- Visitor Center addition
  - Enclose the current porch and create an exhibit space that introduces the water exhibits and major issues of the Colorado River
  - Create a “signature water exhibit” to provoke thought and entice the visitor to find out more information
- Reorganize and add to the information currently presented:
  - Include water specific information whenever it fits
  - Use current building spaces more efficiently
  - Use conversations from the past to help create solutions for the future
- Present the problem in a compelling way:
  - There will not be enough water for all needs in 50 years
  - How do we balance all of the needs?
  - Long-term maintenance of the river?
  - What is the future of the river? - New building proposed
- Present an unbiased array of solutions without a political agenda

SPECIFIC CHANGES:
- All existing exhibits will be enhanced with a water focus
- New buildings proposed are noted in yellow
- Wayfinding signage will be added on the site
- Exterior interpretive signage will be added
- Information will be reorganized on the site
- New exhibits and interactives will be suggested in all areas
- A demonstration garden will be developed
When, in some obscure country town, the farmers come together to a special town-meeting, to express their opinion on some subject which is vexing the land, that, I think, is the true Congress, and the most respectable one that is ever assembled in the United States.

Henry David Thoreau

The park is envisioned as a “Town Meeting of the Southwest”. While hydrologists, scientists and other water experts will play an important role, visitors and Yuma citizens also will gain a greater appreciation of the water challenges ahead and help shape solutions based on common sense and a sense of the greater good.

It is a grass roots effort to rally the public to the challenges ahead, but done with humor, insight, and a faith in our collective ability to solve these problems. And we will also have some fun in the learning process!

Our Target Audiences

- ENVIRONMENTALISTS
- SCIENTISTS
- POLICYMAKERS
- WATER CONFERENCE GROUPS
- BIRDERS & NATURE ENTHUSIASTS
- MILITARY ENTHUSIASTS
- FARMERS
- TOURISTS
- FAMILIES
- SCHOOL GROUPS
- GARDENERS
Brief Exhibit Descriptions

VISITOR BUREAU BUILDING; Introduction to the Site: History of Yuma Crossing and The Colorado River

Visitors can come into the Visitor Information Center to gather pamphlets, ask for directions, use the bathrooms and visit the gift shop.

1. NEW EXHIBIT; Colorado River Exhibit — The General Perception of Water:
    “Colorado River Water is both a natural resource and a utility service that meets the needs of millions of people and helps feed the nation.” The concern is that in 50 years there may not be enough water for all the people. This exhibit will be the introduction of the Colorado River Watershed.

2. OVERVIEW FILMS; THEATER

A 5-7 minute film that tells visitors about the site. Another film could show other attractions around Yuma.

3. EXTERIOR SIGNAGE; Wayfinding: The Site Overview:

Historic Trail — the history of the river integrated into the exhibits

Rivers Trail — the future of the river is the focus

EXTERIOR INTERPRETIVE SIGNAGE:

4. GEOLOGY AND TERRAIN

5. QUECHAN TRIBE — USE OF THE RIVER

6. EXPLORATION OF THE RIVER: 1860-1900

7. POTENTIAL INTERACTIVE COMPONENTS:

Garden: Native plant and tree species that were important to the tribe’s lifestyle

A Quechan dwelling: visitors can enter and see how it is constructed from native species. An interactive on how the huts were made.

STEAMBOAT: These interpretive exhibits are grouped by the Steamboat structure

8. YUMA CROSSING

The geographic significance of this area

9. STEAMBOATS

10. POTENTIAL INTERACTIVE COMPONENTS:

Silhouette structures of Steamboat, climbing structure, mechanical interactives, sound of the steam whistle, a photo opportunity

11. STOREHOUSE

Water reservoirs, Crossing the river and moving supplies

12. WATER RESERVOIR 1800s

Exterior Signage: Water storage historically on the site

13. QUARTERMASTER HOUSE

Interior/Exterior

14. QUARTERMASTER OFFICE

Interior, relocating the model of the site here. Various exhibits to develop.

STOREHOUSE:

15. BOR — PAST & PRESENT 1900 — 2000 — Interior exhibits and interactives


Diversion on the water

Dams and original engineering, flood control

Water: power generating, agriculture and irrigation, recreation

Yuma Context — where is Yuma headed

The Siphon

16. WAYFINDING SIGNAGE

17. WILDLIFE/PLANTS

Native species that were lost or endangered and why

MSCP Native species replanting

Yuma Context - where is Yuma headed

18. WILDLIFE HABITAT RESTORATION PROGRAM TODAY

19. SIPHON STORY AND VIEWING PLATFORM: Exterior Signage

CORRAL HOUSE: Interior Exhibits and Interactives

20. WATER ISSUES TODAY

Stakeholders: Tribal, Farmers, Municipalities, BOR

Wildlife of the River/on the Land

Environmental Quality of Water

Agriculture: Irrigation Techniques

Conservation: Cities and Residential - Intentionally Created

Surplus - Xeriscaping

Demonstration: Gardening

Minute 319 - 2012

DEMONSTRATION GARDEN:

Displaying irrigation techniques

Gardening Techniques

NEW BUILDING: FACING THE FUTURE: Interior Exhibits and Interactives

21. THE FUTURE OF THE RIVER

Environmental Issues and Water Shortage

Water Rights of the Future: Water Master

Stakeholders

Solutions: Conservation, Desalination, Drilling, Fallow Land

Interactives

EXHIBIT LOCATIONS & TRAFFIC FLOW

EXTERIOR WAYFINDING SIGNAGE (#3) The Site Overview:

A map of the site shows options of viewing exhibits

The Historic Trail is organized chronologically and explains the Quartermaster’s use of the site. The River Trail is expanded

The River Trail focuses on the river present and future

YUMA CROSSING NATIONAL HERITAGE AREA

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Guest Considerations

Guest Comfort

“Restrooms? Where can I rest? How much time is needed to visit? Where can I get something to eat?” These are questions that many guests need to know for peace of mind.

Getting Around

Walking in the heat may not be the preferred choice. How about having a few bikes for visitors to use on the site? Live animals are often interesting to visitors. Having a few mules that could pull a wagon around so that visitors do not have to walk, could be fun and educational. A blacksmith shop could be a supportive exhibit and used when necessary.

Food

Currently there is a pie shop. There could be another shop that sells fresh local food. Local farm-to-table choices or historic recipes, such as soups and stews could be offered.

Restrooms

Composting toilets could be installed and they can demonstrate an alternative to flushing!
To succeed, this park must tell a compelling story, and we believe that story is about the Colorado River. The visitor must be drawn immediately into the drama and impact of the changing of the river. The visitor must quickly understand that the very life and health of the Southwest is dependent on this one river.

1. We propose enclosing the current porch to use it as an enticing exhibit to encourage visitation of the grounds.

2. Two Short Films: One that introduces the visitor to all the tourist amenities that Yuma has to offer and another that introduces the park. These can run alternately.
The vast majority of those coming to the Visitor Information Center are primarily interested in “creature comforts”. These are travelers just off Interstate 8 looking for hotel and restaurant information, as well as restrooms and directions. More than 75,000 people come to the building, but only a fraction of those spend any time in the park. The proposed addition of the New Colorado River Room is an opportunity to change that dynamic.

**ENCLOSED PORCH**

This new enclosed porch area is meant to generate excitement. A map of the Colorado River watershed with illustrations of significant areas, especially mountainous terrain will be displayed. This will emphasize the immense size of the watershed. At this point it would be interesting to know how much water flowed throughout the river when Yuma was first settled.

A graphic timeline will be displayed and it will briefly explain all of the ways the site has been used.

At the end of the room will be a reproduction of John Wesley Powell’s boat. A chair is lashed to the boat, and an animatronic Powell will tell stories of his exploration of the river. Comparing when he first explored it, to today and the changes he has observed. He will encourage visitors to venture out into the site.

**NEW Colorado River Room**

The map in this proposed scheme is on the floor and visitors can walk along the path of the river. Kiosk monitors are positioned around the edges that address different uses that the site hosted: Quartermaster Depot, steamboats, the railroad, agriculture, etc

A model of John Wesley Powell and a boat are located at the place where he embarked on his expedition. The figure is animatronic and tells the visitor why we should care about the river and what to look for on the site and to consider the future.

Large images of the river on the walls are used where possible.

Digital touchscreens are located around the space to access more information about the river. The map of the Colorado River Watershed covers the entire floor. The visitor is immersed in the vastness.
TABLE OPTION:

A dimensional interactive topographic map is the focus of this introductory room. Information to support various topics can be placed on the rails around the map.

The center image, to the left, is a map optically mounted to acrylic. LED lights are used to show railroad routes as they developed and how immigration has shaped the country.

A wooden boat and oar is at one end of the room. An animatronic model of John Wesley Powell is sitting in the boat on his chair. The figure tells the visitor why we should care about the river and what to look for on the site.

Wayfinding & Interpretive Signage

To further aid visitors exploring the park’s outdoor spaces, shade canopies will be incorporated to make visitors more comfortable. Wayfinding kiosks will be located throughout the property to orient and guide visitors from one space to another.

Interpretive signage will be located along the paths between buildings to tell important stories that tie all of the elements together.

EXTERIOR INTERPRETIVE SIGNAGE:

Geography
The Quechan Tribe
Exploration: 1800 - 1900
Kit Carson: Trapper
John W. Powell: Explorer
Steamboats and the Colorado River
Significance of Yuma
Joseph Grinnell: Ornithologist
Wildlife & Extinction
Wetlands Restoration Project

Wayfinding & Interpretive Kiosks are represented by a red square

Connecting Canopy with Kiosk featuring Interpretive and Directional Information

Visitor Center
Corral House
Steamboat
Quartermaster’s Office
Visitor Center
Storehouse
Steakhouse
Quartermaster’s Quarters
Kitchen and Garden
Quartermaster’s Offices
The Center for the Future of the Colorado River

View looking South along walkway between Yuma Visitors Center and Corral House

Mobile: We need to balance all of the needs. 3Dimensional map: Graphic Rails highlight different time periods or topics
4. Geology and Terrain: watershed
5. Quechan Tribe: Use of the river / the Yuma Crossing
6. Exploration 1800-1900
7. Potential Interactive Components:
   - Garden: Native plant and tree species that were important to the tribe’s lifestyle
   - A Quechan hut – visitors can enter and see how it is constructed from native species
We will add signs that discuss the establishment of Fort Yuma, as well as the Quartermaster Depot.

1700s

The Quechan history is a fundamental one in the telling of the river story. However, no design or interpretation can be proposed or undertaken without the full involvement of the Cultural Council and tribal elders. This type of collaboration took place at Pivot Point in the development of the interpretive panel there, and a similar process will be undertaken here.

INTERPRETIVE SIGNAGE: THE QUECHAN TRIBE

This sign will explain the Quechan Tribe and their use of the river and local plants.

We propose to have a Quechan dwelling that visitors can enter. An interactive that shows construction techniques as well as materials will be developed. We also propose a native garden planted with native plants and trees from the time:

- Mesquite = the Quechan “tree of life” Roots were the cradleboards, trunks were used for homes, branches were used for cremation
- Willow = aspirin, basketry, clothing
- Arroweed = arrows, sap for glue
- Sage = is used as purifier, the Indians placed bodies on it for cremation
- Beans = flour, a curative for diabetes

We are proposing using full-sized images of people throughout the space allowing us to use first person voices to tell some of the story.
INTERPRETIVE SIGNAGE: KIT CARSON - TRAPPING

Kit Carson was in the Yuma area trapping beaver from 1839 – 1841. More about him and trapping will be shared on this signage.

A beaver pelt will be hanging on the sign for visitors to touch. A solar powered audio interactive is here for visitors to listen to a story told by him.

INTERPRETIVE SIGNAGE: EXPLORING THE RIVER - JOHN WESLEY POWELL

- Excerpts from his journal to read
- Rock to sit on, an oar, a tin pot
- Interactive replicating what it is like to have one arm
- Other Explorers:
  - Joseph Grinnell - Ornithology
  - Godfrey Sykes – Colorado River Delta
  - Robert Stanton – Expedition down the river for the railroad

Compare beaver populations then, and now.
Endangered species status and protection will be touched on plus the truth about their engineering capabilities.
Before the dams, the Colorado River featured 400,000 acres of native forest and plentiful wildlife. This exhibit hearkens back to that era.

Steamboats & Moving Supplies

We want visitors from beyond Yuma to see how the Colorado River might hold importance for them, as well as the citizens of Yuma.

INTERPRETIVE SIGNAGE: Steamboats & The Significance of Yuma

- Wagontrain routes and moving supplies
- Crossing the River
- Interactive, sound and interpretation: A steamboat captain tells you about his day with the help of a solar-powered audio device.
- A panel explains why Yuma is important.
STEAMBOAT ABSTRACTION

The interpretive steamboat structure can be approached in several ways structurally. One way could be a series of platforms and facades that allow visitors to “climb aboard”. In this approach visitors can walk across a wooden plank deck to overlook the river and learn about early river navigation.

Special Effects:

SOUND: A soundtrack can play a steamboat whistle and ship’s bell on a loudspeaker. The sound of engine noise, seabirds and sailor’s voices could enrich the experience. The whistle and bell could also be a visitor-operated exhibit as could the ship’s wheel. Steam could simulate the whistle action.

WATER: The paddlewheel could be built as a fountain and spin to give the sound of flowing water.

LIGHTING: String lighting tracery can illuminate the Steamboat at night and attract the attention of travelers on Interstate 8. Interpretation should include visuals that simulate the historic river level.

SIMPLE OPTION: The Steamboat could also be represented by a simple silhouetted façade with interpretive exhibits surrounding it. This approach would reduce cost yet still allow for enrichment of sound effects and lighting.

An Iconic Element:

The steamboat abstraction attempts to accomplish several goals for the park. First, it bridges the visual gap between the site and its close historical relationship with the Colorado River. Th steamboat will be situated at an elevation equal to the river water level at the time of the QMD. It will also be positioned within the boundaries of the historic riverbank. This is in great contrast to the river’s current bank and water level which are several hundred feet further from the site and much lower than historic levels. In fact, due to the level park grounds and higher elevation, the Colorado River of today is very difficult to see from within the park. This can create an interpretive gap in visitors’ perception of the site as a historic port. Adding the steamboat will put the river back into the context of the park, and its historic use as well as providing a location for QMD and river interpretation.

Secondly, the steamboat enriches interpretation of historic navigation on the river as well as offering a unique location for additional QMD interpretation.

Thirdly, the steamboat abstraction can act as a visual promotion of the park which could eventually become an iconic symbol of the park and its historic relationship with the Colorado River.

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The Storehouse - Riverside

This area is part of the interpretation of the steamboats that used the Colorado River.

A new covered porch is proposed to give a platform for telling the story about moving supplies. Ambient sound helps set the scene of a busy dock loading and unloading supplies.
This area is part of the interpretation of the Quartermaster Depot including the living quarters, the water pump, the offices, the kitchen and gardens. DAY-TO-DAY LIFE OF THE QUARTERMASTER: What was grown in the garden? Recipes and foods. Water use and needs in the home and in the Quartermaster Depot; animals, gardens, personal use cooking and cleaning.

THE CORRAL HOUSE as an interpretive exhibit space depends on the ability to modify the building’s interior to improve traffic flow and properly organize the interpretive story. We are currently investigating how much can be done to the interior. At this time it is too early to dismiss its use as an interpretive space. At this time, we are considering the Corral House as the location to tell the wetland management process.

Quartermaster Depot

STORAGE

WATER RESERVOIR 1800S - Exterior Signage will discuss water storage historically on the site.

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QUARTERMASTER HOUSE

QUARTERMASTER OFFICE

QUARTERMASTER KITCHEN

Corral House

Storehouse

Quartermaster’s Offices

Proposed new exhibit about what the storehouse used to look like. How to construct an Adobe House - Possible interactive element here.
The Bureau of Reclamation (BOR) has added to the building: • Supplies • BOR • Additions to the building • Model T shop • Today

Past & Present | 1900 – 2000

Interior exhibits & interactive elements

Storehouse Interior

Where is the Colorado River Watershed?

The Law of the River:
• The water master, water rights – past and present
• The watershed – diversion and trans-basin diversion

The Colorado River Compact: 1922
• Dividing up the water
• Dams and original engineering
• Flood control

Water Use:
• Power generating
• Agriculture and irrigation
• Recreation

The Siphon:
• Engineering Marvel
• Water for 50,000 acres of the Yuma Valley

New Covered Porch

The Quartermaster Story

“...the most dammed river in the U.S.”

Construction design and materials of exhibits need to take into consideration environmental concerns due to the high temperatures and dust in most of the exhibit areas. Exhibits will be designed with this element under consideration.
Yuma occupies a pivotal position in the story of the Colorado River. It was the only safe place to cross the river when the river was wild and uncontrollable. It was where the very first dam was built on the Colorado River, and where irrigations canals brought water to rich soils, made the desert bloom, and made Yuma the “winter vegetable capital” of North America.

The Corral House

Agriculture | The Siphon | The Wetlands | Desalination

Yuma is where the local agricultural community learned how to make more and more efficient use of irrigation water, such that Yuma farmers are now producing 50% more product today with the same amount of water than they did 40 years ago. It was also where the constricted river flow began to degrade the river’s ecosystems and cut the community off from the river. However, it was also where innovative wetlands restoration techniques transformed the Yuma riverfront and made the Yuma East Wetlands a model for restoration in the Southwest. It is also where cutting-edge methods of ground water desalinization are being explored, and where the United States and Mexico are finding common ground for restoring the river.


“There are some who can live without wild things, and some who cannot. These essays are the delights and dilemmas of one who cannot.”

Aldo Leopold

East Wetlands: After Restoration
400 Acres of Restored Wetlands
250,000 Native Trees Planted

Corral House: Yuma Success Stories
The Corral House will tell all of these stories about Yuma, including the Yuma Project and the Yuma Siphon, the Yuma East Wetlands, and the water efficiency Yuma farmers have brought to the desert. As host to the telling of the story of the Colorado River, Yuma should have a place to tell its own story. The Corral House is that place.

The Center for the Future of the Colorado River
New Building | Water Feature Film | Healing the River | Interactives and Exhibits on How to Solve Water Issues Today and for the Future

Most importantly, it will invite the visitor to become part of the solution through collaboration and building partnerships among diverse stakeholders. The visitor should leave the Center with a clear sense of the challenges and a renewed commitment to become part of the answer to the question: What is the future of the Colorado River?
Entrance to the New Exhibits: WATER FLOOR GRAPHICS

This product projects a water image onto the surface. As visitors walk on the floor the water responds as if it has been disturbed. One version shown above has fish in the water which adds another dimension. Please view the video here: https://www.youtube.com/watch?v=xpIkZtezl8Q.

GroundFX is a multimedia visual display system that projects incredible interactive floor special effects, floor games or floor advertisements directly onto an interactive floor displays. Users control dynamic multimedia interactive displays with simple gestures and body movement. It’s an engaging full-body interactive experience that immerses users in your message.

The Center will also serve as a research center and forum for experts in the field, hosting conferences and research seminars which address legal, scientific, and policy issues involving the Colorado River. The park plan is designed to access the nearby 20,000 square-foot Hilton Garden Inn Conference for larger conferences as well as utilizing outdoor spaces adjacent to the Center.

Games, interactives and activities to get visitors thinking about solutions to water shortages will be the focus of exhibits here. (3500 square feet)
The most difficult thing to explain to visitors is how the Colorado River went from a wild, uncontrollable river to a tightly-controlled “water delivery system” where every ounce of water is accounted for. An introductory film featuring two children on a journey down the river is the best way to do this. The visitor will come to a mural of the Imperial Dam.

**MURAL:** The visitors walk into a curved theater space. Here, a large mural of the Grand Canyon is on the wall. The photograph is from the floor of the canyon and this immerses the visitors in the magnificence of the canyon.

**FILM:** After the visitors are in the space, a film starts and the same two kids from the mural are now getting into a biplane to “find” the headwaters of the Colorado River, and where all the water is!

**SCENE:** Two kids are standing in the river bed with boots on and fishing poles and there is hardly any water.

**MURAL**

**FILM**

**THEATER**

---

**In the Theater, the Visitor continues the journey with the kids on film.**

They climb into the front cockpit of a red biplane and take off searching from the air.

They look down on two mountain men putting a message in a bottle and the bottle in the stream (tributary).

The plane banks and circles. It follows the progress of the bottle downstream and at a fork in the stream where water is siphoned off, the plane looks for the bottle on the water.

Using as an example Las Vegas – when they realize the water passes through, but not the bottle, the pilot loops and circles over the fork, and...

...the bottle pops up! and they continue following it downstream.

**This leads us to an exhibit about the future of the Colorado River.**
Exhibit Topics

Water Rights
When faced with the growing problems of water use of the Colorado River, long-standing agreements for water rights and allocation require careful reexamination to ensure sustainability of this great resource.

Understanding – And Impacting – The Dynamics Of A Changing Watershed: The “Sim River” Experience
The complexity of so many different dams and canals diverting water from the Colorado River makes understanding the issues overwhelming.

One way of overcoming these obstacles is to involve the visitors directly into “operating” the system through a “touch table”.

Through a series of touch screens and three dimensional props (such as dams), the visitor can alter the flow of the river. The challenge is to meet all the needs of cities, farms, and homes – and Mexico – while providing enough river flow for the Colorado River to make it to the Gulf of California. It is a “rigged” game as there is never enough water to go around. The visitor then is forced to choose among competing priorities.

This exercise will engage visitors of all ages and particularly spark interests from Millennials, who will fondly recall playing “Sim City” from their childhood.

An interactive table allows for more than one user and it can make available vast amounts of information.

This exhibit places the visitor into the context of the Colorado River watershed and can hopefully lead to more thorough examination of Colorado River issues located on the touch table.

CHALLENGES & OPPORTUNITIES TO SUSTAIN THE COLORADO RIVER
Now that the visitor understands the nature and depth of the challenge confronting the Colorado River, the Center focuses on the primary solutions: water augmentation and conservation.

A wide variety of augmentation efforts will be explored, but the focus will be on desalinization.

Salinization
Salinization poses many problems for the quality of Colorado River water as well as its soils.

Increases in the salt level of river water occurs several ways. One of the primary reasons is from lack of periodic “flushing flows” in the Colorado River, which leave salts building up in the soil. Some of this build-up is a natural process that has always occurred; some is caused by the constriction of flow over the last century. At its end, the Colorado River water is 30 times more salty than at its headwaters.

A low-tech mechanical interactive could be used to illustrate the process of water washing salts (and other chemicals) out of and soil.

Desalination
The process in which salts are removed from water sources has historically been complex and expensive requiring special materials and high amounts of energy. The higher the salt level, the more difficult it is to desalinate.

Reverse osmosis is a common method of desalinating. Three new technologies are being developed that may reduce energy requirements of desalination.

1. Forward Osmosis
2. Carbon Nanotubes
3. Biomimetics

The principles behind each of these three developing technologies can be reduced to simple terms and explained to visitors. Where possible, animation or simple interactive exhibits can be used to illustrate complex processes.
TAKING PERSONAL RESPONSIBILITY
While many forms of conservation and more efficient use of water by cities, water irrigation districts, and utilities will be described, it is important for the experience to become a personal one. This can be achieved through the use of the media called “water footprint”.

Water Footprints
Water footprint is a comprehensive approach to determining the total amount of water consumption in relation to a person, geographical area or product. This is different from traditional analysis where water consumption is restricted to measuring an amount of water withdrawal from a resource. A water footprint seeks to illuminate more issues surrounding water use.

Water footprint encompasses any loss of water from an available source and relates it to specific activities. For instance, the water footprint of a product such as a cotton T-shirt tracks how much water it takes to grow the cotton, process the cotton into cloth, produce the T-shirt and ship it to the consumer.

This description is a simplification of the total process but illustrates the comprehensive nature of water footprints. As water issues with the Colorado River become more closely watched and debated, awareness of water footprints becomes more thought provoking and can help to deepen consumers’ awareness of their own water use as well as water use in the world around them.

To illustrate the concept of water footprints, we are proposing a large video wall/touch screen that will educate visitors on the water footprint of common consumer goods. The screen will contain large scale (6-24 inch) animated water “droplets” floating and moving as if they were within a large tank of water. On the surface of each water “droplet” is the name of a consumable product. Products can range from food sources such as cattle, chickens, corn or wheat, to goods such as T-shirts, blue jeans or automobiles. When touched, the “droplet” reveals detailed information about the water footprint of the product.

By using items visitors can relate to, the experience is more personal and may make a deeper impression on the visitor. The video wall can be used by any number of people at the same time and will encourage interaction between visitors, perhaps even leading to discussions.

HEALING THE RIVER
Addressing the water needs of cities and farms is certainly a key priority of the Center. Equally important, however, is the long-term health of the Colorado River itself. Providing adequate river flow is but one element of that process. The Center will feature the many innovative projects – both large and small – taking place along the Colorado River which are rooting out non-native riparian vegetation and replacing it with native cottonwoods, willows, and mesquites.

The exhibit will feature dramatic “before” and “after” photos of restoration areas and the technologies helping make restoration happen. Particular attention will be placed on the technology transfer between the agricultural community to environmental projects, making large-scale restoration projects possible.
Watershed Interactive

This interactive is a teaching tool that explains how water moves in a watershed. Visitors can interact with the table to control water flow by changing the sand terrain. Example of this technology can be seen at https://www.youtube.com/watch?v=LurZEwKgdFo

"The augmented reality (AR) sandbox allows users to create topography models by shaping real sand, which is then augmented in real-time by an elevation color map, topographic contour lines, and simulated water. The system teaches geographic, geologic, and hydrologic concepts such as how to read a topography map, the meaning of contour lines, watersheds, catchment areas, levees, etc."

Figure 1: The Augmented Reality Sandbox in its natural habitat. Left: Sandbox unit when turned on, showing a mountain with a crater lake, surrounded by several lower lakes.
Planting Areas & Gardens

1. QUARTERMASTER GARDEN
This garden would be planted with historic plants that were available at the time. Farm to table.

DEMONSTRATION GARDENS:

2. XERISCAPING
Examples of landscaping with water conservation as a major concern.

3. DEMONSTRATION GARDEN

4. AGRICULTURE IN THE AREA
This garden can act as a showcase for some of the latest agricultural developments to offer advantages in water use. Plantings and interpretation, for instance, on drought-resistant species of plants can act as a promotional garden of cutting-edge science. Several regional universities and agricultural labs could partner with the museum to promote their latest developments.

5. IRRIGATION METHODS
The various forms of irrigation can be demonstrated in these sample gardens. Furrow, flood and drip irrigation each have specific requirements. The pros and cons of each method can be interpreted on graphic rails around the garden.

6. QUECHAN
Examples of native plants and how they were used in their day-to-day life.

CONCLUSION
The Center for the Future of the Colorado River intends to raise the awareness of the general public (and policymakers) of the challenges facing the Colorado River, explaining the history of “how we got here” and the many legitimate needs which compete for this scarce resource. More importantly, it will open a dialogue among all users of the Colorado River on how— to-gether— we can overcome these considerable challenges through conservation, more efficient use of water and water augmentation.

When called upon, the American people have always risen to the challenge, whether in war, depression, or overcoming enormous physical barriers. Just as at the beginning of the 20th century when America tamed the Colorado River and opened up development of the West, the United States can meet this new challenge of sustaining the Colorado River in the 21st century.
The Yuma Quartermaster Depot State Historic Park is located within and serves a key component of the Yuma Crossing National Historic Landmark. Furthermore, it is on land deeded to Arizona State Parks from the federal government by a Quitclaim Deed dated March 10, 1999. The deed contains an Historic Covenant which specifies that the property will “be forever used and maintained as and for historical monument purposes.” Any proposed alterations must involve formal consultation with Arizona SHPO. Finally, the property must be managed in keeping with the approved Program of Preservation and Utilization (PPU), dated March 20, 1997. The major improvements undertaken by Arizona State Parks in the period 1997-1999 were completed in keeping with the PPU and in consultation with Arizona SHPO. Therefore, the new proposed interpretive master plan to tell the story of the past, present and future of the Colorado River must respond to the approach contained within the PPU.

Generally, the new interpretive plan utilizes the historic buildings as venues to tell various elements of the history of the Colorado River within the appropriate setting. For example, the historic adobe of the Quartermaster era, which is an amendment to the Draft Master Plan and would need to be approved.

The Yuma Quartermaster Depot State Historic Park is proposed on the site for other purposes, such as the irrigation canals. The new proposed interpretive master plan to tell the story of the future of the Colorado River is purposely located adjacent to the existing Visitor Center building to lessen any impact on the historic resources. It will be on part of the land of the corral yard whose historic integrity was lost more than 100 years ago. The building will be clearly modern in appearance (and reflective of its theme) so that there is no confusion as to its role within the park. Ultimately, telling the story of the future of the Colorado River within one of the existing historic resources would not have done justice to the historic buildings themselves nor to the interpretive theme itself.

Finally, the PPU envisioned a plan which would attract between 52,000 and 76,800 people per year, which would help sustain the park’s historic resources. Admissions have never approached these numbers. Combined with the deep recession and drastic reductions in state funding, the entire business model for the park has had to be rethought—which led to this new plan.

Yuma Crossing National Heritage Area

Arizona State Parks Review Comments

Thank you for submitting the Interpretive Site Plan for Yuma State Park review. Below, please find comments that reflect the input of the ASP Curator, Interpretive Education Manager, Executive Consultant, Development Project Manager, Chief of Operations, and Executive Director for Parks & Development:

- This Interpretive Site Plan is an expanded subsection of the Draft Master Plan for the Yuma Quartermaster Depot and Yuma Territorial Prison State Historic Parks. The Draft Master plan has not been approved by the Arizona State Parks Board, so we are concerned about moving forward with this expanded version until the draft has been approved.

- The plan proposes “a Future of the River” building be added to the park. This is an amendment to the Draft Master Plan and would need to be approved.

- The enclosed porch and Storage Structure are both listed in the Draft Master Plan and are acceptable to ASP. Obviously, we would like to see more detail for the proposed Storage Structure.

- On Page 2 we would like to see the addition of at least two goals that specifically address the interpretation of the history of the site. For example: “To enhance interpretation of the historic uses and elements of the Quartermaster Depot.”

- We encourage Hadley Exhibits Inc., to review the previous planning documents already developed (Southwest Scenic Group, 2002; ASP Interpretive Education Team, 2005; Hadley Exhibits, 2007) to help provide more detail as related to historic themes.

- Both Visitor Traffic Flow plans are confusing, but Plan 1 more closely fits the conceptual map of past to present to future.

The following comments relate to Plan 1:

3. WATER FILM - THEATER
   a. a. The 1975 Southern Pacific coach car is currently in this area. Are you proposing moving this, and if so where? If you are not moving the coach car, come up with another exhibit that expresses the Rio Colorado.

   b. What are the themes you will be featuring in the “Exploration 1800-1900” area? Will a discussion related to the establishment of Ft. Yuma and establishment of the QMD be in this area?

11. STOREHOUSE – CROSSING RIVER AND MOVING SUPPLIES
   - In this main interpretation of the “Quartermaster” story. What sub-themes will be addressed?

   - Will these buildings be period rooms or exhibit spaces, or a combination of both? What sub-themes will be addressed?

20. CORRAL HOUSE
   - It is not clear if you are proposing using the small rooms as well as the main block area. Will vendors still be using some of this space or will it be exhibit areas?

19 & 13. ADDITIONAL PARK ACCESS POINTS
   - Will these gates be open during regular business hours, and if so, we see difficulties with visitor traffic flow.
Cost Estimate

Building Design & Construction Cost Estimates as per the Colorado River Interpretive Plan for the Colorado River State Historic Park

The following is a preliminary estimate for the above facilities based on the details we have at the Master Planning Level. Since finishes, space articulation in the building and exhibit needs for lighting and power have yet to be determined, this estimate is the best conservative approximation possible at this point in time.

Center for the Future of the Colorado River (including connection with the Visitor’s Center and Stage area total 5,600 sq. ft.)

At a projected construction cost of $400 per sq. ft. the cost for this would be $2,240,000

Design cost for the building approximated at 15% of building cost would be $336,000

Design, fabrication and installation of exhibits $1,300,000

Subtotal $3,876,000

Outdoor campus surrounding the Center for the Future of the Colorado River (including trellis, tensile structure and amphitheater garden area)

Construction of Tensile Structure $60,000

Design and Construction of Trellis Structure of 2,000 sq. ft. to Corral House $485,000

Design and Construction of garden/amphitheater area $525,000

Design, fabrication and installation of exhibits $125,000

Subtotal $1,195,000

Changes to the Existing Visitor Center Building

Enclosure of porch area (to become introduction of river story at Visitor Center) Design and Construction of enclosure $287,500

Design, fabrication and installation of exhibits $300,000

Design, production and installation of new introductory film and theater in existing space $200,000

Subtotal $787,500

Steamboat Structural Abstraction

Design, construction and installation of multi-level observation decks and exhibits within space

Subtotal $1,039,000

** A second lower cost option of a steamboat façade treatment for $200,000 was presented and rejected.

Storehouse

Exhibits for interpretation of the Quartermaster Depot and the Bureau of Reclamation

Design, construction and installation of interior and exterior exhibits

Subtotal $1,650,000

Corral House – Exhibits to interpret Yuma

Design, construction and installation of interior exhibits

Subtotal $200,000

Exterior Historic Trail wayfinding interpretive elements and shade structures

Design, construction and installation of wayfinding/interp. elements $300,000

Design, construction and installation of shade structures $150,000

Design, construction and installation of interpretive elements $98,000

Subtotal $548,000

TOTAL $9,415,500

ACKNOWLEDGEMENTS

The re-imagining of this park was a considerable undertaking, which would not have been possible without the generous financial support of the Walton Family Foundation. Two consultants, Deardorff Design Resources and Hadley Exhibits, who have been involved with the Yuma Crossing National Heritage Area for 15 years, were instrumental in bringing this new vision to life. Arizona State Parks staff, Arizona SHPO, and the National Park Service were all helpful with making sure that the National Historic Landmark – in which this park is located – was respected and considered in the drafting of the plan. It is our hope that this park will foster a dialogue to preserve and sustain the Colorado River through the 21st century and beyond.
This is an ambitious master plan, as any visionary document should be. The challenge with any master plan is to identify next steps and early-action projects to generate momentum and credibility for the plan.

1) Early Action
   - Rename QMD to the Colorado River State Historic Park. Enclose the Colorado River Room to the north of the Visitor Information Center, and install the John Wesley Powell animatronic exhibit and evolutionary model of the Colorado River.
   - Seek funding from multiple private foundations for build-out of $9.5 million expansion of the Colorado River State Historic Park.
   - Rebuild Yuma Territorial Prison walls on either side of the Sally Port.
   - Develop virtual reality exhibits to interpret the “Lost Prison.”

2) Creating a long-term partnership
Adoption of this plan by Arizona State Parks, the City of Yuma, and the Yuma Crossing National Heritage Area will signal their mutual commitment to undertake major improvements to the two state parks in Yuma. The Heritage Area will need to serve as the project manager, and take the lead in seeking federal, state, and private foundation grants for the project. Within the significant budget constraints which exist, it is hoped that over time the City of Yuma and Arizona State Parks can make additional capital contributions, with Arizona State Parks focused on conservation and preservation of the historic resources and the City of Yuma assisting in improvements to make the parks more financially self-sustaining.

PHOTO RIGHT: A new granite timeline of the Prison’s history was installed in 2013

PHOTO RIGHT: The Colorado River is diverted to both Phoenix and Los Angeles at Parker Dam.

This master plan is dedicated to the memory of Gerald A. Doyle

A Navy veteran of World War II, a graduate of Western Reserve University (B.A., Architecture, 1948) and Harvard University (M.A., Architecture, 1951), Gerald Doyle settled in Phoenix in 1962 and practiced until 2006. Gerald A. Doyle and Associates, became recognized as the preeminent historic architectural firm in Arizona. His 1984 ground-breaking study for Yuma, “A Master Plan for the Yuma Crossing” has served as the inspiration of three decades of work to reconnect Yuma with its river and its history. While not all of the plan’s recommendations were adopted, it is clear that many of his visionary concepts have become a reality in the wetlands restoration of the East Wetlands, the development of West Wetlands Park, and public/private partnerships which have revitalized the downtown riverfront.

It is hoped that the creative thinking contained in this master plan is in keeping with the spirit with which Gerald Doyle lived and practiced his craft.

THE WALTON FAMILY FOUNDATION