

UTAH MOTORBOAT ACCESS ENHANCEMENT PROGRAM

GRANT APPLICATION

Federal Aid Coordinator
Utah Division of Wildlife Resources
1594 West North Temple, Suite 2110
Box 146301
Salt Lake City, Utah 84114-6301
(801) 538-4850

1. PROJECT TITLE AND LOCATION

Lucerne Wave Attenuator Replacement

Ashley National Forest, Flaming Gorge National Recreation Area
Section 20, Township 3 North, Range 21 East
Daggett County, Utah

2. PROJECT SPONSOR

Ashley National Forest
Flaming Gorge Ranger District, P.O. Box 279 Manila, Utah 84046
Contact Person(s): Mark Sprague, Recreation Program Manager (435) 781-5246
Don Jaques, Partnership Coordinator (435) 781-5119

3. LAND OWNERSHIP



The project area is located on the Ashley National Forest within the Flaming Gorge National Recreation Area. The Flaming Gorge Reservoir is nationally recognized for its world-class fishing, boating opportunities, and scenic beauty. It is considered one of the prime boating and fishing destinations in the state of Utah.

Fishing is the number one activity that visitors participate in while visiting the Flaming Gorge - with boating, camping, and scenic viewing closely following. Creel Surveys show a high use of the reservoir with peak figures showing up to one million angler hours per year.

The project is further situated at the Lucerne Recreation Complex which is the busiest boating access point on the reservoir. The courtesy docks, boat launch ramp, parking areas and roads, campground and other improvements are property of the Forest Service. Improvements associated with Lucerne Marina, operated under special use permit from the Forest Service, are privately owned.



The complex is centered on the access it provides to the reservoir, offering many recreational opportunities and facilities associated with this use. These include a large four-lane boat ramp, fish-cleaning station, over-200 slip marina, boat sewage pumpout station, large courtesy dock, 145 individual and 4 group site campground, flush-toilet restrooms, day-use swim beach, picnic area, RV dump station and other features.

4. PROJECT DESCRIPTION

This project will provide wave attenuation for the boat launch area and public boating facilities at Lucerne Marina. These facilities include the boat ramp, large courtesy dock, floating restrooms, and pumpout station. The attenuator will provide improved safety to boaters against the threat of high winds. These winds create high waves that make boat launching and recovery difficult and very dangerous. The attenuator will also provide needed protection of boating infrastructure and other improvements.

The project includes the purchase and installation of a new wave attenuator to replace the existing failed breakwater structure at this location.



The Lucerne boat ramp area and marina are frequently at capacity during busy weekends and holidays

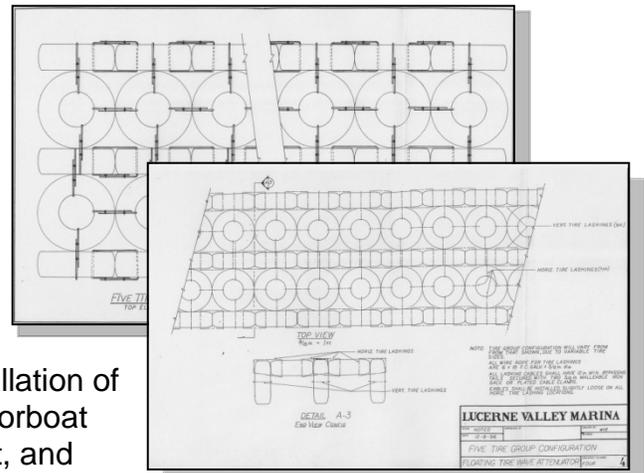
Background: The Lucerne boat launch and marina is the nearest location to visitors traveling from the Wasatch Front. As such, it receives high use from boaters throughout Utah, the region, and even across the nation. The boat launch and marina are the centerpieces of the Lucerne complex due to their boating access to fishing and water recreation. The boat ramp and infrastructure are frequently at capacity during busy weekends and holidays.

During the early 1990's, discussions began regarding development of a means to reduce the safety hazards and damaging effects of the reservoir's wave action to Lucerne Marina and the boaters it serves. After substantial research and discussion between the Forest Service, Flaming Gorge Corporation (operator of the Lucerne Marina), and other partners, a professional assessment was secured through the services of Advanced Aquatechnics Incorporated.

The analysis identified a positive justification and need through consideration of multiple factors. The assessment stated, "*The propensity for seasonal easterly wind exposures, when factored by historical easterly occurring storm cell or microburst activity, which has generated significant and potentially destructive waves into the harbor area, substantiates the need for wave attenuation.*"

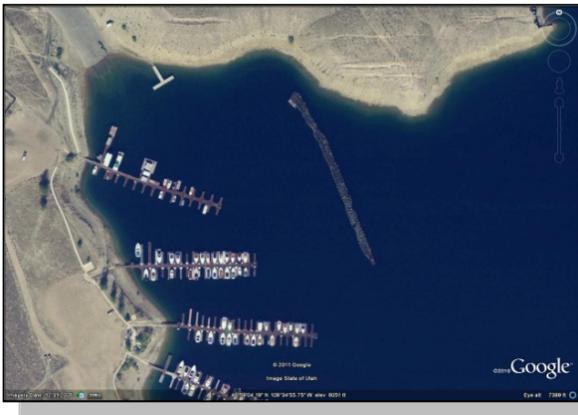
The analysis proposed that a Large Tire Wave Attenuator (LTWA) be installed. This device consists of a series of large equipment tires linked together by cable. Blocks of closed-cell foam are packed inside the tires to ensure flotation.

The Forest Service and partners then worked with the Utah Division of Wildlife Resources and Utah Parks and Recreation and obtained funding for purchase and installation of the attenuator in 1998 through the Utah Motorboat Access Program, Sport Fish Restoration Act, and general fund match.



Diagrams from Large Tire Wave Attenuator proposal prepared in 1996

The attenuator provided breakwater functions for the boat launch area and improvements for a decade, during which time it provided public safety and protection while being subjected to significant weather events. However, during the winter of 2007, the force of ice movement on the reservoir dislodged one of the anchoring blocks, causing it to slide to a lower depth, pulling a portion of the attenuator under water. Since that time, additional movement has occurred that has rendered the attenuator mostly ineffective, with additional sections sinking beneath the surface.



Aerial view of attenuator in 2006



Aerial view of attenuator in 2009 after failure



In June of 2011, the Forest Service attempted to bring the attenuator to shore for repair, but was unsuccessful. The barge that the Forest Service uses for dock maintenance and other functions was not capable of resurfacing the sunken portions of the attenuator.

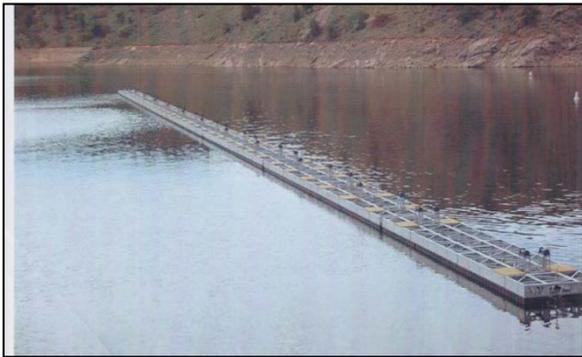
The services of professional divers were employed and portions of the sunken attenuator were detached, but some of the remaining sections are still beneath the surface with other sections having lost much of their flotation properties.



In general, the existing attenuator is in poor condition and needs replacement or extreme repair. Over 200 feet is waterlogged and sunken at the bottom of the lake, with portions of the remaining 300 feet partially submerged. Repair would include dismantling the existing attenuator and bringing it ashore in sections, then replacing the foam floatation material and other components. Cost estimates to repair the existing attenuator are well over \$120,000.

Because of the high cost and short remaining life estimated after completion, this is not considered to be a cost-effective option. In addition, LTWA's have lost their favor in the industry because of their short life and high maintenance requirements.

Project Specifications: This project will include the purchase and installation of an attenuator of modern construction that is much better designed to withstand the topography and conditions that exist in the Lucerne harbor area. The Forest Service and partners have researched current technology for wave attenuation. Newer systems have a much greater anticipated useful life. In addition, the new structures



are designed with enhanced stabilization to address the concerns that led to failure of the existing LTWA.

The replacement attenuator will be approximately 600 feet in length, and located in a slightly different configuration than the previous structure. This will take advantage of existing topography and be situated to better protect the harbor area.

The Forest Service will work with the Utah Division of Wildlife Resources and Utah Parks and Recreation in obtaining recommendations for the exact type of structure to be installed. However, for proposal estimation purposes, cost estimates obtained for the anticipated types of potential structures have been utilized.

The existing LTWA would be removed. Because of its deteriorated state, the Forest Service has determined the cost of repair and length of future useful life do not warrant its returned use at this location. However, there has been some interest expressed by UDWR in utilizing the salvageable portion of the LTWA elsewhere, perhaps as a temporary solution for attenuation along the southern portion of the Lucerne harbor area. Transfer of ownership of the LTWA to the state could be completed if this is desired.



Partnership Efforts:

This project has strong support from the Lake Flaming Gorge Yacht Club, Flaming Gorge Corporation (operator of Lucerne Marina), city of Manila, Daggett County, and numerous other stakeholders and user groups. Letters of support have been obtained from some of these organizations and are included with the proposal.

The yacht club and the marina operator have been key participants in the efforts for attenuator replacement. Numerous meetings, field visits, and other coordination activities have been held with these and other stakeholders. In addition to these efforts, the yacht club and marina users are currently pursuing other funding sources to install a second attenuator to the south. This would provide protection for the concessionaire-owned docks and enhance the overall value of this project.

In addition to the attenuation needs, the entire Lucerne complex has been identified as a priority for maintenance and improvement during the past three years. Numerous improvements have been completed, are underway, or are planned for the future.

Presently, the Forest Service is cooperatively working with several partners in renovating the entire complex. To date, the Forest Service has secured funding of over \$4 million and has recently applied for additional \$3.4 million to complete other improvements. These improvements include resurfacing of boat launch parking area (through 2009 and 2010 Utah Motorboat Access Funds), resurfacing of the main road into Lucerne, replacement of the fish-cleaning station (through 2008 Utah Motorboat Access Funds), and replacement of campground facilities, restrooms, and roads.

The attenuator replacement project will greatly complement each of these other improvements. In addition, it is a direct improvement to the main attraction to the site; namely, the access to boating on the reservoir.

One component of the project will be including signs acknowledging the partnerships providing funding.



Quagga Mussel Education Component: The Ashley National Forest continues to recognize the risks that are associated to the fisheries as well as infrastructure of Flaming Gorge Reservoir and its corresponding waterways if the Quagga mussel is introduced. In connection with this, the Forest is working closely with Utah Department of Wildlife Resources in order to educate the public of the dangers of this aquatic organism. Signs have been placed at the Lucerne Recreation Complex and other access points providing educational materials. The back of our recreational fee pass also now has information concerning Quagga mussel prevention.



The popularity of the Lucerne boat access area, as well as the fact that boaters are staying at the location for an overnight period, presents a large audience to provide education about the Quagga mussel. In addition, Lucerne is a site where cooperative efforts between UDWR and the Forest Service provide use of a portable decontamination unit during the primary operating season. Pamphlets and other educational materials will be available for boaters at the Lucerne location.

5. **PROJECT COST:**

Due to the large cost of replacing the attenuator, various funding options have been considered. It has been determined that the Forest Service can implement the project in separate stages if grant funding is limited. While completion of the project in one stage would be preferred, two budget options are described. These include:

1. Replacement of the entire attenuator at once. This includes the purchase and installation of a 600 foot attenuator, as well as removal and disposal of the existing attenuator. (An alternative to disposal of the existing attenuator can be to transfer ownership of the attenuator back to the state --allowing for its reconstruction and use elsewhere if this is deemed a viable option.)
2. Replacement of the attenuator over two years. This would involve purchase and installation of 300 feet of attenuator in the first year, along with removal and disposal of the existing structure (again, the alternative of transferring ownership can be considered to disposal). During the second year, the additional 300 feet would then be purchased and installed. The nature and construction of the attenuator would allow this as it is constructed in sections with each section having its own anchoring and stabilization.

Note: Budget estimates for each option include the estimated expense of design and contracting costs required if the attenuator is purchased by the Forest Service. However, an option may exist of utilizing state purchase of the attenuator and then transfer of ownership. If this is possible, the estimated costs of the project could be reduced by over \$ 39,600.

Is the proposed project intended to be a cooperative project (partnership, cost share, etc.)?

Yes X No If yes, what is the total estimated cost of the entire project and what portion of the total cost is being requested:

Budget option #1 (*full attenuator replacement in one year - preferred*)

- | | | |
|----|--|--|
| A. | Total estimated cost of entire project | --see attached estimate. \$ <u>495,500</u> |
| B. | Amount of fiscal assistance requested | \$ <u>495,500</u> |

Budget option #2 (*attenuator replacement over a two-year period*)

Year one

- | | | |
|----|---------------------------------------|--|
| A. | Estimated cost of project stage I | --see attached estimate. \$ <u>295,500</u> |
| B. | Amount of fiscal assistance requested | \$ <u>295,500</u> |

Year two

- | | | |
|----|---------------------------------------|--|
| A. | Estimated cost of project stage II | --see attached estimate. \$ <u>206,000</u> |
| B. | Amount of fiscal assistance requested | \$ <u>206,000</u> |

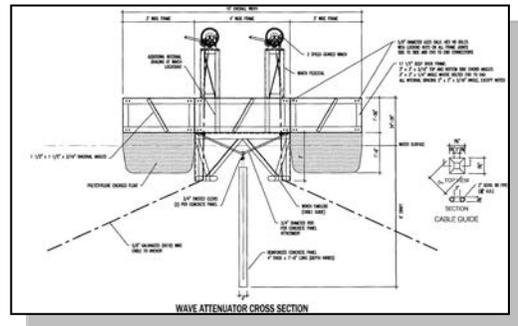
6. **SOURCE OF FUNDING:**

	<u>Budget 1</u>	<u>Budget 2 (yr 1)</u>
A. Utah Division of Wildlife Resources, Sport Fish Restoration Act, Motorboat Access funds (may not be more than 75% of the funds requested under 5B).	\$ <u>371,625</u>	<u>221,625</u>
B. Utah Division of Parks and Recreation, General Fund (may not be more than 25% of the funds requested under 5B).	\$ <u>123,875</u>	<u>73,875</u>
C. Matching funds from non-federal source (identify).		
D. In-Kind match from non-federal source (identify)		

Note: Under Budget option #2, \$206,000 would be submitted as a second funding request in FY2013.

7. **What are the time requirements for the projects?**

After an agreement for funding is received, a contract for final design will be completed. This design will then be utilized as a basis for the attenuator purchase contract. It would then take approximately 60 days for the contract to be awarded (depending on time of fiscal year). It is preferable that the contract be awarded for completion during the fall of 2012 or spring or spring of 2013 prior to the operating season.



Note: If budget option 2 is completed, stage 1 of the project would be completed in the timeframe described, allowing for the benefit of the first 300 feet during 2013. Depending on receipt of funding for the second portion, the additional 300 feet would be installed to benefit users in 2014.

8. **If routine operation and maintenance of the proposed project is to be done by someone other than the sponsor, please identify who will have this responsibility:**

Maintenance of the attenuator will be the responsibility of and performed by the Forest Service. However, due to the large number of courtesy docks and other facilities available on the reservoir, the combined annual maintenance requirements are substantial.

In connection with this, the Forest Service is submitting a separate grant proposal for assistance in maintaining Motorboat Access Enhancements Projects along the Utah portion of the reservoir. These funds will assist existing Forest Service measures to ensure proper maintenance is completed. They may also be able to provide an increase in the operating season availability.

9. **Has the proposed project been identified in some type of needs assessment or management plan? If so please describe:**

The Ashley National Forest Plan for Land and Resource Management states as its second objective for recreation, “*Operate and maintain developed recreation sites to Standard Service Level.*” Within the scope of this objective are standards and guidelines, including to “*Manage sites in maintenance condition class 1, as defined in the Forest Service Handbook*”(FSH 2309.11).

This calls for operational and safe recreation site and facilities. The proposed project will achieve this objective by ensuring the quality and safety of facilities at the Lucerne boat launch area. Objective 6 affirms this by stating, “*Provide areas and opportunities for all types of recreation user experience*”.

10. **What is the present estimated, annual use of the project area? (i.e.: number of boats, angler hours, recreational days):**



The reservoir is part of the Flaming Gorge National Recreation area, which receives approximately 1,924,000 visitors each year. It is estimated that 30% of that use is on the reservoir, for an approximate reservoir use total of 577,200 visitors. Lucerne receives the highest amount of boater access use.

According to National Visitor Use Monitoring surveys, the primary activity visitors participate in while visiting Flaming Gorge is fishing, followed by viewing scenery, camping, and boating. In 1989-1990, peak creel surveys showed approximately one million angler hours for the Flaming Gorge Reservoir. Similar Creel surveys in 1993 estimated approximately 800,000 angler hours. Although overall visitation and recreation is slightly down since the 1990's, the trend in recreation is continued growth with recreation users and anglers desiring more services and opportunities.



11. What are the benefits and/or predicted increase in annual use of the area should the project be completed?

The benefits will include improved safety at the boat launch and marina area. This reduces the danger to boaters and reduces the risk of damage to boats from high waves during wind events. It will also provide for easier launching and boat retrieval. This is anticipated to increase the recreational value of this location and attract additional visitors due to the safer environment.

Visitor use at the Lucerne complex will continue to be high and completed projects are highly visible to an appreciative public. This project, combined with other the improvements from other funding sources will make a huge impact on the quality of the water-based recreational experience at Lucerne Valley and will increase use.



12. Has an Environmental Assessment or Environmental Impact Statement been prepared for the proposed project?

Decisions may be categorically excluded from documentation in an environmental impact statement or an environmental assessment when no significant issues or extraordinary circumstances exist, and they are within one of the categories identified by the U.S. Department of Agriculture in 7 CFR part 1b.3 or one of the categories identified by the Chief of the Forest Service in the Forest Service Handbook.

No significant issues or extraordinary circumstances within the scope of this proposal were identified. Therefore, this action falls within 36 CFR 220.6(d)(5), repair and maintenance of recreation sites and facilities and is categorically excluded from documentation in an environmental impact statement or an environmental assessment.

Potential issues surrounding the inability to remove portions of the existing attenuator from the bottom of the reservoir have been carefully examined. The Utah Division of Water Quality has determined that no threats exist due to the age of the structure and depth of its submerged location. The Bureau of Reclamation has provided documentation indicating that they are unaware of any concerns associated with allowing the sunken attenuator and given authorization for the structure to remain.

The depth of the dislocated sections is also sufficient to eliminate concerns for vessel passage.

CERTIFICATION:

I certify that I am authorized to sign this application and that the information herein provided is, to the best of my knowledge, true and accurate. I further certify that the applicant has the necessary financial resources to fulfill all obligations relative to this project including the cost of operation and maintenance.

Signature of Authorized Agent

Title

Date

Lowdy Em

DISTRICT RANGER

11/10/11

RECOMMENDED FOR FUNDING

Utah Division of Wildlife Resources

Utah Division of Parks and Recreation

Yes _____ No _____

Yes _____ No _____