Supplemental Environmental Assessment
John W. Flannagan Dam
Winter Drawdown Optimization
Dickenson County, Virginia

U.S. Army Corps of Engineers
Huntington District
Huntington, West Virginia
July 2019

Supplemental Environmental Assessment
John W. Flannagan Dam Winter Drawdown Optimization
Dickenson County, Virginia
Executive Summary

This Supplemental Environmental Assessment (SEA) has been developed pursuant to the National Environmental Policy Act (NEPA) by the U.S. Army Corps of Engineers (USACE), Huntington District, to examine the potential environmental impacts of optimizing the existing water drawdown process at the John W. Flannagan Reservoir (JWF) to allow for added scheduled releases in the month of October to provide additional downstream whitewater recreational opportunities. The SEA tiers from previous environmental documentation: the 1992 Environmental Assessment for Operational Change to Provide Recreational White Water Releases at John W Flannagan Reservoir and the 1996 Supplemental Environmental Assessment for Operational Change to Provide Recreational Whitewater Releases at John W Flannagan Reservoir.

JWF, located on the Pound River a tributary of the Russell Fork, is operated for authorized purposes of flood control, low flow augmentation, recreation, fish and wildlife betterment, and water quality control, and water supply. The Russell Fork, which is a tributary of the Big Sandy River, has been noted as an international whitewater destination.[1] Each fall, whitewater enthusiasts, including private kayakers, travel from all over the country and abroad to utilize the whitewater within the Breaks of the Russell Fork resulting from fall drawdown releases at JWF. While enhanced downstream recreation is not an authorized project purpose at the JWF, USACE schedules increased weekend water releases from the project during the first four weekends (on Saturdays and Sundays) in October as a function of the winter drawdown process allowing for recreational whitewater opportunities downstream along the Russell Fork River.

USACE is evaluating optimizing the existing winter drawdown release schedule to determine if additional whitewater opportunities could be provided during the winter drawdown. The Proposed Action Alternative would entail adding two Fridays on the first and fourth weekend of October with higher volume releases. This alternative would provide an overall gain of two days of higher volume water releases to facilitate whitewater rafting activities.

The SEA has concluded there are no significant impacts to the natural or human environment associated with the implementation of the proposed modifications to winter drawdown at JWF.

[1] American Whitewater, a non-profit, nationally recognized organization that rates whitewater rafting and kayaking locations in various regions of the US has recognized the Breaks of the Russell Fork as one of the best whitewater runs in the country and cites numerous Journal articles and first-hand accounts by rafters and kayakers of whitewater adventures in the Breaks.

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT
JOHN W. FLANNAGAN DAM
WINTER DRAWDOWN OPTIMIZATION
DICKENSON COUNTY, VIRGINIA

Table of Contents

1.0 PROJECT DESCRIPTION 1
1.1 Project Background 1
1.2 Project Location 2
1.3 Purpose, Need, and Authorization 2
2.0 PROPOSED ACTION AND ALTERNATIVES 3
2.1 Alternatives Dismissed from Further Consideration 4
2.1.1 Alternative A – Four day weekends of higher volume releases in October 4
2.1.2 Alternative B - 17 Consecutive Days of Higher Volume Releases 4
2.1.3 Alternative C - 14 Consecutive Days of Higher Volume Releases 4
2.2 Alternative A2 - Proposed Action Alternative (PAA) 4
2.3 No Action Alternative (NAA) 4
3.0 ENVIRONMENTAL SETTING AND CONSEQUENCES 7
3.1 Recreation and Land Use 7
3.2 Climate Preparedness and Resilience 9
3.3 Threatened and Endangered Species 9
3.4 Impacts to Other Project Purposes 10
3.5 Cumulative Effects 10
4.0 Status of Environmental Compliance 10
5.0 REQUIRED COORDINATION 11
5.1 Agencies Contacted 11
5.2 Public Review and Comments 12
6.0 CONCLUSION 12

List of Tables

Table 1	Alternatives Considered	5
Table 2	Status of Environmental Compliance	14
Table 3	Consulting Agencies	15

List of Figures

Figure 1	Site Location Map	2
Figure 2	Monthly Angling Effort on Flannagan Reservoir	8

List of Appendices

Appendix A	Agency Coordination
Appendix B	Public, Stakeholder and Organization Input and Comments
Appendix C	Mailing List
Appendix D	Final Environmental Assessment for Operational Change to Provide Recreational Whitewater Releases for John W. Flannagan Reservoir – September 1992
Appendix E	Supplemental Environmental Assessment for Operational Change to Provide Recreational Whitewater Releases for John W. Flannagan Reservoir – October 1996

The brief and concise nature of this document is consistent with the 40 CFR requirements of the National Environmental Policy Act (NEPA) to reduce paperwork and delay by eliminating duplication with existing environmental documentation, incorporating pertinent material by reference, and by emphasizing interagency cooperation. The majority of data collection and analysis in this document was performed by the U.S. Army Corps of Engineers (USACE).

1.0 PROJECT DESCRIPTION

1.1 Project Background

The construction of JWF in the 1960's was authorized by the Flood Control Act of 1938 as a component of a comprehensive plan for flood control in the Ohio River Basin. JWF was formerly named Pound Reservoir and was a substitute for Clintwood Reservoir, which was identified in the original comprehensive plan proposing the construction of four reservoirs within the Big Sandy River Basin. JWF is authorized for flood control, fish and wildlife conservation, water supply, low-flow augmentation, recreation, and water quality control. While JWF is authorized for recreation, such as boating, fishing, and camping, upstream of the dam and on project-related property, the project is not specifically authorized to be operated in a manner supporting off-project recreation downstream of the project.

The reservoir project maintains a summer or conservation pool of 16,500 acre-feet for water-related recreation (boating, water-skiing, swimming, fishing, etc.) and experiences an average of 376,000 recreation users annually at six developed recreation sites. The conservation pool (1,145 surface acres) for fish and wildlife habitat is maintained at an elevation of 1,396 feet between 15 April and 30 September with a winter drawdown of 16 feet starting in October with winter drawdown completed by 1 December. USACE maintains lands approximately one-quarter mile downstream for a day-use area where the Virginia Game and Inland Fisheries stocks fish in October, November and January with additional stockings between February and May. The project also is authorized to maintain reservoir storage for Municipal and Industrial (M&I) water supply, and low flow augmentation for pollution abatement.

Two water storage agreements between USACE and the Flannagan Water Authority provide the right to utilize a total of 3,360 acre-feet of usable storage space within the project. At this time, the Water Authority is removing approximately five million gallons of water per day. Under normal conditions, the removal of this water does not impact the conservation pool as daily inflows exceed the amount of water being withdrawn. Water supplied by JWF serves five counties – Dickenson, Buchanan, Wise, Russell and Tazewell – and serves as the primary source of water for Dickenson and Buchanan Counties. It is unlikely additional water supply beyond the amount allocated in the existing agreements would be needed in the future due to changes in regional economic conditions.

The low flow augmentation increment of storage was originally authorized in JWF to supplement natural flows during seasonal low flow periods (late summer/fall) on the Russell Fork and Levisa Fork. An increment of reservoir storage supporting downstream low flow augmentation in the Levisa Fork is maintained at Flannagan Lake and is discharged in concert with Fishtrap Lake. Additionally, to meet water quality standards promulgated by US

Environmental Protection Agency (USEPA) and the Commonwealth of Kentucky, JWF ensures water quality for dissolved oxygen and water temperature downstream.

1.2 Project Location

JWF is located in Dickenson County, Virginia on the Pound River, a tributary of Russell Fork. The dam is separated from the Russell Fork River by a one mile stretch of the Pound River, which meets the Russell Fork River near Bartlick, Virginia. Figure 1 shows the reservoir and the Federal project boundaries as well as its relationship to the Breaks of the Russell Fork. The Breaks, also referred as the "Grand Canyon of the South", is the deepest gorge east of the Mississippi River. It is accessed via Highway 80 (Virginia State Route 80 and Kentucky State Route 80), between Haysi, Virginia and Elkhorn City, Kentucky. The Breaks Interstate Park is named for this feature and is located in southeastern Kentucky and southwestern Virginia.

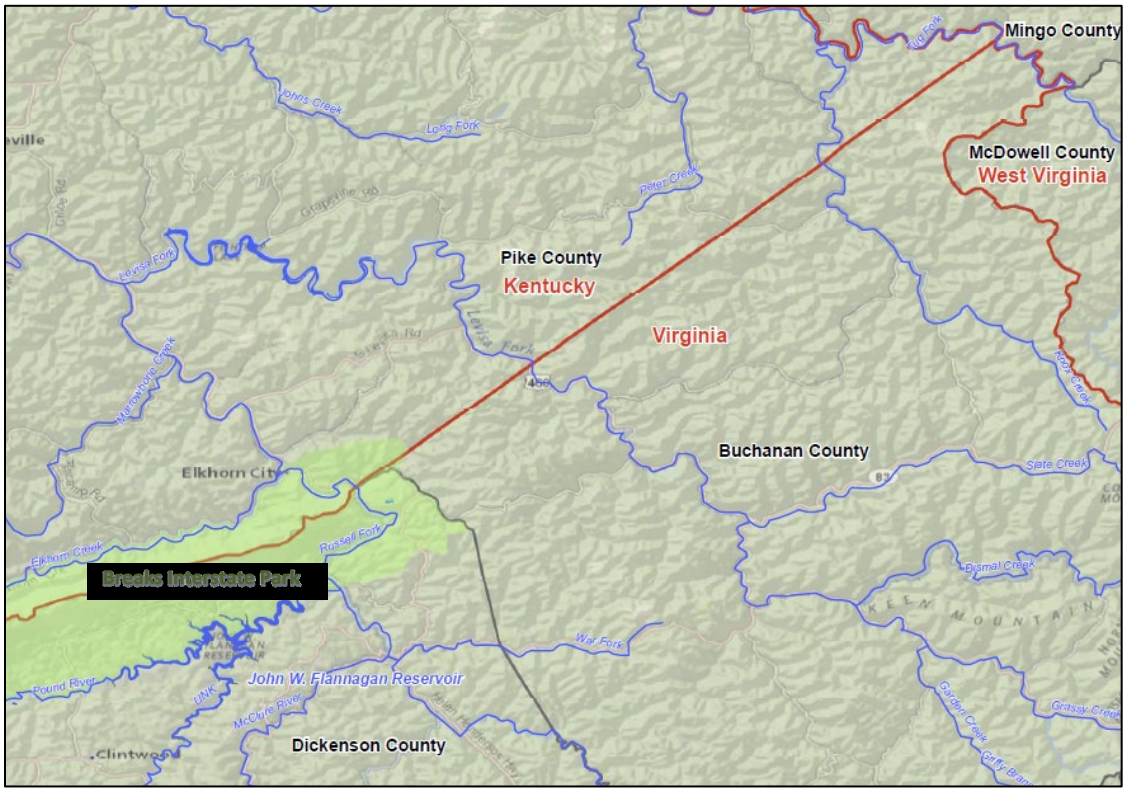

Figure 1: Site Location Map: John W. Flannagan Dam and Reservoir and the Breaks of the Russell Fork

1.3 Purpose, Need, and Authorization

The project purpose of the proposed action is to determine if the current winter drawdown may be modified to optimize the winter drawdown release schedule to accommodate additional whitewater releases. This SEA was prepared pursuant to NEPA, Council on Environmental Quality (CEQ) Regulations (40 CFR 1500-1508), and Corps implementing regulation, Engineering Regulation 200-2-2.

Two previous documents were issued for operational adjustments at JWF in support of downstream recreational opportunities: the 1992 Environmental Assessment for Operational

Change to Provide Recreational White Water Releases at John W Flannagan Reservoir and the 1996 Supplemental Environmental Assessment for Operational Change to Provide Recreational Whitewater Releases at John W Flannagan Reservoir. This Supplemental Environmental Assessment (SEA) tiers from the 1992 assessments, and examines the potential environmental impacts of optimizing the existing winter water drawdown process at JWF to allow for additional scheduled releases in the month of October to provide added downstream recreational opportunities.

This SEA concisely documents environmental consideration and assists in determining whether significant impacts may be associated with the proposal (40 CFR 1508.9 (a)) and tiers (40 CFR 1508.28) from previous environmental documentation, the 1992 EA. A Finding of No Significant Impact (FONSI) for the 1992 EA was issued in September 1992.

2.0 PROPOSED ACTION AND ALTERNATIVES

As indicated above, the winter drawdown process begins on 1 October in order to reach winter pool by 1 December. During initial brainstorming and formulation of alternatives, numerous combinations of drawdown alternatives were formulated to reach winter pool. In addition to numerous combinations of days, there was also evaluation of discharge of flow. Potential whitewater releases were considered in ranges of either lower ranges of 350 – 400 cubic feet per second (cfs) or higher ranges of 800 or 1000 cfs.

Based upon evaluation and comparison of the merits of each plans in terms of their environmental and economic effects, the plans were screened. During this process, many alternatives were eliminated from further consideration. Coordination with public stakeholders and resource agencies was conducted during the evaluation and screening of these alternatives. At this time, substantial concern was received by agencies and public regarding existing and proposed higher volume releases referencing impacts to in-lake and downstream recreation. The comments received indicated impacts were realized by those engaging in angling from bank and by boat. Particular emphasis on weekend recreation from both fishing and whitewater interests was received, emphasizing this is the most valuable time for the users (Friday-Sunday).

As a result of public input, four alternatives were further evaluated by USACE including the NAA for further analysis. A variation of Alternative A (Alternative A2) was formulated in response to public input received, to seek a balance between competing interests. See Table 1 for a comparative summary of the alternatives.

- Alternative A – Four day weekends of higher volume releases in October (8 additional days of higher flow releases)
- Alternative A2 – A variation to plan A, which adds a Friday to the first and fourth weekend of October (two additional days of higher flow releases)
- Alternative B - 17 consecutive days of higher volume release; from the 2nd Saturday to the last Monday of October;
- Alternative C - 14 consecutive days of higher volume release; from the 3rd Monday to the last Sunday of October;

- No Action Alternative - no change from current conditions (800 cfs first three weekends of October and 1000 cfs the fourth weekend of October).

2.1 Alternatives Dismissed from Further Consideration

2.1.1 Alternative A – Four day weekends of higher volume releases in October

Alternative A would entail an expansion of existing higher volume release days from the current baseline of Saturday and Sunday. This would include adding additional releases on Friday and Monday (for a total of 8 additional days of higher flow releases). This alternative was eliminated due to the loss of 8 days of recreational fishing days downstream of the dam as well as impacts expressed by the public regarding current releases.

2.1.2 Alternative B - 17 Consecutive Days of Higher Volume Releases

Alternative B would entail having 17 consecutive days of higher volume releases occur from the 2nd Saturday to the last Monday of October. This alternative was dismissed due to the economic impact of elimination of weekend higher volume releases. Additionally, downstream (immediately below the dam) weekday fishing would be impacted for longer period of time by an additional seven days. In addition, the VADGIF stocking schedule would need to be modified.

2.1.3 Alternative C - 14 Consecutive Days of Higher Volume Releases

Alternative C would entail having 14 consecutive days of higher volume releases occur from the 3rd Monday to the last Sunday of October. Similar to Alternative B, this alternative was dismissed due to the economic impact of elimination of weekend higher volume releases. Moreover, this alternative realizes impact to downstream (immediately below the dam) weekday fishing for longer period of time by (an additional four days) and require a modified stocking schedule.

2.2 Alternative A2 - Proposed Action Alternative (PAA)

Alternative A2 is a modification of alternative A. This alternative was formulated largely in response to public and stakeholder input received during the public comment period and public meeting held from April 2019 to June 2019. During this timeframe substantial concern was received regarding the economic impact of loss of higher releases during the weekend days. Fishing interests also continued to express concerns regarding expansion of whitewater releases. The PAA was developed in an effort to balance the potential optimization of the winter drawdown for whitewater opportunities with the authorized project purposes of in-lake and downstream fishing recreation in the tailwaters proximate to the Flannagan Dam. The PAA would entail two additional Fridays on the first and fourth weekends in October the flows are augmented in October at the higher volume releases. This alternative would provide an overall gain of two days of higher volume water releases to facilitate whitewater rafting activities.

2.3 No Action Alternative (NAA)

The No Action alternative assumes JWF will continue to be operated in accordance with the current Water Control Manual, dated January 2010. The project will continue to operate by releasing additional flows the first four weekends in October; 800 cfs the first three weekends of

October and 1000 cfs the fourth weekend of October, assuming storage is available. As required by NEPA, the NAA would be carried forward for further evaluation.

Alternative	Description	Total whitewater days	Whitewater Impacts	Fishing Impacts	Summary of Effects
A	4 day high volume release weekends (Friday, Saturday, Sunday and Monday) on each weekend in October	16	Increase in eight days of whitewater releases	Downstream fishing significantly impacted.	Substantial adverse impact for anglers downstream consisting of an increase in unfavorable fishing conditions, due to swift water conditions downstream.
A2 Proposed Action Alternative	3 day high volume release weekends (Friday, Saturday and Sunday) on the first and fourth weekend in October	10	Increase in two days of whitewater releases	Minimal change from current conditions	Minimal change for anglers downstream consisting of a slight increase in unfavorable fishing, due to swift water conditions downstream.
B	17 consecutive days of high volume release from the 2nd Saturday to the last Monday of October	17	Increase of 9 days of whitewater but loss of the first weekend of whitewater	One weekend of downstream fishing would be restored. However, weekday fishing would be significantly impacted. The VADGIF trout stocking schedule would require modification	While this alternative would positively benefit recreational fishing during the first weekend in October, the established whitewater recreation during the first weekend would negatively impact local economy. Moreover, downstream fishing impacts would prolonged. This alternative would also require a change the established trout stocking schedule by the VADGIF.
C	14 consecutive days of high volume release from the 3rd Monday to the last Sunday of October	14	Increase of 6 days of whitewater, but loss of two weekends	Fishing downstream would be significantly impacted and for a longer duration. The VADGIF trout stocking schedule would require modification	Dismissed because of the downstream fishing impacts; high river levels for longer periods that make bank fishing impossible and the requirement to change the established trout stocking schedule by the VADGIF. Similar to Alternative B, but still has a negative impact on authorized project purposes.
NAA	No Action - no change from current conditions	8	No change	No change	Current conditions under normal circumstances

Table 1: Alternatives Considered

3.0 ENVIRONMENTAL SETTING AND CONSEQUENCES

This section describes the existing baseline conditions and consequences for resources impacted by the PAA and NAA. The nature of the proposed action involves a targeted flow for a specific period of time and would mimic a small storm event for a defined period of time. Based upon the nature of the proposed action, no further analysis was determined necessary for the following resources: Terrestrial Habitat, Cultural Resources, Floodplain, Aquatic Habitat, Water Quality, Wetlands, Hazardous, Toxic and Radioactive Waste, Biological Resources, Land Use, or Aesthetic Resources. The following discussion focuses only on consideration of those resources determined to have potential for impacts associated with the alternatives, thus complying with the concise document requirement of 40 CFR 1508.9 (a). Potential impacts from the alternatives considered in this SEA would be primarily to recreation, specifically fishing, both in the lake and immediately downstream of the dam.

3.1 Recreation and Land Use

The study area is located in the Kanawha section of the Appalachian physiographic province. The Pound River and Russell Fork River are approximately 10.5 miles in length within the project area and are characterized by a narrow sinuous valley bordered by steep ridges. In some locations (Breaks Gorge), the floodplain is restricted to the streambed itself. The economy and culture of the project area are largely dependent on the coal and timber industries, with recreation becoming an important economic factor in recent years. Recreational fishing occurs in both Flannagan Reservoir and within the Russell Fork. The Russell Fork is utilized as a recreational resource for rafting and kayaking as well.

Western Virginia and eastern Kentucky are rural mountainous areas offering a variety of social and recreational activities. The Jefferson National Forest is another significant recreational resource and offers many outdoor activities. Three regional reservoirs (John W. Flannagan Reservoir, Dickenson County, VA: Fishtrap Lake, Pike County, KY; and North Fork of Pound Reservoir, Wise County, VA) offer boating, fishing, and other outdoor activities. One of the significant tourism-related resources in the area is the Breaks Interstate Park which is comprised of a 4,200 acre park situated on the Russell Fork at the Kentucky-Virginia State line and includes a lodge, restaurant, and a variety of recreational activities.

As discussed previously, in addition to lake related activities, JWF winter drawdown releases currently offers opportunity for whitewater recreation downstream on the Russell River on two days during four weekends during the month of October. Recreational fishing is also practiced in Flannagan Reservoir and within the Russell Fork. The cold water releases from the reservoir have allowed the development of a special regulation trout fishing area on the Pound River below Flannagan Dam. In this area, only trout greater than 16 inches may be kept with no more than two kept per day.

The District conducted an optimization test during the first two weekends in November 2018 to assess potential effects of enhanced outflow.

- The first test weekend was a higher flow release of 900 cfs on 3 and 4 November 2018.
- The second test weekend was a lower volume releases of 350-400 cfs on Friday to Monday, 9-12 November 2018.

The test weekends yielded little quantitative data to gauge enhanced recreation resulting from increased releases. District personnel conducted a site visit to the outflow and downstream areas of the dam during the second test weekend on November 9, 2018. There was no indication of whitewater recreation occurring that day, however during this time the weather was poor with cold, heavy rain and not conducive to recreation. There was also no indication of downstream fishing taking place, despite stocking the day prior.

During various outreach efforts conducted by the study team including public meetings, numerous anglers reported dropping the lake by a 0.5 or 1 foot a day results in diminished fishing for the rest of the week. It was suggested that the recurring weekly weekend releases for downstream whitewater created a prolonged adverse effect for in-lake fishing through the week. Input received from anglers groups indicated in-lake fishing was of very low quality and in-lake fishing was effectively unavailable in October. Anglers were concerned adding of additional days of releases would extend or further diminish fishing quality. However, the JWF 2017 Angler Survey from VADGIF (*Figure 2*) indicates decreases slightly from September to October but generally follows a trend that one would expect for the change of seasons, weather and competing recreational opportunities for outdoor recreation, such as hunting.

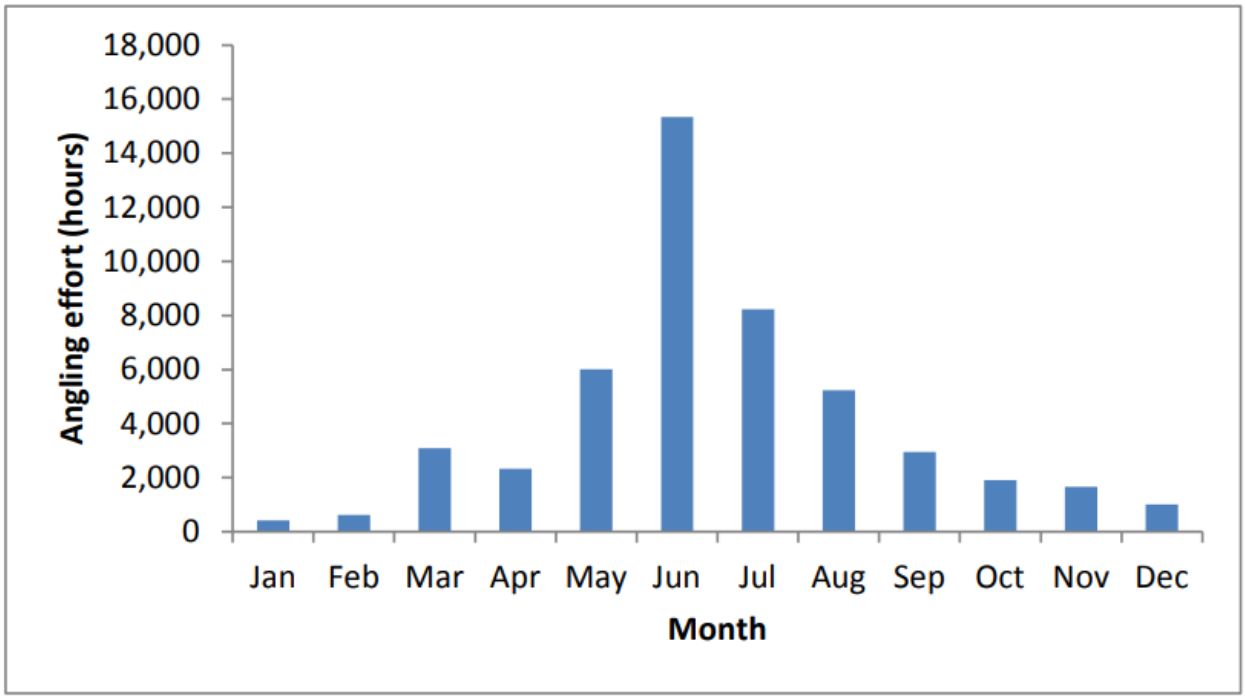

Figure 2: Graph of monthly angling effort estimated during a creel survey on Flannagan Reservoir from "John W. Flannagan 2017 Angler Survey Report" by Jeff Williams, Fisheries Biologist, Virginia Department of Game and Inland Fisheries, Page 3.

Downstream sport fishing immediately below the dam would be more directly affected by adding additional days of higher volume releases. In addition to the diminished quality of fishing due to swift waters, the high water also precludes anglers from wading and walking along the banks to access fishing areas. Each day of additional higher flow releases adversely affects

fishing, particularly in downstream areas proximate to the dam. The Virginia Department of Game and Inland Fisheries (VADGIF) stock trout below the dam. Currently the VADGIF generally stocks mid-October and mid-November below the dam. The stocking conducted by Virginia would potentially require a schedule alteration during October.

The additional releases from the PAA would enhance the recreational opportunities for the whitewater rafters, but would reduce fishing opportunities for anglers and the increased volume of water would potentially reduce the opportunities for visitors seeking calmer waters. However, the impact to anglers is not significant due to the ability of anglers to fish further downstream in the Russell Fork River during increased flow releases. The impact to other recreational visitors to the reservoir and downstream areas would also not be significant as the additional releases would be conducted on Fridays in conjunction with the same weekends that the additional releases are already taking place. Visitors would already be expecting the higher volumes of water to be released on the October weekends.

There would be no additional impacts associated with the NAA.

3.2 Climate Preparedness and Resilience

USACE must ensure that projects are planned and built to assure Climate Preparedness and Resilience. The Big Sandy River Basin's mid-latitude position makes it susceptible to highly variable weather throughout the year. The Basin's climate is greatly influenced by oceanic and atmospheric interactions. Based on existing climate change modeling, it is anticipated the Big Sandy River Basin will experience wetter conditions than historically documented.

The PAA would not involve any activity that would affect the environment in regard to climate change. This region is not projected to experience severe drought conditions and is instead expected to experience more precipitation in the future as larger and more intense rainfalls become more frequent. As a result, the PAA would not likely be influenced by or influence future climate change. For the same reasons, there are also no impacts expected with respect to climate as a result of the NAA.

3.3 Threatened and Endangered Species

The areas surrounding JWF, including the downstream reaches of the project, are within range of the Federally endangered Indiana bat (Myotis sodalis) and Virginia spiraea (Spiraea virginiana), as well as the Federally threatened Northern long-eared bat (Myotis septentrionalis) and Big Sandy crayfish (Cambarus callainus). Historically, a colony of Virginia spiraea was found to be established along the banks downstream of JWF. Big Sandy crayfish have known populations in the Pound River and Russell Fork.

No tree clearing would take place for this action and no caves will be flooded due to the relatively low stage of these outflows. The proposed additional releases for the PAA are much less than the maximum authorized outflows. The two additional days would mimic a minor storm event and not impact aquatic species.

Based upon the nature of the action (two additional days of higher releases in October) the District has determined there would be no effect to federally listed threatened and endangered species. Therefore, no impacts are anticipated to threatened and endangered species in the project area due to the PAA or NAA.

3.4 Impacts to Other Project Purposes

The additional recreational releases would occur during winter drawdown, where releases are already occurring. Therefore, no impacts to other project purposes are anticipated as part of the PAA or the NAA.

3.5 Cumulative Effects

USACE must consider the cumulative effects of the proposed project on the environment as stipulated by NEPA. Cumulative effects are "the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or Non-Federal) or person undertakes such actions". Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 CFR Part 1508.7 Council on Environmental Quality [CEQ] Regulations).

The cumulative effects analysis is based on the potential effects of the proposed project when added to similar impacts from other projects in the region. An inherent part of the cumulative effects analysis is the uncertainty surrounding actions that have not yet been fully developed. The CEQ regulations provide for the inclusion of uncertainties in the analysis and states that "when an agency is evaluating reasonably foreseeable significant adverse effects on the human environment...and there is incomplete or unavailable information, the agency shall always make clear that such information is lacking" (40 CFR 1502.22).

Section 3.0 documents the existing environment and potential environmental effects of the PAA and NAA with respect to existing conditions. The effects of the PAA, as discussed above, are localized and minor. No reasonably foreseeable future actions that would have similar impacts as the proposed action were identified. In scoping cumulative effects issues, no resources were identified as having a potential to be significantly affected. Given the current program is in place for the foreseeable future and the overall beneficial recreation enhancement effect from implementation of the PAA, there is expected to be a positive, though small, cumulative effect on safety based on past, present, and reasonably foreseeable actions.

4.0 Status of Environmental Compliance

The PAA will be in full compliance with all local, state, and Federal statues as well as Executive Orders prior to the issuance of a FONSI. Compliance is documented below in Table 2.

Table 2 – Environmental Compliance Status			
Statute/Executive Order	Full	Partial	N/A
National Environmental Policy Act (considered partial until the FONSI is signed)		X	
Fish and Wildlife Coordination Act	X		
Endangered Species Act	X		
Clean Water Act	X		
Wild and Scenic Rivers Act	X		
Clean Air Act	X		
National Historic Preservation Act	X		
Archeological Resources Protection Act			N/A
Comprehensive, Environmental Response, Compensation and Liability Act	X		
Resource Conservation and Recovery Act	X		
Toxic Substances Control Act	X		
Quiet Communities Act	X		
Farmland Protection Act	X		
Executive Order 11988 Floodplain Management	X		
Executive Order 11990 Protection of Wetlands	X		
Executive Order 12898 Environmental Justice in Minority Populations and Low-Income Populations	X		
Executive Order 13045 Protection of Children	X		

5.0 REQUIRED COORDINATION

5.1 Agencies Contacted

Agency coordination during the optimization process included the below entities. During coordination and consultation, parties were made aware of the process and procedures that would follow as well as what steps were taken to reach the culmination of the project. The development of the early alternatives were driven largely by coordination and consultation with water resource agencies in Kentucky and Virginia. The kickoff of the initial scoping meeting that began the project in September 2018 was attended by a broad array of concerned agencies, stakeholders and the public. The agencies and entities that have been a part of the coordinating and consultation process are listed in Table 3, below.

Table 3– Consulting Agencies
Breaks Interstate Park
Dickenson County Board of Supervisors
Kentucky Department of Fish and Wildlife Resources

Kentucky Office of Tourism, Art and Heritage
Pike County Tourism, Convention and Visitors Bureau
Town of Elkhorn City, Kentucky
Town of Haysi, Virginia
Virginia Division of Game and Inland Fisheries

The initial scoping meeting was held on 27 September 2018. The primary objectives were to define the scope of the project; determine the problems and opportunities and develop early alternatives that may address the situation. The meeting was attended by all of the participants listed in Table 3. Following the agency scoping meeting that evening the first public meeting was held.

The second resource agency meeting was held on 2 April 2019. The objective of this meeting was to provide an update to the stakeholder agencies and to release the array of three final alternatives that the project team had developed. Following the agency meeting that evening, the second public meeting was held.

Agency correspondence is included in Appendix B.

5.2 Public Review and Comments

The draft SEA and draft FONSI are being made available for public review and comment for a period of 30 days, as required under NEPA. A Notice of Availability was published in the local newspaper, Pikeville News Express and the Dickenson Star, advising the public of this document's availability for review and comment. A copy of the SEA will also be placed in the Dickenson County District Public Library and made available on-line at ***http://www.lrh.Corps.army.mil/Missions/PublicReview.aspx***. The mailing list for the SEA is located in Appendix C.

6.0 CONCLUSION

The evaluation of opportunities to further optimize the existing winter drawdown release schedule has resulted in a minimal modification to provide for two additional days of whitewater releases. The Proposed Action Alternative would entail adding two Fridays on the first and fourth weekend of October with higher volume releases. This alternative would provide an overall gain of two days of higher volume water releases to facilitate whitewater rafting activities while minimizing impact to other users, particularly anglers.

Therefore, the PAA would not be expected to have significant adverse impacts on the human environment.

Appendix A

Agency Coordination

Supplemental Environmental Assessment
John W. Flannagan Dam
Winter Drawdown Optimization
Dickenson County, Virginia

TOURISM, ARTS AND HERITAGE CABINET

MATTHEW G. BEVIN
GOVERNOR

2400 CAPITAL PLAZA TOWER
500 MERO STREET
FRANKFORT, KENTUCKY 40601
502-564-4270 – OFFICE
502-564-1512 - FAX

DON PARKINSON
SECRETARY

REGINA STIVERS
DEPUTY SECRETARY

June 15, 2016

Colonel Philip M. Secrist III
Commander, Huntington District
U.S. Army Corps of Engineers
502 Eighth Street
Huntington, WV 25701

Dear Colonel Secrist:

The Tourism, Arts & Heritage Cabinet, Commonwealth of Kentucky is willing and able to participate as the Sponsor for the Feasibility Study, in partnership with the U.S. Army Corps of Engineers (USACE), to cooperatively investigate project modification to include enhanced downstream recreation at the John W. Flannagan Dam in the Big Sandy watershed.

Our agency understands that a study cannot be initiated unless it is selected as a new start study with associated allocation of Federal funds provided through the annual Congressional appropriations process. If selected, we intend to negotiate a Feasibility Cost Sharing Agreement (FCSA) to initiate the study with USACE. It is our understanding the FCSA targets completion of the feasibility study within 3 years at a total cost of no more than $1 million. After signing the FCSA, a Project Management Plan will be developed and agreed upon by our agency and USACE. The study will be conducted and managed by USACE. The cost-sharing for the study is based on a 50% contribution by the Federal government, with our agency's 50% contribution provided in cash, or by a portion or all of the contribution provided through in-kind non-monetary services.

Our agency is aware that this letter constitutes an expression of intent to initiate a study partnership to address the specified water resources problems and is not a contractual obligation. We understand that work on the study cannot commence until it is included in the Administration's budget request, funds are appropriated by the Congress, and an FCSA is signed. It is understood that we or USACE may opt to discontinue the study at any time after the FCSA is signed but will commit to work together as partners from the scoping phase, and subsequent decision points throughout the feasibility study, on providing the necessary support to risk-informed decision making. If it is determined that additional time or funding is necessary to support decisions to be made in order to complete the study, our agency will work with USACE to determine the appropriate course of action. If you require additional information, please contact: Seth Wheat at 502-564-4270 or seth.wheat@ky.gov.

Regards,

Don Parkinson
Secretary

TOURISM, ARTS AND HERITAGE CABINET

MATTHEW G. BEVIN
GOVERNOR

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DON PARKINSON
SECRETARY

REGINA STIVERS
DEPUTY SECRETARY

April 17, 2017

Colonel Philip M. Secrist III
Commander, Huntington District
U.S. Army Corps of Engineers
502 Eighth Street
Huntington, WV 25701

Dear Colonel Secrist:

The Tourism, Arts & Heritage Cabinet, Commonwealth of Kentucky is willing and able to participate as the Sponsor for the Feasibility Study, in partnership with the U.S. Army Corps of Engineers (USACE), to cooperatively investigate project modification to include enhanced downstream recreation at the John W. Flannagan Dam in the Big Sandy watershed.

Our agency understands that a study cannot be initiated unless it is selected as a new start study with associated allocation of Federal funds provided through the annual Congressional appropriations process. If selected, we intend to negotiate a Feasibility Cost Sharing Agreement (FCSA) to initiate the study with USACE. It is our understanding the FCSA targets completion of the feasibility study within 3 years at a total cost of no more than $1 million. After signing the FCSA, a Project Management Plan will be developed and agreed upon by our agency and USACE. The study will be conducted and managed by USACE. The cost-sharing for the study is based on a 50% contribution by the Federal government, with our agency's 50% contribution provided in cash, or by a portion or all of the contribution provided through in-kind non-monetary services.

Our agency is aware that this letter constitutes an expression of intent to initiate a study partnership to address the specified water resources problems and is not a contractual obligation. We understand that work on the study cannot commence until it is included in the Administration's budget request, funds are appropriated by the Congress, and an FCSA is signed. It is understood that we or USACE may opt to discontinue the study at any time after the FCSA is signed but will commit to work together as partners from the scoping phase, and subsequent decision points throughout the feasibility study, on providing the necessary support to risk-informed decision making. If it is determined that additional time or funding is necessary to support decisions to be made in order to complete the study, our agency will work with USACE to determine the appropriate course of action. If you require additional information, please contact: Seth Wheat at 502-564-4270 or seth.wheat@ky.gov.

Regards,

Don Parkinson
Secretary

TOURISM, ARTS AND HERITAGE CABINET

MATTHEW G. BEVIN
GOVERNOR

2400 CAPITAL PLAZA TOWER
500 MERO STREET
FRANKFORT, KENTUCKY 40601
502-564-4270 – OFFICE
502-564-1512 - FAX

DON PARKINSON
SECRETARY

REGINA STIVERS
DEPUTY SECRETARY

March 7, 2018

Colonel Philip M. Secrist III
Commander, Huntington District
U.S. Army Corps of Engineers
502 Eighth Street
Huntington, WV 25701

Dear Colonel Secrist:

The Tourism, Arts & Heritage Cabinet, Commonwealth of Kentucky is willing and able to participate as the Sponsor for the Feasibility Study, in partnership with the U.S. Army Corps of Engineers (USACE), to cooperatively investigate project modification to include enhanced downstream recreation at the John W. Flannagan Dam in the Big Sandy watershed.

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Regards,

Don Parkinson
Secretary

MITCH McCONNELL
KENTUCKY

317 RUSSELL SENATE OFFICE BUILDING
WASHINGTON, DC 20510-1702
(202) 224-2541

United States Senate

MAJORITY LEADER

COMMITTEES:
AGRICULTURE
APPROPRIATIONS
RULES AND ADMINISTRATION

April 27, 2018

The Honorable R.D. James
Assistant Secretary of the Army (Civil Works)
108 Army Pentagon
Washington, D.C. 20310-0108

Dear Assistant Secretary James:

I write to you today to convey my support for efforts to increase recreational whitewater rafting opportunities and tourism at the Breaks Interstate Park region near Elkhorn City, Kentucky. As you may know, whitewater rafting enthusiasts from all over the world are drawn to the rapids of the Russell Fork River and to the surrounding beauty of Central Appalachia. This recreational tourism in Kentucky is enhanced by the U.S. Army Corps of Engineers' (USACE) scheduled fall weekend water releases from the John W. Flannagan Dam & Reservoir (Dam), which help create ideal water conditions for rafters and kayakers.

Unfortunately, USACE's Huntington District's Water Control Manual currently limits these water releases during four weekends in October. Nevertheless, I am told USACE and the Administration have the authority to revise the Huntington District's Water Control Manual to allow for additional weekend water releases from the Dam. These new water releases could double the whitewater rafting season at the park by extending it up to four additional weekends. Providing more opportunities for world-class whitewater rafting in Pike County will increase tourism and expand economic opportunities for my constituents in Eastern Kentucky. I strongly support efforts to revise the Huntington District's Water Control Manual to extend the whitewater rafting season in Eastern Kentucky, and I hope you will give my request full and fair consideration.

Thank you for your attention to this matter.

Sincerely,

MITCH McCONNELL
UNITED STATES SENATOR

MM/arn

Cc: The Honorable Mick Mulvaney, Director, Office of Management and Budget
COL Philip M. Secrist III, Hunting District Commander

FEDERAL BUILDING
241 EAST MAIN STREET
ROOM 102
BOWLING GREEN, KY 42101
(270) 781-1673

1885 DIXIE HIGHWAY
SUITE 345
FORT WRIGHT, KY 41011
(859) 578-0188

771 CORPORATE DRIVE
SUITE 108
LEXINGTON, KY 40503
(859) 224-8286

300 SOUTH MAIN
SUITE 310
LONDON, KY 40741
(606) 864-2026

601 WEST BROADWAY
SUITE 630
LOUISVILLE, KY 40202
(502) 582-6304

100 FOUNTAIN AVENUE
SUITE 300
PADUCAH, KY 42001
(270) 442-4554

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

September 17, 2018

John W. Flannagan Dam Resource Agency Meeting and Public Scoping Meeting

Invitation

As you may be aware, the Huntington District of the U.S. Army Corps of Engineers (USACE) is in the process of evaluating potential changes to the winter drawdown process at John W. Flannagan Dam in Dickenson County, Virginia. While enhanced downstream recreation is not an authorized project purpose at Flannagan, USACE currently schedules weekend releases from the project during the first four weeks in October as a function of the winter drawdown process. This evaluation will consider adding additional weekend releases in the month of November.

At this time, fall releases during October only equate to one-quarter of the total drawdown. As a result, it may be plausible to modify the winter drawdown process to extend the whitewater season and allow for additional downstream recreation opportunities. This evaluation will analyze operation parameters, formulate alternative strategies to balance competing needs, and assess potential impacts associated with modifying the winter drawdown process in accordance with National Environmental Policy Act (NEPA). Should evidence warrant changes to project operations during winter drawdown, the appropriate sections of the Water Control Manual would be updated accordingly. The update to the Water Control Manual would be funded under the Operations and Maintenance appropriation at full Federal expense.

To that end, we are planning a resource agency meeting and public scoping meeting to be held on September 27, 2018 at the conference center at Breaks Interstate Park, located at 627 Commission, Cir., Breaks, Virginia. The resource agency meeting will be held at 1:30 that afternoon, with the public meeting following at 6:30pm.

Your participation in these meetings would be greatly appreciated, as we kick off this evaluation of the potential impacts of downstream recreational releases at Flannagan Dam.

If you have any questions or comments, or would like to confirm your attendance, please feel free to contact me via email at jami.l.buchanan@usace.army.mil or by phone at 304.399.5347.

Appendix B

Public, Stakeholder and Organizational Input and Comments

Supplemental Environmental Assessment
John W. Flannagan Dam
Winter Drawdown Optimization
Dickenson County, Virginia

PETITION IN OPPOSITION TO THE EXPANSION OF WATER RELEASE INTO THE RUSSELL FORK RIVER

We, the undersigned interested citizens and residents of the Elkhorn City area do hereby Petition the United States Army Corps of Engineers in opposition to expanded release of impounded water into the Russell Fork River. Additional release would benefit only a very few white-water adventurers while severely impairing hundreds of years of local use of that river by hundreds of people for fishing, camping, swimming, baptism, tubing, docking and use of small boat and other uses. Prolonged release would permanently impair the watershed, washing away sandbars and islands, and having a severe impact on late-spawning fish. We want to continue our traditional use of our river. That river as it is now offers many of us recreation that we otherwise could not afford. We do not want to become mere spectators, watching a very few enjoy our river.

Frank Amy Moore	Leo Hamilton
Bobby C. Woolwine	Brittany Doegle
Kim Moore	Jenny Doegle
Lillian Anderson	Heather Woolwine
Steve Cantrell	Russell Charles
Judy Daley	Brenda Justice
Karen Woolwine	[illegible]
Marvin L Miller	[illegible]
Felicia D. Stanley	[illegible]
Carolyn Sanders	Lorraine G Stanley
Sammy Sanders	Sidina Flemmy
Elizabeth Barnett	Palma Mullins
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	Britten Woolwine
[illegible]	Earl D. Taylor
[illegible]	Jessie L. Taylor
Christian Woolwine	Ethan Taylor
Joe Woolwine	[illegible]
Brenda Hamilton	

PETITION SHEET # 1

PETITION IN OPPOSITION TO THE EXPANSION OF WATER RELEASE INTO THE RUSSELL FORK RIVER

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Amanda Boyd	Matt Mccoy
Ashlee Vanover	Shy Mccoy
Linn M. Gibson	Rodger Deel
[illegible] Deel	Burton Deel
Johnny Ratliff	Jancie Deel
Marty Ratliff	Traves Deel
Steve Hobbs	Allen Deel
Andrew Hobbs	Marty Mccoy
Adriane Ratliff	Brain Charles
Mariana Hobbs	Nancy Woods
Jacob Herron	Mark Woods
Annie E Chaels	Dewayne Woods
Barry L Charles	Jennifer Woods
Eric L Charles	Tammy Charles
Tamber Charles	Jeffer Charles
Sabrina Charles	Justin Adkins
Judy Charles	Carol Adkins
Pam Owens	Tomason Adkins
Jonthan Owens	Johanth Stitlner
Tyler Clifton	Jeff Woods

PETITION SHEET # 2

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Susan Coleman	Wanye Haynes
Cathy E. Coleman	Josh Sanders
Miles Sanders	Jon Collins
Everett Litteral	Courtney Ann
Kermit Lawrence	Alice Scalamy
James Potter	Linda Owens
Dean Potter	Tommy Owens
Vickie Potter	Angela Baker
Stephen Woodward	Emily Charles
Nicholas Ratliff	Trudie Mullins
Steven Lee Anderson	Cody Jennings
Charles Spaulding	William Fowler
James Sanders	Sylbe Adkins
Wayne A. Smith	Alice Woolwine
Jeffrey G. Wallace	Cody Cantrell
[illegible]	Angela Cantrell
[illegible]	Brad Blackburn
Ricky Bellew	
Curtis Wallace	
Sandy Haynes	

PETITION SHEET # 3

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Nikki Kendrick	Leslie Fields
Lora Hess	Linda Blankenship
Angel Potter	Scottie Harris
Matt Childers	Brenda Harris
Johnny M Potter	Elster Belcher
Sonja R. Potter	Jerry Potter
Dave Shepherd	James E. Potter
Christian Phillips	
Ronna Cantrell	
Stuart Cantrell	
Nicholas Hess	
Madison Phillips	
Sybile Adkins	
Stephanie Bentley	
Kay Swing	
Sonny Swing	
Rob Cole	
Jackie Robinson	
Larry Ramey	
Kathy Fields	

PETITION SHEET # 4

PETITION IN OPPOSITION TO THE EXPANSION OF WATER RELEASE INTO THE RUSSELL FORK RIVER

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Jessica Senters
Sonya Simpson
[illegible]
James Hays
Charles Bentley
Perry Merrill
James Roop
Hilbert Rattliff
Betty L. Rattliff
Mac Rogers
Jonathan Senters
[illegible]
[illegible]
Barbara [illegible]
Jeff Rattliff
[illegible]
David Harris
Allery Clarke Potter

PETITION SHEET # 5

John W. Flannagan Dam
Winter Drawdown Optimization
Public Meeting
27-Sep-2018 6:30 PM

NAME	EMAIL	PHONE
DAVID SANDERS	david.sanders@bell south.net	606/454-4561
Hayes Osborne	PO Box 22 Hayes	276-865-4725
GRONDALL POTTER	KYGPOTTER2@gmail.com	606-422-7740
JOEY QUINN	JPSJCO5@gmail.com	276-865-5513
Joseph Boyd	j.boyd@mainboardllc.com	276-865-1025
BILLY R. HYLTON	CHIEF13@MOUNET.COM	276-835-8629
[illegible]		276-935-2123
Brad Slone	brad.slone@pikeville ky.gov	606-444-5299
Tim Cleary	Tcleary@breaksPark.com	276-971-0009
SETH WHEAT	SETH.WHEAT@KY.GOV	502.330.5114
Buford Mullins		276-835-8802
Roy Fleming	flemingflock@gmail.com	276 926 4452
Brent Austin	jbrentaustinlaw@hotmail.com	859-259-1365
Paul Jackson	PLC Jackson3@yahoo.com	276-498-3418
Jay Shepherd	Marketing@tourpikecounty.com	6064325063
Tony K. Tackett	director(a)Tourpikecounty.com	606 432-5063
Mike Morrow	MRB_Morrow@Embarqmail.com	
Carol Potter	cpotter489@gmail.com	

John W. Flannagan Dam
Winter Drawdown Optimization
Public Meeting
27-Sep-2018 6:30 PM

NAME	EMAIL	PHONE
Jason Deel	haysisupplyco@bvu.net	276 964-3592
Gerald DeLong	gerd-elong@Bellsouth.net	

NEWS RELEASE

U.S. ARMY CORPS OF ENGINEERS BUILDING STRONG ®

For Immediate Release: Oct 5, 2018

Contact:
Public Affairs Office
304-399-5353

John W. Flannagan Dam Winter Drawdown Optimization Release Schedule Announced

HUNTINGTON, W.Va – The U.S. Army Corps of Engineers will modify its current winter drawdown process at Flannagan Dam to extend the whitewater season into November and allow for additional downstream recreation opportunities. The change to current drawdown processes is in support of a winter optimization analysis, being conducted by the Huntington District.

An appraisal completed in 2017 identified a potential opportunity to optimize the current winter drawdown process at Flannagan Dam to extend the whitewater season and allow for additional downstream recreation opportunities.

The current drawdown process involves higher release volumes over the four weekends in October. In addition to continuing October weekend releases, the Corps will increase release volume for the first two weekends in November in order to assess potential impacts associated with modifying the winter drawdown process in accordance with National Environmental Policy Act.

The Corps will release 900 cubic feet per second (CFS) on Saturday November 3rd and Sunday November 4th from 8:00 am to 4:00 pm. The following weekend will include relatively lower volume releases of 350 to 400 CFS, but will increase releases over four days. Friday and Saturday, November 9th and 10th will see releases of 350 CFS. Sunday and Monday, November 11th and 12th will see releases of 400 CFS. The higher release volumes will be discharged from 8:00 am to 4:00 pm on all four days.

For more information, contact the Public Affairs office at 304-399-5353.

-30-

From: Jason Foley
To: Buchanan, Jami L CIV USARMY CELRH (US)
Subject: [Non-DoD Source] John W. Flannagan Dam Winter Draw Down Optimization Evaluation Comments
Date: Tuesday, October 02, 2018 11:29:41 AM

Hi Jami,

I was unfortunately not able to attend the meeting on such short notice and am going to be commenting on the Nov extension of the winter draw-down for Flanagan Dam. If you wish for me to encapsulate my comments into an attached document please let me know and I will provide them in your preferred format.

We are extremely excited about a potential to add two additional weekends to our fall commercial rafting schedule. Our fall operations are set up and based on the level Bartlick to be at minimum 800 CFS. I am requesting that each of the additional two weekends in November to be the 800 CFS or 1000 CFS, identical to either of the October release levels. I would also like to request that on Fridays provide that 400-500 CFS level for the many recreational boaters who live in the area and those would travel in ahead of the weekend releases.

It is my understanding at least one comment has asked for a lower than fall release levels in 400-500 CFS range for some dates. With less than traditional October release levels we would not reserve trips and cease to operate without the 800 CFS needed for fall rafting. At that point we would get no advantage out of these two additional weekends whatsoever and shut down for the year ahead of them after the last October release. Its not feasible to offer a premium rafting trip one weekend and then a lesser half flow trip the next weekend on a lesser section of whitewater especially as the weather gets cold in November.

I would like to thank the entire Huntington District USACE and specifically Flanagan Dam staff for your diligence and hard work with this amazing resource. Please advise if you wish to have further comment or clarity on any of my above comments.

Thank you
Jason Foley
CEO Kentucky Whitewater Raft.Kayak.Rescue

From: Mark Stephens
To: Buchanan, Jami L CIV USARMY CELRH (US)
Subject: [Non-DoD Source] Russel Fork November release levels
Date: Tuesday, October 02, 2018 4:12:30 PM

Hi Jami,

My name is Mark Stephens and I am a whitewater kayaker from Lexington KY and wish to add comments to the process even though i was not able to drive to the Breaks for the meeting last Thursday. I saw the Facebook post allowing us to submit comments and wanted to do so.

It is an exciting time realizing that we may be getting more releases out of our awesome Russell Fork river. I am a kayaker and paddle the upper sections Russell Fork from the Dam to Garden Hole. I am not a gorge (middle section) boater so it takes significantly more water for us to better enjoy the upper section. Since I travel 3 hours to get to the area and need a reasonably good level of water for it to be worth coming I would like to suggest that the CORPS continue to release the same levels as each of the preceding weekends in the 800-1000 <tel:800-1000> CFS. This allows us to know what we are traveling to paddle and it will let us safely continue to predict each rapid and know that it is not any different that it was the previous days of releases. I consider it a safety issue changing these levels for some of the people I paddle with and don't think the trip will be worth it for a non-gorge boater to come with less than the traditional fall release levels.

Mark Stephens

Comment Card

US Army Corps of Engineers ®
Huntington District

Information on this card will be used to notify you of additional information

Written comments/inquiries may be sent to:

Attn: Charles Goad, PD-F

U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Emily Grimes

Address: 3849 Old Tates Creek Court

City: Lexington

State Kentucky ZIP: 40517

Email: eagr223@g.uky.edu

Phone: 859 358 0912

Who are you representing?

✓ Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: _____

COMMENTS: I'm 28 years old, I am a whitewater kayak instructor, and I am learning how to fly fish. I have been coming to the RF since I was a baby (b/c my parents are kayakers & have paddled this river since the early 90's). I am from Central KY but have spent the last 2 years living in Canada. Like lots of folks have said, the October weekend releases are somewhat of a family ~~reunion~~ reunion. A lot of folks at this meeting feel like family - Brent may have held me when I was a baby, Clay taught me how to boof in the RF gorge, and Bethany is like a sister. I have worked the last few years as a server & have foregone my $ making weekends to come kayaking down here. I'm in strong support of keeping these releases as they are on the weekends. That's when the majority of my working friends can come, and the first 2 weekends are likely when I can run the upper RF w/ my mom who is late and still kayaking. She likes those weekends because of the warm weather. I have also brought many friends from many diff. countries to paddle this river & they spend their money down here when they come. We buy our gas in Elkton

Use reverse if more space needed

US Army Corps of Engineers ®
Huntington District

Comment Card

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Written comments/inquiries may be sent to:

Attn: Charles Goad, PD-F

U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Clinton Taylor

Address: PO Box 262 Elkhorn City 41522

City: Elkhorn City

State Ky ZIP: 41522

Email:

Phone: 606-616-9810

Who are you representing?

✓ Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: _____

COMMENTS: Releases should stay the same

Use reverse if more space needed

Comment Card

US Army Corps of Engineers ®
Huntington District

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Attn: Charles Goad, PD-F

U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Jerrica Taylor

Address: Po Box 262

City: Elkhorn City

State Ky ZIP: 41522

Email: jerricataylor86@gmail.com

Phone: 606-454-4233

Who are you representing?

✓ Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: _____

COMMENTS: Im a local business owners in Elkhorn City Ky, and my Husband & Son both are Kayakers too. The weekends releases need to stay the same. Weekend releases give time for boaters to come in and enjoy the river after a long week for work and thier children getting out of school. As a business owner, weekend releases help ~~more~~ with more income coming into all local businesses. As a mother to a Kayaker that loves the river and looks forward to the weekend releases after a week filled fuel of school actives. Thank you

Use reverse if more space needed

Comment Card

US Army Corps of Engineers ®
Huntington District

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Attn: Charles Goad, PD-F

U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Clay Warren

Address: 2116 Maura Trace

City: Lexington, KY

State KY ZIP: 40513

Email: dmdkayak@hotmail.com

Phone: (859) 326-0602

Who are you representing?

X Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: Bluegrass Wildwater Association

COMMENTS:

Minimum Flow to navigate from Flamegan dam to Garden Hole: 550 cfs (combined flow)

Minimum Flow generally accepted for out-of-towners to drive here to paddle just the Gorge section from Garden Hole to Ratliff Hole: 400-450 cfs (combined flow)

Optimum flow for skilled paddlers to have motivation to drive from out of town to paddle the Gorge (Garden Hole to Ratliff Hole): 800 cfs - 1200 cfs (combined flow)

Please: If at all possible give users a 3 day flow prediction

Use reverse if more space needed

Comment Card

US Army Corps of Engineers ®
Huntington District

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Attn: Charles Goad, PD-F

U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Edgar Peck

Address: 172 Mill Farm Rd

City: Sugar Grove

State NC ZIP: 28679

Email: edgarlymanpeck@gmail.com

Phone: 336 749 5993

Who are you representing?

X Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: _____

COMMENTS: I request you consider option 1 (4 days) or option 4 (4 weekends). weekdays are not feasible for most people. 4 weekends

Fishermen have the entire rest of the year it would seem we could receive priority for 8 days of the year.

Use reverse if more space needed

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Huntington District

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Mikel Carr

Address: 3083 Greenbriar Rd

City: Draper

State VA. ZIP: 24324

Email: MCarr2@Trane.Com

Phone: 540-588-8377

Who are you representing?

X Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: _____

COMMENTS: I'm a whitewater enthusiast who take Great Joy in waters that Flow through the Russell Fork Gorge.

I travel to the area throughout the year, when water Levels are between 300-1,000 CFS, but I Really Look Forward to the October Releases where I come to the Breaks with Friends and My Family.

Please, at minimum, Leave releases as they are and if possible Increase the scheduled release events.

Additionally, if there is any way to optimize the Neccesary releases throughout the year to acheive 300 To 1000 CFS and Communicate those via Facebook or some other means I believe there would be possitive Local Economic impact as a result.

Use reverse if more space needed

Regards
Mikel Carr

Comment Card

US Army Corps of Engineers ®
Huntington District

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Ricky Brandon Dale

Address: 831 S. Beaver Dam Ave

City: Damascus

State VA ZIP: 24236

Email: ricky bdale@gmail.com

Phone: 276-698-7208

Who are you representing?

✓ Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: _____

COMMENTS: My name is Ricky Brandon Dale and I support downstream recreation and whitewater river flows from Flannagan Dam & Reservoir. I grew up on the South of the headwater streams in Buchanan County Virginia. I have fished, swam, and generally enjoyed the Russell Fork River for most of my life. I am 39 years old now and live in Damascus VA. I am married and have a 7 year old son. We camp, boat, and raft every weekend in October. It is a homecoming & safe for myself an introduction to an area I know and love for him. Proper management of the water resource that is Flannagan Dam could be managed for all users. I support and will continue to support recreational releases from Flannagan Dam. The future of the area will depend on eco-tourism and should be supported whole-heartedly.

Brandon Dale

Use reverse if more space needed

Comment Card

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Huntington District

Information on this card will be used to notify you of additional information

Written comments/inquiries may be sent to:

Attn: Charles Goad, PD-F

U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: TODD HARBOUR

Address: 118 Grafenburg Rd

City: Waddy

State: KY ZIP: 40076

Email: tharbour2001@yahoo.com

Phone: 859-913-0251

Who are you representing?

✓ Self

✓ Organization

___ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: American Whitewater

COMMENTS: There are only 8 scheduled releases and 357 days with no planned releases. An additional 8 days should not impact this shared resource. Fishing times are best when releases are not occurring due to lake temperatures and best times of days to fish (Dusk & Dawn) along with spawning patterns. When the new bypass is completed, people will not have to travel through Elkhorn City. Tourism should be developed to bring people to the area for its Natural Beauty. Fayetteville, WV is a prime example of a local economy benefiting from the whitewater and outdoor tourism industries

Use reverse if more space needed

April 15

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: James Stapleton

Address: P.O. Box 546

City: Elkhorn City,

State: KY ZIP: 41522

Email: james@appalachiangroundswell.com

Phone: 606-434-6410

Who are you representing?

✓ Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: _____

COMMENTS: I would ~~a~~ suggest adding Friday to existing recreational releases.
or
No action to the existing October drawdown.

Possibly a low-water 300-450 cfs release on Friday.

predictable flows

Use reverse if more space needed

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Andrea Gass

Address: 273 Palmer Rd

City: Kingsport

State TN ZIP: 37660

Email: amrams1989@gmail.com

Phone: 423-765-8315

Who are you representing?

____ Self

✓ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: Nolichucky Outdoor Learning Institute

COMMENTS: Russell Fork is one of the few rivers on release with both a class 2 section and a class 5 section. This increases the frequency of class 2 kayakers paddling with highly experienced kayakers, which leads to a more safe progression in kayaking skills. This benefits the kayaking community greatly by reducing risks and improving water-users skills.

Use reverse if more space needed

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Bethany Overfield

Address: 121 Elam Park

City: Lexington

State: KY ZIP: 40503

Email: bethany@americanwhitewater.org

Phone:

Who are you representing?

✓ Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency:

COMMENTS:

Please keep all weekend releases of the Russell Fork, as currently scheduled, at a minimum. The first two weekends in October are so family friendly due to the warmer air temperature. The last two weekends are important for the folks who travel internationally to race the Lord of the Forks Race.

Paddlers add so much to the local economy - more releases bring more boaters to the area, which positively impacts the local community.

If anything, we would love even more releases in other months, or extended weekend releases.

And we would really like to know what level releases are coming a few days in advance to help us plan travel.

Use reverse if more space needed

Thanks so much for your time!!

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: MICHAEL DAUGHTERY

Address: 2520 KNIGHTSBRIDGE LN

City: LEXINGTON

State KENTUCKY ZIP: 40509

Email: PRESIDENT@BLUEGRASSWILDWATER.ORG

Phone: 502-554-8489

Who are you representing?

____ Self

✓ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: BLUEGRASS WILDWATER ASSOCIATION, INC.

COMMENTS: ON BEHALF OF THE BLUEGRASS WILDWATER ASSOCIATION A 500 MEMBER 501C(3) GROUP OF WATER CONSERVATIONIST AND ENTHUSIASTS. THERE IS A GOOD MAJORITY OF THE CLUB THAT HAS EXPRESSED A HEAVY INTEREST IN OPTION A ~~FOR~~ (4 DAY RELEASES EVERY WEEKEND IN OCTOBER) WE FEEL AS THOUGH THE 4 DAY WEEKENDS WILL PROVIDE A GREATER OPPORTUNITY FOR PEOPLE FROM ACROSS THE COUNTRY TO COME AND UTILIZE THE WHITEWATER SECTION OF THE RUSSELL FORK. WE HAVE SEEN A TURNOUT OF UPWARDS OF 600 PADDLERS DURING THE "RELEASE SEASON." I WOULD IMAGINE THAT NUMBER WOULD INCREASE SIGNIFICANTLY IF THERE ARE 8 EXTRA DAYS OF RELEASES.

THE RELEASE LEVEL OF 500 CFS IS REQUIRED TO BE ABLE TO UTILIZE THE UPPER (CLASS III) GORGE (CLASS V), AS WELL AS THE LOWER (CLASS II).

ALSO ANY WAY TO PREDICT WEEKEND RELEASE LEVEL AND PUBLISH THEM WOULD HAVE A POSITIVE ECONOMICAL OUTCOME TO THE GENERAL AREA.

Use reverse if more space needed

US Army Corps of Engineers ®
Huntington District

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Lucas O'Daniel

Address: 1988 South Mays Trail

City: Pikeville

State Ky ZIP: 41501

Email: lucasodaniel00@gmail.com

Phone: (606) 434-3372

Who are you representing?

X Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: _____

COMMENTS: A utilitarian approach needs to be taken; what is best for most people. I am a proponent for extended releases. I believe this decision will positively effect the area.

Senator McConnell supports the expansion of the season and additional releases.

Economically, small businesses in both Kentucky and Virginia will benefit from increased releases. The bigger influx of people, the greater a business will do.

Boaters are a group of environmentally conscious individuals who collectively leave environments better than when they came.

Use reverse if more space needed

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: KETLIN DUFF

Address: 1051 Martha Glass drive

City: Jefferson City

State TN ZIP: 37760

Email: KETLFF@LIVE.COM

Phone: 276-285-7978

Who are you representing?

✓ Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: _____

COMMENTS: Being a kayaker as of 2017 - I am still in the category of "NEW LEARNING KAYAKER" - I am speaking from the viewpoint of someone who is training to be better and someone - who one day (hopefully sooner than later) hopefully gets to kayak the Russell Fork Gorge. I am in a support of keeping the existing weekends and maybe if possible adding lower volume planned days for people like me to be able to come here with experts and get to run the Gorge on a lower volume days and stay for full weekends and watch the experts - so we get to learn watching them. Most of the time newer kayakers are not aware of these types of meetings and I am absolutely confident that I am speaking from their behalf as well! - THANK YOU!

Use reverse if more space needed

- WE NEED TO KEEP THE DREAM ALIVE -

Comment Card

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Todd Schindler

Address: 5204 Arrowshire Dr

City: La Grange

State: KY ZIP: 40031

Email: schindlerTodd3@Gmail.com

Phone:

Who are you representing?

✓ Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: American Whitewater

COMMENTS: I've made the drive from Louisville KY to Breaks since 10/01. Not a year missed for Oct Release since then. I bring my children here for upper runs, and teach at the Spring clinic. Look forward to many more years of river enjoyment.

Use reverse if more space needed

Comment Card

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: B Terry Ratliff

Address: 3001 Stephens Branch Rd.

City: Martin

State: Ky ZIP: 41649

Email: Onutwood@bellsouth.net

Phone: 606 230 0938

Who are you representing?

✓ Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: _____

COMMENTS:

Leave Oct. releases as they are

Expanding into Nov. weekends would be a good thing

· Consider managed releases of lake average in WARM weather on an announced status thru. DAYLIGHT HOURS.

Use reverse if more space needed

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Jennifer Oates

Address: 1313 Maple street

City: Shelbyville

State Ky ZIP: 40065

Email: jgoates@bellsouth.net

Phone: 502-655-1974

Who are you representing?

____ Self

X Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: Riverkeeper/Ohio River Louis Ky

COMMENTS: Charles is very nice and greeted me upon entering.

- Need to maintain safe release levels

- more concerned that October is only month with "scheduled" releases. rest of year don't know what/when any release

Use reverse if more space needed

US Army Corps of Engineers ®
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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Amy Bresheers

Address: P.O Box 2
Elkhorn City

City: Elkhorn City

State Ky ZIP: 41522

Email: Amy.Elkhorn@gmail.com

Phone: 606-422-2200

Who are you representing?

✓ Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: Pike County Public Library

COMMENTS: My name is Amy Bresheers. I moved to Elkhorn City seven years ago. When people ask why Elkhorn, my answer never changes. The River - I've worked at the public library for almost 5 years now - I work Monday - Friday and depend on scheduled whitewater releases - and so do Elkhorn business owners. Kayakers leave no footprint but an economic impact - The money that comes in during the Oct releases is much needed to this rural area. If you paddle, hike or fish, walk around the river in October and see the people who flock from all over the world. The Russell Fork is unlike any other River. Since I've lived here I've seen 6 events run out of town. Please, the BLUA has bent over backwards to help our river and its people. Lets stand united with BLUA and all of its kayakers. Support all past & future whitewater releases.

Use reverse if more space needed

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Huntington District

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Jason Bordwine

Address: 14489 Branch St

City: Abingdon

State VA ZIP: 24210

Email: jbordwine@hotmail.com

Phone: 276 698 8598

Who are you representing?

✓ Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: _____

COMMENTS: The Russell Fork river is truly a gem, a true treasure to this area. I feel the main issue at hand is the mis-management of water in general.

Use reverse if more space needed

Comment Card

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Huntington District

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U.S. Army Corps of Engineers, Huntington District

502 Eighth Street

Huntington, WV 25701

Email: Charles.D.Goad@usace.army.mil

Name and Mailing Address

Name: Wes Prince

Address: 788 Emmett Creek Cir

City: Lexington

State KY ZIP: 40515

Email: mtbiker88@yahoo.com

Phone: 859-533-8842

Who are you representing?

✓ Self

____ Organization

____ Federal/State/Local/Tribal Agency or Government

Name of Organization or Agency: _____

COMMENTS:

First and foremost I would like to see recreation below the dam become a purpose of the project. ~~of the proposals~~

I much prefer to see the Fall drawdown releases centered around weekends. Extending these releases to weekdays and additional weekends in November if there is enough water in the lake to remain within lake level guidelines would be optimal.

I believe whitewater recreationists bring a significant monetary benefit to the local economy and this should be considered as well.

I will come here to kayak for flows from 300-500 cfs and 800-1000 cfs. Interestingly from 500-800 cfs a couple of rapids become much more difficult. I tend not to come for those flows.

Use reverse if more space needed

Today's Agenda:

- History and background
- Recap of previous public meeting
- Recap of November 2018 test weekends
- Introduction of alternative plans
- Feedback on the alternative plans
- Schedule and way forward
- Discussion, comments and questions

Please send written comments

Address comments to:

U.S. Army Corps of Engineers
ATTN: Charles Goad
502 8th Street
Huntington, West Virginia 25701

Or:

Charles.D.Goad@usace.army.mil

Notes:

Please take a look at the towns and areas of Ocoee TN and Nantahala NC. Those small towns have made enormous gains in tourism via the use of the rivers located there. These rivers are used for amazing whitewater recreation. When I started kayaking in 1992 I not only began/learned to kayak here on our beautiful and amazing river but also traveled to those towns in TN and NC as well as other rivers. I firmly believed that by the 21st century, in only eight years in the year 2000, our small and wonderful communities would be like those other whitewater towns. Families rafting, kayaking and camping. ... and our October's here achieve that.

Also, Team River Runner is a non-profit organization assisting Veterans in getting out into nature and on to the water. Many of those veterans are combat veterans with traumatic injuries such as TBI's, amputations, and PTSD. Those releases allow us to plan and attend Team River Runner event's and many of our members believe that Alternative #1 would help as four days would be optimal in helping beginning members comfortable in camps and on the water.

Please research Team River Runner.

Mike Whaley
140 Madeline st
Pittsburgh PA 15210

Attn: Jami Buchanan, PD-F
US Army Corps of Engineers, Huntington District
502 Eighth Street
Huntington, WV 25701

Dear Jami Buchanan,

I'm writing you today to ask for an extension to the Russell fork white water release schedule. In this fall I was looking to visit the Russell for this year to kayak. Usually when I kayak I go out of state, but a 9 Hour Drive makes it a little less frequent for me. It is also extremely hard to plan an out of state trip when the water is not reliable, so I would normally ignore rivers without dam release schedules. I am well-connected to the paddling community and I see the groups of people going to the Russell fork in the fall.

This schedule change will affect them as well. I also belong to the Benscreek Canoe club and follow the events related to the Stonycreek white water releases. I see how it changes to the schedules drastically affect repeat Kayaker's from coming to the area. I've also seen how this affected the Youghegheny River in that the Over the Falls Race has been canceled due to a simple change in schedule releases. I am hopeful that the Russell forte continues to be a river that attracts Kayaker's and I'm more hopeful to come see it in the fall.

Thanks

Michael R Whaley

Office of Pike County Judge/Executive

RAY S. JONES, II

PIKE COUNTY COURTHOUSE
146 MAIN STREET
PIKEVILLE, KENTUCKY 41501
OFFICE: (606) 432-6247
FAX: (606) 432-6242

April 2, 2019

U.S. Army Corps of Engineers
Huntington District
502 Eighth Street
Huntington, WV 25701

To Whom it May Concern:

As a native, lifetime resident, and Pike County Judge/Executive, I am writing in support of the optimization of the winter drawdown process at John W. Flannagan Dam in order to facilitate extending the season of downstream recreation.

As you are well aware, this region has been negatively impacted economically in the last several years and is currently struggling to rebuild its economy. I feel as though an extension of this process would positively impact tourism by bringing additional unique and exciting adventure tourism opportunities to Pike County. The increase of visitors to this area will lead to the development of potential revenue streams for Pike and surrounding countries.

I appreciate your efforts and hopefully through this forum a balance can be achieved by all parties involved to extend the season. I truly believe that developing our natural resources is one of the keys to our future success. Please feel to contact me at (606) 432-6247 or (606)794-7281 if you wish to discuss this matter further.

Sincerely,

Ray S. Jones II

Ray S. Jones, II
Pike County Judge/Executive

Kevin Colburn
National Stewardship Director
P.O. Box 1540
Cullowhee, NC 28723
828-712-4825
kevin@americanwhitewater.org

www.americanwhitewater.org

April 5, 2019

Re: John W. Flannagan Dam Operations

Dear Ms. Buchanan,

American Whitewater is a national non-profit organization with a mission to protect and restore our nation's whitewater rivers and enhance opportunities to enjoy them safely. Our members are primarily non-commercial whitewater kayakers, rafters, and canoeists. Many of our members regularly enjoy water releases from the John W. Flannagan Dam into the Russell Fork River. We were pleased to learn of the public meeting held on April 2 to discuss opportunities to enhance these releases, and ensured that the meeting was attended by American Whitewater board members, staff, and members. We are now following up with written comments to share our perspective.

Late last year American Whitewater conducted an online survey of Russell Fork paddlers. We had a significant response of over 140 survey participants. We created this survey to supplement a similar agency survey with data from paddlers that likely did not have the opportunity to fill out the hard-copy survey. Both surveys explored flow preferences and opinions between adding releases to existing October releases versus adding new weekend releases in November. The graphical and tabular results of the survey are attached to these comments, and raw data were provided to the Army Corps last year.

The current proposed range of alternatives explores very different options from those surveyed, but there are lessons to be learned from the survey results. Specifically:

- Paddlers were divided equally between a preference for additional weekends in November (36%), additional days added to weekends in October (36%), or either (28%). (See Question 9).
- 3-day releases in October would result in greater attendance of weekend releases. (See Question 8)
- Over 95% of paddlers would always (50%) or sometimes (46%) take advantage of a third day was added to current October releases. (See Question 7)
- If 3-day releases are provided in October, roughly two thirds of paddlers prefer Friday releases, and one third are fine with Friday or Monday. (See Question 6)

Based on these results and our knowledge of the paddling communities interests, we offer the following comments on each proposed alternative.

Alternative 1: Four-day weekend high volume releases throughout October.

This is our preferred alternative. The survey results indicate that there is significant demand for releases on Fridays and Mondays in association with the current weekend releases in October. This scenario would encourage paddlers to travel to the river and spend an extra day or two in the area, and then return for additional weekends. This is a typical pattern for paddlers, most of whom have jobs that prevent midweek or long blocks of paddling. It is also more typical of the natural regional hydrological patterns which often include storm driven high flows of several days alternating with periods of lower flows.

Alternative 2: Fourteen consecutive days of high volume release throughout October.

Under this alternative paddlers would lose two weekends of paddling opportunities in October, roughly half of the scheduled weekend releases. This would be a significant loss to paddlers, and lead to lower overall visitation to the region for paddling. It would also lead to crowding on the remaining weekends. While our survey did not include midweek releases, data from other rivers like the Ocoee show dramatically less use of mid-week releases. This is the worst alternative.

Alternative 3: Seventeen consecutive days of high volume release throughout October.

Under this alternative paddlers would lose one weekend of paddling opportunities in October, roughly a quarter of the scheduled weekend releases. Like Alternative 2, this would be a significant loss to paddlers, reduce visitation, and increase crowding. Like Alternative 2, we do not expect midweek gains in visitation to make up for lost weekend visitation.

Alternative 4: No change

We expect you'll find that this is the second-best alternative for paddlers after Alternative 1. Weekend releases are simply more valuable to more people than midweek opportunities, and protecting all four existing October weekends is an important backstop for any future changes to the flow regime.

Fishing and Paddling Are Compatible

The stated objective of the current study is to balance the needs of whitewater recreation with fishing in Flannagan Reservoir and downstream in the Russell Fork River. We are aware of no studies or data showing that whitewater releases are in any way detrimental to fishing in the reservoir or downstream and thus the premise of seeking balance is not justified. The current weekend releases have been occurring for many years, and we are unaware of any evidence that the fishing is currently impacted by those releases. Likewise, we see no reason that adding

1-2 days to each weekend of releases would create new impacts. However, the recreational benefits of the fall releases are well documented and understood: they attract hundreds of paddlers to ideal conditions in a spectacular whitewater river.

American Whitewater has been involved with flow restoration and changes at well over 100 dams that have been extensively studied. We are not aware of any studies depicting impacts of dam releases on reservoir fishing. Often but certainly not always, anglers prefer lower river flows than paddlers, but dam-controlled higher flow releases like these during drawdown periods are often offset by dam-controlled lower flow releases during reservoir refill periods. Balance must be looked at across entire years, with data, and with the natural flow regime and operational needs such as drawdown as governing factors.

We are confident that there are opportunities to protect and enhance whitewater paddling opportunities on the Russell Fork River while also protecting fishing opportunities. We ask that you avoid making a false choice between the two activities. We request no loss of October weekend paddling opportunities, and that you consider adding Friday releases, and if possible Monday releases to those weekends. In addition, we believe there may be other opportunities to provide scheduled releases of various flows during the spring and summer, and would welcome a broader discussion about such opportunities.

Thank you for considering these comments.

Sincerely,

Kevin Colburn
National Stewardship Director
American Whitewater
PO Box 1540
Cullowhee, NC 28723
828-712-4825
kevin@americanwhitewater.org

Russell Fork River Flow and Access Survey

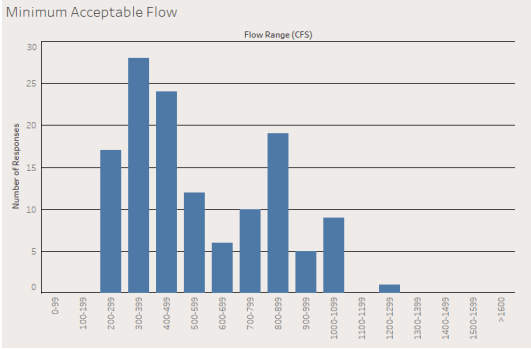
Fall 2018

American Whitewater

Russell Fork Survey Responses
2018

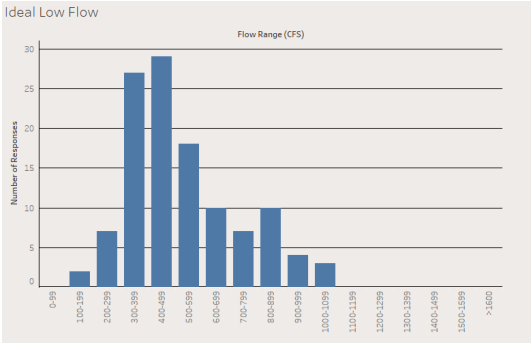
Minimum Acceptable Flow

Minimum acceptable flow is the flow at which paddlers would return to paddle the river. Paddlers identified the minimum acceptable flow in two distinct ranges: some paddlers identified a lower range between 200 and 500cfs, and others a higher range between 800 and 900cfs. These two ranges are likely related to two factors identified in survey comments. First, the river is reportedly dangerous and undesirable between 500 and 800cfs. Second some paddlers either do not have experience with the lower flows or simply do not prefer them.



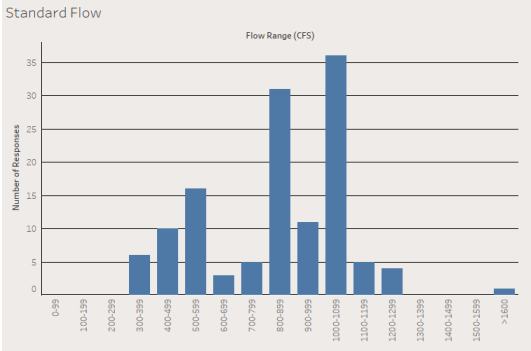
Technical Low Flow

Some paddlers are interested in a more technical paddling opportunity that requires more maneuvering, but typically with lower velocity and smaller holes and waves. Survey respondents identified the 300 to 500cfs range as the ideal low technical paddling flow range.



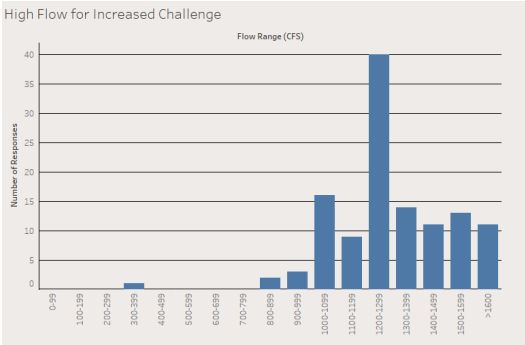
Standard Flow

Paddlers may desire a medium flow that balances the technicality of lower flows with the larger waves and holes experienced at higher flows. Most paddlers preferred flows in the 1000 to 1100cfs range for this kind of trip, followed closely by the 800 to 900cfs range. A separate group of paddlers prefer lower flows in the 400 to 600cfs range for this kind of trip.



Challenging High Flow

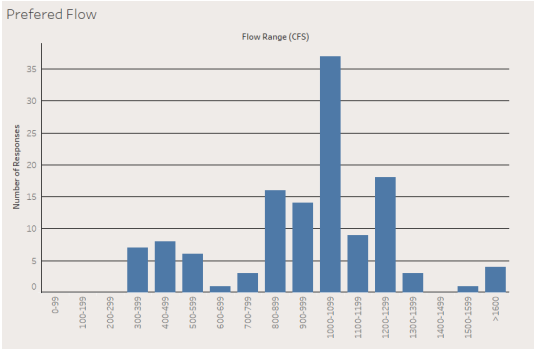
Paddlers may prefer a higher flow generally or in certain circumstances that increases the size of the holes and waves, and leads to higher velocity flows. Often, but not always,



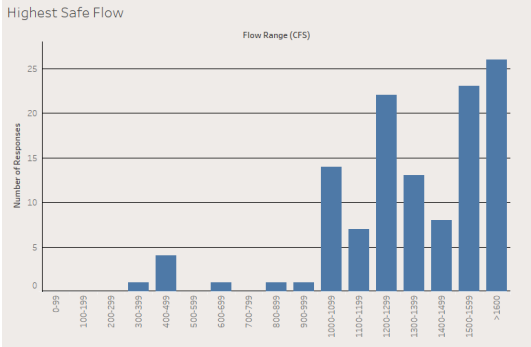
these flows are found to be more challenging. Paddlers overwhelmingly selected flows between 1200 and 1300cfs as the ideal high flow range.

Optimal Flow

When asked about their single preferred flow, there was a strong preference for flows around 1000 to 1100cfs. Some - though fewer - paddlers also selected lower flows between 300 and 500cfs.

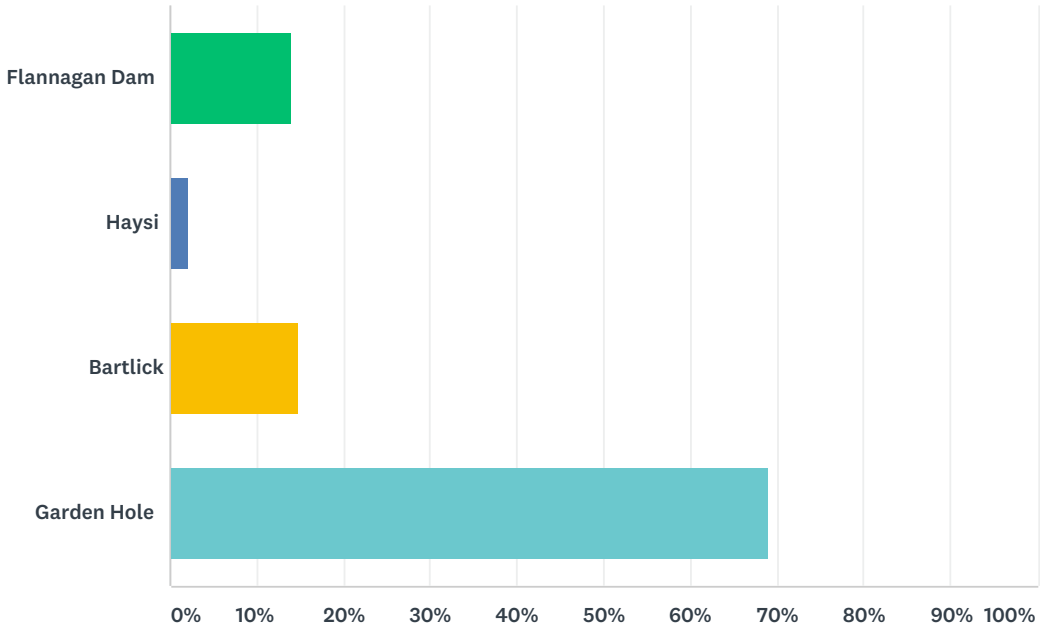


Highest Safe Flow
When asked about the highest safe flow, paddlers generally selected flows in or well above the 1000-1100 cfs flow range.



Q2 Which put in do you typically use?

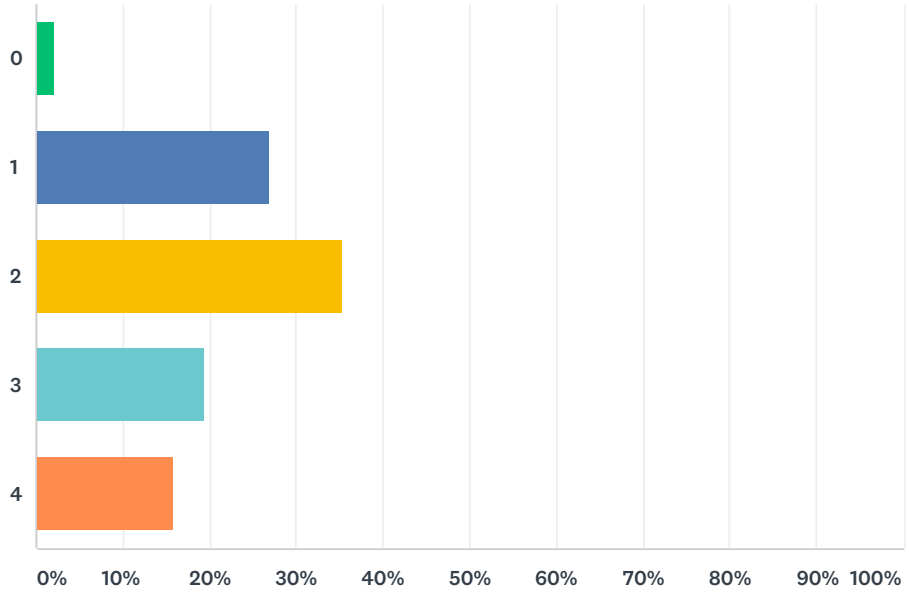
Answered: 142 Sk pped: 4



ANSWER CHOICES	RESPONSES	
F annagan Dam	14.08%	20
Hays	2.11%	3
Bart ck	14.79%	21
Garden Ho e	69.01%	98
TOTAL		142

Q3 On how many of the current October release weekends do you typically paddle the Russell Fork each fall?

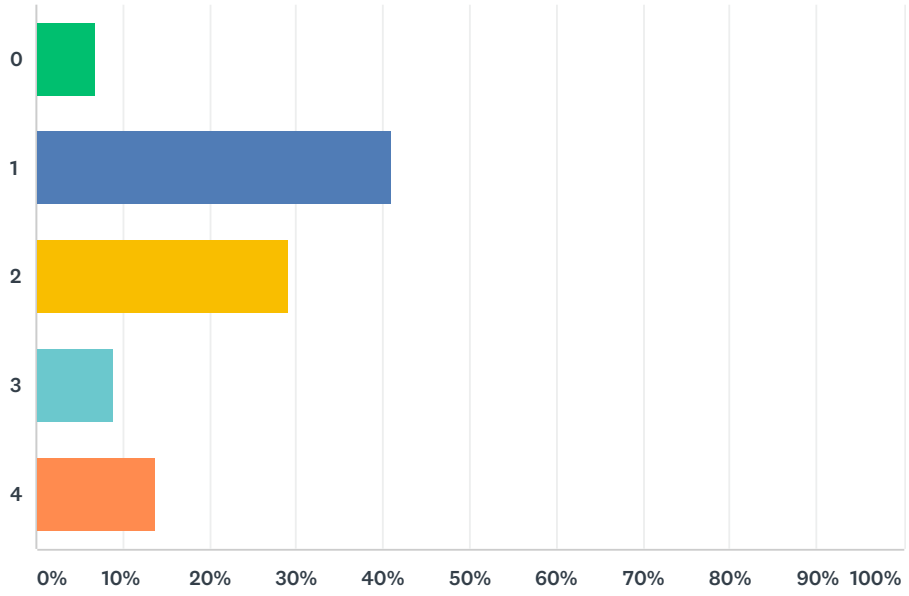
Answered: 144 Sk pped: 2



ANSWER CHOICES	RESPONSES	
0	2.08%	3
1	27.08%	39
2	35.42%	51
3	19.44%	28
4	15.97%	23
TOTAL		144

Q4 If weekend Russell Fork releases were provided in November in addition to October releases, on how many of those November weekends would you likely paddle the Russell Fork?

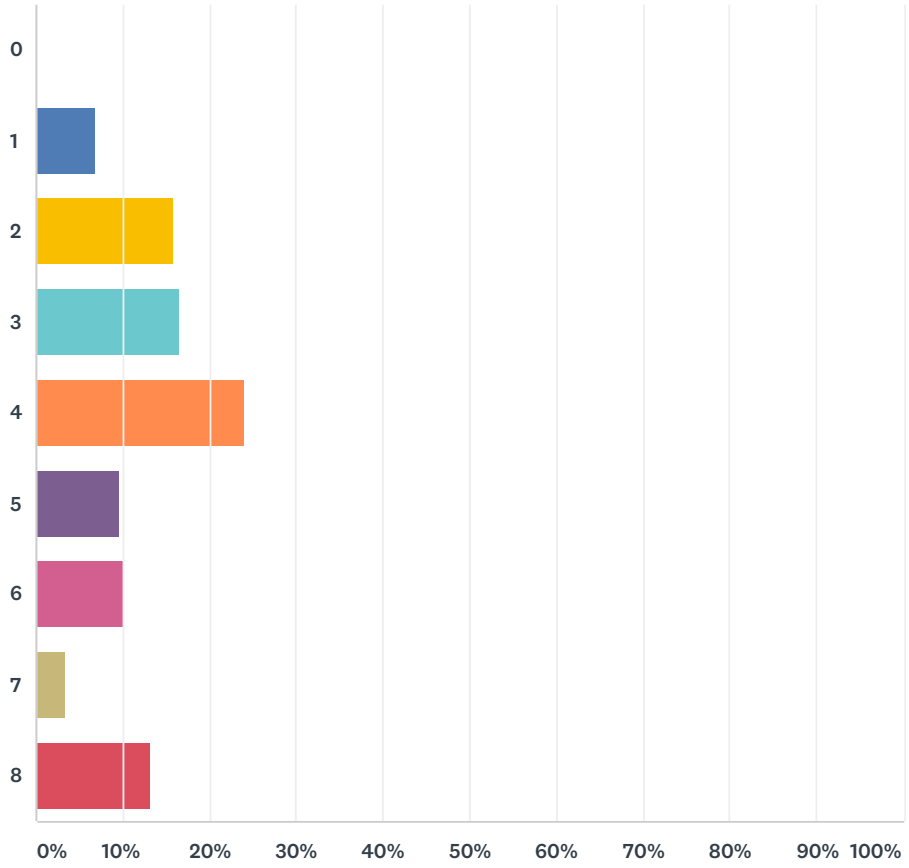
Answered: 144 Sk pped: 2



ANSWER CHOICES	RESPONSES	
0	6.94%	10
1	40.97%	59
2	29.17%	42
3	9.03%	13
4	13.89%	20
TOTAL		144

Q5 If weekend releases were provided throughout October and November, on how many total weekends would you likely paddle the Russell Fork?

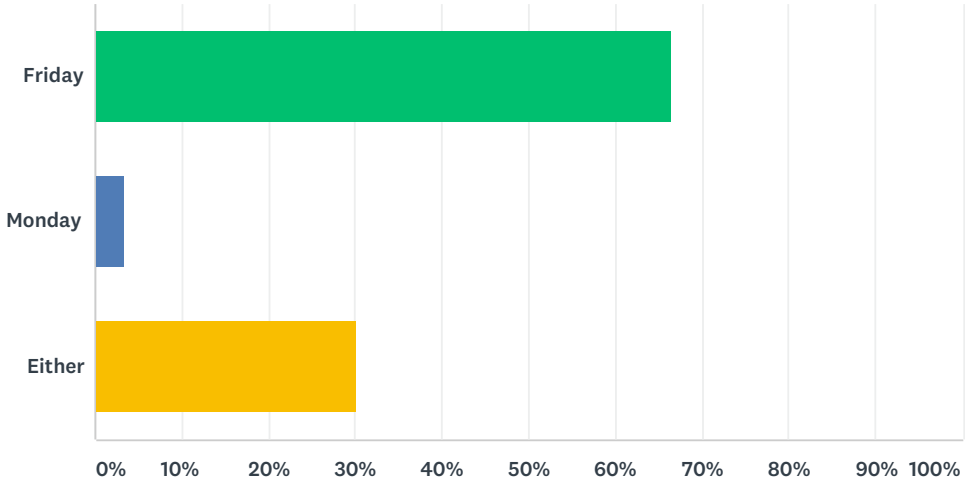
Answered: 145 Sk pped: 1



ANSWER CHOICES	RESPONSES	
0	0.00%	0
1	6.90%	10
2	15.86%	23
3	16.55%	24
4	24.14%	35
5	9.66%	14
6	10.34%	15
7	3.45%	5
8	13.10%	19
TOTAL		145

Q6 If 3-day October releases were provided, which day would you prefer be added to the current Saturday and Sunday releases?

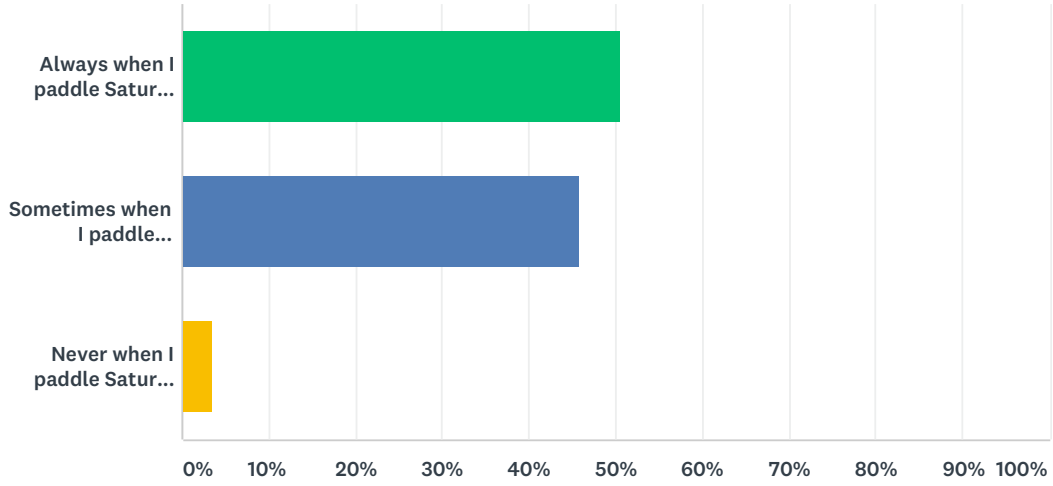
Answered: 146 Sk pped: 0



ANSWER CHOICES	RESPONSES	
Fr day	66.44%	97
Monday	3.42%	5
E ther	30.14%	44
TOTAL		146

Q7 If your preferred third day were added to October releases, how often would you paddle on the third day?

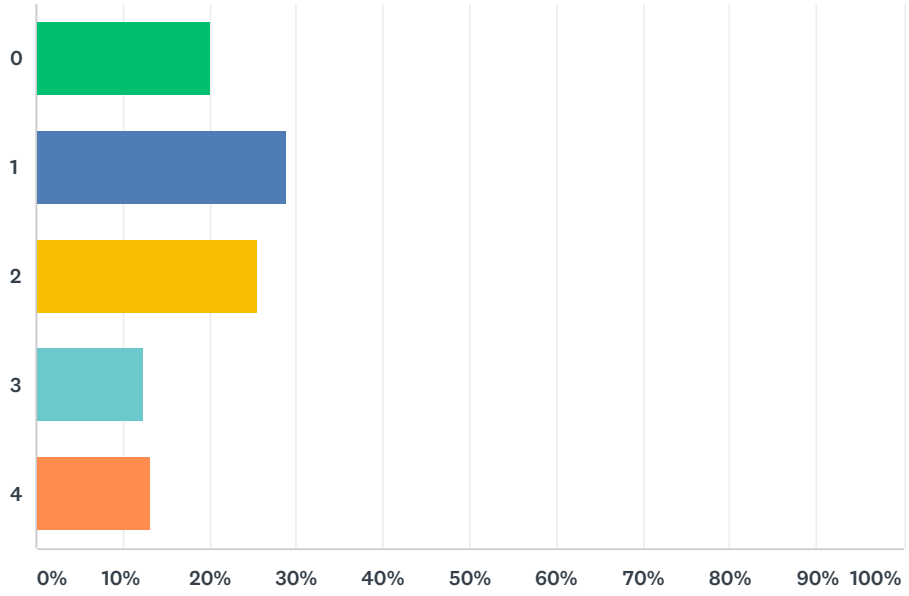
Answered: 144 Sk pped: 2



ANSWER CHOICES	RESPONSES	
A ways when I padd e Saturday and Sunday re eases	50.69%	73
Somet mes when I padd e Saturday and Sunday re eases	45.83%	66
Never when I padd e Saturday and Sunday re eases	3.47%	5
TOTAL		144

Q8 If 3-day October releases were provided, on how many more weekends would you paddle the Russell Fork?

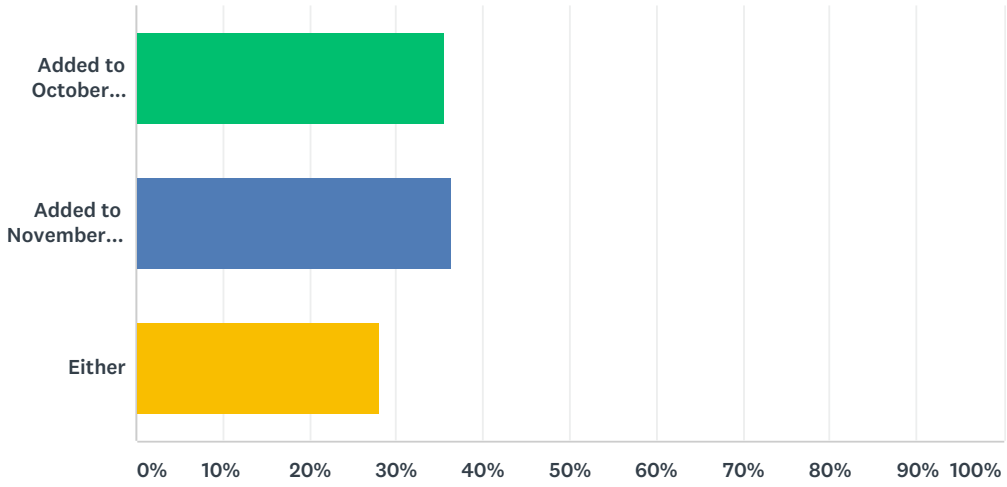
Answered: 145 Sk pped: 1



ANSWER CHOICES	RESPONSES	
0	20.00%	29
1	28.97%	42
2	25.52%	37
3	12.41%	18
4	13.10%	19
TOTAL		145

Q9 How would you prefer additional days of releases be allocated?

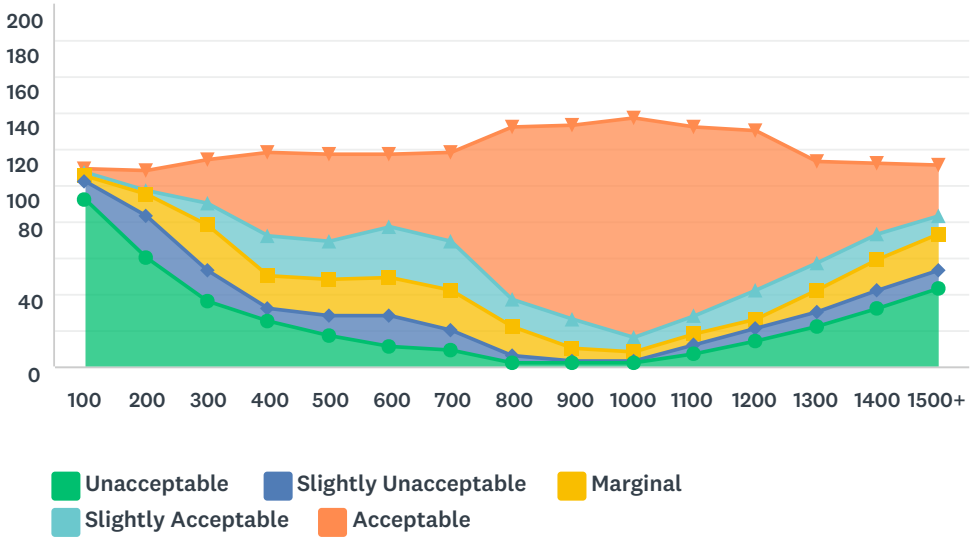
Answered: 146 Sk pped: 0



ANSWER CHOICES	RESPONSES	
Added to October re eases to create 3-day re eases	35.62%	52
Added to November weekends to create new weekend re eases	36.30%	53
E ther	28.08%	41
TOTAL		146

Q10 For comparative purposes please estimate the quality of the following flows for your craft and skill level. Please consider all the flow-dependent characteristics that contribute to a high quality trip (e.g., boatability, whitewater challenge, safety, availability of surfing or other play areas, aesthetics, and length of run). If you do not feel comfortable evaluating a flow you have not seen, don't check a number for that flow.

Answered: 140 Sk pped: 6

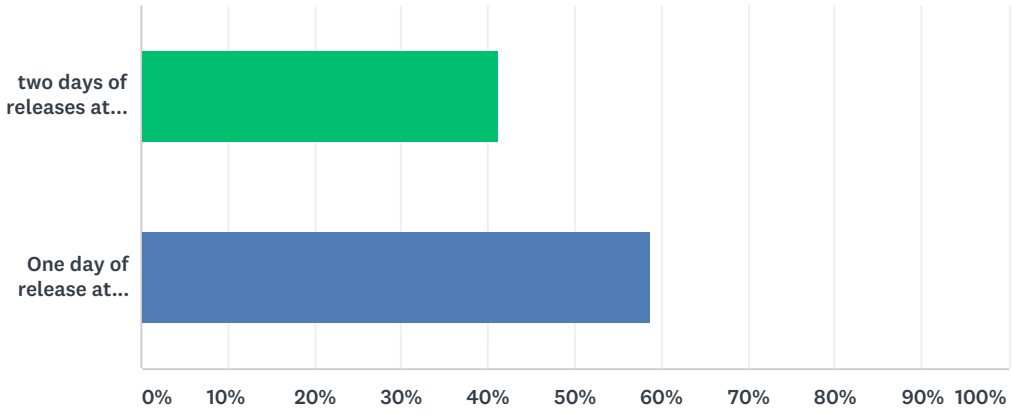


	UNACCEPTABLE	SLIGHTLY UNACCEPTABLE	MARGINAL	SLIGHTLY ACCEPTABLE	ACCEPTABLE	TOTAL RESPONDENTS
100	85.98% 92	9.35% 10	2.80% 3	1.87% 2	1.87% 2	107
200	56.60% 60	21.70% 23	11.32% 12	1.89% 2	10.38% 11	106
300	32.43% 36	15.32% 17	22.52% 25	10.81% 12	21.62% 24	111
400	21.55% 25	6.03% 7	15.52% 18	18.97% 22	39.66% 46	116
500	14.91% 17	9.65% 11	17.54% 20	18.42% 21	42.11% 48	114
600	9.57% 11	14.78% 17	18.26% 21	24.35% 28	34.78% 40	115
700	7.83% 9	9.57% 11	19.13% 22	23.48% 27	42.61% 49	115
800	1.54% 2	3.08% 4	12.31% 16	11.54% 15	73.08% 95	130
900	1.52% 2	0.76% 1	5.30% 7	12.12% 16	81.06% 107	132
1000	1.47% 2	0.74% 1	3.68% 5	5.88% 8	88.97% 121	136

1100	5.34% 7	3.82% 5	4.58% 6	7.63% 10	79.39% 104	131
1200	10.94% 14	5.47% 7	3.91% 5	12.50% 16	68.75% 88	128
1300	19.47% 22	7.08% 8	10.62% 12	13.27% 15	49.56% 56	113
1400	29.09% 32	9.09% 10	15.45% 17	12.73% 14	35.45% 39	110
1500+	38.74% 43	9.01% 10	18.02% 20	9.01% 10	25.23% 28	111

Q17 In addition to current releases, would you rather have:

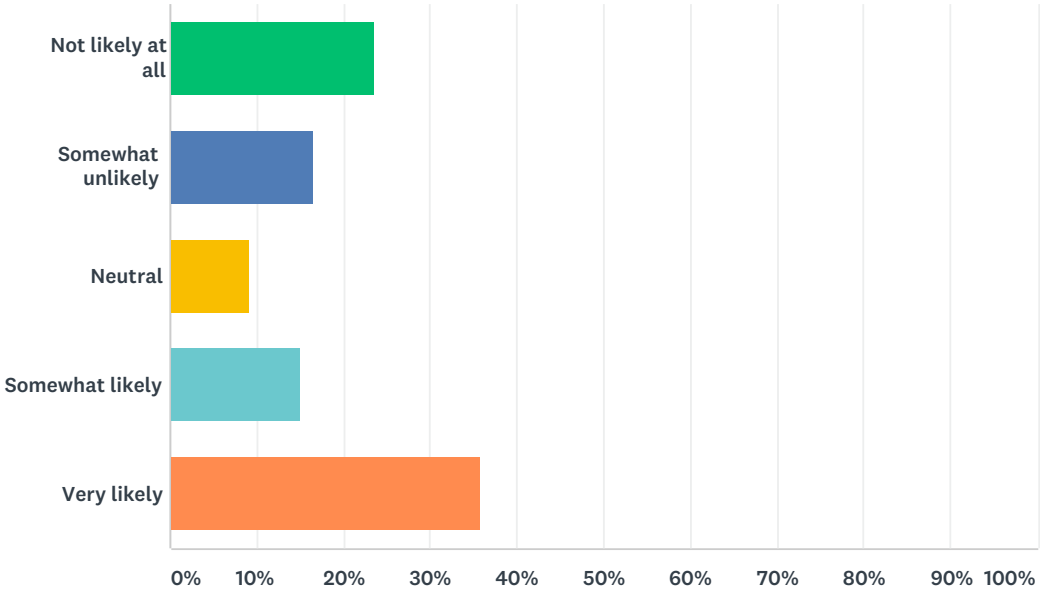
Answered: 136 Sk pped: 10



ANSWER CHOICES	RESPONSES	
two days of re eases at 300-400cfs	41.18%	56
One day of re ease at 600-800cfs	58.82%	80
TOTAL		136

Q18 How likely would you be to paddle on releases of 300-400cfs if they were provided:

Answered: 140 Sk pped: 6



ANSWER CHOICES	RESPONSES	
Not ke y at a	23.57%	33
Somewhat un ke y	16.43%	23
Neutra	9.29%	13
Somewhat ke y	15.00%	21
Very ke y	35.71%	50
TOTAL		140

NEWS RELEASE

U.S. ARMY CORPS OF ENGINEERS BUILDING STRONG ®

For Immediate Release: March 12, 2019

Contact:
Public Affairs Office
304-399-5353

John W. Flannagan Dam
Winter Drawdown Optimization Tentative Plan Selection and Public Meeting Announcement

HUNTINGTON, W.Va – The U.S. Army Corps of Engineers has selected a plan to optimize the winter drawdown procedures at John W. Flannagan Dam in order to facilitate enhanced downstream recreation. The selected plan will release higher volumes of water for 17 consecutive days from the 2nd Saturday each October to the last Monday each October. During those days, the release volume from Saturday to Monday will be 800 CFS and the release volume from Tuesday to Friday will be 400 CFS.

The selected plan balances the needs of whitewater recreation with fishing in Flannagan Reservoir and downstream in the Russell Fork River. Whitewater recreation will gain nine total days of higher release volume, but will lose the first weekend in October. The selected plan will relieve water level and flow fluctuation impacts on fishing by consolidating higher volume releases into 17 days each year.

An important part of the process is input provided by public and local stakeholders. The Corps will hold a second public meeting to inform the public and seek input regarding this change to the winter drawdown process. The meeting will be held at the Breaks Interstate Park Conference Center at 627 Commission Circle, Breaks, Virginia on April 2, 2019 at 6:30 pm.

For more information, contact the Public Affairs office at 304-399-5353.

>
> -----Original Message-----
> From: Carrie [mailto:carriestambaugh@gmail.com]
> Sent: Tuesday, April 02, 2019 12:04 PM
> To: Buchanan, Jami L CIV USARMY CELRH (US) <Jami.L.Buchanan@usace.army mil>
> Subject: [Non-DoD Source] Russell Fork Release Comments
>
> Mr. Buchanan,
>
> I would like to express my support for increased access to the Russell Fork whitewater during a release schedule that includes four day weekend releases. I believe these longer stretches of consecutive days would be most beneficial to the local economy.
>
> I'm a multi-media journalist with a speciality in recreation. I co-host a Kentucky travel adventure show, "Downstream," (available at Liquidkentucky.com), and I write guidebooks for FalconGuides. My newest book is "Paddling Kentucky," (due out in July). It OF COURSE includes the Russell Fork. I've worked in east Kentucky media for 15 years and I think this river is our best kept secret and provides tremendous opportunity for growth. Adventure tourism has a huge untapped potential across former Appalachian coal communities. We just must invest in infrastructure and maximize opportunities for access, like this.
>
> As a paddler myself, and member of the BWA, I prefer to spend multiple days at a location, paddling a day or two, resting and doing another activities then paddling again!! A four day release schedule would allow this. (The Gauley release schedule is a model that works well for travelers and the local economy.) It allows for paddlers to spend more time and money in an area at a slower pace! I think this would bring more travelers from further distances because they would have more opportunities to paddle. It's not an easy place to get to so, that needs to be considered in terms of attracting visitors. Many look at a two day release schedule and pass. They want the chance to paddle every day because if they can't paddle one day, they miss half their chances! They choose to go elsewhere where their "risk" is less.
>
> Thank you for your consideration.
>
> Carrie Stambaugh
> (606) 369-2635 c

From: Buchanan, Jami L CIV USARMY CELRH (US)
To: Goad, Charles D CIV USARMY CELRH (USA)
Subject: FW: [Non-DoD Source] Prospective Changes to Russell Fork Release Schedule
Date: Thursday, April 4, 2019 10:59:48 AM
Attachments: Russell+Fork+Survey+Results+20181786.pdf

-----Original Message-----
From: Jack Henderson [mailto:hendersonjc3@gmail.com]
Sent: Thursday, April 04, 2019 10:50 AM
To: Buchanan, Jami L CIV USARMY CELRH (US) <Jami.L.Buchanan@usace.army.mil>
Subject: [Non-DoD Source] Prospective Changes to Russell Fork Release Schedule

Hi Jami,

I was unfortunately unable to attend Tuesday's meeting about the prospective changes to the Russell Fork release schedule from Flanagan Dam, however I wanted to submit comments here while your team is still considering any changes.

As a whitewater paddler, I respectfully request the "4-day weekend high volume release throughout October" option. This would be a well-appreciated and well-utilized gain for paddlers versus the current 2-day releases. Whitewater paddlers and their families, along with spectaters and water-based recreational tourism supports the regional economy through gasoline, food and other purchases made nearby.

American Whitewater, the nation's primary advocate for the preservation and protection of whitewater rivers throughout the United States, conducted a study in the autumn of 2018 to gather information on paddling usage of the Russell Fork below Flanagan, as part of the scheduled flow releases. The results show that the river and associated releases are well-valued by all paddlers, and that most would appreciate and utilize additional flow releases.

I have attached that survey in PDF form for your reference.

Thank you for your time, and I appreciate you taking my comment into consideration.

Sincerely,
Jack Henderson

From: Buchanan, Jami L CIV USARMY CELRH (US)
To: Goad, Charles D CIV USARMY CELRH (USA)
Subject: FW: [Non-DoD Source] Russell Fork Release Schedule
Date: Friday, April 5, 2019 8:39:01 AM

Sent with BlackBerry Work
(www.blackberry.com)

From: mikeprz58@aol.com <mikeprz58@aol.com <mailto mikeprz58@aol.com> >
Date: Friday, Apr 05, 2019, 7:49 AM
To: Buchanan, Jami L CIV USARMY CELRH (US) <Jami.L.Buchanan@usace.army.mil <mailto:Jami.L.Buchanan@usace.army.mil> >
Subject: [Non-DoD Source] Russell Fork Release Schedule

Jami:

I am a weekend kayaker with a family. 14 day or 17 day continuous releases combined with my schedule could preclude any RF trips. Consequently, I would prefer no change or 4 weekend releases. Additionally, reducing releases may increase congestion on the river which can be a safety hazard. Those eddies are only so big!

Mike Rzesutock
Fayetteville Ohio

From: Buchanan, Jami L CIV USARMY CELRH (US)
To: Goad, Charles D CIV USARMY CELRH (USA)
Subject: FW: [Non-DoD Source] Russell Fork Release Discussion
Date: Monday, April 8, 2019 9:37:22 AM

Sent with BlackBerry Work
(www.blackberry.com)

From: Koushik Ray <ray_koushik@yahoo.com <mailto:ray_koushik@yahoo.com> >
Date: Sunday, Apr 07, 2019, 2:31 AM
To: Buchanan, Jami L CIV USARMY CELRH (US) <Jami.L.Buchanan@usace.army.mil <mailto:Jami.L.Buchanan@usace.army.mil> >
Subject: [Non-DoD Source] Russell Fork Release Discussion

Dear Sir/Madam:

As a previous resident in Johnstown PA, the town of Friendsville in Maryland was a preferred paddling destination an hour and a half away. It seems like a model example to relate to in this discussion. They have been having regular releases every Fri and Mon for a large part of the year. (There are other days sometimes, but Mon and Fri will always have releases for river running.) It draws people from all over since they know that a quality kayaking spot will always have the right amount of water. They also know that the releases are a significant aspect of the small town of Friendsville, so their commercial and general behavior have shaped up to benefit the town.
The Russell Fork is a well known to all river runners east of the Continental divide. Having predictable flows will not only create local boating community around the river, but the reliability of flows will make it a paddling destinations for people from all over.

Koushik Ray

Portland Oregon
503- eight 77- 5354

From: Buchanan, Jami L CIV USARMY CELRH (US)
To: Carrie
Cc: Goad, Charles D CIV USARMY CELRH (USA)
Subject: RE: [Non-DoD Source] Russell Fork Release Comments
Date: Thursday, April 11, 2019 12:43:23 PM

Carrie - I apologize for my slow response. We will be taking public comments now through the end of the public comment period for the Draft Environmental Assessment. We anticipate that the EA will be complete sometime in May and go out for the required 30 day review.

Thanks!
Jami

-----Original Message-----
From: Carrie [mailto:carriestambaugh@gmail.com]
Sent: Thursday, April 04, 2019 12:14 PM
To: Buchanan, Jami L CIV USARMY CELRH (US) <Jami.L.Buchanan@usace.army.mil>
Subject: Re: [Non-DoD Source] Russell Fork Release Comments

Jami,

When does the public comment period end? I wrote a bi-monthly outdoor column for the Greater Ashland Beacon... I submitted my column before I learned through the BWA of your meeting, so it wouldn't publish again until April 16.

Carrie Stambaugh
(606) 369-2635 c

> On Apr 2, 2019, at 4:17 PM, Buchanan, Jami L CIV USARMY CELRH (US) <Jami.L.Buchanan@usace.army mil> wrote:
>
> Ms. Stambaugh,
>
> Thanks so much for commenting on the drawdown optimization. This is the type of information that we are seeking from stakeholders.
>
> As I've told others who have written, we have not yet chosen a plan. We are still seeking input from interested stakeholders and working with the federal and state resource agencies to understand the tradeoffs of benefits and impacts associated with each alternative plan. We will also be considering the feedback we get from the public meeting to be held tonight at 6:30 at Breaks Interstate Park.
>
> If you know of anyone who is unable to attend the public meeting, please pass along my contact information and ask them to write to me. I would hate for anyone to think that their input wouldn't be considered if they weren't able to attend the meeting in person.
>
> If you have any other comments or questions, please feel free to get in touch with me.
> Thanks
> Jami
>
> Jami L. Buchanan
> DSMMCX Planner
> Office - 304.399.5347
>
>

From: Buchanan, Jami L CIV USARMY CELRH (US)
To: Goad, Charles D CIV USARMY CELRH (USA)
Subject: FW: [Non-DoD Source] russell fork fall release proposals
Date: Monday, April 22, 2019 2:10:45 PM

-----Original Message-----
From: Cecil Tickamyer [mailto:ceciltick@gmail.com]
Sent: Monday, April 22, 2019 1:43 PM
To: Buchanan, Jami L CIV USARMY CELRH (US) <Jami.L.Buchanan@usace.army.mil>
Subject: [Non-DoD Source] russell fork fall release proposals

First I would like to point out that the 2 most radical proposals, intended to benefit the fishing community & push the paddlers into the later colder end of the month, don't make sense, i.e. they are self-contradictory. The 3rd Monday thru last Sunday proposal is not necessarily 14 days. When October 1 is a Tuesday, Wednesday, or Thursday, it is only 7 days. That is the case this very year, so you should have noticed it. And the 2nd Saturday thru last Monday proposal is not necessarily 17 days, although it usually is, it is this year, and this time it benefits paddlers when it isn't. When October 1 is a Saturday, the proposal is for 24 straight days of "high" release.

As a retiree who doesn't like paddling in crowds, I find some virtue in those radical proposals, since I could paddle weekdays. However, there are occasional high water years (from late hurricanes or whatever) which could wipe out the entire season's scheduled whitewater releases, because the schedule occupies such a compact portion of the calendar. Or it will once you fix the inconsistencies, since your intent is clear. I guess I like the 2nd Saturday 17-24 day proposal best, the long 4-day weekend proposal next, and the current plan least. The potentially 7 day proposal is just insulting. The fishing community has the entire summer on the river, including September, and could be given some accommodation in the concluding drawdown of November too. They can use the lake during the small number of whitewater releases, even if the release detracts in some small way from their preferred experience. They don't need the first warmer half of October for their own exclusive use too.

I've been coming up there at least one weekend every October for 30 years, usually with one particular paddling buddy who is also a hunter & fisherman (although never in my presence). I may not have too many more such opportunities, but I'd still like to see a plan for the future which doesn't let one self-interested community hog the resource at the expense of other users.

Cecil Tickamyer

Appendix C

Mailing List

Supplemental Environmental Assessment
John W. Flannagan Dam
Winter Drawdown Optimization
Dickenson County, Virginia

Name	Agency	Address	City	State	ZIP
The Honorable Tim Kaine	United States Senate	231 Russell Senate Office Building	Washington	DC	20510
The Honorable Mark R. Warner	United States Senate	703 Hart Senate Office Building	Washington	DC	20510
The Honorable Morgan Griffith	U.S. House of Representatives	323 West Main St	Abingdon	VA	24210
The Honorable Mitch McConnell	United States Senate	771 Corporate Drive	Lexington	KY	40503
The Honorable Rand Paul	United States Senate	1029 State Street	Bowling Green	KY	42101
The Honorable Harold Rogers	U.S. House of Representatives	110 Resource Court, Suite A	Prestonburg	KY	41653
The Honorable Matt Bevin	Governor of Kentucky	700 Capitol Ave, Suite 100	Frankfort	KY	40601
The Honorable Ralph Northam	Governor of Virginia	P.O. Box 1475	Richmond	VA	23218
Mr. Steve Blanford, NRCS KY State Soil Scientist	USDA Natural Resources Conservation Service	771 Corporate Drive	Lexington	KY	40503-5438
Mr. Seth Wheat	KY Department of Tourism	100 Airport Road, 2nd Floor	Frankfort	VA	40601
	KY Energy and Environment Cabinet	300 Sower Boulevard	Frankfort	KY	40601
	KY Department of Fish and Wildlife	#1 Sportsmen's Lane	Frankfort	KY	40601
	KY Division of Water	300 Sower Boulevard	Frankfort	KY	40601
Ms. Regina Stivers, Deputy Secretary	Office of Kentucky Tourism, Arts and Heritage	100 Airport Road, 2nd Floor	Frankfort	VA	40601
	US Environmental Protection Agency, Region 4	Sam Nunn Atlanta Federal Center, 61 Forsyth Street, SW	Atlanta	GA	30303
Ms. Carrie Allison	US Fish and Wildlife	330 West Broadway, Suite 265	Frankfort	KY	40503-5438
	VA Department of Environmental Quality	PO Box 1105	Richmond	VA	23218
	VA Department of Game and Inland Fisheries	PO Box 90778	Henrico	VA	23228-0778
Mr. Austin Bradley	Breaks Interstate Park	627 Commission Circle	Breaks	VA	24607
Ms. Rita Surratt	Dickenson County Tourism Director	PO Box 1098	Clintwood	VA	24228
	Elkhorn Adventures Whitewater Rafting	PO Box 116	Haysi	VA	24256
Pike County Judge / Executive	Pike County Courthouse	146 Main Street	Pikeville	KY	41501
	Town of Clintwood, VA	248 Main Street	Clintwood	VA	24228
Ms. Amy Breshears	Town of Elkhorn City	PO Box 2, 395 Patty Loveless Dr.	Elkhorn City	KY	41522
Mayor Larry Yates	Town of Haysi, VA	PO Box 278	Haysi	VA	24256
	Haysi Community Library	157, O'Quinn St, PO Box CC	Haysi	VA	24256
	Jonnie B. Deel Memorial Library	198 Chase St, PO Box 650	Clintwood	VA	24228
	Elkhorn City Library	150 East Main Street	Elkhorn City	KY	41522
Ms. Emily Grimes		8849 Old Tates Creek Court	Lexington	KY	40517
Mr. Clinton Taylor		P.O. Box 262	Elkhorn City	KY	41522
Ms. Jerrica Taylor		P.O. Box 262	Elkhorn City	KY	41552
Mr. Clay Warren		2116 Mavra Trace	Lexington	KY	40513
Mr. Edgar Peck		172 Mill Farm Rd	Sugar Grove	NC	28679
Mr. Mikel Carr		3083 Greenbriar Rd	Draper	VA	24324
Mr. Ricky Brandon Dale		831 S. Beaver Dam Ave	Damascus	VA	24236
Mr. Todd Harbour		118 Grafenburg Rd	Waddy	KY	40076
Mr. James Stapleton		P.O. Box 546	Elkhorn City	KY	41522
Ms. Andrea Gass		373 Palmer Rd	Kingsport	TN	37660
Ms. Bethany Overfield		121 Elam Park	Lexington	KY	40503
Mr. Michael Daughtery		2520 Knightsbridge Ln	Lexington	KY	40509
Mr. Lucas O'Daniel		1988 South Mayo Trail	Pikeville	KY	41501
Ms. Ketlin Duff		1051 Martha Glass Dr	Jefferson City	TN	37760
Mr. Todd Schindler		5204 Arrowshire Dr	La Grange	KY	40031
Mr. B. Terry Ratliff		3001 Stephens Branch Rd	Martin	KY	41649
Ms. Jennifer Oates		1313 Maple St	Shelbyville	KY	40065
Ms. Amy Breshears		P.O. Box 2	Elkhorn City	KY	41522
Mr. Jason Bordwine		14489 Branch St	Abingdon	VA	24210
Mr. Wes Prince		788 Emmett Creek Ln	Lexington	KY	40515
Mr. Mike Whaley		140 Madeline St	Pittsburg	PA	15210
Mr. Thomas B. Brackman		501 Nutwood St	Bowling Green	KY	42103
Mr. Bobby C. Woolwine		P.O. Box 405	Elkhorn City	KY	41522
Mr. Hayes Ocirin		P.O. Box 22	Haysi	VA	24256

Appendix D

Final Environmental Assessment for Operational Change to Provide Recreational Whitewater Releases for John W. Flannagan Reservoir – September 1992

Supplemental Environmental Assessment
John W. Flannagan Dam
Winter Drawdown Optimization
Dickenson County, Virginia

1616

DEPARTMENT OF THE ARMY
HUNTINGTON DISTRICT, CORPS OF ENGINEERS
502 EIGHTH STREET
HUNTINGTON, WEST VIRGINIA 25701-2070

REPLY TO
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Jonathan J. Aya-ay
Environmental Analysis Section
Dated: 5-28-10

1616 - Final Environmental Assessment for Operational Change to Provide Recreational White Water Releases John W Flannagan Reservoir Dickenson County VA Sep 1992

1616

1992

FINAL
ENVIRONMENTAL ASSESSMENT
FOR
OPERATIONAL CHANGE TO PROVIDE
RECREATIONAL WHITE WATER RELEASES

JOHN W. FLANNAGAN RESERVOIR
DICKENSON COUNTY, VIRGINIA

TABLE OF CONTENTS

Paragraph	Description	Page
	1.00 Purpose and Need	
EA 1.01	Purpose and Need	1
	2.00 Alternatives	
EA 2.01	General	1
EA 2.02	Plans Eliminated from Further Study	1
EA 2.02.1	U.S. Fish and Wildlife Service Plan	1
EA 2.02.2	Whitewater Rafters Plan	2
EA 2.03	Without Conditions (No Federal Action)	2
EA 2.04	Plan Considered in Detail	2
EA 2.05	Environmental Design Measures	3
EA 2.06	Permits and Other Environmental Compliance	3
EA 2.06.1	Fish and Wildlife Coordination Act	3
EA 2.06.2	Endangered Species Act	3
EA 2.06.3	Cultural Resource Requirements	4
	3.00 Environmental Setting	
EA 3.01	General	4
EA 3.02	Significant Environmental Resources	4
EA 3.02.1	Project Purposes	4
EA 3.02.2	Project River Corridor	5
EA 3.02.3	Water Quality	5
EA 3.02.4	Aquatic Resources	6
EA 3.02.5	Terrestrial Resources	6
EA 3.02.6	Wetlands	6
EA 3.02.7	Endangered Species	6
EA 3.03	Significant Cultural Resources	7
EA 3.03.1	Socioeconomics	7
EA 3.03.2	Cultural Resources	7
EA 3.03.3	Recreation	7
EA 3.03.4	Aesthetics	8
EA 3.03.5	Safety	8

4.00 Environmental Impacts

Project River Corridor
EA 4.01 No Federal Action 9
EA 4.02 Selected Plan 9

Water Quality
EA 4.03 No Federal Action 9
EA 4.04 Selected Plan 9

Aquatic Resources
EA 4.05 No Federal Action 9
EA 4.06 Selected Plan 9

Terrestrial Resources
EA 4.07 No Federal Action 10
Ea 4.08 Selected Plan 10

Wetlands
EA 4.09 No Federal Action 10
EA 4.10 Selected Plan 10

Endangered Species
EA 4.11 No Federal Action 10
EA 4.12 Selected Plan 10

Socioeconomics
EA 4.13 No Federal Action 10
EA 4.14 Selected Plan 10

Cultural Resources
EA 4.15 No Federal Action 10
EA 4.16 Selected Plan 10

Recreation
EA 4.17 No Federal Action 10
EA 4.18 Selected Plan 11

Aesthetics
EA 4.19 No Federal Action 11
EA 4.20 Selected Plan 11

Safety
EA 4.21 No Federal Action 11
EA 4.22 Selected Plan 11

5.00 Public and Agency Coordination

EA 5.01 Scoping 12
EA 5.02 Public Meetings 12
EA 5.03 Public Review 12

6.00 Conclusions

EA 6.01 Conclusions 12

SUMMARY

( ) Draft (X) Final Environmental Assessment

Responsible Office: Resource Evaluation Branch, Planning Division
U.S. Army Corps of Engineers
Huntington District, 502 Eighth Street
Huntington, West Virginia 25701-2070

Telephone Number: 304-529-5712

1. Name of Action: Operational change to provide recreational whitewater releases, John W. Flannagan Reservoir, Dickenson County, Virginia.

2. Description of Action: The proposed operational change will provide whitewater recreational opportunity for some 766 average annual participants at John W. Flannagan tailwaters and Russell Fork River.

3. Environmental Impacts: Impacts on fish and wildlife resources, as the result of the operational change, would be minimal and would not have any long-term significant impacts. As there are no known wetlands other than Palustrine involved none will be affected. Species listed on the Federal List of Endangered and Threatened Species will not be impacted.

Water Quality will not be significantly or permanently impacted and the prepared change will not disturb any known archeological, cultural, on historical sites in the area.

Proper coordination has not resulted in any unresolved issues.

In summation, implementation of the proposed operational change to provide recreational whitewater releases, John W. Flannagan Reservoir, Dickenson County, Virginia, will not adversely affect the long-term quality of the human and/or natural environment.

FINAL

ENVIRONMENTAL ASSESSMENT

1.00 Purpose and Need

EA 1.01 A growing interest in developing the commercial use of the Pound and Russell Fork rivers for whitewater recreation has been expressed by the Commonwealths of Kentucky and Virginia, local county governments, area chambers of commerce, professional outfitters, and numerous area whitewater enthusiasts. In response to requests received by the Huntington District Corps of Engineers, and in compliance with the Corps' Policy 216, this environmental assessment has been conducted to ascertain the impacts of providing the requested whitewater recreation releases on other project purposes and the environment.

2.00 Alternatives

EA 2.01 General. Several alternatives for satisfying the whitewater releases from the John W. Flannagan Reservoir were considered. These include the U.S. Fish and Wildlife Service (1984) recommendation that whitewater releases not exceed 300 c.f.s., which was based on instream flow incremental methodology analysis on the Pound River below John W. Flannagan Reservoir. In 1984, a group of rafters representing Carolina Wilderness Adventurers, North Carolina and Mountain River Tours, West Virginia, recommended a release calculated to yield an accumulative flow of 1,000 c.f.s. through the Breaks. This was based primarily on safety features and raft maneuverability. North American River Runners, 1984, recommended flows between 825 c.f.s. to 1,500 c.f.s. throughout the study reach. In 1990 the U.S. Fish and Wildlife Service, West Virginia Cooperative Fishery Unit, West Virginia University and the Huntington District working independently concluded that recreational flow releases from John W. Flannagan should not exceed 800 c.f.s during the normal fall drawdown period from October 1st to December 1st. Such releases, when added to the median flow value from the uncontrolled drainage area upstream of Breaks Interstate Park would yield flows on Russell Fork through the Breaks of 860 c.f.s.

EA 2.02 Plans Eliminated from Further Study. Based upon evaluation of a number of solutions, three comprehensive plans were developed to provide the necessary criteria to provide the operational change at John W. Flannagan Reservoir. Each plan will be presented and the rationale for its elimination.

EA 2.02.1 U.S. Fish and Wildlife Service Plan. The Service, based on their 1984 instream flow incremental methodology, recommended that flow releases for recreational purposes not exceed 300 c.f.s. in the Pound River. The Service in association with the Virginia Department of Game and Inland Fisheries concluded that when flows exceeded 300 c.f.s fish habitat (trout) began to decay. Based on studies conducted for the Huntington District by several rafters in 1984, which recommended flows ranging from 800 c.f.s. to 1700 c.f.s. and the District study on Fishability and Wadeability, which determined that both parameters began to decline when flows exceeded 800 c.f.s. (USACOE, 1984) it was determined that the 300 c.f.s. recommendation was too severe and it was eliminated.

EA 2.02.2 Whitewater Rafters Plan. The whitewater rafters as a group, based on studies conducted by several members of their affiliations, recommended flows ranging from from 800 to 1,700 c.f.s. between John W. Flannagan Reservoir and Elkhorn City, Kentucky (Whitewater Reach). The ideal flow would be calculated to provide a flow of 1,000 c.f.s. through the Breaks. A recent recommendation has been for a flow of 1,100 c.f.s. through the whitewater reach. This plan was rejected based on the observed fact that flows in excess of 1,200 c.f.s. will impact four (4) colonies of the endangered species Virginia spirea (Spirea virginiana) located within the whitewater reach (Nair, 1989).

EA 2.03 Without Conditions (No Federal Action). Normal fall drawdown of seasonal storage from John W. Flannagan Reservoir, beginning October 1st of each year, is accomplished by releasing in addition to all inflow, releases from storage sufficient to allow the lake level to gradually fall in accordance with the operational rule curve developed for the project. Normal drawdown may also occasionally allow temporary storage of excess inflow for later release if prior releases have resulted in lake drawdown below levels called for by the upper limiting rule curve. The total reservoir release will vary depending on inflow and current pool levels but is scheduled such that winter pool at elevation 1,380.0 is obtained by December 1st of each year. During drought years, prior releases from storage required to achieve downstream lowflow requirements may reduce the amount of storage to be released during the fall drawdown period. The No Action Alternative involving the proposed change in operational procedure for whitewater releases would not meet the request of the local county officials, chambers of commerce, outfitters, and local whitewater enthusiasts. However, the No Action alternative will be fully evaluated to comply with NEPA requirements.

EA 2.04 Plan Considered in Detail. The recommended plan for the proposed operational adjustment to accommodate whitewater activities at J.W. Flannagan Reservoir is as follows: Normal fall drawdown of seasonal storage will be accomplished according to the existing operational rule curve and objectives with the exception that daily releases from storage during October will be rescheduled so that increased flow is available each Saturday and Sunday of October for whitewater activities, but not exceeding eight days during the month. During the proposed operational adjustment for whitewater releases, project personnel will begin increasing the scheduled low flow rate (about 50 c.f.s. or greater) at 07:30 a.m. until a flow release of 800 c.f.s. is obtained by 09:30 a.m. This flow of 800 c.f.s. will be maintained for five hours (09:30 a.m. until 02:30 p.m.). At the conclusion, of the five-hour controlled release, flows will be reduced over a two-hour period (02:30 p.m. - 04:30 p.m.) until the flow from John W. Flannagan Reservoir matches the modified operational rule curve for the proposed whitewater releases. This modified operation curve would reach a winter pool elevation of 1380.0 by 1 December. The proposed whitewater releases will take place on the scheduled days during the month of October yearly providing only if the hydrological conditions permit safe and effective operations of the project for all other authorized purposes. At no time during the drawdown period will the release rate exceed 800 c.f.s. unless required for flood control or dam safety considerations.

The proposed whitewater releases as outlined above would result in a Saturday and Sunday daily average discharge from Flannagan Reservoir of about 270 c.f.s and as scheduled would occur about 26 percent of the time. Tabulated below are the

results of a flow duration analysis of recorded flows for the Pound River below Flannagan Reservoir and reflect existing conditions:

Table 1
FLOW DURATION
Pound River Below John W. Flannagan Reservoir

Percent of Time Flow is Exceeded	Daily Average Discharge for Pound River Below Flannagan for Month of October, Existing Cond.
5	370 c.f.s.
8	270
10	235
20	148
30	110
40	89
50	74

Comparison of existing condition data with modified data indicates that the addition of whitewater releases would increase the number of days in October with daily average flows equalling or exceeding 270 c.f.s. from about 8 percent to about 32 percent.

Whitewater releases from Flannagan Reservoir would result in a Median daily average flow through the Breaks of about 330 c.f.s. Historically, an average daily discharge of 330 c.f.s has been equalled or exceeded about 16 percent of the days in October; the addition of whitewater releases would raise the number of days to about 38 percent.

EA 2.05 Environmental Design Measures. The selected action alternative will incorporate actions and measures to avoid or minimize potential environmental impacts to the extent feasible.

EA 2.06 Permits and Other Environmental Compliance.

EA 2.06.1 Fish and Wildlife Coordination Act. Compliance with the Fish and Wildlife Coordination Act is being conducted concurrent with NEPA compliance. Coordination with Federal and state natural resource agencies is ongoing and their view and recommendations will continue to be implemented into the process.

EA 2.06.2 Endangered Species Act. In accordance with the Endangered Species Act of 1973 and the Endangered Species Act Amendments of 1978, the Huntington District requested the views of the U.S. Fish and Wildlife Service concerning the potential presence of animal species listed or proposed for listing as endangered. As discussed in Paragraphs EA 3.02.7 and EA 4.11 & 12 "no effect" determinations have been reached regarding the selected alternative. However, the endangered plant species Virginia spirea (*Spirea virginiana*) occurs in four (4) known locations within the whitewater reach.

EA 2.06.3 Cultural Resource Requirements. Section 106 of the National Historic Preservation Act of 1966 requires the Corps to identify historic properties affected by the proposed action and to evaluate the eligibility of those properties for the National Register of Historic Places. Historic/archeological investigations were conducted for the project area in 1960 and no apparent archeological sites were recorded; however, no systematic survey has been conducted for the project.

3.00 Environmental Setting

EA 3.01 General. The study area is located in the Kanawha section of the Appalachian physiographic province, see map. The Pound River and Russell Fork River are approximately 10.5 miles in length through the project area and are characterized by a narrow sinuous valley bordered by steep ridges. In some locations (Breaks Gorge) the floodplain is almost restricted to the streambed itself (Clark 1937). The economy and culture of the project area are largely dependent upon the coal and timber industry and recreation.

3.02 Significant Environmental Resources

3.02.1 Project Purposes. The existing John W. Flannagan Reservoir is operated for authorized purposes of flood control, low flow augmentation, recreation, fish and wildlife betterment, and water supply. The following paragraphs describe the authorized project purposes.

(a) Flood Control. JWF was constructed to provide storage for floodwaters from the Pound River drainage basin that if released would contribute to flood heights along the mainstem Russell Fork, mainstem Levisa Fork and the Big Sandy River. The project has a net usable flood control storage of 6.2 inches at summer pool, (elev. 1396.0) and 8.7 inches at winter pool (elev. 1380.0). During the April 1977 flood, the John W. Flannagan project alone prevented approximately $93 million in damages throughout the Levisa Fork Basin.

(b) Low Flow Augmentation. The John W. Flannagan project is operated to augment flows on the Russell Fork and Levisa Fork. Flow augmentation is regarded as a continuing important feature for maintenance of suitable downstream water quality. John W. Flannagan in conjunction with the Corps reservoirs i.e. Yatesville, Fishtrap, Paintsville, and Dewey Lakes maintains water quality in the Big Sandy Basin. A minimum flow of 50 c.f.s. or more is maintained from John W. Flannagan to provide minimum target flows of 190 c.f.s. at Pikeville, KY; 232 c.f.s. at Paintsville, KY; and 529 c.f.s. below Louisa, KY.

(c) Reservoir Recreation. Resource management activities related to recreation in the project area are confined to John W. Flannagan Lake. No management of downstream recreation activities on the Pound River or Russell Fork occurs. Table 1 shows average recreational uses of JWF during October from 1988-1990.

Table 2

October Recreation Visitation Estimates

Lake Boating No. Days	Lake Fishing No. Days	Total No. Days
1012	14,356	15,368

(d) Fish and Wildlife Betterment. A minimum discharge rate of 50 c.f.s. is maintained from JWF to maintain the water quality and flow in the tailwaters of the Pound River and the Russell Fork.

(e) Water Supply. Water supply at JWF was not an original authorized project purpose. A contract was entered into with the JWF Water Authority on 28 January 1977 for the purpose of municipal and industrial water supply. JWF Water Authority, a wholesaler who markets the allotted storage to various entities, has contracted with the Corps for the utilization of 2125 acre-feet of storage for present and future use. Present usage is 356 acre-feet.

3.02.2 Project River Corridor. The river corridor consists of second growth oak and hickory-pine forest. The riparian zone, is restricted throughout most of the project area due to the steep topography (WVU CU, 1991). The Pound River tailwaters, below John W. Flannagan Dam differs from the Russell Fork River in that the Pound River fauna is strongly influenced by the cold hypolimnetic releases from the reservoir, whereas, the Russell Fork River is typical of the streams in the area (Angermeier and Neves 1988). The Pound River has a simple invertebrate community composed primarily of Simuliidae, Chironmidae, Betidae, and Asellidae, while the Russell Fork River has a more diverse community of Ephemeroptera, Plecoptera, Trichoptera, Coleoptera, and Diptera (USACE 1989; USACE 1990). The Pound River and Russell Fork rivers provides good habitat for recreational trout fishing based on water temperature, ph, dissolved oxygen, hard water, and potential food supply (USFWS 1984).

EA 3.02.3 Water Quality. The overall water quality conditions in the tailwater at John W. Flannagan Reservoir is "good". However, during the summer the reservoir stratifies with the hypolimnion usually depleted of oxygen. This anoxic condition results in the formation of high concentration of reduced metals, particularly manganese, in the bottom of the reservoir. The concentration of these metals depends on the reservoir retention time. For example, during summers with relative few weather-related releases from the reservoir, the retention time is relatively long, resulting in a very high concentration of manganese in the hypolimnion. When the manganese oxidizes upon release from the reservoir, it precipitates forming a black manganic hydroxide. Deposits of this hydroxide on the substrate affects the number and types of organisms present in the tailwater during dry summers. The temperature regime has also been modified due to cold hypolimnie releases from the reservoir. This has created an environment which favors coldwater rather than warm water organisms, and has permitted the establishment of put-and-take trout fishery.

EA 3.02.4 Aquatic Resources. The aquatic ecology of the project area is highly reflective of the existing chemical and physical conditions. The overall diversity of the project area is variable relative to water quality conditions although, for the most part resident species tend to be pollution tolerant. The benthos of the project area is dependent on several factors, including substrate type, water velocity, food availability, and water quality. Benthos population throughout the project areas are limited to insect larvae, mainly mayflies, stoneflies, caddesflies, and midges. The distribution and diversity of these insect larvae are further determined by the individual species chemical tolerance and thus reflect the water quality of the project area (USACOE, 1990). A fishery survey of the Russell Fork River was conducted by the US Fish and Wildlife Service in May of 1985. Angermeire and Neves 1988 conducted a fishery survey in cooperation with the Virginia Department of Game and Inland Fisheries on the Pound River tailwater below John W. Flannagan Dam. The West Virginia University Cooperative Fish and Wildlife Unit 1990 conducted a fishery survey on the Pound River tailwater below John W. Flannagan Dam. Their surveys revealed the presence of 50 fish species representing eight families. Historical records list 20 additional species that are believed to have been collected in previous surveys, but which do not occur in the current collections (Bay, 1986). The most widely distributed species collected in the upper Russell Fork drainage was the roseface shiner (Notropis rubellus). Additional abundant species were northern hogsucker (Hypentelium nigricans) and stoneroller (Campostoma anomalum). The smallmouth bass (Micropterus dolomieui) was an abundant and widely distributed gamefish. In addition the Virginia Department of Game and Inland Fisheries has established a put-and-take trout fishery composed of brown trout (Salma trutta) and rainbow trout (Oncorhynchus mykiss) in the study area. Both of these species have been reproducing in the Pound River and have established a limited wild trout fishery.

EA 3.02.5 Terrestrial Resources. There are 214 land vertebrate species which may occur in the project area: 138 are aviafauna, 41 are herptafauna, and 35 are mammals. Each class has members that rely on the aquatic, marsh, and riparian habitats associated with the project area. The principal game species which may be found in the area include cottontail (Sylvilous floridanus), fox squirrel (Sciurus niger), gray squirrel (Sciurus carolinensis), raccoon (Procyon loctor), mink (Mustela vison), Muskrat (Ondatra zibethicus), ruffed grouse (Bonasus umbullus), white-tailed deer (Odocolileus virginianus) wild turkey (Meleagris gallopavo), various migratory species, and numerous non-game species (Barbour and Davis, 1974 and Baker, 1986).

EA 3.02.6 Wetlands. The physiography and drainage patterns, in the project area, are not conducive to the formation or occurrence of wetlands. Those which are found in the project area are Type 1 seasonally flooded basins or flats. The Rivervine System of the John W. Flannagan tailwater and the Russell Fork in the project area cover classified as Type 1 wetlands (Cowardin et. al., 1979).

EA 3.02.7 Endangered Species. Several Federally listed species which may occur as transients in the project area are the peregrine falcon (Falco peregrinue), bald eagle (Haliaeetus leucocephalus), and Virginia big-eared bat (Plecotus townsendii) and the Indiana bat (Myotis sodalis). Two fish species worthy of special attention are the long-nose dace (Rhinicthys cataractae), which was not known to occur in Kentucky until 1984 when KYDFWR personnel collected several specimen from the Russell Fork near Potter Flats and the eastern sand darter

(Ammocrypta pellucida). The eastern sand darter is currently under Status Review Category 2 for future listing as endangered and has not been collected in the Russell Fork since 1960. Sand darters are difficult to collect, however, due to their habit of burrowing into sand substrates and remaining stationary when approached. A viable population may, therefore, still exist in the Russell Fork. Four (4) colonies of Virginia spirea (Spirea virginiana) a U.S. Fish and Wildlife Service listed endangered species are located within the project area. A small colony is located approximately 200 yards downstream of the John W. Flannagan Reservoir on the left descending bank within the project area. Two (2) colonies are located below the Garden Hole area, one on each bank, with the one on the left descending bank being the largest colony, covering approximately 100 square feet. The final colony is located downstream on the left descending bank near the rapid know as El Horrendo (USFWS, 1990).

EA 3.03 Significant Cultural Resources

EA 3.03.1 Socioeconomics. Letters have been received from local officials in Buchannan and Dickenson County Virginia, and Pike County, Kentucky, expressing their appreciation for past whitewater releases and their enthusiasm for the continued development of the whitewater industry in the Breaks Gorge area. The officials have expressed that the whitewater industry has brought a much needed economic boost to the area and the new resource was enthusiastically received by the local merchants. Breaks Interstate Park experienced a substantial increase for overnight facilities and restaurant revenues during the four weekend whitewater season in October 1990. Along with the revenues generated by participants on the rafting trips, sightseers and other tourists created an obvious indirect increase in revenues which has been felt throughout the business community. The 1990 local revenues from the whitewater season is conservatively estimated to be around $250,000.00 (Pike County Chamber of Commerce, 1991).

EA 3.03.2 Cultural Resources. Record of man's occupation of the Russell Fork Valley is more than a matter of casual or academic interest. Early man relied heavily on the major stream valleys and natural passes through the mountains for movement, because they were the easiest transportation routes. The availability of certain basic resources within the watershed, such as abundant water, food, game, and fertile farmland, served to attract human settlement. Coal, natural gas, and timber became significant in more recent periods. Based on the existing data base there are no known sites of archeological or historical importance within the project impact area (Maslowski 1991).

EA 3.03.3 Recreation. Southwest Virginia and eastern Kentucky, are rural mountainous areas offering a variety of social and recreation activities sponsored primarily by various local communities, civic groups, and organization. Most of these recreation activities are local in nature and have very little drawing power regarding tourist. Recreation resources of particular interest include the Breaks Interstate Park; a 4200 acre park situated on the Russell Fork at the Kentucky-Virginia state line, with a lodge, restaurant, and variety of recreation activities. The Jefferson National Forest is adjacent to the project area and offers a variety of outdoor activities. The area has three Corps of Engineer's lake projects: John W. Flannagan, Reservoir Dickenson County, Virginia; Fishtrap Lake, Pike County, Kentucky; and North of Pound Reservoir,

Wise County, Virginia, which offer boating, fishing and other outdoor recreational activities.

EA 3.03.4 Aesthetics. The aesthetics of the area are most likely the most spectacular in the region. The Russell Fork after being joined by Pound River (John W. Flannagans Tailwater) has carved a 1600-foot deep gorge in the lovely Pine Ridge Mountains forming the "Breaks of the Sandy" or as some refer to as the "Grand Canyon of the East". This gorge with its steep sandstone walls rising on both sides of the stream makes a semicircular loop around the base of the mountain known as the Tower. From here Russell Fork, with its pounding whitewater, bisects the Kentucky-Virginia border for approximately five miles before plunging out of the mountains near Elkhorn City, Kentucky (Shelinger, 1978).

EA 3.03.5 Safety. Safety regulations and procedures at the John W. Flannagan Reservoir are in accordance with Corp's policy to promote and provide a safe and healthful environment for the visiting public. However, with the discretionary authority, as outlined by the Director of Civil Works, (DAEN-CWO-ml/ltr dtd 10 Feb 84) to permit controlled releases of water to facilitate downstream whitewater recreation, additional safety precautions need to be taken into consideration. A synopsis of the in-place safety provision for whitewater participants/activities has been provided by Chip Miller, Ranger, John W. Flannagan Reservoir 1991, and are as follows:

1. Conducted Swift Water Rescue Training for Corps personnel, Breaks Interstate Park, and Local Rescue Squads.

2. Winterized restroom below Dam Recreation Area for whitewater participants to change, use, and warm up.

3. Keep area and restrooms clean below Dam by contract.

4. Post times/c.f.s of releases Below Dam. Warning horn blasts to alert visitors of rapid rise in water level (Signed).

5. Ranger Below Dam for Visitor Assistance.

6. Contact with County Sheriffs's Department available.

7. Maintain safe/unobstructed access to water's edge for kayakers and rafters on Corps areas.

8. Ensure access availability for emergency vehicles/personnel on Corps areas.

9. Rescue equipment (Bailey, PFD, Throw bags, etc.) maintained and available.

10. Provide for an emergency shutdown of flows in the event of an emergency.

4:00 Environmental Impacts

Project River Corridor

EA 4.01 No Federal Action. No Federal action in the project area could result in increased uncontrolled human encroachment on the aquatic resource and the riparian zone. Other than normal ecological changes and the potential for uncontrolled human encroachment, the river corridor is expected to remain basically unchanged.

EA 4.02 Selected Plan. Implementation of the selected plan will not have any adverse significant impacts on the river corridor. Whitewater recreation releases will be restricted to the four weekends during the month of October on an annual basis and will be controlled and managed. See section EA 2.04.

Water Quality

EA 4.03 No Federal Action. The no Federal action alternative would result in no impact on water quality.

EA 4.04 Selected Plan. Based on available information, implementation of the selected plan, will result in minimal impacts regarding water quality. During normal (1990) and wet (1989) years, concentrations of measured chemical parameters were below commonly recommended maximum limits, and only nominal downstream temperature changes were observed, however significant changes in chemical constituents and temperature were measured during the drought year of 1988 (USCOE, 1991). The U.S. Fish and Wildlife Service, 1991 has recommended that whitewater recreational releases be canceled during low-flow years to prevent the possibility of downstream impacts to water quality. Coincidentally, low flow years will also have significant in-lake drawdown (due to water quality releases) and therefore Self-limit the amount of water available for white water releases.

Aquatic Resources

EA 4.05 No Federal Action. The no Federal action alternative would result in no significant impact on aquatic resources.

EA 4.06 Selected Plan. The selected plan when implemented would have no significant impact on aquatic resources. Aquatic resource communities differ between the Pound River and the Russell Fork. The former is characterized by cold-water fauna maintained by cold hypolimnetic releases from John W. Flannagan reservoir, whereas the latter is typical of warm-water streams in the geographic area (USACOE 1989). In low flow years, pulse-releases at moderate flow rates like those in 1990 are probably beneficial in maintaining a relatively silt-free stream bed. High benthic biomass in low flow years in the Pound River likely indicates that fine particulate sediment are accumulating in the streambed. Such accumulation, and concomitant high benthic productivity, are probably at odds with maintaining a healthy trout fishery in the project area. Conversely, under high flows, excessive flushing would reduce instream productivity, increase out-flow rates of organisms, reduce available optimal fish habitat, and increase respiratory maintenance costs of remaining organisms. This, the intermediate

pulse-released flow regime of 1990, which lies between the minimum flows seen in 1988 and the high flows experienced in 1989, are probably not harmful to aquatic resources in the project area (WV FWCU, 1991).

Terrestrial Resources

EA 4.07 No Federal Action. The no Federal action alternative would result in no significant impact on terrestrial resources.

EA 4.08 Selected Plan. The selected plan when implemented would result in no significant impact to terrestrial resources. Other than normal ecological changes and the potential for increased human impact, terrestrial resources should remain basically unchanged.

Wetlands

EA 4.09 No Federal Action. No wetlands would be affected.

EA 4.10 Selected Plan. Implementation of the selected plan would result in no impacts on wetlands.

Endangered Species

EA 4.11 No Federal Action. No discernible impact on any endangered species is expected. See Section EA 3.02.7.

EA 4.12 Selected Plan. No discernible impact on any endangered species is expected. See Section EA 3.02.7.

Socioeconomics

EA 4.13 No Federal Action. The no action alternative could result in the annual estimated loss of some $250,000.00 to the local economy.

EA 4.14 Selected Plan. Implementation of the selected plan could bring an estimated $250,000.00, to the local business community (USACOE, 1991).

Cultural Resources

EA 4.15 No Federal Action. No cultural resources would be affected.

EA 4.16 Selected Plan. Implementation of the selected plan would not impact any known cultural resources.

Recreation

EA 4.17 No Federal Action. No action would result in the estimated loss of some 766 average annual recreation opportunities for whitewater participants (1988-1991) (USACOE 1991).

Table 3
Whitewater Participants at John W. Flannagan Reservoir

Year	Whitewater Participant
1988	150
1989	390
1990	882
1991	1614

These numbers clearly indicate a trend of growth (over 100% a year!!) That growth will continue until the carrying capacity of the resources is reached. There are three types of carrying capacity that can be identified: 1) Ecological; 2) Sociological: and 3) Physical. Given the fact that there is a narrow launch window on a given day (when flows are at or near 800 c.f.s.), the physical capacity is probably the limiting factor.

EA 4.18 Selected Plan. Implementation of the selected plan will provide adequate whitewater flows in the John W. Flannagan tailwater and Russell Fork for some 766 annual participants. Also scheduled releases will allow the industry and participants to grow in numbers. However, releases are not guaranteed and they are dependent upon storage availability within John W. Flannagan Lake. The selected plan will not have any long term significant adverse impacts on other operational or recreational uses of the John W. Flannagan project.

Aesthetics

EA 4.19 No Federal Action. Short-term adverse impacts could result from the loss of visual recreational viewing of the whitewater participants.

EA 4.20 Selected Plan. The aesthetic quality of a particular area is a subjective matter determined by individual perception and values. Therefore, deterministic findings of whether an action that alters an environmental setting has a negative or positive impact cannot be made. The selected plan, when implemented, could result in aesthetically pleasing environment as the result of short-term cumulative impacts from whitewater and other related recreationalist.

Safety

EA 4.21 No Federal Action. The safety plan, which covers whitewater activities and participants, as presented in EA 3.03.5 will remain in place under the no action plan.

EA 4.22 Selected Plan. Under the selected plan the in place safety plan for whitewater activities and participants at John W. Flannagan Reservoir, EA 3.03.5 will remain. The following additions to the plan are proposed:

(1) An informational bulletin board will be placed at the tailwater staging area containing allocation charts, emergency number, Title 36 Rules and regulations, safety tips, operational procedures of the reservoir, and other information of interest to the visitor.

(2) Resource personnel trained in safety to promote, develop, and maintained public interest in boating and tailwater safety.

(3) Utilization of the existing warnings siren (for fluctuations of tailwater elevations) will be incorporated into the operations.

(4) An informational pamphlet, outlining a "Safety Code," drafted and distributed to the visiting public. The pamphlet would contain inside:

(a) Information on the project operations and schedules;

(b) Guidelines on personal preparedness and responsibilities;

(c) Boat and equipment preparedness;

(d) Trip leaders preparedness and responsibilities;

(e) Things to do in case of an emergency;

(f) A map or diagram outlining potential hazards.

(5) Recommend the States (Kentucky and Virginia) assure that appropriate safety requirements are incorporated into the licensing of outfitters.

5.00 Public and Agency Coordination

EA 5.01 Scoping. Extensive efforts have been made to determine significant issues related to the proposed operational change to authorize whitewater recreational releases from John W. Flannagan Reservoir. The natural resource agencies as well as District comments covered a variety of environmental and other related issues, which have been addressed in this document.

EA 5.02 Public Meetings. Cooperation with Federal and state agencies have been and will continue to be important to the implementation of the selected plan to provide whitewater recreational releases at the John W. Flannagan Reservoir. A public meeting was conducted on December 17, 1991, at Elkhorn City, Kentucky, to present the plan to the public.

EA 5.03 Public Review. This document has been made available to the natural resource agencies both Federal and state, the general public, and other interested agencies and groups for a thirty (30) day review period as required for NEPA compliance.

6.00 Conclusions

EA 6.01 Conclusions. Major points derived from review of the anticipated environmental impacts are as follows: (1) The proposed operational change to provide whitewater recreation releases at John W. Flannagan Reservoir will provide the opportunity for annual whitewater recreation opportunities.
(2) There are no known wetlands other than Palustrine involved with the project, so none will be affected. (3) Species listed on the Federal List of Endangered and Threatened Species will not be impacted. (4) The proposed operational change will not disturb any known archeological, cultural, or historical sites in the area. (5) Water quality will not be significantly or permanently affected. (6) Proper coordination has not resulted in any unresolved issues.

Literature Cited

Angermeier, P.L. and R. J. Neves. 1988. Survey of the fauna of the Pound River, Virginia, below Flannagan Reservoir, before and after a pulsed release. Virginia Polytechnic State University.

Baker, John. 1990. Virginia Department of Game and Inland Fisheries. pers. comm.

Barbour, Roger W. and Wayne H. Davis. 1974. Mammals of Kentucky the University Press of Kentucky, Lexington.

Bay, Robert, 1986. A fishery survey of the Russell Fork of the Big Sandy River, Buchanan and Dickenson Counties, Virginia, and Pike County, Kentucky. Prepared for Huntington District, U.S. Army Corps of Engineers. Huntington, West Virginia.

Carolina Wilderness Adventures, Inc. 1984. Letter Report Regarding Russell Fork Rafting. Submitted to Huntington District, USACOE. Huntington, West Virginia.

Clark, M. E. 1937. Biological Survey of the Big Sandy, Tygart, and Kinniconich Drainage Areas, Kentucky Fisheries Bulletin No. KYDRWR Frankfort, Kentucky.

Cowardin, L.M., V. Carter, F.C. Golet and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. FWS, FWS/OBS-79-31. Washington, D.C. 103 pp.

Maslowski, Robert. 1991 U.S. Army Corps of Engineers, Huntington District. Huntington, West Virginia. Pers. comm.

Miller, Chip. 1991. Ranger, John W. Flannagan Reservoir. pers. comm.

Nair, P.S. 1989. A report on the 1989 study of whitewater recreation releases from J.W. Flannagan Reservoir. U.S. Fish and Wildlife Services, Annapolis, Maryland.

North American River Runners, Inc. 1984. Commercial Rafting Feasibility of the Russell Fork River. Contract/Purchase Order No. DACW69-84-M-1258. Huntington District, USACOE. Huntington, West Virginia.

Pike County Chamber of Commerce, Inc. 1991. Correspondence: Positive Economic Impact on the John W. Flannagan Dam area of Kentucky and Virginia as the Result of Whitewater Releases.

Shelinger, Robert. 1978. A Canoeing and Kayaking Guide to the Streams of Kentucky. Menasha Ridge Press. Hillsborough, North Carolina.

U. S. Fish and Wildlife Service. 1984. Instream flow incremental methodology of the Pound River. Ecological Services. Annapolis, Maryland.

U. S. Fish and Wildlife Service. 1991. John W. Flannagan Reservoir Coordination Act Report on Proposed Whitewater Releases. Ecological Services. Annapolis, Maryland.

U.S. Army Corps of Engineers. 1984. Methodology for Determining feasibility in river reaches subject to variable flow. Huntington, District, Huntington, West Virginia.

U. S. Army Corps of Engineers. 1989. Results from a preliminary field investigation for special discharge releases, John W. Flannagan Reservoir. Huntington District, Huntington, West Virginia.

U. S. Army Corps of Engineers. 1990. Results from field investigations for whitewater discharge releases, John W. Flannagan Reservoir. Huntington District, Huntington, West Virginia.

U. S. Army Corps of Engineers. 1991. Results from the 1990 field investigation for white water discharge releases from John W. Flannagan Reservoir. Huntington District, Huntington, West Virginia.

West Virginia University. 1991. Effects of Pulse-Released Flows on Invertebrate Drift and Fish in the Tailwaters of J. W. Flannagan Reservoir. Final Report to Huntington District. USACOE by West Virginia Cooperative Fish and Wildlife Unit. Morgantown, West Virginia.

FINDING OF NO SIGNIFICANT IMPACT RECREATIONAL WHITEWATER
FOR
OPERATIONAL CHANGE TO PROVIDE RELEASES
JOHN W. FLANNAGAN RESERVOIR
DICKENSON COUNTY, VIRGINIA

1. I have conducted an environmental assessment, in the overall public interest, concerning implementation of the operational change to provide recreational whitewater releases at John W. Flannagan Reservoir. The purpose of this change is to provide releases at John W. Flannagan Reservoir for whitewater recreational opportunities on an annual basis. However, during years of low-flow when there is evidence of a well developed hypolimnion in John W. Flannagan Reservoir, high-flow pulsed releases for recreational purposes will be canceled.

2. The possible consequences of the operational change have been studied for environmental, cultural, and social well being effects. Another factor bearing on my assessment was the capability of the operational change to meet the public needs for which it was proposed.

3. In evaluation of the operational change and viable alternatives, the following points were considered pertinent.

a. Environmental Considerations. The Huntington District has taken reasonable measures to assemble and present the known or foreseeable environmental impacts of the operational change in the environmental assessment. These impacts involve human resources, aesthetics, recreation, and biological (aquatic and terrestrial) resources. Implementation of the operational change will not be adverse to fish and wildlife communities, and therefore not significant. Fauna and flora listed on the Federal List of Endangered and Threatened Species will not be impacted, and as there are no wetlands involved with the operational change, none will be impacted. Impacts on water quality would be intermittent and short term.

b. Economic and Social Well-Being Considerations. No significant economic or social well-being impacts that are both adverse and/or unavoidable are foreseen as a result of the proposed operational change. A survey of current literature reveals that the operational change will have no impact on any sites of significant archeological or historical importance.

c. Pursuant to the Fish and Wildlife Coordination Act (FWCA) of 1958, coordinations with the U.S. Fish and Wildlife Service, the Kentucky Department of Fish and Wildlife Resources, and the Virginia Department of Game and Inland fisheries have been maintained throughout the study. Appropriate measures and best management practices have been identified and incorporated into the plan. Also, in accordance with the Endangered Species Act, as amended, the recommended plan would not impact listed species.

d. No designated wild, scenic, or recreational river pursuant to the Wild life and Scenic rivers Act of 1968, as amended, would be affected. No prime or unique farmland under the CEQ Memorandum of 30 August, 1976 would be involved. The recommended plan is also in compliance with the National Historic

Preservation Act and Executive Order 11988 (Floodplain Management). Finally, in accordance with Executive Order 11990 (Protection of Wetlands), no wetlands will be involved.

e. Alternative Considerations. The proposed operational change plan and the "No Action" plan were the only plans given serious consideration. The proposed plan is both environmentally and socially acceptable, and the no action alternative would not be responsive to the desires and needs of the local communities and recreational whitewater participants.

f. Other Public Interest Considerations. No known opposition to the proposed operational change has been expressed by state or local governments or organized environmental groups, and there have been no significant complaints regarding the implementation of the change. Whitewater recreationists present at the December 17, 1991, public meeting found the 800 c.f.s. to be acceptable; however, some felt 1000 c.f.s. would be better.

4. I find the proposed operational change at John W. Flannagan Reservoir to provide recreational whitewater releases has been designed in accordance with current authorization and as described in the Environmental Assessment. The operational change is consistant with national policy, statutes, and administrative directives. This determination is based on thorough analysis and evaluation of the operational change and the alternative course of action. Where the operational change has an unavoidable adverse impact, this effect is either ameliorated or substantially outweighed by other considerations. In conclusion, I find the proposed operational change to provide recreational whitewater releases at John W. Flannagan Reservoir will have no significant adverse affect on the quality of the human and/or natural environment.

3 SEPTEMBER 1992
Date

EARLE C. RICHARDSON
Colonel, Corps of Engineers
District Engineer

Appendix E

Supplemental Environmental Assessment for Operational Change to Provide Recreational Whitewater Releases for John W. Flannagan Reservoir – October 1996

Supplemental Environmental Assessment
John W. Flannagan Dam
Winter Drawdown Optimization
Dickenson County, Virginia

FINDING OF NO SIGNIFICANT IMPACT
RECREATIONAL WHITEWATER FOR OPERATIONAL CHANGE
TO PROVIDE 1,000 CFS RELEASES

JOHN W. FLANNAGAN RESERVOIR
DICKENSON COUNTY, VIRGINIA

1. I conducted an environmental assessment, in the overall public interest, concerning implementation of the operational change to provide 1,000 cfs recreational whitewater releases at John W. Flannagan Reservoir during a two day period on the final weekend of October beginning on October 26 and 27, 1996. The current release schedule allows for 800 cfs release during this period. The purpose of this change is to provide releases at John W. Flannagan Reservoir for addition whitewater recreational opportunities on an annual basis. However, during years of low flow when there is evidence of a well developed hypolimnion in John W. Flannagan Reservoir, high flow pulsed releases for recreational purposes will be canceled.

2. The possible consequences of the operational change have been studied for environmental, cultural, and social well being effects. Another factor bearing on my assessment was the capability of the operational change to meet the public needs for which it was proposed.

3. In evaluation of the operational change and viable alternatives, the following points were considered pertinent.

   a) Environmental Consideration. The Huntington District has taken reasonable measures to assemble and present the known or foreseeable environmental impacts of the operational change in the environmental assessment. These impacts involve human resources, aesthetics, recreation, and biological (aquatic and terrestrial) resources. Implementation of the operational change will not be adverse to fish and wildlife communities, and therefore not significant. Fauna and flora listed on the Federal List of Endangered and Threatened Species will not be impacted, and as there are no wetlands involved with the operational change, none will be impacted. Impacts on water quality would be intermittent and short-term.

   b) Economic and Social well-being Considerations. No significant economic or social well-being impacts that are both adverse and/or unavoidable are foreseen as a result of the proposed operational change. A survey of current literature reveals that the operational change will have no impact on any sites of significant archeological or historical importance.

   c) Pursuant to the Fish and Wildlife Coordination Act (FWCA) of 1958, coordination with the U.S. Fish and Wildlife Service, the Kentucky Department of Fish and Wildlife Resources, and the Virginia Department of Game and Inland fisheries have been maintained throughout the study. Appropriate measures and best management practices have been identified and incorporated into the plan. Also, in accordance with the Endangered Species Act, as amended, the recommended plan would not impact listed species.

d) No designated wild, scenic, or recreational river pursuant to the Wild and Scenic Rivers Act of 1968, as amended, would be affected. No prime or unique farmland under the CEQ Memorandum of 30 August, 1976 would be involved. The recommended plan is also in compliance with the National Historic Preservation Act of 1966, as amended, and Executive Order 11988 (Floodplain Management). In accordance with Executive Order 11990 (Protection of Wetlands), no wetlands will be involved. Finally, in accordance with Executive Order 12899 (Environmental Justice), the proposed action will not disproportionately affect low income or minority populations.

e) Alternative Considerations. The proposed operational change plan and the "No Action" plan were the only plans given serious consideration. The proposed plan is both environmentally and socially acceptable, and the no action alternative would not be responsive to the desires and needs of the local communities and recreational whitewater participants.

f) Other Public Interest Considerations. No known opposition to the proposed operational change has been expressed by state or local governments or organized environmental groups, and there have been no significant complaints regarding the implementation of the change. Whitewater recreationists present at the December 17, 1991 public meeting found the 800 cfs to be acceptable; however, many felt 1,000 cfs would be better.

4. I find the proposed operational change at John W. Flannagan Reservoir to provide 1,000 cfs recreational whitewater releases has been designed in accordance with current authorization and as described in the Environmental assessment. The operational change is consistent with national policy, statutes, and administrative directives. This determination is based on thorough analysis and evaluation of the operational change and the alternative course of action. Where the operational change has an unavoidable impact, the effect is either ameliorated or substantially outweighed by other considerations. In conclusion, I find the proposed operational change to provide recreational whitewater releases at John W. Flannagan Reservoir will have no significant adverse affect on the quality of the human and/or natural environment.

25 Oct 96
Date

Richard W. Jemiola
Colonel, Corps of Engineers
District Engineer

SUPPLEMENTAL ENVIRONMENTAL ASSESSMENT FOR OPERATIONAL CHANGE TO PROVIDE RECREATIONAL WHITEWATER RELEASES

JOHN W. FLANNAGAN RESERVOIR DICKENSON COUNTY, VIRGINIA

October 18, 1996

Prepared for:
U.S. Army Corps of Engineers
Huntington District
502 8th Street
Huntington, WV 25701-2070

Prepared by:
Dial, Cordy & Associates Inc.
50 A1A North, Suit 110
Ponte Vedra, FL 32082

SUMMARY

( ) Draft (x) Final Environmental Assessment

Responsible Office: Environmental Analysis Branch, Planning Division
U.S. Army Corps of Engineers
Huntington District
502 8th Street
Huntington, WV 25701-2070

Telephone Number: 304-529-5712

1. Name of Action: Operational change to provide enhanced recreational whitewater releases, John W. Flannagan Reservoir, Dickenson County, Virginia.

2. Description of Action: The proposed operational change will provide 1,000 cfs whitewater releases for two days in October, replacing two days of 800 cfs releases under the current whitewater flow regime to enhance the ability of the whitewater economy of the region.

3. Environmental Impacts:

   Impacts on fish and wildlife resources as the result of the operational change will be minimal and there will not be any significant impacts. Wetland and aquatic impacts will be minimal. No federally listed threatened or endangered species will be significantly impacted.

   Water quality will not be significantly or permanently impacted and the operational change will not disturb any known archeological, cultural, or historical sites in the area.

   There are no unresolved issues.

In summation, implementation of the proposed operational change to provide modified recreational whitewater releases at John W. Flannagan Reservoir, Dickenson County, Virginia, will not adversely affect the long-term quality of the human and/or natural environment.

TABLE OF CONTENTS

Page

1.0 PURPOSE AND NEED 1
2.0 ALTERNATIVES ANALYSIS 1
2.1 Alternatives Eliminated From Further Study 1
2.1.1 Extended Flow Plan 1
2.2 Alternatives Considered 3
2.2.1 Without Conditions (No Federal Action) 3
2.2.2 Selected Plan 3
2.3 Environmental Design Measures 3
2.4 Permits and Other Environmental Compliance 4
2.4.1 Fish and Wildlife Coordination Act 4
2.4.2 Endangered Species Act 4
2.4.3 Cultural Resource Requirements 4
3.0 ENVIRONMENTAL SETTING 4
3.1 General 4
3.2 Significant Environmental Resources 5
3.2.1 Project Purposes 5
3.2.2 Project River Corridor 6
3.2.3 Water Quality 6
3.2.4 Aquatic Resources 6
3.2.5 Terrestrial Resources 7
3.2.6 Wetlands 7
3.2.7 Endangered Species 8
3.3 Significant Cultural Resources 8
3.3.1 Socioeconomics 8
3.3.2 Cultural Resources 8
3.3.3 Recreation 9
3.3.4 Aesthetics 9
3.3.5 Safety 9
4.0 ENVIRONMENTAL IMPACTS 10
4.1 Project River Corridor 10
4.1.1 No Federal Action 10
4.1.2 Selected Plan 10
4.2 Water Quality 11
4.2.1 No Federal Action 11
4.2.2 Selected Plan 11
4.3 Aquatic Resources 11
4.3.1 No Federal Action 11
4.3.2 Selected Plan 11

4.4 Terrestrial Resources 12
4.4.1 No Federal Action 12
4.4.2 Selected Plan 12
4.5 Wetlands 12
4.5.1 No Federal Action 12
4.5.2 Selected Plan 12
4.6 Endangered Species 12
4.6.1 No Federal Action 12
4.6.2 Selected Plan 12
4.6 Socioeconomics 13
4.6.1 No Federal Action 13
4.6.2 Selected Plan 13
4.7 Cultural Resources 13
4.7.1 No Federal Action 13
4.7.2 Selected Plan 13
4.8 Recreation 13
4.8.1 No Federal Action 13
4.8.2 Selected Plan 14
4.9. Aesthetics 14
4.9.1 No Federal Action 14
4.9.2 Selected Plan 14
4.10 Safety 14
4.10.1 No Federal Action 14
4.10.2 Selected Plan 14
5.0 PUBLIC AND AGENCY COORDINATION 15
5.1 Scoping 15
5.2 Public Meetings 15
5.3 Public Review 15
6.0 CONCLUSIONS 15
7.0 LIST OF PREPARERS 16
8.0 REFERENCES 17

APPENDIX A PUBLIC NOTICE AND COMMENT

1.0 PURPOSE AND NEED

The John W. Flannagan Dam and Reservoir, Virginia (Figure 1) has been providing flood control, low flow augmentation, water supply, recreation, and fish and wildlife enhancement since its initial operation in 1964. Interest in using scheduled releases during the normal fall drawdown for whitewater recreation was expressed during the 1970's and 1980's. In 1992, a modified flow regime was proposed for this purpose by providing releases of 800 cfs for five hours per day during the first four weekends in October. An Environmental Assessment (EA) was conducted for this proposed change in flow regime, and a Finding of No Significant Impact (FONSI) was issued. The modified flow regime was implemented in October 1992.

The whitewater community and allied economic interests in Kentucky and Virginia expressed their interest in further modifying the whitewater release flows to enhance the industry of the region. In responding to these requests received by the Huntington District Corps of Engineers and in compliance with the Corps' Policy 216, this Supplemental Environmental Assessment has been conducted to ascertain the impacts of providing the requested modification of whitewater recreation releases on other project purposes and the environment.

2.0 ALTERNATIVES ANALYSIS

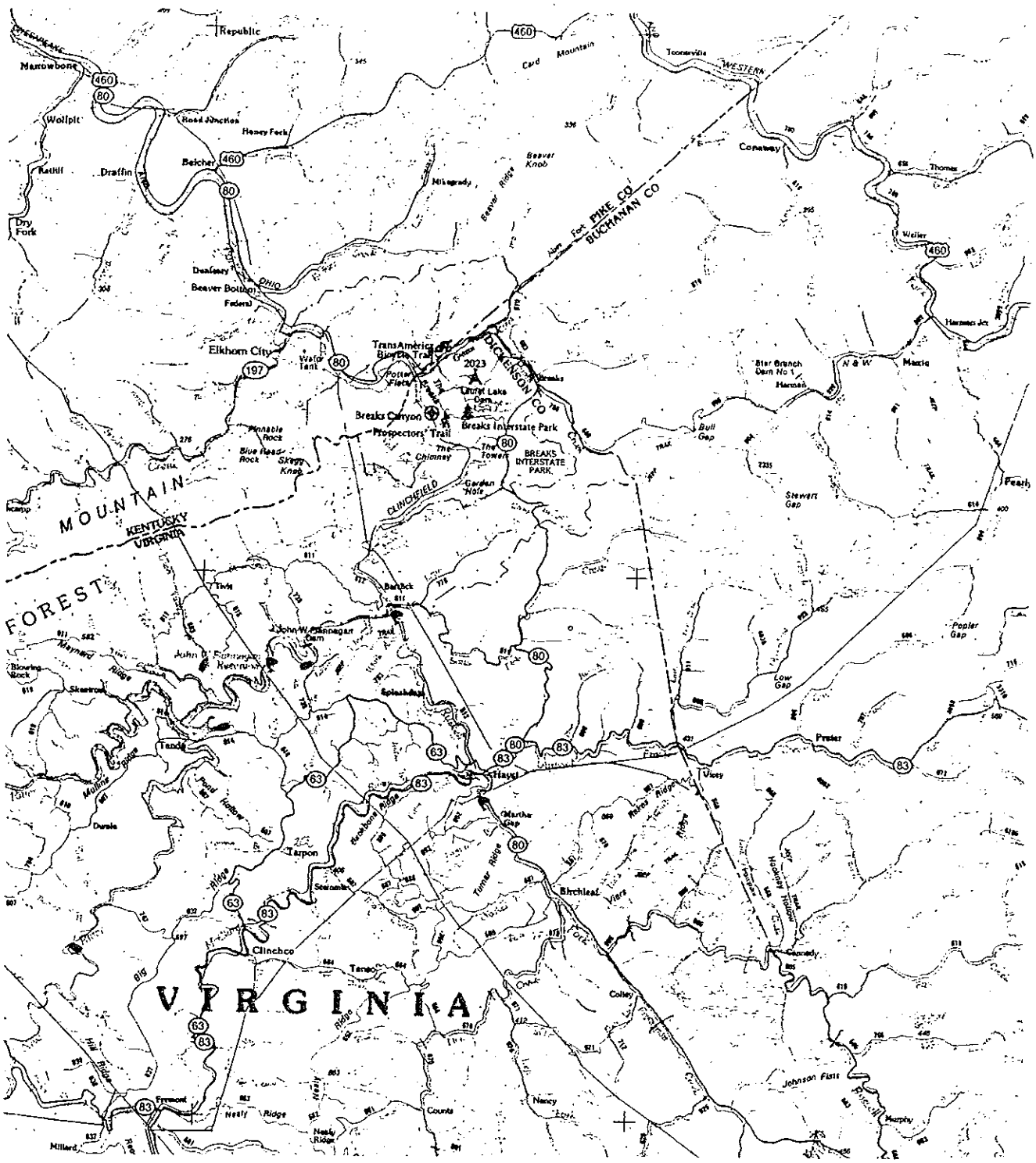
Several alternatives for the John W. Flannagan Dam whitewater releases were initially considered in the 1992 EA and will not be discussed in this Supplemental EA. The alternatives considered for this document include:

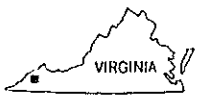
Extended Flow Plan
Without Condition (No Federal Action)
Selected Plan

2.1 Alternatives Eliminated From Further Study

2.1.1 Extended Flow Plan

The Extended Flow Plan considered providing 1,000 cfs whitewater flows for five hours per day during the first four weekends in October. It was determined that reliable water availability to support this plan on a consistent, yearly basis was insufficient under the current administrative allocation policy.





LOCATION MAP			
J.W. FLANNAGAN RESERVOIR			
Scale:	1:150,000	Drawn by:	L. Swain
Date:	June 1996	Approved By:	
DIAL, CORDY AND ASSOCIATES INC Environmental Consultants		J 96-027	
50 A1A North, Ponte Vedra, FL 32082		Figure 1	

2.2 Alternatives Considered

2.2.1 Without Conditions (No Federal Action)

The Without Condition Plan is to continue current practices and policies for whitewater releases at John W. Flannagan Dam and Reservoir. The normal fall drawdown of seasonal storage will continue to be scheduled so that increased flow is available each Saturday and Sunday in October for whitewater releases, but not exceeding eight days during the month. During the operational adjustment for whitewater releases, project personnel will begin increasing the scheduled low flow rate (50 cfs or greater) at 7:30 A.M. until a flow release of 800 cfs is obtained by 9:30 A.M. This flow of 800 cfs will be maintained for five hours (until 2:30 P.M.). At the conclusion of the five hour controlled release, flows will be reduced over a two hour period (until 4:30 P.M.) until the flow from John W. Flannagan Reservoir matches the operational rule curve for the proposed whitewater releases. This operational curve would reach a winter pool elevation of 1,380 feet MSL by 1 December. The whitewater releases currently take place on scheduled days during the month of October and only if the hydrological conditions permit safe and effective operations of the project for all other authorized purposes.

2.2.2 Selected Plan

The Selected Plan is similar to the existing flow regime and whitewater release conditions at John W. Flannagan Reservoir with the following exception. The fourth and final October weekend receiving whitewater releases will receive maximum flows of 1,000 cfs and not 800 cfs. The ramp-up period from the low flow rate (50 cfs or higher) will occur from 7:30 A.M. to the 1,000 cfs release at 9:30 A.M. and will continue at 1,000 cfs until 2:30 P.M. The controlled release will be reduced for a two hour period (until 4:30 P.M.) until the flow matches the operational rule curve for the proposed whitewater releases. As with the current flow regime, the whitewater releases will occur during October and only if the hydrological conditions permit safe and effective operations of the project for all other authorized purposes.

2.3 Environmental Design Measures

The selected alternative will incorporate actions and measures to avoid or minimize potential environmental impacts to the extent feasible. Operational measures, such as increasing the ramp-up period for the higher flows will be considered if impacts are greater than those anticipated.

2.4 Permits and Other Environmental Compliance

2.4.1 Fish and Wildlife Coordination Act

Compliance with the Fish and Wildlife Coordination Act (FWCA) was conducted concurrently with NEPA compliance. The Draft Supplemental EA was provided to the U.S. Fish and Wildlife Service for review and concurrence and suggestions were incorporated into the final decision. Coordination with the Federal and state natural resource agencies is on-going and their views and recommendations will continue to be implemented into the process.

2.4.2 Endangered Species Act

In accordance with the Endangered Species Act (ESA) and the ESA amendments of 1978 the Huntington District received a "no effect" determination from the U.S. Fish and Wildlife Service concerning federally listed threatened or endangered species with the 1992 EA. Additional studies concerning listed species (i.e., *Spiraea virginiana*) and the increase in maximum flow to 1,000 cfs support the initial "no effect" decision.

2.4.3 Cultural Resource Requirements

Section 106 of the National Historic Preservation Act (NHPA) of 1966 required the Corps to identify historic properties affected by the proposed action and to evaluate the eligibility of those properties for the National Register of Historic Places (NRHP). Historic/archeological investigations were conducted for the project area in 1960 and no apparent archeological sites were recorded. A more recent historical and archeological survey was conducted for the Levisa Fork Basin Flood Control Project which identified a number of structures for further study in the region. These sites will not be affected by the proposed operational change.

3.0 ENVIRONMENTAL SETTING

3.1 General

The study area is located in the Kanawha section of the Appalachian physiographic province. The Pound River and Russell Fork River are approximately 10.5 miles in length within the project area and are characterized by a narrow sinuous valley bordered by steep ridges. In some locations (Breaks Gorge) the floodplain is restricted to the streambed itself. The economy and culture of the project area are largely dependent on the coal and timber industries, with recreation becoming an important economic factor in recent years.

3.2 Significant Environmental Resources

3.2.1 Project Purposes

The existing John W. Flannagan Reservoir is operated for authorized purposes of flood control, low flow augmentation, recreation, fish and wildlife betterment, and water supply. The following sections describe the authorized project purposes.

(a) Flood Control

John W. Flannagan Reservoir was constructed to provide storage for floodwaters from the Pound River Drainage Basin that, if released, would contribute to flood heights along the mainstem Russell Fork, mainstem Levisa Fork, and the Big Sandy River. The project has a net usable flood control storage of 6.2 inches at summer pool (elevation 1,396.0 feet MSL) and 8.7 inches at winter pool (elevation 1,380.0 feet MSL).

(b) Low Flow Augmentation

The John W. Flannagan project is operated to augment flows on the Russell Fork and Levisa Fork. Flow augmentation is regarded as an important feature for maintenance of suitable downstream water quality. A minimum of 50 cfs or more is maintained to provide minimum target flows of 190 cfs at Pikeville, KY; 232 cfs at Paintsville, KY; and 259 cfs below Louisa, KY.

(c) Reservoir Recreation

Resource management activities related to recreation in the project area include activities on John W. Flannagan Lake and up to eight days of whitewater during October weekends.

(d) Fish and Wildlife Improvement

A minimum discharge rate of 50 cfs is maintained from John W. Flannagan Reservoir to maintain water quality and flow in the tailwaters of the Pound River and the Russell Fork to maintain and improve aquatic habitat.

(e) Water Supply

Water supply was not an original authorized purpose of John W. Flannagan Reservoir. The John W. Flannagan Water Authority was contracted in 1977 to provide water supply for municipal and industrial use. The Authority is contracted for the utilization of 2125 acre-feet of storage for present and future use.

3.2.2 Project River Corridor

The river corridor consists of second growth oak and hickory-pine forest. The riparian zone is restricted throughout much of the project area due to steep topography. The Pound River tailwaters below the dam differ from the Russell Fork River in that the Pound River fauna are strongly influenced by the cold hypolimnetic releases from the reservoir, whereas, the Russell Fork is typical of the streams in the region (Angermeier and Neves, 1988). The Pound River has a simple invertebrate community composed primarily of Simuliidae, Chironmidae, Betidae, and Asellidae, while the Russell Fork has a more diverse community of Ephemeroptera, Plecoptera, Trichoptera, Coleoptera, and Diptera (USACE 1990; USACE 1991). The Pound and Russell Fork rivers provide good habitat for recreational trout fishing based on water temperature, pH, dissolved oxygen, hardness, and potential food supply (USFWS 1984).

3.2.3 Water Quality

The overall water quality condition in the tailwaters at John W. Flannagan Reservoir is "good." However, during the summer in dry years the reservoir stratifies with the hypolimnion usually depleted of oxygen. This anoxic condition results in the formation of high concentrations of reduced metals, particularly manganese, in the bottom of the reservoir. The concentration of these metals depends on the reservoir retention time. For example, during low rainfall summer with relatively few weather related releases from the reservoir, the retention time is relatively long, resulting in a high concentration of manganese in the hypolimnion. When the manganese is oxidized upon release from the reservoir, it precipitates forming a black manganic hydroxide. Deposits of this hydroxide in the substrate affects the size and makeup of biota present in the tailwaters. According to a 1991 report by the West Virginia University, the phenomenon occurs only in dry years on the Pound River below the dam. Studies made during average and wet years show the reservoir does not stratify and water quality below the dam is not affected by the whitewater releases.

The temperature regime from the reservoir also has an effect on the biotic composition in the tailwaters of the John W. Flannagan Reservoir in the Pound River. The cold hypolimnetic releases have created a coldwater environment in the lower Pound which has permitted the establishment of a put-and-take trout fishery.

3.2.4 Aquatic Resources

The aquatic ecology of the project area is highly reflective of the existing chemical and physical conditions. The overall diversity of the project area is variable relative to water quality conditions, although, for the most part, resident species tend to be pollutant tolerant. The benthos of the project area is dependent on several factors, including substrate type, water velocity, food availability, and water quality. Benthos populations throughout the project area are limited to insect larvae, mainly mayflies, stoneflies, caddisflies, and midges. The distribution and diversity of these insect larvae are further determined by the individual species' tolerance and thus reflect the water quality in the portion of the project area (USACE 1990).

A fishery survey of the Russell Fork River was conducted by the U.S. Fish and Wildlife Service in 1985 (Bay 1986). Angermeier and Neves (1988) conducted a fishery survey of the Pound River below the dam and a 1990 study (West Virginia University 1991) was also conducted in the Pound River tailwaters to examine the effects of pulse-release flows on invertebrate and fish populations.

These surveys revealed the presence of 50 fish species representing eight families. Historical records list 20 additional species which were not collected in the recent studies (Bay 1986). The most widely distributed species collected in the upper Russell Fork drainage was *Notropis rubellus* (roseface shiner). Other abundant species were *Hypentelium nigricans* (hogsucker) and *Campostoma anomalum* (stoneroller). *Micropterus dolomieui* (small mouth bass) was also widely distributed. Both *Salma trutta* (brown trout) and *Oncorhynchus mykiss* (rainbow trout) are also present in the project area as a result of the Virginia Department of Game and Inland Fisheries (VDGIF) put-and-take trout fishery.

The Huntington District conducted a study to determine if the put-and-take trout have been reproducing, thus establishing a wild trout population. An initial survey in the fall of 1995 for suitable breeding habitat identified three or four sites that contained substrate disturbances consistent with redd sites in the lower portion of the Pound River. A subsequent electroshock survey in March 1996 failed to confirm the presence of young-of-year trout (brown or rainbow) indicating that natural recruitment is not occurring (D. Hershfeld, personal communication). Sampling during July 1996, however, produced 24 young-of-year brown trout ranging from 1.5 to 2.5 inches in length downstream of the redd sites. No young-of-year rainbow trout and no suspected wild juvenile or adults were observed.

3.2.5 Terrestrial Resources

There are over 200 land vertebrate species which may occur in the project area including birds, reptiles, amphibians, and mammals, many of which rely on the aquatic and riparian wetlands. The principal game species which may be found in the project area include *Sylvilous floridanus* (cottontail), *Sciurus niger* (fox squirrel), *Sciurus caroliniensis* (gray squirrel, *Procyon loctor* (raccoon), *Mustela vision* (mink), *Ondatra zibethicus* (muskrat), *Bonasus umbullus* (ruffled grouse), *Odocolileus virginianus* (white-tailed deer), *Meleagris gallopavo* (wild turkey), various migratory species, and numerous non-game species (Barbor and Davis 1974).

3.2.6 Wetlands

The physiography and drainage patterns in the project area are not conducive to the formation or occurrence of wetlands other than the river and associated riparian wetlands. Those which are found in the project area are Type 1 seasonally flooded basins or flats. The riverine system of the Lower Pound and Russell Fork rivers immediately below the confluence of the Pound and Russell Fork are classified as Type I wetlands (Cowardin, et. al. 1979).

3.2.7 Endangered Species

The only federally listed threatened species found in the project area is *Spiraea virginiana* (Virginia Spirea). This species is distributed in isolated populations in Georgia, Tennessee, North Carolina, Virginia, West Virginia, and Kentucky. *S. virginiana* grows along banks of second and third order streams in areas frequented by flooding, scouring, and sediment deposition. Four colonies of *S. virginiana* are located in the project area: one on the Pound River downstream of the dam and three on the Russell Fork River within the Breaks Interstate Park.

Six federally listed threatened or endangered species may occur in the project area on a transient basis. These include *Myotis sodalis* (Indiana bat), *Myotis grisenscens* (gray bat), *Felis concolor cougar* (eastern cougar), *Falco peregrinus anatum* (American peregrin falcon), *Picoides dendrocopos borealis* (red-cockaded woodpecker), and *Haliaeetus leucoephalus* (bald eagle).

Three aquatic species listed by the Commonwealth of Virginia are *Etheostoma pellucidum* (eastern sand darter) (threatened), *Percina macrocephala* (longhead darter) (threatened), and *Etheostoma variatum* (varigate darter) (endangered). *E. pellucidum* is also listed as a species of special concern by Kentucky.

A survey conducted in 1994 (Leftwich, et. al. 1994) did not identify *E. pellucidum* or *P. macrocephala* from the project area. *E. variatum* was captured only near the Kentucky/Virginia border.

3.3 Significant Cultural Resources

3.3.1 Socioeconomics

Since 1992, the whitewater releases from the John W. Flannagan Reservoir have had a significant influence on the economics of the region. In 1994, the number of whitewater participants reached 2,884 and, based on recent studies, the economic impact was $685,000 in output, adding 17 new jobs and nearly $417,000 in total income (Thompson 1995; Booker 1995). Whitewater participation in 1995 was significantly lower with only 1,849 rafters contributing $438,000 in output and $267,000 in income. The 1995 participation was lower due to a combination of poor weather and increased rafting on the Gauley River.

3.3.2 Cultural Resources

Man's early occupation of the Russell Fork valley was due to major stream valleys and natural passes being the easiest transportation routes as well as providing sources of water, food, and farmland. The region was first explored by Europeans in the 1750's and has since felt the presence of coal, natural gas and timber industries, railroad transportation, and the Civil

War. A survey of the Russell Fork valley was conducted in 1994 by Amos identified 292 structures deserving of additional study in regard to eligibility for listing on the NRHP.

3.3.3 Recreation

Western Virginia and eastern Kentucky are rural mountainous areas offering a variety of social and recreational activities. Most of these activities are local in nature and have little drawing power regarding tourism. One of the significant tourism-related resources is the Breaks Interstate Park which is comprised of a 4,200 acre park situated on the Russell Fork at the Kentucky-Virginia State line and includes a lodge, restaurant, and a variety of recreational activities. The Jefferson National Forest is another significant recreational resource and offers many outdoor activities. Three regional reservoirs (John W. Flannagan Reservoir, Dickenson County, VA; Fishtrap Lake, Pike County, KY; and North Fork of Pound Reservoir, Wise County, VA) offer boating, fishing, and other outdoor activities.

In addition to lake related activities, the John W. Flannagan Reservoir offers whitewater recreation downstream on the Russell Fork during the month of October. The number of whitewater participants on the Russell Fork had been increasing steadily over the years, from 150 users in 1988 to 1,614 in 1991 and 2,884 in 1994. The past year, however saw only 1,849 participants in whitewater activity on the Russell Fork, a significant decrease from the previous year.

The coldwater releases from the reservoir have allowed the development of put-and-take trout fishing in the tailwaters in the Lower Pound River. The best fishing conditions occur in the Lower Pound at flows of 300 cfs or less. While fair to good fishing conditions exist on the Russell Fork at flows up to 800 cfs in many regions (Dean 1985). Fishing conditions remain good at Bartlick Splashdam at flows up to 1,327 cfs.

3.3.4 Aesthetics

The aesthetics of the area are some of the best in the region. The Russell Fork, after being joined by the Pound River, has carved a 1,600 foot deep gorge in the Pine Ridge Mountains forming the "Breaks of the Sandy," also known as the "Grand Canyon of the East" by many. The gorge, with its steep sandstone walls rising on both sides of the stream, makes a semicircular loop around the base of the mountain known as the Tower. From here, the Russell Fork bisects the Kentucky-Virginia border for approximately five miles before plunging out of the mountains near Elkhorn City, KY (Shelinger 1978).

3.3.5 Safety

Safety regulations and procedures at the John W. Flannagan Reservoir are in accordance with the Corps' policy to promote and provide a safe and healthful environment for the visiting public. Additional safety precautions are also followed as outlined by the Director of Civil Works for downstream whitewater recreation associated with the existing controlled

releases. The following list summarizes the safety provisions that are currently in practice at the John W. Flannagan Reservoir.

1. Swift river rescue training has been conducted by the Corps personnel, Breaks Interstate Park and local rescue squads.
2. Winterized restrooms are available below the dam recreation area for preparation and to warm up river users.
3. The restrooms are maintained by contract.
4. The timing and flows of releases are posted below the dam. Warning horns are used to alert visitors of rapid rise in water level.
5. Rangers are located below the dam for visitor assistance.
6. Contact and coordination are maintained with the County Sheriff's Department.
7. Safe and unobstructed access is maintained at the water's edge on Corps lands.
8. Access is maintained for emergency vehicles/personnel on Corps lands.
9. Rescue equipment is maintained and available for use.
10. Provisions for emergency shutdown of flows are in place in the event of an emergency.

Regardless of any safety precautions and regulations, whitewater rafting is an activity which involves a certain amount of risk. For many participants, the risk is a big part of the attraction. The Russell Fork has some of the most challenging rapids in the eastern United States. Two rafters have died in recent years on the Russell fork which has prompted the whitewater industry to consider additional safety measures for the river.

4.0 ENVIRONMENTAL IMPACTS

4.1 Project River Corridor

4.1.1 No Federal Action

No Federal Action will have no significant impact in the project river corridor.

4.1.2 Selected Plan

Implementation of the Selected Plan will have no significant impact on the project river corridor. The whitewater release of 1,000 cfs during two days in October may encourage additional rafters to participate in whitewater activities. The additional number of participants should not be of a great enough magnitude to cause significant changes in current conditions.

4.2 Water Quality

4.2.1 No Federal Action

No Federal Action will have no significant impact on water quality. During normal and high rainfall years, water quality parameters have predominately been within recommended State limits. During dry years, water availability becomes a limiting factor for whitewater release. The number of whitewater releases will be reduced in those years, thereby minimizing water quality impacts.

4.2.2 Selected Plan

The Selected Plan will cause impacts to water quality to a higher degree than the No Federal Action alternative, but these impacts will not be significant. The majority of water quality impacts occur during dry years due to release from the hypolimnion of the stratified lake. Under the dry conditions, the additional whitewater flows will not take place, so no additional impacts will result from this action.

4.3 Aquatic Resources

4.3.1 No Federal Action

No Federal Action will have no significant impact on aquatic resources.

4.3.2 Selected Plan

The Selected Plan will have no significant impact on aquatic resources.

Natural recruitment of brown trout occurred during the winter of 1995/1996 during which high precipitation in the region resulted in several periods of release which reached 4,000 cfs (USACE 1996). Such flows are considerably in excess of either the current 800 cfs or proposed 1,000 cfs releases associated with the whitewater flows and the fall drawdown.

While it is possible that whitewater releases may impact recruitment in very young trout (age 0 to 1 year), it is unlikely that 1,000 cfs flows will have significantly different impacts than 800 cfs. There are several reasons supporting this conclusion. The Lower Pound River is a relatively productive lotic system, providing trout with conditions that promote rapid growth. By the end of the first year, brown trout have reached a size (approximately 3 inches to 5 inches) at which they are much less susceptible to displacement by high flows. The young-of-year brown trout also occupy habitats at the margins of flow, often in heavy cover. Temporary

rises such as those experienced with whitewater releases have less impact in these areas than in the main channel.

There will be no aquatic impacts within the reservoir since the additional releases will not drop water levels below current levels.

4.4 Terrestrial Resources

4.4.1 No Federal Action

No Federal Action will have no significant impacts on terrestrial resources.

4.4.2 Selected Plan

The Selected Plan will have no significant impact on terrestrial resources.

4.5 Wetlands

4.5.1 No Federal Action

No Federal Action will have no significant impact on wetlands.

4.5.2 Selected Plan

The Selected Plan will have no significant impact on wetlands.

4.6 Endangered Species

4.6.1 No Federal Action

No Federal Action will have no significant impact on Federal or state listed threatened or endangered species.

4.6.2 Selected Plan

The Selected Plan will have no significant impact on Federal or state threatened or endangered species. A 1994 study by Ogle observed threatened *S. virginiana* populations at both 800 cfs and 1,000 cfs releases. Neither flow rate caused water levels to rise high enough

to impact existing colonies. In addition, the position of the colonies in relation to put-in and take-out access sites is such that contact with boaters or spectators is rare. No species listed by Virginia or Kentucky will be significantly impacted by the proposed action.

4.6 Socioeconomics

4.6.1 No Federal Action

No Federal Action may adversely impact economics for the region. Since whitewater releases from the John W. Flannagan Dam are limited to eight days in October and even less if water availability is low, the whitewater industry has a somewhat precarious existence. Without an adjustment to increase the number of days of whitewater or an increase in flows to attract rafters, the economic impact of the whitewater industry may continue to decrease.

4.6.2 Selected Plan

The Selected Plan may have a beneficial impact on the economic resources of the region. By providing the added attraction of higher whitewater releases for a grand finale weekend, interest in rafting the Russell Fork may increase and become a regular yearly activity for whitewater enthusiasts. This may solidify the whitewater industry as a major economic contributor to the region.

4.7 Cultural Resources

4.7.1 No Federal Action

No Federal Action will have no significant impact on cultural resources.

4.7.2 Selected Plan

The Selected Plan will have no significant impact on cultural resources.

4.8 Recreation

4.8.1 No Federal Action

No Federal Action will have no significant impact on recreation. However, whitewater recreation of the region may suffer without some adjustment in the length of the season or increased flows for a more exciting whitewater experience.

4.8.2 Selected Plan

The Selected Plan will have a beneficial impact on recreation in the region. By providing higher flows, the recreational whitewater experience will be more attractive to a number of participants (White 1995). The action may assist in establishing the recreation industry in western Virginia and eastern Kentucky.

Fishing below the dam will be adversely affected by the action. However, the loss of two fishing days within the affected area is not significant considering the added recreational benefits of the whitewater activity.

4.9. Aesthetics

4.9.1 No Federal Action

No Federal Action will have no significant impact on aesthetics.

4.9.2 Selected Plan

The Selected Plan will have no significant impact on aesthetics.

4.10 Safety

4.10.1 No Federal Action

No Federal Action will have no significant impact on safety. However, additional safety measures have been recommended to reduce potentially hazardous situations on the river. Removal of debris from undercut rocks would provide less danger for rafters who have been swept out of their raft or kayak.

4.10.2 Selected Plan

The Selected Plan will have no significant impact on safety. In response to the proposed plan, the Huntington District conducted a navigation obstacle study to determine the feasibility of improving navigation and safety by increasing the discharge or by structurally modifying obstacles in the river. To some degree, the higher flow widens some existing chutes in the gorge as well as opening up new passages, giving rafters more selection. The higher flow also caused participants to approach obstacles more quickly than with the lower flow. However, the safety level appears to be the same for both flows. It was also determined that structurally modifying the river would be too costly and would probably meet extensive opposition by all parties.

5.0 PUBLIC AND AGENCY COORDINATION

5.1 Scoping

Extensive efforts have been made to determine significant issues related to the proposed operational change in recreational whitewater releases from the John W. Flannagan Reservoir. The natural resource agencies as well as District comments covered a variety of environmental and related issues and were addressed in the 1992 EA as well as in this document.

5.2 Public Meetings

A public meeting was held on December 17, 1991, at Elkhorn City, Kentucky to present to the public the original whitewater plan addressed in the 1992 EA. The operational changes addressed in the Supplemental EA were also discussed in the meeting.

5.3 Public Review

This document was made available to the Federal and state resource agencies, the general public, and other interested parties for a 30-day review period as required for NEPA compliance. A record of public notice and review comments received from various parties are located in Appendix A of this document.

6.0 CONCLUSIONS

Major points derived from the review of the anticipated environmental impacts are as follows:

1) The proposed operational change to provide 1,000 cfs flows for two five-hour periods in October will enhance the local whitewater industry.
2) Wetlands, aquatic resources, and terrestrial resources, will not be significantly affected by the proposed action.
3) No state or federally listed threatened or endangered species will be significantly affected by the proposed action.
4) The proposed operational change will not disturb any known archeological, cultural, or historic site in the project area.
5) Water quality will not be significantly or permanently affected.
6) The proposed action will not cause any significant safety hazard in the project area.
7) Proper coordination has resulted in no unresolved issues.

7.0 LIST OF PREPARERS

Name	Discipline/Experience	Affiliation	Role
Lee A. Swain	Botanist 12 years	Dial, Cordy & Associates Inc.	Principal Author
R. Steve Dial	Water Resource Planner 15 years	Dial, Cordy & Associates Inc.	Quality Control
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8.0 REFERENCES

Amos, Christine. 1994. A historical and architectural reconnaissance and survey for the Levisa Fork Flood Control Project Western Virginia and Eastern Kentucky. Prepared for U.S. Army Corps of Engineers, Huntington District, West Virginia. Burry and Amos, Inc.

Angermeier, P.L. and R.J. Neves. 1988 Survey of the fauna of the Pound River, Virginia, below Flannagan Reservoir, before and after a pulsed release. Virginia Polytechnic State University.

Barbour, Roger W. and Wayne H. Davis. 1974. Mammals of Kentucky. The University Press of Kentucky, Lexington.

Bay, Robert. 1986. A fishery survey of the Russell Fork of the Big Sandy River, Buchanan and Dickenson Counties, Virginia, and Pike County, Kentucky. Prepared for Huntington District, U.S. Army Corps of Engineers. Huntington, West Virginia.

Booker Associates, Inc. 1995. Economic impacts, whitewater rafting, Russell Fork, Virginia and Kentucky. Prepared for U.S. Army Corps of Engineers, Huntington District, West Virginia. Lexington, Kentucky.

Cowardin, L.M., V. Carter, F.C. Golet, and E.T. LaRoe. 1979. Classification of Wetlands and Deepwater Habitats of the United States. U.S. Fish and Wildlife Service, FWS/OBS-79-31. Washington, DC 103pp.

Dean, Wallace E. 1985. Methodology for determining fishability in river reaches subject to variable flow. U.S. Army Corps of Engineers, Huntington District. Huntington, West Virginia.

Hershfeld, Don. 1996. Personal Communication.

Leftwich, Kevin N., William E. Ensign, and Paul L. Angermeier. 1994. A survey for rare fishes in Russell Fork, Dickenson County, Virginia and Pike County, Kentucky. Blacksburg, Virginia.

Ogle, D.W. 1994. *Spiraea virginiana* monitoring, John W. Flannagan whitewater release study. Prepared for U.S. Army Corps of Engineers, Huntington District, West Virginia. Highlands Community College, Abingdon, Virginia.

Shelinger, Robert. 1978. A Canoeing and Kayaking Guide to the Streams of Kentucky. Menasha Ridge Press. Hillsborough, North Carolina.

Thompson, Mark A. 1995. The economic impact of whitewater rafting Russell Fork River, Virginia and Kentucky. Prepared for U.S. Army Corps of Engineers, Huntington District, West Virginia. Marshall University, Huntington, West Virginia.

U.S. Army Corps of Engineers. 1990. Results from field investigations for whitewater discharge releases, John W. Flannagan Reservoir. Huntington District. Huntington, West Virginia.

U.S. Army Corps of Engineers. 1991. Results from the 1990 field investigation for whitewater discharge releases from John W. Flannagan Reservoir.

U.S. Army Corps of Engineers. 1995. John W. Flannagan Dam and Reservoir Russell Fork River navigation obstacle study. Huntington District. Huntington, West Virginia.

U.S. Army Corps of Engineers. 1996. Flannagan Tailwaters Trout Study. Huntington District. Huntington, West Virginia.

U.S. Fish and Wildlife Service. 1984. Instream flow incremental methodology of the Pound River. Ecological Services. Annapolis, Maryland.

West Virginia University. 1991. Effects of Pulse-Released Flows on Invertebrate Drift and Fish in the Tailwaters of J.W. Flannagan Reservoir. Final Report to Huntington District. USACOE by West Virginia Cooperative Fish and Wildlife Unit. Morgantown, West Virginia.

White, Christopher M. 1995. Whitewater river users, Russell Fork River. Prepared for U.S. Army Corps of Engineers, Huntington District, West Virginia. ASCI Corporation, Vicksburg, Mississippi.