

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

97.0190A

Ferc ①

Before Commissioners: Martin L. Allday, Chairman;
Charles A. Trabandt, Elizabeth Anne Moler,
Jerry J. Langdon and Branko Terzic

Town of Summersville, West Virginia) Project No. 10813-000
City of Manassas, Virginia) Project No. 10534-000

SEP 25 1992
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ORDER ISSUING LICENSE

(Issued September 25, 1992)

The Town of Summersville, West Virginia (Summersville), filed a license application under Part I of the Federal Power Act (FPA) 1/ to construct, operate, and maintain the 80-megawatt (MW) Summersville Hydroelectric Project. 2/ The project would be located on the Gauley River, in Nicholas County, West Virginia, and would use surplus water or waterpower from the U.S. Army Corps of Engineers' (Corps) Summersville Dam. 3/

Notice of the application was published, and motions to intervene were filed by: the City of Manassas, Virginia (Manassas); West Virginia Division of Natural Resources (West Virginia DNR); American Whitewater Affiliation; Fayette County Chamber of Commerce, West Virginia Professional River Outfitters, and Class VI River Runners; and American Rivers, Incorporated. Except for Manassas, no party objects to issuance of the license. All comments filed by agencies and individuals have been fully considered. For the reasons stated below, we will issue the license.

BACKGROUND

The project, as licensed herein, consists of: (a) three penstocks, each 11 feet in diameter, connected to the existing outlet conduits of the Corps facility, and a fourth, 3-foot-

1/ 16 U.S.C. §§ 791(a)-821(b) (1988).

2/ A competing application for a preliminary permit, filed by the City of Manassas, Virginia, was dismissed without prejudice by an unpublished order issued on December 13, 1990. In this order the application is denied.

3/ Section 23(b)(1) of the FPA, 16 U.S.C. § 817(1), requires a license for the construction and operation of a hydroelectric project that will "utilize the surplus water or water power from any Government dam."

diameter, penstock which branches off penstock No. 3 and leads to the small turbine; (b) a powerhouse containing three 24 MW turbines and one 8 MW turbine-generator, for a total installed capacity of 80 MW; (c) a new valve house with three large and one small Howell-Bunger valves; (d) a tailrace; (e) an 8-mile-long transmission line; and (f) appurtenant facilities. The project's interconnection with the Corps facilities is described further below.

In 1981, Summersville was issued a preliminary permit in Project No. 3493 to study the development of hydroelectric energy at Summersville Dam. 4/ In 1983, during the term of the permit, Summersville filed a license application, and in 1984 a competitor (Southeastern Renewable Resources, Inc.) submitted another license application. In May 1984 both license applications were dismissed because the affected reach of the Gauley River was designated under the Wild and Scenic Rivers Act, 16 U.S.C. §§ 1271-1287, for possible inclusion in the National Wild and Scenic Rivers System. 5/ On April 26, 1985, the President recommended that the affected reach of the Gauley River not be included in the National Wild and Scenic River System; pursuant to the terms of the Wild and Scenic Rivers Act, the licensing prohibition would expire on April 26, 1988.

Thereafter, Summersville submitted an application for a preliminary permit for the Summersville Dam site, which was granted in 1986, 6/ but due to concerns regarding its ability to finance the development Summersville surrendered the permit. The Commission Secretary's Notice of Surrender, issued December 1, 1986, advised that new applications for the site could be filed on January 2, 1987. Summersville and Manassas submitted permit applications on that date, but in July 1988 the Commission dismissed both permit applications because of a policy adopted in March 1987 precluding consideration of permit or license applications at study river sites until the three-year

4/ 15 FERC ¶ 62,218 (1981). The order issuing the preliminary permit also denied competing permit applications, one of which was filed by a group that included Manassas.

5/ 27 FERC ¶ 61,206 (1984), reh'g denied, 28 FERC ¶ 61,257 (1984), aff'd, *Town of Summersville v. FERC*, 780 F.2d 1034 (D.C. Cir. 1986).

6/ 36 FERC ¶ 62,179 (1986).

period for Congressional consideration had expired. ^{7/} The order stated that applications for the site would be accepted beginning August 8, 1988.

On August 8, 1988, Manassas filed a permit application that was docketed as Project No. 10634, and Summersville filed a license application that was docketed as Project No. 10635. The Commission staff notified Summersville of deficiencies in the license application, and Summersville submitted information to correct them.

On October 26, 1988, before the competing permit and license applications were accepted or rejected, Congress enacted the West Virginia National Interest River Conservation Act of 1987, Public Law 100-534, 102 Stat. 2699. Title II of the act created the Gauley River National Recreation Area, which begins at the foot of the Summersville Dam and extends downstream approximately 25 miles. Within Title II, Section 202(d) adopted Section 7(c) of the Wild and Scenic Rivers Act, which prohibits the issuance of hydroelectric licenses. However, Section 205(c) of the act provides that:

during the four-year period after the enactment of this Act [i.e., until October 26, 1992], nothing in this Act shall prohibit the licensing of a project adjacent to Summersville Dam as proposed by the City of Summersville, or by any competing project applicant with a permit or license application on file as of August 8, 1988... .

Section 205(c) also provides that if a project is licensed the boundary of the National Recreation Area is to be modified by relocating the upstream boundary of the Recreation Area to a point 550 feet downstream from the existing valve house. Section 205(c) directs the Secretary of the Interior to retain in the Recreation Area all lands which are not necessary to the operation of the project. The National Recreation Area is to be administered as a unit of the National Park System.

The Summersville Hydroelectric Project will be located between the Summersville Dam and the National Recreation Area, with the downstream edge of the project boundary being adjacent to the upstream boundary of the Recreation Area.

^{7/} 44 FERC ¶ 62,095 (1988). A study river site is a river segment which has been designated for possible inclusion in the Wild and Scenic Rivers System.

Before Summersville's 1988 license application was accepted or rejected, Manassas' permit application was accepted for filing, and the Commission issued notice of that application. Since the deadline for filing license applications in competition with Manassas' permit application was approaching and Summersville had not been informed whether it had corrected the deficiencies in its 1988 application, Summersville filed on July 31, 1989, a timely license application that was docketed as Project No. 10813.

The Commission staff notified Summersville of deficiencies in its 1989 license application, and subsequently rejected Summersville's 1988 license application for failure to correct deficiencies. Summersville filed an appeal of the rejection. The Commission upheld the rejection of the 1988 application but accepted Summersville's 1989 license application for filing. 8/ In an answer to Summersville's appeal, Manassas argued 9/ that a license should not be issued to Summersville because it had abused its municipal preference. 10/ The Commission deferred

8/ 53 FERC ¶ 61,259 (1990). This order determined that Summersville's 1989 application qualified as eligible under the terms of the West Virginia National Interest River Conservation Act. Id. at p. 62,040 n. 7.

9/ Manassas also argued that Summersville's 1989 license application should be rejected because it duplicated the then-pending 1988 license application. The Commission found that Summersville had two license applications on file for the same project as a result of a staff procedural error. We noted that Manassas' permit application should not have been accepted before the staff decided whether to reject Summersville's 1988 application, and therefore rescinded the notice of Manassas' permit application. We also noted that Summersville had corrected the deficiencies in its 1989 license application in a timely manner and that it was being accepted for filing as of July 31, 1989. On December 13, 1990, the staff dismissed Manassas' permit application without prejudice, and Manassas filed a request for rehearing of that order.

10/ Under Section 7(a) of the FPA, 16 U.S.C. § 800(a), when there are competing applications for preliminary permit, or competing applications for original license that were not preceded by preliminary permits, the Commission must give tie-breaker preference to the application filed by a state or municipality. In City of Fayetteville Public Works Commission, 16 FERC ¶ 61,209 (1981) (Fayetteville), the
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consideration of Manassas' allegations of municipal abuse until the review of Summersville's license application.

On rehearing, 11/ the Commission addressed one aspect of Manassas' allegation of municipal abuse by Summersville. 12/ The Commission found that Manassas had not shown that Summersville's 1989 license application was the result of any abuse by Summersville of its municipal preference at the permit stage. The order noted that the 1983 license application filed by Summersville during the term of its 1981 permit was dismissed because of the designation of the Gauley River for potential inclusion in the Wild and Scenic River System. The order further noted that, upon the expiration of the prohibition against licensing during Congressional consideration of the Wild and Scenic River issue, Manassas and Summersville were in fresh and equal positions to compete for development of the Summersville Dam site, and that Summersville's 1989 license application was filed independently from the 1983 permit and not in reliance on it. The order deferred, until review of Summersville's 1989 license application, consideration of Manassas' allegations that Summersville does not have authority under state law to own and operate the project, and that Summersville does not intend to acquire and retain all of the property rights and interests in property necessary to operate and maintain the project. Those issues are addressed below in this order.

10/(...continued)

Commission determined that municipal preference does not apply to so-called "hybrid" applications consisting of a municipality and a nonmunicipality. The Commission has found abuse of municipal preference in situations where the municipality used its municipal preference at the permit stage to gain competitive advantage at the licensing stage on behalf of hidden, nonmunicipal entities whose interest in the project required them to have been co-applicants. See, e.g., Gregory Wilcox, 24 FERC ¶ 61,317 (1983) and 26 FERC ¶ 61,113 (1984).

11/ 55 FERC ¶ 61,271 (1991).

12/ The order also withdrew our rescission of the notice of Manassas' permit application but upheld the order dismissing Manassas' permit application, and affirmed the decision to accept and process Summersville's 1989 license application.

DISCUSSION

A. Manassas' Allegations Regarding Summersville's
Qualifications to Be a Licensee

1. Relationship Between Summersville and
Noah Corporation

Manassas asserts that Noah Corporation is a joint venturer with Summersville in the project's development and that the project will actually be owned and operated by Noah. Manassas argues that Summersville does not intend to retain all of the property rights necessary to construct and operate the project but intends to transfer interests in the project to Noah that would require Noah to become a licensee. Manassas contends that Summersville will not be able to construct and operate the project as the sole licensee, inasmuch as all of the design, consultation, and study work related to the various applications has been performed by Noah and not by Summersville. Manassas also cites to a letter dated November 26, 1980, from Howard M. Hickey, Jr., on behalf of Noah, to Farrell Johnson, Mayor of Summersville, recommending that Noah be withdrawn as an applicant from the pending permit application for Project No. 3493 so that the applicant would be a "pure" municipal rather than a hybrid. The letter goes on to state that any license issued for the project would then be transferred jointly to Summersville and Noah prior to the commencement of construction.

The addition of a non-municipal entity as a co-licensee to a license that was issued to a municipal applicant could constitute an abuse of the municipal preference, even if the non-municipal entity is being added in order to provide financing for the project. ^{13/} Therefore, any financing plan or other agreement in which Noah would hold property rights which would require it to become a licensee could result in a finding that Summersville had abused its municipal preference. ^{14/}

^{13/} See Paterson Municipal Utilities Authority, 27 FERC ¶ 61,323 (1984), and City of Vidalia, Louisiana, 28 FERC ¶ 61,328 (1984).

^{14/} These principles apply despite the fact that Summersville is the sole applicant for a license and no competing license application has been filed, because (as we explained in Paterson and Vidalia) Summersville's status as a municipality gave it an inherent advantage over potential non-municipal applicants such as to discourage potential applications by the latter. However, as discussed in our
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The November 1980 letter from Mr. Hickey to Mr. Johnson raises a question about the relationship between Summersville and Noah and Summersville's intent to acquire and retain all of the property interests necessary to construct, operate and maintain the project. However, this letter was written before the Commission announced its policy regarding abuse of municipal preference in Fayetteville (see n. 11, supra). Summersville has since stated, in its application and in response to staff inquiry, that it intends to acquire and retain all property interests necessary to be sole licensee for the project. It does, however, have a contractual agreement with Noah by which Noah is Summersville's agent for most activities concerning the Summersville Dam Project.

In our decision in City of Fayetteville Public Works Commission, we stated that: 15/

the preference afforded a municipality under Section 7(a) need not be jeopardized by contractual arrangements the municipality may make with non-municipal entities for assistance in financing, studying, constructing or operating a project. In order to retain its entitlement to municipal preference as the party who intends to be the licensee, the municipality must retain in such contractual relationships requisite control over the operation of the project and may not relinquish any property or other rights necessary for project purposes.

We have reviewed the agreement between Summersville and Noah, dated December 13, 1982, and conclude that, as modified herein, it is acceptable. Under the agreement, Noah is to manage all aspects of the licensing, financing, design, construction,

14/(...continued)

prior order, as summarized above, any advantage that Summersville might have incurred from an abuse of municipal preference at the time it sought and held a preliminary permit, had such abuse occurred, would in any event be irrelevant, because Summersville filed its license application in this proceeding long after the permit expired.

15/ Fayetteville, 16 FERC ¶ 61,209 at p. 61,456. The Commission has approved a variety of agreements where municipalities have contracted with non-municipals for financing or project operation. See, e.g., City of New Martinsville, West Virginia, 32 FERC ¶ 61,268 (1985), and El Dorado Irrigation District, 29 FERC ¶ 61,375 (1984).

operation, and maintenance of the project, subject to the direction and control of Summersville, 16/ which will own all project property exclusively. 17/ Summersville has the right to direct and control Noah "in each and every action undertaken pursuant to the agency" established by the agreement, and Noah must consult with Summersville before taking actions "significantly" affecting the project, "unless exigent circumstances require otherwise." 18/ Under these provisions, Summersville appears to retain the requisite control over project operations required by the FPA.

Nevertheless, since Summersville's control of Noah's overall management of the project under the agreement is subject to "exigent circumstances," and since Noah appears to have authority to take independent actions with respect to the project that do not "significantly" affect the project, and to make clear that Noah may in no way encumber Summersville's performance of its duties as a licensee, the agreement must be modified to include a provision stating that:

Notwithstanding any provision contained herein, the Principal [Summersville] has the right to perform any and all acts required by an order of the Federal Energy Regulatory Commission or its successor without the prior approval of the Agent [Noah]. [19/]

Inclusion of the foregoing provision will serve to ensure that the agreement comports with the project control and municipal preference requirements of the FPA.

Under the agreement, Summersville will pay Noah a monthly fee equal to 49 percent of the proceeds of the project, 20/

16/ See the agreement at pp. 3-7, Section Three.

17/ Id. at p. 14, Section Nine.

18/ Id. at p. 8, Section Four.

19/ Compare Linweave, Inc., 23 FERC ¶ 61,391 (1983), where the Commission required modification of a lease agreement of project property to include a similar provision to ensure that the licensee/lessee would possess all rights necessary to accomplish all project purposes.

20/ See the agreement at pp. 12-14, Section Seven. Project proceeds are defined as gross income (consisting of power sales revenues to a utility plus an amount equal to the

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and in the event project expenses exceed gross income, Noah is to receive no fee. 21/ These provisions appear to provide an acceptable method of allocating project revenues between Summersville and Noah. 22/ That Noah will receive a portion of project revenues does not by itself require it to become a licensee. 23/

Manassas has not presented any other evidence to support its contention that Summersville intends to transfer the license to Noah or add Noah as a co-licensee after the issuance of this license. Accordingly, we are satisfied that Summersville intends to maintain the control of project operations and ownership of property and property rights required by the license and the FPA. 24/

20/ (...continued)

fully allocated cost of any project power used by Summersville) less monthly expenses incurred by Noah.

21/ Id. at pp. 14-15, Section Eight.

22/ Compare El Dorado Irrigation District and El Dorado County Water Agency, 29 FERC ¶ 61,375 at p. 61,789 (1984), where the Commission approved a project financing arrangement involving the sharing of project revenues between municipal licensees and a group of private investors.

23/ See Fayetteville, supra, 16 FERC at ¶ 61,459 n. 8, where the Commission found that it is the possession of proprietary interests in project property that distinguishes a licensee from parties that are mere beneficiaries of a project. Compare Owyhee Irrigation District, 55 FERC ¶ 61,252 at p. 61,804 (1991), where the Commission found that a proposed contract to share project revenues between a licensee and a non-licensee, which would not convey interests in project property or rights necessary to accomplish project purposes, would not require the non-licensee to become a co-licensee.

24/ However, if in the future Summersville seeks to transfer its license to a non-municipal entity, such transfer may be barred as an abuse of municipal preference, unless the Commission determines, after a competitive transfer proceeding or other proceeding, that Summersville and/or its private transferee should be awarded the project license. See Vidalia, supra n. 13.

2. Summersville's Municipal Authority

Manassas argues that a license should not be issued to Summersville because Summersville is not authorized by West Virginia law to construct, operate, and maintain the project. Summersville states in its application that it is authorized by West Virginia Code Sections 8-12-5(32) and (33) and 13-2C-1 to 13-2C-5 to engage in the business of operating a hydroelectric generating project. 25/

Manassas contends that the language of Section 8-12-5(32) does not permit Summersville to operate this project. Section 8-12-5(32) states in pertinent part that municipalities shall have the power:

To erect, establish, construct, acquire, improve, maintain and operate ... an electrical system ... within or without the corporate limits of the municipality or partly within and partly without the corporate limits of the municipality, except that the municipality shall not erect any such system partly without the corporate limits of the municipality to serve persons already obtaining service from an existing system of the character proposed

Manassas argues that the prohibition in subsection 32 against establishing an electrical system outside the corporate limits of a municipality to serve persons already receiving service from an existing system prohibits Summersville from producing power for sale to a power company.

On March 10, 1990, after the date of Manassas' motion opposing Summersville's license application, the West Virginia Code was amended to provide that any municipality may:

25/ Chapter 8, Article 12, Section 5 deals with general municipal powers, and Chapter 13, Article 2C is the Industrial Development and Commercial Development Bond Act.

Section 8-12-5(33) provides that Summersville has the authority:

To acquire watersheds, water and riparian rights, plant sites, rights-of-way and all other property and appurtenances necessary, appropriate, useful, convenient or incidental to any such system ... as aforesaid [including in Section 8-12-5(32)]

acquire, construct, establish, extend, equip, repair, maintain and operate or lease to others for operation ... an electric power system or construct, maintain and operate additions, betterments and improvements to an existing ... electric power system, notwithstanding any provision or limitation to the contrary in any other law or charter: Provided, That such municipality ... shall not serve or supply ... electric power facilities or services within the corporate limits of any other municipality or county commission without the consent of the governing body of such other municipality or county commission.

Section 8-19-1(a). 26/ Summersville proposes to sell the project power to the Monongahela Power Company, 27/ but does not yet have a power supply contract. If the sale of project power to a private utility were to invoke the proviso in Section 8-19-1(a), Summersville would at that time have to obtain any requisite consent as provided for in that section. However, at this point Manassas has not demonstrated that the West Virginia Code prevents Summersville from constructing and operating the Summersville Dam Project. 28/

26/ Section 8-19-1(c) (2) defines "electric power system: as:

a system or facility which produces electric power in its entirety or provides for the distribution of electric power for local consumption and use or for distribution and resale or any combination thereof, including, but not limited to, power lines and wires, power poles, ... generators, ... machinery and all other facilities necessary, appropriate, useful or convenient or incidental in connection with or to an electric power supply system.

27/ See EA at 1-2.

28/ Summersville also states that it is authorized to construct and operate the Summersville Dam Project by the Industrial Development and Commercial Development Bond Act (Bond Act), which authorizes municipalities to acquire and finance industrial and commercial projects. Manassas argues that the Summersville Dam Project does not meet the definition of either a commercial or industrial project as contained in the Bond Act. In light of the above discussion, we do not believe it is necessary to reach this issue.

B. Whether to License the Project

We find that issuing a license for Summersville's proposed project, with the mitigative measures recommended by the Commission's staff, is in the public interest. This project will produce 198,000 MWh of electric energy annually using a clean, renewable resource. As discussed below and in the Environmental Assessment (EA) 29/ attached to this order, the project, as licensed, will not have significant adverse impacts on the recreational use of Lake Summersville or the Gauley River. We recognize that temporary adverse impacts on water quality and on recreational boating below the dam will occur during construction of the project, and that some of the project works, such as the powerhouse, valve house, and transmission line, will adversely affect the aesthetic appearance of the project area. Nonetheless, we conclude that the benefits of the project outweigh the unavoidable adverse impacts. Accordingly, we find that the Summersville Hydroelectric Project No. 10813 would be best adapted to comprehensive development of the waterway for beneficial public uses, as required by Section 10(a)(1) of the FPA. 30/

C. Project Design and Construction

The hydroelectric project licensed herein will be constructed adjacent to the Corps' Summersville Dam. The project reservoir is Lake Summersville, which the Corps manages for flood control, low-flow augmentation, and recreation. It has a surface area that varies seasonally between 514 and 4,920 acres. 31/ The dam, built in 1966, is a rockfill structure 393 feet high and 2,280 feet long. Water is drawn out of the reservoir through an intake structure that leads to a 29-foot-diameter outlet

29/ Environmental Assessment for Summersville Hydroelectric Project, FERC No. 10813-000 -- West Virginia (January 10, 1992).

30/ 18 U.S.C. § 803(a)(1).

31/ The minimum pool is 514 acres, and the maximum pool (during flood conditions) is 4,820 acres. The normal winter pool is 928 acres, and the normal summer pool is 2,790 acres. In the fall, the Corps lowers the reservoir level in anticipation of heavy snows and rain in the winter and spring months. Recreational boaters raft down the river during draw-down period.

tunnel, 32/ which splits into three 11-foot-diameter steel tunnels controlled by three 9-foot-diameter Howell-Bunger valves, 33/ and one 3-foot-diameter steel tunnel controlled by one 30-inch Howell-Bunger valve. These valves are in a valvehouse located directly downstream of the reservoir.

The proposed project would be built immediately downstream of the Corps valvehouse. The existing tunnels would be extended and the three 11-foot-diameter tunnels would each be bifurcated by wyes 34/ into two conduits: one leading to a new powerhouse located approximately 250 feet downstream of the Corps valvehouse location, 35/ and the other leading to a new valvehouse located to the left of the powerhouse. The 3-foot-diameter tunnel would go directly into the new valvehouse. The four Howell-Bunger valves would be moved from the Corps valvehouse to the new valvehouse. The powerhouse would contain three 24-MW turbine generators, and one 8-MW turbine generator.

The Corps is concerned that the addition of hydraulic turbines to the existing outlet tunnels could subject that structure to hydraulic transients 36/ that are not experienced with the present control facilities. The Corps believes that the proposed plan's introduction of new bends and wyes into the Corps discharge tunnels which could threaten the physical integrity of the existing outlet works. The Corps asks that we require Summersville to conduct a study of hydraulic transients and, if

32/ The outlet tunnel is sometimes referred to as a discharge conduit.

33/ A Howell-Bunger valve, named for its inventors, is a regulating valve which allows for the release of a controlled flow of water. This type of valve is frequently used for turbine by-passes or to provide aeration of water.

34/ A wye is a "Y" shaped fixture that connects one pipe with two others.

35/ One of these tunnels would have a smaller tunnel off of it just before they entered the powerhouse.

36/ Hydraulic transients are changes in pressure in the water column in a tunnel or penstock. The pressure changes can be caused by changes in the volume of water flow, such as closing a valve. In order to run sufficient water through the turbines, the Howell-Bunger valves may be closed.

necessary, incorporate surge tanks 37/ or other facilities into the project to protect the structural integrity of the outlet works.

We agree that the proposed changes in the outlet works have the potential to cause hydraulic transients which could threaten the structural integrity of the existing outlet works. Accordingly, we are including Article 312 in the license, which requires Summersville to conduct a study of potential hydraulic transients in the dam's discharge conduits and, if required by the Corps, incorporate surge tanks and other facilities into the proposed project to protect the existing outlet works.

The Corps is also concerned that the proposed changes in the discharge conduits may cause unacceptable flow patterns to develop in the conduits at the relocated Howell-Bunger valve site. In order to ensure that the proposed project does not create flow patterns which could adversely affect the dam or outlet works, we are including Article 313 in the license, which requires Summersville to construct and test a physical model of the penstock and conduit system to determine if unacceptable flow patterns would be created in the conduit system, including the tailrace.

In order to construct the new facilities, the licensee will be installing cofferdams 38/ to divert the water from the construction site. The large Howell-Bunger valves will be removed from the Corps valvehouse and placed in the new valve- and powerhouses one at a time, with one cofferdam installed for each valve move. 39/

37/ A surge tank would provide a path for the blocked water in the tunnel to travel, thereby releasing any built-up pressure.

38/ The cofferdams will be a single-sheet pile supported by buttresses, or a similar structure.

39/ The first-stage cofferdam will be located between the third (nearest the new valvehouse) and second turbines in the powerhouse and extend upstream between the third and second powerhouse conduits to the Corps valvehouse, and downstream a short distance. A settling basin with a haybale dike will be located to the right of the cofferdam. While this cofferdam is in place, the conduit leading to the new valvehouse, the new valvehouse, and its tailrace will be built. The second-stage cofferdam will surround the second penstock from the Corps valvehouse to the powerhouse. A

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The Corps commented that the cofferdams needed for the first two stages of project construction are substantial structures which will be difficult to design and construct. The Corps requests that Summersville satisfy the Corps as to the design and feasibility of constructing the cofferdams before proceeding with other aspects of the project design. Summersville does not object to Corps review and approval of the cofferdam design to ensure that the integrity of the federal Summersville Dam is not jeopardized, but does not believe that the Corps' concurrence on the feasibility of the cofferdams is necessary. Summersville believes that, because the cofferdams would be downstream of all dam structures and failure of the cofferdams would not jeopardize the safety of the dam, the feasibility of the cofferdams is the concern of Summersville and its contractor.

We anticipate that any review of the cofferdam design by the Corps would include an evaluation of the likelihood of failure of the cofferdam and the potential threat that such a failure could pose to the structural integrity and operation of the federal project. Therefore, the Corps should have review and approval authority over the cofferdam design. 40/ In order to ensure that the cofferdams do not threaten the operation and structural integrity of the federal project, we are including Article 304 in the license, which will require that cofferdam design and construction be performed in consultation with, and subject to,

39/ (...continued)

settling basin with a haybale dike will be located downstream of the cofferdam. While this cofferdam is in place, the second conduit to the powerhouse will be built. The third-stage cofferdam will extend from the end of the powerhouse nearest the valvehouse and cut across to the bank on the powerhouse side of the tailrace. A settling basin with a haybale dike will be located immediately downstream of the right side of the powerhouse. While this cofferdam is in place, the first conduit to the powerhouse, the powerhouse, and the tailrace will be built.

40/ If the Corps were to conclude that there was a potential for failure of the cofferdam, but that such a failure would not threaten the structural integrity or operation of the federal project, we would expect the Corps to communicate its views to Summersville and its contractors. In light of the Corps' engineering experience and expertise in this area (as well as Summersville's obvious interest in ensuring the integrity of its own facilities) we would expect that in that event Summersville and its contractors would consult extensively with the Corps and to accord considerable deference to the Corps' views.

the approval of the Corps' Division Engineer. Article 304 also requires Summersville to submit a schedule for the submission of design documents and plans and specifications for the project in order to allow timely review and approval by the Corps.

The National Park Service is concerned that the cofferdams could affect the Gauley River National Recreation Area (which, as noted above, extends from just below the project to some 25 miles downstream) through sedimentation and leaching, and has requested its own review authority over the design of the cofferdams. We agree that erosion, sedimentation, and leaching from the cofferdams could affect the Recreation Area. Therefore, Article 311 of the license requires Summersville to submit design drawings and computations for the proposed cofferdams to the Park Service for review and recommendations for making the proposed cofferdams compatible with the operation of the Recreation Area.

The Corps notes that construction of the Summersville Project will cause temporary reductions in the overall discharge capacity of the outlet works during the times that the Howell-Bunger valves are relocated. The Corps states that there are certain periods of the year when any reduction in discharge capacity would be unacceptable. In order to ensure that reductions in discharge capacity do not adversely affect the operation of the Summersville Dam, we are including Article 314 in the license, which requires Summersville to schedule the relocation of the Howell-Bunger valves only during the time periods specified by the Corps.

D. Erosion and Sedimentation

The Park Service and the West Virginia DNR are concerned that sedimentation and erosion from project construction could adversely affect the Recreation Area. Ground-disturbing construction activities include the excavation in the river bank and bed during the construction of the powerhouse, the tailrace, and the discharge channel for the new valve house; the creation of the construction staging area; the disposal of excess excavated spoil; and obtaining access to transmission tower sites and the installation of the new towers. The EA notes that these construction activities could produce significant erosion and sedimentation problems. 41/

Summersville has prepared an Erosion and Sedimentation Control Plan, filed July 31, 1989, and revised May 30, 1990, which would reduce erosion and sedimentation from project construction to minor levels. Article 401 of this license

41/ EA at 8.

requires Summersville to implement the erosion and sedimentation control plan it has filed. Summersville is required to file the final drawings, specifications, and schedule for implementing the plan at the same time it files the final project drawings and specifications required by Article 302. Article 401 further requires Summersville to prepare the final drawings and specifications for the erosion and sedimentation control plan in consultation with the Park Service, West Virginia DNR, the Soil Conservation Service, and the Corps.

The Park Service is also concerned that the planned excavated spoil disposal area could affect the Recreation Area. Summersville proposed to dispose of spoil excavated in construction of the powerhouse, tailrace, and new valve house in the old Summersville Dam borrow area. The Recreation Area boundary map provided by the Park Service indicated that part of the spoil disposal area would be within the Recreation Area. The Park Service states that it reserves the right to refuse deposition of spoil material on land within the Recreation Area. If the Park Service refuses deposition of spoil material, an alternative disposal site would have to be found. One alternative would be to shift the disposal site to another part of the Summersville Dam borrow area. It appears from maps that there is sufficient space in the borrow area outside the Recreation Area boundary to dispose of spoil from the project. Summersville states that there are a number of former coal strip mining sites in the area where spoil could be deposited, and that moving the spoil to an alternate site would not place a greater economic burden on the project.

The Park Service is also concerned about revegetation of those portions of the transmission line route which cross the Recreation Area. The Park Service notes that Summersville's erosion and sedimentation control plan calls for use of lespedeza and alfalfa for revegetation. Park Service policies do not allow the use of "exotic" species such as lespedeza and alfalfa where other alternatives exist. The Park Service states that native species would need to be used to revegetate those parts of the transmission route which cross Park Service land. Article 401 requires Summersville to consult with the Park Service in the preparation of the erosion and sedimentation plan. The Park Service will be able to identify acceptable species for revegetation of the transmission route during this consultation. In addition, Article 410 adopts the terms of the Memorandum of Understanding (MOU) between Summersville and the Park Service, which requires Summersville to locate the transmission line on a route acceptable to the Park Service. These requirements will ensure that the routing and revegetation of the transmission line route will be consistent with the purposes of the Recreation Area.

The Park Service is concerned that the transmission line could pose an electrocution hazard to perching raptors. The EA notes that bald eagles and peregrine falcons may be attracted to the project area and could be electrocuted when perching on the transmission line if it is not properly designed. 42/ Article 406 requires Summersville, after consulting with the Park Service, West Virginia DNR, the Corps, and the Fish and Wildlife Service, to file a transmission line design plan which considers measures necessary to protect raptors from electrocution.

E. Water Quality

Section 401(a)(1) of the Clean Water Act, 33 U.S.C. § 1341(a)(1), requires that Summersville receive water quality certification or a waiver of certification before we can issue a license for the project. West Virginia DNR issued a water quality certification for the project on September 18, 1991.

West Virginia DNR is concerned that project operations could result in reductions in water quality, specifically dissolved oxygen (DO), downstream of the Summersville Dam. At the present time, water is released from Summersville Dam through the Howell-Bunger valves at the base of the dam. These valves dissipate energy from the discharged water and also have the effect of aerating the water to near-saturated or super-saturated DO concentrations. Project operations would divert most of the release flows through the project turbines and would reduce or frequently eliminate releases through the Howell-Bunger valves, with commensurate losses in aeration at the project dam.

West Virginia DNR has designated the Gauley River downstream of the Summersville Dam as a High Quality Stream and a National Resource Water. 43/ West Virginia's anti-degradation policy provides that there should be no reduction in present water quality of National Resource Waters and High Quality Streams. 44/ The EA states that the area immediately downstream of the dam is classified as Trout Water by West Virginia DNR. The standard for DO concentrations immediately downstream of the dam is not less than 6.0 milligrams per liter (mg/l) at any time and not less than 7.0 mg/l during spawning

42/ EA at 20.

43/ "High Quality Stream" and "National Resource Waters" are categories established under West Virginia's water quality program pursuant to West Virginia Code Chapter 20, Article 5A and Legislative Rules, Title 46, Series I, Section 4.0.

44/ EA at 11.

areas. The EA also states that, although DO concentrations have not been continuously monitored downstream of the dam, 61 samples were taken immediately downstream of the dam between 1975 and 1988. DO concentrations ranged from 5.9 mg/l to 13.0 mg/l and averaged 9.7 mg/l. The DO standard of 6.0 mg/l was not met on only one occasion, in June 1981. 45/

The water quality certification issued by West Virginia requires Summersville to maintain a DO concentration of 7.0 mg/l in the project tailrace and to operate the project in a manner that maintains DO concentrations in the river above Swiss, West Virginia, equivalent to those existing prior to project operations. 46/ West Virginia requires that Summersville prepare a plan for determining pre-project DO concentrations. The certification also requires Summersville to prepare an operating plan and to monitor water quality for the first two years of project operations. After the two-year study, Summersville is required to prepare a comprehensive evaluation of the operating plan which documents project impacts and proposes revisions in the operating plan, if necessary.

The EA states that the fish species which occur in the Gauley River require a well-aerated environment for optimum growth and reproduction. The EA notes that the U.S. Environmental Protection Agency's (EPA) criteria for non-salmonid waters indicate that a DO concentration of 6.0 mg/l would have slight or no impact on early fish life stages and no impact on other life stages. The EPA criteria indicate that a DO concentration of 7.0 mg/l would have no effect on salmonid growth rates. The EA concludes that DO concentrations of at least 7.0 mg/l would have little or no impact on fish in the Gauley River. The EA states that it should be possible to operate the project in a manner which meets the 7.0 mg/l minimum DO concentration requirement during critical periods either with partial or total flow releases through the Howell-Bunger valves or other methods, such as the oxygen injection system proposed by Summersville. 47/

Article 404 requires Summersville to maintain a DO concentration of at least 7.0 mg/l, as measured in the Gauley River immediately downstream of the project's tailrace.

45/ EA at 12.

46/ The U.S. Department of the Interior supported this requirement.

47/ EA at 15-16.

Article 404 also requires Summersville to install and operate permanent, continuously recording water temperature and DO monitoring devices, and reserves authority to the Commission to require modifications in project structures or operations to ensure that the 7.0 mg/l DO concentration level is met.

The water quality certification also requires Summersville to construct or provide a substantial number of recreation facilities which are completely unrelated to the maintenance or improvement of water quality. The section of the certification captioned "Recreation" requires Summersville to construct or improve access roads and paths, low water stepping stone bridges, fish attraction structures, a boat launching facility in Summersville Lake, and a residence and storage building, and to provide funds to West Virginia DNR for fish and wildlife management programs. We believe that these conditions are beyond the scope of Section 401, and that states should not use their water quality certification authority to impose conditions that are unrelated to water quality. 48/ However, since pursuant to Section 401(d) of the Clean Water Act all of the conditions in the water quality certification must become conditions in the license, review of the appropriateness of the conditions is within the purview of state courts and not the Commission. The only alternatives available to the Commission are either to issue a license with the conditions included or to deny Summersville's application, and we do not believe it is in the public interest to deny the application.

Several of the recreational facilities (an access road, angler access paths, and two stepping stone bridges) required by the water quality certification would be located outside of the project boundary and within the Recreation Area. 49/ The EA recommends that these riverside facilities not be built, because they would pose a threat to the Virginia spirea and its habitat. 50/ Intervenor American Whitewater Affiliation (Whitewater) objects to these facilities, because they would degrade the pristine scenery along the river bank. Whitewater also objects

48/ See Central Maine Power Co., 52 FERC ¶ 61,033 (1990); Carex Hydro, 52 FERC ¶ 61,216 (1990).

49/ These facilities would be located in or along the river between the powerhouse and the point where the emergency spillway joins the river, approximately two miles downstream. The certification requires Summersville to construct angler access paths on both sides of the river and two stepping stone bridges.

50/ EA at 23-24.

to the low water stepping stone bridges, because they could pose a serious hazard to boaters on the river. A low water stepping stone bridge is a series of rocks or concrete blocks placed in the river which allow pedestrians to cross the river at low flow levels without wading through the water. Whitewater believes that these bridges could create conditions which could cause boaters to be trapped under water and drowned.

The water quality certification requires Summersville to provide alternative access and/or recreational facilities at locations in the vicinity of the project site if the Park Service does not approve the proposed riverside facilities. For the reasons discussed above and in the EA, these facilities should not be built. Therefore, we strongly urge the Park Service to reject these proposed facilities.

With regard to the stepping stone bridges, we, too, are concerned that such bridges would pose a hazard to boaters who use the river during lower flows, and to anglers during flow levels that are slightly higher than the bridges are designed to accommodate. At such flows, the bridges could be submerged but visible to the anglers, tempting the anglers to use the bridges; under these circumstances, someone attempting to use the bridge could be swept into the river. Commission staff communicated these safety concerns to West Virginia DNR, and by letter telefaxed to the Commission on September 15, 1992 (formal letter to follow), West Virginia DNR agreed to delete the water quality certification's requirement (at paragraph 3.C.IV) for stepping stone bridges. In its place, West Virginia DNR intends to insert the following new paragraph:

The Licensee shall design and install unspecified access improvements (to be determined by the Licensee and WVDNR) in the project vicinity at an expense comparable to designing, installing and maintaining two stepstone bridges on the Gauley River downstream of the project site, as per agreement reached between the Licensee and the WVDNR prior to issuance of State Certification.

We are issuing the license for Project No. 10813 now, even though the substitution of new paragraph 3.C.IV of the project's water quality certification will not be effective until West Virginia DNR formally amends the certification. However, by license Article 412 we are reserving our authority to amend the license to reflect adoption of procedures, to be developed through discussions with West Virginia DNR and, as appropriate, the Park Service, to ensure that any access improvements required under new paragraph 3.C.IV of the certification will, in the Commission's judgment, not pose a safety hazard.

F. Recreation and Aesthetic Resources

The Park Service and intervenors West Virginia Professional River Outfitters (Outfitters) are concerned that modifications in the volume or scheduling of flows released into the Gauley River below the project could adversely affect the NRA and whitewater boating on the river. Whitewater rafting and boating on the Gauley River below the Summersville Dam are extensive. The EA notes that in 1990 over 30,000 people boated the river during the fall draw-down, and estimated that at current use levels, recreational boating on the Gauley River adds 35 million dollars to the West Virginia economy. 51/ Any significant change in the volume or scheduling of flows released from the Summersville Dam could have a major adverse impact on recreational boating on the Gauley.

The Corps is required to provide 20 days of whitewater boating releases (2,500 cfs minimum) starting the first weekend after Labor Day every year. 52/ The EA notes that the current agreement between the Corps, the commercial rafting outfitters, and West Virginia DNR provides for 22 days of whitewater releases. 53/ These releases are scheduled Friday through Monday for five weeks and Saturday and Sunday for an additional week. Summersville agrees to generate power only from the flows that are provided by the Corps.

Article 402 requires Summersville to operate the project as directed by the Corps, using flows provided by the Corps and maintaining the current minimum flow regime. Article 402 further provides that the specified mode of operations may be modified only in the event of an emergency or for short periods upon mutual agreement among Summersville, the Corps, West Virginia DNR, the Park Service, and the U.S. Fish and Wildlife Service (FWS). Since Summersville must generate power only from the flows that are made available by the Corps and must maintain the

51/ EA at 28.

52/ Water Resources Development Act of 1986, Pub. L. No. 99-662, 100 Stat. 4082, 4225.

53/ Outfitters believe that the EA's recommendations do not adequately address the additional two days of whitewater flows (the two-day weekend). Since the license requires Summersville to use only those flows made available by the Corps and also requires the agreement of the Corps, Park Service, and West Virginia DNR to modify flow releases, the current 22-day whitewater draw-down season is adequately protected.

present minimum flow regime, the operation of the project will not have any effect on the volume or timing of flows in the Gauley River below the Summersville Dam.

Fayette County Chamber of Commerce, Outfitters, and Class VI River Runners (collectively, Fayette), the Park Service, and American Rivers are concerned that the construction and operation of the project will adversely affect whitewater boating on the Gauley River. Most whitewater boaters entering the Gauley River use one of the three put-ins located below the Summersville Dam. The upper put-in, located just below the present outlet works, and the lower put-in, located about 500 feet downstream, are used extensively by commercial rafting operations. Between the upper and lower put-ins there is an undeveloped path which leads to the river. This path is used primarily by private boaters, most of whom are kayakers. The commenters are concerned that the powerhouse and new valve house will make the upper put-in unusable.

The EA states that an inspection of the site of the new powerhouse and existing boating access points by the commenters, Summersville, FWS, and the Commission's staff revealed that the middle and lower put-ins would not be adversely affected by the project, but that the upper put-in would be. Pursuant to agreements with the Park Service and West Virginia DNR, Summersville will construct a new upper put-in and upgrade the trail leading to the middle put-in. The Memorandum of Understanding, as incorporated in Article 410 of the license, requires Summersville to construct these access improvements before the start of project construction. Article 410 requires Summersville to consult with the Park Service, the Corps, Whitewater, and Outfitters in the design and location of the put-in and other recreation facilities required in the MOU with the Park Service.

Whitewater is concerned that the appearance of the powerhouse and transmission line will adversely affect the aesthetic quality and character of the upper put-in. The proposed powerhouse and valve house will be a substantial structure (approximately 240 feet x 60 feet x 50 feet) and will be visible from the put-in area and from an overlook on U.S. Route 219. The EA recommends that Summersville, in consultation with the Corps and the Park Service, select colors and textural finishes for the exterior of these structures which will blend in with the existing landscape. 54/ Article 409 adopts this recommendation and requires Summersville to file and implement a plan to minimize the visual impacts of structures. The visual

54/ EA at 26.

impact of the new structures will be further reduced by their proximity to the dam, which is 2,280 feet long and 390 feet tall.

Whitewater is also concerned that the reduction or elimination of discharges through the Howell-Bunger valves will adversely affect the aesthetic quality of the upper put-in by eliminating the spray and mist effects that occur when flows are released from the Howell-Bunger valves. 55/ We agree that this will occur, but note that the license ensures continued access to the Gauley River and continuity in river flows such that boaters will continue to enjoy the river. In balancing the power and non-power benefits of the project and the recreational and aesthetic benefits and values of the mist and spray effects of the Howell-Bunger valves, we find that the benefits of developing the project outweigh the adverse effect that will be caused by the loss of the spray and mists at the upper put-in. 56/

The Park Service and Fayette are concerned that construction-related traffic could adversely affect recreational use of the Gauley River during the fall draw-down season. 57/ They believe that the single access road into and out of the project site does not have the capacity to handle construction-related and recreational traffic and ask that Summersville limit construction-related traffic during the draw-down period. In its motion to intervene, Fayette requested that no construction take place on Friday through Monday during the draw-down, including the annual four-day Gauley River Festival. Fayette also asks that Summersville be required to store all construction equipment and materials in the construction staging area on the east bank of the river to avoid conflict with boaters using the put-ins on the west bank.

The MOU between Summersville and the Park Service, which is incorporated in the license by Article 410, requires Summersville to suspend transportation of material and equipment to the construction site between 7:00 a.m. and 12:00 noon during the

55/ The spray and mist occur due to the large decrease in pressure when the water passes from the outlet pipe and out through the valve. The effect is similar to that which occurs with a spray nozzle on a garden hose.

56/ In weighing the benefits and impacts, we have also considered that the spray and mists at the upper put-in are themselves not of natural origin, but are a product of the existing man-made dam.

57/ See n. 30, supra.

fall draw-down season when recreational flows are planned. Article 410 also requires Summersville to suspend all construction activities during the four-day Gauley River Festival, and to confine storage of construction material and equipment to the planned staging area during the fall draw-down period. Fayette agreed that suspending transportation of equipment and materials between 7:00 a.m. and 12:00 noon during the draw-down season is satisfactory, because most of the boaters access the river during those hours. Article 410 also requires Summersville to maintain the access road during the period of project construction. These provisions in the license should ensure that project construction will not have significant adverse impacts on access to the river during the fall draw-down period.

Fayette and the Park Service are concerned that the cost estimates used by Summersville for the recreational facilities are lower than the actual costs of the facilities and ask that these estimates not be treated as caps. The figures used in the EA are only estimates. Their purpose is to permit a comparison of the costs of various alternatives and to determine what effect constructing and operating these facilities will have on the financial feasibility of the project. The terms and conditions of the license require Summersville to construct or provide particular recreational facilities and do not create monetary limits on Summersville's obligations to provide recreational facilities.

Whitewater contends that the EA fails to give equal consideration to the protection of recreational opportunities, as required by Section 4(e) of the FPA. Whitewater cites the omission of Whitewater from the list of entities to be consulted in the preparation of the landscaping plan and the design of the recreational facilities contained in the MOU between Summersville and the Park Service. It also notes that the stepstone bridges and angler access trails, which are required in the water quality certification, were planned without consultation with Whitewater, and are in its view dangerous to recreationists.

Section 4(e) requires the Commission to give equal consideration to developmental and non-developmental purposes of a proposed project, but does not mandate a particular outcome or require equal treatment of these purposes. With regard to recreation, the EA examined the effects of the project on recreational opportunities in the surrounding area and recommended several measures to enhance recreation. The license adopts these recommendations. We have also recommended that the stepstone bridges and angler access trails not be constructed. Whitewater's disagreement with mandatory conditions contained in the water quality certification does not alter the fact that the

Commission has given equal consideration to recreational values in reaching its decision in this proceeding.

G. Endangered, Threatened, and Rare Species

The Park Service is concerned that the construction of some of the recreational facilities could adversely affect populations of Virginia spirea (Spirea virginiana), a federally listed threatened species. This shrub has been found in only 18 locations in five states. It grows in disturbed habitats along the scoured banks of high gradient streams. 58/ The EA states that a 1990 survey found Virginia spirea occurring on the left bank of the Gauley River from about one mile below the project to the confluence of the Gauley and Meadow Rivers.

The EA states that potential impact on Virginia spirea or its habitat can be avoided by careful siting of recreational facilities, and that the facilities proposed in the MOU between Summersville and the Park Service would not be located in areas where spirea are found. 59/ The Park Service is concerned that the facilities that are required by the water quality certification could adversely affect existing Virginia spirea or suitable habitat that is available for the species' expansion. The renovated access road for fish stocking, angler access trails, and low-water stepping-stone bridges required by the water quality certification could significantly increase the number of people using the river banks and increase the likelihood that Virginia spirea are trampled, cut down, or collected. 60/ As discussed above, we disagree with West Virginia DNR's recommendation to provide these facilities along the stream banks; and as the EA states, avoiding impacts is preferable to developing mitigative measures. We have therefore recommended that the river bank facilities requested by West Virginia DNR not be built.

58/ The project area is also within the range of running buffalo clover (Trifolium stoloniferum), a federally listed endangered species. A field reconnaissance found no suitable running buffalo clover habitat in areas which might be affected by project construction.

59/ EA at 22-23.

60/ The EA notes that one reason that the critical habitat for Virginia spirea has not been determined is because publication of critical habitat descriptions and maps would increase the vulnerability of the species to increased collection and vandalism. (EA at 23, n. 4.)

However, as discussed above, all of these facilities are included as conditions of the water quality certification and therefore must be included in the license. Since our responsibilities under the Endangered Species Act must be carried out if Summersville is required to construct these facilities, 61/ we are including Article 407 in the license, which requires Summersville to file and implement a plan to protect the Virginia spirea and its habitat.

The Park Service is also concerned that construction of the downstream river bank recreational facilities could adversely affect Barbara's buttons (Marshallia grandiflora), a candidate for listing as a threatened or endangered plant species, which exist along the Gauley River below the Summersville Dam. The nearest population of Barbara's buttons is located on the right bank of the river about 3,000 feet downstream from the dam. The facilities required by the MOU between Summersville and the Park Service would also not affect populations of Barbara's buttons. However, the facilities required by the water quality certification could adversely affect Barbara's buttons in the same manner as Virginia spirea. The habitat for Barbara's buttons is very similar to that of Virginia spirea, so the effects of the proposed facilities on the two species would be essentially the same. The Park Service states that its policy is to treat candidate species as listed species. Because of the project's relationship to the Recreation Area, we are including Barbara's buttons in the protection plan required by Article 407.

H. Economic Feasibility

Fayette and Whitewater contend that the revenue figures used to calculate the economic feasibility of the project are too high and have resulted in an inflated estimate of the economic benefits of the project. 62/ They argue that a rate of 59

61/ Section 7(a)(2) of the Endangered Species Act, 16 U.S.C. § 1536(a)(2), requires Federal agencies to ensure that their actions are not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of these species' habitats. Since Virginia spirea is a listed threatened species, the Commission must ensure that licensing this project will not jeopardize the existence of Virginia spirea or adversely affect its habitat.

62/ Whitewater contends that the economic analysis in the EA does not comply with the standards contained in publication No. DPR-1, "Evaluating the Economics of Hydroelectric
(continued...)

mills per kilowatt hour (mills/kWh) for project power is higher than Allegheny Power Systems, Inc. is currently paying, and that the current avoided cost of 15 mills/kWh should be used in calculating the financial feasibility of the project.

The economic evaluation of the project that was performed in the EA was based on Summersville's projection that it would be able to sell the project's power output to Monongahela Power Company, a subsidiary of Allegheny Power Systems, Inc., for 59 mills/kWh. After the EA was published, Summersville filed, as support for this assumption, a copy of a 1987 15-year contract for the sale of power at 74 mills/kWh from another licensed hydroelectric project to another subsidiary of the Allegheny Power System. However, the power market has changed dramatically since 1987.

In May 1992 the Commission revised its long-term estimates of regional energy values based on the Department of Energy, Energy Information Administration's (EIA) publication ANNUAL ENERGY OUTLOOK for 1992. Based on EIA's fuel cost data for the region, we now estimate that the 1994, 50-year levelized alternative energy cost would be about 41 mills/kWh. We therefore calculate the internal rate of return for the project, will all of the mitigation measures except the dissolved oxygen (DO) maintenance requirements, at about 8.2 percent. If the DO maintenance requirements are met by use of an oxygen injection system, we estimate the rate of return at 8.1 percent, whereas if

62/ (...continued)

Projects at the Federal Energy Regulatory Commission." Whitewater claims that the Commission's standards require that a project have an internal rate of return that is 5.0 to 5.5 percent higher than the interest rate the licensee will have to pay for financing. The publication Whitewater cites, which was issued by the Commission's Office of Hydropower Licensing in September 1989, is a description of the general criteria used by the Commission staff in reviewing the economic feasibility of a project, and does not bind the Commission's decisionmaking. In any event, Whitewater has misinterpreted the information in the publication. The publication states that Commission staff uses a hurdle rate of 7.5 to 8.0 percent (rates generally available for municipal bonds with minimal risk) to decide whether a project should be licensed. The publication also states that there is a rate of return spread of 5.0 to 5.5 percent between those projects which the Commission staff recommends be denied as economically infeasible and those projects which are attractive enough to potential investors that they will probably be built.

those requirements are met by spilling water over the dam for three months, the annual generation would drop from about 198 GWh to about 165 gWh, and the rate of return would fall to about 6.9 percent.

As a general matter, in the last several years we have considered hydroelectric projects with internal rates of return between 6 and 8 percent to be unattractive to investors, but potentially feasible, and projects with rates of return of less than about 6 percent to be not financeable. ^{63/} In light of the above, the project may not be economically beneficial. However, there are many factors that affect project economics, and a change in any one of those factors could improve the project's economic benefits. The applicant may, for example, be able to obtain financing at a rate lower than the 11 percent rate we assumed in our calculations; to construct the project for less than we projected; or to sell the project power for more than we estimated.

Whether a licensed project is actually built is ultimately decided by the marketplace. If a licensee is unable to obtain financing, the project will not be developed. Article 316 requires Summersville to file a financing plan prior to commencing construction which shows that Summersville has acquired the funds, or commitments for funds, necessary to construct the project in accordance with this license. This will ensure that the environment is not unnecessarily disturbed by a partially constructed project that is abandoned due to lack of funds.

Whitewater contends that the EA should have analyzed the action alternative of adopting energy conservation measures instead of constructing the new generating capacity represented by the proposed project. A discussion of energy conservation measures was not included in the EA, because Summersville has no distribution system and no end-use customers. As a result, Summersville itself has no opportunity to engage in programs to promote energy conservation and efficiency by end-use customers or to promote load management programs designed to reduce peak energy demands. The need for power analysis used the load and resource projections of the Allegheny Power System (the assumed receiving power system) reported by the East Central Area Reliability Coordination Agreement reliability council. Those projections include the effects of projected economical load

^{63/} See, e.g., Allegheny Electric Cooperative, et al., 48 FERC ¶ 61,363 (1989) at p. 62,341 n. 217; Hydroelectric Development, Inc., 55 FERC ¶ 61,474 (1991) at p. 62,558 n. 12.

management and energy conservation measures on internal power demand. Accordingly, Whitewater's concerns about energy conservation measures were considered in determining Allegheny's need for power rather than as an alternative to hydropower development.

I. NEPA Considerations

Whitewater and the Park Service contend that the construction of the project constitutes a major federal action significantly affecting the quality of the human environment such that the Commission must prepare an Environmental Impact Statement (EIS) prior to making a decision on Summersville's application. Our decision not to prepare an EIS but to issue the license based on the EA fulfills the requirements of the National Environmental Policy Act. 64/ The relevant issues are: (1) whether the areas of environmental concern have been accurately identified; (2) whether a "hard look" has been taken at the environmental issues; (3) whether a convincing case has been made for the finding of no significant impact; and, (4) if there is an impact of true significance, whether the impact has been significantly reduced as a result of changes or safeguards in the project. 65/ The EA provides a detailed analysis which has addressed all of the important environmental considerations, including the project's impacts on geology and soils, water resources, fishery resources, terrestrial resources, threatened and endangered species, aesthetic resources, cultural resources, recreation, land and water use, and socioeconomic considerations. Where potential impacts from the project have been identified, the EA has recommended mitigative measures which have been included in the license. Through the analysis in the EA, the Commission has taken the requisite "hard look" at the environmental effects of this project, and our finding that issuing this license will not significantly affect the human environment is supported by substantial evidence.

Whitewater claims that the Commission must prepare an EIS because of the project's impact on the aesthetic character of the put-in area immediately below the Summersville Dam. Our decision to issue a license for this project based on the information contained in the EA does not violate NEPA. The courts have held that decisions on aesthetic impacts generally do not require

64/ 42 U.S.C. § 4321 et seq.

65/ See Humane Society of the United States v. Hodel, 840 F.2d 45, 62 (D.C. Cir. 1988); Sierra Club v. U.S. Department of Transportation, 753 F.2d 120, 127 (D.C. Cir. 1985).

the preparation of an EIS. 66/ The EA considered the effects of the powerhouse and transmission lines on the aesthetic character of the area below the dam, stating that project construction will cause several adverse aesthetic effects. The operation of equipment and machinery will produce noise and dust. Cleared vegetation, cofferdams, construction buildings, and staging areas will temporarily degrade the appearance of the project area. The EA concluded that through proper landscaping and other control measures these impacts can be mitigated. The erosion and sedimentation control plan required by Article 401 will include measures necessary to mitigate the short-term adverse aesthetic impacts that will occur during project construction.

J. Comprehensive Plans

Section 10(a)(2)(A) of the FPA 67/ requires the Commission to consider the extent to which a project is consistent with comprehensive plans prepared by appropriate federal and state agencies for improving, developing, or conserving a waterway or waterways affected by the project. The Commission treats as a comprehensive plan one that is prepared by a state or federal agency authorized to prepare such a plan; is a comprehensive study of one or more of the beneficial uses of a waterway or waterways; includes a description of the standards applied, the data relied upon, and the methodology used in preparing the plan; and is filed with the Secretary of the Commission. 68/ Federal and state agencies filed thirteen comprehensive plans that address various resources in West

66/ Friends of the Ompompanoosuc and the State of Vermont v. FERC, Nos. 92-4013 and 92-4015 (2d Cir. July 8, 1992); River Road Alliance v. Corps of Engineers, 764 F.2d 445 (7th Cir. 1985). In River Road, the court stated:

[a]esthetic objections alone will rarely compel the preparation of an environmental impact statement. Aesthetic values do not lend themselves to measurement or elaborate analysis. The necessary judgements are inherently subjective and normally can be made as reliably on the basis of an environmental assessment as on the basis of a much lengthier and costlier environmental impact statement.

764 F.2d at 451 (citations omitted).

67/ 16 U.S.C. § 803(a)(2)(A).

68/ 18 C.F.R. § 2.19 (1992).

Virginia. Of these, we identified and reviewed two plans that are relevant to this project. 69/ No conflicts were found.

K. Recommendations of Federal and State Fish and Wildlife Agencies

Section 10(j) of the FPA 70/ requires the Commission to include license conditions based on recommendations filed pursuant to the Fish and Wildlife Coordination Act by federal and state fish and wildlife agencies for the protection, mitigation, and enhancement of fish and wildlife. As discussed above, the EA for the Summersville Project addresses the concerns of the federal and state fish and wildlife agencies, and the license includes conditions consistent with the recommendations of the agencies.

L. Conclusion

For the reasons discussed above and in the EA and the Safety and Design Assessment attached to this order, we conclude that the record before us supports issuance of a license to the Town of Summersville, West Virginia, to construct, maintain, and operate the Summersville Hydroelectric Project, as conditioned by the license articles adopted herein.

The Commission orders:

(A) This license is issued to Town of Summersville, West Virginia (licensee), for a period of 50 years, effective the first day of the month in which this order is issued, to construct, operate, and maintain the Summersville Dam Project. This license is subject to the terms and conditions of the Federal Power Act (FPA), which is incorporated by reference as part of this license, and subject to the regulations the Commission issues under the provisions of the FPA.

69/ The two relevant plans are the Gauley River Basin plan, published in 1984 by West Virginia DNR; and the West Virginia statewide comprehensive outdoor recreation plan 1988-1992, published in 1989 by the West Virginia Governor's Office of Economic and Community Development.

70/ 18 U.S.C. § 803(j).

(B) The project consists of:

(1) All lands, to the extent of the licensee's interests in those lands, enclosed by the project boundary shown by exhibit G:

<u>Exhibit G-</u>	<u>FERC No. 10813-</u>	<u>Showing</u>
1	4	Project Plan
2	5	Project Plan

(2) Project works consisting of: (a) three penstocks, each 11 feet in diameter, connected to the existing outlet conduits, and a fourth 3-foot-diameter penstock which is an extension from penstock No. 3 to a small turbine; (b) a powerhouse with three 24 MW and one 8 MW turbine-generators, and a total installed capacity of 80 MW; (c) a new valve house with three large and one small Howell-Bunger valves; (d) a tailrace; (e) an 8-mile-long, 3-phase, 138-kV transmission line; and (f) appurtenant facilities.

The project works generally described above are more specifically shown and described by those portions of exhibits A and exhibit F below:

Exhibit A:

Pages A-2 through A-6, and Table A-2, describing the proposed mechanical, electrical and transmission equipment, filed July 31, 1989.

<u>Exhibit F -</u>	<u>FERC No.</u>	<u>Description</u>
Sheet 1	10813-1	Project Layout
Sheet 2	10813-2	Powerhouse Details
Sheet 3-A	10813-3	Layout of Stage 1 of Cofferdam
Sheet 3-B	10813-4	Layout of Stage 2 of Cofferdam
Sheet 3-C	10813-5	Layout of Stage 3 of Cofferdam

(3) All of the structures, fixtures, equipment, or facilities used to operate or maintain the project, all portable property that may be employed in connection with the project, and

all riparian or other rights that are necessary or appropriate in the operation or maintenance of the project.

(C) The exhibits A, F, and G described above are approved and made part of the license.

(D) This license is subject to the articles set forth in Form L-6 (October 1975), entitled "Terms and Conditions of License for Unconstructed Major Project Affecting Navigable Waters and Lands of the United States," except Article 20, and the following additional articles:

Article 201. The licensee shall pay the United States the following annual charges as determined by the Commission, effective the first day of the month in which this license is issued for the purposes of:

a. Reimbursing the United States for the cost of administration of Part I of the FPA. The authorized installed capacity for that purpose is 106,660 horsepower.

b. Recompensing the United States for utilization of surplus water or waterpower from a government dam.

Article 202. The licensee shall clear and keep clear to an adequate width all lands along open conduits and shall dispose of all temporary structures, unused timber, brush, refuse, or other material unnecessary for the purposes of the project which result from maintenance, operation, or alteration of the project works. In addition, all trees along the periphery of project reservoirs which may die during operations of the project shall be removed. All clearing of lands and disposal of unnecessary material shall be done with due diligence to the satisfaction of the authorized representative of the Commission and in accordance with appropriate federal, state, and local statutes and regulations.

Article 301. The licensee shall commence construction of the project works within two years from the issuance date of the license and shall complete construction of the project within five years from the issuance date of the license.

Article 302. The licensee shall, at least 60 days prior to the start of construction, submit one copy to the Commission's Regional Director and two copies to the Commission (one of these shall be a courtesy copy to the Director, Division of Dam Safety and Inspections) of the final contract drawings and specifications for pertinent features of the project, such as water retention structures, powerhouse, and water conveyance structures. The Commission may require changes in the plans and

specifications to assure a safe and adequate project. If the licensee plans substantial changes to location, size, type, or purpose of the water retention structures, powerhouse, or water conveyance structures, the plans and specifications must be accompanied by revised Exhibit F and G drawings, as necessary.

Article 303. Before starting construction, the licensee shall retain a board of three or more qualified independent engineering consultants experienced in critical disciplines such as geotechnical, mechanical, and civil engineering, to review the design, specifications, and construction of the project for safety and adequacy. The licensee shall submit two copies of a letter with the names and qualifications of the board members (one of these shall be a courtesy copy sent to the Director of the Division of Dam Safety and Inspections) for the Commission's approval of the board, and one copy shall be sent to the Commission's New York Regional Director. Among other things, the board shall assess the following: the geology of the project site and surroundings; the design, specifications, and construction of the powerhouse, electrical and mechanical equipment, and emergency power supply; instrumentation; and construction procedures and progress.

Before each meeting, the licensee shall furnish members of the board of consultants the following: (1) a statement of the specific level of review the board is expected to provide; (2) an agenda for the meeting; (3) a list of the items to be discussed with the board; (4) a discussion of significant events in the design and construction that have occurred since the last board meeting; (5) drawings of the design and construction features; and (6) documentation for the details and analyses of the design and construction features to be discussed. The licensee shall ensure that the board of consultants has sufficient time to review these items before each meeting. At the same time as a copy of these items is provided to the board of consultants, the licensee shall also send two copies to the Commission (one of these shall be a courtesy copy sent to the Director of the Division of Dam Safety and Inspections) and one copy to the Director of the Commission's New York Regional Office.

Within 30 days after each board of consultants meeting, the licensee shall submit to the Commission copies of the board's report and a statement of intent to comply with the board's recommendations or a statement of a plan to resolve the issue(s). The licensee must provide detailed reasons for any recommendation of the board not being implemented. The licensee shall send two copies of this submission to the Commission (one of these shall be a courtesy copy sent to Director of the Division of Dam Safety and Inspections) and one copy to the Director of the Commission's New York Regional Office.

The board's review comments shall be submitted prior to or simultaneously with the submission of the final contract drawings and specifications accompanied by a supporting design report required to be filed with the Commission in accordance with Article 302. Within one year after completion of construction, the licensee shall file two copies with the Commission (one of these shall be a courtesy copy to the Director Division of Dam Safety and Inspections) of the Board's final report which shall contain a statement indicating the Board's opinion with respect to the construction, safety, and adequacy of the project structures.

Article 304. The design and construction of those permanent and temporary facilities, including cofferdams and deep excavations, that would be an integral part of, or that could affect the structural integrity or operation of, the Government project shall be done in consultation with and subject to the review and approval of the Corps of Engineers' Division Engineer. The Corps shall review the cofferdams to ensure that the operation and structural integrity of the federal project are not compromised. This review of the cofferdams will be in addition to the licensee's review and approval of the final plans, and shall in no way relieve the licensee of responsibility and liability regarding satisfactory performance of the cofferdams. Within 90 days from the issuance date of the license, the licensee shall furnish the Corps and the Commission's Regional Director with a schedule for submission of design documents and the plans and specifications for the project. The schedule shall provide sufficient time for review and approval by the Corps. If the Corps does not believe sufficient time has been provided, the licensee, upon request of the Corps, shall meet with the Corps and the Commission's staff to revise the schedule accordingly.

Article 305. The licensee shall review and approve the design of contractor-designed cofferdams and deep excavations other than those approved according to Article 304 prior to the start of construction, and shall ensure that construction of cofferdams and deep excavations is consistent with the approved design. At least 30 days prior to start of construction of the cofferdam, the licensee shall file two copies with the Commission (one of these shall be a courtesy copy sent to the Director, Division of Dam Safety and Inspections) and submit one copy each to the Commission's New York Regional Director and the Corps, of the approved cofferdam construction drawings and specifications and the letter(s) of approval.

Article 306. Within 90 days from the issuance date of the license, the licensee shall enter into an agreement with the Corps to coordinate plans for access to and site activities on lands and property administered by the Corps so that the

authorized purposes, including operation of the federal facilities, are protected. In general, the agreement shall identify the facility, and the study and construction activities, as applicable, and terms and conditions under which studies and construction will be conducted. The agreement shall include, but not be limited to, reasonable arrangements for access to the Corps' site to conduct studies and construction activities, such access rights to be conditioned by the Corps as may be necessary to protect the federally authorized project purposes and operations. Should the licensee and the Corps fail to reach an access agreement, the licensee shall refer the matter to the Commission for resolution, summarizing the areas of disagreement. Two copies of the final agreement shall be filed with the Commission (one of these shall be a courtesy copy sent to the Director of the Division of Dam Safety and Inspections), and one additional copy shall be filed with the Commission's Regional Director.

Article 307. The construction, operation, and maintenance of the project works that, in the judgment of the Corps, may affect the structural integrity or operation of the Corps' project shall be subject to periodic or continuous inspections by the Corps. Any construction, operation, and maintenance deficiencies or difficulties detected by the Corps' inspection shall be immediately reported to the Commission's Regional Director. Upon review, the Regional Director shall refer the matter to the licensee for appropriate action. In cases when construction, operation, or maintenance practices or deficiencies may create a situation posing imminent danger to the structural integrity and safety of the Corps' project, on direction of the Corps' inspector the licensee shall stop construction, operation, or maintenance activities on the project works. The licensee shall immediately inform the Commission's Regional Director of the circumstances surrounding the cessation of construction, operation, or maintenance activities. The licensee shall not resume construction, operation, or maintenance activities until notified by the Commission's Regional Director that the problem or situation has been resolved to the satisfaction of the Regional Director.

Article 308. At least 60 days prior to start of construction, the licensee shall submit to the Corps for approval an operations plan describing: (a) the licensee's designed mode of hydropower operation at the project; (b) reservoir flow diversion and regulation requirements as established by the Corps for operation of the Corps project during construction; and (c) integration of the operation of the hydroelectric facility into the Corps' Emergency Action Plan. The licensee shall file one copy of the operations plan with the Regional Director and two copies with the Commission. In addition, the licensee, prior to

start of power plant operation, shall enter into an operating Memorandum of Agreement (MOA) with the Corps describing the detailed operation of the power facilities acceptable to the Corps. The MOA shall specify any restrictions needed to protect the primary purposes of the Corps' project, including navigation, recreation, water quality, and flood control. The Regional Director shall be invited to attend any meetings held regarding the agreement. The MOA shall be subject to revision by mutual consent of the Corps and the licensee, as experience is gained through project operation. Should the licensee and the Corps fail to reach an agreement, the matter will be referred to the Commission for resolution, with a summary of the areas of disagreement. Two copies of the signed MOA between the Corps and the licensee shall be filed with the Commission (one of these shall be a courtesy copy sent to the Director of the Division of Dam Safety and Inspections) and one additional copy submitted to the Commission's New York Regional Director.

Article 309. The Corps reserves the right to alter, without liability, pool levels or discharge through the outlet works for water management purposes. The licensee shall have no claim under this license against the United States arising from the effect of any changes made in the structure, operation, or reservoir levels of the Corps' project.

Article 310. The licensee shall provide the Commission's New York Regional Director an original and two copies of all correspondence between the licensee and the Corps. The Regional Director shall not authorize construction of any project work affecting the Corps' facilities until the Corps' written approval of the project's (1) construction plans and specifications, (2) quality control and inspection program, and (3) temporary emergency action plan have been received by the Regional Director.

Article 311. The licensee shall submit the design drawings and computations of the proposed cofferdams to the National Park Service for review and recommendations before the start of construction. This review shall be coordinated with the Corps review under Article 304.

Article 312. The licensee shall conduct a study of potential hydraulic transients in the dam's discharge conduit, which will act as the conduit to the new powerhouse, under proposed project operating conditions, including unusual or emergency conditions. Based on the results of the transient conditions studies, the Corps may require the licensee to incorporate surge tank(s) and other facilities into the proposed project to protect the structural integrity of the outlet works. The licensee shall bear the costs of such facilities.

Article 313. The licensee shall construct and test a physical hydraulic model of the system to determine if an unacceptable flow pattern would be created in the conduit at the relocated valve site. The model also must be capable of investigating conditions in the new tailrace channel. The physical model test specifications and requirements will be prepared by the Corps' Huntington District. The licensee shall reimburse the Corps for its expenses associated with this model. The licensee shall provide a copy of the final project design drawings to the Corps' Huntington District as soon as they are completed.

Article 314. In order to ensure the safe operation of the Corps' project during times of high flow conditions, the licensee shall schedule the relocation of the Howell-Bunger valves so that any temporary reduction in the Corps' project discharge capacity would occur only in those periods of the year which will be specified by the Corps' Huntington District.

Article 315. Within 90 days after completion of construction, the licensee shall file for Commission approval eight copies of the revised exhibits A, F, and G describing the project facilities as built. The licensee shall submit six copies to the Commission, one copy to the Commission's Regional Director, and one to the Director, Division of Project Compliance and Administration.

Article 316. At least 90 days before starting construction, the licensee shall file with the Director, Division of Project Compliance and Administration, three copies of a project financing plan. The plan must show that the licensee has acquired the funds or commitment for funds necessary to construct the project in accordance with this license. The licensee shall not start any project construction or any ground-disturbing activities, that are inseparably associated with the project, (other than those required for subsurface site exploration) without Commission approval of the project financing plan.

Article 401. The licensee shall implement the erosion and sediment control plan filed July 31, 1989, consisting of five pages, and revisions to the plan filed May 30, 1990, as Additional Information Item No. 4, including five drawings labelled Figures A through E. The plan is designed to minimize erosion and sedimentation impacts during project construction. The licensee shall file the final drawings, specifications, and schedule for implementing the plan along with the final project drawings and specifications required by Article 302. The final drawings and specifications for the plan shall include a detailed description of proposed landscape restoration and improvement measures, including the appropriate revegetation of disturbed

areas; shall be based on the final project design; shall be prepared in consultation with the West Virginia Division of Natural Resources Program Management Technical Support Group, the Soil Conservation Service, the West Virginia Professional River Outfitters, the American Whitewater Affiliation, the National Park Service Gauley River National Recreation Area manager, and the Department of the Army, Huntington District Corps of Engineers; and shall be prepared in accordance with the guidelines set forth in the "Construction Best Management Practice Manual", West Virginia Division of Natural Resources Division of Water Resources, 1983. The filing shall also include documentation of agency consultation.

The Commission reserves the right to require changes to the plan, drawings, specifications, and schedule to ensure proper control of erosion and discharge of sediment to wetlands and watercourses, and to ensure appropriate restoration and improvement of the project area landscape. The licensee shall implement the erosion and sediment control and landscape restoration and improvement measures according to the final drawings, specifications, and schedule, including any changes required by the Commission.

Article 402. The licensee shall operate the Summersville Project as directed by the Corps. For the protection of water quality, aquatic resources, scenic resource values, and recreation resources in the Gauley River, the licensee shall operate the Summersville Project utilizing flows as provided by the Corps and maintaining the minimum flow discharges at all times, as provided by the Corps. The specified mode of operation may be temporarily modified, if required by operating emergencies beyond the control of the licensee, or for short periods only upon mutual agreement among the licensee, the Corps, the U.S. Fish and Wildlife Service, the National Park Service, and the West Virginia Division of Natural Resources. If the flow is so modified, the licensee shall notify the Commission as soon as possible, but no later than 10 days after each such incident.

Article 403. At least 90 days before the start of land-disturbing or land-clearing activities, the licensee shall file with the Commission for approval a plan to measure and report project flows and operation records to monitor compliance with the mode of operation as stipulated in Article 402.

The licensee shall prepare the plan after consultation with the U.S. Geological Survey (USGS), the Corps, the National Park Service, and the West Virginia Division of Natural Resources (WVDNR). The licensee shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the

agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The plan shall include but not be limited to: (1) an implementation schedule; (2) the proposed location, design, and calibration of gaging equipment; (3) the method of flow data collection; and (4) a provision for providing flow data to the Corps, USGS, and the WVDNR within 30 days from the date of the agency's request for the data.

The Commission reserves the right to require changes to the plan. No land-clearing or land-disturbing activities shall begin until the licensee is notified that the plan is approved. Upon Commission approval the licensee shall implement the plan, including any changes required by the Commission.

Article 404. During operation of the Summersville Project, the licensee shall at all times maintain a minimum dissolved oxygen (DO) concentration of at least 7.0 milligrams per liter (mg/l) in the Gauley River as measured immediately downstream of the project tailrace, to protect aquatic resources of the Gauley River. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission for approval a plan to install, operate, and maintain permanent, continuously recording water temperature and DO monitoring devices to monitor DO concentrations and water temperature in the project tailrace.

The licensee shall prepare the plan after consultation with the Corps' Huntington District Corps of Engineers, the U.S. Fish and Wildlife Service, and the West Virginia Division of Natural Resources. The licensee shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The plan shall include but not be limited to: (a) a detailed description of the methods for monitoring DO concentrations and water temperature levels and the location at

which DO and temperature will be monitored; (b) a proposal whereby project operation could be rapidly altered to ensure maintenance of at least 7.0 mg/l, including project shutdown; and (c) a schedule for implementing the monitoring plan and for filing water quality records with the Commission and the consulted agencies.

The Commission reserves the right to require changes to the plan. No land-clearing or land-disturbing activities shall begin until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

If the results of monitoring indicate that changes in project structures or operation are necessary to ensure maintenance of at least 7.0 mg/l in the Gauley River immediately downstream of the project tailrace, the Commission may direct the licensee to modify project structures or operation.

Article 405. The licensee shall implement the transmission line management plan, filed July 31, 1989, as pages E-3-11 of Exhibit E; and page 9, figure 1, and figure 7 of Appendix III; of its license application. This plan will protect wildlife habitat along the transmission line right of way.

Article 406. The licensee shall design and construct the transmission line in accordance with guidelines set forth in "Suggested Practices for Raptor Protection on Power Lines--the State of the Art in 1981," by Raptor Research Foundation, Inc., to protect raptors from electrocution hazards. Further, after consulting with the U.S. Fish and Wildlife Service, the National Park Service, the West Virginia Division of Natural Resources, and the Corps' Huntington District, and within one year from the date of issuance of the license, the licensee shall file a transmission line design plan that considers adequate separation of energized conductors, groundwires, and other metal hardware, adequate insulation, and any other measures necessary to protect raptors from electrocution hazards. Agency comments on the design plan shall be included in the filing. Unless the Director of the Office of Hydropower Licensing instructs otherwise within 60 days after the filing, the licensee may begin transmission line construction at the end of the 60-day period.

Article 407. At least 90 days before any land-clearing or land-disturbing activities related to the construction of recreational facilities along the Gauley River downstream of the project's powerhouse other than those in the Summersville-National Park Service Memorandum of Understanding dated August 5, 1991, the licensee shall file with the Commission for approval a plan to protect the federally listed threatened Virginia spirea

(Spirea virginiana) and the candidate species Barbara's buttons (Marshallia grandiflora) and their habitat. The plan shall include, but not be limited to, the following:

(a) a recreation management and construction plan to avoid adverse impacts to federally listed threatened and endangered species;

(b) the results of a preconstruction survey by a qualified botanist of all areas to be disturbed by development of the recreational facilities;

(c) measures to protect the Virginia spirea, Barbara's buttons, and any other federally listed species discovered during the survey;

(d) an implementation schedule for the protection measures;

(e) a monitoring proposal and implementation schedule to evaluate the recreation facilities' effect on Virginia spirea and Barbara's buttons in the project area after completion; and

(f) an initial report on the results of monitoring to determine the effect of recreational use on Virginia spirea and Barbara's buttons during the first year of operation, prepared in consultation with the U.S. Fish and Wildlife Service (FWS) and the West Virginia Division of Natural Resources (WVDNR), which shall be submitted to the Commission within 60 days following the end of the first year of operation, including recommendations regarding the need for and a schedule for filing reports on the results of subsequent monitoring during the license term.

The licensee shall prepare the plan after consultation with the FWS, the National Park Service, and the WVDNR. The licensee shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments and recommendations are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-clearing or land-disturbing activities shall begin until the licensee is notified by the Commission that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

If the results of the monitoring program show that modifications to recreation facilities and use along the Gauley River downstream from the project's powerhouse are necessary to protect Barbara's buttons, the federally listed threatened Virginia spirea, or their habitats, the licensee shall also file, for Commission approval, recommendations for modifying the recreational facilities or use or other measures, and comments of the consulted agencies on the proposed modifications or measures. The Commission reserves the right to require changes to the proposed modifications or measures. Upon Commission approval, the licensee shall implement the proposed modifications or measures including any changes required by the Commission.

Article 408. The licensee, before starting any land-clearing or land-disturbing activities within the project boundaries, other than those specifically authorized in this license, shall consult with the State Historic Preservation Officer (SHPO).

If the licensee discovers previously unidentified archeological or historic properties during the course of constructing or developing project works or other facilities at the project, the licensee shall stop all land-clearing and land-disturbing activities in the vicinity of the properties and consult with the SHPO.

In either instance, the licensee shall file for Commission approval a cultural resource management plan prepared by a qualified cultural resource specialist after having consulted with the SHPO. The management plan shall include the following items: (1) a description of each discovered property indicating whether it is listed on or eligible to be listed on the National Register of Historic Places; (2) a description of the potential effect on each discovered property; (3) proposed measures for avoiding or mitigating effects; (4) documentation of the nature and extent of consultation; and (5) a schedule for mitigating effects and conducting additional studies. The Commission may require changes to the plan.

The licensee shall not begin land-clearing or land-disturbing activities, other than those specifically authorized in this license, or resume such activities in the vicinity of a property, discovered during construction or operation, until informed that the requirements of this article have been fulfilled.

Article 409. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission for approval a plan to: (1) minimize the visual impacts of the powerhouse, new valve house, switchyard

structures and equipment, and associated penstocks and flood release pipes to be constructed immediately downstream of Summersville Dam; and (2) avoid or further reduce the project transmission line's visual impacts and conflicts with existing and planned recreational facilities in the project area. The plan, at a minimum, shall include color scheme and textural finish specifications for the above facilities, and final alignment drawings for the transmission line.

The licensee shall prepare the plan after consultation with the Corps' Huntington District, the National Park Service, the American Whitewater Affiliation, and the West Virginia Professional River Outfitters. The licensee shall include with the plan documentation of consultation and copies of comments and recommendations on the completed plan after it has been prepared and provided to the agencies, and specific descriptions of how the agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the agencies to comment and make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on site-specific conditions.

The Commission reserves the right to require changes to the plan. No land-clearing or land-disturbing activities shall begin until the licensee is notified that the plan is approved. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 410. The licensee shall implement the measures contained in the Memorandum of Understanding (MOU) among the National Park Service, the Town of Summersville, and Noah Corporation, dated July 27, 1991, and filed with the Commission on August 9, 1991. The MOU consists of 6 pages of text. The measures contained in the MOU are designed to protect whitewater recreation and other recreational activities during and after project construction. In addition to the measures contained in the MOU, Summersville shall suspend all construction activities during the annual, four-day-long, Gauley River Festival.

At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission for approval a recreation plan that contains: a description, a map, and the final design drawings and specifications for the recreation facilities required in the MOU (*i.e.*, new whitewater raft launching facility, upgrade of the access trail to the existing kayak launching area, new restroom and changing facility, picnic tables, and interpretive and informational signs). In addition, the licensee shall include in the plan a tailrace fishing access facility at or near the

powerhouse. The licensee shall consider the needs of the disabled in designing these facilities. The filing shall also include a timetable for all measures contained in the MOU.

The licensee shall prepare the plan after consultation with the National Park Service Gauley River National Recreation Area manager, the Corps' Huntington District, the West Virginia Professional River Outfitters, and the American Whitewater Affiliation. The licensee shall include with the filing documentation of consultation with the above entities before preparing the plan, copies of comments and recommendations on the plan after they have been prepared and provided to the entities, and specific descriptions of how the consulted entities' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the consulted entities to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-clearing or land-disturbing activities shall begin until the licensee is notified by the Commission that the plan is acceptable. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 411. At least 90 days before the start of any land-disturbing or land-clearing activities, the licensee shall file with the Commission for approval a plan for monitoring recreational use of the project both during and after project construction to ensure compatibility of the project with the Gauley River National Recreation Area.

The plan shall include, at a minimum:

(a) methods for monitoring recreational use of the project site during project construction to identify possible conflicts between construction and recreation, a discussion of the means for making changes should conflicts arise, and a schedule for filing an annual monitoring report during project construction; and

(b) methods for collecting annual recreation use figures for facilities at the project during the first four years of project operation, and thereafter every four years, to determine the adequacy of recreation facilities to meet demand, and to identify possible conflicts between project operation and recreation; and provisions for filing an annual report during the first four years of project operation, and every four years (along with the

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licensee's standard Form 80 submission). The report shall include: recreation use figures, a discussion of the adequacy of the recreation facilities to meet demand, and a proposal to accommodate recreation needs in the project area if there is a need for additional facilities or a conflict is identified.

The licensee shall prepare the plan after consultation with the National Park Service Gauley River National Recreation Area manager, and the Corps' Huntington District. The licensee shall include with the plan documentation of consultation with the above agencies before preparing the plan, copies of comments and recommendations on the plan after it has been prepared and provided to the agencies, and specific descriptions of how the consulted agencies' comments are accommodated by the plan. The licensee shall allow a minimum of 30 days for the consulted agencies to comment and to make recommendations prior to filing the plan with the Commission. If the licensee does not adopt a recommendation, the filing shall include the licensee's reasons, based on project-specific information.

The Commission reserves the right to require changes to the plan. No land-clearing or land-disturbing activities shall begin until the licensee is notified by the Commission that the plan is acceptable. Upon Commission approval, the licensee shall implement the plan, including any changes required by the Commission.

Article 412. The Commission reserves the authority to amend this license to reflect adoption of procedures, to be developed through discussions with West Virginia Department of Natural Resources and, as appropriate, the Park Service, to ensure that any access improvements required under new paragraph 3.C.IV of the project's water quality certification will, in the Commission's judgment, not pose a safety hazard.

Article 413. (a) In accordance with the provisions of this article, the licensee shall have the authority to grant permission for certain types of use and occupancy of project lands and waters and to convey certain interests in project lands and waters for certain types of use and occupancy, without prior Commission approval. The licensee may exercise the authority only if the proposed use and occupancy is consistent with the purposes of protecting and enhancing the scenic, recreational, and other environmental values of the project. For those purposes, the licensee shall also have continuing responsibility to supervise and control the use and occupancies for which it grants permission, and to monitor the use of, and ensure compliance with the covenants of the instrument of conveyance for, any interests that it has conveyed, under this article. If a permitted use and occupancy violates any condition of this

article or any other condition imposed by the licensee for protection and enhancement of the project's scenic, recreational, or other environmental values, or if a covenant of a conveyance made under the authority of this article is violated, the licensee shall take any lawful action necessary to correct the violation. For a permitted use or occupancy, that action includes, if necessary, canceling the permission to use and occupy the project lands and waters and requiring the removal of any non-complying structures and facilities.

(b) The type of use and occupancy of project lands and waters for which the licensee may grant permission without prior Commission approval are: (1) landscape plantings; (2) non-commercial piers, landings, boat docks, or similar structures and facilities that can accommodate no more than 10 watercraft at a time and where said facility is intended to serve single-family type dwellings; and (3) embankments, bulkheads, retaining walls, or similar structures for erosion control to protect the existing shoreline. To the extent feasible and desirable to protect and enhance the project's scenic, recreational, and other environmental values, the licensee shall require multiple use and occupancy of facilities for access to project lands or waters. The licensee shall also ensure, to the satisfaction of the Commission's authorized representative, that the use and occupancies for which it grants permission are maintained in good repair and comply with applicable state and local health and safety requirements. Before granting permission for construction of bulkheads or retaining walls, the licensee shall: (1) inspect the site of the proposed construction, (2) consider whether the planting of vegetation or the use of riprap would be adequate to control erosion at the site, and (3) determine that the proposed construction is needed and would not change the basic contour of the reservoir shoreline. To implement this paragraph (b), the licensee may, among other things, establish a program for issuing permits for the specified types of use and occupancy of project lands and waters, which may be subject to the payment of a reasonable fee to cover the licensee's costs of administering the permit program. The Commission reserves the right to require the licensee to file a description of its standards, guidelines, and procedures for implementing this paragraph (b) and to require modification of those standards, guidelines, or procedures.

(c) The licensee may convey easements or rights-of-way across, or leases of, project lands for: (1) replacement, expansion, realignment, or maintenance of bridges and roads for which all necessary state and federal approvals have been obtained; (2) storm drains and water mains; (3) sewers that do not discharge into project waters; (4) minor access roads; (5) telephone, gas, and electric utility distribution lines;

(6) non-project overhead electric transmission lines that do not require erection of support structures within the project boundary; (7) submarine, overhead, or underground major telephone distribution cables or major electric distribution lines (69-kv or less); and (8) water intake or pumping facilities that do not extract more than one million gallons per day from a project reservoir. No later than January 31 of each year, the licensee shall file three copies of a report briefly describing for each conveyance made under this paragraph (c) during the prior calendar year, the type of interest conveyed, the location of the lands subject to the conveyance, and the nature of the use for which the interest was conveyed.

(d) The licensee may convey fee title to, easements or rights-of-way across, or leases of project lands for:

- (1) construction of new bridges or roads for which all necessary state and federal approvals have been obtained;
- (2) sewer or effluent lines that discharge into project waters, for which all necessary federal and state water quality certification or permits have been obtained;
- (3) other pipelines that cross project lands or waters but do not discharge into project waters;
- (4) non-project overhead electric transmission lines that require erection of support structures within the project boundary, for which all necessary federal and state approvals have been obtained;
- (5) private or public marinas that can accommodate no more than 10 watercraft at a time and are located at least one-half mile from any other private or public marina;
- (6) recreational development consistent with an approved Exhibit R or approved report on recreational resources of an Exhibit E; and
- (7) other uses, if:
 - (i) the amount of land conveyed for a particular use is five acres or less;
 - (ii) all of the land conveyed is located at least 75 feet, measured horizontally, from the edge of the project reservoir at normal maximum surface elevation; and
 - (iii) no more than 50 total acres of project lands for each project development are conveyed under this clause (d)(7) in any calendar year.

At least 45 days before conveying any interest in project lands under this paragraph (d), the licensee must submit a letter to the Director, Office of Hydropower Licensing, stating its intent to convey the interest and briefly describing the type of interest and location of the lands to be conveyed (a marked exhibit G or K map may be used), the nature of the proposed use, the identity of any federal or state agency official consulted, and any federal or state approvals required for the proposed use. Unless the Director, within 45 days from the filing date, requires the licensee to file an application for prior approval, the licensee may convey the intended interest at the end of that period.

(e) The following additional conditions apply to any intended conveyance under paragraph (c) or (d) of this article:

(1) Before conveying the interest, the licensee shall consult with federal and state fish and wildlife or recreation agencies, as appropriate, and the State Historic Preservation Officer.

(2) Before conveying the interest, the licensee shall determine that the proposed use of the lands to be conveyed is not inconsistent with any approved exhibit R or approved report on recreational resources of an exhibit E; or, if the project does not have an approved exhibit R or approved report on recreational resources, that the lands to be conveyed do not have recreational value.

(3) The instrument of conveyance must include covenants running with the land adequate to ensure that: (i) the use of the lands conveyed shall not endanger health, create a nuisance, or otherwise be incompatible with overall project recreational use; and (ii) the grantee shall take all reasonable precautions to insure that the construction, operation, and maintenance of structures or facilities on the conveyed lands will occur in a manner that will protect the scenic, recreational, and environmental values of the project.

(4) The Commission reserves the right to require the licensee to take reasonable remedial action to correct any violation of the terms and conditions of this article, for the protection and enhancement of the project's scenic, recreational, and other environmental values.

(f) The conveyance of an interest in project lands under this article does not in itself change the project boundaries. The project boundaries may be changed to exclude land conveyed under this article only upon approval of revised exhibit G or K drawings (project boundary maps) reflecting exclusion of that land. Lands conveyed under this article will be excluded from the project only upon a determination that the lands are not necessary for project purposes, such as operation and maintenance, flowage, recreation, public access, protection of environmental resources, and shoreline control, including shoreline aesthetic values. Absent extraordinary circumstances, proposals to exclude lands conveyed under this article from the project shall be consolidated for consideration when revised exhibit G or K drawings would be filed for approval for other purposes.

(g) The authority granted to the licensee under this article shall not apply to any part of the public lands and reservations of the United States included within the project boundary.

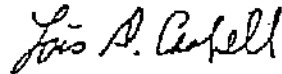
(E) The licensee shall serve copies of any Commission filing required by this order on any entity specified in this order to be consulted on matters related to that filing. Proof of service on these entities must accompany the filing with the Commission.

(F) The application for a preliminary permit filed by the City of Manassas, Virginia on August 8, 1988, is denied.

(G) This order constitutes final agency action. Requests for rehearing by the Commission may be filed within 30 days of the date of issuance of this order, pursuant to 18 C.F.R. § 385.713.

By the Commission.

(S E A L)



Lois D. Cashell,
Secretary.