DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

REPLY TO
ATTENTION OF

CECC-ZA 27 September 2019

MEMORANDUM FOR RECORD

SUBECT: Legal Analysis of Adopted and Alternative Storage Accounting, *Cobb County-Marietta Water Authority v. U.S. Army Corps of Engineers*, No. 1:17-cv-400 (N.D. Ga. filed Feb. 1, 2017)

The enclosed memorandum provides a legal analysis of the water supply storage accounting methodology currently used by the U.S. Army Corps of Engineers ("Corps") and the alternative storage accounting methodology proposed by Cobb-Marietta Water Authority ("Cobb-Marietta") at Allatoona Lake in Georgia, pursuant to an order of the U.S. District Court for the Northern District of Georgia granting the parties' joint motion to stay the case, *Cobb County-Marietta Water Authority v. U.S. Army Corps of Engineers*, No. 1:17-cv-400. The Corps is separately evaluating storage accounting practices at Allatoona Lake in an ongoing storage reallocation study and Environmental Impact Statement (EIS), with a draft EIS expected in October 2019. In a stay agreement adopted by the parties on May 21, 2019 ("Stay Agreement"), preceding the court's stay order, the Corps agreed to provide Cobb-Marietta a memorandum, or "Legal Analysis," setting forth legal parameters for the Corps' reconsideration of the current storage accounting practices at the Allatoona Lake project and evaluation of Cobb-Marietta's alternative storage accounting proposal. On June 3, 2019, the court entered its order staying the case for 180 days, consistent with the Stay Agreement. The enclosed memorandum has been coordinated with the Department of the Army, Office of the General Counsel.

The enclosed analysis sets forth the legal framework for evaluating methods for accounting for storage usage under current and prospective water supply storage agreements at Allatoona Lake, including a 1963 contract between the Corps and Cobb-Marietta, which identified 4.61 percent of conservation storage, or 13,140 acre-feet, as available for water supply use by Cobb-Marietta ("1963 Contract"). As explained below, the Corps believes that the storage accounting methodology it has used at Allatoona Lake (the "Adopted Storage Accounting") is consistent with the terms of the 1963 Contract and with all applicable law. The alternative storage accounting proposed by Cobb-Marietta ("Alternative Storage Accounting") could not be reconciled, in key respects, with the parties' understandings reflected in the terms of the 1963 Contract because it would provide Cobb-Marietta with a greater share of storage and storage yield than was intended or provided under the 1963 Contract. Nonetheless, no law or regulation, other than the terms of the 1963 Contract itself, precludes considering or adopting the Alternative Storage Accounting at Allatoona Lake, after appropriate review. Although the Corps does not interpret the 1963 Contract as providing for storage accounting as Cobb-Marietta has proposed it, the parties could modify that contract or enter into a new storage agreement at

Allatoona Lake. Such actions would require additional analysis under applicable law. The enclosed memorandum does not offer any conclusions as to the outcome of that analysis.

The Corps is currently engaged in a rulemaking effort that addresses storage accounting in Water Supply Act agreements and has solicited comments from the public on whether it should adopt in a binding, nationwide regulation storage accounting principles similar in key respects to the Adopted Storage Accounting; whether it should adopt some other storage accounting methodology; or whether it should adopt no such policy at all. That rulemaking is ongoing and its outcome is unknown at this time. A final rule, if adopted, could bind the Corps to follow certain storage accounting procedures in new contracts or in other actions undertaken after the effective date of that rule. Separately, the Corps is engaged in a public, deliberative process to consider the State of Georgia's request for additional storage and Alternative Storage Accounting at Allatoona Lake. The outcome of this process is likewise unknown, but possible outcomes include a decision to adopt the Alternative Storage Accounting, to reject the Alternative Storage Accounting, or to adopt some intermediate storage accounting methodology borrowing from both the Adopted Storage Accounting and the Alternative Storage Accounting. Although the enclosed memorandum explains that the Corps has the legal authority to consider, and potentially to adopt, alternative storage accounting methodologies at Allatoona Lake, we express no opinion regarding the substantive outcome of either of these separate, deliberative processes.

As provided in the Stay Agreement, this Legal Analysis is not a final agency action as defined by the Administrative Procedure Act and case law interpreting this term, and this Legal Analysis shall not be used as extra-record material in the *Cobb County-Marietta Water Authority v. U.S. Army Corps of Engineers* lawsuit.

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Encl

DAVID R. COOPER
Chief Counsel

LEGAL ANALYSIS OF ADOPTED AND ALTERNATIVE STORAGE ACCOUNTING,
***Cobb County-Marietta Water Authority v. U.S. Army Corps of Engineers*, No. 1:17-cv-400**
(N.D. Ga. filed Feb. 1, 2017)

References:

1. Contract No. DA-0l-076-CIVENG-64-116 Between the United States of America and the Cobb County-Marietta Water Authority for Water Storage Space in Allatoona Reservoir (Oct. 31, 1963) ("1963 Contract") (Enclosure 1)

2. Adopted (USACE) Storage Accounting (Enclosure 2)

3. Alternative (Cobb-Marietta) Storage Accounting (Enclosure 3)

Questions Presented

1. Does the U.S. Army Corps of Engineers' method of accounting for usage by Cobb County-Marietta Water Authority of storage allocated under a 1963 water supply storage contract wrongly deprive Cobb-Marietta of water storage and withdrawal rights granted under the terms of that contract?

2. Does the Corps' method of storage accounting at Allatoona Lake wrongly deny Cobb-Marietta of the right to store "made inflows" allocated to Cobb-Marietta by the State of Georgia?

3. Does the Corps possess the legal authority to adopt the alternative storage accounting method proposed by Cobb-Marietta, or any principle or formula therein?

Brief Answer

1. No. The Corps' storage accounting methodology correctly implements the terms of a Water Supply Act storage contract executed by Cobb-Marietta and the Department of the Army in 1963. That agreement allocated a percentage (4.61 percent, or 13,140 acre-feet) of conservation storage in Allatoona Lake for Cobb-Marietta's use, to enable Cobb-Marietta to satisfy an average daily withdrawal requirement of 34.5 million gallons of raw water from Allatoona Lake. The Corps' storage accounting method measures the use made by Cobb-Marietta of that allocated storage, crediting 4.62 percent[1] of general inflows to the reservoir to

[1] The Corps' storage accounting formula, or "Adopted Storage Accounting," actually credits 4.62 percent of inflows to Cobb-Marietta's storage account, because 13,140 acre-feet comprises 4.62, not 4.61, percent of the actual conservation storage volume of 284,580. The 1963 Contract cited a rounded figure of 285,000 acre-feet, and 4.61 percent of 285,000 is 13,140. However, as explained below, the key figure upon which all other calculations are derived is 4.61 percent, because that figure represents the percentage of critical yield that Cobb-Marietta would divert in satisfying its requested, daily average withdrawal of 34.5 million gallons per day (mgd), as calculated in the

Cobb-Marietta's storage space, debiting 4.62 percent of general losses from the reservoir from Cobb-Marietta's storage space, and debiting 100 percent of Cobb-Marietta's direct water supply withdrawals from Cobb-Marietta's storage space. This methodology is consistent with the terms of the 1963 contract.

2. No. The 1963 contract allocated a percentage (4.61 percent, or 13,140 acre-feet) of conservation storage in Allatoona Lake for Cobb-Marietta's use, to utilize water rights granted to Cobb-Marietta by the State of Georgia, to meet a stated average daily requirement of 34.5 million gallons. The 1963 contract did not fix or allocate water rights, or address "made inflows." The State of Georgia has subsequently issued a water use permit that authorizes Cobb-Marietta's use of storage in Allatoona Lake subject to the terms of the 1963 contract. Although that permit grants Cobb-Marietta the exclusive right to impound or withdraw "made inflows" at Allatoona Lake, that right is conditioned on the availability of storage space under the terms of the 1963 Contract. The Corps' storage accounting method measures the use made by Cobb-Marietta of the allocated storage, and the availability of storage, consistent with the terms of the 1963 Contract.

3. Yes. The 1963 Contract and current water control manual for Allatoona Lake, and not any other law or regulation, govern the method by which the Corps accounts for storage usage in Allatoona Lake. Although those documents in their current form do not provide for the alternative storage accounting proposed by Cobb-Marietta, no law or regulation precludes the Corps from modifying those documents to adopt a different method of storage accounting. The Corps is already considering, and may decide to adopt at Allatoona Lake, an alternative storage accounting method proposed by Cobb-Marietta, as part of an ongoing storage reallocation study that could result in a revised or supplemental contract or Water Control Manual. Implementing a new storage accounting method, however, may require additional analysis under applicable law, including but not limited to the National Environmental Policy Act ("NEPA"), the Clean Water Act, the Water Supply Act, and multiple Rivers and Harbors Acts and Flood Control Acts, and it may require further reallocation of storage in Allatoona Lake. Based on the additional analysis required under these or other statutes, the Corps may reasonably decline to adopt an alternative storage accounting method in a subsequent, final decision, or may conclude that a particular proposal exceeds its authority or conflicts with applicable law. Additionally, the Corps has proposed, but has not yet finalized, a notice-and-comment rule that could govern storage accounting methodologies at Corps reservoirs. This memorandum offers no opinion on the substantive outcome of that rulemaking process, whether the Corps should or should not adopt Cobb-Marietta's proposed storage accounting method, or whether the Corps should revise or supplement the Water Control Manual or the 1963 Contract.

1963 Contract. For the same reason, Cobb-Marietta is responsible under the 1963 Contract for paying 4.61 percent of joint costs. *See* Enclosure 1, 1963 Contract, Arts. 1, 5, & Ex. 1. The actual storage volume of Allatoona Lake may change over time due to sedimentation. The Corps has recently conducted sediment surveys, but the resurvey data remained under review when the Corps finalized the updated Allatoona Lake water control manual in 2015. *See* Alabama-Coosa-Tallapoosa River Basin Water Control Manual, Appendix A, Allatoona Dam and Lake Water Control Manual (May 2015) ("Allatoona WCM") at 5-6. The Corps will consider the resurvey data as part of the ongoing reallocation study, and, if necessary, will equitably adjust storage volumes based on the remaining storage, in the same ratio initially utilized. *See* 1963 Contract, Article 7(c). For Cobb-Marietta's storage account, that ratio is 4.61 percent of conservation storage, as provided in the 1963 Contract.

Background

Congress authorized the construction of the Allatoona Project in Section 3 of the Flood Control Act of 1941, Pub. L. No. 77-228, 55 Stat. 641, "for flood control and other purposes in accordance with the recommendation of the Chief of Engineers in House Document [76-674]." The Chief's Report incorporated and approved by the Flood Control Act of 1941 proposed constructing and operating Allatoona Reservoir "for the control of floods, regulation of stream flow for navigation, and the development of hydroelectric power." Letter from the Chief of Engineers, United States Army Corps of Engineers (March 12, 1940), H.R. Doc. 76-674 at 2 (March 20, 1940). The Corps reports incorporated into the House Document noted that the proposed Allatoona project "would fit into any general plan which may be developed for the control and utilization of the water resources of the Alabama-Coosa Basin," which was expected later, and that the Allatoona reservoir "would function for navigation, flood control, power generation, and stream-flow regulation, and would also provide recreational benefits." H.R. Doc. 76-674 at 2-6. Further development of the Alabama-Coosa-Tallapoosa River ("ACT") River Basin was authorized by Section 2 of the Rivers and Harbors Act of 1945, Pub. L. 79-14, 59 Stat. 10, 17 (March 2, 1945), and by Pub. L. 83-436, 68 Stat. 302 (June 28, 1954) ("Coosa Power Act"). Currently, the Corps operates Allatoona Lake as part of the federal ACT system, for the purposes of hydropower, flood risk management, navigation, recreation, water quality, fish and wildlife conservation, and water supply. Alabama-Coosa-Tallapoosa River Basin Water Control Manual, Appendix A, Allatoona Dam and Lake Water Control Manual (May 2015) ("Allatoona WCM") at 3-1.

The Corps added water supply as a purpose of the Allatoona Project by reallocating storage under the Water Supply Act of 1958, Pub. L. 85-500, 72 Stat. 319, which authorizes the Corps to include storage in Corps reservoir projects for water supply use by state and local interests. 43 U.S.C. § 390b(b). Under the authority of the Water Supply Act, the Corps has entered into contracts with Cobb-Marietta (1963, amended in 1972, 1981, and 2016), and with the City of Cartersville, Georgia (1966 and 1991). The 1963 contract provided for the progressive use by Cobb-Marietta of three increments of storage expected to yield sufficient water to meet a maximum daily requirement of up to 58 million gallons per day (mgd) and an average daily requirement of 34.5 mgd. Enclosure 1, 1963 Contract, Ex. I. The latter figure comprised 4.61 percent of the average annual yield during the critical low-flow period (839,800 acre-feet, which equates to 749 mgd), as calculated at the time of contract execution.[2]

[2] Exhibit I to the 1963 Contract (Enclosure 1) identifies the "[l]ow flow period of record" as a 31-month period from July 1939 through January 1942, a "[m]aximum water yield during [that] period with storage" of 2,169,000 acre-feet, and an "[a]verage annual yield" of 839,800 acre-feet. Although the basis for these figures is not spelled out expressly in the contract, their numerical relationship is self-evident: 2,169,000 divided by 31 (the number of months in the low-flow period of record) is 69,968; 69,968 times 12 (the number of months in a year) is 839,616, which corresponds to the rounded figure 839,800 acre-feet for "[a]verage annual yield" in Exhibit I. 839,800 acre-feet per year equals 749 million gallons per day, and 4.61 percent of 749 is 34.5. This corresponds to the average daily mgd water requirement stated in Exhibit I (34.5 mgd), and to the 4.61 percent allocation of storage (Article 1) and costs (Article 5) to Cobb-Marietta under the 1963 Contract.

Accordingly, the contract provided for the use of 4.61 percent, or 13,140 acre-feet, of conservation storage, which the Corps effectively reallocated for the purpose of water supply.[3]

The 1963 Contract has been supplemented by mutual agreement three times, most recently on November 21, 2016, at Cobb-Marietta's request, "to evidence the conversion of [Cobb-Marietta's] right to the permanent use of water supply storage space in the Project as prescribed in the Act of 16 October 1963 (Public Law 88-140, 43 U.S.C. 390c-f)." Supplemental Agreement No. 3 to Contract No. DA-01-076-CIVENG-64-116 Between the United States of America and the Cobb County-Marietta Water Authority for Water Storage Space in Allatoona Reservoir (Nov. 21, 2016). A copy of the 1963 Contract, as modified by the three Supplemental Agreements, is enclosed as Enclosure 1.

Cobb-Marietta's needs grew over time, and water usage and storage allocation became contentious issues in litigation commencing in 1990. These issues became acute during drought in the early 2000s, leading the Corps to develop and implement a means of measuring storage usage and notifying Cobb-Marietta when its storage volume became substantially depleted or overdrawn, through the "Adopted Storage Accounting." A summary of the Adopted Storage Accounting is attached to this memorandum as Enclosure 2. Meanwhile, the Corps updated its water control manuals for the ACT Basin in 2015, through a public process, informed by an Environmental Impact Statement. The operation of the Allatoona Lake project is governed by the Allatoona WCM. Chapter VII of the Allatoona WCM contains the Water Control Plan for Allatoona Dam and Lake, and references the Adopted Storage Accounting in section 7-09.

Georgia and Cobb-Marietta, among others, filed suit challenging the decision to implement the updated water control manuals. While largely finding in favor of the Corps, the district court granted, in limited part, Georgia's motion for summary judgment, holding that the Corps had unreasonably delayed action on Georgia's request (on behalf of Cobb-Marietta and others) for additional water supply usage at Allatoona Lake. *Georgia v. U.S. Army Corps of Engineers*, No. 14-cv-03593 (N.D. Ga. Sept. 29, 2017). The district court subsequently issued an order directing the Corps to answer Georgia's request by March 1, 2021. *Georgia v. U.S. Army Corps of Engineers*, No. 14-cv-03593 (N.D. Ga. Jan. 9, 2018). In compliance with the court order, the Corps has commenced an administrative process of considering Georgia's request, which includes a request to adopt Cobb-Marietta's proposed storage accounting method, as well

[3] The 1963 Contract used the term "power pool" to refer to the storage between elevations 800 and 840 feet above mean sea level. In modern terminology, this storage pool is referred to as "conservation storage," and it serves multiple purposes, including but not limited to hydropower generation and water supply. It is distinguishable from the inactive storage pool below elevation 800 and from the flood control, or flood management, storage pool above elevation 840. As noted above, note 1, the 1963 Contract utilized rounded figures, and so Exhibit I to the 1963 Contract cited 285,000 acre-feet of conservation storage, rather than the more precise figure 284,580. Additionally, the current Allatoona Lake water control manual cites vertical data as per the National Geodetic Vertical Datum of 1929 (NGVD29), rather than feet above mean sea level, and unless cited otherwise, this memorandum cites to the NGVD29 data. *See* Allatoona WCM at iii & Ex. B.

as, if necessary, additional storage to meet water supply needs greater than those identified in 1963.[4]

No statute or regulation specifically addresses storage accounting at Corps reservoir projects. The Water Supply Act confers broad discretion on the Corps to add or reallocate water supply storage to its reservoir projects, provided that those actions do not involve "major structural or operational changes" or "seriously affect" authorized purposes. 43 U.S.C. § 390b(d); *see also* Earl Stockdale, Chief Counsel, Memorandum for the Chief of Engineers, Subject: Authority to Provide for Municipal and Industrial Water Supply from the Buford Dam/Lake Lanier Project, Georgia (25 June 2012) ("2012 Legal Opinion"). The Water Supply Act does not address the technical details of how the Corps accounts for the use of storage it includes for water supply, and the Corps' Chief Counsel previously concluded that the Corps has the legal authority to consider different storage accounting methodologies, including those that would provide direct credit for "made inflows":

> Other accounting methods, such as direct crediting of return flows to the specific account of the water supply storage user who has provided the return flows, or taking return flows into account when calculating the amount of storage to contract for to accommodate a particular water supply request, may also be legally permissible, given the broad discretion conferred under the Water Supply Act to "include" storage "to impound water" for water supply.[] Again, the Corps has no official policy in this regard; promulgation of such a policy is within the purview of the Secretary of the Army.

2012 Legal Opinion at 37.

The Corps has never issued formal regulations defining whether or how storage accounting will be employed when storage is allocated to water supply at Corps reservoirs, and Corps Districts have employed different practices over time. However, the Corps has published a proposed rule that would require storage accounting to be incorporated into new Water Supply Act storage agreements, and that would establish certain principles that would govern storage accounting. Proposed Rule, Use of U.S. Army Corps of Engineers Reservoir Projects for Domestic, Municipal & Industrial Water Supply, 81 Fed. Reg. 91556 (Dec. 16, 2016), *available at* https://www.regulations.gov/docket?D=COE-2016-0016. The proposed rule would codify the Corps' general practice of not crediting "particular inflows for the sole use by particular entities," because the Corps does not determine or allocate water rights. 81 Fed. Reg. at

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[4] *See* Notice of Intent to Prepare Draft Supplemental Environmental Impact Statement for the Allatoona Lake Water Supply Storage Reallocation Study and Updates to Weiss and Logan Martin Reservoir Project Water Control Manuals in the Alabama-Coosa-Tallapoosa River Basin, 83 Fed. Reg. 18829 (Apr. 30, 2018). The reallocation study is being evaluated in an Environmental Impact Statement (EIS) that is also evaluating potential changes to operations at the Alabama Power Company's Weiss and Logan Martin projects in the ACT system. *See* Final Public Scoping Report, Integrated Study and Supplemental Environmental Impact Statement for the Allatoona Lake Water Supply Storage Reallocation Study and Updates to Weiss and Logan Martin Reservoir Project Water Control Manuals in the Alabama-Coosa-Tallapoosa River Basin (September 2018), *available at* https://www.sam.usace.army.mil/Missions/Planning-Environmental/Allatoona-Lake-Water-Supply-Storage-Reallocation-Study-and-Updates-to-Weiss-and-Logan-Martin-Reservoirs-Project-Water-Control-Manuals/Document-Library/.

92580:3. However, the Corps has solicited public comments on whether that approach should be changed in the final rule, and whether an alternative method such as Cobb-Marietta's "Alternative Storage Accounting" should instead be the standard:

> [T]he Corps solicits comment on an alternative approach to return flows, in which users would receive full credit for 'made inflows.' Specifically, the Corps solicits comment as to the merits of providing that return flows or other 'made inflows,' defined as inflows provided by an entity that could choose whether to discharge such flows into a Corps reservoir, should be fully credited to the water supply storage account holder responsible for such flows, provided that the flows can be reliably measured. Under this alternative proposal, the proposed rule would be identical in all respects, except that instead of receiving proportional credit for made inflows (in proportion to a user's share of storage allocated under a water supply agreement), the user would receive full credit for made inflows. The Corps is not proposing this approach in the draft rule, but invites comments on this alternative proposal, including whether and under what circumstances it could be appropriate to directly credit made inflows.

81 Fed. Reg. at 91581:3.

This rulemaking remains in progress, and as of the date of this Legal Analysis, no final rule has been published or adopted. The public comment period for the proposed rule closed in November 2017, and the Corps is currently reviewing comments prior to development of a draft final rule. Cobb-Marietta and the State of Georgia both submitted comments addressing the treatment of storage accounting and return flows in the proposed rule. *See* https://www.regulations.gov/document?D=COE-2016-0016-0116 (comments of the State of Georgia, Nov. 16, 2017); https://www.regulations.gov/document?D=COE-2016-0016-0118 (comments of Georgia Water Supply Providers, including Cobb-Marietta, Nov. 16. 2017). At the direction of the Assistant Secretary of the Army (Civil Works) on September 23, 2019, the Corps has delayed issuance of a final rule for a minimum of six months in order to continue ongoing consultation and coordination with States and Tribes and better integrate input from stakeholders.

In February 2017, Cobb-Marietta filed suit in the U.S. District Court for the Northern District of Georgia seeking judicial review of the Adopted Storage Accounting. *Cobb County-Marietta Water Authority v. U.S. Army Corps of Engineers, et al.*, No. 17-cv-400 (N.D. Ga. filed Feb. 1, 2017). On March 21, 2019, the parties entered into an agreement ("Stay Agreement") providing for a joint motion to stay the case for 180 days. Under the Stay Agreement, the Corps agreed to issue a memorandum setting forth legal parameters for the Corps' reconsideration of the Adopted Storage Accounting and evaluation of the Alternative Storage Accounting. On June 3, 2019, the court entered an order staying the case for 180 days, consistent with the Stay Agreement. This memorandum provides the Corps' legal analysis as required under the Stay Agreement.

Analysis

Each question or issue presented in the Stay Agreement is discussed in turn below.

A. Basic Contentions of Cobb-Marietta (Stay Agreement ¶ 3.1.A)

1. "[T]hat the Adopted Storage Accounting wrongly denies Cobb-Marietta of the right to store 'made inflows' allocated to Cobb-Marietta by the State of Georgia in the storage space Cobb-Marietta purchased." Stay Agreement ¶ 3.1.A.i.

Discussion:

The Corps agrees with the contention that the Adopted Storage Accounting does not credit 100 percent of "made inflows" to the storage space allocated to Cobb-Marietta in Allatoona Lake or enable Cobb-Marietta to store those "made inflows," apart from other inflows, in that storage space. The Corps disagrees with the premises of this contention that Cobb-Marietta has a "right" to store "made inflows" in the Allatoona Lake storage space allocated to Cobb-Marietta, that Cobb-Marietta has "purchased" storage space in Allatoona Lake, and that the Adopted Storage Accounting wrongly denies Cobb-Marietta any rights to which Cobb-Marietta is entitled.

The Corps does not dispute the fact that the State of Georgia, Environmental Protection Division, has issued a permit to Cobb-Marietta, No. 008-1491-05 (Nov. 7, 2014) ("Georgia Permit"), that purports to allocate the right to use or store "made inflows" in Lake Allatoona, and the Corps takes no position on the validity of this permit under state law. However, the Georgia Permit did not modify the terms of the contract that Cobb-Marietta and the Corps executed more than fifty years prior to the issuance of this permit. To the contrary, while the Georgia Permit states that the permit holder "will have the exclusive right to impound in [contracted] storage space any and all 'made inflows' into Allatoona Lake" from specified sources, that clause is preceded by the following qualification: "To the extent that storage space is available to Allatoona Lake under the terms of its contract with the U.S. Army Corps of Engineers . . . ." ECF No. 1-1 at 2 (Special Condition No. 3). The Corps' position is that the Alternative Storage Accounting is inconsistent with the terms of the 1963 Contract, in two respects: first, by crediting all "made inflows" to Cobb-Marietta, the Alternative Storage Accounting would authorize Cobb-Marietta to use more than 4.61 percent of the yield of conservation storage; and second, by increasing Cobb-Marietta's *pro rata* share of inflows during the seasonal drawdown of conservation storage, the Alternative Storage Accounting would authorize Cobb-Marietta to use more than 4.61 percent of the yield of conservation storage during those seasonal drawdown periods. Increasing Cobb-Marietta's storage use rights in these ways cannot be reconciled with the terms of the 1963 Contract currently in effect.[5]

[5] As noted above, note 1, the Adopted Storage Accounting as currently practiced actually credits Cobb-Marietta with 4.62 percent of inflows due to differences in rounding conventions. However, that rounding error is immaterial because Cobb-Marietta's account is also debited with 4.62 percent of joint losses, and because the difference between 4.61 and 4.62 percent is negligible. Under the Alternative Storage Accounting, however, Cobb-Marietta's account could be credited with substantially more than 4.62 percent of all inflows, and the share of overall inflows credited to Cobb-Marietta's account would exceed the share of joint losses charged to Cobb-Marietta's account.

The 1963 Contract authorizes Cobb-Marietta to "utilize" storage in the reservoir under certain conditions specified in the contract (when water is stored in conservation storage); it does not literally grant a volume of storage to Cobb-Marietta for Cobb-Marietta's exclusive use or grant Cobb-Marietta operational control of Allatoona Dam. The contract refers to "withdrawals" and "diversions" from storage, but it contains no reference to inflows provided by, stored by, or credited to Cobb-Marietta. Cobb-Marietta has not "purchased" storage and does not "own" storage at Allatoona Lake; rather, Cobb-Marietta obtained the right to the use of storage that was considered sufficient to generate an estimated firm yield,[6] and, in consideration of that right, Cobb-Marietta agreed to pay a fixed cost of storage, plus a share of annual operating costs for the life of the project. As stated in Article 1, "[Cobb-Marietta] shall have the right to utilize storage space . . . for present water supply . . . for municipal and industrial use as deemed necessary by [Cobb-Marietta] and to make such diversions as granted to [Cobb-Marietta] by the State of Georgia to the extent such storage space will yield."[7] The 1963 Contract further provides that Cobb-Marietta "shall have the right to withdraw water from the aforesaid storage space at any time so long as sufficient water is available within the allocated power storage of the Project," and that Cobb-Marietta "shall have the right to construct installations or facilities for the purpose of diversions or withdrawals from the Project subject to the approval of the Contracting Officer as to design and location." 1963 Contract, Art. 1. The Contract makes clear that the Corps "shall operate and maintain the Project owned by the Government," while Cobb-Marietta "shall be responsible for operation and maintenance of all features and appurtenances which may be provided and owned by the Authority," i.e., the specific intake facilities constructed with the Corps' permission on federal land. *Id*. Arts. 1, 9. The contract refers only to storage and withdrawals, and contains no reference to discharges of inflows by Cobb-Marietta into the project, or to facilities for that purpose.

The 1963 Contract does not specify how the availability of "water . . . within the allocated power storage of the Project," or "the extent [to which] such storage space will yield

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[6] The 1963 Contract did not use this term, but listed "[w]ater requirements," "[a]verage annual yield," and "[m]aximum water yield during period with storage." 1963 Contract Ex. I. As discussed above at note 2, these references in Exhibit I to the 1963 Contract represent an estimate of the maximum yield that could be realized on an average daily basis throughout a low-flow period equivalent to the drought of record as of 1963, i.e., the low flow period from July 1939 through January 1942. Such a yield is commonly referred to as a "reliable yield," "dependable yield," or "firm yield." *See*, *e.g.*, U.S. Army Corps of Engineers, Engineer Manual No. 1110-2-3600, Management of Water Control Systems at 2-16 (Oct. 10, 2017) (referencing "[e]stimates of reliable yield" for water supply users"); Engineer Manual 1110-2-1420, Hydrologic Engineering Requirements for Reservoirs, at 4-4 (Oct. 31, 1997) (guidance for determining "firm yield," defined as "the supply that can be maintained throughout the simulation period without shortages"); Institute for Water Resources, U.S. Army Corps of Engineers, Report No. 96-PS-4 (rev.), Water Supply Handbook at 7-10 (December 1998) ("The adequacy of a municipal and industrial water supply system is often described as its safe yield, a specified quantity of water which the system can generally support 98% of the time.").

[7] Article 1 provided for the use of the first increment of storage, "storage space No. 1," from 1965 through 1975, and for the use of two additional increments in future years, after notice and payment. All three increments, totaling 4.61 percent of conservation storage, have since been activated and their capital costs paid for as provided under the 1963 Contract.

[water]," would be determined. The Corps has clarified this through the Adopted Storage Accounting. The Adopted Storage Accounting credits a proportional share (4.62 percent)[8] of all inflows to Allatoona Lake to Cobb-Marietta's account, and debits the same proportional share of all losses, other than direct withdrawals by Cobb-Marietta or other withdrawals or releases charged to another storage account, to Cobb-Marietta's account.[9] One hundred percent of direct withdrawals by Cobb-Marietta, or by the City of Cartersville under a separate contract, are charged to those users' accounts, respectively. Conservation storage that is not allocated to water supply users under water supply storage agreements is treated as the Corps' account; general reservoir inflows and losses are charged proportionally to this account, and releases for other authorized purposes of the reservoir project, such as peaking hydropower operations and the fall-winter drawdown, are charged 100 percent to the Corps' account. All measured inflows to Allatoona Lake, including any "made inflows," as described in the Georgia Permit, are accounted for in the Adopted Storage Accounting and credited to each account in proportion to the share of total conservation storage.[10] Accordingly, 4.62 percent of all inflows, including "made inflows," are credited to Cobb-Marietta's account. Although the Adopted Storage Accounting does not credit 100 percent of Cobb-Marietta's "made inflows" to Cobb-Marietta's account, Cobb-Marietta is able to benefit from "made inflows" it provides, to the extent that those inflows increase the yield of Cobb-Marietta's storage account.

In summary, the Adopted Storage Accounting correctly implements the terms of the 1963 Contract, which addresses only diversions or withdrawals by—not "made inflows" from—Cobb-Marietta, and which grants Cobb-Marietta the right to make diversions and withdrawals only to the extent such storage space will yield (and to the extent such diversions are authorized by Georgia). The Adopted Storage Accounting does not deprive Cobb-Marietta of any right granted under the Georgia Permit to store made inflows in the storage space allocated under the 1963 Contract, because that permit itself is conditioned on the availability of storage space "under the terms of its contract with the [Corps]." ECF No. 1-1 at 2 (Special Condition No. 3). The 1963 Contract was not executed with the understanding that "made inflows" would be stored on behalf of Cobb-Marietta, and the Adopted Storage Accounting would increase Cobb-Marietta's storage usage rights beyond what the terms of the 1963 Contract allow.

2. "[T]hat the Adopted Storage Accounting wrongly provides that water supply storage accounts can be less than full or even 'empty' when the conservation pool as defined in the Water Control Manual for Allatoona Lake is 'full'." Stay Agreement ¶ 3.1.A.ii.

The Corps disagrees with the contention that the Adopted Storage Accounting provides that water supply storage accounts can be less than full when the conservation pool as defined in the Allatoona WCM is full. Under the Adopted Storage Accounting, all conservation storage

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[8] *See* note 1 above.

[9] The Corps currently manages three storage accounts in Allatoona Lake: Cobb-Marietta (4.62 percent of conservation storage), the City of Cartersville, Georgia (2.24 percent), and the Corps or "COE" account (93.14 percent).

[10] The permit identifies three sources of "made inflows": the Cobb County - Northwest and Water Reclamation Facility, the Cobb County - Noonday Creek Water Reclamation Facility, and the Hickory Log Creek Reservoir.

accounts are full (at 100 percent storage volume remaining) when the conservation pool level is at or above 840 feet NGVD29. When the surface elevation is below 840 feet NGVD29, any individual storage account may still have 100 percent of storage remaining, but the sum total of all conservation storage accounts must be less than 100 percent. Cobb-Marietta asserts that conservation storage is full at times when the pool level is below elevation 840, specifically, during the fall (September-December) drawdown, as long as the pool is at or above the guide curve. The Corps disagrees with the contention that the Allatoona WCM defines conservation storage as "full' under those conditions.

The Allatoona WCM defines three storage zones: flood control (or flood risk management), conservation storage, and inactive storage. The total volume of conservation storage is 284,580 acre-feet, between elevations 840 and 800. This pool "is regulated between a minimum elevation of 800 feet NGVD29 and a seasonal variable top-of-conservation pool ranging between elevations 823 to 840 feet NGVD29." Allatoona WCM at 7-1; *see also* 1963 Contract, Art. 1 & Ex. I ("Project power storage between pool elevations 800 and 840[:] 285,000 acre-feet"); Final Environmental Impact Statement, Update of the Water Control Manual for the Alabama-Coosa-Tallapoosa River Basin in Georgia and Alabama (October 2014), Vol. 1 at 2-21, § 2.1.1.1.4 (defining "conservation storage" as "the volume of reservoir storage available to meet authorized purposes other than flood risk management (e.g. hydropower, water supply, recreation, etc.)"; "Conservation storage is equivalent to the storage volume between the top of the inactive pool and the top of the conservation pool in each reservoir."). The volume of flood risk management storage between elevations 840 and 860 feet is 302,576 acre-feet, and the volume of inactive storage below elevation 800 feet is 82,891 acre-feet. *Id*. at E-A-3.

The Water Control Manual also provides for an annual fall and winter drawdown according to a "regulation guide curve," in which the top of the conservation storage pool—the target pool elevation—is gradually lowered from elevation 840 to 823 between September and January, and gradually returning to 840 feet NGVD29 by May 1. Allatoona WCM at 3-3, 7-1 to 7-3. This guide curve, which provides for greater flood risk reduction capacity when rainfall is greater during the winter months, was adopted in March 1968, modifying the earlier operating plan from November 1956 that called for a drawdown to elevation 820 feet NGVD29 from September through December. *Id*. The earlier plan, which called for a greater reduction in the volume of water held in conservation storage during the fall and winter months, was in effect at the time the 1963 Contract was executed, although it is not specifically addressed in the Contract itself.[11] Under the Adopted Storage Accounting, releases necessary to accomplish the fall and

[11] It is important to note that the fall and winter drawdown, while it decreases the volume of water held in conservation storage, is not inconsistent with the yield calculations reflected in Exhibit I to the 1963 Contract. The amount of storage allocated under that Contract was a function of the percentage of dependable yield—the amount of water that could dependably be withdrawn from storage on a daily basis throughout the worst drought on record—of conservation storage at that time. Cobb-Marietta's professed average daily withdrawal requirement was 34.5 million gallons per day, which is 4.61 percent of the dependable yield (749 million gallons per day) of the conservation storage (285,000 acre-feet) at that time. Accordingly, the 1963 Contract provided for Cobb-Marietta's utilization of 4.61 percent of conservation storage. A dependable yield calculation certainly would not assume that the surface elevation of Allatoona Lake would remain at 840 feet NGVD29 throughout the critical drought period;

winter drawdown are charged to the Corps' storage account. For that reason, those releases do not, by themselves, reduce the volume of water in the Cobb-Marietta storage account, even though they lower the height of the conservation pool. However, because the Corps is storing less water (i.e., releasing a higher percentage of inflows) during the drawdown period, the Corps' storage account will refill more slowly, if at all, until the Corps begins raising the pool. The refill rate of the other accounts will remain unchanged. The variable guide curve does not change the storage capacity of the conservation pool, but it does change the amount of available conservation storage (i.e. water held in conservation storage).[12] Allatoona WCM at 7-2. When the pool elevation is equal to the guide curve during the fall and winter drawdown, conservation storage is not "full"; the largest conservation storage account, the Corps' storage account, will necessarily show less than 100 percent storage remaining, because the pool drawdown has been charged to that account. Other storage accounts may be at 100 percent remaining or less, if withdrawals from those accounts and their share of joint losses collectively exceed the share of inflows to those accounts over the relevant period. The Adopted Storage Accounting preserves the integrity of each storage account by charging drawdown releases to the Corps' storage account, not to water supply users' storage accounts.

3. "[T]hat the Adopted Storage Accounting wrongly distributes inflow based on the percentage of conservation storage held by Cobb-Marietta when Allatoona Lake is at 'full summer pool' (284,580 acre-feet), rather than the percentage of conservation storage held by Cobb-Marietta at the time the inflow occurs." Stay Agreement ¶ 3.1.A.iii.

The Corps agrees with the contention that the Adopted Storage Accounting credits inflows to Cobb-Marietta's storage account based on the percentage of total conservation storage (4.61 percent of 285,000 acre-feet) allocated for Cobb-Marietta's use under the 1963 Contract. The Corps disagrees that this accounting practice is wrong, and disagrees that "the percentage of conservation storage held by Cobb-Marietta" varies according to inflows or pool elevations.[13] As set forth in Article 1 and Exhibit I to the 1963 Contract, the purpose of allocating storage for Cobb-Marietta's use was to meet a daily requirement of up to 34.5 mgd. This 34.5 mgd requirement comprised 4.61 percent of the estimated average annual yield of conservation storage during the critical low-flow period (839,800 acre-feet, or 749 mgd). Accordingly, under

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rather, it would have assumed the contrary, that the pool would be drawn down to the bottom, but not below the bottom, of conservation storage, i.e., elevation 800 feet NGVD29. *See* Allatoona WCM at 8-13; U.S. Army Corps of Engineers, Mobile District, Federal Storage Reservoir Critical Yield Analysis, Alabama-Coosa-Tallapoosa (ACT) and Apalachicola-Chattahoochee-Flint (ACF) River Basins (February 2010), *available at* https://www.sam.usace.army.mil/Portals/46/docs/planning_environmental/acf/docs/Federal_Storage_Reservoir_Critical_Yield_Analysis_ACT_ACF_5_Mar_2010_(FINAL).pdf. Thus, assuming no change to the critical yield calculation and no decrease in storage capacity due to excessive sedimentation or other factors, Cobb-Marietta should remain able to withdraw an average of at least 34.5 mgd each year, except in droughts worse than the critical drought as calculated in 1963.

[12] *See also* response to Enclosure 3 (Stay Agreement, Ex. A) ¶ 1.2, below.

[13] To the extent that the phrase "distributes inflow" may be interpreted to mean that the Corps physically distributes inflows to separate locations within the conservation storage pool for particular accounts, the Corps disagrees for the reasons set forth in response to ¶ 1.10 of Enclosure 3 (Stay Agreement, Ex. A).

the 1963 Contract, the Corps allocated 4.61 percent of conservation storage for Cobb-Marietta's water supply demand, and Cobb-Marietta agreed to pay an amount equal to 4.61 percent of the total investment cost of the project, and 4.61 percent of ongoing operational costs for the project. *Id*. Arts. 1, 5, 7 & Ex. I. Based on those methods, assumptions, and figures embedded in the 1963 Contract, the Adopted Storage Accounting credits Cobb-Marietta's account with 4.62 percent of joint inflows to the project, and credits Cobb-Marietta's account with 4.62 percent of joint losses from the project.[14]

Under Cobb-Marietta's interpretation, the 13,140 acre-feet of storage allocated for utilization by Cobb-Marietta under the 1963 Contract comprises 4.61 percent of storage at "full" pool (elevation 840 feet NGVD29), but a higher percentage of the remaining storage when the surface of the conservation pool is below elevation 840 feet, entitling Cobb-Marietta to a greater share of inflows under the latter conditions. Enclosure 3 at iii ("The Alternative Storage Accounting principle is to calculate the User's Share of Joint Gains and Losses on Day t based on the size of the User's Storage Account *in relation to the size of the conservation pool on Day t*.") (emphasis added). This would subvert the reasoning that is evident from the calculations in Exhibit 1 to the 1963 Contract, and it cannot be reconciled with the plain language of the Contract. As explained above, the amount of storage allocated to meet Cobb-Marietta's average daily water supply need is a function of the ratio of that daily need to the critical yield of the entire conservation storage pool, as calculated in the 1963 Contract. Critical yield is derived from an analysis of what is available as a daily average while the pool is drawn down to its minimum elevation, in this case 800 feet NGVD29.

The Alternative Storage Accounting would give Cobb-Marietta a greater percentage of available storage than the 1963 Contract provided, whenever the reservoir pool is below 840 feet NGVD29. This was not contemplated in 1963 and cannot be reconciled with the terms of the Contract, including the figures set forth in Exhibit I to the Contract. Although there is no specific extra-contractual legal bar to adopting Cobb-Marietta's approach to determining the percentage of storage available to Cobb-Marietta, it would require modification or replacement of the 1963 Contract. Additionally, adopting the Alternative Storage Accounting could effectively reallocate additional storage and yield to Cobb-Marietta's storage account at the expense of other storage accounts and authorized purposes. Before adopting such a proposal, the Corps would have to evaluate effects on other storage accounts, operations for other authorized purposes, and the human environment. If those effects were significant, the Corps may lack the authority to implement that feature of the Alternative Storage Accounting. The Corps is evaluating Georgia's storage request, including adoption of the Alternative Storage Accounting, as part of the Allatoona Lake Reallocation Study.

B. Legal Framework (Stay Agreement ¶ 3.1.B)

1. Paragraphs 3.1.B.i through iii of the Stay Agreement require the Corps to analyze each of the following Alternative Storage Accounting Principles and Formulas ("Items") set forth in Exhibit A to the Stay Agreement, including (1) whether the Corps has legal authority to

[14] *See* note 1, above.

adopt or is legally precluded from adopting each Item; (2) if the Corps lacks legal authority or is precluded from adopting an Item, an explanation of that prohibition; and (3) for any Item that is within the Corps' authority to adopt and that the Corps is not precluded from adopting, (a) an affirmative statement to this effect, (b) disclosure of relevant potential legal constraints, and (3) a discussion of the factors to be considered by the Corps in ultimately determining whether to adopt the Item.

a. "All water supply storage at Allatoona Lake is located within the "Conservation Pool.'" Enclosure 3 (Stay Agreement, Ex. A) ¶ 1.1.

Discussion: The Corps generally agrees with the proposition. The Item is consistent with the plain text of the 1963 Contract, which authorizes Cobb-Marietta to use 4.61 percent of the "power pool," or conservation pool or conservation storage, between elevations 800 and 840 feet. 1963 Contract, Art. I and Ex. A. A separate water supply storage agreement with the City of Cartersville, Georgia, similarly provides for the utilization of conservation storage. However, we also note that under the Adopted Storage Accounting, Cobb-Marietta is not precluded from making withdrawals when the pool elevation is above 840 feet NGVD29—in fact the Adopted Storage Accounting does not charge such withdrawals against Cobb-Marietta's storage account. The Corps understands that the same would be true under the Alternative Storage Accounting. We also note that the Contract appears to contemplate at least the possibility of Cobb-Marietta making withdrawals when the pool elevation is below 800 feet NGVD29, if specifically approved by the Contracting Officer (District Engineer). Thus, as a factual matter, water that may be stored in the flood risk management pool or in inactive storage may also be available for water supply use, both under the Adopted Storage Accounting and the Alternative Storage Accounting.

b. "The size of the Conservation Pool varies seasonally in accordance with the top-of-conservation guide curve." Enclosure 3 (Stay Agreement, Ex. A) ¶ 1.2.

Discussion: The Corps agrees in part and disagrees in part with the interpretation, depending on the intended meaning of the term "Conservation Pool" in the Alternative Storage Accounting. Under the Allatoona WCM, the amount of water expected to be held in conservation storage, or the conservation pool, varies seasonally in accordance with the guide curve, as the Corps releases water from the conservation pool during the fall and winter drawdown to lower the surface elevation. Under the Adopted Storage Accounting System, those releases do not decrease the size of the conservation pool or the volume remaining in Cobb-Marietta's storage account, but rather, are charged against the Corps' storage account. Under the Adopted Storage Accounting, while the conservation storage pool is reduced during the fall and winter drawdown, the volume of conservation storage remains the same, and the volume of storage allocated to each storage account remains the same. The amount of storage remaining in each account remains a function of general inflows, general losses, and specific withdrawals or releases from each account.

To the extent this Item in the Alternative Storage Accounting implies that the volume of storage allocated to different storage accounts changes seasonally, or that the "Conservation Pool," and all storage accounts within it, may be "full" even when the surface elevation is below

840 feet NGVD29, the Corps disagrees with the assertion and considers it inconsistent with both the Allatoona WCM and the terms of the 1963 Contract for the reasons set forth above in response to the contentions in the Stay Agreement ¶¶ 3.1.A.ii, 3.1.A.iii, and 3.1.B.iv. As discussed in response to those contentions, while there is no specific extra-contractual legal bar to adopting Cobb-Marietta's approach to allocating storage and defining storage accounts, that is not the approach that the Corps used in 1963, and it would not be consistent with the 1963 Contract. Before adopting such a proposal, the Corps would have to evaluate effects on other authorized purposes, as well as the reasonableness of that method for providing a dependable water supply. Allocating more storage than is reasonably necessary to meet a water supply need may exceed the authority conferred by the Water Supply Act, or may be so unreasonable that it could be set aside as arbitrary and capricious under the Administrative Procedure Act.

c. "Because water for all purposes is commingled in the Conservation Pool, Storage Accounting is used to determine how much of the water in the Conservation Pool is held for, and thus available to, each User on each day." Enclosure 3 (Stay Agreement, Ex. A) ¶ 1.3.

Discussion: The Corps agrees with this Item, except to note as a factual matter that water that may be held in the flood risk management pool or in inactive storage may also be available for other purposes. With that caveat, the Corps believes that the Item is consistent with the Allatoona WCM, the 1963 Contract, and the Adopted Storage Accounting.

d. "Each User, including the Government, is assigned a Storage Account." Enclosure 3 (Stay Agreement, Ex. A) ¶ 1.4.

Discussion: The Corps agrees with this Item, which is also consistent with the Alternative Storage Accounting.

e. "The size of a User's Storage Account is the maximum volume of water that can be stored for that User." Enclosure 3 (Stay Agreement, Ex. A) ¶ 1.5.

Discussion: The Corps agrees with the Item, to the extent that the phrase "maximum volume of water that can be stored" means the amount of water that can be stored within the amount of storage allocated to the User. With this understanding, the Item appears consistent with the Allatoona WCM, the 1963 Contract and the Adopted Storage Accounting. However, the Corps also notes that under the Adopted Storage Accounting, Cobb-Marietta or any other water supply user is not precluded from making withdrawals when the Allatoona Lake pool elevation is above 840 feet NGVD29, even though water is not stored above that elevation "for that User."

f. "For water supply users, the size of the Storage Account is equal to the volume of storage under contract. The remainder is allocated to the Government's Storage Account." Enclosure 3 (Stay Agreement, Ex. A) ¶ 1.6.

Discussion: The Corps agrees with this Item, except to the extent that the phrase "volume of storage under contract" suggests that the size of conservation storage "varies

seasonally in accordance with the top-of-conservation guide curve," *see* Enclosure 3 (Stay Agreement, Ex. A), ¶ 1.2, or the contention set forth in the Stay Agreement, ¶ 3.1.A.iii, asserting that the percentage of conservation storage allocated for use by Cobb-Marietta at Allatoona Lake varies seasonally. See responses to Enclosure 3 (Stay Agreement, Ex. A), ¶ 1.2 and Stay Agreement, ¶ 3.1.A.iii, above. Additionally, the Corps notes that over time, the actual storage volume of Allatoona Lake may change due to sedimentation, and in that event, the Corps may equitably adjust storage volumes based on the percentage, not total acreage, of storage allocated under water supply storage agreements. *See* 1963 Contract, Article 7(c). For Cobb-Marietta's storage account, that ratio is 4.61 percent of conservation storage, as provided in the 1963 Contract.

g. "Joint Gains and Losses to the Conservation Pool—including natural inflow, precipitation, evaporation, seepage, and any other losses—are credited and/or debited to individual Storage Accounts pro rata based on the size of the Storage Account in relation to the Conservation Pool." Enclosure 3 (Stay Agreement, Ex. A) ¶ 1.7.

Discussion: The Corps agrees with the proposition, which also appears consistent with the Adopted Storage Accounting, except to the extent it incorporates the contention set forth in the Stay Agreement, ¶ 3.1.A.iii, asserting that the percentage of conservation storage allocated for use by Cobb-Marietta at Allatoona Lake varies seasonally. Under the Adopted Storage Accounting, the *pro rata* share of joint gains and losses for each account does not vary seasonally. To the extent that the Alternative Storage Accounting would adjust the *pro rata* share seasonally, that would be inconsistent with the 1963 Contract and the Allatoona WCM. See responses to Enclosure 3 (Stay Agreement, Ex. A), ¶ 1.6 and Stay Agreement, ¶ 3.1.A.iii, above.

h. "Specific Gains and Losses to the Conservation Pool—including withdrawals by individual Users, releases from the dam for specific purposes such as hydropower, Made Inflows (if recognized), and any other gains or losses to be credited or debited to a specific Storage Account—are credited or debited to the individual Storage Account associated with the gain or loss." Enclosure 3 (Stay Agreement, Ex. A) ¶ 1.8.

Discussion: The Corps agrees with the proposition, except to note that under the Adopted Storage Accounting, when the pool elevation is above elevation 840 feet NGVD29, withdrawals and losses are not charged to any storage account, because each storage account is necessarily 100 percent full. The Corps understands that the same would be true under the Alternative Storage Accounting. Additionally, under the Adopted Storage Accounting, any "made inflows" are credited proportionally to each storage account in the same manner as all other inflows, whereas in the Alternative Storage Accounting, 100 percent of "made inflows" would be credited to the account of the entity providing those inflows. As noted above, there is no extra-contractual bar against crediting "made inflows" in the manner of the Alternative Storage Accounting, but that is not provided for under the 1963 Contract. Before adopting such a proposal, the Corps would have to evaluate effects on other storage accounts, operations for other authorized purposes, and the human environment. If those effects were significant, the Corps may lack the authority to implement that feature of the Alternative Storage Accounting.

The Corps is evaluating Georgia's storage request, including adoption of the Alternative Storage Accounting, as part of the Allatoona Lake Reallocation Study.

i. "The Storage Account Balance for a given User on a given day is the volume of water available to that User on that day." Enclosure 3 (Stay Agreement, Ex. A) ¶ 1.9.

Discussion: The Corps agrees that the Storage Account Balance for a given User at any given moment reflects the volume of water available to that User at that time, under both the Alternative Storage Accounting and the Adopted Storage Accounting. The Corps notes that inflows and outflows can vary over the course of a day, so the Storage Account Balance and the volume of water available to a User may also vary over the course of a day. Additionally, computations under the Adopted Storage Accounting use data as of midnight on the previous day, and storage accounting may not be performed each day. Finally, when the pool is at or above elevation 840 feet NGVD, each storage account has 100 percent storage remaining by definition under the Adopted Storage Accounting, and storage account volumes do not limit the water a User may withdraw. The Corps understands that this would also the case true under the Alternative Storage Accounting.

j. "Any inflow to a Storage Account in excess of the account limit is distributed pro rata to any other Storage Accounts that are not full." Enclosure 3 (Stay Agreement, Ex. A) ¶ 1.10.

Discussion: The Corps agrees with the proposition to the extent that under both the Adopted Storage Accounting and the Alternative Storage Accounting, inflows are or would be credited to some or all storage accounts when those storage accounts are not full. To the extent that the term "distributed" may be interpreted to mean that the Corps does or could allocate water rights or physically distribute inflows to separate locations within the conservation storage pool for particular accounts, the Corps disagrees. The allocation of water rights is beyond the Corps' authority, and all water within the Conservation Pool is physically commingled for multiple purposes and accounts. See response to Enclosure 3 (Stay Agreement, Ex. A) ¶ 1.3, above. The Corps notes that if the pool elevation of Allatoona Lake is at or above 840 feet NGVD29, under the Adopted Storage Accounting, all conservation storage accounts are necessarily 100 percent full, and inflows are not "distributed" or credited to any account. The Corps understands that the same would be true under the Alternative Storage Accounting.

k. Storage Account Balance. "The Storage Account Balance ('B') for each User ('U') is updated daily. The Balance for the User on day t ('$B_{(u,t)}$') is equal to the previous day's balance ('$B_{(u,t-1)}$') plus the User's Share ('$P_{(u,t)}$') of Joint Gains and Losses ('J_t') and any Specific Gains and Losses allocated to the User. Specific Losses ('L_u') include any withdrawals by Users and any releases from the dam, which are debited to the Government's Account. Specific Gains include any Made Inflows allocated to a User ('$MI_{(u,t)}$')." Enclosure 3 (Stay Agreement, Ex. A) ¶ 2.1.

	Joint Gains and Losses	*Specific Gains and Losses*

User Balance at end of Day t		=	User Balance at end of Day t-1	+	(	Joint Gains and Losses	x	User's Share	)	–	Withdrawals or Releases	+	Made Inflows Allocated to User
Adopted Rule	$B_{(u,t)}$	=	$B_{(u,\ t-1)}$	+	(	J_t	x	$P_{(u,t)}$	)	–	$L_{(u,t)}$	+	0
Alternative Rule	$B_{(u,t)}$	=	$B_{(u,\ t-1)}$	+	(	J_t	x	$P_{(u,t)}$	)	–	$L_{(u,t)}$	+	$MI_{(u,t)}$

Discussion: This Item accurately characterizes the Adopted Storage Accounting and the Alternative Storage Accounting. The Corps acknowledges the distinction shown in the last two columns between the Adopted Storage Accounting, in which any "made inflows" are credited proportionally to each storage account in the same manner as all other inflows, and the Alternative Storage Accounting, in which 100 percent of "made inflows" would be credited to the account of the entity providing those inflows. As discussed above, there is no extra-contractual legal bar to adopting the Alternative Storage Accounting approach to crediting "made inflows," but that is not provided for under the 1963 Contract. Before adopting such a proposal, the Corps would have to evaluate effects on other storage accounts, operations for other authorized purposes, and the human environment. If those effects were significant, the Corps may lack the authority to implement that feature of the Alternative Storage Accounting. The Corps is evaluating Georgia's storage request, including adoption of the Alternative Storage Accounting, as part of the Allatoona Lake Reallocation Study.

l. Joint Gains and Losses. "'Joint Gains and Losses' are calculated based on the change in the volume of water held in storage from Day t-1 to Day t. Because the change in the volume of water held in storage reflects the total of all gains and losses, including any gains or losses to be allocated separately (such as withdrawals made by an individual user), it is necessary to 'correct' the observed number by subtracting any 'Specific Gains' and adding any 'Specific Losses' to be allocated separately. If Made Inflows are not recognized, there will be no 'Specific Gains,' so this term will always be zero." Enclosure 3 (Stay Agreement, Ex. A) ¶ 2.2.

					Specific Gains and Losses		
Joint Gains and Losses		=	Change in Volume of Water Held in Storage	+	Withdrawals and Releases (all users)	–	Made Inflows (all users)
Adopted Rule	$J_{(t)}$	=	$\Delta S_{(t,\ t-1)}$	+	$L_{(all\ users,t)}$	–	0
Alternative Rule	$J_{(t)}$	=	$\Delta S_{(t,\ t-1)}$	+	$L_{(all\ users,t)}$	–	$MI_{(all\ users,t)}$

Discussion: This Item accurately characterizes the Adopted Storage Accounting and the Alternative Storage Accounting. The Corps acknowledges the distinction shown in the last two columns in the table between the Adopted Storage Accounting, under which any "made inflows" are credited proportionally to each storage account in the same manner as all other inflows, and

the Alternative Storage Accounting, in which 100 percent of "made inflows" would be credited to the account of the entity providing those inflows. As discussed above, there is no extra-contractual legal bar to adopting the Alternative Storage Accounting approach to crediting "made inflows," but that is not provided for under the 1963 Contract. Before adopting such a proposal, the Corps would have to evaluate effects on other storage accounts, operations for other authorized purposes, and the human environment. If those effects were significant, the Corps may lack the authority to implement that feature of the Alternative Storage Accounting. The Corps is evaluating Georgia's storage request, including adoption of the Alternative Storage Accounting, as part of the Allatoona Lake Reallocation Study.

m. User's Share of Joint Gains and Losses. "The Adopted Storage Accounting calculates the User's Share of Joint Gains and Losses on Day t (P(u,t)) based on the size of the User's Storage Account in relation to the volume of the conservation pool at full summer pool (i.e, elevation 840 feet, which is the top-of-conservation elevation from May 1 through Labor Day). The Alternative Storage Accounting principle is to calculate the User's Share of Joint Gains and Losses on Day t based on the size of the User's Storage Account in relation to the size of the conservation pool on Day t." Enclosure 3 (Stay Agreement, Ex. A) ¶ 2.3.

User's Share of Joint Gains and Losses on Day t		=	Conservation Storage Contracted to User	÷	"Conservation Storage"
Adopted Rule	$P_{(u,t)}$	=	User's Account Limit	÷	284,580 acre-feet
Alternative Rule	$P_{(u,t)}$	=	User's Account Limit	÷	Actual Volume of Conservation Storage as Defined by Top-of-Conservation Rule Curve on Day t

Discussion: This Item accurately characterizes the Adopted Storage Accounting and the Alternative Storage Accounting, assuming that the phrase "User's Account Limit" refers to a fixed volume, not percentage, of storage (e.g., 13,140 acre-feet, not 4.61 percent of storage).[15] With this assumption, the Corps acknowledges the distinction shown between the Adopted Storage Accounting, in which each user's share of joint gains and losses is equivalent to that user's, allocated percentage share of conservation storage (for Cobb-Marietta, 4.62 percent), and the Alternative Storage Accounting, in which each user's share would vary based on a seasonally-varying "actual volume of conservation of storage" below the guide curve. We are not aware of any extra-contractual legal bar to this feature of the Alternative Storage Accounting, and the Corps is evaluating Georgia's storage request, including adoption of the Alternative Storage Accounting, as part of the ongoing Allatoona Lake Reallocation Study. However, the Corps does not agree that the Alternative Storage Accounting could be reconciled in this respect with either the plain text of the agreement or the parties' mutual understanding at the time the

[15] Otherwise, the result of the formula in both rows would be an extremely low percentage (i.e., 4.61 percent divided by a number between 0 and 484,580). The purpose of the formula appears to be to determine the percentage share.

1963 Contract was executed. See response to Stay Agreement ¶ 3.1.A.iii, above. Thus, in order to adopt this Item, the parties would need to modify or replace the 1963 Contract.

Additionally, while the Corps is unaware of any extra-contractual legal bar to considering or adopting this Item, adopting this Item would require changes to the operation of Allatoona Lake and the Allatoona WCM, and may affect the availability of storage in the other existing storage accounts. Applying the Alternative Storage Accounting to Cobb-Marietta's existing contractual rights at Allatoona Lake could significantly increase the percent of storage, and the percent of yield of storage, available to Cobb-Marietta under the 1963 Contract at the expense of other storage accounts and authorized purposes. Before adopting such a proposal, the Corps would have to evaluate effects on other authorized purposes and the human environment, as well as the reasonableness of that method for providing a dependable water supply. If adopting the Alternative Storage Accounting would result in major operational changes or seriously affect other authorized purposes, the Corps would lack the authority to implement such a proposal without Congressional authorization. 43 U.S.C. § 390b(d).

n. Made Inflow. "Because the Adopted Storage Accounting does not recognize Made Inflow as a separate category of inflow that can be allocated separately, Made Inflow is always 'zero' in the Adopted Storage Accounting. The effect is to include Made Inflow as a Joint Gain that is shared *pro rata* as part of the Joint Gains and Losses. The Alternative Storage Accounting recognizes Made Inflow as a separate category of inflow that may be allocated to Users by the State." Enclosure 3 (Stay Agreement, Ex. A) ¶ 2.4.

Made Inflow			
Adopted Rule	$MI_{(u,t)}$	=	0
Alternative Rule	$MI_{(u,t)}$		The volume of any "made inflow" allocated to the user on Day t by the State of Georgia through permits issued by Georgia EPD

Discussion: This Item characterizes the difference between the Adopted Storage Accounting and the Alternative Storage Accounting with respect to crediting of "made inflows." The Corps disagrees with the representation that the Adopted Storage Accounting provides zero ("0") credit for any "made inflows." The Corps acknowledges that the Adopted Storage Accounting does not recognize "Made Inflows" as a separate category, or credit such inflows wholly to the account of an entity that provides them, but under the Adopted Storage Accounting, any "made inflows" are accounted for as general inflows. Thus, the Corps disagrees that "made inflows," to the extent they exist and are reported, are "always 'zero' in the Adopted Storage Accounting." Under the Adopted Storage Accounting, the Corps credits Cobb-Marietta's account with 4.62 percent of all inflows, including made inflows.

The Corps acknowledges that the Alternative Storage Accounting would recognize Made Inflows as a separate category of inflow, credited wholly to the storage account of a user providing such inflows. As discussed above, there is no extra-contractual legal bar to adopting the Alternative Storage Accounting approach to crediting "made inflows," but that is not provided for under the 1963 Contract. Before adopting such a proposal, the Corps would have to evaluate effects on other storage accounts, operations for other authorized purposes, and the human environment. If those effects were significant, the Corps may lack the authority to implement that feature of the Alternative Storage Accounting. The Corps is evaluating Georgia's storage request, including adoption of the Alternative Storage Accounting, as part of the Allatoona Lake Reallocation Study..

2. Paragraphs 3.1.B.iv through xiii require the Corps to clarify the legal framework within which the Storage Accounting exists by addressing the following issues. Stay Agreement, ¶ 3.1.B.

a. "The Corps' definition of the terms 'water,' 'storage,' 'conservation storage,' and 'conservation pool' as applied to Allatoona Lake, and a discussion of the Corps' understanding of the distinction (if any) between 'storage' and 'water.'" Stay Agreement, ¶ 3.1.B.iv.

Discussion: The Corps has not defined these terms specifically for application to Allatoona Lake. The terms "water" and "storage" have common meanings, but like many words, the terms can be used in different ways depending on context. Generally, the noun "water" means "the liquid that descends from the clouds as rain, forms streams, lakes, and seas . . . . and that when pure is . . . [a] liquid oxide of hydrogen H_2O."[16] The term "water" may also be used to mean "a particular quantity or body of water[] such as . . . the water occupying . . . a particular bed," or "a quantity or depth of water adequate for some purpose (such as navigation)."[17]

Generally, the term "storage" means "space or a place for storing," but also "an amount stored."[18] With respect to reservoirs, these meanings may refer to both the reservoir space in which water may be stored, and the amount of water (or other liquid) that is stored in such space. In some contexts, the terms can be used interchangeably. For example, the phrase, "the glass is half full (or empty)" means the same thing as the phrase, "the glass is half full (or empty) of *water*," and the same thing as the phrase, "the *storage* in the glass is half full (or empty)."

In the context of the Adopted Storage Accounting, the term "storage" is often used to refer to a water supply user's storage account, which is an abstract accounting concept rather than a literal storage pool. The 1963 Contract did not result in the construction of physical storage for Cobb-Marietta; rather, it granted Cobb-Marietta the right to use a share of the existing storage in Allatoona Lake. The Adopted Storage Accounting was developed to monitor and represent Cobb-Marietta's use of that share of storage. Thus, the phrase "there is 32% of storage remaining," in the context of the Adopted Storage Accounting, does not literally mean that the

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[16] "Water" (noun). MERRIAM-WEBSTER ONLINE DICTIONARY, http://www.merriam-webster.com (July 6, 2019).
[17] *Id*.
[18] "Storage" (noun). MERRIAM-WEBSTER ONLINE DICTIONARY, http://www.merriam-webster.com (July 6, 2019).

dam has been physically diminished, that less storage space exists in the reservoir, or that precisely 32 percent of the storage space in the reservoir or any physical section of the reservoir contains water. Rather, it means that Cobb-Marietta's withdrawals, combined with the share of losses debited from Cobb-Marietta's account over some period of time, have exceeded the share of inflows credited to Cobb-Marietta's storage account, resulting in a depletion of Cobb-Marietta's storage account.

The terms "conservation storage" and "conservation pool" generally have the same meaning with respect to Corps reservoirs, namely, multipurpose storage used for purposes other than flood control, which typically has its own, exclusive storage zone in a multipurpose reservoir. *See, e.g.*, Engineer Manual No. 1110-2-1420, Hydrologic Engineering Requirements for Reservoirs (31 Oct 1997) at 11-1 ("Conservation Storage. […] Water stored in the conservation pool can serve many purposes. The primary purposes for conservation storage are water supply, navigation, low-flow augmentation, fish and wildlife, and hydroelectric power."); *id*. at 12-4 (multiple-purpose reservoirs generally contain three primary storage zones: (1) "Exclusive capacity, generally for flood control, in the uppermost storage space in the reservoir;" (2) "Multiple-purpose capacity, typically conservation storage, immediately below the flood control storage"; and (3) "Inactive capacity, or dead storage, the lowest storage space in the reservoir."); Allatoona WCM at 7-1; ACT FEIS, Vol. 1 at 2-21. Neither term, nor the term "conservation," appears in the 1963 Contract. The 1963 Contract uses the term "power pool" to refer to what the Corps (and Cobb-Marietta, in the Alternative Storage Accounting) now describes in the Allatoona WCM as the "conservation storage" of Allatoona Lake. The remaining storage consists of flood control or flood risk reduction storage above the top of the conservation pool, and inactive storage below the bottom of conservation storage.

b. "The legal standard(s) or principle(s) to be applied by the Corps to determine if it must or should defer to State water allocation decisions related to Allatoona Lake, including the State of Georgia's grant to Cobb-Marietta of the exclusive right to impound, store, and utilize certain 'made inflows' to Allatoona Lake to the extent such water can be stored within the space contracted to Cobb-Marietta." Stay Agreement, ¶ 3.1.B.v.

Discussion: The Corps operates Allatoona Dam and Lake pursuant to Congressional authorization in the Flood Control Act of 1941, the Rivers and Harbors Act of 1945, the Water Supply Act, and other statutes. Consistent with those statutes, the Corps' operation of Allatoona Lake and the federal ACT system of reservoirs serves multiple purposes, including water supply. Consistent with Congressional intent expressed in 33 U.S.C. § 701-1 ("to recognize . . . the interests and rights of the States in determining the development of the watersheds within their borders and likewise their interests and rights in water utilization and control"), the Corps endeavors to operate its projects for their authorized purposes in a manner that does not interfere with the States' abilities to allocate consumptive water rights, or with lawful uses pursuant to State authorities. Under the Water Supply Act, the Corps is authorized to include storage in any Corps reservoir project for water supply, enabling State or local interests to utilize storage in a Corps reservoir to exercise water rights that may be granted by a State. A State, in turn, may grant (or deny) an entity within its jurisdiction the right to withdraw water that the Corps may make available for withdrawal from storage in its reservoir projects. Since the purposes for

which the Corps operates its reservoirs are generally nonconsumptive in nature, and since the Corps endeavors to operate its reservoirs in a manner that is consistent with allocations of water rights by the States, conflicts generally should not arise between State water rights allocations and Corps reservoir operations.

The Adopted Storage Accounting was developed not as a means of limiting the water rights that Cobb-Marietta may obtain from Georgia, but rather as a means of accounting for the usage Cobb-Marietta makes of the storage allocated for its use under the terms of the 1963 Contract. The Georgia Permit does not appear on its face to conflict with the 1963 Contract, the Corps' operation of Allatoona Lake for its authorized purposes, or the Adopted Storage Accounting. As explained in response to the contention in the Stay Agreement, ¶ 3.1.A.i., above, the permit did not modify the terms of the Contract that Cobb-Marietta and the Corps executed more than fifty years prior to the issuance of this permit. To the contrary, while the Georgia Permit states that the permit holder "will have the exclusive right to impound in [contracted] storage space any and all 'made inflows' into Allatoona Lake" from specified sources, that clause is preceded by the following qualification: "To the extent that storage space is available to Allatoona Lake under the terms of its contract with the U.S. Army Corps of Engineers . . . ." ECF No. 1-1 at 2 (Special Condition No. 3). The Adopted Storage Accounting is consistent with the terms of the 1963 Contract, which addresses only diversions or withdrawals by—not "made inflows" from—Cobb-Marietta, and which grants Cobb-Marietta the right to make diversions and withdrawals only to the extent such storage will yield (and to the extent such diversions are authorized by Georgia). 1963 Contract (noting that Cobb-Marietta "was created by an Act of the General Assembly of Georgia . . . to develop sources of water supply and to produce potable water in sufficient quantities to supply the entire potable water requirements of Cobb County"); *id*. Arts. 1, 3, 4. The Adopted Storage Accounting does not deprive Cobb-Marietta of any right granted under the Georgia Permit to store made inflows in the storage space allocated under the Contract, because that permit itself is conditioned on the availability of storage space "under the terms of its contract with the [Corps]." ECF No. 1-1 at 2 (Special Condition No. 3).

The Allatoona WCM incorporates the allocation of storage from 1963 Contract, as well as the Adopted Storage Accounting by which the Corps measures Cobb-Marietta's storage usage under the terms of that contract. If the Corps and Cobb-Marietta were to enter into a new contract that provided for a different allocation of storage, or a different method of accounting for the use of storage, the Corps would likely need to modify the Allatoona WCM to reflect that new understanding. In considering Georgia's storage request in the Allatoona Lake Reallocation Study, the Corps must consider whether allocating additional storage to Cobb-Marietta or adopting the Alternative Storage Accounting might result in major changes to project operations, or seriously affect authorized federal purposes. If so, that action would exceed the Corps' authority under the Water Supply Act. The Corps must also evaluate any proposed action under various federal laws, including NEPA, and must comply with applicable requirements of the Administrative Procedure Act before taking final agency action to implement a storage reallocation, contract modification, or change in storage accounting.

c. "The Corps' position as to whether the State of Georgia's allocation of made inflows to Cobb-Marietta has been preempted by federal law; and, if so, the identity of the 'preempting' federal law, together with any support for the preemption analysis (e.g., facts demonstrating an actual conflict between the State's specific allocation to Cobb-Marietta and federal objectives)." Stay Agreement, ¶ 3.1.B.vi.

Discussion: The Corps does not consider Georgia's allocation of made inflows to Cobb-Marietta preempted by federal law, because Georgia's allocation of such water use rights does not conflict with federal purposes. As discussed above, the Georgia Permit is expressly conditioned on compliance with the terms of the 1963 Contract: it provides that Cobb-Marietta "will have the exclusive right to impound in [contracted] storage space any and all 'made inflows' into Allatoona Lake," but only "[t]o the extent that storage space is available to Allatoona Lake under the terms of its contract with the U.S. Army Corps of Engineers." The Georgia Permit thus recognizes, rather than conflicts with, the 1963 Contract. Similarly, because the Allatoona WCM incorporates the storage allocation from the 1963 Contract and the Adopted Storage Accounting, and because the Adopted Storage Accounting implements the terms of the 1963 Contract, the Georgia Permit does not conflict with the Allatoona WCM or the Adopted Storage Accounting.

At the same time, no extra-contractual law would prevent the Corps and Cobb-Marietta from entering into a different contract that utilized a different storage accounting method, subject to further evaluation as discussed above.

The Corps acknowledges the theoretical possibility that a state-issued water use permit could purport to dictate or otherwise restrict federal reservoir operations, thus creating a possible conflict of law implicating federal supremacy and state prerogatives. It is also theoretically possible that federal reservoir operations could interfere with the exercise of state-issued water rights, also creating a possible conflict of law implicating federal supremacy and state prerogatives. Finally, the Corps notes that third parties, or neighboring states, could assert water rights that potentially conflict with either state-issued permits or federal reservoir operations.[19] The Corps does not believe that the Georgia Permit, the Adopted Storage Accounting, or the Alternative Storage Accounting, if adopted, would necessarily provoke such conflicts, and the Corps is unaware of any competing claims to water rights related to Allatoona Lake that are currently being adjudicated.

d. "If the Legal Analysis concludes that the State's allocation of made inflow to Cobb-Marietta is not preempted by any federal law, but that the Corps

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[19] As noted above, the Corps takes no position on the validity of the Georgia Permit under state law. The Georgia Permit on its face grants the "exclusive right to impound in Allatoona Lake and/or withdraw from Allatoona Lake any and all 'made inflows'" from two Cobb County reclamation facilities and the Hickory Log Creek Reservoir. However, Cobb-Marietta does not operate the gates at Allatoona Reservoir that have the capacity to store or release water from the dam. That is the exclusive function of the Corps, which owns and operates Allatoona Reservoir. The Corps is, however, unaware of any adjudication of water rights in the ACT Basin, and notes that other entities could potentially assert claims of entitlement to water flows in the basin that could be affected by the Georgia Permit or by federal reservoir operations.

nonetheless has discretion to adopt storage accounting principles or formulas that allocate made inflow in a manner contrary to the State's allocation, an analysis explaining that conclusion." Stay Agreement, ¶ 3.1.B.vii.

Discussion: The Adopted Storage Accounting implements the terms of the 1963 Contract, but there is no extra-contractual bar to entering into a different contractual arrangement with a different storage accounting methodology. Any such contractual arrangement or storage accounting methodology would also have to comply with federal law, including the Corps' continued operation of the Allatoona Lake project for its authorized purposes. See discussion in response to the contentions in ¶¶ 3.1.B.v. and vii. of the Stay Agreement, above.

e. "If the Legal Analysis concludes that the Adopted Storage Accounting does not allocate water, but merely allocates or manages 'storage,' an analysis explaining how this conclusion is consistent with (A) the definition of 'storage' and the distinction between 'storage' and 'water'; and (B) the Storage Accounting Formulas that are used to determine how much water is credited to each storage account each day." Stay Agreement, ¶ 3.1.B.viii.

Discussion: See generally the discussion above. The Adopted Storage Accounting measures the availability of water for withdrawal from storage in the reservoir. Although the Corps does not allocate water rights, through its operation of the Allatoona Lake project or through the 1963 Contract, the Corps does make storage available for utilization by Cobb-Marietta, to the extent that storage will yield. As contemplated under the Contract, Cobb-Marietta will utilize that storage by making withdrawals or diversions from Allatoona Lake, to the extent authorized to do so by the State of Georgia, and to the extent water is available for withdrawal from the allocated storage. The Georgia Permit authorizes Cobb-Marietta to utilize certain made inflows and make certain withdrawals under state law, to the extent consistent with the terms of the 1963 Contract. The Adopted Storage Accounting determines the amount of water available for withdrawal from the allocated storage, consistent with the terms of the 1963 Contract.

Conclusion

As explained above, as a general matter, the Corps is unaware of any law or regulation that would preclude considering or adopting the Alternative Storage Accounting at Allatoona Lake. Although the Corps does not interpret the 1963 Contract as providing for storage accounting as Cobb-Marietta has proposed it, that would not preclude the Corps from taking new action such as entering into a new contract with Cobb-Marietta for the existing storage or reallocating storage pursuant to a new contract. Such actions would require additional analysis under applicable federal law, and this memorandum does not offer any conclusions as to the outcome of that analysis.

ENCLOSURE 1: 1963 CONTRACT, AS AMENDED

Contract No. DA-0l-076-CIVENG-64-116
(Negotiated)

CONTRACT BETWEEN THE UNITED STATES OF AMERICA
AND
THE COBB COUNTY-MARIETTA WATER AUTHORITY
FOR
WATER STORAGE SPACE IN ALLATOONA RESERVOIR

THIS CONTRACT, entered into this 10th day of October 1963, by and between the United States of America (hereinafter called the Government) represented by the Contracting Officer executing this contract, and the Cobb County-Marietta Water Authority, a corporate and political subdivision of the State of Georgia with its principal office in the City of Marietta, Georgia (hereinafter called the Authority), WITNESSETH THAT:

WHEREAS, the Allatoona Dam and Reservoir on the Etowah River in Bartow, Cherokee and Cobb Counties, Georgia (hereinafter called the Project), has been constructed pursuant to authorizations in the Flood Control Acts approved 18 August 1941 and 22 December 1944 (Public Law 228, 77th Congress, lst Session, and Public Law 534, 78th Congress, 2nd Session, respectively) in accordance with recommendations of the Chief of Engineers in House Document No. 674, 76th Congress, 3rd Session; and,

WHEREAS, the Authority, a political subdivision of the State of Georgia and public corporation thereof, was created by an Act of the General Assembly of Georgia, approved 21 February 1951 (Georgia Laws 1951, page 497 et req.) to develop sources of water supply and to produce potable water in sufficient quantities to supply the entire potable water requirements of Cobb County; and,

WHEREAS, the Government is authorized by the Water Supply Act of 1958 (Title III of the Act approved 3 July 1958, Public Law 85-500, 85th Congress, 2nd Session), as amended by the Federal Water Pollution Act, Amendments of 1961, Public Law 87·88, 75 Stat. 204, to include storage in any reservoir project constructed by the Corps of Engineers to impound water for present or anticipated future demand or need for municipal or industrial water: and,

WHEREAS, storage space can be made available from storage allocated for power in the Project; and,

WHEREAS, the Authority desires to utilize storage space (hereinafter called storage space No. 1) available in the allocated power storage of the Project as a source of present water supply, as set forth in Article l; and,

WHEREAS, the Authority desires to utilize additional storage space (hereinafter called storage space No. 2 and storage space No. 3) available in the allocated power storage of the Project for future water supply as set forth in Article l; and,

WHEREAS, the Authority hereby agrees to fulfill the local interest requirements of the Water Supply Act of 1950, as amended.

NOW, THEREFORE, the parties do mutually agree as follows:

ARTICLE 1. WATER STORAGE SPACE. - The Authority shall have the right to utilize storage space No. 1 for present water supply beginning in 1965 and extending to and including 1975 for municipal and industrial use as deemed necessary by the Authority and to make such diversions as granted to the Authority by the State of Georgia to the extent such storage space will yield. Storage space No. 1 is defined as an undivided 1.36 percent of the storage allocated to power amounting to 3,870 acre-feet at the maximum elevation at the top of the power pool. **The Authority shall have the right to utilize Storage Space No. 2 beginning 1 July 1971. The Authority shall have the right to utilize Storage Space No. 3 beginning 1 July 1978.** ~~Similarly, after sufficient notification is given to the Government, and payments are arranged for, the Authority shall have the right to utilize storage space No. 2 from 1975 to and including 1982 and storage space No. 3 after 1982.~~ Storage spaces Nos. 2 and 3 are defined as an undivided 2.74 percent and 4.61 percent of the storage allocated to power, amounting to 7,810 acre-feet and 13,140 acre-feet, respectively, at the maximum elevation at the top of the power pool. ~~The periods for use of storage spaces Nos. 2 and 3 as defined above may be adjusted as agreed by the Contracting Officer and Authority to meet water demands.~~

Changed per Supplemental Agreement No. 1 (May 18, 1972); Supplemental Agreement No. 2 (March 17, 1981)

The Government shall not be responsible for diversions by others, nor will it become a party to any controversies between users of the aforesaid storage spaces.

The Authority shall have the right to withdraw water from the aforesaid storage space at any time so long as sufficient water is available within the allocated power storage of the Project.

The Authority shall have the right to construct installations or facilities for the purpose of diversions or withdrawals from the Project subject to the approval of the Contracting Officer as to design and location; the cost of such installations or facilities or any modifications thereof, shall be borne by the Authority.

The Authority hereby agrees that releases or withdrawals which would lower the water level below elevation 800.0 feet above mean sea level will not be made unless specifically approved by the Contracting Officer.

The Government reserves the right to take such measures as may be necessary in the operation of the Project to preserve life and/or property.

The term "initial operation", as used in this contract, shall mean the date upon which the Authority activates the installations or facilities for water withdrawal located in the Project.

ARTICLE 2. METERING. - For the purpose of maintaining an accurate record of water resources at the Project, the Authority agrees to install suitable meters or metering devices satisfactory to the Contracting Officer, without cost to the Government, at such times as the Authority may withdraw water from the Project by any means. The Authority shall furnish the Government·periodically, at least monthly, a record of all such withdrawals from the Project. Reports will be furnished to the Contracting Officer or to a representative designated by him.

ARTICLE 3. FEDERAL AND STATE LAWS. - The Authority shall utilize such storage space in a manner consistent with Federal and State laws.

ARTICLE 4. REGULATION OF THE USE OF WATER. - The regulation of the use of water stored in the aforesaid storage space shall be the responsibility of the Authority and shall not be considered a part of this contract.

ARTICLE 5. CONSIDERATION AND PAYMENT. - **In consideration of the Government's making available the aforesaid Storage Spaces No. 1 and 2 to the Authority, it is agreed that the Authority shall pay to the Government 1.36 and 1.38 percent, respectively, of that part of the total investment cost of the project allocated to power production in accordance with the schedules attached hereto as Exhibits II and III. In consideration of the Government's making available Storage Space No. 3 it is agreed that the Authority shall pay to the Government 1.87 percent of that part of the total investment cost of the project allocated to power production in accordance with the schedule attached hereto as Exhibit IV. It is further agreed that the Authority shall also pay an undivided 4.61 percent of the total annual operation and maintenance costs of the project allocated to power production upon receipt of bills to be rendered annually for the actual costs for the preceding year.** ~~In consideration of the payments provided in this contract to be paid by the Authority to the Government, it is agreed that the Government will make available storage space in the Project as provided in Article 1. In consideration of the Government's making available~~

Changed per Supplemental Agreement No. 2 (Aug. 21, 1981)

Changed per Supplemental Agreement No. 1 (July 1, 1972)

~~the aforesaid storage space No. 1 to the Authority, it is agreed that the Authority shall pay to the Government 1.36 percent of that part of the total investment and operation and maintenance costs~~ **cost** ~~of the project allocated to power production~~ **in accordance with the schedule attached hereto as Exhibit II and in consideration of the Government's making available the aforesaid Storage Space No. 2 it is agreed that the Authority shall pay to the Government 1.38 percent of that part of the total investment cost of the project allocated to power production in accordance with the schedule attached hereto as Exhibit III. It is further agreed that the Authority shall also pay an undivided 2.74 percent of the total annual operation and maintenance costs of the project allocated to power production upon receipt of bills to be rendered annually for the actual costs for the preceding year**~~. The sum of $12,200 shall be paid on the anniversary date following each full year after initial operation for a period of 50 years to reimburse the investment cost, and an additional $3,900 per year shall be paid to cover allocated operation and maintenance and major replacement costs for as long as the storage space is used subject to adjustments from time to time as determined by the Contracting Officer. The bases for these payments are shown in Exhibit I. In consideration of the Government making available the aforesaid storage spaces Nos. 2 and 3 to the Authority, it is agreed that the Authority shall pay the allocated cost of such spaces determined in the same manner as for storage space No. 1. The payments for storage spaces Nos. 2 and 3 will be established upon the request of the Authority by the Contracting Officer prior to its use to include any modifications to costs allocated to power production.~~

All payments shall be made to the Treasurer of the United States and shall be forwarded directly to the Contracting Officer or to a representative designated by him.

Records of cost of operation and maintenance for power production at the Project shall be available for inspection and examination by the Authority.

In the event of default in the payments contained in this Article, the amount of such payments shall be increased by an amount equal to interest on such overdue payments at the rate of two and five tenths percent (2.5%) per annum thereon; compounded annually, and such amount equal to interest shall be charged from the date such payments are due until paid.

ARTICLE 6. PERIOD OF CONTRACT. - This Contract shall become effective as of the date of approval by the Secretary of the Army, or his duly authorized representative, and shall continue in full force and effect for the life of the Project.

Changed per Supplemental Agreement No. 3 (Nov. 21, 2016)

~~ARTICLE 6. PERIOD OF CONTRACT. - This Contract shall become effective as of the date of approval by the Secretary of the Army, or his duly authorized representative, and shall continue in full force and effect until fifty~~

~~(50) year after the date of initial operation as defined in Article 1 or the life of the Project, whichever is less.~~

ARTICLE 7. PERMANENT RIGHTS TO STORAGE. - Upon completion of payments by the Authority for the investment cost of storage, as provided in Article 5, the Authority shall have a permanent right, under the provisions of the Act of 16 October 1963 (Public Law 88-140, 43 U.S.C. §§ 390c-f), to the use of the water supply storage space in the Project as provided in Article 1, subject to the following:

Changed per Supplemental Agreement No. 3 (Nov. 21, 2016)

(a) The Authority shall continue payment of annual operation and maintenance costs allocated to water supply as provided in Article 5.

(b) The Authority shall bear the costs allocated to water supply as provided in Article 5b of any necessary reconstruction, rehabilitation, or replacement of Project features which may be required to continue satisfactory operation of the Project. The District Engineer will establish such costs and repayment arrangements shall be in writing and payments shall be made, at the Authority's option, either incrementally during construction or in lump sum (including interest during construction) upon completion of construction.

(c) Upon completion of payments by the Authority as provided in Article 5, and at intervals not to exceed fifteen (15) years thereafter, the District Engineer shall perform a sedimentation survey, unless the District Engineer determines that such a survey is unnecessary. If, in the opinion of the District Engineer, the findings of such survey indicate any Project purpose will be affected by unanticipated sedimentation distribution, there shall be an equitable redistribution of the sediment reserve storage space among the purposes served by the Project including municipal and industrial water supply. The total available remaining storage space in the Project will then be divided among the various Project features in the same ratio as was initially utilized. Adjusted pool elevations will be rounded to the nearest one-half foot. Such findings and the storage space allocated to municipal and industrial water supply shall be defined and described as an exhibit which will be made a part of this agreement, and the water control manual will be modified accordingly.

(d) The permanent rights of the Authority under this agreement shall be continued so long as the Government continues to operate the Project. In the event the Government no longer operates the Project, such rights may be continued subject to the execution of a separate agreement or additional supplemental agreement providing for:

(1) Continued operation by the Authority of such part of the facility as is necessary for utilization of the water supply storage space allocated to it;

(2) Terms which will protect the public interest; and,

(3) Effective absolvement of the Government by the Authority from all liability in connection with such continued operation.

~~ARTICLE 7. RENEWALS. - Upon the expiration of the period as prescribed in Article 6 above, the Authority shall have the right, subject to required approvals of appropriate authorities, to negotiate for continued use of storage space then available for water storage purposes. The terms of the renewal contract shall be subject to mutual agreement of the contractual parties at the time. It is understood and agreed that in determining the allocable charges to be specified in the renewal contract, due consideration will be given to the fact that the payments prescribed herein and any other expenses which are attributable to the Authority may have been paid. It is further understood and agreed that consideration will be given to any expenditures made or expected to be made by the Government which have not been recovered during the contract period.~~

ARTICLE 8. DEFAULT. - In the event the Authority refuses or fails to comply with the provisions of this contract with respect to payments and transfer and assignment, the Government reserves the right to terminate this contract.

ARTICLE 9. OPERATION AND MAINTENANCE. - The Government shall operate and maintain the Project owned by the Government. The Authority shall have the right to make withdrawals of water for its purposes as needed in accordance with Article 1. The Authority shall be responsible for operation and maintenance of all features and appurtenances which may be provided and owned by the Authority. In the event the Government should suspend operation and maintenance of the Project during the period of this contract, due to lack of appropriated funds, then and in that event the Authority shall be privileged and shall have the right to enter upon the premises and operate the same for its own uses and benefit in supplying itself with water to the extent provided in this contract.

ARTICLE 10. RIGHTS-OF-WAY. - The grant of an easement for right-of-way over, across, in and upon Government-owned lands, under the control of the Secretary of the Army, required for transmission of water from point of withdrawal, shall be by separate instrument in a form satisfactory to the Secretary of the Army without additional cost to the Authority, under the authority, and in accordance with, the provisions of 10 U.S.C. 2669.

ARTICLE 11. RELEASE OF CLAIMS. - The Authority shall hold and save the Government, including its officers, agents, and employees harmless from liability of any nature or kind for or on account of any claim for damages which may be filed or asserted as a result of the storage in the Project or withdrawal or release of water from the Project, made or ordered by the Authority, or as a result of the construction, operation, or maintenance of the features or appurtenances owned and operated by the Authority.

ARTICLE 12. TRANSFER OR ASSIGNMENT. - The Authority shall not transfer or assign this contract, nor any rights acquired thereunder, nor suballot said water supply storage space or any part thereof, nor grant any interest, privilege, or license whatsoever in connection with this contract, without approval of the Secretary of the Army; provided that this restriction shall not be construed to apply to any water which may be obtained from the water supply storage space by the Authority and furnished to any third party or parties, nor any method of allocation thereof.

ARTICLE 13. OFFICIALS NOT TO BENEFIT. - No member of or delegate to Congress, or resident commissioner, shall be admitted to any share or part of this contract, or to any benefit that may arise therefrom; but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 14. COVENANT AGAINST CONTINGENT FEES. - The Authority warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Authority for the purpose of securing business. For breach or violation of this warranty the Government shall have the right to annul this contract without liability or in its discretion to add to the contract price or consideration or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

ARTICLE 15. APPROVAL OF CONTRACT. - This contract shall be subject to the written approval of the Secretary of the Army, or his duly authorized representative, and shall not be binding until so approved.

IN WITNESS THEREOF, the parties hereto have executed this agreement as of the day and year first above written.

APPROVED: THE UNITED STATES OF AMERICA

/signed/ By /signed/

Cyrus R. Vance
Secretary of the Army

D.A. RAYMOND, Colonel
Corps of Engineers, District Engineer
Contracting Officer

[Oct. 31, 1963]

COBB COUNTY-MARIETTA WATER AUTHORITY
By /signed/

EXHIBIT I

BASIS FOR PAYMENTS ESTABLISHED IN ARTICLE 5

Hydraulic factors

Project power storage between pool elevations 800 and 840	285,000 acre-feet
Low flow period of record since 1897 from July 1939 through January 1942	31 months
Maximum water yield during period with storage	2,169,000 acre-feet
Average annual yield	839,800 acre-feet

	Water supply increment		
	First	Second	Third
Water requirements			
Maximum daily mgd.	12	36	58
Average daily mgd.	10.1	20.5	34.5
Average daily c.f.s.	15.7	31.8	53.5
Annual acre-feet	11,400	23,000	38,700
Percent of yield	1.36	2.74	4.61
Storage in power pool, acre-feet	3,870	7,810	13,140

[…]

ENCLOSURE 2: ADOPTED (USACE) STORAGE ACCOUNTING

The Mobile District employs storage accounting to determine the volume of water held in the storage space allocated to each water supply user ("User") at Allatoona Lake, with the remainder of conservation storage constituting the Corps' account. *See* ALABAMA-COOSA-TALLAPOOSA RIVER BASIN WATER CONTROL MANUAL (MAY 2015), APPENDIX A, ALLATOONA DAM AND LAKE WATER CONTROL MANUAL ("Allatoona WCM") 8-5 to 8-6. As described below, storage accounting tracks multiple storage accounts, crediting each account with a proportion of inflows and losses (e.g. evaporation), and also debiting direct withdrawals by specific Users to the User's account. The amount of water that may actually be withdrawn is ultimately dependent on the amount of water available in the User's storage space, which will naturally change over time.

The necessary data to determine the volume of water held in storage for water supply is received daily, with computations performed weekly during normal conditions, and daily under extreme drought conditions. This accounting is especially critical during drought, when less water is available in storage allocated to water supply and additional conservation measures or alternative sources may be necessary.

The formula used to calculate the volume water available in each User's water supply account each day is shown below:

Ending Storage* = Beginning Storage + Inflow Share – Loss Share – User's Usage

(*with constraint that "Ending Storage" cannot be larger than User's total storage)

The User's Beginning Storage volume and withdrawals from the User's storage space are known, while the User's share of Inflow must be calculated from other known values.

Inflow is calculated at Allatoona Lake hourly by the following formula:

1. $I = \Delta S_r + D + W_T$

Where:

I = Inflow
ΔS_r = Period Ending Volume of Water in Reservoir Conservation Storage – Period Beginning Volume of Water in Reservoir Conservation Storage
D = Total Discharge from Dam (powerhouse + leakage + spill + sluice)
W_T = Total water withdrawal by User

The change in the volume of water held in storage is determined directly from the actual pool elevation and thus considered observed values. Discharge is considered an observed value also because it is determined using spillway, sluice or turbine rating curves and the actual pool

elevation. Using this method means the effects of precipitation, losses, water withdrawals, turbine releases, and any other variables that affect the volume of water in the reservoir are combined within the calculated inflow value. Losses are the sum of reductions in the volume of water held in storage due to factors such as evaporation and leakage. Adjusted Inflow as calculated in equation 1 reflects the losses from evaporation and leakage as well as withdrawals. Each User shares a portion of the Adjusted Inflow after evaporation and leakages have occurred.

For purposes of a water supply storage contract, a User's share of the Adjusted Inflow is defined by the percentage of conservation storage at full summer pool as specified in the contract. This percentage is fixed throughout the year. In terms of a formula this means the following:

2. $I_s = [S_{t\text{-}s} / S_{t\text{-}r}] * I$

Where:

I_s = User's share of Inflow
$S_{t\text{-}s}$ = User's total storage space per contract
$S_{t\text{-}r}$ = Reservoir total conservation storage at summer level
I = Inflow

The conservation pool is drawn down as water usage exceeds inflow. The individual accounts are drawn down at different rates based on their usage. Users will be notified on a weekly basis of the available storage remaining, once their storage account balance drops below 30%.

ENCLOSURE 3: ALTERNATIVE (COBB-MARIETTA) STORAGE ACCOUNTING

[STAY AGREEMENT] EXHIBIT A: ALTERNATIVE STORAGE ACCOUNTING

1. Storage Accounting Principles

1.1. All water supply storage at Allatoona Lake is located within the "Conservation Pool."

1.2. The size of the Conservation Pool varies seasonally in accordance with the top-of-conservation guide curve.

1.3. Because water for all purposes is commingled in the Conservation Pool, Storage Accounting is used to determine how much of the water in the Conservation Pool is held for, and thus available to, each User on each day.

1.4. Each User, including the Government, is assigned a Storage Account.

1.5. The size of a User's Storage Account is the maximum volume of water that can be stored for that User.

1.6. For water supply users, the size of the Storage Account is equal to the volume of storage under contract. The remainder is allocated to the Government's Storage Account.

1.7. Joint Gains and Losses to the Conservation Pool—including natural inflow, precipitation, evaporation, seepage, and any other losses—are credited and/or debited to individual Storage Accounts pro rata based on the size of the Storage Account in relation to the Conservation Pool.

1.8. Specific Gains and Losses to the Conservation Pool—including withdrawals by individual Users, releases from the dam for specific purposes such as hydropower, Made Inflows (if recognized), and any other gains or losses to be credited or debited to a specific Storage Account—are credited or debited to the individual Storage Account associated with the gain or loss.

1.9. The Storage Account Balance for a given User on a given day is the volume of water available to that User on that day.

1.10. Any inflow to a Storage Account in excess of the account limit is distributed pro rata to any other Storage Accounts that are not full.

2. Storage Accounting Formulas

2.1. Storage Account Balance

The Storage Account Balance ("B") for each User ("U") is updated daily. The Balance for the User on day t ("$B_{(u,t)}$") is equal to the previous day's balance ("$B_{(u,t-1)}$") plus the User's Share ("$P_{(u,t)}$") of Joint Gains and Losses ("J_t") and any Specific Gains and Losses allocated to the User. Specific Losses ("L_u") include any withdrawals by Users and any releases from the dam, which are debited to the Government's Account. Specific Gains include any Made Inflows allocated to a User ("$MI_{(u,t)}$".

						Joint Gains and Losses						*Specific Gains and Losses*		
User Balance at end of Day t		=	User Balance at end of Day t-1	+	(	Joint Gains and Losses	x	User's Share	)	–	Withdrawals or Releases	+	Made Inflows Allocated to User
Adopted Rule	$B_{(u,t)}$	=	$B_{(u,\ t-1)}$	+	(	J_t	x	$P_{(u,t)}$	)	–	$L_{(u,t)}$	+	0
Alternative Rule	$B_{(u,t)}$	=	$B_{(u,\ t-1)}$	+	(	J_t	x	$P_{(u,t)}$	)	–	$L_{(u,t)}$	+	$MI_{(u,t)}$

2.2. Joint Gains and Losses

"Joint Gains and Losses" are calculated based on the change in the volume of water held in storage from Day t-1 to Day t. Because the change in the volume of water held in storage reflects the total of all gains and losses, including any gains or losses to be allocated separately (such as withdrawals made by an individual user), it is necessary to "correct" the observed number by subtracting any "Specific Gains" and adding any "Specific Losses" to be allocated separately. If Made Inflows are not recognized, there will be no "Specific Gains," so this term will always be zero.

				Specific Gains and Losses		
Joint Gains and Losses	=	Change in Volume of Water Held in Storage	+	Withdrawals and Releases (all users)	–	Made Inflows (all users)

Adopted Rule	$J_{(t)}$	=	$\Delta S_{(t, t-1)}$	+	$L_{(all\ users,t)}$	–	0
Alternative Rule	$J_{(t)}$	=	$\Delta S_{(t, t-1)}$	+	$L_{(all\ users,t)}$	–	$MI_{(all\ users,t)}$

2.3. User's Share of Joint Gains and Losses

The Adopted Storage Accounting calculates the User's Share of Joint Gains and Losses on Day t ($P_{(u,t)}$) based on the size of the User's Storage Account in relation to the volume of the conservation pool at full summer pool (i.e, elevation 840 feet, which is the top-of-conservation elevation from May 1 through Labor Day). The Alternative Storage Accounting principle is to calculate the User's Share of Joint Gains and Losses on Day t based on the size of the User's Storage Account in relation to the size of the conservation pool on Day t.

User's Share of Joint Gains and Losses on Day t		=	Conservation Storage Contracted to User	÷	"Conservation Storage"
Adopted Rule	$P_{(u,t)}$	=	User's Account Limit	÷	284,580 acre-feet
Alternative Rule	$P_{(u,t)}$	=	User's Account Limit	÷	Actual Volume of Conservation Storage as Defined by Top-of-Conservation Rule Curve on Day t

2.4. Made Inflow

Because the Adopted Storage Accounting does not recognize Made Inflow as a separate category of inflow that can be allocated separately, Made Inflow is always "zero" in the Adopted Storage Accounting. The effect is to include Made Inflow as a Joint Gain that is shared *pro rata* as part of the Joint Gains and Losses. The Alternative Storage Accounting recognizes Made Inflow as a separate category of inflow that may be allocated to Users by the State.

Made Inflow			
Adopted Rule	$MI_{(u,t)}$	=	0

Alternative Rule	$MI_{(u,t)}$	The volume of any "made inflow" allocated to the user on Day t by the State of Georgia through permits issued by Georgia EPD