IN THE
SUPREME COURT OF THE UNITED STATES

No. 138, Original

STATE OF SOUTH CAROLINA,
Plaintiff,
v.

STATE OF NORTH CAROLINA,
Defendant,

CATAWBA RIVER WATER SUPPLY PROJECT,
Defendant-Intervenor,

DUKE ENERGY CAROLINAS, LLC,
Defendant-Intervenor.

Before the Special Master
Hon. Kristin L. Myles

REPLY BRIEF OF THE STATE OF SOUTH CAROLINA ON THE PARTIES' PROPOSED CASE MANAGEMENT PLAN

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Several areas of dispute remain with respect to the case management plan ("CMP"). Specifically, North Carolina and intervenors seek to include within the initial period of discovery two complex issues that all parties previously had agreed are irrelevant to South Carolina's threshold showing of injury; it remains the case that a decision on the relevance and any needed scope of discovery on these issues sensibly can be deferred until after a ruling on summary judgment motions on that issue. In addition, North Carolina and intervenors propose an unwieldy schedule involving at least three years of discovery, more than 600 depositions, more than 1,000 interrogatories, and likely tens of millions of dollars in added litigation costs. South Carolina has proposed a schedule designed to permit full discovery on all relevant issues while encouraging the parties to focus on the most important ones. North Carolina also seeks to burden the CMP with unnecessary language relating to a discrete dispute about the parties' contention interrogatory responses, which is properly addressed through the meet-and-confer process (or on a motion to compel) and not in the CMP.

With respect to these and other disputed issues, South Carolina has put forward a reasonable timeframe and set of limitations that would allow the parties to engage in sufficient discovery while nonetheless moving the case forward in an efficient manner. South Carolina respectfully requests that the Special Master adopt its proposals with respect to those areas of dispute in the CMP.

ARGUMENT

A. Discovery On The Alleged Benefits Of Interbasin Transfers To The Receiving Basin And Electricity Generation Should Be Deferred (§ 5.2)

During briefing on whether to bifurcate these proceedings, all parties agreed that two issues — the purported benefits from interbasin transfers to the transferee basin and electricity generation — are irrelevant to the threshold question whether South Carolina could establish injury stemming from North Carolina's uses, and discovery on them could therefore be deferred. *See* SC Br. 4 & n.1.[1] Although the Special Master has now ruled that the trial in this case will focus on the broader question of South Carolina's entitlement to a remedy, it remains the case that the parties have indicated an intent to file pre-trial summary judgment motions on the narrower question whether South Carolina has demonstrated threshold injury. *See id.* at 5. Because all parties have agreed that the facts concerning benefits from interbasin transfers and electricity generation are irrelevant to South Carolina's threshold showing, any discovery on those issues should be deferred until after summary judgment motions on South Carolina's threshold showing of harm are resolved. Discovery on those issues would occur, if necessary and deemed relevant, before a trial on South Carolina's entitlement to a remedy.

Now that the Special Master has denied their request to bifurcate this case, North Carolina and intervenors have taken a position at odds with their prior stance, claiming that discovery should proceed immediately because those issues

[1] South Carolina continues to reserve the right to challenge both discovery issues as irrelevant and/or unduly burdensome.

are arguably relevant to the trial on South Carolina's entitlement to a remedy. *See* NC Br. 1-2; Intervenors Br. 1-2. However, because all have agreed that both issues are irrelevant to whether South Carolina can show harm from North Carolina's water uses, no party will suffer prejudice if, as South Carolina proposes, discovery on both issues is deferred at this time.

Contrary to North Carolina's claim (at 2), South Carolina does not propose postponing discovery on these two issues until after trial. Instead, South Carolina proposes deferring discovery until after summary judgment motions on South Carolina's threshold showing of injury — which all parties and the Special Master anticipate will be filed prior to the close of discovery — are ruled upon. *See* 8/20/10 Tr. 12 (noting that summary judgment motions on threshold issues could "narrow the scope of the trial in useful ways"); *id.* at 22 (North Carolina stating intention to file such a motion "before all of the discovery on all of the remedy issues, including balancing of harms and benefits").[2]

Deferring discovery on these issues is particularly warranted because, on North Carolina's and the intervenors' view, both are exceedingly complex. North Carolina thus asserts that addressing these issues upfront "will greatly increase the time required for fact discovery." NC Br. 3. Analysis of alleged benefits that South Carolina receives from interbasin transfers will require, in essence, a second full

[2] Intervenors claim here, for the first time and without explanation, that "[b]oth benefits [from interbasin transfers and electricity generation] are relevant *to threshold injury* and to the equitable apportionment factors." Intervenors Br. 2 (emphasis added). Previously, however, intervenors had claimed that those issues were *irrelevant* to threshold injury, and they provide no explanation for their abrupt change of position. *See*, *e.g.*, Intervenors Ltr. Br. 5 (July 30, 2010) (issues c & d).

round of discovery pertaining to a second river basin (and the functional equivalent of a second equitable apportionment action). And discovery into the benefits of electricity generation will potentially be more complicated: electric power is generated from hydroelectric plants located in both States (which do not operate continuously, but rather are primarily utilized during periods of high demand), flows in both directions across the border, and is consumed by residents and businesses in both States. Assessing the net benefit that each State receives from hydroelectric production in the other State will be exceedingly difficult — and the result, it would seem, may well be negligible.[3] All of that additional discovery may well be unnecessary depending on the outcome of the summary judgment motions, as well as the settlement discussions that discovery targeted to issues of central relevance to the case may promote.

B. The CMP Should Adopt South Carolina's Proposed Limits On Discovery

1. Fact Discovery Should Be Limited to 15 Months (§ 5.4)

South Carolina has proposed a reasonable discovery deadline that will permit the parties to explore all relevant issues prior to trial. North Carolina, in its brief, proposes no deadline at all and a set of discovery limitations that will guarantee that discovery drags on for years.[4]

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[3] Again, South Carolina reserves the right to dispute the relevance of either of these issues to this action.

[4] As North Carolina concedes, however, its extreme position on discovery limitations is driven in large part by its request to permit the parties to conduct discovery on the alleged benefits of interbasin transfers and electricity generation. *See* NC Br. 3-4. If those

As an initial matter, North Carolina's proposal that the CMP impose no deadline at all is unreasonable. North Carolina claims that it "is not confident that the Parties can accurately predict how long fact discovery will take." NC Br. 4. But there must be *some* deadline, and failing to include one would invite those parties that oppose a remedy to drag out the discovery process. A deadline of 15 months is far more likely to encourage the parties to conduct discovery in an expeditious manner and work to a resolution of this case. If the parties cannot complete discovery within 15 months, they may request extension of the deadline upon a showing of good cause. South Carolina's proposal is by far the more reasonable and should be adopted.

2. South Carolina Has Proposed Reasonable Limitations on Interrogatories, Depositions, and Requests for Admissions

a. *Interrogatories* (§§ 6.2, 6.3). South Carolina has proposed that each side be permitted a total of 140 interrogatories. This proposal allows for more than five times as many interrogatories as are authorized by the federal rules, *see* Fed. R. Civ. P. 33(a)(1), and is more than adequate to allow for a full development of the factual record. North Carolina's proposal, by contrast, would force South Carolina to respond to 450 interrogatories, imposing an unwarranted burden on the State.

North Carolina and intervenors object to being required to share a total number of interrogatories. *See* NC Br. 8. The Special Master has adopted just such a practice in the past, however, in setting page limits for briefing that assign the

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issues are deferred, as South Carolina requests, North Carolina presumably will concede that its three-year suggested timeframe necessarily should be shortened.

same number of pages to the parties on each side of the caption, recognizing the inherent fairness in requiring North Carolina and its supporting intervenors collectively to hew to the same limits as South Carolina.[5] Despite their protestations to the contrary, the record of this case establishes that the interests of North Carolina and intervenors are generally aligned. North Carolina and intervenors have, to date, taken the same position on every significant disputed issue to arise in this litigation, including the question of bifurcation. And, to date, *all* of the discovery requests North Carolina and intervenors served have been directed toward South Carolina; neither North Carolina nor intervenors have served any discovery on each other. Nor does North Carolina's proposal contemplate any future discovery requests directed to intervenors (or intervenors to direct such requests to North Carolina).

Finally, the fact that the original CMP allowed for 30 contention interrogatories provides no support for North Carolina's proposed limits. The original CMP allowed the parties to conduct discovery into *both* anticipated phases simultaneously, required the parties to "make best efforts to conduct all discovery efficiently," and set interrogatory limits accordingly. Case Management Plan § 4.1. It is thus incorrect to claim, as North Carolina does, that a second phase of discovery under the original CMP would have been "much broader" than the first phase. NC Br. 9. In fact, the reverse is true: the parties would have conducted

[5] *See* E-mail from Special Master Myles to all counsel of Feb. 24, 2010, setting briefing schedule concerning issues of bifurcation and allocating the same number of pages to South Carolina, and to North Carolina and Intervenors collectively.

discovery into most issues relevant to the equitable apportionment analysis during the discovery period established under the original CMP, leaving little additional discovery for a second phase. Thus, South Carolina's proposal to grant each side 40 contention interrogatories as to all issues (save the two issues it proposes to defer) accords with the limit of 30 set forth in the original CMP. North Carolina's proposal, by contrast, would force South Carolina to respond to 150 contention interrogatories, a number completely out of proportion to the original limits.

b. *Fact Witness Depositions* (§ 6.6.1). South Carolina proposes that each side be permitted 30 depositions of fact witnesses, excluding cross-noticed depositions of fact witnesses of interest to both sides. South Carolina's proposal also contemplates a limited number of additional depositions pertaining to the two subjects that South Carolina proposes deferring, along with depositions of any party's experts. South Carolina's proposal therefore would permit full discovery on all relevant subjects while encouraging the parties to move the case forward by focusing their efforts on the issues that are central to the dispute.

North Carolina, in contrast, proposes a total of 600 depositions consuming 6,000 hours of deposition time, in addition to cross-noticed depositions and depositions of experts. North Carolina does not attempt to justify its extraordinary proposal, other than to claim that the parties have identified "approximately 160" fact witnesses, of which "approximately 88" were identified by South Carolina. NC Br. 10. In fact, the parties have identified 68 potential witnesses (and South Carolina only 38) in their fact interrogatory responses; North Carolina provides no

basis for its inflated numbers.[6] Moreover, even if North Carolina's numbers were accurate — and they are not — it does not explain how it made the leap from 160 potential witnesses to 600 depositions, especially given the fact that many of the identified witnesses will be the subject of cross-noticed depositions (a fact North Carolina ignores). Nor does North Carolina justify its apparent assumption that every person mentioned in an interrogatory response must be deposed.

In fact, not all of the 68 (or 160) individuals identified to date will warrant the time and expense of depositions.[7] It is the rare case indeed where litigants find it worthwhile to depose every person who might possess a piece of relevant information. Thus, even allowing for additional witnesses identified by the parties, South Carolina's proposal would be sufficient to allow all parties to engage in full discovery of all relevant issues. In all events, should unforeseen circumstances arise, either party could seek leave, upon a showing of good cause, to depose an additional fact witness if 30 non-expert, non-cross-noticed, non-deferred-topic depositions prove truly insufficient.

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[6] In addition to the 38 witness identified by South Carolina, North Carolina has identified 24 potential witnesses in its interrogatory responses. Duke has identified eight, of whom two were also identified by North Carolina. *See* South Carolina's Responses to North Carolina's First Set of Interrogatories and Requests for Production of Documents at 9-12 (July 31, 2008); South Carolina's Supplemental Responses to North Carolina's First Set of Interrogatories at 2-4 (Apr. 2, 2010); North Carolina's First Response to South Carolina's First Set of Interrogatories at 7-21 (Sept. 4, 2008); Duke Energy's Response to South Carolina's First Set of Interrogatories at 10, 12, 15, 17, 19 (Sept. 4, 2008).

[7] The 38 individuals identified by South Carolina were provided in response to a series of extremely broad requests, such as a request for the identity of "every person with knowledge" of "each instance in which North Carolina's actions are alleged to have resulted in harm to South Carolina." NC Interrogatory No. 1.

c. *Requests to Admit* (§ 5.3.9). South Carolina has proposed that the CMP impose a reasonable limit of 300 requests for admission per side. Since 1993, the federal rules have directly authorized district courts to limit the number of such requests, and many district courts have set baseline limits of 25 or 30 such requests. *See* SC Br. 12-13.[8] As those courts' local rules implicitly recognize, North Carolina's assertion (at 4) that South Carolina be required to seek a protective order from burdensome requests has it exactly backward. Instead, there should be a baseline number — and, here, South Carolina is proposing approximately *10 times* the limit under many district court local rules — exceedance of which the *proponent* should be required to justify.[9]

Importantly, neither North Carolina nor intervenors have argued that 300 requests for admission would be *inadequate*; rather, they object to the very concept of a limitation. But there is no reason why 300 requests for admission per side will be insufficient to permit the parties to limit the contested issues and narrow the scope of this case. If one party ultimately concludes that it needs additional requests to admit, then, as with all limitations in the CMP, it may request that the other party stipulate to a higher number, or seek leave, upon a showing of good cause, before the Special Master. But, by failing to impose a limit, as North

[8] Because the relevant language was added in 1993, the 1970 advisory committee notes and the 1962 law review article cited in North Carolina's opening brief, *see* NC Br. 3, are of no relevance.

[9] The fact that the original CMP did not impose a limit on the number of requests for admission is irrelevant. The original CMP also did not limit the total number of depositions to be taken, but all parties agree here, as they focus on the trial concerning South Carolina's entitlement to a remedy that the Special Master has ordered, that a limit on depositions is necessary.

Carolina and intervenors suggest, the CMP would invite abuse. South Carolina respectfully requests that the CMP impose a limit of no more than 300 requests for admission.

d. *Prohibition on Duplicative Discovery* (§ 5.7). Section 5.7 of the proposed amended CMP states that "[t]he Parties shall endeavor not to serve duplicative discovery." Proposed Amended CMP § 5.7. South Carolina has proposed that the CMP also include the following sentence, which mirrors one in the original CMP: "Thus, for example, discovery served on the party States by Intervenors shall not be duplicative of discovery served on either Party State by the other." *Id.* As noted, all discovery requests by North Carolina and intervenors to date have been directed to South Carolina; nothing suggests that this pattern is likely to change. Intervenors object (at 3) to the requested language, but they do *not* dispute that it accurately reflects the substance of the parties' agreement, as well as the previous CMP. Nor do they identify any possible harm or prejudice to them from retaining the substance of the language from the CMP now in place. South Carolina, as the party with the most reason to be concerned about the possibility of being subjected to duplicative discovery demands, respectfully requests that the CMP retain the proposed language.

3. The Parties Should Propose Expert Discovery Schedules Six Months Prior to the Close of Fact Discovery (§ 5.5)

Requiring the parties to meet and confer and then propose expert discovery schedules six month in advance of the close of fact discovery is the most efficient way to proceed. At that time — and regardless of whether South Carolina's 15-

month proposal or North Carolina's three-year proposal is adopted — the parties will know the state of fact discovery and effectively can work together to submit concrete proposals or disputes to the Special Master.

In contrast, North Carolina's proposal would simply invite wasted effort on behalf of all parties. Any agreements reached based on negotiations that start only six months into a discovery period that (in North Carolina's view) should last three years or even longer surely will require revisions as fact discovery proceeds.[10]

South Carolina's proposal is the more reasonable and should be adopted.

4. North Carolina's Additional Language Regarding Contention Interrogatory Responses Is Unwarranted (§§ 5.4, 6.1)

North Carolina continues to urge that the CMP include language relating to the ongoing meet-and-confer process with respect to the parties' contention interrogatory responses. Specifically, it proposes that the CMP require South Carolina to supplement its contention interrogatory responses within 60 days and further state that "[n]o party shall refuse to respond or to supplement a response to a contention interrogatory on the grounds that discovery is not yet complete or, where the party chooses to rely on its experts to provide its response, that the service of expert reports has not yet been required." Proposed Amended CMP § 6.1.

[10] North Carolina argues (at 6) that South Carolina changed its position on this issue. South Carolina initially proposed that the parties agree to a nine-month discovery period, with expert schedules due six months after the start of that period (or three months from the end of that period). In an effort to move toward agreement, South Carolina then proposed a 15-month discovery period, with expert schedules due six months prior to the end of discovery (or nine months after the start of discovery); North Carolina, however, continued to insist that discovery last three years or longer. Thus, South Carolina consistently has maintained that expert discovery schedules should be proposed toward the end of the fact discovery period.

There is no justification for including this language in the CMP. First, South Carolina has provided North Carolina with considerable detail in response to its contention interrogatories, and North Carolina's suggestion to the contrary is false. *See* SC Letter Br. 7-10 (July 30, 2010) (summarizing harms suffered from overconsumption of water in North Carolina); South Carolina's Responses to North Carolina's First Set of Contention Interrogatories (Apr. 2, 2010) (attached hereto as Exhibit A).

For instance, North Carolina asked South Carolina to identify the substantial harms caused to South Carolina by uses of the Catawba River in North Carolina. In response, South Carolina provided a 20-page answer describing, in significant detail, the harms it has suffered as a result of North Carolina's use of the Catawba. *Id.* at 7-26. Among other things, South Carolina's answer listed a number of specific businesses that had been harmed by North Carolina's uses, *id.* at 8-13, 15-16; it described specific recreational harms that had occurred, *id.* at 13-15; and it detailed secondary harms suffered by the regional economy as well as declines in property values, *id.* at 16-18. Where known, South Carolina also provided its understanding of the approximate dollar amounts associated with these harms, — even where the final, specific calculation of economic harms will be derived by expert economic analysis. *See*, *e.g.*, *id.* at 9-18 (harms to Bowater in excess of $10 million; to South Carolina Electric & Gas of more than $65 million; and to recreational uses and water-related businesses likely exceeding $10 million over a six-month period when lake levels were exceedingly low; as well as other specific

harms described by South Carolina). South Carolina also cited publications and other sources that supported its claims and provided evidence of expected future harms based on past history, Duke's modeling of the Catawba River Basin, expected growth in population and water demands, and preliminary indications made by South Carolina's expert hydrology analysis, which is ongoing. *See*, *e.g.*, *id.* at 22-26.

South Carolina, moreover, has not withheld disclosure of any requested *facts* on which it may rely, on the basis that its experts may rely on those facts. Instead, South Carolina has stated that expert *opinions and conclusions* to be drawn *from* those facts, such as about certain water flows and related requests by North Carolina, will be provided in South Carolina's expert reports and based on expert hydrology analysis using complex computer modeling. For instance, North Carolina demanded that South Carolina identify the amount of Catawba River water use that must be eliminated in order to prevent substantial harms to South Carolina. *See id.* at 31. This specific level of information is not currently known and cannot be known until South Carolina's hydrology experts complete their investigations and reach their conclusions.

North Carolina also complains about South Carolina's response to a contention interrogatory that asked South Carolina to identify those specific uses of Catawba River water in North Carolina that must be enjoined to eliminate any harm to South Carolina. *See id.* at 27-28. South Carolina responded with its legal contention that this interrogatory seeks irrelevant information: South Carolina's goal is to protect (and, indeed, increase) its own aggregate share of the water of the

Catawba; it is for North Carolina to decide how its share of the water will be distributed among residents of North Carolina. South Carolina provided North Carolina with citations to Supreme Court decisions supporting its legal position. *See id.* at 28-29. Nothing more is required. That said, South Carolina also made clear that interbasin transfers effectuated in North Carolina by far cause the greatest harm, gallon for gallon, because none of the water withdrawn is returned to the Catawba River Basin. *See id.* at 30.[11] In times of low flows, therefore, the Court may well conclude that those interbasin transfers logically would be the first to be stopped or reduced in North Carolina so that sufficient water is available for South Carolina uses.

In sum, South Carolina's responses to North Carolina's contention interrogatories clearly place North Carolina on notice of South Carolina's contentions regarding its harms so that North Carolina can conduct discovery on them — as it already has been doing by serving numerous subpoenas on South Carolina's water users. Thus, North Carolina has no basis for complaining about South Carolina's interrogatory answers. But, if North Carolina truly believes that South Carolina's responses were inadequate, it should seek to resolve any disagreements through the meet-and-confer process and, if needed, through the filing of a motion to compel. Instead, it seeks to short-circuit this process by asking

[11] As North Carolina has admitted, "[w]hen water is transferred out of a river basin, flows downstream of the withdrawal are reduced, which can raise a number of economic and ecological concerns." Div. of Water Resources, North Carolina Dep't of Env't & Natural Resources, *State Water Supply Plan* § 6.3 (Jan. 2001), *available at* www.ncwater.org/Reports_and_Publications/swsp/swsp_jan2001/final_pdfs/MainBody.pdf.

the Special Master to rule, in the absence of full briefing on the subject or an adequate factual record, that South Carolina's interrogatory responses were inadequate. The CMP is not the place to resolve such disputes, and for this reason South Carolina respectfully requests that the Special Master reject North Carolina's proposed language.

CONCLUSION

South Carolina respectfully requests that the Special Master enter an Amended CMP incorporating South Carolina's language on all disputed issues.

Respectfully submitted,

for David C. Frederick /SKA

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EXHIBIT A

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STATE OF NORTH CAROLINA,
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Before the Special Master
Hon. Kristin L. Myles

PLAINTIFF SOUTH CAROLINA'S RESPONSES TO DEFENDANT NORTH CAROLINA'S FIRST SET OF CONTENTION INTERROGATORIES

Pursuant to the Rules of the Supreme Court of the United States and the Case Management Plan ("CMP") (adopted in Case Management Order No. 9 (Jan. 7, 2009)) submitted by the party States to the Special Master, including the Federal Rules of Civil Procedure as incorporated therein, Plaintiff South Carolina hereby responds to Defendant North Carolina's First Set of Contention Interrogatories (Feb. 23, 2010) ("Contention Interrogatories") as follows:

GENERAL OBJECTIONS

The following General Objections apply to each and every contention interrogatory and form an integral part of South Carolina's response to each contention interrogatory:

1. South Carolina objects to the Contention Interrogatories to the extent that they seek information protected by applicable privileges (including, but not limited to, the attorney-client privilege and the attorney work product privilege) or otherwise protected under applicable law.

2. South Carolina objects to the Contention Interrogatories to the extent that they seek trial preparation or expert information protected from disclosure under the CMP and its incorporation of the Federal Rules of Civil Procedure. In the event such information is produced in response to the Contention Interrogatories, such production is inadvertent and shall not constitute a waiver of any privilege, doctrine, or other ground for protecting such information from disclosure.

3. South Carolina objects to North Carolina's instruction governing South Carolina's response to contention interrogatories that call for information and/or a document that is privileged to the extent that North Carolina seeks to impose obligations beyond the requirements of CMP § 7 and/or Federal Rule of Civil Procedure 26(b)(5).

4. South Carolina objects to the Contention Interrogatories to the extent that they seek to impose obligations beyond the scope of discovery permitted under the CMP and its incorporation of the Federal Rules of Civil Procedure.

5. South Carolina objects to the Contention Interrogatories to the extent that they are vague, indefinite, uncertain, ambiguous, overly broad, unduly burdensome, irrelevant, duplicative, cumulative, not reasonably calculated to

lead to the discovery of admissible evidence, and/or cannot reasonably be answered.

6. South Carolina objects to the Contention Interrogatories to the extent that they are overly inclusive and/or call for extensive research, investigation, information, or identification of documents that would subject South Carolina to annoyance, embarrassment, oppression, or undue burden or expense.

7. South Carolina objects to the Contention Interrogatories to the extent that they seek information that is publicly available and equally available to both North Carolina and South Carolina.

8. South Carolina objects to the term "you" or "your" to the extent that it purports to require South Carolina to respond on behalf of any other entity that is not a party to this action or that South Carolina does not control. South Carolina further objects to the Contention Interrogatories to the extent that they seek documents not in the possession, custody, or control of South Carolina. Where the terms "you" or "your" are used, the responses will be made by and on behalf of South Carolina. South Carolina will produce only those documents in the possession, custody, or control of the executive branch and the agencies and departments under its control. It should not be inferred from the substance of any objection or response contained herein that documents responsive to any particular request exist.

9. South Carolina objects to the Contention Interrogatories to the extent that they purport to seek "all information available" to South Carolina, its

attorneys, its employees, and/or officers and agents on the ground that production of "all information available" will be overbroad and unduly burdensome.

10. South Carolina objects to the Contention Interrogatories to the extent that they seek non-public or confidential information. South Carolina will produce such information only as provided under CMP § 8 or any other applicable case management order.

11. South Carolina objects to the Contention Interrogatories to the extent that they purport to require South Carolina to provide information other than that which may be obtained through a reasonably diligent search of its records. South Carolina will produce only information in its possession, custody, or control.

12. South Carolina objects to the Contention Interrogatories to the extent that they demand information and/or documents that do not relate to the matters in this litigation. By responding to the Contention Interrogatories, South Carolina does not concede the relevance or admissibility of the information requested or provided in response to the Contention Interrogatories.

13. The responses contained herein reflect South Carolina's best knowledge at this time. South Carolina reserves the right to amend or supplement these responses, pursuant to the CMP and its incorporation of Federal Rule of Civil Procedure26(e), if different or more accurate information comes to South Carolina's attention.

14. South Carolina reserves the right to object to any future discovery on the same or related matters and does not waive any objections by providing the information in these responses.

15. South Carolina objects to the Contention Interrogatories to the extent that they seek information outside its knowledge.

16. South Carolina objects to the Contention Interrogatories to the extent the information sought by the Contention Interrogatories is more appropriate for disclosure in depositions and can be more efficiently and less burdensomely obtained thereby.

17. South Carolina objects to the Contention Interrogatories on the ground that they are improper, premature, and beyond the appropriate scope of discovery to the extent that they seek disclosure of information that is within the province of expert testimony prior to the completion of expert discovery under the scheduling order. Many of the subjects covered by the Contention Interrogatories will be addressed by South Carolina's expert opinion and testimony, and South Carolina therefore hereby incorporates by reference, as applicable, the expert reports to be submitted in this matter by South Carolina.

18. South Carolina objects to the Contention Interrogatories to the extent that they seek information not relevant to the claim or defense of any party at issue in this lawsuit or reasonably calculated to lead to the discovery of admissible evidence.

19. South Carolina objects to the Contention Interrogatories insofar as they purport to require South Carolina to state "all" facts and identify "all" evidence supporting South Carolina's contentions on the ground that such a request is overly burdensome to the extent that it requires more than the obligations imposed by the CMP and its incorporation of the Federal Rules of Civil Procedure.

20. South Carolina's responses to the Contention Interrogatories are made solely for the purposes of this action. In providing these responses, South Carolina does not in any way waive, but rather intends to preserve (a) all objections as to competence, relevancy, materiality, and admissibility; (b) all objections as to vagueness, ambiguity, and undue burden; (c) all objections as to a demand for further response to these or other document requests; and (d) all rights to object on any ground to the use of responses herein or material produced pursuant to these Contention Interrogatories in any proceeding.

21. These General Objections are incorporated by reference into each and every response below to the extent applicable. Various objections may be specifically referred to in the below responses for purposes of clarity. However, failure to incorporate specifically an objection should not be construed as a waiver of any such objection.

SPECIFIC OBJECTIONS AND RESPONSES TO THE CONTENTION INTERROGATORIES

Subject to the foregoing General Objections, which are incorporated into each and every one of the following responses, South Carolina responds to the Contention Interrogatories as follows:

Contention Interrogatory No. 1: What do you contend are the substantial harms to South Carolina caused by uses of the Catawba River in North Carolina which are sufficient to satisfy South Carolina's threshold burden of proving substantial injury? State all facts and identify all evidence supporting South Carolina's contention. In your answer, identify with specificity each harm of which South Carolina complains in the Litigation. In identifying each harm, please include a description of the nature, type, and extent of harm; the location of the harm; the time the harm occurred; the length and duration of the harm; and such other details as are necessary to assess the claim of injury.

Response to Contention Interrogatory No. 1: South Carolina objects to this Contention Interrogatory to the extent that it calls for expert opinion and testimony that is still being developed and to the extent that it calls for early identification of the specific evidence on which South Carolina may rely. Discovery and South Carolina's investigation of the facts are ongoing, and South Carolina reserves the right to supplement its response to this Contention Interrogatory. South Carolina will provide expert reports addressing these matters in greater detail consistent with the scheduling order entered in this case and identifying the evidence underlying those reports.

Subject to and without waiving South Carolina's general and specific objections, South Carolina identifies the following harms based on South Carolina's current understanding of the relevant facts. South Carolina's experts continue to analyze the available data, upon which their reports will be based,

and South Carolina reserves the right to supplement this response as the case progresses.

At the outset, it is important to note that South Carolina has sustained injury from significant periods of low flow from the Catawba River Basin in the past decade, which North Carolina's interbasin transfers from that Basin exacerbate. As the Catawba Riverkeeper noted in her affidavit attached to South Carolina's Complaint, "the Catawba River has reached its threshold for sustainable use" and thus "[a]ll interbasin transfers authorized by the State of North Carolina . . . that transfer water out of the Catawba River . . . impact and injure the State of South Carolina." Affidavit of Donna Lisenby ¶¶ 25-26 (May 30, 2007) (S.C. App. 41-42). The specific injuries documented below are manifestations of the harms that interbasin transfers and other consumptive uses inflict at a time when the Catawba River has reached its threshold of use.

A. Harms to Industrial and Commercial Users

South Carolina's existing industrial entities rely both directly and indirectly on the Catawba River system for the water they require as inputs to operate their businesses. These industrial entities have directly experienced added costs to obtain alternative sources of water, pay higher rates for existing water supplies, implement water-saving process changes or water recycling, or upgrade effluent discharge methods to reflect reduced assimilative capacity in receiving waters. Secondary economic impacts of these harms indirectly affect the regional economy (e.g., output, employment, and tax receipts).

A lack of reliable water availability has harmed South Carolina enterprises in the past and will continue to harm them in the future by creating additional costs (e.g., to obtain alternative sources of water, implement water-saving process changes or water recycling), production losses, and layoffs. The lack of reliable water availability also affects potential future business expansions and relocations to the Catawba River Basin in South Carolina. The following entities have suffered direct harms from low flows on the Catawba River.

Bowater Incorporated. As set out in the affidavit of Dale Herendeen, attached to South Carolina's Complaint, Bowater owns the largest coated paper and market pulp mill in North America and employs approximately 1,000 people. Bowater experienced low flows during the drought of 1998-2002 that severely reduced the assimilative capacity of the Catawba River. As a result, Bowater had to utilize a tertiary treatment plant using on-site holding ponds at a cost of thousands of dollars per day for chemicals used to treat its wastewater discharge, which would have been unnecessary had the flows in the River been sufficient. During the 1998-2002 drought, Bowater operated the tertiary treatment plant for 42 months at a chemical cost of approximately $7.5 million for the chemicals used, plus associated labor and power costs. By late 2002, the holding pond was close to capacity. Had capacity been reached, Bowater might have had to curtail production, which likely would have caused significant financial loss to Bowater and forced layoffs due to the cessation of plant

operations. During the subsequent 2007-2009 drought, Bowater operated its tertiary treatment plant for 7 months at 50% of capacity, at a cost of approximately $3.5 million, plus associated labor and power costs. In addition, Bowater incurred capital costs to upgrade its tertiary treatment plant.

South Carolina Electric & Gas. South Carolina Electric & Gas ("SCE&G") operates a coal-fired power generation plant located below Wateree Dam in Eastover, South Carolina, producing approximately 4.5 million megawatts per year and employing more than 100 people. SCE&G depends on the Catawba River, known as the Wateree River in South Carolina at the SCE&G plant, for water to cool its power plant. The ability to extract sufficient quantities of water (at suitably cool temperatures) is essential to operating its power generation facilities. Originally configured as a "once-through cooling" system, the facility returned the cooling water to the Wateree River in accordance with wastewater discharge permits from the National Pollutant Discharge Elimination System ("NPDES") that limit effluent temperature to ensure that in-stream waters stay below critical heat levels within a specified distance downstream of the discharge point. Low flows in the Wateree River reduce the capacity of the Wateree River to receive cooling water from the plant and stay within the temperature tolerances required by the NPDES permit. SCE&G had often suffered periods of low flow during summer months, particularly during the drought of 1998-2002, and those reduced in-stream flows

elevated the temperatures of the River at the intake and discharge points for the SCE&G facility.

To ensure a continuing ability to operate its power generation facility — especially during summer periods when air and water temperatures are at their highest, and the demand for and value of power generation from the facility is also at its greatest — SCE&G made a considerable investment to convert from once-through cooling to closed-cycle cooling at its coal-fired Wateree power plant at a one-time cost of $67 million, plus $500,000 per year in additional costs for chemicals used in that new cooling system. This conversion significantly reduces the amount of water that the facility needs to withdraw from the River and eliminates the discharge of thermally impacted wastewaters into the River. Had SCE&G not installed that upgrade, it likely would have had to de-rate its power plant and thus reduce power generation during the subsequent drought of 2007-2009. The costly upgrade enabled SCE&G to avoid reducing power production in the region in times when electricity was in highest demand and costing SCE&G considerable revenues and profits by curtailing its ability to generate and sell electricity at peak prices.

Invista. Invista's nylon manufacturing facility, located in the City of Camden below Lake Wateree, is highly dependent on Wateree River levels being consistently high enough to support its extractive water needs. The facility operates with four river intakes, and pump cavitation (air intake) problems were evident in some low-flow periods, nearly resulting in the need to curtail plant

production in 2006. As a consequence, Invista acquired a portable pumping system that it uses periodically to draw water from lower levels of the Catawba River, when needed. The portable pumping equipment costs $4,000 per month to rent (per pump) and also results in additional operation and maintenance costs.

Greenscape Businesses. Other commercial users affected by low water supply in the 1998-2002 and 2007-2009 droughts include sod and lawn service providers, nurseries, and related greenscape businesses that rely on selling, installing, and/or maintaining lawns, shrubs, and other landscapes at residential and commercial properties. Water-use restrictions on outdoor irrigation — as associated with Low Inflow Protocols ("LIP") at Stages 2 and above — have cut into sales and maintenance revenues for these businesses, because their customers must reduce their landscape irrigation. The landscaping and nursery business sector accounts for millions of dollars in annual payroll in the Catawba River Basin.

South Carolina's experts continue to analyze the available data, upon which their reports will be based. One illustrative example is Rolling Hills Nursery and Landscaping, Inc., located in Rock Hill, South Carolina, which reportedly has seen revenues decline by hundreds of thousands of dollars and the number of employees drop precipitously as a result of the low-flow periods experienced in the Catawba River Basin.

In all events, interbasin transfers and consumptive uses in North Carolina — including those to be increased or authorized in the future — will continue to exacerbate the harms suffered by South Carolina in periods of low flow and create uncertainties for persons and entities reliant on a steady flow of water from the Catawba River Basin.

Future Economic Development. Water limitations, or reductions in the perceived reliability of local water resources, are a significant deterrent to potential future business expansions and can prompt consideration of relocation out of the region by entities currently operating in the area. Water issues affect decisions by businesses considering locating new facilities in the region and can affect the determination to locate in an area with more reliable water resource conditions.

B. Harms to Water-Based Recreation and Businesses, and Secondary Impacts

When lake levels decline, those using the lake for recreation, and those operating water-related businesses, have suffered, and will continue to suffer, significant harms.

Recreational Harms. Recreational harms are the values lost when a recreational user is unable to derive his or her full utility (i.e., enjoyment) from a recreational outing or is restricted from taking a recreational trip at all. Low water levels in Lake Wylie have exposed hazards such as rocks, sand bars, or debris that can increase safety concerns, cause delays, and reduce the aesthetic appeal of lake water levels and water quality. All of these factors can adversely

affect the quality of recreational outings. During drought conditions, some access areas such as boat ramps and docks can become subject to closure, precluding recreators from accessing the resource as they normally would. In cases of facility or access area closure, the quantity of trips that recreators take is decreased, and recreators lose the value of an outing they would have taken if not for conditions caused by low flows.

The value of outings taken by recreators who participate in water-based or near-water activities can be affected by low water levels, either through a decrease in trip quality or through lost recreational outings. Duke Energy's REC-01 Study Report submitted with its re-licensing application to FERC contains survey data concerning the number of visits to public boat ramps on a monthly basis from January through December 2004. In 2007, many if not all public access boat ramps were closed from approximately August 2007 through at least the end of that year.

South Carolina's experts expect to show, for example, that economic harms to recreational users on the South Carolina portion of Lake Wylie during the period from approximately August 2007 through February 2008 — during which time the lake levels dropped below critical boating levels — amounted to hundreds of thousands of recreational visits and losses that may exceed $10 million dollars. We believe that similar harms also were suffered at times during the 1998-2002 drought, including when reservoir levels at Lake Wylie likewise dropped below the critical boating elevation from approximately

October-December 2001 and August-September 2002. In the future, South Carolina and its experts also will investigate similar recreational harms suffered below Lake Wylie. South Carolina, concurrently with these responses, is producing a CD with illustrative photographs showing low lake levels at Lake Wylie and Lake Wateree, which are Bates stamped SC-007-0000001 - SC-007-0000018.

Harms to Water-Related Businesses. Although South Carolina's investigation is ongoing, we understand that Lake Wylie Marina, located on Lake Wylie, lost more than $1 million in sales caused by the low lake levels during the most recent drought in 2007-2009. Low lake levels also precluded access to boatable-depth waters from most of the slips rented by the marina to boat owners. The impacts to Lake Wylie Marina during the drought of 1998-2002 are set out in the affidavit of Laron A. Bunch, Jr., attached to South Carolina's Complaint (at App. 22-24).

Following the drought of 1998-2002, River Hills Marina in Tega Cay had refurbished its docks in or around 2003 at a cost of approximately $125,000. In 2007, when lake levels dropped significantly, River Hills had to pay approximately $60,000 more for structural repairs caused directly by the drop in water levels, which should have been unnecessary for such a recently refurbished dock.

Low water levels have harmed South Carolina's sport fishing industry in the area. For example, in the fall of 2002, stream flows running at 5% to 15% of

normal caused Duke Energy to shut down boat ramps at Lake Wylie for safety reasons, which forced at least one fishing tournament, sponsored by the Fishers of Men and expected to draw 350 anglers, to be relocated to Lake Norman in North Carolina, where boat ramps remained open. York County lost an estimated amount of at least $200,000 as a result of the tournament's transfer out of Lake Wylie to Lake Norman, where Lake Norman businesses benefited from the relocation. More recently, the South Carolina Wildlife Federation 5th Annual Bass Fishing Tournament scheduled to be held on October 27, 2007, was cancelled due to low water levels in Lake Wateree. It was rescheduled more than a year and a half later in June 2009.

Secondary Economic Impacts on the Regional Economy. The primary economic impacts described above ripple through the local economy and create secondary impacts in other portions of the regional economy, as well as the state economy. For example, a marina owner or employee who loses sizable earnings because of declining boat sales will tend to spend less on other local goods and services (e.g., purchases for home maintenance or improvements, entertainment, or automobiles). This reduced spending in turn reduces revenues, incomes, and employment opportunities at other local businesses and also adversely affects state and local tax receipts.

South Carolina's experts are estimating those secondary economic impacts using one or more commonly used regional "input output models" such as RIMS (developed by the federal Bureau of Economic Analysis), IMPLAN (developed by

the U.S. Forest Service), and REMI (developed and provided by a private vendor). These models translate the primary impacts (i.e., the estimated earnings decline, meaning the original decline in retail sales) into regional estimates of employment and output impacts (lost jobs and total economic loss, respectively, as generated by how the decline in original retail sales works its way through the regional economy).

Although South Carolina's experts have yet to conduct these analyses in full, preliminary estimates indicate that even a 10% decline in recreational use and expenditures in the region in a given year or boating season caused by low water levels results in secondary harms that include the loss of jobs and a decline in economic output of millions of dollars.

Declines in Property Values. Lakefront residential properties along Lake Wylie in South Carolina derive value, in part, from a variety of services provided by the lake. These services include recreational opportunities, aesthetics, and nature viewing, to name a few. The values of these services are capitalized into housing prices. Residential property values for shoreline properties along the South Carolina portion of Lake Wylie reflect a total investment having a combined asset value in the hundreds of millions of dollars

When water levels decline below typically observed past levels, the flow of the valuable lake-related services to properties along Lake Wylie is disrupted and property values are likely to be adversely affected. Potential impacts from reduced water flows and levels include aesthetic impairments and reduced

recreational access for lakeside property owners. For example, reduced water levels in Lake Wylie can leave behind sunken beaches and expose "bathtub rings." Moreover, boat ramps and docks at lakeshore residential properties that once served the water's edge may no longer offer direct access to the water. Many property owners and visiting recreators observed these impacts on Lake Wylie during the droughts of 1998-2002 and 2007-2009. South Carolina's experts anticipate estimating the economic effects of low reservoir levels on lake-related property values, which may amount to millions of dollars.

C. Public Water Supplies

South Carolina's water utilities in the Catawba River Basin have suffered, and are likely in the future to suffer, some revenue reductions when water-use restrictions are imposed during Low Inflow Protocol stages of two or higher and where wastewater rates are based on potable water-use amounts (as is typically the case). South Carolina understands that there were water-revenue impacts for many South Carolina water utilities in the Catawba River Basin from the 2007-2009 drought due to water-use restrictions. Every utility contacted thus far has experienced a decrease in revenue per tap during one or both of the recent years during which drought was declared and the LIP invoked throughout the irrigation season in 2007 and 2008. Some utilities also indicate decreased per-tap revenues for 2009 as well, during which time residents have likely continued to conserve water.

Water utilities also are forced to spend more on water treatment during periods of low flow in order to address water-quality issues. As lake levels decrease, sunlight is able to reach the bottom of the lake in more areas. The resulting stagnant water and the increased sunlight to the bottom promote the growth of algae, which produces a chemical called MIB (methylisoborneol) and which is responsible for a "muddy" or "dirty" taste in drinking water. One solution is to add Powdered Activated Carbon ("PAC") to the water. We understand that the Lugoff-Elgin Water Authority incurred increased treatment costs of $4,100 per week for PAC use at times during the 2007-2009 drought-induced algae bloom. Lugoff-Elgin continued increased use of PAC into the winter months during the 2007-2009 drought period. We also understand that the Camden Water Utility experienced increased carbon costs totaling $1,835 from August 2008 through October 2009.

The increased use of chemicals results in a larger production of sludge, which must be removed from storage lagoons periodically. That expensive process requires dredging and dewatering. The dewatered solids are then transported to a landfill. Utilities therefore require additional sludge removal and dewatering as a result of the drought. For Lugoff-Elgin Water Authority, instead of requiring the process after only four years as expected, the process was needed after three years. The costs of accelerating that process for Lugoff-Elgin appear to be in the tens of thousands of dollars.

Some utilities have incurred extra costs during drought response. Communicating in a timely fashion with customers about water-use restrictions in response to low flows is essential to meeting LIP obligations to cut water use. Some utilities have incurred significant costs to ensure that customers understand water-use restrictions. For example, Camden Water Utility experienced low-flow-related mailing costs totaling $13,500 for 2007 and 2008 combined. The City of Rock Hill hired a temporary worker for 1.5 years to help deal with the administrative burden associated with the recent drought, including coordinating public notices and public communication, tracking variance requests, and other duties.

In addition, water utility customers may have borne the harm of having their residential or commercial landscaping damaged or lost due to water-use restrictions. This results in added costs to replace lost plantings and a loss of aesthetics and perhaps property values. Over potentially prolonged periods of future water-use restrictions, the loss of trees, shrubs, gardens, and lawns across impacted portions of South Carolina could be substantial.

D. Water-Quality Harms

South Carolina's experts are in the process of analyzing the effects of increased upstream water uses and low-flow conditions on water quality in the Catawba River system. Water-quality harms during low-flow conditions may include degraded ambient water-quality conditions, impacts to aquatic ecosystems, and impacts to federally listed (e.g., threatened, endangered) or

other special status species. South Carolina reserves the right subsequently to supplement this response.

E. Historical Water Conditions

South Carolina's experts are engaged in extensive analysis of the historical water conditions in the Catawba River Basin. They have determined that the frequency of occurrence of stream flows from North Carolina into South Carolina that are less than 1,100 cubic feet per second ("cfs") has been increasing over time commensurate with increased water use in the Basin and that the number of days with flows below 1,100 cfs increased from 109 in 1999 to 228 in 2002 (during the 1998-2002 drought) and from 150 in 2007 to 244 in 2008 (during the 2007-2009 drought).

Increases in consumptive water use in North Carolina translate almost directly into decreased stream flow from North Carolina into South Carolina. Interbasin transfers — which by definition are not returned to the source basin — exacerbate decreased flows in the Catawba River Basin. Therefore, during periods of low water supply, the relative proportion of the water supply that reliably reaches South Carolina diminishes significantly. For example, during most years, approximately 70% of the inflow above Lake Wylie passes into South Carolina. During the 1998-2002 drought, however, that ratio had diminished to less than 50% in 2001 and 2002, and stream flows into South Carolina decreased to historical lows — in December 2001, the average monthly stream flow was less than 600 cfs. During the 2007-2009 drought, stream flows also decreased to

near historical lows, but were maintained above LIP minimum-flow requirements by the depletion of upstream reservoir storage.

That depletion of reservoir storage, however, dropped below or nearly reached the various critical conditions in 2007, for example, when the reservoir elevation in Lake Wylie dropped to 562.2 feet in October and averaged less than 562.5 feet in November. (The critical elevation on Lake Wylie is 564.9 for boating access, 562 feet for industrial intakes, and 561.4 feet for municipal intakes.) Thus, the combination of low water supply in 2007-2009 and increased withdrawals in North Carolina put reservoir conditions on the brink of failure to maintain both minimum-flow requirements and critical reservoir elevations under the provisional LIP implemented at the time.

North Carolina and Duke Energy officials, moreover, have repeatedly warned that the Basin was dangerously short on water, thus highlighting the fact that the Basin could easily be on the brink of disaster during times of drought. *See*, *e.g.*, Bruce Henderson, *What Now for Catawba River? Expert Suggests Bi-State 'Orchestration' to Control Essential Water Resource*, Charlotte Observer, Sept. 19, 2002, at 1B ("Water systems, power plants and recreational users all compete for a piece of the Catawba, said John Morris, director of the N.C. Division of Water Resources. New homes, roads and businesses will affect water quality. 'At some point, the aggregate of this is going to become a problem, even if everybody is doing the right thing,' Morris told the Bi-State Catawba River Conference at UNC Charlotte. . . . Morris suggested the

Catawba region consider 'new institutions' such as the federally authorized interstate compacts set up among other states that share rivers."); Bruce Henderson & Christopher D. Kirkpatrick, Mayor: Duke Job No Conflict in Drought: *Tougher Water Limits Predicted: Duke Says Severest Restrictions Likely to Start in 3 to 6 Weeks*, Charlotte Observer, Oct. 24, 2007, at 1A ("Duke's prognosis: Stage 4 drought status by mid-November to early December if no substantial rain falls. At that point, says the Catawba drought-response plan, usable storage in the reservoirs 'can be fully depleted in a matter of weeks or months.'"); Christopher D. Kirkpatrick, *At Least 18 Inches of Rain Needed: Drizzle Doesn't Dent Drought; Lakes at New Low Duke – Declares Situation Stage 3 Throughout Region as Basin Dwindles*, Charlotte Observer, Oct. 5, 2007, at 1A ("Duke said usable water in the basin was at 42 percent, far below the normal 70 percent or more expected this time of year. The water supply in the basin has been shrinking 2 percent to 3 percent a week, Duke said."); Bruce Henderson, *Duke Power Warns Towns in Charlotte, N.C., Area to Cut Water Use*, Charlotte Observer, Aug. 28, 2002 ("Duke painted a bleak picture of current conditions on its lakes. More water is leaving the Catawba system, through water intakes, than is entering it from streams and rainfall. Most streams feeding the lakes are flowing at 5 percent to 15 percent of normal. The ground under the lakes is so dry that Duke officials say groundwater is flowing the wrong way, further depleting the lakes. . . . 'We're talking about a groundwater

table that's dropping out from under us as we talk,' said Bill Stroud, Duke's hydro operations chief.").

F. Imminent Future Harms

The past harms described above are indicative of the greater harms that South Carolina will suffer in the future when similar low-flow conditions return to the Catawba River Basin — and such conditions could occur at any time, and without warning — particularly if North Carolina continues to authorize interbasin transfers, which remove 100% of the water withdrawn from the Catawba River Basin. Because North Carolina's population and water demands are expected to continue growing rapidly, including but not limited to further requests for interbasin transfers, low-flow periods of the sort experienced over the last decade will be exacerbated, even during times when drought-induced flow levels are above those documented in the two worst droughts on record. The expected increases in upstream consumption and population growth in North Carolina will make future shortages more frequent, more serious, and longer-lived.

South Carolina's expert hydrologist will incorporate *both* of the recent droughts in the historical study period used to generate his expert report, in which South Carolina will show that the probabilities of future periods of low flows make imminent harm to the State of South Carolina likely in the absence of an equitable apportionment requiring North Carolina to reduce its consumption and interbasin transfers during times of low water flows. Low-flow

periods have been, and will continue to be, caused or exacerbated by interbasin transfers that have been authorized or are anticipated to be authorized by North Carolina.

At present, South Carolina's experts have determined that the future water supply sequence used by Duke Energy, which is based on historical data used to make predictions with the CHEOPS model and formed the basis for the Comprehensive Relicensing Agreement ("CRA"), is not a reliable indicator of potential future conditions and exaggerates the ability of future water supply to meet future demand. Additionally, the water-supply sequence projected by Duke's modeling, which is based on the assumption that the future will exactly replicate the past, fails to include any significant drought until the 45th year of the sequence.

Furthermore, the projections offered by Duke Energy of the future occurrence of LIP stages have proven unreliable based on the experience during the 2007-2009 drought period. The projection offered by Duke Energy anticipated only four months of Stage 3 LIP during the entire 51-year period of analysis, and even that short period was projected to occur only in the 49th year of the modeled period, when water withdrawals in North Carolina were projected to be more than twice current levels.

In fact, in 2007 and 2008, despite *reductions* in withdrawals from 2006 levels, Stage 3 LIP conditions were in place for 15 months. Our experts believe that their analysis will clearly demonstrate that future increases in withdrawal

cannot be sustained during water-supply conditions such as those experienced by South Carolina in 2007 and 2008. As demand for water supply increases in the future, the ability to maintain both goals of minimum-flow targets and critical reservoir elevations will become increasingly difficult. Neither the voluntary reductions nor the mandatory reductions called for under the LIP will be sufficient to reduce withdrawals from their increased levels to sustainable levels during periods of low water supply. Therefore, under reasonably foreseeable growth conditions, the LIP will be unable to prevent the failure to meet both minimum-flow targets and critical reservoir elevations during low water-supply periods such as those experienced in 2007 and 2008.

Contention Interrogatory No. 2: For each harm identified in response to the immediately preceding Contention Interrogatory No. 1, or in response to North Carolina's Interrogatory No. 1 served on July 1, 2008, state whether South Carolina contends that such harm is limited to periods of "Drought". To the extent that South Carolina contends it suffers substantial harms during conditions or periods other than "Drought", please state all facts and identify all evidence supporting the specific conditions (e.g., flow parameters) that South [sic] contends give rise to such harms and state all facts and identify all evidence regarding the manner in which South Carolina determined that harm occurs during those specific conditions.

Response to Contention Interrogatory No. 2: South Carolina objects to this Contention Interrogatory to the extent that it is premature because discovery in this matter is ongoing and all facts that support South Carolina's claims against North Carolina may not be known by South Carolina at this time. South Carolina further objects to this Contention Interrogatory to the extent that it calls for expert opinion and testimony that is still being developed.

Subject to and without waiving South Carolina's general and specific objections, South Carolina provides the following response:

In general, South Carolina believes that the harms it has identified, and will continue to identify as discovery and South Carolina's investigation progresses, were caused during a period of "Drought" as that term is defined in the South Carolina Drought Response Act, Chapter 23, Title 49 of the 1976 Code (as amended June 14, 2000), and in North Carolina's First Set of Contention Interrogatories dated February 23, 2010. South Carolina's experts are engaged in extensive data analysis and modeling to determine the specific conditions that give rise to harms that result from low-flow conditions in the Catawba River Basin.

Moreover, further approval of North Carolina interbasin transfers — or implementation of those previously authorized but not yet fully effectuated — with their attendant removal of water outside of the Catawba River Basin, will likely cause low-flow conditions to occur more frequently and in drought conditions that are less severe than the historical drought of record. Such interbasin transfers will make less water available to satisfy existing water demands in South Carolina.

Contention Interrogatory No. 3: What **uses** of the Catawba River in North Carolina, including specific inter-basin transfers, consumptive uses, and other activities in North Carolina, does South Carolina contend must be eliminated or enjoined in order to prevent substantial harm to South Carolina? State all facts and evidence in support of your contention that the elimination or reduction of the specified water uses in North Carolina will cure substantial harms to South Carolina. Your answer should identify each specific water use or activity complained of, a description of the nature, type, and extent of each

specific water use or activity; the location of the specific water use or activity, the date and duration the specific water use or activity has been ongoing, and such other details as are necessary to assess this contention. If your response differs based on whether or not there is a period of Drought, so state and respond separately for each.

Response to Contention Interrogatory No. 3: South Carolina objects to this Contention Interrogatory on the ground that it is irrelevant. The uses of the Catawba River in North Carolina that must be eliminated or enjoined in order to prevent harm to South Carolina are those uses that exceed North Carolina's equitable share of River waters in the aggregate. Subject to and without waiving South Carolina's general and specific objections, South Carolina provides the following response:

South Carolina takes no position on what *individual* uses of the Catawba River in North Carolina must be eliminated or enjoined in order to prevent substantial harm to South Carolina, because, as four Justices recently have confirmed (without objection from the majority), "the Court's judgment in [this] action does not determine the water rights of any individual citizen." *South Carolina v. North Carolina*, 130 S. Ct. 854, 871 (2010) (Roberts, C.J., concurring in the judgment in part and dissenting in part). South Carolina seeks to protect its own aggregate interests in the water of the Catawba River against North Carolina's aggregate uses and need not litigate the claims of particular North Carolina citizens that they be allowed to put water to specified uses, which instead constitute "'an intramural dispute over the distribution of water within the [State],' and is not the subject of this original proceeding." *Id.* at 873

(quoting *New Jersey v. New York*, 345 U.S. 369, 373 (1953)) (alteration in original; internal citation omitted).

South Carolina will demonstrate the requisite threshold "injury or threat of injury" by showing the inadequacy of the supply of water to meet all existing uses in South Carolina, because the river is overappropriated in times of low flows. *See*, *e.g.*, *Nebraska v. Wyoming*, 325 U.S. 589, 610 (1945) ("[W]here the claims to the water of a river exceed the supply a controversy exists appropriate for judicial determination."); *see also Colorado v. New Mexico*, 459 U.S. 176, 187 n.13 (1982) (finding that New Mexico, the downstream State, had proven injury by clear and convincing evidence "since *any* diversion by Colorado, unless offset by New Mexico at its own expense, will necessarily reduce the amount of water available to New Mexico users").

Likewise, South Carolina will show that, regardless of any overappropriation of the river, harms to South Carolina's valuable water uses such as recreation and industry call for a decrease in consumption by North Carolina during times of low flows. *See New Jersey v. New York*, 283 U.S. 336, 345-46 (1931) (issuing equitable apportionment decree based on expected harms to recreational interests and oyster harvesting during the summer months caused by expected diminished flows from a proposed diversion). As part of its showing, South Carolina will identify and quantify the harms suffered by South Carolina users, both in the past and projected into the future, based on fact witnesses and expert testimony concerning hydrological, scientific, and economic

analyses. Moreover, whenever the LIP is invoked and water users in South Carolina are required to cut back on their existing uses, harm is shown as a matter of law, because the available water supply is insufficient to meet the existing demand. Equitable apportionment of the available water supply at such low-flow times is therefore appropriate under the Court's precedents.

South Carolina believes that interbasin transfers effectuated in North Carolina by far cause the greatest harm, gallon for gallon, because none of the water withdrawn is returned to the Catawba River Basin. As North Carolina itself has admitted, "[w]hen water is transferred out of a river basin, flows downstream of the withdrawal are reduced, which can raise a number of economic and ecological concerns." Div. of Water Resources, North Carolina Dep't of Env't & Natural Resources, *State Water Supply Plan* § 6.3 (Jan. 2001) ("*NC Water Supply Plan*"), *available at* http://www.ncwater.org/Reports_and_Publications/swsp/swsp_jan2001/final_pdfs/MainBody.pdf. In times of low flows, those interbasin transfers logically would be the first to be stopped or reduced in North Carolina so that sufficient water is available for South Carolina uses. In addition, South Carolina understands that Duke Energy's fossil fuel and nuclear power generation facilities are net consumers of massive amounts of water that evaporates in the process of cooling those facilities. In times of low flows, it may be that some of those cooling activities can and should be reduced. To the extent that those massive net consumptive uses of water cannot be decreased, other North Carolina water uses become much more significant.

That said, however, it remains North Carolina's burden as *parens patriae* for its citizens, and not South Carolina's obligation, to determine what specific water use or activity must be eliminated in North Carolina to comply with any equitable apportionment decree entered to prevent harm to South Carolina.

Contention Interrogatory No. 4: What **amount** of Catawba River water use in North Carolina, whether in the form of inter-basin transfers, consumptive uses, or other activities, does South Carolina contend must be eliminated in order to prevent substantial harms to South Carolina? State all facts and evidence in support of your contention that the elimination or reduction of the specified amount of water use in North Carolina will cure substantial harm to South Carolina. Specify in detail the factual and legal basis for your contention. If your response differs based on whether or not there is a period of Drought, so state and respond separately for each.

Response to Contention Interrogatory No. 4: South Carolina objects to this Contention Interrogatory on the ground that it is improper, premature, and beyond the appropriate scope of discovery in that it seeks disclosure of information that is within the province of expert testimony prior to the completion of expert discovery under the Special Master's scheduling order. To the extent that this Contention Interrogatory purports to seek information obtained through fact discovery, such discovery in this matter is ongoing. Subject to and without waiving South Carolina's general and specific objections, South Carolina provides the following response:

South Carolina's response to this Contention Interrogatory will rely on fact witnesses and expert testimony concerning hydrological, scientific, and economic analyses. South Carolina's experts are actively modeling the harms suffered by South Carolina as a result of diminished water flow and availability.

Generally speaking, South Carolina will argue that, in times of low flows, North Carolina's consumptive uses and interbasin transfers should be decreased so that more water is available to South Carolina than in previous periods of low flow.

Contention Interrogatory No. 5: Does South Carolina contend that it has been substantially harmed by North Carolina's use of the Catawba River, whether by IBTs, or by other consumptive uses or activities, during any period when there is no Drought? State the legal basis and all facts and evidence supporting South Carolina's contention, including the identification of particular uses in North Carolina and also particular substantial harms, and when and where they occurred.

Response to Contention Interrogatory No. 5: South Carolina objects to this Contention Interrogatory to the extent that it is duplicative of Contention Interrogatories Nos. 1 and 2. South Carolina further objects to this Contention Interrogatory on the ground that it is improper, premature, and beyond the appropriate scope of discovery in that it seeks disclosure of information that is within the province of expert testimony prior to the completion of expert discovery under the Special Master's scheduling order. Subject to and without waiving South Carolina's general and specific objections, South Carolina provides the following response:

South Carolina incorporates its responses to Contention Interrogatory Nos. 1 and 2, above, which set out the time periods and relevant facts for the principal harms that South Carolina intends to prove. Although many of those harms were suffered in times of drought, in some cases the effects lasted beyond such periods of drought. With the current state of actual interbasin transfer

uses in North Carolina, the causes of South Carolina's harms have been limited to drought. However, with future expansion of interbasin transfer withdrawals, it is a hydrological fact that flow levels will be lower for each historical climatological condition, regardless of its drought status. In any case, the harms themselves do not disappear at the conclusion of periods of drought. Further, in the future, preliminary assessments by our experts suggest that proposed and anticipated changes in extractive uses and evaporative losses may cause harm to South Carolina even in times that are not officially designated as drought periods.

Contention Interrogatory No. 6: Does South Carolina contend that a "minimum continuous flow" from Lake Wylie in an amount not less than 1,100 cubic feet per second ("cfs"), referred to in Paragraph 14 of the Bill of Complaint, is necessary at all times, regardless of the existence of Drought conditions, to prevent substantial harm to South Carolina? State the legal basis and all facts and evidence in support of your contention.

Response to Contention Interrogatory No. 6: South Carolina objects to this Contention Interrogatory on the ground that it is improper, premature, and beyond the appropriate scope of discovery in that it seeks disclosure of information that is within the province of expert testimony prior to the completion of expert discovery under the Special Master's scheduling order. Subject to and without waiving South Carolina's general and specific objections, South Carolina provides the following response:

South Carolina's experts will offer testimony regarding the sufficiency or insufficiency of the "minimum continuous flow" of 1,110 cfs referred to in paragraph 14 of South Carolina's Bill of Complaint. That testimony will be the

result of ongoing expert investigation and analysis of, *inter alia*, the relevant hydrological, scientific, and economic factors affecting the flow of Catawba River water to South Carolina.

Contention Interrogatory No. 7: What does South Carolina contend are the "minimally adequate flows" from Lake Wylie, referred to in Paragraph 15 of the Bill of Complaint? State the legal basis and all facts and evidence in support of your contention, including but not limited to numeric indication of the flows that South Carolina contends are "minimally adequate" and how, when and where South Carolina would measure those flows.

Response to Contention Interrogatory No. 7: South Carolina objects to this Contention Interrogatory on the ground that it is improper, premature, and beyond the appropriate scope of discovery in that it seeks disclosure of information that is within the province of expert testimony prior to the completion of expert discovery under the Special Master's scheduling order. Subject to and without waiving South Carolina's general and specific objections, South Carolina provides the following response:

"Minimally adequate flows" are those sufficient to obviate all harms, including but not limited to those identified above in South Carolina's response to Contention Interrogatory No. 1.

Contention Interrogatory No. 8: Does the State of South Carolina contend that it has incurred and/or will incur substantial harm caused by uses of the waters of the Catawba in North Carolina during periods when the CRA and its Low Inflow Protocol have been in effect? If so, identify the facts underlying your contention, specifying the harms and when and where they have occurred, and explain the legal basis of your contention.

Response to Contention Interrogatory No. 8: Yes. South Carolina incorporates its responses to the previous Contention Interrogatories and in

particular to Contention Interrogatory No. 1, which sets out many of the harms suffered while the LIP was in place.

South Carolina also will demonstrate that the Catawba River Basin modeling on which the CRA and its LIP rely (Duke Energy's application of the "CHEOPS" model) contains material flaws revealed by its prediction and historical simulation of low water-supply periods in the Basin. As South Carolina has explained in comments submitted before the Federal Energy Regulatory Commission ("FERC") in May 2009, the extremely low flows experienced by South Carolina during the most recent two-year period of drought occurred nearly *four times more frequently* than the CHEOPS model predicted them to occur over a *51-year period*. *See* Comments of the State of South Carolina on the Draft Environmental Impact Statement, *Duke Power Company, LLC*, Project No. 2232-522 (filed May 8, 2009), *available at* http://elibrary.ferc.gov/idmws/File_list.asp? document_id=13716906. The flawed operation of the CHEOPS model incorrectly assumes that the future 51-year water supply will exactly match (in magnitudes and temporal sequence) a historical 51-year water supply predating the most recent drought. However, those recent extended and severe droughts suggest that the available water supply likely will be diminished in the future. The failure of the CHEOPS model's predictive ability may be due, in whole or in part, to the model's apparent tendency to overestimate the available water supply in the Catawba

River Basin, particularly during periods of low flows. The result is that the Basin will be severely more taxed in the future than Duke's modeling claims.

In addition, the conservation provisions of the LIP, imposed on third parties by the CRA, are not enforceable absent a decree from the Court. As FERC previously has made clear, it "has jurisdiction over only its licensees, and therefore cannot enforce any condition . . . on a non-licensee." Policy Statement on Hydropower Licensing Settlements, *Settlements in Hydropower Licensing Proceedings under Part I of the Federal Power Act*, 116 FERC ¶ 61270, 2006 WL 2709607, at *2 (Sept. 21, 2006).

Contention Interrogatory No. 9: In Paragraph 24 of South Carolina's Bill of Complaint, South Carolina contends that "transfers" exacerbate "existing natural conditions" and Droughts that contribute to low flow conditions in South Carolina and cause the harms, of which South Carolina complains. Identify with specificity each of these "transfers" and the resulting harms which South Carolina contends they exacerbate in this Paragraph. State all facts and evidence supporting South Carolina's contention that the transfers exacerbated existing natural conditions and caused South Carolina harm.

Response to Contention Interrogatory No. 9: South Carolina objects to this Contention Interrogatory on the ground that it is improper, premature, and beyond the appropriate scope of discovery in that it seeks disclosure of information that is within the province of expert testimony prior to the completion of expert discovery under the Special Master's scheduling order. South Carolina further objects to this Contention Interrogatory on the ground that it purports to seek information on North Carolina interbasin transfers that is more readily available to North Carolina, because those transfers occur entirely in North Carolina and are governed by North Carolina state law. *See*

N.C. Gen. Stat. § 143-215.22L. Subject to and without waiving South Carolina's general or specific objections, South Carolina provides the following response:

Interbasin transfers in North Carolina reduce the amount of water available to South Carolina because they are not returned to the Catawba River Basin. Those transfers include the transfers described in the Declaration of John N. Morris (at ¶¶ 25-26) dated August 1, 2007, and attached to North Carolina's opposition to South Carolina's motion for leave to file its Complaint; those reported or projected in Appendix H to the Revised Comprehensive Relicensing Agreement, dated December 22, 2006; and any others to be revealed in discovery. In addition, North Carolina itself has conceded that, "[w]hen water is transferred out of a river basin, flows downstream of the withdrawal are reduced, which can raise a number of economic and ecological concerns." *NC Water Supply Plan* § 6.3.

Contention Interrogatory No. 10: What does South Carolina contend are the "existing natural conditions" referred to in Paragraph 24 of the Bill of Complaint? State the legal basis and all facts and evidence in support of your contention, including but not limited to numeric indication of the conditions that South Carolina contends are "existing natural conditions" and how, when and where South Carolina would measure those conditions.

Response to Contention Interrogatory No. 10: South Carolina objects to this Contention Interrogatory on the ground that it is improper, premature, and beyond the appropriate scope of discovery in that it seeks disclosure of information that is within the province of expert testimony prior to the completion of expert discovery under the Special Master's scheduling order.

Subject to and without waiving South Carolina's general and specific objections, South Carolina provides the following response:

As used in paragraph 24 of the Complaint, "existing natural conditions" means the existing physical and climatic conditions in the Catawba River Basin, including the reservoir system operated by Duke Energy and drought conditions that have existed or will exist in the Basin. The Complaint thus provides, in the same passage, that interbasin transfers in North Carolina "exacerbate" those "existing natural conditions and droughts that contribute to low flow conditions in South Carolina and cause the harms detailed above." South Carolina also incorporates here its response to the Contention Interrogatories above.

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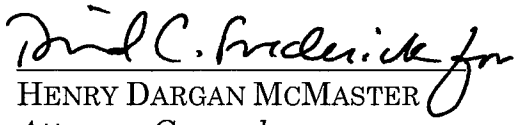

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April 2, 2010

VERIFICATION

I, Robert D. Cook, hereby state that I am Deputy Attorney General for the State of South Carolina; that I am authorized to make this Verification on behalf of the State of South Carolina; that the knowledge and information required to make this verification has been accumulated and is not available from a single individual; and that the statements set forth in the respective Responses to Defendant's First Set of Contention Interrogatories are true and correct to the best of my knowledge and belief, based on my investigation.

Dated: April 1, 2010

Robert D. Cook
Deputy Attorney General

CERTIFICATE OF SERVICE

Pursuant to Rule 29.5 of the Rules of this Court, I certify that all parties required to be served have been served. On April 2, 2010, I caused copies of Plaintiff South Carolina's Responses to Defendant North Carolina's First Set of Contention Interrogatories to be served by first-class mail, postage prepaid, and by electronic mail (as designated) on those on the service list in the Case Management Plan dated January 7, 2009.

Scott K. Attaway
Special Counsel to the
State of South Carolina