

**BEFORE THE OKLAHOMA WATER RESOURCES BOARD  
STATE OF OKLAHOMA**

IN THE MATTER of Determining the Maximum )  
Annual Yield for the Arbuckle-Simpson )  
Groundwater Basin underlying parts of Murray, )  
Pontotoc, Johnston, Garvin, Coal and Carter )  
Counties )

**PROTESTANTS OKAA AND TXI BRIEF IN OPPOSITION TO THE TENTATIVE  
MAXIMUM ANNUAL YIELD**

**and**

**REQUESTED FINDINGS OF FACT UPON ISSUES ESSENTIAL TO THE DECISION**

**I.**

**Parties OKAA and TXI**

The Oklahoma Aggregates Association is an Oklahoma trade association whose members include businesses that own and operate quarries statewide and many of whose members operate in the area of the Arbuckle-Simpson and who may utilize groundwater from one or more of the three aquifers (eastern, central, and western) of the Arbuckle-Simpson. TXI is a business corporation that operates an aggregate quarry and processing facility in the central aquifer. The members of OKAA in the Arbuckle-Simpson, including TXI, own land overlying the aquifers and are entitled to take and use the water of the aquifer, subject only to reasonable regulation by the State.

**II.**

**Adoption of Brief of Protestants by Reference**

In the interest of avoiding repetition, Protestants Oklahoma Aggregates Association (OKAA) and TXI adopt each and every one of the statements, propositions, findings, and

conclusions of fact and law contained in "Protestants' Brief in Opposition to the Tentative Maximum Annual Yield" submitted on behalf of certain protesting parties (including but not limited to the OKAA) by Mark Walker, counsel for those parties, and the Protestants' Brief in opposition to the unlawful proposal of OWRB to "phase-in" a Maximum Annual Yield determination over time, submitted by counsel for those parties, James Barnett.

### **III.**

#### **Requested Findings of Fact Essential to the Decision**

Protestants OKAA and TXI request the hearing examiner and the Oklahoma Water Resources Board (OWRB) to adopt the following findings of fact, each supported by the record in this case comprised of testimony and exhibits, and each of which is essential to a decision regarding the Maximum Annual Yield determination for the Arbuckle-Simpson aquifers:

1. THE OWRB TENTATIVE ORDER ESTABLISHES A MAXIMUM ANNUAL YIELD AND EQUAL PROPORTIONATE SHARE OF 0.2 ACRE-FEET PER ACRE PER YEAR FOR THE CENTRAL AND WESTERN AQUIFERS; HOWEVER, THE OWRB DID NOT PERFORM ANY HYDROLOGIC SURVEY OR INVESTIGATIONS OF THE WESTERN AND CENTRAL AQUIFERS TO DETERMINE THEIR RATE OF RECHARGE, DISCHARGE, OR TRANSMISSIBILITY.

The Arbuckle-Simpson is the name used to describe three aquifers designated as the "western, central, and eastern aquifers" by the OWRB in its "*Arbuckle-Simpson Hydrology Study—Final Report to the U.S. Bureau of Reclamation*" (OWRB Report), Executive Summary, page 3. Title 82 Okla. Stat. § 1020.5 requires the OWRB to "make hydrologic surveys and investigations" of "major groundwater basins and subbasins" and to determine "the rate of recharge to the basin or subbasin, and total discharge" therefrom, and the "transmissibility of the basin or subbasin". The OWRB did not do this prior to tentatively establishing the Maximum

Annual Yield and Equal Proportionate Share for the western and central aquifers. In particular, the OWRB states that "a digital groundwater-flow model of the eastern Arbuckle-Simpson aquifer was developed and used to test conceptual models of the aquifer and to predict the consequences of aquifer-scale groundwater withdrawals on stream flow" but that "the western and central aquifers were addressed with more general methods." Report, p. 1. The OWRB study included the development and use of the model for the prediction of the impacts of groundwater withdrawals on stream flow arising from groundwater emanating only from the eastern aquifer. Report, p. 1, ref. "*Hydrogeology and Simulation of Groundwater Flow in the Arbuckle-Simpson Aquifer, South-Central Oklahoma*", USGS/OWRB (Flow Model), OWRB Exhibit 1. However, as stated by Dr. Kyle Murray, Hydrogeologist with the Oklahoma Geological Survey: "It is imperative to base the Maximum Annual Yield and Equal Proportionate Share on thorough scientific analysis." This has not been done in this case. The central and western aquifers "have not been adequately characterized for hydrogeologic conditions." The central and western aquifers "drastically differ" from the eastern aquifer in regard to geologic structure, including but not limited to fault and fracture density, formation thickness, and placement and incidence of varying rock types. The OWRB considered all three aquifers to be hydrologically contiguous so as to be managed as one groundwater basin, but this is "contrary to previous studies of the Arbuckle-Simpson." Dr. Murray stated, and the hearing examiner and OWRB should find, that there is a need to study the western and central aquifers to determine the effects of these differences, as well as consumptive use and climate variability, before establishing a Maximum Annual Yield and Equal Proportionate share for the western and central aquifers. Dr. Poeter, the specialist in groundwater modeling that testified at the hearing, in her testimony agreed with Dr. Murray's conclusions regarding the inapplicability of an

analysis of the eastern aquifer to the western or central aquifers. Testimony of Dr. Kyle Murray, Hydrogeologist, Oklahoma Geological Survey: *Project Proposal: Augmented Hydrologic Assessment of the Arbuckle-Simpson Groundwater Basin, April 2012, Kyle E. Murray, PhD, Hydrogeologist, Oklahoma Geological Survey* (Murray Assessment); Testimony of Dr. Eileen Poeter.

2. TITLE 82 OKLA. STAT. § 1020.9A REQUIRES THAT THE OWRB ESTABLISH A MAXIMUM ANNUAL YIELD AND EQUAL PROPORTIONATE SHARE FOR THE ISSUANCE OF GROUNDWATER USE PERMITS FROM THE ARBUCKLE-SIMPSON AQUIFERS THAT DOES NOT REDUCE THE "NATURAL FLOW" OF SPRINGS AND STREAMS; HOWEVER, THE OWRB ADOPTED A DEFINITION OF "NATURAL FLOW" WITHOUT REFERENCE TO EXISTING STATUTORY DEFINITIONS AND WITHOUT REFERENCE TO ANY STATUTE OR REGULATION ALLOWING THE TERM TO BE DEFINED WITH REFERENCE TO THE STANDARD IT CHOSE TO ESTABLISH AND USE.

The purpose of the Flow Model was to determine the Maximum Annual Yield of the Arbuckle-Simpson aquifers based upon maintenance of the "natural flow" of springs and streams. The OWRB staff claimed that the statutes did not define the term "natural flow". The OWRB staff decided that it did not know what "natural flow" meant in the applicable statute, and so the staff chose to come up with its own method of defining the term "natural flow".

Testimony of OWRB staff Julie Cunningham and Derek Smithee. Instead of using the statutory definition contained in Title 60 Okla. Stat. § 60 and discussed in Oklahoma case law, the staff selected and convened a committee of people (Smithee committee) to try to secure a consensus among their members on a definition of "natural flow". No record was kept of any deliberation of the panel or a vote of its members on a definition of "natural flow" for purposes of determining the Maximum Annual Yield of any of the three aquifers. The panel consisted largely of selected government employees, plus one landowner in the Arbuckle-Simpson area that was entitled to take and use groundwater from one of the three aquifers. The OWRB staff

lead, Mr. Smithee, is a specialist on water quality, not water quantity, discharge, recharge, or transmissibility. Mr. Smithee chaired the committee and reported that he had obtained a consensus of the committee that the term "natural flow" would not be determined by reference to use of groundwater for drinking water, or for any other purpose other than maintenance of certain fish populations in Pennington Creek and the Blue River. However, the U.S. EPA has designated the eastern Arbuckle-Simpson aquifer as a sole-source aquifer for purposes of its use as a public water supply and not for fish population or habitat or for any other purpose other than its use as a drinking water supply. The panel purportedly studied how much decrease in the stream flows would result in some acceptable level of decrease in fish population. Nothing in Oklahoma law provides that the definition of "natural flow" will be based on fish population maintenance or fish habitat. The OWRB staff claimed that it obtained a consensus of the panel that the term "natural flow" would be based on a 25% stream flow reduction limit in the *ISA Baseline Low Flow regime*. However, the OWRB staff communicated to the modeler performing the Hydrology Study of the eastern aquifer that it should use a 25% reduction limit in the *75th Percentile Flow of the streams*, which is a deviation from a standard predicated on a reduction in the Baseline Low Flow regime. This change was not explained in any document or report nor was it explained by Mr. Smithee in his testimony at the hearing. In addition, the one landowner/water-user in the Arbuckle-Simpson area on the panel convened by the OWRB staff testified that he did not agree with the consensus claimed by the OWRB staff for the panel's definition of "natural flow". Then the modeler used yet a different standard, a *Five-year Average Flow regime*, to arrive at a recommended Maximum Annual Yield. This resulted in the use of an unscientific, non-transparent, and unexplained arbitrary standard adopted by the OWRB, while not following the requirements of the Administrative Procedures Act for its adoption and use.

3. THE DEFINITION OF "NATURAL FLOW" ADOPTED BY THE OWRB FOR USE IN ITS STUDY AND IN ESTABLISHING THE TENTATIVE MAXIMUM ANNUAL YIELD IS A "RULE" AS DEFINED IN THE ADMINISTRATIVE PROCEDURES ACT; IT WAS NOT ADOPTED USING THE PROCESSES AND PROCEDURES REQUIRED BY THE ACT AND IT IS THEREFORE VOID; AS A RESULT, THE OWRB HAS REFERENCE TO NO DEFINITION OF "NATURAL FLOW" OTHER THAN THAT PROVIDED IN TITLE 60 OKLA. STAT. § 60, WHICH IT DID NOT USE; THE OWRB CANNOT USE A VOID RULE AS THE BASIS FOR ITS DECISION ON THE MAXIMUM ANNUAL YIELD; IN DOING SO, IT ACTED ARBITRARILY AND ITS DECISION IS UNLAWFUL

The OWRB staff proposed, and the OWRB utilized, an interpretation of the term "natural flow", which is the phrase found in Title 82 Okla. Stat. § 1020.9A that forms the basis for limitations on water use in the Arbuckle-Simpson aquifers. That action by the OWRB resulted in the prescription and implementation of an agency rule under the Administrative Procedures Act. An agency rule under that Act is any "statement that implements, interprets, or prescribes law or policy", "of general applicability and future effect" and "affecting the private rights of the public". Title 75 Okla. Stat. § 250.3; *Grand River Dam Authority v. State*, 1982 OK 60, ¶ 9.

This rule is of general applicability by defining the standard by which the Maximum Annual Yield will be set for any sensitive sole source aquifer pursuant to Title 82 Okla. Stat. § 1020.9A. (Relevant to the issue of general applicability, that statute has already been declared not to be a "special law" under the ruling of the Oklahoma Supreme Court in the *Jacobs Ranch* case, cited in the Brief of Protestants referenced above.)

The rule is of future effect as being used in the establishment of the tentative Maximum Annual Yield that is the subject of this hearing, and if not repealed by OWRB it will be used again, in future establishments of Maximum Annual Yields for these aquifers to be revisited every ten years as noted by the OWRB staff testifying at the hearing. (In fact, if it were not the

standard for future use in defining "natural flow" for any "sensitive sole source aquifer", it would have to be considered as arbitrary on its face for purpose of the present proceeding.)

The rule unequivocally affects the private rights of the public to use groundwater, and in particular affects the private rights of landowners in the Arbuckle-Simpson area to use the water from under their lands.

The rule was adopted despite the fact that neither the Smithee committee that was selected, convened, and chaired by the OWRB water quality staff, nor the staff itself, nor the OWRB at any time utilized the provisions of the Administrative Procedures Act governing the proposal and adoption of agency rules. Testimony of Mr. Smithee. In failing to do so, the OWRB has avoided granting the opportunity for public comment and participation in the process for adopting agency rules, the publication of proposed rules, and the opportunity for review of the final agency rule by the Oklahoma Legislature. In adopting the definition of "natural flow" tied to fish habitat for purposes of determining the Maximum Annual Yield and Equal Proportionate Share for any of the three Arbuckle-Simpson aquifers, the OWRB has adopted a rule that is void under the Act and is not available for use in determining the Maximum Annual Yield. In using and implementing such a void rule in its selection of the Maximum Annual Yield, the OWRB has acted arbitrarily and unlawfully in setting the tentative Maximum Annual Yield at 0.2 acre feet per acre. If approved as a final Maximum Annual Yield it would be arbitrary, capricious, and unlawful, adversely affecting the rights of the public and landowners regarding their use of groundwater.

4. THE MODELER INTENTIONALLY IGNORED THE APPLICABLE SCIENCE OF GROUNDWATER MODELING; THE MODELER THEREBY UNDERESTIMATED THE MAXIMUM ANNUAL YIELD UNDER ANY DEFINITION OF "NATURAL FLOW"; NEVERTHELESS THE OWRB CLAIMED TO USE THE RESULTS OF THE MODELER'S

## WORK IN ESTABLISHING THE TENTATIVE MAXIMUM ANNUAL YIELD AND EQUAL PROPORTIONATE SHARE

The Arbuckle Simpson contains "confined", "semi-confined" and "unconfined" groundwater zones. An unconfined zone is a zone that gives up water easily, typically at ten times the rate that confined zones do. A confined zone does not give up water at a rate as high as that from an unconfined zone. An unconfined zone will give up a much greater quantity of water to springs and streams, precluding any reduction in flow from springs and streams to a greater extent than can water from a confined zone. Therefore, taking the production of water from an unconfined zone into account, water can be used annually from such a zone in greater quantities than can the water from a confined zone, with no difference or even less difference in the effect on flow of springs and streams. This is because the drawdown from taking an amount of water from an unconfined zone is much less than the drawdown resulting from taking the same amount of water from a confined zone. A well was drilled purely in the unconfined zone and the storage coefficient of that zone was determined to be approximately ten times greater than the storage coefficient for the confined zone. The storage coefficient of the unconfined zone was therefore known to be much greater than that of the confined zone. However, the modeler relied upon by OWRB pretended that the entire eastern aquifer was made up of a confined zone and did not utilize the known flow from the unconfined zone in the study and model. As a result, the amount of water that could be taken from the aquifer per acre foot and maintain a given level of stream and spring flows was significantly underestimated. Compounding this is the fact that the modeler also utilized the wrong vertical footage of the applicable zones in making his calculations. All of these significant errors along with a number of others were detailed in the testimony and report of Dr. Poeter, referenced in the Brief of Protestants. This failure to

properly measure the effect of the unconfined zone of the eastern aquifer, or of any aquifer in the Arbuckle-Simpson, causes the results of the modeling study to be arbitrary, and its reference in establishing a Maximum Annual Yield by the OWRB to be arbitrary and capricious.

5. THE LAW REQUIRES THAT OWRB DETERMINE THE AMOUNT OF WATER IN STORAGE PRIOR TO DETERMINING THE MAXIMUM ANNUAL YIELD OF A GROUNDWATER BASIN OR SUBBASIN; HOWEVER, THE OWRB UTILIZED AN INCORRECT AMOUNT IN ISSUING ITS TENTATIVE MAXIMUM ANNUAL YIELD

The OWRB order states that there is 11 million acre feet of water in storage in the three aquifers, but the OWRB staff and Dr. Kyle Murray stated that the amount is about 9.4 acre feet and there is no evidence in the record to support the 11 million acre feet contained in the order. Although this mistake may pale in comparison to the failure to account for the water that can be produced with lower drawdown from the unconfined zone, it is another demonstration of the lack of scientific rigor going into the OWRB tentative Maximum Annual Yield and of the arbitrariness of its findings and determinations.

6. THE DEFINITION OF "NATURAL FLOW" SUPPOSEDLY ACCEPTED BY THE SMITHEE COMMITTEE WAS BASED UPON THE AMOUNT OF STREAM FLOW REDUCTION TOLERABLE FOR THE MAINTENANCE OF SOME ACCEPTABLE LEVEL OF FISH POPULATION; HOWEVER, THE STUDY BY THE SMITHEE COMMITTEE ACTUALLY ATTEMPTED TO MEASURE THE EFFECTS OF STREAM FLOW REDUCTION ON FISH HABITAT, WITHOUT EXPLAINING WHAT CORRELATION MIGHT EXIST BETWEEN THE TWO; AS A RESULT, THERE IS WAS NO ANALYSIS OF THE EFFECTS OF STREAM FLOW REDUCTION ON FISH POPULATION, THE VERY ISSUE THAT THE SMITHEE COMMITTEE SUPPOSEDLY WAS TRYING TO ADDRESS

In addition, as detailed in the Brief of Protestants, the Smithee committee instructed the flow modeler to utilize a completely different stream flow regime in calculating the stream flow reduction criteria than that which it had used in achieving its purported "consensus", and then the modeler used yet another regime not recommended even by the Smithee committee. The result

for determining any rational standard for the "natural flow" against which the Maximum Annual Yield is required to be determined pursuant to Title 82 Okla. Stat. § 1020.9A. The failure to use a rational basis for defining the "natural flow" against which the yield must be measured makes the determination of the tentative Maximum Annual Yield arbitrary, capricious, and unlawful.

7. THE OWRB ADOPTED THE RECOMMENDATION OF OWRB STAFF TO ADOPT A DIFFERENT MAXIMUM ANNUAL YIELD IN ISSUING ITS TENTATIVE ORDER, WITHOUT ANY RATIONAL BASIS FOR DEVIATING FROM THE FINDINGS OF THE STUDY

The only witness that testified regarding the deviation from the study results could not explain why they were made. Ms. Cunningham of the OWRB staff stated that there were three reasons for not adopting the modeling/study results, but none of them were because of the modeling failures and scientific errors. Rather, she based the 0.2 acre feet per acre recommendation to the OWRB on "model variability, conservative assumptions, and concerns about reasonable use." Ms. Cunningham could not define any of these criteria for recommending a different standard on any scientific basis, could not explain how they were used to calculate a different standard, and deferred to "the scientists" to explain them. However, no one ever did explain how they were used, if at all, in arriving at the 0.2 acre feet per acre recommendation of the OWRB staff—not in the hearing and not in any documents in the record. There is simply no explanation of how they were determined, calculated, or defined. Nowhere in Title 82 Okla. Stat. § 1020.9A does there appear any reference to "model variability, conservative assumptions, or concerns about reasonable use" as being factors available for use in setting the Maximum Annual Yield. The decision at the end, proffered by OWRB staff and adopted by the OWRB, was simply arbitrary as a matter of fact and law.

8. THE RESULT IS THAT THE OWRB DID NOT IN FACT DETERMINE A MAXIMUM ANNUAL YIELD FOR ANY OF THE THREE AQUIFERS AND IT WOULD BE UNLAWFUL FOR THE OWRB TO ESTABLISH A MAXIMUM ANNUAL YIELD ON THE BASIS PROFERRED BY THE OWRB STAFF.

In issuing a tentative and then a final Maximum Annual Yield order, the OWRB is required by title 82 Okla. Stat. §§ 1020.4 and 1020.5 to (1) "make hydrologic surveys and investigations of major groundwater basin or subbasins" such as the three Arbuckle-Simpson aquifers; (2) base its decision on the total land area overlying the aquifer; (3) base its decision on the "total amount of water in storage"; (4) identify and base its decision on the "rate of recharge and total discharge" from the aquifers; and (5) determine and base its decision on the "transmissibility" of the aquifers.

Overriding all of this, under the Constitution of Oklahoma and the Administrative Procedures Act, is the requirement imposed on the OWRB and every State agency and official to take no action that violates the substantive due process rights and rights to equal protection, or conflicts with the statutory requirements of the Act to issue no order that is arbitrary or capricious or unsupported by the facts of the case.

This is especially applicable to the landowners that are entitled to use the groundwater underlying their lands, subject only to reasonable regulation, but not subject to confiscation by the government without just compensation. For the Arbuckle-Simpson aquifers in particular Title 82 Okla. Stat. § 1020.9A requires that the Maximum Annual Yield be such as will not result in the issuance of permits to take groundwater that will reduce the "natural flow" of water in streams and springs emanating from the aquifers.

However, in issuing its tentative Maximum Annual Yield for the Arbuckle-Simpson aquifers, the OWRB:

- (1) Utilized the wrong amount of water in storage in the three aquifers;
- (2) Unlawfully adopted an agency rule defining "natural flow" of springs and streams as that which will protect certain fish populations, or fish habitat, while failing to use existing statutory standards for "natural flow", while also failing to follow the strictures of the Administrative Procedures Act in doing so, making the rule and its subsequent use void;
- (3) Purported to utilize the definition of "natural flow" based on that rule, but for reasons unexplained at the hearing or in any documents, instructed its modeler to use (1) a different definition of "natural flow" from the purported consensus definition of its own committee, and (2) a different stream flow regime than that which was used in adopting the agency rule interpreting "natural flow"; this in effect resulted in three different definitions of "natural flow", and therefore three different rules, one of which was used in the actual modeling study.
- (4) Used a groundwater flow model to purportedly determine the recharge and discharge to and from the eastern aquifer and applied them to all three aquifers, but failed to follow accepted scientific principles for such modeling by (1) using only the storage and discharge attributes of the confined zone of the aquifer, while ignoring the vastly different hydrologic attributes of the unconfined aquifer zone and its meaning for the amount of discharge of water from the aquifer, (2) using the wrong vertical extent of rocks in the applicable zones, (3) not studying or accounting for the drastic differences in the geological structure of the western and central aquifers as compared with the eastern aquifer, and their effects on recharge and discharge and transmissibility, (4) not studying the western and central aquifers for any of the criteria required by statute, (5) making the assumption that the three aquifers are hydrologically contiguous when previous studies stated that they are not, and (6) ignoring even the flawed

results of the model and instead arbitrarily selecting the 0.2 acre feet per acre yield, without explaining or documenting any purported rationale for doing so, while claiming justification based on statements not appearing in any applicable statute or rule.

The lack of any scientific rigor or rationale inherent in the processes and results of the Smithee committee; in its attempting to define "natural flow" without APA rulemaking and public input; in the mistakes and failures of modeling study; and in the lack of process or documentation for selecting the Equal Proportionate Share—that is, the back-calculating from an arbitrarily selected EPS to generate a purported Maximum Annual Yield—are compounded by the continuous disconnects appearing between every stage of the process. Those disconnects appear between the selected standard for "natural flow" and its non-use in the modeling study; between the specification and use of inconsistent stream flow regimes; between the stream flow regimes and the modeling study; between the modeling study and the actual selection of the Maximum Annual Yield, which was then short-circuited by the selection of an Equal Proportionate Share by OWRB staff, not based on any calculated Maximum Annual Yield.

Unfortunately, the only stage of the process in which there appears to be no disconnection is the use of the OWRB staff's back-calculated yield number by the OWRB itself, in ordering its tentative Maximum Annual Yield.

The result is that the OWRB's tentative order relies upon no conceivable science for its outcome. Comparing the process, determinations, and results with the actual statutory requirements, there is in fact no reliance on a correct number for the amount of water in storage; no valid calculation of a rate of recharge or discharge from any of the three basins; no scientifically supported transmissibility determination (especially when ignoring the transmissibility of the unconfined zone); and in sum no hydrologic survey or investigation upon

which the severe ninety-percent restriction of the public's access to groundwater can be based—in fact, none on which it even has *been* based.

The requirements of Oklahoma law for determining a Maximum Annual Yield and Equal Proportionate Share of groundwater from the aquifers of the Arbuckle-Simpson have been avoided, ignored, and in some cases actually violated by the OWRB. There is not just a flawed basis for the OWRB to prescribe the yield of the aquifers, or a few mistakes that can be overlooked. Instead, *there is no basis in the record for prescribing such a yield*, and doing so would be arbitrary and unlawful. In light of the record available for the OWRB to review, it would be nothing short of capricious for it to adopt the tentative order.

The constitutional and statutory rights of the public and the landowners in particular will be trampled by the OWRB if it adopts this order.

9. THE OWRB'S ARBITRARY CHOICE OF 0.2 ACRE FEET PER ACRE AS THE MAXIMUM ANNUAL YIELD OF THE ARBUCKLE SIMPSON AQUIFERS IS A VIOLATION OF THE OKLAHOMA CONSTITUTION AND THE ADMINISTRATIVE PROCEDURES ACT AND MUST BE REJECTED BY THE HEARING EXAMINER AND THE BOARD

The OWRB cannot adopt 0.2 acre feet per acre as the Maximum Annual Yield on the basis of the record before the hearing examiner and the Board. In fact, there is no basis in the record for the adoption of any Maximum Annual Yield for any of the three Arbuckle-Simpson aquifers. If the State adopts the 0.2 Maximum Annual Yield, it will limit the Equal Proportionate Share of landowners of the Arbuckle-Simpson in such a way that is demonstrably arbitrary and unreasonable. The due process clauses of the State and Federal Constitutions afford protection against arbitrary and unreasonable administrative actions. *Lindsey v. State ex rel.*

*Dept. of Corrections, 1979 OK 35, ¶ 17* The Board's tentative decision, if translated into a final decision in any substantive way, is unlawful under the Constitution.

In addition, one way by which the State has attempted to protect the Constitutional rights of persons subject to the laws of this State is by its adoption of the Administrative Procedures Act. That Act makes administrative orders by any agency, including OWRB, unlawful if they are "in violation of constitutional provisions" or "in excess of statutory authority" or "made upon unlawful procedure" or are "clearly erroneous" in view of the evidence, or are simply "arbitrary and capricious" Title 75 Okla. Stat. §322 (1) (a), (b), (c), (e), and (f). The actions of OWRB in this case will display the violation of all those APA standards if the OWRB adopts the tentative order

10. GRAPHIC DESCRIPTION OF ARBITRARY OWRB PROCESSES AND DETERMINATIONS IN ESTABLISHMENT OF THE 0.2 ACRE FEET PER ACRE TENTATIVE MAXIMUM ANNUAL YIELD

Committee selected and chaired by OWRB staff to define "natural flow"; membership is primarily made up of government employees, with only one landowner from the Arbuckle-Simpson; committee chooses a definition of "natural flow" for purposes of implementing the provisions of 82 O.S. 1020.9A for determining the Maximum Annual Yield of the Arbuckle-Simpson aquifers. Committee is chaired by OWRB water quality staff that is not familiar with nor involved in working on groundwater recharge/discharge.

Committee works on the basis of selecting a stream-flow that would be designed to limit the effects of water use from the aquifer on certain fish populations.

Committee chooses not to use any definition of "natural flow" based on use of the aquifer water for public water supplies or drinking water. Committee chair states that it chose the "most protective" standard for fish, but that it has the opposite effect on preserving water quantities available for use for drinking water supplies.

Committee neglects or refuses to use the term "natural flow" in Title 60 O.S. § 60 and case law interpreting that term.

The action of the Committee interprets and implements what will be used as the OWRB's definition of "natural flow", but is not adopted through the rulemaking provisions for publication, public comment, and Legislative review required by the Administrative Procedures Act.

Committee completes work and reports a "consensus" definition of "natural flow" based on effects of water use on fish populations; OWRB staff instructs stream flow modeler to use a definition of "natural flow" based on a different stream flow regime than the one it studied and for which it reported a "consensus".

The reason for this switch to a different stream flow regime is unexplained in OWRB staff testimony and not analyzed or explained in any OWRB document.

Modeler uses a different, and still unexplained and undocumented, stream flow regime than either the "consensus" one studied by the Smithee committee or the one the modeler was instructed to use by the OWRB staff.

Groundwater recharge/discharge modeler conducts study only of eastern aquifer.

Modeler neglects to utilize the approximately ten-times higher storage coefficient of the unconfined zone of the aquifer; in doing so, the modeler vastly underestimates the amount of water that can be used from the aquifer with an equal effect on discharge to streams and springs.

Modeler does not conduct "hydrologic surveys and investigations" of central or western aquifers as required by Title 82 Okla. Stat. § 1020.4A .

OWRB staff does not utilize the results of the modeling study to determine the aquifers' Maximum Annual Yield.

Instead, OWRB staff selects three hypothetical Equal Proportionate Shares for the use of groundwater by landowners and groundwater users in the Arbuckle-Simpson, and has the modeler run these chosen EPS's to back-calculate a Maximum Annual Yield for each of them.

OWRB staff selects 0.2 acre feet per acre as the Maximum Annual Yield/Equal Proportionate Share that it will recommend to the OWRB Board for purposes of issuing its tentative order limiting the use of the groundwater by landowners and other water users in the Arbuckle-Simpson.

OWRB staff states that it did not use the Maximum Annual Yield that resulted from the study model because of "conservative assumptions, model variability, and concerns about reasonableness", but provides no scientific or other definition for these terms, or how they were used to calculate the 0.2 acre foot limitation on groundwater use.

OWRB staff issues Final Report to U.S. Bureau of Reclamation; applies 0.2 acre feet per acre Maximum Annual Yield to all three aquifers; claims the recommendation was based on science.

OWRB issues its Tentative Maximum Annual Yield for the eastern, central, and western aquifers of the Arbuckle-Simpson, proposing to limit the Equal Proportionate Share available for water use by landowners to 0.2 acre feet per acre.

Wherefore, these parties request that the OWRB reject the tentative order establishing the Maximum Annual Yield of the Arbuckle-Simpson aquifers at 0.2 acre feet per year, or at any other amount and rate, until a valid determination of the statutorily required findings can be made for each of the three aquifers.

Respectfully submitted by:



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#### CERTIFICATE OF SERVICE

I certify that prior to 5 p.m. on the 31st day of May, 2012 I e-mailed or mailed a copy of this document to all parties of record in the above-styled case in accordance with the instructions of the hearing examiner.



Michael C. Wofford