

**IN THE UNITED STATES DISTRICT COURT
EASTER DISTRICT OF ARKANSAS
NORTHERN DIVISION**

CLEO WATKINS, *et al.*

PLAINTIFFS

v.

Case No. 3:17-cv-00272-KGB

LAWRENCE COUNTY, ARKANSAS, *et al.*

DEFENDANTS

ORDER

Before the Court is a motion to exclude Dr. Shawkat Ali filed by plaintiffs Cleo Watkins; Pyles Family Farms, LLC; Victor Hutcherson; Alevlla Hutcherson; Helen Knight; Michael Watkins; Betty Watkins; and George Carney and a motion to exclude expert testimony filed by defendants Lawrence County, Arkansas; John Thomison, in his official capacity as County Judge of Lawrence County; and William Powell, Donald Richey, Lloyd Clark, Heath Davis, Ernest Briner, Ronald Ingram, Tracy Moore, Kenney Jones, and Alex Latham, in their official capacities as members of the Lawrence County Quorum Court (Dkt. Nos. 46, 51). Both sides have filed responses in opposition to the respective motions (Dkt. Nos. 58, 60). For the following reasons, the Court denies the motions (Dkt. Nos. 46, 51).

I. Legal Standard

Federal Rule of Evidence 702 provides that:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

Fed. R. Evid. 702. “Rule 702 reflects an attempt to liberalize the rules governing the admission of expert testimony. The rule clearly is one of admissibility rather than exclusion.” *Lauzon v. Senco Prods., Inc.*, 270 F.3d 681, 686 (8th Cir. 2001) (internal quotations and citations omitted).

In determining whether expert testimony should be admitted, the district court must decide if the expert’s testimony and methodology are reliable, relevant, and can be applied reasonably to the facts of the case. *David E. Watson, P.C. v. United States*, 668 F.3d 1008, 1015 (8th Cir. 2012); *Barrett v. Rhodia, Inc.*, 606 F.3d 975, 980 (8th Cir. 2010). Under *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), the district court must conduct this initial inquiry as part of its gatekeeping function. *Watson*, 668 F.3d at 1015. The Court must be mindful that “*Daubert* does not require proof with certainty.” *Sorensen By & Through Dunbar v. Shaklee Corp.*, 31 F.3d 638, 650 (8th Cir. 1994). Rather, it requires that expert testimony be reliable and relevant. *Id.* “The inquiry as to the reliability and relevance of the testimony is a flexible one designed to ‘make certain that an expert, whether basing testimony upon professional studies or personal experience, employs in the courtroom the same level of intellectual rigor that characterizes the practice of an expert in the relevant field.’” *Marmo v. Tyson Fresh Meats, Inc.*, 457 F.3d 748, 757 (8th Cir. 2006) (quoting *Kumho Tire Co. v. Carmichael*, 526 U.S. 137, 152 (1999)).

The proponent of the expert testimony has the burden of establishing by a preponderance of the evidence the admissibility of the expert’s testimony. *Id.* at 757-58. To satisfy the reliability requirement for admission of expert testimony, “the party offering the expert testimony must show by a preponderance of the evidence that the expert is qualified to render the opinion and that the methodology underlying his conclusions is scientifically valid.” *Barrett*, 606 F.3d at 980 (internal quotation marks and citation omitted). To satisfy the relevance

requirement for the admission of expert testimony, “the proponent must show that the expert’s reasoning or methodology was applied properly to the facts at issue.” *Id.* (citing *Marmo*, 457 F.3d at 757).

The Court examines the following four non-exclusive factors when determining the reliability of an expert’s opinion: (1) “whether it can be (and has been) tested”; (2) “whether the theory or technique has been subjected to peer review and publication”; (3) “the known or potential rate of error”; and (4) “[the method’s] ‘general acceptance.’” *Presley v. Lakewood Eng’g & Mfg. Co.*, 553 F.3d 638, 643 (8th Cir. 2009) (quoting *Daubert*, 509 U.S. at 593-94). These factors are not exhaustive or limiting, and the Court must use the factors as it deems fit to tailor an examination of the reliability of expert testimony to the facts of each case. *Id.* In addition, the Court can weigh whether the expertise was developed for litigation or naturally flowed from the expert’s research; whether the proposed expert ruled out other alternative explanations; and whether the proposed expert sufficiently connected the proposed testimony with the facts of the case. *Id.* While weighing these factors, the Court must continue to function as a gatekeeper who separates expert opinion evidence based on good grounds from subjective speculation that masquerades as scientific knowledge. *Id.*

The Court recognizes that experts may, at times speculate, “but too much [speculation] is fatal to admission.” *Grp. Health Plan, Inc. v. Philip Morris USA, Inc.*, 344 F.3d 753, 760 (8th Cir. 2003) (citations omitted). Thus, speculative expert testimony with no basis in the evidence is inadmissible. *Weisgram v. Marley Co.*, 169 F.3d 514, 518-19 (8th Cir. 1999), *aff’d*, 528 U.S. 440 (2000) (reversing a district court for allowing a witness who was qualified as a fire investigator “to speculate before the jury as to the cause of the fire by relying on inferences that have absolutely no record support”).

Likewise, expert opinion is inadmissible if its sole basis is studies that do not provide a sufficient foundation for the opinion. *See Gen. Elec. Co. v. Joiner*, 522 U.S. 136, 145 (1997). When studies form a basis for an expert’s opinion, then, the Court must determine if there is an adequate basis for the experts’ opinion and whether there is “too great an analytical gap between the data and the opinion proffered.” *See id.* at 146.

“As a general rule, the factual basis of an expert opinion goes to the credibility of the testimony, not the admissibility, and it is up to the opposing party to examine the factual basis for the opinion in cross-examination.” *Bonner v. ISP Techs., Inc.*, 259 F.3d 924, 929 (8th Cir. 2001) (internal citation omitted). “Only if the expert’s opinion is so fundamentally unsupported that it can offer no assistance to the jury must such testimony be excluded.” *Id.* at 929-30 (quoting *Hose v. Chi. Nw. Transp. Co.*, 70 F.3d 968, 974 (8th Cir. 1996)).

II. Defendants’ Motion To Exclude Expert Testimony

Defendants move the Court to exclude expert testimony of Marc Johnson and Jim Grisham pursuant to Federal Rules of Evidence 702 and 703 (Dkt. No. 51, at 1). Defendants state that this motion is based upon erroneous factual conclusions adopted for the purpose of Mr. Johnson’s opinions (*Id.*, ¶ 1). Defendants also argue that Mr. Grisham’s opinion and report should be excluded because he attempts to quantify damages based solely on “flood days” given him per Mr. Johnson’s report (*Id.*, ¶ 9). Defendants have submitted as exhibits for the Court’s consideration Mr. Johnson’s expert report; a transcript of Mr. Johnson’s deposition; Mr. Grisham’s expert report; a transcript of Mr. Grisham’s deposition; a May 2003 permit letter; an affidavit from Brad Smithee, the District Engineer of District 10, Arkansas Department of Transportation (“ADT”); the Cache River watershed-based management plan; precipitation and events exceeding half an inch for Mr. Johnson’s “flood days”; and an affidavit from Judge Thomison (Dkt. Nos. 51-1, 51-2, 51-3, 51-4,

51-5, 51-6, 51-7, 51-8, 51-9). Plaintiffs argue that Mr. Johnson and Mr. Grisham’s expert opinions more than meet minimum requirements for expert opinion testimony under Federal Rule of Evidence 702 and the *Daubert* standard (Dkt. No. 58, at 2). First, the Court will review the submitted exhibits to determine Mr. Johnson and Mr. Grisham’s anticipated testimony. Second, the Court will evaluate the admissibility of this anticipated testimony under Federal Rule of Evidence 702.

A. Mr. Johnson’s Opinions And Testimony

Mr. Johnson works as a professional engineer at FTN Engineers in Little Rock, Arkansas (Dkt. No. 51, ¶ 1). Mr. Johnson’s report is directed toward the structure of the Lawrence County Road 717 Bridge and its ability to allow free flow of water from the stream (*Id.*, ¶ 2). Mr. Johnson’s report is dated May 8, 2019 (Dkt. No. 51-1). In his report, Mr. Johnson provides his professional opinion in this matter based on the following four factors: (1) review of materials submitted to him by plaintiffs in this case and other publicly available information; (2) field reconnaissance of the area; (3) numerical hydraulic modeling done under his supervision; and (4) his education and experience as a Civil Engineer specializing in the areas of hydraulics and hydrology within the field of Civil Engineering (*Id.*, at 5).

Mr. Johnson offers six opinions in his report. First, Mr. Johnson opines that the five culverts together in the new bridge with culverts (“the culvert bridge”) provide less than 40% of the cross-sectional area available for flow than the old timber bridge crossing (“the wooden bridge”) did, allows less than 30% of the water to flow downstream than the wooden bridge did, and constricts the flow that can pass downstream in the West Cache River Ditch, effectively damming water up upstream of the Lawrence County Road 717 crossing (*Id.*, at 12). Second, Mr. Johnson opines that the damming up of the West Cache River Ditch caused by the culvert bridge

has caused sediment to deposit in the upstream-most portion of the West Cache River Ditch, reducing the size of the channel near its divergence with the East Cache River Ditch (*Id.*, at 14).

Third, Mr. Johnson opines that the culvert bridge crossing of Lawrence County Road 717 acts as a dam, backing water up upstream of it, causing increased flow to go downstream in the East Cache River Ditch, causing longer duration flooding and higher flood elevations in the East Cache River Ditch and its tributaries than if the wooden bridge was in place (*Id.*, at 23). Specifically, Mr. Johnson finds that 18 of the 27 parcels owned by plaintiffs shown in Table 2 of his report (“Table 2”) experience longer durations of flooding with the culvert bridge in place at the Lawrence County Road 717 crossing than if the wooden bridge was still in place; he also found that 16 of the 27 parcels owned by plaintiffs shown in Table 2 experience higher flood elevations as well (*Id.*, at 23-24). Fourth, Mr. Johnson opines that increased flood elevations and duration will continue in the future for the parcels that experience increased flooding shown in Table 2 whenever the flows in the Cache River upstream of the bifurcation are between 2,000 and 5,500 cubic feet per second (“cfs”) if the Lawrence County Road 717 crossing of the East Cache River Ditch is not changed back to the same cross-sectional area and frictional characteristics of the wooden bridge (*Id.*, at 24, 29). Fifth, Mr. Johnson opines that based on the results of the modeling and his professional judgement, he believes that any flows that occurred between 2,000 and 5,500 cfs since the wooden bridge was replaced would have caused increased flood elevations and durations on the same parcels listed in Table 2 where increases occur (*Id.*). And sixth, Mr. Johnson opines that based on the results of the modeling and professional judgement, he believes that the flood patterns have changed for the same parcels listed in Table 2 where increases occur such that, with the culvert bridge, more water now enters plaintiffs’ properties; except for parcels 4 and 23 the culvert bridge also increases the surface area of the flooding on the properties that were flooded that are shown

in Table 2, according to Mr. Johnson (*Id.*, at 24, 29-30). Mr. Johnson provides further details, photographs, figures, and tables to support and explain these opinions.

Mr. Johnson's report arrives at the following conclusions: the culvert bridge at the Lawrence County Road 717 crossing of the West Cache River is causing increased flood elevations and duration of flooding on plaintiffs' parcels listed in Table 2 when compared to the wooden bridge; the flood patterns have changed for the same parcels listed in Table 2 where increases occur such that with the culvert bridge, more water now enters plaintiffs' properties; except for parcels 4 and 23 the culvert bridge also increases the surface area of the flooding on the properties that were flooded that are shown in Table 2; this increase in flood elevations, flood duration, and increased area of flooding will continue to occur in the future whenever the flows in the Cache River upstream of the bifurcation are between 2,000 and 5,500 cfs; and since 2008, there were 119 separate periods over a total of 705 days when flows were in this range (*Id.*, at 33).

B. Application of Rule 702 To Mr. Johnson's Opinions And Testimony

Defendants maintain that Mr. Johnson's report, opinions, and testimony "should be disallowed as being irrelevant and immaterial under Rule 702" or "excluded under Rule 703 as they would have prejudicial effects being presented to a jury . . . [with] little probative value." (Dkt. No. 52, at 2). Defendants challenge Mr. Johnson's report as "based at its core" on an inaccurate illustration and mathematical computations arising therefrom (Dkt. No. 51, ¶¶ 4-5). Defendants argue that these inaccuracies become obvious when comparing the illustration—Figure 4 in Mr. Johnson's report—to the ADT's scale diagram of the former bridge, which was prepared the month preceding its demolition and the construction of the culvert bridge (*Id.*, ¶¶ 3-5; Dkt. No. 51-1, at 12). Defendants claim these discrepancies prove the fallacy of Mr. Johnson's opinion that the current bridge allows only 30% of the flow of the former bridge (Dkt. No. 52, at

2). Defendants also claim that Mr. Johnson’s report has nothing to do with and fails to consider maintenance issues upon the bridge; siltation in the streambed and its effect on the flow of water; stream flow of Bohannan Ditch or Gum Slough Ditch; precipitation upon subject fields or parcels; or the flow coming from the east from Crowley’s Ridge through Bohannan Ditch and Gum Slough Ditch (Dkt. Nos. 51, ¶¶ 6-7; 52, at 2). Defendants maintain that such failures mean Mr. Johnson has not adequately accounted for obvious alternative explanations for flooding in the basin (Dkt. No. 52, at 2).

Plaintiffs counter that Mr. Johnson modeled the relevant watershed using the pertinent HEC-RAS model for the Cache River watershed, a state-of-the-art modeling routinely used by governmental agencies and relied upon for expert testimony in federal cases (Dkt. No. 58, at 2). Plaintiffs detail the precise steps Mr. Johnson took to run the HEC-RAS model (*Id.*, at 2-3). Mr. Johnson essentially ran the HEC-RAS model twice—once with figures from the wooden bridge in place and once with figures from the five-culvert bridge in place—and compared the results to determine whether the culvert bridge impacted plaintiffs’ properties (Dkt. Nos. 51-1, at 25-26; 58, at 3).

Though defendants do not explicitly challenge Mr. Johnson’s use of HEC-RAS, the Court notes that proper HEC-RAS modeling satisfies *Daubert*. Dr. Ali has testified that the HEC-RAS model is “the most popular” tool for the sort of modeling at issue in this case among professional engineers, including the United States Army Corps of Engineers (“the Corps”) and the Federal Emergency Management Agency (“FEMA”) (Dkt. No. 58-3, at 58-62). Dr. Ali’s testimony indicates that HEC-RAS is “sanctioned by” both the Corps and FEMA and “is considered a standard model that is acceptable and commonly used by” professionals in the industry. *United States v. Dico, Inc.*, 266 F.3d 864, 870 (8th Cir. 2001). Recognizing this reality, numerous federal

courts have admitted expert testimony using HEC-RAS modeling at trial. *See, e.g., Funderburk v. S.C. Elec. & Gas Co.*, 395 F. Supp. 3d 695, 713-14 (D.S.C. 2019) (“[B]ecause HEC-RAS has been explicitly endorsed and ‘general[ly] accept[ed]’ by government agencies and private firms operating within this specialized field, the court finds that this factor endorses the reliability of [the expert’s] methodology, and the court accords this factor great weight.”); *Navelski v. Int’l Paper Co.*, 244 F. Supp. 3d 1275, 1291-92 (N.D. Fla. 2017); *Alost v. U.S.*, 73 Fed. Cl. 480, 495 (Fed. Cl. 2006) (HEC-RAS modelling refuted claimant), *aff’d sub nom. Morgan v. U.S.*, 254 Fed. App’x 823 (Fed. Cir. 2007).

Figure 4 shows drawings of the cross-sectional view of the wooden bridge and the culvert bridge superimposed together and drawn to the same scale for comparison (Dkt. No. 51-1, at 12). Defendants challenge Mr. Johnson’s use of Figure 4, but Mr. Johnson testified that Figure 4 was not input into the HEC-RAS model based on plaintiffs’ representations (Dkt. Nos. 58, at 5; 58-2, at 87-88). According to plaintiffs, Mr. Johnson purposefully used a smaller wooden bridge in his modeling than the wooden bridge diagrammed in Figure 4 because he purportedly wanted to avoid any appearance of skewing the model results (Dkt. Nos. 58, at 5; 58-2, at 90-91, 114-16). This smaller wooden bridge was input in an attempt to be conservative about the estimated flow capacity of the previous wooden bridge and not overestimate the difference in flow between the two bridges, according to plaintiffs (*Id.*). Because the record evidence before the Court indicates that Mr. Johnson did not rely on Figure 4 in arriving at his opinions and conclusions, the Court will not exclude Mr. Johnson’s expert testimony based on Figure 4. This dispute more properly goes to the credibility of the testimony, not its admissibility.

The Court is similarly unmoved by defendants’ argument that the Court should exclude his testimony claiming that Mr. Jonson’s opinion is irrelevant, immaterial, and prejudicial for its

failure to account adequately for alternative explanations for flooding in the subject basin (Dkt. No. 52, at 2). Defendants essentially dispute the factual basis of Mr. Johnson's model. According to plaintiffs, Mr. Johnson purposefully made conservative estimates in his conclusions; did not attempt to model rainfall that fell on plaintiffs' properties because the individual rainfall patterns would have been determined somewhat arbitrarily; testified that adding rainfall into the modeling over plaintiffs' properties would only have made the flooding effects worse because the flooding allegedly caused by the culvert bridge would be exacerbated by additional rainfall; and testified that adding the flow coming down the Bohannon Slough Ditch and Gum Slough Ditch would have the same effect (Dkt. Nos. 58, at 6-7; 58-2, at 90-91, 114-15, 140-42, 155). Plaintiffs also cite Mr. Johnson's reliance on and use of data from the United States Geological Survey ("USGS") gage at Egypt, Arkansas (Dkt. No. 58, at 7). Plaintiffs claim that Mr. Johnson's report, therefore, accounts for these other sources to an extent by hewing to more conservative estimates.

Mr. Johnson's model definitionally captures some known variables and predicts, with a known rate of error, the likely outcome in a given scenario. Defendants' alternative causation theories do not nullify Mr. Johnson's model or render it immaterial, irrelevant, or prejudicial. Any alleged analytical gap between the data upon which Mr. Johnson relied when developing his model and the opinion he intends to offer is not so wide to render the opinion inadmissible under Federal Rules of Evidence 702 or 703. The Court determines on the record before it that such a dispute goes to the credibility of Mr. Johnson's anticipated testimony, not its admissibility. Accordingly, the Court denies defendants' motion to exclude expert testimony as it relates to Mr. Johnson (Dkt. No. 51).

C. Mr. Grisham's Opinions And Testimony

Mr. Grisham owns his own business, Farm Financial Consultants, LLC, through which he offers farm consulting services to a number of clients (Dkt. No. 51-3, at 1). Mr. Grisham was asked to provide an expert opinion in this matter on damages plaintiffs suffered, and he provided a report dated May 13, 2019 (*Id.*). Mr. Grisham's report is based on the relevant crop and farm records of plaintiffs; his consulting records; Mr. Johnson's report; his education and training; and his experience in agriculture, crop pricing, and determining farm rental values in Arkansas (*Id.*). Mr. Grisham's report relies upon Mr. Johnson's report and his determination as to the cause of the flooding; assuming the flooding that Mr. Johnson identified,¹ Mr. Grisham opines that plaintiffs would have lost a number of acres of crops every year to flooding (*Id.*, at 2). Based on the dates Mr. Johnson produced in his report, Mr. Grisham finds that Lawrence County's bridge has caused flooding on average 41.9 days per year since 2009 during the planting or growing season for rice and soybeans (*Id.*). Mr. Grisham opines that the flooding Mr. Johnson identified would have resulted in substantial crop losses to plaintiffs' cropland (*Id.*).

Mr. Grisham was asked to determine the fair market rental value for plaintiffs' properties and claims to have made those determinations in two ways: (1) by using information unique to plaintiffs' properties and (2) by determining a reasonable per-acre rental value based on comparable properties (*Id.*). Mr. Grisham also calculated the annual interest that each plaintiff could have obtained if they had been compensated in the year that flooding occurred (*Id.*). Mr. Grisham calculated both the annual rental value for the properties at issue and a daily rental value while stipulating that it is common practice in the industry to rent cropland annually or for several

¹ Mr. Johnson identifies flooding in Table 3 of his report ("Table 3"), and Mr. Grisham's report calls this flooding "flood days" (Dkt. Nos. 51-1, at 31; 51-3; 58-2, at 126-27).

years at a time (*Id.*). Though Mr. Grisham states that in 49 years of leasing land he has never leased a farm by the day, he understands that damages may be awarded on a per-day basis in cases like this one (*Id.*). Based on that understanding, Mr. Grisham provided a daily rental value but opines that an annual rental value is the more appropriate damages calculation considering standard practice and the nature of farming (*Id.*).

Mr. Grisham provides the following opinions: (1) Cleo Watkins, owner of FSA farm number 8198, lost daily rental income in the amount of \$39,444.00 and annual rental income in the amount of \$264,464.00; (2) the H.T. Nutt Trust,² owner of FSA farm number 6711, lost daily rental income in the amount of \$97,849.00 and annual rental income in the amount of \$264,464.00; (3) David and Kim Watkins, owners of FSA farm number 7661, lost daily rental income in the amount of \$14,201.00 and annual rental income in the amount of \$106,012.00;³ (4) Pyles Family Farm LLC, owners of FSA farm number 4680, lost daily rental income in the amount of \$98,898.00 and annual rental income in the amount of \$522,047.00; (5) Knight Revocable Trust,⁴ owner of FSA farm number 7604, lost daily rental income in the amount of \$18,973.00 and annual rental income in the amount of \$126,820.00; (6) Victor Hutcheson, owner of FSA farm number 8093, lost daily rental income in the amount of \$20,656.00 and annual rental income in the amount of \$150,768.00; and (7) Betty Watkins, owner of FSA farm number 4398, lost daily rental income in

² Brenda Watkins owns the H.T. Nutt Trust (Dkt. No. 51-3, at 1). However, neither Brenda Watkins nor the H.T. Nutt Trust appear to be named plaintiffs in plaintiffs' second amended complaint, although Michael Watkins and Betty Watkins are named plaintiffs (Dkt. No. 17).

³ Neither David nor Kim Watkins appear to be named plaintiffs in plaintiffs' second amended complaint, although Michael Watkins and Betty Watkins are named plaintiffs (Dkt. No. 17).

⁴ Helen Knight appears to own the Knight Revocable Trust (Dkt. No. 51-1, at 24). Helen Knight is a named plaintiff in plaintiffs' second amended complaint (Dkt. No. 17).

the amount of \$47,005.00 and annual rental income in the amount of \$323,145.00 (*Id.*, at 5-7).⁵ Mr. Grisham opines that each plaintiff's interest earned on the flooding days should be paid at a rate of 1.25% (*Id.*). These numbers represent the amount of damages Mr. Grisham reasonably believes plaintiffs are entitled to from Lawrence County for the flooding caused by the county's bridge across the West Cache River Slough (*Id.*, at 7). Mr. Grisham opines that, if Mr. Johnson identifies additional flooding days for 2019, then he would simply apply the same methodology to reflect any new flooding days and calculate further damages (*Id.*).

D. Application of Rule 702 To Mr. Grisham's Opinions And Testimony

Defendants challenge Mr. Grisham's expert testimony as "irrelevant and immaterial" pursuant to Rule 702 "because his proposed testimony is not based on sufficient facts or data and his projections of damages are not the product of reliable principals [*sic*] or methods" (Dkt. No. 52, at 3). As the Court understands Mr. Grisham's calculations, Mr. Grisham did not review any plaintiffs' tax returns and did not talk to any plaintiff about whether that plaintiff actually lost a crop during any relevant year (Dkt. No. 51-4, at 6). In fact, plaintiffs were not able to identify for Mr. Grisham how many bushels per acre grown of any crop during any year, the price per bushel sold, or the dates any bushels were sold (*Id.*). Based on Mr. Grisham's testimony, at least one plaintiff said he suffered damages in "that the water backed up on him" and that he could not "plant his crop or harvest his crops over certain years in certain phases of his crop" (*Id.*, at 3).

⁵ In ruling on the admissibility of Mr. Grisham's anticipated expert testimony, the Court makes two observations. First, the Court does not intend to permit any expert to opine about damages for an individual or entity who is not a named plaintiff in this action at the time of trial. Second, the Court will address separately with the parties issues related to the appropriate statute of limitations applicable to each claim and then will assess the appropriate statutory period for which damages may be sought, limiting any anticipated testimony accordingly and if appropriate.

To approximate the amount of damages, as the Court understands the record, Mr. Grisham reviewed two government forms for each plaintiffs' actual overall farm; determined based on those forms how many total acres were planted in which crops per year; derived a mathematical yield per year based on an average yield of four Lawrence County farms (*Id.*, at 7), not tied to any plaintiffs' actual yield as no plaintiff claimed to have maintained yield information for the relevant time (*Id.*, at 6); determined the price which Mr. Grisham also derived from the four Lawrence County farms (*Id.*, at 12); and then calculated damages from this information, taking the total percent split between the owner and farmer, dividing by the number of acres, and dividing by 365 for a daily value (*Id.*, at 12). The four Lawrence County farms from which Mr. Grisham derived yield were planted at optimum times each year; three are located on high ground in Lawrence County while one is in the Cache River flood plain; and all four farms are irrigated (*Id.*, at 7).

The "primary problem" defendants identify is that Mr. Grisham's formula includes Mr. Johnson's "flood days" as a multiplier (*Id.*). Defendants assert that Mr. Grisham, in relying on Mr. Johnson's "flood days," does not consider precipitation, channelization up north, blockage down south, or in-stream siltation and that he failed to talk to any plaintiff about whether they incurred any specific loss for any specific parcel or farm for any given year (Dkt. No. 52, at 3). Defendants argue these alleged shortcomings result in "misleading" calculations with no true relationship to the damages issue (*Id.*).

Further, according to defendants, these "flood days" are largely constituted by days of the year which are inconsistent with days Mr. Grisham states are important for planting, growing, and harvesting rice and soybeans in the subject basin (*Id.*). Specifically, defendants argue that "flood days" between December and February are "simply irrelevant" since Mr. Grisham identified a planting, growing, and harvesting season stretching from April through November (Dkt. Nos. 51-

3, at 2; 52, at 3). Mr. Grisham identifies the best planting season for rice to receive the highest yield and best grade as April 10 to May 20; growing season as April 10 to September 1; and harvesting as occurring from August 15 to October 10 (Dkt. No. 51-3, at 2). Mr. Grisham identifies the best planting season for soy beans as April 20 to June 15; growing season as April 20 to October 14; and harvesting as occurring from August 20 to November 10 (*Id.*). However, Mr. Grisham concedes that these dates did not factor into his damages equation for plaintiffs (Dkt. No. 51-4, at 7). His average yield and price derived from four Lawrence County farms reflect figures based on optimum times.

Defendants challenge Mr. Grisham's utilization of FSA farm numbers as a basis of calculation (Dkt. No. 51, ¶ 11). Defendants maintain that parcels from all over the subject area are included in any given FSA farm number, so according to defendants there is no way to tell what portion of yield is related to any given parcel and to know whether the FSA farm number bears a relation to Mr. Johnson's affected parcels (*Id.*).

Defendants also move to exclude Mr. Grisham's calculations as novel and not subject to peer review (*Id.*, ¶ 12). Along with failing to consider planting dates, defendants claim his calculations do not consider yields, precipitation, seed costs, labor costs, fertilizer and herbicide costs, irrigation costs, fuel costs, and other essential elements to profit and loss for a particular farm (*Id.*).

For these reasons, defendants state that Mr. Grisham's report should be excluded as irrelevant and immaterial under Rule 702 and excluded due to its marginal relevance being outweighed by the prejudicial effect it would have on a jury under Rule 703.

Defendants argue that Mr. Grisham's expert opinion should be excluded because it fails to account for whether any plaintiff incurred any specific loss for any specific parcel or farm for any

given year, while plaintiffs maintain that such level of detail is unnecessary to meet the *Daubert* admissibility standard for Mr. Grisham's testimony. At this point, and on the record before it, the Court observes that "[t]he principle that damages must be shown to a reasonable certainty, which is borrowed from the law of contract remedies, is not incompatible with the rule that a plaintiff need not prove the precise amount of damages; both principles require that the quantum of damages be shown to a reasonable approximation." *Ark. Game & Fish Com'n v. United States*, 736 F.3d 1364, 1379 (Fed. Cir. 2013) (citations omitted). In making its determination on the admissibility of Mr. Grisham's anticipated testimony, the Court assumes without deciding that each plaintiff is able to show damages to a reasonable degree of certainty. The record before the Court on this point is limited; Mr. Grisham testified that he talked to only one plaintiff who claimed to have suffered damages. Mr. Grisham purports to calculate damages for more than one named plaintiff. As a result, the Court will not make a determination on this threshold issue at this time on the limited record before it. The Court reserves a determination on whether there is sufficient proof that each plaintiff in fact suffered damages at all until after the Court hears additional proof.

Assuming without deciding that each plaintiff is able to show damages to a reasonable degree of certainty, the Court will not exclude Mr. Grisham's anticipated testimony as to a reasonable approximation of the quantum of damages. As explained above, the Court will admit Mr. Johnson's report and anticipated testimony, subject to cross examination by defendants on its alleged shortcomings and purported failure to account for alternative causation theories. Consequently, the Court will not exclude Mr. Grisham's anticipated testimony based on its reliance on Mr. Johnson's report.

Additionally, upon consulting Table 3, the Court notes what appear to be flood days within the relevant planting, growing, and harvesting seasons identified by Mr. Grisham's report (Dkt.

Nos. 51-1, at 31; 51-3, at 2). Defendants are correct that *some* of the flood days fall outside of the seasons identified by Mr. Grisham, but that fact does not render his report “simply irrelevant,” as defendants suggest, particularly given Mr. Grisham’s opinion that industry practice dictates that cropland is typically rented annually and the record evidence indicating that plaintiffs here rent their properties out on a yearly basis (Dkt. Nos. 51-3, at 2; 52, at 3; 58-5, at 21; 58-6, at 9-150).

Further, Mr. Grisham has provided the Court with a daily rental value for each relevant property (Dkt. No. 51-3, at 5-7). As plaintiffs note, “[i]f the Court were to order Mr. Grisham to limit his opinion to only the planting, growing, and harvesting seasons . . . that has largely already been done by Mr. Grisham because all of the pertinent information and methodology is already contained within his report. The total number of days (i.e., the acceptable window of days for computing flooding damages) is simply a variable.” (Dkt. No. 58, at 10-11). If the Court considered appropriate damages only for “flood days” within the planting, growing, and harvesting seasons, a fact finder could consult Table 3 and multiply Mr. Grisham’s daily rental value by the number of “flood days” falling within these seasons during the relevant period.⁶

Assuming without deciding that each plaintiff is able to show damages to a reasonable degree of certainty, Mr. Grisham’s expert opinion is not “so fundamentally unsupported that it can offer no assistance to the jury,” so it is admissible. *United States v. Finch*, 630 F.3d 1057, 1062 (8th Cir. 2011) (quoting *United States v. Rodriguez*, 581 F.3d 775, 795 (8th Cir. 2009)). Of course, defendants may vigorously cross on all of the alleged deficiencies identified in Mr. Grisham’s opinion. The Court concludes on the record before it that, assuming without deciding that each

⁶ For the purposes of this Order, the Court need not—and does not—decide whether damages should be calculated via an annual rental value or daily rental value. The Court will reserve such a determination for after the Court receives briefing on the issue by all parties and additional evidence.

plaintiff is able to show damages to a reasonable degree of certainty, Mr. Grisham’s expert opinion about those damages should be tested by the adversary process with competing expert testimony and cross–examination, rather than excluded by the court at the outset. *Johnson v. Mead Johnson & Co., LLC*, 754 F.3d 557, 562 (8th Cir. 2014). Accordingly, the Court denies defendants’ motion to exclude expert testimony as it relates to Mr. Grisham (Dkt. No. 51).

III. Plaintiffs’ Motion To Exclude Dr. Ali

Plaintiffs have moved to exclude Dr. Ali’s report, opinions, and expected testimony (Dkt. No. 46, ¶ 1). Plaintiffs argue that Dr. Ali’s report, opinions, and accompanying testimony do not meet the requirements of Federal Rule of Evidence 702 and *Daubert (Id., ¶ 3)*. Plaintiffs have submitted as exhibits for the Court’s consideration Dr. Ali’s expert report; a transcript of Dr. Ali’s deposition; a 2001 Redacted Memorandum from the Corps (“the Corps memo”); and plaintiffs’ expert rebuttal report of Marc Johnson (Dkt. Nos. 46-1, 46-2, 46-3, 46-4). Defendants argue that Dr. Ali has prepared his report based upon sound scientific principles and that it will be helpful for a jury to hear his opinions, if the Court allows Mr. Johnson’s testimony (Dkt. No. 61, at 1-2). First, the Court will review the submitted exhibits to determine Dr. Ali’s anticipated testimony. Second, the Court will evaluate the admissibility of Dr. Ali’s anticipated testimony under Federal Rule of Evidence 702.

A. Dr. Ali’s Opinions And Testimony

Dr. Ali works as a professional engineer for ETC Engineers and Architects, Inc. (“ETC”), holds a Ph.D. in Hydraulics, was questioned about his opinions in a lengthy deposition, and has testified that he would rely on all of his opinions stated in his report and at trial (Dkt. Nos. 46-1, at 3; 61, at 2). Plaintiffs state that Dr. Ali offers two types of opinions: an opinion which attempts to compare the potential flow capacity of the county’s current bridge with the wooden bridge that

defendants replaced around 2000 and an opinion concerning potential causes of flooding to plaintiffs' properties (Dkt. No. 47, at 3-13). According to defendants, Dr. Ali has prepared his report and is prepared to testify essentially about six different items: (1) agricultural practice in the 700 square-mile watershed is the major source of in-stream siltation; (2) the geometrical configuration at the bifurcation (plus or minus 90 degrees) increased the sedimentation potential at that spot; (3) the farmers have built levies along the east side of the East Cache River Ditch; this causes increased flood elevations and causes in-stream sedimentation; (4) the Corps memo equated the flow in the current bridge as similar to the former wooden bridge; (5) dredging upstream in the Cache River causes siltation, resulting in sedimentation at the bifurcation and downstream; and (6) levies and culverts which have been built by farmers on the east side of the East Cache River slows flow (Dkt. No. 61, at 2).

Dr. Ali's report is dated June 18, 2019 (Dkt. No. 46-1, at 1). In his report, Dr. Ali provides his "professional opinion on the effect of CR 717 Culverts on the flooding of [plaintiffs'] properties located near the East Cache River Ditch" based on the following five factors: (1) review of Cache River flow regime, watershed, land use, and sediment morphology; (2) field reconnaissance of the area; (3) review of Mr. Johnson's expert report; (4) observation of the Cache River flooding of February 20, 2019; and (5) doctoral level education, professional training, and over 30 years of experience in the field of hydrology, hydraulics, and floodplain research and management (*Id.*). Dr. Ali's report diverges from Mr. Johnson's report in its estimation of the flow capacity of the wooden bridge and the new five-culverts on CR 717 (*Id.*, at 2-3). Mr. Johnson's report showed the peak discharge through the wooden bridge to be approximately 930 cfs and the discharge

through the culvert bridge to be only about 130 cfs (*Id.*, at 2). Using Manning's equation⁷ with the hydraulic parameters Mr. Johnson used for the culvert system, Dr. Ali's report estimates peak discharge through the culvert bridge to be 954.78 cfs (Dkt. No. 46-1, at 3). Dr. Ali cites the Corps memo which estimated a flow of 779 cfs at bank-full with the wooden bridge and identified the need of a fifth culvert with an eight-foot diameter to match closely the flow capacity of the wooden bridge at bank-full (*Id.*). Since the culverts used in the culvert bridge are nine feet in diameter, Dr. Ali's estimate is a little larger than the Corps' estimate (*Id.*). Dr. Ali states that this estimated flow capacity is further verified by the recent flood of February 2019, during which peak discharge at the USGS gage at Arkansas Highway 91 was recorded as 7,380 cfs on February 20, 2019 (*Id.*). Dr. Ali includes photos taken February 20, 2019, with his report and claims that it is evident from these photos that the flow through the culvert bridge is uniform without any damming effect or increased flood elevation upstream of the culverts (*Id.*, at 3, 13-14).

Dr. Ali concludes, therefore, that "the new bridge with [five]-culverts reinstated the flow capacity of the wooden bridge at bank-full and complied with CORPS permit requirements" (*Id.*, at 3). Dr. Ali's report also proffers four other possible causes of prolonged flooding with increased inundation depth of plaintiffs' properties, including: (1) agricultural practices in the Cache River watershed and dredging operation in the upper Cache River causing excessive siltation in the flow of East and West Cache River Ditches and resulting in instream sedimentation around the bifurcation and the downstream of both branches; (2) the geometry of plus or minus 90 degree bifurcation of West Cache River most likely contributing to the sediment deposition at and near

⁷ Manning's equation is "an empirical equation that applies to uniform flow in open channels and is a function of the channel velocity, flow area[,] and channel slope." *See* http://www.fsl.orst.edu/geowater/FX3/help/8_Hydraulic_Reference/Manning_s_Equation.htm. The equation is expressed as: $Q = ([1.49/n] * A * R^{2/3} * S^{1/2})$, where Q = flow rate; A = flow area; R = hydraulic radius; and S = channel slope. *See id.*

the confluence of the bifurcation; (3) manmade intervention of natural flow by building weir across the stream; and (4) building levee and culverts to control natural flow through tributary streams (*Id.*).

B. Application of Rule 702 To Dr. Ali's Opinions And Testimony

Plaintiffs challenge Dr. Ali's opinion calculating the potential flow capacity of the five openings in the culvert bridge as "completely unreliable" due to its reliance on and use of the "cursory" Corps memo and contend that the Corps memo's conclusions are not comparable to the results Dr. Ali calculated using Manning's equation (Dkt. No. 47, at 4). Plaintiffs offer seven critiques regarding Dr. Ali's reliance on the Corps memo: (1) the Corps memo is unreliable, untested, and internally inconsistent; (2) Dr. Ali does not know what math the anonymous engineer authoring the Corps memo used to reach the 779 cfs number; (3) Dr. Ali has never used Flowmaster, the program the anonymous engineer relied upon to reach the 779 cfs number; (4) Dr. Ali does not know how Flowmaster is calibrated or if the anonymous engineer properly calibrated the program; (5) Dr. Ali offers no explanation on why a result calculated using Manning's equation could be reliably compared to a result calculated using the Flowmaster program; (6) Dr. Ali has assumed without explanation that plaintiffs⁸ are not harmed by the culvert bridge if the culvert bridge allows equivalent or greater flow than the wooden bridge; and (7) Dr. Ali has not offered a single opinion regarding the impact of the culvert bridge on plaintiffs' properties (Dkt. Nos. 46-2, at 180, 183-85, 197-99, 205-06; 47, at 5-6). Further, plaintiffs challenge Dr. Ali's opinion concerning potential causes of flooding to plaintiffs' properties as "secondary opinions" and

⁸ Plaintiffs' briefing states that "Dr. Ali has assumed without explanation that if the culvert bridge allows equivalent or greater flow than the wooden bridge, then the Defendants are not harmed by the culvert bridge" (Dkt. No. 47, at 6). The Court understands plaintiffs to assert that Dr. Ali assumes that *plaintiffs* are not harmed by the culvert bridge, not defendants.

“untested theories about other potential flooding causes” which fail the *Daubert* standard and Rule 702 (Dkt. No. 47, at 4, 11-13). Plaintiffs characterize these conclusions as wholly unsupported by any scientific evidence or data (*Id.*, at 12). Plaintiffs have also submitted a rebuttal report of Dr. Ali’s expert report authored by Mr. Johnson (Dkt. No. 46-4).

Defendants maintain that Dr. Ali’s reliance on the Corps memo is acceptable as the Corps had been summoned to the project and performed scientific analysis before permitting the current bridge after Lawrence County installed a fifth culvert in 2003 (Dkt. No. 61, at 3). Defendants argue that the Corps memo is self-authenticating given that the Corps is the government agency which permits bridges in the first place (*Id.*). Dr. Ali’s premise for the reliability of the Corps memo “is essentially that if the permitting agency determines that the bridge passed muster, then why would Dr. Ali or any other engineer question that finding, certainly after all these years?” (*Id.*). Defendants extend this logic and argue that Dr. Ali need not explain the Flowmaster method used by the Corps in arriving at the Corps’ conclusion nor understand the specific hydrology modeling used by Mr. Johnson in his expert opinion report (*Id.*). Defendants also argue that Dr. Ali’s education, 30 years of engineering experience, and training provide the basis for his opinions that dredging operations upriver in the Cache Basin lead to excessive siltation and that the 90-degree geometry of the bifurcation of the West Cache River most likely contributes to sediment deposition (*Id.*, at 3-5). Defendants claim that this education, experience, and training rebut plaintiffs’ assertions that Dr. Ali’s opinions are wholly unsupported by any scientific evidence or data (Dkt. Nos. 47, at 12; 61, at 4).

Despite plaintiffs’ contentions, the Court finds inappropriate excluding Dr. Ali’s expert opinion and testimony. The shortcomings plaintiffs allege in Dr. Ali’s opinion are fair game for cross-examination at trial and assessment by the jury, but the Court considers it reasonable for

purposes of the lenient *Daubert* standard that Dr. Ali would rely on the Corps memo in arriving at the conclusions of his expert report. As defendants note, the Corps memo served as the basis for the Lawrence County bridge being certified for its permit in 2003. The Corps' use of the Corps memo in permitting the bridge speaks to its reliability. Because the Corps is the federal agency responsible for permitting the at-issue bridge, the Court finds unconvincing plaintiffs' argument that Dr. Ali's reliance on the Corps memo even without knowing the identity of the Corps memo's author or the underlying data that informed its results dooms his expert opinion altogether.

The Court also finds unconvincing plaintiffs' critique that Dr. Ali "does not know where [their] properties are located." (Dkt. No. 47, at 12). Dr. Ali testified that he knows where the properties are based on Figure 1 from Mr. Johnson's report, which features a study area map (Dkt. Nos. 46-1, at 5; 46-2, at 101, 119-20; 51-1, at 6). Since the Court has not excluded Mr. Johnson's report under the *Daubert* standard and has not excluded Mr. Grisham's anticipated testimony given its reliance on Mr. Johnson's report, the Court also considers reasonable Dr. Ali's reliance on Mr. Johnson's report, including Figure 1.

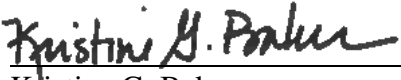
Additionally, the Court considers Dr. Ali's education, experience, training, and work with respect to this case sufficient to include Dr. Ali's theorizing about possible causes of prolonged flooding over plaintiffs' objections (Dkt. Nos. 46, at 11-13; 46-1, at 3). Dr. Ali acknowledged in his deposition that these possible causes were hypotheses or theories, and plaintiffs may cross-examine them as such at trial. However, the Court sees no need to exclude this expert opinion at this stage of the litigation on the record before the Court.

Accordingly, the Court denies plaintiffs' motion to exclude Dr. Ali (Dkt. No. 46).

IV. Conclusion

For the above reasons, the Court denies defendants' motion to exclude expert testimony from Mr. Johnson and Mr. Grisham (Dkt. No. 51). The Court also denies plaintiffs' motion to exclude the expert testimony of Dr. Ali (Dkt. No. 46).

It is so ordered, this the 19th day of May, 2020.



Kristine G. Baker
United States District Court Judge