

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF NEW MEXICO**

IN RE: GOLD KING MINE RELEASE
IN SAN JUAN COUNTY, COLORADO,
ON AUGUST 5, 2015

No. 1:18-md-02824-WJ

This Document Relates to All Cases

MEMORANDUM OPINION AND ORDER
DENYING ALLEN PLAINTIFFS' MOTION TO EXCLUDE
EXPERT TESTIMONY OF MICHAEL DANE GOBLE CONCERNING THE ALLEGED
OVERREPORTING OF LOST CROP BY THE ALLEN PLAINTIFFS

Michael Dane Goble prepared an Expert Report for Defendants Weston Solutions, Inc., Environmental Restoration, LLC, and the United States. *See* Doc. 1667-1, filed June 16, 2022. Mr. Goble has over a decade of experience dealing with the evaluation of agronomic¹ and environmental data, experience as an environmental consultant for 50 farming operations across the western United States comprising over 10,000 acres of cultivated land, and extensive experience performing geospatial analysis using satellite imagery to analyze crops. *See* United States' Response at 5-6, Doc. 1711, filed July 14, 2022.

Mr. Goble estimated the vegetated acres for some of the *Allen* Plaintiffs using satellite imagery from 2014, 2015, 2016, 2018, and the Normalized Difference Vegetation Index ("NDVI") which can be used to indicate the presence of vegetation. *See Allen* Plaintiffs' Motion to Exclude Expert Testimony of Michael Dane Goble Concerning the Alleged Overreporting of Lost Crop by the *Allen* Plaintiffs, Doc. 1667 at 6, filed June 16, 2022. Mr. Goble compared his estimates of vegetated acreage to the "the total lost acres claimed" in 2015 and concluded that 49 *Allen* Plaintiffs overreported their lost acreage by more than double the vegetated acreage identified by the NDVI analysis. Motion at 6.

¹ "Agronomic" means relating to the science of crop production and soil management. Oxford English Dictionary, www.oed.com.

The *Allen* Plaintiffs seek to exclude the portions of Mr. Goble's testimony and opinions concerning the alleged overreporting of crop losses by the *Allen* Plaintiffs. *See* Motion at 7 n.1,

26. The *Allen* Plaintiffs contend that:

- (i) "Mr. Goble's analysis assumes that the *Allen* Plaintiffs cultivated 100% of their fields every year, which is contradicted by not only the testimony of the *Allen* Plaintiffs" but also by other information.
- (ii) Mr. Goble did not consider other available information.
- (iii) "Mr. Goble's analysis only analyzes *lost acreage*, it does not consider the other ways that the *Allen* Plaintiffs suffered lost crops."

Motion at 7-9.

None of the Parties requested that the Court set a *Daubert* hearing prior to ruling on this Motion.

Admission of Expert Testimony Under Rule 702

Rule 702, which governs testimony by expert witnesses, provides:

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.

Federal Rule of Evidence 702 requires the district court to “ensur[e] that an expert's testimony both rests on a reliable foundation and is relevant to the task at hand.” *Daubert*, 509 U.S. at 597, 113 S.Ct. 2786. Under Rule 702, the court must first decide whether the proffered expert is qualified “by knowledge, skill, experience, training, or education” to render an opinion. *See* Fed. R. Evid. 702. Then “the court must determine whether the expert's opinion is reliable by assessing the underlying

reasoning and methodology, as set forth in *Daubert*.” *United States v. Nacchio*, 555 F.3d 1234, 1241 (10th Cir. 2009) (en banc).

Bill Barrett Corp. v. YMC Royalty Co., LP, 918 F.3d 760, 770 (10th Cir. 2019).

Expert Qualifications

To perform its gatekeeping function, the Court generally takes two steps. First, it determines whether the expert is qualified by “knowledge, skill, experience, training, or education” to render an opinion. *See* Fed. R. Evid. 702.

The *Allen* Plaintiffs state: "We do not seek to exclude the images used by Mr. Goble at trial or to preclude Mr. Goble from testifying at trial. We only seek an order precluding Mr. Goble from testifying that the *Allen* Plaintiffs overreported their lost crop acreage." Motion at 7, n.1. Because the *Allen* Plaintiffs do not dispute Mr. Goble's qualifications, the Court turns to the second step which is to decide whether his opinions are sufficiently reliable. *See United States v. Nacchio*, 555 F.3d 1234, 1241 (10th Cir. 2009) (*en banc*).

Opinion Reliability

For the reasons stated below, the Court denies the *Allen* Plaintiffs' Motion to exclude those portions of Mr. Goble's opinions and testimony regarding the *Allen* Plaintiffs' alleged overreporting of lost crops.

Percentage of Fields Cultivated

The *Allen* Plaintiffs state:

Mr. Goble's analysis assumes that the *Allen* Plaintiffs cultivated 100% of their fields every year, which is contradicted by not only the testimony of the *Allen* Plaintiffs, but by information provided to Mr. Goble by the supervisory natural resource specialist for the Shiprock Chapter ... Mr. Goble completely ignored this important and highly relevant evidence because he did not "think it was something that was significant enough to be included."

These omissions are critical as it entirely undermines Mr. Goble's very broad conclusions ... For example, if an *Allen* Plaintiff was resting half their crop in 2015, which is a common practice Mr. Goble did not take into account, then Mr. Goble's analysis that the Plaintiff overclaimed by double is unfounded because Mr. Goble incorrectly assumed that the *Allen* Plaintiffs planted 100% of his crop every year.

To the contrary, many of the *Allen* Plaintiffs rotate their crops such that the degree of use varies from year to year, i.e., the *Allen* Plaintiffs use 100% of their fields but not at the same time, which supports their claims that they lost crops for the total amount of acreage of their field they could grow depending on the year.

Motion at 7-8, 23. While the *Allen* Plaintiffs cite portions of Mr. Goble's testimony to support their contention that Mr. Goble ignored evidence of crop rotation, they do not cite to any portions of the record that indicate Mr. Goble assumed that the *Allen* Plaintiffs cultivated 100% of their fields. *See* Motion at 10-20.

The United States asserts that "Mr. Goble did not assume that Plaintiffs cultivated 100% of their fields each year." Response at 10, Doc. 1711, file July 14, 2022. "For the 49 *Allen* Plaintiffs that reported a specific quantity of lost crops for the 2015 growing season in their administrative claims, Mr. Goble compared their claimed lost crop acreage to his calculations of vegetated acreage based on the satellite imagery from less than a month before the Gold King Mine release occurred." Response at 9-10. The United States argues that "Plaintiffs fail to explain how the practice of crop rotation has any impact on the baseline for Mr. Goble's overreporting opinion: the portion of acres in vegetation at the time of the Gold King Mine release." Response at 11.

The United States sets forth the following example for a Plaintiff discussed in the *Allen* Plaintiffs' Motion:

Mr. Tyler's example shows why crop rotation practices are irrelevant to Mr. Goble's overreporting opinion. Mr. Tyler claimed damages based on 39.2 acres of corn, 48.5 acres of alfalfa, and 8.5 acres of vegetables, which is 100% of his available 96.2 acres of farmland. *See* Ex. E, Thomas Tyler Questionnaire, at 3. But, the satellite imagery from July 11, 2015, shows that only 19.4 of those 96.2 acres actually had any vegetation. *See* Ex. A at 486. Indeed, it is clear from the images that Mr. Tyler had no crops on plots A3-U25, A3-U26, A3-U28, or A3-U29. *Id.* The blue highlighting, which reflects the areas credited as having vegetation, shows that all of Mr. Tyler's actual crops were counted, in addition to giving him credit for non-cultivated vegetation. *Id.* The satellite imagery, which the *Allen* Plaintiffs concede is admissible, reveals that at least 76.8 acres are essentially devoid of vegetation as of July 11, 2015. *Id.* Mr. Tyler is essentially claiming a 100% loss of vegetated acreage for each and every year after the Gold King Mine release, even though he actually only vegetated a small portion of his acreage in any given year, as shown by the 2014 and 2015 satellite imagery. The fact that Mr. Tyler might rotate his crops and use different parts of his field for different crops at different

time is irrelevant. Mr. Tyler was never using 100% of his field in any one year, and the satellite imagery from 2015 is the best evidence of the portion of his acreage that was in use during the 2015 growing season. Plaintiffs do not, and cannot, explain how their critiques have any impact on the simple fact that as of July 11, 2015, *at least* 76.8 acres of Mr. Tyler's farmland was not in use.

Response at 11-12.

In their Reply, the *Allen* Plaintiffs state:

The ways in which the *Allen* Plaintiffs used their farmland is highly relevant in that it shows that while they might not have used 100% of their acreage in a given year, they used 100% of their acreage over multiple years such that the disruption caused by the Gold King Mine Blowout caused them to lose more lost crops than just what was being cultivated in 2015.

Reply at 5, Doc. 1744, filed July 28, 2022. It appears that the *Allen* Plaintiffs may be suggesting that Mr. Goble's opinion, which is based on his comparison of vegetated acreage in 2015 to Plaintiffs' reported losses, is flawed because he did not take into account that Plaintiffs' reported losses over several years. That does not appear to be the case. Mr. Goble's expert report states that

49 plaintiffs listed total claimed *acres lost in 2015*. Values in Table 1 below were calculated by summing total claimed lost acres and summing total acres classified as vegetated ... for the 49 plaintiffs. Vegetated acres were derived from NDVI analysis results for 2014, 2015, 2016, and 2018 ... Estimated *lost acreage in 2015*, based on claims made by 49 plaintiffs, was 634 acres (Table 1). This represents more than double (213%) the acreage identified by the NDVI analysis as actively growing vegetation *in July, 2015*, prior to the GKM spill on August 5, 2015.

Table 1. Claimed Lost Acres Versus NDVI Vegetated Acres

Total Lost Acres Claimed (n=49)	2014 Total NDVI Acres	2015 Total NDVI Acres	2016 Total NDVI Acres	2018 Total NDVI Acres
634	265	298	171	158

Doc. 1667-1 at 4, filed June 16, 2022 (emphasis added). Those *Allen* Plaintiffs reported 634 lost acres for 2015 which is more than twice the 298 acres of vegetated acreage shown on the 2015 satellite imagery. The *Allen* Plaintiffs have not shown that crop rotation is relevant to Mr. Goble's

analysis. Mr. Goble's analysis is based on satellite imagery which for 2015 shows that portions of the *Allen* Plaintiffs' fields were not vegetated one month before the Gold King Mine Release.

Other Information Not Considered

The *Allen* Plaintiffs argue that Mr. Goble's opinion is unreliable because:

- Mr. Goble did not consider or analyze the types of crops grown by the *Allen* Plaintiffs because he was only interested in the vegetation detected by NDVI;
- Mr. Goble did not consider or analyze the growing cycles of the crops grown by the *Allen* Plaintiffs;
- Mr. Goble did not consider or analyze the weather patterns and variations for the years he evaluated;
- Mr. Goble did not “ground truth” (physically inspect the fields that the satellites photographed) the results of his analysis;
- The images are taken from different dates for each year that he evaluated spanning from May 12 to July 11 such that the vegetation detected by the NDVI cannot be considered accurate or consistent to draw conclusions from;
- There is no imagery for 2017; and
- The quality, i.e., the resolution and geolocation accuracy, of the images varies and for 2015, what Mr. Goble called “the most important year” for his analysis, the quality is the lowest."

Motion at 8-9.

The *Allen* Plaintiffs do not explain why Mr. Goble's failure to consider and analyze the types of crops, the growing cycles of the crops, and weather patterns and variations, and his failure to "ground truth" the results make his analysis unreliable. Mr. Goble stated:

"Results from the NDVI analysis do not identify different types of vegetation or determine the health of vegetation, other than to discriminate between actively growing vegetation and barren or fallow land. This approach ensures that most, if not all, actively growing vegetation is accounted for in each LUPP [Land Use Permit Plot] during the peak growing season".

Based on the assignment of **ALL** growing vegetation identified in the NDVI analyses to cultivated crops, we knowingly and conservatively added non-crop trees, shrubs and/or weeds to the cultivated crop acreage, which further supports our stance that values used for lost crop acreage in Stack and Unsworth's analysis are significantly overestimated.

Doc. 1711-2 at 3, filed July 14, 2022 (emphasis in original).

The *Allen* Plaintiffs contend the images are taken from different dates for each year that Mr. Goble evaluated spanning from May 12 to July 11 such that the vegetation detected by the NDVI cannot be considered accurate or consistent to draw conclusions from. Mr. Goble testified that the satellite imagery he relied on was taken "to collect leaf-on or actively growing vegetation, specifically agricultural vegetation during the growing season," "to inventory agriculture," and for "analyzing actively growing crops." Doc. 1711-3 at 2, 5-6. The *Allen* Plaintiffs have not shown that satellite images from May 12 to July 11 inaccurately depict agricultural vegetation.

The *Allen* Plaintiffs assert that Mr. Goble's opinion is unreliable because there is no imagery for 2017 but have not explained why that affects Mr. Goble's estimate of the vegetated acreage and lost crops in 2015. It is not clear whether Mr. Goble plans to opine regarding the *Allen* Plaintiffs' reports of lost crops for 2017. Counsel for the United States and the *Allen* Plaintiffs shall confer regarding Mr. Goble's opinion regarding 2017 crop losses and, if necessary, address the issue in a motion *in limine*.

The *Allen* Plaintiffs also argue that "the images for 2015 were of a lesser quality than the images for the other years included in Mr. Goble's analysis." Motion at 24. Mr. Goble testified that the lower resolution for the 2015 imagery did not add "any significant" uncertainty to his analysis. Doc. 1711-3 at 20.

The Other Ways the *Allen* Plaintiffs Suffered Lost Crops

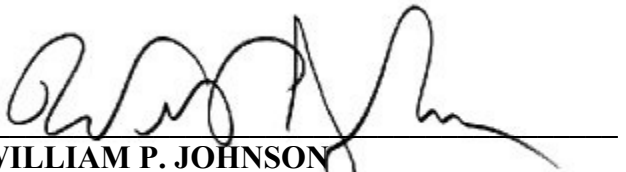
The *Allen* Plaintiffs state: "Mr. Goble's analysis only analyzes *lost acreage*, it does not consider the other ways that the *Allen* Plaintiffs suffered lost crops" because he did not consider information regarding the *Allen* Plaintiffs' inability to sell their crops due to the stigma caused by the Release, or the lower yield and quality of their crops. Motion at 7.

The "other ways" the *Allen* Plaintiffs suffered lost crops are not relevant to Mr. Goble's opinion which merely compares their total vegetated acreage as determined through satellite

imagery to the amount of lost acreage reported by the *Allen* Plaintiffs. It appears that by comparing the Plaintiffs' reported lost acreage to the total vegetated acreage in the satellite images, Mr. Goble is implicitly assuming the entire vegetated acreage was lost meaning none of it made it to market.

The concerns raised by the *Allen* Plaintiffs go to the weight to be given Mr. Goble's opinion, not its admissibility. Moreover, Counsel for the *Allen* Plaintiffs will be afforded the opportunity to cross examine Mr. Goble at trial.

IT IS ORDERED that *Allen* Plaintiffs' Motion to Exclude Expert Testimony of Michael Dane Goble Concerning the Alleged Overreporting of Lost Crop by the *Allen* Plaintiffs, Doc. 1667, filed June 16, 2022, is **DENIED**.



WILLIAM P. JOHNSON
CHIEF UNITED STATES DISTRICT JUDGE