FOR PUBLICATION

UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

UNITED STATES OF AMERICA, *Plaintiff-Appellee,* v. CB & I CONSTRUCTORS, INC., *Defendant-Appellant.*	No. 10-55371 D.C. No. 2:08-cv-03609-PA-AGR OPINION

Appeal from the United States District Court
for the Central District of California
Percy Anderson, District Judge, Presiding

Argued and Submitted
November 15, 2011—Pasadena, California

Filed June 29, 2012

Before: Alfred T. Goodwin, William A. Fletcher, and
Johnnie B. Rawlinson, Circuit Judges.

Opinion by Judge William A. Fletcher

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OPINION

W. FLETCHER, Circuit Judge:

Defendant CB&I Constructors, Inc., ("CB&I") negligently caused a June 2002 wildfire that burned roughly 18,000 acres of the Angeles National Forest in Southern California. The United States brought a civil action against CB&I to recover damages for harm caused by the fire. CB&I does not contest its liability or the jury's award of roughly $7.6 million in fire suppression, emergency mitigation, and resource protection costs. It challenges only the jury's additional award of $28.8 million in intangible environmental damages.

The district court denied CB&I's motions for judgment as a matter of law and a new trial or remittitur, concluding that under California law the government could recover damages for all of the harm caused by the fire, including intangible harm to the environment. The court held that the government provided sufficient evidence for the jury to determine the amount of environmental damages, and that the resulting award was not grossly excessive. We affirm.

I. Background

A. Factual Background

The Angeles National Forest covers roughly 650,000 acres in the San Gabriel Mountains, just north of metropolitan Los Angeles. It was set aside for watershed protection and public use in 1892 as the first federal forest reserve in California. *See* ANTHONY GODFREY, THE EVER-CHANGING VIEW: A HISTORY OF NATIONAL FORESTS IN CALIFORNIA 38 (2005). The U.S. Forest Service administers the forest "for outdoor recreation, range, timber, watershed, and wildlife and fish purposes." 16 U.S.C. § 528. It is part of a National Forest System "dedicated to the long-term benefit for present and future generations." *Id.* § 1609(a).

The Angeles National Forest is an important environmental and recreational resource for Southern Californians, representing about 70 percent of all open space in Los Angeles County. It is also a refuge for native plants and animals, including several threatened and endangered species. San Francisquito Canyon, a chaparral and sage scrub ecosystem surrounded by high ridges in the northwestern part of the National Forest, contains known populations of several species protected under the Endangered Species Act, including the Bald Eagle, California Condor, Southwest Willow Flycatcher, and California Red-Legged Frog. The Red-Legged Frog was once widespread throughout the region, but now has only three known populations in Southern California. The largest of the three populations is in San Francisquito Canyon, where the frog remains "extremely vulnerable" to local extinction.

In April 2002, a county water district hired Merco Construction Engineers, Inc., ("Merco") to build four water storage tanks for a housing project in the city of Santa Clarita. Merco subcontracted with CB&I to construct two of the steel tanks. The site was on private land, next to a brush-covered

hillside about a half mile from the National Forest. As the general contractor, Merco maintained a superintendent at the construction site for part of the work day. CB&I encouraged its employees to work quickly by offering them a financial bonus if they completed the tanks in fewer hours than initially projected.

On June 5, 2002, the air temperature at the work site exceeded 100 degrees. A crew from CB&I worked through the heat to perform tasks that posed known fire hazards. Neither CB&I nor Merco had taken several recommended fire prevention precautions, such as clearing brush 100 feet from the tanks, regularly watering dry vegetation, or keeping a fire watch on the ground while the crew worked on the roof.

At about 2:40 p.m., a CB&I employee was on the roof of the tank operating an electric grinder. The grinder cuts and smooths metal with a high-speed rotating abrasive disc that sends out a trail of sparks and hot metal slag. The employee was directing the sparks away from his coworkers and off the edge of the tank toward the dry brush. He saw that the sparks ignited a fire, but by the time the crew descended from the roof the fire was out of control.

As the fire spread, it burned about 2,000 acres of private and county-owned property. It quickly reached the National Forest where it burned another 18,000 acres, or more than 28 square miles. Federal, state, and county firefighters fought the fire for nearly a week before they contained it on June 11. The government incurred roughly $6.6 million in fire suppression costs. The fire became known as the Copper Fire.

The CB&I welding crew returned to work the day after starting the fire. Company employees eventually received a bonus for completing the water tanks in fewer hours than originally projected.

Within the National Forest, some of the greatest fire damage occurred in San Francisquito Canyon. The fire burned

"pretty much all" of the native chaparral and sage scrub vegetation in the Canyon, opening the door to invasive, nonnative plants that increase the risk of future fires. For example, the Copper Fire spread an infestation of Arundo donax — a highly invasive giant reed that grows as fast as eighteen inches per day, outcompetes native vegetation, and clogs waterways. The fire also created a serious flood hazard by destroying vegetation that normally intercepts the flow of rainwater and allows for filtration of the water into the soil. *Cf. First English Evangelical Lutheran Church of Glendale v. Los Angeles Cnty.*, 482 U.S. 304, 307 (1987) (discussing a July 1977 forest fire and resulting February 1978 flood in the Angeles National Forest). The Copper Fire increased the rates of sedimentation in the Canyon watershed by up to three times its normal amount. Much of San Francisquito Creek filled in with ash and dead trees.

The U.S. Forest Service assembled a Burned Area Emergency Rehabilitation ("BAER") team of specialists to coordinate immediate erosion control measures after the fire. The team included a hydrologist, soil scientist, botanist, biologist, and archeologist. Based on the team's recommendations, the Forest Service installed drainage on forest roads and built a large, 30,000 cubic-yard catchment basin to trap mudflow from denuded hillsides. The total cost of BAER work was about $530,000. The government also estimated about $515,000 in anticipated resource protection costs, such as manually removing Arundo dorax from about 40 burned acres and surveying and reestablishing boundary markers damaged by the fire.

In September 2002, as part of the BAER process, the Forest Service closed public access to areas where the National Forest most needed to recover. The Forest Service prohibited all users in these areas for one year, and horseback riders, bicycles, and off-road vehicles for two. Vegetation had regrown by roughly 40% when the closures ended in September 2004.

However, researchers estimated it would take as long as 20 to 25 years for the National Forest to recover from the fire.

The fire and subsequent floods destroyed more than 90% of the California Red-Legged Frog habitat in the National Forest. In 2002, before the fire, about 350 to 500 adult California Red-Legged Frogs lived along San Francisquito Creek. By 2009, researchers saw only about 30 to 50 frogs. Researchers expressed concern that the small size of the remaining population would result in a lack of genetic diversity, making the population more susceptible to diseases and other threats.

The Copper Fire also caused extreme damage to the Hazel Dell Mining Camp, an abandoned graphite mine in the National Forest with historically significant cabins and artifacts from the early twentieth century. The fire consumed all of the camp's wooden structures and contents and collapsed two horizontal mining tunnels. It left the vegetation at the site "moonscaped" and "burned beyond recognition." Damage from the fire reduced the site's historical value and integrity to the point where the camp was no longer eligible for listing on the National Register of Historic Places.

B. Procedural Background

In June 2008, the United States filed a civil action against CB&I and Merco to recover tort damages resulting from the Copper Fire. During a five-day jury trial in September 2009, the government presented evidence of monetary costs for its fire suppression, BAER, and resource protection efforts. The government also called expert witnesses who testified about environmental harm to scenic views, recreational use, soil stability, water quality, plant life, wildlife habitat, the Red-Legged Frog population, and the mining camp. However, the government did not elicit testimony that put a dollar amount on the environmental harm. It maintained that the environmental damages are "not susceptible to empirical calculation"

because they are "measured by their value to the public and for posterity."

In its closing argument, the government described the intangible environmental harm as "a category of damage that you, the jury, are going to decide based on your assessment of the evidence." The government asked the jury, "What is . . . the fact that the Hazel Dell Mining Camp isn't there anymore worth? What is it worth that the [California Red-Legged F]rog has been compromised and the gene pool polluted? What is it worth that the grasses have been changed and other aspects of the Angeles National Forest have been changed?" The government suggested two possible ways the jury could calculate an award for the intangible environmental damages: first, by applying a "multiplier" to the hard damages; or second, by determining a "price per acre" for the 18,000 acres of burned National Forest land.

The district court instructed the jury, "The United States does not have to prove the exact amount of damages that will provide reasonable compensation for the harm. However, you must not speculate or guess in awarding damages." The court also instructed the jury not to include any punitive damages "for the purpose of punishing or making an example of the defendant."

The jury returned a special verdict finding CB&I and Merco liable for negligence and trespass by fire, allocating 65% of the fault to CB&I and 35% to Merco. It awarded roughly $7.6 million for fire suppression, BAER, and resource protection costs in the amounts requested by the government. The jury also awarded the government an additional $28.8 million for intangible environmental damages, or $1,600 per acre of burned National Forest land.

Merco had settled with the government for $2.1 million just before the jury returned its verdict. In November 2009, the district court entered a judgment against CB&I, offsetting its

damages liability based on the Merco settlement. Pursuant to California Civil Code § 1431.2, the court held CB&I jointly and severally liable for the $7.6 million in economic damages, but only severally liable for its share of the $28.8 million in intangible environmental damages. CB&I's 65% share of the environmental damages award was $18.72 million.

In December 2009, CB&I renewed an earlier motion for judgment as a matter of law. The company did not challenge its liability, or the jury's award of $7.6 million in economic damages. Rather, CB&I argued that the intangible environmental damages were not compensable. The company also moved for a new trial or remittitur, arguing that the $28.8 million award was excessive.

In January 2010, the district court denied both motions. It wrote:

> In burning 18,000 acres of the Angeles National Forest, the Copper Fire harmed lands held in trust for this and future generations. The Government should be able to recover damages for all of the damages caused by the fire, including the intangible environmental damages, and the trial provided sufficient evidence for the jurors to quantify that harm.

CB&I timely appealed. Energy utilities that operate transmission lines in California forests, and tree companies that trim or remove trees for the utilities, filed amicus briefs supporting CB&I on appeal (collectively "Amici").

II. Standard of Review

We review *de novo* a district court's denial of a motion for judgment as a matter of law, *Theme Promotions, Inc. v. News Am. Marketing FSI*, 546 F.3d 991, 999 (9th Cir. 2008), and its legal conclusion about the availability of certain types of damages, *EEOC v. Wal-Mart Stores, Inc.*, 156 F.3d 989, 992

(9th Cir. 1998). We review a jury's damage award for substantial evidence. *Lambert v. Ackerley*, 180 F.3d 997, 1012 (9th Cir. 1999) (en banc). We review a district court's denial of a motion for a new trial and remittitur for abuse of discretion. *DSPT Int'l., Inc. v. Nahum*, 624 F.3d 1213, 1218 (9th Cir. 2010).

III. Discussion

On appeal, CB&I makes three primary arguments challenging its share of the $28.8 million jury award for intangible environmental damages. First, CB&I argues that intangible noneconomic damages are not compensable in tort suits alleging harm to property. Second, it contends that the government did not produce sufficient evidence for the jury to determine the amount of environmental damages in a rational way. Finally, CB&I argues that the jury award was grossly excessive. We take the three arguments in turn.

A. Compensability of Intangible Environmental Damages

State law governs the federal government's recovery of damages for harm caused by fires in National Forests. *See United States v. California*, 655 F.2d 914, 917, 920 (9th Cir. 1980).

[1] California's general tort statute provides that the proper measure of damages "is the amount which will compensate [the plaintiff] for all the detriment proximately caused thereby, whether it could have been anticipated or not." Cal. Civ. Code § 3333. "There is no fixed rule for the measure of tort damages under Civil Code section 3333. The measure that most appropriately compensates the injured party for the loss sustained should be adopted." *Santa Barbara Pistachio Ranch v. Chowchilla Water Dist.*, 88 Cal. App. 4th 439, 446-47 (2001). "What is apparent from the[ ] cases is the flexibility employed in the approach to measuring damages and the broad scope of alternative theories applied to fit the particular

circumstances of a case." *Id.* at 447; *see also* 6 WITKIN, SUMMARY OF CALIFORNIA LAW, TORTS § 1727 (10th ed. 2005) ("The different kinds of real property and varying types of injury make it unwise to establish a fixed rule governing damages, and consequently a number of alternative theories are applied.").

[2] California also has a specific statutory provision governing liability for negligently set fires. It provides:

> Any person who personally or through another wilfully, negligently, or in violation of law, sets fire to, allows fire to be set to, or allows a fire kindled or attended by him to escape to, the property of another, whether privately or publicly owned, is liable to the owner of such property for any damages to the property caused by the fire.

Cal. Health & Safety Code § 13007. Based on the provision's "broad language" and "history of liberal construction," a California Court of Appeal held that section 13007 places "no restrictions on the type of property damage that is compensable." *McKay v. California*, 8 Cal. App. 4th 937, 940 (1992). California courts have "neither deviated from nor limited the reach of" the provision, and generally treat it as an "addition[ ] to rather than deduction[ ] from plaintiffs' general protections against negligent harm." *Anderson v. United States*, 55 F.3d 1379, 1381, 1384 n.5 (9th Cir. 1995).

[3] Landowners in California may recover damages for all the harm, including environmental injuries, caused by negligently set fires. In *People v. Southern Pacific Co.*, 139 Cal. App. 3d 627 (1983), the court recognized that a private landowner was entitled to *both* the fair market value of destroyed timber as well as the cost of restoring the property through reforestation. *Id.* at 635. The court reasoned that the fire damaged plaintiff 's property "not only through destruction of trees used for timber, but through damage to the soil. . . .

These are separate injuries." *Id.*; *see also McKay*, 8 Cal. App. 4th at 939-40 (permitting recovery of lost agricultural profits, as well as diminution in value of a burned 25-acre farm).

More recently, a California Court of Appeal upheld a negligence award of more than $3 million against CB&I for damage that the Copper Fire caused to a private, 34-acre ranch near Santa Clarita. *Kelly v. CB&I Constructors, Inc.*, 179 Cal. App. 4th 442 (2009). The fire destroyed about 100 oak trees on the property, damaged several structures, and was a substantial factor in subsequent mudslides that gouged a 200-foot-long gully across a pasture. *Id.* at 448-49. The Court of Appeal affirmed an award of more than $2.6 million in restoration costs — including roughly $1.5 million for erosion and flood control, streambed reconstruction, and removing silt and sand from a pasture — even though these damages "substantially exceeded" the market value of the property before the fire. *Id.* at 454. The court also upheld an additional $750,000 in damages for harm to trees on the property. *Id.* at 459-61.

[4] Federal courts have allowed the government to recover environmental damages for negligently set forest fires on protected public land in California. In *Feather River Lumber Co. v. United States*, 30 F.2d 642 (9th Cir. 1929), we affirmed a damages award against a negligent lumber company for harm caused to merchantable timber in the National Forest as well as to young growth, which "while it had no market value, had a value to its owner." *Id.* at 644. We explained that the measure of damages for the merchantable timber was the market value of the trees, but that the measure of damages for young growth in the National Forest, which could not be sold, was "the damage actually sustained, that is to say, what was required to make the government whole." *Id.* We held that this amount "might properly include the cost of restoring the land to the condition in which it was before the fire." *Id.*

In a case arising out of an August 2000 fire in the Plumas and Lassen National Forests, a district court in the Eastern

District of California held that under California law the federal government was "entitled to *full* compensation for *all* of its damages." *United States v. Union Pac. R.R. Co.*, 565 F. Supp. 2d 1136, 1143 (E.D. Cal. 2008) (emphasis in original). The court noted that many of the tort cases cited by the defendant railroad company had "little or no relevance" to a case, as here, in which the defendant "burned thousands of acres of protected government forest lands for which no real estate market value exists." *Id.* The court held that "to 'fully' compensate plaintiff for defendant's negligent conduct," the government "may seek damages for injuries other than to the timber, including harm to the soil, . . . and destruction of wildlife, habitat, recreation use, views, etc." *Id.* at 1150.

[5] CB&I and Amici argue that the government may not recover intangible environmental damages because noneconomic damages are not recoverable in negligence suits regarding harm to real property. However, CB&I and Amici err by relying on cases that merely limit damages for emotional distress or suffering. *See, e.g.*, *Erlich v. Menezes*, 981 P.2d 978, 985 (Cal. 1999) ("No California case has allowed recovery for emotional distress arising solely out of [negligent] property damage." (internal quotation marks omitted)). They point to no case holding that noneconomic damages, as a general category, are precluded in suits alleging harm to property. California law plainly contemplates that noneconomic damages are compensable in such suits. See Cal. Civ. Code § 1431.2(a) ("In any action for . . . property damage, . . . the liability of each defendant for non-economic damages shall be several . . . ."); *accord DaFonte v. Up-Right, Inc.*, 828 P.2d 140, 145 (Cal. 1992) ("Section 1431.2 declares plainly and clearly that in tort suits for . . . property damage . . . each defendant shall be liable only for those non-economic damages directly attributable to his or her own percentage of fault." (internal quotation marks and alteration omitted)). In fact, CB&I and Amici acknowledge that at least some noneconomic damages, such as annoyance and discomfort, are recoverable in trespass cases under certain circumstances. *See, e.g.*, *Kornoff v. Kings-*

burg Cotton Oil Co., 288 P.2d 507, 511 (Cal. 1955); *Kelly*, 179 Cal. App. 4th at 456-59 (reversing a $543,000 annoyance and discomfort award because the plaintiff property owner merely stored personal property on the trespassed land at the time of the fire).

[6] The government never sought emotional distress damages in the case. Rather, the intangible environmental damages sought by the government are a type of property damage caused by the fire. *See McKay*, 8 Cal. App. 4th at 940 (holding that California law places "no restrictions on the type of property damage that is compensable" for negligently set forest fires). The district court observed that the government simply made an "instructive" analogy between valuing environmental harm and other forms of noneconomic damages. *Cf.* Christopher D. Stone, *Should Trees Have Standing? — Toward Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450, 478-79 (1972) (analogizing valuation of environmental harm to tort damages for pain and suffering); Jeffrey C. Dobbins, Note, *The Pain and Suffering of Environmental Loss: Using Contingent Valuation to Estimate Nonuse Damages*, 43 DUKE L.J. 879, 937-44 (1994) (same). Environmental harm shares characteristics with other noneconomic damages in that they are "subjective, non-monetary losses." Cal. Civ. Code § 1431.2(b)(2); *see also Ohio v. U.S. Dep't of the Interior*, 880 F.2d 432, 462-63 (D.C. Cir. 1989) ("From the bald eagle to the blue whale and snail darter, natural resources have values that are not fully captured by the market system."). However, as the district court noted, "[t]hat the Government has analogized its evidentiary burden in seeking intangible environmental damages to the burden of a plaintiff seeking damages for emotional distress does not mean that the Government is impermissibly seeking damages for emotional distress. It is not."

For similar reasons, CB&I and Amici's argument that the government lacks the ability to experience emotional distress is misplaced. *See, e.g., Templeton Feed & Grain v. Ralston*

Purina Co., 446 P.2d 152, 156 (Cal. 1968) ("Plaintiff Templeton, a corporation, does not seriously urge that it, a corporate entity, can sustain mental suffering."). Here, the government did not seek damages for emotional distress or mental suffering. It sought damages for intangible environmental harms caused by the fire. Moreover, CB&I and Amici's attempt to analogize the federal government to a corporate entity is mistaken. The United States is not a corporation. In the public lands context, the federal government is more akin to a trustee that holds natural resources for the benefit of present and future generations. *See United States v. Beebe*, 127 U.S. 338, 342 (1888) ("The public domain is held by the government as part of its trust. The government is charged with the duty, and clothed with the power, to protect it from trespass and unlawful appropriation . . . ."). As the district court observed, the Copper Fire harmed 18,000 acres of federal forest land "held in trust for this and future generations."

CB&I relies on a Canadian Supreme Court case to argue that intangible environmental damages are not recoverable for a negligently set forest fire. In *British Columbia v. Canadian Forest Products, Ltd.*, [2004] 2 S.C.R. 74 (Can.), a logging company negligently burned approximately 3,700 acres of government-owned forest in British Columbia. *Id.* at ¶¶ 1-2. The Crown filed suit to recover fire suppression costs, lost revenue from commercial timber, and the value of protected non-harvestable trees. *Id.* at ¶ 3. For the non-harvestable trees in environmentally sensitive areas, the government sought to recover both their commercial value as well as a 20% premium for harm to the environment. *Id.* at ¶ 131. The court was skeptical of an analogy between environmental harm and other types of noneconomic damages. *See id.* at ¶ 151 ("[P]rinciples governing non-pecuniary loss . . . do not fit easily with renewable forest resources."). But the court ultimately rejected the requested 20% premium because the Crown had pled its case as a landowner with "a fairly narrow commercial focus" and had not produced evidence of environmental harm. *Id.* at ¶¶ 12, 83, 134, 141. The court expressly

left unresolved the question whether the common law allowed the Crown to seek compensation on behalf of the public for environmental damage to public lands. *Id.* at ¶¶ 81-82, 119, 155. Even if we were willing to treat Canadian common law as instructive on an issue of California statutory law, we note that, by contrast to the Crown in *Canadian Forest Products*, the government here pled environmental damages from the outset and produced substantial evidence of the environmental harm caused by the fire.

[7] In sum, we see nothing in California law that prevents the federal government from recovering intangible, noneconomic environmental damages for a negligently set fire. California embraces broad theories of tort liability that enable plaintiffs to recover full compensation for all the harms that they suffer. Under California law, the government may recover intangible environmental damages because anything less would not compensate the public for all of the harm caused by the fire. *See* Cal. Health & Safety Code § 13007 (anyone who sets fire to "the property of another, whether privately *or publicly owned*, is liable to the owner of such property for *any damages* to the property caused by the fire" (emphasis added)). Accordingly, we agree with the district court in this case that the government "should be able to recover damages for all of the damages caused by the fire, including the intangible environmental damages."

B. Sufficiency of the Evidence

[8] CB&I next argues that the government did not produce sufficient evidence for the jury to determine the amount of environmental damages. Where, as here, property has no commercial or market equivalent, "its value, or plaintiff 's damages, must be ascertained in some other rational way, and from such elements as are attainable." *Willard v. Valley Gas & Fuel Co.*, 151 P. 286, 289 (Cal. 1915) (internal quotation marks omitted), *overruled on other grounds by Showalter v. W. Pac. R.R.*, 106 P.2d 895, 898-99 (Cal. 1940).

As the district court observed, a "rational way" of ascertaining damages "does not require mathematical precision." In *Zvolanek v. Bodger Seeds, Ltd.*, 5 Cal. App. 2d 106 (1935), plaintiff 's experimental, non-marketable varieties of sweet peas were damaged in flooding caused by defendant's negligence. *Id.* at 107-08. Citing *Willard*, the court held that the elements available to support a rational damages award may include "the difficulty and expense to which plaintiff was put in acquiring the property, the nature and character of the use to which it was put by him, and the like." *Id.* at 109. "All these elements being shown, the value is to be determined by the court or jury by the exercise of a sound discretion." *Id.*

The district court acknowledged that the government in this case did not "elicit any testimony that put a dollar amount on the intangible environmental damages." However, the court noted that the government "produced evidence regarding the extent of damage to the Angeles National Forest, including testimony regarding the 18,000 acres of burned federal land that was not usable by the public as a result of the fire. . . . The jury also heard testimony concerning the extensive destruction and harm to animal habitats, soils, and plant life. This testimony included the harm caused by the fire to the endangered California red-legged frog and the destruction of the historic Hazel Dell mining camp."

The government presented the jury with five days of evidence specifying the nature and extent of the damage caused by the Copper Fire. It called three expert witnesses who testified in detail about the fire's impacts. Lisa Northrop, the resource and planning officer in the Angeles National Forest, described the damage to San Francisquito Canyon including erosion and sedimentation, invasive species, and lost recreational use. Dr. Robert Fisher, a research ecologist with the U.S. Geological Survey ("USGS"), provided a first-hand account of harm to the California Red-Legged Frog population and habitat. Darrell Vance, an archeologist with the National Forest, testified at length about the destruction of the

Hazel Dell Mining Camp. Through these experts, the government also introduced several reports as evidence of environmental harm, including a burned area report prepared by the BAER team; a botany report describing effects to Nevin's barberry, an endangered flowering shrub; a hydrology report about flood and sedimentation; a USGS report regarding the California Red-Legged Frog and federally threatened unarmored three-spine stickleback freshwater fish; and an archeological report about the mining camp.

[9] We agree with the district court that the "trial provided sufficient evidence for the jurors to quantify the [intangible environmental] harm." Evidence about the "nature and character" of the damaged National Forest environment provided a rational way for the jury to calculate the award. *Zvolanek*, 5 Cal. App. 2d at 109. Such evidence having been shown, the jury could determine the intangible environmental damages award in "the exercise of a sound discretion." *Id.* That the government's environmental damages are "largely intangible" and " 'not readily subject to precise calculation' " does not make them any less real. *Moylan v. Dykes*, 181 Cal. App. 3d 561, 574 (1986) (quoting *Greater Westchester Homeowners Ass'n v. City of Los Angeles*, 603 P.2d 1329, 1338 (Cal. 1979)). The amount of such damages is " 'necessarily left to the subjective discretion of the trier of fact.' " *Id.* (quoting *Greater Westchester*, 603 P.2d at 1338).

CB&I argues that the government did not present evidence about the monetary cost of restoring the burned acreage or the value of lost recreational use after the fire. *See, e.g.*, *Starrh & Starrh Cotton Growers v. Aera Energy LLC*, 153 Cal. App. 4th 583, 600 (2007) (finding "no record evidence" to support the jury's award of restoration costs); *Chaparkas v. Webb*, 178 Cal. App. 2d 257, 261-62 (1960) ("While compensation for loss of use may be an item of damages, proof of value of the use lost must be established."). CB&I and Amici compare this case to *Union Pacific*, where the government produced evidence that placed a monetary figure on the environmental

damages, such as reforestation plans that estimated costs of between $24 and $33 million and expert testimony that calculated the damage to wildlife habitat and public enjoyment of the forest at another $13 million. Union Pacific, 565 F. Supp. 2d at 1150-52. However, as the court noted in *Union Pacific*, "the case law is clear that there is not one particular method for ascertaining plaintiff 's damages." *Id.* at 1145.

In *Robinson v. United States*, 175 F. Supp. 2d 1215 (E.D. Cal. 2001), plaintiffs sued the government, alleging that it negligently allowed a prescribed fire to escape onto their private land and burn their homes. *Id.* at 1217-18. They sought to recover damages for items of personal property with important sentimental value, such as a wedding dress, little league trophies, and school art projects. *Id.* at 1219. The government argued that evidence of the items' sentimental value was not a rational method of valuation. *Id.* at 1232. The court agreed and held that "Plaintiffs must provide a rational basis for determining their value. The sentimental or subjective value placed on such items is not permitted." *Id.* at 1233; *see also McMahon v. Craig*, 176 Cal. App. 4th 1502, 1519 (2009) ("damages cannot be based on sentimental value" (quoting Restatement (Second) of Torts § 911)). Citing *Willard*, the court suggested that a rational method might include the "nature and character" of the property. *Robinson*, 175 F. Supp. 2d at 1232 (citing *Willard*, 151 P. at 290 (Sloss, J., concurring)). Here, the government did not rely on the sentimental value that specific plaintiffs placed on damaged forest lands. Rather, the government produced substantial evidence detailing the nature and character of the environmental harm caused by the fire, and allowed the jury to determine the value to the public as a whole.

[10] Based on the testimony and reports describing the fire's extensive damage to the National Forest — including impacts to public use; harm to animal habitats, soils, plant life, and the California Red-Legged Frog; and the destruction of the historic mining camp — we agree with the district court

that sufficient evidence supported the jury's award of intangible environmental damages. *See Lambert*, 180 F.3d at 1012.

C. Excessiveness of the Award

Finally, CB&I argues that it is entitled to a new trial or remittitur because the jury's award of $28.8 million in intangible environmental damages was grossly excessive. We "afford substantial deference to a jury's finding of the appropriate amount of damages." *Harper v. City of Los Angeles*, 533 F.3d 1010, 1028 (9th Cir. 2008) (internal quotation marks omitted). We must uphold the jury's award "[u]nless the amount is grossly excessive or monstrous, clearly not supported by the evidence, or based only on speculation or guesswork." *Id.*

CB&I premises its excessiveness argument on the government's suggestion during closing argument that the jury could determine the amount of intangible environmental damages by applying a "multiplier of two or three" to the hard economic damages. Amici note that multipliers are traditionally reserved for punitive, rather than compensatory, damages. *See, e.g.*, *Clark v. Superior Court*, 235 P.3d 171, 176 (Cal. 2010) ("Penalties provide for recovery of damages additional to actual losses incurred, such as double or treble damages." (internal quotation marks omitted)). The district court specifically instructed the jury that punitive damages were not authorized in this case.

CB&I conceded at oral argument on appeal that the jury likely determined the amount of intangible environmental damages based on a "price per acre" of burned National Forest land, which was the government's other suggested method for calculating damages. The price-per-acre method results in a round number: $28.8 million divided by 18,000 acres equals $1,600 per acre. By contrast, a multiplier method would have required a very unlikely multiplier. If the jury had applied a multiplier to the $7,637,035.68 in "hard" economic damages,

to reach the total of $28.8 million it would have had to use a multiplier of 3.77109669.

[11] Given the scope of the environmental harm caused by the Copper Fire, we agree with the district court that the jury's damage award of $1,600 per acre was not grossly excessive or against the clear weight of the evidence. We conclude that the district court did not abuse its discretion by denying CB&I's motion for a new trial or remittitur.

Conclusion

CB&I negligently sparked a forest fire that burned roughly 18,000 acres of the Angeles National Forest. Under California law, the government was entitled to full compensation for all the harms caused by the fire, including intangible environment harm. The government produced substantial evidence for the jury to determine the amount of environmental damages, and the resulting award of $1,600 per acre was not grossly excessive.

AFFIRMED.