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“Unless and Until It Proves To Be Necessary”: Applying Water Interest To Prevent Unjust Enrichment in Interstate Water Disputes

Chad O. Dorr*

The Pecos River is a lifeline of water that flows through the arid region of eastern New Mexico and west Texas. Along its course, farmers use its waters for irrigation and communities use it for drinking water and recreation. Through much of the twentieth century, the river could not meet all the demands placed on it, setting the stage for regular disputes among those reliant on its waters. Seeking a measure of predictability in their respective shares to the river, the states negotiated, and the U.S. Congress approved, the Pecos River Compact in 1949. Despite this mutual agreement, disputes continued. As the upstream state, New Mexico has control of all the river’s surface waters until it crosses into Texas. Texas claimed New Mexico was taking more than its share and ultimately sought its day in court—the U.S. Supreme Court sitting in its original jurisdiction.

The Court designated a Special Master to hear the evidence, determine liability, and calculate the extent of damages (if any) in

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* Associate, Jones Day, Washington, D.C.; Commander, U.S. Navy (Retired); J.D. University of California, Berkeley, School of Law, 2012; M.A. University of Maryland 1988; U.S. Naval Academy 1988. I would like to thank Professor Robert Infelise for his encouragement throughout the writing process and his thought-provoking questions on the topic, some of which I am sure remain unanswered. Thanks also to the Honorable John T. Noonan, Senior Circuit Judge, for giving me the opportunity to work in chambers one summer. It was there I first encountered the dispute over the Truckee—a river whose ice-cold water I played in as a child, blissfully unaware of the strife building downstream. I am grateful to the Editors of the *California Law Review* for making this a vastly better Comment. Any errors that remain are my own. My deepest appreciation is reserved for my wife, Amy, for her love and support through twenty-one years of deployments, late-night flights, and missed anniversaries and holidays. Without her all-in commitment, I would not have had the courage to embark on this wonderful encore career in law. The views set forth in this Comment are my personal views and do not necessarily reflect those of Jones Day.

Texas v. New Mexico. After years of proceedings that extended beyond the retirement of his predecessor, Special Master Charles Meyers found that for nearly forty years, New Mexico had breached the Compact by failing to deliver an accumulated 340,100 acre-feet of water. Rather than converting that water deficit into monetary damages, his Report recommended that the Court order repayment in kind, or in specie. The Court agreed and ordered judgment in Texas's favor, authorizing repayment in water.

The Special Master also recognized that if damages could be awarded in specie, then interest in water might also be appropriate. He recommended that the Court award "water interest"—a novel version of postjudgment interest—to prevent New Mexico's procrastination in repayment. While the Court approved of the in specie damages award, it summarily disposed of the water interest issue in a footnote, saying it was unpersuaded that water interest should be awarded "unless and until it prove[d] to be necessary." However, by failing to disapprove of the concept outright or outlining guiding principles for when and how water interest ought to be applied, the Court opened the door for potentially enormous liability.

As competition for scarce natural resources increases, litigants are increasingly seeking to have courts apply "water interest" to in specie awards. This Comment analyzes the issue that the Court disposed of in a footnote. It examines the propriety of water interest, finding that additional water above the award is not necessary to fully compensate the plaintiff. However, because the upstream party is a fiduciary of the water and has heightened duties to protect the property of its downstream neighbor(s), courts should consider restitutionary remedies to prevent the upstream state's unjust enrichment. This Comment establishes that interest is a necessary component of restitution, and thus water interest is a justified component of an in specie remedy. The Comment then explores practical implications of awarding water interest and establishes guidelines for its correct application through a case study of United States v. Board of Directors, Truckee-Carson Irrigation District.

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INTRODUCTION

As the upstream state in the Pecos River Compact (the "Compact"),¹ New Mexico had little incentive to force farmers with inferior water rights to stop irrigating their fields in dry years. While New Mexico had agreed to deliver the

1. Pecos River Compact, Pub. L. No. 81-91, 63 Stat. 159 (1949).

quantity of water “equivalent to that available . . . under the 1947 condition”² to the Texas state line, that standard was difficult to evaluate on the highly variable Pecos.³ Rather than worry about determining his state’s allocation and limiting irrigation to comply with the terms of the Compact, New Mexico’s long-time state engineer, Steve Reynolds, drove increased beneficial use of the water flowing through the eastern part of his state, despite mounting evidence that these policies were depleting Texas’s share of the river.⁴ Even after Texas filed suit in the U.S. Supreme Court to enforce the Compact, New Mexico was not concerned about having to pay back any water deficits because the Court had never before awarded damages in a suit between states over “unintentional” violations of a compact.⁵ It had only ordered prospective relief against further violations.⁶

Special Master Charles J. Meyers thought otherwise, however. Hearing the case on behalf of the Court to determine the extent of the alleged shortfall, Meyers found that between 1950 and 1983 New Mexico had under-delivered 340,100 acre-feet of water.⁷ Though he felt that both sides would be better off with money damages, he reasoned that the Compact contemplated only delivery of water.⁸ Because the Compact is federal law,⁹ “the Court may not

2. *Id.* art. III(a).

3. It was not until 1979 that Special Master Jean Breitenstein filed a report with the U.S. Supreme Court defining the 1947 condition using a complex inflow-outflow manual, which the Court approved. *See Texas v. New Mexico (Texas v. New Mexico I)* 446 U.S. 540 (1980). The manual proved unworkable for translating the 1947 condition into “water quantities to provide a numerical standard”; an effective model to calculate the deficit was not completed and approved by the Court until 1984. *Texas v. New Mexico (Texas v. New Mexico IV)*, 482 U.S. 124, 129 & n.6 (1987). Only then could Breitenstein’s successor Special Master Charles M. Meyers hold hearings to determine the amount of shortfall, if any.

4. *See G. EMLEN HALL, HIGH AND DRY: THE TEXAS-NEW MEXICO STRUGGLE FOR THE PECOS RIVER* 1–2 (2002) (describing the Pecos River basin); *WATER RESOURCES OF THE LOWER PECOS REGION, NEW MEXICO* 5 (Peggy S. Johnson et al. eds., 2003) (describing Reynolds’s water management policies as “highly supportive of growth” and “expanding irrigation to the maximum extent possible for as long as possible, until forced to stop”). Beneficial use is a key concept in establishing and maintaining rights to water under the doctrine of prior appropriation. *See infra* Part I.B.

5. HALL, *supra* note 4, at 176; *see also* New Mexico’s Brief in Support of Exceptions to the Report of the Special Master at 24–32 [hereinafter New Mexico’s Brief in Support of Exceptions], *Texas v. New Mexico IV*, 482 U.S. 124 (1987) (No. 65, Orig.) (arguing that the Court was precluded from granting retroactive relief).

6. HALL, *supra* note 4, at 176.

7. Report of Charles J. Meyers, Special Master at 32, *Texas v. New Mexico IV*, 482 U.S. 124 (1987) (No. 65, Orig.) [hereinafter Meyers Report]; *see Texas v. New Mexico IV*, 482 U.S. at 127.

8. Meyers Report, *supra* note 7, at 32.

9. The Compact Clause of the U.S. Constitution prevents states from “enter[ing] into any Agreement or Compact with another State” without the consent of Congress. U.S. CONST. art. 1, § 10, cl. 3. Thus, compacts only become effective as a federal law once approved by Congress. *Tarrant Regional Water Dist. v. Herrmann*, No. 11-889, slip op. at 10–11 n.8 (U.S. June 13, 2013) (quoting *Virginia v. Maryland*, 540 U.S. 56, 66 (2003)).

order relief inconsistent with [the Compact's] terms."¹⁰ With an average annual flow of 75,500 acre-feet, it would be impossible for New Mexico to repay the water immediately.¹¹ Thus, he recommended that New Mexico be ordered to repay it over the course of ten years.¹²

Acting on Meyers's recommendations, the Supreme Court approved the retrospective damages, finding "no merit in [New Mexico's] submission that [the Court] may order only prospective relief."¹³ This holding "started a cottage industry in suits [between states] for breaches of interstate water agreements."¹⁴ The effect was immediate. After the Court released the opinion, Kansas added a retrospective damages request to its pending suit against Colorado for Colorado's alleged breach of the Arkansas River Compact.¹⁵

Even though the award of retrospective damages in an interstate water case was novel, Meyers also extended the payment-in-kind requirement to include a provision emulating postjudgment "water interest" to "prevent procrastination by New Mexico."¹⁶ Meyers recommended that if sufficient flows did not reach Texas in a particular year, the amount due the following year would consist of (1) the Compact obligation for that year; (2) a 34,010 acre-feet annual minimum delivery to repay one-tenth of the awarded damages; and (3) the deficit amount for the previous year, plus one year's water interest.¹⁷ However, the Court did not uphold this last component. Instead, it simply disposed of the issue without analysis in a footnote, indicating it was "unpersuaded . . . that 'water interest,' rather than money, should be awarded *unless and until it proves to be necessary*."¹⁸

By summarily disposing of the issue without analysis, the Court not only left the door open for future litigants to apply for water interest, it also provided no guidance as to when water interest might prove to be necessary or how it should be applied. Ordinarily, such a cursory disposition would not be problematic because lower courts would have already addressed the issue.

10. Meyers Report, *supra* note 7, at 32. A compact is essentially a contract between two (or more) states. *Petty v. Tennessee-Missouri Bridge Comm'n*, 359 U.S. 275, 285 (1959) (Frankfurter, J. dissenting) ("A Compact, after all, is a contract."). The court recently has reiterated that "compacts are [to be] construed as contracts under the principles of contract law" and "the express terms of the Compact [are] the best indication of the intent of the parties." *Tarrant*, No. 11-889, slip op. at 11 (citing *Texas v. New Mexico IV*, 482 U.S. at 128).

11. See Meyers Report, *supra* note 7, at 31.

12. *Id.* at 32.

13. *Texas v. New Mexico IV*, 482 U.S. at 128. All members of the Court joined Justice White's opinion, except for Justice Stevens who took no part in the consideration or decision of the case. *Id.* at 125. The Court did not agree with the Special Master, however, that it was limited to awarding in-kind relief and remanded the case to consider whether money damages might be appropriate. See *id.* at 130.

14. HALL, *supra* note 4, at 189.

15. *Kansas v. Colorado*, 533 U.S. 1, 24 (2001) (O'Connor, J., dissenting in part).

16. Meyers Report, *supra* note 7, at 32.

17. *Id.* at 32-33. See *infra* Part II.D.1 for a discussion of the way the water interest was to be calculated.

18. *Texas v. New Mexico IV*, 482 U.S. at 132 n.8 (emphasis added).

However, in suits between states the Court sits in exclusive, original jurisdiction as a trial court.¹⁹ Thus, there is no appellate record to guide future courts and litigants.²⁰ Disputes between states over water tend to be protracted affairs lasting years (or decades), during which the allegedly infringing state is unlikely to alter its water use—exposing parties to potentially enormous liability for long-running breaches of compact/contract.²¹

This judicial uncertainty over water interest in the wake of the Supreme Court's cursory treatment is apparent in *United States v. Board of Directors, Truckee-Carson Irrigation District (TCID)*.²² In *TCID*, the district court initially denied the plaintiff's request for water interest, but then without explanation, modified its opinion to include postjudgment interest at a rate of two percent.²³ On appeal, the Ninth Circuit remanded the case for further justification, but it gave the district court dubious instructions, directing it to address whether it should also award prejudgment interest based on the Ninth Circuit's justification for postjudgment interest.²⁴ However, this instruction improperly conditioned the award of common law-based prejudgment interest on the justification for statutory-based postjudgment interest.²⁵ Perhaps burdened by this improper linkage, in its order on remand the district court denied any award of water interest.²⁶ Rather than providing an analysis of the issue in light of the proper bases for the two different awards, the district court merely considered the pleadings and affidavits submitted on remand and summarily found neither a legal nor an equitable basis for an award of water interest.²⁷ In doing so, the court found that it was "not 'necessary to compensate the government and the Tribe for being deprived of water.'"²⁸

19. U.S. CONST. art. III, § 2, cl. 2; 28 U.S.C. § 1251(a) (2006).

20. *Texas v. New Mexico* and *Kansas v. Colorado* referenced above are but two examples, and the potential for future litigation is far greater. By one count, there are thirty-one interstate allocations: twenty-six by compact, two by congressional legislation, and three by Supreme Court decree. See Douglas L. Grant, *Limiting Liability for Long-Continued Breach of Interstate Water Allocation Compacts*, 43 NAT. RESOURCES J. 373, 373–74 (2003). Continued population growth will increase the demand for water while forecast climate change—at best—will affect the management of its supply. Randall M. Dole, *Predicting Climate Variations in the American West: What Are Our Prospects?*, in WATER AND CLIMATE IN THE WESTERN UNITED STATES 9, 22–23 (William M. Lewis, Jr., ed., 2003). As supply and demand tensions increase, states will have increasing incentive to challenge compliance with these allocations in court.

21. See Grant, *supra* note 20, at 417.

22. *United States v. Bd. of Dirs., Truckee-Carson Irr. Dist. (TCID I)*, No. CV-N-95-0757-HDM (D. Nev. Feb. 16, 2005) (amended judgment), *vacated in relevant part sub nom. United States v. Bell*, 602 F.3d 1074 (9th Cir. 2010), *amended by United States v. Bd. of Dirs., Truckee-Carson Irr. Dist.*, No. 12-15474, (9th Cir. July 22, 2013).

23. *Bell*, 602 F.3d at 1082.

24. *Id.* at 1084 ("If water interest is appropriate for postjudgment interest, we conclude it should be awarded prejudgment as well.").

25. For the discussion as to why this link is inappropriate, see *infra* Part I.A.

26. Order, *United States v. Bd. of Dirs., Truckee-Carson Irr. Dist.*, No. 3:95-cv-00757-HDM (D. Nev. Oct. 6, 2011) [hereinafter Order on Remand].

27. See *id.*

28. *Id.* at 3 (quoting *Bell*, 602 F.3d at 1084).

This Comment seeks to correct and fill the analytical gap to determine whether it is ever appropriate to apply interest to in-kind awards of water, and if so, how it should be applied: What rate is appropriate? When should the interest begin? What is an appropriate period? Simple or compounding interest?²⁹ The answers to these questions in the water context are complicated by the lack of commonly accepted benchmarks available to financial markets, like Treasury bill yields.³⁰ The issue is further complicated by differences between water law systems prevalent in the eastern and western United States.

Ultimately, this Comment agrees with the *TCID* court that water interest is not necessary *compensation*, but argues that courts should consider remedial principals beyond strict compensation. It concludes that *in specie* interest should be more liberally available than the Supreme Court endorsed with its “unless and until . . . necessary” standard.³¹ For the farmers and the communities in the arid West that are directly affected when upstream states over-deplete a river basin, financial compensation may be an inadequate remedy for the wrongful taking of its life-sustaining water. The Court endorsed such awards when it approved the Special Master’s award *in specie*. However, interest is also necessary as a restitutionary remedy to prevent the unjust enrichment of the upstream state. Making water interest a component of an award would also provide a meaningful incentive to upstream parties to avoid breaches of compact/contract and encourage settlement or more expeditious litigation.

Part I begins with a brief introduction to fundamental issues of remedies and basic water law, including a discussion of the differences between riparian and prior appropriation doctrines.³² These sections are not intended to provide a detailed explication of these areas, but rather to develop a sufficient foundation to apply the principles to the analysis of interest that follows. Part I concludes with a more thorough discussion of the compensatory purposes of interest as part of the award (prejudgment) and on the judgment itself (postjudgment). Part I.C further examines the corollary policy effects of awarding interest, the key differences between prejudgment and postjudgment interest, and the factors to consider in properly applying interest to monetary judgments.³³ Part II examines the Special Master’s recommendation for, and the Court’s skepticism of, water interest in *Texas v. New Mexico*, leading to the conclusion that water interest should be allowed to prevent the unjust enrichment of an upstream state that acts as a fiduciary of the water that rightfully belongs to its downstream

29. See generally Michael S. Knoll, *A Primer on Prejudgment Interest*, 75 TEX. L. REV. 293 (1996) (analyzing judicial applications of interest and proposing “correct” answers for each of the key variables).

30. Special Master Meyers suggested that water interest run at the rate of the one-year yield on a Treasury bill. Meyers Report, *supra* note 7, at 32 n.13.

31. *Texas v. New Mexico IV*, 482 U.S. 124, 132 n.8 (1987).

32. See *infra* Parts I.A., I.B.

33. See *infra* Part I.C.

neighbor(s).³⁴ Having concluded that water interest should be permitted, Part II then explores some of the weaknesses of Special Master Meyers's original application and proposes a more reasoned approach to the issue.³⁵ Part III is a case study, applying those conclusions to *TCID*, where the district court ordered damages be awarded in water.³⁶ The district court also attempted to apply water interest, but without sufficient guidance from the Supreme Court, it did so ineffectively, requiring a remand from the Ninth Circuit.³⁷ The court of appeals further muddied the issue in its instructions on remand,³⁸ leading the district court to withhold an interest award³⁹ where it could have been applied equitably.

I.

FOUNDATIONAL ISSUES: REMEDIES, WATER RIGHTS AND MONETARY INTEREST

Before interest can be awarded, there first must be a judgment in the plaintiff's favor. To understand interest—especially when considering whether and how to apply a novel form of interest—it will be helpful to have a brief understanding of some of the fundamental issues underlying remedies in general. Entire areas of law are dedicated to these topics, so this review is necessarily cursory, including only those points that bear on interest in general or provide a wrinkle in converting those principles to the application of water interest.

This Part begins by examining various types of awards, both in law and equity. It introduces principles of awards, like provability and measurability, and notes key differences between compensatory and punitive damages. These principles of remedies interact with the nature of water rights they protect. So, this Part concludes with an overview of the key characteristics of riparian and prior appropriation systems that bear directly on the ability of a court to award *in specie* damages and interest.

A. Remedies: Principles of Awards in Law and Equity

Before the merger of the courts of law and equity in the mid-nineteenth century, the remedy available differed based on the court to which the plaintiff

34. See *infra* notes 45–54 and accompanying text.

35. See *infra* Part II.

36. See *infra* Part III.

37. United States v. Bell, 602 F.3d 1074 (9th Cir. 2010).

38. See *id.* at 1084 (“We therefore remand this issue to the district court for it to reconsider, in light of its explanation of the basis for awarding postjudgment interest, whether it should award pre-judgment interest. If water interest is appropriate for postjudgment interest, we conclude it should be awarded prejudgment as well.”). It is surprising that the court of appeals directed this link between pre- and postjudgment interest, because it effectively differentiated between their common law and statutory bases, respectively, in its earlier analysis.

39. Order on Remand, *supra* note 26.

appealed for relief.⁴⁰ In general, courts of law would award compensation for injury to a right in the form of damages—“a money remedy aimed at making good the plaintiff’s losses.”⁴¹ Courts of law adjudicated the rights and liabilities of the parties, but did not command compliance with the judgment.⁴² Courts of equity, on the other hand, did not affect the rights of the parties. Instead they had discretion to command the parties to comply with their orders, which they issued based on a balance of various ethical and hardship considerations.⁴³ These *in personam* orders created equitable remedies including injunctions, specific performance, and restitution.⁴⁴ Where the law was silent, chancellors in the courts of equity could create an entirely new right under “substantive equity.”⁴⁵

The law of equitable trusts is one of these well-known chancery-created principles.⁴⁶ A trust is “a fiduciary relationship with respect to property, arising from a manifestation of intention to create that relationship and subjecting the person who holds title to the property to duties to deal with it for the benefit of [the beneficiary].”⁴⁷ It requires a trustee, one or more beneficiaries, and trust property.⁴⁸ In the context of an interstate water compact, the water would be the trust property and the upstream state would be the trustee for the downstream state beneficiary. However, this analogy is not perfect because the compact is the manifestation of the parties’ intent, and compacts are construed as contracts.⁴⁹

Contracts to convey property are not normally trusts.⁵⁰ That rule, however, generally applies when the contract is between a vendor and purchaser.⁵¹ But even without a formally established trust, the parties may still establish a fiduciary relationship.⁵² There is “one characteristic . . . common to all [such trust-like relationships],” that the fiduciary “is under a duty to act for

40. See 1 DAN B. DOBBS, LAW OF REMEDIES § 2.6(1) (2d ed. 1993).

41. *Id.* § 1.1.

42. *Id.* § 1.4.

43. *Id.* §§ 2.2, 2.4(1).

44. *Id.* § 2.1(2).

45. *Id.*

46. *Id.* § 10.4. The laws of mortgages is another. *Id.* § 2.3(1).

47. RESTATEMENT (THIRD) OF TRUSTS § 2 (2003).

48. *Id.* § 2 cmt. f.

49. Tarrant Reg’l Water Dist. v. Herrmann, No. 11-889, slip op. at 11 (U.S. June 13, 2013) (noting that compacts are to be construed as contracts). Besides express trusts, a trust can also be a “resulting trust,” but that analogy is also inexact. In a resulting trust, a transferor gives property to a transferee under circumstances indicating that the transferee is not intended to be the beneficial owner of the property. See RESTATEMENT (THIRD) OF TRUSTS § 7 cmt. a (describing resulting trusts as reversionary interests implied by law). The downstream state does not give the property to the upstream state, so it cannot be a transferor; and the relationship is established by the contract, not implied by law.

50. RESTATEMENT (THIRD) OF TRUSTS § 5(i) cmt. i.

51. The Restatement only discusses this rule in the context of purchaser and vendor. See *id.*

52. See *id.* § 2 cmt. b (“The trust relationship is one of many forms of fiduciary relationship . . .”).

the benefit of the other as to matters within the scope of the relationship.”⁵³ This duty arises “out of equity’s demands on the conscience to act for the benefit of another . . . rather than one’s self.”⁵⁴ A fiduciary “owes a duty of *considerable care* in dealing with the property . . . of the beneficiary.”⁵⁵ The importance of the water as a resource, combined with the physical inability of the downstream state to take possession of the water where it rises in the stream, calls for an increased duty in equity to enforce this considerable care.

Since the merger of the courts of law and equity, a single court may award legal damages, equitable relief, or both.⁵⁶ Despite this unification, the historic distinction remains important in enforcement of rights⁵⁷ and shaping of remedies. Notably, many courts still maintain that equitable relief is only available where remedies at law are inadequate.⁵⁸ For example, a claim for breach of contract will normally be provided a remedy at law, awarding expectation damages.⁵⁹ But when the contract concerns items that are unique (like land or, as this Comment contends, increasingly scarce water in the West), the court may find the remedy at law inadequate and award substantive equitable relief by requiring upstream states to act as fiduciaries of the downstream state’s waters and disgorging the unjust enrichment when the upstream state breaches its fiduciary duty.⁶⁰

In fashioning a remedy, a court must determine whether the appropriate measure of the award is the plaintiff’s loss or the defendant’s gain.⁶¹ In all cases, the damages must be proven with reasonable certainty and the loss must be realized.⁶² In the case where a plaintiff has suffered losses but the defendant has not obtained an appreciable benefit, the proper measure is the damage caused to the plaintiff. In those cases, the court will normally award compensatory damages.⁶³ However, in some cases, the defendant may profit from his wrongful actions more than the plaintiff was harmed. In these

53. *Id.*

54. 2 DOBBS, *supra* note 40, § 10.4.

55. *Id.* (emphasis added).

56. 1 DOBBS, *supra* note 40, § 2.6(1). When a court awards more than one remedy, they must not contain duplicative elements or provide more than one complete compensation. *Id.* § 1.1.

57. For example, the constitutional right to a jury trial is limited to cases in law, not equity. *See* U.S. CONST. amend. VII (“In suits at common law . . . the right of trial by jury shall be preserved . . .”).

58. 1 DOBBS, *supra* note 40, § 2.5(3) (noting that despite significant debate over the continued viability of the “adequacy test,” it is “repeatedly invoked today when the plaintiff seeks equitable relief”).

59. *Id.* § 12.1(1).

60. *See id.* § 2.5(1). Substantive equity—where the court fashions a remedy in the absence of or contrary to legal remedies—is by definition not subject to the inadequate-remedy-at-law-rule. The court, by fashioning a substantive remedy, necessarily has determined the legal remedy inadequate. *Id.*

61. *Id.* § 1.1 (“If the plaintiff’s losses and the defendant’s gains were always in the same amount, the distinction between compensatory damages and restitution would not be very important today.”)

62. *Id.* § 3.4.

63. *Id.* § 3.3(7).

circumstances, the defendant's gain is the proper focus and the court will seek to prevent any unjust enrichment by awarding ill-gotten gains to the plaintiff in restitution.⁶⁴

By way of illustration, in a case for damages in tort (for example, a car crash), the successful plaintiff will have suffered injury caused by the defendant, but the defendant is unlikely to have been unjustly enriched by his negligent operation of the vehicle. Compensatory damages could include the plaintiff's costs to repair or replace her vehicle or to pay her medical bills, and consequential damages like lost wages.⁶⁵ But compensatory damages are not limited to items quantified on a receipt or pay-stub. The victim in the car crash may also be able to claim damages for pain and suffering.⁶⁶ Because the defendant was not unjustly enriched, the proper focus is the plaintiff's loss, and restitution would be inappropriate.

Conversely, restitution may be appropriate in an embezzlement case. Assume the defendant steals \$100 from his employer's petty cash drawer to place a bet on his favorite horse and wins \$150. The plaintiff has been harmed by the loss of \$100, but if damages were awarded by that measure, the defendant would still have profited \$50 from the embezzlement—not a desirable outcome. So, whenever it would be “unjust or impolitic to permit the defendant to retain the gain,” restitution is the proper remedy.⁶⁷

Breach of fiduciary duties is particularly well suited for a restitutionary remedy because in many cases the breach will be the result of the fiduciary protecting her own self-interest, rather than the interests of the beneficiary.⁶⁸ In the context of interstate water compacts, some of the water that flows through an upstream state belongs to the downstream state(s) by compact or court decree.⁶⁹ The upstream state has a fiduciary obligation to protect that water and see that it is delivered to those downstream.⁷⁰ When the upstream state breaches that duty, the plaintiff(s) downstream may make a claim for restitution, which may be awarded *in specie*.⁷¹

64. *Id.* Unlike damages (law) or specific performance (equity), restitutionary remedies have origins in both law and equity. *See generally id.* §§ 4.2–4.3 (analyzing “Restitution at Law” and “Restitution in Equity,” respectively).

65. *See id.* §§ 3.3(4), 8.1(2).

66. *Id.* § 8.1(4).

67. *Id.* § 4.1(1).

68. *See id.* § 10.4 (“It is . . . much more common to find the victim asserting restitutionary remedies [for breach of fiduciary duty].”).

69. *See infra* Part I.B.

70. *See supra* notes 46–55 and accompanying text.

71. 1 DOBBS, *supra* note 40, § 1.1. For example, rather than betting on horses, if the embezzler used the money to buy shares in a hot initial public offering, the plaintiff may prefer to recover the shares instead of their market value.

This all-too-brief summary establishes the foundation of remedial principles relevant to this Comment, but they cannot be viewed in isolation. To know the remedy, we must also know the substantive right.⁷²

B. Water Law: The Basic Property Rights

The property regime for water is “more complex than that of land or other ‘fixed’ resources.”⁷³ This is because wet water⁷⁴ in lakes and rivers cannot be owned like other tangible items like real property or chattels.⁷⁵ Instead, water rights in the United States are usufructory—“define[d] . . . in terms of the right to use rather than ownership of the corpus of the water.”⁷⁶ This complexity is redoubled due to the development of two distinct water law doctrines—riparian and prior appropriation—and the interplay of state and federal law.⁷⁷ Because interest is a part of the remedy and the remedy correlates with the right,⁷⁸ it is necessary to have an understanding of the key characteristics of riparian and appropriative water rights systems, and the types of interstate orderings available under the federal system.

1. State Water Rights Systems

American water law developed in the humid eastern half of the continent where water was plentiful and depletions from streams were low.⁷⁹ With this relative abundance, the law developed along the same lines as the English

72. *Id.* § 1.7.

73. Sarah Hendry, *Ownership Models for Water Services: Implications for Regulation*, in PROPERTY AND THE LAW IN ENERGY AND NATURAL RESOURCES 257, 257 (Aileen McHarg et al. eds., 2010).

74. “Wet water” is a term of art used to denote actual water. It is often used to distinguish wet water from water rights (or “paper water”), especially where there is insufficient wet water to satisfy all rights holders. *See, e.g.*, HALL, *supra* note 4, at 126.

75. *See* DANTE A. CAPONERA, PRINCIPLES OF WATER LAW AND ADMINISTRATION (Marcella Nanni ed., rev. & updated ed. 2007). I use the generic term “lakes and rivers” advisedly, as there are some situations where ownership of the wet water is permissible, like the capture of diffused surface waters on a person’s land. *See, e.g.*, A. DAN TARLOCK, LAW OF WATER RIGHTS & RESOURCES §§ 3:13, 5:14 (2011).

76. TARLOCK, *supra* note 75, § 3:10; *see also* CAPONERA, *supra* note 75, at 126–27 (describing the reasonable use doctrine in riparian systems and the requirement to make beneficial use to maintain the right under prior appropriation systems).

77. *See* TARLOCK, *supra* note 75, § 10:15 (“[The Supreme Court] has incorporated local law into the doctrine of equitable apportionment. . . . [P]rior appropriation applies among appropriation states . . . and riparian rights applies among common law states. However the Court has always reserved the power to displace state law when considerations of equity require it.”). It is also worthy of note that the riparian/prior appropriation classification is a false dichotomy. Some states have adopted a mixed riparian/prior appropriation system. *See, e.g., id.* § 5:6 (“[In California,] a federal [land] patent issued after an appropriation is made carries with it riparian rights but these rights are subordinate to the prior appropriation. If an appropriation was made after the issuance of a federal patent, the patentee has superior riparian rights.”).

78. *See supra* Part I.A.

79. CAPONERA, *supra* note 75, at 125–26.

common law.⁸⁰ The common law scheme, also known as “riparian rights,” gives landowners the right to make reasonable use of the water that flows on or adjacent to the land.⁸¹ Each riparian landowner has “co-equal rights” with every other owner along their shared water source.⁸² The riparian system requires that a landowner’s use be reasonable and, conversely, provides the right to be free from another’s interfering use.⁸³ Because the riparian right is tied to the land, a landowner’s failure to use the water does not imperil the right.⁸⁴

Water law in the arid American West, on the other hand, developed in an environment where water is scarce.⁸⁵ The gold and silver miners who settled the area “applied the same principle [of rights] to their water as they did their mines[:] . . . ‘first in time is first in right.’”⁸⁶ The prior appropriation approach, based on a capture theory that stops short of genuine ownership of the water,⁸⁷ assured the earliest appropriators that their needs would be met in full during dry years as long as the source contained sufficient water.⁸⁸ This scheme provided a measure of certainty for the earliest settlers to begin developing industry and communities.⁸⁹ Unlike in the riparian system, the right is established by the earliest beneficial use of the water and is unrelated to ownership of the underlying land.⁹⁰ Failure to use the water beneficially through abandonment, forfeiture, or adverse possession revokes the priority right.⁹¹

At their core, the two systems could not be more dissimilar.⁹² For the purposes of the analysis below, however, there is one critical difference to highlight. In the riparian system, the water right “is not a right to a fixed

80. *Id.* at 125.

81. *Id.* at 126; TARLOCK, *supra* note 75, § 3:9. A use is “reasonable” when it “does not unreasonably interfere with another’s use.” BLACK’S LAW DICTIONARY 1682 (9th ed. 2009).

82. TARLOCK, *supra* note 75, § 3:11.

83. *See* CAPONERA, *supra* note 75, at 126.

84. *Id.*

85. *Id.* at 127.

86. *Id.*; *see also* TARLOCK, *supra* note 75, § 5:3 (noting that in addition to miners’ custom, Spanish and Mexican law allowed water rights to be severable from the land).

87. *See* TARLOCK, *supra* note 75, § 5:30.

88. *See* Kenneth D. Frederick, *Overview*, in SCARCE WATER AND INSTITUTIONAL CHANGE 1, 8 (Kenneth D. Frederick & Diana C. Gibbons eds., 1986). The earlier appropriators are known as senior, or superior, rights holders. The later appropriators hold junior, or inferior, rights.

89. *See id.* (justifying prior appropriation as a protection of reliance interests). Of course, certainty for the earliest appropriators allocates all of the risk to junior appropriators in a resource-constrained environment. *See* CAPONERA, *supra* note 75, at 127. While some argue that such an all-or-nothing approach to prior appropriation is unfair, “westerners early saw that an equal share of water that was insufficient for all might lead to parceling out the waters in shares that were sufficient for none.” Frank J. Trelease, *Arizona v. California: Allocation of Water Resources to People, States, and Nation*, 1963 SUP. CT. REV. 158, 186–87.

90. *See* TARLOCK, *supra* note 75, § 5:3.

91. CAPONERA, *supra* note 75, at 128.

92. *See id.* (describing the operative characteristics of allocation in the two systems as “diametrically the opposite”); TARLOCK, *supra* note 75, § 5:30 (calling prior appropriation “the antithesis” of riparian rights).

quantity of flow or volume.”⁹³ Each user has the same usufructory right to what water there is, so when flows are limited all owners must correspondingly reduce their use to remain reasonable.⁹⁴ In prior appropriation systems, on the other hand, the extent of the right is defined by the quantity of the appropriation put to beneficial use.⁹⁵ The senior right holder may take the entire flow of a stream (if it is put to beneficial use) without regard to junior rights holders.⁹⁶ In both systems, those harmed by unlawful interference of their water rights may state claims for the tort injury to their use.⁹⁷ The riparian landowner is limited to injunctive relief to stop the infringing use or consequential damages suffered as a result of another’s unreasonable use.⁹⁸ In the quantity-based prior appropriation system, though, the plaintiff can measure the harm in gallons or acre-feet and seek damages *in specie*.⁹⁹ The remedy correlates with the right.¹⁰⁰

2. Interstate Allocations

If watercourses remained within the territory of a single state, there would be little need to worry about conflicting systems of state water rights. Under the principles of federalism, those issues would be controlled by state law.¹⁰¹ Obviously, though, that is not always the case. Many rivers cross or form borders between states.¹⁰² While states may be sovereign within their own borders, that is not the case in the federal system. Upstream states with the benefit of geography may not divert water from an interstate river without considering the effects on those downstream.¹⁰³

93. CAPONERA, *supra* note 75, at 126.

94. *See* Frederick, *supra* note 88, at 8.

95. *See* CAPONERA, *supra* note 75, at 127 (“[T]he appropriative right must exist for a definite amount.”).

96. *See* TARLOCK, *supra* note 75, § 5:30.

97. *See id.* § 3:60; *see, e.g.*, Third Report of Arthur L. Littleworth, Special Master at 45–64, *Kansas v. Colorado*, 533 U.S. 1 (2001) (No. 105, Orig.), 2000 WL 3458307 at *20–28 (calculating crop damages caused by Colorado’s misappropriation of water allocated to Kansas).

98. *See* TARLOCK, *supra* note 75, § 3:60 n.8 and accompanying text.

99. *See Texas v. New Mexico IV*, 482 U.S. 124, 125 (1987) (authorizing a “suitable remedy, whether in water or money”).

100. *See supra* note 72 and accompanying text.

101. *See Tarrant Reg’l Water Dist. v. Herrmann*, No. 11-899, slip op. at 14–15 (U.S. June 13, 2013) (“[A]s sovereign entities in our federal system, the States possess an absolute right to all their navigable waters and the soils under them for their own common use.”) (internal quotation marks omitted).

102. For example, the Mississippi River watershed drains all or part of thirty-one states. COASTAL LOUISIANA ECOSYSTEM ASSESSMENT & RESTORATION, REDUCING FLOOD DAMAGE IN COASTAL LOUISIANA: COMMUNITIES, CULTURE & COMMERCE 1 (2006), available at http://ian.umces.edu/pdfs/ian_newsletter_13.pdf.

103. *See* William W. Van Alstyne, *International Law and Interstate River Disputes*, 48 CALIF. L. REV. 596, 605 (1960).

Interstate waters may be allocated to states in three ways. The preferred method is by mutual agreement through a compact.¹⁰⁴ Not only do compacts give parties more autonomy to determine an equitable apportionment of the water for themselves, they often provide a method of monitoring and administering the agreement in an ongoing basis.¹⁰⁵ Second, the Supreme Court may exercise its original jurisdiction to determine an equitable apportionment of the interstate waterway when states cannot come to an agreement.¹⁰⁶ Finally, on at least two occasions, Congress has stepped in and legislated an apportionment when states could not agree.¹⁰⁷

The terms of these interstate settlements dictate whether a party will have a quantitative right to a determined amount of water. In equitable apportionment cases between states with prior appropriation laws, the Court will apply prior appropriation principles to the decree.¹⁰⁸ Between riparian states, the Court will typically apply riparian principles,¹⁰⁹ but it has also applied quantitative terms that more resemble appropriative systems.¹¹⁰

Whenever these compacts or apportionments provide for a method of determining a quantitative shortfall, a plaintiff may state a claim for a defined amount of water *in specie*. This amount, when awarded as a judgment, then becomes the “principal”—the first factor required to calculate water interest. However, before attempting that calculation in this novel form, we need to understand the fundamentals of monetary interest.

C. Interest on Judgments: Principles of Calculating Monetary Interest

Having provided a basic overview of the restitutionary principles that form the basis of *in specie* awards of water and the two basic water rights regimes, this Section will briefly review the principles behind the award of

104. TARLOCK, *supra* note 75, § 10:25; Edella Schlager & Tanya Heikkila, *Resolving Water Conflicts: A Comparative Analysis of Interstate River Compacts*, 37 POL’Y STUD. J. 367, 369 (2009).

105. Schlager & Heikkila, *supra* note 104.

106. TARLOCK, *supra* note 75, § 10:2. Lower courts may also equitably apportion waterways when non-state parties are involved. For example, the *Orr Ditch* Decree, *United States v. Orr Water Ditch Co.*, Equity No. A-3 (D. Nev. 1944), and the *Alpine* Decree, *United States v. Alpine Land & Reservoir Co.*, 503 F. Supp. 877 (D. Nev. 1980), are central to the Truckee Carson Irrigation District case study in Part III.

107. *E.g.*, The Boulder Canyon Project Act, 43 U.S.C. § 617 (2006) (allocating 7.5 million acre-feet of the Colorado River between Arizona, California, and Nevada); Fallon Paiute Shoshone Indian Tribes Water Rights Settlement Act of 1990, Pub. L. No. 101-618, § 204, 104 Stat. 3289, 3296–304 (1990) (allocating the waters of Lake Tahoe and the Carson and Truckee Rivers between California, Nevada, and the Pyramid Lake Tribe). While the Paiute tribe is not a state, it has a similar degree of sovereignty. I use the term *state* to refer to both for consistency and to avoid the unnecessary (for the purposes of this Comment, at least) complication that tribal jurisdiction might raise.

108. TARLOCK, *supra* note 75, § 10:15.

109. *Id.*

110. *See, e.g.*, *New Jersey v. New York*, 347 U.S. 995, 996–97 (1954) (authorizing Delaware River diversions of between four hundred and eight hundred million gallons per day to New York City, subject to minimum flow rates in New Jersey).

monetary interest in ordinary money judgments. As above, this Section does not attempt to address monetary interest comprehensively.¹¹¹ However, it does dive a bit deeper into the statutory and common law bases for awarding interest, as well as the policy rationales that dictate the selection of values for principal, rate, and time—the key variables required to properly calculate interest.

With the ubiquity of interest rates in the modern media—from credit card advertisements to news reports announcing historically low mortgage rates—it may seem a bit surprising to those in the contemporary consumer culture that the concept of interests on judgments is still developing.¹¹² In ancient times, interest was prohibited on religious or moral grounds.¹¹³ Today, courts generally eschew these ancient principles in favor of economically based rationales, even if they apply those rationales imperfectly.¹¹⁴ At its most basic, interest is a payment for use of another person's money—much like rent is payment for use of another's property.¹¹⁵ This compensation for the time use of money serves to offset the devaluation of the dollar over time.¹¹⁶ But interest awards also create several beneficial policy effects. Prejudgment interest provides an incentive to take due care to avoid harming others¹¹⁷ or to resolve disputes expeditiously.¹¹⁸ Postjudgment interest encourages prompt payment of a judgment after it has been awarded.¹¹⁹

Interest may be awarded to cover the time of the plaintiff's injury through the court's announcement of the award (prejudgment) or between the award and the final payment by the defendant (postjudgment). Pre- and postjudgment interest are distinct entities, but the underlying mathematics is the same. To

111. An excellent source for such a comprehensive consideration is Professor Knoll's primer. See Knoll, *supra* note 29.

112. See 1 DOBBS, *supra* note 40, § 3.6(1) (observing a “[r]esidual reluctance to award interest for prejudgment losses”); John C. Keir & Robin C. Keir, *Opportunity Cost: A Measure of Prejudgment Interest*, 39 BUS. LAW. 129, 131 (1983) (“The law of . . . interest awards in litigation has not changed to reflect modern economic theory . . .”); Knoll, *supra* note 29, at 299 (“[T]here has been little movement to improve how . . . interest [on judgments] is calculated.”).

113. 1 DOBBS, *supra* note 40, § 3.6(1); Keir & Keir, *supra* note 112, at 129.

114. See 1 DOBBS, *supra* note 40, § 3.6(1); see also *Prager v. N.J. Fid. & Plate Glass Ins. Co.*, 156 N.E. 76, 77 (N.Y. 1927) (Cardozo, C.J.) (“More and more the courts are coming over to the view that . . . interest is a concomitant very nearly automatic . . .”). But see Keir & Keir, *supra* note 112, at 131 (“The law of . . . interest awards in litigation has not changed to reflect modern economic theory . . .”); Knoll, *supra* note 29 (evaluating inconsistent applications of prejudgment interest in opinions); Anthony E. Rothschild, Comment, *Prejudgment Interest: Survey and Suggestion*, 77 NW. U. L. REV. 192 (1982).

115. 1 DOBBS, *supra* note 40, § 3.6(1).

116. Knoll, *supra* note 29, at 294.

117. *Id.* at 296.

118. *Id.* at 296–97.

119. Susan Margaret Payor, Comment, *Post-Judgment Interest in Federal Courts*, 37 EMORY L.J. 495, 495 (1988).

determine the interest due (I), you must know the amount borrowed¹²⁰ (*principal* or P), the period over which interest accrues (*time* or t), and the rate of interest for that period (r).¹²¹ The formula is rudimentary, but determining whether interest should apply (and, if so, the appropriate values of P , r , and t) is less so.¹²²

1. Prejudgment and Postjudgment Interest: Purposes and Principles

Today, prejudgment interest is a judge-made principle that seeks to “ensure that an injured party is fully compensated for its loss.”¹²³ Because there is time value to money, prejudgment interest “is an ordinary part of any award under federal law.”¹²⁴ Prejudgment interest also has policy rationales. It incentivizes parties to take appropriate precautions—requiring potential defendants to internalize risk—and dissuades prolonged litigation.¹²⁵

As a construct of common law, “[t]here are no statutory restraints on awards of prejudgment interest.”¹²⁶ Postjudgment interest, on the other hand, is a creature of statute.¹²⁷ It, too, attempts to compensate for the time value of money.¹²⁸ But unlike prejudgment interest, it incentivizes swift payment rather than efficient litigation.¹²⁹

120. I have used “borrowed” here to maintain the analogy to a money loan. Defendants do not literally borrow from plaintiffs, but courts often use the concept of the victim in a tort as an “involuntary creditor.” See, e.g., *In re Oil Spill by the Amoco Cadiz*, 954 F.2d 1279, 1331 (7th Cir. 1992) (per curiam).

121. The formula for calculating interest is $I = P \times r \times t$. Thus, on this single period ($t = 1$) $I = P \times r$. See David E. Ault & Gilbert L. Rutman, *Calculating Damage Awards: The Issue of “Prejudgment Interest,”* 12 J. FORENSIC ECON. 97–98 (1999). For interest over multiple periods, the calculation depends on whether the interest is simple or compounding. See *infra* notes 193–203 and accompanying text.

122. See *supra* note 29 and accompanying text.

123. *City of Milwaukee v. Cement Div., Nat’l Gypsum Co.*, 515 U.S. 189, 194–95 (1995).

124. *Amoco Cadiz*, 954 F.2d at 1331.

125. See Knoll, *supra* note 29, at 296–97 (citing RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 163–65 (4th ed. 1992)).

126. *Nat’l Gypsum*, 151 U.S. at 195. Many states, however, have also provided a statutory basis for prejudgment awards. See, e.g., N.Y. CIV. PRACT. L. & R. § 5001; see also NAT’L CTR. FOR STATE CTS., *PREJUDGMENT INTEREST & INTEREST ON JUDGMENTS GENERALLY* (2001), available at <http://cdm16501.contentdm.oclc.org/cdm/ref/collection/civil/id/43> (survey of states and territories). Commentators have noted that creating statutory requirements for prejudgment interest may have the advantage of predictability, but in general creates deleterious effects. See Keir & Keir, *supra* note 112, at 131–35; Knoll, *supra* note 29, at 299.

127. *Kaiser Aluminum & Chem. Corp. v. Bonjorno*, 494 U.S. 827, 840 (1990) (quoting *Pierce v. United States*, 255 U.S. 398, 406 (1921)).

128. Payor, *supra* note 119, at 495.

129. See *id.* at 496.

a. Prejudgment Interest

The primary reason for awarding prejudgment interest is to adequately compensate the plaintiff for the time between the injury and the award.¹³⁰ It prevents the erosion of value of the award over time due to inflation.¹³¹ Moreover, as Judge Learned Hand noted, “[t]he present use of my money is itself a thing of value, and, if I get no compensation for its loss, my remedy does not altogether right my wrong.”¹³² In other words, had the harm not occurred, the plaintiff would have been able to put that money to some other use in hopes of earning more.¹³³

Prejudgment interest also has at least two beneficial policy rationales that promote economic and social efficiency. First, prejudgment interest, like the damages award itself, forces defendants to internalize the costs of their injurious actions.¹³⁴ The *Amoco Cadiz* court effectively explained, “[t]ortfeasors who choose to reinvest their money in their business . . . rather than create a trust fund [to earn interest pending trial] must believe that the returns in their enterprise exceed the market rate. . . . An injurer allowed to keep the return on this money has profited by the wrong.”¹³⁵ When an alleged tortfeasor retains control of funds that could have been used to satisfy damages when they occurred, the costs of litigation are shifted to the victim.¹³⁶ This inefficient allocation of resources encourages unnecessary risk taking by the defendant who can, in the absence of appropriate interest principles, profit by shifting the risk to potential plaintiffs.

But this approach of compensating for a plaintiff’s losses may not be adequate to provide a complete remedy in cases better suited for restitution.¹³⁷ Restitution is a better remedy in cases where there is little harm to the plaintiff, as in the embezzler who takes money from the employer’s petty cash, then returns it after winning at the track.¹³⁸ In analyzing the award of interest in restitutionary cases, the court should move from the usual measure of damages being the plaintiff’s loss, to a restitutionary award where the defendant’s gain is

130. See, e.g., *Nat’l Gypsum*, 151 U.S. at 194–95 (“The essential rationale for awarding prejudgment interest is to ensure that an injured party is fully compensated for its loss.”); *In re Oil Spill by the Amoco Cadiz*, 954 F.2d 1279, 1331 (7th Cir. 1992) (per curiam); 1 DOBBS, *supra* note 40, § 3.6(1).

131. Ault & Rutman, *supra* note 121, at 98, 101.

132. Proctor & Gamble Distrib. Co. v. Sherman, 2 F.2d 165, 166 (S.D.N.Y. 1924).

133. See Keir & Keir, *supra* note 112, at 130 (quoting ADAM SMITH, WEALTH OF NATIONS bk. II, ch. 4 (1776): “As something everywhere can be made by the use of money, something ought everywhere be paid for the use of it.”).

134. See Ault & Rutman, *supra* note 121, at 99–100 (noting that the bargaining power of defendants in settlement negotiations decreases as they consider the potential costs of increasing interest payments over time).

135. *Amoco Cadiz*, 954 F.2d at 1332.

136. See Ault & Rutman, *supra* note 121, at 100.

137. See *supra* Part I.A.

138. To continue our hypothetical from Part I.A, above. See *supra* note 65–67 and accompanying text.

the focus.¹³⁹ But restitution may not be sufficient to make the plaintiff whole; “interest upon the funds or property [wrongfully held] may be necessary to force complete restitution.”¹⁴⁰

The second benefit of prejudgment interest is to discourage a defendant from delaying litigation or settlement.¹⁴¹ A dollar today is worth more than a dollar tomorrow, so without prejudgment interest, a defendant is rewarded by any delay in litigation.¹⁴² This tolerance for extended litigation also reduces incentives for the defendant to agree to a settlement that fully restores the injury to the plaintiff.¹⁴³ Without prejudgment interest, the social costs of protracted litigation and discouraged settlement are forced upon the plaintiff, instead of on the defendant where they should be.¹⁴⁴

So, even in situations where it may not be necessary to fully compensate the plaintiff, prejudgment interest should be “an ordinary part of any award” to dissuade defendants from committing bad acts or implementing stalling tactics in the face of potential or pending litigation.¹⁴⁵

b. Postjudgment Interest

Unlike prejudgment interest, postjudgment interest is not a common law principle. Instead, it is a function of statute, designed to compensate the plaintiff for the delay between judgment and payment.¹⁴⁶ Federal statute awards postjudgment interest as a matter of right “on any money judgment in a civil case recovered in a district court.”¹⁴⁷ Since the litigation is past, the efficiency arguments specific to prejudgment interest are not present. Even if a defendant does not have cash on hand to pay the judgment, it could borrow elsewhere, thus properly distributing the costs of a delay to the defendant.¹⁴⁸

139. 1 DOBBS, *supra* note 40, § 3.6(2).

140. *Id.* (noting that justification for interest on restitution was “most obvious in fiduciary cases”).

141. Ault & Rutman, *supra* note 121, at 100.

142. *See* 1 DOBBS, *supra* note 40, § 3.6(2); *see also supra* note 132 and accompanying text (quoting Judge Learned Hand’s formulation of the adage).

143. Ault & Rutman, *supra* note 121, at 99–100 (describing the parties in a dispute as a bilateral monopoly and noting that the relative bargaining power of the defendant increases directly with both time and interest rates).

144. *See id.*; *see also* Knoll, *supra* note 29, at 297 (arguing the same).

145. *See supra* note 124 and accompanying text.

146. Knoll, *supra* note 29, at 359.

147. 28 U.S.C. § 1961(a) (2006) (“Interest *shall* be allowed . . .”) (emphasis added).

148. Note, however, that if the interest rate on the “weekly average 1-year constant maturity Treasury yield” prescribed by § 1961 is below the prevailing rate the defendant can borrow, it will rationally delay payment on the judgment rather than borrowing elsewhere. For this reason, Professor Knoll argues that postjudgment interest should not be statutorily fixed, but based on the same considerations as prejudgment interest. Knoll, *supra* note 29, at 359.

The postjudgment interest statute, 28 U.S.C. § 1961, only applies to money judgments in district courts,¹⁴⁹ and explicitly states that it “shall not be construed to affect the interest on any judgment of any court not specified in [the] section.”¹⁵⁰ But the Supreme Court, sitting in its original jurisdiction, has held that it is not encumbered from awarding interest by § 1961. For example, in *Texas v. New Mexico*, New Mexico argued that even if the Supreme Court approved monetary damages, it should be precluded from awarding interest on the judgment because “common law judgments do not bear interest.”¹⁵¹ The Court shrugged off this challenge by noting that it had awarded interest on the judgment in *Virginia v. West Virginia*.¹⁵² It justified this general exception to the rule for original actions as “consistent with express statutory authority for other federal courts.”¹⁵³

2. Calculating Interest: Evaluating the Factors

Having sufficient rationale for an award of monetary interest is not sufficient to bring about its beneficial effects. The interest must be calculated properly to ensure that the plaintiff is made whole—but not overly compensated by forcing the defendant to pay a windfall.¹⁵⁴ To make this calculation correctly from an economic standpoint, courts must consider each element that makes up the interest award: principal, rate, and time.¹⁵⁵ Once the court determines these elements, it must also evaluate whether the interest should be simple interest (applying only to the principal balance) or compounded (allowing interest on unpaid interest as well).¹⁵⁶ Each of these decisions must be made in light of the purposes of the award, and may vary between pre- and postjudgment interest.¹⁵⁷

While interest is primarily designed to ensure that the awarded compensation is fair to the plaintiff, courts also have a duty to ensure that the interest awarded is also fair to the defendant. Otherwise, the plaintiff will receive a windfall and it will reverse the incentives in the efficiency

149. See § 1961(a). There are two exceptions increasing the section’s scope. Paragraph (c)(2) provides an exception including final decisions of the Federal Circuit. Paragraph (c)(3) includes suits against the United States, and waives sovereign immunity, in the Court of Federal Claims. § 1961(c)(2), (3).

150. § 1961(c)(4).

151. New Mexico’s Brief in Support of Exceptions, *supra* note 5, at 39 (citing *Pierce v. United States*, 255 U.S. 398, 406 (1921)); see *Pierce*, 255 U.S. at 406 (“At common law, judgments do not bear interest; interest rests solely upon statutory provision.”).

152. *Texas v. New Mexico IV*, 482 U.S. 124, 133 n.8 (1987) (citing *Virginia v. West Virginia*, 238 U.S. 202, 242 (1915)).

153. *Id.*

154. See Knoll, *supra* note 29, at 299.

155. See *supra* note 121. Again, $I = P \times r \times t$.

156. Knoll, *supra* note 29, at 306.

157. See *supra* Part I.C.

rationales.¹⁵⁸ As a fairness evaluation, such an adjustment would be an equitable decision.¹⁵⁹ When the court makes equitable adjustments to the interest award, it should do so in a manner that most directly relates to the equitable defense. For example, when the plaintiff has unclean hands, a court could adjust the award (the principal) for those transgressions.¹⁶⁰ Or, when a plaintiff unreasonably delays bringing suit in a dispute, it would not be fair to charge the defendant for that delay and the court could deny all or part of a prejudgment interest award due to laches.¹⁶¹

a. The Principal

When a court enters judgment for a plaintiff, the award amount becomes the principal on which the interest will be calculated.¹⁶² Historically, courts resisted the application of interest to any judgment where the amount was unliquidated—that is, where the parties had not agreed to a fixed sum due as of a fixed day.¹⁶³ Courts reasoned that it was unfair to require defendants to pay prejudgment interest when they could not “determine exactly what they owed.”¹⁶⁴ But the Supreme Court concluded in *Funkhouser v. J.B. Preston Co.* that the distinction between liquidated and unliquidated claims is not determinative of whether to award interest.¹⁶⁵ Instead, the proper test is whether the plaintiff’s loss could be “ascertained with reasonable certainty as of a fixed day.”¹⁶⁶ Since the primary purpose of prejudgment interest is to make the victim whole, prejudgment interest will ordinarily apply as long as the defendant is aware of the magnitude of the damages and the date of injury.¹⁶⁷

158. Cf. Knoll, *supra* note 29, at 296 (discussing the inverse effects on the plaintiff when interest is not properly calculated).

159. See *id.* at 355–56 (discussing equitable grounds to deny interest).

160. *Id.* at 356 (arguing for equitable adjustments of the award amount). Because the ideal interest rate will depend on economic factors and not the facts of the case, Knoll argues that there will rarely, if ever, be a justifiable reason to equitably adjust the interest rate. *Id.*

161. See, e.g., *Kansas v. Colorado*, 533 U.S. 1, 15–16 (2001) (approving prejudgment interest only for the period after Kansas filed its claim, even though Colorado “knew or should have known” of its violations of the Arkansas River Compact, because even though Kansas’ delay was understandable, its fifteen year delay in filing would result in unfair charges to Colorado).

162. See *supra* Part I.C.

163. See Knoll, *supra* note 29, at 298.

164. *Id.* Courts, apparently, did not perceive that the failure to award interest itself was unfair to the plaintiff, who bore the costs of the injury and the delay. See Ault & Rutman, *supra* note 121, at 100.

165. See *Funkhouser v. J.B. Preston Co., Inc.*, 290 U.S. 163, 166 (1933).

166. *Id.* For postjudgment interest, because the court enters a determinate sum on a specific date, the ascertainability of the amount owed is generally not at issue. See 1 DOBBS, *supra* note 40, § 3.6(6). The exception to this is when judgments are modified on appeal. This complication is beyond the scope of this Comment, but the effects in more complicated situations are explored in Payor, *supra* note 119.

167. See *Golden Gate Transit Corp. v. City of Los Angeles*, 773 F. Supp. 204 (C.D. Cal. 1991) (awarding prejudgment interest from date defendant was served the complaint because that was when it had notice of the size of the claim and date of the injury).

The primary purpose of an interest award is to make the plaintiff whole for the damages caused by the defendant¹⁶⁸—it is not a punishment.¹⁶⁹ In appropriate cases, punitive damages may be awarded.¹⁷⁰ Unlike interest on unliquidated claims, where as a matter of fairness damages accrue even if the specific amount cannot be known,¹⁷¹ punitive damages do not become a defendant's obligation until they are actually awarded.¹⁷² Therefore, it would be inappropriate to award prejudgment interest on any element of the award that is not tied to the harm suffered by the plaintiff.¹⁷³ Once the award is adjudged due, however, punitive damages are appropriate for inclusion in any postjudgment interest calculation.¹⁷⁴

b. Rate of Interest

The rate of interest is the most important decision in making the interest award economically efficient and equitable. Set too high a rate and the plaintiff will receive a windfall; set too low a rate and the plaintiff will not be fully compensated, resources will not be efficiently allocated (encouraging unnecessary risk taking by the defendant), and the defendant will have incentive to delay litigation and not settle.¹⁷⁵ To achieve the economically efficient solution, a court must examine the nature of the remedy and the individual economic situation of the parties.¹⁷⁶

Because statutorily set interest rates (as in § 1961, the federal postjudgment interest statute) do not take into account the specifics of the case or the parties, they are arbitrary and almost certainly will be inefficient.¹⁷⁷ In the marketplace, the interest a borrower pays is largely a function of the perceived risk of default on that loan.¹⁷⁸ As a result, § 1961 will almost always yield results where the defendant pays too little interest because the referenced Treasury bill rate reflects the near-zero risk of default by the U.S. government.¹⁷⁹

168. See *supra* notes 130–33 and accompanying text.

169. *Socony Mobil Oil Co. v. Texas Coastal & Int'l Inc.*, 559 F.2d 1008, 1014 (5th Cir. 1977) (“Prejudgment interest is not awarded as a penalty, but is in the nature of compensation for the use of funds.”). Like punitive damages, the application of interest does have deterrent effect on the actions of potential defendants, but this is only by force of the proper allocation of economic risk. See *supra* Part I.C.

170. For example, the Clayton Act, 15 U.S.C. § 15(a) (2006), authorizes treble damages for certain violations of U.S. antitrust law.

171. See *supra* notes 163–66 and accompanying text.

172. See 1 DOBBS, *supra* note 40, § 3.6(4).

173. *Id.*

174. *Id.*

175. See Knoll, *supra* note 29, at 317–19.

176. See generally *id.* (analyzing the various options available to courts).

177. Barring pure coincidence, of course. See Keir & Keir, *supra* note 112, at 131–35.

178. See Knoll, *supra* note 29, at 320.

179. See *id.* at 327 & n.171.

When courts are not constrained by statute to a legislatively determined interest rate, they have discretion to choose a more appropriate rate. But there are several key variables to making a proper determination.¹⁸⁰ In voluntary transactions, the two sides are commonly known as lenders (creditors) and borrowers (debtors). In legal disputes, plaintiffs and defendants are engaged in an involuntary transaction, but in identifying an appropriate interest rate the court can analogize to their voluntary counterparts. Plaintiffs who have suffered harm at the hands of the defendant are “involuntary creditors”—meaning they have either had to use their own money or borrow in order to compensate for the damages suffered at the time.¹⁸¹ On the other hand, defendants who have injured, but not compensated, the plaintiff for the costs of those damages are “involuntary debtors” who have received the benefit of deferred payment.¹⁸²

This dichotomy provides the court a two-part framework to consider its selection of an appropriate interest rate. Under the involuntary creditor theory, the court may apply the interest rate that the plaintiff actually paid (for borrowing) or failed to earn (for spending savings).¹⁸³ This approach effectuates the primary purpose of prejudgment interest—fully compensating the plaintiff for its loss.¹⁸⁴ But these interest rates will likely have little correlation to the defendant’s ability to borrow (or raise capital in the case of a corporate entity). For example, returning to the example of a car crash, if the plaintiff uses savings to repair damages to her vehicle, she may have forgone a very low interest rate on the money she spent.¹⁸⁵ But where the purpose of the award is restitutionary, such a low rate will not fully disgorge the unjust enrichment of the defendant with a higher cost of borrowing or raising capital and will not internalize the costs of the defendant’s risk taking.¹⁸⁶ Under this “involuntary debtor” theory,¹⁸⁷ the court should ordinarily award interest based

180. See generally *id.* (criticizing courts’ historic attempts to award prejudgment interest and proposing reforms); Ault & Rutman, *supra* note 121 (same); Keir & Keir, *supra* note 112 (same).

181. *In re Oil Spill by the Amoco Cadiz*, 954 F.2d 1279, 1331 (7th Cir. 1992) (per curiam) (hypothesizing what the victims of the oil spill would have had to pay to borrow funds for the cleanup).

182. See Knoll, *supra* note 29, at 302–03 (citing *Amoco Cadiz*).

183. See *id.*

184. See *id.* at 308–09.

185. Richard Barrington, *Online Banks Offer Best Savings Account Rates for 2013*, FORBES, (Jan. 11, 2013), <http://www.forbes.com/sites/moneybuilder/2013/01/11/online-banks-offer-best-savings-account-rates-for-2013> (noting the “best” interest rates available for online and traditional banks were between 0.64 percent and 0.87 percent).

186. See Knoll, *supra* note 29, at 309.

187. Though as *Amoco Cadiz* notes, the defendant’s borrowing is not entirely involuntary. If a defendant knows that a judgment may be entered against it, including interest, it has a choice between using its own traditional sources (savings, capital, or borrowing) to compensate the plaintiff before litigation and continuing to “borrow” from the involuntary creditor, the plaintiff. The rational defendant will choose the source with the lowest rate. See *In re Oil Spill by the Amoco Cadiz*, 954 F.2d 1279, 1331–33 (7th Cir. 1992) (per curiam).

on the defendant's cost of borrowing to maximize the benefits of awarding interest on the judgment.¹⁸⁸

One final consideration is whether the court should select a fixed or variable interest rate. When a court fixes an interest rate—even one that varies based on an available market measure like § 1961—that rate will only be correct at the moment it is fixed. Falling interest rates in the market would mean that the rate would be inefficiently high; rising interest rates would have the opposite effect.¹⁸⁹ For this reason, statutorily defined fixed interest rates are inefficient. Courts must apply statutory rates if they apply.¹⁹⁰ But whenever they have the discretion, courts should set an appropriate floating rate to achieve an economically efficient result.¹⁹¹ Fixed rates are particularly inappropriate for prejudgment interest in long-running disputes or during periods where interest rates have fluctuated significantly, as the cost of borrowing likely will have changed significantly over the period of the dispute.¹⁹² Therefore, where the court has discretion to set an interest rate, it should normally use the defendant's cost of borrowing at a variable rate over the period of dispute (prejudgment) and during the course of repayment (postjudgment).

c. Time and Compounding

As noted above, interest on judgments compensates for the time value of money. Thus, time is an essential element of the calculation.¹⁹³ Typically, interest rates are expressed as annual rates. The interest period defines how often interest is calculated and, for compound interest, accrued during that year.¹⁹⁴ For simple interest, where the interest is paid only on the principal amount outstanding,¹⁹⁵ the periodicity of payments does not affect the amount owed, only when the interest is due. Compound interest, however, is calculated on both the outstanding principal and any unpaid accrued interest over the

188. See Knoll, *supra* note 29, at 308–10.

189. See *id.* at 319.

190. Kaiser Aluminum & Chem. Corp. v. Bonjorno, 494 U.S. 827, 840 (1990).

191. Knoll, *supra* note 29, at 319; accord *Amoco Cadiz*, 954 F.2d at 1333 (“[I]t is necessary to use the rates in force during the case and not whatever rate prevails at the end.”).

192. See, e.g., *Amoco Cadiz*, 954 F.2d at 1332 (noting that in the more than thirteen years since the *Amoco Cadiz* ran aground, market rates had been above 20 percent and below 10 percent, and it would be “inappropriate to use a low rate [set by the postjudgment interest statute] when higher rates persisted during the bulk of the case”).

193. See *supra* note 121 and accompanying text.

194. See Knoll, *supra* note 29, at 327. Time and period are inextricably linked as inverse proportions. The longer the time between accruals, the fewer periods. For example, a loan that compounds annually has one period; a loan that compounds monthly has twelve. *Id.* at 328.

195. BLACK'S LAW DICTIONARY, *supra* note 81, at 887.

period.¹⁹⁶ As a result, compound interest grows exponentially and will always be greater than simple interest.¹⁹⁷

The rationale for applying interest—whether prejudgment or postjudgment—is based in part on remedying the harm to the plaintiff’s earning power (to account for inflation) and opportunity costs (to account for loss of control of the funds).¹⁹⁸ These economic justifications for interest weigh in favor of compounding the interest awards, because it is “consistent with commercial practices.”¹⁹⁹ Section 1961 explicitly provides for annual compounding of postjudgment interest.²⁰⁰ The majority common law rule for prejudgment interest has been to award simple interest,²⁰¹ but federal courts maintain discretion whether or not to compound.²⁰² That said, one court called compounding “the norm in federal litigation.”²⁰³

D. Summary

The rationale for applying interest to monetary judgments will normally be to restore the plaintiff to the position she held before the damages caused by the defendant. Actual damages, both liquidated and unliquidated—as long as they are reasonably ascertainable—should be included in any interest award. The rate should be set at a floating rate appropriate for the underlying purpose of the award (damages or restitution) and should almost always be compounded.

The next Part explores the genesis of water interest in the Special Master’s report to the Supreme Court and compares the Court’s treatment of the award to these principles, finding that some form of interest is appropriate. As interest in kind, though, economic principles will not apply with the same force, necessitating variation from certain of these conclusions.

II.

TEXAS V. NEW MEXICO: THE CASE FOR WATER INTEREST

This Part analyzes whether water interest should have been awarded in *Texas v. New Mexico* and, if so, how it should have been applied. Unfortunately, it does not appear that Special Master Meyers was able to elaborate beyond his report on the rationale for his novel measure of

196. *Id.*; Knoll, *supra* note 29, at 306.

197. *See* Knoll, *supra* note 29, at 307 n.82.

198. *See supra* Part I.C.

199. Knoll, *supra* note 29, at 307.

200. 28 U.S.C. § 1961(b) (2006).

201. Knoll, *supra* note 29, at 307 (citing 1 DOBBS, *supra* note 40, § 3.6(4)).

202. *Id.* (citing *Bio-Rad Lab., Inc. v. Nicolet Instrumental Corp.*, 807 F.2d 964, 969 (Fed. Cir. 1986)).

203. *In re Oil Spill by the Amoco Cadiz*, 954 F.2d 1279, 1332 (7th Cir. 1992) (per curiam) (saying that the conclusion is “almost compelled by” *West Virginia v. United States*, 479 U.S. 305 (1987) and *General Motors Corp. v. Devex Corp.*, 461 U.S. 648 (1983)).

damages—he died the year after the Supreme Court decision that left the door open for water interest.²⁰⁴ Thus, the examination is limited to the public record—his report and the proceedings before the Court—and a few biographical clues to uncover his intent in awarding and applying it.

Even with this scant record, the analysis shows that water interest will not necessarily be required to make the plaintiff whole, but its beneficial effects of deterrence and promoting settlement or swift litigation are sufficient to consider awarding it.²⁰⁵ The award would be on its firmest foundation when based on a substantive equity right tantamount to a fiduciary duty, where the upstream party is viewed as a fiduciary of the downstream party's water, and restitutionary interest would be appropriate.²⁰⁶ Despite the Court's skepticism that the Compact compelled awarding repayment in kind²⁰⁷ the Special Master's recommendation for water interest is well supported by policy and should be considered—with some slight changes in its application—in future water cases.

A. The Fight for the Pecos: History of the Dispute

By all accounts, the Pecos is a difficult river to manage. It has a small base flow from artesian sources and some snow run-off, but is largely “subject to the vagaries of flash floods which sometimes reach major magnitude.”²⁰⁸ Storing these variable flows is the only way agriculture has been able to maintain itself in the arid region.²⁰⁹ In dry years, unrestricted use in New Mexico could mean that “no water at all might reach Texas.”²¹⁰ In the face of these difficulties, New Mexico and Texas—the only two states through which the Pecos flows before it feeds into the Rio Grande—sought to form an interstate compact to allocate the variable waters as early as 1925.²¹¹ The states made two abortive attempts before they agreed to the 1949 Compact that Congress ratified.²¹²

204. The case was decided June 8, 1987. *Texas v. New Mexico IV*, 482 U.S. 124 (1987). Meyers died July 17, 1988. HALL, *supra* note 4, at 195.

205. See *supra* Part I.C.

206. See *supra* notes 45–54 and accompanying text.

207. *Texas v. New Mexico IV*, 482 U.S. at 132.

208. Letter from Oscar L. Chapman, Acting Sec'y of the Interior, to Sen. Joseph P. O'Mahoney, Chairman, Comm. on Interior and Insular Affairs, May 9, 1949, *reprinted in* PECOS RIVER COMPACT, S. DOC. NO. 81-109 at XIV (1949) [hereinafter S. DOC. 109].

209. *Id.*; see also *Texas v. New Mexico (Texas v. New Mexico II)*, 462 U.S. 554, 557 (1983) (noting that the river's characteristics “barely support[] a level of development reached in the first third of [the twentieth] century”). With respect to the variability, one commentator estimated that the Pecos “will overdeliver for five or six years at a time and then it will underdeliver for five or six years at a time . . .” Charles T. DuMars, *Texas v. New Mexico: It's Time to Correct Some Judicial Mistakes*, 34 PROC. N.M. WATER CONF. 25, 26 (1989).

210. *Texas v. New Mexico II*, 462 U.S. at 557.

211. S. DOC. 109, at XI.

212. *Id.*

The Compact formally established the Pecos River Commission, consisting of a commissioner from each state and a non-voting federal representative.²¹³ There is no provision for a tie-breaking vote should the two state commissioners fail to agree on an issue.²¹⁴ The Commission was to administer the river based on a 1947 engineering study that measured conditions in the river basin and developed an “Inflow-Outflow Manual” to reflect those conditions.²¹⁵ The key provision of the Compact, article III(a), required that New Mexico “not deplete by man’s activities the flow of the Pecos . . . below an amount that will give to Texas a quantity of water equivalent to that available to Texas under the 1947 condition.”²¹⁶ Senate Document No. 109, recommending congressional approval of the Compact, incorporated the Inflow-Outflow Manual’s charts and graphs into the Compact and became the basis by which the Commission would predict the quantity of water Texas could expect based on that 1947 condition.²¹⁷

During the early years of the Commission, the work progressed harmoniously.²¹⁸ Even after it became clear that the Inflow-Outflow Manual did not accurately describe the actual state of the river, the Commission was able to agree on most issues, including ordering a new study to better reflect the hydrographic realities of the river and adopting the resultant charts and tables for its determinations.²¹⁹ Using the new model, the Commission determined that for the period from 1950 to 1961, New Mexico delivered a shortfall of 53,000 acre-feet to Texas.²²⁰ Thornier issues, though, were deferred when the Commission could not gain consensus between the two voting members.²²¹

Eventually, the deferred issues came to the fore and the Commission gridlocked. Finally, in July 1970, Texas reversed course and objected to the adoption of the new model for calculating shortfalls, claiming that the original Inflow-Outflow Manual approved by Congress should be the standard—despite its previously demonstrated errors.²²² Texas calculated the alleged shortfall for 1950 to 1969 as 1.1 million acre-feet.²²³ In 1971 and 1974, the state commissioners drafted independent triennial reports and could not agree on

213. Pecos River Compact, *supra* note 1, art. V(a). The Commission had been established prior to ratification and its operations remained largely unchanged once formalized by the Compact. *Texas v. New Mexico II*, 462 U.S. at 558, 560.

214. *See Texas v. New Mexico II*, 462 U.S. at 560.

215. *Id.*

216. Pecos River Compact, *supra* note 1, art. III(a).

217. *Texas v. New Mexico II*, 462 U.S. at 559; *see also* HALL, *supra* note 4, at 73 (describing S. DOC. 109 as “the Rosetta Stone of the compact”).

218. *Texas v. New Mexico II*, 462 U.S. at 560.

219. *Id.*

220. *Id.* at 561. No adjustment was made to allocate losses attributable to “man’s activities.” *Id.* at 561 n.8.

221. *Id.* at 561.

222. *Id.* at 561–62.

223. *Id.* at 562.

calculated deficits or required action.²²⁴ Faced with no prospect of future agreement and continued shortfalls, Texas initiated the original action with the Supreme Court.²²⁵

B. Conduct of the Litigation: The Special Masters' Progress

After the Supreme Court granted Texas leave to file the complaint,²²⁶ it appointed the Honorable Jean Sala Breitenstein as the first Special Master in the case.²²⁷ Before joining the bench, Judge Breitenstein was a Denver-based water law attorney who had not only represented upstream Colorado in a landmark interstate water compact case against New Mexico,²²⁸ but also had a hand in drafting the Pecos River Compact.²²⁹ This made him eminently qualified to interpret the highly technical compact—but it also gave him an upstream party's view of the conflict.²³⁰ Despite the repeated delays in the course of the litigation²³¹ and New Mexico State Engineer Steve Reynolds's refusal to comply with strict prior appropriation doctrine by failing to stop junior rights holders from pumping in the Roswell basin when it needed more water to satisfy its obligations to Texas,²³² Breitenstein sought to find ways to get the states to cooperate and “tried to stay clear of the relative fault of the two states.”²³³

After eight years of hearing evidence, filing two reports with the Court, and having the states' objections argued before the Justices, Breitenstein had resolved some fundamental questions, but had not been able to bring the case to a conclusion.²³⁴ Most notably, the Court endorsed his recommendations regarding the proper definition of the critical term “1947 condition,” adopting an “updated inflow-outflow methodology to be used in calculating Texas's entitlement.”²³⁵ By adopting these recommendations, the Court had finally

224. *Id.*

225. *See id.*

226. Order Granting Motion for Leave to File Bill of Complaint, *Texas v. New Mexico*, 421 U.S. 927 (1975).

227. *See* Order Appointing Judge Breitenstein Special Master, *Texas v. New Mexico*, 423 U.S. 942 (1975). Judge Breitenstein was a senior judge of the Tenth Circuit when appointed. *Id.*

228. *Hinderlider v. La Plata River & Cherry Creek Ditch Co.*, 304 U.S. 92 (1938).

229. HALL, *supra* note 4, at 5.

230. *See id.* at 195 (noting Breitenstein and another Special Master shared “an upstream state perspective on interstate river claims”).

231. *See id.* at 134–35; *see also id.* at 129 (describing Reynolds's reliance “on his ability to delay and confuse lawsuits” as part of his litigation strategy).

232. Joshua Mann, *Saving Water in the Pecos: One Coin, Two Sides, Many Overdrafts (and No Bailouts?)*, 47 IDAHO L. REV. 341, 352–53 (2011) (“Ironically, the godfather of New Mexico water law actually disliked and disregarded its basic tenet—the doctrine of prior appropriation.”).

233. HALL, *supra* note 4, at 135.

234. *See id.* at 163.

235. *Texas v. New Mexico IV*, 482 U.S. 124, 127 (1987) (citing *Texas v. New Mexico (III)*, 467 U.S. 1238 (1984)).

approved a definitive model that quantified New Mexico's obligations to Texas.

Dean Charles J. Meyers succeeded Judge Breitenstein as Special Master.²³⁶ Special Master Meyers was a veteran of the battle over the Colorado River, having served as chief legal assistant to the Special Master in *Arizona v. California*.²³⁷ He was also a Texan, with a downstream state's perspective on interstate water disputes.²³⁸ He began his task of calculating the shortfall of the actual flows using Breitenstein's model by replacing Breitenstein's assistant, "an engineer who consistently had sided with New Mexico[]." ²³⁹ Meyers also reopened the question of which party had the burden of proof in determining whether material depletions of the river were caused by "man's activities in New Mexico."²⁴⁰ Breitenstein (and, by approving his report, the Court) had suggested that Texas would have the burden. However, Meyers shifted that burden, accepting Texas's position that the model of the 1947 condition accounted for all natural changes and thus, unless shown to the contrary by New Mexico, departures were chargeable to New Mexico as the result of man's activities.²⁴¹ These changes ultimately yielded the calculation that New Mexico owed Texas 340,100 acre-feet of Pecos River water.²⁴²

But there was one more change that Meyers made to Breitenstein's decisions that likely influenced him to impose retrospective damages and create the concept of water interest: the first draft of his report accused New Mexico of acting in bad faith.²⁴³ That draft concluded that New Mexico had "known since 1961—if not earlier—that it has been in default under the Compact, and so far as the record shows it has not sought to perform its obligations, but rather has sought to avoid them, or at least delay performance as long as possible."²⁴⁴ Unlike Breitenstein, who had tried to avoid assigning blame and explicitly noted that both parties had been working in good faith, Meyers had proposed to change that—implicitly attacking Reynolds's strategy while explicitly blaming New Mexico.²⁴⁵ New Mexico countered the accusation in its comments on the draft and Meyers "corrected" his misimpression in the report filed with the

236. Order Appointing Charles J. Meyers Special Master, *Texas v. New Mexico*, 468 U.S. 1202 (1984).

237. *Arizona v. California*, 373 U.S. 346 (1963) (opinion); *Arizona v. California*, 376 U.S. 340 (1964) (decree); see HALL, *supra* note 4, at 168–71 (describing Meyers's involvement and the parallels to *Texas v. New Mexico*).

238. See HALL, *supra* note 4, at 195.

239. *Id.* at 171.

240. *Id.* at 173.

241. *Id.* at 175–76.

242. See *supra* note 7, and accompanying text.

243. HALL, *supra* note 4, at 179.

244. *Id.* (quoting the draft report of Mar. 18, 1986).

245. See *id.*

Supreme Court.²⁴⁶ But the water interest remained “to prevent procrastination by New Mexico.”²⁴⁷ Could that mean that the concept of water interest is a vestigial remnant of the Special Master’s initial sense of New Mexico’s culpability? Yes, but as we see below, it is a useful vestige²⁴⁸ to consider for future water disputes.

C. The Supreme Court’s Reaction

At oral argument, the Court repeatedly pressed each of the attorneys on the issue of monetary damages and repayment in kind.²⁴⁹ The Justices probed the legal basis for equitable repayment, focusing primarily on specific performance and the practical problems that such an award would create.²⁵⁰ As it had with the Special Master, New Mexico argued that there should be no retroactive relief, but that such relief should be payable in money if it were ordered.²⁵¹ It portrayed Texas as inflexible, demanding payment in water—quoting a letter that said as much.²⁵² Texas, on the other hand, stressed the unique nature of water, making payment in kind appropriate.²⁵³ One Justice called Texas’s demand “very irrational behavior”;²⁵⁴ another questioned the long-term beneficial use of repayment in water if the source of the payment was temporary.²⁵⁵

The Justices’ clear preference for monetary damages appears to come in part from the economic efficiency argument and in part from frustration with the long, drawn-out proceedings in this case.²⁵⁶ The Court was not merely concerned with the twelve years the case had been on its docket, but also wary of its continued involvement if it had to supervise an order of specific performance each time a new shortfall was determined.²⁵⁷ Money, it observed, could be paid immediately.²⁵⁸ If, however, the Court ordered specific performance of the Compact, the parties could be back before the Court each

246. See Meyers Report, *supra* note 7, at 2–3 (omitting the offending passage and noting the states “have worked together” in the “spirit of cooperation”).

247. *Id.* at 32.

248. Oxymoron intended.

249. See, e.g., Transcript of Oral Argument at 17–20, 33–34, 38, *Texas v. New Mexico IV*, 482 U.S. 124 (1987) (No. 65, Orig.).

250. See *id.* at 20–21, 37.

251. See *id.* at 6, 13.

252. See *id.* at 19.

253. See *id.* at 33, 37.

254. *Id.* at 18.

255. See *id.* at 38. Remember, the cornerstone of western water law is beneficial use. See *supra* notes 90–91 and accompanying text.

256. During oral argument one Justice remarked: “Well, you two states have had a chance to settle this controversy over, I don’t know, forever.” Transcript of Oral Argument, *supra* note 249, at 18; see also *Texas v. New Mexico II*, 462 U.S. 554, 575–76 (1983) (similar admonition).

257. See 3 DOBBS, *supra* note 40, § 12.8(3) (“[Courts] seek to avoid, as the saying is, ‘long continuous supervision’ of their decrees.”).

258. *Texas v. New Mexico IV*, 482 U.S. 124, 131 (1987).

year arguing over enforcement of annual shortfalls—a prospect the Court would likely be loath to take on.²⁵⁹ The Court seemingly limited the need for its continued involvement by ordering that a River Master be appointed to break the Pecos River Commission’s stalemates instead of relying on continued litigation.²⁶⁰

The Justices’ emphasis on efficiency to support their preference for monetary damages suffers from a faulty premise: it requires an efficient market—or at least a market where the water’s value can be readily ascertained. In an efficient market, water allocations would be freely transferable so that those who value the resource more could pay more and move it to higher value uses.²⁶¹ While market allocations of water have expanded in recent decades, “nowhere could such voluntary transactions [of water transfers] be characterized as a ‘free market.’”²⁶² It seems an odd argument to make for a resource as fungible as water, but as demand continues to grow in the West, disputes will “increasingly [be] seen as zero sum” and “[i]t will be harder to reach agreement[.]”²⁶³ This would certainly be true where there is a bilateral monopoly as in *Texas v. New Mexico*. Without a genuine interstate market for the transfer of water rights, Texas could hold out for artificially high sums as compensation for shortfalls, leading to inefficient resource transfer.²⁶⁴

The Court ultimately remanded the issue to the Special Master to determine “whether New Mexico should be allowed to elect a monetary remedy and, if so, to suggest the size of the payment.”²⁶⁵ Obviously, the Court is within its equitable powers to make such an order, but since New Mexico is essentially a fiduciary for Texas, restitution should have been the remedy instead of specific performance or expectation damages.²⁶⁶ In such cases, it should be the downstream beneficiary—not the upstream trustee—who elects

259. See 3 DOBBS, *supra* note 40, § 12.8(3) (noting that “[c]ourts will not specifically enforce contracts if they regard enforcement as . . . too demanding upon judicial resources,” especially when “the court might be required to supervise enforcement of the decree, perhaps for a long period of time”).

260. *Texas v. New Mexico IV*, 482 U.S. at 134–35.

261. See Bonnie G. Colby, *Transactions Costs and Efficiency in Western Water Allocation*, 72 AM. J. AGRIC. ECON. 1184, 1184 (1990).

262. *Id.* (citation omitted). State regulation is but one barrier to a truly free water market. In *Tarrant Regional Water District v. Herrmann*, the Fort Worth water district first sought to buy water from Oklahoma to satisfy its growing demand. However, Oklahoma had enacted protectionist water laws that preferred in-state water users over those from out of state, regardless of value. See *Tarrant Reg’l Water Dist. v. Herrmann*, No. 11-889, slip op. at 7–8 (U.S. June 13, 2013).

263. W. WATER POLICY REVIEW ADVISORY COMM’N, WATER IN THE WEST: THE CHALLENGE FOR THE NEXT CENTURY 2–38 (1998), available at http://www.preventionweb.net/files/1785_VL102318.pdf.

264. *Cf.* Colby, *supra* note 261, at 1186–89 (noting the same effect as a result of overregulation of the market).

265. *Texas v. New Mexico IV*, 482 U.S. at 132.

266. See *supra* notes 139–40 and accompanying text.

the remedy (equitable considerations notwithstanding).²⁶⁷ Having determined that damages can, and should, be made available in water, the next question is whether interest—in water—is also appropriate.

D. Evaluating Meyers's Water Interest

Meyers did not give a full consideration of the rationales and application of water interest in his report. In creating the concept, Meyers invoked only the rationale for postjudgment interest—to prevent New Mexico's procrastination in repayment—without attaching that label. Indeed, Meyers even strayed beyond the ordinary limits of interest awards, describing it as “an interest penalty.”²⁶⁸ But even though much remained unstated, a close examination of the way his water interest was to be calculated reveals that allowing such awards carries the beneficial effects of prejudgment interest, discouraging the initial harm and encouraging expeditious settlement. Because this interest came in the form of water, and as a matter of fairness to New Mexico in recognition of the variability of the Pecos River, Meyers included equitable considerations as he selected values for principal, rate, and time. Not surprisingly, some of his selections in this first attempt to award water interest would not provide the optimum policy benefits. Similar equitable considerations would be necessary in any such award, but should be corrected to compensate for shortcomings in the Meyers concept.

1. Calculating Water Interest

Meyers's approach to water interest used the same key factors to calculate interest—principal, rate, and time—but did so in a way that recognized the differences between awarding interest in money and awarding it *in specie*. His proposal would have required water interest to “be charged on the undelivered balance of water due in any year in which New Mexico does not meet its annual minimum delivery obligation.”²⁶⁹ However, unlike monetary damages that could be paid all at once, repayment in water is subject to the “realistic geographical, geological limitation on how much can come down [the river] in

267. See also Charlotte Benson Crossland, “Breach” of an Interstate Water Compact: Texas v. New Mexico, 28 NAT. RESOURCES J. 849 (1988) (arguing that the Court should not strictly adhere to contractual remedies in western water disputes).

268. Meyers Report, *supra* note 7, at 38 (emphasis added). But see Socony Mobil Oil Co. v. Texas Coastal & Int'l Inc., 559 F.2d 1008, 1014 (5th Cir. 1977) (“[I]nterest is not awarded as a penalty, but is in the nature of compensation for the use of funds.”); Keir & Keir, *supra* note 112, at 137 (“If interest is compensation, then there is no logical basis for using such an award as a form of punishment”); *supra* Part I.C.1 (summarizing the purposes of interest without attributing it as a penalty).

269. Meyers Report, *supra* note 7, at 32. The annual minimum delivery obligation was simply the total shortfall of 340,100 acre-feet divided by the ten annual installments. Thus, each year, New Mexico owed 34,010 acre-feet over and above its annual Compact requirements as its annual minimum delivery. If it met this amount, New Mexico would benefit from a rebuttable presumption of good faith. See *id.*

one year.”²⁷⁰ Meyers therefore created several conditions that would not normally be appropriate for monetary postjudgment interest by making equitable adjustments to the principal. First, he implemented a three-year grace period before repayment was to begin to give both states time to prepare for the repayment period.²⁷¹ Not only would this give time for New Mexico to call²⁷² the lower priority uses or acquire rights from more senior appropriators, but it would also give Texas time to prepare to make beneficial use of the water. Second, he recognized a level of good faith compliance that would prevent the interest from being charged during the first five years of the repayment period.²⁷³ Because of the well-known variability of the Pecos, New Mexico might otherwise have been held liable for water interest because of drought conditions beyond its control. Meyers therefore attached a good faith standard of 80 percent for those first five years; this standard roughly approximated the standard deviation in river flows since the Compact’s ratification.²⁷⁴ Only after the conclusion of this five-year period would New Mexico be charged interest if shortfalls remained at the end of each year.²⁷⁵

With the principal adjusted for equitable factors, Meyers had to determine an appropriate rate. He selected a rate equal to the one-year Treasury bill effective on the date that the delivery deficit was determined,²⁷⁶ reasoning that this rate “approximate[d] the opportunity cost to Texas of late delivery of water by New Mexico.”²⁷⁷ This rate mimics the statutory postjudgment interest rate on money judgments, but uses the spot rate for the day the water deficit is determined rather than the average from the week prior.²⁷⁸ Any accumulated deficits, including unpaid interest, would be carried forward into the next year, creating compound interest on the judgment.²⁷⁹

To examine how Meyers’s water interest worked in practice, consider the following example. If after the three-year grace period and the first five years of repayment, New Mexico had only delivered 150,000 acre-feet of water as repayment (in addition to its continuing Compact Article III(a) requirements), it would not be required to pay interest because it will have repaid more than 80

270. Transcript of Oral Argument, *supra* note 249, at 30–31.

271. Meyers Report, *supra* note 7, at 36.

272. In prior appropriation systems, a “call” for water is a demand for junior water rights holders to shut down their use so that senior rights holders will receive the water they are due. *See* [Black’s 9th p.232] (defining the noun as a “request, demand, or command” and the verb as “[t]o summon”).

273. *Id.* at 37.

274. *Id.* at 37 n.16.

275. *Id.* at 37. The annual period for the rate is intuitive as it accounts for rains in all four seasons and was the accounting period already chosen by the Pecos River Commission.

276. *Id.* at 32 n.13.

277. *Id.*

278. 28 U.S.C. § 1961 (2006) (using the “weekly average 1-year constant maturity Treasury yield” for the week preceding the judgment).

279. Meyers Report, *supra* note 7, at 33 n.14.

percent of the required 170,050 acre-feet, creating a rebuttable presumption of good faith. After year six, however, if New Mexico only delivered its Article III(a) requirements and the year six repayment of 34,010 acre-feet of water, it would owe interest on the 20,050 acre-feet outstanding from the first five years. Had the Court adopted the water interest provision in 1987, after three years grace and six years of calculating shortfalls, New Mexico would have owed an additional 1,180 acre-feet in 1996.²⁸⁰ If New Mexico only delivered its 34,010 annual acre-feet installment again the next year, with compounding, the calculations would be repeated with the next year's rate on a principal of 21,175 acre-feet.

TABLE 1: Repayment Example—Beginning June 8, 1987²⁸¹

| <i>Year Ending June 7</i> | <i>Compact Requirement Met?</i> | <i>Repayment Delivery (34,010 acre-feet /year)</i> | <i>Principal (acre-feet)</i> | <i>Interest Rate (%)</i> | <i>Interest Due (acre-feet)</i> |
|---------------------------|---------------------------------|--|------------------------------|--------------------------|---------------------------------|
| 1988 | Grace Period | | | | |
| 1989 | Grace Period | | | | |
| 1990 | Grace Period | | | | |
| 1991 | Yes | 30,000 | 4,010 | N/A* | |
| 1992 | Yes | 30,000 | 8,020 | N/A* | |
| 1993 | Yes | 30,000 | 12,030 | N/A* | |
| 1994 | Yes | 30,000 | 16,040 | N/A* | |
| 1995 | Yes | 30,000 | 20,050 | N/A* | |
| 1996 | Yes | 34,010 | 20,050 | 5.890 | 1,181 |
| 1997 | Yes | 34,010 | 21,231 | 5.650 | 1,200 |
| 1998 | Yes | 55,241 | 0 | 5.413 | 0 |

* Not applicable due to the rebuttable presumption of good faith for 80 percent delivery during the first five years

280. See *Publications—Postjudgment Rate 1990–1999*, U.S. DIST. CT., N. DIST. TEX., http://www.txnd.uscourts.gov/publications/interest/rate_1990_1999.html (last visited Aug. 28, 2013). Unlike § 1961, which uses the average rates for the prior week, Meyers's water interest used the spot rate. Therefore, I chose the rate closest to June 8 as the better approximation rather than the postjudgment interest rate that was effective on that date. In 1996, June 8 was closer to the June 20, 1996, determination; that rate was of 5.89 percent. $20,500 \times 0.0589 = 1,180.95$. To compare the impact of the selected interest rate, compare the June 2013 rate (0.14 percent)—a period of historically low interest rates. The same principal would yield only 28 additional acre-feet in water interest. See *Publications—Postjudgment Rate 2010–2014*, U.S. DIST. CT., N. DIST. TEX., http://www.txnd.uscourts.gov/publications/interest/rate_2010_2014#2013.html (last visited Aug. 28, 2013) (using the June 7, 2013 rate).

281. This table uses the Court's opinion date as the start of the repayment. The parties could have agreed to other, more convenient, annual periods already evaluated by the Pecos River Commission.

2. Analysis

In analyzing the propriety of an award of water interest, two questions must be answered. First, as a threshold issue, is the interest permitted at all? While awarding interest *in specie* is a novel concept, there do not appear to be any bars to the Supreme Court awarding water interest. The Court may fashion a restitutionary remedy in equity. Even at law, prejudgment interest is a judge-made principle and it does not appear that common law precludes awarding such interest. Indeed, because the Court did not rule out Meyers's water interest completely when it said that it would not award it "unless and until it prove[d] to be necessary"²⁸² in *Texas v. New Mexico IV*, the Court signaled there are situations where it may be appropriate. The Court may find that it is precluded from awarding postjudgment interest in water, though, because the federal postjudgment interest statute²⁸³ applies only to money judgments. The Court has held that it is not prevented by the statute's limited applicability to district courts,²⁸⁴ but it is not clear whether the Court would extend the statute beyond monetary awards. The threshold issue is satisfied: with the possible exception of postjudgment interest, it appears to be within the Court's power to award water interest.

The second question is whether the interest was calculated properly. To frame this question, this Section first examines the characterization of Meyers's interest as prejudgment or postjudgment and compares his rationale with the policy justifications of those two categories. It then examines each of the elements that make up the interest award: principle, rate, and time. Finally, it examines whether the interest should be compounded and explores some of the equitable considerations with regard to awarding *in specie* interest.

a. Types of Interest: Prejudgment or Postjudgment?

While Special Master Meyers called his new concept "interest,"²⁸⁵ he did not label it as prejudgment or postjudgment. Because the two forms of interest have different purposes and policy underpinnings,²⁸⁶ it is necessary to consider which version he intended in order to determine how effectively his plan implemented interest.

The water interest Meyers awarded appears on its face to be a form of postjudgment interest. He awarded water interest to prevent New Mexico's procrastination in repayment.²⁸⁷ While postjudgment interest does have a forcing function, its foundational rationale is to compensate the plaintiff for the

282. *Texas v. New Mexico IV*, 482 U.S. 124, 132 n.8 (1987).

283. 28 U.S.C. § 1961 (2006).

284. *See supra* notes 149–53 and accompanying text.

285. Meyers Report, *supra* note 7, at 32.

286. *See supra* Part I.C.1.

287. Meyers Report, *supra* note 7, at 32.

time value of money.²⁸⁸ But Meyers's concept of water interest does not fit neatly as postjudgment interest because water is not subject to the same economic forces as money. The Court implicitly acknowledged this during oral arguments when one Justice noted that the water Texas "didn't get . . . back in 1952 . . . may not have been worth nearly what it is going to be worth when [Texas] finally do[es] get it."²⁸⁹ This observation demonstrates that the value of water does not necessarily follow the financial principles used to determine money's present value and the better-known maxim that a dollar today is worth more than a dollar tomorrow.²⁹⁰

Unlike the norm for postjudgment interest, Meyers's concept was not designed to fully compensate the plaintiff for the defendant's delay in paying. While Meyers selected an interest rate he thought approximated the opportunity cost to New Mexico, the concept never would afford complete compensation because it included an interest-free three-year grace period before repayment and a five-year good faith period where New Mexico could avoid interest if it repaid at least 80 percent of the judgment principal due during that period. But that does not mean that the award of water interest was unsound. Meyers reasoned that some form of forcing function was required to encourage New Mexico to pay its water debt. Instead, calling it interest rather than a penalty may have been simple mislabeling.

b. Principal

In the postjudgment context, the principal subject to water interest is fully defined—with both the quantity and date the obligation begins determined by the Court. Even as it returned the issue to the Special Master for consideration of monetary damages, the Court affirmed the 340,100 acre-feet award, providing that "[i]f damages are not awarded or a damages judgment is not paid, it would appear it would be necessary to make up the shortfall by delivering more water over a period of years as the Master has recommended."²⁹¹ The Court having approved the division of the repayment over the course of ten years on equitable grounds, New Mexico knew that it owed 34,010 acre-feet each year until repaid.

288. See *supra* Part I.C.2.

289. Transcript of Oral Argument, *supra* note 249, at 34.

290. Otherwise, that water would have been worth more to Texas in 1952 than today. See *supra* note 142 and accompanying text.

291. *Texas v. New Mexico IV*, 482 U.S. 124, 132 n.8 (1987). This is not to suggest that *determining* the amount is so straightforward. Texas argued for much more (1.1 million acre-feet); New Mexico, much less (53,000 acre-feet). See *supra* notes 218–25 and accompanying text. However, once the amount was set by the Court, it became the well-defined principal.

c. Time

Meyers's selection of an annual calculation of interest is logical. It aligns with the natural seasonal cycle over which the Pecos inflows fluctuate and conforms to the Pecos River Commission's practice of measuring flows annually.²⁹² It also happens to correspond to the common practice of structuring financial products with annual terms and advertised rates.²⁹³ This may have influenced the Special Master's selection of the one-year Treasury bill as the selected rate of interest.²⁹⁴

d. Rate

Meyers was not as effective at selecting an appropriate interest rate as he was as measuring principal and time. Meyers selected the one-year Treasury bill rate prevailing at the time any deficit is identified "to approximate the opportunity cost to Texas of late delivery of water by New Mexico."²⁹⁵ The approximation may seem elegant at a glance, but a closer look shows that this rate would likely have undercompensated Texas for its opportunity cost. Treasury bills are the means by which the United States borrows money, a historically safe investment that typically carries low interest rates.²⁹⁶ Under either the involuntary creditor theory (whereby interest is awarded based on the plaintiff's cost of borrowing) or the involuntary debtor theory (based on defendant's cost of borrowing),²⁹⁷ the United States' cost of borrowing is irrelevant to properly compensating Texas for its injury.

Meyers focused on the "opportunity cost" to Texas, a victim-centric view suggesting that some form of interest based on the plaintiff's cost of borrowing was appropriate. But should the interest rate be set according to the borrowing costs of the actual plaintiff—the state of Texas as a whole? Or should it be based on the costs incurred by the farmers and other beneficial users who were deprived of the water? The latter is more consistent with the compensatory purpose of interest, since they are the most directly impacted. However, such a model would be highly fact intensive—potentially requiring a different rate for each person harmed over the thirty-four years included in the award—and practically impossible from an administrative standpoint. A more appropriate strategy might be to use a local proxy—for example, a county or water district—to determine a more localized rate that better reflects the users' actual opportunity costs. Where this is not practical, or if it were not equitable, the

292. The Pecos River Compact mandated that the Commission perform various flow calculations "on the basis of three-year periods." Pecos River Compact, *supra* note 1, art. VI(b). But the Commission interpreted that clause to mean a three-year running average of annual measurements. See Transcript of Oral Argument, *supra* note 249, at 36.

293. See Knoll, *supra* note 29, at 331 n.190.

294. See *supra* notes 276–78 and accompanying text.

295. Meyers Report, *supra* note 7, at 32 n.13.

296. See *In re Oil Spill by the Amoco Cadiz*, 954 F.2d 1279, 1332 (7th Cir. 1992) (per curiam).

297. See *supra* notes 180–88 and accompanying text.

state as a whole would be an appropriate choice. It is also probably the most defensible legal choice, since it is the party to the Compact and is not suing on behalf of particular plaintiffs.²⁹⁸ In the end, any measure of plaintiff's cost is doctrinally more appropriate than Treasury bills. But in this case, measuring by plaintiff's cost still does not yield the best answer.

Instead, Meyers should have chosen an interest rate that reflected New Mexico's gain. Because the upstream New Mexico should be treated as a fiduciary for its downstream neighbor, this restitutionary remedy is most appropriate to prevent New Mexico's unjust enrichment.²⁹⁹ Unjust enrichment is properly disgorged only when the defendant's cost of borrowing is the measure of interest.³⁰⁰ It does not matter that New Mexico did not actually borrow money to acquire the water that flowed down the Pecos; it avoided costs that it would otherwise have had to pay to comply with the Compact. For example, Reynolds could have called in the junior water rights so that New Mexico could meet its obligation to Texas.³⁰¹ However, this would have required shutting down all irrigation in the Roswell basin, affecting at least 112,000 acres of farmland.³⁰² This was neither an acceptable nor a sufficient solution, so the state should have purchased or leased water rights from senior appropriators when necessary to keep Roswell irrigated and meet its obligations to Texas.³⁰³ Therefore, New Mexico was unjustly enriched by avoiding payments to purchase and retire the rights necessary to guarantee sufficient quantities of water flowed into Texas. By avoiding these expenditures, it reduced the interest-bearing debt that would have been necessary to make the annual payments in water. Using New Mexico's cost of borrowing as the rate

298. Under the doctrine of *parens patriae*, "state[s] ordinarily ha[ve] no standing to sue on behalf of its citizens, unless a separate sovereign interest will be served by the suit." BLACK'S LAW DICTIONARY, *supra* note 81, at 1221. Thus, Texas would not have standing to sue as plaintiff for the benefit of the Pecos water users rather than in its sovereign interest. A fuller discussion of the doctrine and related issues, like sovereign immunity, are outside the scope of this Comment, but they should be considered in any interstate water litigation.

299. See *supra* Part I.A.

300. See Knoll, *supra* note 29, at 310.

301. See Meyers Report, *supra* note 7, at 33. Even before *Texas v. New Mexico*, Reynolds had a history of ignoring prior appropriation on the Pecos. Rather than cease pumping of wells in Roswell to satisfy the superior rights of the downstream Carlsbad Irrigation District (CID), he convinced the CID to drill its own "supplemental wells" to make up its allocations. See HALL, *supra* note 4, at 126–27.

302. Transcript of Oral Argument, *supra* note 249, at 15.

303. See HALL, *supra* note 4, at 204 (describing the contradictory positions of the Roswell irrigators, who wanted the state to purchase superior water rights, and the CID, who sought strict priority enforcement); *id.* at 205–06 (recounting an Interstate Stream Commission engineer's testimony to the New Mexico legislature that each option was "either physically impossible or economically impractical," settling on water rights acquisition as a plan that "would reduce, but not eliminate, the risk of shortfalls").

also has the advantage of being the simplest to administer, since this case has a single defendant.³⁰⁴

The difference between Meyers's Treasury bill approach and the recommended approach is not insignificant. New Mexico's 2013 general obligation bonds carry an interest rate between 2.0 and 2.4 percent³⁰⁵ as opposed to the near-zero Treasury rate.³⁰⁶ The difference between New Mexico's 2.0 percent and the U.S. Treasury bill's 0.16 percent for a single year's judgment delivery would be more than 630 acre-feet.³⁰⁷

In all cases, selection of a rate for water interest will have some measure of error, since financial products like New Mexico's general obligation bonds factor in inflation and credit risk—factors relevant to monetary products but not water.

e. Simple or Compounding

Whether the water that New Mexico owed Texas derived from the judgment or any interest that was later added for default, it is still subject to the same restitutionary goals. As such, Meyers's decision to compound the interest was the most consistent with the principles of interest. However, because of the history of prolonged periods of drought on the Pecos, equitable considerations could justify awarding simple interest to avoid rapid escalation of the balance due to natural factors beyond New Mexico's control.

f. Equitable Considerations

In major water cases, the amount of water awarded will likely exceed the defendant's physical ability to pay the judgment immediately. Storage capacity and channel flow are two supply-side limitations any award of water interest must consider. For example, the four reservoirs along the Pecos have a combined entitlement storage capacity of 176,500 acre-feet.³⁰⁸ Assuming 100 percent capacity³⁰⁹ and disregarding every sound water management practice and protections for endangered species,³¹⁰ New Mexico would have had to

304. However, in a case with multiple defendants, as was the case in *TCID*, see *infra* Part III, this ease of administration rationale is muted. See *infra* note 390 and accompanying text.

305. NEW MEXICO BD. OF FIN., CAPITAL PROJECTS GENERAL OBLIGATION BONDS, SERIES 2013 (Mar. 19, 2013), available at http://www.nmdfa.state.nm.us/uploads/FileLinks/83b0c95cb3ad461095948ed6b4c35e7e/GO_2013_OS.pdf.

306. See *supra* note 280.

307. New Mexico: $34,010 \times 0.02 = 680.2$ acre-feet. United States: $34,010 \times 0.0016 = 47.6$ acre-feet.

308. STEPHEN MASSEY, FREDERIC TATE & EDMUND G. ARCHULETA, BUREAU OF RECLAMATION, CALENDAR YEAR 2012 REPORT TO THE PECOS RIVER COMMISSION 4 tbl.1 (2013), available at <http://www.usbr.gov/uc/albuq/water/Pecos/prcc/pdfs/ReclamationPRCC2012.pdf>.

309. This is a bad assumption. On December 31, 2012, the reservoirs held only 12 percent of their storage entitlement. See *id.* at 3.

310. Like the Pecos Bluntnose Shiner. See *id.* at 12–13.

completely drain the reservoirs twice to deliver the 340,010 acre-feet shortfall to Texas.³¹¹

In light of these potentially draconian measures, Meyers was correct in giving New Mexico ten years to comply with the award and making the interest conditional. And the equities not only protected New Mexico, they also provided a demand-side benefit to Texas. Even though New Mexico would not have completely disgorged its unjust enrichment as a result, the scheme would have delivered the water at a rate that could be put to beneficial use by Texas.³¹² Because beneficial use is the fundamental requirement of prior appropriation water rights schemes, any assignment of water interest should account for a plaintiff's ability to beneficially use the additional water.

3. Alternatives

Meyers's recommended water interest most closely resembles post-judgment interest. However, considering postjudgment interest's main purpose is to compensate for the time value of money, which is irrelevant to an award in kind, Meyers should have considered other alternatives to better align his intent with the form of the award. Specifically, the implicit efficiency rationales would have been better served with prejudgment interest. If his main concern was subsequent enforcement of the decree, he could have fashioned a predetermined contempt penalty.

Prejudgment interest's deterrent effect encourages economically and socially efficient behavior by the defendant.³¹³ It deters the harmful act in the first place and discourages feet-dragging during litigation. This latter effect is particularly welcome considering the duration of typical water disputes. But, as discussed above with postjudgment interest, the award of interest in kind presents difficulties in application. Since Meyers seemed most concerned with New Mexico's compliance with the Court's award, water interest as it was applied in *Texas v. New Mexico* could be better seen as a predetermined contempt penalty. Many of the same factors that apply to postjudgment interest apply in this context as well, so only the key differences are addressed here.

a. Prejudgment Interest

As a judge-made rule, prejudgment interest may be a more appropriate tool to use in the water context. Except when state law applies and the legislature has mandated a prejudgment interest rate, the judge can fashion the

311. This extreme example also does not consider transit and evaporative losses, nor does it provide for continued obligations under the Compact's article III(a).

312. See Transcript of Oral Argument, *supra* note 249, at 37–38 (“[I]t all can't come down in one year and we don't want it to come down in one year. We couldn't use it. . . . As much as farmers in the west would take any kind of rain they can get, they don't want it all at once.”).

313. See *supra* Part I.C.1.a.

terms of interest to best achieve the intended effects.³¹⁴ Considering the long duration of many water disputes, prejudgment interest could escalate into enormous judgments,³¹⁵ encouraging vigilant compliance from the upstream state. Even when a dispute did arise, the prospect of a large award would encourage a defendant to settle, an outcome that the Supreme Court expressly prefers.³¹⁶ Should negotiations prove to be fruitless, defendants would be discouraged from the sort of delaying tactics New Mexico employed.³¹⁷

The uncertainty of damages in a water dispute will not be a bar to the award of water interest. Should the courts adopt water interest as proposed in this Comment, however, parties may try to avoid it by claiming that such an award was not contemplated during Compact negotiations. At one time, the unliquidated nature of damages alone would have effectively barred any interest, but that prohibition has been abrogated.³¹⁸ In another interstate water compact dispute, the Supreme Court awarded monetary prejudgment interest to downstream Kansas, even though a portion of the Court felt that doing so would have been unfair because the signatories to the Arkansas River Compact “neither intended or contemplated” the inclusion of prejudgment interest.³¹⁹ The majority, however, felt that the principles of prejudgment interest had developed sufficiently by the time the compact was negotiated to award interest on the money judgment.³²⁰ For water interest, on the other hand, this consideration may prove to be an obstacle for any compact negotiated prior to 1987.³²¹ Water interest likely would not have been intended or contemplated by the parties to those compacts until the Court published *Texas v. New Mexico*, addressing the novel concept for the first time.

To overcome this barrier, state parties could attempt to renegotiate earlier agreements to include such terms. But unlike traditional contracts, where each side could be liable for a breach and potentially subject to interest, upstream states would be the only party potentially liable for water interest. They would therefore have little incentive to agree to the renegotiation when the Court’s consideration is limited to a passing footnote as it stands today. However, a

314. See Knoll, *supra* note 29, at 299–300.

315. See Grant, *supra* note 20 (arguing against open-ended liability for compact violations).

316. See, e.g., *Texas v. New Mexico II*, 462 U.S. 554, 575 (1983). In the context of the bilateral monopoly, though, a downstream state could hold out in such negotiations. While not ideal, this power would help counter-balance the upstream state’s monopoly on the water.

317. See *supra* note 231 and accompanying text.

318. See *supra* note 163–66 and accompanying text.

319. *Kansas v. Colorado*, 533 U.S. 1, 25 (2001) (O’Connor, J., dissenting).

320. *Id.* at 11–12 n.4 (majority opinion).

321. This would be most such compacts. See *Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service*, <http://www.fws.gov/laws/lawsdigest/compact.html> (last visited Aug. 28, 2013) (listing interstate compacts). Only two of the twenty-five ratified compacts—the Alabama-Coosa-Tallapoosa (ACT) River Basin Compact and Apalachicola-Chattahoochee-Flint River Basin Compact—were ratified after the Court decided *Texas v. New Mexico* on June 8, 1987. See *id.* (identifying the ratifying documents, and thus the dates, for each compact).

Court decision endorsing water interest could encourage upstream states to renegotiate to include express water interest terms for the sake of predictability.³²²

This potential limitation notwithstanding, an award of prejudgment water interest must be calculated properly to provide its beneficial incentives without being unfair to the defendant. Justifications for interest rates and compounding remain largely unaffected in the comparison between pre- and postjudgment interest. The most significant difference is in the determination of how much principal is subject to interest and when interest should begin. The Supreme Court's decision in *Funkhauser v. J.B. Preston Co.* instructs that interest should only be applied when the damages can be "ascertained with reasonable certainty as of a fixed day."³²³ As a matter of fairness, an award of interest should only apply to damages that the defendant is aware (or should have been aware) that it caused the plaintiff.³²⁴

New Mexico argued that it should not be subject to any retroactive relief because "to the best of her knowledge and ability, she complied with the 1947 condition."³²⁵ New Mexico argued that the complexity of the calculations required by the inflow-outflow methodology, the admitted inaccuracies of the original manual, and recognition that the method used to determine the final damages was not approved by the Court until 1984 made determination of damages too uncertain to make an interest award.³²⁶ But the Court refused to accept New Mexico's approach because "good-faith differences about the scope of the contractual undertakings do not relieve either party from performance."³²⁷

So when was New Mexico sufficiently aware of the dispute to make it liable for interest? The date Texas filed its claim in 1974 is likely the latest date the Court would have accepted.³²⁸ From this date forward, New Mexico would not have been able to argue that it was unaware of Texas's claim to the disputed waters. This was the approach taken in *Kansas v. Colorado*, in due consideration of applicable equitable factors.³²⁹

But here, the dispute was well known long before Texas filed suit. There are several points in the history of the conflict that would be a more appropriate starting point. For example, it became clear soon after the Compact took effect

322. For an extended consideration of the incentives states have for renegotiating compacts, see Douglas L. Grant, *Interstate Water Allocation Compacts: When the Virtue of Permanence Becomes the Vice of Inflexibility*, 74 U. COLO. L. REV. 105 (2003).

323. 290 U.S. 163, 166 (1933).

324. See *supra* note 167 and accompanying text.

325. New Mexico's Brief in Support of Exceptions, *supra* note 5, at 30.

326. See *id.* at 30–31; see also *Texas v. New Mexico IV*, 482 U.S. 124, 129 (1987) (finding New Mexico's view was not without substantial foundation).

327. *Texas v. New Mexico IV*, 482 U.S. at 129.

328. See *Texas v. New Mexico II*, 462 U.S. 554, 562 (1983) (describing the procedural history of the case).

329. See *supra* notes 319–20 and accompanying text.

that the original inflow-outflow calculations were inaccurate. At that time, the Pecos River Commission ordered a study to correct the calculations.³³⁰ Based on that study, the Commission unanimously agreed in 1962 that New Mexico had under-delivered 53,300 acre-feet of water.³³¹ Another possible starting point is 1970, when Texas reversed course and argued that the original Inflow-Outflow Manual should apply. Based on those calculations, Texas demanded 1.1 million acre-feet for 1950 through 1969. Either of these dates would be more appropriate than the filing date for the principal to begin accruing water interest. The better option is 1962.³³² By then, the parties had an agreed liquidated amount in dispute, so New Mexico was on notice—or should have been—that it must be more diligent to remain in compliance.

There is one additional practical consideration for awarding water interest. Money judgments can be satisfied instantly by writing a check, so prejudgment and postjudgment interests are distinct phases of the award. Thus, the differing legal bases (common law and statutory law) are unproblematic. But when interest is awarded in water, the judgment may have to be paid over an extended period of time.³³³ This could lead to conflicting considerations when awarding both pre- and postjudgment water interest. This is especially true in cases like *Texas v. New Mexico*, where a court determines equitable considerations militate for a grace or good-faith period. By awarding prejudgment interest, the court will have determined that interest is appropriate to compensate the plaintiff for the water lost during the years before the judgment. But interest would not accrue during a grace period (or the like), effectively reducing the interest rate to 0 percent during that period. Therefore, if there is sufficient justification to award prejudgment interest, it should run continuously until the judgment is paid in full, not stop the instant the Court declares the judgment.³³⁴

As with postjudgment interest, prejudgment water interest is not necessary to fully compensate Texas for the water New Mexico withheld. But it should

330. See *Texas v. New Mexico II*, 462 U.S. at 560–62; see also *Texas v. New Mexico IV*, 482 U.S. at 129 n.6 (“The Inflow-Outflow Manual incorporated in the Compact proved to be so faulty as to be unusable.”).

331. See Meyers Report, *supra* note 7, at 6.

332. It is likely possible to prove an even earlier date. In the process of drafting the 1962 report, the New Mexico representative on the Pecos River Commission would have become sufficiently aware to put the state on notice that it was not in compliance with its compact obligations. Determination of this earlier date would be a fact intensive inquiry that would add little to the discussion at this point.

333. See *supra* note 270 and accompanying text (noting the geophysical limitations on water repayments).

334. By recognizing that the interest is for prejudgment harm to the plaintiff and not for postjudgment failure to satisfy the judgment, interest payments could continue beyond the date of the judgment despite the statutory limitation of postjudgment interest to money judgments. However, should a court conclude that § 1961 can be applied *in specie*, then the two periods must be distinct to avoid double counting. *Cf.* notes 149–53 and accompanying text (explaining the Supreme Court’s avoidance of literal reading of statutory language in § 1961).

still be available to plaintiffs because of its beneficial policy effects—notably, encouraging vigilant compliance by the upstream defendant and expediting litigation or settlement. This Section demonstrated the various factors of interest as they should have been applied by the Special Master. However, it may be that courts will not adopt the approach taken in this Comment. If that happens, courts would still be able to achieve some of these beneficial effects without using the words “water interest.”

b. Contempt Penalty

As noted above, postjudgment interest is not entirely suited to enforce compliance with the court’s order to make the repayment in water.³³⁵ Unlike an award for damages at law, where the enforcement of the judgment would be made *in rem*, equitable decrees are enforced *in personam*, using the court’s power against the party itself.³³⁶ Civil contempt sanctions may be awarded to enforce compliance with a court’s decree.³³⁷ Traditional sanctions for civil contempt include confinement or charging a periodic fee until the party complies.³³⁸

Special Master Meyers conceived of the water interest as a way to compel New Mexico’s compliance with the decree.³³⁹ In doing so, he used language more appropriate to contempt sanctions than an economics-based interest when he noted that “without an interest *penalty*, New Mexico will have no incentive to fulfill the terms of the decree.”³⁴⁰ At oral argument, the Court also explored the use of water interest in terms of contempt sanctions, with one Justice remarking that they are “usually the way courts enforce injunctions.”³⁴¹ Ordering confinement is not possible, however, when the defendant, such as a state, is not a natural person. Even if an individual responsible for failing to comply with the injunction could be identified—like the state engineer—that person would have to remain in jail for a year until the next set of calculations determined that New Mexico had come into compliance.³⁴² As Texas noted, this would be an unrealistic way to enforce the injunction.³⁴³ So, if Meyers’s concept were applied as a contempt penalty, it would have to be in the form of a fine.

335. See *supra* Part II.D.2.a.

336. See *supra* note 44 and accompanying text.

337. See 1 DOBBS, *supra* note 40, § 2.8(1).

338. See *id.*

339. Meyers Report, *supra* note 7, at 32.

340. *Id.* at 38 (emphasis added).

341. Transcript of Oral Argument, *supra* note 249, at 40; see also *id.* at 42 (discussing, too, “the normal ways to enforce an injunction”).

342. See *id.* at 40–41.

343. See *id.*

Normally, a court “must hold a hearing to determine whether the court’s order has been disobeyed” before making a contempt award.³⁴⁴ Despite pressing the parties on contempt sanctions during oral argument,³⁴⁵ the Court did not raise it in its opinion.³⁴⁶ It may have been concerned about repeated, annual litigation over compliance, much like its reticence to award specific performance.³⁴⁷ However, by creating an objective standard to evaluate New Mexico’s good faith compliance, Meyers’s plan avoided “the lengthy fact finding process of . . . an action to enforce this decree.”³⁴⁸ The standard would have served as a guidepost for the River Master to enforce the injunction through remedial sanctions.³⁴⁹

If the Court had agreed with the Special Master that some forcing function was required to make New Mexico repay the water, but was hesitant to establish a new substantive equity right to water interest, it could have framed the award in terms of a predetermined contempt penalty.

E. Recap: Water Interest Fundamentals

Plaintiffs in water cases deserve additional compensation—not to make them whole, but rather to prevent the upstream parties’ unjust enrichment and to encourage upstream parties’ due care in the management of the water, which they hold as fiduciaries of those downstream.³⁵⁰ To achieve these goals in the Texas-New Mexico context, the interest award should have been prejudgment interest, calculated based on a short term variable rate associated with New Mexico’s cost of borrowing, and compounded annually. Special Master Meyers’s creation was a conditional postjudgment interest that could have been used in conjunction with the prejudgment interest for the maximum prophylactic effect. Equitable considerations will always be factored into awards in kind. Should a court find that either version of water interest would create a burden outweighing its policy-based benefits, especially as resources become more limited, a predetermined contempt penalty could be used to enforce the repayment.

344. See 1 DOBBS, *supra* note 40, § 2.8(1).

345. See *supra* note 341 and accompanying text.

346. See *Texas v. New Mexico IV*, 482 U.S. 124 (1987).

347. See *supra* note 257 and accompanying text.

348. Meyers Report, *supra* note 7, at 38. Normally, the court must determine whether the defendant has a valid defense—such as an inability to comply. See 1 DOBBS, *supra* note 40, § 2.8(1). However, when the fine is to compensate the plaintiff—as it would be here—“intent and ability to comply are wholly insignificant. A remedial contempt fine . . . may be justified even if the defendant lacked the ability to comply with the original order.” *Id.* § 2.8(7).

349. See 1 DOBBS, *supra* note 40, § 2.8(1) (explaining the authority of Masters to carry out the court’s tasks).

350. See *supra* notes 46–55 and accompanying text.

III.

CASE STUDY: *UNITED STATES V. TRUCKEE-CARSON IRRIGATION DISTRICT*

Because most interstate water disputes come directly to the Supreme Court in its original jurisdiction, there is little opportunity for the lower courts to develop a water interest doctrine. By failing to analyze the issue in *Texas v. New Mexico*, the Court left future litigants without an intelligible framework governing whether or how water interest should be applied. One such case arose in the District of Nevada, where the court attempted to award postjudgment water interest but denied prejudgment interest.³⁵¹ On appeal, the Ninth Circuit vacated the interest award and remanded to the district court for justification.³⁵² Notably, it concluded that “[i]f water interest is appropriate for postjudgment interest, . . . it should be awarded prejudgment as well.”³⁵³ The appellate court was correct in finding that the district court improperly applied the principles of postjudgment interest, but it was improper to link the justifications for pre- and postjudgment interest. In light of these instructions, the district court did not fully analyze the propriety of interest. Instead, it simply “considered the pleadings and affidavits” submitted on remand and found no legal or equitable basis to award water interest in the case.³⁵⁴ Using the principles established in Part II, this Part examines the *TCID* case and proposes a more appropriate application of water interest.

A. Background

Like the fight for the Pecos, the battle over the waters of the Truckee and Carson Rivers has a “long, divisive history of . . . litigation.”³⁵⁵ The Truckee River flows from its source at Lake Tahoe to its terminus in Pyramid Lake, Nevada.³⁵⁶ As a “terminal lake” with no outlet, Pyramid Lake relies on the Truckee as its only permanent source of water; inflow from the Truckee is necessary to offset the lake’s evaporative losses.³⁵⁷ The lake and the lower reaches of the Truckee are under the control of the Pyramid Lake Paiute Tribe, as the land surrounding the lake was established as a reservation in 1874.³⁵⁸ In 1902, the Reclamation Act created the Newlands Project to establish farmland

351. See *TCID I*, No. CV-N-95-0757-HDM (D. Nev. Feb. 16, 2005) (amended judgment), *remanded in relevant part sub nom.* *United States v. Bell*, 602 F.3d 1074 (9th Cir. 2010), *cert.denied*, 131 S. Ct. 653 (2010).

352. *Bell*, 602 F.3d at 1084.

353. *Id.*

354. See Order on Remand, *supra* note 26.

355. See *Bell*, 602 F.3d at 1077.

356. *Nevada v. United States*, 463 U.S. 110, 114 (1983).

357. See *id.*; PYRAMID LAKE PAIUTE TRIBE & U.S. DEP’T OF AGRIC. NATURAL RES. CONSERVATION SERV., PYRAMID LAKE INDIAN RESERVATION: COMPREHENSIVE RESOURCE MANAGEMENT PLAN 73 (2005), available at http://truckeeriverinfo.org/files/truckee/PLIR_CRMP_final090105.pdf.

358. *Nevada*, 463 U.S. at 115.

projects outside of Reno, Nevada.³⁵⁹ To accomplish the reclamation, the project created a diversion dam and canal to carry waters of the Truckee to the Carson to supply the irrigation.³⁶⁰ Since then, extensive litigation has sought to establish or alter the apportionment of the rivers and to enjoin compliance with apportionment decrees and operating procedures promulgated by the Secretary of the Interior.³⁶¹

In an attempt to resolve the various disputes, Congress passed the Fallon Paiute Shoshone Indian Tribes Water Rights Settlement Act of 1990 (the “Settlement Act”).³⁶² The Settlement Act did not affect the allocations under the *Orr Ditch*³⁶³ and *Alpine*³⁶⁴ decrees (apportioning the Truckee and Carson rivers, respectively), but authorized the Secretary of the Interior to “pursue recoupment of any water diverted from the Truckee River in excess of the amounts permitted by . . . [promulgated departmental] operating criteria and procedures.”³⁶⁵ After attempting to arrive at a negotiated settlement for five years, the United States (later joined by the Pyramid Lake Paiute Tribe (the “Tribe”) as an intervenor plaintiff) filed suit against TCID and the water users in the project, seeking to recoup over one million acre-feet that it claimed were excess diversions.³⁶⁶ The district court’s most recent determination awarded 309,480 acre-feet to the government and the Tribe.³⁶⁷

B. The District Court’s Award of Water Interest

In addition to claiming damages for the excess diversions, both the United States and the Tribe followed the lead of the Special Master in *Texas v. New*

359. Reclamation Act of 1902, Pub. L. No. 57-161, 32 Stat. 388 (1902).

360. *Nevada*, 463 U.S. at 115–16.

361. See *United States v. Bell*, 602 F.3d 1074, 1077–78 (9th Cir. 2010) (summarizing the extensive history).

362. Pub. L. 101-618, 104 Stat. 3289 (1990).

363. *United States v. Orr Water Ditch Co.*, Equity No. A-3 (D. Nev. 1944).

364. *United States v. Alpine Land & Reservoir Co.*, 503 F. Supp. 877 (D. Nev. 1980).

365. See *Bell*, 602 F.3d at 1078 (quoting Settlement Act § 209(j)(3)); see also Settlement Act § 210(b)(13) (recognizing the prior apportionments of the *Orr Ditch* and *Alpine* decrees).

366. See *Bell*, 602 F.3d at 1079.

367. *United States v. Truckee-Carson Irr. Dist. (TCID II)*, No. 3:95-cv-00757-HDM (D. Nev. Jan. 5, 2012), *vacated*, *United States v. Bd. of Dirs., Truckee-Carson Irr. Dist. (TCID III)*, No. 12-15474, (9th Cir. July 22, 2013). The court initially awarded 197,152 acre-feet (plus 2 percent water interest) to the Tribe to be repaid over twenty years. *TCID I*, No. CV-N-95-0757-HDM, slip. op. at 2 (Feb. 16, 2005). The court of appeals, in assessing error to the court below, limited its mandate for recalculation to certain years. See *Bell*, 602 F.3d at 1087. On remand, the district court followed the mandate’s directions and came to the figure 309,480 acre-feet. *TCID II*, No. 3:95-cv-00757-HDM, slip op. at 2. In its appeal of this judgment, the government demonstrated that the circuit court’s mandate was flawed; the court agreed and took the extraordinary action of withdrawing and amending a final mandate. See *TCID III*, No. 12-15474, slip op. at 13–15. In reissuing its mandate, the circuit court directed the district court to include additional years in its calculations, so this amount, if adjusted, will only increase. *Id.* at 16.

Even though the number may change, for the purposes illustrating the principle of water interest, this case study treats the 309,480 acre-feet as the final award.

Mexico and requested water interest on its in-kind award.³⁶⁸ Initially, the court awarded no interest “because it found the government [had] delayed in bringing suit and accidentally destroyed a number of documents relevant to [the] litigation.”³⁶⁹ However, the court modified its opinion (without explanation) when it entered judgment and awarded postjudgment water interest at “two percent each year on the outstanding balance of water due.”³⁷⁰ Based on its findings, the court’s intuition in awarding interest was correct, but it should have awarded prejudgment interest and evaluated the equitable considerations to ensure that the benefits of the award outweighed the burdens.

The award in this case was rightly viewed as restitutionary.³⁷¹ The Settlement Act, on which the judgment was based, directed the Secretary to recoup excess diversions rather than seek monetary damages.³⁷² The court’s decision to fashion a remedy designed to prevent TCID’s unjust enrichment was especially justified since it found that TCID had “willfully failed to comply” with the Secretary’s operating procedures.³⁷³ TCID argued that since it did not hold the water rights—the irrigators in the Project did—a restitutionary award against TCID was inappropriate.³⁷⁴ Such an argument is unfounded. While not standing in *parens patriae* like a state, TCID is the designated agent of the Project users and its personnel were the ones the court found to have over-diverted to the Project users’ benefit.³⁷⁵

In *Texas v. New Mexico*, all of the water appears to have been put to beneficial use, thus unjustly enriching the state. But in *TCID*, the amount of damages was not as clear cut because some of the Tribe’s claimed damages were spills from dams that were not put to beneficial use. In fashioning its award, the court included excess diversions delivered to users in 1974, 1975, 1978, and 1979, and unauthorized spills between 1979 and 1983.³⁷⁶ If unjust enrichment were the only basis of the equitable award, the water from the unauthorized spills would have to be removed from the award, since those spills did not enrich any party.³⁷⁷ However, because equitable awards are not limited to a single theory, the entire award of 309,480 acre-feet is suitable for consideration of water interest.

368. See *Bell*, 602 F.3d at 1083.

369. *Id.* at 1082.

370. *Id.*

371. See Opening/Answering Brief for Appellee/Cross-Appellant Pyramid Lake Paiute Tribe of Indians at 3, *Bell*, 602 F.3d at 1074, 2008 WL 2340025; Brief of Appellants at 23, *Bell*, 602 F.3d at 1074, 2007 WL 4921132 [hereinafter TCID Brief].

372. See *supra* note 365.

373. See *Bell*, 602 F.3d at 1079.

374. See TCID Brief, *supra* note 371, at 31.

375. See *Bell*, 602 F.3d at 1081 (“TCID does not dispute that it controls all diversions from the Truckee and Carson Rivers . . .”).

376. See Order on Remand, *supra* note 26, at 3.

377. Of the total award of 309,480 acre-feet, 266,040 acre-feet were excess diversions to the TCID irrigators. The remainder (43,440 acre-feet) was the amount of unauthorized spills. See *id.*

1. Prejudgment Interest

The district court denied prejudgment interest because of the government's delay in bringing suit for the diversions that had occurred since the implementation of the operating criteria and procedures in 1973.³⁷⁸ The Ninth Circuit panel found that because the cause of action was created by the Settlement Act in 1990 and the Act directed the government "to pursue settlement efforts before instituting judicial proceedings," filing suit in 1995 was reasonable "given the length and bitterness of the underlying disputes."³⁷⁹

Because the policy behind prejudgment interest is not only to compensate the plaintiff but also to discourage harmful acts and encourage settlement or expedite litigation, *United States v. TCID* was ideally suited for the award of prejudgment interest. TCID's actions were found to be willful violations of federal law and such behavior is most worthy of an interest award. Similarly, this case would have benefitted from an incentive to settle or promptly conclude the litigation. The case was originally filed in 1995, yet the docket is still active. In the most recent appeal, on July 22, 2013, the court of appeals withdrew and amended its 2010 mandate in *United States v. Bell*, and remanded the case to district court for recalculation of damages.³⁸⁰ Irrespective of fault, such a delay should be compensable to the plaintiff, who has litigated for nearly two decades for the defendant to remedy the harms that go back forty years.

Determining the principal for the prejudgment interest calculation is not as simple as multiplying the 309,480 acre-feet by an appropriate rate. Instead, each of the diversions and spills would need to be accounted for as it occurred. Unlike *Texas v. New Mexico*, where Texas had an objective, determinable allocation based on the inflow-outflow calculations, the Tribe is entitled to receive the unquantified balance of water not diverted by senior upstream appropriators.³⁸¹ Thus, to properly calculate the ascertainable damages, the Tribe must prove the amount of the improper diversions—not a shortfall to a specific quantity. It did so to the district court's satisfaction.

As in *Texas v. New Mexico*, water allocations for the Newlands Project are evaluated annually.³⁸² Thus, an annual application of interest would also be appropriate so each improper diversion or spill accrues against TCID during the period in which it occurred. The key issue for the court to determine is the proper rate for the prejudgment period. In the initial litigation, the district court

378. See *Bell*, 602 F.3d at 1084.

379. *Id.*

380. See *TCID III*, No. 12-15474, slip op. at 16–17 (9th Cir. July 22, 2013); see also *supra* note 367.

381. See *Pyramid Lake Paiute Tribe of Indians v. Morton*, 354 F. Supp. 252, 255 (D.D.C. 1972), incorporated by Settlement Act, Pub. L. 101-618, § 209(j)(1), 104 Stat. 3289 (1990) ("[A]ll water not obligated by court decree or contract with the District goes to Pyramid Lake.").

382. See TRUCKEE RIVER OPERATING AGREEMENT § 3.B.3 (2008), available at http://www.usbr.gov/mp/trao/final/trao_final_09-08_full.pdf (requiring that the annual report "reflect[] water use" in the region).

selected 2 percent at the plaintiffs' suggestion.³⁸³ But as the Ninth Circuit correctly held, the district court must have a basis for that decision.³⁸⁴ In their brief on remand, the plaintiffs argued that water interest is appropriate due to the evaporative losses that increase over time.³⁸⁵ The Tribe's expert filed a declaration calculating such losses as 10.49 acre-feet per 1000 acre-feet of additional water repaid to the lake.³⁸⁶ Thus, the government and Tribe argued that this amount "functions exactly like postjudgment interest in the monetary damages context: it compensates for the loss of water over time during the period in which the debt is being repaid."³⁸⁷ This fact-based explanation is precisely the sort of justification courts should use, rather than choosing a financial rate that merely approximates the water losses. Unfortunately for this analysis, the court rejected water interest altogether without analyzing the relative merits of the Tribe's proposal.³⁸⁸

However, other disputes may not have the environmental factors that impact a terminal lake like Pyramid Lake. Thus, plaintiffs may need to resort to economic analogies to determine an appropriate rate. As explained above, the most appropriate rate for a restitutionary award is the rate at which the individual users could borrow to ensure complete disgorgement of their unjust enrichment.³⁸⁹ But just as the number of water users in *Texas v. New Mexico* proved to be too unwieldy to effectively use them to determine the most economically efficient rate, the numerous Project users in the irrigation district would be difficult to administer. As a proxy, then, TCID's cost of borrowing should form a substituted basis for the award of interest.³⁹⁰ As a last resort, the court should apply the federal postjudgment interest rates. This approach may be economically flawed, but it is the default rule in the Ninth Circuit.³⁹¹

2. Postjudgment Interest

The district court's interest award in *United States v. TCID* differs from Special Master Meyers's recommendation in *Texas v. New Mexico* in two key

383. See *Bell*, 602 F.3d at 1083.

384. See *id.* at 1084.

385. Joint Opening Brief on Remand Issues at 13, *TCID II*, No. 3:95-cv-00757-HDM (D. Nev. May 25, 2011).

386. *Id.* In other words, 1.049 percent.

387. *Id.*

388. Though as the brief also admits, evaporation rate increases with the surface area of the lake, which also increases with more water. See *id.* Thus, ironically, the lake's *rate* of loss would increase with accelerated payment, though the total evaporative loss increases due to the *time* to repay the deficit.

389. See *supra* notes 299–300 and accompanying text.

390. See *supra* Part II.D.2.d.

391. See *supra* note 189–92 and accompanying text; see also *W. Pac. Fisheries, Inc. v. SS President Grant*, 730 F.2d 1280, 1289 (9th Cir. 1984) (holding that postjudgment interest rates must be used in awarding prejudgment interest unless the court finds by substantial evidence that another rate is appropriate).

respects. First, unlike the Supreme Court, which side-stepped the issue of the applicability of the federal postjudgment interest statute by virtue of its unique position sitting in original jurisdiction, the district court had to consider the applicability of 28 U.S.C. § 1961. Second, the structure of the award varies significantly; whereas New Mexico would have owed interest only on annual balances that it failed to deliver (subject to the good-faith 80 percent compliance during the first five years), TCID would have owed interest on the entire outstanding balance from the date of judgment.

a. Postjudgment Interest Statute

The threshold issue in evaluating the TCID court's award of postjudgment interest is whether it, as a U.S. district court, may award postjudgment interest in kind. In its brief, TCID challenged the district court's jurisdiction to award postjudgment interest, pointing—as New Mexico did—to *Pierce v. United States*, which held that postjudgment interest had no basis in common law and must be awarded pursuant to statute.³⁹² Section 1961(a) provides that “[i]nterest shall be allowed on any money judgment in a civil case recovered in a district court.”³⁹³ Implicit in TCID's argument is the reliance upon the *expressio unius* canon of statutory construction: expressing one thing implies the exclusion of others.³⁹⁴ In other words, because Congress included only “money judgments” in the statute, TCID argued that interest on “*in specie*” awards is not permitted.

The Ninth Circuit agreed that there appeared to be no legal basis for the interest award, but it “[did] not foreclose the possibility of an equitable basis for such an award.”³⁹⁵ At first glance, the Ninth Circuit's approach appears to be consistent with *Pierce*, which only noted that there was no provision for interest on judgments at common law, but did not address decisions in equity.³⁹⁶ However, § 1961 does not differentiate between actions at law and in equity. Instead, it explicitly applies to “civil case[s].”³⁹⁷ Because the Federal Rules provide only one action, the civil action,³⁹⁸ equitable justifications for postjudgment water interest in the district court likely contravene the statute.³⁹⁹

Because the award of in-kind postjudgment interest is doubtful, at least at the district court, the Ninth Circuit's instructions on remand were flawed. It instructed the district court to reconsider its denial of prejudgment interest “in

392. See TCID Brief, *supra* note 371 at 39; *supra* note 127 and accompanying text.

393. 28 U.S.C. § 1961(a) (2006).

394. See *Barnhart v. Peabody Coal Co.*, 537 U.S. 149 (2003).

395. *United States v. Bell*, 602 F.3d 1074, 1083 (9th Cir. 2010).

396. See *Pierce v. United States*, 255 U.S. 398, 406 (1921).

397. 28 U.S.C. § 1961 (2012).

398. See FED. R. CIV. P. 2.

399. The Supreme Court acknowledged *Pierce*'s statement of common law and did not distance itself from that statement. *Texas v. New Mexico IV*, 482 U.S. 124, 132–33 n.8 (1987). Instead, it based its authority to award postjudgment interest absent statutory authority on its original jurisdiction—a justification not applicable to the lower courts.

light of its explanation of the basis for awarding postjudgment interest.”⁴⁰⁰ As demonstrated throughout this Comment, though, each type of interest has fundamentally different bases. Linking them together risked the denial of a salutary award of judge-made *prejudgment* water interest simply because there is no statutory provision for a district court to award it postjudgment. The district court did not overtly fall into this trap on remand, but its consideration of the interest issue was cursory, covered in the course of a single paragraph and rested on its discretion in equity.⁴⁰¹

*b. Structure of the TCID Postjudgment Interest Award*⁴⁰²

The *TCID* court applied water interest in a manner distinctly different than Special Master Meyers proposed in *Texas v. New Mexico*. As a result, an evaluation of equitable factors is needed to determine whether these differences cause any unfairness to the parties. The Special Master’s recommendation for in-kind repayment to Texas contemplated a ten-year repayment period, during which New Mexico would be required to deliver an additional 34,010 acre-feet of water each year.⁴⁰³ Interest would apply only if New Mexico did not make a good faith effort to comply during the first five years (defined as falling short by no more than one standard deviation of the average flows of the Pecos), and for any annual shortfalls thereafter. There was no such consideration in *United States v. TCID*. Instead, the district court held that interest would apply to the entire amount should *TCID* fail to deliver the entire shortfall during the first year.⁴⁰⁴

This structure would be appropriate if the court found it equitable to command repayment in a single year. A one-year repayment period could be possible here because, unlike the variable Pecos, the head of the watercourse in this case is Lake Tahoe—a store of 122 million acre-feet of water.⁴⁰⁵ The channel also may be able to handle sufficient water flow to allow repayment in a single year.⁴⁰⁶ But such a determination must consider the equitable benefits

400. *Bell*, 602 F.3d at 1084.

401. *See* Order on Remand, *supra* note 26, at 3–4.

402. As noted, the district court did not award interest in its order on remand. *Id.* The analysis in this Section refers to the water interest as applied in its original opinion. *See TCID I*, No. CV-N-95-0757-HDM (D. Nev. Feb. 16, 2005) (amended judgment).

403. *See supra* Part II.D.

404. *See Bell*, 602 F.3d at 1079.

405. *See* J.R. CRIPPEN & B. R. PAVELKA, THE LAKE TAHOE BASIN, CALIFORNIA-NEVADA 3 (1973), available at <http://pubs.usgs.gov/wsp/1972/report.pdf>.

406. The average annual flow at the river gauge above Derby Dam is 565,420 acre-feet and the high water annual flow at the mouth of Pyramid Lake was nearly 1.9 million acre-feet in 1983. *See Table 4—Selected Truckee River Runoff and Rates of Flow*, NEVADA DEP’T NAT. RESOURCES (Oct. 19, 2011, 11:38 AM), <http://water.nv.gov/mapping/chronologies/truckee/part1.cfm>.

and hardships not only to the parties,⁴⁰⁷ but to other interests as well, such as potential flooding in Reno and other towns along the Truckee.⁴⁰⁸

If those interests militate in favor of an extended repayment, the court should consider structuring the repayment over a reasonable term that avoids deleterious consequences, like the Special Master's recommendation in *Texas v. New Mexico*. However, because the district court made an explicit finding that TCID willfully violated the terms of the applicable operating procedures, the district court need not provide a good-faith standard where interest could be avoided for compliance. It could be added as a matter of course for any amount not delivered to Pyramid Lake as scheduled.

C. Case Study Summary

United States v. TCID presents an excellent case study to examine some of the implications of awarding water interest outside the context of the Supreme Court's original jurisdiction. Most notably, it is doubtful whether a district court can award *in specie* postjudgment interest outside the scope of the statutory authority of 28 U.S.C. § 1961. However, the Ninth Circuit's instructions on remand linking the award of prejudgment interest to the district court's justification for postjudgment interest may have deterred a full consideration of the issue back at the trial level. Unquestionably, the court was within its discretion to deny interest in equity. But as this Comment has demonstrated, the court missed an opportunity to lay out principles in a case that was well suited to its award. Beyond "fully compensat[ing] the Tribe for [its] loss" (the justification recognized by the court of appeals),⁴⁰⁹ TCID's position as an upstream fiduciary argues for restitution to disgorge its unjust enrichment. To fully prevent unjust enrichment, prejudgment interest should have been applied according to TCID's cost of borrowing. This approach would also have the salutary effects of prejudgment interest, forcing TCID to internalize the costs of its harmful (and in this case willful) actions, thus deterring future violations and encouraging settlement or more expeditious litigation.

407. An order to repay 309,480 acre-feet in a year would also risk running afoul of the *Orr Ditch* and *Alpine Decrees*. The Settlement Act, under which the government and Tribe brought this case, specifically guarantees that the water rights owners subject to those judicial apportionments "receive the amount of water to which they are entitled." Settlement Act, Pub. L. 101-618, § 210(b)(13), 104 Stat. 3289, 3323 (1990).

408. See generally TRUCKEE RIVER FLOOD PROJECT, FACT SHEET: TRUCKEE RIVER FLOOD MANAGEMENT PROJECT 1 (August 2009), available at [http://truckeeflood.us/uploads/files/File/Fact Sheets/All Pages Flood Project FACT SHEET.8-10-09_DMH.pdf](http://truckeeflood.us/uploads/files/File/Fact%20Sheets/All%20Pages%20Flood%20Project%20FACT%20SHEET.8-10-09_DMH.pdf) (noting that a 1997 flood caused over \$1 billion in damage).

409. See *Bell*, 602 F.3d at 1084 (quoting *City of Milwaukee v. Cement Div., Nat'l Gypsum Co.*, 515 U.S. 189, 195 (1995)).

CONCLUSION

The Supreme Court changed the landscape of water litigation when it approved an award for past damages in *Texas v. New Mexico*. While it clearly preferred a monetary award, on which it would have applied interest without question, it acknowledged that an in-kind award may be appropriate in certain cases. With in-kind awards established, the Court's hasty disposal of the Special Master's proposal for water interest has left litigants unclear about when and how to apply water interest—the misapplication of which will likely be unfair to one side or the other.

Upstream parties on any river system act as a fiduciary of the downstream users by virtue of geography. As such, when the fiduciary takes water that rightfully belongs to its downstream neighbors, a restitutionary award is required to prevent the fiduciary's unjust enrichment. A key component of preventing unjust enrichment is the interest on the award. If water interest becomes a recognized part of water awards, upstream parties will have stronger incentive to comply with their interstate compact obligations.

In contrast to the ordinary compensatory purpose of interest, Special Master Meyers fashioned the original incarnation of water interest as a *penalty*. Rather than using it as a penalty, though, he should have used it as a means to disgorge New Mexico's unjust enrichment. Regardless of the stated purpose, Meyers structured it much like postjudgment interest. While he largely applied the mathematical factors that go into determining interest well, including compounding accrued interest, his decision to set interest rates according to the return on Treasury bills would have been insufficient to fully deprive New Mexico of its unjust gains. That said, his tailored approach of taking several equitable factors into consideration was instructive in formulating a more rational approach to establishing water interest as a recognized award in water disputes between states.

While the Supreme Court may be able to avoid the strict application of the postjudgment interest statute to money judgments, district courts likely will not have the same flexibility. As a result, when private parties take their disputes over interstate water compacts (or other allocation) to district courts, those courts may be limited to prejudgment interest to remedy the defendant's unjust gains. *United States v. Truckee-Carson Irrigation District* presented the district court with an excellent opportunity to effectively do so, but the Ninth Circuit's improper linking of pre- and postjudgment interest may have negatively affected the district court's willingness to apply interest on remand. This Comment demonstrates how the court could have effectively applied water interest.

As resources become more limited across the arid American West, applying water interest to disputes will force all parties to internalize the cost of their actions (in acre-feet as well as dollars), encouraging more diligent compliance and reducing the likelihood of a dispute. But even when a dispute

does occur, well-defined principles behind a water interest award will encourage expeditious proceedings or settlement and, ultimately, delivery of the wrongfully withheld water.

