

**Potential Options to Reduce ESA Liability for  
Private New Mexico Irrigators Who May Be  
Liable for a Section 9 ‘Take’**

by

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## Abstract

Customary irrigation techniques employed by New Mexico irrigators may place them in jeopardy of a Section 9 ‘take’ under the Endangered Species Act (ESA) if their diversion constitutes a foreseeable harm that may kill or impair reproduction of a listed fish species. Unless irrigators are covered by a federal incidental take statement, anyone can challenge the activity if harm was done or may occur in the future. What constitutes a ‘take’ is a highly contentious issue; a dead fish is not necessary to prove an action will violate Section 9 since future ‘harm’ that is ‘imminent’ can also be seen as a ‘take.’ How may irrigators reduce their liability in a situation where the diversion clearly poses harm? The option with immediate benefits for fish is for an irrigator to leave more water in-stream by increasing irrigation efficiency. This must be backed up by applying for a Section 10 Habitat Conservation Plan (HCP) or Safe Harbor Agreement to gain legal protection from a lawsuit.

New Mexico has not developed in-stream flow incentives for irrigators because historically, state law has not explicitly recognized the value of water left in-stream for fish. This complicates the situation for New Mexico irrigators not tied to federal programs, which includes many small community irrigation districts and acequia communities. New Mexico irrigators should be pro-active in protecting their water right. Emerging state-based incentive programs that seek to leave water in-stream are a start in the right direction, but applied alone without a Section 10 HCP, will not fully reduce their ESA liability.

## **I. Introduction**

The United States (US) government has played a large role in fresh water habitat modification with the financing and building of many flood control and water storage dams across the United States. These projects were built to encourage settlement and agricultural production. It is widely known that these federal actions have played a significant role in modifying fresh water habitat, leading to the decline of many fish species nationwide. This also holds true for habitat modification by non-federal parties, which may be smaller in scale, but nonetheless have had an adverse impact on fish. In an attempt to halt species loss, Congress passed the Endangered Species Act (ESA) of 1973.<sup>1</sup> Within the Endangered Species Act there is a distinction between federal actions and non-federal actions that can cause jeopardy to a listed species. Generally, Section 7 of the ESA guides federal actions while Section 9 guides actions by private parties.

Currently, conflict is brewing in New Mexico between farmers and fish. Traditional agricultural practices in New Mexico have altered riverine habitat by actions that include the dewatering of streams, draining of wetland riparian areas, and construction of dams and levees. Many fish and bird species endemic to New Mexico rely on this riverine and riparian habitat, and its continued modification has placed many species at risk, including the Rio Grande silvery minnow and the Southwestern willow flycatcher. Past actions in river systems, including irrigation diversions and other riverine habitat modifications have resulted in the listing of these two species as endangered, and continued habitat modification will result in listings of other water dependant species. Because of the way the ESA is written, current irrigation practices in New Mexico that

utilize direct diversion from a stream have the potential to violate Section 9 of the ESA by committing a ‘take’ of endangered fish.

Since irrigators are the primary users of surface water, any attempt to leave water in-stream is met with resistance, and legislative attempts to establish in-stream flows have repeatedly failed since the 1970’s. However, two 1998 attorney general opinions suggest that State law does not explicitly prohibit in-stream flows, and an in-stream flow could be granted as a change to an existing water right.<sup>2</sup> In addition, New Mexico must meet water delivery compact obligations to Texas, which means that New Mexico irrigators cannot divert the entire flow of interstate streams such as the Pecos River or the Rio Grande. This essentially creates an in-stream flow at times when water is released to meet compact obligations. These flows are not continuous, but can have ancillary benefits if the water is released at critical times that would benefit fish species. Despite the potential for in-stream flows and the fact compact deliveries keep water in-stream, diverting water for irrigation has the greatest impact on fish in New Mexico and should be the focus of efforts to leave more water in-stream.

This discussion will primarily revolve around irrigators not tied to federal actions, though the federal nexus does play a role. Section 7 of the ESA allows for an incidental take statement (ITS) as part of the biological opinion for a specific federal action. An ITS allows the federal action to proceed as long as it does not jeopardize the listed species. As

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<sup>1</sup> 16 U.S.C. § 1531. Endangered Species Act of 1973. P.L. 93-205, December 28, 1973.

<sup>2</sup> The question was posed, “Does New Mexico law (constitutional, statutory, or case law) permit the State Engineer to afford legal protection to instream flows for recreational, fish or wildlife, or ecological purposes?” Two separate, but similar opinions were written. D.L. Sanders & Stephen R. Farris, January 8, 1998. Memorandum – Instream Flow, Request from AG for the State Engineer’s Opinion. (On file with author). This memorandum states that “constructed works” are necessary to comply with the diversion requirement, and that a “metering device” would suffice (at 6). They also stated “. . .no legislation is necessary because the state engineer is not barred by the Constitution, statute or case law from entertaining an application for a permit for instream use; and if granted, it would be afforded the same protections as any other permitted, licensed or adjudicated water right.” (at 8). See also, Alletta Belin, Opinion No. 98-01, March 27, 1998. In this opinion, it was determined that it is legal for the State Engineer to allow an in-stream flow right, if it is brought as a change from an existing use to an in-stream use, and conditioned upon having a metering device.

was done recently with regards to consultation for the silvery minnow, federal water users in the middle Rio Grande were placed under this incidental take ‘blanket.’ The biological opinion also covered non-federal actions. In a review of documentation for New Mexico endangered fish (excluding the Rio Grande silvery minnow), only one biological opinion was found, and the ITS ‘blanket’ was not extended to non-federal actions.<sup>3</sup> The absence of other biological opinions for endangered fish in New Mexico shows that there have been no recent federal actions that may adversely affect fish. However, there are plenty of private irrigators that modify fish habitat through individual diversions and acequias/community ditches. Unless these private irrigators apply for a Section 10 Habitat Conservation Plan (HCP) or Safe Harbor Agreement to ensure their actions do not jeopardize listed fish species, they may be at risk for a Section 9 ‘take.’

## **II. Objectives**

This paper will focus on 1) how Section 9 of the ESA creates legal liability for non-federal irrigators in New Mexico, and 2) how this group of irrigators can use existing federal and state incentive programs to reduce their liability. The word ‘irrigators’ includes individual irrigators, irrigation districts, conservancy districts, acequias/community ditches and Pueblos. Although these users are lumped together, their different organizational statuses with both the State and federal government may result in distinctive degrees of ESA liability. For example, New Mexico laws governing an

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<sup>3</sup> Review of US Fish and Wildlife Documents for the five endangered fish in New Mexico shows that many of these species do not have associated biological opinions. New Mexico’s endangered fish include the Gila topminnow, Gila trout, Pecos gambusia, razorback sucker and the Rio Grande silvery minnow. Many have recovery plans and have directly attributed irrigation impacts to watercourses as a cause in species decline. The Gila Topminnow has an associated biological opinion, however it primarily pertains to grazing on federal lands. The following webpages have information about all endangered species in New Mexico and relevant biological opinions and recovery plans. Available at:

irrigation district may act as a barrier for conservation and individuals within the irrigation district may not want to participate, especially if it means an increase in cost. Plus, who would bear the potential ESA liability? The district, each individual, or maybe the individual who uses the most? Another scenario would entail many individual irrigators or a combination of irrigation districts and individual irrigators whose combined diversion caused a 'take.' A lawsuit would have to enjoin them all if it is not clear which diversion was at fault. Differences may be significant in terms of who is liable, or to what degree they may be liable depending on priority, amount diverted and timing of diversion. Also, Pueblos and acequias hold the most senior water rights when compared to many irrigation districts, and this could be important when determining or apportioning ESA liability.

Since there are no in-stream flow protections in New Mexico, if all irrigators exercise their water rights on a stream, essentially drying it up and killing fish, they are not violating state law but could be held liable under federal law for a Section 9 'take.' How may irrigators reduce their liability under the ESA? Increasing irrigation efficiency is one way. An irrigator or irrigation district can prepare a Habitat Conservation Plan (HCP) to demonstrate that an increase in efficiency will reduce the amount of water that needs to be diverted, thereby leaving more water in-stream. If an applicant can prove that leaving more water in the stream enhances habitat, and that this reduced diversion does not cause harm to the fish population, the applicant may qualify under Section 10 for an incidental take permit. This provides legal protection with the understanding their irrigation activities will *incidentally* 'take' a few listed fish species as part of normal

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<http://fw2es.fws.gov/Library/ListDocs.cfm?Topic=Endangered+Species&Section=EndangeredSpecies> [Accessed 5 November 2004],

operations. However, this may only work if the Office of the State Engineer (OSE) allows the conserved water to remain in-stream. Typically when there is water available, it goes to the next junior appropriator. Since many streams and rivers in New Mexico are over-appropriated, there is a chance that the conserved water will instead satisfy the next appropriator and not the fish.

Some states in the West have recognized that apportioning water via the prior appropriation system has resulted in dwindling stream flows. These states created incentive programs for conservation with the realization that conserved water has value in-stream.<sup>4</sup> These programs compete with growing municipalities that are willing to pay top dollar to lease or purchase water rights. Some of these stream-based programs take the form of a state-owned in-stream flow right, short-term leases, or purchasing then retiring the right.<sup>5</sup>

If New Mexico lawmakers are made aware that state water laws are not sufficient to help irrigators deal with federal ESA liability, statutory incentives may be made available to irrigators who conserve with the understanding that many are potentially liable for a ‘take’ under Section 9 of the ESA.

### **III. Endangered Species Act**

Congress passed the Endangered Species Act (ESA)<sup>6</sup> in 1973 to prevent extinction by protecting species along with associated habitat. The ESA applies to both the federal government and private citizens by regulating land and water use decisions that can directly or indirectly cause harm to a species, as well as protections that make it

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and <http://arizonaes.fws.gov/biologic.htm> [Accessed 5 November 2004].

<sup>4</sup> See discussion in Section V. about programs in Idaho, Oregon and Washington.

illegal to ‘take,’ a listed species.<sup>7</sup> The ESA allows any citizen the opportunity to petition for a listing, comment on that listing and sue if they believe provisions are not being followed or enforced. The ESA encourages federal and state governments to work collaboratively and come up with plans to protect threatened and endangered species, particularly with respect to water resource issues. However, court cases do arise despite Congress’ intent for collaboration. These cases have attempted to define some of the vague wording in the ESA, especially the meaning of ‘harm’ resulting in a ‘take.’

The most important sections of the ESA to the discussion surrounding irrigation diversions are as follows: The word ‘take’ encompasses many actions that do not have to result in killing a species.<sup>8</sup> This definition is important in determining if ‘harm’ via stream dewatering by irrigation will ‘take’ fish. ‘Harm’ to a listed species can place the federal government or a ‘person’ in violation of a Section 9 ‘take,’<sup>9</sup> and the violator may be assessed a civil penalty under federal law.<sup>10</sup> The ESA allows an individual citizen to sue in order to protect listed species.<sup>11</sup> Since an irrigation diversion can de-water a stream, the threat of future ‘harm’ can rise to the level of a ‘take’ and an injunction can be used to stop the action.<sup>12</sup> These citizen suits, including a landmark challenge over enforcement of the ESA in *Tennessee Valley Authority (TVA) v. Hill*, have empowered people to become involved in species preservation, rather than leaving it up to the federal government. Section 10 allows for an incidental taking of a listed species if the applicant

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<sup>5</sup> *Id.*

<sup>6</sup> 16 U.S.C. § 1531. Endangered Species Act of 1973. P.L. 93-205, December 28, 1973.

<sup>7</sup> 16 U.S.C. § 1532(19). The word ‘take’ is defined in section 2 as “...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.”

<sup>8</sup> *Id.*

<sup>9</sup> 16 U.S.C. § 1538.

<sup>10</sup> 16 U.S.C. § 1540.

<sup>11</sup> 16 U.S.C. § 1540(g).

<sup>12</sup> 16 U.S.C. § 1540(g)(2)(A).

can mitigate the impacts of an otherwise lawful activity that may kill a few individual members of a species.<sup>13</sup> This can encourage habitat modifiers such as irrigators to change their actions and allow them to participate in species recovery and protection by offering immunity from a ‘take.’

## A. THE ‘TAKE’ OF LISTED SPECIES

### 1. *Section 7 and 9 Species and Habitat Protections*

Section 7 of the ESA is meant to protect listed species impacted by federal actions. Specifically, the impact of the action is questioned as to whether it may actually rise to the level of a ‘take,’ or destroy critical habitat.<sup>14</sup> This ensures that the government action does not cause ‘jeopardy.’ If it does, the project must be changed or its effects mitigated to such a degree that ‘no jeopardy’ is the final outcome. Section 7 recognizes the link between habitat protection and species conservation and mandates the designation of critical habitat by the listing agency.<sup>15</sup> Critical habitat is an essential component for recovering and sustaining species populations.

The Section 9 ‘take’ provision is meant to protect listed species on what can be seen on its face as protection for individual members of a species, however courts have also interpreted Section 9 to apply to populations.<sup>16</sup> Section 9 is based on wildlife law, which intended to protect direct taking of animals by activities such as poaching and

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<sup>13</sup> 16 U.S.C. § 1539.

<sup>14</sup> 16 U.S.C. § 1536(a)(2).

<sup>15</sup> 16 U.S.C. § 1536(a)(2).

<sup>16</sup> Cheever, Federico and Michael Balster, *Symposium Article: The Take Prohibition in Section 9 of the Endangered Species Act: Contradictions, Ugly Ducklings, and Conservation of Species*. 34 ENVTL. L. 363, 372 (2004). The authors state that looking at populations is something courts have done when determining if *future* action can destroy habitat leading to a ‘take.’ There are no dead fish in this analysis, only whether habitat modification will lead to future dead fish. This implies a population level analysis since a diversion may cause harm over a long period of time rather than at one instance in time. [Hereinafter, CHEEVER AND BALSTER]

hunting.<sup>17</sup> This would explain why some may see it only as a way to protect individual species members.

## 2. *The Section 9 ‘Harm’ Regulation*

Section 9 also applies to habitat modification with the inclusion of the word ‘harm’ as an action that can rise to the level of a ‘take.’ As ‘harm’ is not explicitly defined in the statute, the USFWS developed a regulation, or ‘policy’ for the word in 1975:

‘Harm’ in the definition of ‘take’ in the Act means an act or omission which *actually* injures or kills wildlife, including acts which annoy it to such an extent as to significantly disrupt essential behavioral patterns, which include, but are not limited to, breeding, feeding or sheltering; significant environmental modification or degradation which has such effects is included within the meaning of ‘harm.’<sup>18</sup> (Emphasis added).

The ‘harm’ regulation was re-defined in 1981, and remains the same today:

...[A]n act which *actually* kills or injures wildlife. Such act may include significant habitat modification or degradation where it *actually* kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering.<sup>19</sup> (Emphasis added).

The US Supreme Court upheld the 1981 definition of ‘harm’ in *Babbitt v. Sweet Home*,<sup>20</sup> and also upheld the premise of ‘take’ that includes both direct and indirect actions that cause ‘harm.’<sup>21</sup> The main holding by the Court in *Sweet Home* was that Congress intended to give USFWS the authority to create policy consistent with the purpose of the ESA in its definition of ‘harm.’<sup>22</sup> A look at the 1981 Federal Register discussion shows that the USFWS was concerned that the existing definition would allow any type of

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<sup>17</sup> *Id.* at 371.

<sup>18</sup> 46 F.R. 29490-01 (June 2, 1981). This Federal Register document is the proposed rule for changes to the harm regulation adopted soon after on November 4, 1981. The proposed rule includes text of the existing harm rule established in 1975. Available at: <http://www.westlaw.com> [Accessed 5 May 2005].

<sup>19</sup> 50 C.F.R. § 17.3 (2002).

<sup>20</sup> *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon, et. al.* 515 U.S. 687 (1995).

habitat modification to rise to the level of ‘harm’ “...even where there was no injury to the listed endangered or threatened wildlife.”<sup>23</sup> This concern led to rewording ‘harm’ by adding the word ‘actually’ twice, before ‘kills or injures wildlife,’ and removed ambiguity in the original definition surrounding the last sentence, which appeared to place ‘significant environmental modification or degradation’ on a separate level that would require no proof.

One of the early cases that provoked this re-definition was *Palila v. Hawaii Department of Land & Natural Resources*.<sup>24</sup> In this case, the 9<sup>th</sup> Circuit Court of Appeals found that destruction of woodland habitat by sheep and goats would ‘harm’ the Palila, an endangered Hawaiian bird. The 9<sup>th</sup> Circuit ultimately upheld the district court opinion that this ‘harm’ amounted to a Section 9 ‘take.’ The 1981 rule, proposed after the 9<sup>th</sup> Circuit decision said, “Palila can be read as holding that habitat modification alone may constitute ‘harm.’”<sup>25</sup> By initiating rulemaking in 1981, using ‘harm’ to prove a Section 9 ‘take’ was held to a greater standard of proof, which is what USFWS argued that it said in the first place; however the rule change was necessary because the courts came to a different interpretation.

This re-construction of ‘harm’ has led to the current policy governing how private parties must act when habitat modification impacts endangered species. The federal government has a different standard which looks at whether the project will cause

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<sup>21</sup> *Babbitt v. Sweet Home* 515 U.S. at 704.

<sup>22</sup> 515 U.S. at 708 (1995).

<sup>23</sup> 46 F.R. 54748 (November 4, 1981). Available at: <http://www.westlaw.com> [Accessed 5 May 2005].

<sup>24</sup> *Palila v. Hawaii Dep’t of Land & Natural Resources*, 471 F. Supp. 985 (D. Hawaii 1979), aff’d, 639 F. 2d 495 (9<sup>th</sup> Cir. 1981).

<sup>25</sup> 46 F.R. 29490-01, 29492 (June 2, 1981). In the last paragraph before the conclusion, the rule gets to the heart of the matter. “As the result of the FWS overly broad definition of ‘harm,’ the Ninth Circuit decision in *Palila* erroneously supports the view that habitat modifications alone may constitute ‘harm.’ The implications of such a decision are far-reaching. The discussion set forth above indicates that the present definition of ‘harm,’ as interpreted by the Court of Appeals in *Palila*, exceeds the statutory authority conferred by Section 9 of the Act. Accordingly, we recommend that the Service clarify its definition to prevent the result reached in *Palila*.” Available at: <http://www.westlaw.com> [Accessed 5 May 2005].

‘jeopardy’ through its potential to cause a *future* ‘take’ of an endangered species. This process is mandatory, and action cannot continue unless there are mitigation measures to protect the species. With respect to private parties, there is no equivalent law that says a person must enter into mandatory consultation prior to habitat modification where a listed species is present. However, private parties modify habitat at their own risk and potentially open themselves up to a lawsuit if they violate Section 9.

This distinction is important in the interpretation of ‘harm;’ what equates to perceived ‘harm’ is mitigated under Section 7 to ensure “...‘agency action’ is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species...”<sup>26</sup> Basically, the federal government has no choice but to mitigate for its impacts on endangered species. In contrast, ‘harm’ as interpreted by Section 9 for private parties (including the government) must be an act that ‘actually kills or injures wildlife,’ placing a similar burden on those who wish to challenge private parties. This burden of proof makes the protection of habitat for endangered fish very complicated as most plaintiffs have gone after the federal government due to the ‘no jeopardy’ standard, but few have dealt with private irrigators whose impacts can be just as destructive.

This definition of ‘harm’ has created a great deal of controversy; when does ‘harm’ become a ‘take’? In the context of in-stream flows, an irrigator dewatering a stream can cause enough ‘harm’ to rise to the level of a ‘take’ if that diversion causes ‘significant habitat modification.’ For example, drying up a stream will rise to the level of a ‘take’ by stranding fish in disconnected pools, raising water temperature and increasing

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<sup>26</sup> 16 U.S.C. § 1536(a)(2).

the chance of predation. That same action can adversely impact ‘breeding, feeding or sheltering’ by impeding those essential life functions. The fine line that irrigators walk is how much diversion will ‘at least’ injure a fish, satisfying the ‘harm’ test.

Some questions that may help understand irrigator’s ESA liability include the following: Will low streamflows ‘harm’ a fish if that harm is not directly noticeable, but eventually impairs breeding, significantly reducing offspring? Does that constitute an ‘injury’ under the ‘harm’ definition since no fish were actually killed, just forced to reproduce at a lower level? Court interpretations of ‘harm’ may hopefully answer these types of questions.

### 3. *Federal Court Interpretation of ‘Harm’*

In order to understand the liability borne by private irrigators, a look at case law dealing with ‘harm’ both before and after *Sweet Home* is necessary. Section 9 case law can be divided into either a post-action claim where the dead species is proof of a ‘take,’ or it can consist of an injunction to prevent *future* ‘take.’ The reason for the distinction is due to the standard of proof. The finding of a ‘take’ requires a dead individual or individuals, and can stop an action and result in large fines and possible jail time. An injunction against *future* action has a different burden of proof because a ‘take’ has not occurred, but is ‘reasonably certain’ and ‘imminent.’ These future ‘harm’ injunctions are limited to stopping the proposed action and make up the majority of case law revolving around ‘harm’ and Section 9 ‘take.’ This discussion will focus exclusively on injunctions against future action as these holdings have the most promise for protecting listed fish species.

a) *Successful Section 9 Injunctions*

*TVA v. Hill* was one of the first cases to look at ‘harm’ after passage of the ESA. The emphasis was on federal responsibility under Section 7 and referenced the early ‘harm’ language that was subsequently changed in 1981. The Court emphasized the original Section 9 statement that “...significant environmental modification or degradation which has such effects is included within the meaning of ‘harm.’”<sup>27</sup> This statement had more relevance to scrutinizing federal actions under Section 7 because a large federally funded dam would have harmed the endangered snail darter.

An important case in the interpretation of Section 9 ‘harm’ is *Forest Conservation Council v. Rosboro*. In this case, the 9<sup>th</sup> Circuit reversed a district court decision that interpreted the ESA as only applying to “past or current injury to a protected species, unless the challenged action threatens that species with extinction.”<sup>28</sup> The 9<sup>th</sup> Circuit looked at the 1981 change in the ‘harm’ definition that emphasized the word ‘actually’ before ‘kills or injures wildlife.’ The court’s interpretation of the intent of the ‘harm’ regulation shows the injury does not have to have already happened, but can occur in the future. Using the word ‘actually’ ensures the habitat modification must *cause* the death or injury to be a ‘take.’ Its use was not intended to create a strict temporal element that only applies *after* the act ‘actually’ occurs. This interpretation was found to be consistent with other ESA cases tried prior to *Rosboro*.<sup>29</sup> Also in *Rosboro*, the 9<sup>th</sup> Circuit came up with a standard that was used in future court proceedings; for a successful injunction, the threat must be ‘reasonably certain’ to cause ‘harm’ and the ‘harm’ must be ‘imminent.’ This

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<sup>27</sup> *TVA v. Hill*, 437 U.S. 153, 185 (FN 30) (1978).

<sup>28</sup> *Forest Conservation Council v. Rosboro Lumber Co.*, 50 F. 3d 781, 783 (9<sup>th</sup> Cir. 1995).

<sup>29</sup> See *infra*, note 45. *American Bald Eagle v. Bhatti*, 9 F. 3d 163 (1<sup>st</sup> Cir. 1993).

places a high standard of proof for cases that allege a future ‘take,’ which is consistent with the ‘harm’ language in Section 9.

*Sweet Home*, which was briefly discussed above, does not fall directly into either a successful or unsuccessful challenge under Section 9. This case is what is called a facial challenge to the law as it is written. The Supreme Court found that ‘harm’ can be the result of a direct action, or an indirect action such as habitat modification.<sup>30</sup> The Court then upheld the ‘harm’ regulation, and in doing so, maintained the practice of issuing future injunctions when an action was found ‘reasonably certain’ and ‘imminent’ to ‘harm’ a listed species. This was done implicitly by recognizing the view held by the Secretary of the Interior about the role of private parties in mitigating future action:

The Secretary...submits that the § 9 prohibition on takings, which Congress defined to include ‘harm,’ places on respondents a duty to avoid harm that habitat alteration will cause the birds unless respondents first obtain a permit pursuant to § 10. The text of this act provides three reasons for concluding that the Secretary’s interpretation is reasonable.<sup>31</sup>

How this might fit into injunctions against future ‘harm’ was recognized one year later in *Marbled Murrelet v. Babbitt*, when the 9<sup>th</sup> Circuit looked at the above language and noted, “By finding this view reasonable, the Court approved an interpretation of the ESA which prevents activity that will cause future harm.”<sup>32</sup> Because private parties have a duty to ensure habitat alteration will not cause future ‘harm,’ the use of injunctions against those that choose *not* to use Section 10 to obtain an incidental take permit is reasonable when there is proof that the threat is ‘reasonably certain’ and ‘imminent.’

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<sup>30</sup> *Babbitt v. Sweet Home*, 515 U.S. at 700. The court refers to the incidental take provisions in Section 10 for private parties, emphasizing the use of the word ‘incidental’ as Congressional intent for including indirect action. Within that discussion, the Court held that Congress “had in mind foreseeable, rather than merely accidental effects on listed species.” This statement suggests that just like *Rosboro*, the ‘harm’ definition is not limited to past or current injury when determining if an action will rise to the level of a ‘take.’

<sup>31</sup> *Babbitt v. Sweet Home*, 515 U.S. at 697.

<sup>32</sup> *Marbled Murrelet v. Babbitt*, 83 F. 3d 1060, 1066 (9th Cir. 1996), referring to *Babbitt v. Sweet Home*, 515 U.S. at 697.

In the concurring opinion in *Sweet Home*, Justice O'Connor discussed proximate causation with reference to the addition of 'actually' in the definition of 'harm':

Indeed, by use of the word 'actually,' the regulation clearly rejects speculative or conjectural effects, and thus itself *invokes* principles of proximate causation.<sup>33</sup>

In addition, O'Connor came up with a three-part test when determining 'harm':

In my view, then, the 'harm' regulation applies where significant habitat modification, by impairing essential behaviors, proximately (foreseeably) causes actual death or injury to identifiable animals that are protected under the Endangered Species Act.<sup>34</sup>

This statement bolsters the idea that an action that will actually cause harm is necessary, not speculation about whether the harm might occur in the future.

Some interesting questions were raised by the Supreme Court in how to construe the 'harm' regulation. Quarles and Lundquist (2002) believe the outcome of *Sweet Home* should make lower courts interpret future Section 9 cases in a narrow light. This would make it difficult to prove a 'take' unless the harm or injury is essentially visible, which implies a strict definition of causation towards an individual species member.<sup>35</sup> Cheever and Balster (2004) see it just the opposite since lower district and appellate courts have consistently been more liberal in interpreting 'harm' both before and after *Sweet Home* by focusing on population issues when the facts were relevant.<sup>36</sup>

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<sup>33</sup> *Babbitt v. Sweet Home*, 515 U.S. at 712.

<sup>34</sup> 515 U.S. at 713.

<sup>35</sup> Quarles, Steven P. and Thomas R. Lundquist, *When Do Land Use Activities "Take" Listed Wildlife Under ESA Section 9 and the "Harm" Regulation? in ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES 207* (Donald C. Baur and William Robert Irvin, eds. 2002). In their analysis, "to take or harm listed wildlife means to proximately cause the death of or a tangible actual injury to an identifiable member of a listed wildlife species." Their use of the word tangible implies it must be seen or felt by an 'identifiable member,' when in fact injury can show up much later and well after the action took place and have an impact not only on individuals, but on the population if enough individuals are killed.

<sup>36</sup> See generally CHEEVER AND BALSTER *supra*, note 16 at 363. The authors suggest that under Section 9, "courts must consider injury to both individual species members and the population of which they are a part." Their conclusion suggests a broader interpretation of Section 9 not limited to strict proximate cause. This would be more in line with Section 7, which is preventative in analyzing take, where as Section 9 has been interpreted as reactionary or after the fact. See also, Skaggs, Sean C., *Judicial Interpretation of Section 9 of the Endangered Species Act Before and After Sweet Home: More of the Same*, in *ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES 253* (Donald C. Baur and William Robert Irvin, eds. 2002). As the title suggests, the decision in *Sweet Home* has not significantly changed the lower courts interpretation of Section 9.

In *Marbled Murrelet*, the 9<sup>th</sup> Circuit said their decision in *Rosboro* was still good after *Sweet Home* and reiterated that indirect harm through habitat modification is within the statutory definition of ‘harm.’<sup>37</sup> The appellants tried to use the word ‘actually’ to mean harm that has already taken place but the 9<sup>th</sup> Circuit reminded them that in *Rosboro*, the injury does not have to have occurred in the past and that the Supreme Court did not overrule injunctions against future action. The 9<sup>th</sup> Circuit reiterates essential components for an injunction by stating, “A reasonably certain threat of imminent harm to a protected species is sufficient for issuance of an injunction under section 9 of the ESA.”<sup>38</sup> Another issue that was raised is whether impaired breeding applies to individual members of a species or larger populations. The appellants believed the Supreme Court did not allow impaired breeding to apply to populations and that ‘harm’ only applied to an individual member of the species. The 9<sup>th</sup> Circuit avoided making a determination on that issue and stated that the question was avoided in *Sweet Home*.<sup>39</sup> However, the 9<sup>th</sup> Circuit did look at ‘harm’ to populations two years prior in *National Wildlife Federation v. Burlington Northern Railroad*, which is discussed below.

Following these successful injunctions was *House v. U.S. Forest Service*. This case used scientific evidence that showed habitat destruction through the removal of trees would impact feeding and nesting of the Indiana bat. The district court found that this action would constitute a Section 9 ‘take’ and issued an injunction against the US Forest Service to halt tree harvesting.<sup>40</sup> This ruling recognized previous decisions in *Marbled*

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<sup>37</sup> *Marbled Murrelet v. Babbitt*, 83 F. 3d at 1065.

<sup>38</sup> 83 F. 3d at 1066.

<sup>39</sup> 83 F. 3d at 1067.

<sup>40</sup> *House v. U.S. Forest Service, U.S. Dept. of Agriculture*, 974 F. Supp. 1022, 1029-1030 (E.D. Ky. 1997).

*Murrelet* and *American Bald Eagle* (to be discussed) that allow an injunction before the action occurred.

In *Strahan v. Coxe*, the Supreme Court upheld a district court opinion that the Commonwealth of Massachusetts was liable for a Section 9 ‘take’ because granting licenses to citizens for gillnet fishing resulted in injury to the Northern Right whale.<sup>41</sup> With respect to ‘harm,’ the Northern Right whale was injured because it was shown that some became tangled in fishing nets. Because ‘harm’ could be proven from a past action, similar future action that might harm the Northern Right whale could be enjoined. This case also deals with vicarious liability whereby the *state* was held liable for permits it granted to fisherman, not the fisherman who inadvertently kill the whale. This poses an interesting question as to whether states can be held liable for administering water rights. Permitting an activity that may kill a listed fish species could make the state indirectly liable for a Section 9 ‘take.’

b) *Unsuccessful Section 9 Injunctions*

Not all ESA ‘harm’ cases are successful in protecting listed species through an injunction. This is mainly due to weak cases with poor scientific proof or evidence. In *Sierra Club v. Block*, the plaintiff failed to get an injunction to protect the red-cockaded woodpecker because of a lack of proof. The plaintiff used one abandoned site as evidence and could not prove that logging caused the abandonment.<sup>42</sup> For a successful case, more sites would be necessary, as well as a study both before and after the logging to determine the impacts.

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<sup>41</sup> *Strahan v. Coxe*, 127 F. 3d 155 (1<sup>st</sup> Cir. 1997).

<sup>42</sup> *Sierra Club v. Block*, 614 F. Supp. 488, 492 (D.D.C. 1985).

The district court in *Morrill v. Lujan* did not grant an injunction because there was no proof that the Perdido beach mouse occupied the property in question. Although some suitable habitat was identified, the plaintiff could offer no proof as to whether the habitat was being actively used by the mouse. The plaintiff offered as evidence a mouse trapped near the property, however, there was no evidence the mouse resided on the property. Six years later there were sightings of mouse tracks on the property but the type of mouse that made the tracks was unknown.<sup>43</sup> The plaintiffs failed to establish a ‘causal’ connection between the destruction of habitat and harm to the beach mouse.<sup>44</sup>

Plaintiffs in *American Bald Eagle v. Bhatti* did not obtain an injunction due to lack of scientific evidence proving that lead shotgun slugs used to kill deer would be ingested by bald eagles feeding on un-recovered carcasses.<sup>45</sup> This case resembled *National Wildlife Federation v. Hodel* where an injunction was granted due to scientific proof that eagles were poisoned with lead after feeding on duck carcasses.<sup>46</sup> However, in *American Bald Eagle*, the scientific proof was lacking and the allegation of future ‘harm’ was potential, not actual. The 1<sup>st</sup> Circuit states,

...courts have granted injunctive relief only where petitioners have shown that the alleged activity has actually harmed the species or if continued will actually, as opposed to potentially, cause harm to the species.<sup>47</sup>

This statement emphasizes the term ‘actually’ in the *application* of ‘harm’ that encompasses both past *and* future action. The 9<sup>th</sup> Circuit in *Rosboro* cited this distinction in its ruling, creating consistency at the appellate level.

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<sup>43</sup> *Morrill v. Lujan*, 802 F. Supp. 424, 430 Civ. A. No. 92-0216-B-S (S.D. Alabama Sept. 28, 1992).

<sup>44</sup> 802 F. Supp. at 431.

<sup>45</sup> *American Bald Eagle v. Bhatti*, 9 F. 3d 163, 166 (1<sup>st</sup> Cir. 1993).

<sup>46</sup> 9 F. 3d 163, 167 (FN 6) citing, *National Wildlife Federation v. Hodel*, 23 Env't Rep.Cas. (BNA) 1089, 1985 WL 186671 (E.D. Cal. Aug. 26, 1985).

<sup>47</sup> 9 F. 3d at 166.

In *National Wildlife Federation v. Burlington Northern Railroad*, the 9<sup>th</sup> Circuit upheld a district court decision “that NWF had failed to establish ‘the possibility’ of irreparable injury as a result of the BN's past violation of the ESA.”<sup>48</sup> What caused the alleged taking was an accident, and the railroad took extensive steps to mitigate its actions to ensure no bears would be ‘taken’ in the future. The 9<sup>th</sup> Circuit found this mitigation precluded the NWF assertion that the cause of the accident leading to ‘take’ of a few bears would lead to ‘irreparable injury.’ And further, “we do require that a future injury be sufficiently *likely*.”<sup>49</sup> This language shows that speculation about a future injury is not sufficient to issue an injunction. Also raised was the issue of ‘significant habitat modification’ within the Section 9 ‘harm’ language. Expert opinion showed the harm was ‘localized’ and did not affect bears within the entire ecosystem, and that the ‘long term overall effect’ was negligible.<sup>50</sup> The 9<sup>th</sup> Circuit essentially interpreted ‘significant habitat modification’ as an action having a long term effect on a larger population rather than a localized impact on a few individuals.

One of the first cases after *Sweet Home* where an injunction was denied due to lack of scientific proof was *Hawksbill Sea Turtle v. FEMA*. Initially, the plaintiffs failed to prove a particular snake actually resided on the land in question but that it might potentially occupy it.<sup>51</sup> Also, based on the facts, “a reasonably certain threat of imminent harm” was not proven to the court. The Hawksbill Sea Turtle was also included in the ‘harm’ analysis and again, the district court denied an injunction. The court held that even if one food source were to be damaged, the turtles could find food elsewhere. Plus, the

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<sup>48</sup> *National Wildlife Federation v. Burlington N. R.R.*, 23 F. 3d 1508, 1510 (9<sup>th</sup> Cir. 1994).

<sup>49</sup> 23 F. 3d at 1512.

<sup>50</sup> 23 F. 3d at 1513.

<sup>51</sup> *Hawksbill Sea Turtle v. Federal Emergency Mgmt. Agency*, 11 F. Supp. 2d 529, 554 (D.V.I. 1998). Specifically, Footnote 36.

court wanted to see dead turtles or a study that showed a decrease in population in response to the construction.<sup>52</sup> The court recognized that future injunctive relief is possible within the existing law; however the proof was not comprehensive enough in the eyes of the court to issue an injunction. The response by the court to the plaintiffs made it appear that the burden of proof was so high that only a showing of past injury would satisfy the court.

In *Coastside Habitat Coalition v. Prime Properties*, the district court used language in both *Rosboro* and *Marbled Murrelet* to determine if an injunction was warranted. Specifically, the court asked if the two species in question were located on the property and if developing the property is "...reasonably certain to constitute a threat of imminent harm..."<sup>53</sup> The expert on the listed snake found that it *only* inhabited the conservation easement portion of the property, which is protected from development. The finding was the same for the Red-Legged Frog in that it was only found on the conservation easement portion of the property and not on the portion to be developed. In addition, suitable habitat was identified only within the conservation easement.<sup>54</sup> Because the snake and frog were not in the area to be developed, the court found that harm was not 'imminent' or 'reasonably certain' to occur. The denial of an injunction shows that suitable habitat must be occupied. If not, then the courts cannot look to the next step because in light of the facts, it would be unnecessary to do so.

*Defenders of Wildlife v. Bernal* is one of the most recent examples of a failed ESA injunction. In this case, a school district was taken to court because the proposed location

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<sup>52</sup> 11 F. Supp. 2d at 554.

<sup>53</sup> *Coastside Habitat Coalition v. Prime Properties*, 1998 WL 231024, 2 No. C 97-4025 (N.D. Cal. April 30, 1998) Unpublished opinion.

<sup>54</sup> 1998 WL 231024 at 3-4.

of a high school was to be built in an area designated as critical habitat for the cactus ferruginous pygmy-owl. The school was to only be built on 2/3 of the property with 1/3 remaining undeveloped, consisting primarily of arroyos.<sup>55</sup>

In its analysis, the 9<sup>th</sup> Circuit reiterates that,

Harming a species may be indirect, in that the harm may be caused by habitat modification, but habitat modification does not constitute harm unless it ‘actually kills or injures wildlife.’<sup>56</sup>

The 9<sup>th</sup> Circuit uses *Sweet Home*, *Rosboro* and *Marbled Murrelet* to justify the use of injunctions against future action, if it can be proven that action will ‘actually kill or injure wildlife.’<sup>57</sup> The 9<sup>th</sup> Circuit upheld the district court ruling that pygmy-owls would not be ‘taken’ during school construction because they only occupy the arroyos in the undeveloped habitat. Also, increased human activity on the developed portion of the site will not cause harm to a degree that it warrants a ‘take.’<sup>58</sup>

This case has a holding similar to *Coastside Habitat Coalition* in that in order for there to be a case for harm, the species must occupy some portion of the potentially altered habitat. If not, then a case would be almost impossible to prove.

c) *Specific ‘Harm’ Cases for Fish*

The cases discussed above refer to a variety of species found in the US including birds, amphibians and mammals. To gain an understanding of how this may apply to irrigators, holdings from specific cases that deal with fish species will be analyzed in order to understand the similarities and differences between fish and non-fish cases due to the variation in habitat, and the nature of the habitat modification.

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<sup>55</sup> *Defenders of Wildlife v. Bernal*, 204 F. 3d 920, 924 (9<sup>th</sup> Cir. 2000).

<sup>56</sup> 204 F. 3d at 925.

<sup>57</sup> 204 F. 3d at 925.

<sup>58</sup> 204 F. 3d at 925-926.

Not many ESA cases involving fish and private irrigators have been tried. Most cases look at large federal irrigation projects operated primarily by the US Bureau of Reclamation, however some have holdings that can help in this analysis. *Pyramid Lake v. U.S. Navy* involves a federal action where the US Navy leased land to private citizens for irrigated agriculture. The US Navy holds the water right and delivers it to the local irrigation district. The irrigation district diverts this water from the Truckee River, which flows into Pyramid Lake and is the home to the endangered Cui-ui fish.<sup>59</sup> It is understood that flows into the lake are lower due to the diversion, which in turn reduces the volume of the lake and the amount of habitat available to the fish. The low flows and the low lake level also make it difficult for the fish to spawn.<sup>60</sup>

This case was decided before *Sweet Home* upheld the ‘harm’ definition, but is important because it had to answer whether a federal action amounts to ‘jeopardy’ under Section 7 or ‘harm’ under Section 9. The 9<sup>th</sup> Circuit determined that in this case, both jeopardy and ‘harm’ were somewhat similar and in its affirmation of the district court opinion that the action did not cause ‘jeopardy,’ it also did not amount to ‘harm’ under Section 9.<sup>61</sup> The 9<sup>th</sup> Circuit recognized that the appellant (tribe) had their own diversion on the river and there was not enough proof that the Navy’s diversion was at fault because other users of the river (including the tribe) were not distinguished from the Navy’s use.<sup>62</sup>

*Pyramid Lake* is problematic because it shows that all users on a watercourse may have to be enjoined in a lawsuit in order to distinguish between each user who may be at

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<sup>59</sup> *Pyramid Lake Paiute Tribe v. U.S. Dep't of the Navy*, 898 F. 2d 1410, 1412-1413 (9<sup>th</sup> Cir. 1990).

<sup>60</sup> 898 F. 2d at 1413.

<sup>61</sup> 898 F. 2d at 1420.

<sup>62</sup> 898 F. 2d at 1420.

fault. In essence, they all could be at fault, or would it be the one closest to where the river discharges to the lake? Could it also be the one who uses the most water from the river? To be consistent with prior appropriation, maybe the most junior users should be shut off to leave more water in-stream. ‘Harm’ may be difficult to prove due to the many users of the shared ‘habitat’ relied on by the fish.

In *United States v. Glenn-Colusa Irrigation District*, a few important holdings address how the ESA can affect private irrigators.<sup>63</sup> In this case, an irrigation district was found to be ‘taking’ endangered salmon. An injunction was issued to stop the diversion during the time-period when the fish migrated downstream. The irrigation district challenged the authority of the federal ‘take’ language because California had a similar state ESA plan that had ‘take’ language. The district court found the state language was ‘less protective’ and therefore used the federal ‘take’ language in Section 9. The court also said that state water rights do not ‘prevail’ over the ESA. The ESA allows states to develop their own endangered species act, however it must be just as protective, or more protective as the federal ESA.

One of the more important holdings in this case has to do with the property interest in a water right. The court stated that complying with the ESA did not lead to confiscation of water rights, it only affects how the district ‘exercises those rights.’<sup>64</sup> This statement attempts to deflect the question of whether an injunction to stop the irrigation district from irrigating amounts to a 5<sup>th</sup> Amendment ‘taking’ of private property. Because the injunction only affects use of the rights for a specific time period, and the government is not claiming a water right, a property ‘taking’ claim would be unsuccessful.

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<sup>63</sup> *United States v. Glenn-Colusa Irrigation District*, 788 F. Supp. 1126 (E.D. Cal. Jan 9, 1992).

The 2001 case of *Arizona Cattle Growers v. USFWS* helped clarify some of the harm regulation with actions that may impact endangered species. The case has to do specifically with land use activities that can impact both endangered fish and animals. The 9<sup>th</sup> Circuit found that the Biological Opinion issued by USFWS was arbitrary and capricious because for most of the species it tried to include, there was not enough data to show that the species actually resided within that area.<sup>65</sup> The main argument regarding Section 9 ‘take’ was how USFWS was interpreting both Section 7 and Section 9. USFWS thought that Section 7 should allow a taking “...in which harm to a listed species was ‘possible’ or ‘likely’ in the future due to the proposed action.”<sup>66</sup> The 9<sup>th</sup> Circuit re-iterated its previous holdings that a taking applied via Section 7 and Section 9 has the same meaning, and that the act causing ‘harm’ must ‘actually kill or injure wildlife’ and be ‘significant.’<sup>67</sup> The 9<sup>th</sup> Circuit basically told the USFWS that a vague interpretation through Section 7 would be inconsistent with the purposes of the ESA by ignoring Section 9. Although this case had nothing to do with using water directly from a stream for irrigation, *Arizona Cattle Growers* shows the Appellate courts have tried to remain consistent in their interpretation of Section 9 of the ESA.

A recent case that has the best example of ‘harm’ liability for private irrigators is *Idaho Watersheds Project (IWP) v. Jones*. This case looks specifically at how operating an irrigation diversion can constitute harm under Section 9. In *IWP v. Jones*, an environmental group successfully proved to the district court, “...that the Joneses’

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<sup>64</sup> 788 F. Supp. at 1134.

<sup>65</sup> *Ariz. Cattle Growers' Ass'n v. U.S. Fish and Wildlife*, 273 F. 3d 1229 (9<sup>th</sup> Cir. 2001).

<sup>66</sup> 273 F. 3d at 1237.

<sup>67</sup> 273 F. 3d at 1238.

diversion poses a reasonably certain threat of imminent harm to the bull trout.”<sup>68</sup> The court gave IWP a permanent injunction against the Joneses’ diversion, forcing them to ensure 1) that bull trout are not diverted into the ditch, and 2) that the bull trout can migrate past their diversion.<sup>69</sup> The major factors that could lead to harm were outlined through expert testimony from a biologist, not refuted by the defendants. The expert found that “the diversion is a migration barrier that ‘has the risk of reducing the population through the loss of future eggs.’”<sup>70</sup> In this case, the diversion can dewater the stream to a point where bull trout could not migrate to their spawning grounds. Also, fish are likely to be injured or killed because the diversion is not suitable habitat; it moves the bull trout to a different creek where they are hindered from migrating back to their native creek, and exposes the fish to a steep and rocky drop.<sup>71</sup>

The district court used tests in the most recent holding by the 9<sup>th</sup> Circuit in *Bernal* to confirm that the threat is ‘reasonably certain’ and ‘imminent.’<sup>72</sup> In the irrigator’s defense, they raised the issue that IWP did not have long-term stream flow data or population studies to determine the past and future status of the bull trout in response to the irrigation diversion. The court looked to *Marbled Murrelet* for guidance and determined that “Future harm to a species need not be shown with certainty before a permanent injunction may issue, but mere speculation will not suffice.”<sup>73</sup> The court determined that relatively recent evidence is enough to issue an injunction, understanding that it could take many years to fully understand the behavior of the bull trout, and that

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<sup>68</sup> *Idaho Watersheds Project v. Jones*, Civ. No. 00-0730-E-BLW at 17 (D. Idaho Nov. 14, 2002).

<sup>69</sup> *IWP v. Jones* at 17.

<sup>70</sup> *IWP v. Jones* at 18.

<sup>71</sup> *IWP v. Jones* at 19.

<sup>72</sup> *IWP v. Jones* at 20.

<sup>73</sup> *IWP v. Jones* at 20, citing *Marbled Murrelet v. Pacific Lumber Company*, 880 F. Supp. 1343, 1367 (9<sup>th</sup> Cir. 1995), *aff’d*, 83 F. 3d 1060 (9<sup>th</sup> Cir. 1996).

the bull trout may be in serious jeopardy by the time a long-term study is completed. On the subject of speculation, expert testimony coupled with a biological assessment was enough for the court to determine that this action was not speculation but based on best available science. This conclusion of future ‘harm’ is consistent with the USFWS definition that the diversion must be a ‘significant habitat modification’ that will ‘kill or injure wildlife by significantly impairing...breeding.’<sup>74</sup>

*IWP v. Jones* followed the federal courts affirmation that an ‘imminent threat’ of future harm must be shown in order to allow an injunction to prevent a *future* ‘take’ of fish. This applies to both irrigators involved with federal projects and those who are not. Successful challenges must pass the two tests used by the courts: The threat must be ‘reasonably certain,’ and ‘imminent.’ As was shown in *IWP v. Jones*, a comprehensive understanding of how fish use a stream is not necessary. An expert opinion using the best available science can assess ‘at that moment’ whether the irrigation diversion may cause a ‘take.’

However, in a recent unpublished opinion, the 9<sup>th</sup> Circuit reversed the district court’s injunction and remanded the case to be re-heard by the district court.<sup>75</sup> What appears to be the strongest reason for the reversal was that the 9<sup>th</sup> Circuit did not believe that there was a likelihood of future harm because there were no proven past harm. In the appellate opening brief, plaintiff-appellees’ response brief, and appellants’ response brief,

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<sup>74</sup> 50 C.F.R. § 17.3 (2002).

<sup>75</sup> *Idaho Watersheds Project v. Jones*, Civ. No. 03-35870, 2005 WL 900197 (9<sup>th</sup> Cir. 2005). Unpublished opinion. Available at: <http://www.westlaw.com/> [Accessed 12 May 2005].

both parties essentially argued about the validity of the expert witnesses and the lack of scientific certainty about the population dynamics of the bull trout.<sup>76</sup>

This case, although reversed by the 9<sup>th</sup> Circuit, has the most potential for defining the relationship between private irrigators and listed fish species. Because the case was remanded to the district court for reconsideration, different conclusions may fall out that will hopefully clarify the standard of ‘harm’ and the amount of scientific evidence needed to determine what is a ‘reasonably certain threat of imminent harm.’<sup>77</sup>

d) *Summary of Case Holdings*

The holdings by the US District, Appellate and Supreme Courts with regards to the definition of ‘harm’ in the Endangered Species Act create a set of conditions that must be met for a successful injunction. The conditions are as follows:

- 1) The species must be present on the property in question. This points to behavior that includes breeding, nesting and feeding to name a few. Because someone saw wildlife on the property does not automatically make that property suitable habitat.
- 2) If a species resides on the property in a portion that is *not* to be developed, the development can likely go forward, unless it can be proven that work on the portion adjacent to the occupied habitat can cause ‘harm.’
- 3) Habitat modification must be *reasonably certain* to cause *imminent* harm. Another test is that the habitat modification is *sufficiently likely* to cause injury.<sup>78</sup>
- 4) Scientific proof for ‘harm’ does not have to consist of many years of research, and can be based on short-term studies that can prove harm through the legal

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<sup>76</sup> Appellants’ Opening Brief 2004 WL 1636294 (9<sup>th</sup> Cir.), Plaintiffs-Appellees’ Response Brief 2004 WL 1948947 (9<sup>th</sup> Cir), and Appellants’ Reply Brief 2004 WL 2085163 (9<sup>th</sup> Cir.). Available at: <http://www.westlaw.com/> [Accessed 12 May 2005]. In these briefs, the main arguments by the defendants-appellants was that there were sightings of the bull trout both above and below the diversion for over 40 years, the injunction should not cover an entire irrigation season because water flows can only be critically low for two months out of the year, and that harm to the species is not ‘reasonably certain’ due to what they consider was speculation by the plaintiffs expert witness.

<sup>77</sup> *Marbled Murrelet v. Babbitt*, 83 F. 3d at 1066.

<sup>78</sup> Although courts often use language referring to ‘actual harm’ they are referring to a standard of proof or proximate causation based on reasonable certainty and imminent harm. Some ESA cases have had a plaintiff or defendant arguing that ‘actual harm’ leading to a ‘take’ requires a dead individual of a species. This interpretation has been repeatedly denied by the courts, as mentioned in the discussion about injunctions in Section 3.

principles stated in 3 and 4. A scientific inference however, can not be speculative.

- 5) Significant habitat modification *can* mean an action that has a long term effect on a larger population rather than just a localized impact on a few individuals.
- 6) If there is potentially more than one party causing harm, it is up to the plaintiff to make the case for who should be held responsible by differentiating between those that are the most ‘proximate’ to the cause.

These conditions provide a summary of relevant case law developed to decipher the ‘harm’ regulation. The list represents *current* holdings from good case law that could be used to determine a private irrigator’s ESA liability. However, some of these points may be overruled or become irrelevant as new cases arise, current decisions are appealed, or if Congress decides to modify the ESA.

#### **IV. The Implication of ESA ‘Harm’ Case Law on Irrigators**

What do these federal court rulings mean for the relationship between endangered fish and private irrigators? How can it be shown that their diversion may cause enough ‘harm’ to be a ‘take’? The answer to these questions starts with an understanding of the differences between land and water-based habitats, as it is these differences that have defined existing case law. A hypothetical example is then used to show the strengths and limitations in ESA case law when applied to private irrigators. Finally, the role of injunctions will be explored.

##### **A. HABITAT AS FLOWING WATER**

There are many differences between habitat for dry-land species and aquatic species such as fish. The habitat for fish is constantly flowing water within a channel, and the water must be of a sufficient quantity to allow fish to survive. Reduced flows within

the channel decrease the volume of water, and sometimes quality, therefore resulting in a reduction or impairment of habitat. This occurs naturally due to seasonal and long-term climate variation; however, the use of water for irrigated agriculture that comes directly out of streams reduces flows even more than under natural conditions.

This difference between aquatic and terrestrial habitat has to do with both spatial and temporal components unique to that habitat. For a parcel of land, the habitat is relatively static, with changes occurring naturally over time due to competition between plants and climate change. For a stream, the habitat is always ‘moving,’ and covers considerably less area than habitat available for use by migratory birds. For example, the volume in a stream is in a constant state of flux with high flows occurring at certain times of the year and low flows during others. Land-based species survive by breathing oxygen while fish survive by utilizing oxygen through water. In cases where habitat is destroyed on land, the species may still be able to breathe even though its food sources and breeding areas have been destroyed. For fish, dewatering of a stream can also destroy both its food sources and breeding areas, and it has the added effect of potentially suffocating the fish because without water, the fish can not live. Lakes are also used by fish and changes to lake volume or water quality can have an impact on survival. These differences in what makes up habitat have been incorporated into our legal system, which further differentiates how land-based and aquatic habitats can be used.

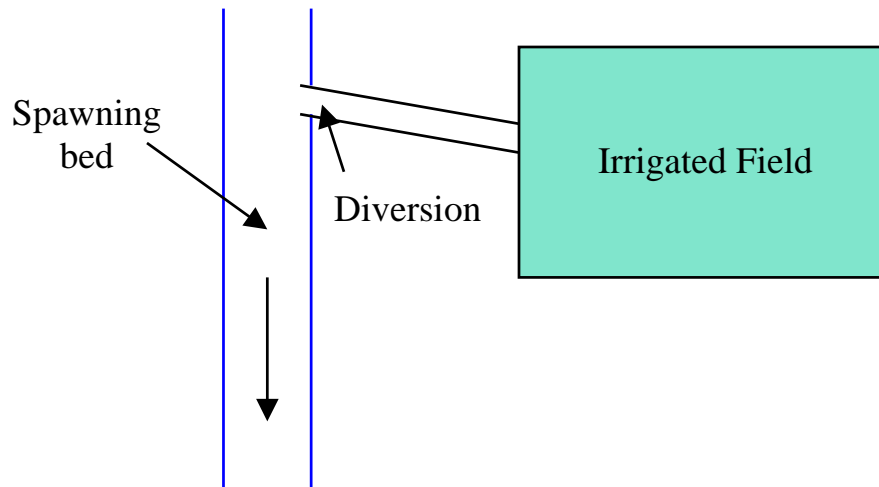
#### **B. APPLYING ‘HARM’ CASE LAW TO A HYPOTHETICAL PRIVATE IRRIGATOR**

To understand how Section 9 case law can be applied to an irrigator, one could look at the opinion in *IWP v. Jones*, despite the fact that the case is still evolving and could end up with a different holding. For this example, let’s assume there is one irrigator

and no other man-made influences will impact the stream. The irrigator uses a simple gravity drained canal system to irrigate his fields. The head gate for his diversion is located on the main-stem of the stream adjacent to prime spawning grounds for an endangered fish. This creek typically receives large amounts of runoff from mountain snows through the spring and early summer, however summers are typically dry with little rainfall to augment these flows. For the past few years, mountain snowfall has been very low and runoff in the late summer/early fall has subsequently been low. The endangered fish uses gravel beds below the diversion for spawning in the early fall, and typically migrates downstream to larger portions of the river in the winter and spring months. A neighbor knows these fish are endangered and is concerned that the diversion may dewater the stream where the fish spawn. The neighbor (plaintiff) takes the irrigator to court to get an injunction against future action (diverting water) by the irrigator, because he believes the habitat modification will ultimately harm the fish, leading to a 'take.'

1. *Condition One – Is the Fish Present?*

In this case, what would the plaintiff need for a successful injunction? First, using the summary of case holdings in Section III. D., the plaintiff would need to prove the fish exists on the habitat in question. Now, in the case of private irrigators, there is no listed critical habitat in this area because the stream and diversion are on private property. Critical habitat can only be regulated when it is on federal land. In addition, a report by the listing agency says that irrigation diversions may be a factor in the species decline. Figure 1 will help outline the necessary conditions to determine if the fish is present.



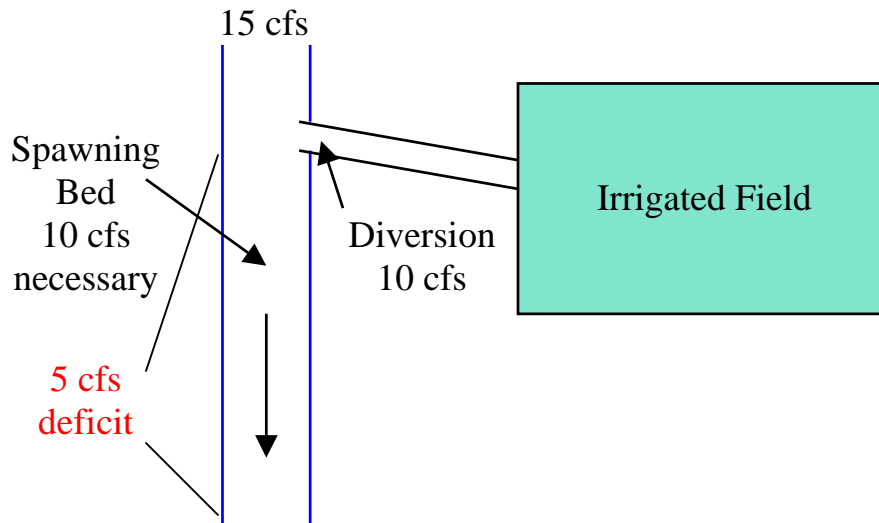
**Figure 1** – Hypothetical stream system with a single irrigation diversion located above a potential spawning bed.

To determine if the fish is present, there must be visual proof by an expert, namely a fish biologist that works for the federal government, or a consultant. If the expert can conclude that the fish does in fact breed adjacent to the irrigation diversion, then that helps the plaintiff’s argument. The best argument would include some years of scientific studies that would show a decline in population, or physical evidence that the diversion is creating an impassable ‘defecit.’ As raised on appeal by the defendants-appellants in *IWP v. Jones*, the fact that the diversion was operating for 40 years, and that fish were seen both below and above the diversion shows that more scientific analysis should have been focused on the time period when flows are typically low and the bull trout starts migrating upstream to spawn. A good understanding of the river hydrology would also help because it becomes more difficult to prove that the diversion causes harm a significant distance above or below a stream due to the fact that the stream may be

either gaining in a certain reach, replacing water taken out by the irrigator, or losing, where the stream is naturally drying up.

2. *Condition Two – Is the Entire Habitat Used by the Species?*

The second condition regarding modification on part of the habitat not used by an endangered species would have different standards for an aquatic species compared to a terrestrial species. As shown below in Figure 2, if the irrigator diverts 10 cubic feet per second (cfs), the diversion will have an impact on the habitat the fish needs for spawning. As discussed in *Coastside Habitat Coalition*,<sup>79</sup> and *Bernal*,<sup>80</sup> for real property, only developing a portion of land that is not considered habitat critical to the survival of the species would likely avoid any harm. In the case of a migrating fish, it is acceptable to divert some water up to the point where it does not impact the quantity or quality of water needed by the fish for survival. However, when a diversion takes enough water past that point that will actually injure or kill the fish, it should be enough to warrant an injunction. This would be legally sufficient only during those times when the fish is migrating, spawning or is found to inhabit that area. In this case, a longer injunction would be necessary until the fish moves to another portion of its habitat.



**Figure 2** – In this scenario, some water is diverted, but there is a deficit that can hinder successful spawning. (cfs – cubic feet per second).

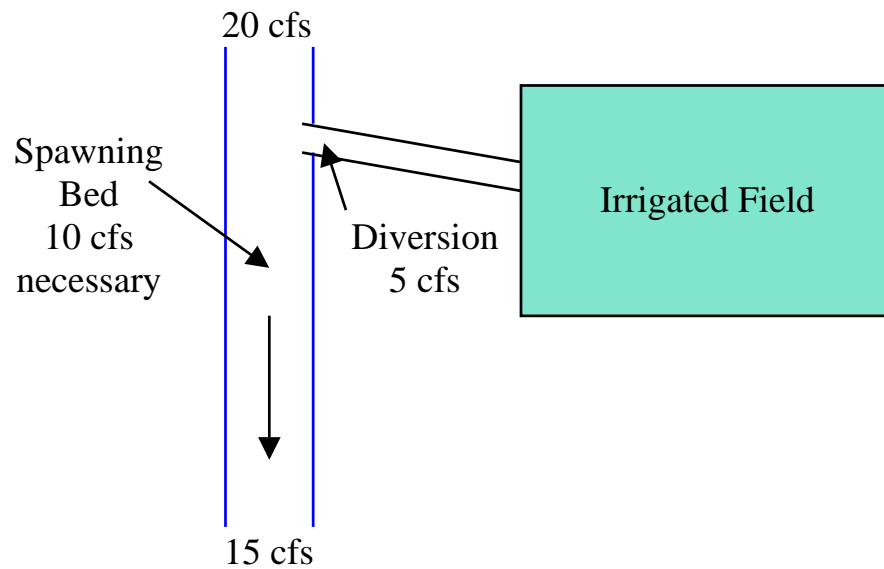
### 3. *Condition Three – Will Habitat Modification Cause Imminent Harm?*

The third condition, whether an action must be ‘reasonably certain to cause imminent harm,’ or is ‘sufficiently likely’ to cause injury, is determined by an expert, most likely a fisheries biologist. This wording is likely to apply when it is obvious to the scientist, who then makes it obvious to the court, that unless the action is stopped ‘right away,’ the action will cause enough ‘harm’ to be a Section 9 ‘take.’ In the hypothetical situation shown in Figure 2, this would apply if the fish were about to come up to the creek and the diversion was taking enough water to hinder spawning. This would have to be observable or highly likely if it is known that the diversion will dewater the stream. The action will likely not cause ‘harm’ if stream flows are sufficient (Figure 3), therefore an argument for an injunction during high flows would be an example of speculation. This example shows how climate can shape the argument; one year water flows are sufficient and the fish is not threatened, however the next year, the same amount of water

<sup>79</sup> *Coastside Habitat Coalition v. Prime Properties*, 1998 WL 231024 No. C 97-4025 (N.D. Cal. April 30, 1998) Unpublished opinion.

<sup>80</sup> *Defenders of Wildlife v. Bernal*, 204 F. 3d 920 (9<sup>th</sup> Cir. 2000).

used by the irrigator can cause harm. What determines ‘reasonably certain to cause imminent harm,’ or is ‘sufficiently likely’ to cause injury, would have to be looked at on a case by case basis with the plaintiff having the burden of proof to show the action will cause or is causing harm.



**Figure 3** – In this scenario, some water is diverted, but enough is available for the fish to successfully spawn. (cfs – cubic feet per second).

There is a fine line between having enough scientific evidence to determine if there is enough harm to give cause for an injunction, and whether that evidence is speculative and subsequently rejected by the court. It is only fair to the irrigator that the expert actually visit the site in question and make a determination based on that specific locale instead of basing their opinion on region-wide observations. As shown in *IWP v. Jones*, the plaintiff’s expert may understand the general population dynamics better than small-scale interactions, however scientific certainty based on the diversion in question is the only way to find an ‘imminent threat.’

#### 4. *Condition Four – Is the Science Speculative or Sound?*

*IWP v. Jones* shows that scientific proof does not have to be well established in order to issue an injunction;<sup>81</sup> however, it cannot be speculative. Part of the reason the 9<sup>th</sup> Circuit overturned the decision was due to scientific uncertainty. Although, if that much certainty and more time is needed to figure it out, the fish may potentially become extinct while being studied. The courts realize that type of outcome would be contrary to the purposes of the ESA, which is to sustain and recover endangered species. In the hypothetical situation, the plaintiff would need a fisheries biologist that understands the potential threats to breeding due to a lack of water. This research must be scientifically valid and be able to apply directly to the fish in question. This research could be based on how the same fish has fared in similar streams and conditions, or better yet, from a recent study in that specific location. If longer-term information is available, that would make an even greater case for the plaintiff.

#### 5. *Condition Five – Are Protections for an Individual Species or Population?*

The fifth condition looks at protecting both individuals and the greater population. An injunction against future action applies mainly to protecting future populations of the fish as the exact amount that could be taken due to stream dewatering is unknown. In addition, the ‘harm’ definition protects fish from actions that would hinder reproduction, which would in effect lower the total population. The influence of wildlife law on the ESA left its mark with those believing that a ‘take’ only applies to individuals of the

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<sup>81</sup> *Idaho Watersheds Project v. Jones*, Civ. No. 00-0730-E-BLW at 17 (D. Idaho Nov. 14, 2002), citing *Marbled Murrelet v. Pacific Lumber Company*, 880 F. Supp. 1343, 1367 (9<sup>th</sup> Cir. 1995), *aff’d*, 83 F. 3d 1060 (9<sup>th</sup> Cir. 1996).

species;<sup>82</sup> however the ESA specifically states that it is to conserve threatened and endangered species and the ecosystems they depend on,<sup>83</sup> with no mention of only protecting individuals. In *National Wildlife Federation v. Burlington Northern Railroad* it appears that the court interpreted significant habitat modification as an action that can have a long-term effect on population. This implies that dead fish would be necessary to prove a ‘take’ because an injunction for future harm would have to potentially injure a large number of individuals, therefore significantly reducing future populations. Looking at *IWP v. Jones*, there is no mention of either individuals or population, just the accusation that continued irrigation will harm the bull trout. In this case, biologic studies have identified that bull trout populations are declining due to ‘migratory barriers’<sup>84</sup> such as irrigation diversions. The diversion in *IWP v. Jones* had the potential to be a migratory barrier and was seen as one piece of the puzzle causing population decline. However in order to protect the population, the individual species member must also be protected and the expert witness did not present a strong case that looked at individual bull trout.

With the hypothetical situation, the court may look at whether the alleged action that will cause a ‘take’ is one of the actions identified in the initial listing documents as causing a decline in population. That action may fall under ‘significant habitat modification’ because the action in general was identified as an original factor in leading to a threatened or endangered designation. What needs to be discussed by the expert and made clear to the court is that there is no distinction between populations and individuals in the eyes of the ESA. The reason is that many individuals make up the entire

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<sup>82</sup> See QUARLES AND LUNDQUIST, *supra* note 35 at 225. The authors go to great lengths to try and point out that ‘harm’ only applies to individuals and that actions that “reduce[ing] breeding success rate at the population level is not take.”

<sup>83</sup> 16 U.S.C. § 1531(b)(1).

<sup>84</sup> *Idaho Watersheds Project v. Jones*, Civ. No. 00-0730-E-BLW at 7 (D. Idaho Nov. 14, 2002).

‘population’ of that species. Any reduction of individuals reduces the population, and any reduction in the general population reduces the amount of individuals.

#### 6. *Condition Six – How Many Parties are Potentially Involved?*

This analysis becomes much more difficult when there are many irrigators on a stream system (Figure 4). Many have argued about applying the notion of causation, which deals with proximity and alternative liability,<sup>85</sup> and it is important to note that this idea is being explored as another way to assign liability in future ESA cases. Rasband (2003) devotes an entire paper on this subject and the appropriateness of using tort law concepts in concert with enforcement of the ESA.<sup>86</sup>

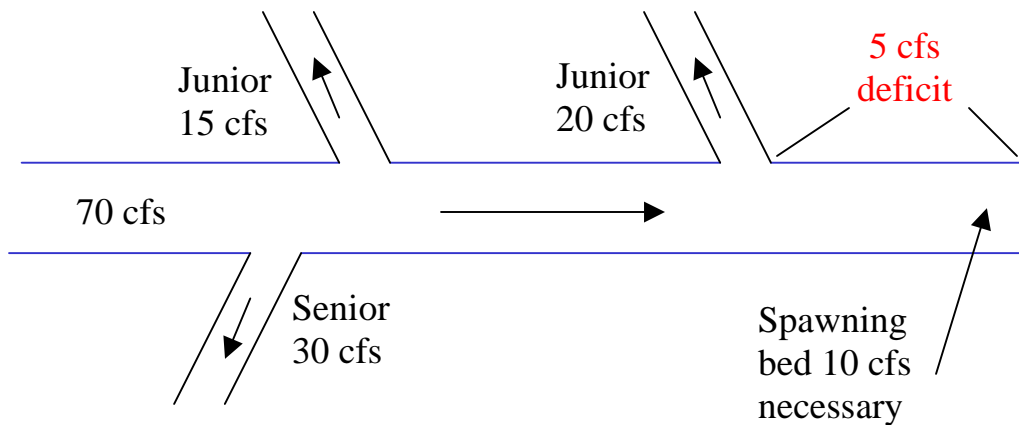
Another issue that complicates situations with multiple users occurs when the stream system has not been adjudicated. In this situation, it may be difficult to prove exactly which diversion is causing the harm. In an adjudication, the courts are left to determine the validity of water rights and the relationship of one right to another. To say one irrigator is responsible out of 50 on an un-adjudicated stream would pose serious problems to a potential plaintiff. The plaintiff may have to enjoin all fifty irrigators to make a strong case as it may focus attention between irrigators by trying to prove who is more ‘proximate.’ This action may also have the inadvertent effect of starting a general stream adjudication or end up charging all the irrigators if the one whose diversion has caused the most harm cannot be found. This is an example of the appropriateness of using tort law to try and apportion liability between irrigators.

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<sup>85</sup> See generally Rasband, James R., *Priority, Probability, and Proximate Cause: Lessons from Tort Law About Imposing ESA Responsibility for Wildlife Harm on Water Users and Other Joint Habitat Modifiers*. 33 ENVTL. L. 595 (2003), Glen, Alan M., and Craig M. Douglas, *Taking Species: Difficult Questions of Proximity and Degree*. 16 FALL NAT. RESOURCES & ENV'T 65 (2001), and Bricker, Jennie L., and David E. Filippi, *Endangered Species Act Enforcement and Western Water Law*. 30 ENVTL. L. 735 (2000).

<sup>86</sup> See generally RASBAND, *supra* note 85.

One way to address the causation issue is to look at the language of the ESA where it ‘mandates’ cooperation between the listing agencies and the states.<sup>87</sup> This implies cooperation with an individual state’s water right apportionment system. In the West, it would be the prior appropriation doctrine. During times of shortage, the senior water users are satisfied first, then junior users. Imposing a ‘regulatory’ drought to keep water in-stream for ESA listed fish species can follow a similar path where senior irrigators are satisfied first, then juniors if any water is left. This idea would fall within congressional intent. However, this would become more complicated if only one junior user on the stream entered into a Section 10 HCP. That user would expect to receive water because they were proactive in reducing their liability by leaving more water in-stream. It would be a disincentive to punish the irrigator that took steps to leave more water in-stream through a priority call when a senior irrigator did nothing to mitigate their water diversion.



**Figure 4** – Hypothetical stream system where there are many diversions with different priority dates. (cfs – cubic feet per second).

Figure 4 shows a hypothetical stream system with three irrigators that have different priority dates. The senior irrigator takes the most water and is located upstream

<sup>87</sup> 16 U.S.C. § 1531(b)(2).

of the two junior irrigators. The scenario shows that all three irrigators have the potential to dewater the stream to a point where ‘harm’ may occur to a fish because there is not enough water for it to successfully spawn. The question then becomes, who should be shut off to leave water in-stream? Should it be the junior irrigator closest to the spawning bed because he is the most ‘proximate’? This would fall in line with prior appropriation because the senior user should be satisfied first during times of drought. Application of a ‘regulatory’ drought could do the same thing. This argument would become more complicated if the senior irrigator was the closest to the spawning bed. Should prior appropriation still be followed by cutting off the junior users until there is enough water in the stream? Or, should the senior user be held responsible because her diversion is the most ‘proximate’ to the spawning bed. These questions make determining fault and apportioning liability a difficult task. The policy of the listing agencies (USFWS and NOAA Fisheries) is for proportionate reductions, as discussed by Bricker and Filippi (2000).<sup>88</sup> This method would ignore applying ‘regulatory’ droughts that would follow prior appropriation, and instead group all water users together and ask or enforce a proportionate reduction among all users regardless of proximity or seniority.

### C. INJUNCTIONS AGAINST FUTURE ACTION

The issuance of an injunction is an acknowledgement that a ‘take’ will more likely than not occur due to the proposed action. This tool carries significant weight as it has the power to stop an action for an indefinite amount of time until that action is mitigated. The correct mitigation as articulated by the Supreme Court in *Sweet Home*

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<sup>88</sup> See BRICKER AND FILIPPI, *supra* note 85 at 756, referencing 15 C.F.R. § 904.107 (1999) and 64 F.R. 60,727, 60,730 (November 8, 1999).

would entail entering into a Section 10 Habitat Conservation Plan.<sup>89</sup> An injunction does not carry the significant penalties under Section 11 for civil and criminal violations,<sup>90</sup> however its reach can impact seemingly lawful activities that result in habitat modification and can be seen as a preliminary step that acts as a ‘warning’ to the habitat modifier; if these actions continue, the habitat modifier can face monetary fines and/or incarceration.

An added dimension that may eventually be used by lower courts are concepts of tort law in the context of a Section 9 ‘take,’ whether the result is an injunction against future action, or assessment of a civil penalty when it can be shown that habitat modification had already killed or injured a fish. In *Babbitt v. Sweet Home*, Justice O’Connor stated “...private parties should be held liable under § 1540(a)(1) [civil penalties] only if their habitat-modifying actions proximately cause death or injury to protected animals,”<sup>91</sup> and that this task should be decided by lower courts.<sup>92</sup> As stated by the Supreme Court, there is a place for causation for activities that have occurred after the fact, since a civil penalty can only be assessed when a ‘take’ has already occurred. Relevant case law is not entirely clear on how to obtain a successful injunction through the ‘reasonably certain to cause imminent harm’ standard developed by the courts to prevent *future* action, and especially in situations where there are many irrigators on a

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<sup>89</sup> The Supreme Court states “The Secretary...submits that the § 9 prohibition on takings, which Congress defined to include ‘harm,’ places on respondents a duty to avoid harm that habitat alteration will cause the birds unless respondents first obtain a permit pursuant to § 10. The text of this act provides three reasons for concluding that the Secretary’s interpretation is reasonable.” *Babbitt v. Sweet Home*, 515 U.S. at 697 (1995). Later, the court refers directly to Section 10 and HCPs. “The permit process requires the applicant to prepare a ‘conservation plan’ that specifies how he intends to ‘minimize and mitigate’ the ‘impact of his activity on endangered and threatened species, 16 U.S.C. § 1539(a)(2)(A), making it clear that Congress had in mind *foreseeable* rather than merely accidental effects on listed species.” Emphasis added. *Sweet Home* at 700. These statements by the Supreme Court allude to the fact that any action by a private party that has the potential to impact a listed species must ‘avoid harm’ through the Section 10 HCP process. This parallels the Section 7 ‘no jeopardy’ clause that is mandatory for government projects, however only encouraged in the private sphere as a ‘duty to avoid harm.’

<sup>90</sup> 16 U.S.C. § 1540.

<sup>91</sup> *Babbitt v. Sweet Home*, 515 U.S. 687, 712 (1995). Referring to Section 11 of the ESA.

<sup>92</sup> *Id.* at 713.

stream system rather than the one irrigator in *IWP v. Jones*.<sup>93</sup> More than likely, the standard of proof for future injunctions will be developed on a case-by-case basis. Hopefully future decisions will create more certainty about what is ‘reasonably certain to cause imminent harm.’

Despite the lack of specific case law for private irrigators, existing case law for other ESA cases surrounding ‘harm’ can potentially be applied to private irrigators for habitat modification that violates the Section 9 ‘take’ prohibitions. The above example was simplistic, however it lays the foundation for a successful argument against private irrigators whose habitat modification can amount to enough ‘harm’ to equal a ‘take.’ The Court in *Sweet Home* emphasized the use of Section 10 to reduce the liability for private irrigators. I propose that New Mexico irrigators should use this tool to help reduce their federal ESA liability. This option gives private irrigators the opportunity to help improve habitat for listed fish species. As the above examples and hypothetical situation point out, an educated citizen can force a private irrigator to stop their diversion. In New Mexico, the water code does not have protections for listed fish species as in-stream flows are relatively non-existent. In addition, the state does not have programs in place to try and get more water in stream to help listed fish species. This lack of state support will only force irrigators to look for federal relief under Section 10 or fend for themselves against potential citizen suits that can threaten their state-issued water right.

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<sup>93</sup> In *IWP v. Jones*, only one irrigator was involved in activities that could rise to the level of a future take. It was obvious that only one diversion could cause harm making a causation analysis pointless. If there were other diversions by many irrigators, the court would have had to take a closer look at which diversion might cause the harm and determine fault among the multiple ‘tortfeasors.’

## V. Reducing Irrigator's ESA Liability through Section 10

Just as federal actions are mitigated to prevent jeopardy to a listed species through a Section 7 consultation, Section 10 provides a similar vehicle for habitat modifications not tied to federal actions. As a Section 7 consultation and mitigation is mandatory for federal actions, Section 10 mitigation by a private irrigator is optional and carried out at their own expense. This raises a question of risk vs. cost for the irrigator. If there is a gray area surrounding an action that may or may not cause a 'take,' how should an irrigator proceed?<sup>94</sup>

With regards to irrigators, the gray area is substantial because their actions are more likely to cause a Section 9 'take' under the 'harm' definitions due to the nature of irrigation diversions. These diversions do not necessarily kill instantaneously but can indirectly kill fish by significantly altering the aquatic habitat, which can impair breeding, lead to mortality, and reduce fish populations. Case law developed before and after *Sweet Home* allows for an injunction against future action by irrigators if there is sufficient proof to show that the diversion will cause harm.

In New Mexico, many streams support fish that can survive on very low flows common to arid and semi-arid rivers. However when people put that water to use, there is a greater likelihood a diversion will adversely impact fish habitat than a diversion in the Pacific Northwest where water is relatively abundant, therefore allowing for more irrigation before adversely affecting fish. Case law and the not-so perennial nature of New Mexico streams should give irrigators a clear picture that their actions will likely

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<sup>94</sup> Ruhl, J. B., *How to Kill Endangered Species, Legally: The Nuts and Bolts of Endangered Species Act "HCP" Permits for Real Estate Development*. 5 ENVTL. L. 345, 357 (1999). Ruhl states "...when the effects of a project are not clearly a 'take' or 'no-take' situation: should an HCP permit be sought, thus gaining the certainty of legal authorization of take at the price of regulatory entanglements, or does the benefit of not having to undertake the permit process justify the risk of going forward without a permit?"

amount to a Section 9 ‘take.’ To reduce their future liability, New Mexico irrigators should apply for a Section 10 HCP.

#### A. SECTION 10, GENERALLY

Section 10 has an incidental take provision similar to the federal Section 7 version. It was added in 1982 to codify a process for non-federal habitat modifiers that work to protect listed species.<sup>95</sup> A handbook was developed to assist those seeking a legal remedy for their habitat modifying activities.<sup>96</sup> The authorized ‘take’ can only be incidental in nature, stemming from an otherwise lawful activity,<sup>97</sup> which is similar to what the federal government follows in Section 7. A necessary provision before approving a HCP is that the applicant must show that the project will be funded.<sup>98</sup> The public also gets a chance to comment on the HCP prior to its final issuance.<sup>99</sup> Because approval of a HCP is a federal ‘green light’ to commence habitat modification, a section 7 consultation is mandatory.<sup>100</sup> Depending on the size of the project, it may require an environmental assessment (EA) or a more comprehensive Environmental Impact Statement (EIS),<sup>101</sup> which would likely be paid for by the applicant. This appears to get complicated and more expensive depending on the proposed habitat modification. However, this is one of a few options available to irrigators that want to continue to

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<sup>95</sup> Kalen, Sam, *An Overview of Section 10 in ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES* 287 (Donald C. Baur and William Robert Irvin, eds. 2002).

<sup>96</sup> US Fish and Wildlife Service and National Marine Fisheries Service, *HABITAT CONSERVATION PLANNING AND INCIDENTAL TAKE PERMIT PROCESSING HANDBOOK* (Nov. 1996) 61 F.R. 63,854 (1996); 64 F.R. 11,485 (March 9, 1999). [Hereinafter, HCP HANDBOOK].

<sup>97</sup> *Id.* at 1-2.

<sup>98</sup> *Id.* at 7-3.

<sup>99</sup> *Id.* at 6-20.

<sup>100</sup> *Id.* at 3-15.

<sup>101</sup> *Id.* at 5-1.

irrigate and reduce their ESA liability. As an incentive for voluntary cooperation, besides covering the species in question, the HCP may cover species not yet listed.<sup>102</sup>

The HCP must predict how many of the listed species will be incidentally taken as a result of these actions. This can be done by calculating it in terms of “numbers of animals ‘killed, harmed, or harassed’” or by “habitat acres or other appropriate habitat units (e.g., acre-feet of water) to be affected generally or...where the specific number of individuals is unknown or indeterminable.”<sup>103</sup> A HCP can also be tailored to protect habitat or mitigate for its loss.<sup>104</sup> This condition shows that both individuals or the greater population that they belong to can be looked at in a HCP.

## B. HOW CAN SECTION 10 APPLY TO WATER USERS?

In the realm of an irrigation diversion, the HCP process can be used by an individual irrigator or an irrigation district to make sure their continued actions will only incidentally ‘take’ fish. The best way to get water in-stream for fish without buying out irrigators would be a reduction of water used to irrigate crops by encouraging more efficient irrigation or enforcing against wasteful practices. As waste is a term that typically compares other similar irrigation practices to the one in question, unless all adjacent irrigators are already efficient, it is highly unlikely to call that use a ‘waste’ of water.<sup>105</sup> Also, it may not be possible to get irrigators to comply because a state system

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<sup>102</sup> *Id.* at 4-3. If the HCP does not include other species that may eventually be listed, the permittee will be liable if a ‘take’ occurs even though protections for that first species, such as an improved fish screen will benefit the ‘eventually’ listed fish.

<sup>103</sup> *Id.* at 3-14.

<sup>104</sup> *Id.* at 3-21.

<sup>105</sup> Neuman, Janet C., *Beneficial Use, Waste, and Forfeiture: The Inefficient Search for Efficiency in Western Water Use*. 28 ENVTL. L. 919, 975-976 (1998). Professor Neuman’s analysis of beneficial use tied to waste sheds light on the fact states do not enforce prior appropriation and beneficial use does not promote conservation. “...because the concept of waste is so generous and poorly defined, and because forfeiture is not aggressively enforced, the doctrine [beneficial use] does not even begin to maximize the number of users who could be supported by a given amount of water.” Also, “the beneficial use doctrine encourages maximum consumptive use of water by any given water user, but does not necessarily maximize the number of water users.” And finally, “Reliance on a legal standard that endorses custom will not encourage the desired conservation behavior. Custom does not evolve fast enough to cope with

that encourages conservation and efficiency might not be in place. The state may have to step in, or be forced to step in if irrigators do not pursue a HCP.

Because water rights are given out and administered by a state agency, it has been suggested that the state can be held liable since the permit effectively promotes habitat modification by the use of water.<sup>106</sup> A few federal court cases have dealt with this issue and have consistently found that the state or local agency should consider the ESA when issuing permits to a third party because actions authorized by the state may ‘take’ a listed species.<sup>107</sup> In New Mexico, this would only apply when a water right is changed or transferred because all surface water has been appropriated. If the water right change may impact a listed species, and the issuing agency believes its approval may make it the target of an ESA lawsuit, the agency may be able to hold up that change until the permittee completes a HCP.<sup>108</sup> This is an example of what is termed ‘vicarious’ liability. If future cases hold states liable under the ESA due to permitting decisions that result in a taking, then the states will have to revamp their water codes to ensure that listed fish are not brought to extinction via the prior appropriation system. Irrigators and even state government would prefer the federal government not get involved in what they deem a state matter in the issuance of water right permits. Unless states provide incentives for irrigators to conserve, this issue will continue to play out in the courts with the potential for states losing some of their discretionary power over water rights administration.

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severe overappropriation, critical instream demands, increasing competition among diverse demands, and population growth across the West.”

<sup>106</sup> See RUHL, *supra* note 94 at 373-375.

<sup>107</sup> *Id.* The author refers to *Strahan v. Coxe*, 939 F. Supp. 963 (D. Mass. 1996), *United States v. Town of Plymouth*, 6 F. Supp. 2d 81 (D. Mass. 1998), *Loggerhead Turtle v. County Council of Volusia County (Loggerhead I)*, 896 F. Supp. 1170 (M.D. Fla. 1995), and *Loggerhead II*, 148 F. 3d 1231 (11<sup>th</sup> Cir. 1998). These cases all discuss the discretionary role that state and local agencies hold when issuing permits for activities that can ‘take’ a listed species. It is interesting to note that although these cases are relatively few in number, “no court has rejected the principle that state and local governments can be held accountable for issuing discretionary approvals under state and local law if such approvals enable third parties to engage in activities that cause take.” *Id.* at 374.

<sup>108</sup> *Id.* at 375.

Some states have stepped up with programs that try to get water in-stream by offering incentives to conserve. States have also created water banks and lease programs that are used for in-stream flows. These programs were not just initiated with an eye for ESA compliance but rather reflect the views held by citizens to keep riverine habitats as functioning ecosystems rather than conduits that only deliver water to irrigators.

1. *Oregon*

a) *Conserved Water Program*

In 1987, the state of Oregon initiated the Conserved Water Program (CWP) that provides an incentive for irrigators to conserve water. Essentially, if an irrigator decides to become more efficient, they are able to keep 75% of the *conserved* water with the remaining 25% going to the state in a water bank that leaves the water in-stream.<sup>109</sup> The irrigator then has the option to leave more than 25% in-stream. Currently, the state has recognized the CWP is underutilized,<sup>110</sup> and in 2002, only 0.6 cfs (cubic feet per second) was realized under the CWP.<sup>111</sup> Leases and transfers of water in-stream amounted to just over 360 cfs in the same year.<sup>112</sup> The Oregon Water Resources Department (OWRD) recently conducted a survey to identify water right holders eligible to participate in the program but did not explain why the participation rate was so low as compared to the amount of water left in-stream for leasing. Since the program started in 1987, the water resources department has only received 36 applications with all of them between 1995

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<sup>109</sup> ORS § 690-018-0012.

<sup>110</sup> Oregon Watershed Enhancement Board (2003) *2001-2003 Oregon Plan Biennial Report* 38. Salem, Oregon. Available at: [http://www.oweb.state.or.us/OWEB/docs/pubs/OR\\_Plan\\_Report01-03.pdf](http://www.oweb.state.or.us/OWEB/docs/pubs/OR_Plan_Report01-03.pdf) [Accessed 23 May 2005].

<sup>111</sup> *Id.* at 40.

<sup>112</sup> *Id.*

and 2004.<sup>113</sup> The State of Oregon has access to grant funding through the Oregon Watershed Enhancement Board and this money can be used to assist irrigators participating in the CWP.<sup>114</sup>

There may be many reasons for lack of participation, and it has been suggested that “unless the potential value of the saved water to the user (either for use or sale) is significant, there really is not much incentive for water users to pursue conservation measures.”<sup>115</sup> And also, the program is voluntary, and Oregon does not actively enforce against waste. If the incentive is not backed up with a good regulatory ‘stick,’ irrigators will just continue with their customary irrigation practices.<sup>116</sup> However, if these irrigators are in areas with endangered fish, just the threat of their diversion is enough to show their actions can cause future ‘harm’ that could amount to a ‘take.’ By using this program, irrigators could be essentially self-permitting by conducting an action that may prevent the ‘take’ of fish or even enhance habitat.<sup>117</sup> But to be in full compliance, a Section 10 HCP is necessary.

In addition, by offering this program, the state may in fact deflect the notion of ‘vicarious’ liability. If the state’s issuance of a water right was in fact challenged, a court may find that existence of this program is enough to show the state is attempting to comply with the ESA by offering incentives and acting in a collaborative manner. However, as is the case in Oregon, not enforcing against waste may be something the

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<sup>113</sup> According to Bob Rice of the Oregon Water Resources Department, “Since the program’s inception in 1987, the [Oregon Water Resources Department] has received 36 applications for allocations of [Conserved Water], with all of these occurring in the past 9 years.” E-mail correspondence received on 26 August 2004.

<sup>114</sup> According to Bob Rice of the Oregon Water Resources Department, “The OWEB has funded some allocations of conserved water.” E-mail correspondence received on 12 December 2004.

<sup>115</sup> See NEUMAN, *supra* note 105 at 286. Referring to Oregon’s Conserved Water Program (CWP).

<sup>116</sup> *Id.* It is also suggested that because water use patterns are not well known, it would be difficult for the state to determine how much water savings would result.

<sup>117</sup> See RUHL *supra*, note 94 at 363. This action may give an irrigator peace of mind, but it doesn’t give them the necessary Section 10 HCP immunity for an incidental take.

court would find inexcusable and insist that the state uphold its own laws or be potentially liable under the ESA. In any case, the program is still emerging and could be an example for other states to use, including New Mexico. It gets water in-stream for fish, it gives irrigators more water when they conserve, and it potentially deflects ESA liability since both the state and irrigators are acting to get more water in-stream.

b) *Water Leasing and Banking*

Oregon created the Deschutes Water Exchange Annual Water Leasing Program in 2001 to augment river flows in the upper Deschutes Basin.<sup>118</sup> It allows water users to lease water to be placed in-stream.<sup>119</sup> The program is only three years old but initial results are promising. In 2003, 3,400 of 160,000 acres (2%) in the upper Deschutes Basin were leased for in-stream flows.<sup>120</sup>

The Walla Walla Lease Bank was created for the Walla Walla Basin to ensure flows are high enough to protect endangered fish. The OWRD administers this program with Oregon Water Trust, a private organization that helps facilitate transfers of water in-stream.<sup>121</sup> This is similar to the Deschutes program and only places water in-stream on a temporary basis.<sup>122</sup> What prompted this program was a Section 9 ‘take’ of bull trout in the Walla Walla River during the 1998 and 1999 irrigation seasons. USFWS threatened to assess civil penalties of up to \$25,000 per fish unless the irrigation district changed

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<sup>118</sup> Washington State Department of Ecology and WestWater Research, 2004. *Analysis of Water Banks in the Western States*, Pub. No. 04-11-011 at 100. 156p. Available at: <http://www.ecy.wa.gov/programs/wr/instream-flows/wtrbank.html> [Accessed 23 May 2005]. [Hereinafter, WATER BANKS].

<sup>119</sup> *Id.* The program is set up to ensure compliance with state law. “An annual lease counts as one year of beneficial use and puts the holder of the water right in compliance with the State’s requirement to exercise a water right once every 5 years. The water is left in-stream and protected according to its priority date.” Also, “The term of lease contracts are for the full irrigation season typically running from April 1 to November 1.” *Id.* at 101.

<sup>120</sup> *Id.* at 101.

<sup>121</sup> *Id.* at 102-103.

<sup>122</sup> *Id.* This program is for those within the Walla Walla Irrigation District and non-district landowners in the area. Most leases are for one year and run from March through October. The program primarily leases senior water rights.

their irrigation management practices.<sup>123</sup> What is more interesting is that senior water right holders were targeted, which is contrary to what Bricker and Filippi (2000) argue as the listing agencies preferred policy of proportionate reductions.<sup>124</sup> The irrigation district came up with an interim agreement to get water in-stream and was able to gain consensus with the local tribes and environmental groups.<sup>125</sup> This agreement was successful at restoring flows in the Walla Walla basin and early estimates suggested that fish populations were stable and improving.<sup>126</sup> However, a Section 10 HCP needs to be completed to allow for an incidental take in order to reduce the irrigator's Section 9 liability.<sup>127</sup> This process was done collaboratively and without the use of lawsuits, showing that results can be achieved when groups with different interests work together.

## 2. *Washington Water Acquisition Program*

The State of Washington has a trust water rights program that is set up to enhance and restore flows in critical portions of streams and rivers where salmon migrate and spawn.<sup>128</sup> Water can be sold to the state to be held in-stream, leased to the state on a split-season or dry-year basis, or donated to the state.<sup>129</sup> As of December 2003, the state has recorded over 80 transactions with most occurring in 2003. It is important to note that all but nine transactions were leases.<sup>130</sup> In 2004, the state had 5.5 million dollars to fund this program.<sup>131</sup>

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<sup>123</sup> See BRICKER AND FILIPPI, *supra* note 85 at 761-762.

<sup>124</sup> *Id.* at 756, referencing 15 C.F.R. § 904.107 (1999) and 64 F.R. 60,727, 60,730 (November 8, 1999).

<sup>125</sup> *Id.* at 763.

<sup>126</sup> *Id.*

<sup>127</sup> *Id.*

<sup>128</sup> WASH. REV. CODE § 90.42. See also, Policy Consensus Center, 2004. *Of Water and Trust: A Review of the Washington Water Acquisition Program* 2. 33p. [Hereinafter, OF WATER AND TRUST]

<sup>129</sup> *Id.* at 3. Split-season allows a portion of the water right to be used early in the irrigation season, but returns to the river when needed by fish. A Dry-year lease allows a farmer to irrigate except in dry years, when water is not withdrawn.

<sup>130</sup> *Id.* at 6.

<sup>131</sup> *Id.* at 1.

Washington has also created an Irrigation Efficiencies Grants Program (IEGP) that works with conservation/irrigation districts to help with on-farm efficiencies and conveyance systems.<sup>132</sup> The ultimate goal is to give money and technical assistance to farmers to help aid in irrigation efficiency. The conserved water is then placed in-stream through the Water Acquisition Program. It is not clear if the conserved water goes in-stream through a lease or a purchase. Four projects were finished in 2003 in targeted areas saving 4.1 cfs and 979.7 acre-feet per year. So far, the program has received 7.8 million dollars in appropriations.<sup>133</sup> This system is similar to the Oregon plan in that it tries to promote efficient use of water through incentives and gets water in-stream. It has only been in place since 2001 and it remains to be seen if the program will be effective. Preliminary reviews suggest that Washington irrigators prefer the Irrigation Efficiencies Program to the Water Acquisition Program because it offers more certainty in their use of the water right and may increase their land value.<sup>134</sup> One question that remains for the long-term is whether the in-stream right would be owned by the irrigator and just leased to the state, or would the state attempt to purchase some of that conserved water to remain in-stream.

These state-based incentives have the potential to get water in-stream and allow continued irrigation. The IEGP appears more flexible than the Oregon CWP due to the lease options and the possibility more grant money is available as an incentive to irrigators. As most applicants have chosen to lease their water, the gains to endangered fish may only be temporary if the land eventually returns to irrigation. If the state were to

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<sup>132</sup> Available at <http://www.scc.wa.gov/programs/irrigation/> [Accessed 1 December 2004].

<sup>133</sup> See WATER BANKS *supra*, note 118 at 7. "Through a cost-share mechanism, the farmer or landowner receives an improved irrigation system at reduced cost and in turn places a portion of the saved water in the state's trust water program for the life of the system."

purchase water, more could be left in-stream permanently. Nonetheless, irrigators that use these options (especially those in Oregon that are under the CWP) should also incorporate a HCP that would give them even more assurance that their actions will only amount to an incidental take and also have the effect of increasing available in-stream habitat. Again, the presence of a state-based program may deflect ‘vicarious’ liability lawsuits over whether the state permitting process violates the ESA, however it means that the irrigator would be the focus of any potential citizen suit if not protected under a Section 10 HCP.

### 3. *Idaho’s ‘Rental Pools’ for Endangered Fish*

In Idaho, water banks are called ‘rental pools.’ The Lemhi River Rental Pool created in 2001 has a specific purpose of getting water in-stream for salmon.<sup>135</sup> The bank is set up by the state to allow the US Bureau of Reclamation (USBR) to lease water from irrigators when flows are low. If flows dip below the critical flow level set by NOAA Fisheries, then it triggers federal regulatory action. This rental pool is meant to keep flows above a critical flow level.<sup>136</sup> Because Idaho created the legal mechanism to allow water leasing for in-stream purposes, this should help circumvent any ESA action that NOAA Fisheries would take because the program will keep flows above a critical level. Even though this was completed via a Section 7 consultation due to federal involvement by the USBR, it provides an example of federal and state cooperation to help irrigators. In this case, irrigation efficiency was addressed and it was NOAA Fisheries opinion that part of the mitigation for fish would actually increase conveyance and irrigation

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<sup>134</sup> *Id.* at 17.

<sup>135</sup> *Id.* at 85.

<sup>136</sup> *Id.*

efficiencies. However, there is no mention that this water could be left in-stream and there is concern that irrigators would use the conserved water and increase depletions, thereby decreasing in-stream flows.<sup>137</sup> This is obviously something the USBR and NOAA Fisheries want to avoid because if irrigators used more water it would defeat the purpose of the leasing program.

This is another example of a state working with irrigators to ensure survival of endangered fish. Action by the state provides an incentive for irrigators to leave water in-stream through a short-term lease and ensures there is no Section 9 ‘take.’ This helps reduce liability for the irrigators and the state.

## **VI. Section 10 and Efficient Irrigation in New Mexico**

How can the examples shown above be applied to water users in New Mexico? As it appears in Idaho, Oregon and Washington, leasing is a short-term option very popular with irrigators as there are only a few examples of irrigators selling or giving a portion of their conserved water to the state. However, because leasing is short-term, it does not provide a constant water source that endangered fish need for recovery. Leasing will eventually be more expensive than buying the water right since some yearly lease programs will end up leasing the same water more than once. Also, the increased demand for water by cities will give the states competition when looking to leave water in-stream. If a municipality offers more for the water be it a lease or purchase, the water may go to that municipality rather than in-stream.

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<sup>137</sup> National Marine Fisheries Service, ENDANGERED SPECIES ACT AND ESSENTIAL FISH HABITAT CONSULTATIONS: BIOLOGICAL ASSESSMENT FOR THE L6-TO-S14 WATER TRANSFER PROJECT, LEMHI RIVER AND SALMON RIVER IDAHO (2002) at 15.

It appears that leasing programs are the first step in developing relationships with irrigators. As irrigators lease water for a period, they may decide to eventually sell their water right. The leasing process also builds trust with the state. If irrigators see that the state wants to be flexible and not just condemn or relinquish their water right, they may be more inclined to work with state irrigation efficiency programs, especially if money is available. The few state-based programs that attempt to get irrigators to conserve and leave some water in-stream are not as popular for reasons such as fear that property values will decline if there is less water available, and concern that scrutiny of their water right will lead to partial relinquishment.<sup>138</sup>

#### A. WATER LEASING AND BANKING

New Mexico has started using a state water bank program to meet compact deliveries to Texas via the Pecos River. Initially, the Interstate Stream Commission (ISC) leased water from irrigators to meet compact requirements. The program then progressed into a water bank where the state purchases water rights to leave them in-stream.<sup>139</sup> This program is relatively new and secondary benefits to fish populations remain to be seen. There is a proposal to try and lease water in-stream for the threatened Pecos bluntnose shiner, and the State Engineer authorized an emergency water transfer in-stream during 2003.<sup>140</sup> The proposal involves the USBR since they are in charge of irrigation delivery.

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<sup>138</sup> See OF WATER AND TRUST *supra*, note 128 at 14-16.

<sup>139</sup> See WATER BANKS, *supra* note 118 at 88. This essentially creates an in-stream flow that may benefit fish although environmental enhancement is not the purpose of compact deliveries.

<sup>140</sup> See WATER BANKS, *supra* note 118 at 94-95.

New Mexico also allows water leasing between ‘individuals.’ The statute was created to allow irrigators in the Elephant Butte irrigation district the opportunity to lease water to the city of Las Cruces for a period of 40 years.<sup>141</sup>

The main problem facing New Mexico with respect to endangered fish is the absence of statutory provisions allowing for in-stream flows. Statutes could be amended, but many attempts have failed. Listed fish on rivers under compact administration may benefit from state efforts to get water in-stream, however it is unknown if the state will go further and establish explicit in-stream flow laws. Absent any state action, there are two New Mexico attorney general opinions that say it is possible for the state to change an existing water right to an in-stream right with conditions.<sup>142</sup> There are no specific laws or constitutional provisions that disallow it, however this has not been tried on a noticeable scale and a future court case may answer the question once and for all if New Mexico can legally administer in-stream water rights.

## B. IN-STREAM FLOWS IN NEW MEXICO?

Even if irrigators decide to leave water in-stream for fish, there is no mechanism to ensure that water would be left in-stream. That water would likely be used by a junior appropriator. New Mexico is one of the last states in the West that does not give statutory recognition to in-stream flows,<sup>143</sup> and is still stuck on the idea that a man-made diversion is required to establish a water right.<sup>144</sup> Plus, beneficial use is not narrowly defined in statute as it is in many other western states, leaving the courts to interpret what

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<sup>141</sup> N.M. STAT.ANN § 72-6-3.

<sup>142</sup> See Attorney General Opinions, *supra* note 2.

<sup>143</sup> Boyd, Jesse A., Student Writing – *Hip Deep: A Survey of State Instream Flow Law from the Rocky Mountains to the Pacific Ocean*. 43 NAT. RESOURCES J. 1151, 1202 (2003).

<sup>144</sup> *State ex rel. Reynolds v. Miranda*, 493 P. 2d 409, 411 (N.M. 1972).

constitutes a beneficial use.<sup>145</sup> Despite repeated attempts to set in-stream flow legislation, no laws have passed, however there have been a few water right transfers that changed ‘use’ to in-stream flow.<sup>146</sup>

If an irrigator were to enter into a HCP on a river absent a state system for recognizing in-stream flows, it may still have enough benefit for USFWS approval. For example, if an irrigator conserved water due to greater efficiency and applied for a HCP that recognized his water savings, the water not used might go downstream to satisfy another junior user. USFWS should recognize that individual’s contribution instead of denying them a HCP just because the downstream junior irrigator may end up dewatering the stream through their diversion.

The junior irrigator may see this action by the upstream irrigator as increasing the junior’s liability since the upstream irrigator is now shielded from a Section 9 ‘take.’ This may then force them to become more efficient and leave water in-stream. The more irrigators who follow suit, the greater the liability may be for those who choose not to act. In any case, the threat of Section 9 action against an irrigator will likely increase if more species become listed. If the Office of the State Engineer decides to help out, the State Engineer will have to come up with a plan that will assist irrigators and at the same time recognize the values of water left in-stream for ecological purposes, not just compact deliveries.

The irrigator attached to the HCP may have a transferable water right in the conserved water. Since the State Engineer has allowed a few transfers of water from

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<sup>145</sup> N.M. STAT.ANN § 72-1-2. Beneficial use is the basis, measure and limit of the right to use water.

<sup>146</sup> See HIP DEEP, *supra* note 143 at 1204.

existing uses to in-stream ‘use,’<sup>147</sup> there may be value for that conserved water if it is left in-stream and there is a willing buyer. Environmental groups may take advantage of this and find landowners willing to conserve and leave some water in-stream. This idea has merit if similar lawsuits like *IWP v. Jones* are won on behalf of fish, and the State Engineer decides not to explicitly amend the water code to allow for in-stream flow for fish and wildlife purposes.

### C. IRRIGATION EFFICIENCY

There are many directives within the New Mexico water code that speak to ‘efficient use,’ ‘conservation of water,’ and ‘good agricultural practices.’ The State Engineer even went so far to heavily regulate waste by ground water users in artesian basins due to flooding problems and to keep artesian pressure high enough so irrigators would not have to pump.<sup>148</sup>

#### 1. *Water Project Finance Act*

An important statute that attempts to promote voluntary conservation through incentives is the Water Project Finance Act, Article 4A. It was created in 2001 and recently amended in 2003. The Act recognizes the scarcity of water in New Mexico and the need for efficient use and conservation so that all can benefit from its use.<sup>149</sup> Wording

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<sup>147</sup> *Id.*

<sup>148</sup> N.M. STAT.ANN § 72-13-6. Waste is defined as “...causing, suffering or permitting any artesian water to reach any previous stratum above the artesian strata before coming to the surface of the earth, or causing, suffering or permitting any artesian well to discharge unnecessarily upon the surface of the ground, unless said waters are to be placed to a beneficial use under the constant supervision of the person using such water, or his employee, and through a constructed irrigation system.” N.M. STAT.ANN § 72-13-8. The owner of any artesian well which is being beneficially used or which under existing water rights may be beneficially used, who causes, suffers or permits the waters therefrom after coming to the surface of the earth to waste as herein defined, shall be guilty of a misdemeanor. Such waste is also hereby declared to be a public nuisance. N.M. STAT.ANN § 72-13-9. To clamp down on transmission loss the State declared it unlawful if more than 20% of water is lost between the well and the point of appropriation.

<sup>149</sup> N.M. STAT.ANN § 72-4A-2. A. The legislature finds that: (1) New Mexico is a desert where water is a scarce resource; (2) the economy depends on reasonable and fair allocation of water for all purposes; (3) the public welfare depends on efficient use and conservation of water; (4) New Mexico must comply with its delivery obligations under interstate compacts; and (5) public confidence and support for water use efficiency and conservation is based on a reasonable balance of investments in water infrastructure and management. B. The purpose of the Water Project Finance Act [Chapter 72, Article 4A NMSA 1978] is to provide for water use

such as “the public welfare depends on efficient use and conservation of water...,” shows the importance of recognizing the public nature of water and implies the public is better off when water is conserved and used efficiently. The public welfare may eventually be interpreted to where some water should be left in-stream for fish and wildlife purposes. The political subdivisions that this Act speaks to include municipalities, counties, irrigation districts, conservancy districts, and acequias to name just a few.<sup>150</sup> Priority for projects comes from the 2003 State Water Plan.<sup>151</sup>

## 2. *New Mexico State Water Plan*

One of the common priorities, goals and objectives of the recent 2003 State Water Plan is “promoting conservation and the efficient use of water.”<sup>152</sup> The Plan recognizes future population growth in New Mexico is inevitable and that “...conservation and efficient use of water will be increasingly necessary to meet the State’s present and future needs for water.”<sup>153</sup> Water markets are identified as a way to temporarily or permanently transfer water to other uses. If an irrigator uses water in a more efficient manner, the water market can act as a “temporary fallowing agreement(s) for conservation or efficiency purposes.”<sup>154</sup> To make the transfer process more attractive to irrigators, the Plan emphasizes voluntary conservation and financial incentives, supposedly relaxing forfeiture and abandonment to allow farmers the option to sell or lease the conserved water. Nowhere does it mention use of strict statutory mandates to force conservation and irrigation efficiency. A telling statement in the water plan mentions, “water saved through

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efficiency, resource conservation and protection and fair distribution and allocation of New Mexico’s scarce water resources for beneficial purposes of use within the state.

<sup>150</sup> N.M. STAT.ANN § 72-4-3.

<sup>151</sup> N.M. STAT.ANN § 72-4A-5.1.

<sup>152</sup> *Id.* at 5.

<sup>153</sup> *Id.* at 8.

efficient use, conservation, and reuse may be the only practical new source of water” due to the limited water supply in the State.<sup>155</sup>

If the reality is that conservation of existing uses provides the only new source of water, voluntary measures are not going to necessarily result in water for growing municipalities. Unless the State Water Plan eventually leads to new policy or laws that can proactively address increased irrigation efficiency, supply might not keep up with demand. This will pit growing municipalities and advocates for protecting endangered species against each other with the municipalities winning because they may be willing to pay more money for water. Also, the fact the statutes are silent on in-stream flows does not help.

### 3. *New Mexico Statutes*

#### a) *Existing Statutes*

New Mexico legislators amended a law during the 2003 legislative session that may make it easier for irrigators to conserve water:

In the issuance of permits to appropriate water for irrigation or in the adjudication of the rights to the use of water for that purpose, the amount allowed shall be based upon beneficial use and in accordance with *good agricultural practices* and the amount allowed shall not exceed such amount. The state engineer shall permit the amount allowed to be diverted at a rate consistent with good agricultural practices and that will result in the most effective use of available water in order to prevent waste. *Improved irrigation methods resulting in the conservation of water shall not affect an owner’s water rights.*<sup>156</sup> (Emphasis added).

This statute applies to New Mexico irrigators saying that if they apply for a new water right or change in water right, it will be scrutinized to ensure the use does not amount to waste. The most important part is the last sentence, implying that if an irrigator does

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<sup>154</sup> *Id.* at 16.

<sup>155</sup> *Id.*

<sup>156</sup> N.M. STAT. ANN § 72-5-18.

conserve water through more efficient irrigation, the state cannot take the right through forfeiture. This wording was added in 2003 and looking at the Fiscal Impact Report for House Bill 977, the State Engineer did not have a policy to forfeit conserved water and wanted wording to ‘codify this practice.’<sup>157</sup> The significant issues are as follows:

OSE has not exercised the forfeiture clause on any reduced water use resulting from conservation efforts. This bill would codify this practice. While the State Engineer supports conservation efforts, the agency is concerned (sic) taking any water being saved due to improvements in irrigation, and then put to additional beneficial use, will increase depletions of water in the system. The goal needs to be to keep the system in balance by increasing return flows to the river and not developing new uses.<sup>158</sup>

The justification for this law is somewhat confusing since the purpose is to allow conservation, yet it implies that the water user must transfer the water, or just not use it once it is conserved. The State Engineer is either concerned that applying new conserved water to other fields may change the timing of return flows to the river, or is concerned that transferring water out of the stream system once conserved will result in lower return flows since less water is being applied. These are valid concerns, yet it is no different than what the state must do when reviewing a change in place or purpose of use. Oregon allows this ‘spreading’ to occur when water is conserved, but only after a comprehensive review to ensure that there is no harm to other water users. The amount of water left in-stream may offset the return flow issue. If the State Engineer is that concerned about return flows to the river due to water conservation but will not pass in-stream flow legislation, the conserved water should then be purchased and left in-stream for compact deliveries. This may have the desired effect of intermittently creating in-stream flows for fish while satisfying compact obligations. However, it does not answer the question of

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<sup>157</sup> HB 977 Fiscal Impact Report 2/22/03. Available at <http://legis.state.nm.us/Sessions/03%20Regular/firs/hb0977.html> [Accessed 9

how this will help individual irrigators reduce their ESA liability. The water code must be developed further to come up with a successful program that will encourage irrigators to leave water in-stream.

If and when an irrigator does apply for a HCP, it is not known if USFWS will accept the state program to leave water in-stream for compact deliveries as providing secondary, albeit necessary benefits to listed fish. A better program would actually allow for in-stream flows. It is unknown if the few water right changes to allow in-stream flow will continue and if they will even be held as valid if challenged.

b) *New Administrative Laws*

A few promising statements regarding administration of surface waters were introduced and passed as rules in 2005. First, beneficial use is expanded to include fish and wildlife purposes.<sup>159</sup> Also, irrigation efficiency is defined as “The portion of the duty of water, expressed as a percentage, consumed to meet the crop irrigation requirement.”<sup>160</sup> It is clear that the state is making efforts to recognize the value of water that is used by fish and wildlife, and that efficient irrigation is important enough to be defined so future laws and rules refer to a specific definition, not many definitions.

Despite the uncertainties over the status of in-stream flows, New Mexico is at least moving in the right direction by encouraging conservation and providing irrigators the funds to become more efficient. Hopefully these efforts will be combined with in-stream flows to give New Mexico irrigators the incentive to become more efficient and leave some of their conserved water in-stream. As examples from other states have

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December 2004].

<sup>158</sup> *Id.*

<sup>159</sup> NMAC § 19.26.2.7(F). “Beneficial use.” “The direct use or storage and use of water for a beneficial purpose including, but not limited to, agricultural, municipal, commercial, industrial, domestic, *fish and wildlife*, and recreational uses...” Emphasis added.

shown, just having the system in place does not mean irrigators will line up and voluntarily leave water in-stream. The irrigators must be able to trust the State Engineer and in turn, there must be a combination of financial incentives and statutory changes, such as certainty the State Engineer will not relinquish their water right when it is reviewed.

#### D. SAFE HARBOR AGREEMENTS

A recent review of HCPs in the southwestern region administered by the USFWS shows that no HCPs have been issued in New Mexico.<sup>161</sup> It did show however that the Pueblo of Santa Ana has entered into a safe harbor agreement with the USFWS for the Rio Grande silvery minnow and the Southwestern willow flycatcher. This agreement was completed in July 2004 for a period of 25 years. These types of agreements allow a landowner to participate in restoration activities on their own land in exchange for an ‘enhancement of survival’ permit that allows some incidental take.<sup>162</sup> Safe harbor provides benefits for habitat enhancement whereas a Section 10 HCP attempts to mitigate habitat destruction. The condition for safe harbor is that the listed species does not currently reside on that property, but if they do take refuge as a result of habitat enhancement, the landowner is covered under an ITS. However, “Safe harbor agreements

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<sup>160</sup> NMAC § 19.26.2.7(T).

<sup>161</sup> Habitat Conservation Plans by Region. Available at:

[http://ecos.fws.gov/conserv\\_plans/servlet/gov.doi.hcp.servlets.PlanReportSelect?region=2&type=HCP](http://ecos.fws.gov/conserv_plans/servlet/gov.doi.hcp.servlets.PlanReportSelect?region=2&type=HCP) [Accessed 22 June 2005].

<sup>162</sup> Ryan, Patrick, Galen Schuler and Jennifer Bell, *ESA Compliance Options: Section 10 and Other Tools in ENDANGERED SPECIES ACT: LAW, POLICY, AND PERSPECTIVES* 312. (Donald C. Baur and William Robert Irvin, eds. 2002). See also, AN OVERVIEW OF SECTION 10, *supra* note 94 at 286.

do not affect any preexisting restrictions that may apply to a property as a result of endangered species already living there.”<sup>163</sup>

This agreement may help irrigators, just as it is helping the Pueblo of Santa Ana. As the Pueblo works to restore riparian habitat, the endangered silvery minnow may take refuge in their 6-mile reach of river (if it has not already). This agreement will offer them some protection against ‘take’ especially if the existing coverage under the current Section 7 ITS for the middle Rio Grande is withdrawn. Leaving more water in the river may not be enough for an irrigator to qualify for a safe harbor agreement because suitable habitat is also necessary for that fish species to survive. Those irrigators who may have that option can benefit substantially by entering into this agreement. Safe Harbor Agreements may be a better option for some irrigators than a Section 10 HCP due to the specific nature of their action and the regulatory hurdles one must face when completing a Section 10 HCP.

Deciding which works better for an irrigator may be complicated and could come down to whether the diversion was either pre-existing, new and whether riparian habitat exists on the irrigator’s lands. The use of a water right can be looked at as a flux between habitat destruction and habitat enhancement; when the water is being diverted, destruction might occur. When water is not being diverted, the habitat can return to its natural state. This could complicate matters for an irrigator trying to determine if applying for a safe harbor agreement or a HCP. USFWS should be able to direct the applicant towards the right project depending on the circumstances.

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<sup>163</sup> Safe Harbor Handbook. Available at [http://www.environmentaldefense.org/documents/929\\_handbook.htm](http://www.environmentaldefense.org/documents/929_handbook.htm) [Accessed 24 May 2005]. This handbook provides a good overview of how a landowner can use a safe harbor agreement to reduce their liability when creating habitat that may be attractive to a listed species.

New Mexico is attempting to change the statutes and administrative code to allow for water conservation and more efficient irrigation. The main problem is the fact that in-stream flows are not recognized in the statutes. Adding to that problem is the question of how the State Engineer will treat conserved waters. The existing statutory option is to transfer it to another user, which would likely be a growing municipality. As transferring water in-stream is relatively new and not tested, this option may or may not work. Because of this, it may make it more difficult for USFWS to sign off on an HCP or Safe Harbor Agreement that includes leaving more water in-stream. However, the Santa Ana agreement is a good sign that the USFWS may support these types of agreements in the future.

## **VII. Conclusions**

There is no doubt that irrigators in New Mexico will face increasing pressures from those who want their water, whether it is thirsty municipalities, the ISC needing to meet compact deliveries, or the federal government looking to increase in-stream flows for endangered fish. This pressure is a result of irrigators using a majority of the New Mexico's water. In other western states, there are innovative lease and purchase options that let farmers continue to irrigate and apportion some of that water for fish. The State Engineer should look at adopting some of these ideas to help New Mexico irrigators that face Section 9 ESA liability. As these programs develop, New Mexico irrigators will have to choose between complying with the ESA in order to continue irrigating, or selling their water right to municipalities.

Currently, New Mexico law is set up to allow for this to happen; irrigators can either sell their water right to a municipality, or lease it long-term. They *might* be able to

transfer a water right to an in-stream use as a few already have; however the statutes do not yet recognize it making it a high risk. If irrigators transfer *some*, but not all of that water to municipalities, they are still potentially liable for a ‘take’ under the ESA. It would be an easy way out to sell the water right and reduce their liability altogether, placing the Section 9 burden on additional appropriators on the stream or the municipality that purchased the water right.

Because of the Federal Supremacy Clause of the US Constitution, water needs for endangered species can trump Federal compact obligations to a downstream state, and state issued water rights.<sup>164</sup> The federal government would rather cooperate with irrigators than take their water away through regulation or condemnation. The ESA specifically mandates cooperation when water resources are at stake because states have been traditionally left on their own to apportion water. Most states are not comfortable with this federal involvement that has and will continue to erode their administration of water rights. However, protecting species from the brink of extinction is a nationwide effort that Congress gave the highest priority; those who have modified habitat and continue to do so today must make sacrifices.

ESA based programs for private irrigators are voluntary and can be combined with a combination of state laws to enhance the project. The more flexible the state law, the better chance irrigators will want to participate. Also important are incentive programs that can help irrigators become more efficient. Some western states such as Oregon and Washington have these programs in place and are slowly getting irrigators to respond. Case law regarding ESA liability and private irrigators is just beginning to

develop and as it does, more irrigators will see the need to reduce their liability by leaving more water in-stream. The Section 10 Habitat Conservation Plan and Safe Harbor Agreement are the main federal options available to irrigators that allow them to continue their irrigation practices and not be held liable if a few endangered fish die as a result. Existing diversions that dewater a river may already contribute to the death of a large number of fish, and leaving water in-stream by improving irrigation efficiency can show the USFWS that effort is being made on their part to mitigate the negative effects to fish. This way, irrigators get to divert and reduce their liability for a Section 9 ‘take,’ and more water is left in-stream for fish. All that remains is for the State Engineer or the State Legislature to step up and create incentive programs for private irrigators. If not, there will be continued legal uncertainty over the dewatering of streams and rivers. This will eventually lead to more protracted legal battles such as the one over the Rio Grande silvery minnow and may eventually result in government mandated in-stream flows that will force irrigators to reduce their water diversions. Since irrigation is important in New Mexico, both culturally and economically, it is important that a system be designed to satisfy the needs for endangered fish and water for irrigators.

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<sup>164</sup> Doremus, Holly, *Water, population growth, and endangered species in the West*. 72 U. COLO. L. REV. 361, 401 (2001). The author states that just because states enter into an interstate compact, they can not ignore the ESA.

## Glossary of Terms

**Acequia** – The name given to a traditional community irrigation ditch in New Mexico. An acequia is a political subdivision recognized by the State of New Mexico and has specific statutory directives that recognize its unique status within the State.

**Adjudication** – In this paper, a court process where all irrigators on a stream are enjoined in a lawsuit that it meant to determine the extent and validity of a water right in its relationship between the state water resource authority and between other irrigators.

**Appellant** – The party that is appealing a decision by a lower court for review by a higher court.

**Appellee** – The party that is opposing the appeal by the Appellant for review by a higher court.

**Beneficial Use** – A term used in Western water law to emphasize that the use of water must be ‘beneficial’ or it is considered waste. Each state defines or does not define what constitutes a beneficial use. Some of these uses include irrigation, domestic use, municipal use, industrial use and in-stream flows. In New Mexico, beneficial use is statutorily defined as ‘the basis, the measure and the limit of the right to the use of water.’ Administrative rules give specific definitions for beneficial use.

**Causation** – A legal term referring to the cause of an action. The degree of the relationship between the cause of action and its outcome or effect is often termed ‘proximate cause.’

**Defendant** – The party that is brought to court by another party for resolution of a dispute. See Plaintiff.

**Endangered Species Act** – An act passed by the U.S. Congress in 1973 to provide protection for species under the threat of extinction.

**Environmental Assessment** – A preliminary study, typically a checklist, that determines whether further action is necessary to study the impacts of a proposed federal project on the environment. If more study is warranted, then an environmental impact statement is completed.

**Environmental Impact Statement** – An in-depth report that studies the impacts of the proposed federal project on the environment and potential mitigation measures to reduce its impact. This study also addresses the feasibility of alternatives to the proposed action as well as no action.

**Habitat Conservation Plan** – An option available to private parties under section 10 of the Endangered Species Act that allows for mitigation of habitat modifying activities that

have the potential to ‘take’ members of a species. This plan, once approved by either the US Fish and Wildlife Service or NOAA Fisheries, gives the applicant immunity from a ‘take’ lawsuit as long as the activity does not take more than what is allowed under the Incidental Take Statement.

**Incidental Take Statement** – An option under Section 7 and Section 10 of the Endangered Species Act that allows the applicant the ability to ‘incidentally’ take a certain amount of species that would occur as the result of an otherwise lawful activity.

**Injunction** – A court order issued to temporarily or permanently stop an action at the bequest of an appealing party. In some cases, if the action is mitigated, the injunction is lifted. In this paper, injunctions are used to stop an imminent action that will violate Section 9 of the Endangered Species Act. Injunctions for ESA cases are not ‘equitable’ because Congress puts greater weight on species protection.

**In-stream Flow** – This term refers to water that remains in a stream. In this paper, a water right may be associated with an in-stream flow where the water is not used in the traditional sense of the word, but left in-stream for the benefit of riparian habitat or aquatic species.

**Interstate Stream Commission** – The Interstate Stream Commission is a state agency that works with the New Mexico Office of the State Engineer on water resource issues. Its primary directive is to ensure that New Mexico meets its compact requirements for interstate streams that are subject to sharing agreements between New Mexico and other downstream states. The Commission also works to ensure that upstream states deliver water as outlined in interstate sharing agreements.

**New Mexico Office of the State Engineer** – The state agency that manages the appropriation and management of both surface and ground water in New Mexico.

**NOAA Fisheries** – A United States Federal agency housed under the US Commerce Department that is tasked with management of fisheries within the offshore territorial waters of the United States. This agency has jurisdiction over fish that spend part of their life cycle in the ocean and then spawn in United States streams. NOAA Fisheries is the primary agency for enforcement of the Endangered Species Act for ocean species. This agency was formally known as the National Marine Fisheries Service, or NMFS.

**Plaintiff** – The party that typically initiates a courtroom hearing over a dispute with another party. See defendant.

**Prior Appropriation** – The system by which water is appropriated in most western states. This term means ‘first in time, first in right,’ where the first appropriator of stream water or ground water is senior and the subsequent appropriation is junior. In times of shortage, the senior appropriator is fully satisfied before water is allowed to be used by the junior appropriator.

**Pueblo** – The name given to native peoples in New Mexico that have traditionally occupied the same lands before European settlement. These lands are different than ‘reservation’ lands, as reservations imply land reserved by the government for a specific group of native peoples that were moved from their ancestral lands. Water rights held by pueblos are recognized as ‘prior and paramount’ to any right held by subsequent Spanish and northern European settlers.

**Real Property** – A term for property that includes both land and buildings. Real property can not be taken by government unless compensation is made to the owner.

**Safe Harbor Agreement** – A federal program aimed at those who want to improve habitat and receive a permit for incidental take if a threatened or endangered species takes up residence in the newly improved habitat.

**Tort** – A name for common law derived from court decisions.

**US Bureau of Reclamation** – A United States Federal agency housed within the US Department of the Interior. This agency is charged with building dams to create reservoirs and generate hydropower in selected states throughout the western United States. The water stored behind the dams is either owned by Reclamation and leased to irrigators, or owned by the irrigators and stored for eventual delivery. Reclamation can also store water for environmental purposes or recreation.

**US Fish and Wildlife Service** – A United States Federal agency housed within the US Department of the Interior. It is charged with enforcement of federal laws that deal with fish and wildlife that reside within the United States or ones that are migratory and just pass through. This agency is the primary agency for enforcement of the Endangered Species Act for fish and wildlife within the terrestrial United States.

**US Forest Service** – A United States Federal agency housed within the US Department of Agriculture. This agency is charged with management of the National Forests.

**Vicarious Liability** – This term means holding a third party responsible for an action that it did not directly commit.

**Waste** – A term in western water law that describes uses that are not ‘beneficial.’ Waste can also be defined in term of irrigation efficiency when comparing similar irrigation methods in the same region.

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## Personal Correspondence

E-mail from Bob Rice of the Oregon Water Resources Department, 26 August 2004.

E-mail from Bob Rice of the Oregon Water Resources Department, 12 December 2004.

## **Appendix I: Abbreviations and Acronyms**

**BN** – Burlington Northern

**CWP** – Conserved Water Program

**CFS** – Cubic feet per second

**EA** – Environmental Assessment

**EIS** – Environmental Impact Statement

**ESA** – Endangered Species Act

**FEMA** – Federal Emergency Management Agency

**HCP** – Habitat Conservation Plan

**ISC** – Interstate Stream Commission

**IEGP** – Irrigation Efficiencies Grants Program

**IWP** – Idaho Watersheds Project

**ITS** – Incidental Take Statement

**NOAA** – National Oceanic and Atmospheric Administration

**NWF** – National Wildlife Federation

**USBR** – US Bureau of Reclamation

**USFWS** – US Fish and Wildlife Service