



COMMENTS ON UNITED STATES FOREST SERVICE PROPOSED ACTION FOR  
ARROWHEAD SPRINGS SPECIAL USE PERMIT #7285,  
SAN BERNARDINO NATIONAL FOREST, SAN BERNARDINO, CALIFORNIA

Submitted by:

Nestlé Waters North America Inc.

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Nestlé Waters North America Inc.

**I. Nwana is committed to water stewardship in California and a constructive approach to permit reissuance that meets all forest service objectives**

Arrowhead Mountain Spring Water has been a local favorite for generations. With roots in Southern California dating back to the late 1800s, Arrowhead® has been enjoyed by Californians for more than 121 years and is now the most popular spring water brand in California. The brand's beginnings can be traced back to the San Bernardino Mountains. According to Native American lore, the iconic arrowhead rock formation was burned into the San Bernardino Mountains by the fall of an arrow from heaven, showing the way to the adjacent healing springs. Today, the arrowhead symbol can still be seen in the mountainside and the original spring sources, only a short distance away, still provide the fresh tasting mountain spring water that consumers love. The first structures used to gather the water were built around 1863, three decades before the first federal reservation of land that today comprises San Bernardino National Forest. From these storied beginnings, Arrowhead has always had a close connection with the environment, and to this day continues to respect nature.

Arrowhead is deeply engrained in the history of California and continues to be a part of its culture. In 1932, Arrowhead was named the official water of the Olympic Games, held at the City of the Stars in the Los Angeles area. When Los Angeles hosted the Olympic Games in 1984, Arrowhead had the privilege of being the official bottled water. In 1993, Arrowhead became the naming sponsor of the then-new Mighty Ducks hockey arena, the Arrowhead Pond (1993-2006). On several occasions, Arrowhead was the official water of the world-famous Los Angeles Marathon. Today, the brand supports several Southern Californian organizations (such as Inland Empire Waterkeeper and the Southern California Mountains Foundation) focused on caring for and improving the natural environment for future generations of Californians. These are just a few examples of the brand's commitment to California and its local communities.

Arrowhead Mountain Spring Water provides a trusted, efficient, high-quality source of natural hydration to Californians. Approximately 80% of Arrowhead Mountain Spring Water produced in California is sold within the state. In fact, bottled water is the most popular beverage in California. It is healthier than other bottled beverage options, like soda, and it requires significantly less water to produce than any other equivalent-sized bottled beverage. Bottled water is a critical resource for consumers and first responders after a natural disaster, catastrophic event or any situation in which the local water supply is compromised. Nestlé Waters North America Inc. ("Nwana"), parent company for the Arrowhead brand, works with the California Office of Emergency Services, the Red Cross, AmeriCares, and several local

authorities to provide bottled water when local supplies are unsafe or unavailable. In 2015 alone, NWNA donated over 600,000 gallons of water to California communities that did not have access to safe drinking water.

NWNA ownership of and its right to the spring waters of Strawberry Canyon can be traced to a possessory claim recorded in 1865, and a subsequent patent from the United States recorded in 1882. NWNA's water rights were adjudicated under state law and upheld in state superior court proceedings in 1931. Since that time, these rights have never been legally challenged. Starting in 1929, the United States Forest Service ("USFS or Forest Service") has continually issued special use permits ("SUPs") that identify and set mutually-agreed terms governing the use of a right-of-way for a four-inch pipeline that conveys spring water from NWNA's springs across the San Bernardino National Forest ("SBNF") to a collection point on private land. Special Use Permit No. 7285 ("SUP #7285") was issued by the Forest Service in 1978, its renewal was requested in 1987, and it remains valid until a new SUP is issued.

The Forest Service is proposing to reissue SUP #7285. *See* Forest Service, NWNA Special Use Permit San Bernardino National Forest Project Proposal (Mar. 18, 2016) ("Project Proposal"). NWNA respects this important reissuance process, and is pleased to participate fully. In this comment letter, our focus is on raising important questions and on sharing areas of improvement in the proposed action. NWNA notes that there are a number of important tenets upon which NWNA, the Forest Service, and many others in the West can mutually agree:

- (1) The drought in California is serious, and a concerted, collaborative effort is required to address the drought.
- (2) Reissuance of a multi-year SUP should proceed that includes additional conditions designed to protect the environment.
- (3) A form of adaptive management plan should be issued in connection with reissuance of the SUP.
- (4) NWNA and the Forest Service should work together to develop a mutually-acceptable framework to study and manage the conveyance of water from Strawberry Canyon in a manner that meets the Forest Service's data collection and forest sustainability objectives.

Our questions and concerns focus on the following areas, which we believe require clarification before a final federal action is taken and a SUP is reissued:

- (1) The State's governing legal framework, which is designed to allocate and manage water supplies within its boundaries, should not be superseded by federal permit actions.
- (2) The Forest Service's Proposed Action is a significant departure from the prior SUPs for the right-of-way, and from NWNA's request to reissue SUP #7285, and thereby raises significant legal, technical, and practical implications. Based on the need for scientific studies that typically take years to complete, and given the ten-year terms of NWNA's previous

SUPs, a five-year SUP may not provide sufficient time for appropriate study.

- (3) NWNA will commit to adhere to an objective and scientifically sound AMP<sup>1</sup>, but must do so voluntarily in order to comply with the law.
- (4) The Forest Service's AMP as drafted imposes subjective standards, sets triggers based on arbitrary considerations, and lacks a valid, scientific basis for determining the effects of water withdrawals from Strawberry Canyon. Due to the fact that timing and flow can be more important than volume, there is no scientific basis to assume that a reduction in NWNA's water collection will have any impact on the triggering conditions in the proposed AMP, much less constitute the sole impact.

NWNA takes environmental stewardship and sustainable use of its water resources very seriously. We have a team of natural resource managers that regularly monitor and care for our spring water resources and surrounding environments. We actively work with third party experts to help us continuously improve our stewardship practices. Our bottling facilities are among the most efficient in the bottled water industry. We have recently added water saving technologies in our California bottling facilities that are projected to save approximately 55 million gallons of water per year. We are also focused on improving recycling rates and reducing our environmental footprint. We currently use 50% post-consumer recycled plastic in 9 out of 10 Arrowhead bottles produced in California. We are deeply committed to the responsible management of the natural resources our operations rely on.

Our comments address these areas in greater detail. We thank you for the opportunity to submit these comments, and we look forward to your questions and comments in response to this submission.

## **II. NWNA HAS LEGAL CONCERNS WITH THE FOREST SERVICE'S PROPOSED ACTION**

### **A. For More Than 85 years, the Forest Service Has Issued SUPs Governing NWNA's Use of a Right-of-Way**

The first Forest Service SUP governing the right-of-way for NWNA's pipeline was issued in 1929. Later SUPs were issued in 1931, 1934, 1946, 1960, and 1976.

SUP #7285 was issued by the Forest Service in 1978, and continues to govern NWNA's use of Forest Service land within the right-of-way across the SBNF. The Forest Service has long recognized in these SUPs that it does not authorize or regulate use of the springs, but rather water

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<sup>1</sup> As used herein in reference to NWNA's proposals, the term "AMP" shall mean and refer to NWNA's Proposed Adaptive Management Plan (*see* Section III below). As used herein in reference to the Forest Service's proposals, the term "AMP" shall mean and refer to the draft Adaptive Management Plan published by the Forest Service on March 18, 2016.

rights must be “obtained and retained under applicable State law.”<sup>2</sup> Accordingly, the current and previous SUPs do not contain terms that address or otherwise attempt to regulate the collection of water. SUP #7285 explains that its purpose is to identify “a right-of-way not to exceed five (5) feet in width and approximately 23,020 feet in length across portions of the National Forest land” for “maintaining thereon water transmission lines, necessary service trails to maintain pipelines and water collection tunnels, horizontal wells, and spring boxes.” An Abbreviated Environmental Analysis prepared by the Forest Service in connection with SUP #7285 concluded that “there will be no significant adverse environmental effects” from the modest land use activities authorized under the SUP.<sup>3</sup> The 1987 request for renewal did not propose, and NWNNA has not proposed, any changes to the location or use of the existing right-of-way as described in the 1978 SUP.

### **1. The 1978 Special Use Permit Remains In Effect as a Matter of Law.**

Pending issuance of a new SUP, SUP #7285 automatically remains in effect as a matter of law. The 1978 permit was amended on June 24, 1981, with the following new termination clause:

Unless sooner terminated or revoked by the Forest Service in accordance with the provisions of the permit, this permit shall, subject to annual revalidation by the Forest Service and payment of fees by the permittee, expire and become void on 8/2/1988, but a new permit to occupy and use the same National Forest land may be granted provided the permittee will comply with the then existing laws and regulations governing the occupancy and use of National Forest lands and shall have notified the Forest Supervisor not less than 1 year prior to said date that such new permit is desired.

More than a year before expiration of SUP #7285, by letter dated May 12, 1987, NWNNA’s predecessor-in-interest requested that the Forest Service renew its SUP, and the Forest Service advised NWNNA that its permit would remain in place until a new permit was issued.<sup>4</sup> NWNNA and its predecessors-in-interest have paid all required fees and are in full compliance with all of the terms of the original permit.<sup>5</sup> The SUP has been continued “not by affirmative agency

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<sup>2</sup> See Memorandum from Kenton P. Clark, District Ranger, Cajon, to Forest Supervisor, San Bernardino at ¶ 20 (Aug. 28, 1964) (the permit “confers no rights upon the permittee for the use of the water involved,” because “[s]uch rights are obtained and retained under applicable State Law.”).

<sup>3</sup> See James R. Mattiazzi, Acting Forest Supervisor, Abbreviated Environmental Analysis for Arrowhead Puritas Wells #10, 11, 12 (Aug. 2, 1978).

<sup>4</sup> See Letter from Frank Schiller, V.P. Manufacturing, Beatrice Bottled Water, to Richard Stauber, District Ranger (May 12, 1987); Letter from Ron Lansing, Production Manager, Arrowhead Drinking Water Co., to Gary Earney, Lands Assistant, SBNF Cajon Ranger Dist. (July 25, 1988) (restating “understanding from our conversation . . . that the present permit, conditions, and fee structures will remain in place until the new permit is issued,” given inability of Forest Service to process permit by renewal deadline).

<sup>5</sup> See Letter of Authorization from Elliott L. Graham, District Ranger, U.S. Forest Service, San Bernardino National Forest, to Mr. Ramirez, Arrowhead Mountain Spring Water Company (July 2, 1993) (“1993 LOA”)

action, but by operation of law” under section 558(c) of the Administrative Procedure Act (“APA”). *NRDC v. EPA*, 859 F.2d 156, 214 (D.C. Cir. 1988); 5 U.S.C. § 558(c) (“When the licensee has made timely and sufficient application for a renewal or a new license in accordance with agency rules, a license with reference to an activity of a continuing nature does not expire until the application has been finally determined by the agency.”).<sup>6</sup>

Indeed, the Forest Service has confirmed on several occasions that “[the SUP] is deemed valid until a new Special Use Permit is reissued.”<sup>7</sup> Accordingly, until a new SUP is issued, SUP #7285 remains in effect as a matter of law.

## **2. The Forest Service’s Proposal is a Substantial Departure from Prior Permits and NWNA’s Use of the Right-of-Way.**

NWNA (through its predecessor entity) applied for reissuance of its existing SUP in 1987. Once the Forest Service began working on the reissuance, NWNA cooperated fully by providing numerous documents, submissions, and reports, attending meetings and calls, and hosting a site visit. NWNA also signed a Cost Recovery Agreement (“CRA”) to cover the costs of Forest Service staff and consultants assigned to process the permit’s renewal.

However, rather than propose a renewal of NWNA’s existing SUP as applied for, the Forest Service proposed a new SUP with an accompanying AMP that would directly (and newly) regulate NWNA’s water rights by controlling its water collection. In our view, the Proposed Action is a substantial departure from NWNA’s application to reissue its permit, and from all previous SUPs issued for the right-of-way across forest land for the four-inch diameter pipeline. (The prior SUPs governed the use of Forest Service land within a five-foot right-of-way that extends approximately four miles, encompassing about 2.5 acres of public land.) In addition, the proposed term of the SUP was reduced from ten years to five years. All of these changes were made without consultation or advance notice to NWNA, contrary to Forest Service regulations.

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(acknowledging that NWNA “has continued to pay the annual fee for [the SUP] and has upheld Forest Service permit regulations”).

<sup>6</sup> *Kitlutsisti v. Arco Alaska, Inc.*, 592 F. Supp. 832, 843 (D. Alaska 1984), *vacated on other grounds*, 782 F.2d 800 (9th Cir.1986) (“The purpose of the ‘extension’ language in § 558(c) is to protect the license applicant when the agency is slow in [reviewing an application.]”); *Cnty. of Sullivan v. CAB*, 436 F.2d 1096, 1099 (2d Cir. 1971) (“The policy behind [this provision] is that of protecting those persons who already have regularly issued licenses from the serious hardships occasioned both to them and to the public by expiration of a license before the agency finds time to pass upon its renewal.”); Attorney General’s Manual on the Administrative Procedure Act 91-92 (1947) (“It is only fair where a licensee has filed his application for a renewal or a new license in ample time prior to the expiration of his license, and where the application itself is sufficient, that his license should not expire until his application shall have been determined by the agency. In such a case the licensee has done everything that is within his power to do and he should not suffer if the agency has failed, for one reason or another, to consider his application prior to the lapse of his license.”).

<sup>7</sup> 1993 LOA at 3; Letter from J. Rider, Attorney for the Forest Service, to R. Johnson (April 7, 2015) ([U]ntil the Forest Service renders a decision on NWNA’s application, the current amended permit remains in full force and effect . . .”).

### **3. The Forest Service's Proposal is Inconsistent with Its Own Regulations.**

The Forest Service must follow its own regulations, its statutory authority, and the Forest Service Special Uses Handbook, FSH 2709.11 (“Special Uses Handbook”), which clearly sets forth the procedures for special use authorizations. The Special Uses Handbook contemplates either: (1) reissuance of an existing SUP, where the proposal authorizes essentially the same use, or (2) a new SUP for a new activity, where the Forest Service and applicant work together to reach agreement on the proposed activity before it is formally proposed. *See* 36 C.F.R. pt. 251, subpt. B; Special Uses Handbook, ch. 10 (Feb, 12, 2016). Neither process was followed here.

The processing of an application for renewal of an existing use of National Forest lands, such as NWNA’s application, ordinarily follows a streamlined process for renewal. “Proposals involving existing uses are immediately accepted as applications upon submission,” and “[i]nitial and second-level screening” are not required for “[p]roposals involving existing rather than proposed uses.” Special Uses Handbook at 9-10. Forest Service regulations provide that the USFS “*shall* renew [an existing SUP] . . . if the project or facility is still being used for the purpose(s) previously authorized and is being operated and maintained in accordance with all the provisions of the authorization.” 36 C.F.R. § 251.64(a) (emphasis added). NWNA’s activities meet these requirements and have been approved by the Forest Service many times over the past 80 plus years. Thus, the proposed terms and conditions of a SUP reissuance should not come as a surprise to an applicant—as they did in this case—because such a SUP is for an existing activity without substantive change.

To the extent that the Forest Service was not simply processing NWNA’s application as a SUP renewal for an on-going activity without substantive change, it would have been obliged as a matter of administrative due process to follow the procedures that apply to an application for a new use. Applications for a new use involve an initial and second-level screening, meetings between the Forest Service authorized official and the applicant, and on-going communications until the proposal is accepted as a formal written application to the Forest Service, at which time the proposal would be published for public comment and evaluated under applicable statutes, such as the National Environmental Policy Act (“NEPA”). Accordingly, such a new proposal would not surprise the applicant because it would reflect its formal submission to the Forest Service after extensive consultation with its staff. But here, the Forest Service omitted these procedural steps, and proposed a SUP that differs substantially from NWNA’s application. As a result, there has been no prior mutual understanding between NWNA and the Forest Service as to the proposal or how the process would proceed. Instead, the Forest Service acted unilaterally and published a Proposed Action fundamentally different from NWNA’s application.

By not following applicable procedures, the Forest Service has placed NWNA in much the same position as a third party member of the public, not knowing what the Forest Service intended to propose until the public notice was issued (rather than in the position of an applicant, who holds valuable property and procedural due process rights). In so doing, the Forest Service failed to observe the necessary and applicable procedural safeguards and requirements set forth in its own regulations and Special Uses Handbook.

#### 4. The Forest Service's Authority is Limited to Imposing Reasonable Right-of-Way Conditions.

The Forest Service may impose reasonable conditions on the use of land within the permitted right-of-way. However, the proposed AMP framework, which includes triggers for restricting Nwana's water collection, exceeds the Forest Service's authority. Under the Act of 1866, appropriators with vested water interests within public lands have a "right-of-way" to access and "use" the water under state law. 43 U.S.C. § 661 ("Whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes, have vested and accrued, and the same are *recognized and acknowledged by the local customs, laws, and the decisions of courts*, the possessors and owners of such vested rights *shall be maintained and protected in the same*; and the *right of way* for the construction of ditches and canals...*is acknowledged and confirmed...*")<sup>8</sup> (emphasis added). Nwana's water rights were recognized by local rules and customs in *Del Rosa Mut. Water Co. v. D. J. Carpenter*, Case No. 31798 (San Bernardino Cty. Sup. Ct., October 19, 1931) (discussed in Subsection C below). Therefore, Nwana has a statutory right-of-way pursuant to the 1866 federal statute that "shall be maintained and protected." 43 U.S.C. § 661.

Where a person has a property right (fee simple, usufructuary, or other property interest) surrounded by a federal reservation (such as SBNF), the federal government has an obligation to allow the property owner to freely access its property, subject to reasonable regulation of that access consistent with the relevant regulations. For example, in *Adams v. United States*, the Nevada District Court considered whether the Forest Service was required to allow a right-of-way for a private party to access and exercise a usufructuary water right identical to Nwana's water rights. The *Adams* court confirmed that, where a vested water right existed under Nevada law, the Forest Service was required to provide the rights holders with reasonable access across Forest Service land to access their water. *Adams v. United States*, 3 F.3d 1254, 1259-60 (9th Cir. 1993). Accordingly, the Forest Service must provide access to Nwana's property (in this case, land-locked water rights) for the beneficial use of those rights, but it may impose *reasonable* conditions on the means of access through its standard permitting process.

Conditions such as those found in the Special Uses Handbook are the types of reasonable measures that the Forest Service may employ. See Special Uses Handbook, ch. 50 § 52; *Adams*, 3 F.3d at 1258 (owners of inholdings must "comply with the rules and regulations applicable to ingress and egress to and from the National Forest system"). Permit conditions may not be arbitrary, may not have the effect of limiting Nwana's full use and enjoyment of its water rights, and must be reasonably related to regulating Nwana's use of the right-of-way. See, e.g., *United States v. Mango*, 199 F.3d 85, 93 (2d Cir. 1999) (Army Corps of Engineers may only impose permit conditions that are "reasonably related" to its jurisdiction over discharges of dredged or fill material into waters of the U.S.).

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<sup>8</sup> By amendment 14 years later, 16 Stat. 217, 218 (1870), the Mining Act was clarified as "not limited to [validating] rights acquired before 1866," but instead "reach[ed] into the future ... and approve[d] and confirm[ed] the policy of appropriation for a beneficial use, as recognized by local rules and customs, and the legislation and judicial decisions of the arid land states, as the test and measure of private rights in and to the nonnavigable water on the public domain." *California Oregon Power Co. v. Beaver Portland Cement Co.*, 295 U.S. 142, 155 (1935).

Standard SUP conditions are also set forth in the Special Uses Handbook. For example, it may be appropriate for the Forest Service to require “safe and proven engineering practices,” impose use restrictions on the type of fertilizers or herbicides to maintain the right-of-way, or require Nwana to use a specific road or trail to access the right-of-way. Special Uses Handbook, ch. 50 § 52. The overall physical aspects and utilization of the right-of-way are not altered in any way by the reissuance of the SUP, but the Forest Service Proposed Action goes well beyond these types of appropriate conditions to, among other things, require Nwana to modify its water collection activities under an AMP “if monitoring showed that water extraction was impacting surface water flow and riparian dependent resources on the National Forest.” *See* Project Proposal § 2.

### **5. A CATEX is Appropriate for Reissuance of Nwana’s SUP.**

The reissuance of a SUP with administrative changes only falls squarely within the Forest Service’s Categorical Exclusion (“CATEX”) 15 under its NEPA regulations. CATEX 15 applies to:

Issuance of a new special use authorization for a new term to replace an existing or expired special use authorization when the only changes are administrative, there are no changes to the authorized facilities or increases in the scope or intensity of authorized activities, and the applicant or holder is in full compliance with the terms and conditions of the special use authorization.

36 C.F.R. § 220.6(e)(15).

If the Forest Service reissues SUP #7285 in accordance with Nwana’s application, each of these factors would be met: (1) it would replace an existing SUP; (2) the changes would be administrative only; (3) there would be no changes to the existing facilities; (4) there would be no increases in the scope or intensity of the use of the right-of-way; and (5) the applicant is in full compliance with the terms and conditions of its current SUP.

Where an action is covered by a CATEX, the Forest Service’s scoping process is required to analyze whether an “extraordinary circumstance” would result from reissuance of the SUP that would preclude its use. 36 C.F.R. § 220.6(a). The determination of whether an “extraordinary circumstance” would arise is based on whether reissuance of the SUP “may have a significant effect on the environment,” *id.* § 220.6(c), including an effect on certain specified resource conditions such as flood plains, wetlands, or wilderness or national recreation areas.<sup>9</sup> *Id.* § 220.6(b)(1). There is no information or data demonstrating that Nwana’s use of the land within the right-of-way (within the scope of the Forest Service’s regulatory control and discretion) results in an “extraordinary circumstance.” In fact Nwana and its predecessors have

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<sup>9</sup> Forest Service NEPA regulations emphasize that the “mere presence of one or more” resource conditions does not necessarily mean that “extraordinary circumstances” exist that preclude application of a CATEX. Rather, extraordinary circumstances exist *only if*: (1) there is a “cause-effect relationship between [the] proposed action and the potential effect on these resource conditions”; and (2) the “degree of the potential effect” may be significant. 36 C.F.R. § 220.6(b)(2), (c).

continuously operated the collection systems in Strawberry Canyon, exercising their water rights in conjunction with USFS SUPs since 1929 and Nwana has also complied with Cal. Water Code § 4999, *et seq.* through annual reports to the State Water Resource Control Board (“SWRCB”) since 1947. Indeed, a contrary conclusion as to the impacts of Nwana’s use of the right-of-way would contradict the Abbreviated Environmental Analysis issued in conjunction with the 1978 SUP. To the extent Nwana’s collection of its water is addressed in the new SUP through adaptive management, it must be done voluntarily by Nwana as explained elsewhere in these comments, and thus is outside of the Forest Service’s legal control and discretion. Moreover, Nwana proposes adaptive management that would fully preclude the existence of an extraordinary circumstance.

**B. The Forest Service’s Proposed Restrictions on Nwana’s Water Collection Would Be “Arbitrary and Capricious” Under the APA**

**1. The Proposed Restrictions on Water Collection Are Inconsistent with Other Recent SUPs Governed by the Same Land Management Plan.**

The Forest Service relies on a Land Management Plan (“LMP”) as the basis for the AMP. But the SBNF’s Proposed Action stands in stark contrast to actions taken by the SBNF’s sister national forest, the Los Padres National Forest (“LPNF”), even though both Forests are governed by the same LMP.<sup>10</sup> In 2013, the LPNF reissued a SUP to Quail Run Ranch for the use and maintenance of an existing spring-fed pipeline on LPNF lands. The LPNF did not restrict water uses, and applied a CATEX to that action, concluding that the infrastructure “would not result in adverse environmental effects.”<sup>11</sup> The SUP issued by the LPNF confirmed that “[w]ater rights must be acquired . . . in accordance with state law,” and noted state water rights were granted by the SWRCB in 1957 and 1988, nearly 100 years after Nwana’s predecessor-in-interest acquired its water rights, and after the establishment of the LPNF. The final permit contained no conditional requirements to conduct hydrologic and riparian studies, and no adaptive management plan with restrictive triggers.

Just last year, within SBNF boundaries, the Forest Service, reissued a 30-year permit for continued operation and use of six water pipelines – each eight inches in diameter or larger extending a total of more than 15,000 feet in length – and a large water reservoir. Again, this permit was categorically excluded from further environmental analysis and was issued without any conditional, hydrological requirements. Finding the “decision is consistent with the [SBNF LMP],” the Forest Supervisor stated the project could “be implemented immediately.”<sup>12</sup>

There is no legal justification to treat Nwana’s application to reissue its long-standing SUP differently.

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<sup>10</sup> Forest Service, *Land Management Plan, Part 3 Design Criteria for the Southern California National Forests* (Sept. 2005) (including the Angeles National Forest, Cleveland National Forest, Los Padres National Forest and San Bernardino National Forest).

<sup>11</sup> Forest Service, Ojai Ranger District, Decision Memo: Mike Cromer – Quail Run Ranch Special Use Permit Reissuance Project, at 2 (June 13, 2013).

<sup>12</sup> Forest Service, San Jacinto Ranger District, Decision Memo: Desert Water Agency Permit Reissuance, at 8 (Feb. 24, 2015).

## **2. LMPs Are Guidance and Do Not Provide a Legal Basis to Restrict Valid Water Rights.**

Section 2.8 of the Project Proposal states that the “permittee will be required to implement an Adaptive Management Plan to ensure that water extraction is consistent with San Bernardino National Forest Land Management Plan (LMP) standards,” but an LMP cannot be the legal basis upon which the Forest Service restricts the use of private water rights. Nor can an LMP be the basis for conditioning the issuance of an SUP. Like the Forest Service Manual and Handbook, LMPs are not promulgated pursuant to the procedural requirements of the Administrative Procedure Act, which requires public notice and comment on any proposed federal rulemaking. Neither are LMPs published in the Code of Federal Regulations. Thus, they do not have the force of law, but can only serve as guidance to Forest Service personnel. The National Forest Management Act (“NFMA”) authorizes the Secretary of Agriculture to promulgate regulations for the purpose of managing the national forests, but the NFMA expressly disclaims any intent to affect “valid existing rights.” 16 U.S.C. § 1604(i) (“Any revision in present or future permits, contracts, and other instruments made pursuant to this section shall be subject to valid existing rights.”). Even if the NFMA authorized the Forest Service to regulate valid water rights, which it does not, LMPs are not federal regulations and thus, do not provide the necessary authority to the Forest Service to limit an applicant’s use of its state water rights.

## **3. The Proposed Action Would Create Problematic Precedent Nationwide.**

Water is essential to life, and faced with a multi-year drought, California implemented severe conservation requirements on water usage throughout the state. Nwana’s water rights are governed by the laws of California and the regulatory agencies that carry out those laws. But the approach taken by the SBNF threatens to create a bifurcated system of water management in California and, potentially, across the United States.

The vast majority of public land in the United States is located in the West, where water is too often in scarce supply. The Forest Service, in particular, owns approximately 20 percent of the land in California<sup>13</sup> and between five and 40 percent of the land in other western states. If the Forest Service asserts a right to regulate third party use of state-regulated water within national forest boundaries (a right it does not have under federal or state law), all parties with state-based water rights will be threatened, the hierarchy of senior water rights undermined, and long-term economic expectations thrown into doubt. Western states and their congressional delegations will be pressed to consider the Forest Service’s new assertion of authority, its disregard of the established doctrine of prior appropriation, and encroachment upon each state’s ability to allocate and manage its water supplies, particularly in times of drought.

As discussed below, Nwana’s water rights in the SBNF are among the most senior water rights in the State of California. The SBNF’s attempt to control whether, and to what extent, Nwana may exercise its water rights outside the purview of the SWRCB will have a chilling

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<sup>13</sup> Five federal agencies, including the USFS, own 46% of the land in California. See Cong. Res. Serv. *Federal Land Ownership: Overview and Data* (Dec. 29, 2014).

effect on the security and stability of the state's water supplies. Allowing junior appropriators to restrict water extraction by senior right holders destabilizes a carefully crafted system of water appropriation and usage that provides the basis for long-term investments in the development of reliable and sustainable water supplies. Likewise, local water and property interest groups will have serious concerns with the Forest Service's new assertion of authority. This proposal will likely open the door to additional scrutiny of Forest Service permits nationwide.

**C. The Proposed Action Intrudes Upon Federal Deference to State Management of Its Water Supply**

NWNA's ownership of and rights to the waters of Strawberry Canyon derive from California state law. NWNA's water rights date back to a possessory claim recorded in 1865, and a subsequent land patent from the United States recorded in 1882. These appropriative rights were subsequently perfected by NWNA's predecessors-in-interest in accordance with state law and were upheld by a state court adjudication in 1931.

For well over a century, NWNA and its predecessors-in-interest have diverted and put to "beneficial use" under applicable law the waters in Strawberry Canyon located within the SBNF. This beneficial water use predates the reservation of land that comprises the SBNF, and access to the springs for this purpose has continued pursuant to SUPs issued by the Forest Service since 1929. The Arrowhead Springs were the original source for the current Arrowhead® 100% Mountain Spring Water brand, and the right-of-way provides the only currently available, environmentally responsible means of transporting water from Arrowhead Springs off the SBNF.

The Forest Service is required to recognize and comply with state law governing the use of water on federal lands, and has historically honored NWNA's water rights by continuously permitting a right-of-way for the spring water pipeline across the SBNF. The current permit (SUP #7285) acknowledges this deference to state water law.

We believe the Forest Service's Proposed Action exceeds its legal authority to regulate water and disregards the state laws that administer water rights both on and off federal land. NWNA owns the right to collect spring water from the Arrowhead Springs. As proposed, the new SUP and the accompanying AMP, in our view, usurp those rights.

**1. NWNA's Vested State Water Rights Predate Reservation of the SBNF.**

Before the State of California enacted the Water Commission Act in 1914, interested parties could voluntarily file a notice with the local county recorder's office describing their water appropriation. This filing put other potential appropriators on notice of the appropriation. Cal. Civil Code of 1872 §§ 1410-1415; *see also Irwin v. Phillips*, 5 Cal. 140, 141 (1855) ("the rule of time is the rule of right; and the first taker is to be protected in his entry and possession"). NWNA's ownership of and right to the spring waters in Strawberry Canyon can be traced to a possessory claim to the waters recorded by David Noble Smith on March 21, 1865 (Book "A" of Possessory Claims, at 75), and a subsequent patent from the United States to Mr. Smith which

was recorded on February 1, 1882 (Book “B” of Patents, at 91). This history has previously been acknowledged by the Forest Service.<sup>14</sup>

In 1931, a dispute arose over the use of water in East Twin Creek and its tributaries, including Strawberry Creek. See *Del Rosa Mut. Water Co.*, *supra* section II.A.4. NWNA’s predecessor, California Consolidated Water Company (“CCWC”), was named as a defendant in that action. The *Del Rosa* court concluded that CCWC’s pre-existing rights included “any and all of the water of all springs situated or obtainable in . . . ‘Strawberry Creek and Canyon’ and canyons lateral thereto.” *Id.* at 11.

The *Del Rosa* court recognized CCWC’s right to all of the waters of Strawberry Creek and to “develop, by means of tunnels or . . . pipe line” all springs or water situated in the upstream area and “to take and transport [such water] . . . out of [the] watershed for bottling or other purposes . . . .” This finding was expressly based on the fact that these appropriative, pre-1914 rights had been put to continuous, beneficial use “for more than 50 years.” *Id.* at 6, 11 (emphasis added). In an April 20, 1964 memorandum, the San Bernardino Forest Supervisor concluded that the 1931 *Del Rosa* judgment is binding on the Forest Service because “water rights in California are applied for and held by applicable state law,” the “application involves one of the few water rights that was actually contested,” and “the government has never held any water rights in this drainage. . . .”<sup>15</sup>

The SBNF was established in 1893 pursuant to Proclamation No. 48 (27 Stat. 1068). Congress, in giving the President the power to withdraw land from the public domain and reserve portions for specific federal purposes, including national forests, impliedly authorized the President to reserve “water then *unappropriated*” and “only that amount of water necessary to fulfill the purpose of the reservation, no more.” *Cappaert v. United States*, 426 U.S. 128, 138, 141 (1976) (emphasis added). Because NWNA’s water rights were appropriated decades before this reservation was made, they represent *appropriated* water and cannot, therefore, be subject to any implied reservation of unappropriated water by the federal government.

The Forest Service has no legal right to the waters it now attempts to appropriate through regulation. Rather, the Forest Service’s authority is limited to imposing reasonable conditions on NWNA’s use of Forest Service land within the permitted right-of-way.

## **2. The Federal Statutes Cited by the Forest Service Do Not Authorize Control of State Adjudicated Water Rights.**

In its Public Notice for the Proposed Action and other correspondence, the Forest Service references the Organic Administration Act of 1897, the Federal Land Policy and Management Act (“FLPMA”), and the National Forest Management Act (“NFMA”) as providing legal authority for its proposal. Specifically, the Forest Service states that it proposes to authorize the water transmission pipeline and other support facilities pursuant to FLPMA, and the water

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<sup>14</sup> Appropriative water use in Strawberry Canyon since 1864 by NWNA’s predecessor-in-interest was acknowledged by Harry Simpson, Forest Lands Officer, in a letter to the Regional Forester dated January 31, 1978.

<sup>15</sup> Memorandum from Kenton P. Clark, District Ranger, Cajon, to Forest Supervisor, San Bernardino at ¶ 3 (Apr. 20, 1964); see also *supra* note 2.

collection tunnels and horizontal wells pursuant to the Organic Administration Act. Project Proposal §§ 2 and 3. While FLPMA and NFMA do provide general regulatory direction for rights-of-way and development of LMPs adopted by National Forests, neither authorizes regulation of state-based water rights.

Directly contrary to the Forest Service’s proposal, the Organic Administration Act specifies that use of waters within national forests is to be determined under state law. 16 U.S.C. § 481 (“All waters within the boundaries of national forests may be used for domestic, mining, milling, or irrigation purposes, under the laws of the State . . .”). Thus, the Act clearly acknowledges the primacy of a state to manage the waters within its jurisdiction. In accordance with this provision, the Forest Service Watershed and Air Management Manual, FSM 2500 at § 2541.1 (Sept. 4, 2007) directs forest managers to “apply[] for water under state laws or [to] purchase[] water rights,” once they have determined what is required.<sup>16</sup> The Organic Administration Act provides no authority for Forest Service regulation of Nwana’s state water rights, or the permitting of horizontal wells or water collection tunnels, which are also regulated under state law.

Nor does FLPMA provide the requisite authority to the Forest Service. Section 505 of FLPMA authorizes the issuance of SUPs for federal land use, including terms and conditions to carry out the statute’s purpose. 43 U.S.C. § 1765(a). But FLPMA expressly states that “[n]othing in this Act . . . shall be construed as terminating any valid . . . right-of-way, or other land use right or authorization existing on the date of approval of this Act,” and that “all actions by the Secretary concerned under this Act shall be subject to *valid existing rights*.” Pub. L. No. 94-579 § 701(g) and (h) (emphasis added); *Cty. of Okanogan v. Nat’l Marine Fisheries Serv.*, 347 F.3d 1081, 1085 (9th Cir. 2003) (“[T]he government could not under the FLPMA divest a private party of an existing ‘land use right’ or other ‘valid existing rights.’”). As a consequence, the Federal Water Rights Task Force concluded that Section 706 (g)(1)<sup>17</sup> prohibits FLPMA’s use in “any manner that would interfere with the diversion and use of water allocated to and owned by non-federal water users under state laws, or to interfere with state water allocation and administration systems.”<sup>18</sup>

In the Project Proposal, the Forest Service also cites the NFMA to support its proposed action, quoting the provision that states “permits, contracts and other instruments for the use and occupancy of National Forest Service lands shall be consistent with the land use plans.” 16 U.S.C. § 1604(i). However, the same section of the NFMA also expressly disclaims any intent to affect “valid existing rights.” *Id.* (“Any revision in present or future permits, contracts, and other instruments made pursuant to this section shall be subject to valid existing rights.”).

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<sup>16</sup> See also *United States v. New Mexico*, 438 U.S. 696, 703 n.7 (1978) (“the rights to use water for national forest purposes . . . will be obtained in accordance with State law.”) (quoting Forest Service Manual at § 2514.1 (Jan. 1960)).

<sup>17</sup> “Nothing in this Act shall be construed . . . (1) as affecting in any way any law governing appropriation or use of . . . water on public lands; (2) as expanding . . . Federal . . . jurisdiction, responsibility, interests, or rights in water resources development or control.” Pub. L. No. 94-579, § 701(g).

<sup>18</sup> Report of the Federal Water Rights Task Force Created Pursuant to Section 389(D)(3) of P.L. 104-127, Part VI Forest Service Legal Authority (Aug. 25, 1997).

Although not mentioned in the Project Proposal, the Multiple Use Sustained Yield Act of 1960 (“MUSYA”), 16 U.S.C. §§ 528 *et seq.*, which expanded the authorized uses of national forest land, is also an important federal law. While MUSYA specifically addresses additional authorized activities in the national forests, including recreation, wildlife and fish preservation, it contains a savings provision that explicitly leaves state water law requirements intact. The reason for this state water rights savings clause becomes apparent when viewed in the larger context of the traditional state law allocation and regulation of water use within state boundaries.

### **3. Forest Service Restriction of Senior, State-Based Water Rights Would Undermine the Security of California’s Appropriative Framework.**

The United States Supreme Court has repeatedly confirmed Congress’ traditional deference to western state water law in the management of federal lands and federal water projects. The seminal case, *United States v. New Mexico*, 438 U.S. 696 (1978), involved the Forest Service’s claim to a federal reserved water right in the Gila National Forest for recreation and wildlife preservation. In this context, the state water law savings clause was carefully analyzed by the Supreme Court, and the Court stated “[w]hile we conclude that [MUSYA] was intended to broaden the purposes for which national forests had previously been administered, we agree that Congress did *not* intend to thereby expand the reserved [water] rights of the United States.” 438 U.S. at 713 (emphasis added). Such an expansion, the Court reasoned, “could mean a substantial loss in the amount of water available for irrigation and domestic use, thereby defeating Congress’ principal purpose of securing favorable conditions of water flow.” *Id.* at 715.

The Court concluded that a federal reserved water right for the national forests is limited to the primary purposes of the forest, and rejected the claim that Congress intended to reserve water for, *inter alia*, wildlife purposes on national forest lands. *Id.* at 708, 711. Instead, the Court held that “Congress authorized the national forest system principally as a means of enhancing the quantity of water that would be available to the settlers of the arid West,” and “intended, consistent with its other views, that the United States would acquire water in the same manner as any other public or private appropriator.” *Id.* at 713, 702.

In California, the SWRCB is exclusively authorized to administer the State’s surface water appropriation system.<sup>19</sup> The SWRCB has, consistent with the holding in *United States v. New Mexico*, undertaken to determine and administer water rights on national forest land “in the same manner as any other public or private appropriator.” *In re Water of Hallett Creek Stream Sys.*, 44 Cal. 3d 448, 471-72 (1988) (if the Forest Service intends to exercise any federal riparian rights, “[it] must apply to the State Water Resources Control Board or to the court . . .”). Thus, if it seeks to exercise federal riparian rights on forest lands for recreation, wildlife and preservation of stream flow, the Forest Service would need to apply for authorization from the SWRCB. The SWRCB would, as in *Hallett Creek*, evaluate the proposed use in context of other

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<sup>19</sup> The SWRCB may determine “all rights to water of a stream system whether based upon appropriation, riparian right, or other basis of right.” California Water Code, § 2501. The SWRCB may make such “determinations as to the scope, nature and priority” of unexercised federally-held riparian rights as the Board deems “reasonably necessary to the promotion of the state’s interest in fostering the most reasonable and beneficial use” of its water resources. *In re Waters of Long Valley Creek*, 25 Cal. 3d 339, 359 (1979).

uses and determine whether, and to what extent, a riparian use should be permitted in light of the state's interest in promoting the most efficient and beneficial use of the state's waters.

There are sound public policy reasons for limiting the recognition of dormant riparian water rights. “[U]ncertainty impairs the state’s administration of water rights . . . and affects decisions to grant permits, because the availability of water for appropriation and the existence and extent of other beneficial uses of water are uncertain. It also affects the ability of the [SWRCB] to set meaningful terms and conditions to provide effective enforcement and protection of statutory water rights.” *In re Waters of Long Valley Creek*, 25 Cal.3d 339, 356 (1979) (citing Governor’s Comm. to Review Cal. Water Rights Law, Final Rep. at 22 (Dec. 1978)).

In summary, the Forest Service Proposed Action seeks to displace Nwana’s senior, state-based water rights with a self-granted superior federal right to put water to use for riparian uses. We believe such action is directly contrary to the many savings provisions of the Organic Administration Act, MUSYA, FLPMA and NFMA, and the holdings of the United States Supreme Court in *New Mexico*. While we recognize the need to balance withdrawals with environmental needs, we believe this can be best accomplished through voluntary, science-based programs.

**D. The Forest Service’s Curtailment of Nwana’s Vested Water Rights Could Lead to a Compensable Taking Under the Fifth Amendment.**

The Forest Service’s Proposed Action could significantly reduce Nwana’s ability to collect water. Such a curtailment of Nwana’s vested water rights could amount to a regulatory taking under the Fifth Amendment entitling Nwana to just compensation.<sup>20</sup> The “Takings Clause” of the U.S. Constitution “is designed not to limit the governmental interference with property *per se*, but rather to secure *compensation* in the event of otherwise proper interference amounting to a taking.” *First English Evangelical Lutheran Church of Glendale v. Cnty. of L.A.*, 482 U.S. 304, 315 (1987). A physical takings occurs by “a direct government appropriation or [a] physical invasion of private property.” *Lingle v. Chevron U.S.A., Inc.*, 544 U.S. 528, 537 (2005). The size and scope of a physical invasion is immaterial to the analysis; even if the government only appropriates a tiny slice of a person’s holdings, a taking has occurred, and the owner must be provided just compensation. *Tahoe-Sierra Preservation Council v. Tahoe Reg. Planning Agency*, 535 U.S. 302, 322 (2002).

Nwana has vested, senior water rights in the Arrowhead Springs of Strawberry Canyon. It is well settled that water rights are considered “property” for the purposes of a constitutional

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<sup>20</sup> The Fifth Amendment provides that private property shall not “be taken for public use, without just compensation.” U.S. Const. amend. V. The seminal regulatory takings case, *Penn Central Transportation Co. v. New York City*, identifies three factors of particular significance in determining whether a regulation goes too far: (i) the “economic impact of the regulation on the claimant,” (ii) the “extent to which the regulation has interfered with distinct investment-backed expectations,” and (iii) “the character of the governmental action.” 438 U.S. 104, 124 (1978). A regulation depriving a landowner of “all economically beneficial uses in the name of common good” can also amount to a taking. *Lucas v. South Carolina Coastal Council*, 505 U.S. 1003, 1019 (1992).

takings claim.<sup>21</sup> Indeed, courts have granted compensatory relief in similar circumstances. For example, in *Tulare Lake Basin Water Storage Dist. v. United States*, county water agencies in California received compensation when their contractually-conferred right to use river water was restricted by the federal government to protect endangered species. 59 Fed. Cl. 246, 247 (2003). Similarly, in *Casitas Municipal Water Dist. v. United States*, 543 F.3d 1276 (Fed. Cir. 2008), imposition of requirements to divert water and install equipment to protect endangered species amounted to a taking because the government was found to have directly appropriated Casitas' water for its own use – preservation of an endangered species. *See also Store Safe Redlands Assocs. v. United States*, 35 Fed. Cl. 726, 736 (1996). The denial or conditioning of a permit that deprives a party of its property has also been found to amount to a compensable taking. *Lost Tree Village Corp. v. United States*, 787 F.3d 1111, 1116 (Fed. Cir. 2015) (upholding trial court's determination that the government's permit denial diminished value of the parcel by 99.4% and thus constituted a taking). Therefore, any final adaptive management plan imposing restrictions on NWNA's vested water rights that amount to a "take," could give rise to a compensable takings claim.

### **III. NWNA WILL COMMIT TO MEET ALL USFS OBJECTIVES THROUGH A VOLUNTARY ADAPTIVE MANAGEMENT APPROACH**

The Forest Service proposal includes studies and an adaptive management plan designed to maintain a "desired condition for the area" that includes "a natural appearing landscape . . . managing vegetation to provide fire protection for adjacent urban communities . . . [and improvement of] conditions for threatened, endangered, and sensitive species." Project Proposal § 3.

NWNA firmly believes that its exercise of its State water rights to the spring waters of Strawberry Canyon is not subject to Forest Service discretion or control (including through the imposition of adaptive management requirements). Furthermore, as explained above, NWNA firmly believes that its operations are sustainable and do not harm the environment. Nevertheless, NWNA will commit to implement a voluntary adaptive management approach based on objective, scientific triggers and standards.

Because of the reasons set forth in sections II and IV of these comments, NWNA is proposing the following AMP and scientific studies as an alternative to the USFS AMP.

[NWNA Proposed Adaptive Management Plan Commences on Following Page]

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<sup>21</sup> *See, e.g., Casitas Municipal. Water Dist. v. United States*, 543 F.3d 1276, 1288 (Fed. Cir. 2008); *Store Safe Redlands Assocs. v. United States*, 35 Fed. Cl. 726, 736 (1996) ("the government legally cannot deprive plaintiff of its rights to water without compensation"); *Tulare Lake Basin Water Storage Dist. v. United States*, 49 Fed. Cl. 313, 318 (2001) ("plaintiffs' contract rights in the water's use . . . [are] a property interest").

## **ARROWHEAD SPRINGS PROPOSED ADAPTIVE MANAGEMENT PLAN**

The purpose of this voluntary NWNA Proposed Adaptive Management Plan (“NWNA AMP”) is to establish objective data collection and specific criteria that may be used to evaluate the effects of project operations and to provide an informed framework to adapt operations if necessary to meet the SBNF objectives. By its nature, an adaptive management plan is heavily dependent on monitoring data describing site-specific conditions that may be used to establish effective triggers to govern management decisions. Efforts are currently underway in Strawberry Canyon to collect the data necessary to support an adaptive management plan that may be applied to the project site over the long-term. In order to establish an appropriate site-specific baseline that incorporates natural seasonal and multi-year variability, the data collection activities of the NWNA AMP are anticipated to extend over a period of at least five years and shall include at least one drought cycle.

NWNA proposes an adaptive management plan that is responsive to regional and local climatic inputs and will also serve to produce data describing attributes of natural hydrologic and riparian systems. This NWNA AMP is intended to be modified to incorporate site-specific observations and to revise triggers, actions, and monitoring to further protect existing riparian resources as additional site-specific data become available.

The NWNA AMP includes a series of objectives derived from standards provided in the Land Management Plan for the Southern California National Forests (September 2005) (“So. Cal LMP”). Each objective includes:

- (1) Stated Forest Plan objective
- (2) Monitoring program to assess if the objective is being met
- (3) Trigger point(s) indicating if the objective is not being met
- (4) Action(s) in response to each trigger to achieve the stated objective
- (5) Monitoring to assess effects of actions

This proposed NWNA AMP includes four stated objectives derived from the So. Ca. LMP, together with triggers, actions, and monitoring programs to achieve those objectives. Each of these elements is described in detail below.

### **Objective 1 Water Standards**

- (1) **Land Management Plan, Part 3 Design Criteria for the Southern California National Forests (September 2005), S46:** “Surface water diversions and groundwater extractions, including wells and spring developments will only be authorized when it is demonstrated by the user, and/or agreed to by the Forest Service, that the water extracted is excess to the current and reasonably foreseeable future needs of forest resources.”

- (a) “Consideration of beneficial uses, existing water rights, and the absence of other available water resources will be part of the water extraction application.”
  - (b) “Approved extractions and diversions will provide for long-term protection and reasonable use of surface water and groundwater resources.”
  - (c) “Feasibility and sustainability assessments should be appropriately scaled to the magnitude of the extraction or diversion proposed.”
- (2) Proposed Monitoring Components:
- (a) Establish baseline monitoring criteria for steep gradient (>10%), tectonically active, arid intermittent streams.
  - (b) Develop watershed scale water balance that incorporates precipitation, groundwater inflow, infiltration/overland flow, evapotranspiration, surface water outflow, extraction, and groundwater outflow.
  - (c) Develop a calibrated groundwater-surface water model that incorporates the water balance elements described above and incorporates geologic attributes of the Strawberry Creek watershed within five years of permit issuance.
  - (d) Conduct Stream Condition Inventory (“SCI”) described in the document titled Stream Condition Inventory, Technical Guide, Pacific Southwest Region (July 2005), Version 5.0, to identify and quantify characteristics of existing riparian areas within Strawberry Canyon. Repeat inventory during spring and fall each year to develop a seasonal multi-year baseline describing existing riparian habitat. Include description of habitat requirements for each species.
  - (e) Water quality testing to maintain compliance with Clean Water Act Basin Plan.
    - (i) 475 mg/L TDS

(3) Proposed Triggers:

The planned data collection described above under the heading Monitoring Components represents a substantial effort to collect data that do not presently exist. Because these data have not yet been collected, they cannot yet be used to support associated triggers. Consequently, interim triggers are included below that are based on regional drought conditions. These triggers may be revised in the future once the necessary data are collected to support triggers based on site-specific measurements. The triggers described below are based on the self-calibrating

Palmer Drought Severity Index (“scPDSI”),<sup>22</sup> which provides a publicly available and reasonable indication of drought stress conditions determined by industry standard methods.

- (a) The scPDSI indicates that moderate drought conditions (scPDSI score between -2.0 and -2.99) exist at Strawberry Canyon (“Trigger A-1”).
  - (i) This trigger indicates that an unusually low amount of precipitation has been received and riparian resources may become stressed.
- (b) The scPDSI indicates that severe drought conditions (scPDSI score between -3.0 and -3.99) exist at Strawberry Canyon (“Trigger B-1”).
  - (i) This trigger indicates that low precipitation conditions persist and stress on riparian resources may increase.
- (c) The scPDSI indicates that extreme drought conditions (scPDSI score of -4.0 or less) exist at Strawberry Canyon (“Trigger C-1”).
  - (i) This trigger indicates that low precipitation conditions have persisted for some time and riparian resources are likely to be impacted.

(4) Proposed Actions:

The actions described below will facilitate generation of data that will describe the effects of reduced collection and/or bypass release, and the resultant effects on surface flows under drought conditions.

- (a) When Trigger A-1 is reached, reduce total collection by 20 percent as measured at the borehole meters by shutting in, or valving back horizontal boreholes (“Action A-1”).
- (b) When Trigger B-1 is reached, reduce total collection an additional 10 percent (30 percent total) as measured at the borehole meters by shutting in, or valving back horizontal boreholes (“Action B-1”).
- (c) When Trigger C-1 is reached, reduce total collection by an additional 20 percent (50 percent total) as measured at the borehole meters, releasing this water into the environment near the springs (“Action C-1”).
- (d) The above Proposed Actions A-1 through C-1 for this Objective 1 are not intended to be cumulative with the below proposed actions for Objective 2, 3, or 4.

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<sup>22</sup> PDSI is a measurement of dryness based on recent precipitation and temperature developed by meteorologist Wayne Palmer, who first published his method in 1965 for the Office of Climatology of the U.S. Weather Bureau. It is widely used operationally, with Palmer maps published weekly by the U.S. National Oceanic and Atmospheric Administration.

- (5) Proposed Monitoring:
- (a) Following Trigger A-1 and Action A-1:
    - (i) Continue baseline monitoring for steep gradient (>10%), tectonically active, arid intermittent streams.
    - (ii) Log piezometric pressure at shut in or valved back boreholes as an indication of the piezometric surface above the boreholes.
    - (iii) Measure water quality parameters.
  - (b) Following Trigger B-1 and Action B-1:
    - (i) Continue baseline monitoring for steep gradient (>10%), tectonically active, arid intermittent streams.
    - (ii) Log piezometric pressure at shut in or valved back boreholes as an indication of the piezometric surface above the boreholes.
    - (iii) Measure water quality parameters.
  - (c) Following Trigger C-1 and Action C-1:
    - (i) Continue baseline monitoring for steep gradient (>10%), tectonically active, arid intermittent streams.
    - (ii) Increase frequency of Stream Condition Inventory to three times annually, with emphasis on dry season.
    - (iii) Measure water quality parameters.

## **Objective 2 - Riparian Standards**

- (1) **Land Management Plan (LMP), Part 3 Design Criteria for the Southern California National Forests (2005), S47:** “When designing new projects in riparian areas, apply the Five-Step Project Screening Process for Riparian Conservation Areas (RCAs) as described in LMP Appendix E - Five-Step Project Screening Process for RCAs.”

“In the [RCAs] that include perennial and intermittent streams, lakes, and wetlands, allow only those actions that maintain or improve long-term aquatic and riparian ecosystem health including quantity, quality, and timing of stream flows.”

The Five Step Project Screening Process includes consideration of physical factors (such as soil characteristics, groundwater and surface water characteristics, geology and geologic hazards, slope, and stream characteristics) and biological

factors (such as aquatic and riparian dependent species present, and their habitat needs (see species guidance documents in LMP Part 3, Appendix H)).

The Arrowhead SUP does not represent a new project, but rather reauthorization of an existing right-of-way; however it is recognized that the Five Step Project Screening Process provides value in that it will allow existing RCAs to be identified, protected, and maintained.

(2) Proposed Monitoring Components:

- (a) Identify appropriate locations in other front country watersheds that may be used to serve as paired reaches for qualitative comparison of riparian conditions in Strawberry Canyon. Define current riparian/stream health at all comparison reaches in each watershed.
  - (i) Comparison reaches need not be identical, but should be similar with respect to size, slope, channel gradient, number and type of tributaries, location, soils characteristics, land cover, topography, aspect, hydrology, geology, and land use.
  - (ii) Baseline evaluation of the paired reaches will continue for a minimum period of five years.
  - (iii) Use a modified stream condition inventory/proper functioning condition (SCI/PFC) protocol to gather geomorphology, plant physiology, extent of riparian vegetation (including native mid to late seral stage), condition of the channel, stream characteristics, flow, water quality, macroinvertebrate diversity, stream hydrograph, precipitation, geologic structural controls on flow, etc.
  - (iv) Determine habitat suitability by using protocol standards established for southwestern willow flycatcher, least Bell's vireo, California gnatcatcher, Santa Ana speckled dace, and mountain yellow-legged frog.

(3) Proposed Triggers:

The planned data collection described above under the heading Proposed Monitoring Components represents a substantial effort to collect data that do not presently exist. Because these data have not yet been collected, they cannot yet be used to support associated triggers. Consequently, interim triggers are included below that are based on regional drought conditions. These triggers may be revised in the future once the necessary data are collected to support triggers based on site-specific measurements. The triggers described below are based on the scPDSI, which provides a publicly available and reasonable indication of drought stress conditions determined by industry standard methods.

- (a) The scPDSI indicates that moderate drought conditions (scPDSI score between -2.0 and -2.99) exist at Strawberry Canyon ("Trigger A-2").

- (i) This trigger indicates that an unusually low amount of precipitation has been received and riparian resources may become stressed.
- (b) The scPDSI indicates that severe drought conditions (scPDSI score between -3.0 and -3.99) exist at Strawberry Canyon (“Trigger B-2”).
  - (i) This trigger indicates that low precipitation conditions persist and stress on riparian resources may increase.
- (c) The scPDSI indicates that extreme drought conditions (scPDSI score of -4.0 or less) exist at Strawberry Canyon (“Trigger C-2”).
  - (i) This trigger indicates that low precipitation conditions have persisted for some time and riparian resources are likely to be impacted.

(4) Proposed Actions:

The actions proposed below will facilitate generation of data that will describe the effects of reduced collection and/or bypass release, and the resultant effects on riparian resources under drought conditions.

- (a) When Trigger A-2 is reached, reduce total collection by 20 percent as measured at the borehole meters by shutting in, or valving back, the horizontal boreholes (“Action A-2”).
- (b) When Trigger B-2 is reached, reduce total collection an additional 10 percent (30 percent total) as measured at the borehole meters by shutting in, or valving back, the horizontal boreholes (“Action B-2”).
- (c) When Trigger C-2 is reached, reduce total collection by an additional 20 percent (50 percent total) as measured at the borehole meters, releasing this water into the environment near the springs (“Action C-2”).
- (d) The above Proposed Actions A-2 through C-2 for this Objective 2 are not intended to be cumulative with the proposed actions for Objective 1, 3, or 4.

(5) Proposed Monitoring:

- (a) Use a modified stream condition inventory/proper functioning condition (“SCI/PFC”) protocol to gather geomorphology, plant physiology, extent of riparian vegetation (including native mid to late seral stage), condition of the channel, stream characteristics, flow, water quality, macroinvertebrate diversity, stream hydrograph, precipitation, geologic structural controls on flow, etc.

- (b) Shallow groundwater monitoring piezometers (with data loggers) set back from the channel to either side, where soil conditions permit installation with hand tools, within the riparian corridor to measure rooting depth for riparian plants.
- (c) Monitor riparian vegetation health across the lateral extent of the survey reaches using vegetative health indicators, determined through consultation with Forest Service botanist, to identify the effects of reduced extraction on existing riparian resources.

### **Objective 3 – Species Standards**

- (1) **Land Management Plan, Part 3 Design Criteria for the Southern California National Forests (2005), S11:** “When occupied or suitable habitat for a threatened, endangered, proposed, candidate or sensitive (TEPCS) species is present on an ongoing or proposed project site, consider species guidance documents (see [LMP Part 3] Appendix H) to develop project-specific or activity-specific design criteria. This guidance is intended to provide a range of possible conservation measures that may be selectively applied during site-specific planning to avoid, minimize or mitigate negative long-term effects on threatened, endangered, proposed, candidate or sensitive species and habitat. Involve appropriate resource specialists in the identification of relevant design criteria and appropriate species lists. Include review of species guidance documents in fire suppression or other emergency actions when and to the extent practicable.”

**Land Management Plan, Part 3 Design Criteria for the Southern California National Forests (2005), S24:** “Mitigate impacts of on-going uses and management activities on threatened, endangered, proposed, and candidate species.”

- (2) Proposed Monitoring Components:
  - (a) Develop a current baseline of existing habitat conditions in Strawberry Canyon.
    - (i) Document lateral/spatial extent of riparian vegetation and TEPCS plants and wildlife.
    - (ii) Measure rooting depth within established riparian areas.
    - (iii) Measure groundwater levels within established riparian areas where soil conditions permit installation of piezometers by use of hand tools.
    - (iv) Conduct presence/absence surveys for species identified with habitat present, both plant and animal.
    - (v) Identify spring discharge and surface water extent.

- (vi) Set movement cameras to document use of surface water by animals
  - (b) Identify appropriate locations in other front country watersheds that may be used to serve as paired reaches for qualitative comparison of habitat conditions in Strawberry Canyon. All types of monitoring in Strawberry Canyon watershed must be duplicated in the identified comparison reaches.
- (3) Proposed Triggers:
- (a) From 70% to 90% of expected aquatic life forms and communities are present in existing riparian areas, based on the potential natural communities present in the paired reaches (“Trigger A-3”). [Indicates a Functioning At Risk rating for Life Form Presence under Watershed Condition Classification protocol.]
  - (b) Less than 70% of expected aquatic life forms and communities are present in the existing riparian areas, based on the potential natural communities present in the paired reaches (“Trigger B-3”). [Indicates an Impaired rating for Life Form Presence under Watershed Condition Classification protocol.]
- (4) Proposed Actions:
- (a) When Trigger A-3 is reached, reduce collection by 20 percent as measured at the borehole meters by shutting in, or valving back, the horizontal boreholes, and monitor effects on areas rated as impaired (“Action A-3”).
  - (b) When Trigger B-3 is reached, reduce collection an additional 10 percent (30 percent total) as measured at the bore hole meters by shutting in, or valving back, the horizontal boreholes, and monitor areas rated as impaired (“Action B-3”).
  - (c) The above Proposed Actions A-3 and B-3 for this Objective 3 are not intended to be cumulative with the proposed actions for Objective 1, 2, or 4.
- (5) Proposed Monitoring.
- (a) Monitor recovery of plant and animal communities.

#### **Objective 4 – Invasive Species Standards**

- (1) **Land Management Plan, Part 1, Southern California National Forest Vision(2005). Goal 2.1** Reverse the trend of increasing loss of natural resources due to invasive species. Forest Service Manual direction for Invasive Species

Management is contained in FSM 2900, effective December 5, 2011. This direction sets forth National Forest System policy, responsibilities, and direction for the prevention, detection, control, and restoration of effects from aquatic and terrestrial invasive species.

- (2) Proposed Monitoring components – identify, quantify, and map existing occurrences of priority invasive plant and animal species within the project area and document with GIS polygon shapefiles or GPS coordinates.
  - (a) The priority invasive plant and animal list is to be based on species that are included in Cal IPC list of species considered to be High and Medium threat to ecological systems, and are not already ubiquitous throughout both the project area and the paired watershed. This list will be compiled in consultation with USFS botany and wildlife specialists.
  - (b) Conduct annual survey of project areas to identify, quantify, and remove the species listed on the priority invasive plant and animal list from project areas.
- (3) Proposed Triggers:
  - (a) Cover, quantity, or extent of current infestations are increasing.
  - (b) New invasive species are identified.
- (4) Proposed Actions:
  - (a) Consult with USFS botany and biology specialists to determine most effective control/eradication methods allowed by agency policy and direction.
  - (b) Initiate control as soon as possible within the time period for most effective treatment.
  - (c) Remove biomass containing reproductive potential (root segments, seeds, or flowers that could develop into viable seed) from project areas.
  - (d) Remove adult, juvenile, or larval forms of animals from project areas.
  - (e) Provide yearly report of monitoring and control efforts including names of workers/surveyors, date, method of control, and location.
- (5) Proposed Monitoring
  - (a) Monitor and re-treat when necessary to control or eradicate identified invasive plant and animal infestations.

#### **IV. NWNA HAS TECHNICAL COMMENTS ON THE FOREST SERVICE'S PROPOSED ACTION**

In addition to authorizing the use of the existing improvements, the proposed SUP and accompanying AMP would require NWNA to conduct hydrologic and riparian area studies during the term of the permit, and to modify operations if monitoring showed that water extraction was impacting surface water flow and riparian-dependent resources on the National Forest. *See* Project Proposal § 2. Although the Forest Service has acknowledged that additional study of Strawberry Creek is warranted, the AMP as drafted is required to be implemented before those studies are complete and lacks the necessary and appropriate science-based tools to develop an adequate understanding of the natural environment and the flows in Strawberry Creek and adjacent riparian habitats. The AMP does not acknowledge the natural conditions in Strawberry Canyon, both currently and historically. For example, Upper Strawberry Creek has been classified by the USGS as an intermittent stream since 1901, which means the Creek's natural flows are not continuous. The AMP makes no provision to separate the effects of NWNA operations from groundwater use of the aquifer system by others, surface water diversion by others within the same watershed, and more importantly, local climatic conditions.

The AMP's proposed framework does not specify where measurements of "flows in channel" should be made, proposes using measurement methods and criteria that are not suited to the environment, and appears to require more water in the watershed than naturally occurs. It is neither practically feasible nor scientifically defensible to introduce more water into the watershed than would otherwise exist in nature and maintain those conditions by extraordinary means.

While NWNA actively supports developing a better understanding of the Strawberry Canyon watershed and intends to work with the Forest Service collaboratively to do so, we believe that any studies of the watershed must be comprehensive, grounded in sound scientific principles, and based on objective data. NWNA's comments in the Chart below provide a more detailed analysis of the AMP.

In addition to the legal concerns outlined in section II above, below are NWNA's technical concerns with the USFS AMP.

*[NWNA Line-by-Line Technical Comments Commence on Following Page]*

## TECHNICAL COMMENTS ON PROPOSED ACTION AND AMP

As used in the NWNA comments below, the term “USFS Draft AMP” shall mean and refer to the draft Adaptive Management Plan published by the Forest Service on March 18, 2016.

As used in the NWNA comments below, the term “NWNA Proposed AMP” shall mean and refer to NWNA’s Proposed Adaptive Management Plan set forth in Section III above.

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
<b>A.</b>	<b>PROPOSED ACTION</b>	
<b>1.</b>	<p><b>Introduction.</b> This document describes the project proposal for the short term (5 year) authorization of the Nestle Waters North America (Nestlé) tunnels, wells, pipelines, and associated improvements on the San Bernardino National Forest. Section 2 of this document describes the proposed action, Section 3 describes the purpose and need, Section 4 describes the decision to be made, and Section 5 describes some key analysis assumptions. These developments, more commonly referred to as the Arrowhead Springs Permit, have been authorized since 1929 with the latest permit issued in 1978. This proposal only applies to the authorization of the facilities on National Forest System (NFS) land.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p> <p>A 10-year permit is hereby requested.</p>
<b>2.</b>	<p><b>Proposed Action.</b> The Forest Supervisor, San Bernardino National Forest, is proposing to issue a 5 year special use permit to authorize the continued occupancy and use of NFS lands for the extraction and transmission of water using existing improvements. In addition to authorizing the use of the existing improvements, the permit would require Nestlé to conduct hydrologic and riparian area studies and to modify operations under an Adaptive</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p> <p>A 10-year permit is hereby requested.</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	Management Plan if monitoring showed that water extraction was impacting surface water flow and riparian dependent resources on the National Forest.	
	The right-of-way occupies approximately 2.5 acres of NFS land. Authorization of the water transmission pipeline and other support facilities would be under the authority of the Federal Land Policy and Management Act of 1976. Authorization of the water collection tunnels and horizontal wells is under the authority of the Organic Act of 1897. The proposed action is further described in the following sections:	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby incorporated by reference herein.
2.1	<p><b><u>Authorized improvements</u></b>– The permit would authorize:</p> <ul style="list-style-type: none"> <li>2 water collection tunnels</li> <li>10 horizontal wells located within 4 concrete vaults</li> <li>5 electronic monitoring telemetry sites and associated equipment</li> <li>4 helicopter landing areas</li> <li>5.7 miles of access trails (4.5 miles of trail are along the water transmission lines)</li> <li>4.5 miles of 4” steel water transmission pipe and associated valves <ul style="list-style-type: none"> <li>2.75 miles of above ground pipeline</li> <li>1.75 miles of buried pipeline</li> </ul> </li> <li>20 pipeline support bridges</li> </ul>	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby incorporated by reference herein.
	The permit would also authorize administrative use and maintenance of Forest road 1N24 on a shared basis.	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby

	PROPOSED SBNF ACTION	Nwana COMMENTS												
		incorporated by reference herein.												
	The general location of the permitted improvements are shown on the attached map.	<p>Comments to this provision are set forth in the Nwana Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>												
	<p>The working area is the area needed for temporary use when routine maintenance work is conducted on the authorized improvements. This working area is calculated based on set distances from approved facilities, and is used to identify the area that may be used if work is needed during the term of the permit. Those working areas are:</p> <table border="1" data-bbox="321 797 1066 1062"> <thead> <tr> <th data-bbox="321 797 747 834">Improvement</th> <th data-bbox="747 797 1066 834">Working Area</th> </tr> </thead> <tbody> <tr> <td data-bbox="321 834 747 872">Vault Structures</td> <td data-bbox="747 834 1066 872">5' around structure</td> </tr> <tr> <td data-bbox="321 872 747 943">Above ground pipeline</td> <td data-bbox="747 872 1066 943">2.5' each side or 5' on one side</td> </tr> <tr> <td data-bbox="321 943 747 980">Buried pipeline and road 1N24</td> <td data-bbox="747 943 1066 980">5' each side</td> </tr> <tr> <td data-bbox="321 980 747 1018">Trails</td> <td data-bbox="747 980 1066 1018">5' each side</td> </tr> <tr> <td data-bbox="321 1018 747 1062">Helicopter landing areas</td> <td data-bbox="747 1018 1066 1062">30' radius circle</td> </tr> </tbody> </table>	Improvement	Working Area	Vault Structures	5' around structure	Above ground pipeline	2.5' each side or 5' on one side	Buried pipeline and road 1N24	5' each side	Trails	5' each side	Helicopter landing areas	30' radius circle	<p>Comments to this provision are set forth in the Nwana Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
Improvement	Working Area													
Vault Structures	5' around structure													
Above ground pipeline	2.5' each side or 5' on one side													
Buried pipeline and road 1N24	5' each side													
Trails	5' each side													
Helicopter landing areas	30' radius circle													
2.2	<p><b>Operation of the system</b> – The permit would authorize the continued operation of the current system subject to the terms and conditions of the permit, including the adaptive management plan requirements. The system is operated to collect water on a year-round basis. Water infiltrates under the influence of gravity into the collection tunnels or horizontal wells and is transported through pipes to storage tanks on private land. Pipeline pressure is regulated through a series of valves located along the pipeline.</p>	<p>Comments to this provision are set forth in the Nwana Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>												

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	There is no storage of water on National Forest System lands.	
	Electronic devices are used to monitor conditions at the vaults. The information is sent via radio signals to a company owned facility on private lands. The power to the devices is provided by solar panels with battery backup.	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
2.3	<p><b><u>Maintenance of the system</u></b> – The permit would authorize the continued maintenance of the existing system subject to the terms and conditions of the permit. The system is maintained based on periodic inspections. Every piece of equipment is inspected at least annually. The maintenance work includes:</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p><b><u>Well and pipeline sanitizing</u></b> – Collection facilities are sanitized annually or more frequently as indicated by weekly tests. Collection areas are treated with a 200 parts-per-million solution of chlorine. Treated water is dechlorinated with Sodium thiosulfate and discharged through the pipeline system on private property. The pipeline system as a whole is sanitized by adding chlorine at the collection points and running that chlorinated water through the pipeline system to a release point on private land. All water released in conjunction with routine maintenance is regulated under National Pollution Discharge Elimination System permit CA #G998001, issued by the Santa Ana Regional Water Quality Control Board.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p><u>Horizontal well cleaning</u> – The horizontal wells are cleaned by brushing and water jetting the full length of each boring screen. The wells are typically cleaned once every 10 years.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p><u>Equipment maintenance/replacement</u> – All equipment including valves, sensors, and telemetry equipment is inspected for proper operation, and maintained as needed. Maintenance could include cleaning and exercising valves, replacing parts within valves, and replacing defective components as needed. Isopropyl alcohol is used to disinfect any serviced components that are part of the water system.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p><u>Pipeline repair</u> – Any sections of pipeline that are damaged by falling rocks, trees or other debris are repaired as soon as possible. For the above ground pipeline, the damaged section of pipeline is cut out and a new section is welded in place, with pipe supports replaced as needed. For the buried pipeline, a backhoe would be used to expose the broken section of pipe. Materials may be flown to the repair site using helicopters. Equipment powered by generators or gas motors would be used to perform the work, along with common hand tools.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p><u>Vegetation management</u> – Vegetation is cleared 5 feet around vaults and 5 feet along the pipeline using motorized equipment and hand tools on an as-needed basis.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
2.4	<p><b><u>Access</u></b> – The permit would authorize the continued use and maintenance of designated access trails (with a tread width of 50” or less), designated helicopter landing areas, and use of Forest road 1N24. Depending on the work location, maintenance crews may access work sites by using one of the authorized access points and then traveling cross-country or along the pipeline to reach the work site. Helicopter access is the most common access method used to reach the improvements, and typically 32 helicopter flights are required on an annual basis for routine inspections and maintenance. Helicopter flights for pipeline repair and emergency work would be on an as-needed basis.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p>Trails are not regularly maintained, allowing vegetation to encroach on the trail. When the trail is needed for access, motorized equipment and hand tools are used to maintain foot access. Helicopter landing areas are maintained as needed to prevent vegetation encroachment using motorized equipment and hand tools.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
2.5	<p><b><u>Emergency Work</u></b> – Work on the system may be required on an emergency basis. The permit holder will be required to notify and request approval from the Forest Service of any emergency work as soon as possible. The holder will be required to utilize previously approved temporary work areas to the extent such use is possible.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
2.6	<p><b><u>Resource Protection</u></b> –Permit Sections V and VIII contain standard and supplemental provisions for resource protection that cover compliance with environmental laws, and protection of water quality, esthetics, and threatened,</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	endangered and sensitive species habitat. The section of the permit also includes requirements that Nestlé would follow if there was an unanticipated discovery of archeological or paleontological resources, or human remains, funerary objects, sacred objects, or objects of cultural patrimony. The Operating Plan required by permit section III C would include implementation details of how Nestle would comply with the permit terms.	incorporated by reference herein.
	Resource protection measures developed by the Forest Service during the development of the proposed action include:	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby incorporated by reference herein.
	<ul style="list-style-type: none"> <li>The appropriate site-specific National BMPs (USDA USFS, FS-990a, April 2012) will be applied to the operation and maintenance of the pipeline, helispots, trails, roads, etc. such as those BMPs in the Facilities and Nonrecreation Special Uses Management Activities, Operations in Aquatic Ecosystems, Water diversions and conveyances, and Road Management Activities categories.</li> </ul>	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby incorporated by reference herein.
	<ul style="list-style-type: none"> <li>Maintain a Limited Operating Period (LOP) for the protection of least Bell’s vireo (March 15 through September 15) and southwestern willow flycatcher (May 1 to August 31), both federally listed species, during the breeding season for any disturbance related activities within 1/4 mile of suitable habitat.</li> </ul>	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby incorporated by reference herein.
	<ul style="list-style-type: none"> <li>Maintain a limited operating period (LOP) prohibiting activities within approximately 0.25 miles</li> </ul>	Comments to this provision are set forth in the NWNA

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	of a California spotted owl nest site (US Forest Service sensitive species), or activity center where nest site is unknown, during the breeding season (February 1 through August 15), unless surveys confirm that the owls are not nesting.	Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby incorporated by reference herein.
	Additional resource protection measures may be added after public scoping and the associated environmental analysis.	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby incorporated by reference herein.
2.7	<b><u>Hydrologic and Riparian Studies</u></b> – The permittee will be required to conduct hydrologic and riparian studies to better understand the relationship between water extraction, surface flows, and riparian habitat. The initial studies provided by the permittee suggest that water extraction is reducing surface flow in Strawberry Creek. The effect of this flow reduction has not been thoroughly studied. The permittee will be required to study comparison sites in adjacent unmanaged drainages to determine what conditions would exist in Strawberry Creek without water extraction in the upper watershed. This approach is typically referred to as a “paired basin” study. This study will also be used to support the Adaptive Management Plan described in Section 2.8 that follows.	All comments set forth in Sections I-II above are hereby incorporated by reference herein.  NWNA and its predecessors-in-interest have been continuously operating the Arrowhead Springs site for 121 years under the authority of established and well-defined senior water rights. Since 1929, site operations have been conducted in accordance with special use permits issued by the USFS, with the most recent permit issued in 1978.  Previous special use permits did not require extensive studies in order to receive special use permits governing continued use of the right-of-way, which accommodates the pipeline and associated infrastructure required to make use of NWNA’s established water right.

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p>The permittee will consult with the Forest Service in the development of the study plan, and will submit a draft study plan to the Forest Service for approval within 30 days of permit issuance. The permittee will implement the plan within 30 days of Forest Service approval. The study period is expected to last for a minimum of three years.</p>	<p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p> <p>NWNA proposes meetings begin as soon as possible to allow NWNA and the USFS technical team to identify specific data needs, to identify the best methods to collect those data, and to plan other aspects of the NWNA Proposed AMP described in Section III above, and the Hydrologic and Riparian Studies described in Section 2.7 of the Proposed Action. A period of six months to conduct this series of meetings would also allow sufficient time for USFS technical staff to visit the spring sites, and to observe conditions at those sites through key seasonal changes. These meetings may be conducted prior to permit issuance.</p>
<p><b>2.8</b></p>	<p><b><u>Adaptive Management Plan</u></b> – The permittee will be required to implement an Adaptive Management Plan to ensure that water extraction is consistent with San Bernardino National Forest Land Management Plan (LMP) standards. Adaptive management provides an implementation tool that incorporates an “implement-monitor-adapt” strategy that provides flexibility to respond to monitoring information that indicates that desired conditions are not being met.</p>	<p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p> <p>Although it is a departure from previous permits issued for the Arrowhead Springs site and similar permits issued by the USFS to other entities in the region, NWNA recognizes the benefits that may be derived from adaptive management and has submitted the NWNA Proposed AMP (see Section III above).</p> <p>The Forest Service proposes to require implementation of the USFS Draft AMP based on existing data at the time of permit issuance, but that may be amended as additional data become available from the Hydrologic and Riparian studies described under Section 2.7 of the Proposed Action. Both the USFS Draft AMP and the Riparian Study plan are proposed to be developed and submitted within 30 days after the permit is</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
		<p>issued. Given the geographic size of the site, the unique characteristics of each spring site, the unique permitting requirements for performing invasive testing in the SBNF, and uncertainty regarding when the permit may be issued, 30 days is an insufficient period of time in which to accomplish these tasks unless adequate time to do so is provided prior to permit issuance.</p> <p>NWNA proposes a period of six months to conduct a series of collaborative meetings between NWNA and the USFS technical team to identify specific data needs, to identify the best methods to collect those data, and to plan other aspects of both the NWNA Proposed AMP described in Section III above, and the Hydrologic and Riparian Study plans described in Section 2.7 of the Proposed Action. This would also allow sufficient time for USFS technical staff to visit the spring sites, and to observe conditions at those sites through key seasonal changes. These meetings may be conducted prior to permit issuance.</p>
	<p>Each component of the Adaptive Management Plan would include:</p> <ol style="list-style-type: none"> <li>1. An objective based on the LMP standards</li> <li>2. A monitoring scheme to assess if the objective is being met</li> <li>3. Trigger point(s) where the Forest Plan objective is not being met</li> <li>4. Action(s) to mitigate and restore conditions to meet the LMP standard</li> <li>5. Monitoring to assess success of mitigation and restoration</li> </ol>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p>A draft Adaptive Management Plan is described in Appendix 1. The permittee will develop the final Adaptive Management Plan in consultation with the Forest Service and will submit the final plan to the Forest Service for approval within 30 days of permit issuance. The permittee will implement the plan within 30 days of Forest Service approval. The Adaptive Management Plan will be active for the term of the permit, and may be amended based on the results of the paired basin studies described in Section 2.7 above.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
<p><b>3.</b></p>	<p><b>Purpose and Need for Action</b> – There is a need to authorize the continued occupancy of the existing water development, water transmission pipelines, electronic telemetry equipment, helicopter landing areas, and access trails on NFS lands, and require additional study and an Adaptive Management Plan under a current Forest Service permit in order to continue to administer the use, consistent with state and federal law, regulations, and the San Bernardino National Forest LMP.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p>Nestlé’s project purpose is to continue to operate and maintain the existing system to supply bottled drinking water for retail sale. Nestlé is responsible for the safe and reliable operation of their water system under a variety of federal and state laws, and would operate the system on NFS lands according to the terms of the permit.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p>This action responds to the goals and objectives outlined in the San Bernardino National Forest LMP, and helps move the project area towards desired conditions described in</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	that plan.	incorporated by reference herein.
	The permit area is located within the San Bernardino Front Country Place. The desired condition for the area is to maintain a natural appearing landscape while managing vegetation to provide fire protection for adjacent urban communities. Habitat conditions for threatened, endangered, and sensitive species are improving over time. Heritage properties and Native American gathering areas are identified and protected. The program emphasis is on community protection from wildland fire and conservation of habitat for threatened, endangered, and sensitive species, such as the southwestern willow flycatcher, mountain yellow-legged frog and speckled dace.	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby incorporated by reference herein.
	The upper portion of the proposed permit area is in a Developed Area Interface (DAI) land use zone, the lower wells and the majority of the above ground pipeline is in a Back Country Non-Motorized (BCNM) land use zone, and the buried pipeline is within a Back Country (BC) land use zones. Non-Rec special uses are listed as suitable uses (LMP Table 2.4.3) in the DIA and BC land use zones, and allowed by exception in the BCNM land use zone. This proposed permit would be authorized by exception in the BCNM land use zone.	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby incorporated by reference herein.
	Relevant direction for special uses in the LMP includes:	
	<ul style="list-style-type: none"> <li>• <b>S5:</b> Treat all freshly cut live or recently dead conifer stumps with a registered fungicide to prevent the establishment of annosus root disease.</li> </ul>	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby

	PROPOSED SBNF ACTION	Nwana COMMENTS
		incorporated by reference herein.
	<ul style="list-style-type: none"> <li>• <b>S9:</b> Design management activities to meet the Scenic Integrity Objectives (SIOs) shown on the Scenic Integrity Objectives Map.</li> </ul>	<p>Comments to this provision are set forth in the Nwana Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>• <b>S10:</b> Scenic Integrity Objectives will be met with the following exceptions: <ul style="list-style-type: none"> <li>• Minor adjustments not to exceed a drop of one SIO level is allowable with the Forest Supervisor’s approval.</li> <li>• Temporary drops of more than one SIO level may be made during and immediately following project implementation providing they do not exceed three years in duration.</li> </ul> </li> </ul>	<p>Comments to this provision are set forth in the Nwana Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>• <b>S11:</b> When occupied or suitable habitat for a threatened, endangered, proposed, candidate or sensitive (TEPCS) species is present on an ongoing or proposed project site, consider species guidance documents (see Appendix H) to develop project-specific or activity-specific design criteria. This guidance is intended to provide a range of possible conservation measures that may be selectively applied during site-specific planning to avoid, minimize or mitigate negative long-term effects on threatened, endangered, proposed, candidate or sensitive species and habitat. Involve appropriate resource specialists in the identification of relevant design criteria. Include review of species guidance</li> </ul>	<p>Comments to this provision are set forth in the Nwana Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	documents in fire suppression or other emergency actions when and to the extent practicable.	
	<ul style="list-style-type: none"> <li>• <b>S15:</b> Within riparian conservation areas retain snags and downed logs unless they are identified as a threat to life, property, or sustainability of the riparian conservation area.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>• <b>S17:</b> In areas outside of Wildland/Urban Interface Defense Zones and fuelbreaks, retain soft snags and acorn storage trees unless they are a safety hazard, fire threat, or impediment operability.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>• <b>S18:</b> Protect known active and inactive raptor nest areas. Extent of protection will be based on proposed management activities, human activities existing at the onset of nesting initiation, species, topography, vegetative cover, and other factors. When appropriate, a no-disturbance buffer around active nest sites will be required from nest-site selection to fledging.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>• <b>S20:</b> Maintain a limited operating period (LOP) prohibiting activities within approximately 0.25 miles of a California spotted owl nest site, or activity center where nest site is unknown, during the breeding season (February 1 through August 15), unless surveys confirm that the owls are not nesting. Follow the USDA Forest Service (1993, 1994 or subsequent) protocol to determine whether owls are nesting. The LOP does not apply to existing road and trail use and</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p>maintenance, use of existing developed recreation sites, or existing special-uses, such as recreation residence tracts. When evaluating the need to implement a limited operating period, site- and project-specific factors need to be considered (use species management strategy or subsequent guidance; see Appendix H).</p>	
	<ul style="list-style-type: none"> <li>• <b>S22:</b> Except where it may adversely affect threatened and endangered species, linear structures such as fences, major highways, utility corridors, bridge upgrades or replacements, and canals will be designed and built to allow for fish and wildlife movement.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>• <b>S25:</b> Conduct road and trail maintenance activities during the season of year that would have the least impact on threatened, endangered, and proposed wildlife species in occupied habitats, except as provided by site-specific consultation.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>• <b>S32:</b> When surveys for species presence/absence are done for threatened, endangered, and proposed species, use established survey protocols, where such protocols exist.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>• <b>S45:</b> All construction, reconstruction, operation and maintenance of tunnels on National Forest System lands shall use practices that minimize adverse effects on groundwater aquifers and their surface expressions.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<ul style="list-style-type: none"> <li>• <b>S46:</b> Surface water diversions and groundwater extractions, including wells and spring developments will only be authorized when it is demonstrated by the user, and/or agreed to by the Forest Service, that the water extracted is excess to the current and reasonably foreseeable future needs of forest resources. <ul style="list-style-type: none"> <li>○ Consideration of beneficial uses, existing water rights, and the absence of other available water sources will be part of the water extraction application.</li> <li>○ Approved extractions and diversions will provide for long-term protection and reasonable use of surface water and groundwater resources.</li> <li>○ Feasibility and sustainability assessments should be appropriately scaled to the magnitude of the extraction or diversion proposed.</li> </ul> </li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>• <b>S47:</b> When designing new projects in riparian areas, apply the Five-Step Project Screening Process for Riparian Conservation Areas as described in Appendix E - Five-Step Project Screening Process for Riparian Conservation Areas.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p> <p>Specific comments to S47 are set forth below.</p>
	<ul style="list-style-type: none"> <li>• <b>S48:</b> For non-hydroelectric and exempt hydroelectric surface water development proposals (such as flood control reservoirs and municipal water supplies), instream flows favorable to the maintenance and restoration of riparian dependent and aquatic</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	resources and channel conditions will be required.	
	<p>The water developments and above ground pipeline are within the City Creek Inventoried Roadless Area. Activities within the roadless area are subject to the 2001 Roadless Area Conservation Rule (36 CFR Part 294, published in the Federal Register Vol. 66, No. 9, January 12, 2001). The purpose of the rule is to provide, within the context of multiple-use management, lasting protection for inventoried roadless areas within the National Forest System. Road construction and timber cutting is generally prohibited unless the action fits within one of the exceptions. No road construction or timber cutting is proposed as part of the proposed permit.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p>Other regulatory direction includes the Federal Land Policy and Management Act and the National Forest Management Act.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p>The Federal Land Policy and Management Act grants the Secretary of Agriculture authority to issue rights-of-way for the:</p> <p>...reservoirs, canals, ditches, flumes, laterals, pipes, pipelines, tunnels, and other facilities and systems for the impoundment, storage, transportation, or distribution of water...</p> <p>43 U.S.C. § 1761.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p>Provided:</p> <p>Each right-of-way shall contain--</p> <p>(a) terms and conditions which will (i) carry out the purposes of this Act and rules and regulations issued thereunder; (ii) minimize damage to scenic and esthetic values and fish and wildlife habitat and otherwise protect the environment; (iii) require compliance with applicable air and water quality standards established by or pursuant to applicable Federal or State law; and (iv) require compliance with State standards for public health and safety, environmental protection, and siting, construction, operation, and maintenance of or for rights-of-way for similar purposes if those standards are more stringent than applicable Federal standards...</p> <p>43 U.S.C. § 1765.</p>	
	<p>The National Forest Management Act provides the statutory direction for the development of Land and Resource Management Plans. It also requires that:</p> <p>Resource plans and permits, contracts, and other instruments for the use and occupancy of National Forest System lands shall be consistent with the land management plans.</p> <p>16 U.S.C. § 1604(i).</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p>Executive Order 13112 of February 3, 1999 directs federal agencies to prevent the introduction of invasive species,</p>	<p>Comments to this provision are set forth in the NWNA</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p>detect and respond rapidly to and control such species, not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species unless the agency has determined and made public its determination that the benefits of such actions clearly outweigh the potential harm caused by invasive species; and that all feasible and prudent measures to minimize risk of harm will be taken in conjunction with the actions.</p>	<p>Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
<p>4.</p>	<p><b><u>Decision Framework</u></b> – The Forest Supervisor is the authorized officer for the proposed permit. The Forest Supervisor will decide whether a permit will be issued, and if so, what terms and conditions will be included in the authorization.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
<p>5.</p>	<p><b><u>Analysis Assumptions</u></b> – The following general assumption will guide the analysis of environmental effects:</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>• The permit will be issued for a 5 year term.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p> <p>A 10-year permit is hereby requested.</p>
	<ul style="list-style-type: none"> <li>• All routine activities will occur within the working areas described in Section 2.1.</li> </ul>	<p>Comments to this provision are set forth in the NWNA</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
		<p>Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>Authorized activities will be conducted in compliance with the terms of the permit, and will include resource protection measures identified during the environmental review.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>No new facilities will be authorized during the term of the permit. Existing improvements may be maintained, repaired, or replaced in-kind. As examples, Nestlé has identified several routine maintenance projects that will be implemented during the permit term, including pipeline support repair or replacement, pipeline bridge repair and footing stabilization, and concrete pad repair.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>Drilling new horizontal wells to replace existing wells is not authorized by the permit and would require a permit amendment.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>Routine maintenance activities will occur on an annual basis.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<ul style="list-style-type: none"> <li>Repair and replacement of facilities may take place as needed, and occur anywhere within the authorized area. This may mean that emergency work would occur during Limited Operating Periods.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>Operations may be modified by the requirements of the Adaptive Management Plan in order to meet LMP standards.</li> </ul>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	[Map]	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
<b>B.</b>	<b>ADAPTIVE MANAGEMENT PLAN</b>	

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p>The Adaptive Management process includes a:</p> <ol style="list-style-type: none"> <li>1. Forest Plan objective (standard, requirement, handbook)</li> <li>2. Monitoring scheme to assess if the objective is being met</li> <li>3. Trigger point(s) where Forest Plan objective(s) is not being met</li> <li>4. Action(s) to mitigate and restore Forest Plan objective</li> <li>5. Monitoring to assess success of mitigation and restoration</li> </ol>	<p>Comments to these topics and the substantive sections to which they refer are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
<b>O.1</b>	<b><u>Water Standards</u></b>	
<b>1.</b>	<p><b>LMP, Part 3, S46:</b> Surface water diversions and groundwater extractions, including wells and spring developments will only be authorized when it is demonstrated by the user, and/or agreed to by the Forest Service, that the water extracted is excess to the current and reasonably foreseeable future needs of forest resources.</p>	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>NWNA holds the most senior water rights within Strawberry Canyon and collects water in accordance with those rights for beneficial use. NWNA does not seek to develop any more water than that quantified by its adjudicated senior water right, and in fact uses much less water than allowed in accordance with that right. The right-of-way facilitates conveyance of water lawfully collected in accordance with NWNA’s vested water rights.</p> <p>Three text bullets describing how S46 is to be applied were omitted from the text of Objective 1 of the USFS Draft AMP. The omitted S-46 text reads:</p> <ul style="list-style-type: none"> <li>• “Consideration of beneficial uses, existing water rights, and the absence of other available water sources will be part of the water extraction application.”</li> </ul>

	PROPOSED SBNF ACTION	Nwana COMMENTS
		<ul style="list-style-type: none"> <li>• “Approved extractions and diversions will provide for long-term protection and reasonable use of surface water and groundwater resources.”</li> <li>• “Feasibility and sustainability assessments should be appropriately scaled to the magnitude of the extraction or diversion proposed.”</li> </ul> <p>The following are the changes required to the USFS Draft AMP to incorporate the full text of S-46 into the USFS Draft AMP:</p> <ul style="list-style-type: none"> <li>• As written, Objective 1 of the USFS Draft AMP does not take into consideration the beneficial use of the water extracted by Nwana, the existing senior water right held by Nwana, or the absence of other available water sources for use at Nwana facilities located on private land below the SBNF. The USFS Draft AMP must acknowledge that Nwana and its predecessors-in-interest hold senior water rights, have continuously exercised those rights for beneficial use, has maintained USFS SUP since 1929 and that there is no other suitable source of water available to supply spring water to the Nwana conveyance and facilities.</li> <li>• As written, Objective 1 of the USFS Draft AMP does not include any provisions protecting the long term reasonable use of water by water rights holders within the Strawberry Canyon watershed. The USFS Draft AMP must recognize that S-46 provides for the long term reasonable use of water within the Strawberry Canyon watershed by those, including Nwana, holding valid water rights.</li> </ul>

	PROPOSED SBNF ACTION	Nwana COMMENTS
		<ul style="list-style-type: none"> <li>As written, the triggers identified under Objective 1 are not scaled to the magnitude of extraction. The trigger values stated under Objective 1, Subheading 3 in the upper Strawberry Canyon drainage far exceed the amount of water naturally available within the watershed, depending on the intended point of measurement. The USFS Draft AMP must be revised to reflect actual watershed conditions.</li> </ul>
2.	<p>Monitoring components</p> <p>a. Determination of safe yield (water balance) in the subwatershed containing the extraction points:</p> <p>i. Inputs: Precipitation gaging, groundwater inflow, infiltration</p> <p>ii. Outputs: Evapotranspiration gaging, overland flow, surface water outflow, groundwater outflow</p> <p>iii. Build a gridded surface water-groundwater model and calibrate it with collected data including structural geology (e.g. faults) components</p> <p>1. Building and calibrating a fractured mountain-front hydrogeologic model is a longer term goal (framework by end of 5-year permit) given the lack of baseline data and the multiple parameters needed</p>	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>The USFS Draft AMP must state what parameters are to be monitored, where those parameters are to be monitored, and how the monitoring data are to be applied to satisfy S-46, or to determine “that the water extracted is excess to the current and reasonably foreseeable future needs of forest resources.” LMP, Part 3, S46.</p> <p>Objective 1.2(a) is not consistent with the criteria listed in Standard S-46. Objective 1.2(a) incorrectly equates safe yield with a water balance. A safe yield determination is based upon water resource management criteria that may be used to objectively gage the status of a hydrologic system and determine if key criteria are satisfied or if goals are being met. A water balance is a quantitative tool used during the safe yield determination to determine the flux of water through a watershed or aquifer system. The USFS Draft AMP does not define how the water balance will be used to support determination of safe yield; what criteria, metrics, or goals are to be applied to make a determination of safe yield; or what quantitative relationship a determination of safe yield has to</p>

	PROPOSED SBNF ACTION	Nwana COMMENTS
		<p>S-46.</p> <p>Objective 1.2(a), Subparts i and ii list selected elements of a water balance that include a mixture of directly measured and calculated parameters. The USFS Draft AMP does not define the monitoring required to generate the data necessary to support creation of the required water balance, or how the water balance is to be applied to satisfy S-46 or specifically to determine “that the water extracted is excess to the current and reasonably foreseeable future needs of forest resources.”</p> <p>The current and reasonably foreseeable future water needs of forest resources are not quantified, and no method is provided to quantify them.</p> <p>Objective 1.2(a), Subpart iii requires the development of a surface water and groundwater model over the 5-year term of the SUP, but does not indicate how the proposed model is to be applied to satisfy S-46 or specifically to determine “that the water extracted is excess to the current and reasonably foreseeable future needs of forest resources.”</p> <p>A 10-year permit is hereby requested.</p>
	<p>b. Water quality testing to maintain compliance with Clean Water Act Basin Plan</p> <p>i. 475 mg/L TDS</p>	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>The USFS Draft AMP does not identify the location, frequency, or reporting requirements of the required water quality testing. Total Dissolved Solids (TDS) is the only parameter listed for the required monitoring. The TDS parameter describes the concentration of dissolved minerals or</p>

	PROPOSED SBNF ACTION	Nwana COMMENTS
		<p>salts in a given water body. However, Nwana’s activities do not contribute dissolved minerals or salts to the Strawberry Canyon watershed. Therefore, this parameter is inapplicable to Nwana’s operations.</p>
	<p>c. Maintenance of surface water flow to support macroinvertebrate populations and riparian vegetation</p>	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>The USFS Draft AMP does not identify the location(s) where surface flow is to be maintained. This is an important consideration because, like many of the streams occurring in canyons of the San Bernardino Mountains, the upper reaches of Strawberry Creek are, in fact, intermittent streams and <u>not</u> perennial streams as defined by current and historical published USGS topographic maps.</p> <p>In an intermittent stream, water may alternately surface and re-infiltrate in response to geologic conditions, channel morphology, and climatic inputs. This produces wetted areas within the alluvial deposits of the stream bed that expand and contract with changes in precipitation, seasonal conditions, and drought conditions. At times, some of the wetted areas disappear completely. Vibrant riparian habitat occurs at many locations throughout Strawberry Canyon, concurrent with Nwana operations at both current and historical extraction rates. By definition, there is currently sufficient flow in Strawberry Creek to maintain the existing naturally vibrant habitats.</p> <p>The USFS Draft AMP does not take into account seasonal variability, drought cycles, wildfires, flooding or the actions of others in the watershed that may affect flow,</p>

	PROPOSED SBNF ACTION	Nwana COMMENTS
		<p>macroinvertebrate populations, or riparian vegetation. For example, San Bernardino County Flood Control District has proposed to divert approximately 47 acre-feet of storm water from the Strawberry Creek watershed. This storm water currently contributes both to recharge and surface water flow in Strawberry Canyon. Diversion of this water could reduce macroinvertebrate populations and riparian vegetation, and is completely outside the control of Nwana the senior water rights holder in the watershed.</p> <p>Additionally, several water wells exist in the Rimforest/Crestline area that may draw groundwater from the same aquifer feeding the Arrowhead Springs. The USFS Draft AMP would penalize Nwana, the senior water rights holder, for any effects induced by the water use of others and for diversion of water upgradient of SBNF lands.</p> <p>The USFS Draft AMP does not include sufficient provision for development of a seasonal, multi-year baseline to reasonably assess where flow is to be maintained, what magnitude of flow is appropriate, or to quantify the effects of water withdrawals or diversions made by others in the watershed.</p> <p>Sufficient data must be collected to develop a seasonal, multi-year baseline that will allow for the development of appropriate, site-specific triggers and actions that will protect existing macroinvertebrates and riparian resources.</p>
3.	Triggers:	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>This section establishes triggers to reduce water extraction if</p>

	PROPOSED SBNF ACTION	Nwana COMMENTS
		<p>certain conditions are observed at an undefined location within the Strawberry Creek drainage. It is critical to identify locations for measurement(s) of the trigger parameters because the upper portion of Strawberry Creek naturally experiences intermittent surface flow, and surface flow monitoring of the type proposed is only meaningful in channels with perennial flow. Without exact locations, the required actions may be triggered in response to climatic conditions, activities of other groundwater users, or activities of other parties diverting water from the upper watershed.</p> <p>Moreover, the triggers described are specific to depth and velocity of water flow, but make no provision for channel geometry or slope and the resulting effects on flow velocity. As written, Triggers A and B may be reached when depth is greater than 0.3 or 0.1 feet, but velocity is below 0.25 and 0.1 feet per second, respectively. Many of the pools naturally occurring in the channel of the intermittent Strawberry Creek may have sufficient depth to avoid activating the trigger but may not have sufficient flow velocity to meet the arbitrary velocity criteria defined under Objective 1, Subpart 3.</p> <p>The USFS Draft AMP must identify the location where stream flow measurements are to be made and include measurement technology and criteria that are appropriate for the intermittent Strawberry Creek.</p>
	<p>a. Flow in channel violates Basin Plan or flow reduced to below pygmy meter measurement specifications: of 0.25 feet per second and 0.3 feet depth</p> <p>i. This trigger indicates the surface flow is</p>	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>The “Basin Plan” as referenced is understood to mean the Santa Ana Region Basin Plan (SAR Basin Plan) administered</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p>trending towards too dry</p> <p>ii. As future data is collected these trigger points can change</p>	<p>by the Santa Ana River Water Quality Control Board. The SAR Basin Plan neither makes reference to required minimum flows in Strawberry Creek, nor includes provisions that would define a minimum flow in Strawberry Creek. Reference to violation of flow requirements established by the SAR Basin Plan should be removed from the USFS Draft AMP.</p> <p>The application of the measurement limits of a Pygmy meter as a measure of adequate flow is arbitrary and inappropriate given the intermittent nature of Strawberry Creek. No location is provided in the USFS Draft AMP where measurements are to be made within the intermittent Strawberry Creek with a Pygmy meter, and no provision is made for natural seasonal variability of flow. Given that the upper reaches of Strawberry Creek are intermittent, much of the drainage does not have sufficient water to facilitate measurement with a Pygmy meter except during or after heavy rain events.</p> <p>In addition to being an intermittent stream, the gradient (slope) of the streambed in the upper portions of the Strawberry Creek watershed is exceedingly steep, ranging from 0.47 to 0.61 feet per feet (ft/ft) in the area below the upper springs. This results in rapid runoff of precipitation flows, where the depth of the flow may not reach the minimum measurement criteria of the Pygmy meter, and velocity of the storm water flow far exceeds the capability of the Pygmy meter. The gradient of the streambed above the lower springs is less steep, but still has a substantial gradient of 0.22 ft/ft and is intermittent. The streambed below the lower springs has a gradient of 0.13 ft/ft, and due to the intermittent nature of the drainage, may not naturally have sufficient flow to measure consistently with a</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
		Pygmy meter.
	<p>b. Flow in channel reduced to below hydroacoustic current meter specifications of: 0.1 feet per second and 0.1 foot depth</p> <p>i. This trigger indicates the surface flow continues to trend towards too dry threatening the viability of macroinvertebrate and aquatic-dependent resources</p>	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>Trigger B appears to be arbitrarily based on the measurement limitations of a hydroacoustic meter and the measurement precision of that instrument. No location is provided in the USFS Draft AMP where measurements with the hydroacoustic meter are to be made within the intermittent Strawberry Creek, and no provision is made for natural seasonal variability of flow.</p> <p>Streambed gradients are so steep in the vicinity of the upper springs that flows of the type described by Trigger B only occur during or immediately after heavy rain events. As an example, surface flow of approximately 180 gallons per minute (gpm) would be required to achieve depths of 0.1 feet in the channels below boreholes 1, 1A, and 8. The flow required to achieve 0.1 feet of depth in the steep channels below Springs 2, 3, and 7 ranges from 224 to 336 gpm. For reference, each of the upper springs described currently flows under the force of gravity alone at rates between 1.48 and 15.48 gpm (April 2016). Unimpeded, natural flow from all of the springs combined is 70.34 gpm (April 2016) and is not sufficient to generate 0.1 foot of depth in any of the channels of the upper watershed. These facts illustrate the arbitrary nature of the proposed triggers.</p>
<b>4.</b>	Actions:	
	a. When Trigger A. is reached, stop extraction for	As drafted, Trigger A could be activated immediately upon

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p>Wells/Springs based on closest diversion point to measurement reach</p> <ul style="list-style-type: none"> <li>i. The 2002 and 2015 studies showed that the stream reach below Wells 10, 11, 12 was dry and didn't support macroinvertebrate populations</li> <li>ii. Data has yet to be collected in stream reaches below Wells 7 and below the cluster of wells/springs 1, 2, 3, 8</li> <li>iii. As the hydrogeology becomes better understood (travel times, groundwater/surface water connections), reduction of diversions from the appropriate sources can be better identified</li> </ul>	<p>NWNA's acceptance of the USFS Draft AMP depending on the particular reach of the intermittent Strawberry Creek where the measurement is required, and where within that reach the measurement is required because—as with all intermittent streams—portions of the streambed are naturally dry. Thus, the trigger could inappropriately require NWNA to mitigate for natural streambed conditions.</p> <p>Objective 1.4 (a), Subpart i references two studies that identified portions of the streambed below boreholes 10, 11 and 12 as dry and unable to support macroinvertebrate populations. Both of the reports referenced were effectively snapshots in time of conditions observed during a few weeks of field activity. As noted above, the upper reaches of Strawberry Creek are characterized by the United States Geological Survey as intermittent. By definition, this means that portions of the streambed—or at times the entire streambed—may be observed to be dry. As written, the USFS Draft AMP does not recognize the fact that a fault occurs down-gradient of boreholes 10, 11, and 12 that is believed to act as a groundwater flow barrier. Groundwater is naturally nearer to the ground surface on the up-gradient side at such a fault than it is on the down-gradient side. This barrier effect is often responsible for the occurrence of springs, where groundwater rises to the surface up-gradient of the faults, flows across the fault, and re-infiltrates down-gradient of the fault. Depending on geologic conditions, the down-gradient side of the fault typically exhibits less surface water than the up-gradient side of the fault.</p> <p>The USFS Draft AMP requires this action regardless of confounding variables such as seasonal fluctuations, climatic</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
		<p>variability, groundwater use by others pumping from the shared aquifer that the Arrowhead Springs occur in, or diversions by others in the upper reaches of the watershed. The net effect of ignoring these confounding variables is to arbitrarily cause NWNA, the senior water rights holder, to curtail extraction in response to actions taken by others, or other conditions wholly outside of their control, in order to achieve an arbitrary surface water depth and velocity in a streambed that is naturally intermittent.</p>
	<p>b. If Trigger B. is reached, then water must be added to the surface stream above the area where the drying is occurring</p>	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>If Action A (cessation of extraction) is insufficient to achieve the arbitrary surface water depth and velocity defined in Objective 1.3(b) for the intermittent streambed, then Action B is triggered as described under Objective 1.4 (b). Action B requires that “water must be added to the surface stream above the area where drying is occurring.” The USFS Draft AMP does not identify the source of water to be “added” to the stream above the drying area. Given that Action A is to cease extraction until flow is restored, and that no other source of water is available within the watershed, Action B appears to require acquisition of import water from outside of the watershed to achieve the water depth and velocity defined in Objective 1.3(b).</p> <p>After Trigger A has been activated and extraction has ceased as required under Action A, arguably all of the water that would naturally be available to the intermittent stream system is available to support that system. It is unreasonable to require that more water be added to the intermittent stream bed</p>

	PROPOSED SBNF ACTION	Nwana COMMENTS
		<p>than would otherwise exist naturally in that system. Furthermore, the introduction of imported water would likely change the existing water quality of Strawberry Creek and may have other detrimental impacts due to temperature, pH, TDS and other factors. As described in Section II above, the proposed addition of imported water, presumably from a source outside of the watershed, is inappropriate.</p>
5.	Monitoring:	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>The monitoring described must be refined to reflect site-specific characteristics of each of the springs within the Strawberry Creek watershed, seasonal and multi-year variability of climatic conditions, the intermittent nature of Strawberry Creek, groundwater extraction by others, diversions made by others, and other factors.</p> <p>Objective 1, Subheading 5 of the USFS Draft AMP requires the installation of piezometers at unspecified locations within the Strawberry Creek watershed. This will have a significant (and unstudied) impact on the environment. Each of the springs in the watershed originates from groundwater flow through the fractured quartz monzonite of the Arrowhead Springs aquifer. Prior to development, the spring flow originates from fractures that are covered by a thin layer of soil. Each of the springs was developed either by tunneling or by drilling small diameter (2-inch) horizontal borings into the fractured quartz monzonite. Piezometers intended to monitor groundwater conditions within the fractured quartz monzonite aquifer will require drilling equipment similar to that used to drill the spring water boreholes. Piezometers installed with</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
		<p>hand tools alone will not be able to advance into the hard fractured quartz monzonite to depths sufficient to monitor groundwater conditions as required.</p> <p>Installation of piezometers in this environment, and that connect hydrogeologically with the Arrowhead Springs aquifer, will require using a drill rig to penetrate into the fractured quartz monzonite. This will require, as a minimum effort, that a helicopter air lift a drill rig into the canyon and set it down at prepared drill pads with sufficient lay down areas to support the required drilling operations. Depending on the proximity of the required piezometers to one another, roads may need to be cut between the drill pad locations to facilitate safe drill rig access. The requirement to install piezometers in this environment is unduly invasive and will result in the destruction of a significant amount of Forest resources.</p> <p>NWNA alternately proposes that surface flow monitoring be implemented at appropriate locations within the intermittent streambed; that groundwater level observations be conducted at areas where there is sufficient soil cover to allow installation of piezometers with hand tools; and that pressure monitoring occur at shut-in horizontal boreholes. Monitoring pressure at shut-in boreholes will provide an indication of recovery of the piezometric surface in the areas up-gradient of the boreholes for tracking groundwater recovery.</p>
	<p>a. Following Trigger A. and Action A.</p> <p>i. Change surface flow monitoring to</p>	<p>Appropriate post-action monitoring is described in the NWNA Proposed AMP (see Section III above).</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p>hydroacoustic meter</p> <p>ii. Track groundwater recovery (i.e, pressure transducers, piezometers) between spring locations and surface water drying location(s)</p> <p>iii. Measure travel time through the system</p> <p>iv. Measure water quality parameters</p>	
	<p>b. Following Trigger B. and Action B.</p> <p>i. Continue flow monitoring</p> <p>ii. Continue water quality monitoring</p> <p>iii. Track groundwater recovery</p>	<p>Appropriate post-action monitoring is described in the NWNA Proposed AMP (see Section III above).</p>
<b>O.2</b>	<b><u>Riparian Standards</u></b>	
<b>1.</b>	<p><b>LMP, Part 3, S47:</b> When designing new projects in riparian areas, apply the Five-Step Project Screening Process for Riparian Conservation Areas as described in Appendix E - Five-Step Project Screening Process for Riparian Conservation Areas. Activities are designed to protect, maintain, or restore the riparian ecosystem. In the riparian conservation areas that include perennial and intermittent streams, lakes, and wetlands allow only those actions that maintain or improve long-term aquatic and riparian ecosystem health including quantity, quality, and timing of stream flows. As part of the analysis consider physical factors, such as soil characteristics, groundwater and surface water characteristics, geology and geologic</p>	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>Standard S-47 requires the implementation of a Five-Step Project Screening Process to identify riparian conservation areas for new projects. The Five-Step Project Screening Process includes evaluation of documented habitat, desired conditions, and forest goals to identify Riparian Conservation Areas (RCAs) and is intended for use when designing new projects in riparian areas.</p> <p>The requested SUP renewal does not constitute a new project, but rather re-authorization of an existing right-of-way that has</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p>hazards, slope, and stream characteristics; and biological factors, such as aquatic and riparian dependent species present, their habitat needs (see species guidance documents in Part 3, Appendix H), and the ability of the existing environment to provide needed habitat. [Strategy WAT 1 includes RCA language and “Restore, maintain and improve watershed conditions over the long-term.”]</p>	<p>been in use since at least 1929. Although not a new project, NWNA recognizes the value of applying the Five-Step Project Screening Process to identify potential RCAs currently existing within the Strawberry Canyon watershed so that those areas may be monitored, protected, and maintained.</p> <p>It is important to note that the riparian areas as they exist in Strawberry Canyon today have been naturally restored after the “Old Fire” destroyed vegetation and habitat in the study area in 2003. This natural restoration has occurred concurrent with extraction and while infrastructure operation has been ongoing.</p>
<p><b>2.</b></p>	<p>Monitoring components – Determine potential of riparian ecosystem for restoration purposes</p> <p>a. Conduct a paired watershed study to assess the riparian health of East Twin Creek compared to the subwatershed of Strawberry Creek where the extraction points are located. Multiple paired locations may be used to look at different parts of the watershed. Define current riparian/stream health in each watershed at all comparison reaches.</p>	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>Objective 2, Subheading 2 of the USFS Draft AMP requires a paired basin study to be conducted to compare the relative health of Strawberry Creek to that of East Twin Creek to determine the riparian ecosystem potential and for restoration purposes. The USFS Draft AMP does not identify any restoration objectives, goals, locations, or criteria. The USFS Draft AMP assumes that the two watersheds are identical with respect to spring elevations, fault alignments, geomorphology, hydrologic characteristics, and biologic communities.</p> <p>The USFS Draft AMP assumes that hydrologic and riparian conditions in Strawberry Canyon and the analog canyon (East Twin Creek is the proposed analog) will be identical on a quantitative basis, as demonstrated by Riparian Triggers A, B, and C. The metrics provided for the comparisons made under the Riparian Triggers are cited from the “Watershed Condition</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
		<p>Classification Protocol.” The Watershed Condition Classification Protocol referenced is understood to be the Watershed Condition Classification Technical Guide, FS-978, July 2011.</p> <p>The paired basin analysis should focus on richness and diversity of riparian habitat and suitable habitat for sensitive and/or listed species that require protection. NWNA agrees that multiple sites may be identified for the paired basin analysis; however, identifying similar monitoring locations based on elevation is not a reasonable comparison, as the flow regime and aspect is very different between the two canyons. Monitoring stations must take into account the number and length of tributaries feeding into each particular location. NWNA will work with USFS to ensure that the paired basin analysis is relevant and comparable.</p> <p>Objective 2 of the USFS Draft AMP misapplies FS-978 to create a type of paired basin study that is not contemplated by that document. The paired basin study loosely based on FS-978 is proposed without any reference to established guidelines for the conduct of paired basin studies such as those published by the United States Environmental Protection Agency (USEPA) (1993) or other published sources. There are established criteria for the selection of paired basins and the application of control conditions to scientifically analyze the effects of specific actions applied in two watersheds. As written, Objective 2 assumes that all of East Twin Creek is a suitable quantitative experimental control for comparison to Strawberry Creek. This assumption is unfounded and based on a lack of scientific analyses comparing attributes of the two creeks. Based on the fundamental differences between the two</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
		subject creeks, and a lack of data describing either creek, only qualitative comparisons can be made until sufficient characterization data are collected and analyzed.
	i. Since the 2002 and 2015 studies noted that the creek was dry below the geologic fault near Wells 10, 11, 12, set one monitoring location transect and channel length in East Twin Creek based on elevation and lateral extent of geologic fault structures (this could occur near the H1 bird survey area, Figure 7, Bio technical report)	All comments set forth in Sections I-II above are hereby incorporated by reference herein.  Appropriate application of the SCI and paired basin study criteria are described in the NWNA Proposed AMP (see Section III above).
	ii. Additional comparison reach locations should coincide with elevation, faulting, geomorphology, etc for extraction locations 1, 2, 3, 7, 8 spring groupings.	All comments set forth in Sections I-II above are hereby incorporated by reference herein.  Appropriate application of the SCI and paired basin study criteria are described in the NWNA Proposed AMP (see Section III above).
	iii. As there is a meadow type area near Wells 10, 11, 12, determine if similar meadow locations exist in East Twin Creek for comparison.	All comments set forth in Sections I-II above are hereby incorporated by reference herein.  Appropriate application of the SCI and paired basin study criteria are described in the NWNA Proposed AMP (see Section III above).
	iv. Use a modified stream condition inventory/proper functioning condition (SCI/PFC) protocol to gather geomorphology, plant physiology, extent of riparian vegetation (including native mid to late seral stage), condition of the channel, stream characteristics,	All comments set forth in Sections I-II above are hereby incorporated by reference herein.  Appropriate application of the SCI and paired basin study criteria are described in the NWNA Proposed AMP (see

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	flow, water quality, macroinvertebrate diversity, stream hydrograph, precipitation, geologic structural controls on flow, etc	Section III above).
	v. Determine habitat suitability by using protocol standards established for southwestern willow flycatcher, least Bell’s vireo, California gnatcatcher, Santa Ana speckled dace, and mountain yellow-legged frog.	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>Habitat suitability will be evaluated using established protocols for southwestern willow flycatcher, least Bell’s vireo, California gnatcatcher, Santa Ana speckled dace, and mountain yellow-legged frog.</p>
	vi. Determine if (check assumption that) the characteristics of East Twin Creek make it suitable as a paired watershed.	<p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p> <p>Appropriate application of the SCI, and paired basin study criteria are described in the NWNA Proposed AMP (see Section III above).</p>
<b>3.</b>	Triggers:	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>The text of Objective 2, Subheading 3, Parts (a through c) indicate that if the metrics misapplied from FS-978 are not met, then Strawberry Creek will be assigned a status as “impaired.” Objective 2, Subheading 4 leaves the reader with the impression that if extraction ceases, presumably in stages, then Strawberry Creek may be restored to a non-impaired condition. Since FS-978 was published in 2011, the USFS has made an effort to characterize all of the watersheds within USFS lands to assess conditions of impairment, including Strawberry Creek and East Twin Creek. Based on this</p>

	PROPOSED SBNF ACTION	Nwana COMMENTS
		<p>assessment, the USFS designated Strawberry and East Twin Creeks as impaired. In addition to these creeks, the creeks within Sand Canyon, Little Sand Canyon, Borea Canyon, Waterman Canyon, Sycamore Canyon, East Strawberry Canyon, and several unnamed canyons on the southern slope of the San Bernardino Mountains in the vicinity of Strawberry Canyon have also been designated as impaired (<a href="http://apps.fs.usda.gov/nfs/nrm/wcatt/WCFMapviewer/">http://apps.fs.usda.gov/nfs/nrm/wcatt/WCFMapviewer/</a>). Given that all of the canyons adjacent to Strawberry Canyon and East Twin Creek have been designated as impaired, it is unreasonable to assume that any actions taken by Nwana in Strawberry Canyon would remove the “impaired” designation from that Canyon.</p> <p>There is presently no quantifiable relationship between the metrics misapplied from FS-978 for use as triggers under Objective 2, Subheading 3, Parts (a through c), and the actions that are intended to achieve a non-impaired status in the intermittent Strawberry Creek watershed described under Objective 2, Subheading 4. Consequently, the assignment of these actions to the specified triggers can only be characterized as arbitrary.</p> <p>Triggers should not be identified until the area of analysis is identified, the analysis parameters are clear (e.g., vegetative health indicators provided by USFS botanist), and the quantitative relationships established. Furthermore, how those relationships apply to operation and maintenance activities of the existing infrastructure must be clearly defined.</p>
	<p>a. Base flows measured in East Twin Creek control watershed are not maintained in diversion</p>	<p>All comments set forth in Sections I-III above are hereby</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p>subwatershed. [Indicates an Impaired rating for Flow Characteristics under Watershed Condition Classification protocol.]</p>	<p>incorporated by reference herein.</p> <p>Objective 2, subheading 3 a. requires identical flow in Strawberry Creek and East Twin Creek, but makes no provision for the natural geologic differences or differences between flows in the respective creeks. Riparian Trigger A states that Strawberry Creek was observed to be dry below the fault located down-gradient from boreholes 10, 11, and 12, failing to note that Strawberry Creek is intermittent and that surface water flow is typically reduced or absent down-gradient of faults which act as groundwater flow barriers. Strawberry Creek has been classified as intermittent since at least 1901; East Twin Creek has been classified as perennial since at least 1896. This further invalidates the assumption that flow should be equal in these two creeks.</p> <p>Riparian Trigger A states that if base flows measured (at unspecified locations on either creek) in the East Twin Creek control watershed are not exactly equal to flows in the diversion sub-watershed, then the diversion sub-watershed is impaired in accordance with the referenced document (FS-978). However, the criteria for impairment described in Riparian Trigger A, Trigger B, and Trigger C are not the same as those described in FS-978.</p> <p>The referenced document (FS-978) does not include provisions to characterize creeks as impaired based on flow measurements made in other creeks, and thus does not reflect the approach described in the USFS Draft AMP for designation of impairment by comparison of Strawberry Creek to East Twin Creek. Rather, the referenced document (FS-978) states that the purpose is to address changes to the</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
		<p>natural flow regime with respect to the magnitude, duration, or timing of natural streamflow hydrographs. This analysis is to be made in a single watershed by analysis of current and historical streamflow hydrographs from that watershed. As written, Riparian Trigger A misapplies the flow analyses described in FS-978, and misconstrues the intent of that document to compare naturally dissimilar creeks in a manner not contemplated in that document.</p>
	<p>b. More than 75% of diversion subwatershed channel length has width-to-depth ratios greater than the East Twin Creek control area. [Indicates an Impaired rating for Channel Shape and Function under Watershed Condition Classification protocol.]</p>	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>FS-978 does not include provisions to characterize creeks as impaired based on any type of comparisons (including width-to-depth ratios) made to other creeks. As described in FS-978, the 75 percent metric cited in Trigger B is meant to be applied to the number of channels that have experienced width to depth reductions within a single watershed, not a quantitative comparison of two separate channels. As written, Riparian Trigger B misapplies the channel shape and function criteria established in FS-978, and conflates the metrics provided within that document to compare naturally dissimilar channels in a manner not contemplated in that document.</p> <p>Additional guidance is provided in the Watershed Condition Classification Technical Guide (FS-978). This classification guide should be applied to channels lower in the watershed that are typically response reaches with less than three percent (0.03) gradients. The gradients within the study reach range between 13 and 61 percent (0.13 and 0.61). Based on this criterion alone, FS-978 may not be appropriately applied to the upper reaches of the intermittent Strawberry Creek where</p>

	PROPOSED SBNF ACTION	Nwana COMMENTS
		Nwana's water collection takes place..
	<p>c. Native vegetation is vigorous, healthy and diverse in age, structure, cover and composition on &lt;75% of the riparian/wetland areas in the diversion subwatershed where extraction is taking place compared to the East Twin Creek control area. [Indicates an Impaired rating for Riparian Vegetation under Watershed Condition Classification protocol.]</p>	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>Similar to Triggers A and B described above, this Trigger B misapplies the channel vegetation condition criteria established in FS-978 and conflates the metrics provided within that document to compare naturally dissimilar environments in a manner not contemplated in that document.</p>
4.	Actions:	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>All of the actions described include reduction of extraction until the desired conditions quantified by the metrics provided in Riparian Triggers, A, B, and C are met. As noted above, the metrics are misapplied, and/or misstated from FS-978, and are not applicable in the manner proposed. In addition to this substantial error, no attempt has been made to establish a quantitative relationship between the extraction and creek flow or environmental conditions that are imagined to exist in the absence of extraction. Given that Strawberry Creek is a naturally intermittent stream, that water alternately rises to the surface and then re-infiltrates at many locations in the upper Strawberry Creek watershed, and that current total extraction is on the order of 70 gallons per minute (April 2016), there is no basis for the assumption that cessation of extraction on any scale will have any measureable effect on the parameters stated under Objective 2, Subheading 3, Parts (a through c).</p> <p>The text of Objective 2, Subheading 3, Parts (a through c)</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
		<p>indicates that if the metrics misapplied from FS-978 are not met, then Strawberry Creek will be assigned a status as “impaired.” Objective 2, Subheading 4 leaves the reader with the impression that if extraction ceases, presumably in stages, then Strawberry Creek may be restored to a non-impaired condition. Given that Strawberry and East Twin Creeks have already been designated as impaired, and that all of the surrounding creeks have been designated as impaired (<a href="http://apps.fs.usda.gov/nfs/nrm/wcatt/WCFMapviewer/">http://apps.fs.usda.gov/nfs/nrm/wcatt/WCFMapviewer/</a>) it is unreasonable to assume that any actions taken by NWNA in Strawberry Canyon would remove the “impaired” designation from that Canyon.</p>
	<p>a. Reduce extraction from springs whose travel time connectedness allows for base flow to be maintained. (This level of flow could be different than minimum under Objective 1 triggers.) If reduced extraction is insufficient to maintain base flow, addition of water will be necessary.</p>	<p>See comment above.</p> <p>Appropriate triggers and site-specific actions are described in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p>b. Reduce extraction from springs that affect groundwater depth within the riparian zone to allow groundwater to rise to the rooting depth of the perennial based vegetation.</p>	<p>See comment above.</p> <p>Appropriate triggers and site-specific actions are described in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p>c. Reduce extraction to allow for vegetation to reach a</p>	<p>See comment above.</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	sustained level of 75% area of vigorous, healthy and diverse in age, structure, cover, and composition.	<p>Appropriate triggers and site-specific actions are described in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
<b>5.</b>	Monitoring:	
	a. Base flow maintenance levels are to be maintained and measured in the low flow periods until sufficient fall/winter rainfall raises the level to a non-base flow level based on gaging in control watershed.	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>No provision is made to quantify the required base flow or to characterize the seasonal variability of the natural base flow. In the absence of these data, the USFS Draft AMP effectively requires the natural variability of base flow to be overcome with artificial irrigation. No location is given where base flow is to be maintained.</p>
	b. Shallow groundwater monitoring piezometers (with data loggers) set back from the channel to either side within the riparian corridor to measure rooting depth for riparian plants.	<p>Appropriate post-action monitoring is described in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	c. Monitor riparian vegetation health across the lateral extent of the survey reaches using vegetative health indicators, determined through consultation with Forest Service botanist, until threshold is reached. Track water needs to reach this level and maintain reduced extraction levels seasonally to maintain this level of vegetative health.	<p>Appropriate post-action monitoring is described in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>

	PROPOSED SBNF ACTION	Nwana COMMENTS
<b>O.3</b>	<b><u>Species Standards</u></b>	
<b>1.</b>	<p><b>LMP, Part 3, S11:</b> When occupied or suitable habitat for a threatened, endangered, proposed, candidate or sensitive (TEPCS) species is present on an ongoing or proposed project site, consider species guidance documents (see Appendix H) to develop project-specific or activity-specific design criteria. This guidance is intended to provide a range of possible conservation measures that may be selectively applied during site-specific planning to avoid, minimize or mitigate negative long-term effects on threatened, endangered, proposed, candidate or sensitive species and habitat. Involve appropriate resource specialists in the identification of relevant design criteria and appropriate species lists. Include review of species guidance documents in fire suppression or other emergency actions when and to the extent practicable.</p> <p><b>LMP, Part 3, S24:</b> Mitigate impacts of on-going uses and management activities on threatened, endangered, proposed, and candidate species.</p>	<p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p> <p>Surveys for TEPCS are currently in progress, and surveys for LBVI/SWFL have been conducted. The data gathered from these surveys will be used to develop site-specific criteria, triggers, and actions for protection of TEPCS.</p>
<b>2.</b>	Monitoring components – determine potential of micro-riparian habitats from untapped springs and meadows for restoration purposes	<p>Appropriate site-specific monitoring will be proposed based on the results of ongoing biological surveys.</p> <p>All comments set forth in Sections I-III above are hereby incorporated by reference herein.</p>
	a. Investigate East Twin Creek to find un-tapped springs, meadows, and seeps both in upper areas (elevations similar to diversions) and lower down (where increased groundwater pressure could be	<p>Appropriate application of paired basin study criteria are described in the Nwana Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	<p>maintaining these features)</p> <ul style="list-style-type: none"> <li>i. Document lateral/spatial extent of riparian vegetation and TEPCS plants and wildlife</li> <li>ii. Measure rooting depth</li> <li>iii. Measure groundwater levels</li> <li>iv. Conduct presence/absence surveys for species identified with habitat present; both plant and animal</li> <li>v. Identify spring discharge and surface water extent <ul style="list-style-type: none"> <li>1. Set movement cameras to document use of surface water by animals</li> </ul> </li> </ul>	<p>incorporated by reference herein.</p>
	<ul style="list-style-type: none"> <li>b. All types of monitoring in control watershed must be duplicated in diversion sub watershed</li> </ul>	<p>Appropriate application of paired basin study criteria are described in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
<b>3.</b>	Triggers:	
	<ul style="list-style-type: none"> <li>a. From 70% to 90% of expected aquatic life forms and communities are present based on the potential found in the East Twin Creek watershed. [Indicates a Functioning at Risk rating for Life Form Presence</li> </ul>	<p>Appropriate site-specific aquatic trigger criteria and corresponding actions will be proposed based on the outcome of ongoing biological studies.</p> <p>All comments set forth in Sections I-III above are hereby</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
	under Watershed Condition Classification protocol.]	incorporated by reference herein.
	b. Less than 70% of expected aquatic life forms and communities are present based on the potential found in the East Twin Creek watershed. [Indicates an Impaired rating for Life Form Presence under Watershed Condition Classification protocol.]	Appropriate site-specific aquatic trigger criteria and corresponding actions will be proposed based on the outcome of ongoing biological studies.  All comments set forth in Sections I-III above are hereby incorporated by reference herein.
<b>4.</b>	Actions:	
	a. Using water from the spring/well diversion sites, restore sufficient areas with addition of water to create areas that can be used for replanting or for wildlife drinkers.	Appropriate site-specific aquatic trigger criteria and corresponding actions will be proposed based on the outcome of ongoing biological studies.  All comments set forth in Sections I-III above are hereby incorporated by reference herein.
	b. Continue the addition of water (irrigation) to support success of native special status vegetation and provide for wildlife habitat linkages.	Appropriate site-specific aquatic trigger criteria and corresponding actions will be proposed based on the outcome of ongoing biological studies.  All comments set forth in Sections I-III above are hereby incorporated by reference herein.
<b>5.</b>	Monitor restoration of plant and animal communities.	Appropriate monitoring criteria will be proposed based on the outcome of ongoing biological studies.  All comments set forth in Sections I-III above are hereby incorporated by reference herein.

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
<b>O.4</b>	<b><u>Invasive Species Standards</u></b>	
<b>1.</b>	<b>LMP Part 1. Goal 2.1:</b> Reverse the trend of increasing loss of natural resources due to invasive species. Forest Service Manual direction for Invasive Species Management is contained in FSM 2900, effective December 5, 2011. This direction sets forth National Forest System policy, responsibilities, and direction for the prevention, detection, control, and restoration of effects from aquatic and terrestrial invasive species.	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby incorporated by reference herein.
<b>2.</b>	Monitoring components – identify, quantify, and map existing occurrences of priority invasive plant and animal species within the project area and document with GIS polygon shapefiles or GPS coordinates.	Surveys for invasive species will be conducted.  All comments set forth in Sections I-III above are hereby incorporated by reference herein.
	a. The priority invasive plant and animal list is to be based on species that are included in Cal IPC list of species considered to be High and Medium threat to ecological systems, and are not already ubiquitous throughout both the project area and the paired watershed of East Twin Creek. This list will be compiled in consultation with USFS botany and wildlife specialists.	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby incorporated by reference herein.
	b. All types of monitoring in control watershed must be duplicated in extraction watershed	Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).  All comments set forth in Sections I-II above are hereby incorporated by reference herein.
<b>3.</b>	Triggers:	Comments to this provision are set forth in the NWNA

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
		<p>Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p>a. Cover, quantity or extent of current infestations are increasing.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p>b. New invasive species are identified.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
<p><b>4.</b></p>	<p>Actions:</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p>a. Consult with USFS botany and biology specialists to determine most effective control/eradication methods allowed by agency policy and direction.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>
	<p>b. Initiate control as soon as possible within the time period for most effective treatment.</p>	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
		incorporated by reference herein.
	c. Remove biomass containing reproductive potential (root segments, seeds, or flowers that could develop into viable seed) from project site and FS land.	<p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p> <p>Once a targeted priority invasive plant list is developed, NWNA will work with USFS to determine the efficacy of removal locations and strategies based on access and potential disturbance. Once defined and approved, NWNA will remove biomass containing reproductive potential (root segments, seeds, or flowers that could develop into viable seed) from project areas, and will dispose of those materials at an approved location. The project area is defined as the subject ROW and associated buffer areas.</p>
	d. Remove adult, juvenile or larval forms of animals from project site and FS land.	<p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p> <p>Once a targeted priority invasive animal list is developed, NWNA will work with USFS to determine the efficacy of removal locations and strategies based on access and potential disturbance. Once defined and approved, NWNA will remove from project areas, when feasible. The project area is defined as the subject right-of-way and associated buffer areas.</p>
	e. Provide yearly report of monitoring and control efforts including names of workers/surveyors, date, method of control, and location.	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>

	<b>PROPOSED SBNF ACTION</b>	<b>NWNA COMMENTS</b>
<b>5.</b>	Monitor and re-treat when necessary to control or eradicate identified invasive plant and animal infestations.	<p>Comments to this provision are set forth in the NWNA Proposed AMP (see Section III above).</p> <p>All comments set forth in Sections I-II above are hereby incorporated by reference herein.</p>

## **V. CONCLUSION**

The SUP renewal process presents an opportunity for both NWNA and the Forest Service to continue the long tradition of sustainable environmental stewardship that began 121 years ago. While NWNA has some concerns with the current Forest Service proposal, we enthusiastically support science-based management goals to conserve the health of California's precious water resources and promote the long-term health of the SBNF. We look forward to the Forest Service's reissuing the SUP in line with our comments. NWNA is confident that its proposed scientifically sound adaptive management plan will ensure that these resources are available for future Californians.