CONSERVATION AGREEMENT
for the
San Xavier Talussnail
Sonorella eremita

El Paso Natural Gas Company
El Paso, Texas 79901

Arizona Electric Power Cooperative, Inc.
Benson, Arizona 85602-0670

Arizona Game and Fish Commission
Phoenix, Arizona 85023

U.S. Fish and Wildlife Service
Albuquerque, New Mexico 87102

This Conservation Agreement deals with conservation and protection of the San Xavier talussnail (*Sonorella eremita*) hereinafter referred to as the "Talussnail", a southern Arizona endemic land snail that has been proposed for Federal listing as an endangered species under the Endangered Species Act. At this time, status surveys indicate that the Talussnail occurs in an area of approximately 15 by 30 meters (50 by 100 feet) on lands owned by the El Paso Natural Gas Company, hereinafter referred to as "EPNG", on a single hill in Pima County. The Talussnail is restricted to a deep, northwestward-facing, limestone rock slide on the hill. The hill is on private land and is adjacent to land owned by the Bureau of Land Management. Arizona Electric Power Cooperative, Inc., hereinafter referred to as "AEPCO", has been granted a perpetual easement for a site on the hill-top and has assumed responsibility for maintaining the access road to the hill-top. Potential threats include urban development, vandalism, and road construction or maintenance. Without measures to address these threats to the Talussnail, the species is considered imperiled and its continued existence in danger.

PURPOSE OF THIS CONSERVATION AGREEMENT

This Conservation Agreement (Agreement) has been initiated to conserve the Talussnail and its habitat by reducing threats to the species and maintaining its habitat under the ownership of EPNG, and the stewardship of AEPCO. This Conservation Agreement's primary purpose is to implement the means for Talussnail's protection and long-term viability through this Conservation Agreement's proactive conservation program by EPNG and AEPCO, as assisted by the U.S. Fish and Wildlife Service (Service) and the State of Arizona, by and through the Arizona Game and Fish Commission. The Arizona Game and Fish Department and the Director, act as administrative agents for the Commission.

I. SPECIES INVOLVED:

The species that will be addressed by this Conservation Agreement is the San Xavier talussnail (Sonorella eremita). Because of the limited habitat occupied by the Talussnail and the concomitant specificity of this Agreement to maintain that habitat, it is not considered likely that other listed species are present in the approximately 5,000 square foot area that is the subject of this Conservation Agreement.

The Talussnail is a desert snail and is very restricted in range and is very sensitive to desiccation and sedimentation resulting from disturbance of the talus and associated vegetation.

The Talussnail is less than one inch in diameter, has a round shell with as many as 4.5 whorls, a white to pinkish tint and a chestnut-brown shoulder band and has a round shell, and is approximately 19 millimeters (0.7 inches) in diameter. The Talussnail is hermaphroditic. After some rain, the snail will feed, mate, and lay eggs. Fertilization and production of eggs

takes several days. If the rains are short-lived, the eggs are held until the next rain. The Talussnail requires three or four years to mature, depending on rainfall frequency, and has a reproductive life of four to six years, depending on the number of days it remains active. The Talussnail is known to estivate for up to three years and in most years is only active for three or four days.

II. PROJECT OFFICERS:

A. El Paso Natural Gas Company
100 North Stanton
El Paso, TX 79901
Telephone: (915) 496-3034
Fax: (915) 496-2495

For the purposes of coordination and administrative matters, EPNG designates Sheila Castellano, Senior Environmental Scientist, as Project Officer for this Agreement. Email: castellanos@epenergy.com

B. Arizona Electric Power Cooperative, Inc.
P.O. Box 670
Benson, Arizona 85602-0670
Telephone: (520) 586-3631
Telephone: (520) 586-5122
Fax: 520-586-5566

For the purposes of coordination and administrative matters, AEPCO designates Carol Peters, Environmental Planner, as Project Officer for this Agreement. Email: carolp@aepnet.com

C. Arizona Game and Fish Department (AGFD)
2221 W. Greenway Road
Phoenix, Arizona 85023
Telephone: (602) 942-3000

Fax: (602) 789-3920; 789-3299

For purposes of coordination and administrative matters, the Department designates Dennis Kubly, Nongame Branch, 2221 W. Greenway, Phoenix, Arizona 85023, Telephone (602) 789-3516; Fax (602) 789-3926, as the point of contact for this Agreement; E-mail dkubly@gf.state.az.us

D. Nancy Kaufman, Regional Director
U.S. Fish and Wildlife Service
P.O. Box 1306
Albuquerque, New Mexico 87102
Telephone: (505) 248-6286
Fax: (505) 248-6920

For purposes of coordination and administrative matters, the Service designates Debra Bills, Arizona Ecological Services Office, 2321 West Royal Palm Road, Suite 103, Phoenix, Arizona 85021, Telephone (602) 640-2720; Fax (602) 640-2730, as the point of contact for this Agreement; E-mail debra_bills@fws.gov

III. AUTHORITY

The authority for the Service to enter into this voluntary Conservation Agreement with EPNG and AEPCO derives from the Endangered Species Act of 1973, as amended [16 U.S.C. 1531-1544]); the Fish and Wildlife Act of 1956, as amended [16 U.S.C. 742(a)-754]; and the Fish and Wildlife Coordination Act, as amended [16 U.S.C. 661-667(e)].

The authority for the Department to enter into this voluntary Conservation Agreement with EPNG and AEPCO derives from the A.R.S. ' 17-231.B.7, the Endangered Species Act of 1973, as amended [16 U.S.C. 1531-1544]); the Fish and Wildlife Act of 1956, as amended [16 U.S.C. 742(a)-754]; and the Fish and Wildlife Coordination Act, as amended [16 U.S.C. 661-667(e)].

Nothing in this Agreement is intended to abrogate any of the parties respective responsibilities under the Endangered Species Act, State law, or other laws or regulation.

IV. STATUS AND DISTRIBUTION OF THE TALUSSNAIL

At this time, the Talussnail is known to be located on private land on a single hill of Mineral Hills in Pima County. The entire habitat at this location is approximately 15 by 30 meters. The Talussnail lives in a deep, limestone rock slide. The area is protected from drying effects of the sun by outcrops of limestone and decomposed granite to the northeast and southwest, and by the hill itself to the southeast. The vegetation, slope of the hillside, and depth of the rock slide provide necessary moisture conditions.

The extremely restricted range of the Talussnail (at this time all known individuals reside in an area of approximately 5000 square feet) renders it vulnerable to extinction by relatively small-scale human actions. While there is great concern for the Talussnail, little is known of its biology, such as population dynamics.

In general, desert snails are known to protect themselves from drying out by crawling into deep, cool rockslides that are not filled with soil. The limestone rock or other talus that contains calcium carbonate is crucial to the species as it provides minerals for shell deposition and neutralizes carbonic acid that is produced during the Talussnail's prolonged periods of estivation. Talussnails are extremely sensitive to desiccation and sedimentation resulting from disturbance of the talus that forms their sole habitat. Even limited removal of cover could alter the microclimate of the rockslide, adversely affecting the Talussnail. The highly restricted distribution of this species also makes it vulnerable to excessive collection

from either vandals or individuals curious about the Talussnail.

V. PROBLEMS FACING THE TALUSSNAIL

At this time, the Talussnail is known to be located on a single hillside just downslope from a dirt road leading to a microwave tower. Changes in moisture conditions, trails, collection, and vandalism may impact the talus slope or the Talussnail. The Talussnail's restricted location makes it vulnerable to extinction from a single catastrophic event.

The threat of vandalism will continue to burden this species and the area in general. Unauthorized individuals entering the talus slope will be trespassing on private property. The Advisory Committee will continue to evaluate the need for additional fencing, and replacing or adding "No Trespassing" signs in the area, particularly in areas used by dirt bikes. One additional "No Trespassing" sign was added to the upper gate by AEPCO during the first week of August 1998 after evidence of damage to one of the locks.

Dust and sediment from extensive use of the dirt road, maintenance, or expansion of the roadbed could fill the interstitial spaces within the rockslide, rendering it incapable of supporting the talussnail. This is not a serious threat because vehicle access of the road is rare and limited to individuals with a key to the two locked gates on the road. Access to the road is primarily for those individuals requiring access to the microwave towers. AEPCO employees may visit the site once every other month. EPNG employees use the road about once a month. An equipment problem may require daily visits until remedied, but this is rare.

Information provided by AEPCO shows that since the construction of the road in 1978, there have been approximately 6 occasions that maintenance has been conducted on the road. The last road

maintenance activity was performed in April 1996. That action included only the lower portion of the road, below the talus slope. The last time a grader worked the entire road was December 1990. Access to the talus slope may be gained by climbing up the hillside which is accessible by foot or dirtbikes. Trespassing around the locked gate may also occur.

Other emergency actions that may occur in the area include major equipment damage at the microwave towers from fire, vandalism, or extreme weather conditions. These events may result in the interruption of control or indication information from the microwave transmission systems. Crews are dispatched to the site for immediate repairs. Routine maintenance is not considered an emergency. The only time emergency road work would be necessary is if major equipment damage resulted in the road being impassable. AEPCO and El Paso have agreed to notify the Advisory Committee as soon as practicable after any type of emergency in the area. The Advisory Committee is evaluating the feasibility of having a monitor on site to ensure that excess material is not pushed down the side of the road into the talus slope.

When the Talussnail was proposed for listing in 1994, the Service believed that the land was owned by an individual landowner. Recent Service reviews of the exact location on the hill confirm that the land is owned by EPNG. AEPCO has been granted a perpetual easement for a site on the hill-top and has assumed responsibility for maintaining the access road to the hill-top. When the proposed rule was issued, the Service included road expansion and other activities associated with expanding development north and southwest of the hill as potential threats to the continued viability of the Talussnail. The Service has since learned that EPNG has no plans to expand the road nor does EPNG anticipate any changes in the current use of the road. Although falling rocks and dust may enter the talus slope, this is not viewed as a significant impact under these conditions.

Also, when the talussnail was proposed in 1994, the status of the mining claims was not known. As the general area is known for its mining potential, we believed this to be a serious threat. Since that time, El Paso has clarified that they own all of the mining claims in the Area of Concern. Although adjacent landowners may undergo small scale prospecting and mining, we do not believe this is a significant threat to this piece of private property. Further, Asarco Incorporated, has clarified that there are no plans to expand any operations in the area of the talus slope, as a larger area including the talus slope, is being designated as a conservation easement for the Pima pineapple cactus (Coryphantha scheeri var. robustispina).

VI. MANAGEMENT PROGRAM

Limited information regarding the biology of the Talussnail is available at this time. Therefore, management actions cannot as yet be fully identified. The most pressing requirement is to ensure that no actions occur on the land that will alter the existing physical environment and lead to changes in suitability of the habitat to sustain the species.

A. EPNG and AEPCO agree to the Management Program as stated in this Article VI for the designated period of time.

1. An Advisory Committee shall be established to provide guidance, discussion and review of the progress of the Management Program. Each party to this Conservation Agreement shall appoint a representative to serve on the Advisory Committee.

2. The area encompassing and adjacent to the habitat will be recognized as the "Area of Concern" and shall not undergo any modifications. The Advisory Committee shall, after the effective date of this Conservation Agreement, agree upon and mark the corners of the Area of Concern, including the area that drains into the talus slope. It is anticipated that the Area of Concern

shall encompass the canyon body, approximately 100 by 200 feet, including a 50 feet buffer around the perimeter.

3. EPNG and AEPCO agree that no rock, soil or construction material shall be removed or added to the Area of Concern.

4. The dirt road above the Area of Concern will not be widened.

5. Routine road maintenance above the Area of Concern shall not be conducted during rainy periods of July and August and will be done so that the hydrology of the talus slope is not altered and there is no redistribution or buildup of soil or rocks that could be carried into the talus slope habitat by runoff events. Emergency road maintenance shall not be prohibited by this paragraph. However, Cooperators shall be notified of any emergency actions as soon as practicable.

6. If herbicides are required for the control of non-native or invading species at the microwave tower site or on the road, they will be selectively applied by hand, not during periods of rain, and when the probability of precipitation is low. AEPCO who maintains the road, has never applied herbicides to the road or anywhere near the talus slope. Although herbicides may be used upslope at the microwave site, the application is confined to the microwave tower fenced area and consists of annual pre-emergent application in the November to March time frame. Herbicide use shall follow all application guidelines and attempts shall be made to apply sufficiently prior to periods of rain to allow for decomposition.

7. Maintenance or additions to the microwave facilities on the hill-top shall not be prohibited by this Management Program. EPNG and/or AEPCO shall notify Cooperators and take reasonable precautions to prevent rock, soil or construction material from being transported to the Area of Concern both during construction and post-construction precipitation events. The Advisory

Committee will review all plans for change. Some of the mitigation measures currently being considered include removing excess materials, establishing temporary barriers, silt fences, or hay bales down hill from the construction area. Actual measures will be determined when expansion plans have been finalized.

B. The Service agrees to the following conditions for the designated period of time:

1. The Service will select a representative to serve on the Advisory Committee to identify management needs and implement conservation actions for the Talussnail, based on information provided by Federal and State agencies and species experts, and the identification of established goals.

2. The Service will provide technical expertise, survey assistance, and monitoring assistance in implementation of the Management Program for the Talussnail.

3. The Service will provide field assistance to EPNG and AEPCO for advice and counsel on site specific actions that may affect the Talussnail or its habitat.

4. The Service will seek funding necessary to implement the Management Program.

C. The Department agrees to the following conditions for the designate period of time:

1. The Department will select a representative to serve on the Advisory Committee to identify management needs and implement conservation actions for the Talussnail, based on information provided by Federal and State agencies and species experts, and the identification of established goals.

2. The Department will provide technical expertise, survey assistance, and monitoring assistance in implementation of the Management Program for the Talussnail.

3. The Department will provide field assistance with implementation of the Management Program.

4. The Department will retain the Talussnail species on subsequent Crustaceans and Mollusks Commission Order 42 and the list of sensitive elements that qualify for Heritage funding.

5. The Department will review the Management Program and any other documents related to the conservation effort for the Talussnail and provide needed advice and counsel.

VII. CHANGES TO THE MANAGEMENT PROGRAM

1. If any change in the Management Program of the Area of Concern is required or anticipated, such change or changes will be presented to the Advisory Committee for discussion, review, and counsel. No changes in the Management Program of the Area of Concern shall be made without the consent of all parties.

2. As management actions are further identified, EPNG will participate in the implementation of such measures, but only under the guidance of the Advisory Committee, and only as funding, staff, and equipment availability will allow.

3. The Service has tentatively found, based upon the provisions of this Agreement and other information on the status and threats to the Talussnail, and after public notice and consideration of comments, that the Talussnail does not qualify for listing under the Endangered Species Act. The Service intends to finalize this finding and withdraw the proposal to list the species in a Federal Register notice at a later date.

4. Any party may terminate this Agreement by providing the other parties a thirty (30) day written notice.

5. To the extent required pursuant to this Agreement, the parties agree to use arbitration, after exhausting all applicable administrative remedies, to resolve any dispute arising out of this Agreement, where not in conflict with Federal law.

VIII. ADDITIONAL RESPONSIBILITIES OF EACH SIGNATORY PARTY

A. Each signatory agrees that it will be responsible for its own acts and the results thereof and shall not be responsible for the acts of other parties and the results thereof.

B. Each signatory agrees that it will assume all risk and liability to itself, its agents, employees, for any injury to third party persons or property resulting in any manner from the conduct of its own operations, and the operations of its agents or employees, under this Conservation Agreement, and for any loss, cost, damage, or expense resulting at any time from any and all causes due to any act or acts, negligence, or the failure to exercise proper precaution, of or by itself or its own agents or its own employees, while occupying or visiting the property under and pursuant to this Agreement. The Federal Government's liability shall be governed by the provisions of the Federal Employees Compensation Act [5 U.S.C. and 8101 et seq. (1988)] shall apply, as necessary, to activities conducted pursuant to this Agreement.

IX. DURATION OF AGREEMENT

A. The duration of this Conservation Agreement is for ten (10) years following the date of the last signature below, at which time it may be renewed, with the consent of all parties.

B. The parties involved will annually review the Conservation

Agreement and its effectiveness to determine whether revision is necessary.

C. No obligation shall be in effect after expiration of this Conservation Agreement, with the exception of normal provisions of the Endangered Species Act, although this Conservation Agreement will be considered for renewal. If it becomes known that there are threats to the survival of the subject species that cannot be resolved through this or other Conservation Agreements, the Service reserves the right to list the species.

X. DUPLICATE ORIGINALS

This Conservation Agreement may be executed in any number of duplicate originals. A complete original of this Conservation Agreement shall be maintained in the official records of each of the parties hereto.

XI. ASSIGNMENT

This Conservation Agreement may not be assigned by any party unless prior consent to such assignment is given in writing by the other parties, except that AEPCO may assign this Conservation Agreement to such successor entity or assign as results from any restructuring of AEPCO's corporate body and which maintains responsibility for administering agreements pertaining to AEPCO's microwave system.

XII. SIGNATURES

The parties identified herein have caused this Conservation Agreement to be executed as of the date of the last signature shown.

El Paso Natural Gas Company

Vice President

Sept. 23, 98

(Date)

XII. SIGNATURES

The parties identified herein have caused this Conservation Agreement to be executed as of the date of the last signature shown.

Arizona Electric Power Cooperative, Inc.

Executive Vice President and General Manager

9/23/98
(Date)

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XII. SIGNATURES

The parties identified herein have caused this Conservation Agreement to be executed as of the date of the last signature shown.

U.S. Fish and Wildlife Service

Nancy M. Kaufman
Regional Director

September 23, 1998
(Date)

XII. SIGNATURES

The parties identified herein have caused this Conservation Agreement to be executed as of the date of the last signature shown.

Arizona Game and Fish Department

Duane L. Shroufe

Secretary to the Commission and Director of the Arizona Game and Fish Department

9-24-98

(Date)