ARIZONA DEPARTMENT OF WATER RESOURCES
15 South 15th Avenue
Phoenix, Arizona 85007

AFFIDAVIT OF POSTING NOTICE

STATE OF ARIZONA)
) ss.
County of Cochise)

APPLICATION TO APPROPRIATE

NO. 33-95789

Ben Lomeli, being first duly sworn, states that two copies of the Notice of Application for a Permit to Appropriate Public Water of the State of Arizona No. 33-95789, a copy of which is hereto attached, were posted on the 22 day of July, 19 91, at:

1. Huachuca City Post Office

2. Sierra Vista Post Office

Each of the notices was posted in a conspicuous place in the locality to be affected by the proposed appropriation of water and remained posted for thirty consecutive days ending on the 22 day of August, 19 91.

Ben Lomeli for B.L.M.
Affiant

Subscribed and sworn to before me this 27 day of August, 19 91.

Sandra M. Phillips
Notary Public

My commission expires:

07-12-92

SEP - 5 1991

DWR 33-08-8/88
MB

SRP349

Arizona Department of Water Resources
15 South 15th Avenue
Phoenix, Arizona 85007

NOTICE OF APPLICATION TO APPROPRIATE PUBLIC WATER

On the 1st day of April, 19 91, Bureau of Land Management, Arizona State Office, P. O. Box 16563, Phoenix, Arizona 85011,

filed an Application for a Permit to Appropriate Public Water, No. 33-95789.

The application states:

1. Source of water: San Pedro River.
2. Purposed use and amount: The proposed use is for instream flow and periodic flood flows. The proposed amount is an instantaneous peak flow of 18,200 cubic feet per second and a 24-hour volume of 11,300 acre-feet the first time it occurs during the year.
3. Point of diversion: There will be no physical diversion from the San Pedro River; the use will occur instream.
4. Place(s) of use: For Segment 1: From the International border at the Northeast quarter of the Northwest quarter (NE¼NW¼), Section 19, Township 24 South, Range 22 East and continues through to the Northeast quarter of the Northeast quarter (NE¼NE¼) of

(CONTINUED ON THE REVERSE SIDE)

5. Description of dam and reservoir: N/A.

Other: ***(more detailed informaiton available at the Department of Water Resources)***

Any person whose prior vested appropriable water rights may be affected by this proposed appropriation, may, within sixty (60) days of the issuance of the Notice, file a Statement of Protestant against this application. The protest form may be obtained from the Arizona Department of Water Resources, Operations Division, 15 South 15th Avenue, Phoenix, Arizona 85007.

The Statement of Protestant must be completed according to instructions found on the form and filed with the Department. The protestant must also send a copy of the completed Statement to the applicant.

Inquiries concerning the proposed appropriation may be directed to the Operations Division at (602) 542-1581.

Issued this 27th day of June, 19 91

Arizona Department of Water Resources

4. Places of use continued:

Section 4, Township 24 South, Range 22 East, Gila and Salt River Base and Meridian, Cochise County, Arizona.

For Segment 2: From a point approximately 2 miles south of Hereford, Arizona, beginning at a point within the Southwest quarter of the Southwest quarter (SW¼SW¼) of Section 22, Township 23 South, Range 22 East and continuing through the meandering course of the San Pedro River and ending at a point within the Northwest quarter of the Northwest quarter (NW¼NW¼) of Section 21, Township 18 South, Range 21 East (approximately 7 miles south of the City of Benson, Arizona), Gila and Salt River Base and Meridian, Cochise County, Arizona.

One copy sent to the applicant and one to:

City of Tucson, P. O. Box 27210, Tucson, Arizona 85726
San Carlos Irrigation Project, P. O. Box 250, Coolidge, Arizona 85228
San Carlos Irrigation & Drainage District, P. O. Box 218, Coolidge, Arizona 85228
BLM, Safford District, 425 East 4th Street, Safford, Arizona 85546
Tenneco West Inc., Box 9380, Bakersfield, California 93309
W. P. Ullrich, R R 1 Box 146, Hereford, Arizona 85615
J. R. Bond, P. O. Box 1 Highway 92, Hereford, Arizona 85615

4: Amount of Use

This application is a request for permit to obtain a minimum peak instream flow on the San Pedro River at the Charleston gaging station (USGS station number 09471000). A 24-hour flow that includes the permitted, minimum peak flow is requested the first time it occurs during the year. Annual peak flows are generally recorded during July or August, but could occur in any month of the year.

Seven cross-sections of the river are presented on pages 65-68 in the Bureau of Land Management's Assessment of Water Conditions . . . (W. Jackson, et al., 1987). The cross-sections show that the water level of the ten year return period will inundate the banks and benches adjacent to the channel. This level will be sufficient to reach depositional surfaces important to development of riparian vegetation in all cross-sections except for portions of Numbers 3 and 7. It will exceed bank-full conditions providing the flow necessary for streambed scouring, fishery improvement and morphological development in all cross-sections. Therefore, the ten-year event was taken as a flood flow sufficient to meet the needs described in number 3 above.

An instantaneous peak flow of 18,200 cubic feet per second and a 24-hour volume of 11,300 acre-feet were calculated using a Log-Pearson III duration-frequency analysis of the 73-year period of record from the Charleston gaging station. Calculations were performed by Dan Muller, of the Bureau of Land Management Service Center, Denver, Colorado, using the DURFREAK Program on the United States Geological Survey Charleston gage data, which is included in the San Pedro assessment of water conditions (W. Jackson, op. cit., pages 78-80). The 24-hour average flow rate for an event with an exceedence probability 0.1 is 5723 cfs or 11,300 acre-feet in the 24-hour period. Consequently, this application is for a peak flow of 18,200 cubic feet per second and an associated 24-hour volume of 11,300 acre-feet the first time it occurs during the year.

Proposals for diversions or impoundments that could obstruct the permitted high flow would be presented to permit holder (Bureau of Land Management) for review.

Reference

Jackson, William, et al., Assessment of Water Conditions and Management Opportunities in Support of Riparian Values: Bureau of Land Management San Pedro River Properties, Project Completion Report, U.S. Department of the Interior, 1987, pages 63-94.

Attachment B

US Bureau of Land Management Application to
Appropriate Public Water

3: Use of Water

G. and H. Recreation and Wildlife, including Fish

The 1985 Huachuca Audubon Society instream flow application and the BLM's 1987 Amendment described in detail the recreational uses of the San Pedro Riparian National Conservation Area. The application also described the variety of wildlife and fish species that inhabit the riparian areas in those parts of the San Pedro River. The beneficial uses of wildlife, including fish, and recreation depend not only on a continuous base flow in the amount claimed in the amended application, but also on the long-term health of the entire watershed and riparian systems. Today's systems are the products of evolutionary processes that must continue for a varied fauna and flora to persist. In fact, our studies show that the stream system is currently in a process of recovery following serious degradation in the early 1900's (Jackson, et al., 1987).

The natural morphological processes that have shaped the San Pedro and other river systems are largely driven by periodic high flows that flush and redistribute sediment and rock. These high flows inundate the floodplain spreading sediment and seed, scour, shape and regrade the channel, and allow development of new riparian vegetation on banks and floodplain. The long-term improvement and maintenance of the San Pedro River environment is absolutely dependent on the recurrence of sufficiently high peak flows. The conception of a riparian conservation area is meaningless if artificial structures eliminate the variability that once created and now maintains the fluvial biome.

Eighty-two percent of Sonoran Desert bird species depend extensively on riparian vegetation, particularly Fremont Cottonwood forests (Ohmart and Anderson, 1982). The establishment and maintenance of cottonwood stands are strongly dependent on periodic flooding. Flooding spreads seed and deposits silt. Alternating deposition and scouring is the essential geomorphic process that allows the development of uneven-aged cottonwood stands and the vegetative diversity with which wildlife species diversity is associated. Once established, riparian vegetation captures more sediment contributing in turn to the bank-building geomorphic process itself. The process encourages formation of meanders, which further enhance wildlife habitat.

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Attachment A

Periodic flooding gives a competitive advantage to the native component of fish populations that include both native and introduced species. Native species are reestablished more quickly after floods by making better use of natural channel features and being generally more adapted to faster moving waters. Modified environments with calmer water and sediment accumulation in the channel seem to favor introduced species. (ter Horst, 1990).

Whitetail deer, Mexican garter snake, summer tanager and scores of other animal populations are correlated with healthy, diverse riparian habitat (ter Horst, 1990). This is the environment that attracts hikers, hunters, bird watchers and other recreationists. Geomorphic and vegetative development and periodic flood flows are inseparably combined with each other and with the beneficial uses upon which this application is based.

References

Jackson, William, et al., Assessment of Water Conditions and Management Opportunities in Support of Riparian Values: BLM San Pedro River Properties, Project Completion Report, U.S. Department of the Interior, 1987, pages 63-94.

Ohmart, R.D. and B.W. Anderson, "North American Desert Riparian Ecosystems," 1982. In Binder, G.L. (ed.) Reference Handbook on the Deserts of North America.

ter Horst, Kate, "Riparian Birds and Fishes," unpublished review prepared for The Nature Conservancy, Wickenburg, Arizona, 1990.

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6. Location of Proposed Places of Use: County: Cochise

San Pedro River Streambed. Two Segments:

Segment 1: From the international border at NENW Section 19, T. 24 S., R. 22 E. through NENE section 4, T. 24 S, R. 22 E.;

Segment 2: From a point approximately 2 miles south of Hereford, Arizona at SWSW section 22 (south section line), T. 23 S., R. 22 E. through NWNW section 21, T. 18 S., R. 21 E. (approximately 7 miles south of the city of Benson, Arizona.

Segments are marked on the attached maps.

Attachment C