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TABLE S1. Land use classification criteria applied on this study.

Type of land use [46,51]	Natural land use cover or anthropogenically influenced cover	Selected land use criteria for this study [44]
Microphyllous desert shrubland	Natural	Natural land use
Rosetophyllous desert shrubland	Natural	Natural land use
Tamaulipan thornscrub	Natural	Natural land use
Xerophitic scrubland mesquite	Natural	Natural land use
Piedmont scrub	Natural	Natural land use
Secondary vegetation of Tamaulipan thornscrub	Anthropic	Classification of land use will depend on the type of anthropic pressure closest to this type of land use. (Urban/ Agricultural).
Secondary vegetation of Piedmont scrub	Anthropic	Classification of land use will depend on the type of anthropic pressure closest to this type of land use. (Urban/ Agricultural).
Secondary vegetation of Microphyllous desert shrubland	Anthropic	Classification of land use will depend on the type of anthropic pressure closest to this type of land use. (Urban/ Agricultural).
Permanent grassland	Anthropic	Agricultural land use
Induced grassland	Anthropic	Agricultural land use
Anual rainfed agriculture	Anthropic	Agricultural land use
Anual irrigated agriculture	Anthropic	Agricultural land use
Urban zone	Anthropic	Urban land use
Human settlements	Anthropic	Urban land use
Non-vegetated area	Anthropic	Urban land use

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Figure S1. Pesquería River Sub-Basin drone aerial photographs. Natural land use photographs correspond to sampling site 1, urban land use photographs to sampling site 4 and agricultural land use photographs to sampling site 15.

TABLE S2. Land use classification and percentage of each site

Sampling Site	SS-Name-reference	X-Location	Y-Location	DBSS-KM	D-KM	Channel width (m)	LUC	Nat %	Urb %	Agr %	Description of Land use in each sampling site.
SS1	García	334092.63	2855097.19	0.0	0.0	18	Nat	100	0	0.0	Natural Land use
SS2	García	335270	2854277	1.4	1.4	17.17	Nat	100	0	0.0	Natural Land use
SS3	García	336345	2855062	2.1	3.5	19.21	Nat	73	27	0.0	Natural land use and starts the urbanization on the left bank of the river.
SS4	García	342461.64	2854345.01	7.1	10.7	18.01	Urb	0	100	0	Urbanization in the left and right bank of the river.
SS5	García	353772.06	2853947.15	13.0	23.7	18.88	Urb	0	100	0	Urbanization human settlements in left and right bank of the river.
SS6	García	361061.29	2854164	8.2	31.9	19.26	Urb	0	100	0	Urbanization and human settlements left and right bank of the river. Small strips of riparian forest/vegetation less than 10 m width of the sampled area.
SS7	Escobedo	363688.43	2855392.36	3.8	35.7	19.33	Urb	0	100	0	Urbanization and human settlements left and right bank of the river. Small strips of riparian forest/vegetation less than 10 m width of the sampled area.
SS8	Escobedo	369493	2854813	6.6	42.3	17.1	Urb	0	100	0	Urbanization and human settlements left and right bank of the river. Small strips of riparian forest/vegetation less than 15 m width of the sampled area.
SS9	Santa Rosa	377346.01	2856678.33	10.5	52.8	20.4	Urb	0	100	0	Urbanization and human settlements left and right bank of the river.
SS10	Agua fría	384632.56	2855949.88	8.9	61.7	18.83	Agr	0	0	100	Agricultural fields
SS11	Pesquería	393388.76	2852351.96	10.0	71.7	21.27	Agr	39.7	0	60.3	Agricultural fields. Riparian forest/ vegetation is present in one of the river banks.
SS12	Hipódromo	400753.38	2849990.38	9.6	81.3	19.85	Agr	0	0	100	Agricultural fields.
SS13	Pesquería	420004.01	2845289.61	20.6	101.9	29.7	Agr	0	0	100	Agricultural fields.
SS14	San Isidro	424212.44	2840113.73	7.6	109.5	20.8	Agr	0	0	100	Agricultural fields. Small strips of riparian vegetation.
SS15	El Refugio	431131.22	2837805.68	8.4	117.9	32.2	Agr	48	0	52	Agricultural fields. Riparian forest/ vegetation is fully present in one of the river banks.
SS16	San Agustín	463589.31	2865321.59	60.0	177.9	27.34	Agr	0	0	100	Agricultural fields. Small strips of riparian vegetation.

CODE	Meaning
Nat	Natural
Urb	Urban Zones
Agr	Agriculture
SS	Sampling Site
DBSS	Distance between sampling sites
DF-SS1-SS16	Distance from site 1-16
LUC	Land use classification

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TABLE S3. Sampling site impacts classification

Sampling Site	LUC	Impacts	Distance from the impact to the site
SS1	Nat	No impact present	Natural land use
SS2	Nat	No impact present	Natural land use
SS3	Nat	WSP	The water discharge is located 200 meters before reaching the next sampling site (ss4).
SS4	Urb	WWTP / Urbanization/ B) Indirect from Industry	Urbanization and human settlements left and right bank of the river.
SS5	Urb	Urbanization	The discharge comes from the WWTP located 12.8 km upstream / The indirect discharge from industry comes from the 9.36 km upstream from the sampling site.
SS6	Urb	CD/ HS	Clandestine dump is 0.10 km upstream from the sampling site. Human settlements are 0.15km upstream from the SS.
SS7	Urb	Urbanization	Urbanization and human settlements left and right bank of the river.
SS8	Urb	Urbanization	Urbanization and human settlements left and right bank of the river.
SS9	Urb	A) WWTP	The discharge comes from 8.45 km upstream from the sampling site 8.
SS10	Agr	A) WWTP/ B) WWTP	The discharge comes from A) 6.87 km / B) 3 km upstream from the sampling site 9.
SS11	Agr	Agriculture	Agricultural fields
SS12	Agr	WWTP	The discharge comes from 3 km upstream from the sampling site 11.
SS13	Agr	WTTP/ Agriculture	The discharge comes from 15.7 km upstream from the sampling site 12 /Agricultural fields
SS14	Agr	Agriculture	Agricultural fields
SS15	Agr	WSP	The discharge comes from 44 km upstream from the sampling site.
SS16	Agr	Agriculture	Agricultural fields

CODE	Meaning
WSP	Water Stabilization Pond
WWTP	Wastewater Treatment Plant
CD	Clandestine Dump
HS	Human settlements
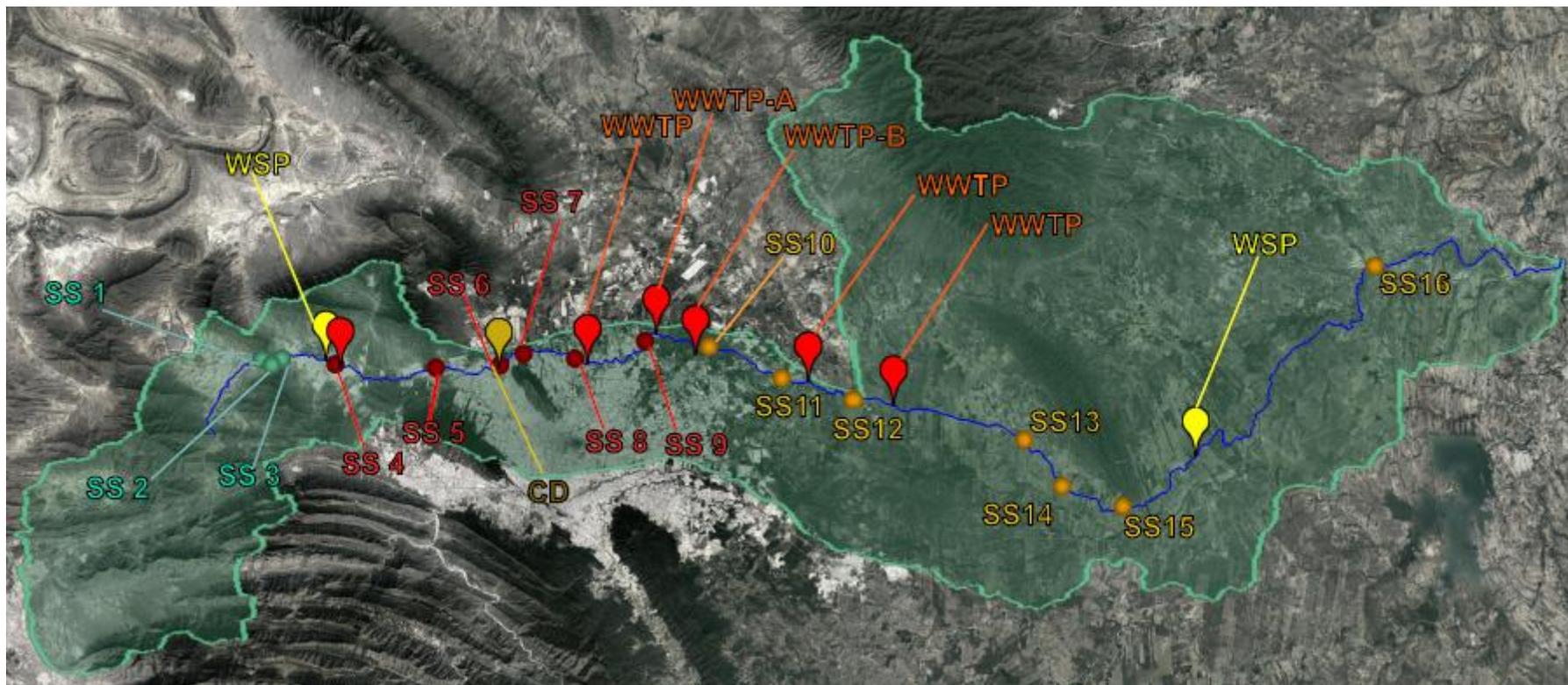
Figure S2. Pesquería River Sub-Basin drone aerial photographs

CODE	Meaning
WSP	Water Stabilization Pond
WWTP	Wastewater Treatment Plant
CD	Clandestine Dump
SS	Sampling Sites

SUPPLEMENTARY MATERIAL-A