The Desert Flows Database

Elia Tapia
September 16, 2016
WHAT IS THE DESERT FLOWS DATABASE?
METHODOLOGY

Ecology

Biological Element
- Abundance
- Age structure
- Survivorship
- Reproduction

Relationship

Flow need
- Depends upon
- Does not depend on
- Uses
- Associated with Flow response
- Influenced
- Enhanced
- Harmed

Hydrology

Natural Flow Regime Element
- Magnitude
- Frequency
- Duration
- Timing
- Rate of Change
EXTENT OF INVENTORY

408 Studies
312 Species/Genera

- 257 of flow needs and/or flow responses
- 48 of relationships between riparian vegetation and fauna
- 50 of human values
- 53 review of multiple studies/multiple study synthesis w/o “new” flow needs/responses information

Desert Rivers Studied
CONCLUSION

• Although research on flow needs and responses has been conducted across the desert watersheds of the U.S. and Mexico, there are significant areas with perennial streams that remain unexamined.

• Identifying areas with no information on water needs and responses is an important step for the expansion of environmental flow studies.

• This methodology could serve as the base for future studies that describe flow needs and responses for the deserts around the globe.
THANK YOU!