



EAHCP
EDWARDS AQUIFER
HABITAT CONSERVATION PLAN

Biological Goals Subcommittee – Meeting #2

February 16, 2023

Meadows Center for Water and the Environment & Microsoft Teams

Meeting Logistics

****This meeting is being recorded****

- Meeting Materials available on the EAHCP website under – Biological Goals Subcommittee
- Contact Olivia Ybarra for more info:
oybarra@edwardsaquifer.org
- IT Support: Jesus Hinojosa:
jhinojosa@edwardsaquifer.org

Overview of Meeting #1

- Subcommittee introductions
- Current Biological Goals
- HCP Handbook – Chapter 9 and other meeting materials.
- Discussion on proposed Biological Goals and species categories.

Biological Objectives Work Group

- Fountain Darter/
Texas wild-rice:

- Tom Arsuffi
- Megan Bean
- Jason Martina
- Tim Bonner

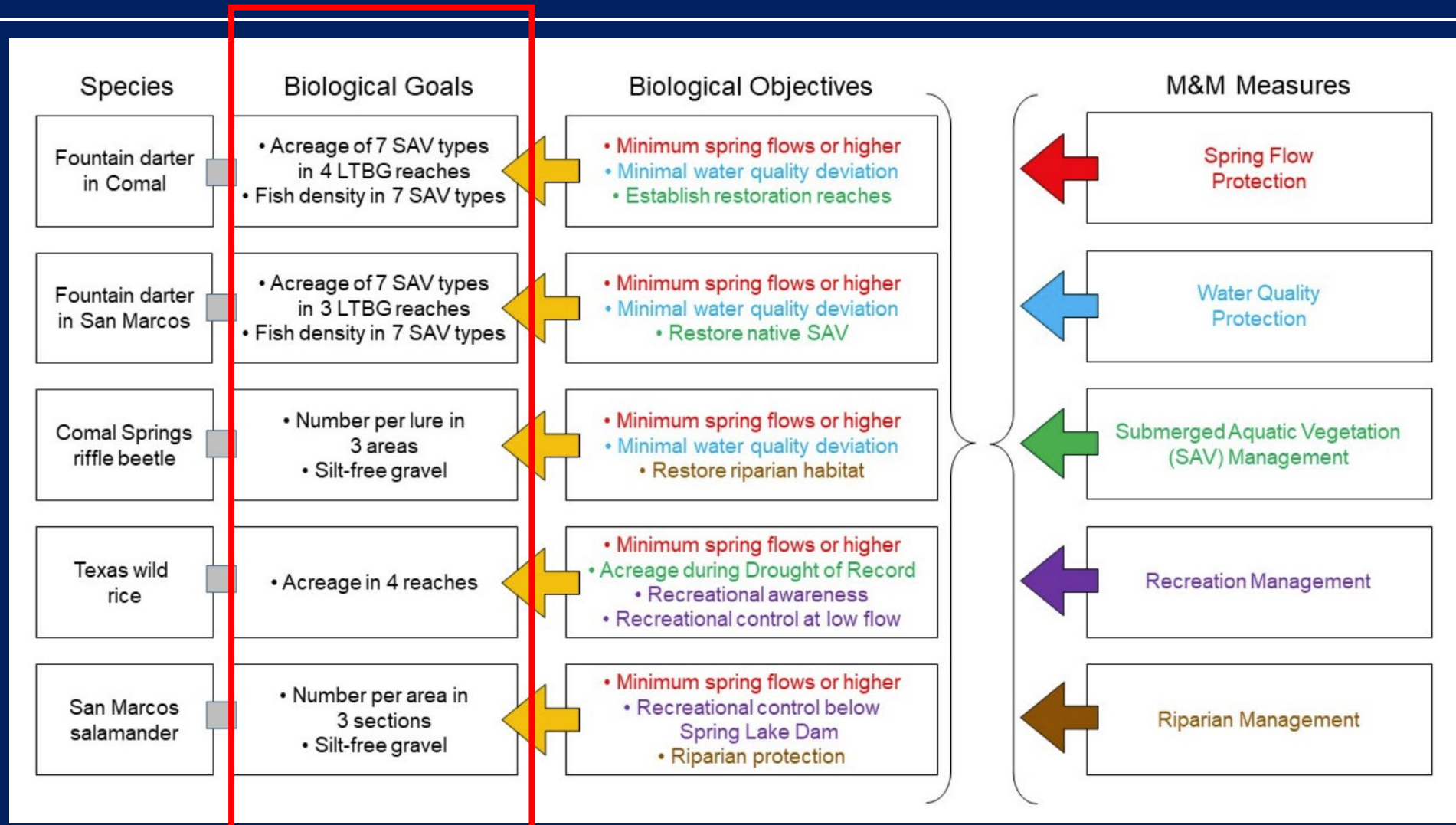
- Salamanders:

- Justin Crow
- Pete Diaz
- Nate Bendik

- Macroinvertebrates:

- Butch Weckerly
- Chad Norris
- Randy Gibson

NAS Report 3



Action Item:

Consider staff recommendation to develop new biological goals for the next EAHCP.

Developing Biological Goals

Handbook pg. 9-6

- Biological goals **broadly describe** the desired future conditions of an HCP in **succinct statements**.
- Each goal steps down to one or more **objectives that define how to achieve** these conditions in measurable terms.
- A well-written goal directs work toward achieving the **vision and purpose of an HCP**.

Examples

Thurston County HCP (updated 2022)

5.2 Biological Goal and Conservation Objectives

The Biological Goal, Conservation Objectives, and Conservation Measures are intended to illustrate the vision and commitments of the Conservation Program. The Biological Goal describes what the Conservation Program will accomplish by the end of the incidental take permit duration. The Conservation Objectives serve as benchmarks by which to measure progress in achieving goals for each Covered Species, across temporal and spatial scales. Conservation Measures are specific measurable actions that will be implemented to meet the Conservation Objectives and achieve the Biological Goal.

The Biological Goal of the HCP is to:

Maintain, in perpetuity, populations of each of the Covered Species within Thurston County, through strategic habitat acquisition, conservation, enhancement, and management in advance of, unavoidable impacts to the Covered Species from the Covered Activities.

Maricopa Sun Solar Complex Project HCP (2021)

The goals and objectives developed for each of the Covered Species are similar, as is the rationale for their importance as part of the conservation strategy. The Project's primary biological goals are to preserve Covered Species and provide Covered Species habitat within the Permit Area by:

1. Preserving populations of Kern mallow within the Permit Area.
2. Increasing the ability of San Joaquin kit fox to disperse through the Permit Area and providing habitat within the region.
3. Preserving existing populations of the Tipton kangaroo rat within the Permit Area and providing habitat for the Tipton kangaroo rat within the Permit Area.
4. Preserving existing populations of Nelson's antelope squirrel within the Permit Area and providing habitat for Nelson's antelope squirrel within the Permit Area.
5. Preserving existing populations of the western burrowing owl within the Permit Area and providing habitat for the western burrowing owl within the Permit Area.
6. Providing habitat for the blunt-nosed leopard lizard within the Permit Area.



Bitter Ridge Indian Bat and Northern Long-Eared Bat HCP (2020)

5.1 Biological Goals and Objectives

These biological goals are the guiding principles for this HCP's conservation program. The biological objectives are meant to clarify the purpose and direction of the conservation measures through specific, measurable, achievable targets. While measures to conserve or recover an endangered or threatened species are not required under § 10 of the ESA, the biological goals and objectives of this HCP are consistent with actions to promote the recovery of the Indiana bat and northern long-eared bat.

Goal 1: Contribute to maintaining the integrity of the populations of the Covered Species in Indiana by minimizing mortality of the Covered Species in the Permit Area.

Objective 1: Implement an operational strategy in each permit year that will decrease Covered Species' fatality rates by at least 60% compared to levels of projected take without minimization for the Project, as well as implementing a monitoring and adaptive management strategy (with potential for additional minimization measures to be put in place) in order to maintain take at or below the permitted levels over the 35-year term of the ITP (Sections 4.1 through 4.3).

HCP for the Hine's Emerald Dragonfly, Blanding's Turtle, Spotted Turtle, Leafy Prairie Clover, and Lakeside Daisy (2021)

The biological goals for this HCP are:

- To meaningfully contribute to the conservation of the Covered Species found in the Permit and Planning Area;
- Protect Covered Species and habitat by avoiding and minimizing take of Covered Species and impacts to their habitat to the maximum extent practicable; and
- To restore, enhance, and preserve Covered Species habitat as mitigation for impacts to habitat.

Aera Block 12 Development Project – HCP (2020)

Goal 1. Avoid or minimize disturbance to or loss of Covered Species habitat within the Project Area to the maximum extent practicable, emphasizing avoidance of habitat occupied by Covered Species.

Objective 1.1. Minimize disturbance of suitable habitat during project construction, production O&M, and well plugging and abandonment by implementing best management practices.

Objective 1.2. Minimize disturbance of suitable habitat occupied by Covered Species by conducting preconstruction surveys for Covered Species and implementing species-specific avoidance measures to protect occupied habitat to the maximum extent practicable.

Objective 1.3. Reclaim areas of temporary disturbance after construction activities are completed to reestablish suitable habitat conditions for the Covered Species.

Lake States HCP (2023)

Biological Goal 3: Promote stewardship on other nonfederal lands.

Objective 3.1: Increase bat conservation by providing the Landowner Enrollment Program on eligible lands throughout the permit term.

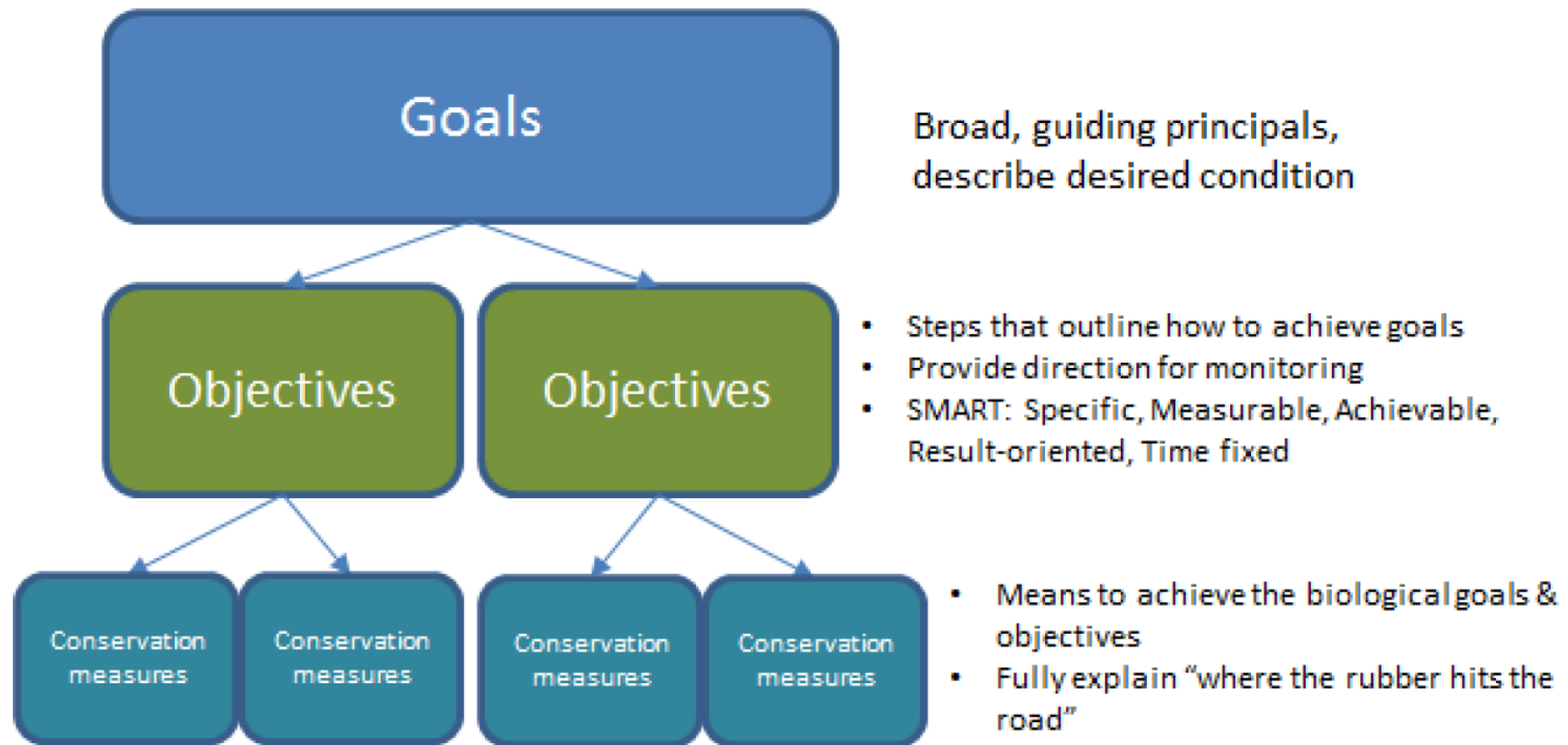
- Provide opportunity to eligible forest owners to receive take authorization through the Lake States HCP in exchange for improving bat conservation on their lands. ^a

Objective 3.2: Develop and implement a communication plan for educating the public on covered bats and their conservation.

- Develop a communication plan about bats.
- Implement the communication plan through publication of press releases, development and publication of web content, development of a brochure, speaking engagements, webinars, and other public outreach.

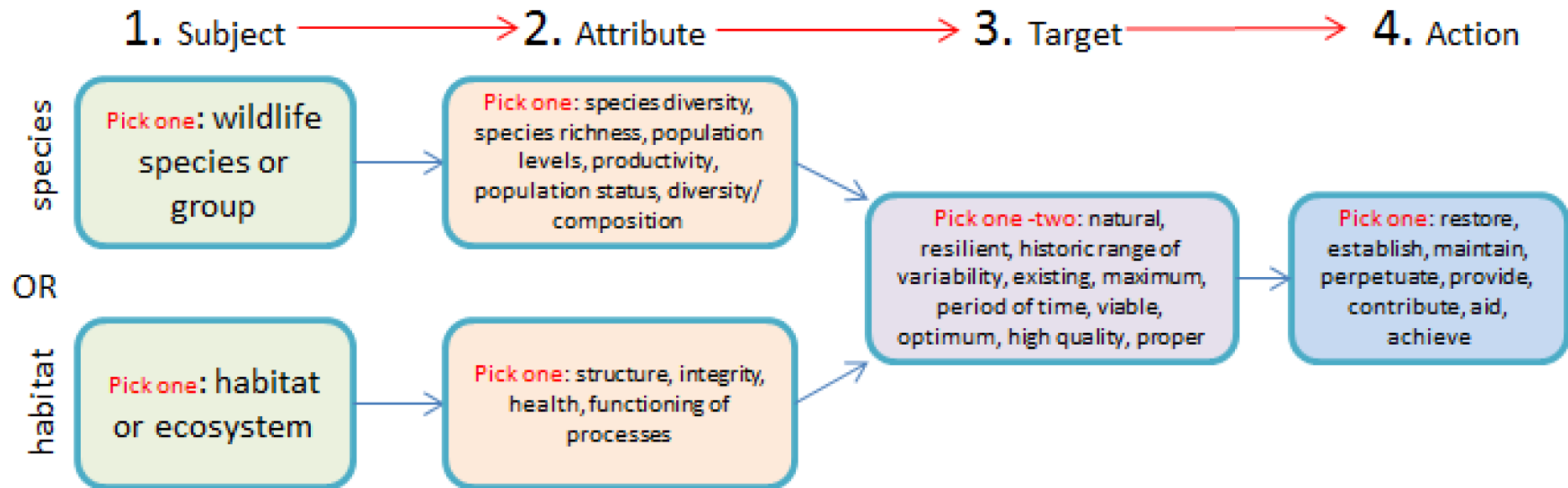
Biological Goals

Figure 9.1a: Biological Goals and Objectives



Elements of a Biological Goal

Figure 9.1b: Four Elements of a Biological Goal



Suggested Biological Goals

Covered Species

- Fountain Darter
- Comal Springs riffle beetle
- Comal Springs dryopid beetle
- Peck's Cave Amphipod
- Texas wild-rice
- ~~San Marcos gambusia~~
- ~~Comal Springs salamander~~
- Texas blind salamander
- San Marcos salamander
- Edwards Aquifer diving beetle
- Texas troglobitic water slater

Suggested Goals

Goal 1: Maintain resilient **Texas wild-rice** populations in the San Marcos River and Spring Lake.

Goal 2: Provide and maintain native habitat to support **fountain darter** populations in the Comal and San Marcos spring systems.

Goal 3: Maintain covered **macroinvertebrate** species populations in the Edwards Aquifer, and the Comal and San Marcos spring systems. (Comal Springs riffle beetle, Comal Springs dryopid beetle, Peck's Cave Amphipod, Edwards Aquifer diving beetle, and Texas troglobitic water slater)

Goal 4: Maintain healthy **salamander** populations in the Edwards Aquifer and San Marcos spring systems. (San Marcos salamander and Texas blind salamander)

Suggested Goals

Goal 5: Maintain healthy populations of each of the **Covered Species**, within the **Permit Area**, through habitat conservation, enhancement, and management.

Goal 6: Contribute to maintaining springflow in the Comal and San Marcos spring systems for the **Covered Species**.

Goal 7: Maintain good water quality in the Comal and San Marcos spring systems for the **Covered Species**.

Suggested Goals

Goal 8: Promote the importance of **habitat conservation** in the Edwards Aquifer region.

Goal 9: Support **land conservation** in the Edwards Aquifer region.

Goal 10: Manage **recreational impacts** to the Covered Species and their habitat.



Thank You!

- Public Comment
- Next Meeting:
 - Date: March 2, 2023
 - Time: 2:00PM – 4:00PM
 - Location: Pauline Espinosa Community Hall – San Marcos, TX and Microsoft Teams
- Adjourn