SPRNCA MOU Adaptive Management Committee

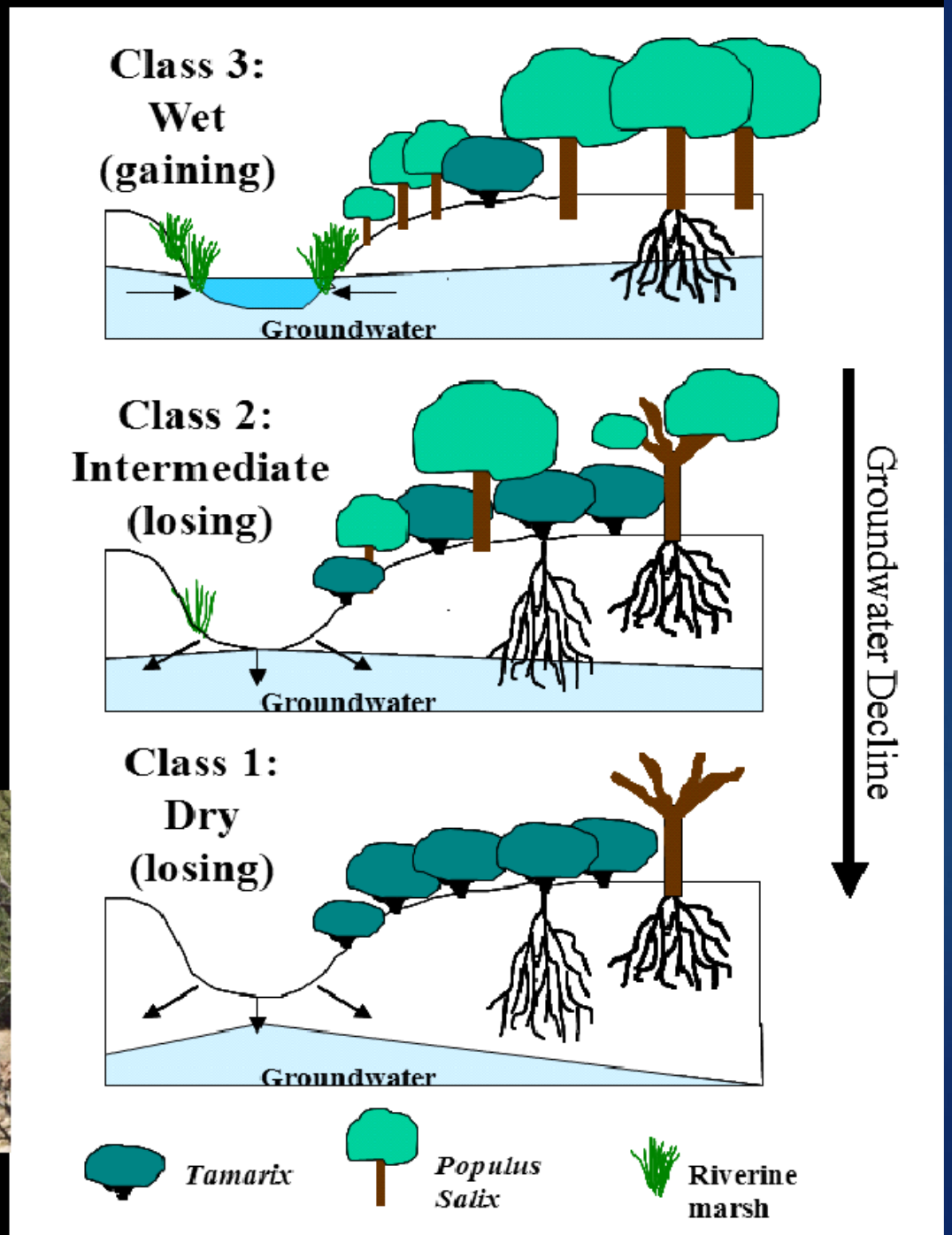
Update to the USPP Technical Committee

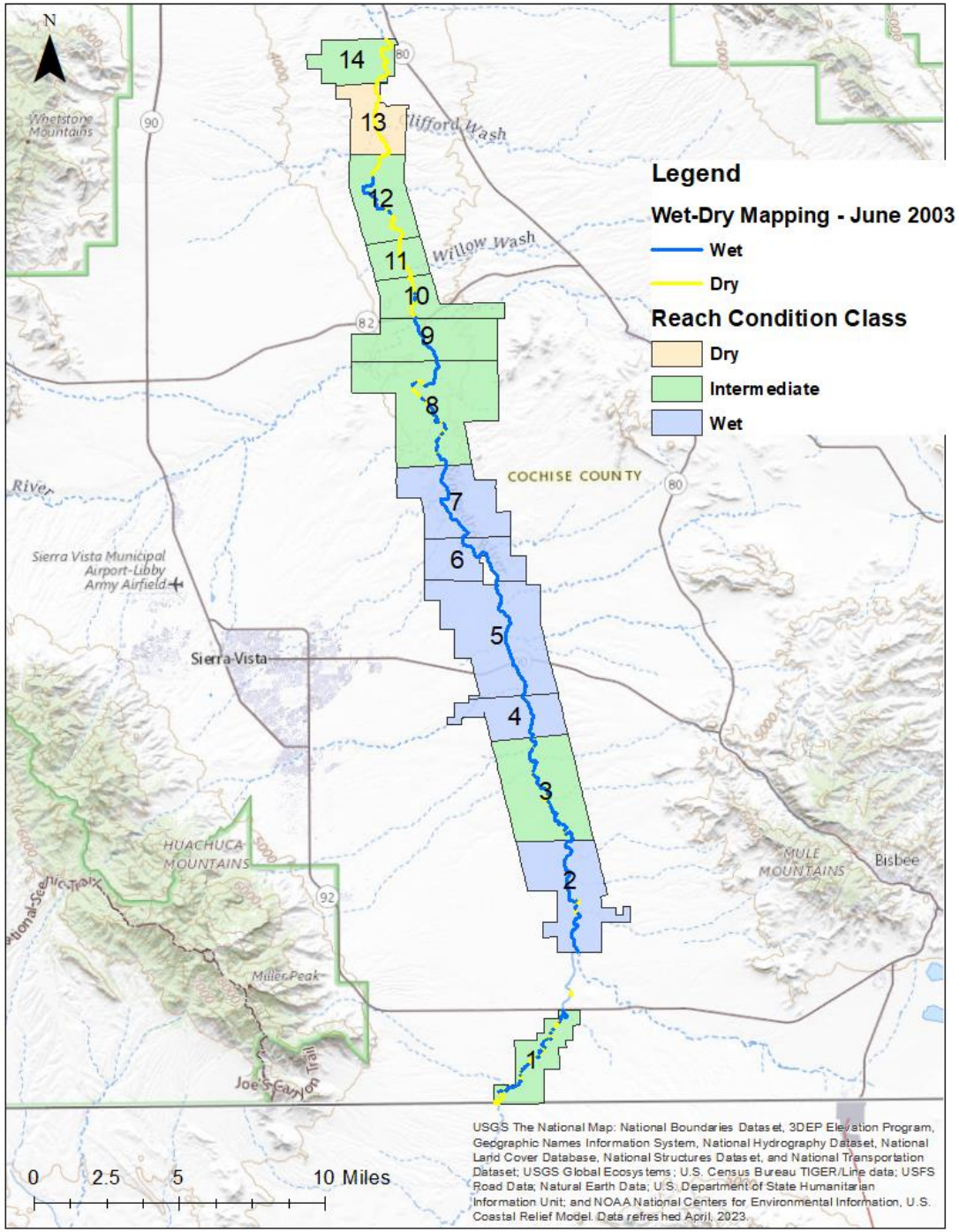
February 21, 2024

2023 Riparian Health Assessment

How is Riparian Health Determined?

- Nine different vegetation measurements ("bioindicators")
  - Quantitative scores for each of these nine bioindicators calculated for each reach
  - Overall score for each reach determined, then classified into one of three "Condition Classes"
  - This scoring system developed in 2002 for the San Pedro River


Class 3:
Wet
(gaining)
Groundwater
Class 2:
Intermediate
(losing)
Groundwater
Class 1:
Dry
(losing)
Groundwater
Groundwater Decline
Tamarix
Populus
Salix
Riverine
marsh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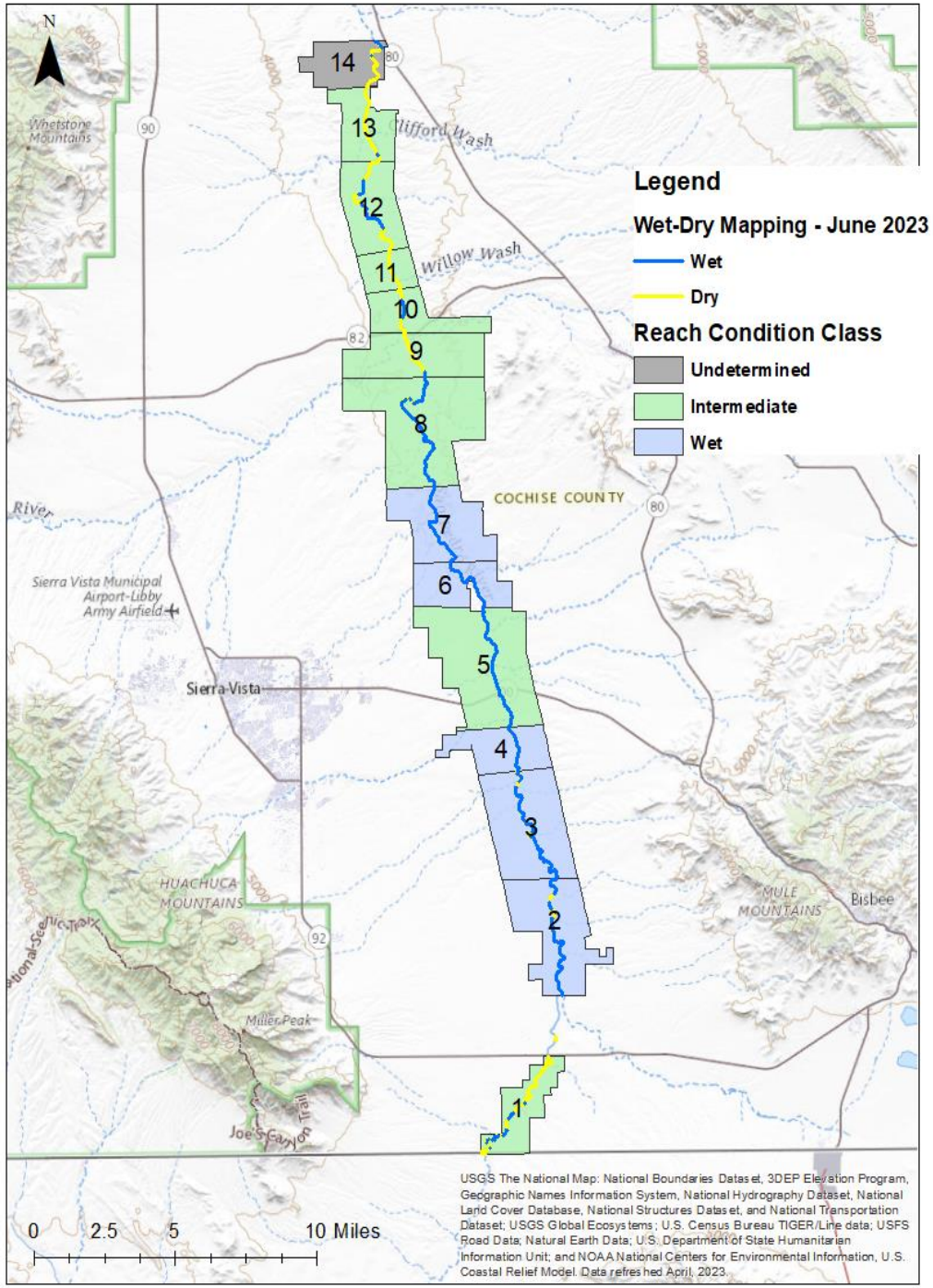
Whetstone Mountains
Clifford Wash
Willow Wash
COCHISE COUNTY
River
Sierra Vista Municipal Airport-Libby Army Airfield
Sierra Vista
HUACHUCA MOUNTAINS
MULE MOUNTAINS
Bisbee
Miller Peak
Joe's Canyon Trail
Legend
Wet-Dry Mapping - June 2003
Wet
Dry
Reach Condition Class
Dry
Intermediate
Wet
0 2.5 5 10 Miles
USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed April, 2023.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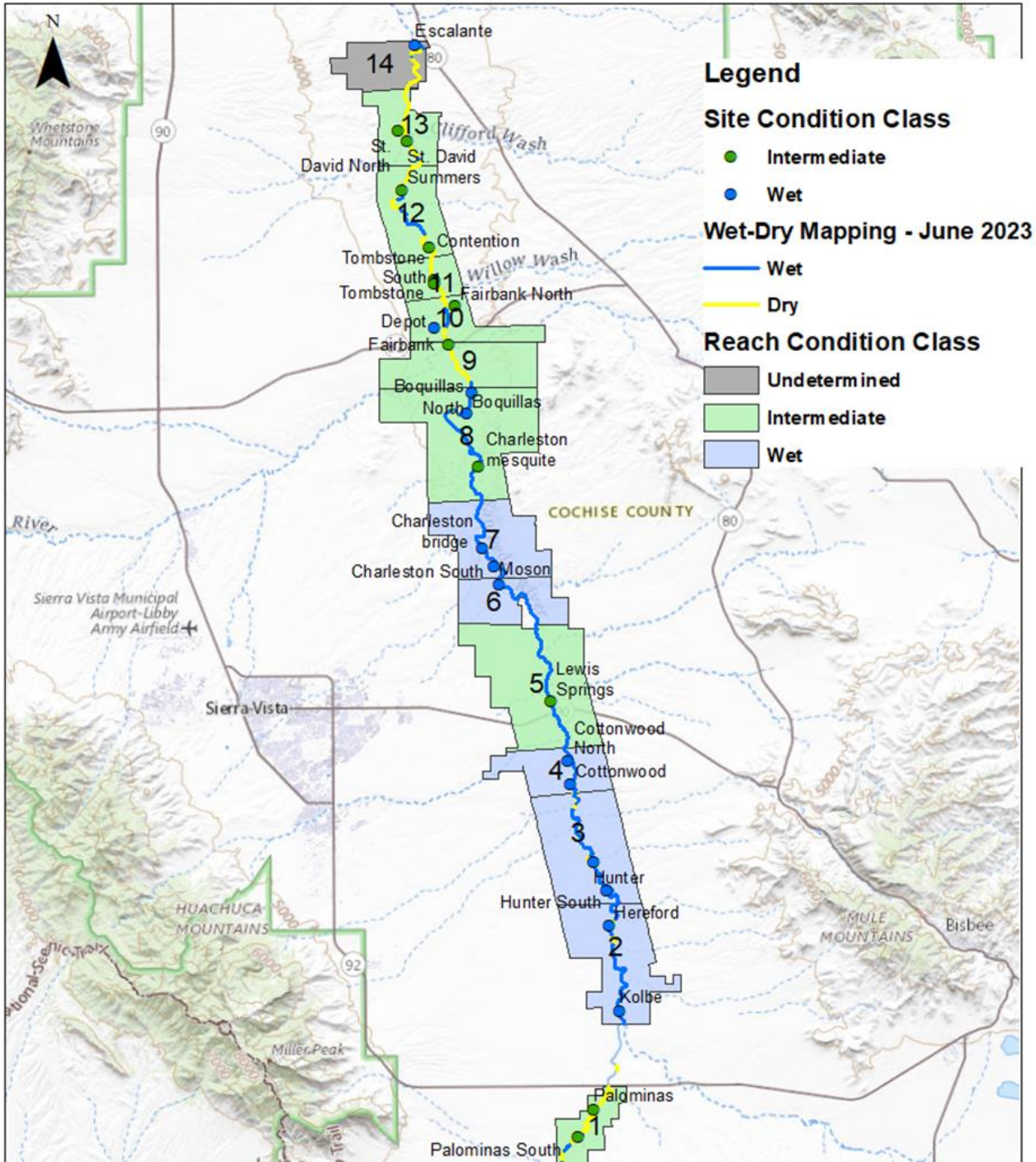
Interim Decision Matrix for 2024

SPRNCA Reach	2023 Condition Classes	1999-2023 Wet Dry Trend	2024 Decision Matrix Results
	Class 1, 2, 3	*Significant Improvement, No Change, Significant Decline*	*MOU Objectives Satisfied (Yes/No) Monitoring and/or management needs*
14	Undetermined	**Improvement**	Add riparian health transect
13	**2 (Improvement)**	No Change	Additional monitoring and management may be considered
12	2 (No Change)	No Change	Additional monitoring and management may be considered
11	2 (No Change)	No Change	Additional monitoring and management may be considered
10	2 (No Change)	No Change	Additional monitoring and management may be considered
9	2 (No Change)	No Change	Additional monitoring and management may be considered
8	2 (No Change)	No Change	Additional monitoring and management may be considered
7	3 (No Change)	No Change	MOU Objectives Satisfied
6	3 (No Change)	No Change	MOU Objectives Satisfied
5	**2 (Decline)**	**Decline**	Additional Monitoring and Action Required
4	3 (No Change)	No Change	MOU Objectives Satisfied
3	**3 (Improvement)**	No Change	MOU Objectives Satisfied
2	3 (No Change)	No Change	MOU Objectives Satisfied
1	2 (No Change)	**Decline**	Additional Monitoring and Action Required



Comparison: 2002-2023

- Reaches 1, 2, 4, 6, 7, 8, 9,10, 11, 12 No change
- Reach 3 changed to Class 3 (+)
- Reach 13 changed to Class 2 (+)
- Reach 5 changed to Class 2 (-)
- Reach 14 undetermined (?)

2023 Recommendations Reach 1

- Install USGS stream gage at US/ Mexico border
- Acquire Bisbee effluent recharge site
- Finalize effluent lease agreement
- Begin conceptual design for Bisbee effluent recharge site
- Coordinate transboundary monitoring and modeling with USGS

2023 Recommendations Reach 5

- Install streamflow permanence camera at Lewis Springs
- Compile historic data (log jams, bed elevation, fire, scour) and photos
- Document changes in USGS streamgage location/methods
- Add two riparian vegetation sampling sites in this reach for 2024
- Use MIKESHE to explore future management options for this reach
- Adjust CCRN Roadmap based on MIKESHE results

Lewis Springs sampling location-May 2023

2023 Recommendations Reach14

- Add a riparian vegetation sampling site at Reach 14 (Escalante South)
- Determine if local pumping/irrigation has changed
- Define Benson Subwatershed monitoring needs (also reaches13-10)

2024 Riparian Health Assessment Scope of Work

- Resample four (out of nine total) bioindicators for all existing sampling sites
- Add a riparian vegetation sampling site at Reach Escalante South
- Add two new riparian vegetation sampling sites at Reach 5
- Field work to commence in May
- Report finished by December

Integrated Modeling

- Task 1: RockWorks® Model (TNC)
- Task 2: Updated Palominas Model and Bisbee Scenarios
  - A: Palominas MIKESHE update - (TNC)
  - B: Extend SPRNCA MIKESHE into Mexico and update with RockWorks® and Palominas
  - MIKESHE information, and recalibrate
  - C: Bisbee Scenarios
- Task 3: MOU Riparian Condition Simulations
- Task 4: Update Carr Canyon in SPRNCA Model and Run Riverstone Scenarios