

RIGHTS-OF-WAY AS HABITAT WORKING GROUP

Metrics and Targets Task Force Report

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Pollinator Habitat Definition

Pollinator habitat contains native flowering plants, host plants, and nesting sites, throughout the growing season.

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Pollinator habitat contains native flowering plants, host plants, and nesting sites, throughout the growing season.

Additional information may be added, depending on the company/organization and their communication goals and target audiences, such as:

- Pollinator habitat may be remnant natural habitat, habitat enhanced through management, or newly created habitat.
- Flowering plants provide floral resources: nectar and pollen.
- A greater diversity of (or dominance by) native plants provides a greater diversity of floral resources and host plants (such as for butterflies) and nesting sites (such as for native bees).
- While non-native plants may provide some resources for pollinators, we manage for native plants because they provide other ecosystem services including soil stabilization improving water quality, habitat for birds and other wildlife, and are persistent and typically less costly to maintain for long term sustainability.
- A common goal is to provide three or more native plant species to be blooming in each of spring, summer, and fall periods (or throughout the period of time when natural habitats provide floral resources).

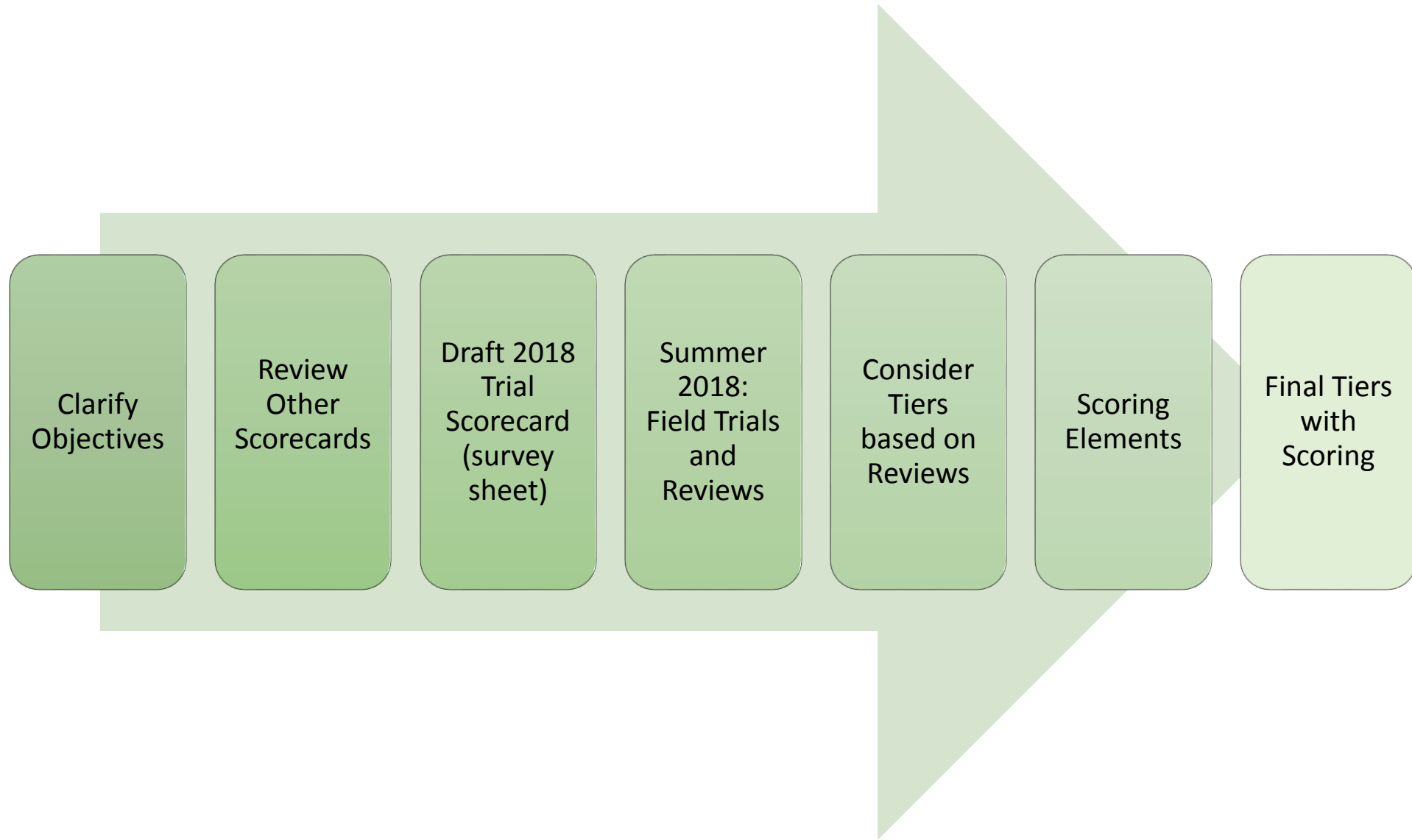
Pollinator Habitat Scorecard



Pollinator Habitat Scorecard - Purpose

- Provide a **common language**, a **standardized methodology**, and a **standard set of metrics** to allow collaborative discussions and tracking across the working group
 - Define the core fields reported in the working group's Geospatial Habitat Database
 - Align with other habitat assessments
 - Fulfill monitoring requirements for the monarch CCAA
- Provide a flexible tool for organizations to use in a variety of ways:
 - Identify habitat and measure its quality
 - Establish baseline and determine what habitat they have
 - Compare effects of management actions on different sites, or before/after management
 - Set goals and prioritize future work

Pollinator Habitat Scorecard



Scorecards Reviewed

- We collated factors from 18 pollinator habitat evaluation/scoring programs, lined up by categories such as nectar resources, management practices, landscape context, etc.
- We identified the most commonly repeated elements
- Additional programs were added
- We proposed a set of factors for field scoring for 2018

Tool	Nectar Resources	Management Practices	Landscape Context	Other Factors
1. Pollinator Habitat Assessment Tool
2. Pollinator Habitat Assessment Tool
3. Pollinator Habitat Assessment Tool
4. Pollinator Habitat Assessment Tool
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16. Pollinator Habitat Assessment Tool
17. Pollinator Habitat Assessment Tool
18. Pollinator Habitat Assessment Tool

2018 Trial Scorecard

Rights-of-Way as Habitat Working Group Pollinator Habitat Scorecard																																
Name of Assessor/Observer:	Assessment Date:	For administrative purposes Survey Area Location: <input type="checkbox"/> On ROW perpendicular to center line <input type="checkbox"/> On ROW parallel to center line <input type="checkbox"/> On ROW diagonal to center line <input type="checkbox"/> Off ROW																														
Name of Organization:	Survey Area: <input type="checkbox"/> 150 ft x 10 ft <input type="checkbox"/> Other: Length _____ feet Width _____ feet																															
Site Name/Description:																																
Survey Location (latitude/longitude):																																
Basic Assessment		Optional Assessment Elements																														
1. Adjacent Land Use Land use within 100 ft of site (see definitions on back page) Check all that apply: <input type="checkbox"/> CROP <input type="checkbox"/> NDI <input type="checkbox"/> WOOD <input type="checkbox"/> HED <input type="checkbox"/> IDLE <input type="checkbox"/> WET <input type="checkbox"/> DIV <input type="checkbox"/> DEV <input type="checkbox"/> Other: _____		2b. Potentially Blooming Nectar Plants (PBN) Indicate number of <i>native</i> PBN species: <input type="checkbox"/> 0 <input type="checkbox"/> 1-4 <input type="checkbox"/> 5-9 <input type="checkbox"/> 10+ List known PBN species (mark "b" if currently blooming): List known noxious/invasive species: Estimate total percent cover of noxious/invasive species: <input type="checkbox"/> < 5% cover <input type="checkbox"/> 26 - 50% cover <input type="checkbox"/> > 75% cover <input type="checkbox"/> 5 - 25% cover <input type="checkbox"/> 51 - 75% cover																														
2a. Potentially Blooming Nectar Plants (PBN) Include wildflowers and blooming shrubs that provide floral resources, while excluding grasses and woody species that do not bloom. Floral resources provide nectar and pollen to pollinators. Indicate total number of PBN species: <input type="checkbox"/> 0 <input type="checkbox"/> 1-4 <input type="checkbox"/> 5-9 <input type="checkbox"/> 10+ Estimate total percent cover of PBN species: <input type="checkbox"/> < 5% cover <input type="checkbox"/> 26 - 50% cover <input type="checkbox"/> > 75% cover <input type="checkbox"/> 5 - 25% cover <input type="checkbox"/> 51 - 75% cover																																
3a. Milkweed Estimate total number of milkweed plants: <input type="checkbox"/> Unknown <input type="checkbox"/> 1-10 <input type="checkbox"/> 51-100 <input type="checkbox"/> 500+ <input type="checkbox"/> 0 <input type="checkbox"/> 11-50 <input type="checkbox"/> 100-500		3b. Milkweed <table border="1"> <thead> <tr> <th>List milkweed species</th> <th colspan="2">Estimate number of milkweed stems by species</th> </tr> </thead> <tbody> <tr> <td></td> <td><input type="checkbox"/> 0</td> <td><input type="checkbox"/> 51-100</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 1-10</td> <td><input type="checkbox"/> 100-500</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 11-50</td> <td><input type="checkbox"/> 500+</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 0</td> <td><input type="checkbox"/> 51-100</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 1-10</td> <td><input type="checkbox"/> 100-500</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 11-50</td> <td><input type="checkbox"/> 500+</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 0</td> <td><input type="checkbox"/> 51-100</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 1-10</td> <td><input type="checkbox"/> 100-500</td> </tr> <tr> <td></td> <td><input type="checkbox"/> 11-50</td> <td><input type="checkbox"/> 500+</td> </tr> </tbody> </table>	List milkweed species	Estimate number of milkweed stems by species			<input type="checkbox"/> 0	<input type="checkbox"/> 51-100		<input type="checkbox"/> 1-10	<input type="checkbox"/> 100-500		<input type="checkbox"/> 11-50	<input type="checkbox"/> 500+		<input type="checkbox"/> 0	<input type="checkbox"/> 51-100		<input type="checkbox"/> 1-10	<input type="checkbox"/> 100-500		<input type="checkbox"/> 11-50	<input type="checkbox"/> 500+		<input type="checkbox"/> 0	<input type="checkbox"/> 51-100		<input type="checkbox"/> 1-10	<input type="checkbox"/> 100-500		<input type="checkbox"/> 11-50	<input type="checkbox"/> 500+
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4. Additional Habitat Resources Check all that apply: <input type="checkbox"/> Native bunch grasses <input type="checkbox"/> Plants with hollow, pithy stems <input type="checkbox"/> Brush piles <input type="checkbox"/> Larval host plants <input type="checkbox"/> Undisturbed thatch <input type="checkbox"/> Artificial stem bundles/nesting blocks <input type="checkbox"/> Dead wood / snags <input type="checkbox"/> Available water sources <input type="checkbox"/> Undisturbed bare ground <input type="checkbox"/> Rock piles <input type="checkbox"/> Basking areas (no-shade)																																

Core and Optional Fields

Nectar (potentially blooming plants)

cover, species richness

Milkweed

Additional Habitat Resources

nesting

basking

water

Pollinators Observed during visit

bees

butterflies

other

Landscape Context

Management Practices

mowing

herbicide use

Scorecard Trials and Reviews

- 6+ members completed field trials
- 9+ provided detailed comments
- Feedback carefully curated in large spreadsheet

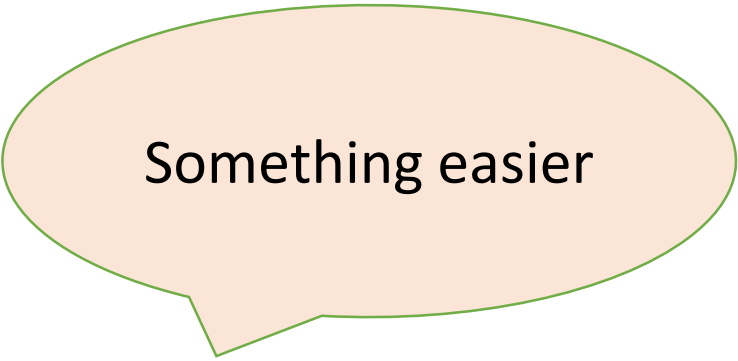


Recommendations

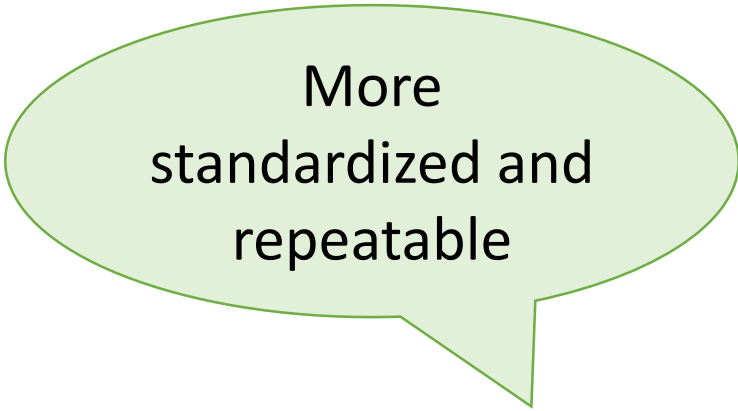


Something easier

Recommendations



Something easier



More
standardized and
repeatable

Recommendations

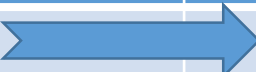
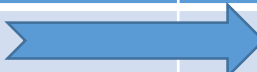
Something
easier

More
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- Different
 - Objectives
 - Scale
 - Detail
 - Level of expertise
- Create a tiered set of metrics
 - Add an simple “yes/no” level
 - Include a moderate level
 - Offer a robust, quantitative option



Scorecard Tiers

	Tier 1	Tier 2	Tier 3
Objective (What am I trying to answer?)	 <i>Do I have habitat?</i>	 <i>Generally, how good is my habitat?</i>	<i>How do some habitats compare to others?</i> <i>Where can I make improvements?</i> <i>How do management actions affect habitat?</i>
Survey Methods	Most basic (view or meander) Least effort / time / cost / expertise Easily implemented across many sites 5 – 10 minutes to complete	Simple to implement by non-technical staff (meander) Mid-level effort; categorical data Implemented across a cross-section of sites 10 – 20 minutes to complete	Performed by knowledgeable staff More intense, standardized effort Perhaps 2-3 times per season Implemented across a sample of sites 20+ minutes to complete
Outcome	“Yes / No” habitat determination	Qualitative score: Low / Medium / High Quality Habitat	Quantitative score: 0 - 100

Scorecard Tiers – Components

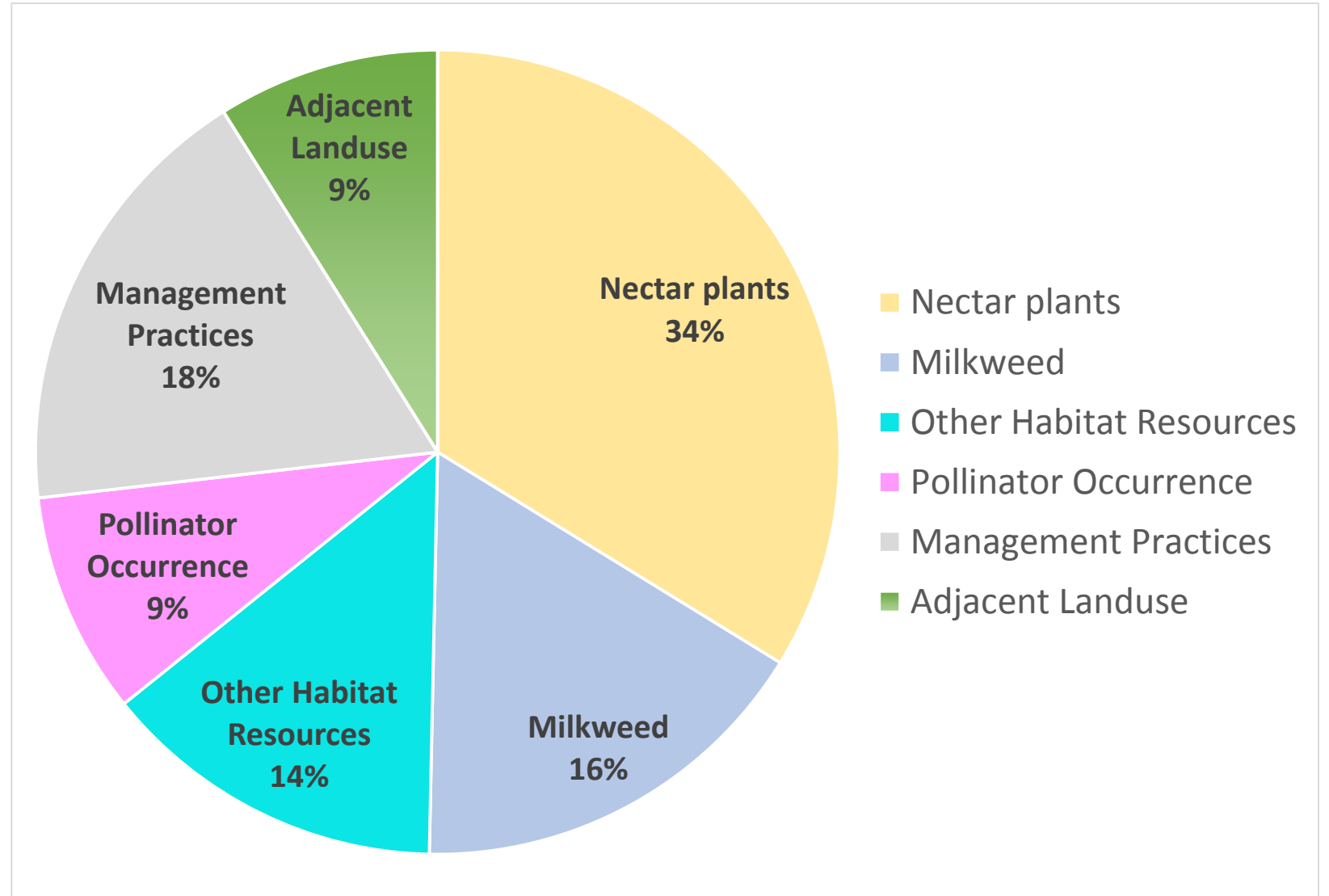
Tier 1	Tier 2	Tier 3
<p>Milkweed presence (2+ plants in 150 ft x 10 ft)</p> <p>More than 10% nectar plant cover</p> <div> <div>Nectar</div> <div>Milkweed</div> <div>Additional Habitat Resources</div> <div>Pollinators Observed</div> <div>Landscape Context</div> <div>Management Practices</div> </div>	<p>Percent cover of Potentially Blooming Nectar (PBN) plant species</p> <p>Percent cover by invasive/undesirable/noxious/problematic species (??)</p> <p>Number of PBN plant species (categories)</p> <p>Number of milkweed plants (categories)</p> <p>Other habitat resources</p> <p>If pollinators are observed</p> <p>Adjacent land use</p> <p>Management practices (??)</p>	<p>Percent cover of PBN plant species</p> <p>Number of PBN plant species (identified)</p> <p>Number of native PBN species</p> <p>Percent cover of noxious/invasive species</p> <p>Number of milkweed plants</p> <p>Number of milkweed stems by species</p> <p>Other habitat resources</p> <p>Types of pollinators observed and numbers of monarchs, other butterflies/moths, native bees, and honey bees</p> <p>Adjacent land use</p> <p>Management practices (??)</p>

Scorecard Components by Tier

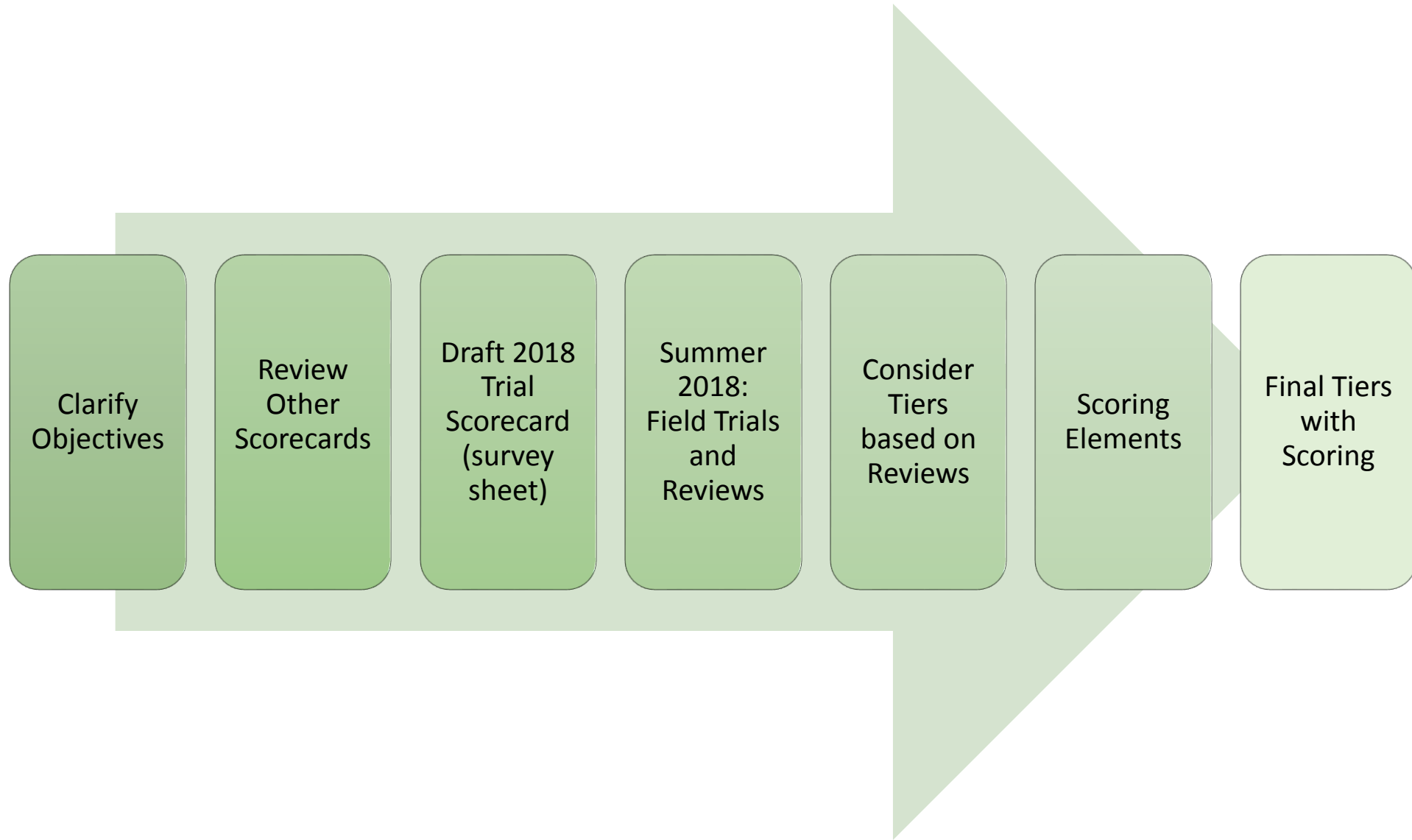
Components	Tier 1	Tier 2	Tier 3
Adjacent Land use	Not applicable	Liked categories on existing scorecard: could add “urban/impervious,” “rocky/barren” Give qualitative rankings (H, M, L)	Look beyond 100ft, using GIS/remote sensing data Attach vulnerability score (herbicide use, invasive species presence, etc.) to provide additional color
Management Practices	Do we have sector-specific mgmt. practices? Important to keep toolbox open, evolve over time	Score management practices (need to develop)	Score management practices (need to develop)
Nectar Plants & Milkweed	Agreed with existing scorecard: <ul style="list-style-type: none"> - 2 or more milkweed stems - 10% nectar plant cover - Using plot (1500 sf), provide guideline for establishing area - Plant ID resources 	# of PBN plant (assuming one assessment per year or season), do not need to ID specific species = richness classes # milkweed plant = frequency class Rank milkweed by species Should include invasive species – need more thought on how to incorporate	Same elements from Tier 2, plus distinctions between native and non-native
Habitat Resources	Timing and regionality: 1x per year, general US	More region-specific 2x per growing season (year) Presence-absence for habitat resources	More region-specific 3x per growing season (year) % cover for habitat resources
Pollinator Occurrence		Insects observed: using floral resources Incorporate seasonal component Timed?	Types of pollinators observed, potentially insect survey (# of types of insects) – range scored Incorporate seasonal component Timed?

Scorecard Components Weights (Tiers 2 & 3)

- ***Preliminary weights***
- ***Do they differ across tiers or by program objectives?***
- ***Does management stay in the score?***



Pollinator Habitat Scorecard



Next Steps

Next Steps

- Finalize the Scored Components for each Tier
- Score levels within Components
- Create final weighting across Components

