Water Resources HCP Species Selection Process

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WRHCP Steering Committee Meeting

May 19, 2010

Today's Purpose

- WRHCP Core Team developed a draft decision tree for the selection of covered species
- Steering Committee review and consensus is needed on this decision tree to guide the next phase of technical work

Terms

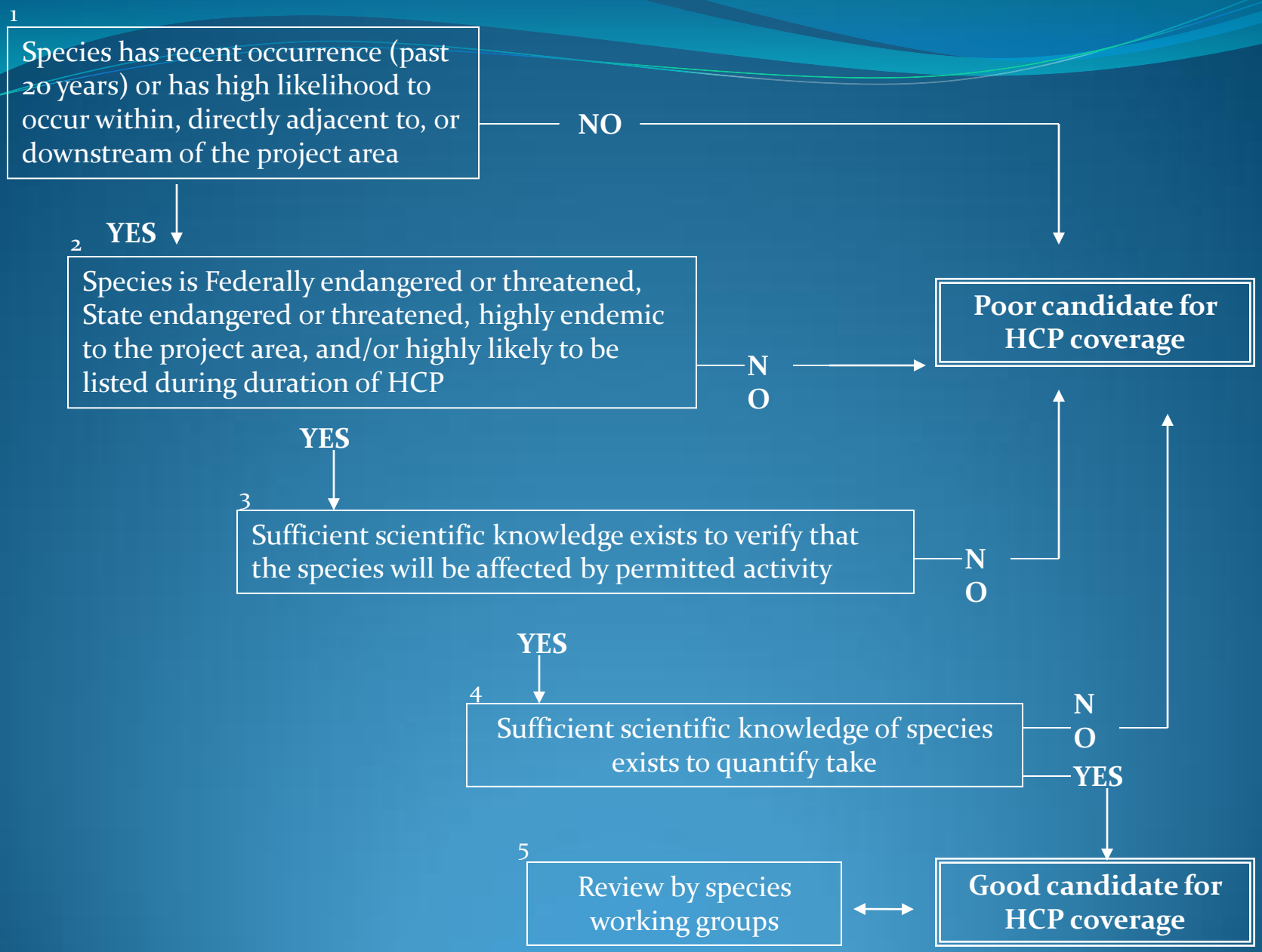
- Conservation Measures
- Implementation Costs
- Incidental Take Permit
- No Surprises

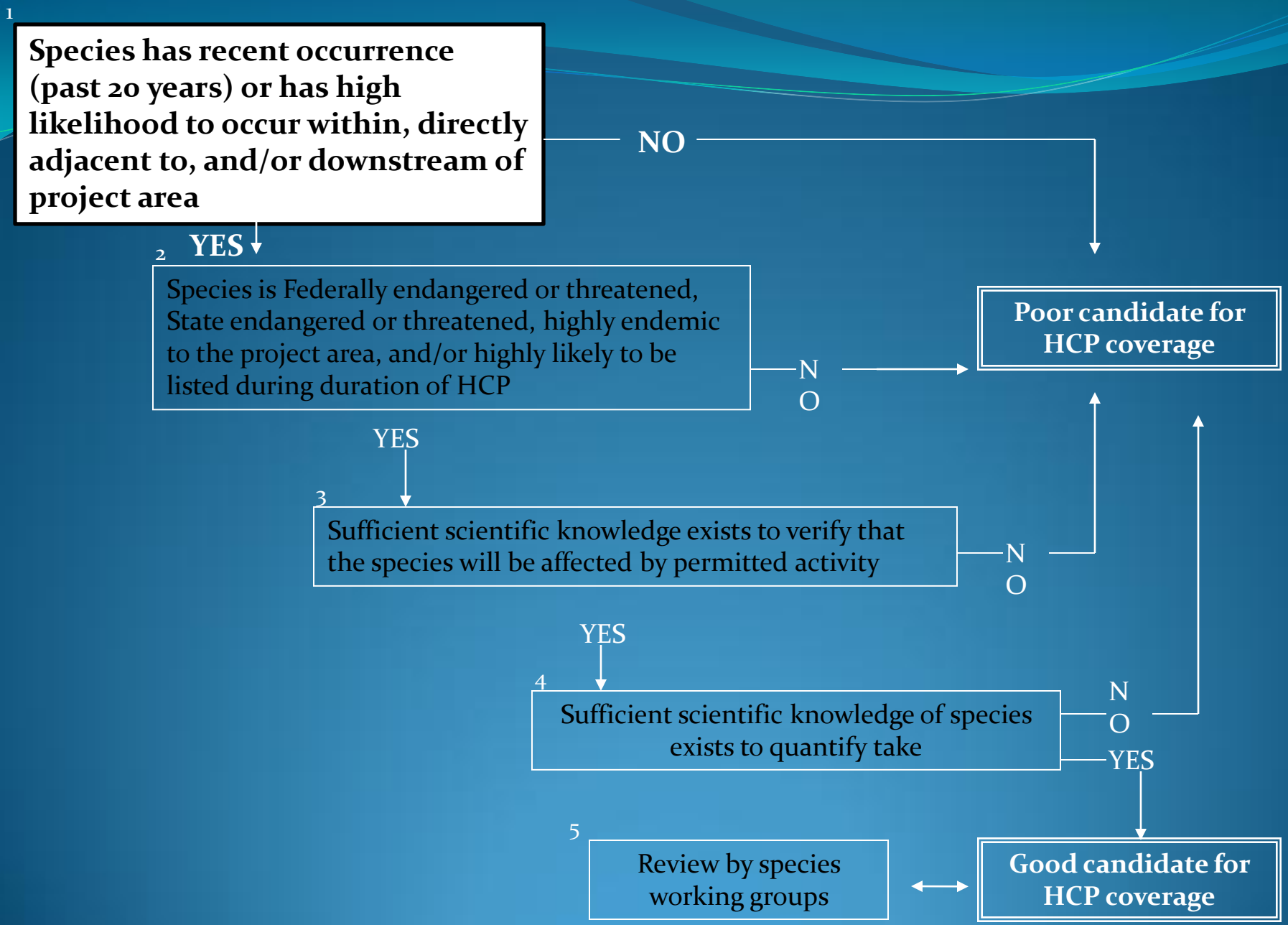
Approach

- Compile all known information about rare species occurrences
- Apply filters to narrow the list of species to those which are pertinent to cover in the HCP

Considerations

- Balance applicant certainty, implementation cost, and scientific defensibility
- Protect unique natural resources, including endemic species
- Maximize “no surprises” benefits of the HCP
- Support streamlined permitting
- Use all available species occurrence information (best available science)
- Ensure that the decision process is clear, defensible, and flexible enough to incorporate new information


1
Species has recent occurrence (past 20 years) or has high likelihood to occur within, directly adjacent to, or downstream of the project area
NO
YES
2
Species is Federally endangered or threatened, State endangered or threatened, highly endemic to the project area, and/or highly likely to be listed during duration of HCP
NO
Poor candidate for HCP coverage
YES
3
Sufficient scientific knowledge exists to verify that the species will be affected by permitted activity
NO
YES
4
Sufficient scientific knowledge of species exists to quantify take
NO
YES
5
Review by species working groups
Good candidate for HCP coverage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Filter 1

Species has recent occurrence (past 20 years) or has high likelihood to occur within or directly adjacent to/downstream of project area

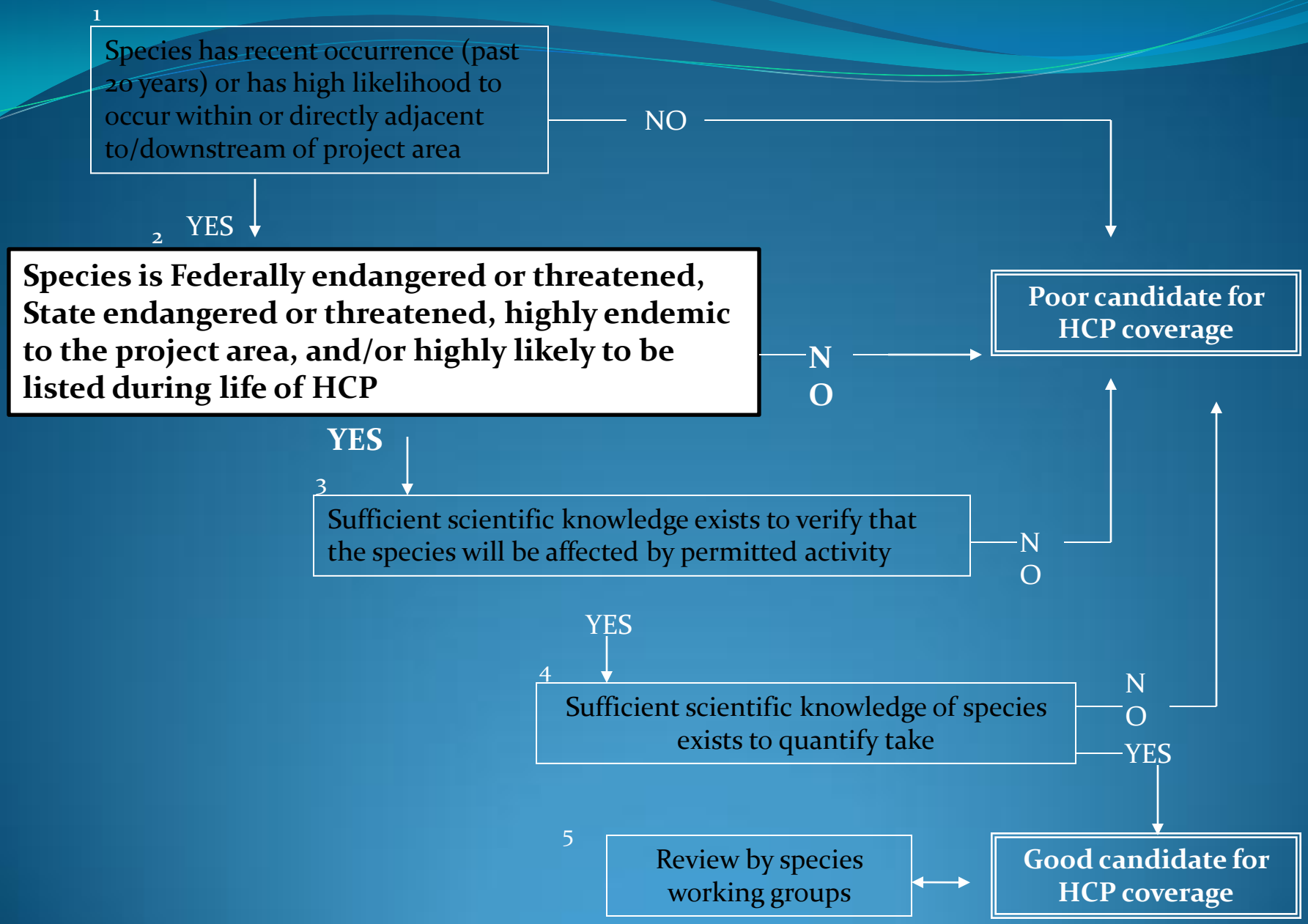
Steps

- Compile species occurrence databases that track reported occurrences of TN's rare species (species, location, & date)
- Evaluate the occurrence records for the most current species records
- Include species that have a high likelihood of having current occurrences, but not surveyed for
- Identify species near project area that may be effected by activities in project area
- Review by species experts (e.g. TWRA, academic scientists, etc.)

Filter 1

Species has recent occurrence (past 20 years) or has high likelihood to occur within or directly adjacent to/downstream of project area

Recommendation	Pros	Cons
Include Filter 1	•Focus on species most likely to exist in the project area today •Include species outside of project area that may be impacted	•Potential for amendment of the HCP if non-covered species are found in the future •No clear scientific basis for 20 year threshold (vs. 10, 25, 30, etc.)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Filter 2

Species is Federally endangered or threatened, State endangered or threatened, highly endemic to the project area, and/or highly likely to be listed during life of HCP

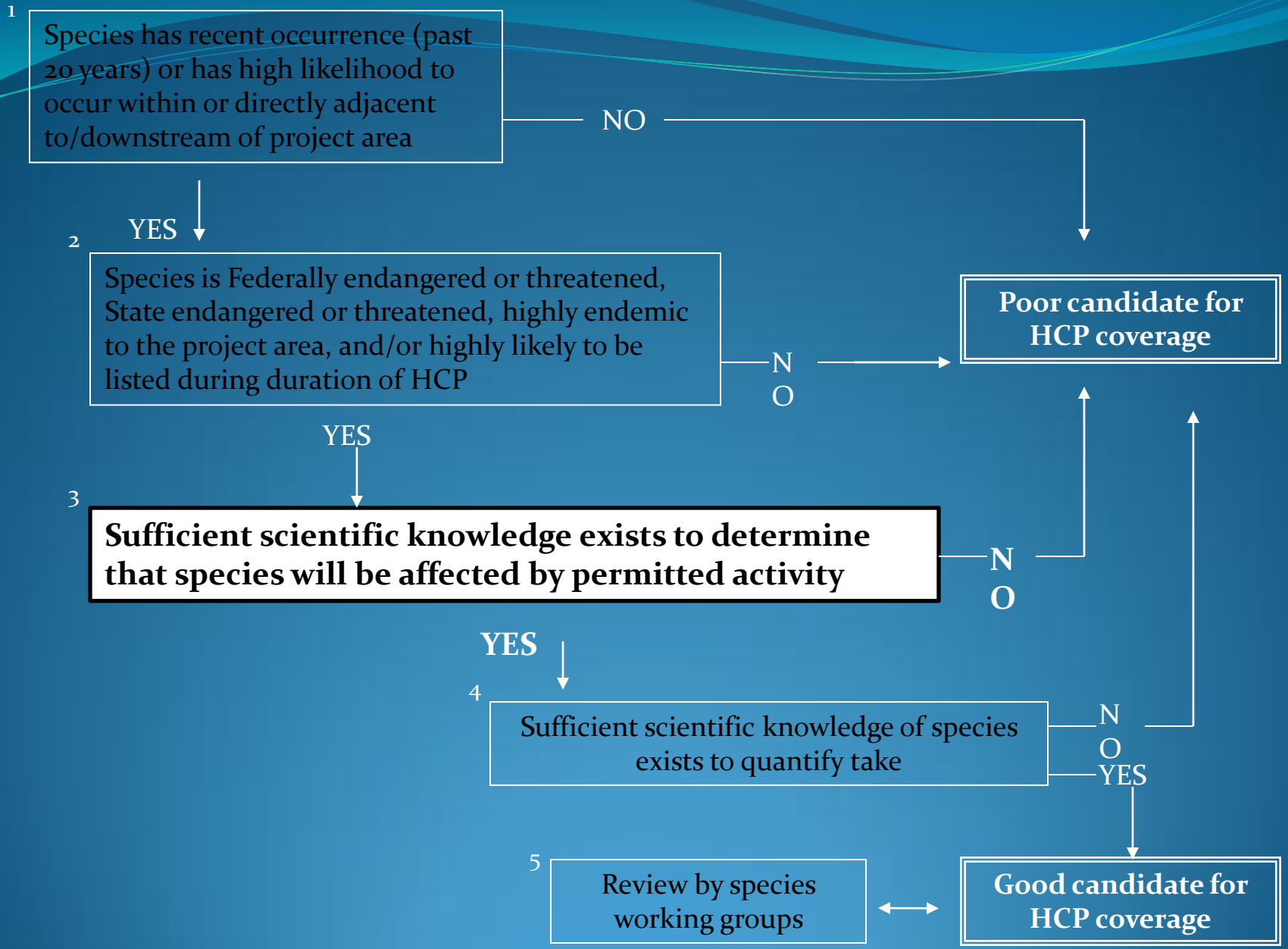
Steps

- Select species that are Federally and/or State listed as endangered or threatened
- Select species that have the majority of their distribution in the project area
- Select species that are considered candidates for Federal listing or have been or will be petitioned for Federal listing
- Review by species experts (e.g. TWRA, academic scientists, etc.)

Filter 2

Species is Federally endangered or threatened, State endangered or threatened, highly endemic to the project area, and/or highly likely to be listed during life of HCP

Recommendation	Pros	Cons
Include Filter 2	•Focus on Federal and State listed species •Streamline permitting process •Increase applicant certainty by including species that are likely to be listed in future	•Potential for amendment of the HCP if non-covered species are found in the future •Potential for higher implementation costs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Filter 3

Sufficient scientific knowledge exists to determine that species will be affected by at least 1 permitted activity

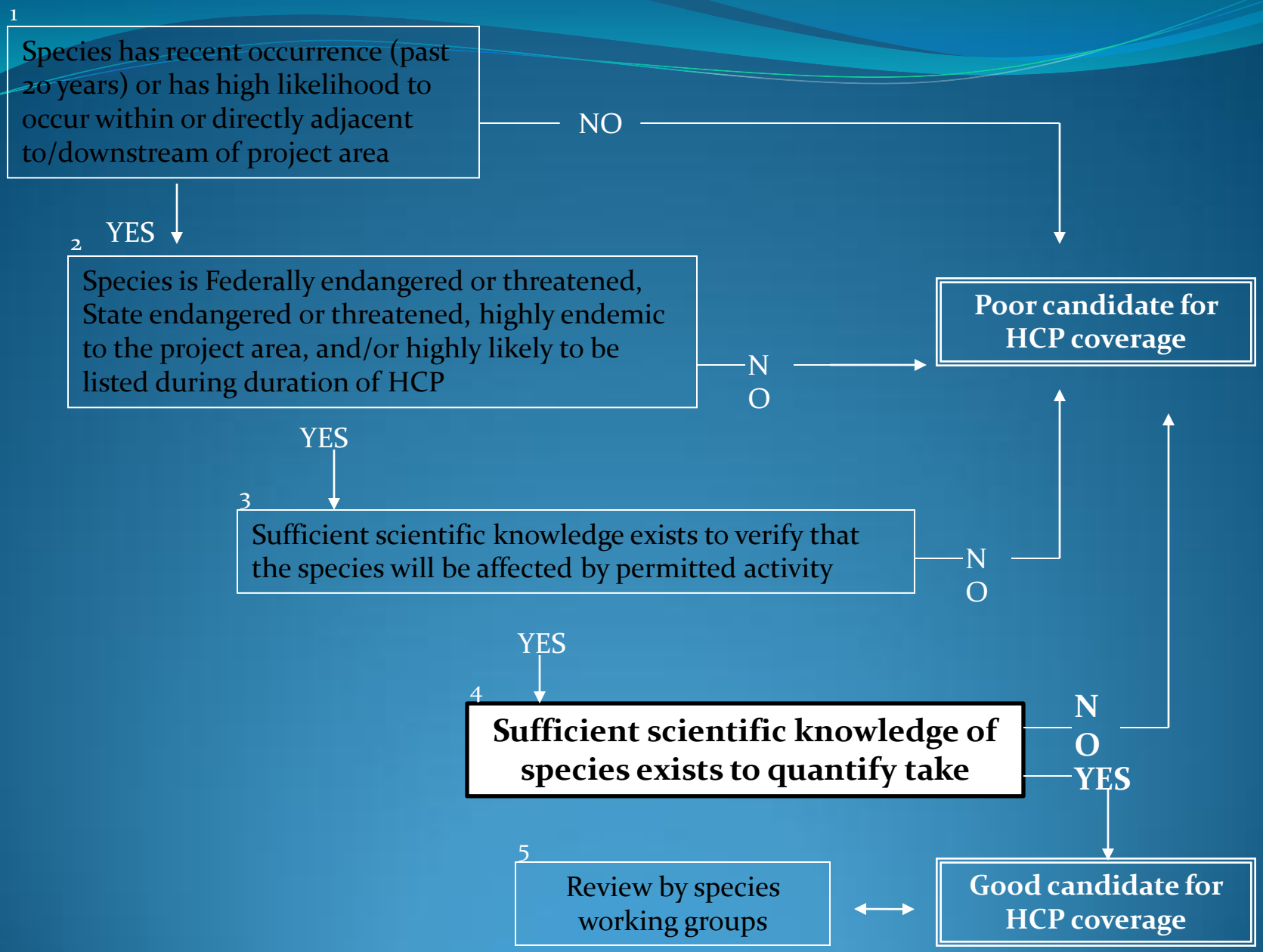
Steps

- Create maps that overlay species occurrences with current and projected covered activity occurrences
- Review literature that identifies direct and indirect impacts associated with development activities that effect covered species
- Review by species experts (e.g. TWRA, academic scientists, etc.)

Filter 3

Sufficient scientific knowledge exists to determine that species will be affected by at least 1 permitted activity

Recommendation	Pros	Cons
Include Filter 3	•Identify species that need an HCP •Save on unnecessary implementation costs	•Have to make predictions on where activities and species overlap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Filter 4

Sufficient scientific knowledge of species exists to quantify take

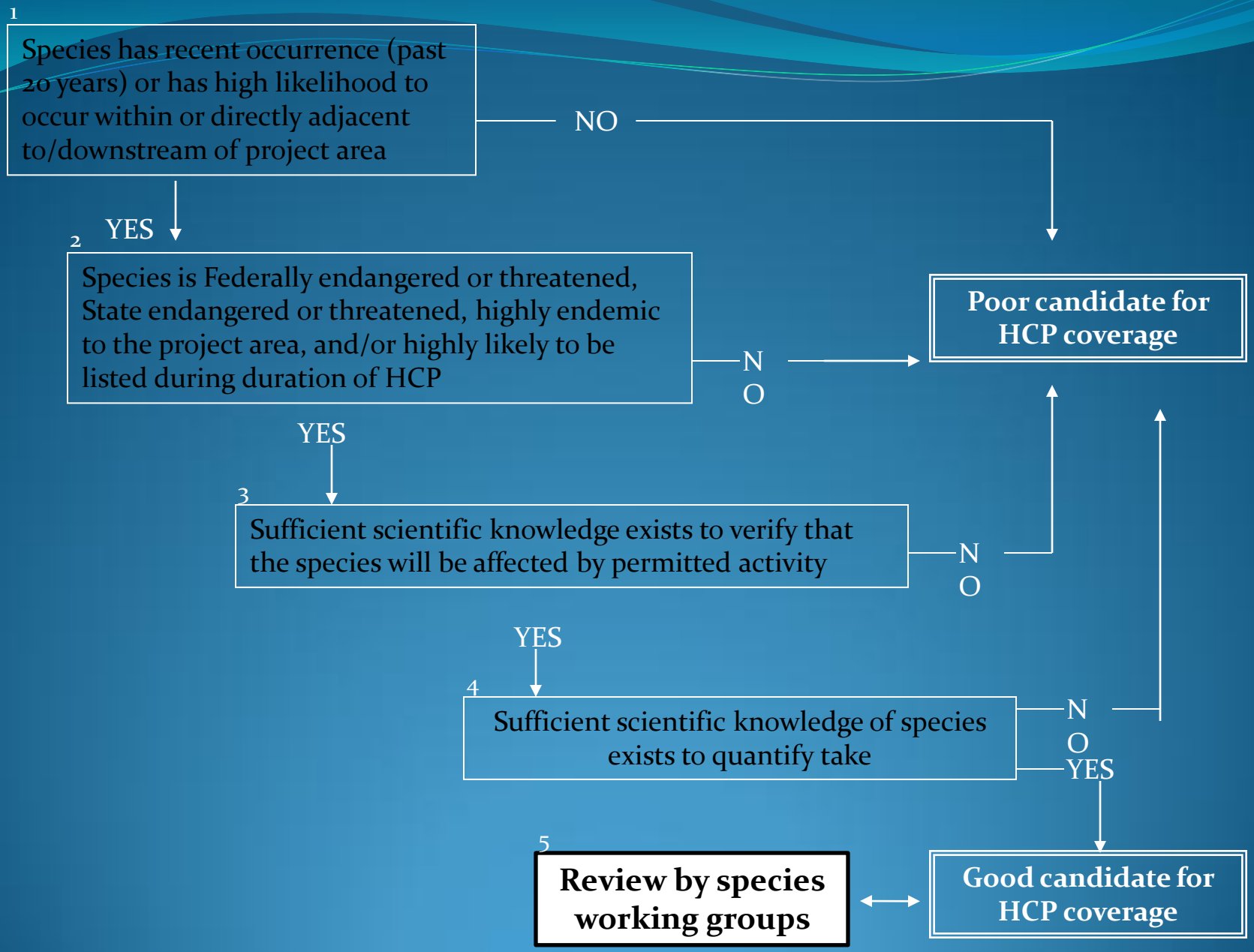
Steps

- Identify current state of the landscape
- Identify how much and where covered activities alter the landscape
- Translate landscape alteration into take of species
- Select species for which take will occur
- Review by species experts (e.g. TWRA, academic scientists, etc.)

Filter 4

Sufficient scientific knowledge of species exists to quantify take

Recommendation	Pros	Cons
Include Filter 4	•Identify species that need an HCP •Save on unnecessary implementation costs •Identify where and to what extent conservation measures and mitigation are needed	•Have to make predictions of where and how much take is likely to occur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Filter 5

Review by species working groups

Steps

- When needed have species experts complete surveys on species data
- Hold yearly meeting to discuss HCP components with species experts and get feedback
- Species experts review HCP components
- Incorporate feedback from species experts

Filter 5

Review by species working groups

Recommendation	Pros	Cons
Include Filter 5	•Scientific support •Increased applicant certainty	•Species experts do not have final word

Other Recommendations

Subterranean Species

(cave: salamanders, arachnids, crustaceans, fish, insects, etc.)

Recommendation	Pros	Cons
Do not include subterranean species	•Available information does not support a scientifically defensible evaluation of these species	•Potential for amendment of the HCP for non-covered species

Terrestrial Species

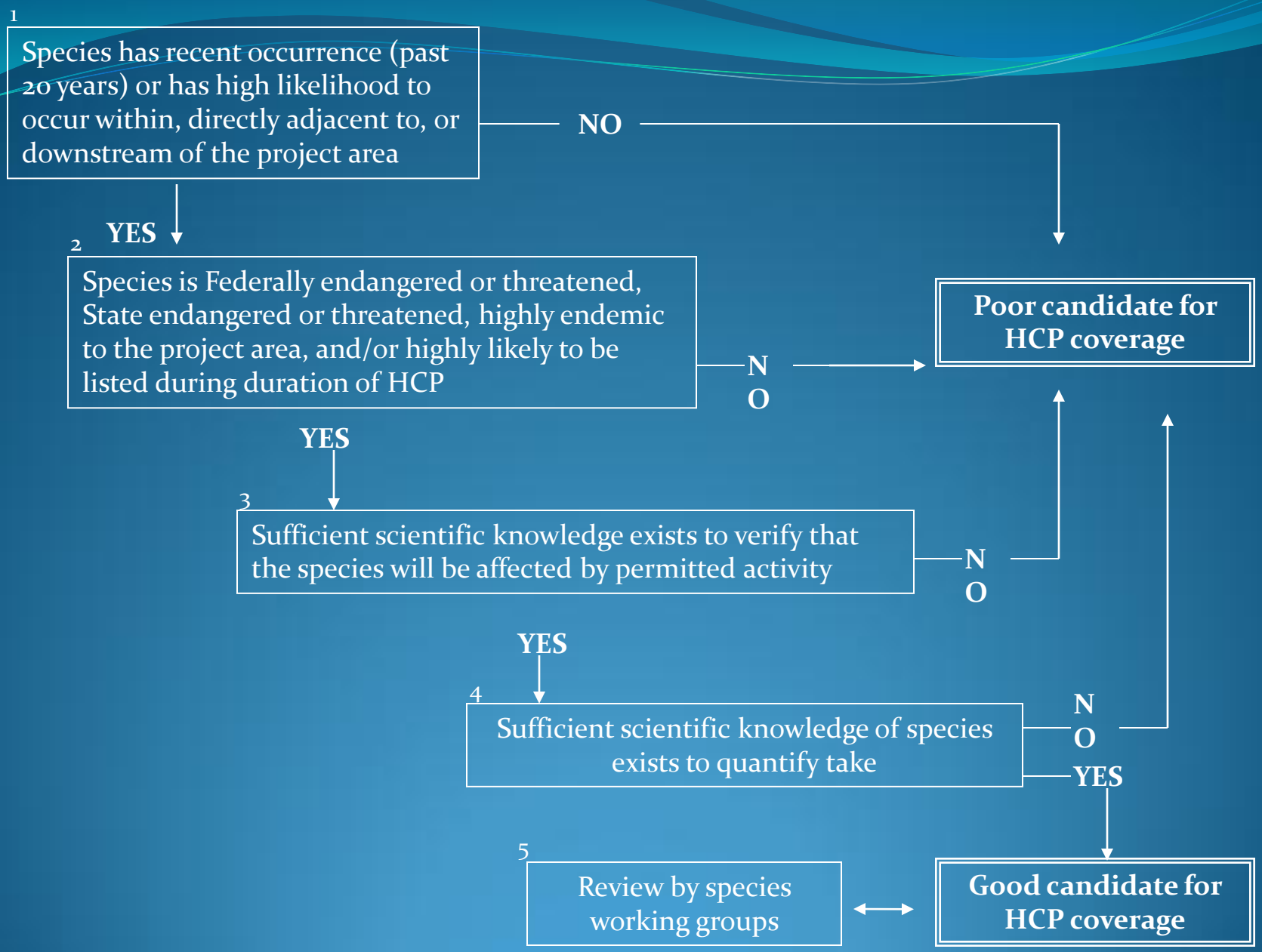
(birds, bats, rodents, plants, reptiles, insects, etc.)

Recommendation	Pros	Cons
Include terrestrial species in the HCP	•Increases certainty provided by the HCP (land development affects terrestrial and aquatic species)	•Potential for increased implementation cost

Next Steps

- Species experts survey on species with historical records and that the records we use are accurate
- Refine list as we continue identifying impacts to species and take modeling
- Refine list as more species information is available

Decision Review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Subterranean Species Exclusion

Terrestrial Species Inclusion


Questions