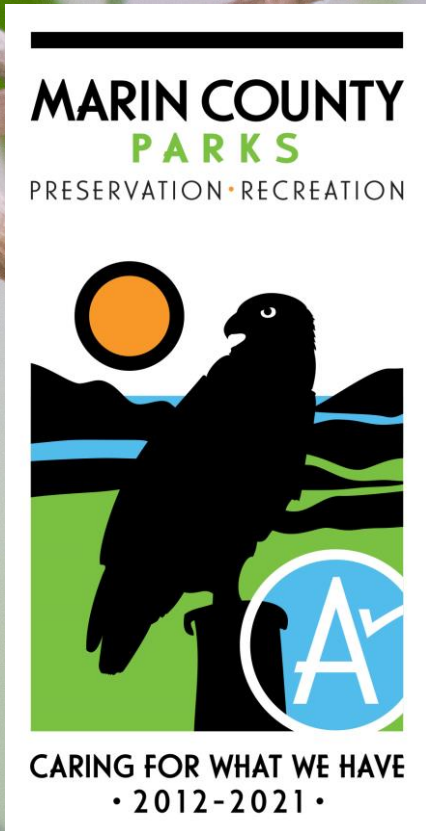


# Marin County Park Nesting Bird Survey



May 25, 2021

# OUTLINE

- Purpose of Surveys
- Laws and Regulations
- Survey Protocol
- Conducting a Survey



# PURPOSE OF SURVEYS

- Protect natural resources prior to project implementation
- Comply with environmental laws



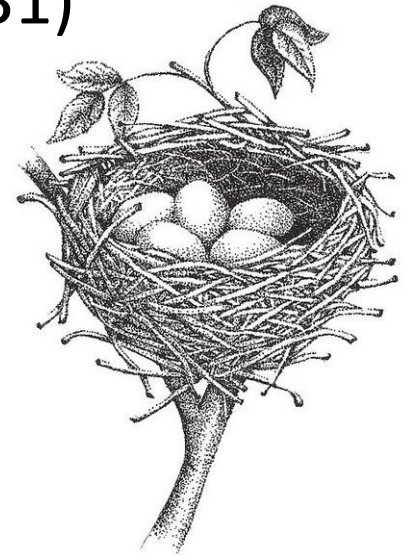
# LAWS PROTECTING NESTS AND/OR BIRDS

- Migratory Bird Treaty Act of 1918
  - Federal **prohibition to “pursue, hunt, take, capture, kill, attempt to take, capture or kill, ... For the protection of migratory birds . . . or any part, nest, or egg of such bird.”** (16 U.S.C. 703)

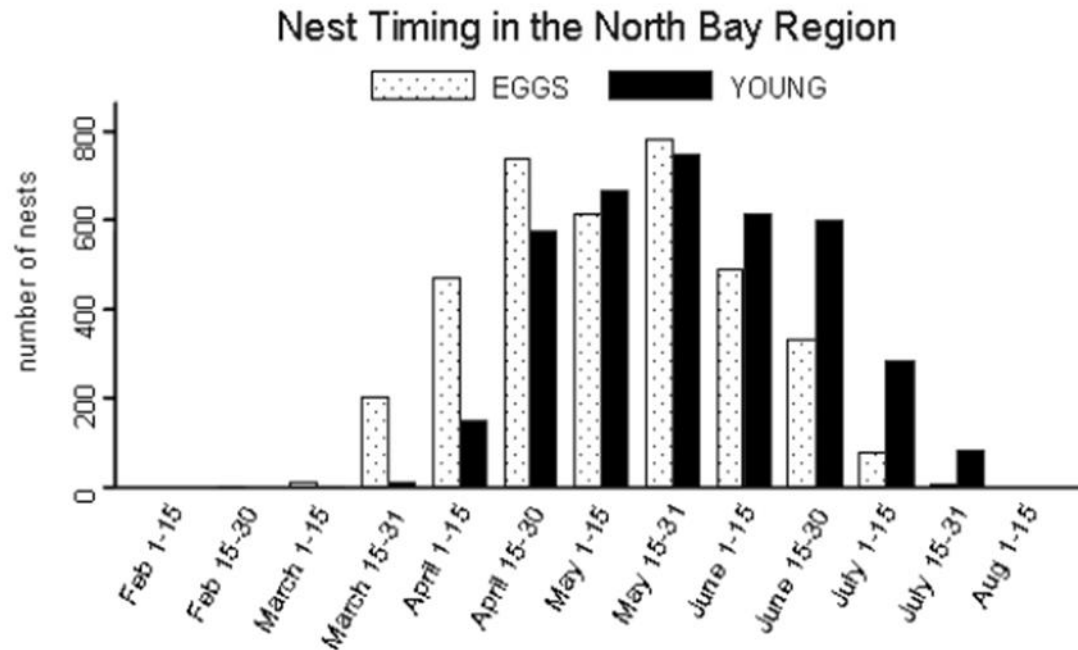


# General Avoidance Measures

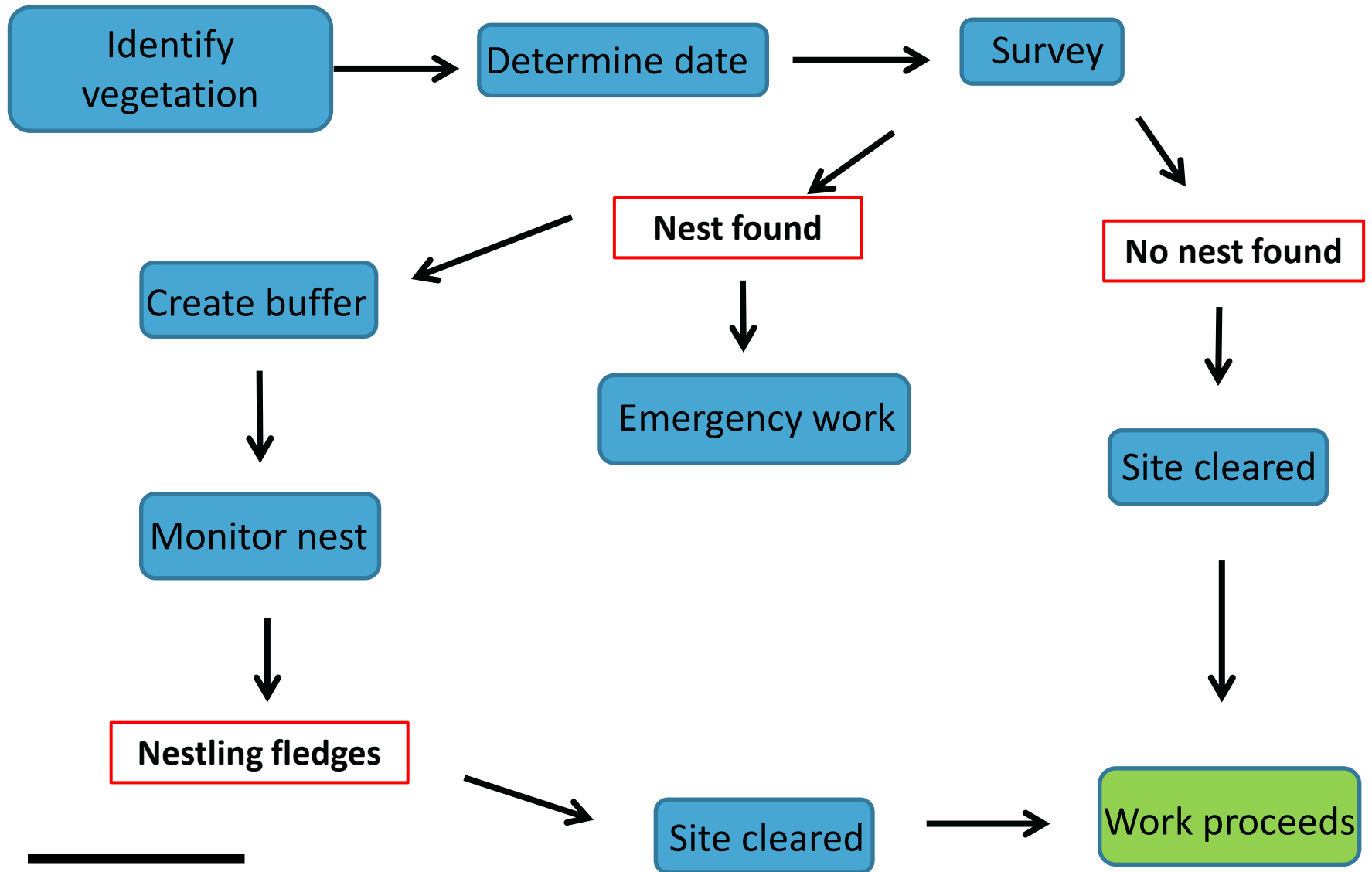
- Schedule vegetation removal outside of nesting season
  - Raptors (Jan. 1—July 31)
  - Songbirds (March 1—July 31)
  - Northern Spotted Owls (Feb. 1—July 31)
  - Ridgway's Rail (Feb. 1 – Aug. 31)
- Provisions—Avoid cutting
  - Grasses > 8 inches
  - Shrubs and Trees



# NESTING BREEDING DATES



**Figure 4.** Timing of the breeding season for birds in the North Bay Region. Data are total number of nests by first egg and hatching dates from 67 species at four sites in Sonoma and Marin counties; 1979-2005 (PRBO unpublished data).



# Survey Protocol: Timing

1. **Survey max 7 days** before initiation of vegetation maintenance
2. Sunrise – 11 AM
3. Do NOT conduct surveys in rain
4. Wind, heat, fog, etc. can impact activity levels
5. Work completed within **7 days** of survey



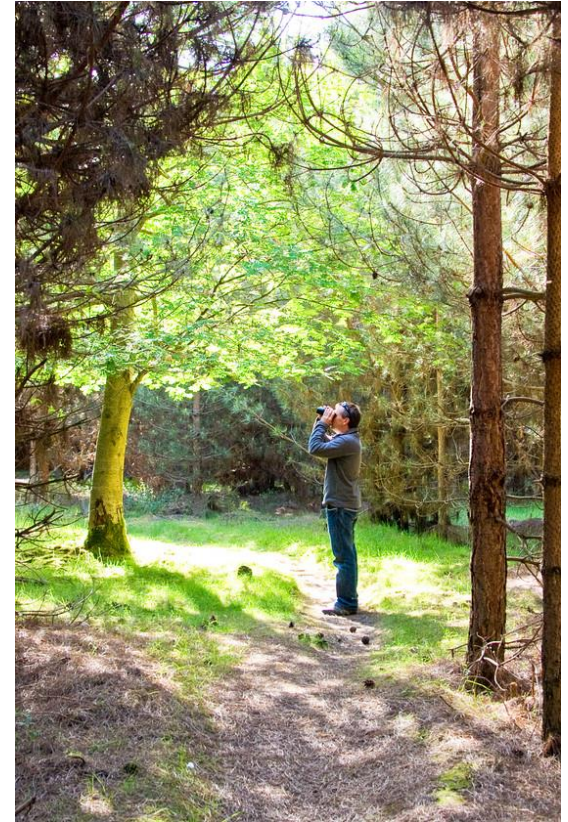
# Survey Protocol: Detect Birds

## 1. Active Flushing

- Use 1 – 1.5 meter stick
- Sweep veg at least 6" off ground

## 2. Active Observation

- Walk through project footprint
- Detect birds by sight or sound
- Watch for prolonged period of time



# Techniques and Tips: Finding Birds

- Look for slight movements
- Be patient, still, and quiet
- Cover the full project area
- Get different viewing perspectives
- Listen for birds

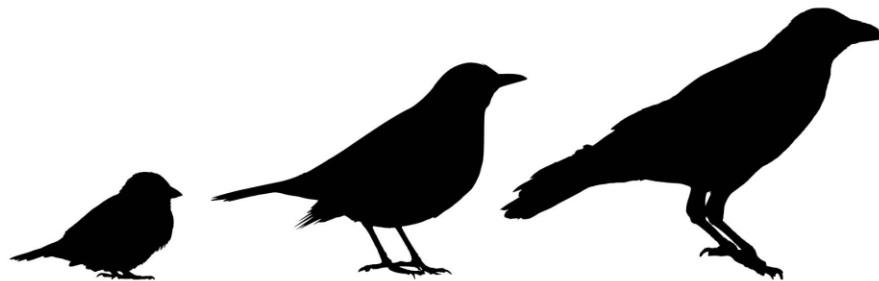


# Techniques and Tips: Finding Nests

- **Alarm Calls** – quicker and harsher, repeated incessantly
- [Carrying Nesting Material](#) – sticks, feathers, leaves, string, etc.
- **Repeated Location Perching** – return 30 seconds to a few minutes to same spot
- **Carrying Food** – feeding young
- **Guarding** – does not flush easily or at normal distance

# Techniques and Tips – Bird ID

- Learn one bird at a time
- Choose the bird most visible and focus on it until determine the species
- Learn common birds first and simple songs
- Look for key features of the bird
- Take recording of bird vocalizations to analyze
- Write all birds observed during the survey



# Techniques and Tips: Raptor Nests

- Nests are larger and easier to locate
  - Get different viewpoints of tree
- May confuse with squirrel nest or arboreal woodrat nest

	Raptor	Dusky-footed Woodrat	Squirrel
Nest Height in Tree	High in tree	Varies	Anywhere
Nest Location	On sturdy branches	Variety, on ground and in trees or shrubs	Variety, including ends of flimsy branches
Nest Shape	Dish, wide and somewhat concave on the top side with mass of sticks extending below dish shape	Conical or dome-shaped, nest height can be 2-6' and nest width as much as 8' in diameter	Vary, but no flat top part to nest
Nest Material	Sticks with some moss and other material	Sticks	Mostly leaves

# Techniques and Tips: Raptor Nests

- Reuse nests, so nests built sturdy
  - May not use every year
  - May not fall apart for many unoccupied years
- Observe nest for minimum 10+ minutes
- Look for downy feathers poking out of nest
- Look for whitewash or pellets below nest



# External Resources

- Books (e.g. Sibley)
- Apps (e.g. Merlin Bird ID, Audubon)
- Websites (e.g. Cornell Lab of Ornithology, ebird.org)



## NESTS: CUP

Anna's  
Hummingbird



Cedar Waxwing



Dark-eyed Junco



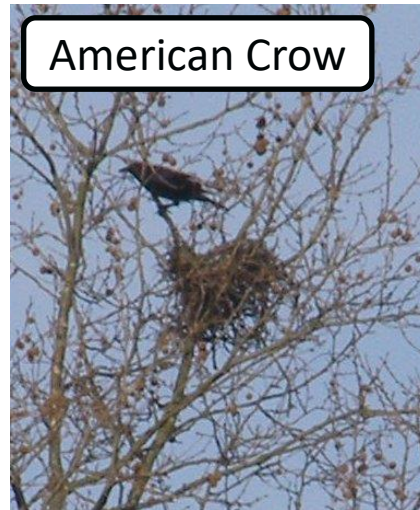
Pacific-slope  
Flycatcher



# NESTS: STICK



Red-tailed Hawk



American Crow



CA Scrub Jay



Northern Mockingbird

## NESTS: CAVITY

Northern Flicker



European Starling



Bewick's Wren



Barn Owl



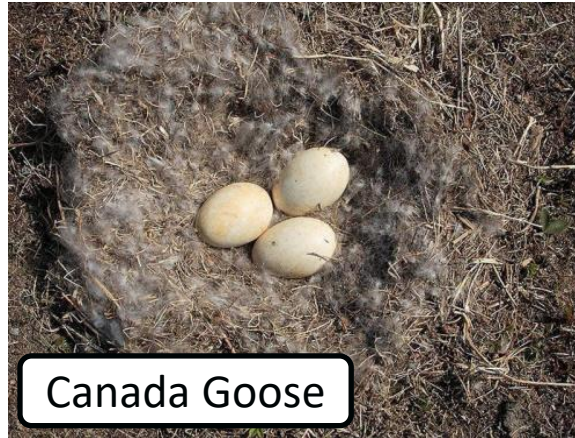
Tree Swallow



## NESTS: GROUND/SCRAPE



Killdeer



Canada Goose



Mourning Dove



Wild Turkey

## NESTS: OTHER



Bushtit



Turkey Vulture



Cliff Swallow

# Take Aways

- **Check the area for bird activity a few days before vegetation removal**
- **Avoid working within 50 feet of active nests (could be weeks or months)**
- **Ensure nest has fledged before continuing vegetation removal**

QUESTIONS?

