

Welcome to the Conservation Lecture Series



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Questions? Contact margaret.mantor@wildlife.ca.gov

Managing California Red-legged Frogs and California Tiger Salamanders in Landscape-scale Habitats



Jeff Alvarez, The Wildlife Project

Natural History Overview



D. Cook

Natural History Overview



D. Cook























S. Foster

S. Foster



M. Legg

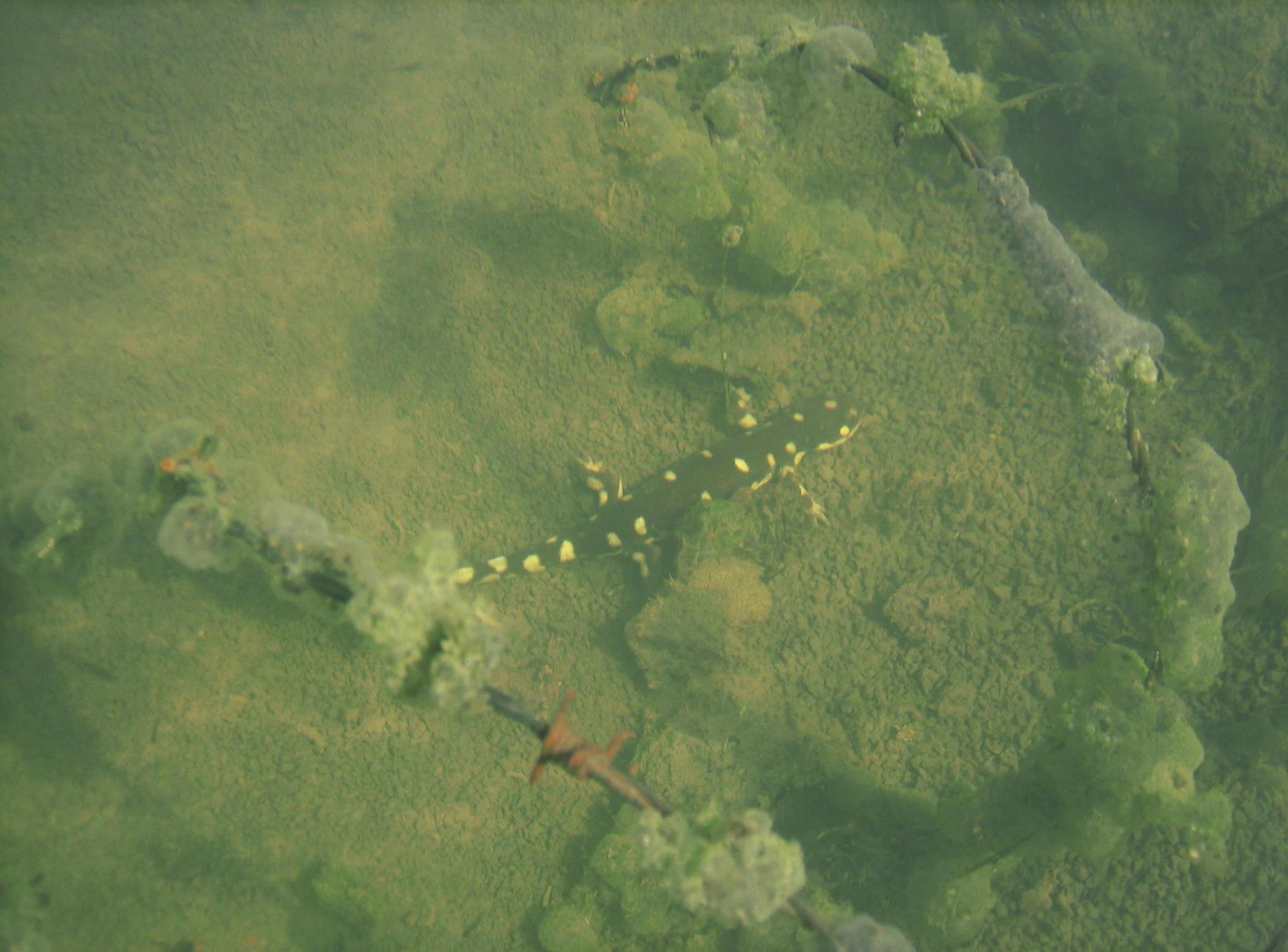




Natural History Overview



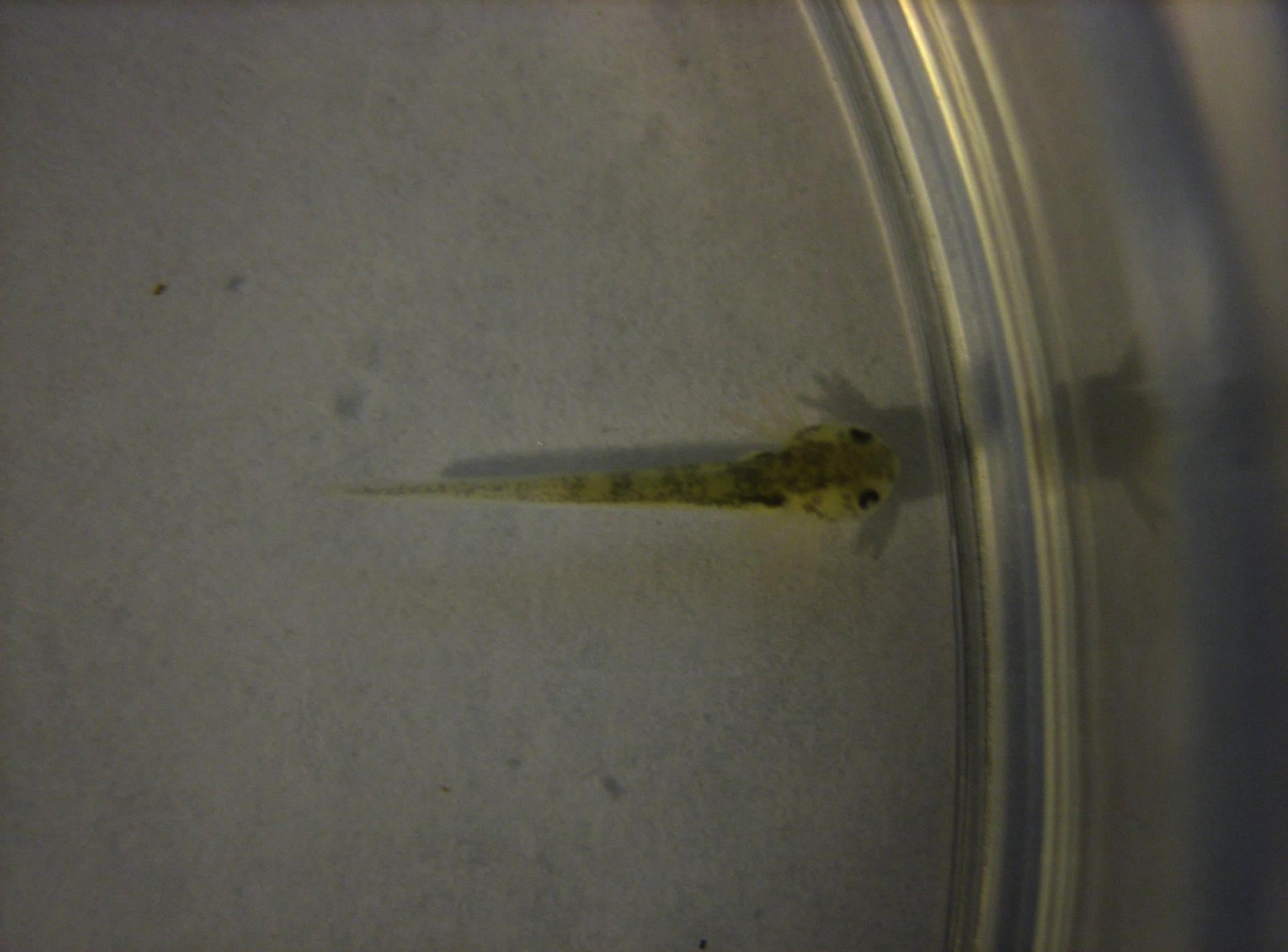
D. Cook







J. Wilcox









D. Cook

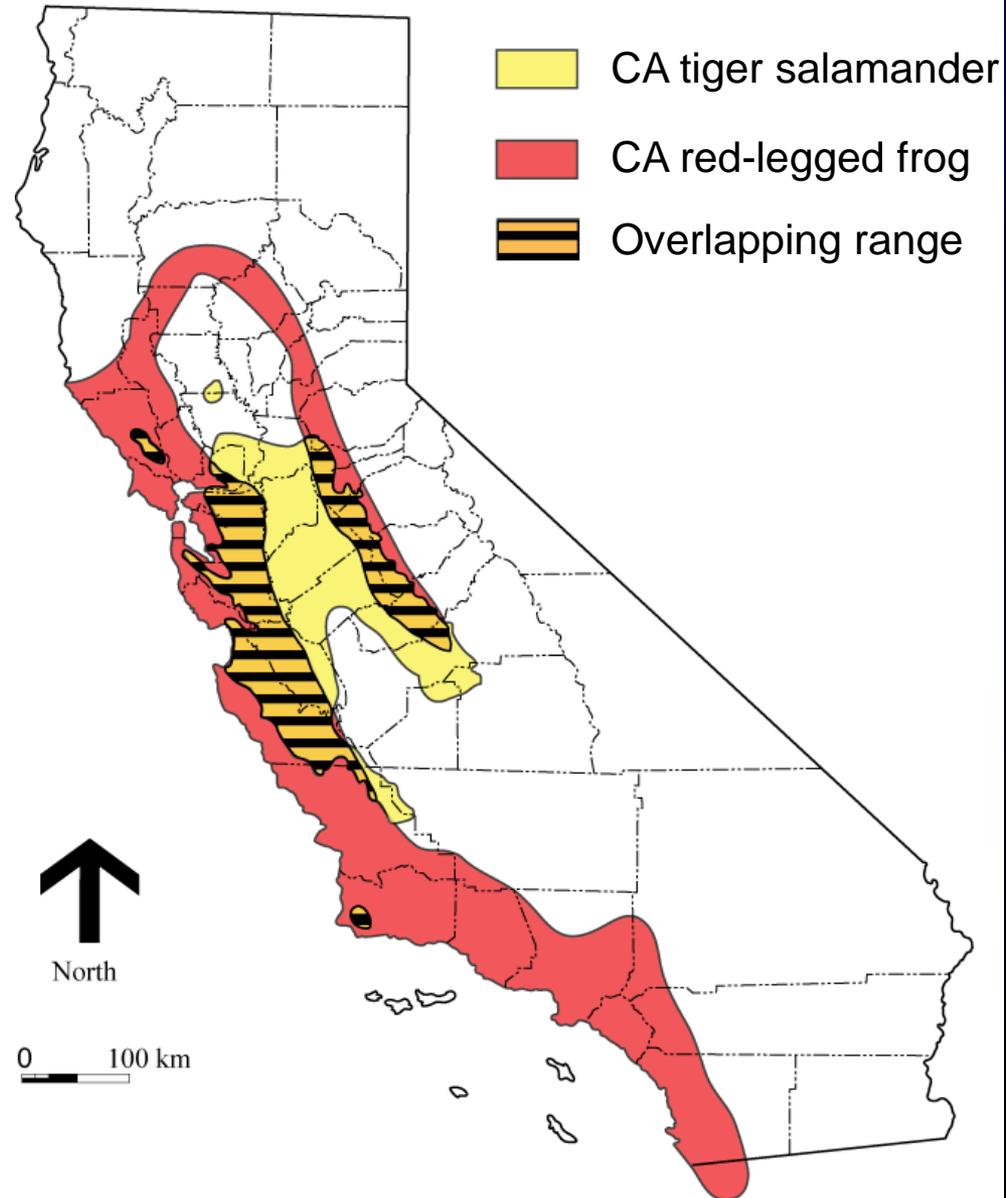


Natural History Similarities



- Biphasic reproductive pattern;
- Congregate in aquatic breeding sites in late fall and winter;
- Lay eggs in shallow water;
- Both may have early metamorphosing or overwintering larvae;
- Adults highly adapted to dry uplands;
- May utilize similar aquatic breeding habitat.

An Important Similarity...





Perennial and ephemeral creeks



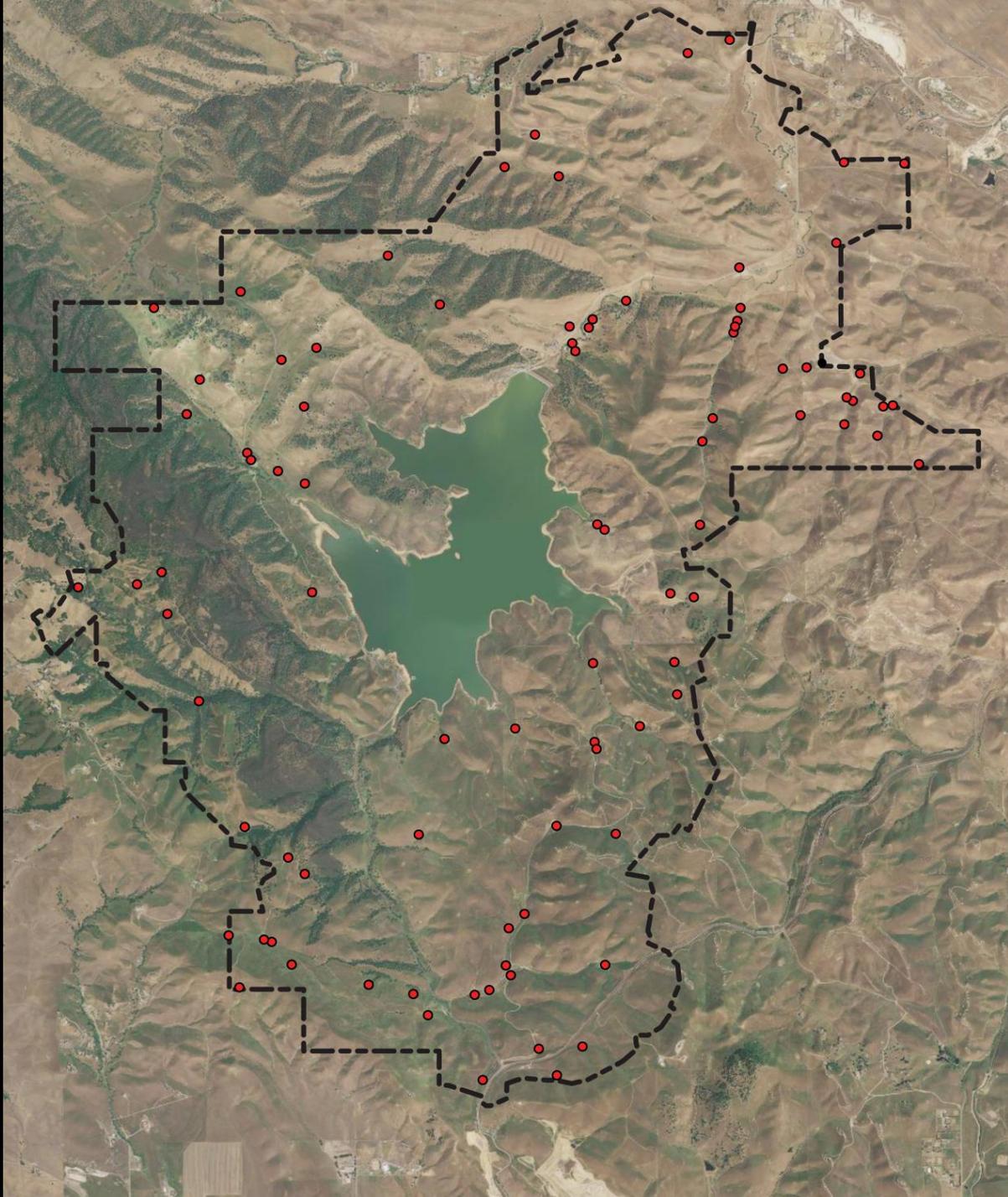
Created wetlands

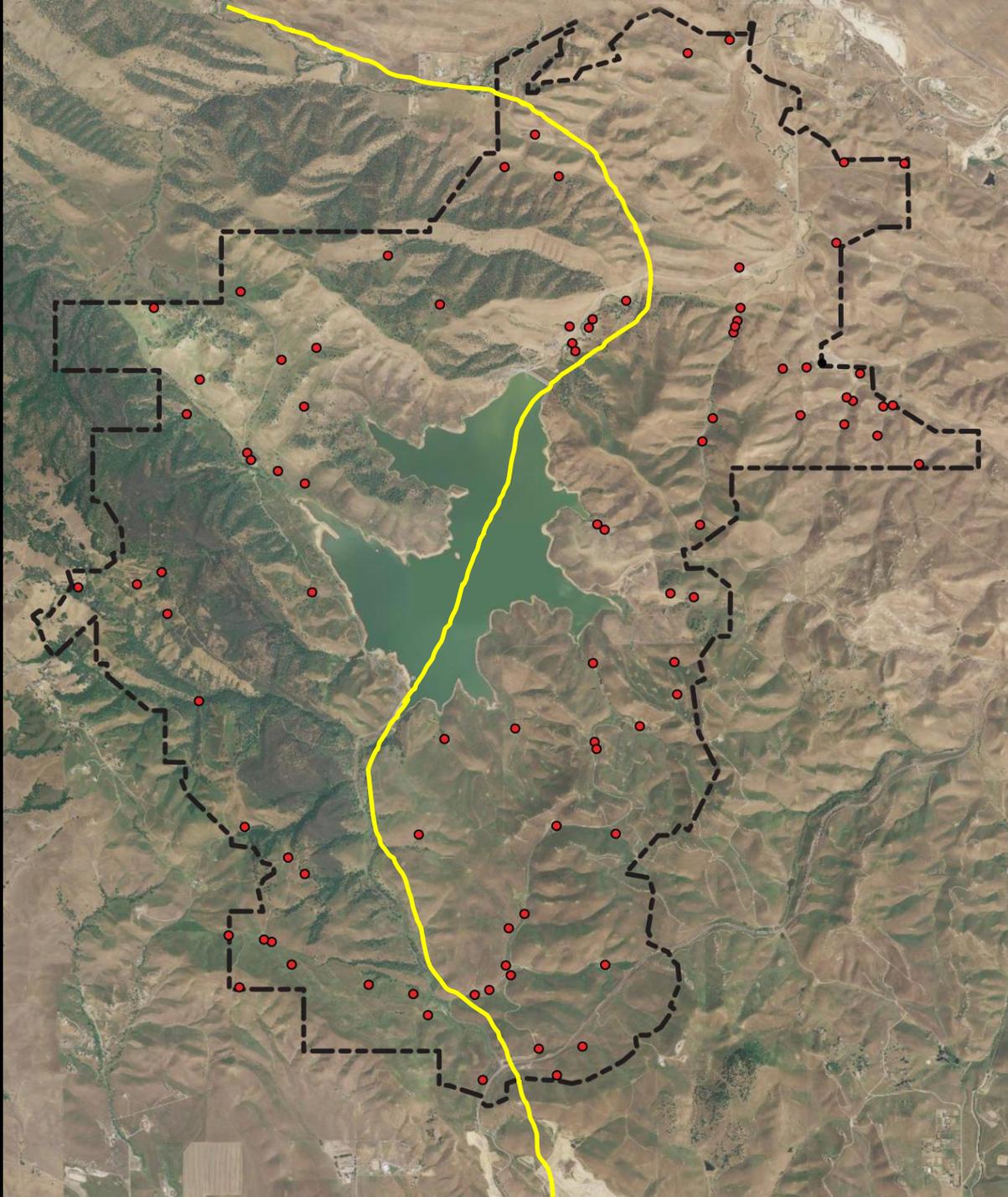
Ephemeral ponds





Perennial stock ponds







Management Activities

Aquatic breeding habitat:

- invasive species management
- vegetation and silt removal
- pond construction/repair/removal

Upland habitat:

- grazing
- vehicular travel
- rodent control (passive and active)
- ground disturbance

Other:

- “dry” ponds
- atypical habitat
- good projects

















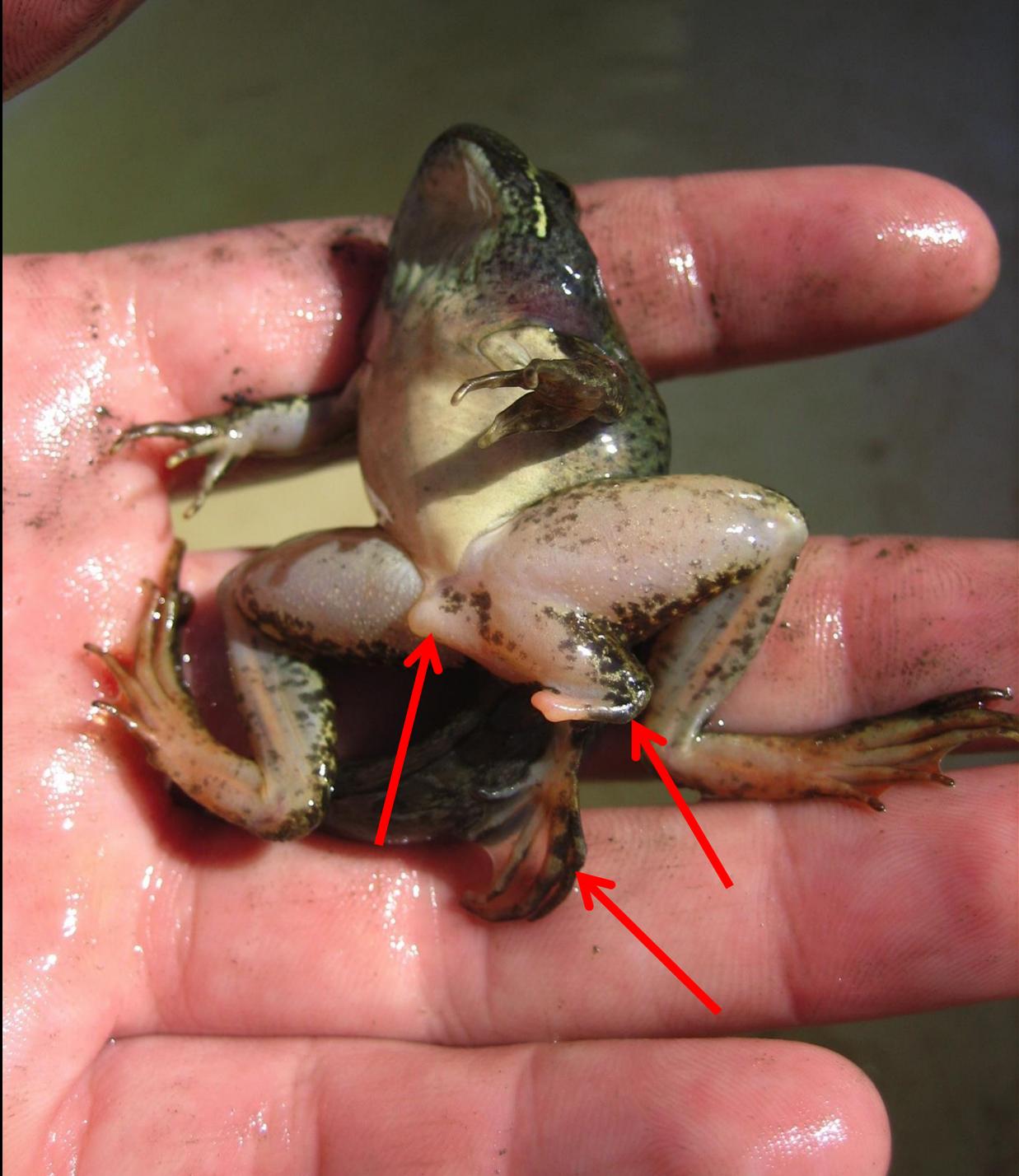
















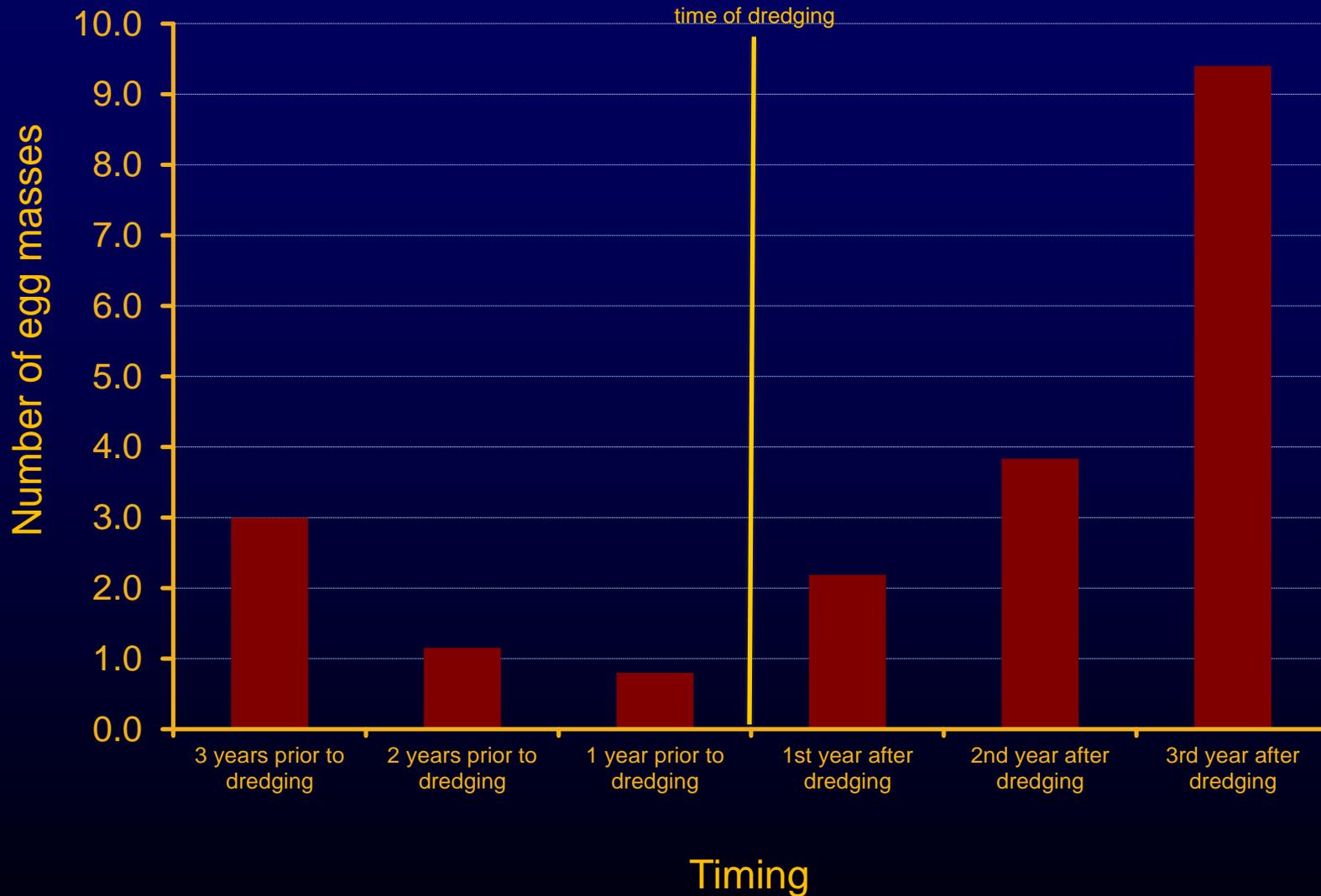


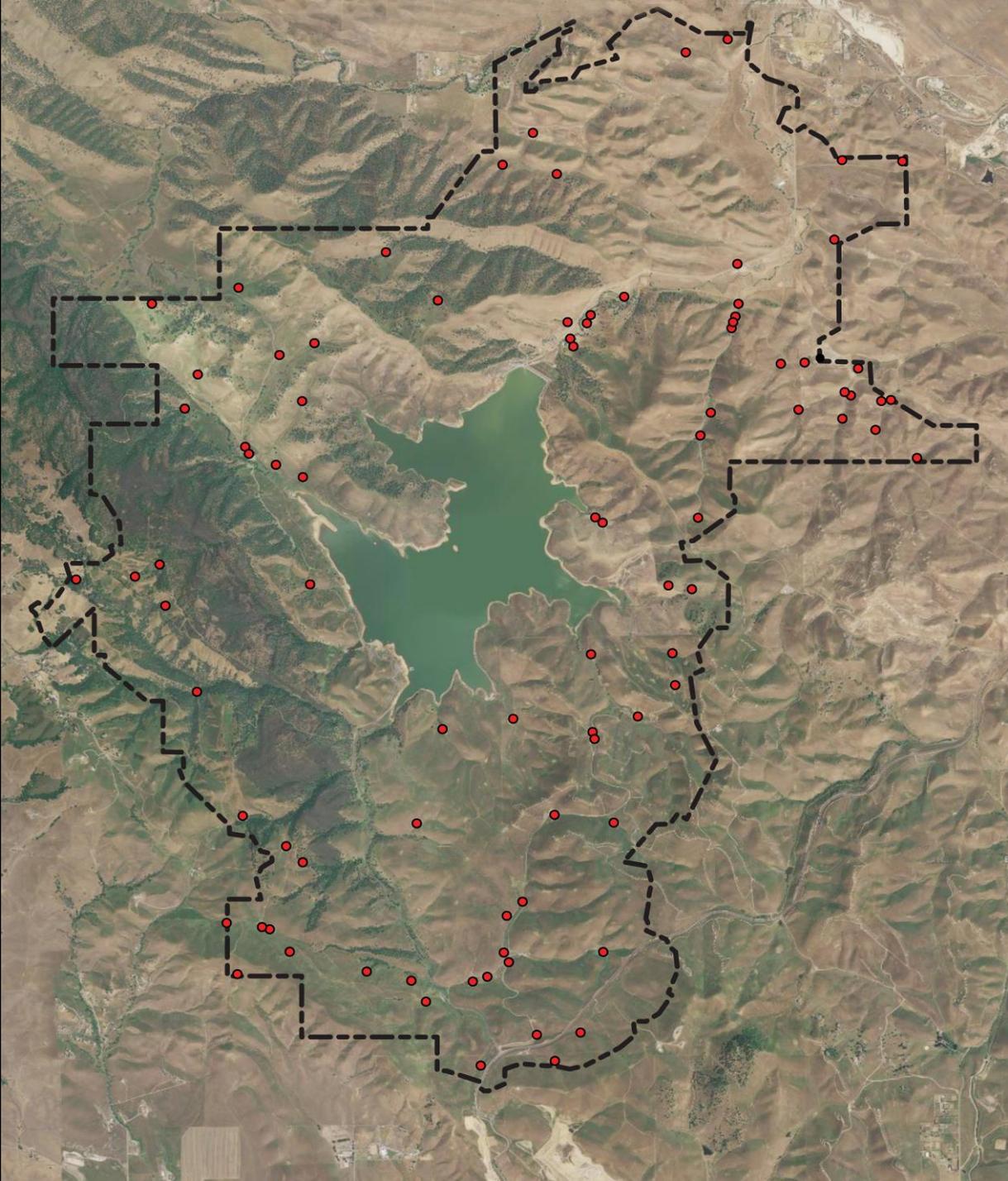
KOMATSU

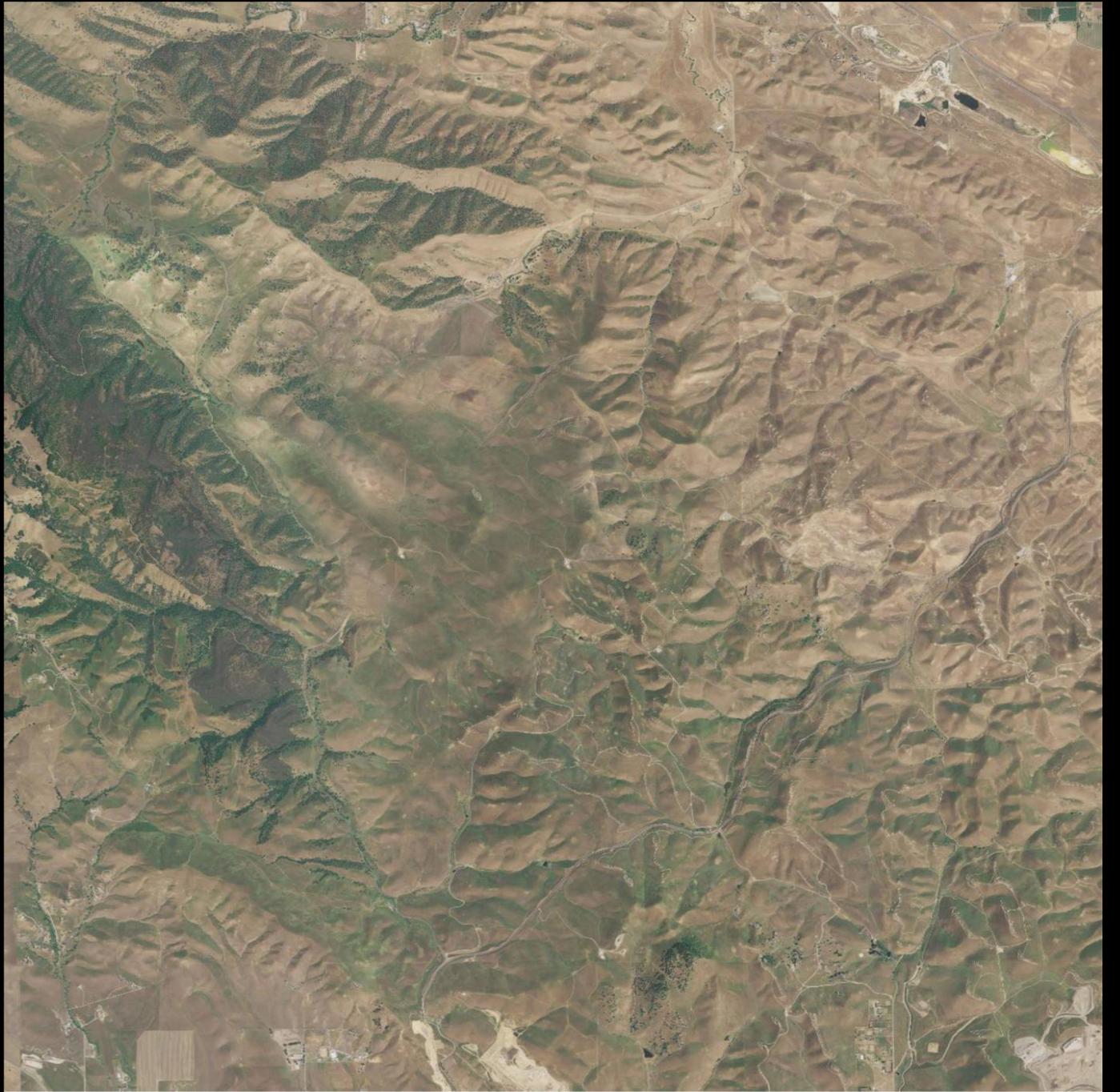
2230
PC
160
LC



Numbers of egg masses relative to dredging









Results of Surveys at Aquatic Breeding Habitat

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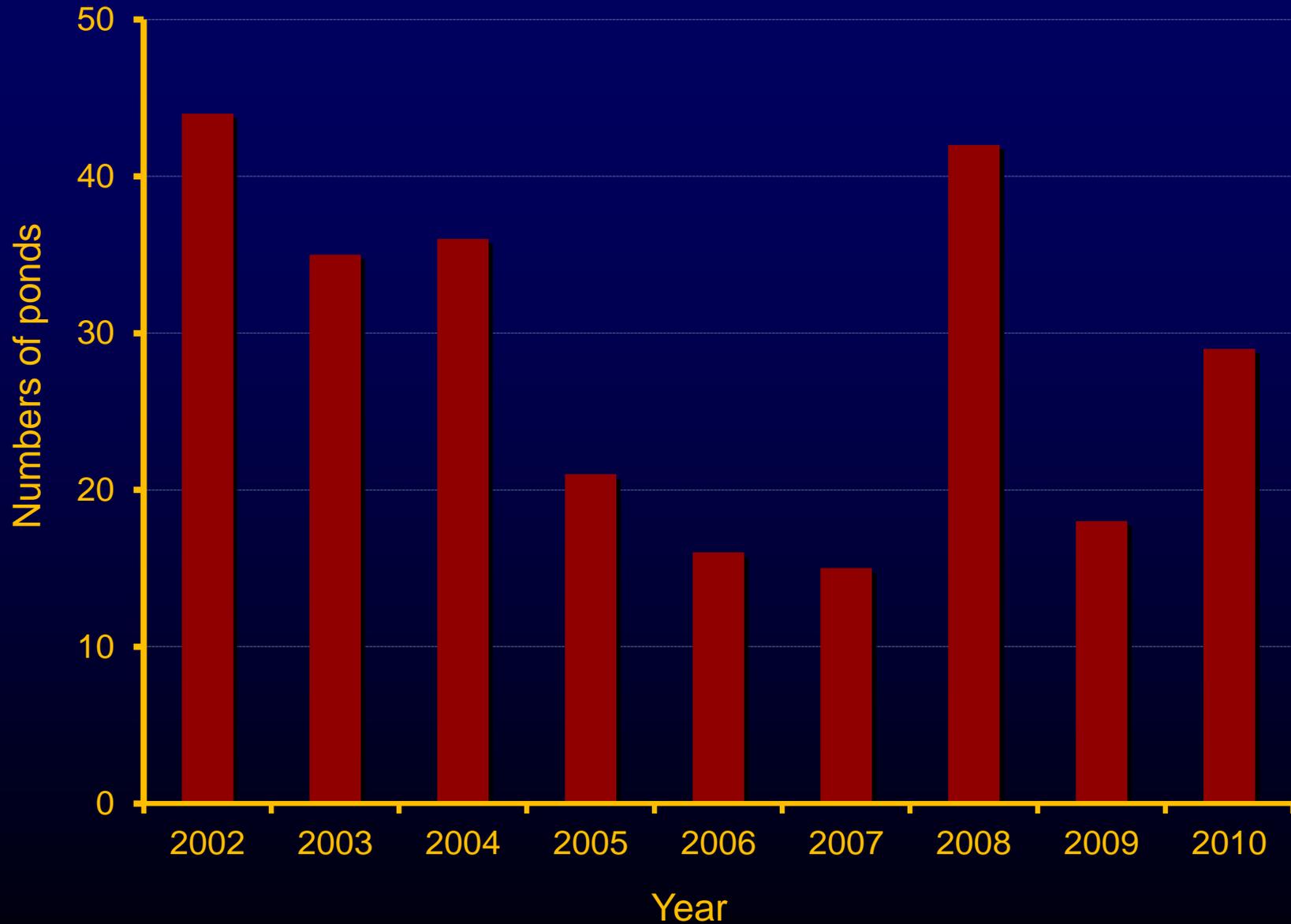
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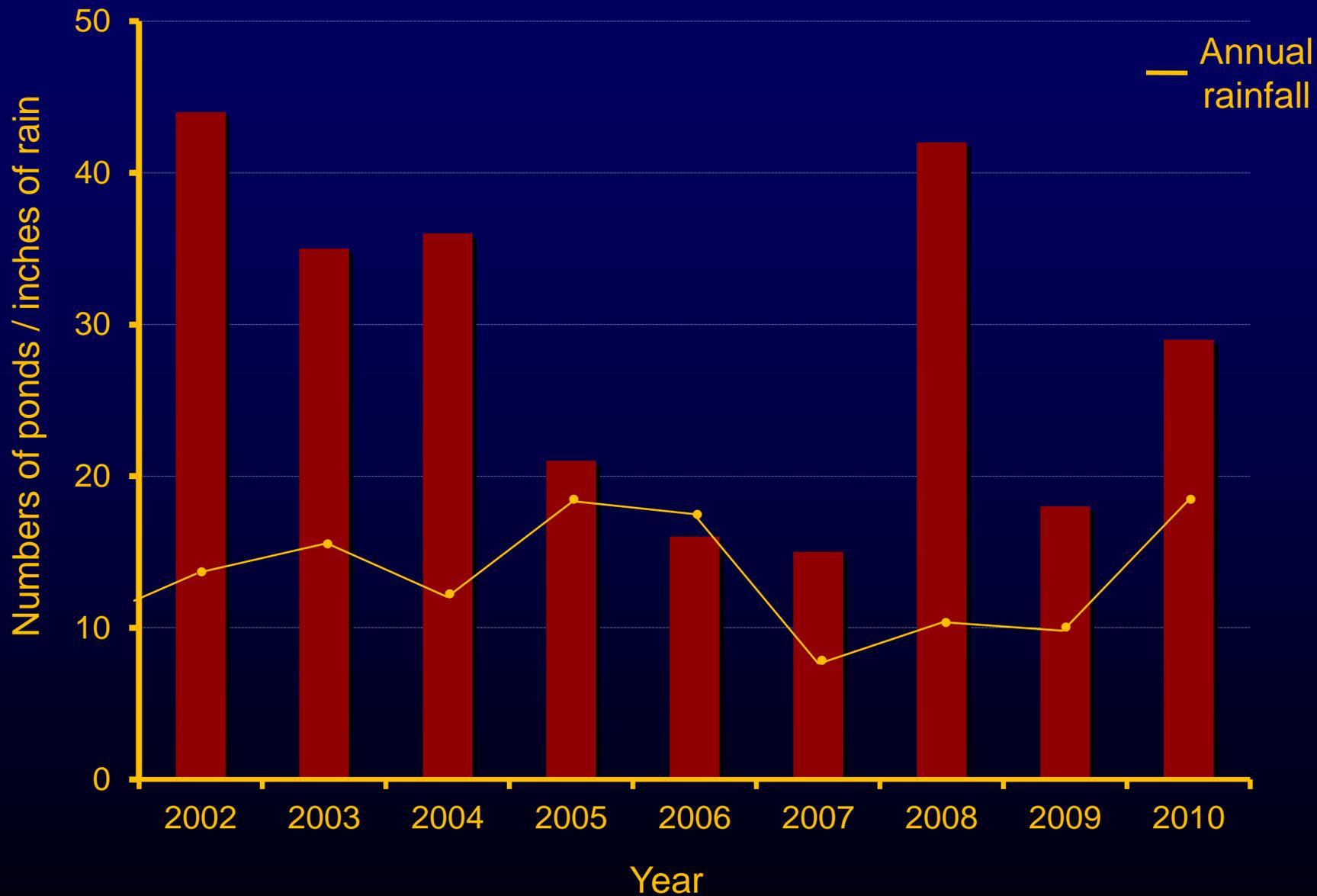
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- Up to 44 ponds had CTS breeding in a single season,
- CTS bred in perennial and ephemeral systems with turbid to clear water,
- CTS were sympatric with California red-legged frog 100% of the time.

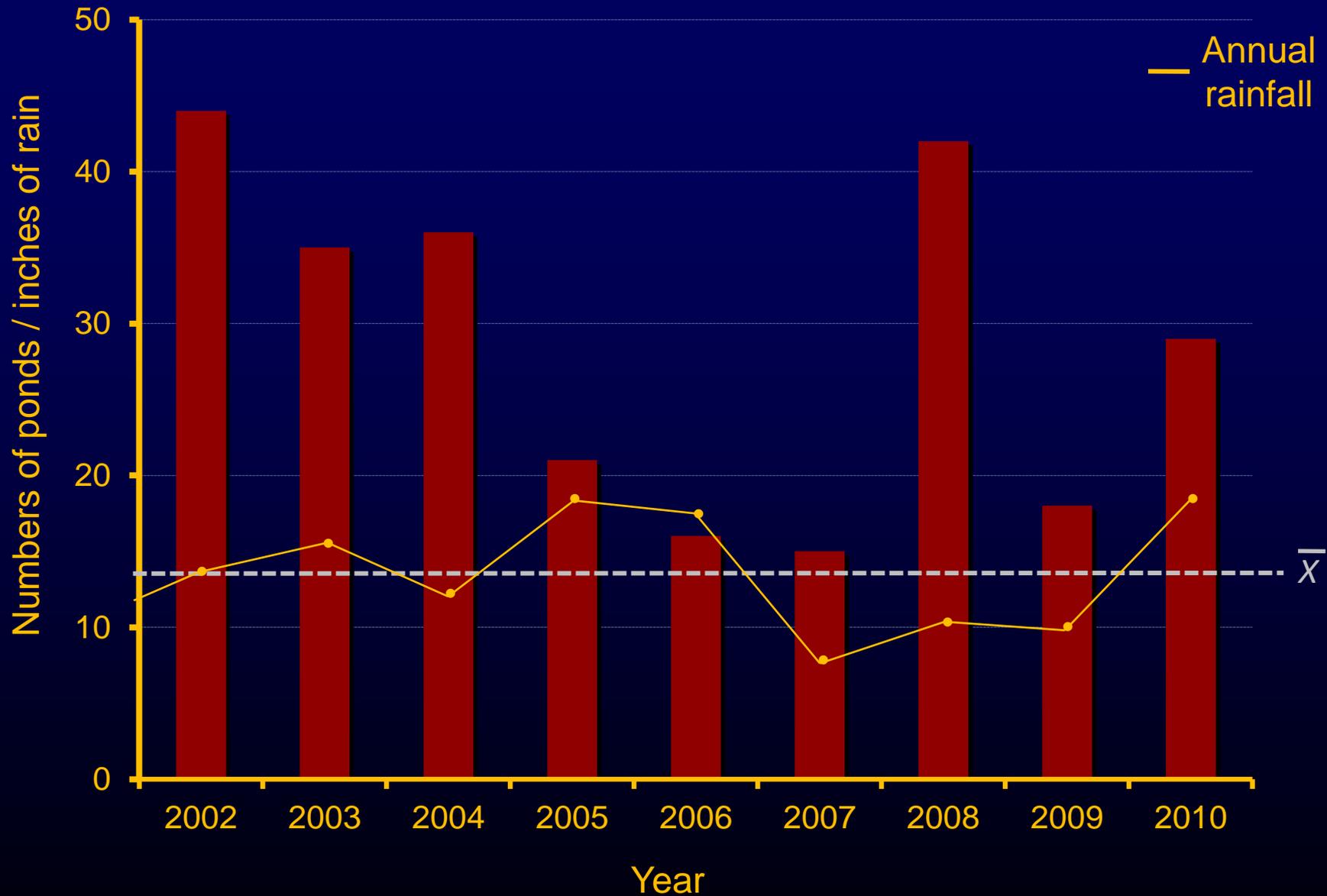
Numbers of ponds with observed CTS breeding



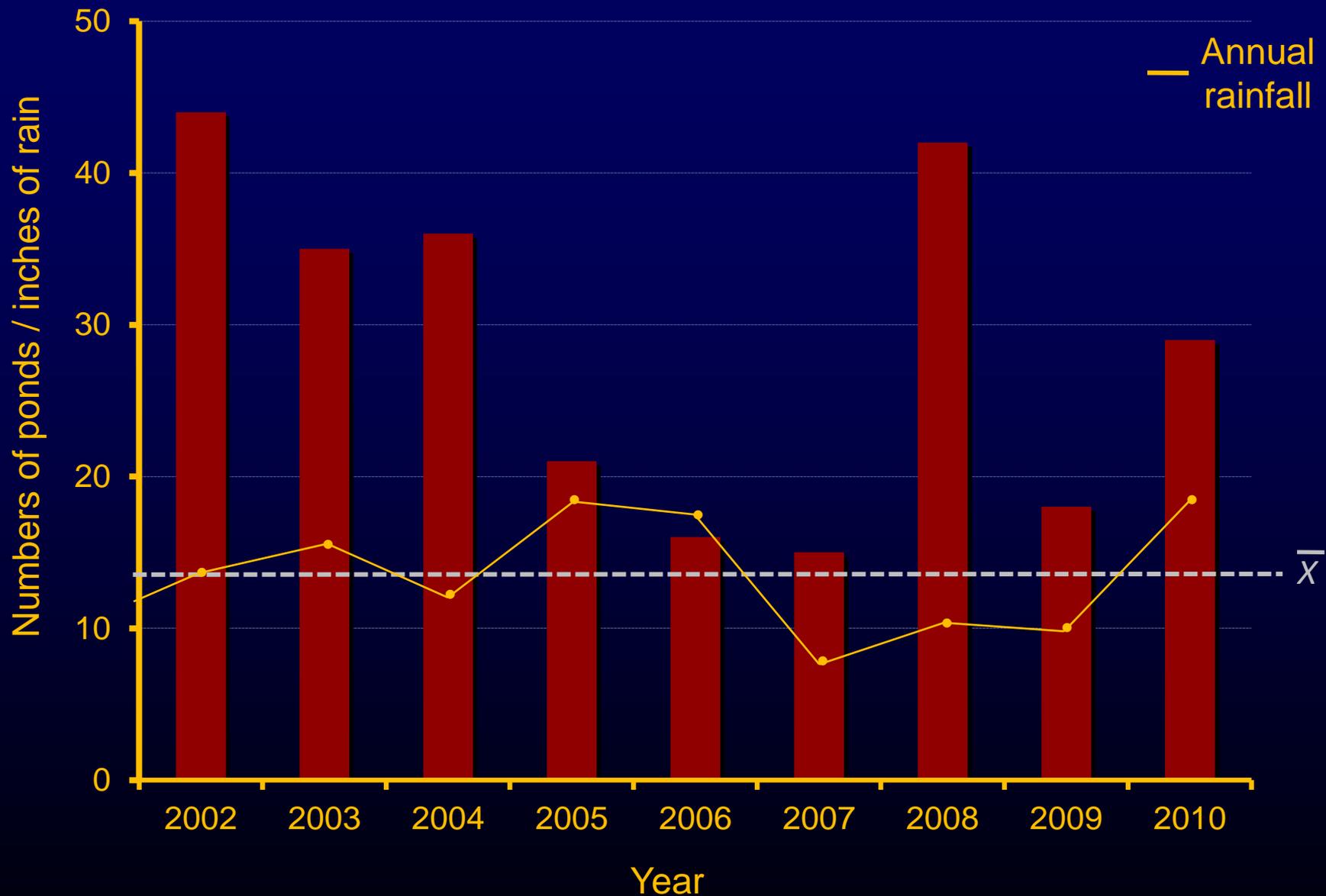
Numbers of ponds with CTS breeding observed



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Numbers of ponds with CTS breeding observed



Where are the rest of the CTS?































But what about...

*projects that have little to do with CRLF
and CTS, but will likely provide a benefit to
them?*









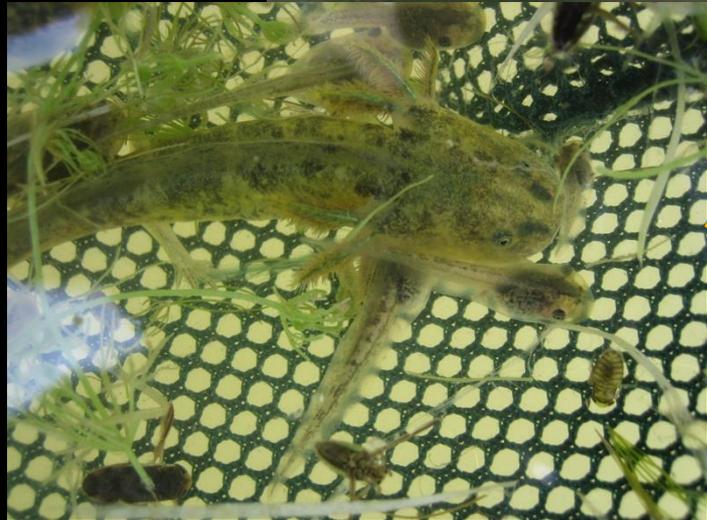




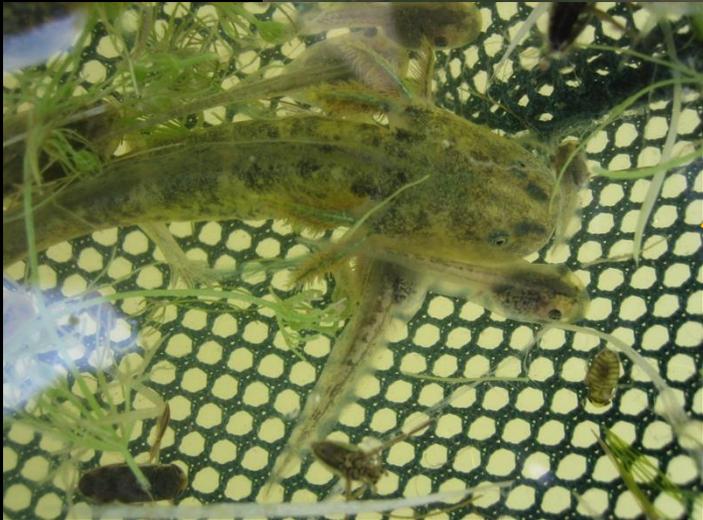
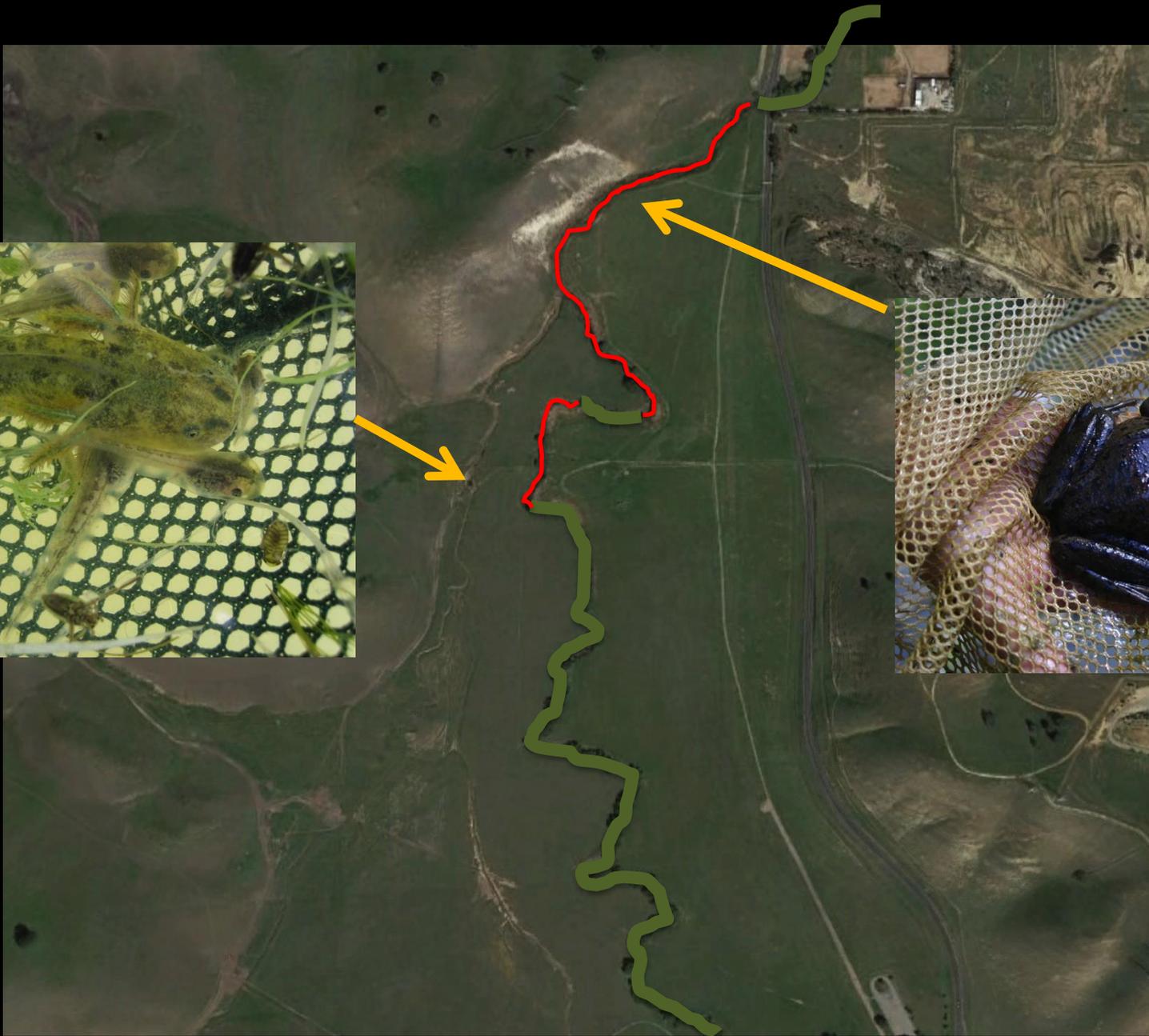


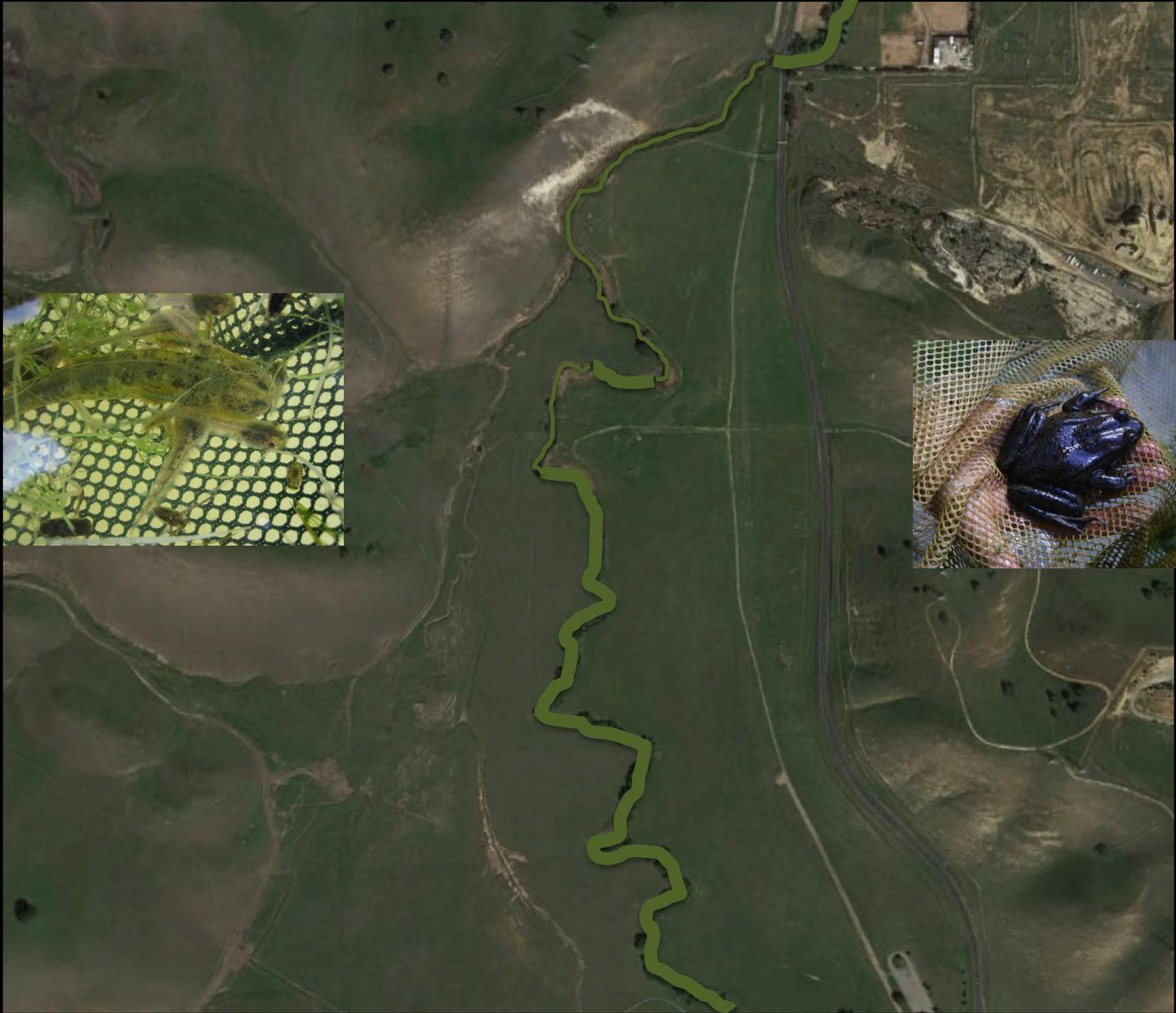












Considerations:

- Sympatry is common in CRLF/CTS;
- Grazing, or upland vegetation management is critical for CTS;
- Observed CTS breeding is sporadic;
- CRLF require uplands for nocturnal foraging;
- “Dry” ponds are not always dry and may still be suitable for CRLF/CTS;
- CRLF/CTS can respond quickly to predator control efforts;
- Aquatic breeding habitat can be manipulated to the benefit of CRLF/CTS;
- Nearly all sites will require management over time.



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