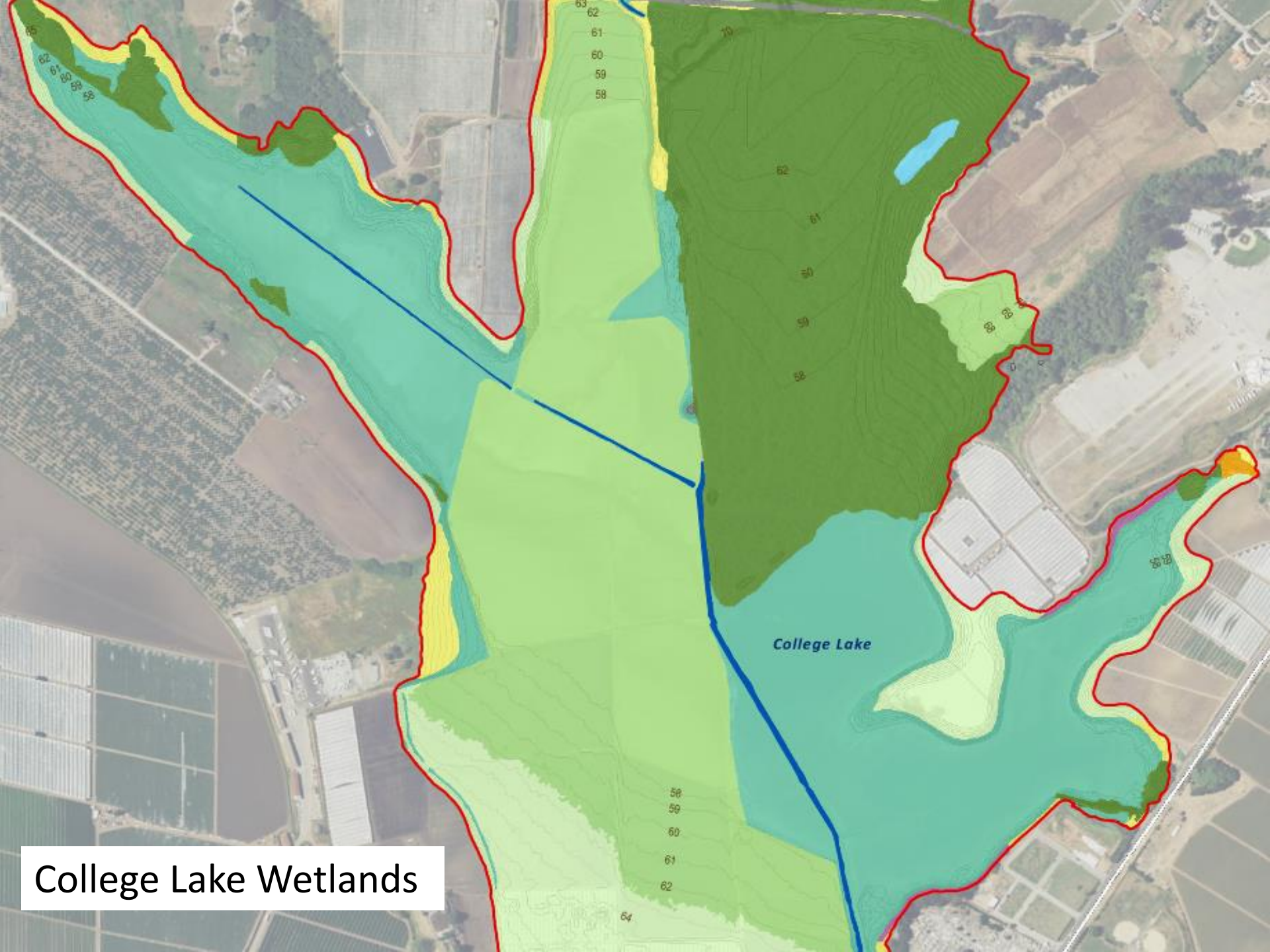
Wetland Vegetation and Waterfowl

Jerry Busch
Committee Vice-Chair

Ad Hoc Adaptive Management Plan Committee

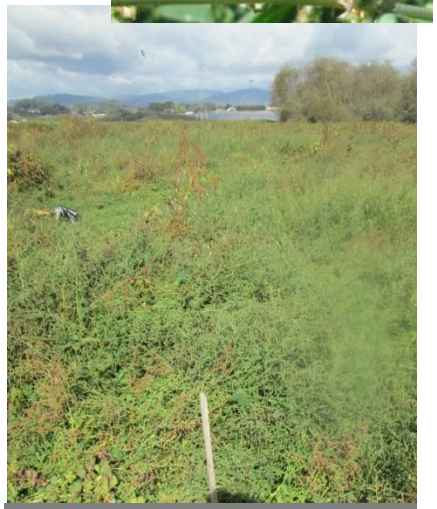


College Lake Wetlands

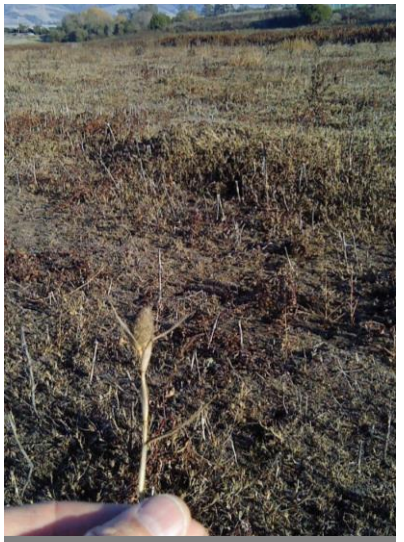
Main ditch

Seasonal Wetlands- Waterfowl Food Plants

Smartweed & Watergrass (Millet)



Fat hen



Swamp timothy

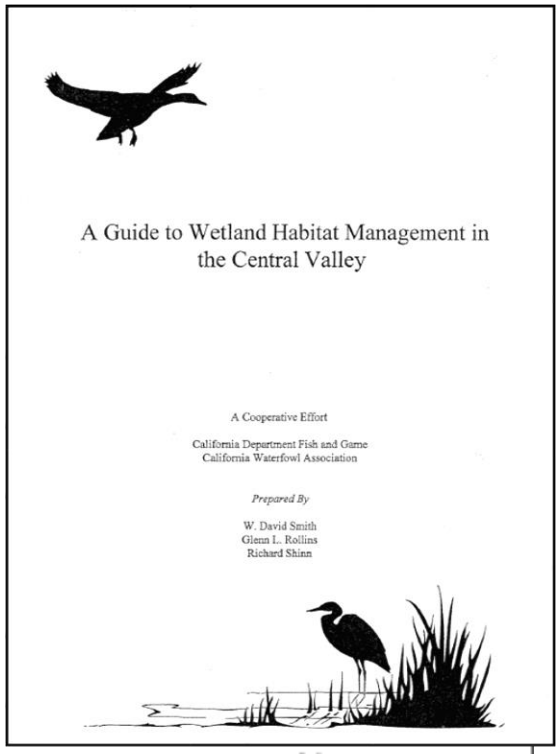
Other Dominant Cover

Negligible food value to waterfowl

Persicaria amphibia – all elevations, aquatic and terrestrial.

Melilotis alba – white sweet clover. Tall, can be rank, deer forage.

Cocklebur - transition habitats, found at range of elevations at College Lake. Low food value to waterfowl.



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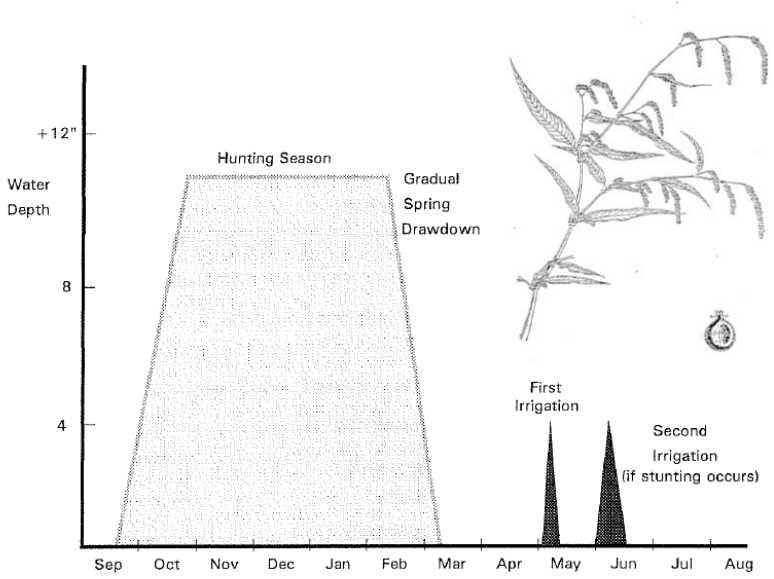


Central Valley Drawdown

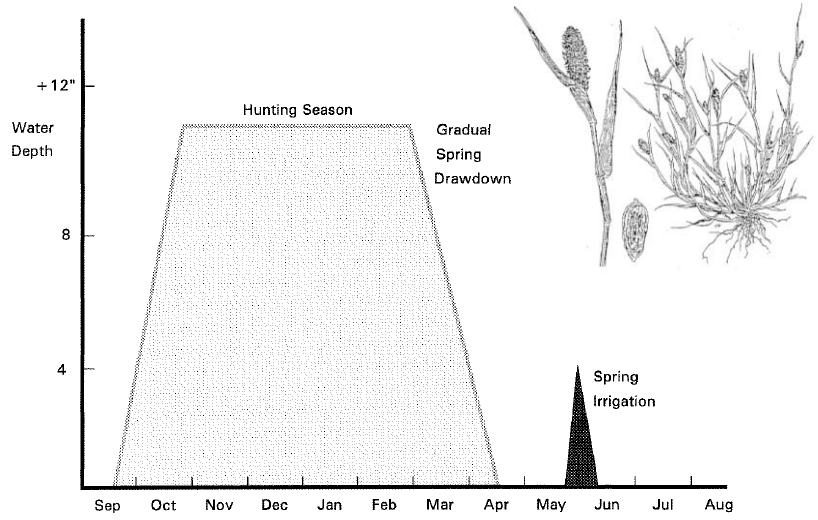
March 7 – Smartweed

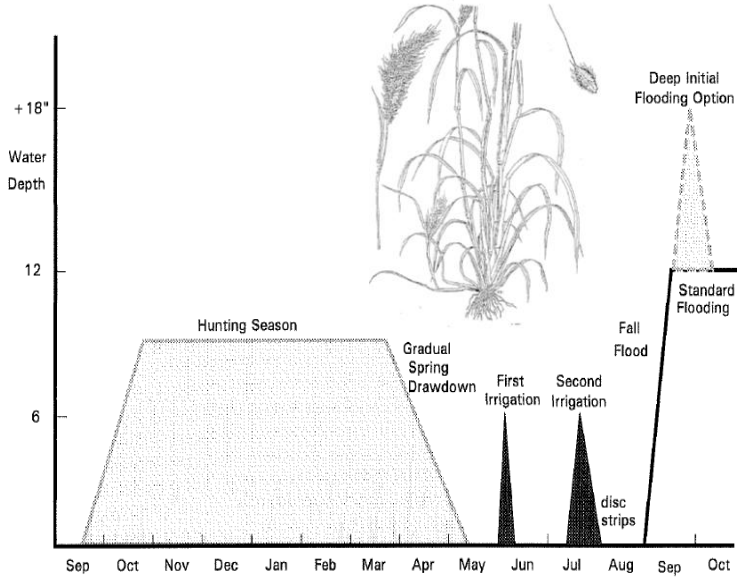
April 15 – Swamp Timothy

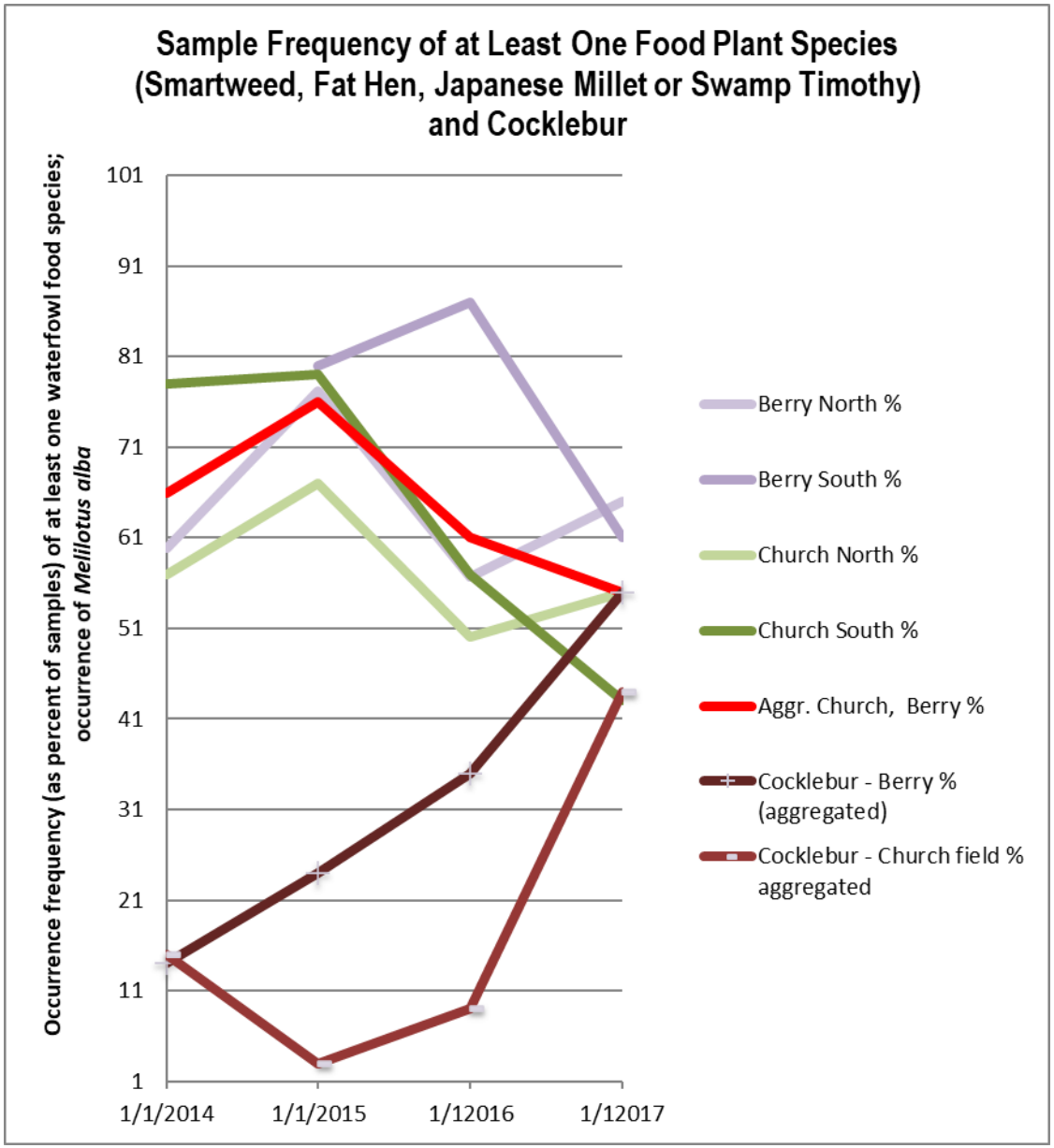
May 7 – Japanese millet

College Lake Drawdown

May 1 – May 10.






Sample Frequency of at Least One Food Plant Species (Smartweed, Fat Hen, Japanese Millet or Swamp Timothy) and Cocklebur
Occurrence frequency (as percent of samples) of at least one waterfowl food species; occurrence of Melilotus alba
101
91
81
71
61
51
41
31
21
11
1
1/1/2014
1/1/2015
1/12016
1/12017
Berry North %
Berry South %
Church North %
Church South %
Aggr. Church, Berry %
Cocklebur - Berry % (aggregated)
Cocklebur - Church field % aggregated

Plant Productivity Supports Food Chain

Sparrows, Finches, Other Songbirds

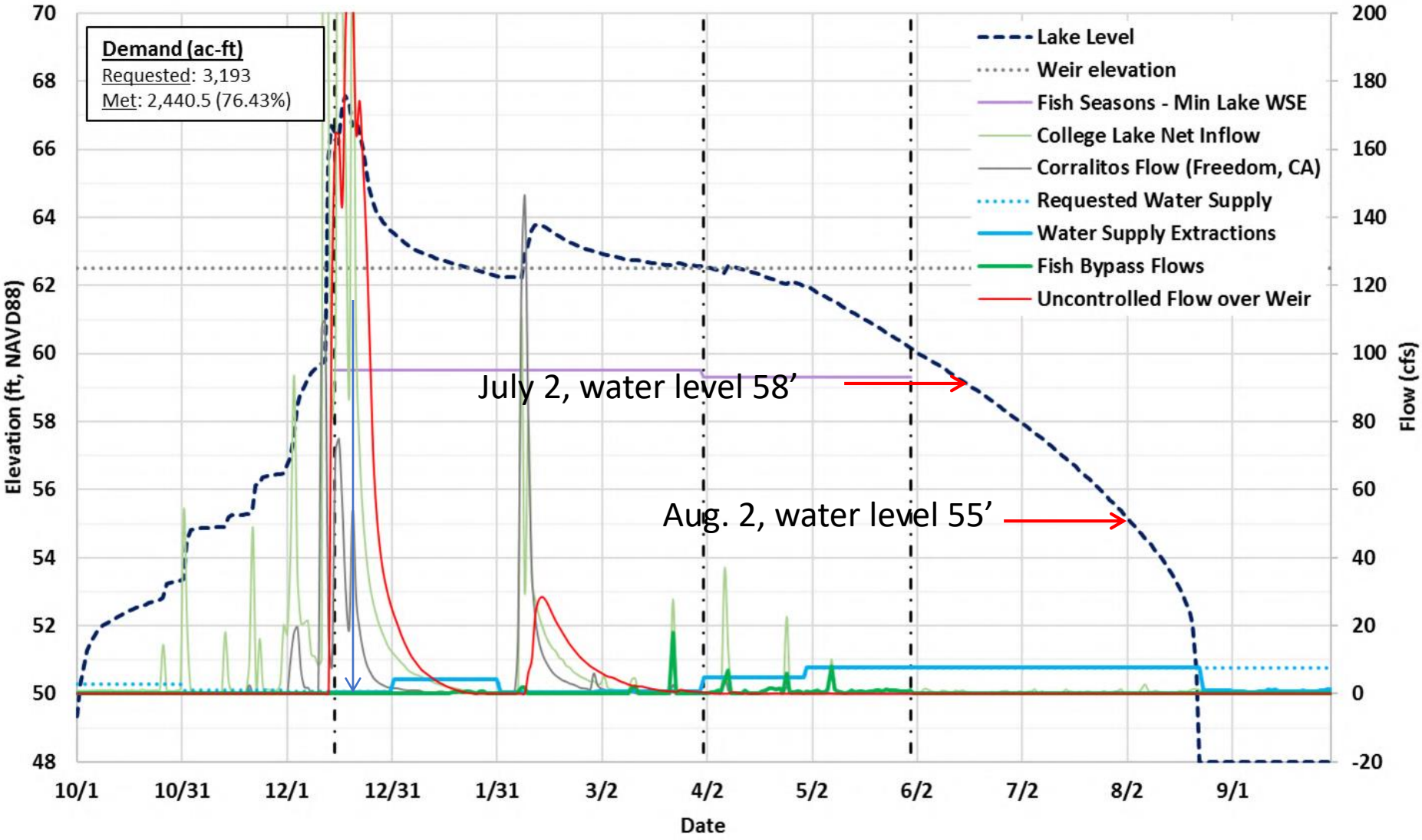
Insects and Other Invertebrates

Mammals - Herbivores and Predators

Reptiles, Amphibians and Fish

PAULSEN RD
STATE HWY 152
62
60
58
56
54
52
50
64
59
E

Drawdown Date vs. Elevation, 2015



Map Of 55’ Inundation Area – Palustrine, Emergent Marsh Converted to Bare Mud: ~80 Acres

Land Areas at 55’-59’ Elevation
Potential Palustrine, Emergent Marsh

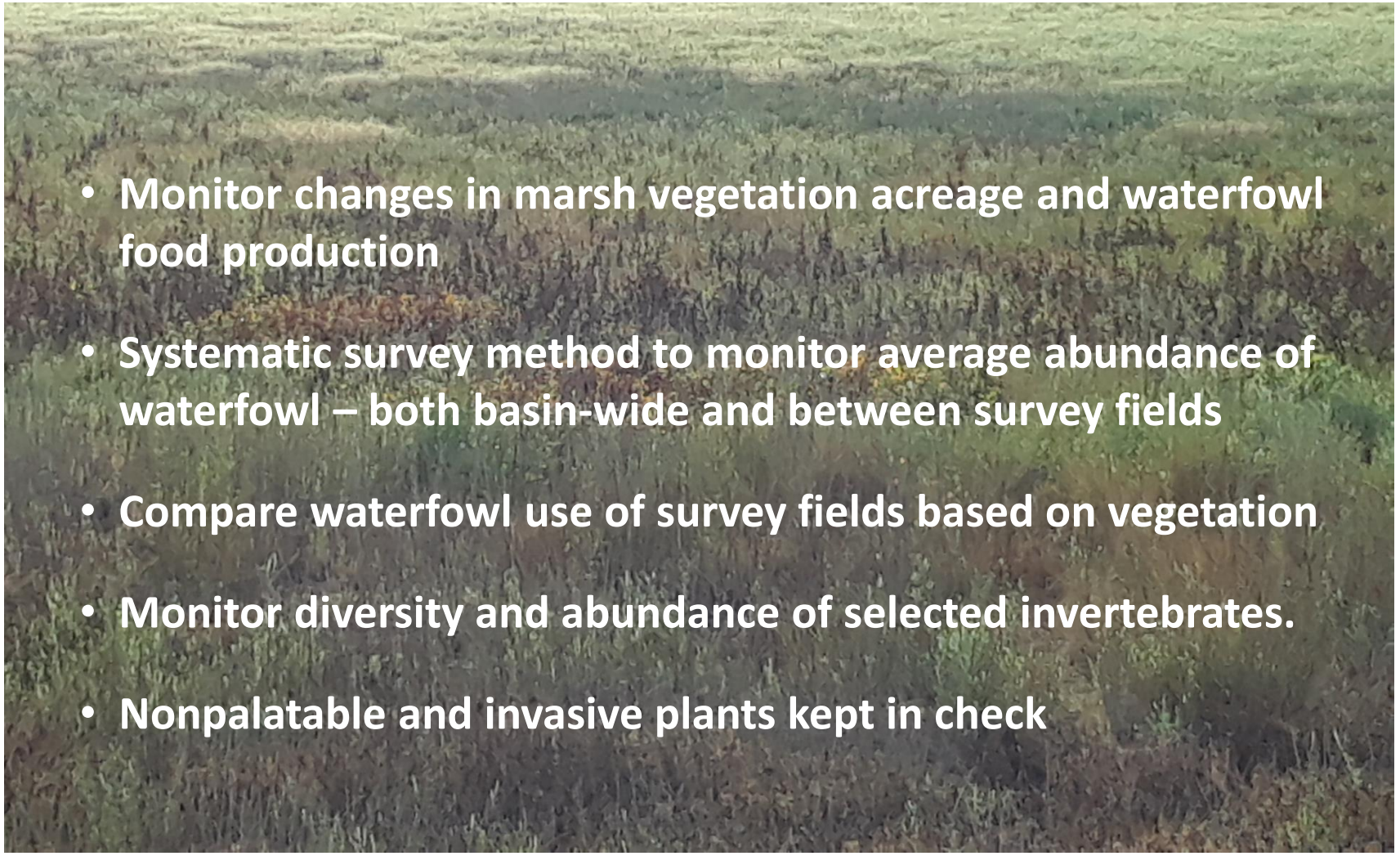
Persicaria amphibia engulfing smartweed, *Polygonum lapathifolium.*

Cocklebur dominating transition zone between wetlands and uplands *(55-58').*

Summary – Waterfowl Habitat Quality

- Waterfowl food plants present, augmented if needed
- Vegetated habitat for tipping ducks (12” depth)
- High invertebrate diversity and abundance - zooplankton and macro-invertebrates
- Minimize waterfowl population decrease correlated with vegetation loss by field
- Wetland vegetation in 58’-63’ elevation as consistent with agricultural activity
- Rapid drawdown as consistent with water yield, to promote plant germination
- Woody plant control minimally invasive
- Nonpalatable plants kept in check

Baseline Monitoring Needs



- Monitor changes in marsh vegetation acreage and waterfowl food production
- Systematic survey method to monitor average abundance of waterfowl – both basin-wide and between survey fields
- Compare waterfowl use of survey fields based on vegetation
- Monitor diversity and abundance of selected invertebrates.
- Nonpalatable and invasive plants kept in check