

Wetland Wildlife and Hybrid Cattail

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Section of Wildlife
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What we will cover

Very basic needs of wetland wildlife
Focus on dabbling ducks as an example
Relate these needs to cattail management
Provide a few management examples

Wetland Wildlife Needs

Life Cycle Event

- Reproduction
- Molt
- Migration
- Wintering

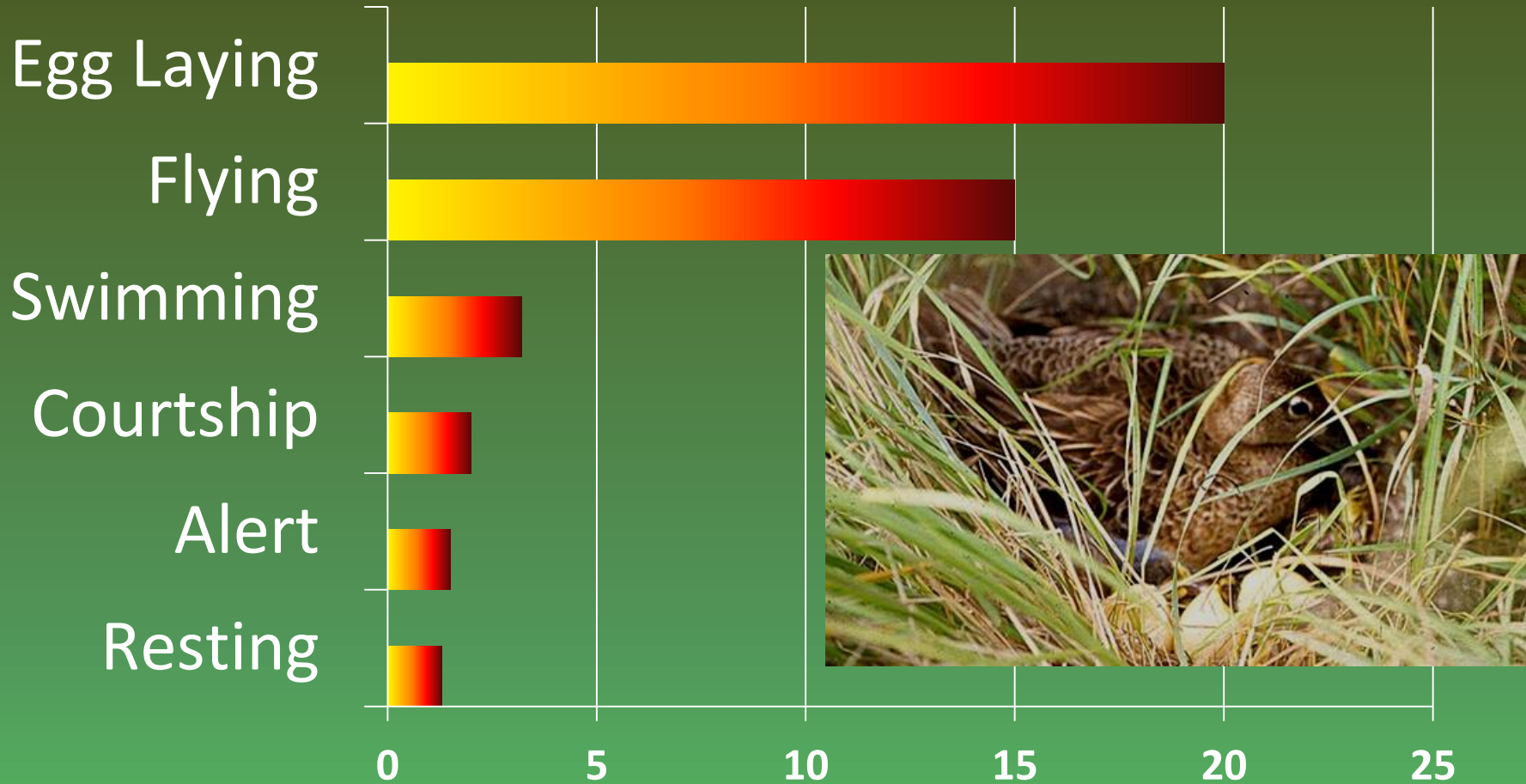


Behavior/Activity

- Roosting or Rest
- Social Interaction
- Foraging
- Changing Location



Energy Cost X Basic Metabolic Rate



Recovery after 8 hr flight

Good Habitat

No Disturbance

3 Days

With Disturbance

5 Days

480 kcal/day

Poor Habitat

No Disturbance

5 Days

With Disturbance

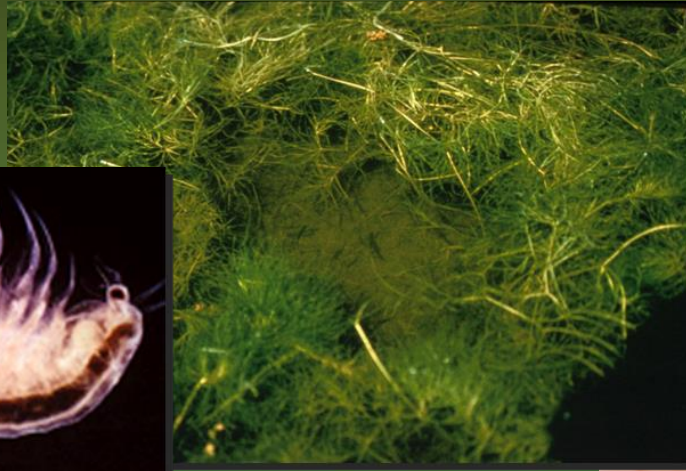
8 Days

390 kcal/day



Gary Moss
Pelican Lake 1970s

It is all about food

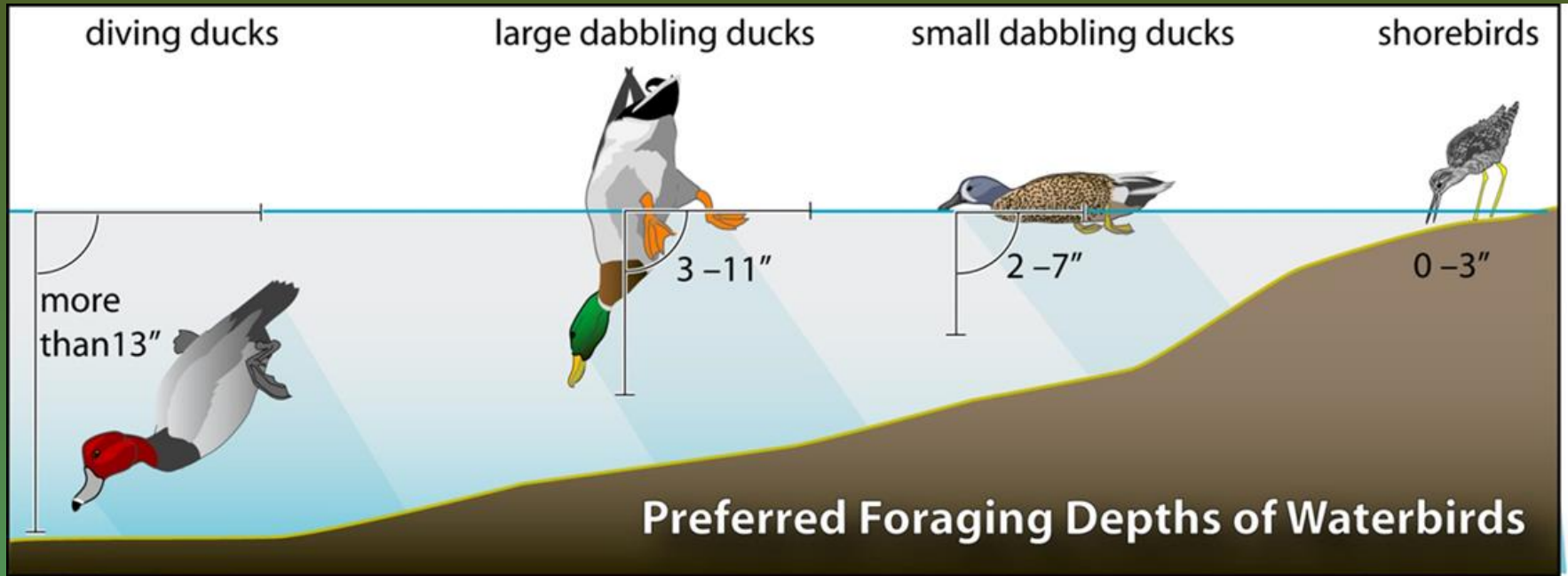


What's in it for ducks

	Annual Seeds	Inverts	Acorns	Row Crops
Protein	+	+	+	+
Lipid	+	+	+	+
Minerals	+	+	+	+
Vitamins	+	+	+	+

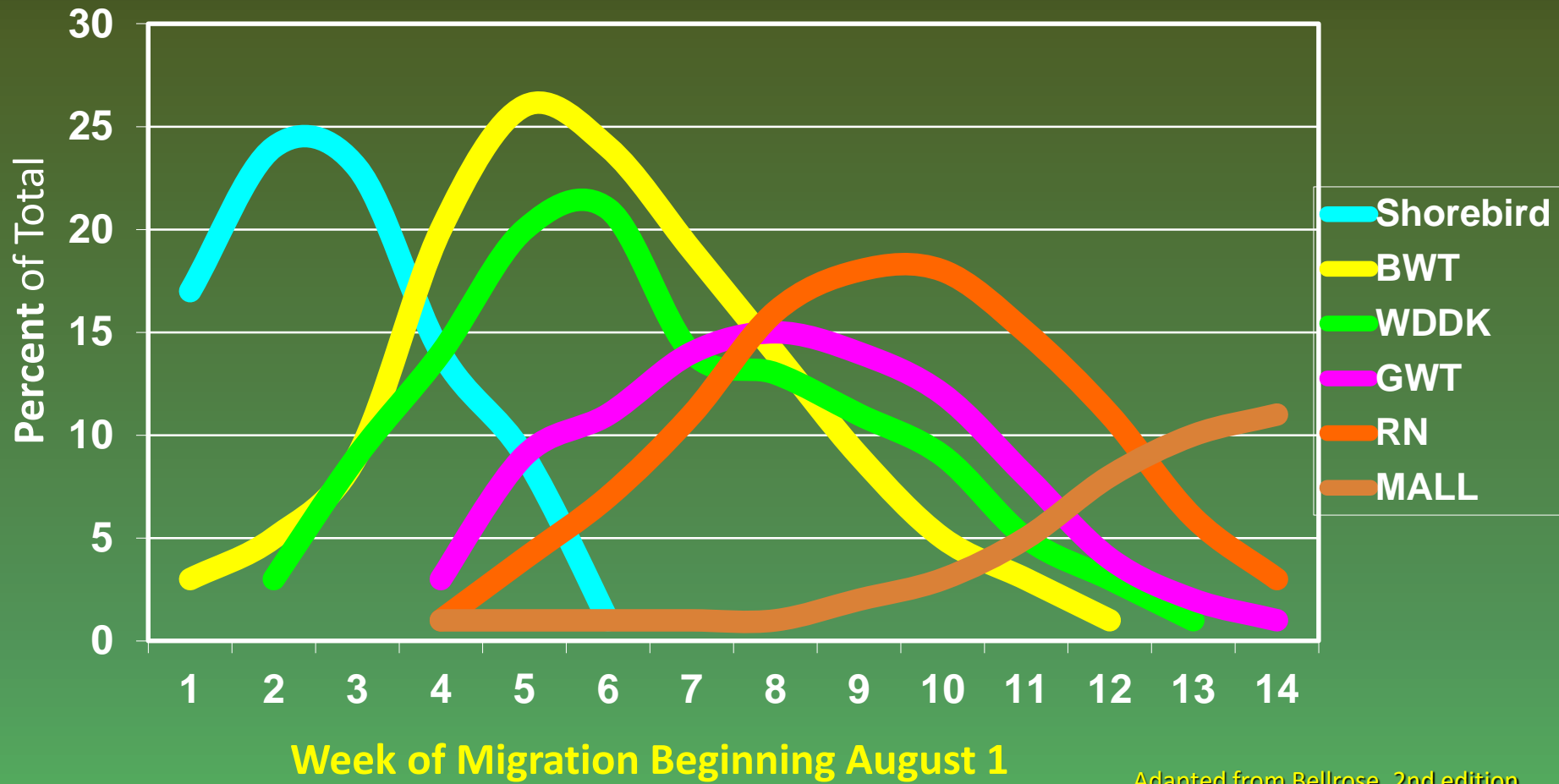


Access to Food Resources



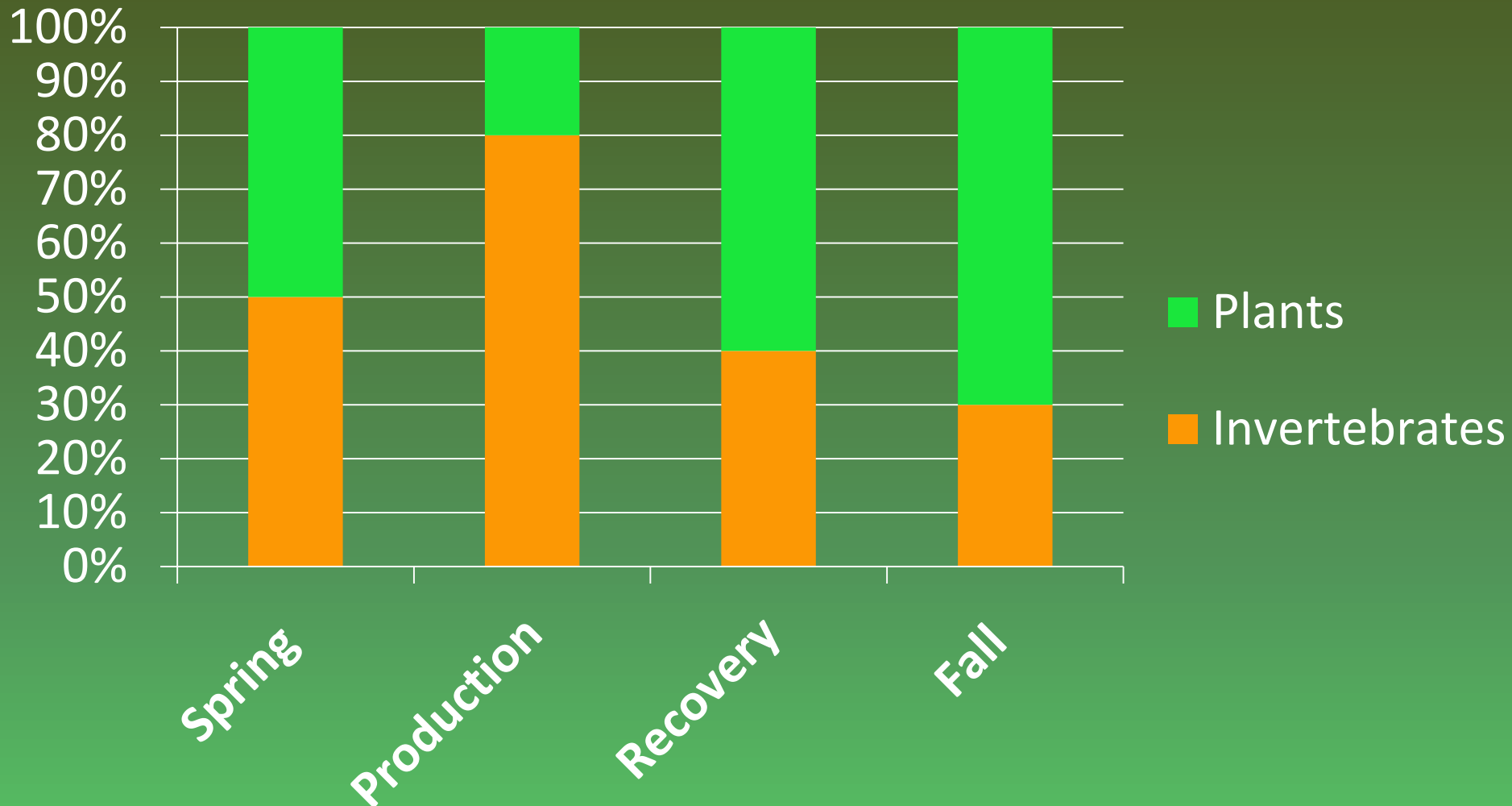
Fredrickson, L.H., & Dugger, B.D. 1993. Management of Wetlands at high altitudes in the Southwest. U.S. Department of Agriculture, Forest Service, Southwest Region, Washington, D.C.

Fall Migration Upper Mississippi Region

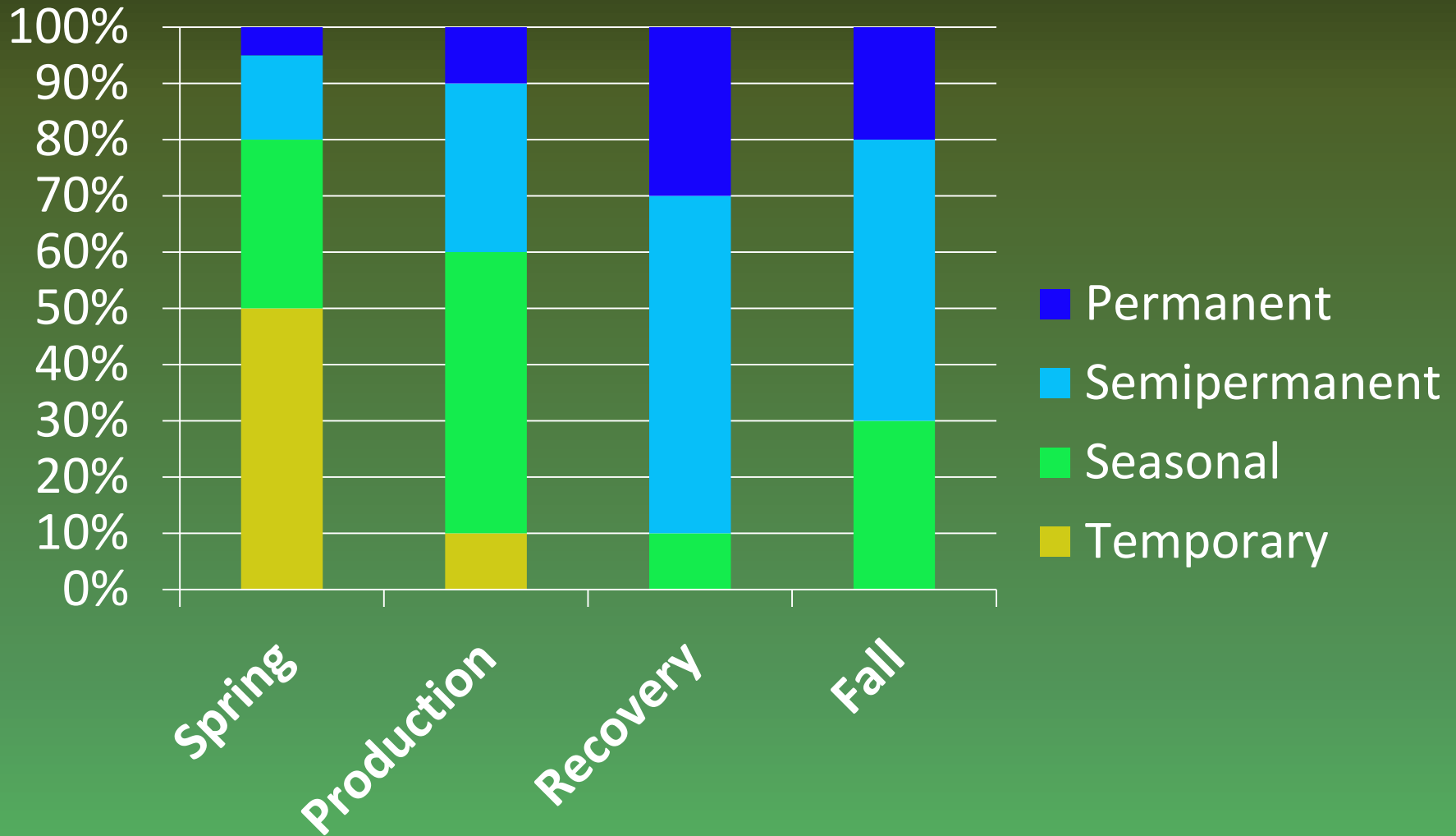


Adapted from Bellrose, 2nd edition

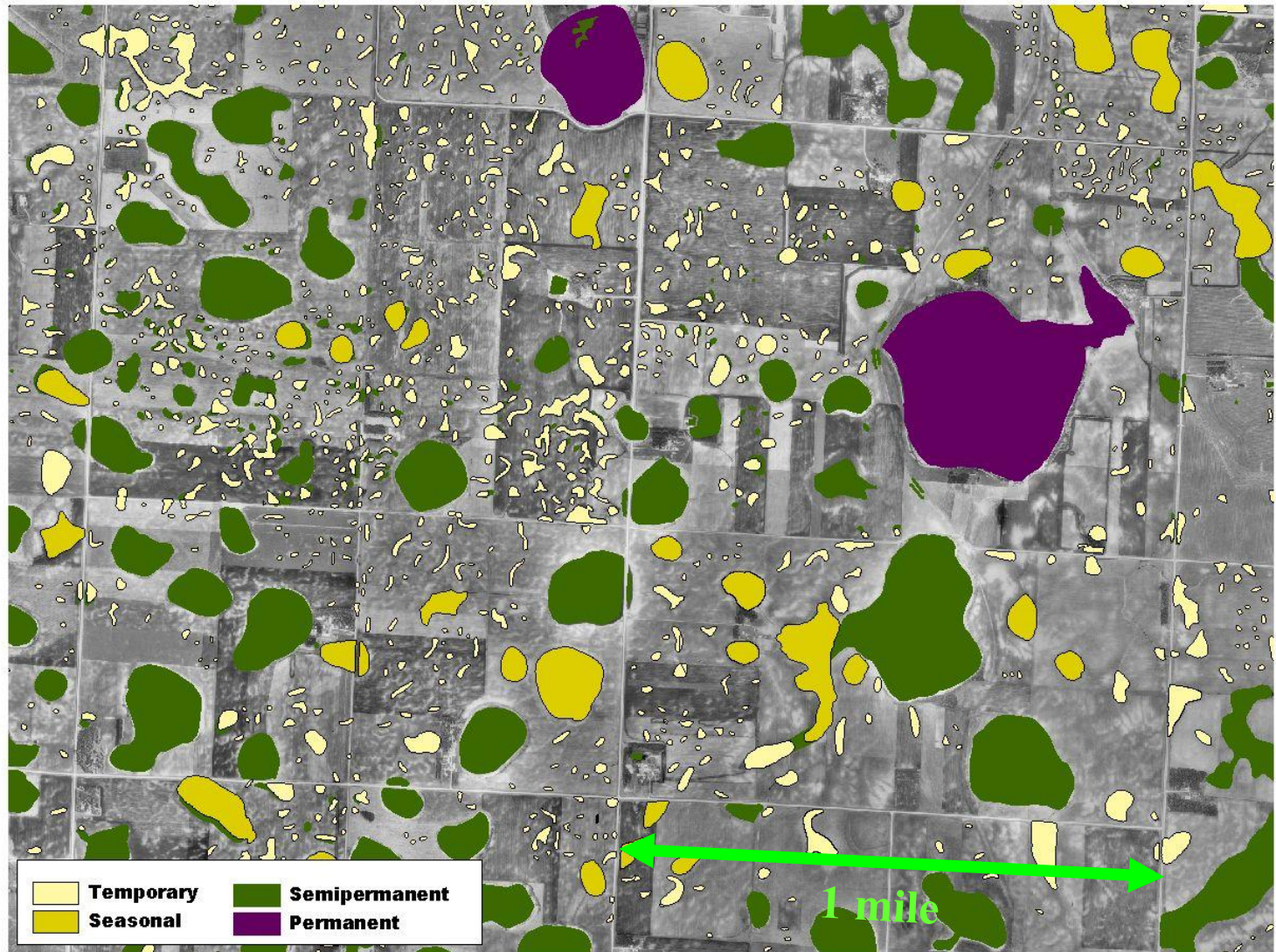
Duck Food Calendar



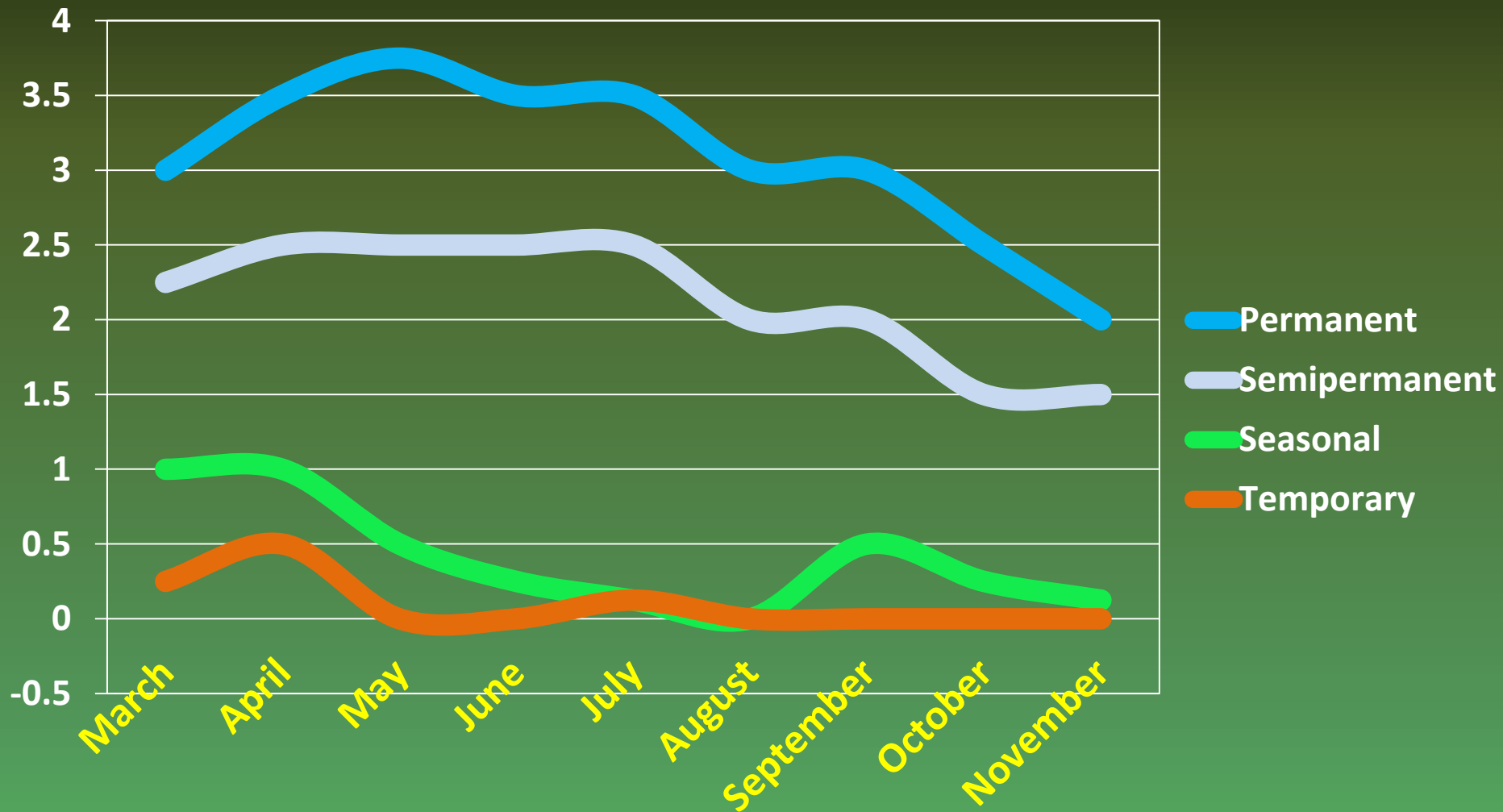
Wetland Use Calendar



Wetland Complex



Natural Wetland Examples



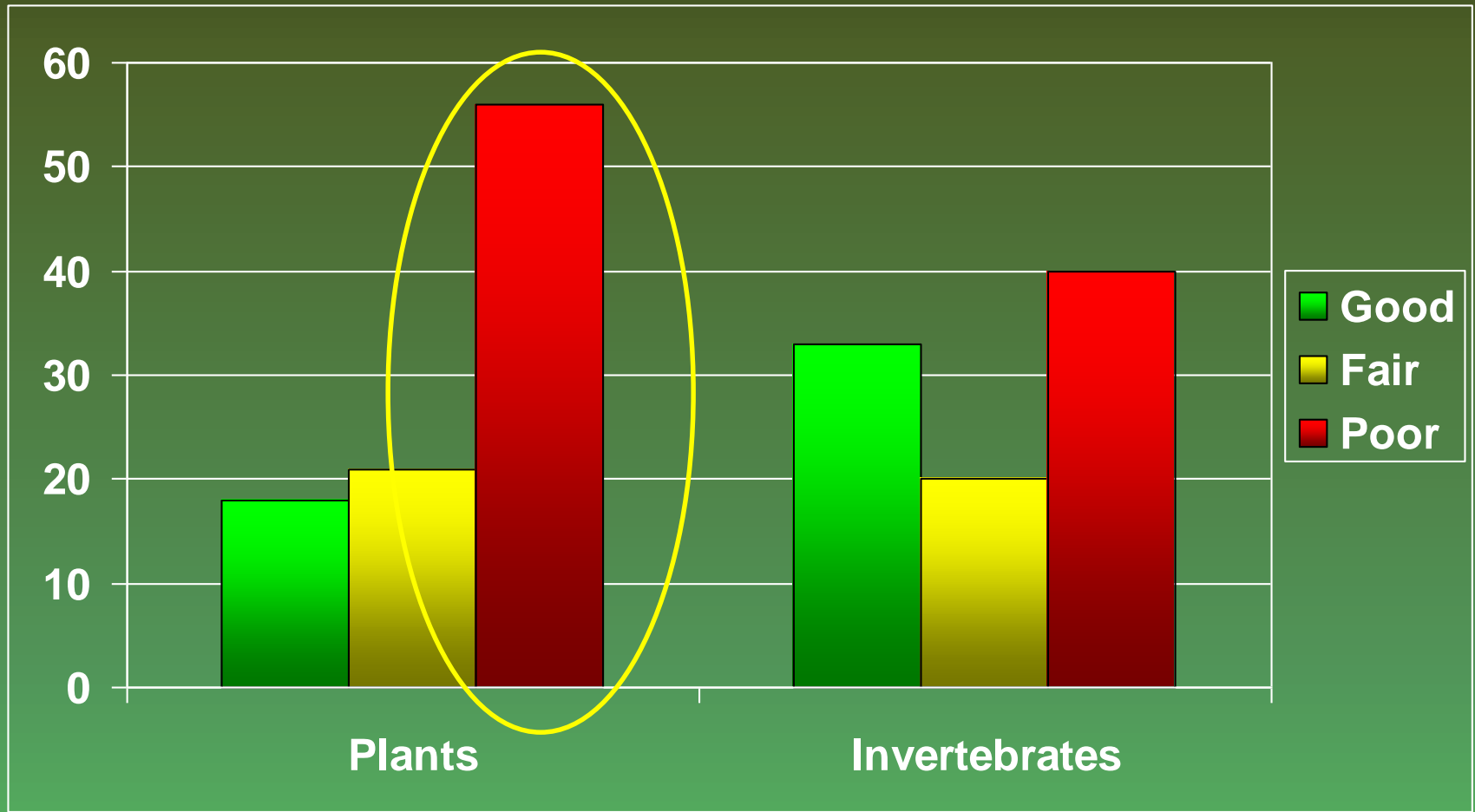
Cattail Problem?

Loss of Shallow Water



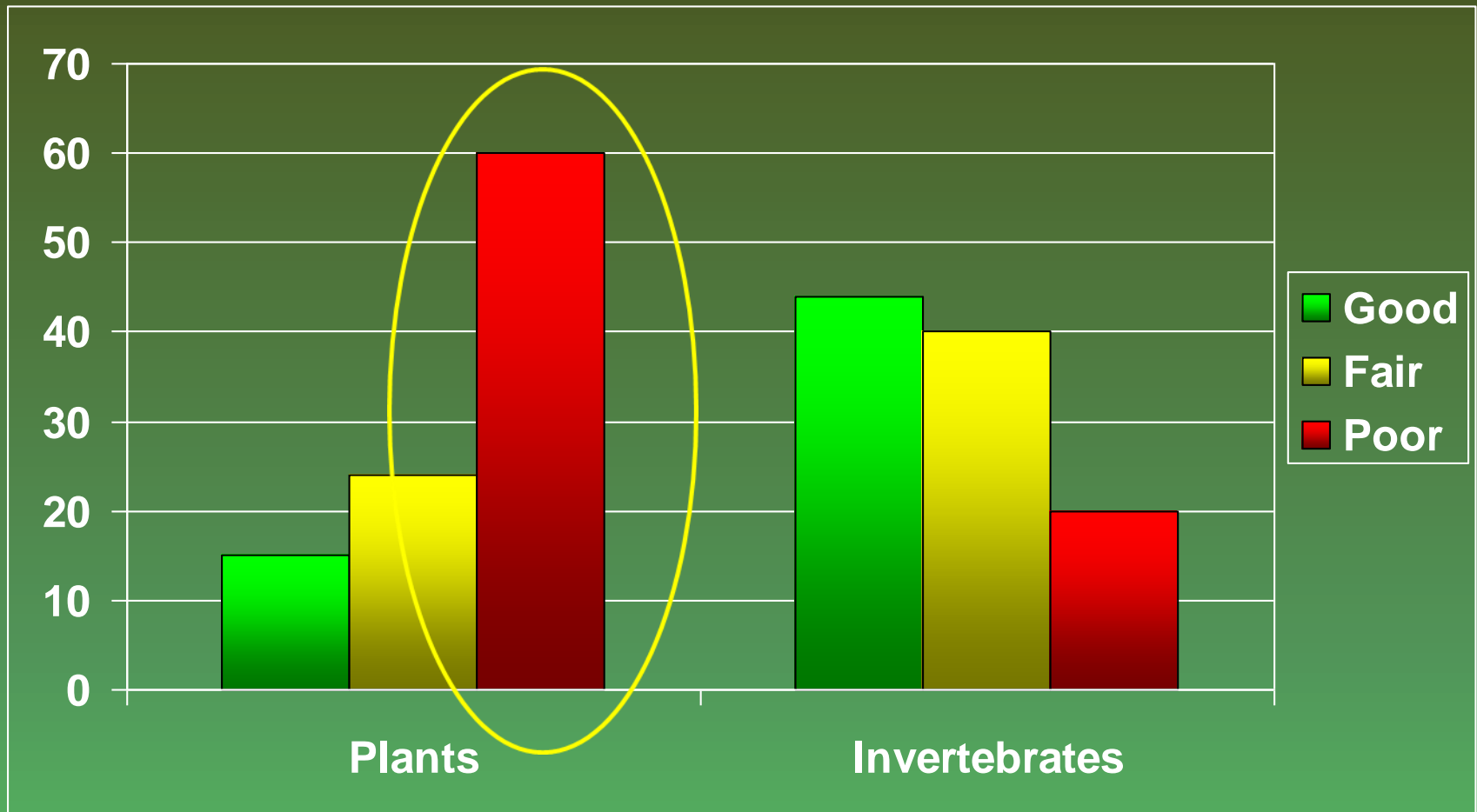
Loss of Diversity

Prairie Wetland Quality



Adapted from MPCA

Transition Wetland Quality



Adapted from MPCA

Hybrid Cattail Rooting



Early Establishment



Later Successional Stage

Mature Cattail Root Mass



Mowing Eldorado WMA

- Late season cutting of rank vegetation
- Particularly important for temporary and seasonal wetlands
- Annual management



Grazing

Lac qui Parle WMA

- Spring/Summer grazing of rank vegetation
- Important tool for temporary and seasonal wetlands
- Annual to periodic treatment



Herbicide Spring Creek WMA

0.35 acre basin



Prescribed Burning

- Some success with late summer treatment
- Winter treatment can remove dead stems
- Spring treatment tends to be incidental
- Smoke issues and timing has discouraged use



Cattail Avoidance with Sediment Removal

- Recreate micro-topography
- Remove nutrient enriched topsoil



Best suited for
Temporary &
Seasonal basins

Spring Creek WMA

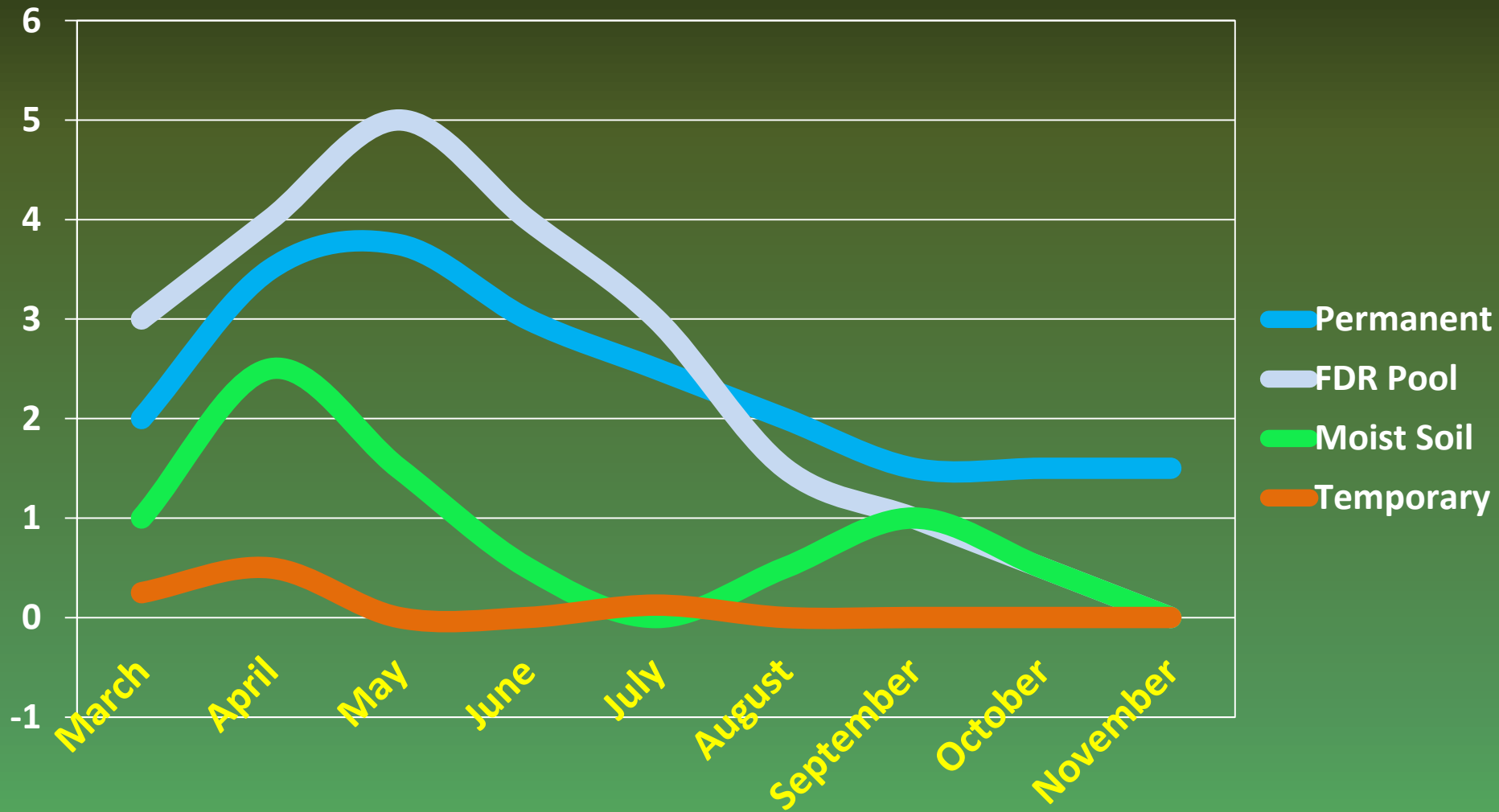


Cattail Avoidance During Drawdowns

- Seed germination does best in moist soil to 1”
- Germination and growth best in warm temps
- Energy transferred to roots after flowering
- FIT (frequency, intensity, timing) the drawdown strategy to desired outcomes



General Management Strategies



- Change water levels slowly – 1 inch a day or less
- Start fall drawdowns in late summer to avoid collateral mortality to herps
- Manage for early successional stage rather than long-lived stands

