

Item # 66: Trend of Reed Canary Grass

Purpose: Reed canary grass within water howellia occupied ponds and u-ponds was monitored to detect changes in the distribution of the invasive species in the Swan Valley water howellia metapopulation. Reed canarygrass is an invasive grass species that has been known to displace native vegetation in wetland and semi-wetland habitats.

Methods: Presence/absence data was recorded at all monitored water howellia occupied and u-ponds (Table 66-1) using the same methods as described for water howellia ponds in the previous section. Relative abundance rating of zero, low, moderate or high (Table 66-1) was assigned for each 0.25-acre section. Note that the relative abundance rating classifications for reed canary grass are different from those for water howellia relative abundance in Item 64, Table 64-3.

Table 66-1. Abundance Classes for Reed Canarygrass in 0.25-acre Pond Sections

Abundance Classes	Percent Canopy Cover of Reed Canarygrass
0	No plants found
L - Low	0-25%
M - Moderate	25%-50%
H - High	>50%

Results: Reed canarygrass presence and abundance increased slightly from 1998 to 2007 in both occupied water howellia ponds and u-ponds (Figures 1 and 2). Frequency increased from 1998 to 1999; however, in 2000 to 2003 the frequency decreased and leveled off to an average of 30% of ponds with reed canarygrass present. The increase of frequency in 1999 may be a result of sampling error (incorrect identification of plants). With a long-lived perennial grass, this type of annual fluctuation would not be expected; but rather a steady increase or decrease over time. Since 2003, reed canarygrass presence has shown an increasing trend. Reed canarygrass is currently known in 27 of the 64 (42%) occupied ponds and 23 of the 48 (48%) currently monitored u-ponds (9 of 23 u-ponds even years and 14 of 25 odd years).

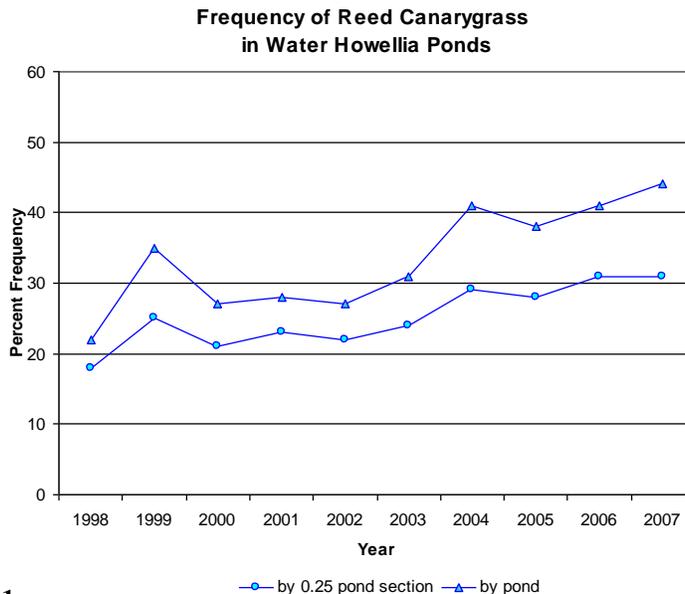


Figure 1

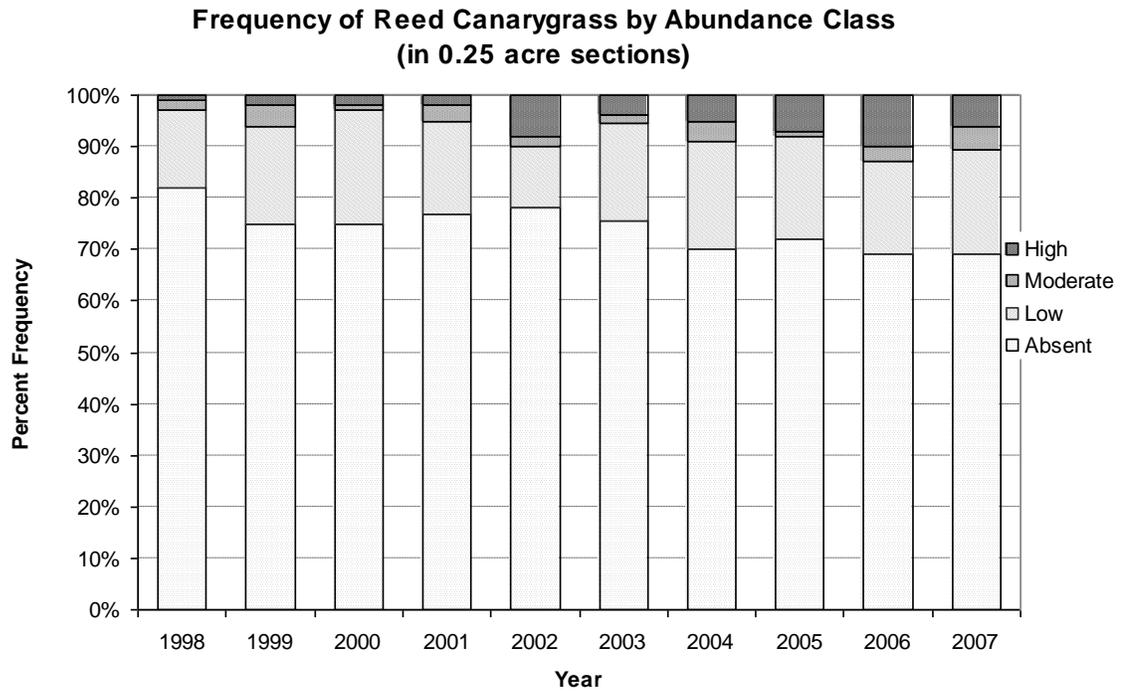


Figure 2: Frequency of Reed Canarygrass by Abundance Class

Evaluation: Preliminary data indicate an upward trend in frequency and abundance of reed canarygrass. Sampling error has been corrected by including known locations of reed canarygrass on field data sheets to assist surveys in detecting old locations. At this time, no additional trend data have been analyzed with respect to the effects of reed canarygrass presence on distribution and abundance of water howellia. The increase in frequency of reed canarygrass within ponds may be a concern for long-term abundance trend for water howellia; however at this time, the 10-year monitoring data indicates no downward trend for water howellia abundance or distribution.

Recommendations: Continued monitoring of reed canarygrass within occupied and u-ponds is recommended to detect possible effects to water howellia distribution and abundance.