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## Estimates of drainage needs at the Kissimmee Prairie Sanctuary - 1998-05-07

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## Estimates of drainage needs at the Kissimmee Prairie Sanctuary

Lennart Lindahl, P.E., did an assessment of the Sanctuary's drainage problem and made a proposal to solve it (attached letter and oral presentation to landowners at a SFWMD meeting). His findings were:

- 11.5 square miles of Fish Slough are impounded on Audubon and David Durando's Ranch (to our east).
- Appropriate drainage capacity for the Audubon property would be about 10.7 cubic feet per second (cfs) water/square-mile leaving our property.
- The impounded Fish Slough area can be managed as two sub-basins. The western sub-basin is mostly on Audubon's property and about 3 miles in size. The eastern sub-basin is about 8.5 square miles and is on Audubon's and Durando's property. (Paul's note: The sub-basins are connected by two open sloughs of 180 and 1200 feet wide, respectively, at low water, therefore cannot be managed completely separately).
- Audubon could install two 30" culverts that will move about 32 cfs of water to meet the needs of the 3 square-mile western sub-basin
- Similar conveyance needs to be installed in the eastern sub-basin (Lindahl estimated two 48" culverts but has not written official "engineering documents"—they are working on those at this time).

These numbers can be used to estimate whether various proposals for solving the impounding problem are likely to be sufficient. Lindahl notes that these are best estimates and may be modified once we gain operational experience with any culverts that are placed.



5-7-98

Using Lindahl's numbers, we  
need about 123 cfs total  
to protect the basin