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Date: 4/23/01 2:39PM
Subject: Mitigation Planning in Auburn

** High Priority **

Hi

I've put together and attached a few photos of several wetland sites that served as a "model" for the shrub and emergent communities planned for the Auburn mitigation site. I have revisited these areas this spring, and feel we are generally on target with the hydrology, given our ability to hold the water level between 41 and 42 feet if needed.

Part of the rationale for the planting elevations was to have shrub communities that would out-compete (due to wetness) blackberry, and emergent communities that were too wet for vigorous growth of reed canary grass.

I'm going through my notes of our past several meeting, and will provide (probably tomorrow afternoon) a brief list of clarifications for some of the design issues that we discussed and I was unsure of the answer.

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Wetland
pics
4-23-01

ECY00022075

Exhibit-2209

AR 034806

Seattle-Tacoma International Airport
Master Plan Update Improvements

EXAMPLES OF SHRUB AND EMERGENT PLANT COMMUNITIES SIMILAR TO
THOSE PLANNED FOR THE AUBURN MITIGATION SITE

April 23, 2001

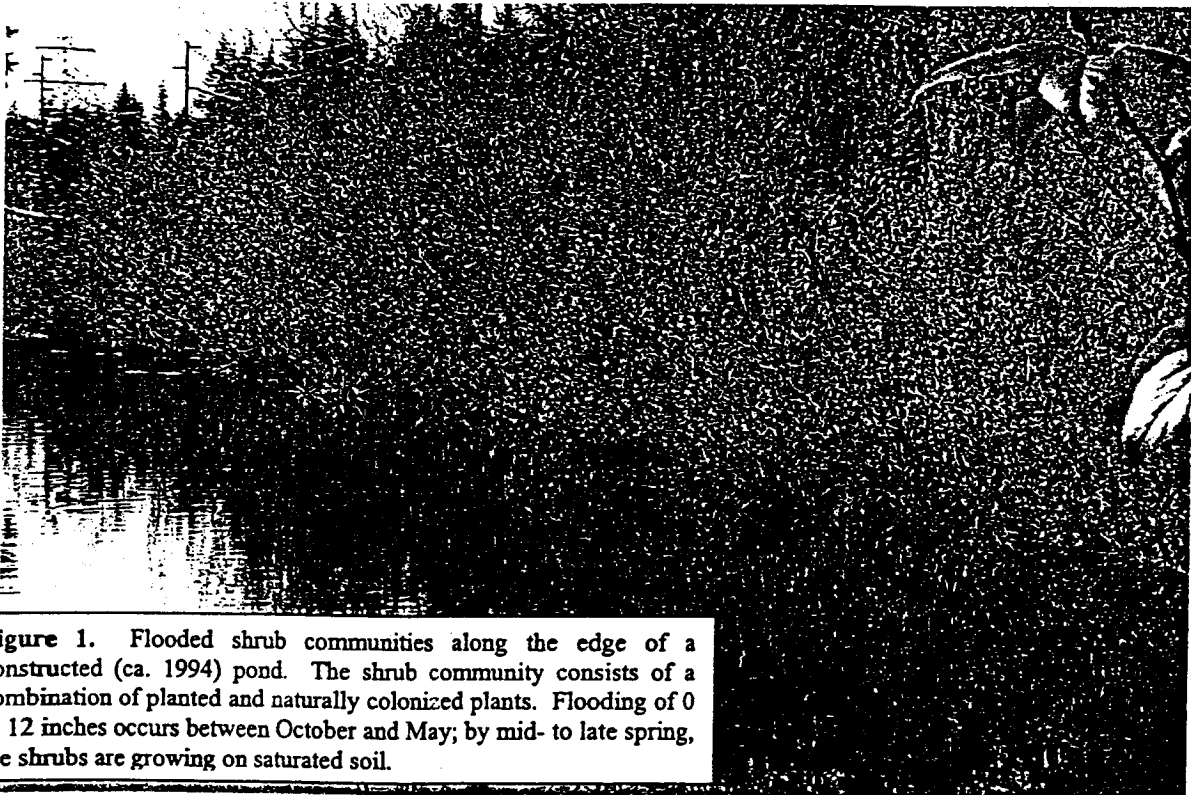


Figure 1. Flooded shrub communities along the edge of a constructed (ca. 1994) pond. The shrub community consists of a combination of planted and naturally colonized plants. Flooding of 0 to 12 inches occurs between October and May; by mid- to late spring, the shrubs are growing on saturated soil.

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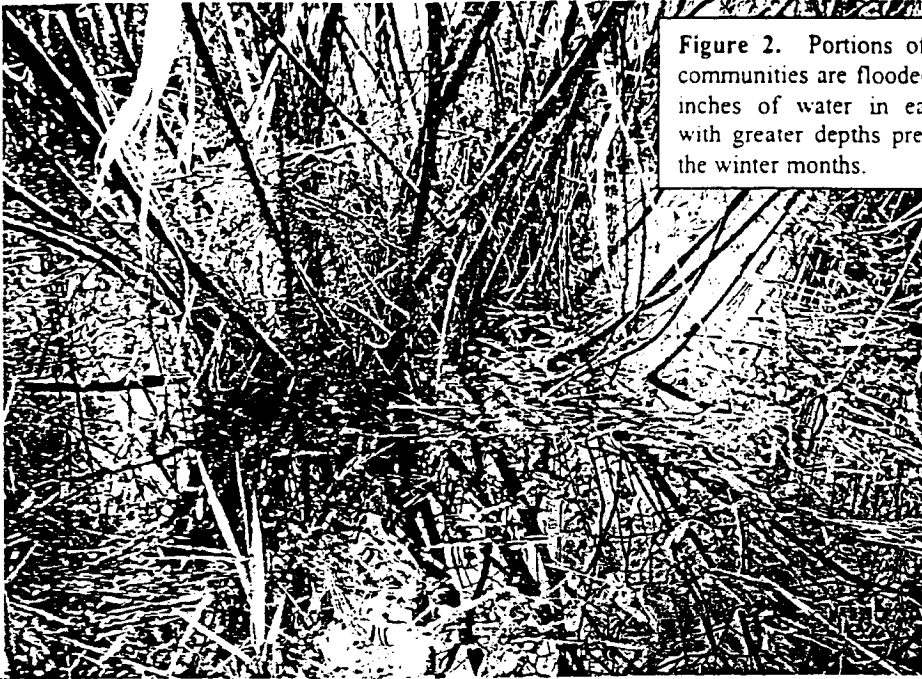


Figure 2. Portions of the shrub communities are flooded with 0-15 inches of water in early spring, with greater depths present during the winter months.



Figure 3. The shrub communities provide forage habitat for waterfowl. Waterward of the shrubs, great blue heron feed in standing water.

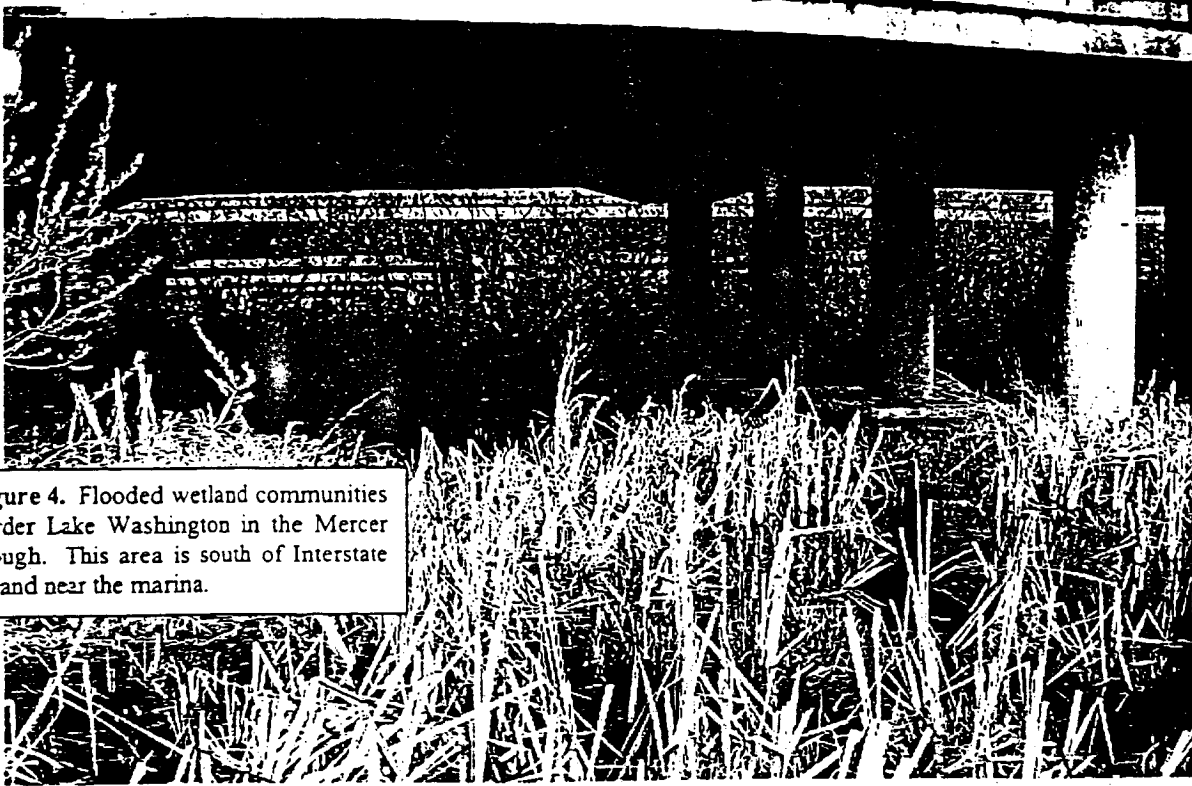


Figure 4. Flooded wetland communities border Lake Washington in the Mercer Slough. This area is south of Interstate 5 and near the marina.

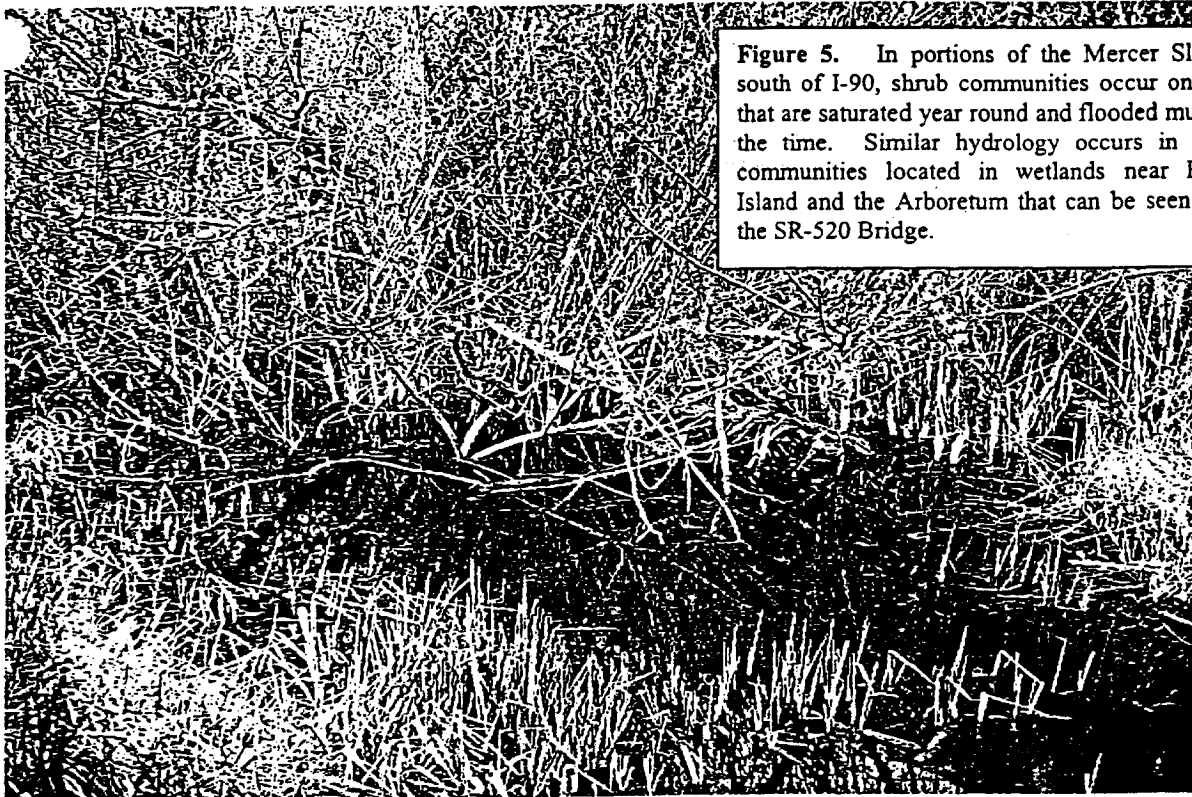


Figure 5. In portions of the Mercer Slough, south of I-90, shrub communities occur on soils that are saturated year round and flooded much of the time. Similar hydrology occurs in shrub communities located in wetlands near Foster Island and the Arboretum that can be seen from the SR-520 Bridge.

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6. A flooded shrub community located in a natural oxbow of the Snoqualmie River (Carnation Farm Road, near Carnation). Shrub communities shown here typically remain flooded through early May.

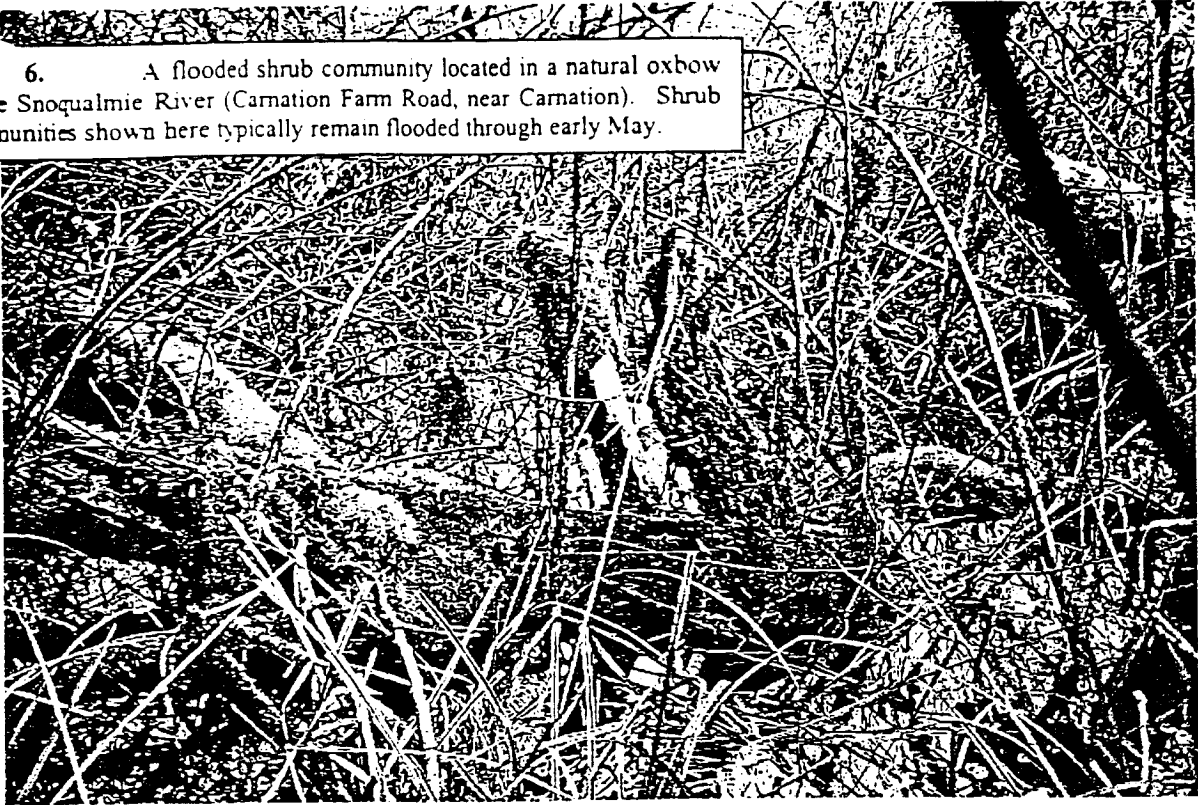


Figure 7. Willow shrubs colonize a gravel bar in the Green River, opposite the Port's wetland mitigation site in Auburn. This site remains flooded through much of May during normal runoff periods.

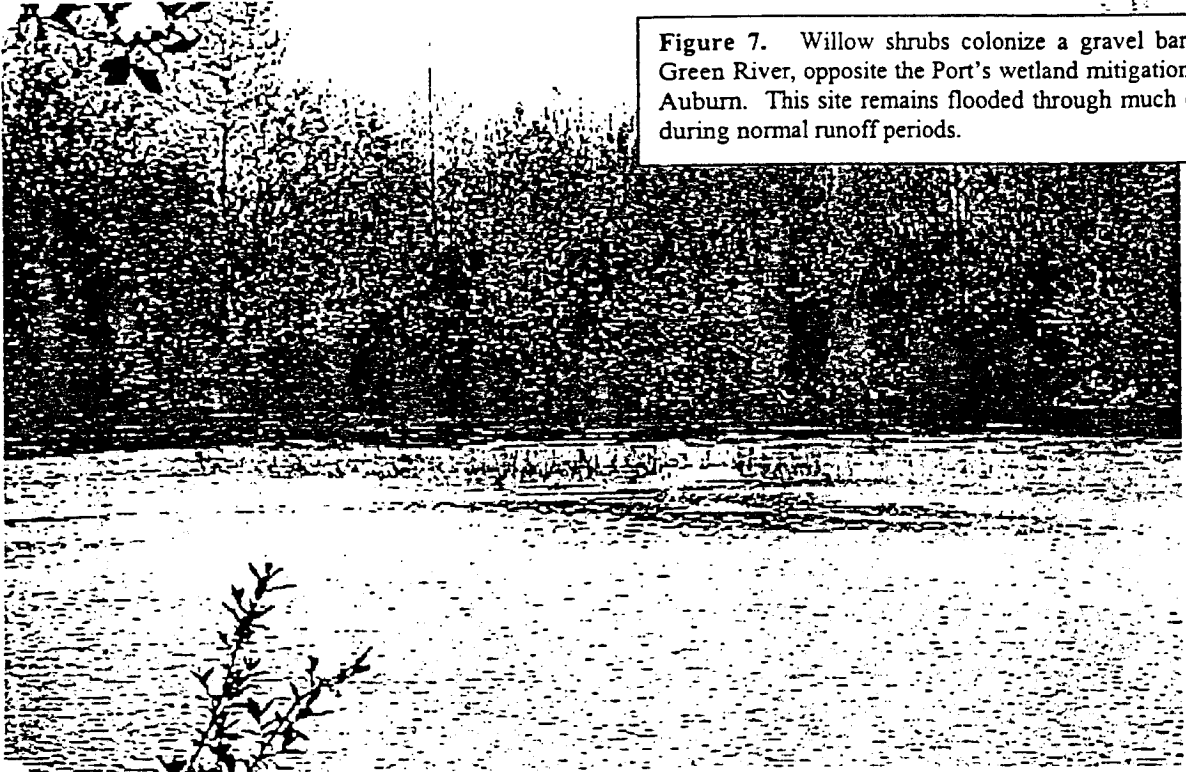


Figure 8. High quality emergent wetland plant communities occur in a constructed wetland near Auburn. The area is dominated by water-reed, spike rush, and sedges.

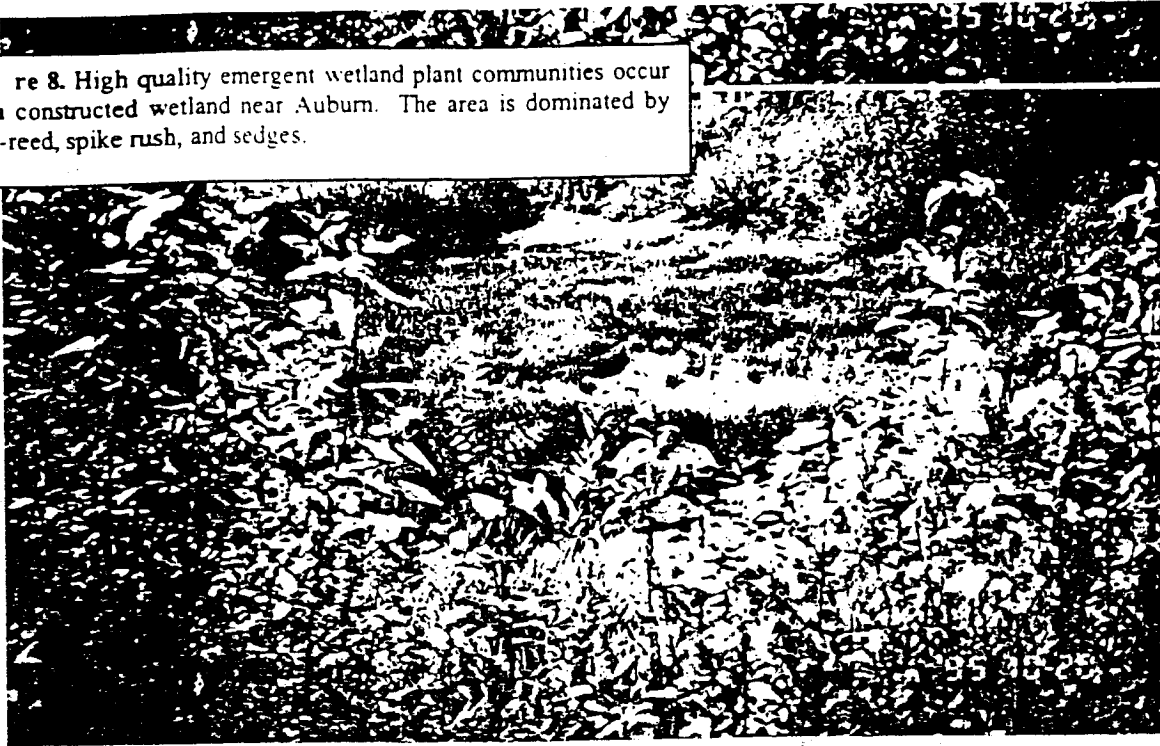
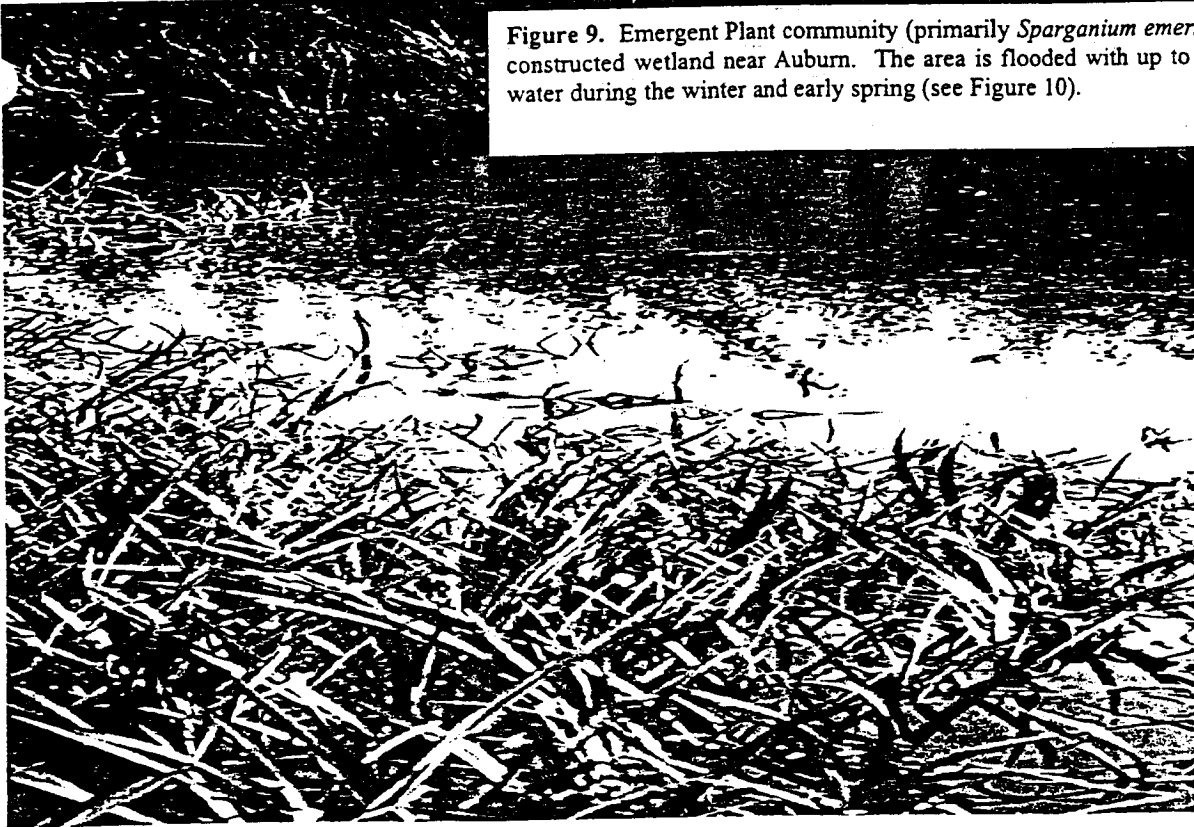
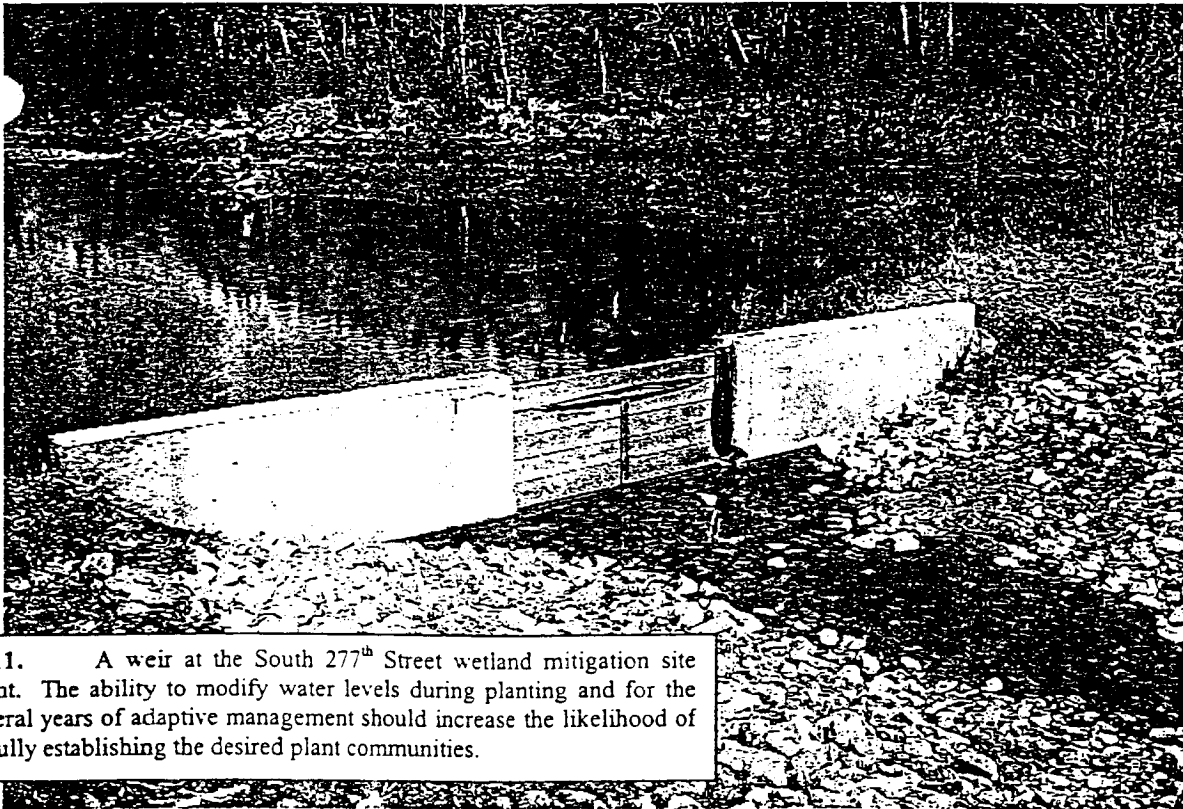


Figure 9. Emergent Plant community (primarily *Sparganium emersum*) in a constructed wetland near Auburn. The area is flooded with up to 4 feet of water during the winter and early spring (see Figure 10).



10. Standing water in the emergent wetland communities early fall 1996 was about 3 feet deep. Water depths are usually 2 to 4 feet deep during the November to May period.



11. A weir at the South 277th Street wetland mitigation site. The ability to modify water levels during planting and for the several years of adaptive management should increase the likelihood of fully establishing the desired plant communities.