Great Salt Lake Wetlands

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IMPLEMENTATION AND DEVELOPMENT OF A GREAT SALT LAKE WETLAND ASSESSMENT FRAMEWORK

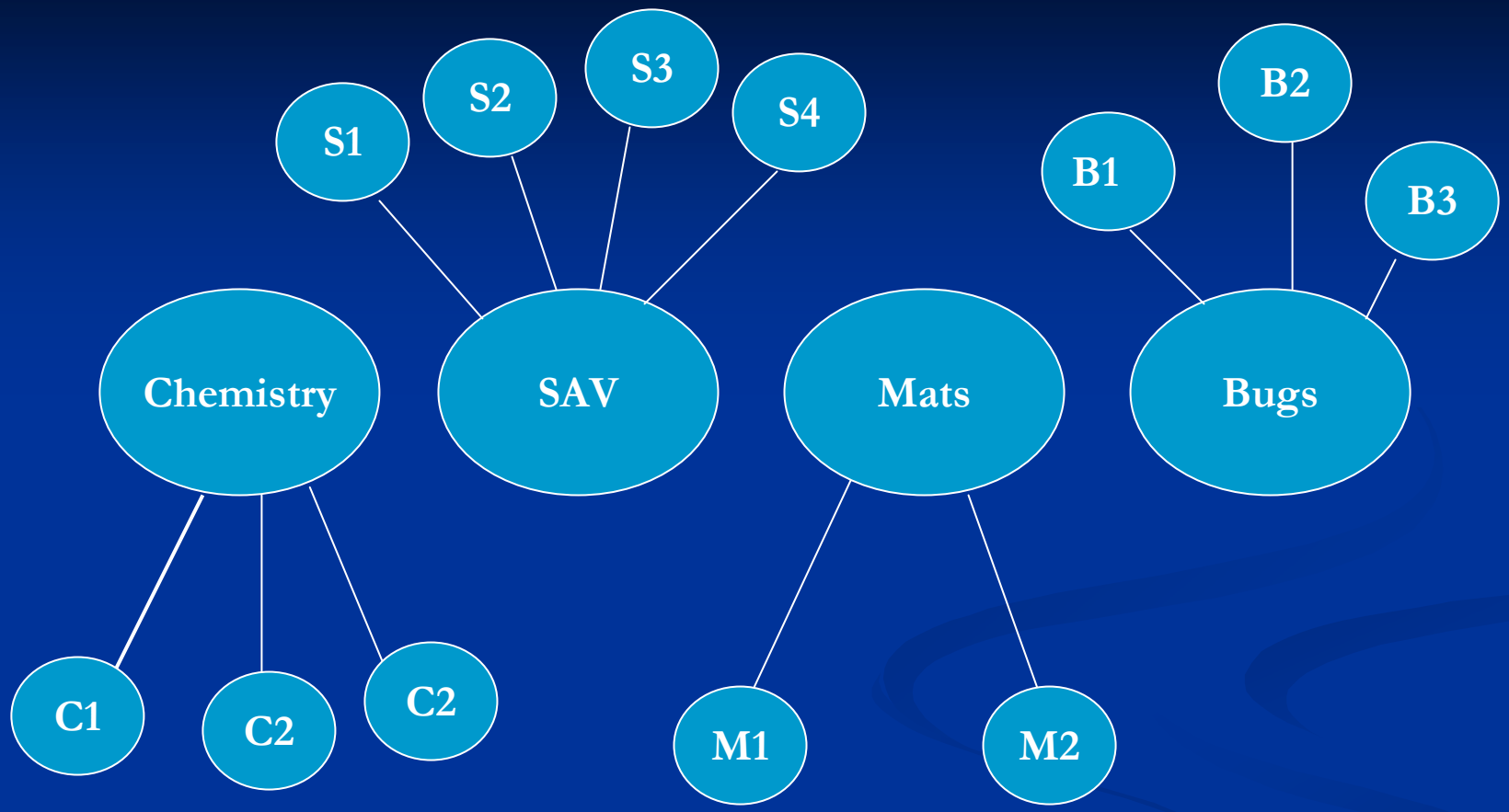
Objectives

1. Report the ecological health
2. Expand to include all GSL wetland classes
3. Produce environmental information to form a wetland management plan
4. Build information to characterize how GSL wetlands "work" and how they respond to disturbance and adaptive management practices.

Tasks

- Present the Preliminary Assessment Framework for GSL Impounded Wetlands in 2010 Utah WQ Integrated Report
- Apply for the EPA Wetland Protection Development Grant.
- Test multi-metric indices developed for impounded class wetlands.
  - Year-to-year variation
  - Hydrology
  - Testing with independently collected data, preferably at new sites
  - Evaluate the potential of adding additional lines of evidence
- Prepare a wetland landscape profile of GSL wetlands (Note collaboration with Utah Geological Survey).
  - Cooperative agreement with DNR with funding from EPA
  - Maps will be generated to identify and delineate wetland classes

MMI for GSL Impounded Wetlands



Utah's initial assessment framework was developed to be defensible (ecologically relevant) and practical (data were available).

***Additional lines of evidence will be added to future iterations*.**

Wetland assessments that focus on biotic communities provide direct information about the ecological condition of wetlands

TABLE 4-10
Summary of Multiple Lines of Evidence Developed as MMI for Water Chemistry, Vegetation (SAV and Surface Mats), and Benthic Macroinvertebrates for the Impounded Wetlands of Great Salt Lake

Site	Lines of Evidence				Average of All MMIs
	Water Chemistry MMI	SAV MMI	Surface Mat MMI	Benthic Macro-invert. MMI	
Farmington Wetlands Ambassador W 1	58	47	40	82	57
Farmington Wetlands Ambassador 100	86	60	100	100	87
Farmington Wetlands Ambassador W 2	91	87	100	96	93
Farmington Wetlands Ambassador W 5	88	100	80	89	89
Farmington Wetlands South B Pond	83	100	100	.	94
Farmington Wetlands West A Pond	61	33	100	.	65
IMPC Conservation Easement	68	100	100	.	89
Farmington Wetlands FBWMA Unit 2 Outfall	74	87	40	78	69
Farmington Wetlands FBWMA Unit 1 Outfall	98	33	80	87	74
GSL Wetlands Public Shooting Ground Widgeon Lake 01 Outfall	84	100	80	91	89
GSL Wetlands Public Shooting Ground Pintail Lake Outfall	100	100	100	95	99
Bear River NWR Pond 4C Outfall	92	100	100	.	97
New State Duck Club Middle Unit	84	100	80	68	83
GSL Wetlands New State Duck Club Pond 47	45	33	40	79	49
GSL Wetlands New State Duck Club Pond 20	85	100	80	94	90
GSL Wetlands New State Duck Club Unit 5-6	60	87	60	82	72

NOTES:

COLOR CODES (On a scale of 0–100): Blue indicates wetland sites with relatively good MMI scores, indicating good condition (80 and above); yellow indicates wetland sites with average MMI scores, indicating average condition (70–79 and above); red indicated wetlands sites with poor MMI scores, indicating poor condition (<70).

Tasks continued

- Design a survey to report the ecological condition of GSL Impounded wetlands (50 randomly selected sites)
  - Conducted in tandem with the 2011 EPA National Wetland Condition Assessment.
  - Results also will be used to complete assessment protocols of GSL impounded wetlands.
- Begin preliminary study on the feasibility of using constructed wetlands or other mitigation efforts
- Begin technical study to document variability in the response of impounded wetlands to nutrient loads, metals, and other pollutants.

Tasks continued

- Develop reference wetland network for GSL fringe class ("sheetflow") wetlands
- Begin to evaluate the potential ramifications of the Jordan River TMDL and its associated implementation schedule on the condition of impounded wetlands.
- Begin preparation of GSL Wetland and Water Quality Management Strategy

Great Salt Lake Wetlands Website

http://www.deq.utah.gov/Issues/gslwetlands/index.htm