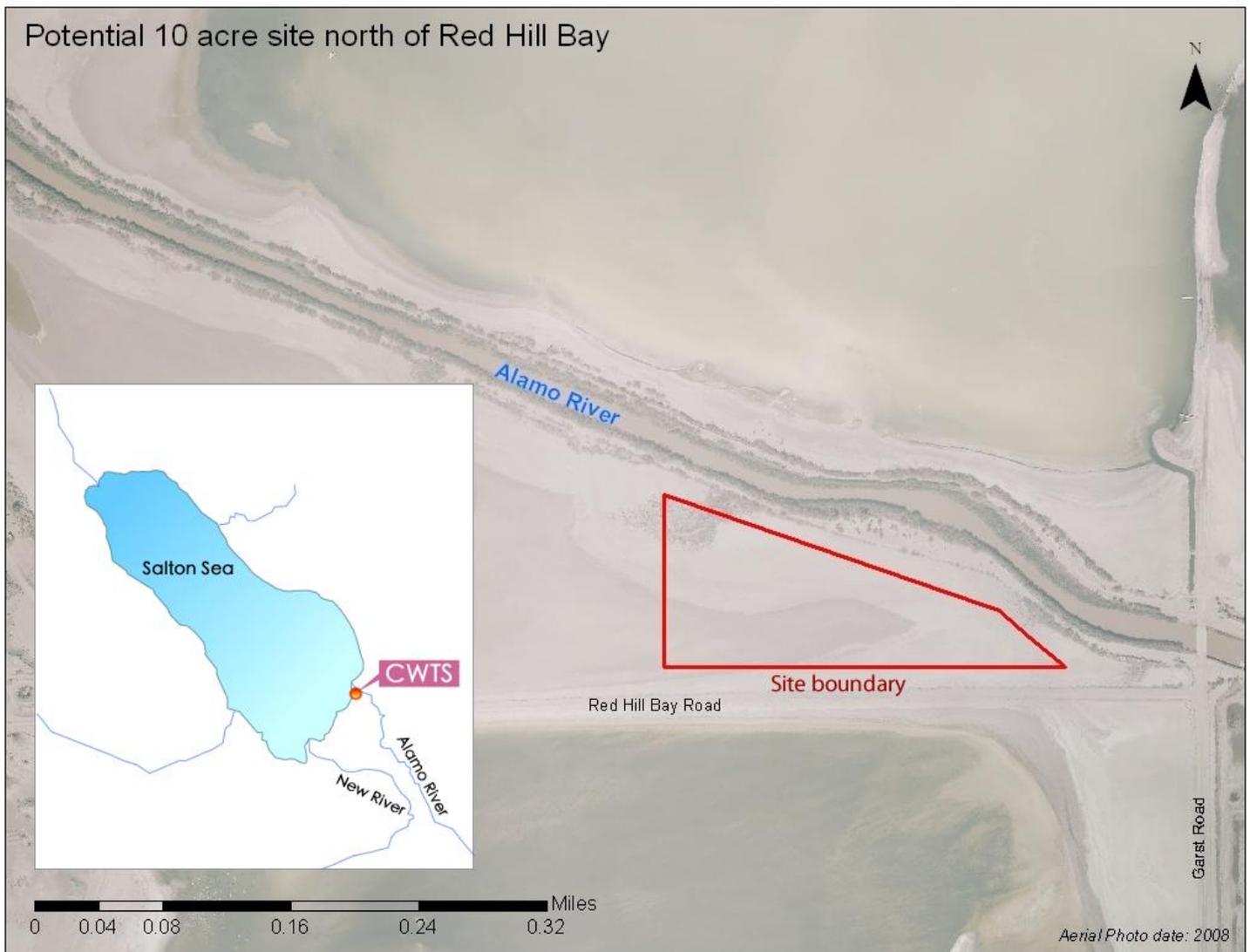
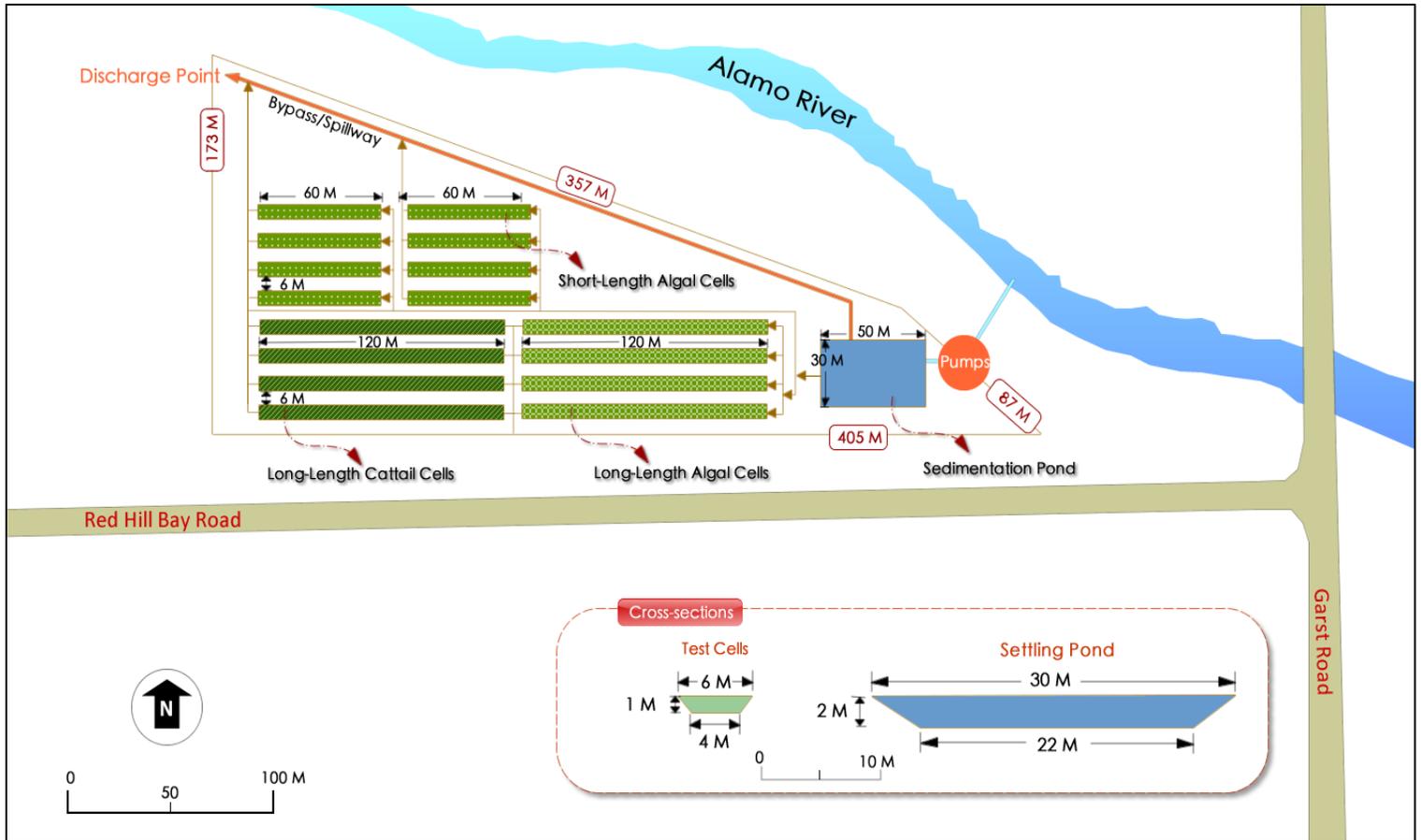


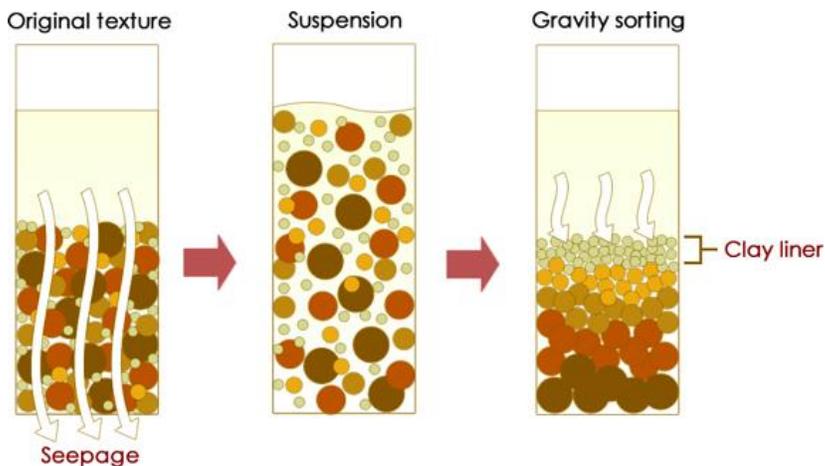
**Attachment 8. Site Maps, Design Figures and Tables**



**Figure 1. Proposed site for the constructed wetland treatment system (CWTS).** The location of the proposed CWTS is along the southern shore of the Salton Sea in Imperial County, California ( $33^{\circ}11'56.73''\text{N}$ ,  $115^{\circ}35'57.18''\text{W}$ ). IID has proposed a ~10-acre site near the mouth of the Alamo River for the construction of the pilot wetland. The area is located between the Alamo River and Red Hill Bay Road (outlined in a red)

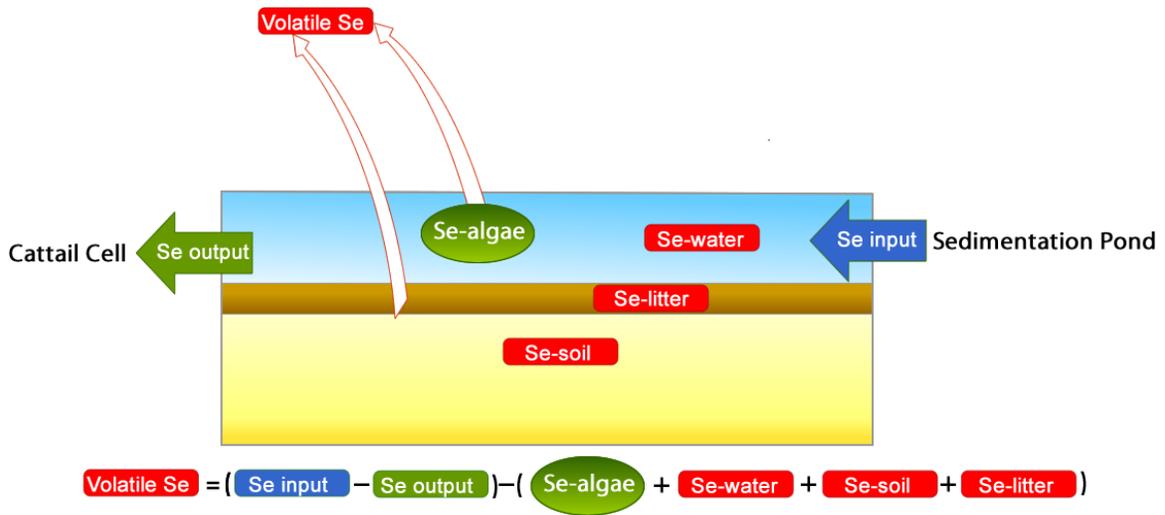


**Figure 2. CWTS design:** Includes sedimentation pond, eight short-length cells and eight long-length cells. Different algal species will be tested in eight short-length cells. One selected algal species will be grown in four eastern long-length cells while cattail will be planted in four western long-length cells.

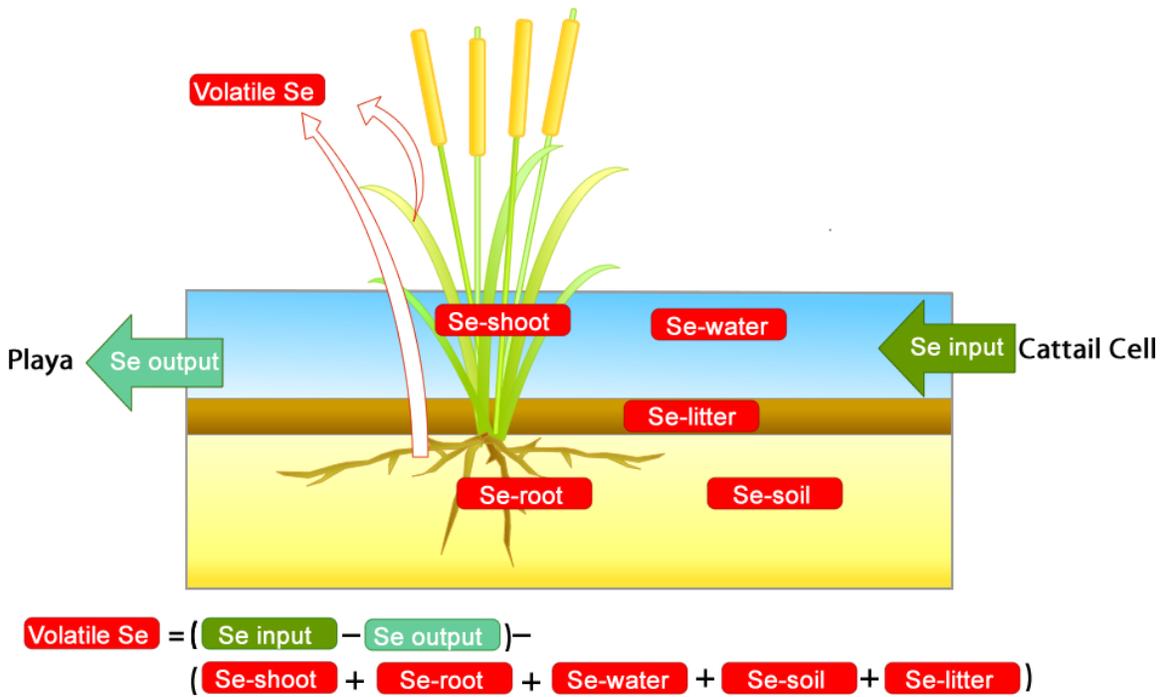


**Figure 3. Seepage prevention in CWTS cells.** A clay liner will form at the bottom of the cell, through repeated gravity sorting, to prevent seepage.

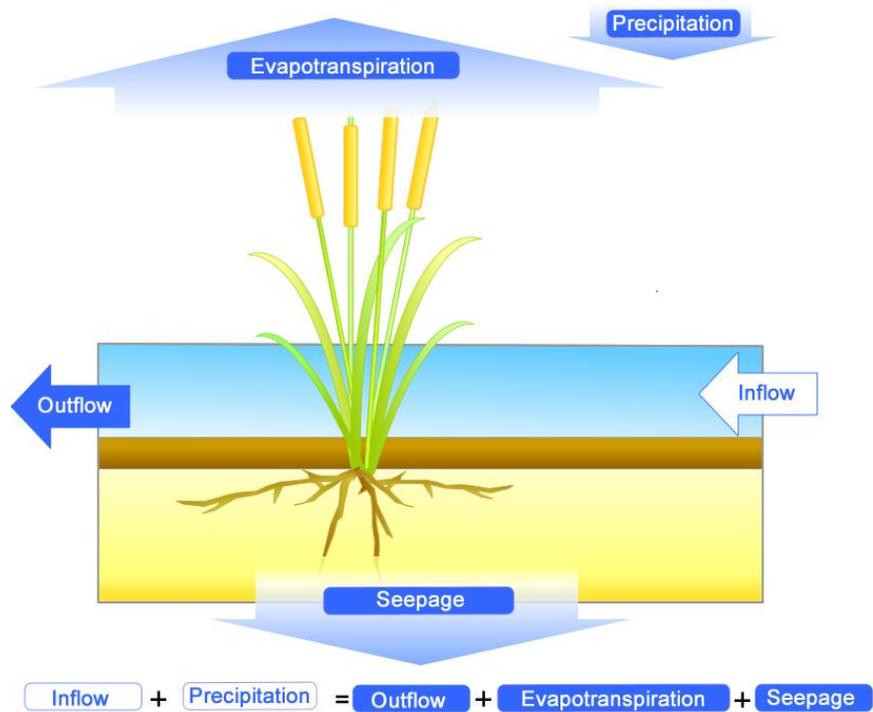
A)



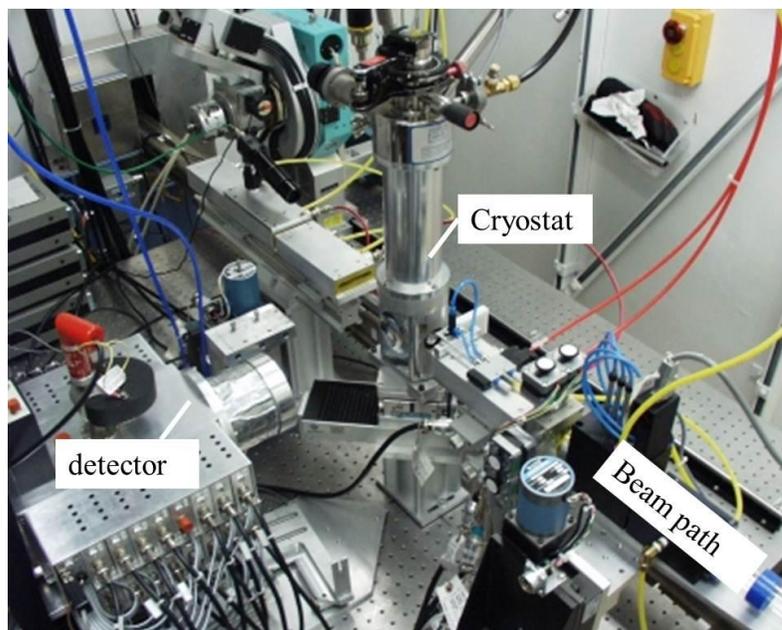
B)



**Figure 4. Se mass balance diagrams.** (A) Mass balance for Se in the algal cells; (B) Mass balance for Se in cattail cells



**Figure 5. Water budget.** The water budget is the difference between total water input and output. The input will include inflow (pumped river water), rainfall (and ground water) while the total water output includes outflow, seepage and evapotranspiration.



**Figure 6. Synchrotron XAS technology to study Se speciation.** The picture illustrates a typical XAS beamline setup used to identify Se species in environmental samples.

**Table 1. Design specifications for the CWTS.**

<b>Parameter</b>	<b>Sedimentation Pond</b>	<b>Short length cells</b>	<b>Long length cells</b>
Bank slope	1:2	1:1	1:1
Bottom slope	0-1:200	0-1:200	0-1:200
Depth (m)	2	1	1
Bottom width (m)	22	4	4
Top width (m)	30	6	6
Length (m)	50	60	120
Cell numbers	1	8	8
Cell area (m <sup>2</sup> )	1,500	360	720
Total Area (m <sup>2</sup> )	1,500	2,880	5,760
Total pumping rates (gallons/day)*	428,000		

\* based on the residence time of 2 days.

**Table 2. Sampling and Analysis. CWTS sample coding system\***

<b>Code</b>	<b>Description</b>	<b>Type</b>	<b>Period</b>
C.SW.1	Cell 1-8	Surface Water	Monthly
C.PW.1	Cell 1-8	Pore Water	Monthly
C.S.1	Cell 1-8	Sediment	Monthly
C.C.1	Cell 1-8	Cattail	Monthly
C.A.SW.1	Cell 1-8	Surface Water In Algal Pond	Monthly
C.A.PW.1	Cell 1-8	Pore Water In Algal Pond	Monthly
C.A.S.1	Cell 1-8	Sediment In Algal Pond	Monthly
C.A.B.1	Cell 1-8	Algal Biomass In Algal Pond	Monthly
C.B.I	CWTS	Benthic Invertebrates	Monthly
C.B	CWTS	Biofilms	Monthly
C.I	CWTS	Insects	Monthly
C.B.E	CWTS	Bird Excreta	Monthly
C.F	CWTS	Fish	Monthly

\*Sample coding system that allows identification and tracking of the field samples through out the processing stages. Each code is produced with the first characters of the sample types.