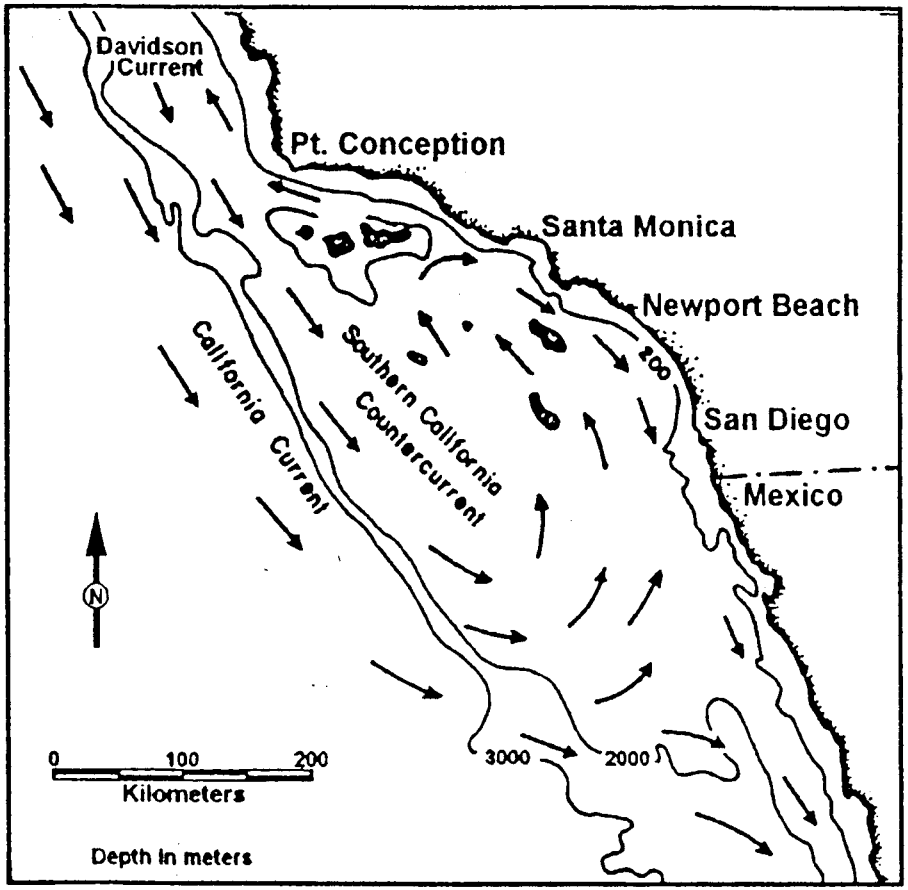

Figure 1. Surface currents and geographical features of the Southern California Bight.

Jessica, This file contains the following for insert if needed:

2- Figure 1
3- Figure 2
4- Table 1A and B
5- Table 2
6. Table 3
7. Fig 3
8. Fig 4
9. Fig. 5
10. Fig. 6
11. Fig. 7
12. Fig. 8

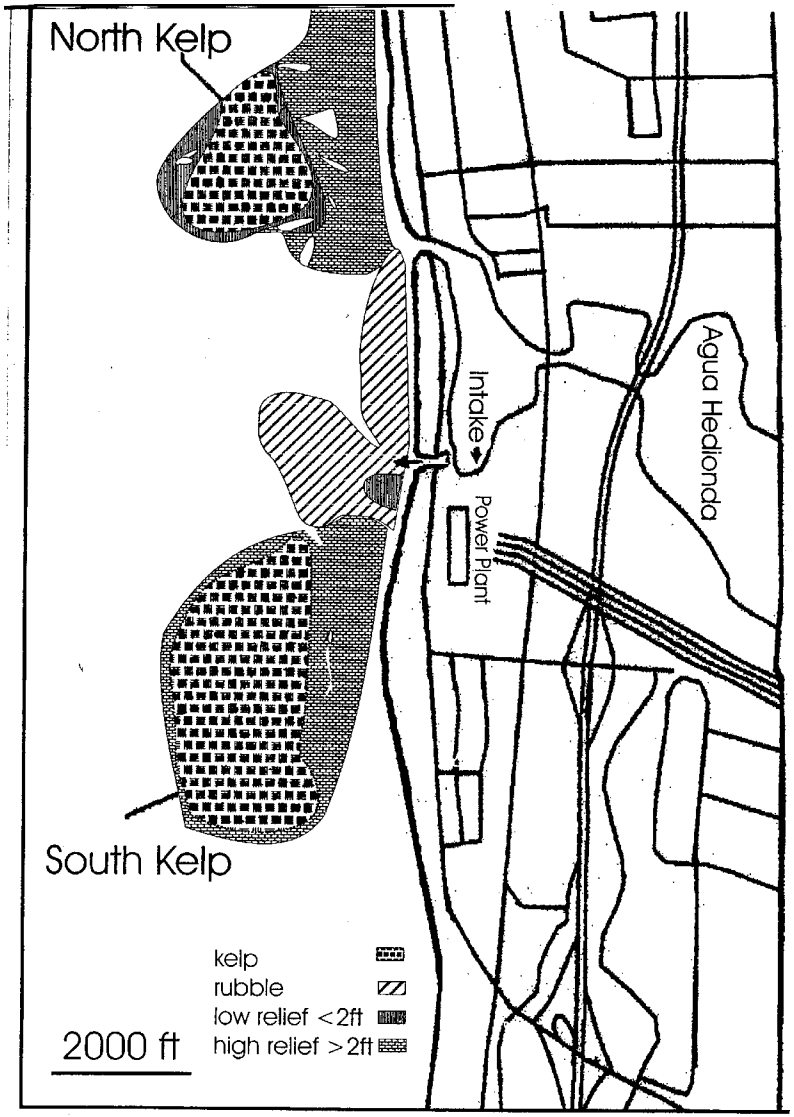

Figure 2. Major substrate and life zone areas described by EA Engineering, Science, and Technology (1997) and Le Page and Ware (2001) shown in relation to the Encina Power Plant intake and the discharge channel and Agua Hedionda Lagoon.

Table 1A and B. Data from MEC (2004, Table 6) showing algae and macroinvertebrate density estimates at quadrat sites in the NKS, SKS, and CKS kelp study areas, October 2003.

Scientific Name	Common Name	Station NKS-1			Station SKS-2			Station SKS-3			Station CKS-2		
		Mean (#/m²)	Std. Error	Occur. (%)	Mean (#/m²)	Std. Error	Occur. (%)	Mean (#/m²)	Std. Error	Occur. (%)	Mean (#/m²)	Std. Error	Occur. (%)
A. Algae													
Botryocladia pseudodichotoma	Red Algae	0	0	0	0	0	0	0.04	0.04	4.2	0	0	0
Condracanthus sp.	Red Algae	0	0	0	0	0	0	0	0	0	0	0	0
Corallina sp(p).	Red Algae	8.6	0.8	91.7	0.8	0.3	33.3	5	1.5	66.7	0.6	0.3	20.8
Cystoseira osmundacea	Brown Algae	5.2	0.6	95.8	2.4	1	33.3	3.6	0.7	66.7	0	0	0
Desmarestia sp	Brown Algae	1.3	0.5	25	0	0	0	0	0	0	0.2	0.1	12.5
Dictyotales sp	Brown Algae	0.04	0.04	4.2	0	0	0	0	0	0	0.1	0.1	8.3
Egregia laevigata	Brown Algae	0.8	0.2	58.3	0.2	0.1	12.5	0	0	0	0	0	0
Eisenia arborea	Brown Algae	0.4	0.2	16.7	0.7	0.2	41.7	0	0	0	0	0	0
Erthroglossum californicum	Red Algae	0	0	0	0.04	0.04	4.2	0	0	0	0.04	0.04	4.2
Gigartina sp.	Red Algae	6.9	0.9	91.7	0.3	0.2	12.5	1.4	0.5	33.3	2.9	0.5	75
Gymnogongrus sp	Red Algae	0	0	0	0	0	0	0	0	0	0	0	0
Laminariales, unident.	Brown Algae	0	0	0	0.1	0.1	8.3	0	0	0	0	0	0
Macrocystis pyrifera (15-40 cm)	Giant Kelp (juvenile)	0	0	0	0.2	0.1	16.7	0	0	0	0.2	0.1	12.5
Macrocystis pyrifera (41-200 cm)	Giant Kelp (subadult)	0	0	0	0.1	0.1	4.2	0	0	0	0	0	0
Macrocystis pyrifera (> 2 m)	Giant Kelp (adult)	0	0	0	0.1	0.1	8.3	0.2	0.1	16.7	0.2	0.1	20.8
Neoagardhiella baileyi	Red Algae	0	0	0	0	0	0	0	0	0	0	0	0
Red algal turf	Red Algae (percent coverage)	1	0.5	20.8	1.5	0.4	45.8	1.2	0.4	33.3	0.8	0.3	25
Stenogramme interrupta	Red Algae	4.1	0.9	58.3	8.3	1.7	62.5	1.1	0.5	29.2	8.3	0.9	100
B. Macroinvertebrates													
Anthopleura sp.	Green Anemone	0	0	0	0	0	0	0	0	0	0	0	0
Ascidiacea, unident.	Tunicate	0	0	0	0	0	0	0	0	0	0.04	0.04	4.2
Astraea undosa	Turban Snail	0	0	0	0	0	0	0	0	0	0.1	0.1	4.2
Astropecten verrilli	Sand Star	0	0	0	0	0	0	0	0	0	0	0	0
Conus californicus	Cone Snail	0	0	0	0.6	0.3	25	0.5	0.3	16.7	0.1	0.1	8.3
Corynactis californica	Anemone	0	0	0	0.4	0.4	4.2	0	0	0	0	0	0
Crassispira semiinflata	Snail	0	0	0	0	0	0	0	0	0	0	0	0
Cypraea spadicea	Chestnut Cowry (Snail)	0	0	0	0	0	0	0	0	0	0	0	0
Diopatra ornata	Polychaete Worm	2.7	0.8	66.7	2	1	37.5	4	1.1	54.2	16.2	6	79.2
Doriopsilla albopunctata	White speckled nudibranch	0	0	0	0	0	0	0	0	0	0	0	0
Ectoprocta, unident.	Bryozoan	0	0	0	0	0	0	0	0	0	0	0	0
Hydrozoa, unident.	Hydroid	0	0	0	0	0	0	0.5	0.3	16.7	0	0	0
Kelletia kelletii	Whelk (Snail)	0	0	0	0.6	0.3	20.8	0	0	0	0.4	0.1	25
Lytechinus sp	White Sea Urchin	0	0	0	0	0	0	0	0	0	0	0	0
Maxwellia gemma	Gem Murex (Snail)	0	0	0	0	0	0	0	0	0	0	0	0
Muricea californica	Sea Fan	0	0	0	0.8	0.2	50	0.4	0.2	12.5	1.4	0.6	29.2
Muricea fruticosa	Brown Gorgonian	0.04	0.04	4.2	0	0	0	0.3	0.2	12.5	2.4	0.7	50
Norisia norrisi	Kelp Snail	0.2	0.2	4.2	0	0	0	0	0	0	0	0	0
Nudibranch, unident.	Nudibranch	0	0	0	0	0	0	0	0	0	0.1	0.1	4.2
Olivella baetica	Olive Snail	0	0	0	0	0	0	0	0	0	0	0	0
Ophiuroidea	Brittlestar	0	0	0	0	0	0	0	0	0	0	0	0
Pachycerianthus fimbriatus	Tube Anemone	0	0	0	0.04	0.04	4.2	0	0	0	0	0	0
Paguridae, unident.	Hermit Crab	0	0	0	0	0	0	0	0	0	0	0	0
Patiria miniata	Bat Star	0	0	0	0	0	0	0	0	0	0	0	0
Pholadidae, unident.	Boring Clam	0	0	0	0.2	0.1	20.8	0.2	0.1	16.7	0.9	0.3	41.7
Phragmatopoma californica	Polychaete Worm	0	0	0	0	0	0	0	0	0	0	0	0
Pisaster giganteus	Giant Spined Star	0	0	0	0	0	0	0	0	0	0	0	0
Porifera, unident.	Sponge	3.1	1.8	20.8	54.3	8	95.8	20.6	5.2	62.5	3.1	1.2	41.7
Pteropurpura sp	Rock Shell (Snail)	0	0	0	0	0	0	0	0	0	0	0	0
Strongylocentrotus franciscanus	Red Sea Urchin	0	0	0	0	0	0	0	0	0	0	0	0
Strongylocentrotus purpuratus	Purple Sea Urchin	0	0	0	0	0	0	0	0	0	0	0	0
Styela montereyensis	Stalk Tunicate	0.5	0.2	37.5	0	0	0	0.2	0.1	8.3	0.1	0.1	12.5
Zoantharia, unident.	Anemone	0	0	0	0.04	0.04	4.2	17.5	6.5	29.2	0	0	0

Table 2. Data from MEC (2004, Table 7) showing abundance of fish observed by divers along the NKS, SKS, and CKS kelp transects, October 2003.

Scientific Name	Common Name	STATION			
		NKS-1	SKS-2	SKS-3	CKS-2
Anisotremus davidsonii	Sargo	1	0	0	0
Brachyistius frenatus	Kelp perch	0	5	0	0
Halichoeres semicinctus	Rock wrasse	0	1	0	1
Heterostichus rostratus	Giant kelpfish	1	0	0	0
Hypsypops rubricundus	Garibaldi	2	0	0	0
Oxyjulis californica	Señorita	22	0	5	32
Paralabrax clathratus	Kelp bass	8	2	12	13
Paralabrax nebulifer	Barred sand bass	0	0	3	0
Phanerodon furcatus	White seaperch	3	0	1	0
Rhacochilus toxotes	Rubberlip seaperch	0	0	0	14
Semicossyphus pulcher	California sheephead	3	7	1	3

Table 3. Data from MEC (2004, Table 8). Comparisons of the species number and total individual fishes observed at the NKS, SKS, and CKS kelp study areas, during the spring and fall of each year from 1991 to 2003.

Year	Number of Species	Number of Individuals
FALL		
1991	17	523
1992	10	475
1993	16	153
1994	14	90
1995	15	475
1996	14	346
1997	12	265
1998	10	129
1999	10	44
2000	17	864
2001	19	326
2002	10	144
2003	11	140
SPRING		
1991	11	49
1992	13	298
1993	7	31
1994	15	186
1995	16	162
1996	13	390
1997	13	201
1998	11	218
1999	12	103
2000	13	95
2001	12	49
2002	12	157
2003	8	30

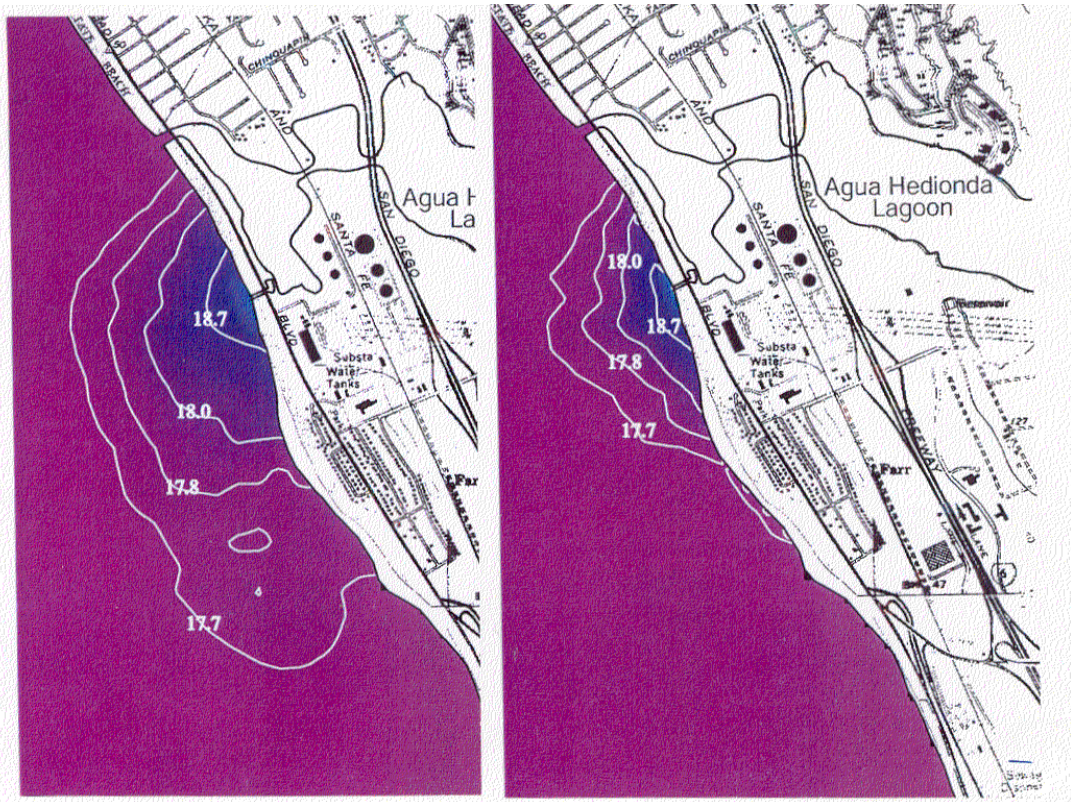

Figure 3. Historical average case EPS flow and receiving-water conditions (delta T =5.5°C). Average bottom temperature (left) and depth-averaged temperature (right) contours of the concentrated seawater discharge for RO = 50 mgd, Plant total flow rate = 576 mgd, net discharge 526 mgd, ambient ocean surface temperature = 17.6°C, 23 May 1994. (Jenkins and Wasyl, 2005).

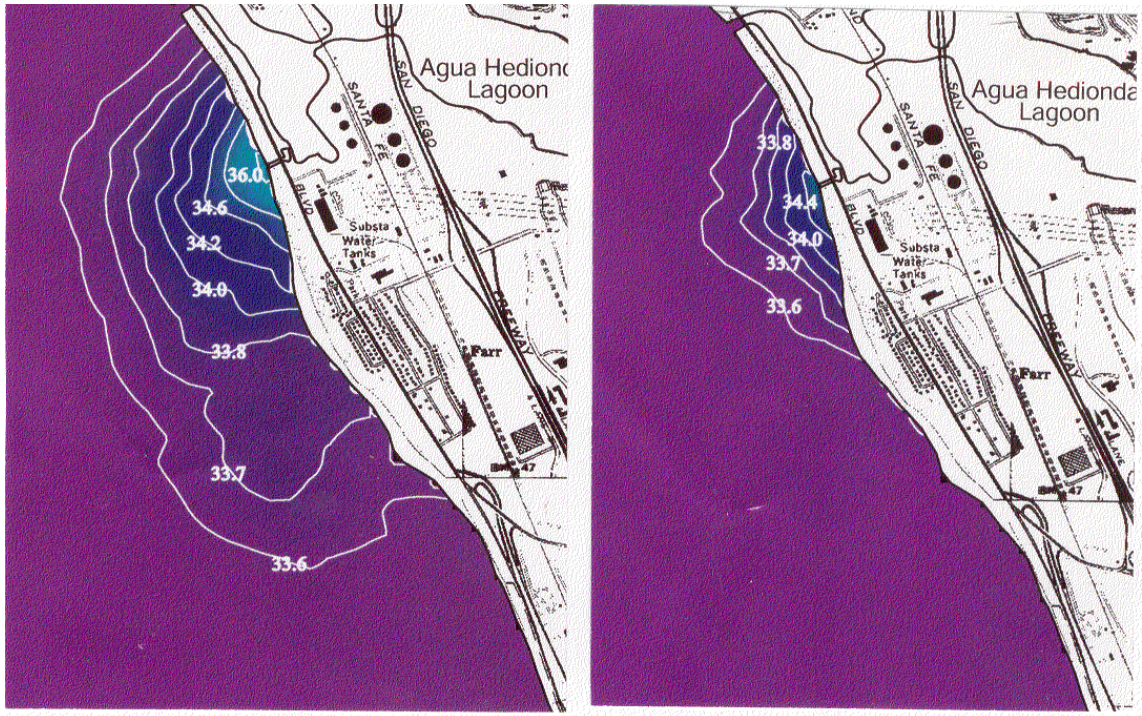

Figure 4. Historical average case EPS flow and receiving-water conditions (delta T =5.5°C). Average bottom salinity (left) and depth-averaged salinity (right) contours of the concentrated seawater discharge for RO = 50 mgd, Plant total flow rate = 576 mgd, net discharge 526 mgd, ambient ocean salinity = 33.52°/oo, 23 May 1994. (Jenkins and Wasyl, 2005).

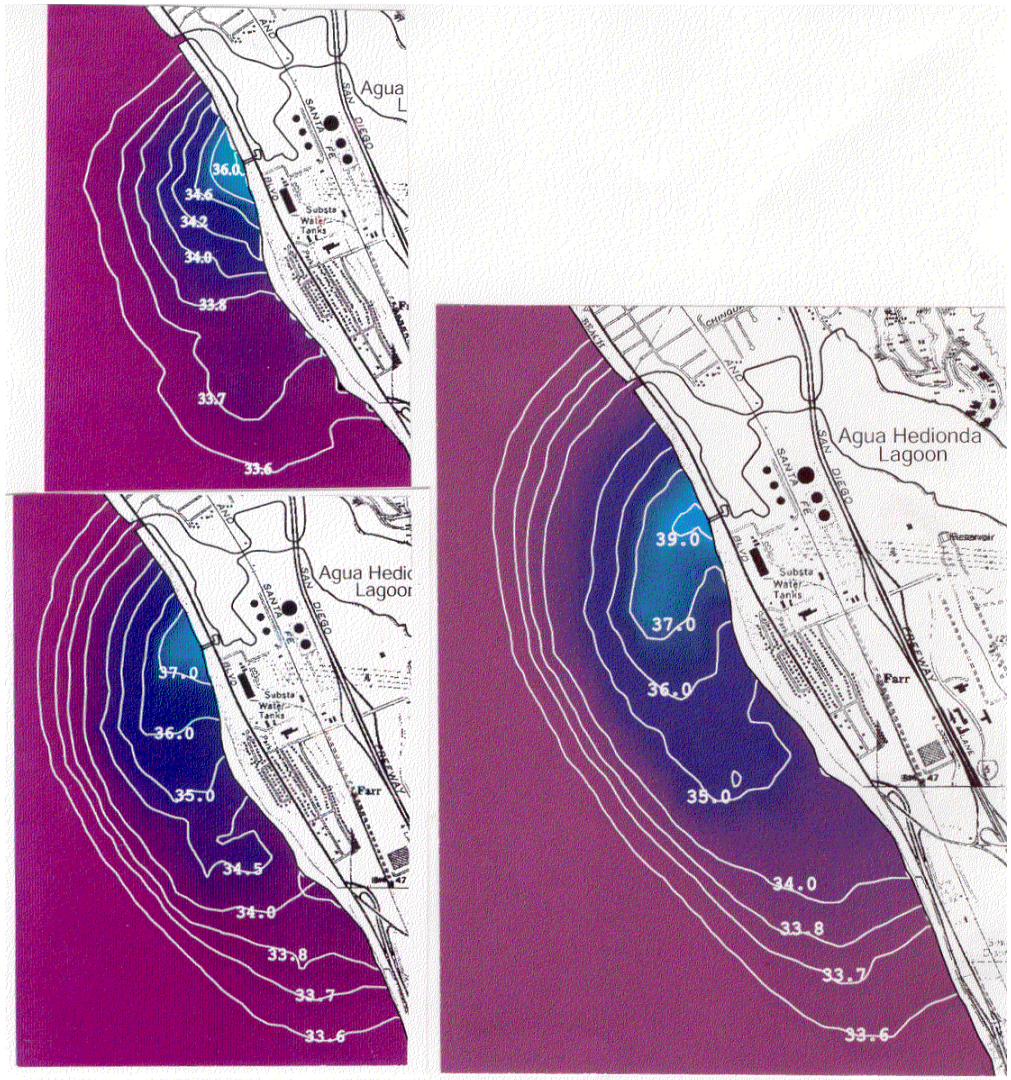

Figure 5. Comparison of bottom salinities for the historical average (top left) and the two historical extreme cases that were modeled [i.e., Unit 4 historical extreme, heated (lower left), vs unheated (right)] cases. (Note: The historical extreme cases assume both low EPS flow and sub-optimal receiving water conditions for discharge mixing.) (Data from Jenkins and Wasyl, 2005.)

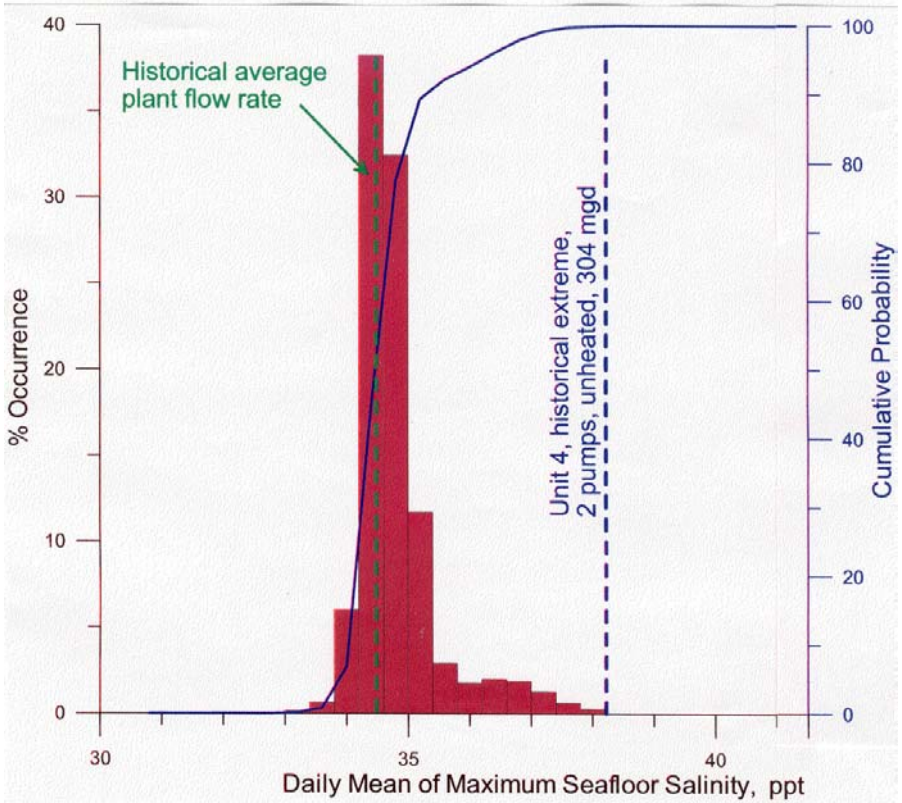

Figure 6. The range of outer ZID salinities modeled for the historical average (vertical dashed green line) and the historical extreme (blue dashed line) cases and for various combinations of different flow rates and receiving water mixing conditions (histograms) determined from the 20.5 year time series. See text for other details. (Data from Jenkins and Wasyl, 2005.)

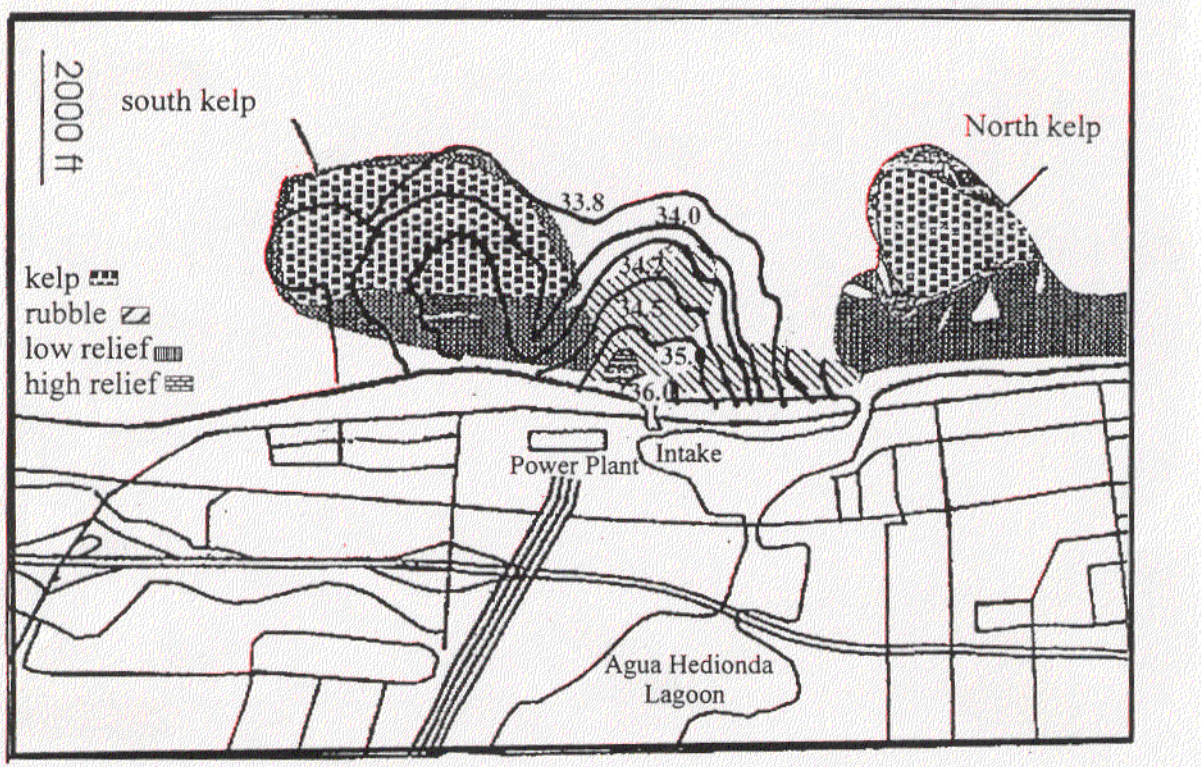

Figure 7. Major substrate and life zone offshore from the EPS shown in relation to bottom salinity contours predicted by historical average discharge case for flow rate and receiving water condition. Salinity data from Jenkins and Wasyl, (2005); substrate and life zone map from Le Page and Ware (2001).

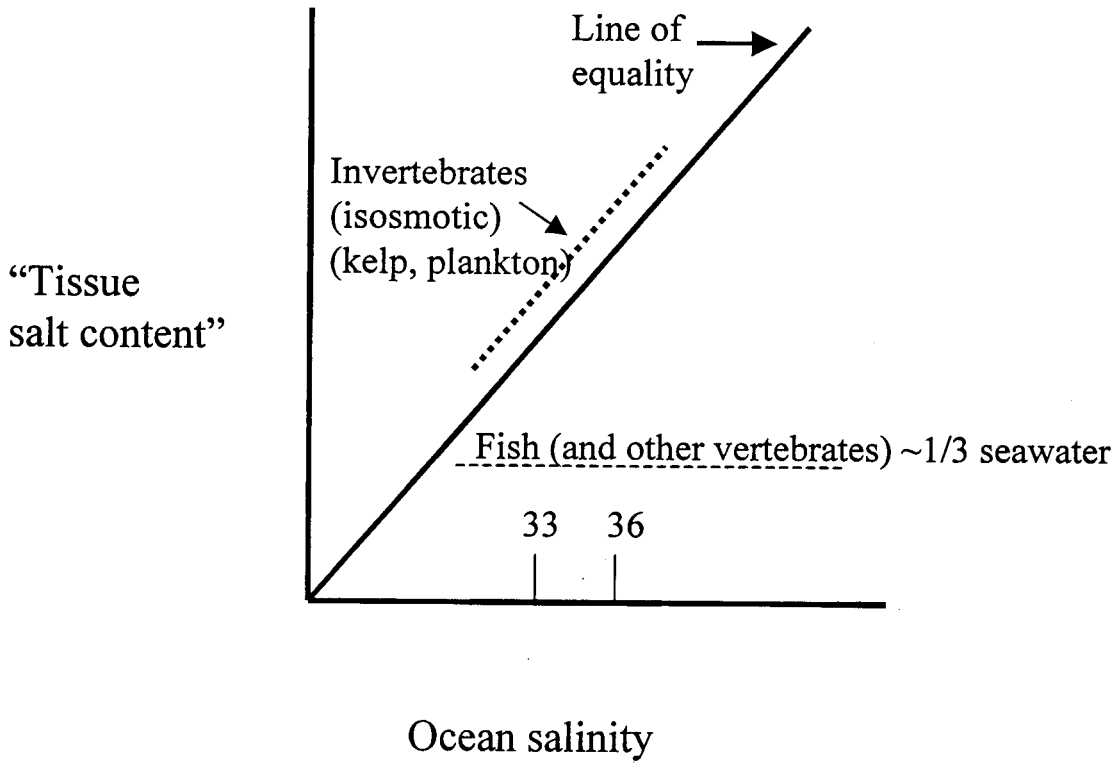

Figure 8. Salinity adaptations of marine invertebrates, fishes, and other organisms.