

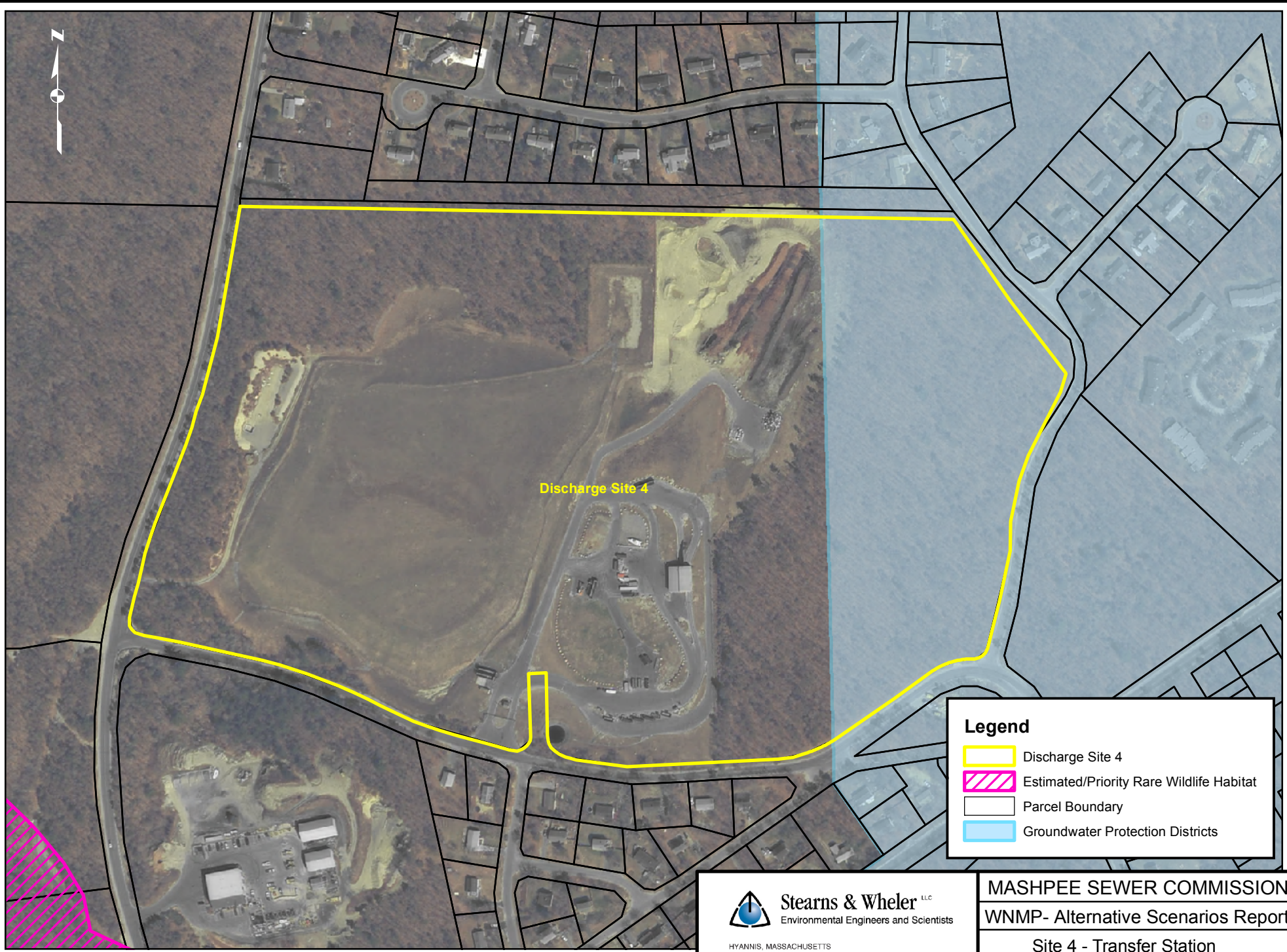


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MASHPEE SEWER COMMISSION
WNMP - Alternative Scenarios Report
SITE 2 - CONCEPTUAL
SAND BED LAYOUT
FIGURE 2-18

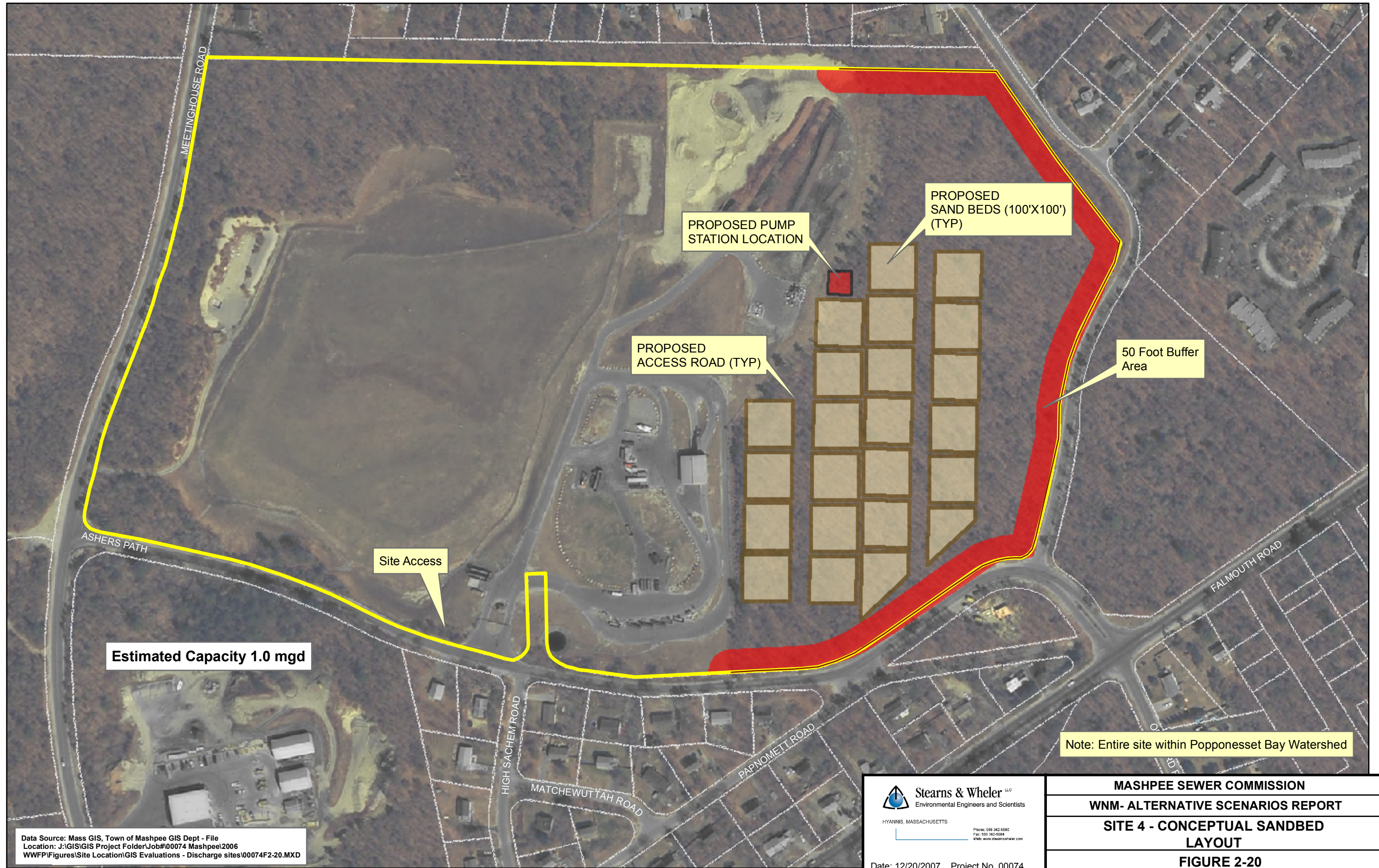


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MASHPEE SEWER COMMISSION
WNMP- Alternative Scenarios Report
Site 4 - Transfer Station
Figure 2-19

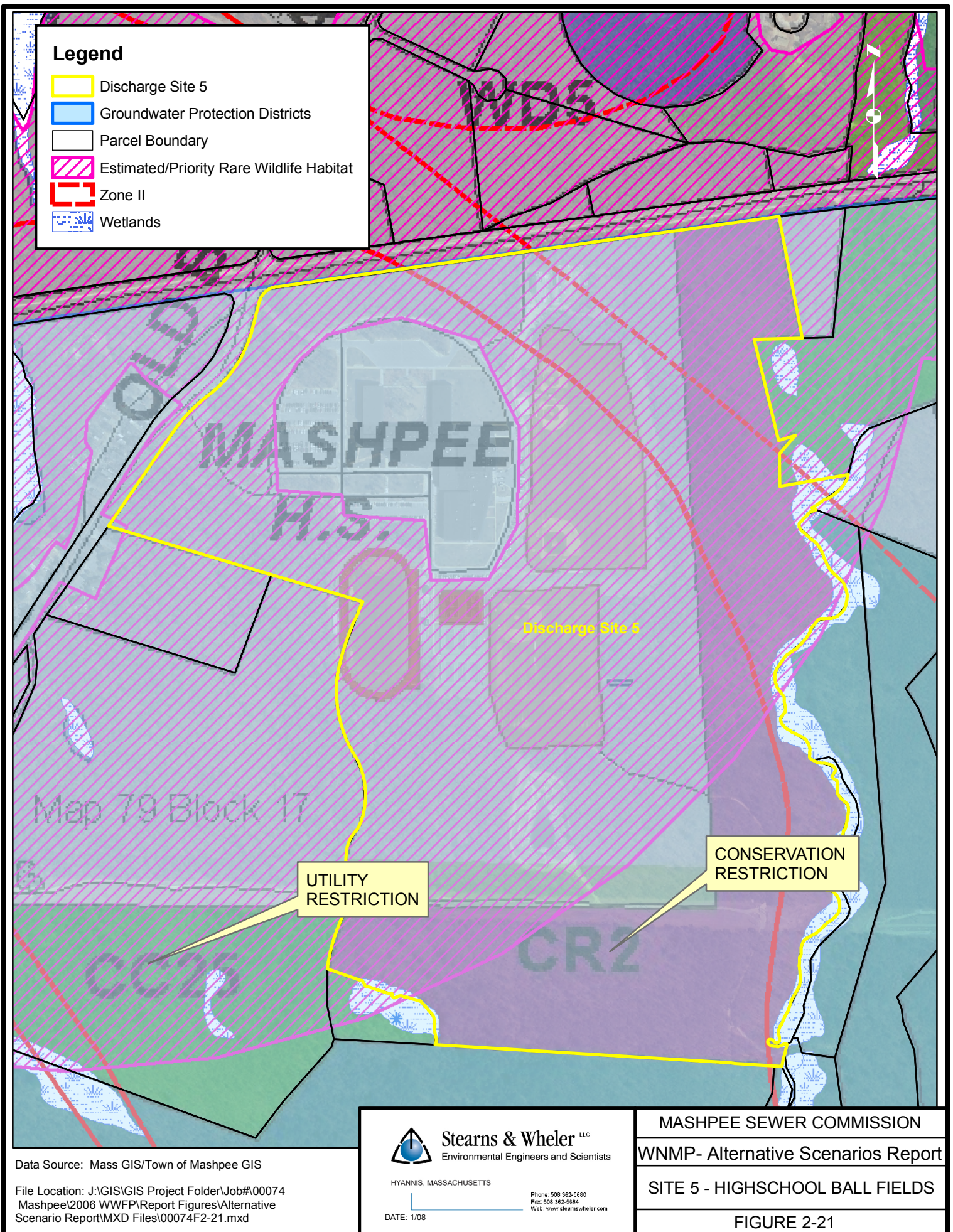


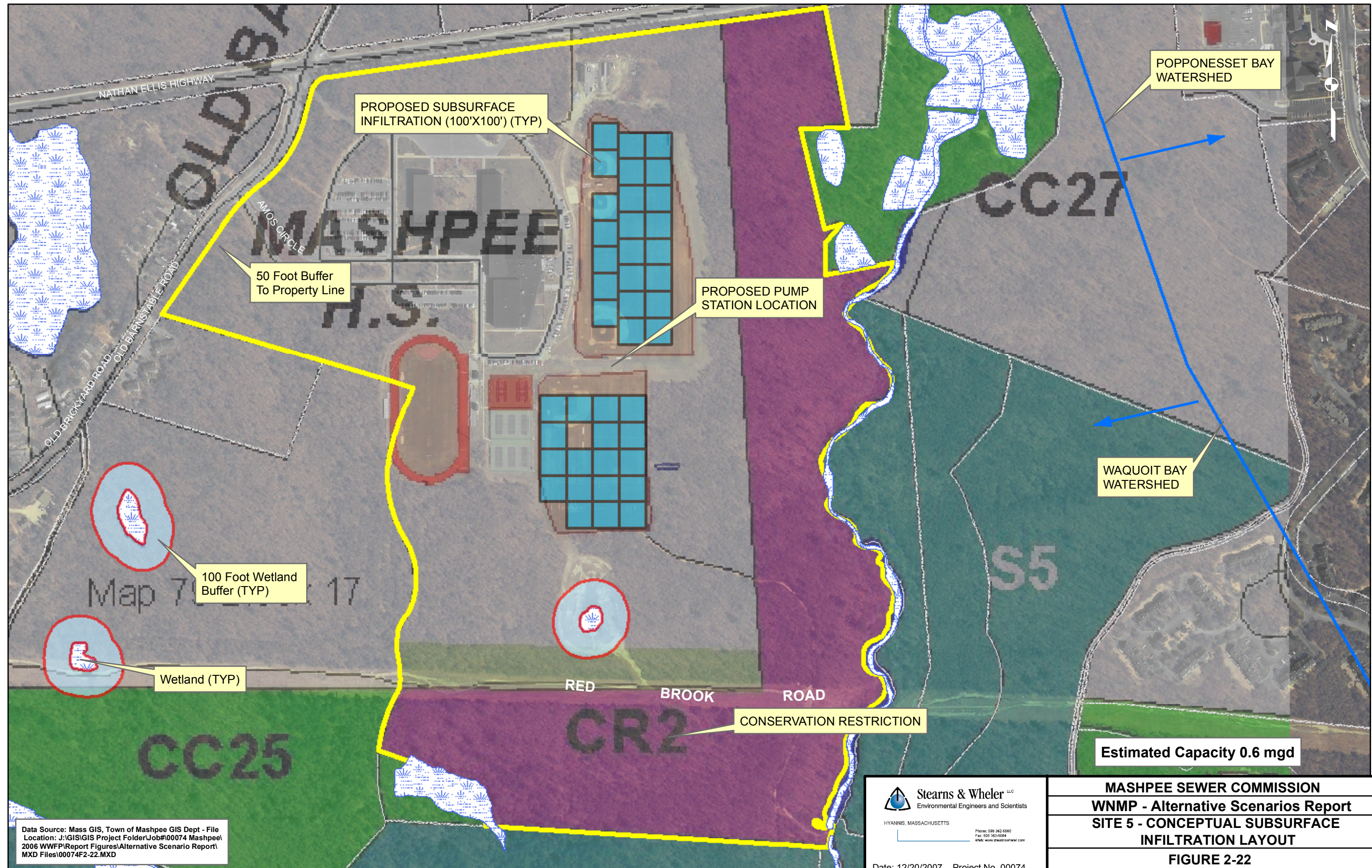
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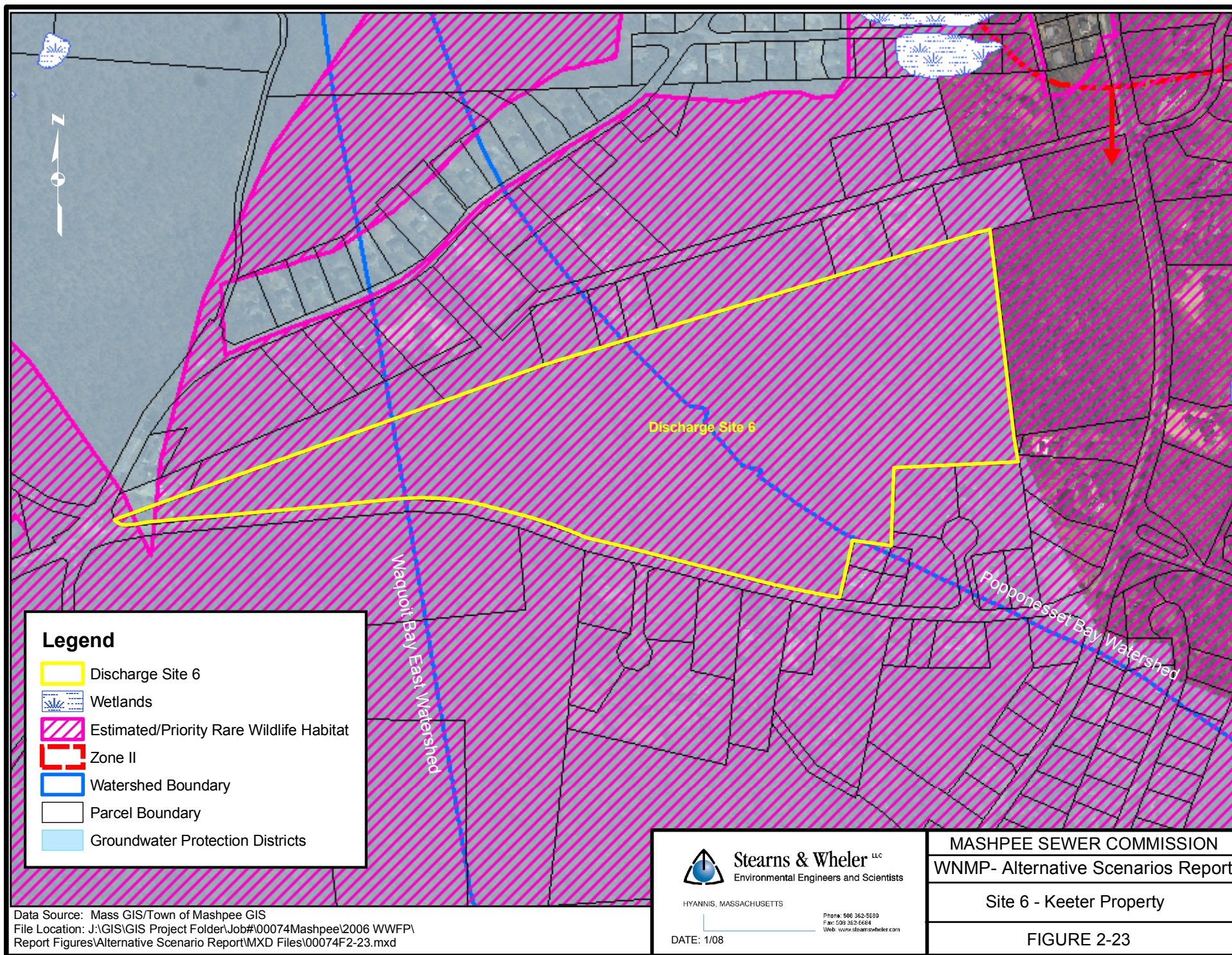
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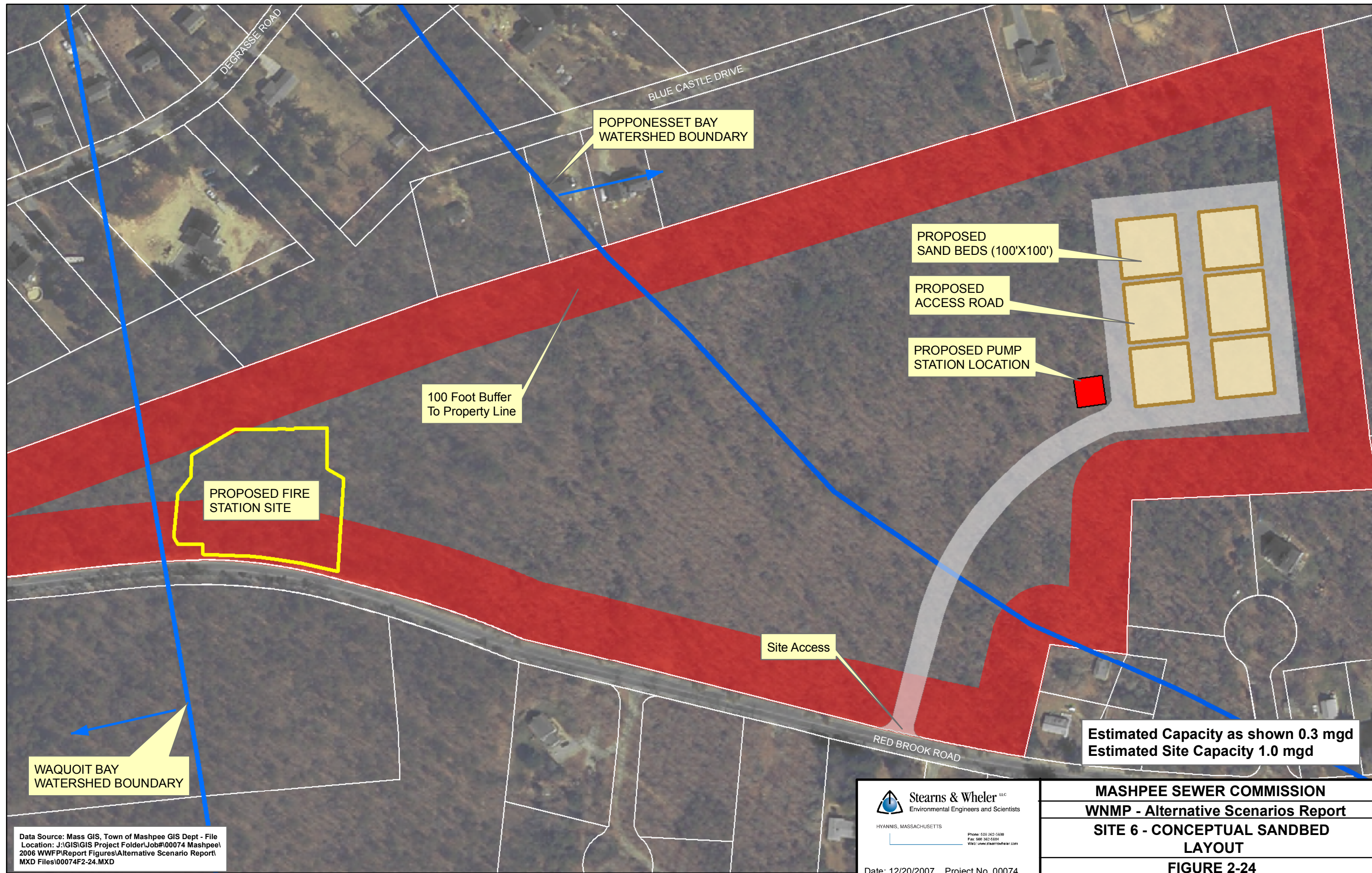
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MASHPEE SEWER COMMISSION
WNM- ALTERNATIVE SCENARIOS REPORT
SITE 4 - CONCEPTUAL SANDBED LAYOUT
FIGURE 2-20







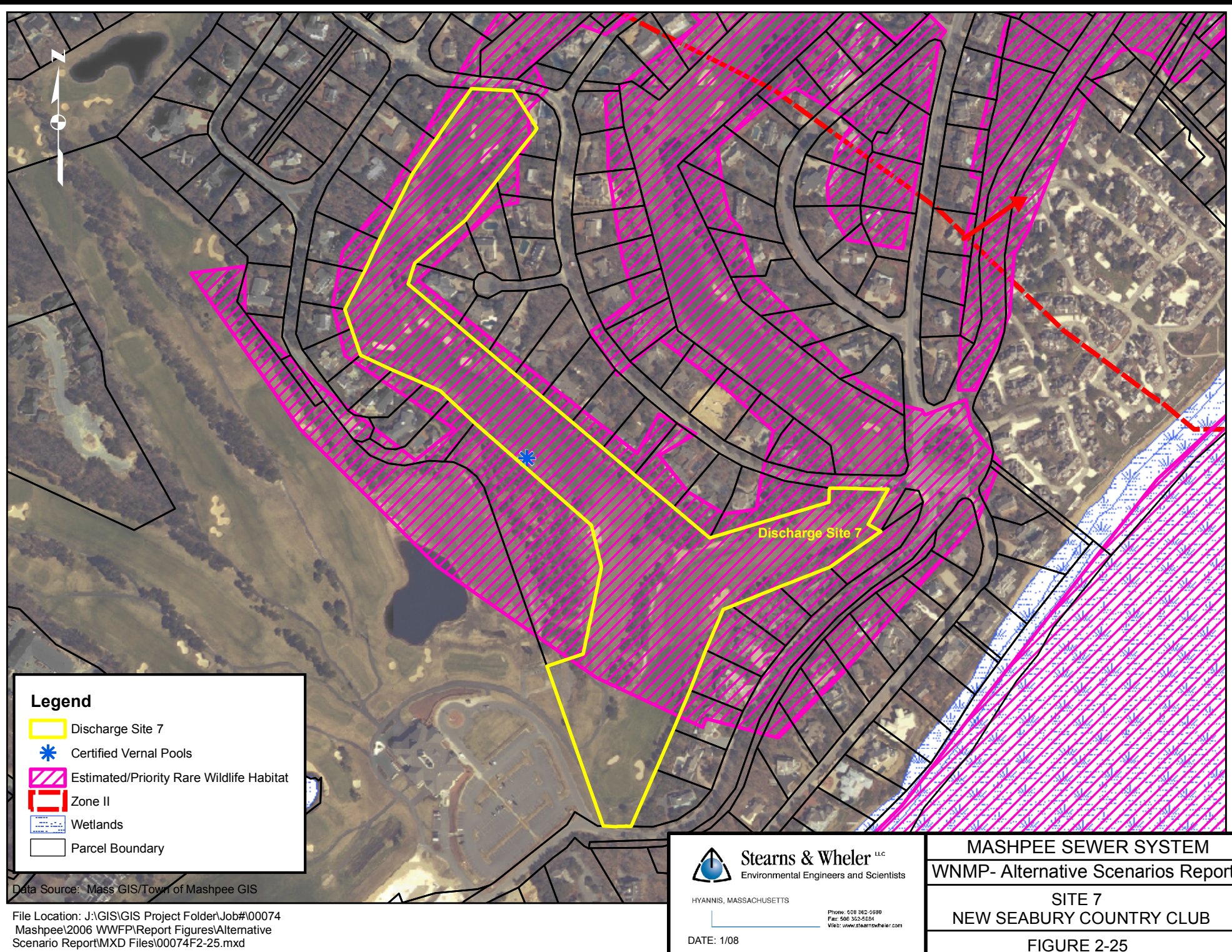


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MASHPEE SEWER COMMISSION
WNMP - Alternative Scenarios Report
SITE 6 - CONCEPTUAL SANDBED LAYOUT
FIGURE 2-24



Legend

- Discharge Site 7
- Certified Vernal Pools
- Estimated/Priority Rare Wildlife Habitat
- Zone II
- Wetlands
- Parcel Boundary

Data Source: Mass GIS/Town of Mashpee GIS

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MASHPEE SEWER SYSTEM
WNMP- Alternative Scenarios Report
SITE 7
NEW SEABURY COUNTRY CLUB
FIGURE 2-25

Legend

-  Discharge Site 11
-  Parcel Lines
-  Wetlands
-  Zone II*
-  Watershed Boundary
-  Estimated/Priority Rare Wildlife Habitat

Popponesset Watershed

Discharge Site 11



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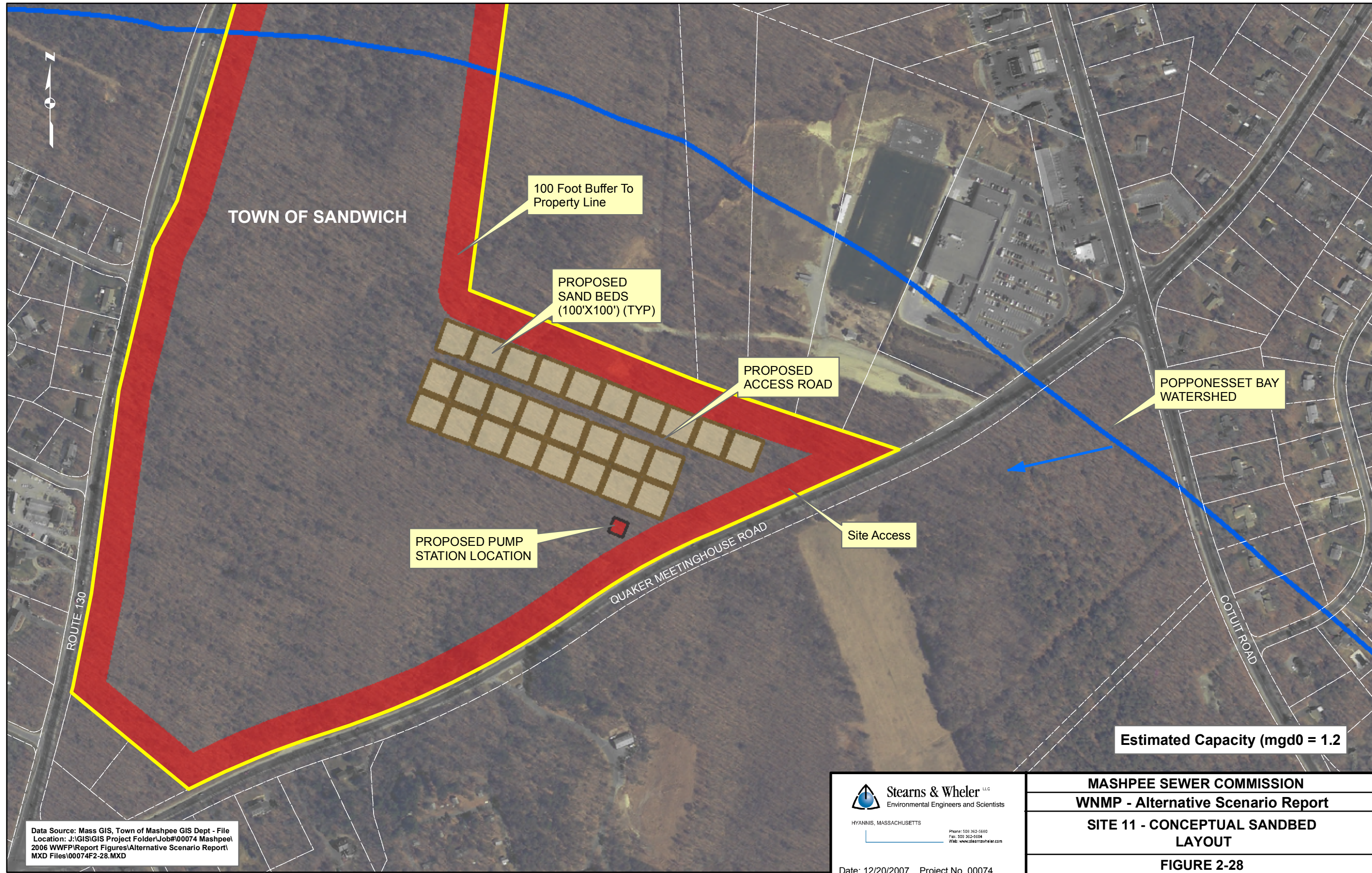
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MASHPEE SEWER COMMISSION
WNMP- Alternative Scenarios Report

SITE 11
168 ROUTE 130 (SANDWICH)

FIGURE 2-27

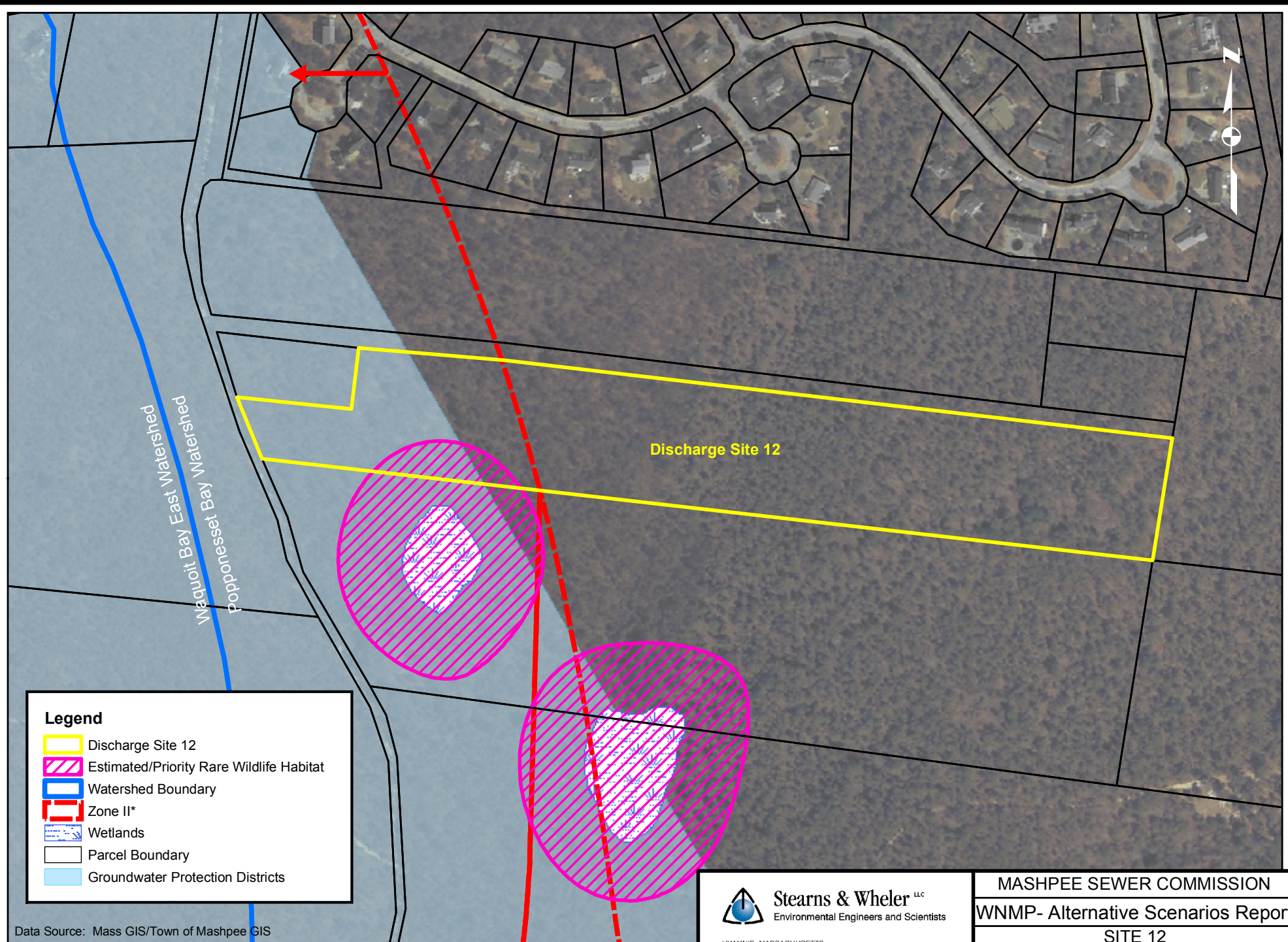


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MASHPEE SEWER COMMISSION
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SITE 11 - CONCEPTUAL SANDBED LAYOUT
FIGURE 2-28



Legend

- Discharge Site 12
- Estimated/Priority Rare Wildlife Habitat
- Watershed Boundary
- Zone II*
- Wetlands
- Parcel Boundary
- Groundwater Protection Districts

Data Source: Mass GIS/Town of Mashpee GIS

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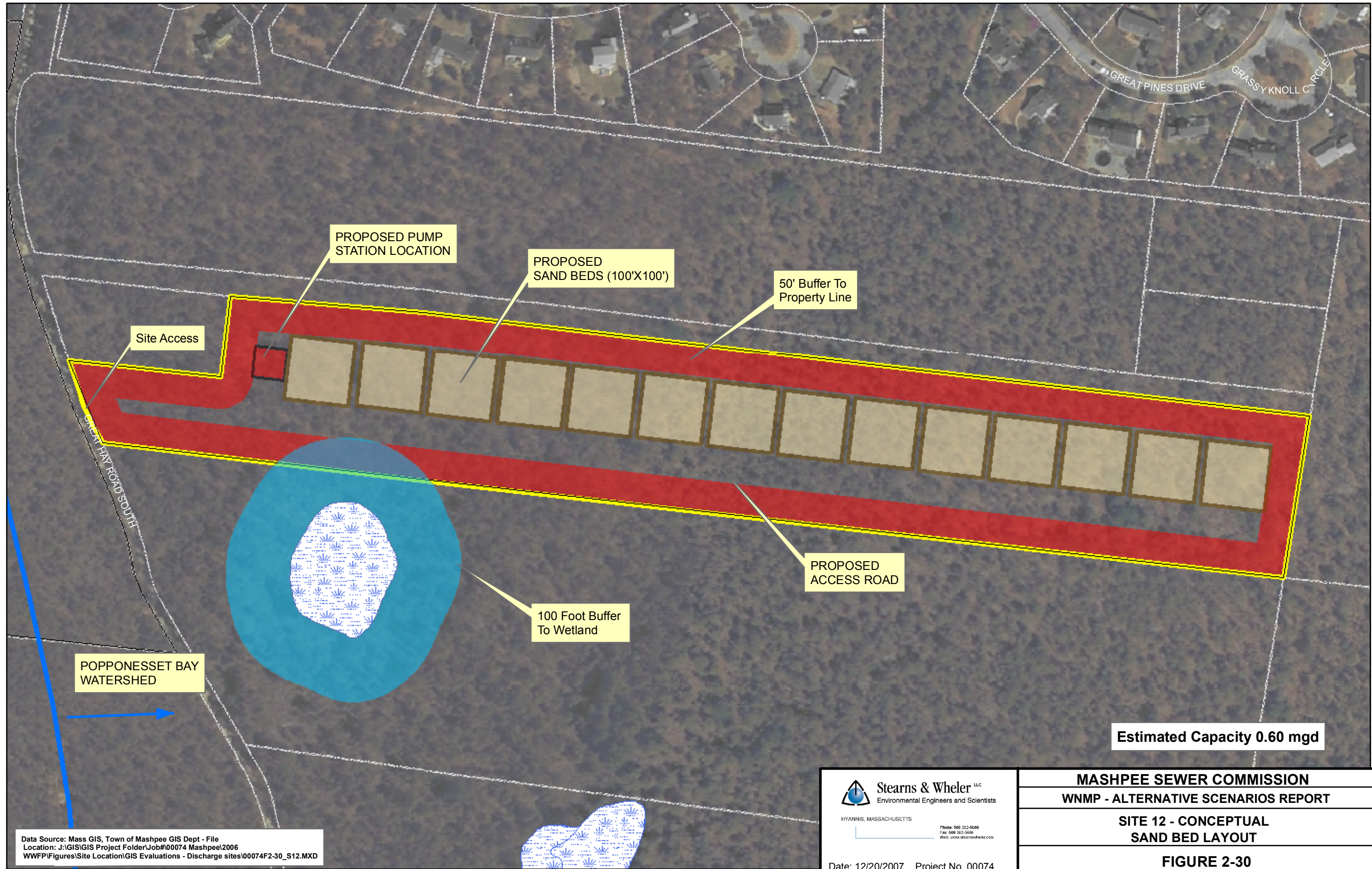
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WNMP- Alternative Scenarios Report

SITE 12
 BARTLETT PROPERTY

Figure 2-29



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WWFP\Figures\Site Location\GIS Evaluations - Discharge sites\00074F2-30_S12.MXD

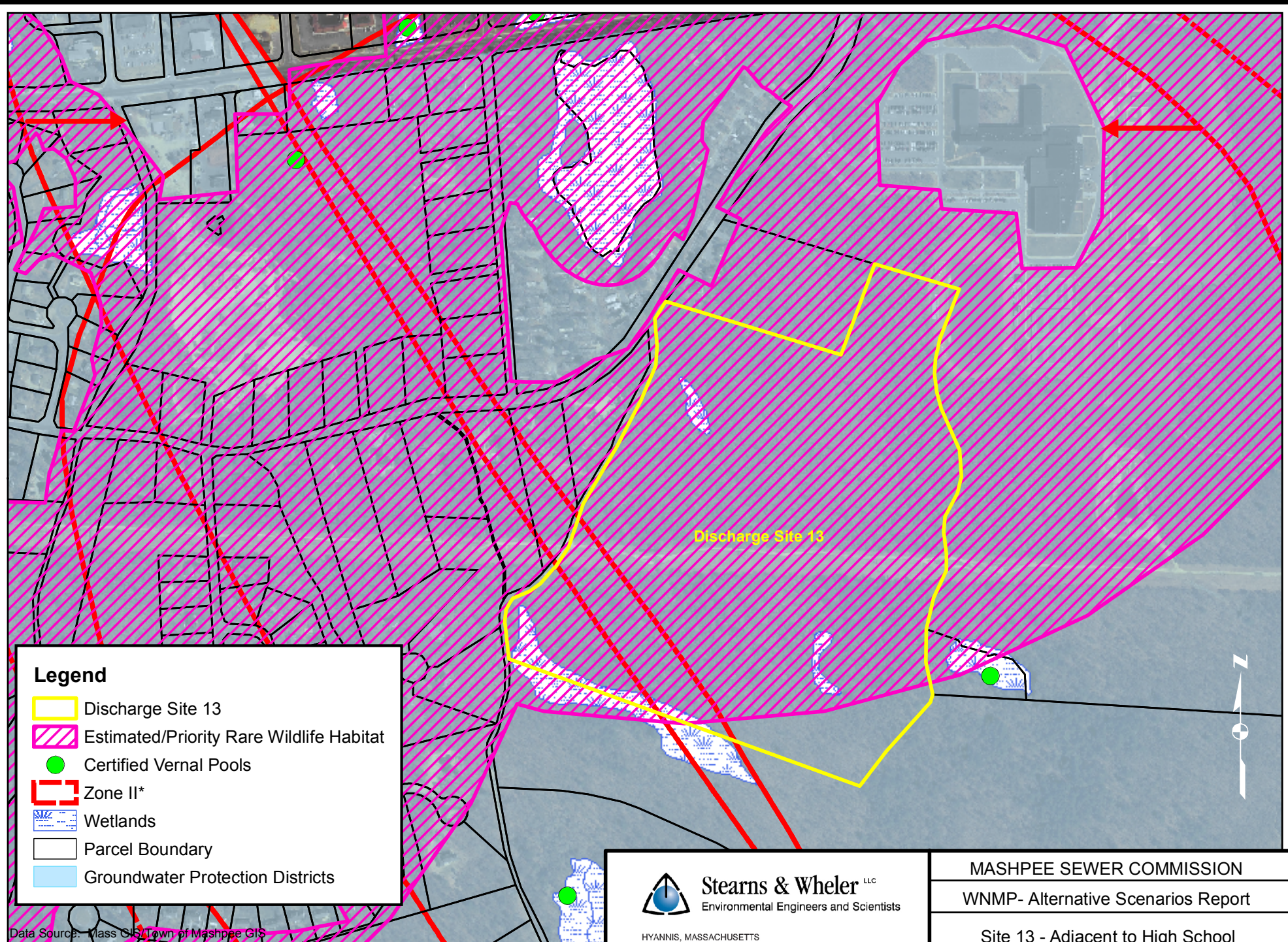


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MASHPEE SEWER COMMISSION
WNMP - ALTERNATIVE SCENARIOS REPORT

SITE 12 - CONCEPTUAL
SAND BED LAYOUT

FIGURE 2-30



Legend

-  Discharge Site 13
-  Estimated/Priority Rare Wildlife Habitat
-  Certified Vernal Pools
-  Zone II*
-  Wetlands
-  Parcel Boundary
-  Groundwater Protection Districts

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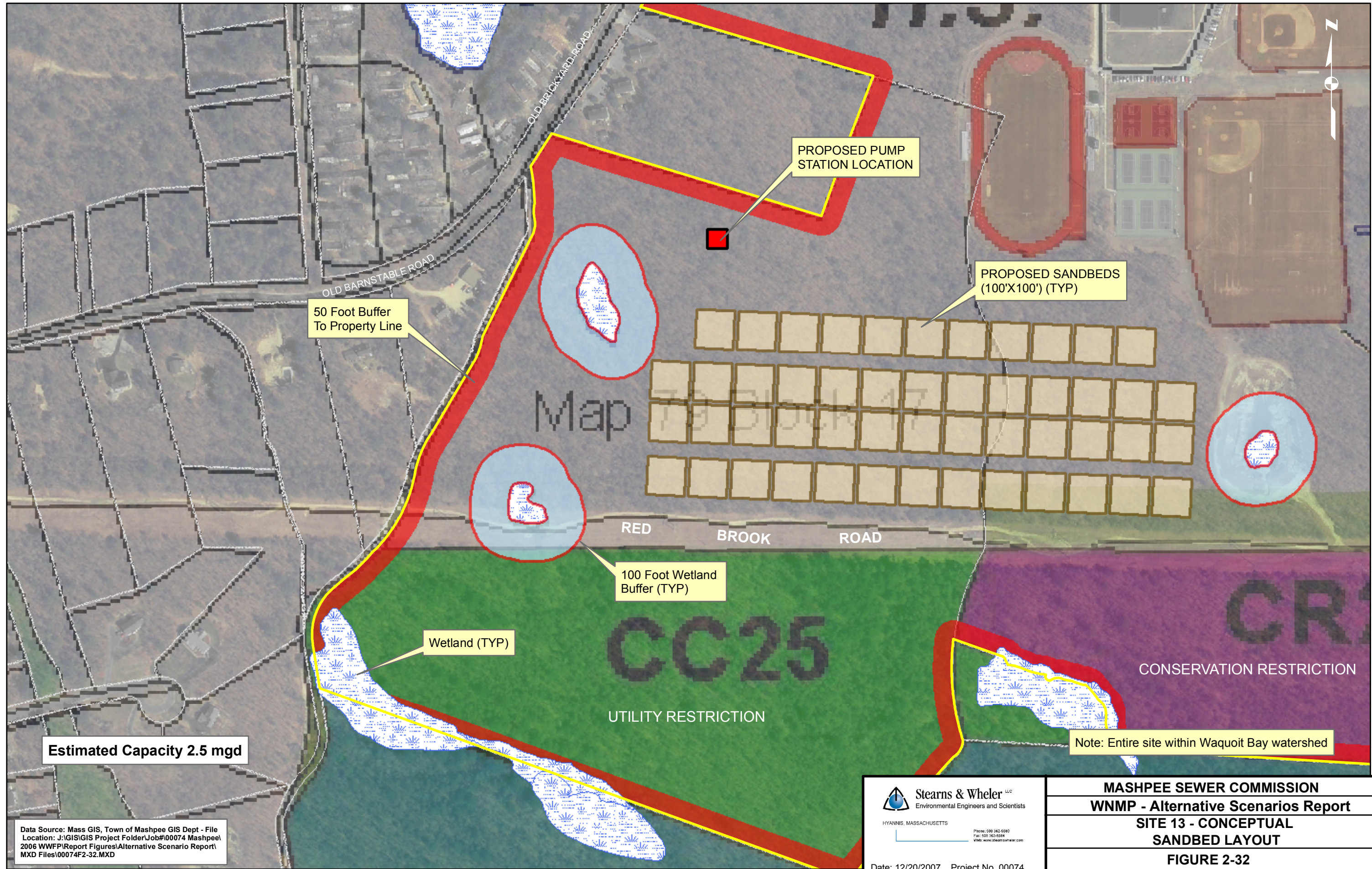
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Site 13 - Adjacent to High School

FIGURE 2-31

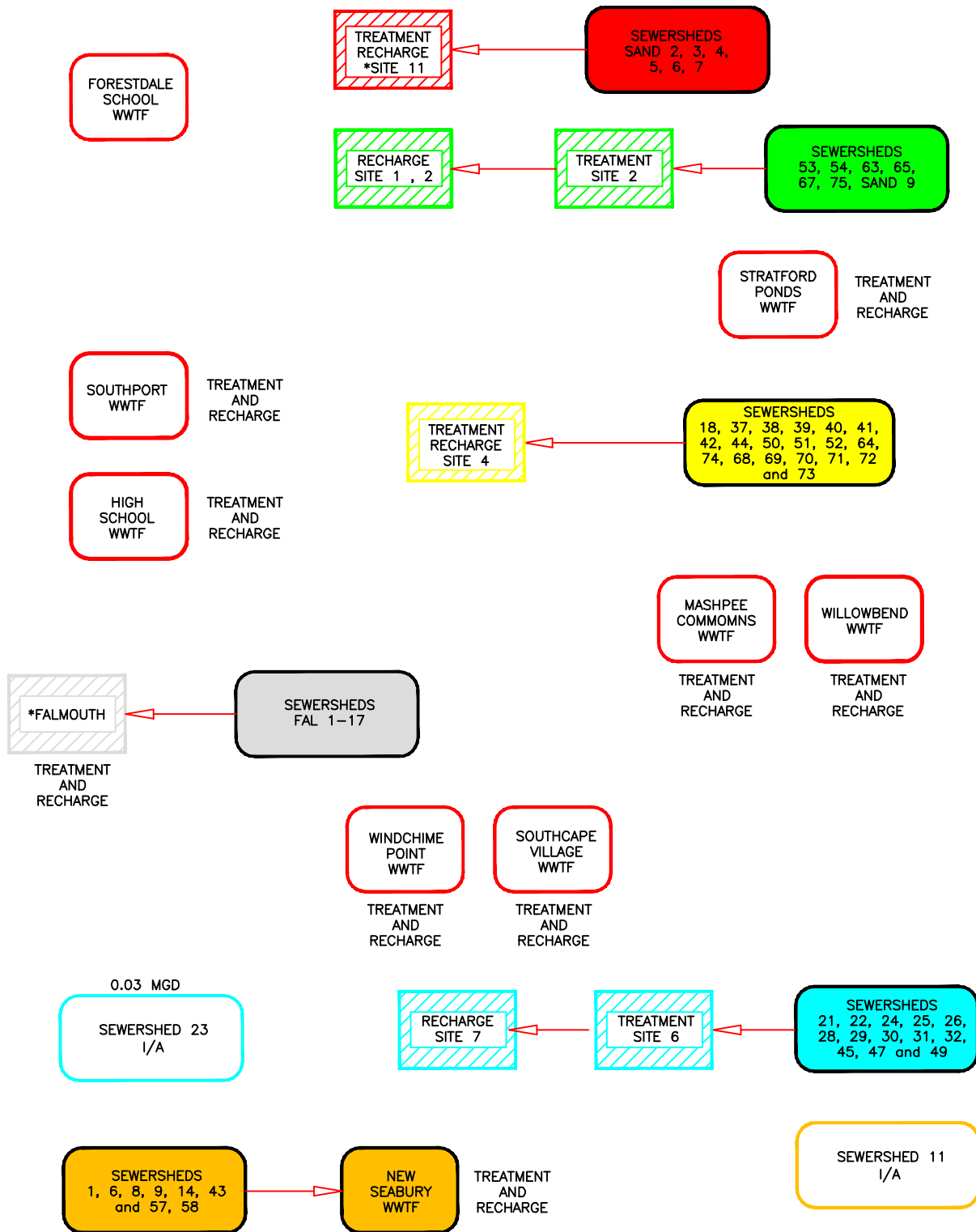


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MASHPEE SEWER COMMISSION
WNMP - Alternative Scenarios Report
SITE 13 - CONCEPTUAL
SANDBED LAYOUT
FIGURE 2-32



***NOTE:**
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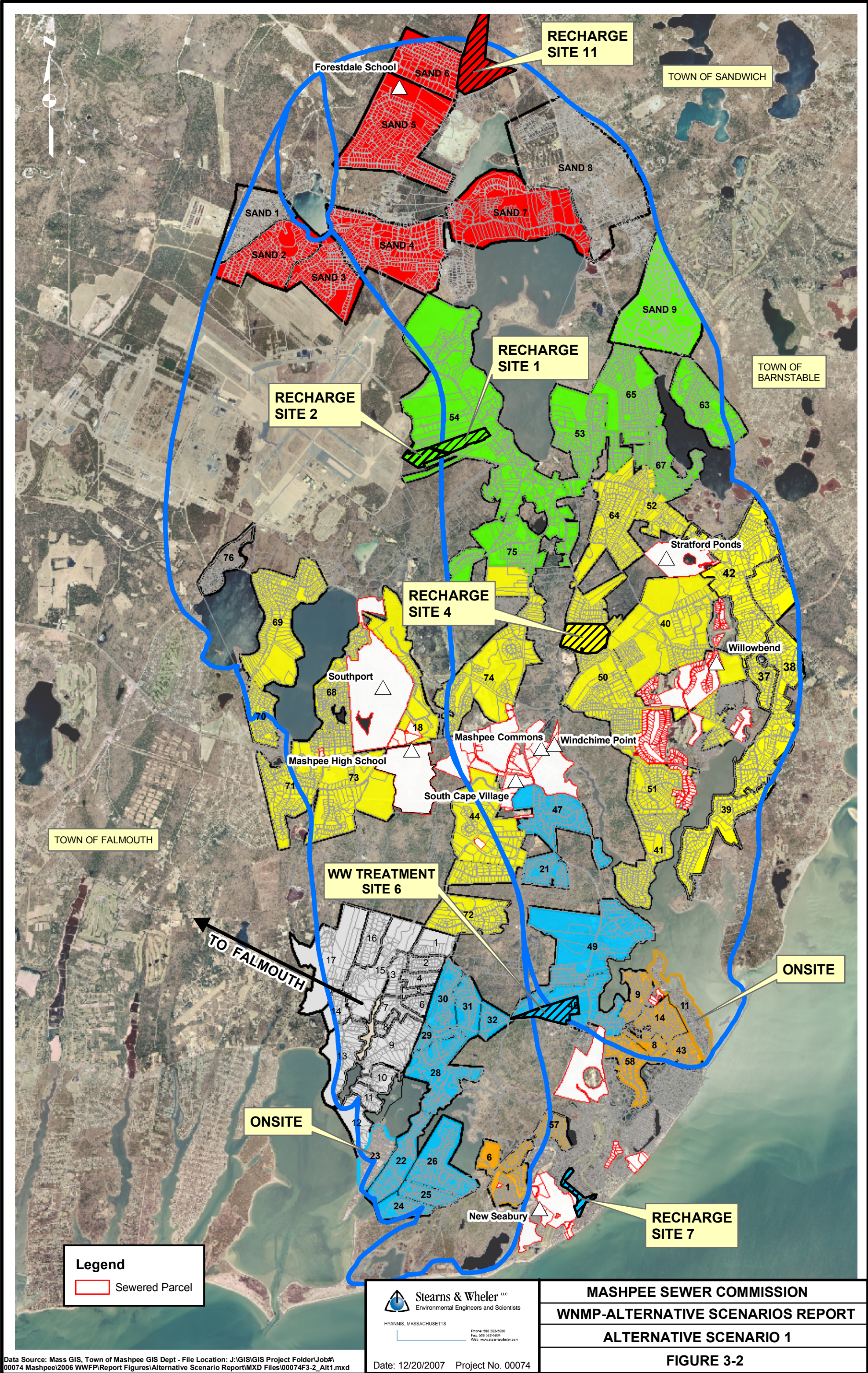
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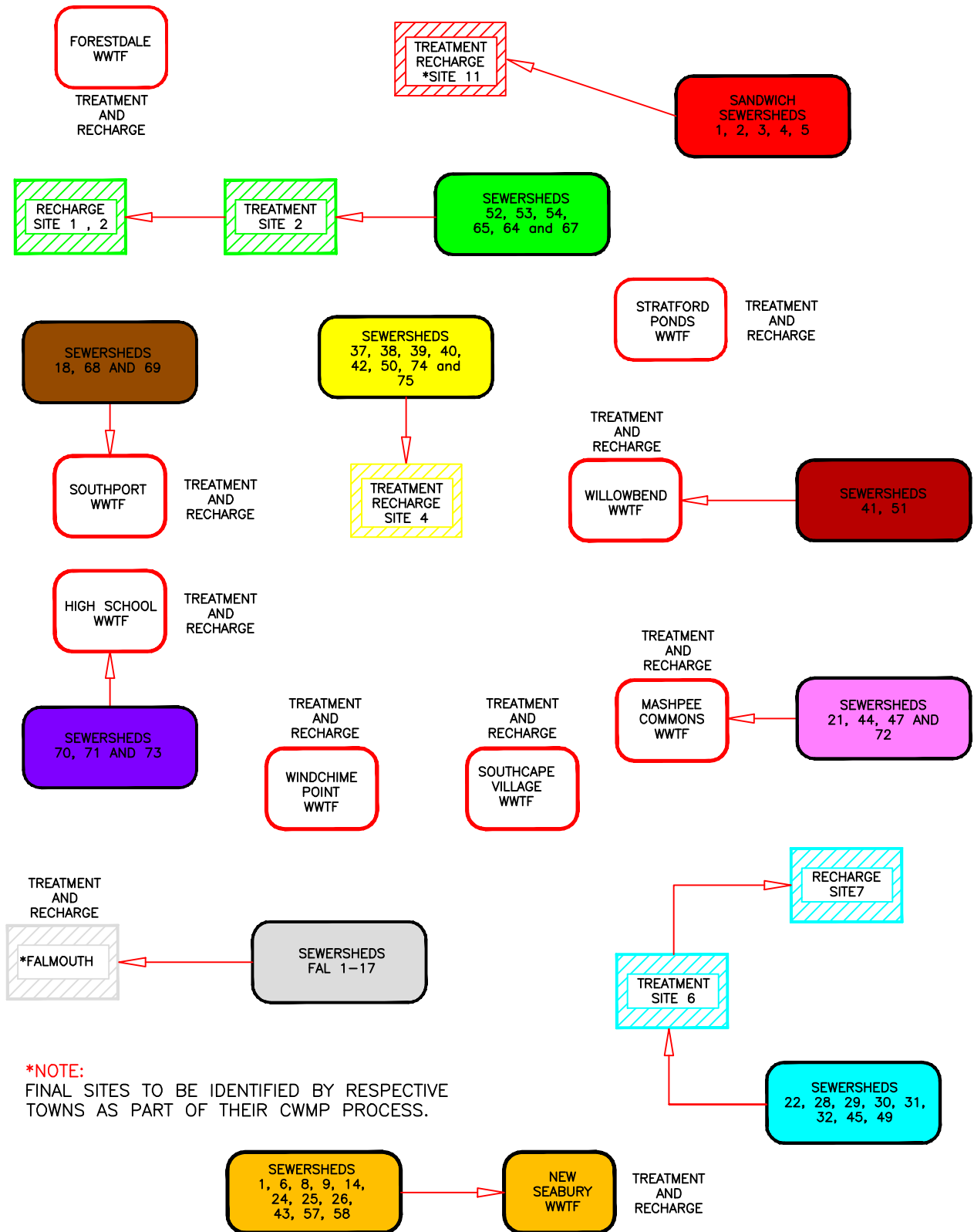
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MASHPEE SEWER COMMISSION
WNMP – ALTERNATIVE SCENARIOS
REPORT

FIGURE 3-1
SCENARIO 1 SCHEMATIC





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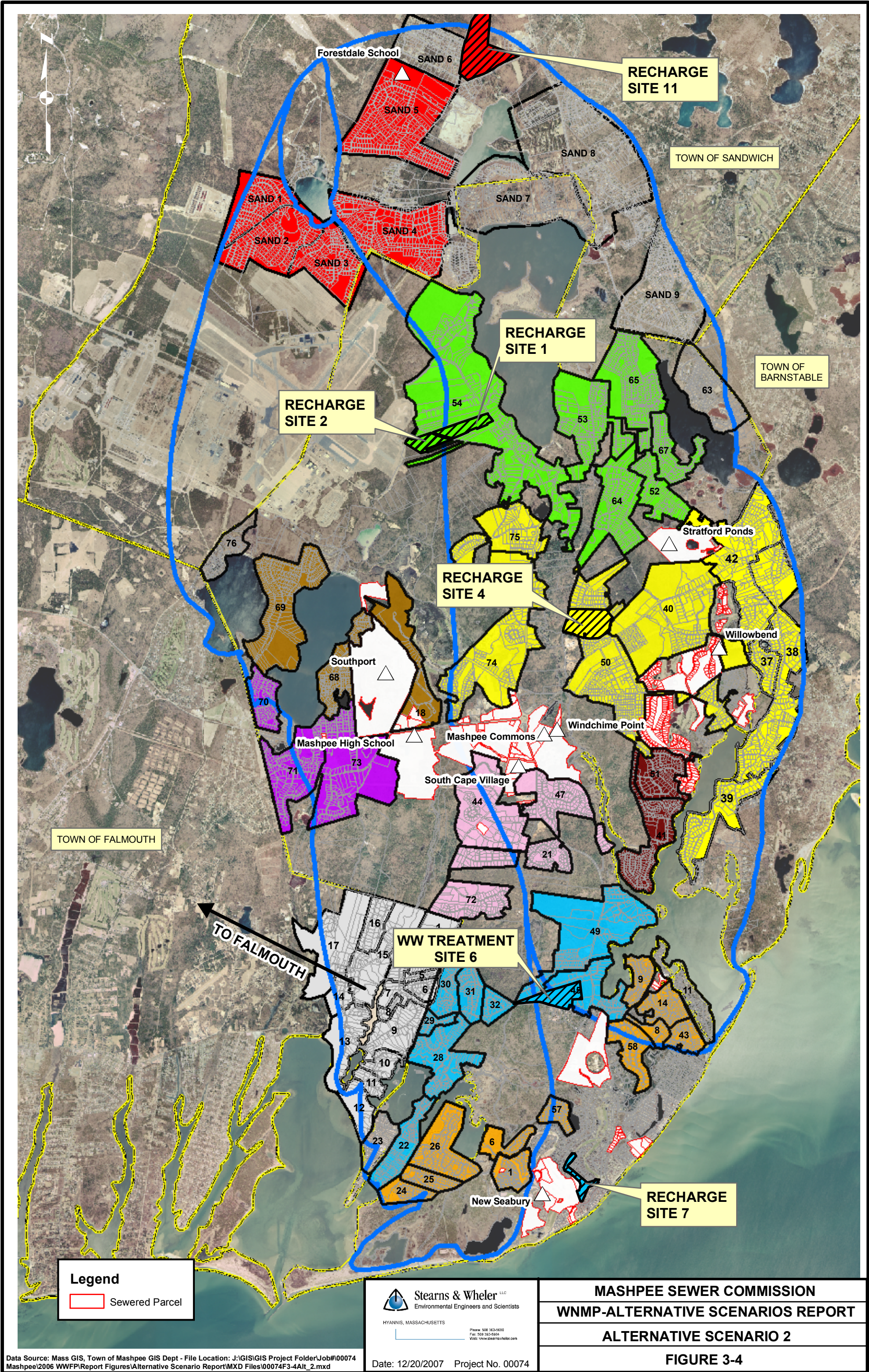
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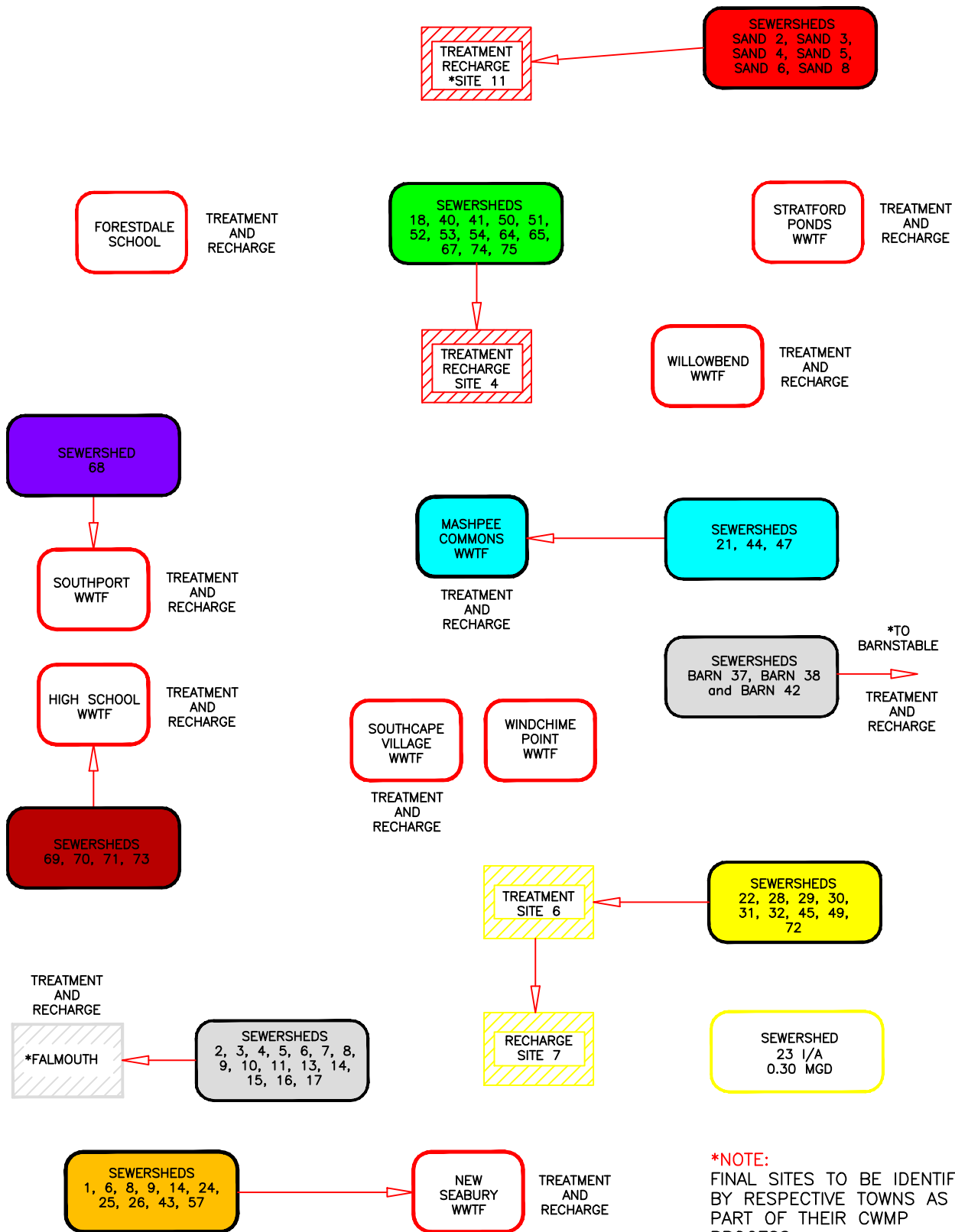
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MASHPEE SEWER COMMISSION
WNMP – ALTERNATIVE SCENARIOS
REPORT

FIGURE 3-3
SCENARIO 2 SCHEMATIC





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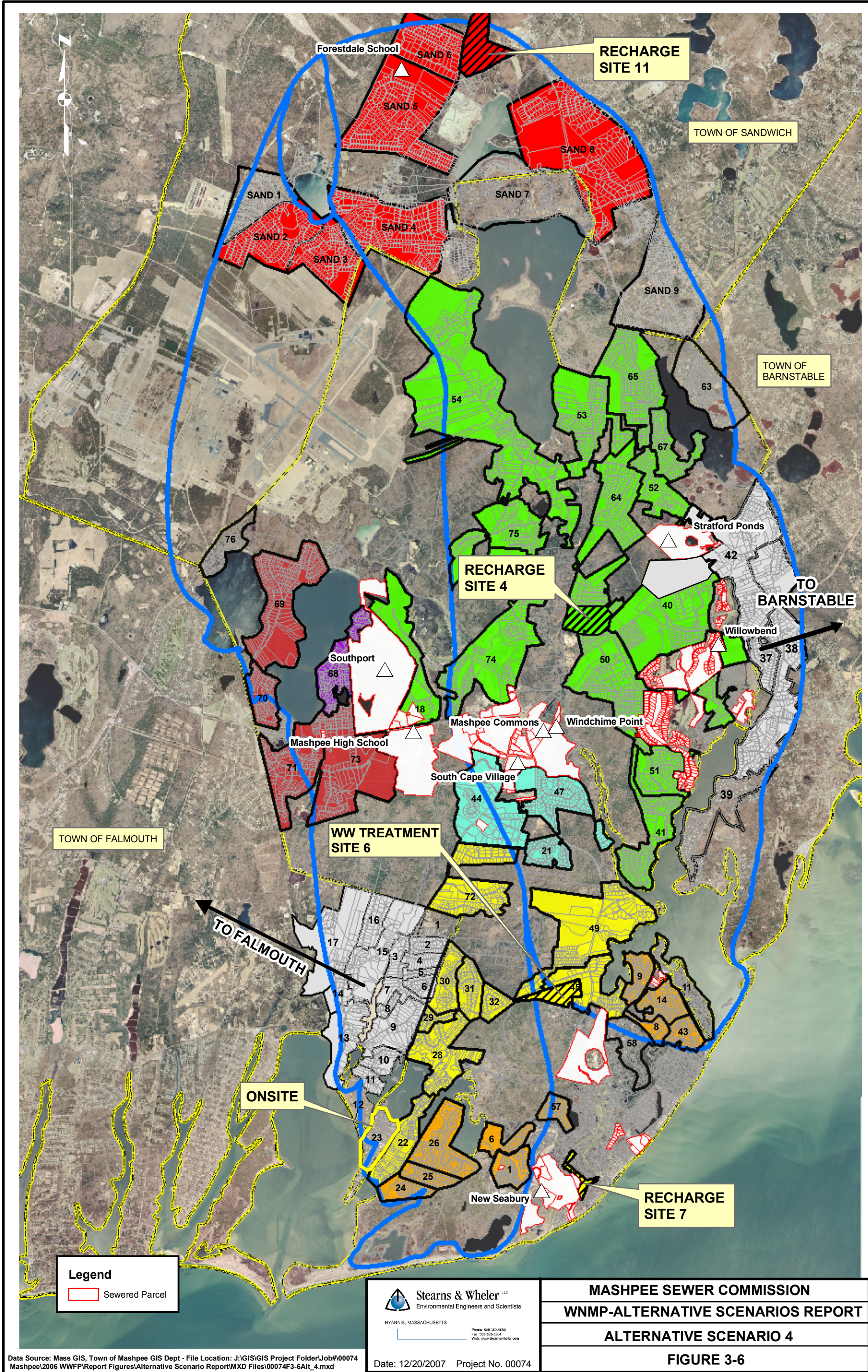
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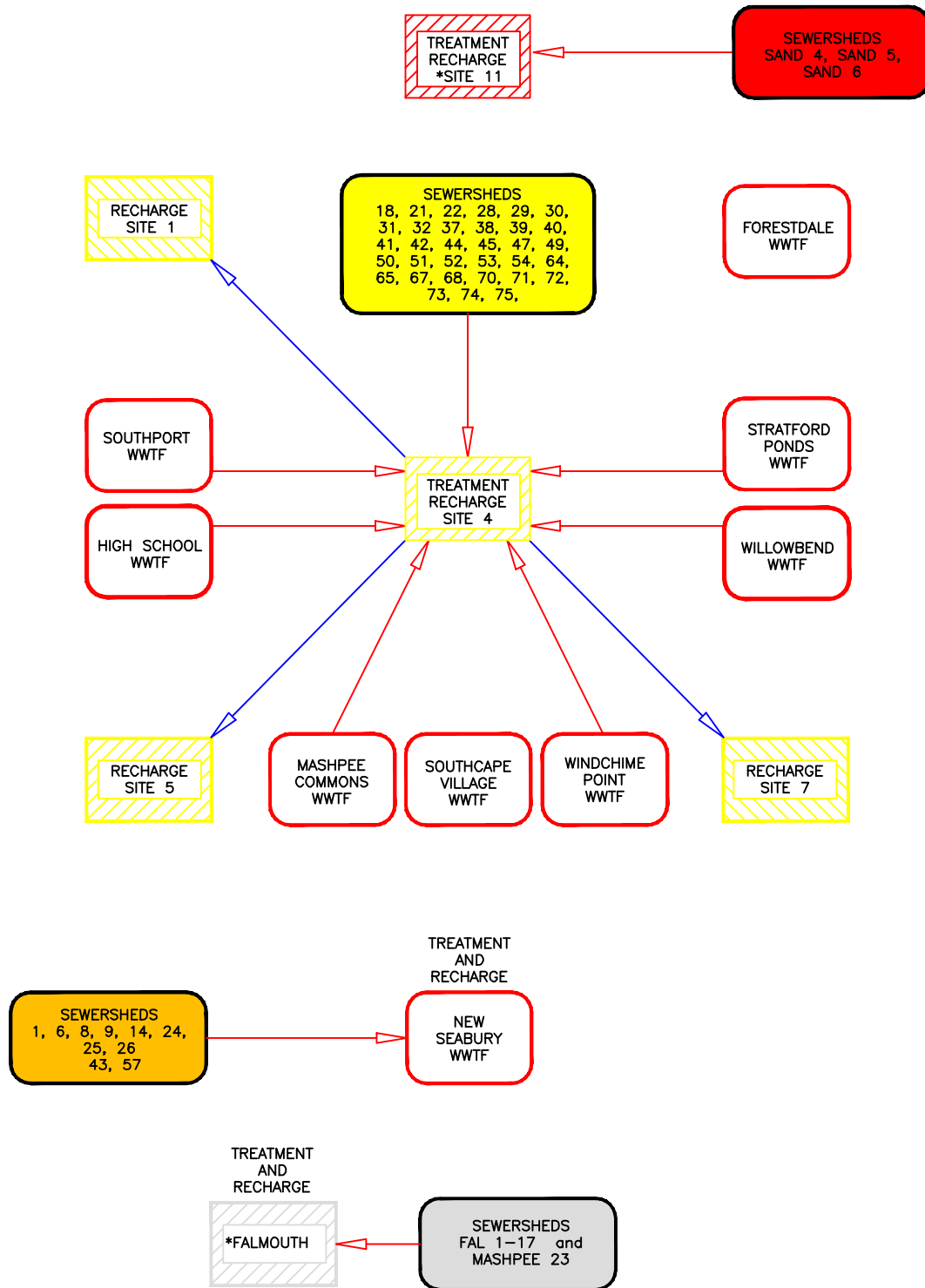
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MASHPEE SEWER COMMISSION
 WNMP – ALTERNATIVE SCENARIOS
 REPORT

FIGURE 3–5
 SCENARIO 4 SCHEMATIC



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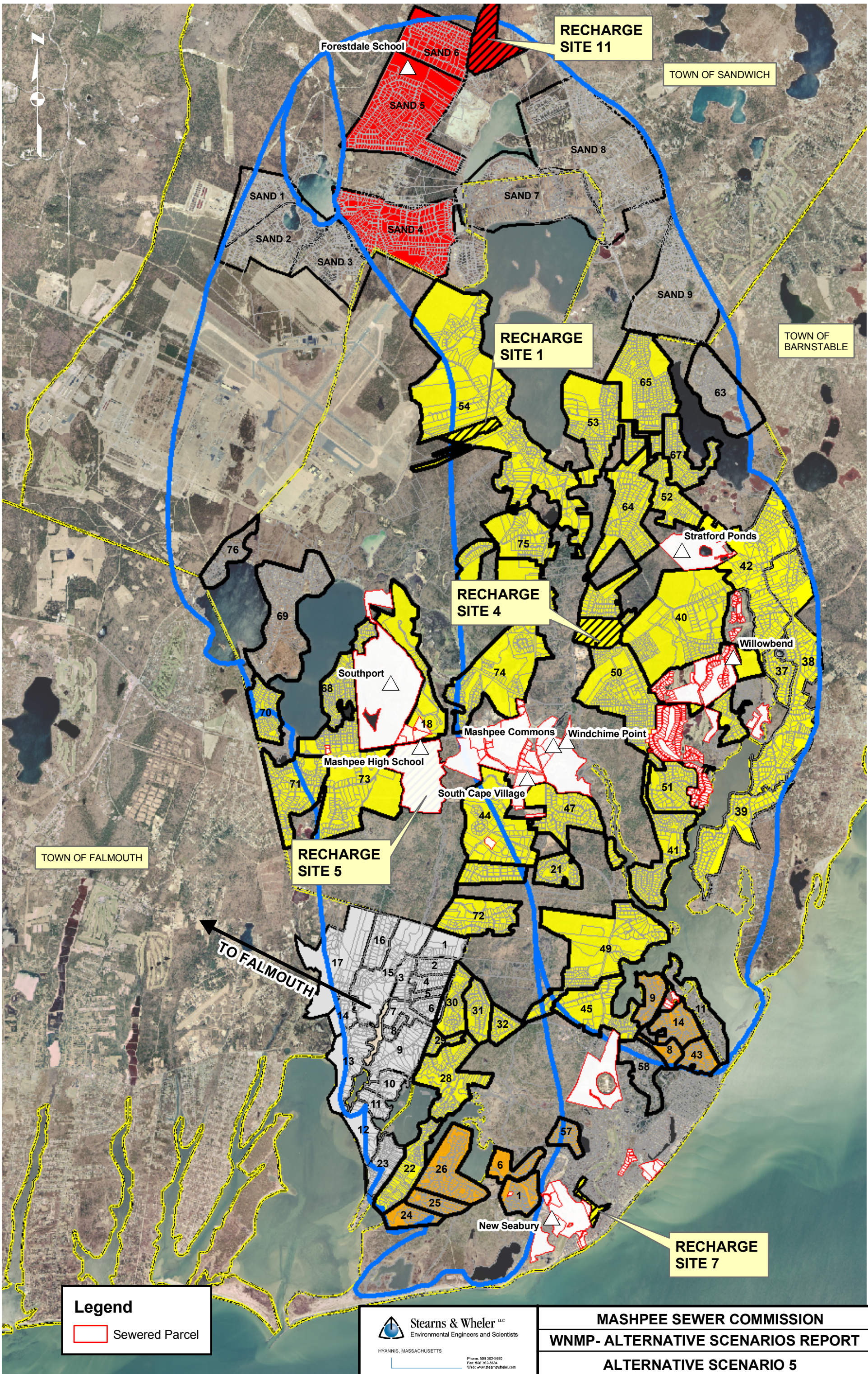
HYANNIS, MA

DATE:03/08

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MASHPEE SEWER COMMISSION
WNMP – ALTERNATIVE SCENARIO
REPORT

FIGURE 3-7
SCENARIO 5 SCHEMATIC



Appendix A

Table IV-5. Eastern Waquoit Bay System Nitrogen Loads. Build-out is based on current zoning and represents additional un-attenuated N expected in the future.

*All values in kilograms/year		Mashpee N Loads by Input:							% of Pond Outflow	Present N Loads		
Name	Watershed ID#	From Septic Systems	From WWTF	Lawn Fertilizers	Impervious Surfaces	Water Body Surface Area	"Natural" Surfaces	Buildout		UnAtten N Load	Atten %	Atten N Load
E Waquoit Bay	1 to 20 (minus 21)	13517	159	1981	2910	3959	1413	13105		23938		18823
Quashnet River	1 to 8, 19, 20 (-21)	6759	159	993	2419	2254	996	10095		13580		9882
Upper Quashnet River	1 to 6, 19, 20 (-21)	5893	159	888	2366	2040	943	9743		12289		8591
Moody Pond (MP)	5	87	0	6	184	35	44	101	44%	356	50%	178
Turner Road Well No. 5	19	95	0	0	2	0	10	51		108		108
Mashpee Well No. 1	20	62	0	0	20	0	4	27		87		87
Johns Pond Summary (JPS)	4 + AP, WP, SNP, MP	1643	7	164	1375	1562	270	1318	67%	5021	50%	2113
Johns Pond (JP)	4	1805	0	189	1412	1499	207	497		5111		5111
Snake Pond (SNP)	1	3	0	2	1	73	10	6	21%	89	50%	44
Moody Pond (MP)	5	108	0	7	231	44	55	126	56%	445	50%	223
Weeks Pond (WP)	2 + SNP	43	0	5	8	86	9	19	70%	151	50%	63
Ashumet Pond (AP)	3	474	10	40	387	614	120	1305	65%	1645	50%	822
Removed from AP watershed by J Well												
MMR J Well	21	679	0	48	47	0	30	66		804		
Weeks Pond (WP)	2 + SNP	19	0	2	3	37	4	8	30%	54	50%	27
Middle Quashnet River	7	658	0	42	44	122	45	315		911		911
Lower Quashnet River	8	208	0	63	9	92	8	37		380		380
Hamblin Pond/Red Brook	9 to 12	4386	0	319	278	635	217	2330		5835		4417
Red Brook	9	2366	0	165	157	0	146	1701		2835	50%	1418
Lower Red Brook	10	459	0	45	37	20	20	205		581		581
Hamblin Pond	11	1227	0	73	57	558	44	366		1958		1958
Little River	12	334	0	37	26	57	7	59		461		461
Jehu Pond/Great River	13 to 15	1956	0	368	178	723	139	629		3365		3365
Great River	13	131	0	16	21	202	81	329		451		451
Jehu Pond	14	966	0	239	72	246	39	146		1563		1563
Lower Great River	15	858	0	113	85	275	20	154		1351		1351
Sage Lot/Flat Pond	16 to 18	416	0	300	35	346	61	51		1159		1159
Flat Pond	16	253	0	278	17	174	34	0		756		756
Flat / Sage Lot Ponds Transition	17	163	0	22	19	0	12	51		215		215
Sage Lot Pond	18	0	0	0	0	172	16	0		188		188

Note: Unattenuated buildout nitrogen load is sum of additions to wastewater (septic system and WWTF), fertilizers, and impervious surface caused by the development of undeveloped parcels within the subwatersheds.

Table IV-5. Popponesset Bay System Nitrogen Loads.

*All values in kilograms/year		<i>Popponesset Bay Subwatershed N Loads by Input:</i>							% of Pond Outflow	<i>Present N Loads</i>			<i>Buildout N Loads</i>		
Name	Watershed ID#	Wastewater	From WWTF	Lawn Fertilizers	Impervious Surfaces	Water Body Surface Area	"Natural" Surfaces	Buildout		UnAtten N Load	Atten %	Atten N Load	UnAtten N Load	Atten %	Atten N Load
Popponesset Bay System	11, 12, 13, 14 + Shoestring Bay + Mashpee River	32300	227	3765	2668	7584	1971	9394		48513		31885	57804		39644
Mashpee River	6, 7 + MWP	16199	54	1458	1411	4238	1153	6643		24512		13010	31051		18796
Upper Mashpee River	6 + MWP	12692	0	1206	1016	3996	941	4566		19851	30%	8349	24314	30%	12058
Mashpee-Wakeby Pond (MWP)	1, 2, 3, 4	7828	0	676	513	3989	503	771	100%	13509	50%	5585	14176	50%	5781
Direct to MWP	4	4572	0	421	321	3212	307	117		8833			8950		
Snake Pond (SNP)	1	5	0	3	2	121	17	10	34%	148	50%	74	54	50%	27
Pimlico Pond (PIP)	2	1139	0	90	63	74	42	563	100%	1407	50%	704	1971	50%	985
Peters Pond (PEP)	3	2112	0	163	126	582	138	80	100%	3121	50%	1560	3201	50%	1601
Lower Mashpee River	7	3507	54	251	395	242	212	2077		4661		4661	6737		6737
Shoestring Bay	8, 9, 10, 15, 16 + SAP	12986	173	1978	986	1379	636	2058		18139		13012	20196		14293
Santuit River	9, 16	8853	173	1075	675	564	440	1623		11780	30%	6653	13403	30%	7500
Cotuit Well No. 5	16	329	0	33	16	0	11	66		388		388	454		454
Quaker Run	8, 15	1598	0	405	99	0	82	232		2183		2183	2415		2415
Quaker Run Wells	15	659	0	37	23	0	18	51		736		736	787		787
Santuit Pond (SAP)	5	4386	0	429	326	758	216	1112	100%	6114	50%	3057	7226	50%	3613
Ockway Bay	12	874	0	103	90	399	83	402		1549		1549	1951		1951
GW Flow to Popponesset Bay	11, 13, 14	2241	0	226	180	1568	98	290		4314		4314	4604		4604
Pinquickset Cove	11	210	0	19	10	106	40	80		385		385	465		465
Popponesset Creek	13	1455	0	171	146	0	31	151		1803		1803	1954		1954
Popponesset Bay	14	576	0	36	24	1462	28	59		2126		2126	2185		2185