

Norwich State Hospital Development Analysis Assumptions

Commercial development scenario:

- City will acquire the State Hospital property in January 2010
- EPA grant will pay for entire cost of environmental assessments
- Securing Buildings & other Public Works – estimate of costs to secure buildings, clear overgrowth and other maintenance in the first year and then one man-year of labor for regular maintenance until the environmental remediation is complete. After that, we estimate that the cost of maintaining the roughly 0.5 mile of road that will be turned over to the City to be \$30,000 (Total PW budget \$9.2 million / 161 miles of improved road x 0.5 mile = \$28,571) and will increase by 3% each year.
- Environmental remediation will cost \$5 million and will take 6 years to complete. We assume that 1/3 of these costs will be paid by State and Federal Grants. In order to pay for its portion of the remediation costs, the City will have to pass a bond referendum. These costs will be bonded over 10 years.
- Police/ Security – in order to monitor the property during the environmental remediation process, we estimate that it would cost \$25,000 each year.
- City will need to make a total of \$2,860,000 of utility infrastructure improvements to be able to serve the Gas, Electric, Water, and Sewer needs of such a development. These improvements will be done in phases as each of the three parcels is developed. We assume that ½ of these costs will be paid by State and Federal Grants. In order to pay its share of these improvements, the City will have to pass a bond referendum. These costs will be bonded over 10 years.
- Developers will purchase the property for \$3,315,000 (\$85,000 x 39 developable acres) and build out the 3 parcels.
 - Parcel 2 (28.7 developable acres) will be built out to resemble the mix of businesses on 113 Salem Tpke (shopping plaza), 15 Stott Ave (wholesale distributor), and 201 Salem Tpke (retail). We assume that this parcel will be sold the year after the environmental remediation has been completed and built out in two years.
 - Parcel 3 (2.0 developable acres) will be built out to resemble 79 Wawecus St (medical offices). We assume that this parcel will be sold in the 6th year of the environmental remediation and built out in two years.
 - Parcel 6 (8.3 developable acres) will be built out to resemble 101 High St (offices). We assume that this parcel will be sold in the 4th year of the environmental remediation and built out in two years.
- Revenues from Building Permits and Conveyance Taxes will be collected in the same year the parcels are sold.
- Real Estate and Personal Property taxes will rise at a rate of 2% per year. No Enterprise Zone phase-in will apply.
- The City may have additional costs for Fire and Police services. These costs are difficult to quantify and are not included in this calculation.
- The utilities infrastructure improvements would bring the utilities right to the Preston town line which could open the door for NPU to sell to Preston consumers. This would increase the City's 10% share of gross revenues. These revenues are speculative and difficult to quantify, so they are not included in this calculation.

Norwich State Hospital Development Analysis Assumptions

Residential development scenario:

- City will acquire the State Hospital property in January 2010
- EPA grant will pay for entire cost of environmental assessments
- Securing Buildings & other Public Works – same assumptions as Commercial Development scenario
- Environmental remediation will cost \$7 million and will take 6 years to complete. We assume that 1/3 of these costs will be paid by State and Federal Grants. In order to pay for its portion of the remediation costs, the City will have to pass a bond referendum. These costs will be bonded over 10 years.
- Police/ Security – in order to monitor the property during the environmental remediation process, we estimate that it would cost \$25,000 each year. Then, once the property is transferred over to developers and built out, we estimate the additional cost of police service with the following formula:
 - $\text{Current Police budget} \times \text{Number of new housing units} / \text{Current number of housing units}$
 - $\$10,030,593 \times 156 \text{ units} / 15,794 = \$99,074$
- City will need to make a total of \$2,476,188 of utility infrastructure improvements to be able to serve the Gas, Electric, Water, and Sewer needs of such a development. These improvements will be done in phases as each of the three parcels is developed. The developers will pay the entire cost of the utilities improvements.
- We assume that the residential development will put 0.35 students per household (5,519 students in NPS and NFA as of 10/1/08 divided by 15,794 households = 0.35) into the school system. The cost for this is calculated as follows:
 - $156 \text{ units} \times 0.35 \text{ students/unit} = 54.6 \text{ students}$
 - $\$12,500 \text{ per student (from 2007-08 Strategic School Profile)} \times 54.6 \text{ students} = \$682,500$
 - The education cost could vary widely depending on which market the residential developers are targeting.
- Refuse tipping fees – Average household trash of 4.5 lbs/day x 156 units x 365 days / 2,000 lbs/ton x \$60/ton = \$7,686.90 in tipping fees for SCRRA.
- Once remediation is completed, developers will have purchased all of the parcels for \$4,680,000 (\$120,000 x 39 developable acres).
- Revenues from Building Permits and Conveyance Taxes will be collected in the first year of construction.
- Real Estate taxes will be phased in over 2 years. No Enterprise Zone phase-in will apply.
- Education Cost Sharing grant – based on the 2008-09 ECS Grant entitlement per resident student figure published by the CT Department of Education in January 2009 of \$5,731. $\$5,731 \times 54.6 = \$312,913$
- The City may have additional costs for Fire services. These costs are difficult to quantify and are not included in this calculation.
- The utilities infrastructure improvements would bring the utilities right to the Preston town line which could open the door for NPU to sell to Preston consumers. This would increase the City's 10% share of gross revenues. These revenues are speculative and difficult to quantify, so they are not included in this calculation.

City of Norwich
 Cost-Benefit Analysis of Acquisition of Norwich State Hospital Property
 Commercial Development Scenario

Fiscal Year		1 2010	2 2011	3 2012	4 2013	5 2014	6 2015	7 2016	8 2017	9 2018	10 2019	11 2020	12 2021	13 2022	14 2023	15 2024	16 2025	17 2026	18 2027	19 2028
<i>Expenses</i>	Escalation %																			
Acquisition Costs		28,000																		
Securing buildings & other Public Works	3%	165,000	55,000	56,650	58,350	60,100	61,903	63,760	30,000	30,900	31,827	32,782	33,765	34,778	35,822	36,896	38,003	39,143	40,317	41,527
Environmental assessments		100,000																		
Insurance	3%	38,000	39,140	40,314	41,524	42,769	44,052	45,374												
Police/ Security	3%	25,000	25,750	26,523	27,318	28,138	28,982	29,851												
Environmental remediation			833,333	833,333	833,333	833,333	833,333	833,333												
Loss of State-owned property PILOT funds	2%		82,000	83,640	85,313	87,019	88,759	90,535	92,345	94,192	96,076	97,998	99,958	101,957	103,996	106,076	108,197	110,361	112,568	114,820
Utilities Infrastructure Improvements						953,333	953,333	953,333												
Debt Service - Environmental remediation			80,837	159,147	234,928	308,181	378,905	447,102	431,933	416,764	401,595	386,426	315,701	247,505	181,836	118,696	58,083			
Debt Service - Utilities Infrastructure Improvements						69,359	136,551	201,574	195,070	188,565	182,060	175,555	169,051	162,547	156,043	101,861	49,846			
Total Expenditures		356,000	1,116,061	1,199,607	1,280,766	2,382,233	2,525,819	2,664,862	749,348	730,421	711,558	692,760	618,475	546,787	477,697	363,529	254,130	149,504	152,886	156,347

<i>Revenues</i>																				
EPA Brownfields Assessment Grant		100,000																		
Bond Proceeds - Environmental remediation			555,556	555,556	555,556	555,556	555,556	555,556												
State/Federal Grants - Environmental remediation			277,778	277,778	277,778	277,778	277,778	277,778												
Bond Proceeds - Utilities infrastructure improvements						476,667	476,667	476,667												
State/Federal Grants - Utilities infrastructure improvements						476,667	476,667	476,667												
Sale of Property						830,776		259,679	2,224,545											
Conveyance Taxes (\$3.60/\$1,000)						2,991		935	8,008											
Building Permit revenue						88,327		81,794	318,240											
RE Tax revenue	2%					50,529	101,058	143,792	371,653	556,781	567,917	579,275	590,861	602,678	614,731	627,026	639,567	652,358	665,405	678,713
PP Tax revenue	2%						26,000	26,000	52,000	77,500	79,050	80,631	82,244	83,888	85,566	87,278	89,023	90,804	92,620	94,472
10% of NPU gross utilities revenue	3%						20,856	20,856	25,882	98,000	100,940	103,968	107,087	110,300	113,609	117,017	120,528	124,143	127,868	131,704
Total Revenues		100,000	833,333	833,333	833,333	2,759,290	1,934,581	2,319,723	3,000,328	732,281	747,907	763,874	780,192	796,866	813,907	831,321	849,117	867,305	885,893	904,889

Net Benefit/ (Cost)		(256,000)	(282,727)	(366,274)	(447,432)	377,057	(591,238)	(345,139)	2,250,980	1,860	36,349	71,114	161,717	250,080	336,210	467,792	594,987	717,801	733,007	748,542
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Net Present Value calculation
 Discount Rate 4%

Present Value of each year's net benefit/ (cost)		(246,154)	(261,397)	(325,616)	(382,467)	309,913	(467,264)	(262,278)	1,644,769	1,307	24,556	46,195	101,008	150,191	194,153	259,748	317,669	368,500	361,833	355,290
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30-year PV of Benefit/ (Cost)		5,699,571
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City of Norwich
 Cost-Benefit Analysis of Acquisition of Norwich State Hospit
 Commercial Development Scenario

Fiscal Year		20 2029	21 2030	22 2031	23 2032	24 2033	25 2034	26 2035	27 2036	28 2037	29 2038	30 2039	30-year TOTAL
<i>Expenses</i>	Escalation %												
Acquisition Costs													28,000
Securing buildings & other Public Works	3%	42,773	44,056	45,378	46,739	48,141	49,585	51,073	52,605	54,183	55,809	57,483	1,494,349
Environmental assessments													100,000
Insurance	3%												291,174
Police/ Security	3%												191,562
Environmental remediation													5,000,000
Loss of State-owned property PILOT funds	2%	117,116	119,459	121,848	124,285	126,770	129,306	131,892	134,530	137,220	139,965	142,764	3,180,963
Utilities Infrastructure Improvements													2,860,000
Debt Service - Environmental remediation													4,167,639
Debt Service - Utilities Infrastructure Improvements													1,788,082
Total Expenditures		159,889	163,515	167,225	171,024	174,912	178,891	182,965	187,135	191,404	195,774	200,247	19,101,768

Revenues

EPA Brownfields Assessment Grant													100,000
Bond Proceeds - Environmental remediation													3,333,333
State/Federal Grants - Environmental remediation													1,666,667
Bond Proceeds - Utilities infrastructure improvements													1,430,000
State/Federal Grants - Utilities infrastructure improvements													1,430,000
Sale of Property													3,315,000
Conveyance Taxes (\$3.60/\$1,000)													11,934
Building Permit revenue													488,361
RE Tax revenue	2%	692,287	706,133	720,256	734,661	749,354	764,341	779,628	795,221	811,125	827,348	843,895	15,866,593
PP Tax revenue	2%	96,362	98,289	100,255	102,260	104,305	106,391	108,519	110,689	112,903	115,161	117,464	2,219,671
10% of NPU gross utilities revenue	3%	135,655	139,725	143,916	148,234	152,681	157,261	161,979	166,838	171,844	176,999	182,309	3,060,199
Total Revenues		924,304	944,147	964,427	985,154	1,006,340	1,027,993	1,050,126	1,072,748	1,095,872	1,119,507	1,143,668	32,921,759

Net Benefit/ (Cost) **764,415 780,632 797,201 814,131 831,428 849,102 867,161 885,613 904,468 923,734 943,421 13,819,991**

Net Present Value calculation

Discount Rate 4%
 Present Value of each year's net benefit/ (cost) **348,869 342,568 336,383 330,314 324,358 318,513 312,776 307,145 301,620 296,197 290,874**

30-year PV of Benefit/ (Cost)

Utilities Infrastructure Bond Costs

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Amount 476,667 1/3 of City's share of Utilities infrastructure costs
 Rate 4.50%
 Years 10

Year	Principal	Interest	Total	Principal Remaining
				476,667
1	47,667	21,691	69,359	429,000
2	47,667	19,522	67,191	381,333
3	47,667	17,353	65,023	333,666
4	47,667	15,184	62,855	285,999
5	47,667	13,014	60,686	238,332
6	47,667	10,845	58,518	190,665
7	47,667	8,676	56,350	142,998
8	47,667	6,507	54,182	95,331
9	47,667	4,338	52,014	47,664
10	47,667	2,169	49,846	(3)

476,670	119,302	596,027
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Year 1	69,359			69,359
Year 2	67,191	69,359		136,551
Year 3	65,023	67,191	69,359	201,574
Year 4	62,855	65,023	67,191	195,070
Year 5	60,686	62,855	65,023	188,565
Year 6	58,518	60,686	62,855	182,060
Year 7	56,350	58,518	60,686	175,555
Year 8	54,182	56,350	58,518	169,051
Year 9	52,014	54,182	56,350	162,547
Year 10	49,846	52,014	54,182	156,043
Year 11		49,846	52,014	101,861
Year 12			49,846	49,846

596,027	596,027	596,027	1,788,082
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City of Norwich
 Cost-Benefit Analysis of Acquisition of Norwich State Hospit
 Residential Development Scenario

		17	18	19	20	21	22	23	24	25	26	27	28	29	30	30-year
	Fiscal Year	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	TOTAL
<i>Expenses</i>	Escalation															
	%															
Acquisition Costs																28,000
Securing buildings & other Public Works	3%	39,143	40,317	41,527	42,773	44,056	45,378	46,739	48,141	49,585	51,073	52,605	54,183	55,809	57,483	1,494,349
Environmental assessments																100,000
Insurance	3%															291,174
Police/ Security	3%	129,269	133,147	137,141	141,256	145,493	149,858	154,354	158,984	163,754	168,667	173,727	178,938	184,307	189,836	3,406,794
Environmental remediation																7,000,000
Loss of State-owned property PILOT funds	2%	110,361	112,568	114,820	117,116	119,459	121,848	124,285	126,770	129,306	131,892	134,530	137,220	139,965	142,764	3,180,963
Utilities Infrastructure Improvements																2,476,188
Education	4%	934,048	971,410	1,010,267	1,050,677	1,092,704	1,136,413	1,181,869	1,229,144	1,278,310	1,329,442	1,382,620	1,437,925	1,495,442	1,555,259	23,842,364
Refuse tipping fees	2%	9,006	9,187	9,370	9,558	9,749	9,944	10,143	10,346	10,552	10,764	10,979	11,198	11,422	11,651	215,117
Debt Service - Environmental remediation																5,834,671
Total Expenditures		1,221,828	1,266,630	1,313,125	1,361,380	1,411,461	1,463,440	1,517,389	1,573,385	1,631,507	1,691,837	1,754,460	1,819,465	1,886,944	1,956,993	47,869,620

Revenues

EPA Brownfields Assessment Grant																100,000
Bond Proceeds - Environmental remediation																4,666,667
State/Federal Grants - Environmental remediation																2,333,333
Developer reimbursement for utilities costs																2,476,188
Sale of Property																4,680,000
Conveyance Taxes (\$3.60/\$1,000)																16,848
Building Permit revenue																411,060
RE Tax revenue	2%	555,768	566,884	578,221	589,786	601,582	613,613	625,885	638,403	651,171	664,195	677,479	691,028	704,849	718,946	13,511,603
MV Tax revenue	2%	64,375	65,662	66,975	68,315	69,681	71,075	72,496	73,946	75,425	76,934	78,472	80,042	81,643	83,276	1,537,579
Education Cost Sharing	2%	366,627	373,960	381,439	389,067	396,849	404,786	412,882	421,139	429,562	438,153	446,916	455,855	464,972	474,271	8,756,822
10% of NPU gross utilities revenue	3%	51,578	53,125	54,719	56,360	58,051	59,793	61,587	63,434	65,337	67,297	69,316	71,396	73,538	75,744	1,271,263
Total Revenues		1,038,348	1,059,631	1,081,354	1,103,529	1,126,163	1,149,267	1,172,850	1,196,923	1,221,496	1,246,579	1,272,183	1,298,320	1,325,001	1,352,236	39,761,362

Net Benefit/ (Cost)		(183,480)	(206,999)	(231,771)	(257,851)	(285,298)	(314,173)	(344,539)	(376,463)	(410,012)	(445,258)	(482,277)	(521,145)	(561,943)	(604,757)	(8,108,258)
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Net Present Value calculation

Discount Rate	4%															
Present Value of each year's net benefit/ (cost)		(94,194)	(102,181)	(110,008)	(117,680)	(125,198)	(132,567)	(139,789)	(146,866)	(153,802)	(160,600)	(167,262)	(173,790)	(180,188)	(186,458)	

30-year PV of Benefit/ (Cost)

Commercial Development Scenario

			From Assessor's Records							Estimated building permits for similar new building		Conveyance Taxes
Location	Owner's Name	Style Desc	Land Area in Acres	10/1/08 Land Assessment	10/1/08 Building Assessment	10/1/08 Total Assessment	General Fund Mill Rate	RE Taxes	PP Taxes	Sales value		
<u>Parcel 2</u>												
113 SALEM TPK	PLAZA ENTERPRISES	Retail	10.71	1,948,000	10,337,000	12,285,000	23.48	288,452	3,500 *	251,041	1,045,254	3,762.91
15 STOTT AVE	LEVINE DISTRIBUTING COMPANY INC	Warehouse/Off	9.48	521,000	1,685,000	2,206,000	23.48	51,797	18,000	40,921	925,470	3,331.69
201 SALEM TPK	201 SALEM TURNPIKE LLC	Vacant Land	2.60	196,000	1,082,000	1,278,000	23.48	30,007	4,000	26,277	253,821	913.75
			22.79	2,665,000	13,104,000	15,769,000		370,256	25,500	318,240	2,224,545	8,008
<u>Parcel 3</u>												
79 WAWECUS ST	WAWECUS MEDICAL ASSOCIATES LLC	Profess. Bldg	2.66	272,000	3,368,000	3,640,000	23.48	85,467	26,000	81,794	259,679	934.84
<u>Parcel 6</u>												
101 HIGH ST	NEW LONDON COUNTY MUTUAL INS C	Office Bldg	8.51	667,000	3,637,000	4,304,000	23.48	101,058	26,000	88,327	830,776	2,990.79
			33.96	3,604,000	20,109,000	23,713,000		556,781	77,500	488,361	3,315,000	11,934

[Redacted] Preliminary assessment. Final assessment hasn't yet been determined by Assessor's office.

The RE & PP taxes above are just the General Fund taxes

* We do not have any personal property records for this property yet.

Residential Development Scenario

Location	Developable Acres	# Housing Units (rounded to nearest whole unit)	Land Value per unit	Building value per unit	Total Construction Value	Building Permits (\$17/\$1,000)	RE Taxes	MV Taxes	Sales price to Developer	Conveyance Taxes	
Parcel 2		28.70	115	30,000	155,000	17,825,000	303,025	349,676	40,503	3,444,000	12,398
Parcel 3		2.00	8	30,000	155,000	1,240,000	21,080	24,325	2,818	240,000	864
Parcel 6		8.30	33	30,000	155,000	5,115,000	86,955	100,342	11,623	996,000	3,586
		39.00	156.00			24,180,000	411,060	474,343	54,943	4,680,000	16,848

156 units based on 4 units per acre on 39 usable acres

Building Permits

2008 Norwich Median Home Sales Price (Commercial Record)	185,000
Less: land value (assume \$120,000 per acre / 4)	(30,000)
Construction value per unit	155,000

Utilities Revenue

Estimated NPU payment to City	40,716.00	Source: NPU
Divided by 156 Units	261.00	

Multiplied by 156 units	24,180,000
Building Permits \$17 per \$1,000 of building value	411,060

Education Costs/ Revenues

Total 10/1/2008 Student enrollment	5,519.00	NPS
2008 Number of Households	15,794.00	January 2009 CERC profile
Ration Students/Households	0.35	
2007-08 Average cost per student	12,500.00	2007-08 Norwich Strategic School Profile
2008-09 ECS grant payment per pupil	5,731.00	January 2009 ECS Grant program Dept of Ed publication

Real Estate Taxes

2008 Norwich Median Home Sales Price (Commercial Record)	185,000
70% assessment	129,500
Mill rate	23.48
Taxes per unit	3,040.66
Multiplied by 156 units	474,343

Refuse

Estimated taxable value of 2 vehicles	15,000	Google search on lbs/household yielded articles showing between 4.4 and 4.6 lbs/household per day
Mill rate	23.48	
Taxes per unit	352.20	
Multiplied by 156 units	54,943	
Average lbs/household	4.50	
Pounds per household per year	1,642.50	
Tons per year	0.82	
Refuse tipping fee per ton	60	
Cost per household per year	49.28	