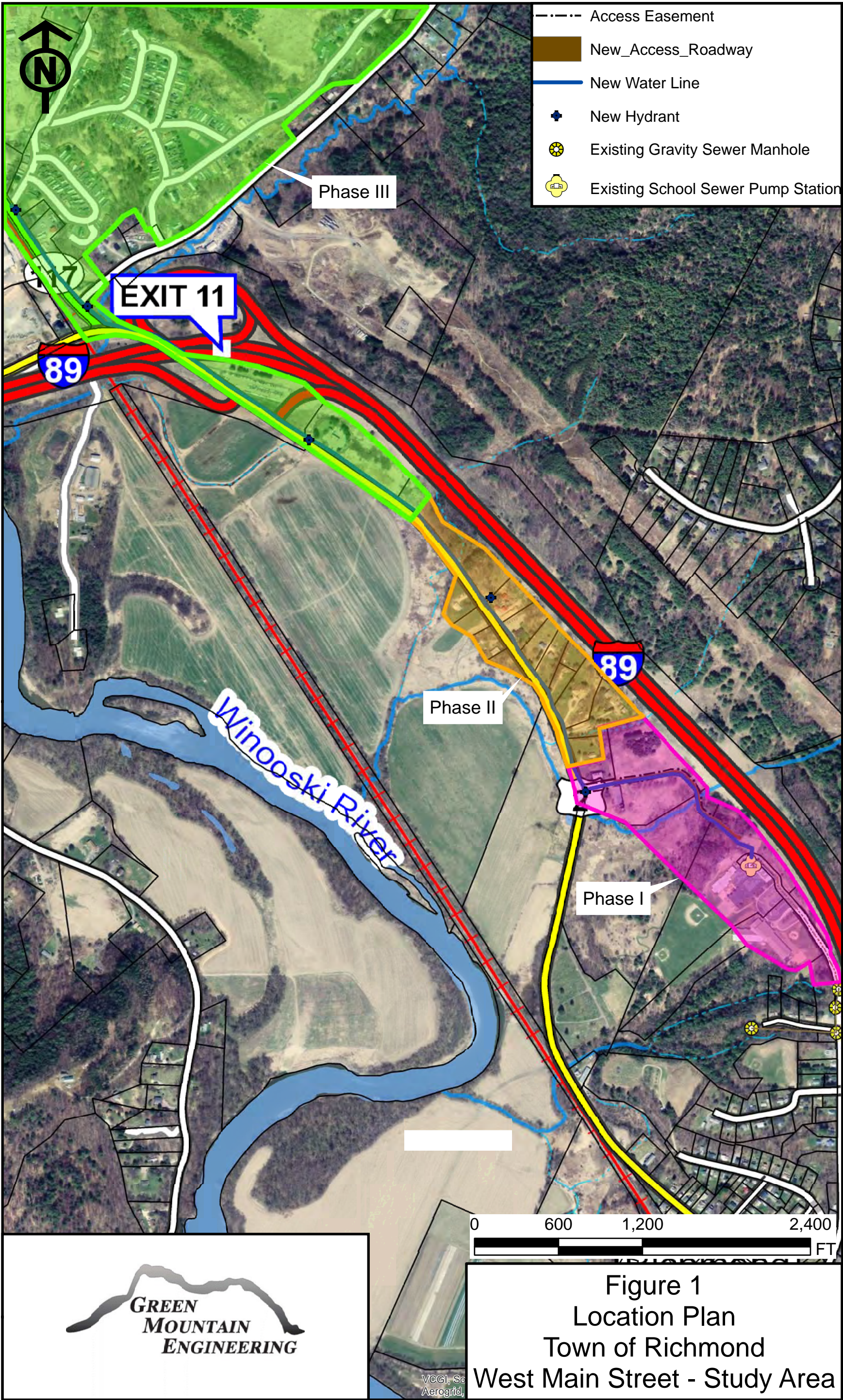


## UPDATED 12/1/14 STUDY AREA INFORMATION

- The attached Tables and Spreadsheets are based on existing uses in the Study Area and do not have additional flows, revenues or fees included for any new development.
- Updated flow/ hook on fee and annual revenue projections (Attached Tables 3, 3A, 10A, 17 and 18);
  1. Revised to show flow numbers and related fees/revenue as close as possible to that actually anticipated.
  2. Construction Cost is easier to predict than the revenue side due to revenue variables such as actual flow and number of connections.
- The revenue for a Phase I and II (Spreadsheet #1) only project shows a capital investment of approximately \$247,440 would be required if the fees and revenues calculated as outlined herein are used, resulting in an increase in water/sewer rates of \$0.
- The revenue for Phase I, II and III (Spreadsheet #2) shows no capital investment would be required if the fees and revenues calculated as outlined herein are used, resulting in a decrease in water/sewer rates of approximately \$216/yr.
- Spreadsheet (#3) outlines revenue Phase I, II and III construction, no capital investment and the result if 60% of anticipated flow/fees/revenue of that shown in Spreadsheet #2 are achieved after initial construction. This shows there is still a moderate savings for all users of approximately \$31/yr.
- Additional development would generate additional use and additional revenue, thus representing additional future benefits to the system.







**Table 3**  
**Estimated Study Area Water and Wastewater Existing Flow Demand**

<b>Phase/ Address</b>	<b>Use Description</b>	<b>User Type</b>	<b>Quantity</b>	<b>Flow* Basis</b>	<b>Ave. Daily Flow (gpd)</b>
<b>Phase 1</b>					
840 W Main	Commercial	Reap Office Building/ Employees	42	15 gpd/staff	630
<b>Subtotal Phase 1</b>					<b>630</b>
<b>Phase 2</b>					
878 W Main	Residential	Single Family Home	1	100 gpd/Unit	100
920 W Main	Res./Commercial	Single Family Home/Tow Business	1	100 gpd/Unit	100
932 W Main	Residential	Single Family Home/Home Business	1	100 gpd/Unit	100
978 W Main	Residential	Single Family Home	1	100 gpd/Unit	100
1010-1014 W Main	Residential	Duplex	2	100 gpd/Unit	200
1008-1012 W Main	Residential	Duplex	2	210 gpd/Unit	200
1070 W Main	Commercial	Office Bldg/Employees	20	15 gpd/staff	300
1108 W Main	Commercial	Dog Day Care Employees Kennels Grooming Station	8 40 1	15 gpd/staff 25 gpd/kennel 400 gpd/station	120 1,000 400
1151 W Main	Res./Commercial	Residence Chiropractor Office	1 3 16	100 gpd/Unit 35 gpd/staff 10 gpd/patient	100 105 160
-	Vacant	Hay barn	-	-	-
-	Vacant	Field South Side	-	-	-
-	Vacant	Empty Lot	-	-	-
<b>Subtotal Phase 2</b>					<b>2,985</b>
<b>Subtotal Phase 1 and 2</b>					<b>3,615</b>
<b>Phase 3</b>					
1436 W Main	Commercial Gas Station	1 <sup>st</sup> Pump Set Additional Pump Sets Employees	1 3 6	500 gpd/Pump 300 gpd/Pump 15 gpd/staff	500 900 90
9 Gov. Peck	Commercial- Fuel	Employees	8	15 gpd/staff	120
116 River Rd	Commercial Fuel	Employees	10	15 gpd/staff	150
Rt 117	Mobile Home Park	Mobile Homes	148	142 gpd/MH	21,016
<b>Subtotal Phase 3</b>					<b>22,626</b>
<b>Subtotal Phase 1, 2 and 3</b>					<b>26,241</b>

\*Based on estimates, State "book flows" or existing State Permits except for Mobile Home Park which is metered

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Table 3A

## Estimated Study Area Water System Hook-On Fees

Phase/ Address	Use Description	User Type	Quantity	Flow For Fee Basis*	Average Daily Flow (gpd)	Hook- On Fee*
<b>Phase 1</b>						
840 W Main	Commercial	Reap Office Building/ Employees	42	15 gpd/staff	630	\$1,341
<b>Subtotal Phase 1</b>					<b>630</b>	<b>\$1,341</b>
<b>Phase 2</b>						
878 W Main	Residential	Single Family Home	1	450 gpd/Unit	450	\$1,001
920 W Main	Res./Commercial	Single Family Home/Tow Business	1	450 gpd/Unit	450	\$1,001
932 W Main	Res./Commercial	Single Family Home/ Home Business	1	450 gpd/Unit	450	\$1,001
978 W Main	Residential	Single Family Home	1	450 gpd/Unit	450	\$1,001
1010-1014 W Main	Residential	Duplex	2	450 gpd/Unit	900	\$1,851
1008-1012 W Main	Residential	Duplex	2	450 gpd/Unit	900	\$1,851
1070 W Main	Commercial	Office Building/Employees	20	15 gpd/staff	300	\$717
1108 W Main	Commercial	Dog Day Care Employees Kennels Grooming Station	8 40 1	15 gpd/staff 25 gpd/kennel 400 gpd/station	120 1,000 400	\$3,023
920 W Main	Res./Commercial	Residence Chiropractor Office	1 3 16	450 gpd/Unit 35 gpd/staff 10 gpd/patient	450 105 160	\$1,501
-	Vacant	Hay barn	-	-	-	
-	Vacant	Field South Side	-	-	-	
-	Vacant	Empty Lot	-	-	-	
<b>Subtotal Phase 2</b>					<b>6,135</b>	<b>\$12,947</b>
<b>Subtotal Phase 1 and 2</b>					<b>6,765</b>	<b>\$14,288</b>
<b>Phase 3</b>						
1436 W Main	Commercial - Gas Station	1 <sup>st</sup> Pump Set Additional Pump Sets Employees	1 3 6	500 gpd/Pump 300 gpd/Pump 15 gpd/staff	500 900 90	\$2,966
9 Gov. Peck	Commercial -Fuel	Employees	8	15 gpd/staff	120	\$377
116 River Rd	Commercial- Fuel	Employees	10	15 gpd/staff	150	\$433
Rt 117	Mobile Home Park	Mobile Home	148	250 gpd/MH	37,000	\$70,080
<b>Subtotal Phase 3</b>					<b>38,760</b>	<b>\$73,856</b>
<b>Subtotal Phase 1, 2 and 3</b>					<b>45,525</b>	<b>\$88,144</b>

\*Based on estimates State "book flows" or existing State Permits

\*\*gpd x 1.89/Gal/Day + \$150 Inspection Fee

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**Table 10A**  
**Estimated Study Area Wastewater Hook-On Fees**

<b>Phase/ Address</b>	<b>Use Description</b>	<b>User Type</b>	<b>Quantity</b>	<b>Flow For Fee Basis*</b>	<b>Average Daily Flow (gpd)</b>	<b>Hook-On Fee*</b>
<b>Phase 1</b>						
840 W Main	Commercial	Reap Office Building/ Employees	42	15 gpd/staff	630	\$2,928
<b>Subtotal Phase 1</b>					<b>630</b>	<b>\$2,928</b>
<b>Phase 2</b>						
878 W Main	Residential	Single Family Home	1	210 gpd/Unit	210	\$1,076
920 W Main	Res./Commercial	Single Family Home/Tow Business	1	210 gpd/Unit	210	\$1,076
932 W Main	Residential	Single Family Home/Home Business	1	210 gpd/Unit	210	\$1,076
978 W Main	Residential	Single Family Home	1	210 gpd/Unit	210	\$1,076
1010-1014 W Main	Residential	Duplex	2	210 gpd/Unit	420	\$2,002
1008-1012 W Main	Residential	Duplex	2	210 gpd/Unit	420	\$2,002
1070 W Main	Commercial	Office Bldg/Employees	20	15 gpd/staff	300	\$1,473
1108 W Main	Commercial	Dog Day Care Employees Kennels Grooming Station	8 40 1	15 gpd/staff 25 gpd/kennel 400 gpd/station	120 1,000 400	\$6,853
1151 W Main	Res./Commercial	Residence Chiropractor Office	1 3 16	210 gpd/Unit 35 gpd/staff 10 gpd/patient	210 105 160	\$2,245
-	Vacant	Hay barn	-	-	-	
-	Vacant	Field South Side	-	-	-	
-	Vacant	Empty Lot	-	-	-	
<b>Subtotal Phase 2</b>					<b>3,975</b>	<b>\$18,879</b>
<b>Subtotal Phase 1 and 2</b>					<b>4,605</b>	<b>\$21,807</b>
<b>Phase 3</b>						
1436 W Main	Commercial Gas Station	1 <sup>st</sup> Pump Set Additional Pump Sets Employees	1 3 6	500 gpd/Pump 300 gpd/Pump 15 gpd/staff	500 900 90	\$6,721
9 Gov. Peck	Commercial-Fuel	Employees	8	15 gpd/staff	120	\$679
116 River Rd	Commercial -Fuel	Employees	10	15 gpd/staff	150	\$812
Rt 117	Mobile Home Park	Mobile Homes	148	210 gpd/MH	31,080	\$137,213
<b>Subtotal Phase 3</b>					<b>32,840</b>	<b>\$145,425</b>
<b>Subtotal Phase 1, 2 and 3</b>					<b>37,445</b>	<b>\$167,233</b>

\*Based on estimates, State "book flows" or existing State Permits

\*\*gpd x 4.41/Gal/Day + \$150 Inspection Fee

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**Table 17**  
**Estimated Study Area Existing Water Revenue**

<b>Phase/ Address</b>	<b>Use Description</b>	<b>User Type</b>	<b>Yearly* Quantity</b>	<b>Unit Cost</b>	<b>Annual Revenue</b>
<b>Phase 1</b>					
840 W Main	Commercial	Reap Office Building/ Employees	4 229,950	\$381.00/unit \$9.77/1,000 gal	\$1,524 \$2,247
<b>Subtotal Phase 1</b>					<b>\$3,771</b>
<b>Phase 2</b>					
878 W Main	Residential	Single Family Home	1 36,500	\$130.64/unit \$10.43/1,000 gal	\$130.64 \$381
920 W Main	Res./ Commercial	Single Family Home/Tow Business	1 36,500	\$130.64/unit \$10.43/1,000 gal	\$130.64 \$381
932 W Main	Residential	Single Family Home/ Home Business	1 36,500	\$130.64/unit \$10.43/1,000 gal	\$130.64 \$381
978 W Main	Residential	Single Family Home	1 36,500	\$130.64/unit \$10.43/1,000 gal	\$130.64 \$381
1010- 1014 W Main	Residential	Duplex	2 73,000	\$130.64/unit \$10.43/1,000 gal	\$261.28 \$761
1008- 1012 W Main	Residential	Duplex	2 73,000	\$130.64/unit \$10.43/1,000 gal	\$261.28 \$761
1070 W Main	Commercial	Office Building/Employees	4 109,500	\$381.00/unit \$9.77/1,000 gal	\$1,524 \$1,070
1108 W Main	Commercial	Dog Day Care	1 554,800	\$381.00/unit \$9.77/1,000 gal	\$381 \$5,420
1151 W Main	Res./ Commercial	Residence Chiropractor Office	1 133,225	\$130.64/unit \$10.43/1,000 gal	\$130.64 \$1,389
<b>Subtotal Phase 2</b>					<b>\$12,961</b>
<b>Subtotal Phase 1 and 2</b>					<b>\$16,732</b>
<b>Phase 3</b>					
1436 W Main	Commercial	Gas Station	1 543,850	\$381.00/unit \$9.77/1,000 gal	\$381 \$5,313
9 Gov. Peck	Commercial	Employees	1 43,800	\$381.00/unit \$9.77/1,000 gal	\$381 \$428
116 River Rd	Commercial	Employees	1 54,750	\$381.00/unit \$9.77/1,000 gal	\$381 \$535
Rt 117	Mobile Home Park	Mobile Homes	148 7,670,840	\$130.64/unit \$10.43/1,000 gal	\$19,335 \$80,007
<b>Subtotal Phase 3</b>					<b>\$106,761</b>
<b>Subtotal Phase 1, 2 and 3</b>					<b>\$123,493</b>

\* Based on Table 3 values x 365 days/year

**Table 18**  
**Estimated Study Area Existing Wastewater Revenue**

<b>Phase/ Address</b>	<b>Use Description</b>	<b>User Type</b>	<b>Yearly Quantity*</b>	<b>Unit Cost</b>	<b>Annual Revenue</b>
<b>Phase 1</b>					
840 W Main	Commercial	Reap Office Building/ Employees	4 229,950	\$519.98/unit \$13.00/1,000 gal	\$2,080 \$2,990
<b>Subtotal Phase 1</b>					<b>\$5,070</b>
<b>Phase 2</b>					
878 W Main	Residential	Single Family Home	1 36,500	\$174.55/unit \$14.13/1,000 gal	\$174.55 \$516
920 W Main	Res./Commercial	Single Family Home/Tow Business	1 36,500	\$174.55/unit \$14.13/1,000 gal	\$174.55 \$516
932 W Main	Residential	Single Family Home/ Home Business	1 36,500	\$174.55/unit \$14.13/1,000 gal	\$174.55 \$516
978 W Main	Residential	Single Family Home	1 36,500	\$174.55/unit \$14.13/1,000 gal	\$174.55 \$516
1010-1014 W Main	Residential	Duplex	2 73,000	\$174.55/unit \$14.13/1,000 gal	\$349.10 \$1,032
1008-1012 W Main	Residential	Duplex	2 73,000	\$174.55/unit \$14.13/1,000 gal	\$349.10 \$1,032
1070 W Main	Commercial	Office Building/Employees	4 109,500	\$519.98/unit \$13.00/1,000 gal	\$2,080 \$1,424
1108 W Main	Commercial	Dog Day Care	1 554,800	\$519.98/unit \$13.00/1,000 gal	\$519.98 \$7,212
1151 W Main	Res./ Commercial	Residence Chiropractor Office	1 133,225	\$174.55/unit \$14.13/1,000 gal	\$174.55 \$1,882
<b>Subtotal Phase 2</b>					<b>\$17,421</b>
<b>Subtotal Phase 1 and 2</b>					<b>\$22,491</b>
<b>Phase 3</b>					
1436 W Main	Commercial	Gas Station	1 543,850	\$519.98/unit \$13.00/1,000 gal	\$519.98 \$7,070
9 Gov. Peck	Commercial	Employees	1 43,800	\$519.98/unit \$13.00/1,000 gal	\$519.98 \$569
116 River Rd	Commercial	Employees	1 54,750	\$519.98/unit \$13.00/1,000 gal	\$519.98 \$712
Rt 117	Mobile Home Park	Mobile Homes	148 7,670,840	\$174.55/unit \$14.13/1,000 gal	\$25,833 \$108,389
<b>Subtotal Phase 3</b>					<b>\$144,133</b>
<b>Subtotal Phase 1, 2 and 3</b>					<b>\$166,624</b>

\* Based on Table 3 values x 365 days/year

SPREADSHEET #1

**Richmond Water/Sewer Expansion: Gateway 'study area' with updated flows/fees and revenues**

**Rate Impact/Analysis** 12.01.2014

**Phase I and Phase II Complete**

\$591,000	<b>Estimated Phase I and II Water Total Project Cost (ENR 9800, 2015)</b>
\$387,000	<b>Estimated Phase I and II Sewer Total Project Cost (ENR 9800, 2015)</b>
\$978,000	<b>Estimated Phase I and II Water/Sewer Total Project Cost (ENR 9800, 2015)</b>

\$14,286	Water Hookup Fees (\$150 inspection fee + \$1.89 /gal= \$150 (10) + \$1.89(6,765) = \$14,286)
\$21,808	Sewer Hookup Fees (\$150 inspection fee + \$4.41 /gal= \$150 (10) + \$4.41(4,605) = \$21,808)
\$123,720	<b>Estimated Water Capital Contributions (Developer(s), Town and/or others)</b>
\$123,720	<b>Estimated Sewer Capital Contributions (Developer(s), Town and/or others)</b>

\$452,994	<b>Balance of Estimated Water Total Project Cost</b>
\$241,472	<b>Balance of Estimated Sewer Total Project Cost</b>
\$694,466	<b>= Balance of Estimated Water/Sewer Total Project Cost</b>

\$26,201	<i>Est. Annual Water Loan Payments: 4% for 30 years or \$57.84 per year per \$1000</i>
\$14,754	<i>Est. Annual Sewer Loan Payments: CWSRF 2% for 20 years or \$61.10 per year per \$1000</i>
\$40,955	<b>Estimated total new annual water/sewer loan payments</b>
\$40,955	<b>- Estimated new annual revenue from new users</b>

\$0	<b>= Estimated total rate increase/decrease for all current users</b>
\$0.00	<b>= Estimated average annual rate w+s increase/decrease per current user (&lt;20 years)</b> <i>current number users = 491</i>

Notes

1. Does not include or address cost of new road from school
2. Estimates are for existing users only and does not include any additional hook-up fees or revenues from development.
3. Developer \$ contributions and details tbd; may need legal advice/direction
4. Does not include cost for work on private property (i.e. water services/water meters/sewer service and grinder pumps). Average cost for water work on private property is approximately \$4,000. Costs for sewer work on private property cost range from \$7,000 to \$14,000 depending on property specifics.

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## SPREADSHEET #2

**Richmond Water/Sewer Expansion: Gateway 'study area' with updated flows/fees and revenues**

Rate Impact/Analysis 12.01.14

**Phase I, II and III Water & Sewer Complete**

\$1,401,000	<b>Estimated Phase I, and II Water Total Project Cost (ENR 9800, 2015)</b>
\$1,023,000	<b>Estimated Phase I, II and III Sewer Total Project Cost (ENR 9800, 2015)</b>
\$2,424,000	<b>Estimated Phase I and II Water/Sewer Total Project Cost (ENR 9800, 2015)</b>

\$88,142	Water Hookup Fees (\$150 inspection fee + \$1.89 /gal= \$150 (14) + \$1.89(45,525) = \$88,142)
\$167,232	Sewer Hookup Fees (\$150 inspection fee + \$4.41 /gal= \$150 (14) + \$4.41(37,445) = \$167,232)
\$0	<b>Estimated Water Capital Contributions (Developer(s), Town and/or others)</b>
\$0	<b>Estimated Sewer Capital Contributions (Developer(s), Town and/or others)</b>
\$1,312,858	<b>Balance of Estimated Water Total Project Cost</b>
\$855,768	<b>Balance of Estimated Sewer Total Project Cost</b>
\$2,168,625	<b>= Balance of Estimated Water/Sewer Total Project Cost</b>
\$75,936	<i>Est. Annual Water Loan Payments: 4% for 30 years or \$57.84 per year per \$1000</i>
\$52,287	<i>Est. Annual Sewer Loan Payments: CWSRF 2% for 20 years or \$61.10 per year per \$1000</i>
\$128,223	<b>Estimated total new annual water/sewer loan payments</b>
\$123,493	<b>Estimated new annual water revenue from new users</b>
\$5,100	<b>Estimated Additional Water O&amp;M Cost</b>
\$166,624	<b>Estimated new annual sewer revenue from new users</b>
\$290,117	<b>- Estimated total new annual revenue from new users</b>
\$17,800	<b>Estimated Additional Sewer O&amp;M Cost</b>
(\$42,457)	<b>Estimated total Average water rate increase/decrease for ALL USERS</b>
(\$66.13)	<b>Estimated average annual water rate w+s increase/decrease for ALL USERS (&lt;30 years)</b>
(\$96,537)	<b>Estimated total Average sewer rate increase/decrease for ALL USERS</b>
(\$150.37)	<b>Estimated average annual sewer rate w+s increase/decrease for ALL USERS (&lt;20 years)</b>
	<i>Estimated Total Number Water Users = 642</i>
	<i>Estimated Total Number Sewer Users = 642</i>

Notes

1. Does not include or address cost of new road from school
2. Estimates are for existing users only and does not include any additional hook-up fees or revenues from development.
3. Developer \$ contributions and details tbd; may need legal advice/direction
4. Does not include cost for work on private property (i.e. water services/water meters/sewer service and grinder pumps). Average cost for water work on private property is approximately \$4,000. Costs for sewer work on private property cost range from \$7,000 to \$14,000 depending on property specifics. Mobile home park may be higher.

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SPREADSHEET #3

**Richmond Water/Sewer Expansion: Gateway 'study area' with updated flows/fees and revenues**

**Rate Impact/Analysis** 12.01.2014

**Phase I, II and III Water & Sewer 60% Completed - based on Flow**

\$1,401,000	<b>Estimated Phase I, and II Water Total Project Cost (ENR 9800, 2015)</b>
\$1,023,000	<b>Estimated Phase I, II and III Sewer Total Project Cost (ENR 9800, 2015)</b>
\$2,424,000	<b>Estimated Phase I and II Water/Sewer Total Project Cost (ENR 9800, 2015)</b>

\$53,414	Water Hookup Fees (\$150 inspection fee + \$1.89 /gal= \$150 (14) + \$1.89(27,315) = \$53,414)
\$101,179	Sewer Hookup Fees (\$150 inspection fee + \$4.41 /gal= \$150 (14) + \$4.41(22,467) = \$101,179)
\$0	<b>Estimated Water Capital Contributions (Developer(s), Town and/or others)</b>
\$0	<b>Estimated Sewer Capital Contributions (Developer(s), Town and/or others)</b>
\$1,347,587	<b>Balance of Estimated Water Total Project Cost</b>
\$921,821	<b>Balance of Estimated Sewer Total Project Cost</b>
\$2,269,407	<b>= Balance of Estimated Water/Sewer Total Project Cost</b>
\$77,944	<i>Est. Annual Water Loan Payments: 4% for 30 years or \$57.84 per year per \$1000</i>
\$56,323	<i>Est. Annual Sewer Loan Payments: CWSRF 2% for 20 years or \$61.10 per year per \$1000</i>
\$134,268	<b>Estimated total new annual water/sewer loan payments</b>
\$75,000	<b>Estimated new annual water revenue from new users</b>
\$5,100	<b>Estimated Additional Water O&amp;M Cost</b>
\$100,000	<b>Estimated new annual sewer revenue from new users</b>
\$175,000	<b>- Estimated total new annual revenue from new users</b>
\$17,800	<b>Estimated Additional Sewer O&amp;M Cost</b>
\$8,044	<b>Estimated total Average water rate increase/decrease for ALL USERS</b>
\$13.99	<b>Estimated average annual water rate w+s increase/decrease for ALL USERS (&lt;30 years)</b>
(\$25,877)	<b>Estimated total Average sewer rate increase/decrease for ALL USERS</b>
(\$45.00)	<b>Estimated average annual sewer rate w+s increase/decrease for ALL USERS (&lt;20 years)</b>
	<i>Estimated Total Number Water Users = 575</i>
	<i>Estimated Total Number Sewer Users = 575</i>

Notes

1. Does not include or address cost of new road from school
2. Estimates are for existing users only and does not include any additional hook-up fees or revenues from development.
3. Developer \$ contributions and details tbd; may need legal advice/direction
4. Does not include cost for work on private property (i.e. water services/water meters/sewer service and grinder pumps). Average cost for water work on private property is approximately \$4,000. Costs for sewer work on private property cost range from \$7,000 to \$14,000 depending on property specifics. Mobile home park may be higher.

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