

# Town of River Bend, NC Strategic Energy Plan



**Adopted August 21, 2008**

Mayor John Kirkland  
Mayor Pro-Tem Charles Sharpe  
Councilwoman Brenda Garvey  
Councilman Bert Linkonis  
Councilman Phil Seymour  
Councilman Irving "Bud" Van Slyke

Town Manager – Drew Havens

The Town of River Bend, in an effort to be good stewards of our environmental and financial resources continues its commitment to improve energy efficiency in all areas of operation. The focus of the effort for FY 2008-09 will be to reduce electrical energy use in our buildings, significantly improve our effort to recycle solid waste, reduce fuel consumption in our fleet, and continue to educate our residents in best practices for water conservation.

The Town Council signified its commitment to this effort by enrolling in the North Carolina League of Municipalities’ “Green Challenge” on July 17, 2008 and adoption of a resolution endorsing the U.S. Mayors Climate Protection Agreement on August 21, 2008.

The Town Council will review, with management, on-going efforts outlined in this plan and other sustainability issues at their monthly Work Session. This plan will be updated each year in order to evaluate the effect of our efforts, and to outline additional future efforts.

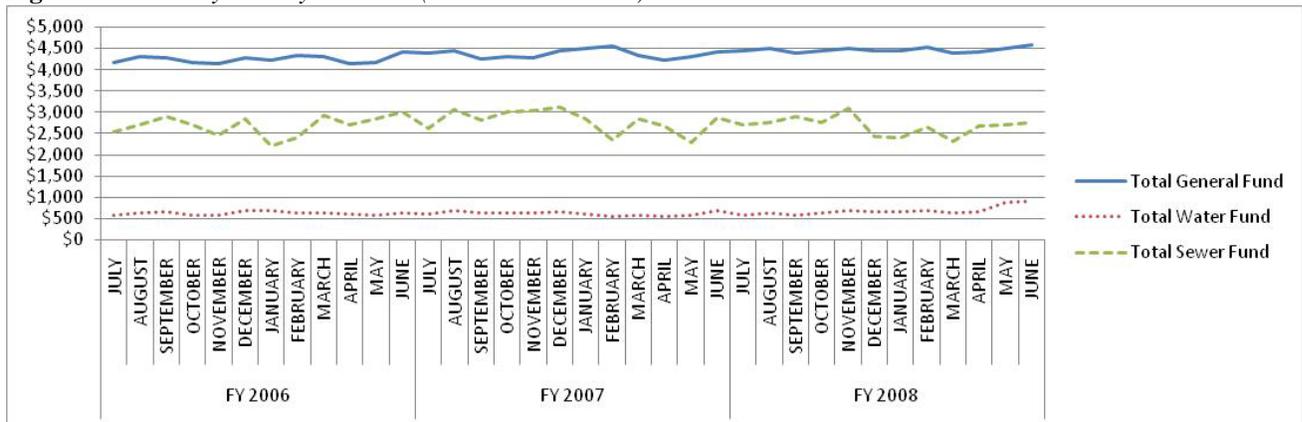
### Electrical Consumption

The Town of River Bend uses electricity in all areas of operation. Our general fund area accounts for the electricity used to provide light, heating, and cooling to our buildings. It also pays for street lighting, pond aeration fountains, and other incidentals. The water and sewer utilities are the larger consumer of electricity in order to operate water pumping and treatment, and wastewater collection and treatment.

#### Consumption Trends

The Town has not, in the past, captured consumption data for electricity, but does capture cost data. Figure 1 shows monthly power costs for each area of operation for fiscal years 05-06, 06-07, and 07-08. Figure 2 shows the number of kWh of electricity used for buildings, streetlights, water, and wastewater. Management will continue to monitor not only costs, but also consumption in order to evaluate the success of conservation efforts.

**Figure 1. Electricity Cost by Function (FY 2006 – FY 2008)**



**Figure 2. Electricity Use by Function (July 2007 – June 2008)**

	July 07	Aug. 07	Sept 07	Oct. 07	Nov. 07	Dec. 07	Jan. 08	Feb. 08	March 08	April 08	May 08	June 08
	kWh											
TOTAL BUILDINGS	11,126	12,111	10,732	11,025	11,481	10,776	10,726	11,895	9,786	10,287	11,347	12,153
TOTAL WATER	5,625	6,279	5,517	6,303	6,708	6,425	6,436	6,864	6,377	6,844	9,322	9,813
TOTAL SEWER	37,645	39,127	41,031	39,568	45,627	34,233	33,600	38,468	32,686	37,166	40,272	40,067
<b>TOTAL kWh</b>	<b>54,396</b>	<b>57,517</b>	<b>57,279</b>	<b>56,896</b>	<b>63,816</b>	<b>51,434</b>	<b>50,762</b>	<b>57,227</b>	<b>48,849</b>	<b>54,297</b>	<b>60,941</b>	<b>62,033</b>

### *Conservation Efforts*

The Town has not made any concerted effort to conserve electricity, but certainly has not been overtly wasteful in terms of this resource. Past practices include ensuring office lighting is turned off at night and maintaining electrical pumps and other motors to ensure efficiency.

Efforts to commence in FY 08-09 include:

- Installation of automatic thermostats set to reduce heating/cooling when the buildings are typically unoccupied (10-33% savings).
- Installation of occupancy sensors for interior lighting (savings estimated vary from 22 – 75% depending on the use of the room).
- Installation of Compact Florescent lamps in place of incandescent lights where appropriate (66-75% savings).
- Signing a contract for annual maintenance of three air blowers at the wastewater treatment plant (savings unknown)
- Beginning a preventative maintenance program for wastewater lift station pumps.
- Monitoring electrical consumption.
- Specifying Energy Star appliances and equipment as appropriate.

Efforts under consideration for future years include, but are not limited to:

- Insulating water heaters
- Insulating HVAC ducts
- Enrolling in a maintenance program for HVAC units and other electrical equipment
- Continued monitoring of electrical consumption
- Replace older fluorescent lamps and ballasts with newer, energy efficient lamps/units

### **Solid Waste**

The Town of River Bend currently contracts for the removal of solid waste from our office and wastewater treatment facilities. The bulk of the waste from the wastewater operation is in the form of screenings from the incoming waste stream. The waste from office function has, in the past, included a mixture of recyclable and non-recyclable materials.

*Conservation Efforts*

Beginning in FY 08-09 the Town of River Bend became more aggressive in the effort to recycle waste. The Town uses weekly curbside collection of aluminum, glass, plastic, newsprint, and small cardboard. The Town also is retaining mixed paper, and larger amounts of cardboard for monthly delivery to a local recycling center. It is estimated that the volume of waste placed in a container for removal to the landfill will be reduced by over fifty percent.

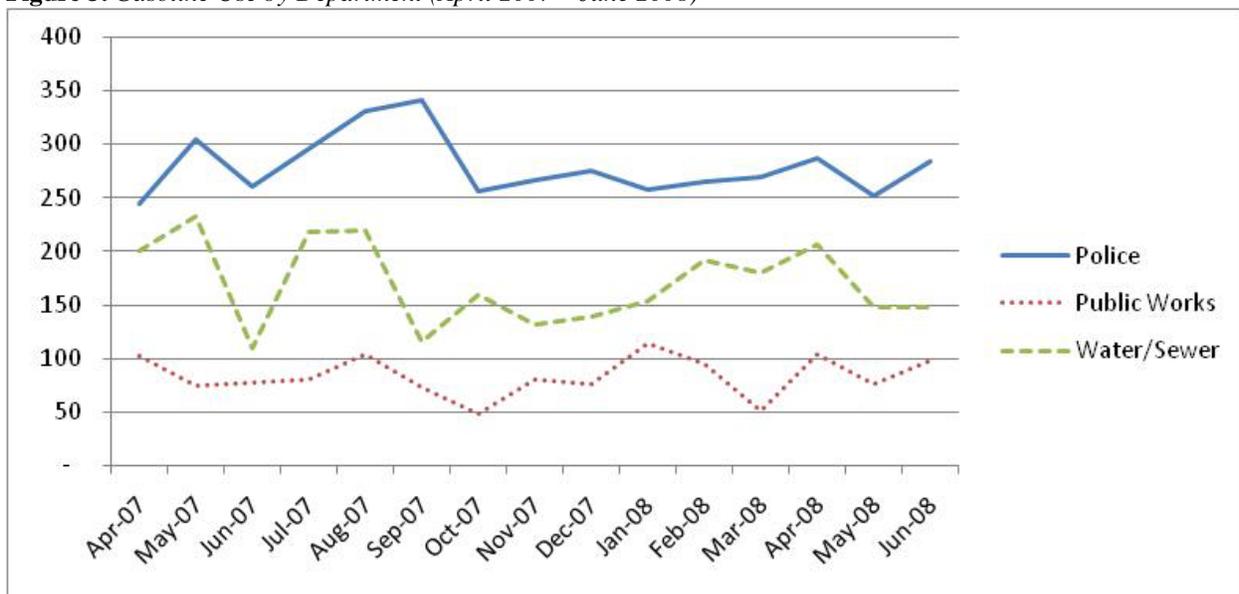
**Fuel Consumption**

The Town of River Bend maintains a fleet of eight motor vehicles and two tractors. The motor vehicle fleet is comprised of two sedan type police vehicles, one sport utility police vehicle, two half-ton pick-up trucks, two three-quarter ton pick-up trucks, and a mini-van. The Town also maintains 10 diesel fuel powered generators. A small quantity of diesel fuel is pumped from the generator tanks to fuel two tractors used for grounds/roadside maintenance. All vehicles receive maintenance (oil change, tire check/rotation) at regular intervals.

*Consumption Trends*

The Town captures both fuel costs and data regarding the quantity of fuel used. Figure 3 shows the pattern of fuel consumption in fiscal year 2007-08 and the last three months of fiscal year 2006-07. The Town will continue to monitor gallons and cost in an effort to determine if conservation efforts are having an impact.

**Figure 3. Gasoline Use by Department (April 2007 – June 2008)**



Total Gal. by Dept.	Apr-07	May-07	Jun-07	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	TOTAL
Police	245	305	260	295	330	340	257	267	275	258	265	269	286	252	284	3,637
Public Works	102	75	78	81	103	72	48	80	75	115	95	51	104	76	98	1,077
Water/Sewer	200	233	109	218	219	115	159	131	138	154	191	180	206	148	147	2,115

### *Conservation Efforts*

Management, by way of an informal policy, restricts the idling of vehicles to those cases when absolutely necessary. This policy is enforced by field supervisors. The Town budgeted to purchase a new vehicle in FY 08-09. Breaking the cycle of purchasing only pick-up trucks for water/wastewater operations, the Town will add a minivan to the fleet. This purchase, while not as economically sound, provides a vehicle that will use less gasoline than other options considered. Other conservation efforts include:

- Studying the applicability of low speed electric vehicles to supplement/supplant larger gasoline powered vehicles.
- Studying the applicability of a hybrid vehicle for police patrol use.

## **Water Conservation**

The Town of River Bend has a history of educating its water customers on best practices for conserving water. Utility operators work with residents and their contractors to identify sources of unusually high water consumption.

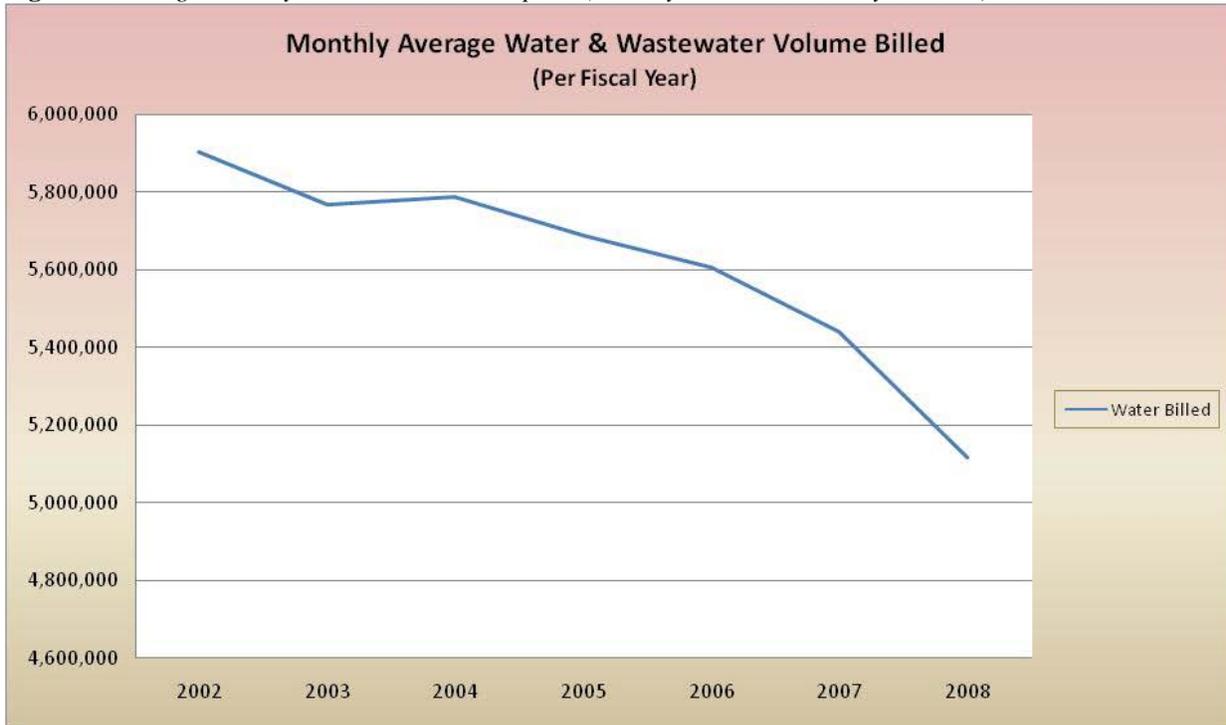
### *Consumption Trends*

The Town's efforts continue to show signs of success. Figure 4 shows total water consumption by our customers over the past seven fiscal years. Figure 5 shows the average monthly water use per customer over the past seven fiscal years. While no predictions have been offered on future reductions in consumption, recently adopted rate modifications contemplate an additional 2% reduction in consumption.

### *Conservation Efforts*

The Town plans to continue its regular effort to inform water customers about best practices for water conservation. We will use printed stuffers in utility bills and occasional articles in a monthly paper to keep this message in front our residents. The Town began, in fiscal year 2007-08 a three-year project to replace all our water meters with meters that are read from a central station. This will not only save fuel used during meter reading, it will allow the utility office to monitor daily water use for each customer on the system. Our staff will be alerted to unusual water use and contact the customer in an effort to have leaks repaired more quickly.

**Figure 4.** Average Monthly Total Water Consumption (Fiscal year 2002 – Fiscal year 2008)



**Figure 5.** Average Monthly Water Consumption per Customer (Fiscal year 2002 – Fiscal year 2008)

