VILLAGE OF INDIAN POINT, MISSOURI
USER CHARGE ORDINANCE

Bill Number 94 **Ordinance Number** 05-09

AN ORDINANCE ESTABLISHING A USER CHARGE SYSTEM IN THE VILLAGE OF INDIAN POINT, COUNTY OF STONE, STATE OF MISSOURI, TO PROVIDE FUNDS NEEDED TO PAY FOR ALL EXPENSES ASSOCIATED WITH THE VILLAGE OF INDIAN POINT'S JAKES CREEK TRAIL WASTEWATER TREATMENT WORKS.

WHEREAS, the Village of Indian Point, Missouri has constructed wastewater treatment works to serve the Jakes Creek Trail project as described in the Facility Plan dated December 28, 2004; and,

WHEREAS, the Village of Indian Point must pay all expenses associated with said treatment works and charge the users of said treatment works accordingly; and

WHEREAS, the Village of Indian Point has previously enacted Ordinances Number 03-14 and 03-15 which place all wastewater treatment and collection systems under the direct supervision and control of the Board of Public Works; and

WHEREAS, The Board of Public Works has full power to take charge of and exercise full control over the Jakes Creek Trail wastewater system and to operate the wastewater system, except as may be otherwise provided by law or regulation.

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF TRUSTEES, of the Village of Indian Point, Missouri, that the following user charge system for the Jakes Creek Trail project be established:

Article I

It is determined and declared to be necessary and conducive to the protection of the public health, safety, welfare, and convenience of the Village of Indian Point to have the Board of Public Works collect charges from all users who contribute wastewater to the Village of Indian Point's Jake Creek Trail treatment works. The proceeds of such charges so derived will be used for the purpose of operating, maintaining, and retiring the debt for said public wastewater treatment works.

Article II

Unless the context specifically indicates otherwise, the meaning of terms used in this ordinance shall be as follows:

Section 1: "BOD" (denoting Biochemical Oxygen Demand) shall mean the quantity of oxygen utilized in the biochemical oxidation of organic matter under standard laboratory procedure in five (5) days at twenty (20) degrees Celsius, expressed in milligrams per liter (mg/l).

Section 2: "Normal Domestic Wastewater" shall mean wastewater that has a BOD concentration of not more than 287 mg/l and a suspended solids concentration of not more than 185 mg/l.

Section 3: "Operation and Maintenance" shall mean all expenditures during the useful life of the treatment works for materials, labor, utilities, and other items which are necessary for managing and maintaining the treatment works to achieve the capacity and performance for which such works were designed and constructed.

Section 4: "Replacement" shall mean expenditures for obtaining and installing equipment, accessories, or appurtenances which are necessary during the useful life of the treatment works to maintain the capacity and performance for which such works were designed and constructed. The term "operation and maintenance" includes replacement.

Section 5: "Residential Contributor" shall mean any contributor to the Village of Indian Point treatment works whose lot, parcel of real estate, or building is used for domestic dwelling purposes only.

Section 6: "Shall" is mandatory; "May" is permissive.

Section 7: "SS" (denoting suspended solids) shall mean the solids that either float on the surface of or are in suspension in water, sewage, or other liquids and which are removable by laboratory filtering.

Section 8: "Treatment Works" shall mean any devices and systems for the storage, treatment, recycling, and reclamation of municipal wastewater, domestic wastewater, or liquid industrial wastes. These include interceptor sewers, outfall sewers, sewage collection systems, individual systems, pumping, power, and other equipment and their appurtenances; extensions, improvements, remodeling, additions, and alterations thereof; elements essential to provide a reliable recycled supply such as standby treatment units and clear well facilities; and any works including site acquisition of land that will be an integral part of the treatment process or is used for ultimate disposal of residues resulting from such treatment including land for composting sludge, temporary storage of such compost, and land used for storage of treated wastewater in land treatment systems before land application; or any other method or system for preventing, abating, reducing, storing, treating, separating, or disposing of municipal waste or industrial waste, including waste in combined storm water and sanitary sewer systems.

Section 9: "Useful Life" shall mean the estimated period during which the treatment works will be operated.

Section 10: "User Charge" shall mean that portion of the total wastewater service charge which is levied in a proportional and adequate manner for the cost of operation, maintenance, and replacement of the wastewater treatment works.

Section 11: "Water Meter" shall mean a water volume measuring and recording device, furnished and/or installed by the Board of Public Works or furnished and/or installed by a user and approved by the Board of Public Works.

Article III

Section 1: The User Charge System shall generate adequate annual revenues to pay the costs of annual operation and maintenance, including replacement, and costs associated with debt retirement of capital associated with financing the treatment works which the Board of Public Works may by its Rules and Regulations designate to be paid by the user charge system. That portion of the total user charge which is designated for operation and maintenance including replacement of the treatment works shall be established by this ordinance.

Section 2: That portion of the total user charge collected which is designated for the operation and maintenance including replacement purposes as established in Article IV, shall be deposited in a separate non-lapsing fund known as the Operation, Maintenance, and Replacement Fund and will be kept in two primary accounts as follows:

a. The Operation and Maintenance Account shall be an account designated for the specific purpose of defraying operation and maintenance costs excluding replacement of the treatment works. Deposits in the Operation and Maintenance Account shall be made monthly from the operation and maintenance revenue to total an annual amount of $ 53,844.32.

b. The Replacement Account shall be an account designed for the purpose of ensuring replacement needs over the useful life of the treatment works. Deposits in the Replacement Account shall be made monthly from the replacement revenue to total an annual amount of $ 3,254.90. (See Appendix B for calculation.)

Section 3: Fiscal year-end balances in the Operation and Maintenance Account and the Replacement Account shall be carried over to the same accounts in each subsequent fiscal year, and shall be used for no other purposes than those designated for these accounts. Monies which have been transferred from other sources to meet temporary shortages in the Operation, Maintenance, and Replacement Fund shall be returned to their respective accounts upon appropriate adjustment of the user charge rates for operation, maintenance, and replacement. The user charge rate(s) shall be adjusted such that the transferred monies will be returned to their respective accounts within the fiscal year following the fiscal year in which the monies were borrowed.

Article IV

Section 1: Each user shall pay for the services provided by the Village of Indian Point based on their use of the Jakes Creek Trail treatment works as determined by water meter(s) acceptable to the Village of Indian Point.

Section 2: The initial variable portion of the monthly user charge for the first twelve (12) months of operation will be as established by the Board of Public Works pursuant to this ordinance. Thereafter, for residential contributors, the variable portion of the monthly user charges will be based on the average monthly water usage of all residential contributors during the months of January, February, and March. Water usage for these months includes little use for such activities as lawn watering, car washing, and other seasonal consumptive uses.

For industrial and commercial contributors, user charges shall be based on water used during the current month. If a commercial or industrial contributor has a consumptive use of water, or in some other manner uses water which is not returned to the wastewater collection system, the user charge for that contributor may be based on wastewater meter(s) or separate water meter(s) installed and maintained at the contributor's expense, and in a manner acceptable to the Village of Indian Point.

Section 3: (Reference is made to Appendix A of this ordinance.) The minimum charge per month shall be $18.40 for residential contributors. For light commercial / resort contributor units the minimum charge per month shall be based on the person capacity of each resort unit as outlined in Appendix D. In addition, each contributor (Residential or light commercial / resort) shall pay a user charge for operation and maintenance, including replacement, of $3.24 per 1,000 gallons of wastewater as determined in the preceding section.

Section 4: (Reference is made to Appendix A of this ordinance.) For those contributors which contribute wastewater, the strength of which is greater than normal domestic sewage, a surcharge in addition to the normal user charge will be collected. The surcharge for operation and maintenance including replacement is:

$ 0.341 per pound of BOD
$ 0.534 per pound of SS

Section 5: Any user which discharges any toxic pollutants which cause an increase in the cost of managing the effluent or the sludge from the Jakes Creek Trail treatment works, or any user which discharges any substance which singly or by interaction with other substances causes identifiable increases in the cost of operation, maintenance, or replacement of the treatment works, shall pay for such increased costs. The charge to each user shall be as determined by the responsible plant operating personnel and approved by the Board of Public Works.

Section 6: The user charge rates established in this article apply to all users of the Village of Indian Point's Jakes Creek Trail treatment works, regardless of the user's location.

Article V

Section 1: All users shall be billed monthly. Billings for each month shall be made within thirty (30) days after the end of that month. Payments are due within fifteen (15) days of when billings are made. Any payment not received within thirty (30) days after the billing is made shall be delinquent.

Section 2: A late payment penalty of ten (10) percent of the user charge bill will be added to each delinquent bill for each thirty (30) days of delinquency. When any bill is thirty (30) days in default, rendition of water and/or sewer service to such premises shall be discontinued until such bill is paid, following due notice and due process.

Article VI

Section 1: The Board of Public Works the Village of Indian Point shall review the user charge system at least annually and revise user charge rates as necessary to ensure that the system generates adequate revenues to pay the costs of operation and maintenance including replacement and that the system continues to provide for the proportional distribution of operation and maintenance including replacement costs among users and user classes.

Section 2: The Board of Public Works will notify each user at least annually, in conjunction with a regular bill, of the rate being charged for operation and maintenance including replacement of the treatment works.

Article VII

Section 1: All residential and commercial structures which are structurally complete and inhabited by March 15, 2005, and which are otherwise required to connect to the project wastewater treatment system, shall be required to pay for the cost of installation of a septic tank which meets the project engineering specifications and which is suitable for use in connecting the structure to the collection system, unless the following conditions are met:

a. The owner of record agrees to allow the BPW or its designated representative full access to the existing septic tank for purposes of inspection, which may include excavation of said tank; said inspection to be paid for by the BPW; and

b. Said tank is either fiberglass or concrete and upon inspection, it meets the specifications for existing tanks as defined by the BPW; and

c. the owner of record agrees to transfer ownership of said tank to the Village of Indian Point and fully executes an easement in a form to be established by the BPW, said easement which allows permanent access to the components of the collection system located on the real property in question.

Section 2: In the event that an owner of record is required to pay for the cost of the installation of a septic tank pursuant to Section 1 above, the BPW will install the tank and the owner of record will be billed for the cost of the installation. The owner of record will not be permitted to install the septic tank directly. Upon the request of the owner of record, the BPW will divide the cost of installation into a maximum of 36 monthly payments, which will be added to the monthly user's bill, in the event that the owner of record and the user are one and the same. If a monthly payment is missed or any monthly user charge is not paid on time, the BPW reserves the right to demand the remaining balance of the septic tank installation cost in full, and to treat any failure to pay said balance as a refusal to pay a monthly user charge, and to act accordingly. If the owner of record and the user are not one and the same, the BPW will, upon request of the owner of record, divide the cost of installation into a maximum of 36 monthly payments .If a monthly payment is missed or not paid on time, the BPW reserves the right to demand the remaining balance of the septic tank installation cost in full. Further, as a condition of the payment plan, the owner of record agrees that the BPW may treat the balance due as a lien against the property and take all necessary legal actions to enforce said lien.

Section 3: For all residential and commercial structures which are structurally complete and inhabited by March 15, 2005, and which are otherwise required to connect to the project wastewater treatment system, the BPW will pay for the additional costs necessary to connect the structure to the wastewater collection system, except the installation of the septic tank pursuant to Section 2 above. Said additional costs include but are not limited to the effluent pump and its installation and the installation of the service line from the septic tank to the main collection line. The user will be required to pay for the electricity needed to operate the effluent pump, and the BPW install a separate electric meter at its own cost and said monthly bill for electricity will be added to the monthly user charge.

Section 4: All residential and commercial structures which are completed and inhabitable after March 15, 2005, may be allowed to connect to the project wastewater treatment system, if the BPW makes a determination that there is existing treatment capacity in the system, and if following conditions are met:

a. The owner of record installs a septic tank at his own cost which meets the project engineering specifications and which is suitable for use in connecting the structure to the collection system, and submits to the inspection provisions set forth in Section 1 above; and

b. The owner of record pays the BPW for the effluent pump and its installation, the installation of the service line from the septic tank to the main collection line, and the installation of a separate electric meter for the effluent pump, and

c. The owner of record will be billed by the BPW for these costs and will not be allowed to complete connection to the wastewater treatment system until all costs are paid in full, and the owner of record agrees that the cost of the electricity for the operation of the effluent pump will be added to the monthly user charge.

d. The owner of record agrees to transfer ownership of said effluent tank to the Village of Indian Point and fully executes an easement in a form to be established by the BPW, said easement which allows permanent access to the components of the collection system located on the real property in question.

Article VIII

This ordinance shall be in full force and effect from and after its passage and approval.

Passed and approved by the Board of Trustees of the Village of Indian Point, State of Missouri this 14 day of June, 2005.

FIRST READING	YEA	NAY
Doug Battaglia	X	
Jim Daily	X	
Greg Fier	Absent	
Brett Stump	X	
J C Zalog	X	

SECOND READING	YEA	NAY
Doug Battaglia	X	
Jim Daily	X	
Greg Fier	X	
Brett Stump	X	
J C Zalog	X	

Chair, Board of Trustees
J C Zalog

Attest:
Secretary/Treasurer, Board of Trustees
Brett Stump

Appendix A to User Charge System

This appendix presents the methodology to be used in calculating user charge rates and surcharges, illustrates the calculations followed in arriving at the first year's user charges and surcharges. The unit costs established in this appendix are based on estimates of expenses, including those associated with transporting and treating inflow and infiltration, and loadings. The actual expenses and loadings that occur may differ from these estimates and certainly they will change as time passes. Therefore, the unit cost must be reestablished whenever necessary to reflect actual expenses and loadings. Once the system is in use, the expenses and loadings can be determined from operating records and the unit costs can be adjusted based on these figures.

1. Expenses. The total annual expenses associated with the treatment works, as defined in Article II, Section 8, are estimated as follows:

Item		Annual Expense	
Billing	$	960.00	= (8hrs/mo.)($10/hr)(12mo./yr)
Collection	$	480.00	= (4hrs/mo.)($10/hr)(12mo./yr)
Administration (Incl. reading meters)	$	480.00	= (4hrs/mo.)($10/hr)(12mo./yr)
Power	$	1,440.00	= ($120/mo.)(12mo./yr)
Labor (including fringe benefits)	$	3,600.00	= ($300/mo.)(12mo./yr)
Material Costs	$	-	
Replacement Costs		$3,254.90	= (See Appendix B)
Total Annual Debt Service (Fixed 85%)	$	36,501.79	= (See Appendix F)
Total Annual Debt Service (Variable 15%)	$	6,441.49	= (See Appendix F)
Chemicals	$	3,600.00	
Inflow/Infiltration Reduction Program	$	-	
Postage	$	257.52	= ($0.37/mo./invoice)(58 invoices)
Invoice, Envelopes, Etc.	$	83.52	= ($0.12/mo./invoice)(58 invoices)
Other (specify)	$	-	
Other (specify)	$	-	
Other (specify)	$	-	
Total Expenses:	$	57,099.22	

Revenues Received from Other Sources		
Dedicated Capital Improvement Sales Tax Revenue	$	4,000.00
Other Revenue (specify)	$	-
Other Revenue (specify)	$	-
Other Revenue (specify)	$	-
Other Revenue (specify)	$	-
Total Revenues from Other Sources:	$	4,000.00
Total Expenses to be Derived From User Charges:	$	53,099.22

2. Allocation of Expenses: The total operation and maintenance, including replacement expenses, is allocated to the appropriate pollutants in the following manner:

Annual Dollars to Treat Annual Flow = XX% annual cost allocated to flow x (total annual O&M budget minus billing, collection, administration, and debt less dedicated debt revenue)

= 50% X $ 53,099.22 - $ 34,762.83

= $ 9,168.20 (Flow)

Annual Dollars to Treat Annual BOD = XX% annual cost allocated to BOD x (total annual O&M budget minus billing, collection, administration, and debt less dedicated debt revenue)

= 25% X $ 53,099.22 - $ 34,762.83

= $ 4,584.10 (BOD)

Annual Dollars to Treat Annual SS = XX% annual cost allocated to SS x (total annual O&M budget minus billing, collection, administration, and debt less dedicated debt revenue)

= 25% X $ 53,099.22 - $ 34,762.83

= $ 4,584.10 (SS)

Annual Dollars to Treat Annual Other = XX% annual cost allocated to Other Pollutant x (total annual O&M budget minus billing, collection, administration, and debt less dedicated debt revenue)

= 0% X $ 53,099.22 - $ 34,762.83

= $ - (Specify Other)

100%

(Note: In this example, the billing, collection, administration, and debt expenses are deducted from the total O&M budget at this point because each user will pay the same for these expenses per billing period. See paragraph 5 for Minimum Charge calculation. In some situations other appropriate expenses may be handled in the same manner. Costs associated with debt can be collected as part of the unit/volume charge or as a combination of the Minimum Charge and Unit Charge. The ordinance writer should adjust the allocation of percentages to Flow, BOD, and SS to fit their specific type of treatment works.

3. Loadings

The number of system users is:	149	Customers = (homes &/or units)
The initial hydraulic loading (less I/I) is estimated to be:	5,657,839	Gallons/year
The initial BOD loading is estimated to be:	13,435	Pounds/year
The initial SS loading is estimated to be:	8,582	Pounds/year
The initial *Other Pollutant (specify)* loading is estimated to be:		Pounds/year

(Note: If the loading estimates for BOD, SS, and Other Pollutant(s), are based on historical data from the Treatment Works and the concentration is different from the definition of Normal Domestic Wastewater, please see note in paragraph 6 before completing the Variable Unit Charge Calculation.)

Normal Domestic BOD based on above loadings:	***285***	***mg/l***
Normal Domestic SS based on above loadings:	***182***	***mg/l***
Normal Domestic Other Pollutant based on above loadings:	***-***	***mg/l***

4. Unit Costs

Initial unit cost for flow in $/gallon = Annual $ to treat annual flow / Estimated annual hydraulic loading - inflow & Infiltration

= $ 9,168.20 / 5,657,839

= $ 0.001621 per gallon

Initial unit cost for BOD in $/pound = Annual $ to treat annual BOD / Estimated annual BOD loading

= $ 4,584.10 / 13,435

= $ 0.341199 per pound

Initial unit cost for SS in $/pound = Annual $ to treat annual SS / Estimated annual SS loading

= $ 4,584.10 / 8,582

= $ 0.534153 per pound SS

Initial unit cost for *Other Pollutant(s)* in $/pour = Annual $ to treat annual *Other Pollutant(s)* / Estimated annual *Other Pollutant(s)* loading

= $ - / -

= $ - per pound

(Note: The unit costs for BOD, SS, and Other Pollutants are to be inserted in Article IV, Section 4 of the ordinance.)

5A. Minimum Charge (Residential)

Number of users:	58	homes (includes residences corresponding to each resort)
Billing Period:	12	
Percent of WWTP Design Capacity:	33%	(Reference Appendix "E")

Billing	=	$ 870.00
Collection	=	$ 435.00
Administration (Incl. reading meters)	=	$ 435.00
Postage	=	$ 233.38
Invoice, Envelopes, Etc.	=	$ 75.69
Total Annual Debt Service (Fixed 85%)	=	$ 12,078.14
Dedicated Capital Improvement Sales Tax Revenue	=	$ (1,323.57)
Total Annual Minimum Cost	=	$ 12,803.64
Minimum Charge	=	Total Annual Minimum Cost/Billing Period/Number of Users
	=	$ 18.40 / User

(Note: The Annual Debt Service collected through the minimum charge is the Total Annual Debt Service less any other revenues dedicated to debt retirement as indicated in the budget.)

(Note: The minimum charge, per user, per billing period is to be inserted in Article IV, Section 3 of the ordinance.)

5B. Minimum Charge (Light Commercial / Resort)

Number of users:	91	units
Billing Period:	12	
Percent of WWTP Design Capacity:	67%	(Reference Appendix "E")

Billing	=	$ 90.00
Collection	=	$ 45.00
Administration (Incl. reading meters)	=	$ 45.00
Postage	=	$ 24.14
Invoice, Envelopes, Etc.	=	$ 7.83
Total Annual Debt Service (Fixed 85%)	=	$ 24,423.65
Dedicated Capital Improvement Sales Tax Revenue	=	$ (2,676.43)
Total Annual Minimum Cost	=	$ 21,959.19
Minimum Charge	=	Total Annual Minimum Cost/Billing Period/Number of Units
	=	$ 20.11 / Average Unit

(Note: The Annual Debt Service collected through the minimum charge is the Total Annual Debt Service less any other revenues dedicated to debt retirement as indicated in the budget.)

(Note: The minimum charge, per user, per billing period is to be inserted in Article IV, Section 3 of the ordinance.)

6) Variable Unit Charge

The variable user unit charge is calculated as follows using the Normal Domestic pollutant concentrations as defined in Article II, Section 2 of this ordinance. Note: If the estimated loadings in paragraph 3 result in pollutant concentrations that are different than those defined in Article II, Section 2 of this ordinance, then the definition must be revised or the contributors of extra strength wastewater must be identified (see paragraph 7).

Variable Unit Charge = unit flow charge + [(unit BOD charge) x (BOD_{ND}) x (.00834)] + [(unit SS charge) x (SS_{ND}) x (.00834)]

Where:

Variable unit charge is in $/1,000 gallons;
Unit BOD charge is in $/pound of BOD from paragraph 4;
Unit SS charge is in $/pound of SS from paragraph 4;
BOD_{ND} is the Normal Domestic BOD strength in milligrams per liter (mg/l) as defined in Article II, Section 2, of the ordinance;
SS_{ND} is the Normal Domestic SS strength in milligrams per liter (mg/l) as defined in Article II, Section 2, of the ordinance; and,
.00834 is a unit conversion factor.

= $0.0016 x 1000 + [($0.3412 x (285 mg/l) x (0.00834)] + [($0.5342) x (182 mg/l) x (0.00834)]

= $ 3.24

(Note: The total variable unit charge is to be inserted in Article IV, Section 3, of the ordinance.)

An example calculation of a monthly house / light commercial unit charge is as follows:

Assumed flow = 5,000 gallons

$18.40 + [(5,000/1,000) x $3.24] = $34.62 per month
(Note: Example based on 5,000 gal./mo. usage)

7) Extra Strength Users

For users who contribute wastewater that has a greater strength than Normal Domestic wastewater, the user charge will be calculated as follows:

Total Monthly Charge for Extra Strength User = Minimum Charge + Variable Unit Charge + surcharge for BOD (if applicable) + surcharge for SS (if applicable) + surcharge for other pollutant(s)if applicable.

Total Monthly Charge for Extra Strength User = Minimum Charge + v(variable Unit Charge) + v(unit BOD charge)(BODES - BODND)(.00834) + v(unit SS charge)(SSES - SSND)(.00834) + and so on for any other pollutant(s) if applicable.

Where:

Total monthly charge to extra strength user is in dollars;
Minimum charge is in dollars as calculated in paragraph 5;
v is the volume of wastewater in 1000 gallons discharged by the extra strength user during the month;
Variable unit charge is in $/1000 gallons as calculated in paragraph 6
Unit BOD charge is in $/pound BOD from paragraph 4;
Unit SS charge is in $/pound SS from paragraph 4;
BOD_{ES} is the average BOD concentration in milligrams per liter (mg/l) contributed by the extra strength user during the month;
SS_{ES} is the average SS concentration in milligrams per liter (mg/l) contributed by the extra strength user during the month;
BOD_{ND} is the Normal Domestic BOD strength in mg/l as defined in Article II, Section 2, of the ordinance;
SS_{ND} is the Normal Domestic SS strength in mg/l as defined in Article II, Section 2, of the ordinance; and,
.00834 is a unit conversion factor.

An example user charge calculation for an extra strength user follows:

Assumed flow	=	30,000 gallons
Assumed BOD_{ES}	=	400 mg/l
Assumed SS_{ES}	=	250 mg/l
Monthly Charge	=	$18.40 + [(30,000/1000)($3.24)] + [(30,000/1000)($.34)(400 - 285)(0.00834)] + [(30,000/1000)($0.53)(250 - 182)(0.00834)]
Monthly Charge	=	$18.40 + $97.32 + $9.80 + $9.07
Monthly Charge	=	134.59

Are rates sufficient?

Annual revenues generated from Minimum Charge	=	Minimum Charge per billing period x Number of Billing Periods x Number of Customers
	=	$18.40 x 12 x 58 + $20.11 x 12 x 91
	=	$ 34,762.83
Annual revenues generated from Variable Unit Charge	=	Variable Unit Charge x Total Annual Flow in 1000 gallons
	=	$3.24 x Gallons/year/1000
	=	$ 18,353.85
Total Annual Revenues	=	Annual revenues generated from Minimum Charge + Annual revenues generated from Variable Unit Charge
	=	$34,762.83 + $18,353.85
	=	$ 53,116.68
Budget Surplus/(Deficit)	=	Total Annual Revenues - Total Expenses to be Derived From User Charges
Budget Surplus/(Deficit)	=	$53,116.68 - $53,099.22
Budget Surplus/(Deficit)	=	$17.46

Appendix B to User Charge System

REPLACEMENT SCHEDULE

This appendix contains a replacement schedule that was developed to determine the amount of revenue needed to fund the Replacement Account. The replacement schedule lists the major equipment in the wastewater system, the estimated dates when the equipment will have to be replaced, and the estimated cost of replacement (based on today's cost) over the useful life of the wastewater system. The replacement dates and costs shown are estimates; the actual replacement dates and costs could be significantly different from those shown. If the actual replacement expenses differ significantly from those listed in the replacement schedule, the funding of the Replacement Account shall be adjusted accordingly. The Replacement Fund Calculation includes factors for inflation and interest. These should be adjusted to reflect actual interest and inflation rates.

Years From Treatment Works In Operation	Replacement Item	Cost Per Item	Yearly Total
1	Routine Maintenance/Repairs	$200.00	$200.00
2			
	One-year Replacement/Repair Items	$200.00	$200.00
3			
	One-year Replacement/Repair Items	$200.00	$200.00
4			
	One-year Replacement/Repair Items	$200.00	$200.00
5	Five-year Replacement/Repair Items	$12,770.00	
	One-year Replacement/Repair Items	$200.00	$12,970.00
6			
	One-year Replacement/Repair Items	$200.00	$200.00
7	Seven-year Replacement/Repair Items	$1,150.00	
	One-year Replacement/Repair Items	$200.00	$1,350.00
8			
	One-year Replacement/Repair Items	$200.00	$200.00
9			
	One-year Replacement/Repair Items	$200.00	$200.00
10	Ten-year Replacement/Repair Items	$1,639.00	
	Five-year Replacement/Repair Items	$12,770.00	
	One-year Replacement/Repair Items	$200.00	$14,609.00
11			
	One-year Replacement/Repair Items	$200.00	$200.00
12			
	One-year Replacement/Repair Items	$200.00	$200.00
13			
	One-year Replacement/Repair Items	$200.00	$200.00
14			
	Seven-year Replacement/Repair Items	$1,150.00	

		One-year Replacement/Repair Items	$200.00	$1,350.00
15				
		Five-year Replacement/Repair Items	$12,770.00	
		One-year Replacement/Repair Items	$200.00	$12,970.00
16				
		One-year Replacement/Repair Items	$200.00	$200.00
17				
		One-year Replacement/Repair Items	$200.00	$200.00
18				
		One-year Replacement/Repair Items	$200.00	$200.00
19				
		One-year Replacement/Repair Items	$200.00	$200.00
20	Ten-year Replacement/Repair Items		$1,639.00	
		Five-year Replacement/Repair Items	$12,770.00	
		One-year Replacement/Repair Items	$200.00	$2,200.00

Appendix B to User Charge System

Equipment Replacement Schedule

System Component	No. of System Components	Approx. Replacement Frequency (Yrs.)	Percent Needing Replacement	No. Replaced in 20 years	Approx. Unit Cost of Replacement	Approx. Cost of Replacement per Frequency Interval
Septic Tank						
Effluent Pump	24	5	25%	24	$800	$4,800
Pump Floats	24	5	25%	24	$520	$3,120
Discharge Assembly	24	5	25%	24	$170	$1,020
Check Valve at FM	24	5	25%	24	$128	$768
Effluent Filter	70	10	10%	14	$520	$3,640
Recirculation Tank						
Effluent Pump	8	5	25%	8	$590	$1,180
Effluent Filter	8	10	25%	4	$520	$1,040
Pump Floats	4	10	25%	2	$142	$142
Flow Splitter	1	20	100%	1	$625	$625
Recirculation Filter Bed						
Gravel Media	1	20	100%	1	$18,713	$18,713
Laterals, manifolds, etc.	1	20	0%	0	$300	$0
Automatic Distributing Valve	4	15	25%	1	$352	$352
Phosphorous Removal System						
Chemical Feeder	1	10	100%	2	$317	$317
Chemical Feeder Floats	1	20	100%	1	$142	$142
Pump Floats	1	10	100%	2	$142	$142
Chamber Pump	1	15	100%	1	$730	$730
Mixing Pump	1	15	100%	1	$730	$730
Discharge Pump	1	15	100%	1	$730	$730
Tertiary Sand Filters	3	7	33%	3	$800	$792
Filter Pump	1	5	100%	4	$1,150	$1,150
Backwash Pump	1	5	100%	4	$1,150	$1,150
Discharge Effluent Pump	1	5	100%	4	$730	$730
Discharge Pump Floats	1	10	100%	2	$142	$142
Chlorinator/Dechlorinator						
Tablet Chlorinator Tubes	4	10	25%	2	$310	$310
Miscellaneous						
Routine Maintenance/Repairs	1	1	100%	1	$200	$200

Appendix C to User Charge System

REPLACEMENT FUND ANNUAL ANNUITY

(A separate sheet showing what items are to be replaced, what year, and estimated replacement cost, should also be attached.)

Inflation	**3.00%**	
Interest	**2.60%**	*(Based on an average of current 1-yr & 5-yr CD rates)*
Initial Balance	**$0.00**	

Year	Estimated Replacement Costs	X	3.00% Compound Amount Factor (F/P)	=	Future Worth	X	2.60% Present Worth Factor (P/F)	=	Adjusted Present Worth	Interest on Fund Balance	Net Fund Balance
	Initial Balance										*$0.00*
1	$200.00		1.030000		$206.00		0.974659		$200.78	0.00	$3,048.90
2	$200.00		1.060900		$212.18		0.949960		$201.56	79.27	$6,170.89
3	$200.00		1.092727		218.55		0.925887		$202.35	160.44	$9,367.68
4	$200.00		1.125509		225.10		0.902424		$203.14	243.56	$12,641.04
5	$12,970.00		1.159274		15,035.78		0.879555		$13,224.81	328.67	$1,188.83
6	$200.00		1.194052		238.81		0.857266		$204.72	30.91	$4,235.83
7	$1,350.00		1.229874		1,660.33		0.835542		$1,387.28	110.13	$5,940.53
8	$200.00		1.266770		253.35		0.814369		$206.32	154.45	$9,096.53
9	$200.00		1.304773		260.95		0.793732		$207.13	236.51	$12,326.99
10	$14,609.00		1.343916		19,633.27		0.773618		$15,188.65	320.50	($3,730.88)
11	$200.00		1.384234		276.85		0.754013		$208.75	(97.00)	($849.83)
12	$200.00		1.425761		285.15		0.734906		$209.56	(22.10)	$2,097.82
13	$200.00		1.468534		293.71		0.716282		$210.38	54.54	$5,113.55
14	$1,350.00		1.512590		2,042.00		0.698131		$1,425.58	132.95	$6,459.40
15	$12,970.00		1.557967		20,206.84		0.680440		$13,749.53	167.94	($10,324.60)
16	$200.00		1.604706		320.94		0.663197		$212.85	(268.44)	($7,659.08)
17	$200.00		1.652848		330.57		0.646390		$213.68	(199.14)	($4,933.89)
18	$200.00		1.702433		340.49		0.630010		$214.51	(128.28)	($2,147.76)
19	$200.00		1.753506		350.70		0.614045		$215.35	(55.84)	$700.60
20	2,200.00		1.806111		3,973.44		0.598484		$2,378.04	18.22	$0.28
	$48,249.00								**$ 50,265.00**		

Less Initial Deposit		$0.00
		$ 50,265.00
Capital Recovery Factor	X	0.064755
Annual Annuity		**$3,254.90**

Appendix B to User Charge System

Equipment Replacement Schedule

System Component	No. of System Components	Approx. Replacement Frequency (Yrs.)	Percent Needing Replacement	No. Replaced in 20 years	Approx. Unit Cost of Replacement	Approx. Cost of Replacement per Frequency Interval
Septic Tank						
Effluent Pump	24	5	25%	24	$800	$4,800
Pump Floats	24	5	25%	24	$520	$3,120
Discharge Assembly	24	5	25%	24	$170	$1,020
Check Valve at FM	24	5	25%	24	$128	$768
Effluent Filter	70	10	10%	14	$520	$3,640
Recirculation Tank						
Effluent Pump	8	5	25%	8	$590	$1,180
Effluent Filter	8	10	25%	4	$520	$1,040
Pump Floats	4	10	25%	2	$142	$142
Flow Splitter	1	20	100%	1	$625	$625
Recirculation Filter Bed						
Gravel Media	1	20	100%	1	$18,713	$18,713
Laterals, manifolds, etc.	1	20	0%	0	$300	$0
Automatic Distributing Valve	4	15	25%	1	$352	$352
Phosphorous Removal System						
Chemical Feeder	1	10	100%	2	$317	$317
Chemical Feeder Floats	1	20	100%	1	$142	$142
Pump Floats	1	10	100%	2	$142	$142
Chamber Pump	1	15	100%	1	$730	$730
Mixing Pump	1	15	100%	1	$730	$730
Discharge Pump	1	15	100%	1	$730	$730
Tertiary Sand Filters	3	7	33%	3	$800	$792
Filter Pump	1	5	100%	4	$1,150	$1,150
Backwash Pump	1	5	100%	4	$1,150	$1,150
Discharge Effluent Pump	1	5	100%	4	$730	$730
Discharge Pump Floats	1	10	100%	2	$142	$142
Chlorinator/Dechlorinator						
Tablet Chlorinator Tubes	4	10	25%	2	$310	$310
Miscellaneous						
Routine Maintenance/Repairs	1	1	100%	1	$200	$200

Appendix D
User Charges
(Handout: Sample Commercial Calculation)

Design Population vs. Person Capacity for Existing Commercial Properties

Development	No. of Units (Not Including Residence)	Design Population (Incl. Residence)	Actual Person Capacity
Antlers Resort	25	123	108
Happy Valley Lodge	21	101	108
White Wing Resort	18	92	98
Artilla Cove Resort	10	46	60
Night Hawk Resort	16	68	72
Altenhoff Restaurant	1	20 seats x 4 hrs.	9
Subtotal Resorts:	91	430	455

The total actual person capacity	=	455 persons	
From Appendix A, the fixed commercial contribution is	=	$ 21,959.19	/ year
Therefore, the fixed rate per month is	=	$ 1,829.93	/ month
Or, the fixed rate per person capacity is	=	$ 4.02	/ person / month

Resort Rates Based on Person Capacity per Unit

	Person Capacity / Unit		Fixed Rate /Person/Mo.		Fixed Rate / Unit
Condominium / Resort Rooms	2	x	$ 4.02	=	$8.04
	4	x	$ 4.02	=	$16.09
	6	x	$ 4.02	=	$24.13
	8	x	$ 4.02	=	$32.17
	10	x	$ 4.02	=	$40.22
	12	x	$ 4.02	=	$48.26

Appendix "E" - Summary of Estimated User Charges
Jakes Creek Trail with Crowne View, Phase I

Table A -1 (36% Resort Annual Occupancy) 50,000 gpd

Based on User Charge Ordinance (June 2005) 5/22/2009

Summary of Wastewater Flow and Characteristics | **Summary of Estimated User Charges**

	Occupancy & Usage							Fixed / Minimum Payments			Variable Payments			Total Payments			
Development	No. of Units	Design Population	*Average Daily Flow (gpd)	Percent of Design Flow	Average Annual Occupancy	Average Annual Usage (gal/year)	Percent of Annual Usage	Avg. Min. Mo. Payment /Unit	Min. Monthly Payment	Min. Annual Payment	Avg. Variable Mo. Payment /Unit	Variable Monthly Payment	Variable Annual Payment	Avg. Mo. Payment / Unit	Monthly Payment	Annual Payment	Percent of Annual Payment
Commercial / Resort Properties:																	
Antlers Resort	25	123	5,289	15%	36%	693,071	10%	$ 20.11	$ 502.73	$ 6,032.74	$ 7.49	$ 187.36	$2,248.30	$ 27.60	$ 690.09	$ 8,281.04	12.8%
Happy Valley Lodge	21	101	4,343	13%	36%	569,107	8%	$ 20.11	$ 422.29	$ 5,067.51	$ 7.33	$ 153.85	$1,846.16	$ 27.44	$ 576.14	$ 6,913.67	10.7%
White Wing Resort	18	92	3,956	11%	36%	518,394	7%	$ 20.11	$ 361.96	$ 4,343.58	$ 7.79	$ 140.14	$1,681.65	$ 27.89	$ 502.10	$ 6,025.23	9.3%
Artilla Cove Resort	10	46	1,978	6%	36%	259,197	4%	$ 20.11	$ 201.09	$ 2,413.10	$ 7.01	$ 70.07	$840.83	$ 27.12	$ 271.16	$ 3,253.92	5.0%
Night Hawk Resort	16	68	2,924	8%	36%	383,161	5%	$ 20.11	$ 321.75	$ 3,860.96	$ 6.47	$ 103.58	$1,242.96	$ 26.58	$ 425.33	$ 5,103.92	7.9%
Altenhoff Restaurant	1	9	510	1%	36%	66,830	1%	$ 20.11	$ 20.11	$ 241.31	$ 18.07	$ 18.07	$216.80	$ 38.18	$ 38.18	$ 458.11	0.7%
Crowne View Phase I	8	64	2,752	8%	36%	360,622	5%	$ 20.11	$ 160.87	$ 1,930.48	$ 12.19	$ 97.49	$1,169.85	$ 32.30	$ 258.36	$ 3,100.32	4.8%
Subtotal Resorts:	99	503	21,752	63%		2,850,382	40%		$ 1,990.81	$ 23,889.67		$ 770.55	$9,246.55		$ 2,761.35	$ 33,136.21	51.1%
Residential Properties:																	
Vacation Residences	6	19	1,034	3%	11%	124,151	2%	$ 18.40	$ 117.37	$ 1,408.40	$ 5.26	$ 33.56	$402.74	$ 23.66	$ 150.93	$ 1,811.14	2.8%
Permanent Residences	52	155	8,362	24%	89%	3,043,928	43%	$ 18.40	$ 949.60	$ 11,395.24	$ 15.94	$ 822.87	$9,874.40	$ 34.34	$ 1,772.47	$ 21,269.64	32.8%
Crowne View Phase I	21	63	3,402	10%	89%	1,102,112	15%	$ 18.40	$ 386.32	$ 4,635.80	$ 15.94	$ 334.76	$4,017.10	$ 34.34	$ 721.07	$ 8,652.90	13.3%
Subtotal Residential:	79	237	12,798	37%		4,270,191	60%		$ 1,453.29	$ 17,439.44		$ 1,191.19	$14,294.24		$ 2,644.47	$ 31,733.68	48.9%
Existing Total	178	740	34,550	100%		7,120,573	100%		$ 3,444.09	$ 41,329.11		$ 1,961.73	$ 23,540.79		$ 5,405.82	$64,869.90	100%

*Note: Per discussions with existing resort owners, the design average daily flows shown above may exceed actual flows by approximately 20%. However, the design values are based on historical data from previous studies. Once the system is operational an

VILLAGE OF INDIAN POINT, MISSOURI
AMENDMENT TO USER CHARGE ORDINANCE

Bill Number 137 **Ordinance Number 09-03**

AN ORDINANCE AMENDING A PREVIOUS ORDINANCE, BILL NUMBER 94 ORDINANCE NUMBER 05-09, ESTABLISHING A USER CHARGE SYSTEM IN THE VILLAGE OF INDIAN POINT, COUNTY OF STONE, STATE OF MISSOURI, TO PROVIDE FUNDS NEEDED TO PAY FOR ALL EXPENSES ASSOCIATED WITH THE VILLAGE OF INDIAN POINT'S JAKES CREEK TRAIL WASTEWATER TREATMENT WORKS.

WHEREAS, on June 14, 2005, the Village of Indian Point, Missouri previously enacted a User Charge Ordinance for the wastewater treatment works known as the Jakes Creek Trail project as described in the Facility Plan dated December 28, 2004; and,

NOW, THEREFORE, BE IT ORDAINED BY THE BOARD OF TRUSTEES, of the Village of Indian Point, Missouri, that the following amendments to the user charge system for the Jakes Creek Trail project be made:

The following sentence shall be added to Article IV, Section 1 so that Article IV, Section 1 should read in its' entirety as follows:

"Section 1: Each user shall pay for the services provided by the Village of Indian Point based on their use of the Jakes Creek Trail treatment works as determined by water meter(s) acceptable to the Village of Indian Point. **In addition, each user shall pay White River Electric Cooperative directly for all electricity required to operate any component of the collection system located on their property.**

Article VII, Sections 2, 3 and 4 shall be repealed. The following language shall be substituted:

"Section 2: In the event that an owner of record is required to pay for the purchase and installation of a septic tank pursuant to Section 1 above, the BPW will install the septic tank and the owner of record will be billed for the purchase and installation of the septic tank. The owners of residential properties will not be permitted to install the septic tank directly. The owners of commercial properties will be allowed to install the septic tank at their own expense, provided all project engineering specifications are met. Upon the request of a residential owner, the BPW will divide the cost of septic tank installation plus an additional administrative fee not to exceed 6.45% into a maximum of 240 monthly payments, known as the "septic tank and installation fee". In the event that the owner of record and the user are one and the same, the septic tank and installation fee will be added to the monthly bill and treated as if it were a part of the monthly bill for all purposes of collection. If any portion of the monthly bill is not paid on time, the BPW reserves the right to demand the remaining balance of the septic tank installation fee in full. If the owner of record and the user are not one and the same, the BPW will send a separate monthly bill for the septic tank and installation fee directly to the owner. If a monthly payment is missed or not paid on time, the BPW reserves the right to demand the remaining balance of the septic tank and installation cost in full and to suspend service to the lot of record, even if the monthly user charge is paid in full by the user. Further, as a condition of the payment plan, the owner of record agrees that the BPW may treat the balance due as a lien against the property and take all necessary legal actions to enforce said lien, and that the outstanding balance of the septic tank and installation fee is due in full upon the sale or the transfer of the lot of record.

Section 3: For all residential and commercial structures which are structurally complete and inhabited prior to the effective date of this amendment to the ordinance and which have been identified in the project plans previously approved by MoDNR and which are otherwise required to connect to the project wastewater treatment system, the BPW will pay for the additional costs necessary to connect the structure to the wastewater collection system, except the cost for purchase and installation of the septic tank pursuant to Section 2 above.

Section 4: All residential and commercial structures which are completed and inhabitable after the effective date of this amendment to the ordinance and which are not identified in the project plans previously approved by MoDNR may be allowed to connect to the project wastewater treatment system, if the BPW makes a determination that there is existing treatment capacity in the system, and if the following conditions are met:

a. The owner of record installs a septic tank at his own cost which meets the project engineering specifications and which is suitable for use in connecting the structure to the collection system, and submits to the inspection provisions set forth in Section 1 above; and

b. The owner of record pays the BPW for the effluent pump and its installation and the installation of the service line from the septic tank to the main collection line, and

c. The owner of record is billed by the BPW for these costs and is not allowed to complete connection to the wastewater treatment system until all costs are paid in full, and

d. The owner of record agrees to transfer ownership of said effluent tank to the Village of Indian Point and fully executes an easement in a form to be established by the BPW, said easement which allows permanent access to the components of the collection system located on the real property in question.

The following section shall be added to Article VII:

"Section 5.

The BPW shall be responsible for the installation of all water meters for residential and commercial users who are connecting pursuant to Section 3 above."

Passed and approved by the Board of Trustees of the Village of Indian Point, State of Missouri this 24 **day of** MARCH **, 20**09.

Date of First Reading 3/24/09

	YEA	NAY
Greg Fier	✓	
Kevin McKoy	ABSENT	
Dave Rawson	✓	
Larry Stenzel	✓	
Arno Wehr III	✓	

Date of Second Reading 3/24/09

	YEA	NAY
Greg Fier	✓	
Kevin McKoy	ABSENT	
Dave Rawson	✓	
Larry Stenzel	✓	
Arno Wehr III	✓	

Arno Wehr III,
Chair – Board of Trustees

ATEST: Kathy Isaacs

Kathy Isaacs,
Village Clerk/Superintendent