

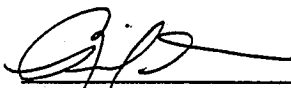
**A REPORT TO THE CITY COUNCIL OF THE
CITY OF SANTA ROSA
ON STORM WATER ENTERPRISE CHARGES**

**Rosalind A. Daniels
Director of Public Works**

September 1996

**REPORT TO THE CITY COUNCIL OF THE
CITY OF SANTA ROSA
ON STORM WATER ENTERPRISE CHARGES**

As directed by the City Council by Resolution No. 22844, a Resolution Initiating Proceedings for the Levy and Collection of Storm Water Enterprise Charges, this report was prepared in accordance with the Title 16 of the Santa Rosa City Code.



Rosalind A. Daniels
Director of Public Works

9/17/96
Date

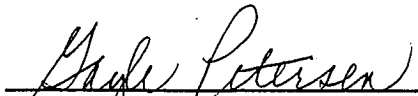
Report Preliminarily Approved by the City Council by Resolution No. 22845.



Gayle Petersen
City Clerk

11-4-96
Date

Report Finally Approved and Adopted by the City Council by Resolution No. 22880.



Gayle Petersen
City Clerk

11-4-96
Date

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PROPOSED CHARGE FOR EACH PARCEL, LISTED BY ASSESSOR'S PARCEL NUMBER
On file at the office of the Director of Public Works

**A REPORT TO THE CITY COUNCIL OF THE
CITY OF SANTA ROSA
ON STORM WATER ENTERPRISE CHARGES**

INTRODUCTION

The Federal Water Pollution Control Act (referred to as the Clean Water Act) was amended in 1987 to include storm water runoff. On November 16, 1990, the Federal Environmental Protection Agency (EPA) issued rules governing the quality of storm water runoff. The regulations require that storm water discharges be regulated under the National Pollutant Discharge Elimination System (NPDES) that regulates wastewater discharges. In California, the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Board (RWQCB) issue and enforce NPDES permits.

The EPA regulations require municipalities with a separate storm water system serving an area with a population greater than 100,000 to obtain an NPDES permit for storm water discharges. The list of communities over 100,000 included in the regulations was based on the 1980 census. At that time Santa Rosa's population was less than 100,000. The population in the Santa Rosa area served by the separate storm water system officially became over 100,000 in the 1990 census.

The State of California through its nine Regional Water Quality Control Boards is responsible for implementing the NPDES program in California. The North Coast RWQCB is responsible for the Santa Rosa area. The North Coast RWQCB lists urban runoff as one of the sources of water quality impairment in the Laguna de Santa Rosa, the large wetlands complex downstream of the Santa Rosa urban area. On September 14, 1993, the North Coast RWQCB notified the City of Santa Rosa, County of Sonoma, and Sonoma County Water Agency of the requirement to obtain an NPDES permit for the storm water discharge from the municipal storm drain system. The RWQCB designated as part of the Santa Rosa storm drain system those portions of the Sonoma County Water Agency and County of Sonoma storm drain systems that are interconnected with the Santa Rosa system.

The storm water NPDES permit application is being submitted to the RWQCB in two parts. Part 1, which generally described existing programs, practices, funding sources, and legal authority was submitted on February 10, 1995. Part 2 of the application describes what the co-permittees propose to do to control storm water runoff quality to the maximum extent practicable. The deadline for submittal of Part 2 of the NPDES permit application is October 1, 1996. Estimated City costs for NPDES permit compliance based on the Part 2 application include \$400,000 in capital expenditures and start-up costs and \$385,000 in annual operation and maintenance costs. These estimated costs are in addition to existing expenditures for storm water management.

In addition to the storm water quality activities for the NPDES permit, the City's storm water management program includes water-quality related creek restoration efforts, operation and maintenance of the drainage system, design and construction of drainage system improvements, updates to storm drain system maps and database, hydraulic analyses and drainage related customer service.

STORM WATER ENTERPRISE AND UTILITY

This report is prepared in accordance with Title 16 of the Santa Rosa City Code. The purpose of Title 16 is to establish a storm water enterprise and utility in order to facilitate the obtaining by the City of a storm water discharge permit and otherwise facilitate the management of storm water runoff in order to control and reduce flooding, property damage, erosion and water quality degradation, all to preserve and enhance the public health, safety and welfare and the quality of life of the citizens of Santa Rosa. By enacting Title 16, a surface water, storm water, storm drainage and flood control management enterprise was created as a City enterprise and utility to operate, maintain, and fund the City's surface water, storm water, storm drainage and flood control management. The enterprise may provide for, among other related matters, funding, permitting, maintaining, planning, designing, retrofitting, reconstructing, constructing, acquiring, environmentally restoring, regulating, surveying, water quality testing, and inspecting of surface water, storm water, storm drainage and flood control facilities, and the management thereof. Title 16 provides the City with the authority to prescribe, revise and collect charges for the services and facilities of the enterprise after legal notice and public hearing.

STORM WATER ENTERPRISE CHARGES

Basic Assessment Unit

It is proposed to prescribe and levy a charge on the basis of proportionate storm water runoff from each parcel of real property situated within the boundaries of the City, using the same methods as for the flood control benefit assessment in Zone 1A by the Sonoma County Water Agency. The proportionate storm water runoff from each parcel is determined based on the area of the parcel and its "runoff factor." The runoff factor is a measure of the amount of water that will flow off a parcel compared to the amount of rainfall that falls on the parcel expressed as a decimal fraction. Land used for lawn, agriculture, and similar uses has a low runoff factor. Land which has been improved by adding structures with roofs and paving has a high runoff factor.

The basic assessment unit is the proportionate runoff from the average single-family residential parcel. The average single-family parcel has an area of 0.22 acre (9,600 square feet) and a runoff factor of 0.23. The product of these numbers is defined as one unit and is designated as K:

$$K = \text{one unit} = 0.22 \text{ acre} \times 0.23 = 0.0506$$

To compute the assessment for any developed parcel it is necessary to compute its units. The number of units, ERU, is calculated as the product of the parcel area, PA, and its runoff factor, RF, divided by the standard unit, K, derived above. This formula is used for all land use codes assigned to Formula No. 1.

$$\text{Equivalent Residential Units (ERU)} = \frac{\text{area of parcel, (PA)} \times \text{runoff factor, (RF)}}{\text{one unit, (K)}}$$

All other land use codes will have their assessments calculated using formulas 2, 3, or 4 as discussed below.

Raw undeveloped land is assigned a low runoff factor of 0.0003 and vacant residential land, golf courses, farmland, and campgrounds are also assigned a low runoff factor of 0.0005 since such lands will receive lesser benefit from the services proposed to be financed. The runoff factor for all other categories of land uses reflect the expected average runoff and are listed in Appendix A.

Modifications to the Standard Assessment Formula

It is necessary to modify the formula to limit the computation of equivalent residential units for certain land use codes where there could be a large portion of the property that is excess to that use. For instance, residential and other urban uses are assigned by the assessor if that is the primary land use. A larger parcel of land may have a use code designation of 01X (urban residential) or other urban use code which would normally occupy a small acreage. Application of the urban use code to the entire acreage would generate an assessment much too high as a substantial part of the parcel is not actually in urban use. The excess acreage is probably unused or in a non-urban use for which a much reduced runoff factor needs to be applied.

The general formula is extended to make adjustments for parcels which exceeded a base acreage. A base acreage of either ½, 2, or 5 acres is used to adjust for urban uses ranging from residential types at ½ and 2 acres to commercial at 5 acres. The following formula is used to make adjustments for such cases where it is necessary to place a cap on the base area assessment and assess the remaining property area at a lower rate.

$$\text{ERU} = [(\text{RF} \times \text{BA})/\text{K}] + (0.0005 \times \text{PA} - \text{BA})/\text{K} \quad \text{where:}$$

BA = base acreage and

BA = 0.5 in Formula No. 2

BA = 2.0 in Formula No. 3

BA = 5.0 in Formula No. 4

The formula number and base acreage applicable to each land use code is listed in Appendix A. If the total equivalent residential units for an individual property is less than 0.25 then a value of 0.25 benefit units is assigned to that property.

SERVICES PROPOSED TO BE FINANCED

A description of various programs proposed to be financed with the revenue from the proposed storm water enterprise charges is provided below. Except for new activities to be undertaken in compliance with the storm water discharge permit, the revenue would fund only a portion of the cost of the program as described.

Storm Water Discharge Permit Compliance

The following activities are proposed in the storm water discharge permit application which is due to be filed with the Regional Water Quality Control Board on October 1, 1996:

- storm water permit fees of \$10,000 per year
- establishment of long-term storm water sampling stations
- laboratory costs for annual storm water monitoring
- incident-related storm water monitoring
- additional equipment and staff in the Field Services Division for improved drainage system cleaning
- materials and staff time for public education activities, including preparation and printing of written materials, workshops, outreach to schools, industry, businesses and the media
- additional staff time for building, grading, subdivision, and encroachment permit inspectors and for the storm water management staff to educate about and enforce the storm water quality provisions of the City Code
- additional staff time for coordination of the storm water permit program with the Regional Water Quality Control Board, Sonoma County Water Agency, County of Sonoma, other City departments and other municipal storm water permit programs
- preparation of an annual report to the Regional Water Quality Control Board.

Water-quality Related Creek Restoration

Storm water washes pollution and sediment from the Santa Rosa urban area into local creeks. Storm water runoff from the urban area is also higher in temperature than runoff from undeveloped lands. Vegetation in and alongside creek channels provides a natural filter to remove pollutants from storm water runoff. Sediments and heavy metals settle out into bottom-growing vegetation; floating pollutants such as oil and grease adhere to vegetation and are broken down through natural processes. Overhanging trees provide shade to cool the water. Vegetated creek corridors act as a linear treatment system for urban runoff, protecting sensitive downstream water bodies such as the Laguna de Santa Rosa and the Russian River.

Many creeks in the Santa Rosa area were channelized for flood control purposes and now contain only a small amount of vegetation. A portion of the storm water enterprise funds would be used to regrade creek channels, plant trees and shrubs, and maintain vegetated creeks to improve storm water quality.

Drainage System Improvements

A partial list of areas in Santa Rosa that experience flooding during heavy storm events are listed below. Projects proposed at these locations are currently unfunded. A portion of the storm water enterprise funds would be used for design and construction of drainage system improvements in areas such as these.

College Avenue at Morgan Street
Eighth Street
Fair Oaks Court erosion repair
Fountaingrove Parkway bubble-up replacement
Gold Lake Drive
Leete Avenue
Lynn Court
Pacific Avenue
Palm Street
Rowland Court
Sonoma/Franquette area
Third Street
10th/Ripley half-rounds replacement

Engineering, Operations and Maintenance, and Program Administration

Storm water enterprise funds would fund a portion of the costs of the following ongoing activities so that these services can continue to be provided:

- * drainage system mapping, hydrology/hydraulic analyses, customer service, and coordination
- * drainage system operations and maintenance
- * hazardous spill response
- * street sweeping
- * overall program administration and coordination.

PROPOSED CHARGE PER EQUIVALENT RESIDENTIAL UNIT

The charge proposed for the 1997-98 fiscal year is \$19 per equivalent residential unit per year. The charge that would be applied to each parcel is calculated by multiplying the number of ERUs for that parcel by the dollar amount prescribed per ERU. For example, for a parcel of 1.68 ERUs the charge at \$19 per ERU would be:

$$1.68 \text{ ERUs} \times \$19 \text{ per ERU} = \$31.92 \text{ per year}$$

The amount of proposed charges for each parcel served by the storm water enterprise, listed by assessor's parcel number, is too voluminous to be included in this report but is on file at the office of the Director of Public Works and incorporated by this reference.

The cost of storm water management services provided by the City exceeds the amount that would be collected at the proposed \$19 per ERU per year rate. The \$19 figure was derived as follows:

<u>Type of expense</u>	<u>Annual amount</u>
Water-quality Related Creek Restoration	\$350,000
Public Education	25,000
Storm Water Quality Testing	25,000
Maps, Hydraulics and Survey	30,000
Drainage System Improvements	140,000
System Cleaning for Storm Water Quality	175,000
Operations and Maintenance	45,000
Storm Water Discharge Permit	150,000
<u>Program Administration and Coordination (10%)</u>	<u>105,000</u>
TOTAL	\$1,045,000
Approximate number of ERUs for all parcels served	55,000

$$\text{Charge per ERU} = \frac{\text{Total annual expenses}}{\text{Total ERUs}} = \frac{\$1,045,000}{55,000 \text{ ERUs}} = \$19 \text{ per ERU per year}$$

An escalator is proposed to be included in the charge so that a consistent level of service can be provided over time. The escalator would be based on the Consumer Price Index for all Urban Consumers (CPI-U) for the San Francisco-Oakland-San Jose area. Accordingly, the charge of \$19 per ERU for Fiscal Year 1997/98 will be increased each year by the percentage increase in such Index.

If Measure "U" (Flood Control Zone 1A Benefit Assessment) of the Sonoma County Water Agency on the November 5, 1996, election ballot passes and funds from that benefit assessment are received by the City in any fiscal year and are committed for purposes for which the revenues from the proposed storm water enterprise would otherwise be expended ("Zone 1A Replacement Funds"), a credit is proposed to be given against the \$19 per ERU charge in the next fiscal year on each property in an amount equal to that property's pro rata share of the Zone 1A Replacement Funds.

APPENDIX A

STORM WATER ENTERPRISE CHARGES - COMPUTATION PARAMETERS

EXTENDED LAND USE	USE CODE	RUNOFF FACTOR	FORMULA NUMBER	BASE AREA	RUNOFF FACTOR
VACANT RESIDENTIAL LOT	00X	.0003	1	N/A	N/A
SINGLE FAMILY RESIDENCE	01X	.23	2	.5	.0005
DUPLEX RESIDENTIAL	02X	.23	2	.5	.0005
	020	.0003	1	N/A	N/A
	02X	SEE FOOTNOTE 1			
RESIDENTIAL 3 & 4 UNIT	03X	.45	2	.5	.0005
	030	.0003	1	N/A	N/A
	03X	SEE FOOTNOTE 1			
APARTMENT	04X	.45	3	2	.0005
	040	.0003	1	N/A	N/A
	04X	SEE FOOTNOTE 1			
RURAL RESIDENTIAL	05X	.23	2	.5	.0005
	050	.0003	1	N/A	N/A
	05X	SEE FOOTNOTE 1			
MOTEL	06X	.53	3	2	.0005
HOTEL	07X	.70	3	2	.0005
RESIDENTIAL COMMON AREA	08X	.0005	1	N/A	N/A
TRAILER PARK	09X	.53	3	2	.0005
	095 WITH AREA < 436 SQ FT (.01 ACRE):DON'T PROCESS-\$0.00				
	097 WITH AREA < 436 SQ FT (.01 ACRE):DON'T PROCESS-\$0.00				
VACANT LAND	10X	.0003	1	N/A	N/A
STORE	11X	.53	3	2	.0005
STORE & OFFICE COMBO	12X	.53	3	2	.0005
DEPARTMENT STORE	13X	.70	3	2	.0005
FOOD STORE	14X	.70	3	2	.0005
SHOPPING CENTER	15X	.70	1	N/A	N/A
NOT USED BY ASSESSOR	16X	N/A	N/A	N/A	N/A
OFFICE BUILDING	17X	.65	3	2	.0005
NOT USED BY ASSESSOR	18X	N/A	N/A	N/A	N/A
PROFESSIONAL BUILDING	19X	.65	3	2	.0005
MISC. COMMERCIAL	20X	.53	3	2	.0005
RESTAURANT/BAR	21X	.70	3	2	.0005
NOT USED BY ASSESSOR	22X	N/A	N/A	N/A	N/A
THEATER	23X	.70	3	2	.0005
BANK	24X	.70	3	2	.0005
SERVICE STATION	25X	.90	3	2	.0005
AUTO SALE	26X	.90	4	5	.0005
FARM/CONSTR. SALE	27X	.90	4	5	.0005
SERVICE SHOP	28X	.70	3	2	.0005
NURSERY	29X	.53	3	2	.0005
VACANT INDUSTRIAL	30X	.0003	1	N/A	N/A
LIGHT MANUFACTURING	31X	.90	4	5	.0005
WAREHOUSE	32X	.90	4	5	.0005

EXTENDED LAND USE	USE RUNOFF CODE FACTOR	FORMULA NUMBER	BASE AREA	RUNOFF FACTOR
LUMBER	33X .8	3	2	.0005
PACKING PLANT	34X .90	4	5	.0005
PROCESSING PLANT	35X .75	3	2	.0005
AGRIC. COMMODITY	36X .75	3	2	.0005
HEAVY INDUSTRY	37X .90	4	5	.0005
MINERAL PROCESSING	38X .53	3	2	.0005
MISC. INDUSTRIAL	39X .75	3	2	.0005
NOT USED BY ASSESSOR	40X N/A	N/A	N/A	N/A
IRRIGATED ORCHARD	41X .0005	1	N/A	N/A
VINEYARD	42X .0005	1	N/A	N/A
VINE/BUSH FRUIT	43X .0005	1	N/A	N/A
TRUCK CROP	44X .0005	1	N/A	N/A
FIELD CROP	45X .0005	1	N/A	N/A
PASTURE	46X .0005	1	N/A	N/A
DAIRY	47X .0005	1	N/A	N/A
POULTRY	48X .0005	1	N/A	N/A
FEED LOT	49X .0005	1	N/A	N/A
NOT USED BY ASSESSOR	50X N/A	N/A	N/A	N/A
ORCHARD	51X .0005	1	N/A	N/A
NON-IRRIGATED VINEYARD	52X .0005	1	N/A	N/A
FIELD CROP	53X .0005	1	N/A	N/A
PASTURE	54X .0005	1	N/A	N/A
TIMBER LAND	55X .0003	1	N/A	N/A
HARDWOOD & CHAPARRAL	56X .0003	1	N/A	N/A
WASTE LAND	57X .0003	1	N/A	N/A
TIDELAND	58X N/A	N/A	N/A	N/A
SPECIALTY FARM	59X .0005	1	N/A	N/A
PRIVATE INDOOR REC.	60X .65	3	2	.0005
PRIVATE OUTDOOR REC.	61X .65	3	2	.0005
DANCE HALL	62X .65	3	2	.0005
BOWLING ALLEY	63X .65	3	2	.0005
CLUB, LODGE HALL	64X .70	3	2	.0005
AUDITORIUM, STADIUM	65X .70	3	2	.0005
PRIVATE GOLF COURSE	66X .53	3	2	.0005
RACE TRACK	67X .53	3	2	.0005
CAMP	68X .0005	1	N/A	N/A
PARK	69X .0003	1	N/A	N/A
NOT USED BY ASSESSOR	70X N/A	N/A	N/A	N/A
CHURCH	71X .60	3	2	.0005
SCHOOL	72X .53	3	2	.0005
COLLEGE	73X .60	3	2	.0005
PRIVATE HOSPITAL	74X .65	3	2	.0005
REST HOMES, ETC	75X .65	3	2	.0005
ORPHANAGE	76X .65	3	2	.0005
BURIAL PROPERTY	77X .53	3	2	.0005
VOL. FIRE DEPARTMENT	78X .65	3	2	.0005
NOT USED BY ASSESSOR	79X N/A	N/A	N/A	N/A
NOT USED BY ASSESSOR	80X N/A	N/A	N/A	N/A
UTILITY	81X .53	3	2	.0005

EXTENDED LAND USE	USE RUNOFF CODE FACTOR	FORMULA NUMBER	BASE AREA	RUNOFF FACTOR
EXTRACTABLE COMMODITY	82X .0005	1	N/A	N/A
PETROLEUM & GAS	83X .0005	1	N/A	N/A
MISCELLANEOUS RIGHT	84X N/A	N/A	N/A	N/A
ROADWAY	85X .0005	1	N/A	N/A
WATER SOURCE	86X N/A	N/A	N/A	N/A
RIVER AND LAKE	87X N/A	N/A	N/A	N/A
NOT USED BY ASSESSOR	88X N/A	N/A	N/A	N/A
PARKING LOT-PRIVATE	89X .90	3	2	.0005
FEDERAL GOVERNMENT	90X N/A	N/A	N/A	N/A
STATE GOVERNMENT	91X N/A	N/A	N/A	N/A
COUNTY GOVERNMENT	92X N/A	N/A	N/A	N/A
CITY-OWNED PROPERTY	93X N/A	N/A	N/A	N/A
SPECIAL DISTRICT	94X N/A	N/A	N/A	N/A

NOTE:

If acreage is less than .01 and property has a significant amount of impervious surfaces (as evidenced by total improvement of \$40,000 or greater), assign one equivalent residential unit to property.

[CF\SWEC.P06]