

CLEAN WATER FEE STUDY

SECTION 1
INTRODUCTION

INTRODUCTION

On July 8, 2014, Clark County's Board of County Commissioners (BOCC) adjusted the clean water fee and raised rates for the first time in 15 years.

The fee was altered to reflect the more extensive efforts necessary to manage stormwater in the urban areas over the rural areas. The county's Municipal Separate Storm Sewer System (MS4) is located primarily in the urban zone of unincorporated Clark County, with over 70 percent of clean water program expenditures incurred in that geographic area.

The BOCC established two fees, one for the urban zone, and one for the rural zone of unincorporated Clark County. The urban fee was increased from \$33 a year to \$47 a year and the rural fee went from \$33 a year to \$35 a year.

The BOCC also required a fee study to be done regarding Clark County's fee and the possibility of a polluter pays fee in the future. The Clark County Board of Councilors (BOC) removed that section of the Clark County code in August of 2015.

The Department of Environmental Services submitted a draft study to the BOC and sought their input for a final draft. The council's action in August made the study moot. The intention of the Department of Environmental Services is to have that study serve as a basis for helping direct future funding for the clean water program.

This revised preliminary draft is submitted to the Clean Water Commission for their input and direction. We ask that Clean Water Commissioners provide feedback and identify any methods they believe would merit further research or detail.

We hope this document will assist in moving us forward in the clean water program.

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HOW WE ASSESS THE CLARK COUNTY CLEAN WATER FEE

2.1 Historical Stormwater Overview

Clark County uses a combination of methods to assess the clean water fee, or what is commonly called a stormwater fee in most other areas of the country.

Jurisdictions throughout America must manage stormwater runoff. Stormwater is the water that flows off roofs, roads, and other impervious surfaces. For centuries, civilizations have created systems to convey and control stormwater, which is essential to protect public and private property from flood damage during storm events.



Stormwater drainage spouts to a control area in the Forbidden City, Beijing, China. Constructed during the Ming Dynasty, 1420.

Over time, we have learned that how we handle stormwater has enormous impacts on our water quality and our wildlife. In Washington state, we know that if stormwater is released into the waterways too quickly the impact on fish, salmon in particular, can be fatal.

Managing stormwater runoff is an issue that has challenged civilizations for thousands of years and is a science and engineering field all by itself.

SECTION 2: Stormwater History and Current Fees



An ancient Chinese stormwater control and treatment area at the Temple of the Sun in Beijing. Constructed during the Ming Dynasty in 1530, it is an almost 500 year old version of a modern bioswale.

Stormwater control systems have been utilized throughout time as a method for combining architecture and natural open space.

A modern bioswale amphitheater at Manassas Park Elementary School in Manassas Park, Virginia.



Thomas Wetlands stormwater facility and trails, Clark County, Washington.

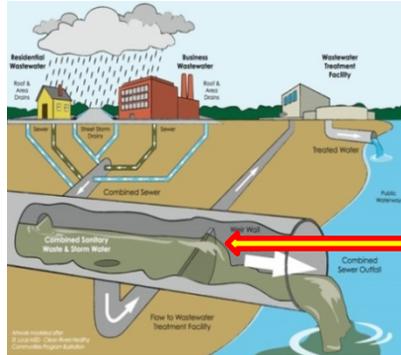
2.2 Types of Stormwater Systems in Washington State

In Washington state, jurisdictions use one of two methods for controlling, treating, and discharging stormwater: 1) combining stormwater and sewage effluent together in a single piping system flowing to a centralized wastewater treatment facility, or 2) separating stormwater from the sanitary sewer and routing through a separate system.

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In areas of heavy rainfall, the combined system is vulnerable during large rain events. A large volume of water can overwhelm the combined system and lead to untreated sewage discharging directly into nearby waterways (rivers, lakes, and/or the ocean).

A combined sewer and stormwater system.



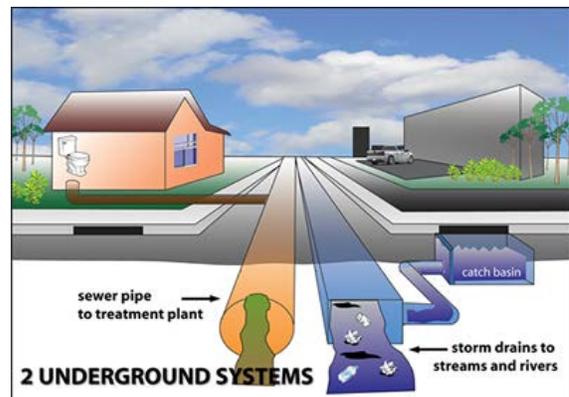
Untreated sewage and stormwater can discharge directly into the public waterway. This occurs when large storm events overwhelm the system. (overflow)

In Washington state, the most common method to control, collect, treat, and discharge stormwater is a separate piping system from the sewer/sanitary system. Systems that are separate from the sewage/sanitary system greatly reduce the risk of discharging untreated sewage into the public waters. These stormwater conveyance systems are called a Municipal Separate Storm Sewer System (MS4).



A separated sewage and stormwater system. (MS4)

In older systems, the pipes directly discharge into the public waterways. This gives pollutants a direct pathway into our rivers, lakes, streams.



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Clark County has an extensive MS4 system and maintains over 1,000 stormwater treatment and detention facilities. The county's stormwater system also includes roughly 2,000 dry wells and more than 250 stormwater filter vaults containing more than 2,000 individual filter cartridges. Four hundred miles of pipe connect to over 170,000 individual assets.

Along with maintaining its own system, the county is required by the federal National Pollution Discharge Elimination System Permit (NPDES) permit to inspect more than 1,000 privately owned stormwater facilities, all private businesses, and an additional 1,000 publicly owned facilities.

2.3 State and Federal Permits and Mandates

Discharging stormwater into public waters requires a federal permit issued from the United States Environmental Protection Agency (EPA). This permit, called the National Pollution Discharge Elimination System Permit (NPDES), is statutorily required by the Federal Water Pollution Control Act (the Clean Water Act), Title 33 United States Code, Section 1251 et seq.



Stormwater discharging into a public waterway.

In Washington, a state permit is also required for discharging stormwater into public waters, or "waters of the state." A State Waste Discharge General Permit is required under the provisions of the state of Washington Water Pollution Control Law, RCW 90.48. These sections of the RCW require Clark County to create and maintain a stormwater manual for builders of projects that create stormwater discharge (homes, roads, commercial buildings, etc.) and meet other state obligations in addition to the federal permit. The Washington state Department of Ecology (DOE) serves as the manager of the county's federal NPDES Permit.

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The NPDES permit is about much more than just the physical retention, treatment, and discharging of stormwater. The permit requires:

- Inspections and reports regarding all the stormwater facilities.
- Creation of a stormwater manual for private developers outlining the standards necessary for constructing stormwater facilities.
- Mapping of all components of the county's stormwater system.
- Erosion control for all new construction.
- Inspections for illicit discharges of pollutants into our stormwater system.
- Education and outreach informing people about the discharge system and raising awareness of behaviors that reduce pollution our surface water.
- Monitoring stormwater discharges for pollutant levels.
- A plan for future maintenance and construction of the stormwater system.
- Coordination and planning with other local jurisdictions to improve surface water quality.

Each NPDES permit issued by the federal government is valid for five years. Clark County has had three NPDES permits. Each new permit renewal has increased compliance requirements, obligations, and costs to comply with the permit. Clark County will receive a new NPDES permit in 2018.

2.4 The Clark County Clean Water/Stormwater Fee

The Clark County clean water fee is an assessment on property owners in Clark County to pay for the county’s stormwater system and other unfunded federal and state mandated obligations related to stormwater control and treatment.



A bioswale next to a busy roadway

Most stormwater in unincorporated Clark County passes through the MS4 system. Some, but not all, runoff is first conveyed through stormwater facilities, dry wells, or filters prior to discharging into nearby creeks, rivers, or lakes.

These man-made structures “treat” the stormwater as it passes through. The treatment system is designed to remove as many contaminants from the stormwater as is practically and economically possible prior to being discharged into our local public waterways. The system is also designed to capture and infiltrate or detain stormwater, preventing it from rapidly entering waterways. This helps prevent erosion and flooding of both natural and man-made waterways.

In 1999, Clark County established the Clean Water Program and an annual fee for all properties in unincorporated Clark County. The fee pays for the legal obligations established by the federal NPDES permit and the state discharge permit (combined as one permit). The program originally sent separate annual billing notices to all property owners. Currently, the annual fee is placed on the tax assessment for individual properties.

The Clean Water Program in Clark County is an enterprise fund. All revenue generated from the fee is mandated by state law to be spent for purposes of controlling and treating stormwater, in accordance with our Clark County Clean Water Program. This includes maintenance of our stormwater facilities.

2.5 Creating Units to Calculate Stormwater Fees Nationally and Locally

There are three basic methods that public entities use to calculate and assess residents for stormwater control and treatment. These are sometimes modified slightly to meet unique billing requirements or jurisdictional needs. Impervious area is the most important factor influencing stormwater runoff and is, therefore, a major element in each method utilized for assessing a stormwater fee.

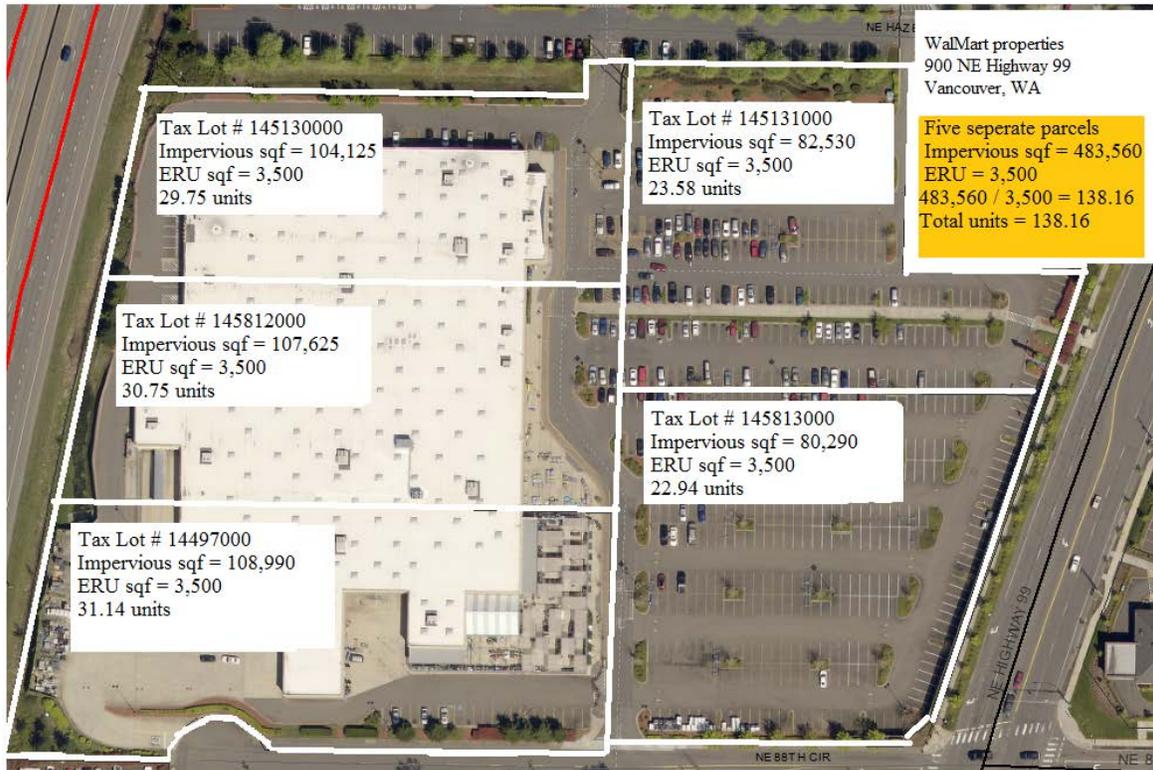
Equivalent Residential Unit (ERU) (Also referred to as the Equivalent Service Unit (ESU) method): More than 80 percent of all stormwater assessments around the U.S. use the ERU/ESU method. Parcels of land are billed based on the amount of impervious area on each parcel, regardless of the total area of the parcel. This method is based on the impact of a typical single family residential (SFR) home's impervious area footprint. A sample of SFR parcels is studied to determine the average impervious area of a typical SFR parcel. The square footage amount is called an ERU. In most cases, all single family homes are billed a flat rate of one ERU.

In some jurisdictional methods, several tiers of ERU rates are established based on an analysis of SFR parcels within a defined geographic area. Having such a tiered-SFR rate approach improves the equitability of the billings sent to homeowners.

For commercial properties, the impervious area on each commercial property is measured and assessed. The amount of impervious square footage on a commercial property is then divided by the single ERU square footage (ERU square footage varies from jurisdiction to jurisdiction) to determine the number of units to be billed for that property.

Many commercial properties are set on more than one tax lot. An example of this and the actual equation used by Clark County for establishing the clean water fee is the Walmart property located at 900 NE Highway 99, Vancouver, WA.

SECTION 2: Stormwater History and Current Fees



WALMART on NE Highway 99

2.6 Methods for Calculating and Charging Stormwater Fees

Intensity of Development (ID): This stormwater cost allocation method is based on the percentage of impervious area relative to an entire parcel's size. All parcels, (including those that are vacant and undeveloped) are charged a fee on the basis of their *intensity of development*, which is defined as the percentage of impervious area in the parcel. Rates are calculated for several individual categories.

This method is utilized by a number of jurisdictions in Washington state. King County, Pierce County, and Snohomish County are just a few who utilize this methodology.

Equivalent Hydraulic Area (EHA): Under this stormwater allocation method, parcels are billed on the basis of the combined impact of their impervious and pervious areas in generating stormwater runoff. The impervious area is charged at a much higher rate than the pervious area.

This method is the least commonly used since it requires a large amount of work and analysis to implement. With this method, each individual property is measured and assessed.

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Development Impact fees: This stormwater cost allocation method charges a fee that is collected at the time of permitting and planning to cover the projected costs of infrastructure and maintenance of stormwater facilities. The fee is calculated when permits or plans are submitted and collected prior to issuing construction permits.

This fee estimates the annual cost of maintaining a stormwater facility for a proposed project or building. The annual costs are then multiplied by twenty or twenty-five (years) to determine the amount charged to the project proponent for their impact fee.

An advantage of this method is that it provides a large amount of money to the local jurisdiction for costs associated with stormwater maintenance. The drawback of this method is that it requires permit applicants to submit a substantial amount of money prior to getting any permits.

Almost all jurisdictions have a blend of both ERU and intensity of development methods. Many jurisdictions also include development impact fees when a development is initially proposed and permitted. Clark County does not assess a development impact fee.

Zoning: Another basis for establishing fees for stormwater control is property zoning. In Washington state, counties are divided into urban or rural zoning. Urban zoning features smaller single family lots, dense housing, intense multi-family, large areas of commercial, and manufacturing. Compared to rural zoning, urban zoning has more developed infrastructure such as sewer, multi-lane roads, and sidewalks. Rural zoning features large single family lots, farming, and minimal infrastructure (primarily septic, smaller roads, and few sidewalks). Clark County has adopted a fee method that separates the urban zone fee from the rural zone fee.

Snohomish County charges different base rates for parcels in urban and rural areas. Like Snohomish County, Clark County now charges a higher stormwater fee for urban areas since the demands for stormwater control are highest within those more densely populated areas. Clark County adopted this method for calculating the stormwater fee in July 2014.

Clark County's MS4 system is primarily located within the urban zone of Clark County where roughly 70 percent of all expenditures for stormwater control occur.

2.7 The Clark County Clean Water Fee

The ERU method has been used to calculate fees for stormwater control and treatment in Clark County since the fee was adopted in 1999. Clark County refers to an ERU as a base unit.

“Base unit” means a single-family residential unit of three thousand five hundred (3,500) square feet of impervious surface.

Clark County Code 13.30A.030 A

The base unit ERU system establishes a method for creating a numeric value for the amount of impervious surface on a piece of property. To calculate the number of billable units for a property, divide the square footage of impervious surface on a parcel by 3,500 square feet. That number is then multiplied by the dollars per ERU to determine the fee for a property.

As recommended by the EPA, a study of Clark County single family residential properties was conducted. Staff analyzed over 70 individual residential parcels and measured the square footage of impervious surface on each. The amount of impervious surface on the individual residential properties sampled ranged from a low of 2,700 square feet to a high of more than 4,900 square feet. The average amount of impervious surface was slightly more than 3,700 square feet per individual residential lot. The county commissioners chose to make each base unit or ERU 3,500 square feet.

In 1999, the county placed the assessment rate at \$33 for each base unit. Discounts in the fee were set for larger lot sizes beginning at ½ acre to 1 acre, 1 to 5 acres, 5 to 20 acres, and 20 acres and above. Each step received a 10 percent reduction in the fee. There are other statutory exemptions from the fee that were required to be in the county code.

In 2014, the county increased the base rate to \$35 for properties in the rural zone and \$47 for properties within the urban zone. All properties in the county are assessed a \$5 surcharge to cover the cost of settling environmental litigation against the county for violations of the Clean Water Act. That \$5 surcharge expires in 2019. All other discounts and exemptions remained unchanged in the code.

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Clark County’s code for clean water fees:

13.30A.050 Rate structure and fees.

A. The service charges shall be based upon the relative contribution to increased surface and stormwater runoff from developed parcels and based upon the land use of the parcel. The service charge shall be imposed on all developed parcels within the unincorporated areas of the county with improvements having a value of ten thousand dollars (\$10,000) or more. Land uses are categorized as single-family residential lots, single-family residential large lots, multifamily residential lots, commercial, industrial and other nonresidential lots, and undeveloped lots. A base unit is used to calculate the service charge for each commercial, industrial or other nonresidential lot. The service charge for single-family residential lots of one-half (1/2) acre or less shall be calculated as a single base unit. Larger single-family residential lots shall be charged an amount less than the full annual service charge as set forth in this section. The annual service charge rate for multifamily residential lots shall be thirty-five dollars (\$35.00) multiplied times the number of residential units located on the lot. The base unit is three thousand five hundred (3,500) square feet of impervious surface area, which is the average impervious surface area for single-family residential lots within the urban growth area of the county. The annual service charge imposed for each base unit of impervious surface area within the urban growth area is forty-seven dollars (\$47.00). The annual service charge imposed for each base unit of impervious surface outside the urban growth area is thirty-five dollars (\$35.00).

B. Land Use Category	Annual Service Charge Rate Inside the Urban Growth Area	Annual Service Charge Rate Outside the Urban Growth Area
No. 1 Single-family residential detached	\$47.00/single-family residence	\$35.00/single-family residence
No. 2 Single-family residential large lots:		
More than 0.5 acre to 1 acre	\$43.70	\$31.70
More than 1 acre to 5 acres	\$40.40	\$28.40
More than 5 acres to 20 acres	\$37.10	\$25.10
More than 20 acres	\$33.80	\$21.80
No. 3 Multifamily residential lots	\$47.00 X number of residential units	\$47.00 X number of residential units
No. 4 Retail, commercial, offices, churches, hospitals, airports, public or private utility installations, public or private schools, golf courses, government structures, other public facilities, subject to RCW 90.03.525 , industrial, manufacturing and railroad right-of-way, county road and street right-of-way	\$47.00 X number of base units or portion thereof	\$35.00 X number of base units or portion thereof
No. 5 State highway	\$14.10 X number of base units or portion thereof subject to RCW 90.03.525	\$10.50 X number of base units or portion thereof subject to RCW 90.03.525

SECTION 2: Stormwater History and Current Fees

- C. For the purpose of defining total land area of properties in land use category numbers 4 and 5 above, the storm and surface water program shall use the county assessor's current records and such other records as necessary to measure the property to within one hundred (100) square feet.
- D. The board of county commissioners further finds that many of the difficulties in managing of surface and stormwater problems result in part from the general lack of public knowledge about the relationship between human actions and surface and stormwater management. In order to achieve a comprehensive approach to surface and stormwater management, the county should provide general information to the public about land use and human activities that affect surface and stormwater management. Pursuant to RCW [36.89.085](#), the board of county commissioners further finds that public and private schools can provide significant benefits to the county regarding surface and stormwater management through educational programs, on-site facilities, and community activities related to protection and enhancement of the surface and stormwater management system. These programs, facilities and activities can provide students with an understanding of human activities and land use practices that create surface and stormwater problems by providing students firsthand exposure to the difficulties of such problems after they occur. Public and private schools providing such programs, and complying with best management practices for their facilities and activities as set forth in the county's best management practices manual, may apply to the county director of environmental services for a reduction of the applicable service charge. The reduction shall be based on the nature and extent of the programs, facilities and activities provided, the extent to which the programs, services and facilities mitigate the impacts of surface and stormwater runoff and any other matters that are relevant to managing surface and stormwater.
- E. For the purpose of establishing a fund and providing revenue to pay a settlement of previous noncompliance with the NPDES Phase 1 municipal stormwater permit, a surcharge of five dollars (\$5.00) shall apply to each base unit during the years 2015, 2016, 2017, 2018, and 2019. This charge will be removed in the year 2020 and will not apply to the 2020 clean water rate.
- F. The board of county commissioners finds that it is crucial to reevaluate the current methodology of assessing the clean water fee. The department of environmental services shall prepare a study and report back to the board of county commissioners within one (1) year of the adoption of the changes to this section, with an examination of alternative methods for collecting the clean water fee. The focus of the study shall be an examination of the allocation of the fee to those whose behaviors and/or conduct generate higher pollutant impacts on the surface and ground water of Clark County. The board of county commissioners shall acknowledge receiving the study through a public resolution and/or reaffirmation of this section. If no resolution is put forward by the board of county commissioners within thirty (30) days of the scheduled receipt of the fee study, the changes to the fee schedule in this section shall sunset, and the previously adopted version of this section shall apply; provided, that the surcharge authorized by subsection (E) of this section is not subject to the sunset provisions of this clause and shall remain in effect until it expires in 2020. (Sec. 3 of Ord. 1999-11-09; amended by Sec. 1 of Ord. 2000-04-08; amended by Sec. 2 of Ord. 2001-08-20; amended by Sec. 1 (Att. A) of Ord. 2009-07-01; amended by Sec. 1 (Att. A § 2) of Ord. 2011-08-08; amended by Sec. 1 of Ord. 2014-07-08)

2.7.1 Comparing Clark County To Other Jurisdictions

The 3,500 square feet per base unit amount of square footage for an individual base unit (ERU) means Clark County charges \$47 per unit in urban areas, a rate of \$.01342 per square foot fee on impervious surface. The \$35 rural fee is a \$.01 charge per square foot of impervious surface.

To determine how Clark County's fee compares with other jurisdictions, one needs to divide the individual ERU amount in a jurisdiction by the square footage for their individual ERUs.

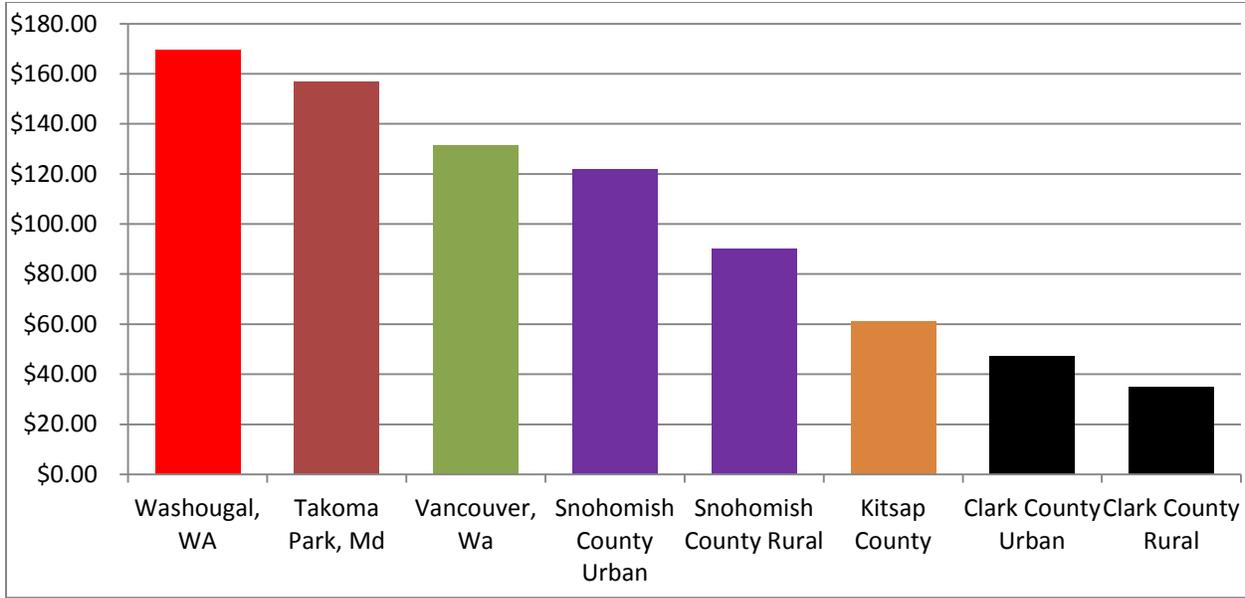
The table below breaks down the fees from five other jurisdictions and calculates the charge per square foot of their ERU charges. That charge is then calculated into the 3,500 ERU as defined by Clark County.

Jurisdiction	ERU square feet per base unit	\$ sq. ft.	\$ per ERU	\$ at 3,500 sq. ft. per ERU
Tacoma Park, MD	1,288	.0447	55	156.73
Vancouver, WA	2,500	.03758	93.96	131.46
Clark County, WA	3,500	Rural .01342 Urban .01	Rural 35 Urban 47	Rural 35 Urban 47
Washougal, WA	3,900	.04843	188.88	169.50
Kitsap County, WA	4,800	.0175	84	61.25
Snohomish County, WA	NA	NA	Rural 90 Urban 122	Rural 90 Urban 122

All units in Clark County have a \$5 surcharge for a period of five years to cover the costs of the Clean Water litigation settlement.

Other jurisdictions have individually determined the square footage for their individual ERUs. Some jurisdictions charge different amounts for their individual ERUs. The graph below compares the ERU rates of five other jurisdictions after calculating the square foot charge and using the 3,500 ERU Clark County ERU as the base line comparable.

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Clark County adopted the following EPA definition for “impervious surface”, which is included in its NPDES permit:

“Impervious surfaces” means a hard surface area that either prevents or retards the entry of water into the soil mantle as under natural conditions prior to development. A hard surface area which causes water to run off the surface in greater quantities or at an increased rate of flow from the flow present under natural conditions prior to development. Common impervious surfaces include, but are not limited to, roof tops, walkways, patios, driveways, parking lots or storage areas, concrete or asphalt paving, gravel roads, packed earthen materials, and oiled, macadam or other surfaces which similarly impede the natural infiltration of stormwater. Open, uncovered retention/detention facilities shall not be considered as impervious surfaces.

County Code 13.30A.030(c)

2.7.2 How Clark County Calculates the Clean Water/ Stormwater Fee

All properties in Clark County are charged a clean water (stormwater) fee. Since this is a fee and not a tax, all properties are assessed the fee to cover the costs of controlling and treating stormwater in Clark County.

Clark County utilizes a Geographical Information System (GIS) mapping technology to determine the amount of impervious surface on an individual property based upon impervious surface as defined in county code. The square footage of that impervious surface area is calculated and divided by 3,500. The result is the number of base units (ERUs) for that property. The number of base units is then multiplied by \$35 or \$47 depending on whether the property is located in the rural or urban zoned areas of Clark County.

The Clark County formula for calculating clean water fees:

Square feet of impervious surface divided 3,500 = base units

Base units multiplied by 35 if in the rural zone = clean water fee

Base units multiplied by 47 if in the urban zone = clean water fee

All units are assessed a \$5.00 surcharge for litigation settlement (expires 2019)

All single family residential properties are charged a single base unit.

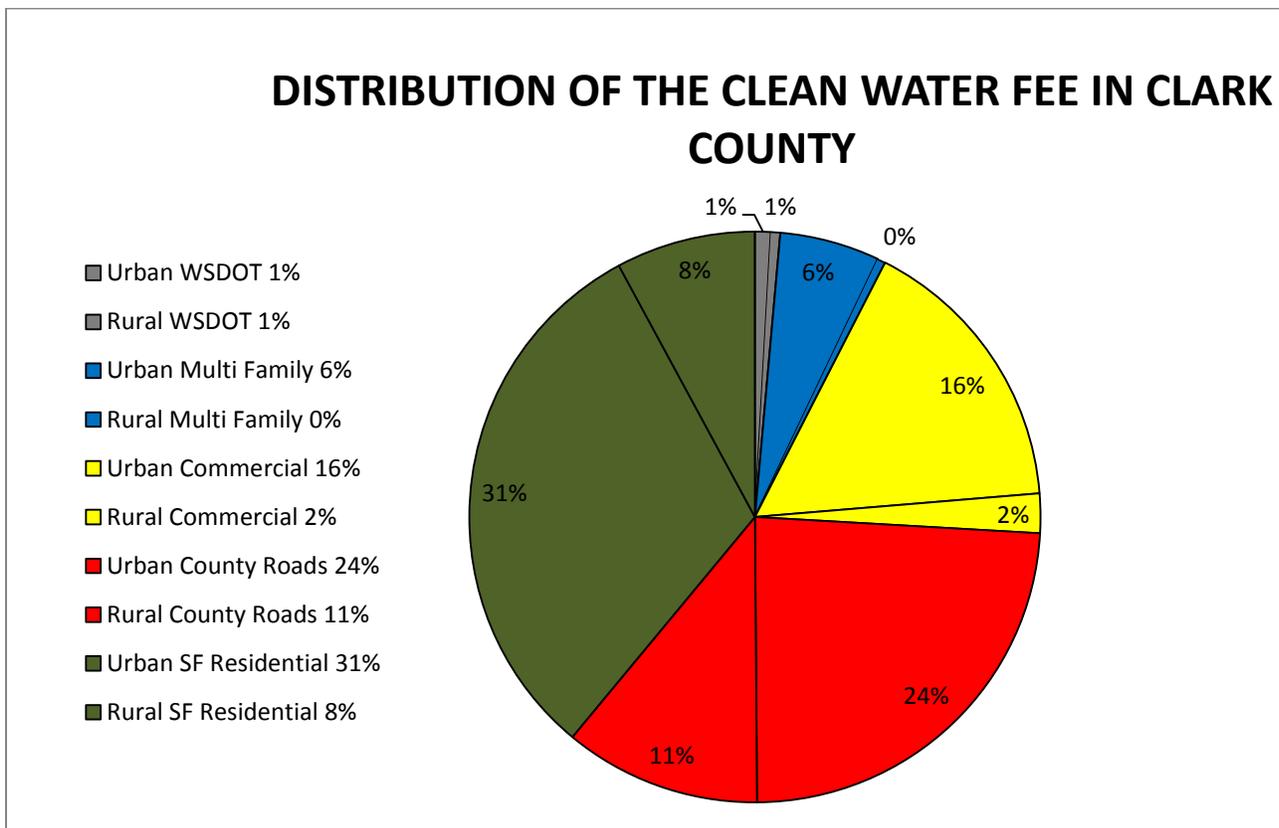
Multi-family housing is charged one base unit for each individual housing unit located on their property.

Commercial properties are charged per the number of base units on the property (square feet of impervious surface divided by 3,500).

2.8 Distribution of the Clark County Fee

The largest rate payer into the Clark County Clean Water program is Clark County. A clean water fee is charged to the county fairgrounds, county roads, and all other county-owned facilities.

Every year the county collects the clean water fee on a little more than 168,000 ERUs. Clark County Public Works pays more than 2.6 million dollars a year from the road fund in clean water fees. The county roads pay for nearly 60,000 of the total ERUs charged in the county. This represents roughly 35 percent of the money collected annually for the clean water fee.



The Washington state Department of Transportation (WSDOT) is also charged for impervious surface area representing 9,000 ERUs. State law mandates a 70 percent reduction in stormwater fees for WSDOT. The annual fee for WSDOT is approximately \$90,000 per year. If WSDOT were treated like all other rate payers, they would pay nearly \$300,000 a year.

2.8.1 Fee Reductions or Discounts

The clean water assessment is a fee not a tax. All properties pay a clean water fee. There are few exceptions or discounts for the fee.

Forestry:

State law exempts property identified as forestry land from stormwater/clean water fees. *RCW 84.33.210*

Large Land Parcels:

State law and county code allow for fee discounts based on the size of property and senior citizen discounts. Properties in Clark County presently receive step discounts based on the property size with ranges of ½ acre to 1 acre; 1 to 5 acres; 5 to 20 acres; and 20 acres or above.

Low Income Senior Citizen Discounts:

Low income senior citizen property owners receive a 50% discount:

The service charge for owner occupied, single-family residential property qualifying for a low-income senior citizen property tax exemption pursuant to RCW [84.36.381](#) shall be fifty percent (50%) of the amount specified in Section [13.30A.050\(B\)\(1\)](#) or (2).

Clark County Code 13.30A.060

Hardship Discounts:

State law and county code also provide for “hardship” reductions in the fee. If the property qualifies, the fee is waived for that property.

Single-family residential dwellings qualifying for hardship status, pursuant to Section [40.260.210\(A\)](#) (as existing or hereafter amended), shall not be subject to a service charge; provided, the principal dwelling and any other dwellings on the property shall remain subject to service charges imposed by this chapter.

Clark County Code 13.30A.065

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School Reduction Programs:

State law and county code allow schools to receive reductions in the fee equal to the value of service and educational work performed in education and outreach programs with a clean water focus within individual schools. This fee reduction program is discretionary.

The ability to offer schools a reduced fee is found in Clark County Code 13.30A.050 D. Many jurisdictions in Washington state do not offer any fee reduction to schools. The City of Seattle and the City of Washougal do not offer any fee reduction program for schools and schools pay their stormwater fee in full to those cities.

Clark County currently offers a clearly defined program for schools to receive a reduction in their clean water fee. This program has resulted in the largest number of certified Green Schools of any county in Washington state. The new fee reduction program for schools creates financial incentives for the school districts to partner with the Washington state Green Schools program. Clark County's award winning program is a model for incentivizing schools to meet the goals outlined in federal, state, and county law.



From left to right: Rob Gutridge, Sustainability Specialist, Pete Dubois Solid Waste Division Manager, and Don Benton Director of Clark County Environmental Services accept an award from the Washington state Green Schools Program

2.9 Methods for Collecting Stormwater Fees Utilized by Other County Phase I Permittees in Western Washington

In addition to Clark County, three other counties in Washington state, King, Pierce, and Snohomish, have a Phase I NPDES permit,. Phase I permits were required for incorporated cities with a population over 100,000 and unincorporated counties with populations of more than 250,000, according to the 1990 census. The cities in Western Washington that have Phase I NPDES permits are Seattle and Tacoma. The ports of Seattle and Tacoma and The Washington State Department of Transportation were also required to obtain a Phase I permit.

In 2003, expanded EPA regulations required more jurisdictions to obtain an NPDES permit. These Phase II permits went into effect in 2007. This second round of new permits included over eighty cities and five counties in Western Washington. The cities of Vancouver, Battle Ground, Camas, and Washougal are all Phase II permittees.

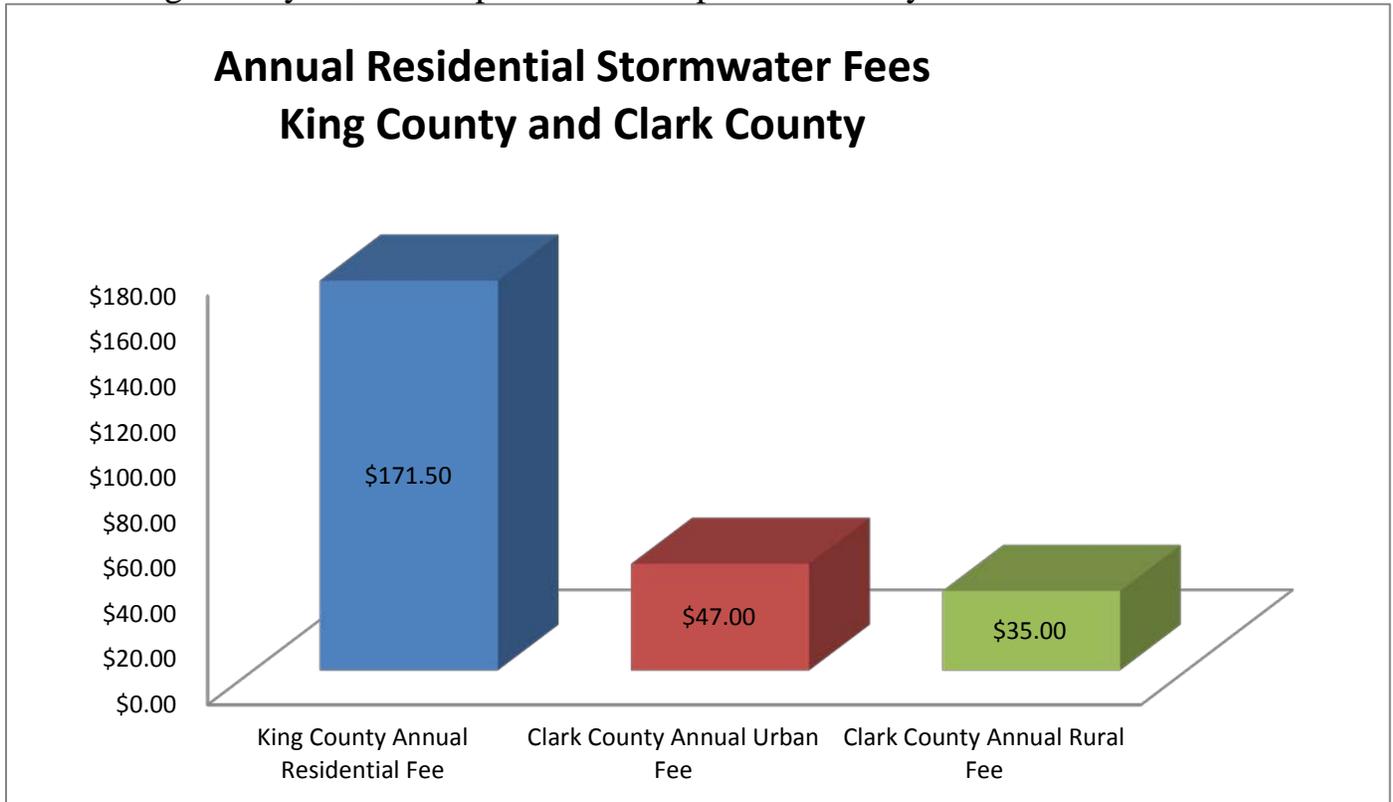
The following compares Clark County’s new fee rates with the three other Phase I Washington counties’ fee structures for single family residential, multi-family housing, and commercial properties.



2.9.1 King County

King County Residential Annual Stormwater Fee

King County assesses a flat rate stormwater fee for each residential unit. The flat rate in King County is \$171.50 per residential parcel annually.



King County annual residential fees are 3.7 times higher than the annual Clark County urban rate and 4.9 times higher than the Clark County rural rate.

King County Annual Multi-Family Housing Stormwater Fee

In mobile home parks, King County charges the residential fee of \$171.50 for every mobile home space in a mobile home park.

Apartment complexes and condominiums fall into the intensity of use category. They are charged based upon the percentage of impervious surface on their assessed parcels.

SECTION 2: Stormwater History and Current Fees

King County Non-Residential Annual Stormwater Fee

The stormwater fee for non-residential use in King County (commercial use) is calculated based on the percentage of actual impervious surface area compared to the size of the parcel in square feet. The fee increases based on the percentage of impervious surface for each parcel. The King County fee ranges from \$171.50 for equal to or less than 10% impervious surface for light use to \$2,638.96 for very heavy use equal to or greater than 85 percent impervious surface per acre.

The intensity of use methodology utilized by King County is more expensive for those properties in the urban zones on smaller lots that have “very high” impervious surface coverage, compared to the flat rate charged by Clark County.

Comparing King County Non-Residential Fees with Clark County non-residential fees

Using the Walmart property on Highway 99 in Clark County as an example and applying the King County rates, Walmart would pay \$24,452.60 more in fees for a similar property in King County compared to what they currently pay in Clark County.

Walmart Property	Tax Lot # 145813000 1.93 acres	Tax Lot # 145812000 2.47 acres	Tax Lot # 144947000 2.68 acres	Tax Lot # 145131000 2.14 acres	Tax Lot # 145130000 2.77 acres
Clark County	29.75 ERUs \$1,195.48	30.75 ERUs \$1,599.87	31.14 ERUs \$1,619.67	23.58 ERUs \$1,226.38	22.94 ERUs \$1,547.13
King County	\$5,093.19	\$6,518.23	\$7,072.41	\$5,647.37	\$7,309.91

Clark County clean water fee total = **\$7,188.53**

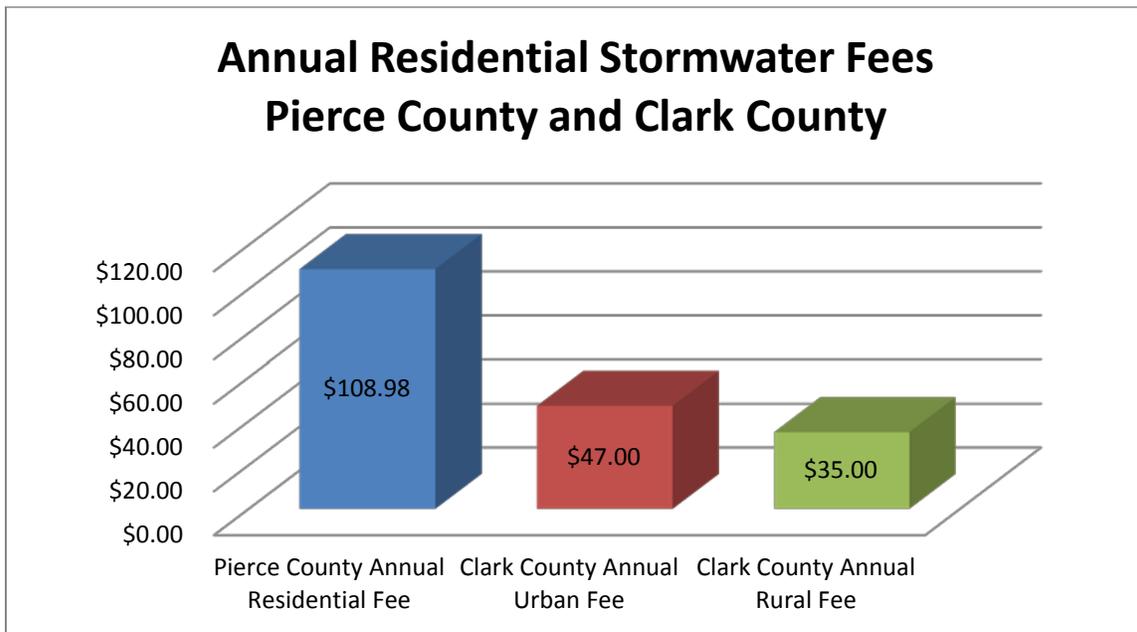
King County stormwater fee total = **\$31,641.13**

Difference = **\$24,452.60**

2.9.2 Pierce County

Pierce County Annual Residential Stormwater Fee

Pierce County, like Clark and King counties, has a flat rate for residential housing units. The flat rate for a single family residence in Pierce County is \$108.98. This rate is 2.7 times higher than Clark County’s rural rate of \$40 (including surcharge) and is 2.09 times greater than Clark County’s urban residential rate of \$52 (including the surcharge).



Pierce County Annual Multi-Family Housing Stormwater Fee

Pierce County segregates duplexes and “equivalent” into an individual category with each unit being charged an annual fee of \$140.60 per unit.

Duplex condos and “equivalent”, mobile homes and park condos are placed into an individual category and charged a rate of \$70.30 annually.

Multi- family housing is charged a minimum rate of 108.98 per unit with impervious areas and gravel areas being calculated and charged for each square foot of impervious surface.

SECTION 2: Stormwater History and Current Fees

Pierce County Annual Non-Residential Stormwater Fee

Pierce County bases their charges for commercial properties on the square footage of the property. The fee rate is calculated at \$.04128 per square foot of a parcel.

Unlike Clark County, Pierce charges a stormwater fee for vacant land parcels. There is a minimum charge of approximately \$20 per parcel. For properties above 50 acres, the fee is calculated at approximately 40 cents an acre.

Pierce County also charges a different rate for areas covered in gravel. Gravel is considered an impervious surface by definition in the NPDES Permit. While recognizing gravel is impervious, Pierce County charges approximately 10% less for each square foot of area covered by gravel.

Comparing Pierce County Non-Residential Fees with Clark County Non-Residential Fees

The chart below compares the non-residential fee rates in Pierce County to the fee rates in Clark County using the Walmart on Highway 99 as a comparable.

Using the Pierce County formula for use intensity and the fee rate, the Walmart in Clark County would pay an additional \$8,772.81 if they were located on a like property in Pierce County.

Walmart Highway 99	Tax Lot # 145813000 104,125 square feet	Tax Lot # 145812000 107,625 square feet	Tax Lot # 144947000 108,990 square feet	Tax Lot # 145131000 82,530 square feet	Tax Lot # 145130000 80,290 square feet
Clark County	29.75 ERUs \$1,195.48	30.75 ERUs \$1,599.87	31.14 ERUs \$1,619.67	23.58 ERUs \$1,226.38	22.94 ERUs \$1,547.13
Pierce County	Square feet x .04128 = \$4,298.28	Square feet x .04128 = \$4,442.76	Square feet x .04128 = \$4,499.10	Square feet x .04128 = \$3,406.83	Square feet x .04128 = \$3,314.37

Clark County Clean Water fee total = **\$7,188.53**
 Pierce County stormwater fee total = **\$15,961.34**
 Difference = **\$8,772.81**

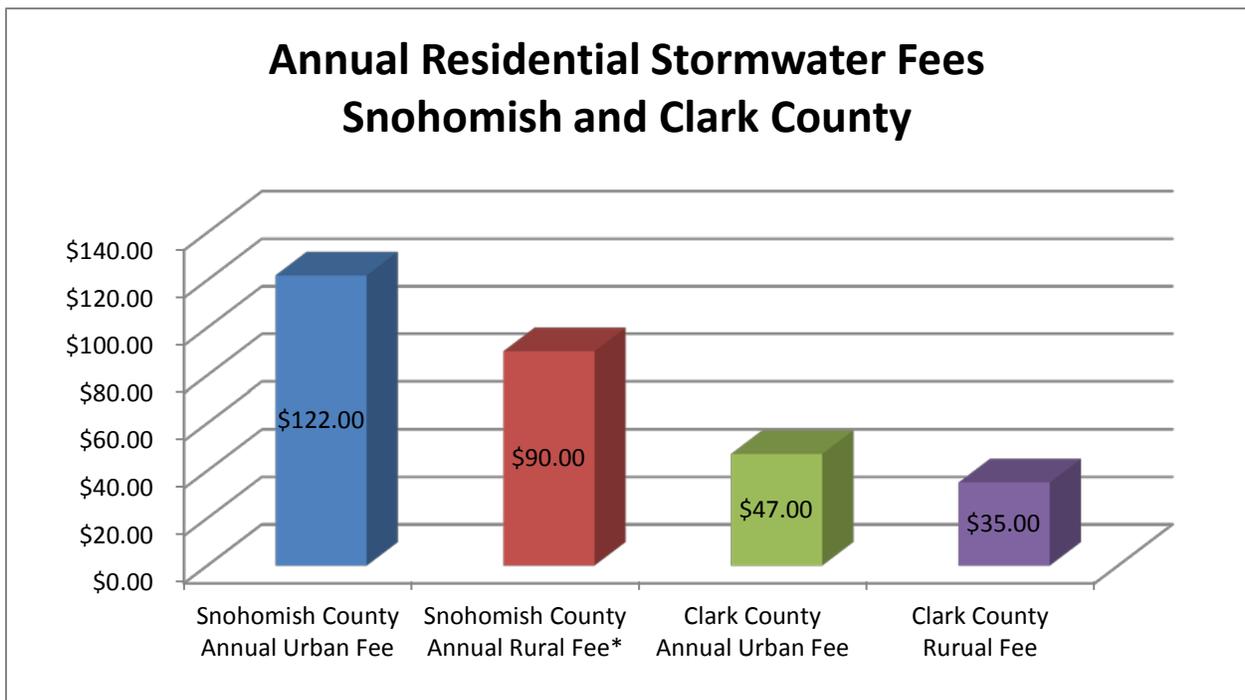
2.9.3 Snohomish County

Snohomish County Annual Residential Stormwater Fee

Snohomish County utilizes a mixture of methods for calculating their stormwater fees. Snohomish County charges for watershed management areas. Parcels located outside of identified watershed management areas are not subject to the stormwater fee.

Snohomish County differentiates between urban and rural zones. Single family residential homes located in a watershed management area *and* in the urban zone will pay a higher fee than those homes located in the same watershed management area but located in the rural zone.

The rate for homes in a watershed management area in the urban zone is \$122 a year. Those in a watershed management area in the rural zone pay \$90 a year.



Snohomish County allows single family residential rates to apply to farms with a charge of \$90 for each ¼ acre, not to exceed \$360 for an entire farm. By comparison, in Clark County, a single family farm on 20 acres in the rural area is charged a total of \$21.80 (a reduction of their \$35 fee).

SECTION 2: Stormwater History and Current Fees

Snohomish County Annual Multi-Family Housing Stormwater Fee

Snohomish County provides a separate category for condominiums. In the rural watershed areas, a condominium pays an annual fee of \$81.00. In the urban watershed area, an additional \$28.80 is added for a total of \$109.80.

Commercial multi-family housing is treated in the same way as non-residential property with fees calculated on the intensity of use model.

Comparing Snohomish County Non-Residential Fees with Clark County Non-Residential Fees

Snohomish County has six categories of “use” ranging from exempt to very heavy for commercial properties. The non-residential fee is based upon the percentage of impervious surface covering a tax assessed property. The fee is not based on square footage but is assessed on intensity of use. Once that is established, the property is charged a fee per acre based upon the intensity level.

The Walmart property on Highway 99 would fall within Snohomish County’s “Very Heavy” category of use based upon impervious surface covering over 80% of each assessed parcel.

Walmart Highway 99	Tax Lot # 145813000 1.93 acres	Tax Lot # 145812000 2.47 acres	Tax Lot # 144947000 2.68 acres	Tax Lot # 145131000 2.14 acres	Tax Lot # 145130000 2.77 acres
Clark County	29.75 ERUs \$1,195.48	30.75 ERUs \$1,599.87	31.14 ERUs \$1,619.67	23.58 ERUs \$1,226.38	22.94 ERUs \$1,547.13
Snohomish County	7.72 quarter acres x 269.97 = \$2,084.17	9.88 quarter acres x 269.97 = \$2,667.30	10.72 quarter acres x 269.97 = \$2,894.07	8.56 quarter acres x 269.97 = \$2,310.94	11.08 quarter acres x 269.97 = \$2,991.26

Clark County clean Water fee total = **\$7,188.53**
 Snohomish County stormwater fee total = **\$12,947.74**
 Difference = **\$5,759.21**

SECTION 3
POLLUTER PAYS
CONCEPTS

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Introduction:

In 2014, the Clark County Board of Commissioners (BOCC) passed a new fee structure and rate for stormwater management by the county's clean water program. The BOCC also codified a desire to examine alternative methods for collecting the stormwater fee from those whose actions have a direct impact upon stormwater and surface water pollution, and examine possible ways of charging based on impact to stormwater and surface water.

“The study shall be an examination of the allocation of the fee to those whose behaviors and/or conduct generate higher pollutant impacts on the surface and ground water of Clark County”

Clark County's current method for collecting clean water fees centers on property owners and impervious surface on property. The fee is derived from all property owners, residential, commercial, governmental, and road owners (the county and the Washington State Department of Transportation) all bear the burden of the fee. The ESU/ERU methodology for assessing the clean water/stormwater fee is based on charging property owners either a flat fee, a commercial rate fee, a fee that measures impervious surface, and/or a formula that defines the level of intensity of use of a property.

Government entities renew their NPDES permits every five years with the burden and expectations on those permits increasing with each new permit. As the unfunded mandates have increased, local governments have found that revenues generated from property owners are insufficient to cover the increased costs of the new mandates and expectations. With each new NPDES and state discharge permit, the costs rise 20 to 30 percent in order to maintain compliance. Many jurisdictions have simply increased the fee amount paid by property owner-based fees to keep pace with the requirements of the NPDES permit.

The burden on property owners as the sole source of revenue for stormwater revenue has resulted in stormwater fees in Western Washington that have broken businesses and forced individuals to sell and move off their property. In King County, the stormwater fee is the largest governmental financial obligation faced by a large number of property owners. Many farming activities and businesses associated with farming in King County have ceased operations and sold their

properties due, in large part, to stormwater fees that were far in excess of what the farmers or small businesses could afford. This is a situation Clark County has avoided.

The BOCC directed staff to explore methods that would spread the clean water fee in a more equitable manner to those whose behaviors and or practices result in a negative impact on surface and stormwater quality. The BOCC wants to stop imposing the increasing financial burdens of stormwater control and treatment solely upon Clark County property owners. The BOCC is hoping to find and develop a method for generating the necessary and increasing revenue demands of maintaining compliance with the state and federal discharge permits in a more equitable manner.

3.1 THE POLLUTER PAYS STUDY

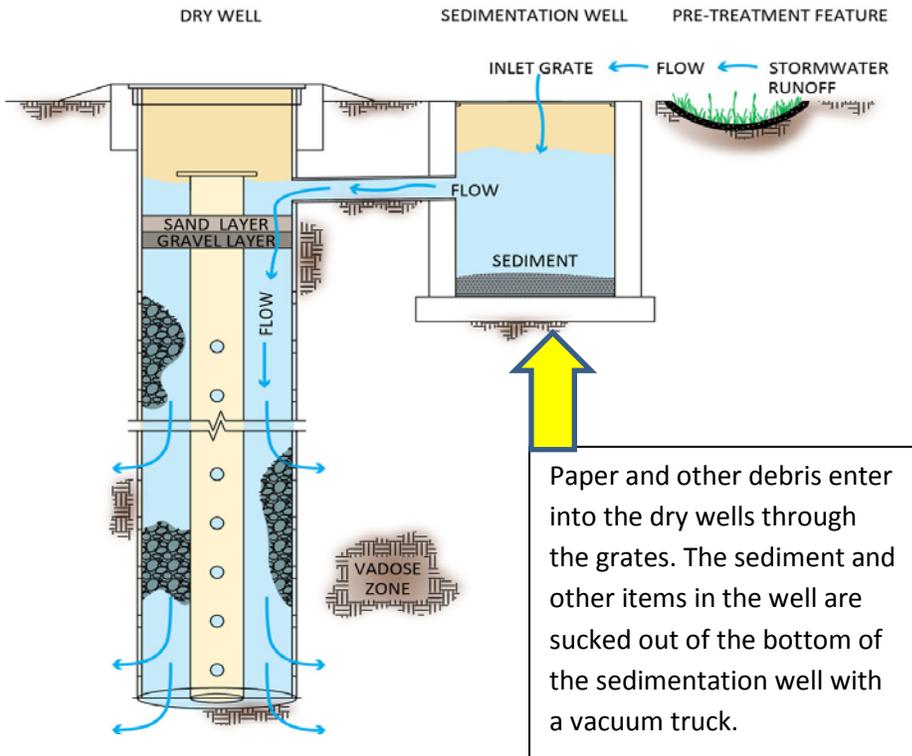
The federal Clean Water Act was put into law to ensure that waters of the United States are kept safe and that pollution will not be allowed to harm waters to an extent that would prevent them being used for drinking, swimming, fishing, tourism, farming, manufacturing, tourism, and other activities essential to the American economy and quality of life.

The BOCC, through statute, directed the Department of Environmental Services engage to in “an examination of the allocation of the fee to those whose behaviors and/or conduct generate higher pollutant impacts on the stormwater and ground water of Clark County.”

The “polluter pays” concept has been, and is currently being, examined or acted upon on at almost all levels of government.

For purposes of this examination, we are looking at point source activities that contribute to surface and stormwater pollution. This examination focuses on whether there is, within law or practicality, a method for charging those whose practices or behaviors are having a disproportionate and quantifiably larger pollutant impact on stormwater and surface water.

3.2 HOW DO POLLUTANTS GET INTO THE STORMWATER SYSTEM?



The above diagram of a dry well system shows how materials such as paper cups, cans, plastic bags, a variety of paper and plastic foam (Styrofoam) products, and dirt enter into the dry well system. The sedimentation well is where silt and debris are captured to prevent that material from getting into the actual dry well. The diagram is of a current design. There are a number of variations to this system, but they all perform in essentially the same manner.

Runoff passes either across a pre-treatment area into the sedimentation well or directly from the gutter into a sedimentation well. The sedimentation well captures the stormwater and, as the water enters into the sedimentation well, the heavier material such as litter and dust sink to the bottom of the well. The flow pipe is above the area where the heavier material is settling and water then passes over into the dry well.

The debris that collects at the bottom of the sedimentation well requires a vacuum truck to suck up the debris. This material is then transported to a covered holding area called a decontamination facility.

3.2.1 Whatley Pit

At Clark County's Whatley Pit facility the material vacuumed out of sedimentation wells is "treated" prior to disposal. This facility also collects street sweeping material.



Bays at the Whatley Pit Decant facility with sediment from dry wells

Material delivered to Whatley Pit from the sedimentation wells is pumped into a holding area where it is allowed to dry. Once the moisture has evaporated from the material, the residue is taken to a landfill. This material is loaded with a variety of toxins and cannot be used as fill material. It is too "hot" and contains a number of chemicals at levels that could create a hazard if the material were reused as fill.

Street sweepings are kept separate from the material collected from the dry well systems.



Street sweepings pile at Whatley Pit Decant facility

Testing shows that street sweepings are not too “hot” and can be reused for fill after the debris has been sifted and large trash material, cans, glass, toys, etc. are filtered out of the collected sweepings. This material does not require a covered holding bay for storage.

The Whatley Pit facility is a regional facility and other jurisdictions utilize this facility. The Whatley Pit is run by a full time county employee. The county and other regional partners shared in the construction cost for this facility.

3.3 WHO ARE THE POLLUTERS?

The EPA ranks urban runoff and storm-sewer discharges as the second most prevalent source of water quality impairment in our nation's estuaries, and the fourth most prevalent source of impairment of our lakes.

The most prevalent sources of urban pollutants into stormwater are:

- **Atmospheric deposition** *fine particles, phosphorus, ammonia, nitrate, metals, pesticides, petroleum products, toxic organics, and metal*

Section 3: Polluter Pays Concepts

- **Litter and leaf fall** *personal and commercial debris discarded to roadways and parking lots such as plastics, paper, cans, and food; leaves and organic debris from roadside and parking lot trees, BOD(5), nitrogen, phosphorus, humic organics, and metals*
- **Residential and roadside landscape maintenance** *phosphorus and nitrogen, pesticides and herbicides, dissolved organics from soil amendments*
- **Urban wildlife and pets** *bacteria, phosphorus, and nitrogen*
- **Transportation vehicles** *fuels; brake drum and tire wear; body rust: fine particles, metals in particular zinc, copper, cadmium, lead, and chromium; and petroleum products such as oil grease and PAH*
- **Pavement and pavement maintenance** *temperature modification, petroleum derivatives from asphalt*
- **Pavement deicing** *chlorides, sulfates, organics from acetate deicers, coarse sediments, and cyanide*
- **Building exteriors** *Galvanized metals, chipped and eroded paints, corrosion of surfaces accelerated by acid rain, metals*
- **Industrial businesses** *pollutants from inappropriate connections; petroleum products, phenols, solvents, metals*
- **Commercial businesses** *parked vehicles; improperly disposed of refuse such as discarded food, used cooking oil and grease; packaging materials; improper storm drain connections, BOD5, bacteria, phosphorus, nitrogen, oil, and grease*
- **Residential activities** *landscaping, pest control, moss control, vehicle maintenance, painting, wood preservation, pesticides, herbicides, phosphorus, nitrogen, petroleum products, zinc, bacteria*
- **Site development** *High pH from fresh concrete surfaces; petroleum products from fresh asphalt and spills; organics from landscaping materials; eroded sediment and associated constituents like phosphorus; pollutants associated with improperly disposed construction materials like fresh concrete and paints; cement from preparation of exposed aggregate concrete*
- **Public infrastructure** *metals from galvanized stormwater drain systems; metals and petroleum products from maintenance shops; bacteria, nitrogen, phosphorus, and organics from exfiltrating or overflow sanitary sewers*

3.4 WHAT IS THE PERCENTAGE OF IMPACT FROM INDIVIDUAL SOURCES?

Stormwater and the pollutants contained in that water are unique in every situation. Using the categories above and determining the pollutants most commonly found in the stormwater runoff associated with those uses provides a basis of expectation for determining what pollutants will be found in stormwater runoff from certain areas.

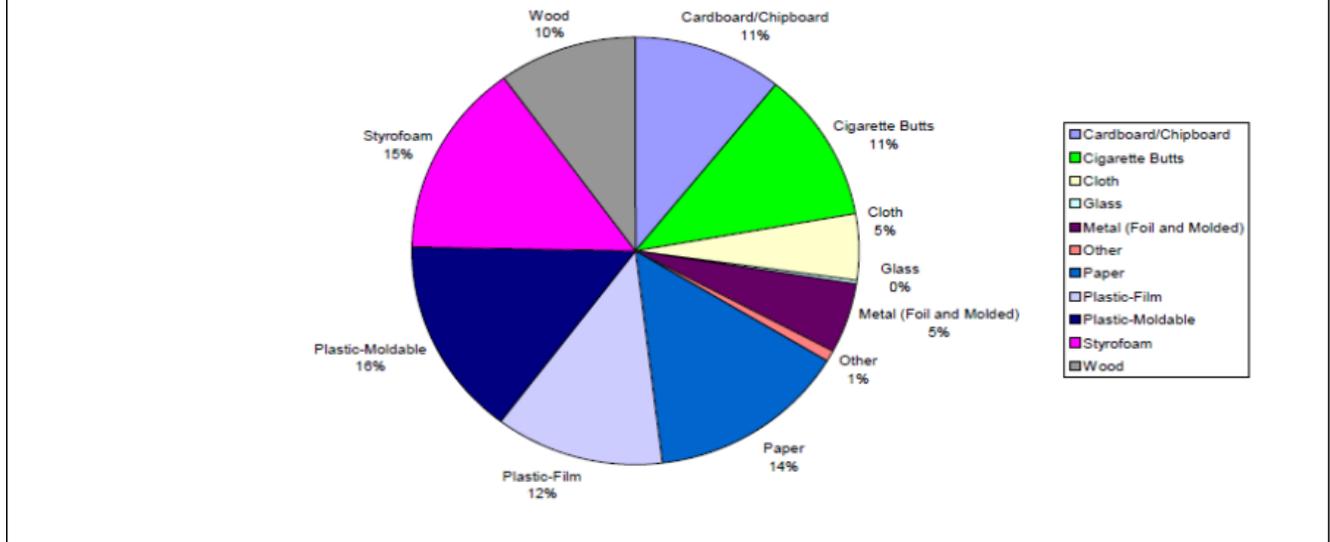
The runoff generated from properties being used in a particular way predictably contain the pollutants associated with the activities in those uses. Pollutants in a commercial use area commonly have food waste and general litter in the stormwater, industrial use areas commonly have chemical residue and greases in the stormwater, and residential uses commonly have the chemical pollutants contained in fertilizers, cleaning products, moss removal products (nitrogen, ammonia, copper), and pet waste.

Evaluating stormwater holistically and attempting to ascertain what percentage of pollutants found in all stormwater is attributable to specific pollutants is an exercise of futility. However, evaluating the impacts on stormwater generated from a specific type of use and the detrimental effect that particular polluted stormwater has on protected waters can (and has been) done.

3.4.1 The California Department of Transportation Study

The California Department of Transportation (CalTrans) engaged in a three-year study to determine what pollutants were entering into the stormwater from CalTrans properties (highways), and if the best management practices (BMPs) mandated by the federal government and those adopted by the state of California were effectively reducing the discharge of those pollutants into the waterways of the United States. The study trapped (captured) debris and runoff from the freeway decks that were entering into the CalTrans stormwater treatment system.

**Figure 6-3
LITTER CATEGORY DISTRIBUTION BY VOLUME FOR ALL
EVENTS COMBINED**



Most litter on highways is consistent throughout the world. For stormwater, the physical litter that pollutes the system appears to be largely from the food industry, plastics, foam products, and paper making up well over 50 percent of the actual litter (solid waste). Cigarette butts make up 11 percent of the pollutants by volume found in the stormwater on CalTrans roadways.

The CalTrans study found that:

8.1.2.4 Litter Characterization Activities

Litter was characterized in many different ways during the LMPS. The litter data collected at the 24 outfalls during this two-year study are believed to provide a generally representative sample of the litter characteristic from Caltrans Los Angeles highways. Conclusions from characterization activities are presented below.

- **Litter Usage Analysis** – *Data from the LMPS indicate that smoking- and food-related litter account for 20-30% of the litter by weight and volume. However, the relatively small size of individual litter pieces likely contributed to item usage not being identifiable, and may contribute to the large percentage (79% by weight and 71% by volume) of usage in the “other” category. These results are consistent between year 1 and year 2 data. Due to the high percentage of material that cannot be identified, determining the sources of freeway storm water litter is not possible by conducting inlet or outfall monitoring.*

• **Floatable Litter Analysis** - During the development of the Study Plan it was believed that identifying the floatable fraction of the litter might provide some insight related to selecting and designing BMPs more effectively and to assess the portion of litter that would be most likely to be transported to receiving waters. The LMPS data indicate that approximately 80% of the litter collected by count, weight, and volume is floatable (Table 6-2). It should be noted that the method that was developed for the LMPS floatable analysis is a laboratory procedure that assessed general floatability of litter items without attempting to replicate flow, turbulence, and other physical conditions present in a Caltrans storm water conveyance system.

• **Oven Drying Analysis** – The LMPS performed oven drying on litter sub-samples during the second year of monitoring to assess litter moisture content by category and event. Moisture contents by category, after a minimum of 24 hours of air-drying, ranged from a season average of 0% for glass items to a high of 36% for cigarette butts (Table 6-1). The total moisture content of all categories by event generally ranged from 2% to 23%.

8.1.2.5 Street Sweeper Litter Characterization

The litter portion of sweeper debris was characterized in the litter lab from March to October 1999 to compare sweeper litter to outfall litter with respect to visual appearance and composition. Analysis shows that the types of litter materials present in sweeper litter are similar to outfall litter, with higher proportions of glass, moldable plastics, and metals, and a lower proportion of paper and film plastic in sweeper litter (Figures 4-6 to 4-8). This may be explained by the sweepers' ability to remove larger items such as bottles, plastic containers and large metal scraps that cannot fit through drain inlet grates. **The proportion of the number of cigarette butts in sweeper debris (38%) is comparable to the percentage of cigarette butts in outfall litter by count (34%).** (emphasis added)

8.1.2.6 Litter Pick-Up Characterization

The litter portion of litter pick-up debris was characterized in the litter lab during September and October 1999 to compare litter collected during litter pick-up activities to outfall litter with respect to visual appearance and composition. Analysis shows that the types of materials present in litter collected from the freeway ROW are similar to outfall litter with higher proportions of chipboard/cardboard, glass, and wood, and a much lower proportion of cigarette butts in ROW litter (Figures 4-6 to 4-8). This may be explained by the removal of larger items during litter pick-up that cannot fit through drain inlet grates. In accordance with standard District 7 AAH litter collection practices, the AAH contractor does not remove individual cigarette butts, and no butts were found in the ROW litter analyzed.

8.1.2.7 Site Hydrology and Litter Collected at Outfall

The data were evaluated to identify trends that might exist between litter and various elements related to site hydrology. Litter data were compared to rainfall intensity, peak

flow, total flow, and antecedent dry period for monitored events at each outfall. No clear relationship between litter and any of the individual factors were identified for the analysis of event by event or total seasonal data.

3.4.2 The WSU Study

Based upon reports of fish kills and/or pre spawn mortality (PSM) in salmon occurring in creeks in the Puget Sound area, Washington State University (WSU) engaged in a detailed examination of stormwater runoff captured off a large state highway (520) in Seattle that was directly discharging into the Mountlake Slew. WSU identified the specific pollutants in the water and the amounts of those pollutants contained in the stormwater runoff samples.

When individual pollutants were put into water at the levels they were found in the stormwater discharged off the highway and adult salmon were exposed to those individual chemicals, the impacts from the individual chemicals on the fish were minimal.

However, when the chemicals were combined and the salmon were exposed to the mixture of the chemicals, the results were obvious and toxic. The salmon began to lose equilibrium and float on their sides, unable to maintain correct positioning in the water. Most of the salmon died within 24 hours after exposure to the combined pollutants.

Stormwater that discharged after more than a week of no precipitation proved to be particularly toxic for the salmon.

It would appear that no one pollutant is enough to kill or harm the fish at the levels discharged from the roadways on a regular basis, but lack of precipitation prior to a heavy rain event amplified the impact of the stormwater runoff on the fish. The pollutants in the runoff were at much higher levels than pollutant levels discharged during multiple day rain events.



Bottles of treated roadway stormwater runoff (left two) and bottles of untreated roadway stormwater runoff (right two). Collected samples were from SR 520, Seattle, Wa.

The two darker colored carboys contain straight highway runoff. The two lighter colored carboys contain runoff that has been filtered through soil columns.
Credit: Katie Campbell

<https://www.youtube.com/watch?v=Nfnn4CMSysY>

The study also reaffirmed that filtering runoff from roads through a mixture of gravel, compost, and wood debris was effective in removing the toxic impacts of the roadway runoff. Treating the runoff that had proven toxic through a mixture of gravel, compost, and wood debris resulted in no salmon mortality.

<http://www.seattletimes.com/seattle-news/filtering-rain-runoff-reduces-its-threat-to-salmon-study-suggests>

3.4.3 Clark County Polluters Analysis

In 2014, Clark County Department of Environmental Services (DES) examined the possibility of a polluter pays fee. A stormwater surcharge committee composed of DES staff was formed and tasked at looking at the possibility of a polluter fee.

Using existing information, the committee examined ways to shift the financial burden of treating stormwater away from property owners and on to those whose behaviors and products were significantly contributing to the pollutants in our stormwater.

The committee developed criteria for a preliminary examination of the items or actions:

- A) Would an environmental surcharge be legal on a particular item or behavior?
- B) Would there be a manageable method for charging and collecting an environmental surcharge on a particular item or behavior?
- C) Would the surcharge on the item or behavior generate sufficient revenue to cover the costs of collecting and processing the revenue?
- D) Would there be negative unintended consequences associated with placing an environmental surcharge on an item or behavior?

The committee chose to examine the following possible funding sources based on behaviors or pollutants:

- | | |
|---|--|
| 1) Local source control fund | 9) Fertilizer and Pesticide fee |
| 2) Garbage tip fee | 10) Road intensity of use fees |
| 3) Single use plastic sacs | 11) Private road fee |
| 5) System Development fees | 12) Pet licenses |
| 6) Solid Waste collection District | 13) Vehicle registration fee |
| 7) Septic Fees | 14) Fireworks fee |
| 8) Single use plastic bag fee | 15) Newspaper fee |

While it was easy for the committee to identify pollutants that are contributing directly to stormwater pollution, it was far more difficult to find methods that could recover costs from those manufacturers, retailers, or individuals whose products and behaviors were directly polluting stormwater.

3.5. WOULD AN ENVIRONMENTAL SURCHARGE BE LEGAL ON A PARTICULAR ITEM OR BEHAVIOR

The committee found that the constraints of federal and state laws over the county's authority to develop polluter pays system eliminated a large number of the behaviors or specific items from the committee's consideration.

These constraints arose from both federal and state law. At the state level, solid waste and fees associated with solid waste are regulated by state law and the funds generated must be expended on solid waste programs.

A general concern would be issues regarding the federal commerce clause and possible problems with interstate trade.

3.5.1 Ban vs a Fee

Most jurisdictions that target a product due to its negative impact on the environment or surface waters take the form of a ban rather than a fee. Bans are simple to regulate. They remove the product directly from the environment and the stream of commerce. Bans do not produce revenue.

Fees are much more difficult to implement. Fees require a system for establishing an inventory of the targeted product as it is being offered to the public, establishing a method for collecting the fee, and establishing an approach that treats all vendors fairly.

3.5.2 Fertilizers and Pesticides Fee

The committee examined a fee for fertilizers and pesticides. Fertilizer and pesticide products for homes and businesses contribute significantly to the pollutants in surface water that harm fish and overall water quality. These pollutants migrate into our waters through stormwater systems.

Washington state regulates fertilizers and insecticides at the state level through the Department of Ecology. Counties in Washington state have no authority to regulate or charge a fee on those products due to the regulatory oversight at the state level.

Other jurisdictions in America have adopted bans on fertilizers and pesticides. Those jurisdictions are in states that have granted local authorities the power to regulate fertilizers and insecticides. Even with that authority those jurisdictions admit that enforcement of such a ban on those chemicals would not be enforceable for a number of practical reasons. The most basic reason was the public would only need to purchase the products from a neighboring jurisdiction and then apply it to their lawns and gardens. (Montgomery County, Maryland; Takoma Park, Maryland)

Another problem was, and is, the negative reaction from the public to these types of proposed fees or regulations. Residents accuse their local governmental authorities of creating a “nanny” state and attempting to regulate their daily lives. For a “polluters pay” fee on products or behaviors to be successful, there needs to be substantial acceptance or “buy in” from the public at large.

http://www.washingtonpost.com/local/md-politics/proposed-ban-on-cosmetic-pesticides-causes-turf-war-in-montgomery-county/2015/03/08/51533626-bdc9-11e4-b274-e5209a3bc9a9_story.html

Clark County’s examination identified other practical problems with a fee on fertilizers and pesticides. How would the county collect such a fee, and how would an accurate accounting for fertilizer and pesticide products be established?

Collecting the fee at the point of sale creates reporting costs and issues for the retailers and has problems with existing state laws involving sales tax limitations.

With a large number of jurisdictions located in Clark County, retailers in jurisdictions not collecting the fee would charge less for those products. Customers buying such products would go to the local municipalities to avoid the fee. Retailers in unincorporated Clark County would legitimately argue that such action would result in an unfair advantage for their competitors.

3.5.3 Single Use Plastic Bags

Plastic bags are a large problem in stormwater and in our recycling efforts in Clark County.

Plastic bags have been banned by twelve cities and one county in Washington state. Charging a fee for plastic bags has netted little or no revenue for those jurisdictions and has proven to be problematic to collect the fee from vendors.

That is why almost all local regulations involving single use plastic bags have been in the form of a ban. The few jurisdictions that do allow a fee to be charged have allowed those fees to be collected and kept by the vendors.

For Clark County collecting a polluter pays fee is to both modify behavior and collect revenue that is necessary to meet the financial obligations created by the NPDES permit. Bans generate zero revenue.

3.5.4 Tipping Fees, Solid Waste Collection District, and Source Control Fund

Solid waste fees are governed by state statute and the Washington State Utilities and Transportation Commission. All funds collected from those fees are designated for solid waste use and are restricted to dealing directly with solid waste issues.

Clark County cannot collect a garbage can “fee” and use the money for surface water control or treatment. This also applies to a solid waste collection district fee.

Source control funds can be used where stormwater and source control issues cross. Fees from source control could be used to help defray some stormwater costs for permit compliance. These fees would be very limited and the amount of revenue available would be limited.

3.5.5 Pet Licensing Fee

Some of the items identified could have an extremely negative unintended consequence. An example of this is a potential fee to be charged pet owners due to the impact pet waste has on stormwater. The concept was that the fee could be collected at the time an animal is licensed.

Clark County, like most local jurisdictions, has a difficult time getting pet owners to license their pets. While there are roughly 18,000 pets licensed in Clark County it is estimated that there are more than 110,000 dogs alone in Clark County.

That many pets produce nearly 15 tons of pounds of pet waste per year. Pet waste contributes fecal coliform, and bacteria into the stormwater and surface water. This waste is a significant pollutant found in stormwater and surface water. This is especially true in the urban areas where animal waste is often deposited on cement and then carried directly to a storm drain by natural rain or cleaning of the sidewalks with a hose.

If we were to add an additional fee to the pet licenses, it is highly likely that many of the people currently licensing their animals in Clark County would choose not to license their animals. Pet licensing serves a number of positive policies for Clark County including assurance of animal immunization and discounts for neutering animals. Licensing of pets generates minimal revenue for the county and does not

cover the annual costs associated with animal control and sheltering of lost animals. An animal waste fee would likely serve as a deterrent to licensing pets and would have a negative result for the county.

The potential revenue generation would be minimal from a pet licensing fee.

3.5.6 Fireworks Fee

Fireworks fees are restricted by state law. The possible revenue generation is limited to \$100 per firework vendor. The revenue generation would be minimal.

Fireworks have minimal impact on stormwater since they are an infrequent use, and are continually being banned or having their use limited to only one or two days a year in local jurisdictions. No study examining stormwater pollutants has cited fireworks as an issue in their systems.

3.5.7 System Development Fee

System development fees are used by other jurisdictions, generate significant revenue, and have a manageable method for assessing and collecting the fee.

These fees are an upfront charge for a stormwater facility built by a private developer. The stormwater facility is then signed over to the county through a quick claim deed and the county assumes responsibility for that stormwater facility.

The system development charge is a one-time fee generally based on the costs of twenty to twenty five years of maintenance for a stormwater facility. The annual maintenance costs are then calculated into a one-time individual fee. This single fee is then paid to the county and used to maintain the stormwater facility.

Currently, one of the largest demand on the Clark County clean water budget is the policy of the county to assume ownership of private stormwater facilities to assure consistent maintenance and operational integrity of those facilities. The number of facilities owned and maintained by the county has grown from close to 400 stormwater facilities in 2005 to over 1,000 facilities currently being maintained by the county.

A system development fee could potentially generate large capital that would offset maintenance costs.

3.5.8 Registered Vehicle Fee

Almost all studies point to runoff from the roads as the number one pollutant to surface and stormwater.

One possible polluter pays concept is to use the Washington State Department of Licensing data base to identify vehicles registered to properties in Clark County. A fee could be assessed for each registered vehicle and that assessment added to the clean water fee already being billed to the property.

The Washington State Department of Licensing identifies and categorizes vehicles by type. The county could have a variable fee based upon the size or number of axles on a particular vehicle. Standard four wheel cars would have a set fee, commercial vehicles would have a higher fee, and motorcycles may receive a lower fee. Based upon the fee and the revenue generated, the county may be able to shift away some of the financial burden from the property owners.

The City of Vancouver assesses their stormwater fee on multifamily housing based upon the number of water meters located on the property. Vehicle registrations could be utilized in the same manner.

This could be a substantial source of revenue dispersed over a large number of payers. No other jurisdiction in Washington State has a similar fee.

3.5.9 Newspaper Polluter Fee

Newspapers were identified as a manageable and justifiable method for assessing and collecting a clean water fee from a polluter. This finding, and even the examination of a potential fee on newspapers, resulted in tremendous negative press from the local newspaper. Much like the fertilizer bans in Maryland, the newspapers accused the government of over-reach. The local paper used their product as the main method to sway public opinion against this potential fee.

The committee's analysis found that newspapers were the only product whose market cycle took it from cradle to grave almost exclusively within the confines of Clark County.

Newspaper publishers also regularly report to a third party association the number of papers they print and send to market. No other product examined engaged in similar self-submission of data regarding production and sales that newspapers do as a common part of their business practice.

While there is no way for us to know how many paper cups are passed out to people in Clark County on a daily basis, newspapers actually report the number of papers they produce and sell on a daily basis. Paper cups are manufactured in a number of different states. The number of cups shipped into Clark County is not shared by the manufacturer or distributor. Likewise, businesses who sell the products do not share this information.

The CalTrans study found that paper products comprised 14 percent of the waste collected by volume of all the waste collected entering into their stormwater system.

The newspaper industry is a dying business and the revenue would be subject to a steep decline as newspapers continue to lose popularity and alternative methods for getting news and information are developed. The revenue would be small and likely inconsistent over time.

The newspapers criticized the county's examination of this fee option claiming that their impact on surface water was insignificant and almost "unmeasurable," asserting that their product had little or no impact on the environment and, in particular, no impact on stormwater.

Articles were published claiming that the fee was a retaliatory act focused on the local newspaper due to the consistently negative stories being published regarding the county.

The ability of the county to generate the necessary public "buy in" for this fee was undermined. Partisan political fighting made a rational discussion of the issue impossible.

Unfortunately, after the work of the committee was done the Washington State Department of Ecology released a study that identified newspapers as one of the “everyday” paper products that produce and expose the public to PCBs.



New testing shows low levels of the banned toxic chemical PCB in everyday consumer products such as newspapers, magazines and food packaging.
Jon S/Flickr

Report: Banned Toxic PCB Still Showing Up In Everyday Products

Cassandra Profita OPB | Aug. 7, 2014 11:21 a.m. | Updated: Feb. 18, 2015 8:25 a.m.

3.6 DEPARTMENT OF ECOLOGY STUDY

“In this study, the Washington State Department of Ecology (Ecology) evaluated the presence of polychlorinated biphenyls (PCBs) in general consumer products. **Particular emphasis was placed on products likely to be contaminated with PCBs due to the inadvertent production of PCBs in the manufacturing process.** Although many chemicals may contain low levels of PCB contaminants due to use of chlorine in their manufacture, recent studies have shown PCB presence in pigments and dyes used in consumer products. **Products known to contain PCB contaminants include** paints (Hu, 2010), **newspapers**, glossy magazines, cereal boxes, yellow plastic bags, etc. (Rodenburg, 2012).”

Based upon the results of this study, Ecology concludes that PCBs:

- **Are found in consumer products.**
- **Can enter the environment in significant concentrations through water and air discharges.**
- **May affect people directly through contact with consumer products.**

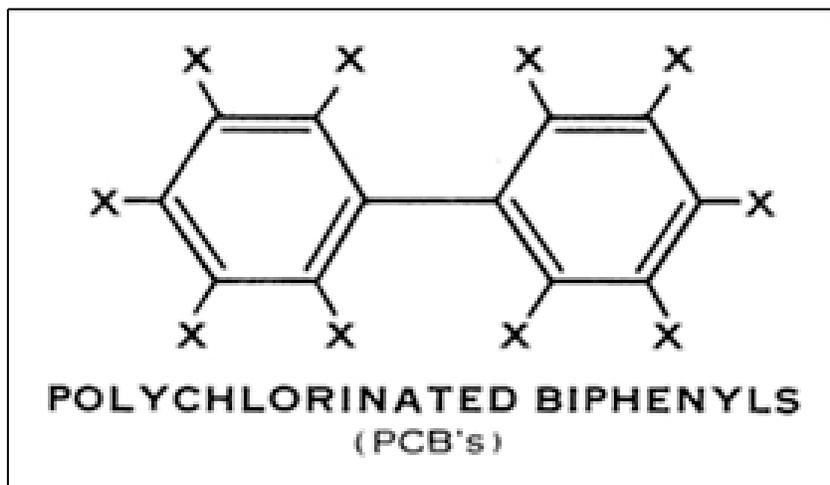
Please note that **this report does not investigate the effects of PCBs on human health or the environment, nor does it reach any conclusions concerning the risk they pose.**

3.7 PCBs

PCBs were commercially manufactured in America from 1930 to 1979. PCBs were used in a large number of commercial uses such as electrical transformers, brake fluids, hydraulic fluids, and generators. PCBs have a low degree of reactivity, they are not flammable, have high electrical resistance, and maintain stability when exposed to high levels of heat and pressure.

PCBs are also generated and released into the environment as an unintentional by-product of manufacturing processes including processes that involve pigments used in dyes, inks, and paints.

Not all PCBs are the same. There are 209 individual types of PCBs. PCBs are created when chlorine attaches to a biphenyl. Biphenyls are a molecule with two benzene rings.



Newspapers and other inked products have PCB 11 in their dye. The exposure for humans comes through the odor (air), feel (touching), and biodegrading of the products in the environment (litter).

Recent analysis of air samples from Chicago and Lake Michigan areas observed a ubiquitous airborne polychlorinated biphenyl (PCB) congener, 3,3'-dichlorobiphenyl (PCB11). Our analysis of serum samples also revealed the existence of hydroxylated metabolites of PCB11 in human blood. Because PCBs and PCB metabolites have been suggested to induce oxidative stress, this study sought to determine whether environmental exposure to PCB11 and its 4-

hydroxyl metabolite could induce alterations in steady-state levels of reactive oxygen species (ROS) and cytotoxicity in immortalized human prostate epithelial cells (RWPE-1)..... Results showed that 4-OH-PCB11 could significantly induce cell growth suppression and decrease the viability and plating efficiency of RWPE-1 cells. 4-OH-PCB11 also significantly increased steady-state levels of intracellular superoxide, ($O_2^{\bullet-}$), as well as hydroperoxides. Toxicol Sci. 2013 Nov;136(1): 39-50

The EPA has found that:

PCBs have been demonstrated to cause a variety of adverse health effects. PCBs have been shown to cause cancer in animals. PCBs have also been shown to cause a number of serious non-cancer health effects in animals, including effects on the immune system, reproductive system, nervous system, endocrine system and other health effects. Studies in humans provide supportive evidence for potential carcinogenic and non-carcinogenic effects of PCBs. The different health effects of PCBs may be interrelated, as alterations in one system may have significant implications for the other systems of the body.

<http://www.epa.gov/wastes/hazard/tsd/pcbs/pubs/effects.htm>

These findings from the EPA are what have served as the underpinning of Governor Jay Inslee's push for state legislation targeting manufacturers who produce and release harmful toxins into the environment. These toxins impact children to a higher degree and have a more profound impact on developing immune systems.

3.9 EFFORTS AT APPROACHING POLLUTER SPECIFIC REGULATIONS

During the 2015 legislative session, Governor Jay Inslee sought to engage in a chemical specific approach to minimize surface water contamination. The bill (HB 1472) did not pass during the 2015 legislative session.

The legislation was described as a bill to protect children from harmful chemical exposure. The bill would have demanded that manufacturers who utilize and discharge specifically identified chemicals would have to significantly reduce or find alternatives for those identified chemicals.

3.9.1 City of Oakland and the Excess Litter Fee

In 2008, the city of Oakland, California passed an “Excess Litter Fee” on businesses that generate litter. Certain types of businesses open to the public with over the counter sales were subject to this fee. Fast food establishments, liquor stores, convenience markets, gasoline station markets, or specially designated businesses.

The amount of the fee was based upon the annual sales generated by a business per year in the city of Oakland. The fee ranged from \$230 to \$3,815 a year per business. In Oakland, 565 businesses were assessed the excess litter fee, generating \$363,250 a year in revenue. Almost \$100,000 was expended in picking up excess litter and implementing the program.

The amount of money generated was only to cover the costs associated with the costs of picking up and processing street litter in Oakland, California. (appendix J) This type of fee structure does not collect the amount of revenue necessary for the needs of the Clark County Clean Water program.

3.9.2 Source Control Fee

Floor Drains and Sewer Lines

“Floor Drains – Floor drains represent a direct threat to surface and ground water. In 17 facilities, typically related to vehicle maintenance, indoor floor drains were found connected to either a storm system draining to local streams or connected to a ground infiltration drain (a drywell). In all cases these drains were plugged with cement or reconnected to sanitary sewer. Vancouver’s program demonstrates that pollution risks from floor drains can be effectively addressed and remedied locally.” (Vancouver Water Study Appendix K)

A potential fee source is an annual charge for businesses with floor drains. This fee could be added to the annual property tax if a data base were created indicating what commercial properties have floor drains.

Such a fee could be seen as punitive, penalizing those whose drains are properly connected to the sewer lines and generate minimal revenue.

A more serious issue is sewage lines that improperly connect or drain directly into the storm water system. In 2014, DES staff found a direct discharge of sewage into the county's MS4 system. Like in Vancouver's cases, when such problems are discovered the issue is remedied quickly.

3.9.3 All Property Fee Regardless of Impervious Surface

Currently Clark County only assesses a clean water fee to properties with impervious surface on them. All properties in a basin area contribute to stormwater runoff. Even those properties outside the basin area contribute due to their vehicles and other activity generated on private property that migrate over into the basin area.

Pierce County currently assesses a minimal base fee to all parcels of property regardless of the presence of impervious surface.

An assessment on all tax assessed properties could generate enough additional revenue to carry the program through the next new permit cycle.

PUBLIC HEALTH

The Board of Health in Clark County has much more authority under state law to impose fees and assessments in order to protect public health and safety but to do so would need to establish that the imposition of fees on polluters was necessary for the sake of public health and welfare.

This is a similar conceptual route taken by the governor's office in proposing fees on targeted chemicals at the state level in Washington. Similar to jurisdictions in Maryland that banned fertilizer, the proposed legislation from the governor had a legislative finding that called for these fees based on the need to protect children and other highly sensitive groups from harmful pollutants.

The governor's legislative package in Olympia this year stated in the intent section:

NEW SECTION. Sec. 1. The legislature finds:

(1) Biomonitoring studies reveal adults, children, and even fetuses carry a body burden of toxic chemicals. These include

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chemicals linked to cancer, brain and nervous system damage, birth defects, developmental delays, and reproductive harm.

(2) A growing body of scientific evidence demonstrates that these toxic chemical exposures are taking a toll on public health and playing a role in the incidence and prevalence of many diseases and disorders, including learning and behavioral problems, asthma, reproductive problems, birth defects, obesity, and cancer.

Clark County could consider having the Board of Health pass stormwater and potential polluter pays fees as a necessity for the protection of the health and safety of the public. This would allow the county more latitude in how and what fees could be created and applied for surface and ground water protection.

SECTION 4
CONCLUSION

CONCLUSION

MOVING FORWARD

In 2018, Clark County's NPDES permit will expire and we will be required to obtain a new NPDES permit.

It is probable that the new permit, like each one of our previous permits, will increase our responsibilities and obligations.

With each new permit, our costs to maintain compliance have risen approximately 30 percent over the previous permit. Running the clean water program and keeping in compliance with the permit costs approximately \$6.8 million annually. It is likely that the costs to run the program and maintain compliance with the new permit after it is developed and issued by the federal and state government will require an annual budget at or above \$8 million dollars.

This study shows that Clark County runs a highly efficient program at costs that are significantly lower than other similar jurisdictions. Clark County has developed and is maintaining a fiscal discipline that is unmatched.

We know the costs will rise with the new permit and we need to develop a fee generating method that will raise the necessary revenues for the program moving into the future.

The task of finding and proposing new methods of paying for this mandated program should be given to the Clark County Clean Water Commission. The commission should develop a number of proposals in coordination with DES staff, present those proposals to the public, and make recommendations to the Clark County Board of Councilors for future action.