GOVERNMENT OF THE DISTRICT OF COLUMBIA
Department of Energy and Environment

Stormwater Retention Credit Program
Fiscal Year 2019 Summary Report

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DEPARTMENT OF ENERGY & ENVIRONMENT
GOVERNMENT OF THE DISTRICT OF COLUMBIA

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GOVERNMENT OF THE DISTRICT OF COLUMBIA
MURIEL BOWSER, MAYOR

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1. Summary

The District's stormwater management regulations provide major regulated sites with flexible options for meeting the District's stormwater management regulations. Under the rule, each major regulated project is required to achieve a stormwater retention volume (SWRv) based on either the 0.8 or 1.2 inch storm. Each major regulated site must meet at least 50 percent of the required SWRv on-site and has flexibility to meet the remaining portion of its SWRv off-site, with the exception that sites in areas of the District draining to tunnels to manage combined sewer overflow runoff have flexibility to meet their entire retention volume off site. A site can meet a retention requirement off-site with Stormwater Retention Credits (SRCs) that are purchased in an open market or through payment of an in-lieu fee (ILF) to DOEE.

When regulated construction projects purchase SRCs on the market from newly-constructed, voluntary green infrastructure projects in areas served by the Municipal Separate Storm Sewer System (MS4), this shifts investment in green infrastructure to areas that drain directly to the District's waterbodies without treatment, maximizing water quality benefits. DOEE refers to these as "High Impact" SRCs. DOEE expects that when regulated developers use High Impact SRCs, this will help to accelerate the restoration of the District's waterbodies while also providing compliance flexibility.

This report provides summary information about SRC and Offv program activity in FY19. Additional details are provided in the subsequent sections of this report in charts and tables. For full information about the SRC Program, SRC Price Lock Program, and to view the SRC Registry, visit doee.dc.gov/src.

2020 Regulatory Amendments

On January 31, 2020, DOEE finalized amendments to the District's stormwater management regulations. Among other amendments, DOEE proposed three key changes to the SRC program,

described below. The changes increase compliance flexibility and encourage developers to use High Impact SRCs.

DOEE reviewed public comment and finalized the regulatory amendments in early FY20. For a more detailed explanation of the regulatory amendments, visit doee.dc.gov/proposedstormwaterrule.

Additional Off-site Compliance Flexibility

The District's stormwater management regulations created a first-of-its-kind off-site stormwater management compliance program. The SRC trading program allows regulated properties to achieve compliance with green infrastructure (GI) installed voluntarily at other locations in the District. One of DOEE's primary goals in implementing the SRC trading program is to increase the amount of green infrastructure located in areas that drain to the MS4.

To help incentivize more green infrastructure in the MS4, DOEE's 2020 amendments to the regulations waived the 50 percent on-site retention requirement for projects draining to storage tunnels that will prevent combined sewer overflow. To use the new flexibility, projects must commit to achieving their off-site retention in the MS4 (by using SRCs from the MS4 or by paying ILF).

Requirements to Use MS4 SRCs

When the SRC trading program was established, DOEE did not include any trading barriers or trading ratios, except for Anacostia Watershed Development Zone (AWDZ) sites. DOEE's 2020 amendments introduced requirements that AWDZ sites and any site in the MS4 must achieve off-site retention in the MS4 (by using SRCs from the MS4 or by paying ILF). The regulations allow for some exceptions for owners of sites in the MS4 who have already purchased or generated SRCs from the Combined Sewer System (CSS).

In designing the SRC program, DOEE anticipated that the market would result in projects located in the CSS complying with Offv by using SRCs generated in the MS4. This scenario maximizes water quality benefits in the District by increasing the total retention capacity built in the MS4. DOEE has observed that the majority of SRCs used have been generated within the MS4. However, DOEE has also observed projects in the MS4 using SRCs generated in the CSS, as DOEE did not restrict projects in the MS4 from purchasing and using SRCs that were generated by projects in the CSS. When this scenario occurs, retention capacity is built in the CSS instead of the MS4, which achieves a less beneficial outcome for District waterbodies. The regulatory amendments now require sites in the MS4 to purchase SRCs from the MS4.

SRC Eligibility Cutoff Date

Prior to the 2020 amendments, the District's stormwater management regulations allowed any project installed after May 1, 2009 to generate SRCs, assuming that all other eligibility criteria are met. Now, only projects installed after July 1, 2013 are eligible to generate SRCs. This

change was required by the District's MS4 Permit. The amendment also ends SRC eligibility for projects if the first application for SRC certification is not submitted within 3 years of project completion. DOEE expects that without also implementing the 3-year application window following project completion, future MS4 permits would require regular changes to this cutoff date.

This change will encourage investment in voluntary green infrastructure in the District. Specifically, the change reduces the risk that SRCs from voluntarily installed SRCs won't be sold. Selling SRCs is critical for the financial viability of these voluntary projects that protect the District's waterbodies. However, certainty about being able to sell SRCs is undermined by the potential for already-built green infrastructure projects with sunk costs to start generating and selling SRCs at below-market prices. Already-built green infrastructure with sunk costs includes many projects that were vested under the District's pre-2013 regulations or exceeded the requirements of the District's stormwater management regulations. It is possible that these SRCs could be brought onto the market at relatively low cost since the design, permitting, and construction have been completed. While many of these already-built projects have not elected to get SRCs certified, the potential for this has had the effect of dis-incentivizing voluntary SRC-generating GI. DOEE expects this change will incentivize the creation of SRC-generating businesses, which will help to ensure a stable long-term supply of SRCs for use by regulated development.

Furthermore, it is worth noting that an important part of the reason for allowing already-built green infrastructure to generate SRCs under the 2013 rule was due to uncertainty as to whether the SRC market would provide sufficient SRCs soon enough to meaningfully enable off-site compliance by regulated development, starting from when the regulations were implemented. Since the creation of the SRC Trading program through the end of FY19, there have been 66 SRC trades, with the number of SRCs for sale increasing over time. New, voluntary green infrastructure projects are currently occurring at a large enough scale to meet the total demand for SRCs from regulated developers.

These changes were waived for the first 6 months following the final rulemaking. As long as a project starts generating SRCs within 3 years of the project completion and does not lapse in SRC certification for more than 6 months, the project will be able to continue generating SRCs. DOEE expects that these cutoff dates provided ample time for projects that have a desire to generate SRCs to submit the necessary application.

SRC Market Activity Summary

The SRC market and Offv programs grew substantially in FY19. Twenty-seven trades occurred for a total of 193,158 SRCs, with an average price of $1.84. The total number of SRCs sold in FY19 was the highest of any prior fiscal year. DOEE received two in-lieu fee (ILF) payments in FY19, totaling $15,873.17. Projects may use SRCs or pay ILF to achieve Offv compliance in a later fiscal year, which means that some of these trades and payments will achieve Offv compliance in FY20.

In FY19, DOEE approved 12 applications to certify SRCs, accounting for 689,852 SRCs, of which 512,750 represent new supply in the SRC market (including SRC Price Lock Program participants). The other 177,102 were generated by SRC owners who chose not to list their SRCs for sale (e.g., the SRCs are being banked with the intention of meeting the SRC owners' Offv obligations on future projects if they arise).

One of the ways SRCs approved is reported on is based on location and is classified by sewershed and watershed. A sewershed area has all sewers draining to a single point, while a watershed has all runoff and precipitation draining to a single point. Of the SRCs approved in FY19, 42.7 percent are from green infrastructure located in the Anacostia River watershed, 55.8 percent are from the Potomac River watershed, and 1.5 percent are from the Rock Creek watershed. Of the SRCs approved in FY19, 80.9 percent are from green infrastructure located in the MS4 and 19.1 percent are from the CSS.

In FY19, DOEE approved 27 new permit applications for sites with Offv (16 percent of all projects approved in FY19). These 27 new sites with Offv are in addition to the 80 sites approved with Offv in prior fiscal years. However the designs for some previously approved projects also changed. While some of these revised projects eliminated the Offv requirement, others opted to comply off-site, for a net decrease of two projects with Offv. Including the 80 previously-approved sites with Offv, the net increase of two revised sites with Offv, and the 27 new sites with Offv, DOEE has approved 105 projects with Offv (13.1 percent of all projects approved) from the SRC program inception through the end of FY19 . Out of the 105 projects with Offv, 15 projects finished construction in FY19.

2. SRC Price Lock Program

The SRC Price Lock Program allows participants the option to sell SRCs to DOEE, for a reduced price, in addition to the option to sell the SRCs on the market. The option to sell to DOEE effectively constitutes a price floor in the SRC market and offers certainty about the revenue from an SRC-generating project.

Four projects enrolled in the SRC Price Lock Program in FY19. All four SRC Price Lock Program projects were motivated primarily by the opportunity to generate and sell SRCs. When completed, their green infrastructure will manage runoff from a combined retrofit area of more than 14 acres in the MS4. A list of the GI installed via the SRC Price Lock Program through FY19 is shown in Table 1.

From SRC Price Lock Program inception through the end of FY19, seven projects have been enrolled. When completed, their green infrastructure will manage runoff from a combined retrofit area of more than 20 acres in the MS4.

Table 1. GI Installed by SRC Price Lock Program Participants

GI Group	GI Installation	Total Contributing	Impervious Portion of	GI Surface Area (square	SRC-eligible Retention

	Date[1]	Drainage Area (CDA) (square feet)	CDA (square feet)	feet)	Volume (gal)[2]
Bioretention	5/4/2017	14,600	9838	748	11,165
Bioretention	12/7/2017	53,492	6169	3542	21,374
Bioretention	12/7/2017	74,880	8582	4062	24,123
Bioretention	12/7/2017	70,785	4724	2912	16,709
Bioretention	12/7/2017	56,323	7323	3123	14,447
Bioretention	12/7/2017	42,253	2976	2830	15,500
Bioretention	6/27/2018	12,458	8258	1015	9,426
Bioretention	5/8/2019	85,291	8493	2254	11,121
Tree Planting	5/8/2019	0	-	-	898
Tree Planting	5/8/2019	0	-	-	898
Tree Planting	5/8/2019	0	-	-	1197
Land Cover Change	5/8/2019	832,696	77596	12,859	6,655
Bioretention	5/8/2019	73,617	10607	2785	24,895
Bioretention	5/8/2019	60,941	3642	690	2,594
Bioretention	5/8/2019	129,156	8990	3400	10,390
Tree Planting	5/8/2019	0	-	-	2,094
Tree Planting	5/8/2019	0	-	-	2,693
Tree Planting	5/8/2019	0	-	-	3,590
	TOTAL	1,506,492	157,198	40,220	179,769

Of the $11.5 million DOEE committed to the SRC Price Lock Program, the projects that enrolled through FY19 originally accounted for $3.86 million of funding. This $3.86 million is the amount required to purchase 3,310,020 SRCs over 12 years of credit certification, assuming none of the projects sell any of their SRCs on the market. Of the SRCs generated as part of the first 3-year SRC certification cycle for those projects, participants have sold a total number of 47,306 SRCs on the market through the end of FY19.[3] If not sold on the market, these SRCs would have used $92,246.70 of DOEE's SRC Price Lock Program funds, which can now be used for other SRC Price Lock Program projects in the future. The status of the escrow account, which contains the Price Lock Program funds, can be found in Table 2. DOEE purchased SRCs from one SRC Price Lock Program project in FY19, spending a total of $512,163.6 to purchase 262,648 SRCs that the project generated from its first 3-year SRC certification cycle. Price Lock Program SRCs purchased and retired by DOEE can be found in Table 3.

[1] DOEE began accepting applications for the SRC Price Lock Program in FY18 and allowed prior projects to enroll if they were built after September 2016. DOEE no longer allows projects to enroll in the SRC Price Lock Program after construction begins.

[2] The SRC-eligible retention volume is the retention volume achieved by the green infrastructure practice in excess of pre-project retention. This includes an adjustment based on land cover changes. For more information about this calculation, refer to Chapter 7 of the Stormwater Management Guidebook (doee.dc.gov/swguidebook).

[3] This includes SRCs that were sold in FY18 prior to the drafting of the FY18 annual report

When DOEE approves a 3-year SRC certification cycle for a project in the SRC Price Lock Program, the participant has 1 year to decide whether to sell SRCs to DOEE or sell SRCs on the market. For the seven projects enrolled in the program, DOEE still had $3.2 million reserved in the escrow account as of the end of FY19. This is the maximum amount required if DOEE were to purchase all the participants' remaining SRCs from their first 3-year certification cycle and SRCs from subsequent certification cycles for years 4 through 12. For these projects, SRC purchase prices are $0.42/SRC for years 7 through 12 of SRC certification, so less funding is required to purchase credits during those years.

Table 2. FY19 Escrow Account Status

Project Number	FY Enrolled	Original Amount Reserved	SRC Price Lock Program Funding Forfeited Due to Market Sale[4]	Total Amount Paid as of FY19	Amount Still Reserved at the End of FY19
1	FY18	$157,426.50	$65,315.25	$0	$92,111.25
2	FY18	$1,299,357.30	$26,931.45	$512,163.6	$1,272,425.85
3	FY18	$132,906.60	$0	$55,142	$77,764.50
4	FY19	$563,280.90	$0	$0	$563,280.90
5	FY19	$1,156,947.30	$0	$0	$1,156,947.30
6	FY19	$254,809.80	$0	$0	254,809.80
7	FY19	$294,210.60	$0	$0	$294,210.60
	TOTAL	**$3,858,939.00**	**$92,246.70**	**$567,305.70**	**$3,316,386.6**

Table 3. SRCs Purchased and Retired by DOEE in FY19

Transfer Date	Watershed Where SRCs Are Generated	Purchase Price per SRC	Number of SRCs	Total Value of Transfer
9/5/2018	Anacostia	$1.95	28,278	$55,142.10
1/21/2019	Anacostia	$1.95	262,648	$512,163.60

SRC Aggregator Startup Grant and SRC Site Evaluation Program Activity

DOEE approved five SRC Aggregator Startup Grants in FY19, accounting for a total of $371,072. In addition to the five SRC Aggregator Startup Grants approved in FY18, this brings the total funds awarded by DOEE to $745,497. Each SRC aggregator is focused on designing green infrastructure in the MS4 for participation in the SRC Price Lock Program. While each aggregator has proposed their own strategy for developing green infrastructure designs, general

[4] Based on the SRC Price Lock Program price that DOEE would have paid for these credits, as specified in the participant's SRC Purchase Agreement. For the credits these participants sold on the market, DOEE would have paid $1.95/SRC, based on these credits being for green infrastructure managing runoff from the non-tidal MS4 area and being for the first 6 years of credit certification.

themes include focusing on religious institutions, partnering with properties that have large impervious surfaces, implementing vegetated green infrastructure like rain gardens, and searching for opportunities located in the non-tidal MS4.

DOEE provided two SRC Site Evaluations in FY19 for two properties in the MS4. One was for a condo building and the other for a nonprofit institutional property.

3. SRCs Certified

A total of 689,852 SRCs were certified in FY19. DOEE certifies SRCs for up to 3 years at a time on one application, as shown in Figure 1. Each fiscal year shown in Figure 1 includes any SRCs certified in that year, including SRCs certified for future fiscal years.

Some SRC owners generate SRCs to bank for Offv compliance for potential future regulated projects. Figure 1 and Table 4 show how many of the SRCs certified each year represent supply in the SRC market versus SRCs that were not listed for sale on the market because they were privately banked for other reasons such as satisfying the SRC generator's Offv requirement at another site. This categorization is based on the applicant's decision whether to list SRCs for sale.

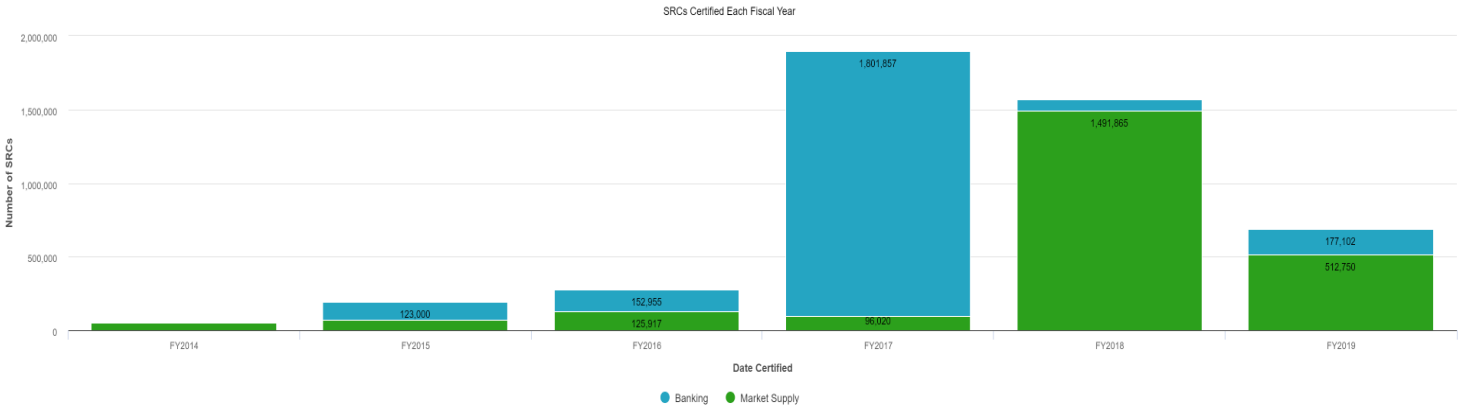

Figure 1. SRCs Certified Per Fiscal Year

Table 4. SRCs Certified Each Fiscal Year

Fiscal Year	SRCs approved – Market Supply	SRCs Approved – Banking	Total
FY14	51,249	0	51,249
FY15	71,588	123,000	194,588
FY16	125,917	152,955	278,872
FY17	96,020	1,801,857	1,897,877
FY18	1,491,865	79,762	1,571,627
FY19	512,750	177,102	689,852
Total	**2,349,389**	**2,334,676**	**4,684,065**

Figure 2 and Figure 3 show the number of SRCs certified by DOEE in FY19, grouped by watershed and sewershed, respectively: 43 percent of SRCs in FY19 were certified in the Anacostia watershed, 56 percent were certified in the Potomac watershed, and 2 percent were certified in the Rock Creek watershed. Eighty-one percent of SRCs were certified in the MS4 and 19 percent of SRCs were certified in the CSS.

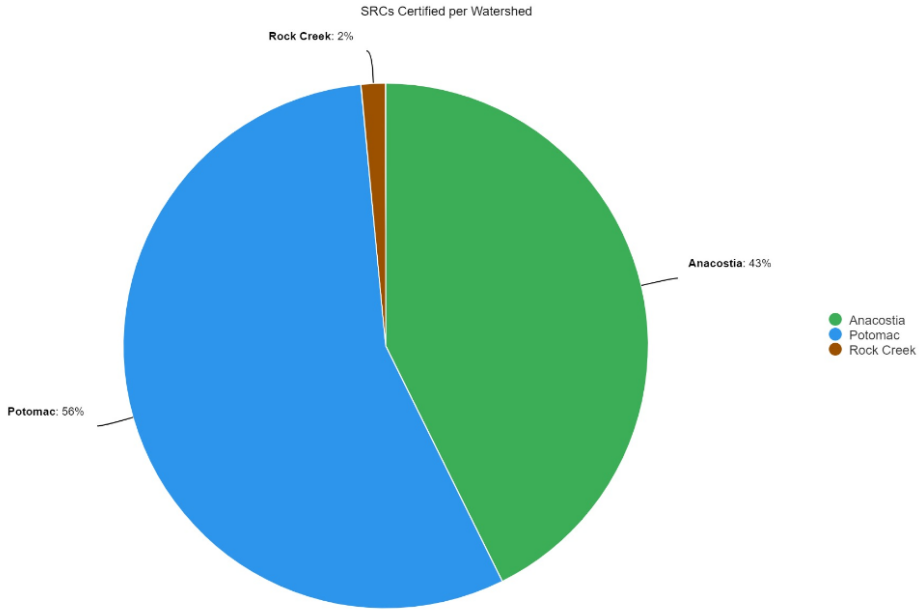

Figure 2. SRCs Certified Per Watershed in FY19

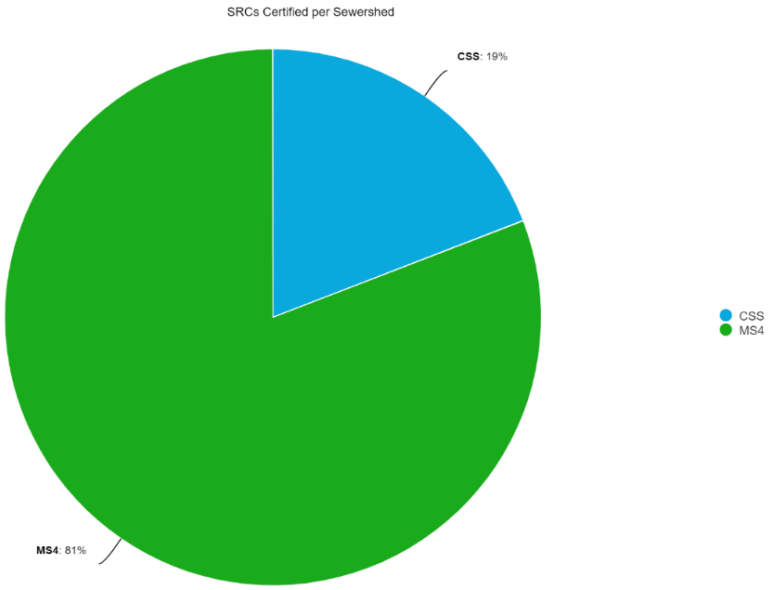

Figure 3. SRCs Certified Per Sewershed in FY19

Since the SRC certification period may last for up to 3 years, each SRC also has a retention year,[5] which corresponds to the year during which the green infrastructure that generated the SRC is actually retaining stormwater. For example, if a green infrastructure project with 100 gallons of SRC eligibility is certified for 3 years in FY19, all 300 credits would be approved in FY19. However, 100 credits are from the retention of stormwater in FY19, 100 are from the retention of stormwater in FY20, and 100 are from the retention of stormwater in FY21. For clarity, DOEE refers to this concept as the retention year. By contrast, the SRC certification date is the date when a complete and approvable certification application was submitted to DOEE. The first retention year for a set of SRCs starts on the SRC certification date. The second and third retention years covered by the application begin on the anniversaries of the SRC certification date.

More information about SRC certification is available in Table 5, including the certification date and retention year for each SRC. Each application may result in SRC certification for up to 3 years, which is shown in the Retention Year columns. In most instances, the retention year occurs partially in two fiscal years. For simplicity, this table reports the fiscal year during which the SRC begins to achieve retention. For example, an SRC with a retention year from 8/22/2019 through 8/21/2020 would achieve retention during both FY19 and FY20, but would be reported only in the FY19 column.

Due to space limitations, Table 5 includes information about all SRCs certified with an application submitted in FY19. Prior annual reports[6] include information about the retention year of SRCs approved by DOEE on applications submitted prior to FY19.

Table 5. Retention Year of SRCs Certified in FY19

Date SRCs Certified	Watershed	Sewer-shed	Total SRCs (certified in FY19)	Retention Year			
				FY18	FY19	FY20	FY21
9/12/2019	Rock Creek	CSS	4,539		1,513	1,513	1,513
7/8/2019	Anacostia	CSS	5,625		1,875	1,875	1,875
6/27/2019	Rock Creek	CSS	5,916		1,972	1,972	1,972
6/17/2019	Anacostia	MS4	199,443		66,481	66,481	66,481
6/11/2019	Potomac	MS4	28,992		14,496	14,496	-
5/16/2019	Potomac	MS4	20,330		10,165	10,165	-
5/2/2019	Anacostia	CSS	9,669		-	9,669[7]	-
4/8/2019	Anacostia	CSS	36,609		12,203	12,203	12,203
3/28/2019	Anacostia	CSS	70,140		23,380	23,380	23,380
3/8/2019	Potomac	MS4	123,003		41,001	41,001	41,001

[5] In prior reports, DOEE has referred to this concept as the "vintage year." DOEE is switching to the term "retention year" to clarify the meaning. DOEE welcomes feedback on other terms that may provide further clarification.
[6] Prior annual reports can be found in the MS4 annual reports at doee.dc.gov/node/139492 or on the SRC website at doee.dc.gov/src.
[7] An extended maintenance contract was submitted, so DOEE approved additional SRCs for an application that had originally been approved in a prior fiscal year.

3/4/2019	Potomac	CSS	9,873		3,271	3,271	3271
12/17/2018	Potomac	CSS	62,685		20,895	20,895	20,895
10/1/2018	Anacostia	MS4	113,088[8]	37,696	37,696	37,696	-
Total			**689,912**	**37,696**	**234,948**	**244,617**	**172,591**

4. Off-Site Retention Volume

As DOEE continues to review and approve projects under the District's stormwater management regulations, DOEE expects annual variation in the number of projects and volume of Offv approved per fiscal year. However, DOEE notes that the cumulative Offv in effect continues to grow annually.

DOEE's 2020 amendments introduced the need to differentiate between two parts of the CSS: the portions draining to the storage tunnels that will handle sewer overflows, and the portion that does not. Projects in the portion of the CSS that drains to the storage tunnels have the option to meet up to 100 percent of the retention requirement off-site if they purchase SRCs from the MS4. The number of projects can be seen in Figure 4 and 5.

In FY19, DOEE approved permit applications for 27 projects with Offv. Figure 4 shows the number of plans approved with Offv for each fiscal year. If applicable, values for prior fiscal years have been updated to reflect design changes that occurred in FY19 to projects that were initially approved in prior fiscal years.

The number of projects approved with Offv increased by 3.6 percent in FY19 relative to the number of projects approved with Offv in FY18. Figure 5 shows the number of gallons of Offv approved per fiscal year. The number of gallons of Offv on plans approved in FY19 increased by 29.9 percent relative to the number of gallons on plans approved in FY18. Because Offv for past years remains in effect as new projects take on Offv in the current year, cumulative Offv steadily grows from year to year. As more projects are approved with Offv, the demand in the SRC market increases, unless the regulated sites plan to comply with self-generated SRCs or ILF payment. This creates additional incentive for more voluntary green infrastructure projects to meet that demand.

[8] The retention year begins the date a complete application is submitted, even if the approval occurs on a later date. This application was submitted on 9/28/2018 and was not approved until the next business day, 10/1/2018. Therefore, while the approval occurred in FY19, the first retention year started in FY18.

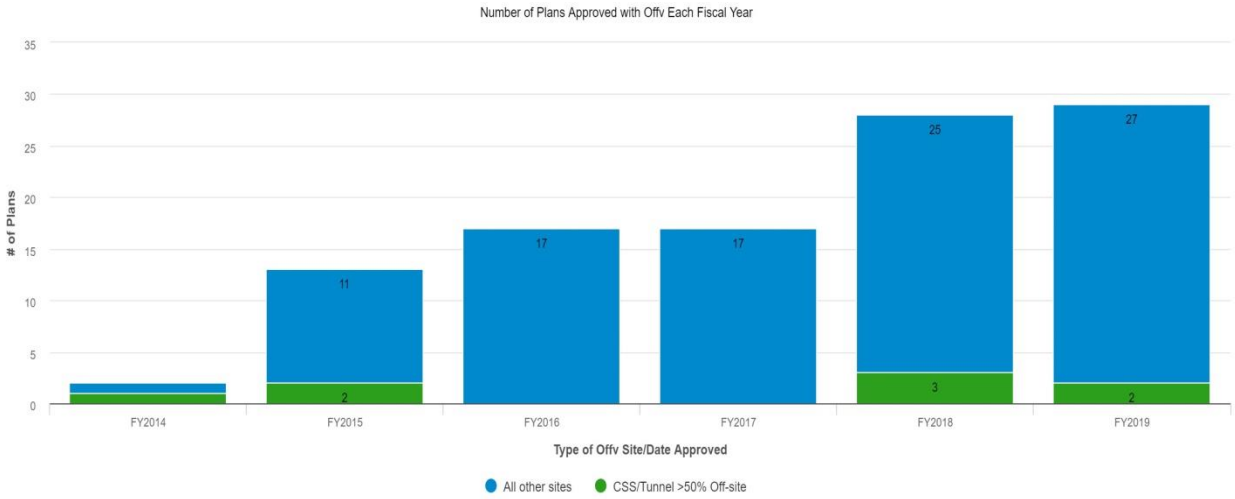

Figure 4. Number of Plans Approved With Offv Per Fiscal Year

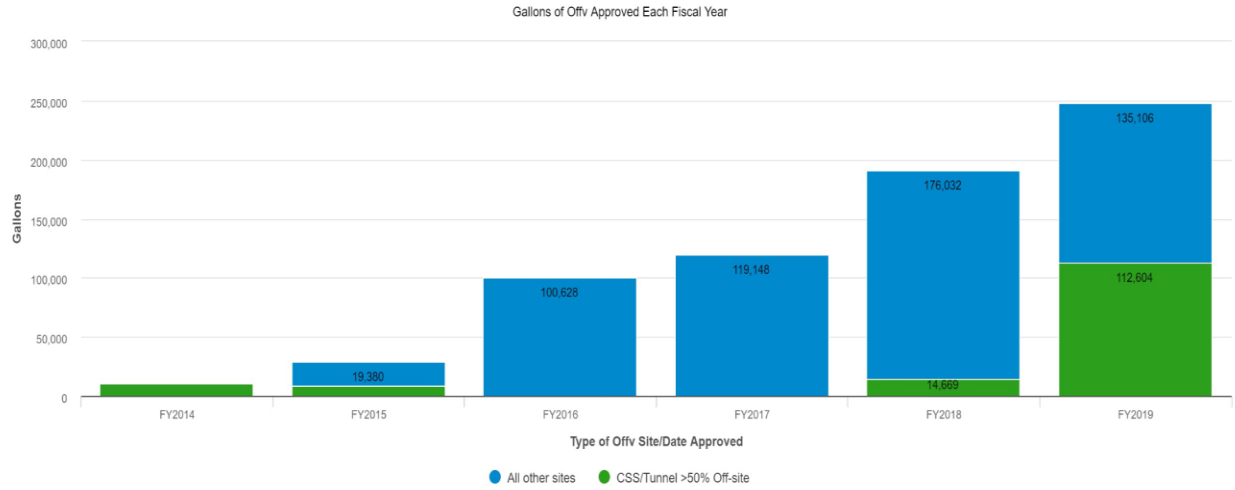

Figure 5. Gallons of Offv Approved Per Fiscal Year

Figure 6 shows the number of plans built (Figure 4 shows plans approved) with Offv each fiscal year. Figure 7 shows the number of gallons of Offv on plans built (Figure 5 shows gallons of Offv approved) in each fiscal year. The number of individual projects with Offv built decreased by 12 percent in FY19 relative to FY18, and the number of gallons of Offv on projects built in FY19 decreased by 8.8 percent relative to FY18. This is a decrease in the rate of growth, but not a decrease in overall SRC demand. As shown in Figure 8, the cumulative Offv built increased 46 percent to 356,889 gallons. Because Offv is an annual requirement, total Offv is cumulative and the overall demand for SRCs increased.

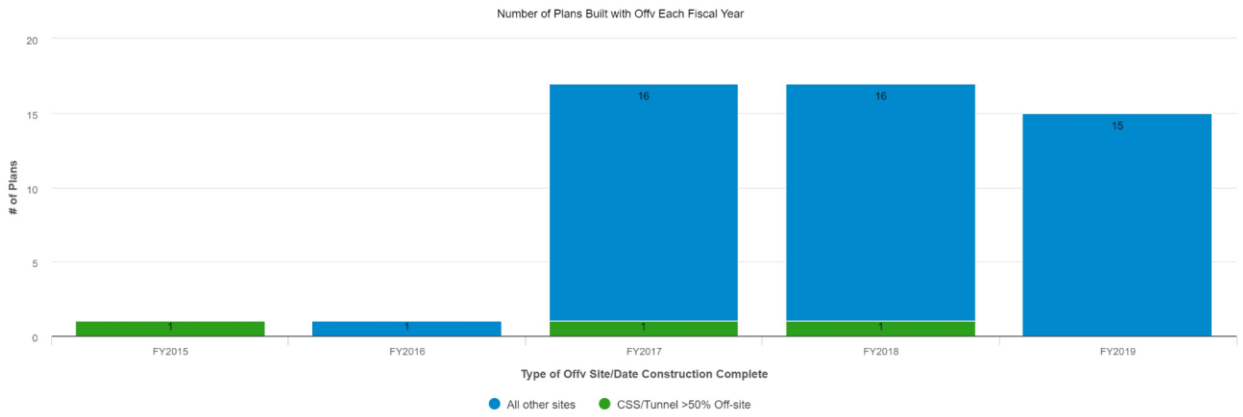

Figure 6. Number of Plans Built With Offv Per Year

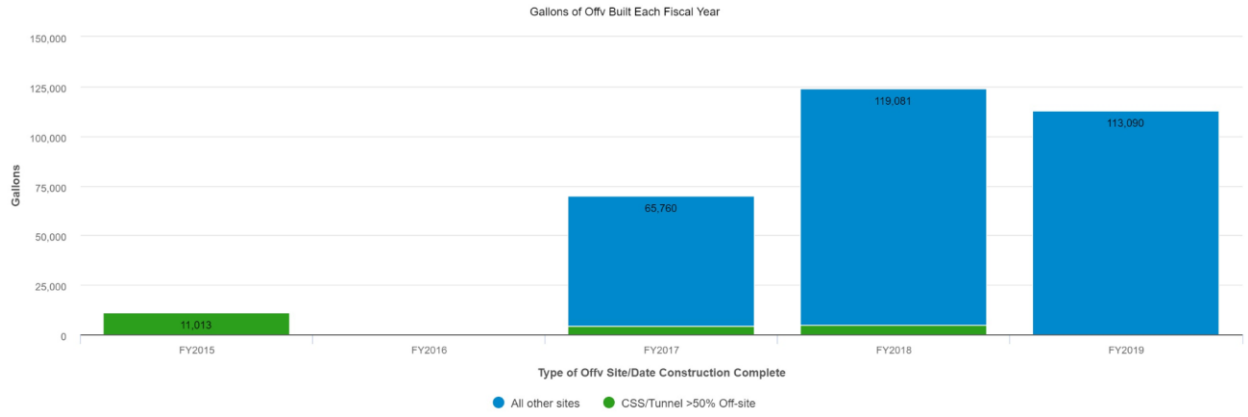

Figure 7. Gallons of Offv on Built Projects Per Year

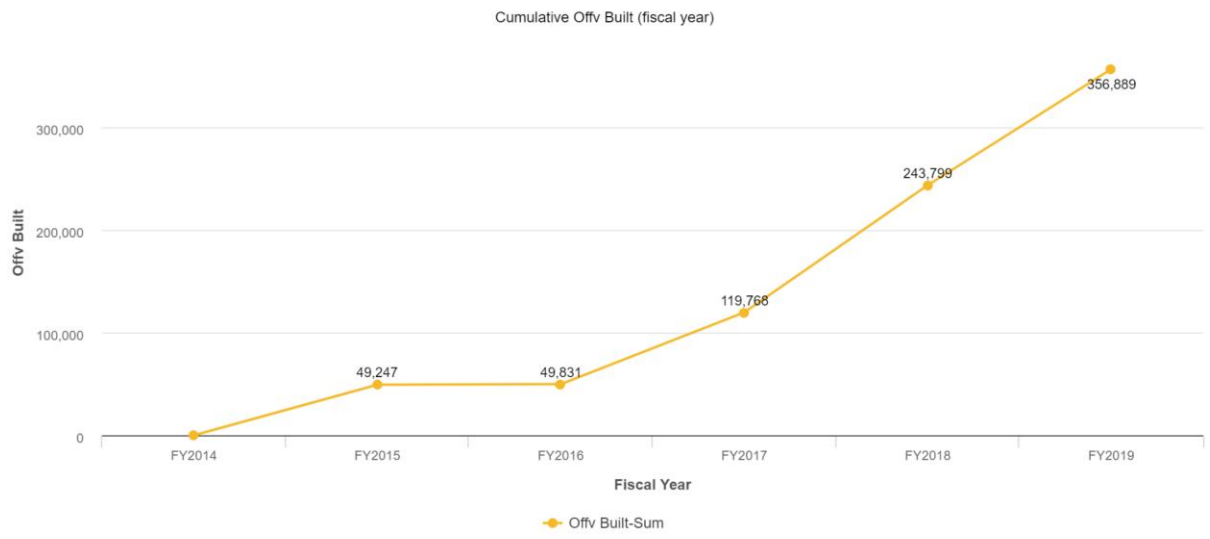

Figure 8. Cumulative Gallons of Offv on Built Projects

5. SRC Trades

Twenty-seven SRC trades occurred in FY19, an increase from 18 SRC trades in FY18. All trades were driven by projects that were nearing the end of construction or their next Offv compliance date. This does not include SRCs purchased by DOEE through the SRC Price Lock Program. Table 6 lists the prices for each trade and a weighted average for all trades.

Table 6. FY19 SRC Trades

Date	Number of SRCs	SRC Sale Price	Total Value of SRCs Sold
10/15/18	11,013	$2.00	$22,026
11/13/18	4,950	$1.91	$9,454.50
11/14/18	3,468	$2.00	$6,936
11/14/18	782	$1.91	$1,493.62
12/6/18	1,806	$1.85	$3,341.10
12/11/18	2,334	$1.73	$4,037.82
1/18/19	2,798	$1.97	$5,512.06
2/26/19	773	$1.65	$1,275.45
2/28/19	1,086	$1.70	$1,846.20
3/5/19	6,275	$2.00	$12,550
3/27/19	71,083	$1.70	$120,841.10
4/3/19	1,645	$1.80	$2,961
4/29/19	4,686	$1.80	$8,434.80
5/9/19	438	$1.80	$788.40
5/24/19	1,076	$1.73	$1,861.48
6/3/19	2,142	$1.80	$3,855.60
6/7/19	5,905	$2.00	$11,810
6/7/19	3,976	$2.00	$7,952
6/13/19	4,980	$1.80	$8,964
6/17/19	10,409	$1.80	$18,736.20
7/10/19	95	$1.80	$171
7/26/19	18,025	$1.80	$32,445
8/12/19	3,556	$1.80	$6,400.80
8/13/19	1,752	$1.80	$3,153.60
8/22/19	4,527	$1.80	$8,148.60
8/27/19	4,551	$2.00	$9,102
9/5/19	19,027	$1.80	$34,248.60
TOTAL/AVERAGE	**193,158**	**$1.84**	**$348,346.93**

Further analysis can be provided when grouping SRC trades into groups based on the number of SRCs included in the trade. Table 7 shows this in more detail, including the average amount of SRCs traded, the average price per trade, and the average price per SRC per group in FY19. Prior annual reports include information about the average price of SRCs traded since the program inception, grouped by size of trade.

Table 7. Average Price of SRCs Traded in FY19, Grouped by Size of Trade

Number of SRCs Traded	Number of Trades	Average SRCs per Trade	Average Price of Trade	Average Price per SRC
Under 1,000	4	522	$932	$1.79
1,000 – 9,999	18	3,417	$6,462.31	$1.86
10,000 – 19,999	4	14,619	$26,863.95	$1.85
20,000 +	1	71,083	$120,841.10	$1.70

6. Offv Compliance

A regulated site must begin to comply with its Offv as of the date of its Final Construction Inspection and every year thereafter. Projects with Offv must use SRCs and/or pay ILF for each year of Offv compliance. Table 10 shows periods of Offv compliance that began in FY19, regardless of when ILF payment was received or when SRCs were certified and traded (e.g., for a multi-year compliance period or for a trade that occurred in one fiscal year for a compliance period that began in another).

Table 8. Offv Compliance in FY19

Offv Compliance Start Date	Offv (gallons)	SRCs Used	ILF Payment	Gallons of Offv Met with ILF	Notes
10/4/2018	1,622	-	$5,855.42	1,622	Renewed Offv Compliance
10/8/2018	38,234	38,234	-	-	Renewed Offv Compliance
10/14/2018	534	534	-	-	Renewed Offv Compliance
10/17/2018	2,281	2,281	-	-	End of Construction
10/19/2018	1,411	1,411	-	-	End of Construction
10/26/2018	10,548	10,548	-	-	Renewed Offv Compliance
10/30/2018	360	133	-	-	End of Construction
10/31/2018	11,013	11,013	-	-	Renewed Offv Compliance
11/16/2018	4,950	4,950	-	-	Renewed Offv Compliance
11/21/2018	705	705	-	-	Renewed Offv Compliance
12/7/2018	1,052	1,052	-	-	End of Construction

12/10/2018	2,775		$10,017.75	2,775	End of Construction
12/18/2018	389	389	-	-	Renewed Offv Compliance
12/20/2018	903	903	-	-	Renewed Offv Compliance
12/27/2018	1,825	1,825	-	-	Renewed Offv Compliance
1/7/2019	548	548	-	-	End of Construction
1/9/2019	380	380	-	-	Renewed Offv Compliance
1/23/2019	3,708	3,708	-	-	Renewed Offv Compliance
2/5/2019	2,798	2,798	-	-	End of Construction
2/10/2019	4,177	4,177	-	-	Renewed Offv Compliance
2/13/2019	639	639	-	-	Renewed Offv Compliance
2/21/2019	1,314	1,314	-	-	End of Construction
2/22/2019	1,050	1,050	-	-	Renewed Offv Compliance
2/22/2019	19,349	19,349	-	-	Renewed Offv Compliance
3/4/2019	1,055	1,055	-	-	End of Construction
3/15/2019	782	782	-	-	End of Construction
3/22/2019	3,077	3,077	-	-	Renewed Offv Compliance
3/29/2019	1,859	1,859	-	-	Renewed Offv Compliance
4/4/2019	24,505	24,505	-	-	Renewed Offv Compliance
4/11/2019	8,229	8,229	-	-	Renewed Offv Compliance
4/25/2019	9,909	9,909	-	-	Renewed Offv Compliance
4/30/2019	4,527	4,527	-	-	End of Construction
5/5/2019	218	218	-	-	Renewed Offv Compliance
5/31/2019	438	438	-	-	Renewed Offv Compliance

6/5/2019	12,671	15,839[9]	-	-	Renewed Offv Compliance
6/15/2019	6,403	6,403	-	-	Renewed Offv Compliance
6/18/2019	1,156	1,156	-	-	End of Construction
6/20/2019	16,291	16,291	-	-	End of Construction
6/26/2019	249	249	-	-	Renewed Offv Compliance
6/27/2019	651	651	-	-	Renewed Offv Compliance
6/28/2019	2,343	2,343	-	-	End of Construction
7/1/2019	71,083	71,083	-	-	End of Construction
7/11/2019	2,142	2,142	-	-	Renewed Offv Compliance
7/25/2019	223	223	-	-	Renewed Offv Compliance
8/11/2019	2,324	2,324	-	-	Renewed Offv Compliance
8/19/2019	3,976	3,976	-	-	End of Construction
8/24/2019	584	584	-	-	Renewed Offv Compliance
8/27/2019	18,025	18,025	-	-	Renewed Offv Compliance
9/7/2019	1,455	1,455	-	-	Renewed Offv Compliance
9/13/2019	25,258	25,258	-	-	Renewed Offv Compliance
9/17/2019	5,905	5,905	-	-	Renewed Offv Compliance
9/21/2019	621	621	-	-	Renewed Offv Compliance
9/26/2019	19,027	19,027	-	-	Renewed Offv Compliance
TOTAL	**357,551**	**356,095**	**$15,873.17**	**4,397**	

[9] This project is an Anacostia Waterfront Development Zone (AWDZ) site that used non-Anacostia watershed credits. As a result, a trading ratio of 1.25 was applied and the site required additional SRCs to achieve its Offv obligation.

From program inception through the end of FY19, 105 projects that received SWMP approval from DOEE opted to comply with the requirement in part through Offv (approximately 13 percent of projects that have triggered the District's stormwater management regulations). As of the end of FY19, 53 of those projects had finished construction and begun complying with the Offv.

Table 11 provides a summary of additional information about how projects have complied with their Offv for the most recent year. DOEE has observed that ILF payment is made in very limited circumstances. Typically, ILF payment occurs when a project has a relatively small Offv. Self-generated SRCs are generated from green infrastructure at one project and used for Offv compliance for another project owned by the same entity.

Table 9. Type of Compliance Used for the Most Recent Year of Offv Compliance (All Projects Built Through the End of FY19)

Option Used for Offv	Number of Projects	Percent of Projects	Offv from Approved Plan (gallons)	Percent of Offv from Approved Plan
ILF	2	3.8%	4,397	1.23%
Purchased SRCs	32	60.4%	198,635	55.64%
Self-generated SRCs	19	35.8%	153,952	41.13%

DOEE has found that many SRC sellers prefer larger transactions, which may include multiple years of Offv compliance. DOEE is also aware of several instances in which buyers and sellers have discussed or agreed to an initial sale that includes an option for future SRC sales. Buyers are able to purchase enough SRCs to meet many years of Offv compliance at a time, which may help to reduce administrative processing of applications. However, DOEE has observed that buyers typically purchase in 1-year increments. The tables below summarize the number of years of Offv compliance achieved on applications to use SRCs that were submitted during FY19 as well as the amount of time between the SRC sale and the start of the Offv compliance period.

Table 10. Length of Offv Compliance Period Achieved in FY19 Using Purchased SRCs

Number of Years of Compliance Achieved	Number of Sites	Offv (Annual)	Number of SRCs Used
1	31	262,275	262,285
2	2	3,246	6,492
3	6	6,291	18,873
5	1	2,281	11,405
6	1	389	2,334
20	1	249	4,980

DOEE has observed that SRC buyers do not typically purchase their SRCs more than a few months in advance of their required compliance date. Eighty-one percent of individual purchases occur within 100 days of the required compliance date. However, aside from a single purchase of 71,083 SRCs (roughly 1/3 of all SRCs used in FY19), most SRCs were purchased within 40 days of the required compliance date. This indicates that most SRCs are not typically banked for a

long time prior to purchase and use. For periods of Offv compliance beginning in FY19, Table 11 identifies how far in advance the SRC buyer made an SRC purchase.

If the buyer purchases enough SRCs for a multi-year compliance period, Table 11 identifies the length of time between the purchase and the start of the first year of the compliance period. For example, if a project has an Offv of 100 gallons and the owner purchases 300 SRCs to comply for 3 years, and the purchase occurs 30 days before the start of the compliance period, all 300 SRCs are counted as being purchased 21 to 30 days before the compliance period.

Table 11. Time between SRC Purchase and Offv Compliance Period for Periods Beginning in FY19

Time Period Between SRC Sale and Start of Offv Compliance Period	Number of SRCs	Percent of SRCs	Number of Transactions
10 days or fewer	9,866	5.0%	3
11 to 20 days	18,624	9.4%	6
21 to 30 days	26,824	13.5%	5
31 to 40 days	21,591	10.9%	4
41 to 50 days	0	0	0
51 to 60 days	8,998	4.5%	3
61 to 70 days	0	0	0
71 to 80 days	4,733	2.4%	3
81 to 90 days	0	0	0
91 to 100 days	71,083	35.8%	1
Over 100 days	36,916	18.6%	10

7. SRCs Used in FY 2019 – Spatial Distribution

An SRC certified in one location in the District can be used to comply with an Offv requirement in another sewershed or watershed. Figure 9 shows that 20 percent of the SRCs that were used in FY19 were generated by green infrastructure practices located in the MS4 and were used to comply with Offv requirements in the CSS. 36 percent of the SRCs used in FY19 were both generated and used in the MS4. 29 percent were generated in the CSS and used in the MS4, and 15 percent were both generated and used in the CSS.

Figure 10 shows the watersheds in which the SRCs were generated and used. 26.8 percent of SRCs used in FY19 were generated and used in the Anacostia River watershed. 7.3 percent of SRCs used in FY19 were generated in the Anacostia River watershed and used in the Potomac River watershed, and 0.8 percent were generated in the Anacostia River watershed and used in the Rock Creek watershed. 14.4 percent of SRCs used in FY19 were generated in the Potomac River watershed and were used in the Anacostia River watershed. 48.3 percent of SRCs used in FY19 were generated and used in the Potomac River watershed, and 0.5 percent were generated in the Potomac River watershed and used in the Rock Creek watershed. 1.5 percent of SRCs used in FY19 were generated in the Rock Creek watershed and used in the Anacostia River watershed, and 0.4 percent were generated and used in the Rock Creek watershed. To provide further

information, Table 12 also includes the sewershed and watershed where the SRCs were certified and the sewershed and watershed where the SRCs were used.

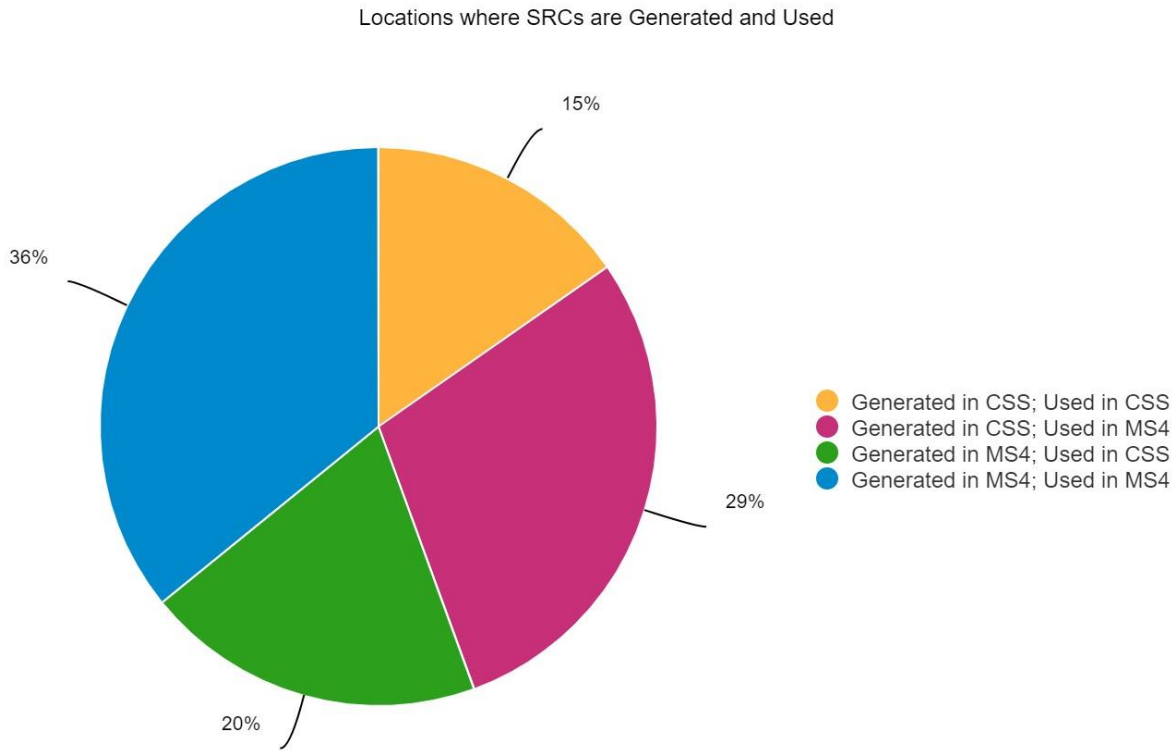

Figure 9. SRCs Used in FY19 – Spatial Distribution by Sewershed

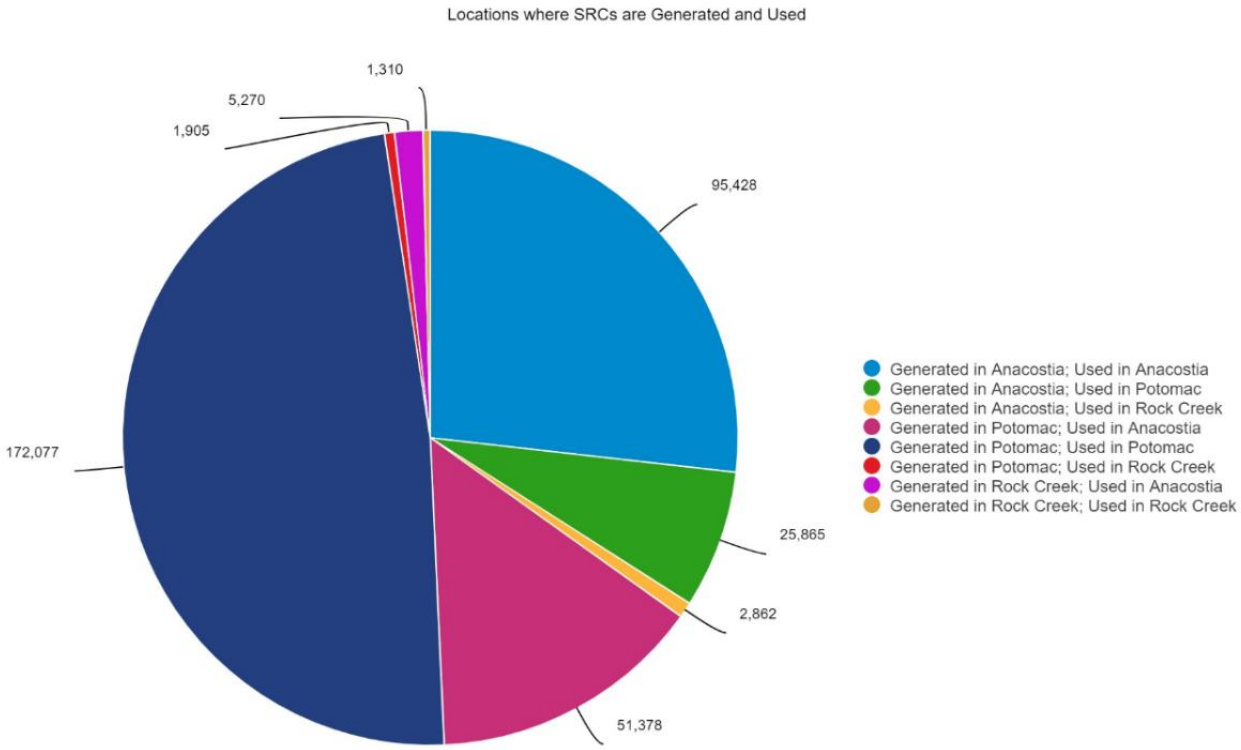

Figure 10. SRCs Used in FY19 – Spatial Distribution by Watershed

Table 12. SRCs Used in FY19

Number of SRCs	Retention Date	Certification Watershed	Certification Sewershed	Use Date	Use Watershed	Use Sewershed
7,574	5/1/2020	Anacostia	CSS	10/8/2018	Anacostia	CSS
15,330	5/1/2019	Anacostia	CSS	10/8/2018	Anacostia	CSS
15,330	5/1/2018	Anacostia	CSS	10/8/2018	Anacostia	CSS
534	1/29/2015	Rock Creek	CSS	10/14/2018	Anacostia	CSS
845	4/23/2019	Anacostia	CSS	10/17/2018	Anacostia	CSS
1,436	4/23/2018	Anacostia	CSS	10/17/2018	Anacostia	CSS
167	2/9/2019	Rock Creek	CSS	10/19/2018	Anacostia	MS4
1,244	2/9/2018	Rock Creek	CSS	10/19/2018	Anacostia	MS4
10,548	4/16/2018	Anacostia	CSS	10/26/2018	Potomac	MS4
133	2/9/2019	Rock Creek	CSS	10/30/2018	Rock Creek	CSS
11,013	1/22/2018	Anacostia	MS4	10/31/2018	Anacostia	CSS
4,950	3/26/2018	Anacostia	MS4	11/16/2018	Anacostia	CSS
705	3/7/2015	Potomac	MS4	11/21/2018	Anacostia	CSS
1,052	10/27/2015	Potomac	CSS	12/7/2018	Anacostia	CSS
389	3/26/2018	Anacostia	MS4	12/18/2018	Anacostia	CSS
903	10/27/2015	Potomac	CSS	12/20/2018	Anacostia	CSS
1,825	5/10/2018	Anacostia	MS4	12/27/2018	Potomac	MS4
548	3/4/2019	Potomac	CSS	1/7/2019	Potomac	CSS
84	8/15/2018	Rock Creek	CSS	1/9/2019	Anacostia	CSS

296	1/29/2016	Rock Creek	CSS	1/9/2019	Anacostia	CSS
1,769	2/22/2019	Anacostia	MS4	1/23/2019	Anacostia	MS4
1,939	2/22/2018	Anacostia	MS4	1/23/2019	Anacostia	MS4
2,798	1/22/2018	Anacostia	MS4	2/5/2019	Anacostia	CSS
4,177	3/8/2019	Potomac	MS4	2/10/2019	Potomac	CSS
404	2/9/2019	Rock Creek	CSS	2/13/2019	Rock Creek	MS4
90	9/24/2017	Potomac	MS4	2/13/2019	Rock Creek	MS4
55	9/24/2016	Potomac	MS4	2/13/2019	Rock Creek	MS4
90	9/24/2015	Potomac	MS4	2/13/2019	Rock Creek	MS4
1,314	4/23/2018	Anacostia	CSS	2/21/2019	Potomac	CSS
11,165	5/10/2019	Anacostia	MS4	2/22/2019	Anacostia	MS4
5,690	5/10/2018	Anacostia	MS4	2/22/2019	Anacostia	MS4
1,050	2/20/2018	Potomac	MS4	2/22/2019	Potomac	MS4
2,494	5/10/2017	Anacostia	MS4	2/22/2019	Anacostia	MS4
1,055	4/23/2018	Anacostia	CSS	3/4/2019	Rock Creek	MS4
782	3/26/2018	Anacostia	MS4	3/15/2019	Anacostia	CSS
3,077	3/7/2016	Potomac	MS4	3/22/2019	Anacostia	CSS
773	1/29/2020	Rock Creek	CSS	3/29/2019	Rock Creek	CSS
1,086	2/20/2018	Potomac	MS4	3/29/2019	Rock Creek	CSS
24,505	2/20/2019	Potomac	MS4	4/4/2019	Potomac	MS4
8,229	6/11/2017	Potomac	MS4	4/11/2019	Potomac	MS4
3,634	4/20/2018	Potomac	MS4	4/25/2019	Anacostia	MS4
6,275	4/16/2018	Anacostia	CSS	4/25/2019	Anacostia	MS4
4,527	2/20/2018	Potomac	MS4	4/30/2019	Anacostia	MS4
218	5/1/2019	Anacostia	CSS	5/5/2019	Anacostia	MS4
438	2/20/2018	Potomac	MS4	5/31/2019	Potomac	CSS
3,168	3/8/2020	Potomac	MS4	6/5/2019	Anacostia	CSS
12,671	3/8/2019	Potomac	MS4	6/5/2019	Anacostia	CSS
4,184	4/16/2020	Anacostia	CSS	6/15/2019	Potomac	MS4
130	4/20/2019	Potomac	MS4	6/15/2019	Potomac	MS4
2,089	4/16/2019	Anacostia	CSS	6/15/2019	Potomac	MS4
1,156	4/16/2020	Anacostia	CSS	6/18/2019	Rock Creek	MS4
6,873	6/1/2020	Potomac	MS4	6/20/2019	Potomac	MS4
9,418	6/1/2019	Potomac	MS4	6/20/2019	Potomac	MS4
249	2/20/2018	Potomac	MS4	6/26/2019	Anacostia	CSS
651	3/26/2018	Anacostia	MS4	6/27/2019	Rock Creek	CSS
2,343	2/20/2018	Potomac	MS4	6/28/2019	Potomac	CSS
8,386	12/17/2019	Potomac	CSS	7/1/2019	Potomac	MS4
20,895	12/17/2018	Potomac	CSS	7/1/2019	Potomac	MS4
20,895	10/27/2017	Potomac	CSS	7/1/2019	Potomac	MS4
20,895	10/27/2016	Potomac	CSS	7/1/2019	Potomac	MS4
12	10/27/2015	Potomac	CSS	7/1/2019	Potomac	MS4
2,142	2/20/2018	Potomac	MS4	7/11/2019	Anacostia	CSS
223	6/11/2017	Potomac	MS4	7/25/2019	Anacostia	MS4
887	1/29/2019	Rock Creek	CSS	8/11/2019	Anacostia	CSS

1,437	1/29/2018	Rock Creek	CSS	8/11/2019	Anacostia	CSS
17	4/16/2020	Anacostia	CSS	8/19/2019	Anacostia	CSS
3,017	4/16/2019	Anacostia	CSS	8/19/2019	Anacostia	CSS
942	4/16/2018	Anacostia	CSS	8/19/2019	Anacostia	CSS
584	2/20/2018	Potomac	MS4	8/24/2019	Rock Creek	CSS
18,025	2/20/2018	Potomac	MS4	8/27/2019	Potomac	MS4
1,455	4/23/2018	Anacostia	CSS	9/7/2019	Anacostia	CSS
25,258	2/20/2019	Potomac	MS4	9/13/2019	Potomac	MS4
3,405	4/16/2020	Anacostia	CSS	9/17/2019	Potomac	MS4
2,500	4/16/2018	Anacostia	CSS	9/17/2019	Potomac	MS4
222	8/15/2019	Rock Creek	CSS	9/21/2019	Anacostia	CSS
399	1/29/2018	Rock Creek	CSS	9/21/2019	Anacostia	CSS
19,027	2/20/2018	Potomac	MS4	9/26/2019	Anacostia	CSS

8. SRCs Used in FY 2019 – Temporal Distribution

DOEE certifies up to 3 years' worth of SRCs at a time and SRCs may be banked indefinitely. As discussed above, DOEE tracks the SRC retention year, which represents the year during which the green infrastructure practice achieves retention. The first retention year for an SRC generating projects starts on the date a complete, approvable SRC Certification Application is submitted. The second and third retention years covered by the application begin on the anniversaries of the date DOEE received the complete application.

Offv compliance is also tracked on an annual basis, which DOEE refers to as the SRC usage year. A regulated site with an Offv must begin to comply with its Offv as of the date of its Final Construction Inspection. Figures 11 through 15 show the extent to which the SRC retention year overlaps with the regulated sites' SRC usage year for FY19. The SRC retention year is shown in green and the SRC usage year is shown in blue. DOEE refers to an SRC usage year overlapping with the SRC retention year as contemporaneous use. Put differently, contemporaneous use means the SRC usage year began within 1 year of the start of the SRC retention year. Figure 16 shows that 62 percent, or 219,409 SRCs of the 356,095 SRCs used in FY19 were generated and used contemporaneously. This means the SRC usage year began within 1 year of the start of the SRC retention year. This has decreased from 69 percent in FY18.

When the retention year for SRCs concludes before the beginning of the SRC usage year, the year of Offv compliance for which the SRCs were used, it means that the stormwater retention of the green infrastructure represented by these SRCs occurred in full prior to beginning the period for which the SRCs were used by a regulated site. For 28.4 percent of the SRCs used in FY19, their usage year began within 1 year after the conclusion of their retention year. Six percent of the SRCs used in FY19 had a usage year that began more than 1 year but less than 2 years after the conclusion of the SRC retention year. 1.8 percent of the SRCs used in FY19 had a usage year that began more than 2 years but less than 3 years after the conclusion of the SRC retention year. The combined percentage of credits generated prior to use increased from 23 percent in FY18 to 36.2 percent in FY19.

In limited circumstances, an SRC can have a usage year prior to its retention year. For example, a regulated site with an Offv of 15,000 gallons can buy 15,000 SRCs from a site with a bioretention with 5,000 gallons of eligible retention capacity, meaning that it generates 15,000 SRCs every 3 years. In this case, the regulated site would use all 3 years of SRCs to meet one year of Offv. 2.1 percent of SRCs had a usage year that concluded within 1 year prior to the start of the SRC retention year. The ability for this to occur is limited by the maximum 3-year period of SRC certification, and SRCs can only be certified for the entire 3-year time period if a maintenance contract or plan is also provided to cover for the entire 3 years.

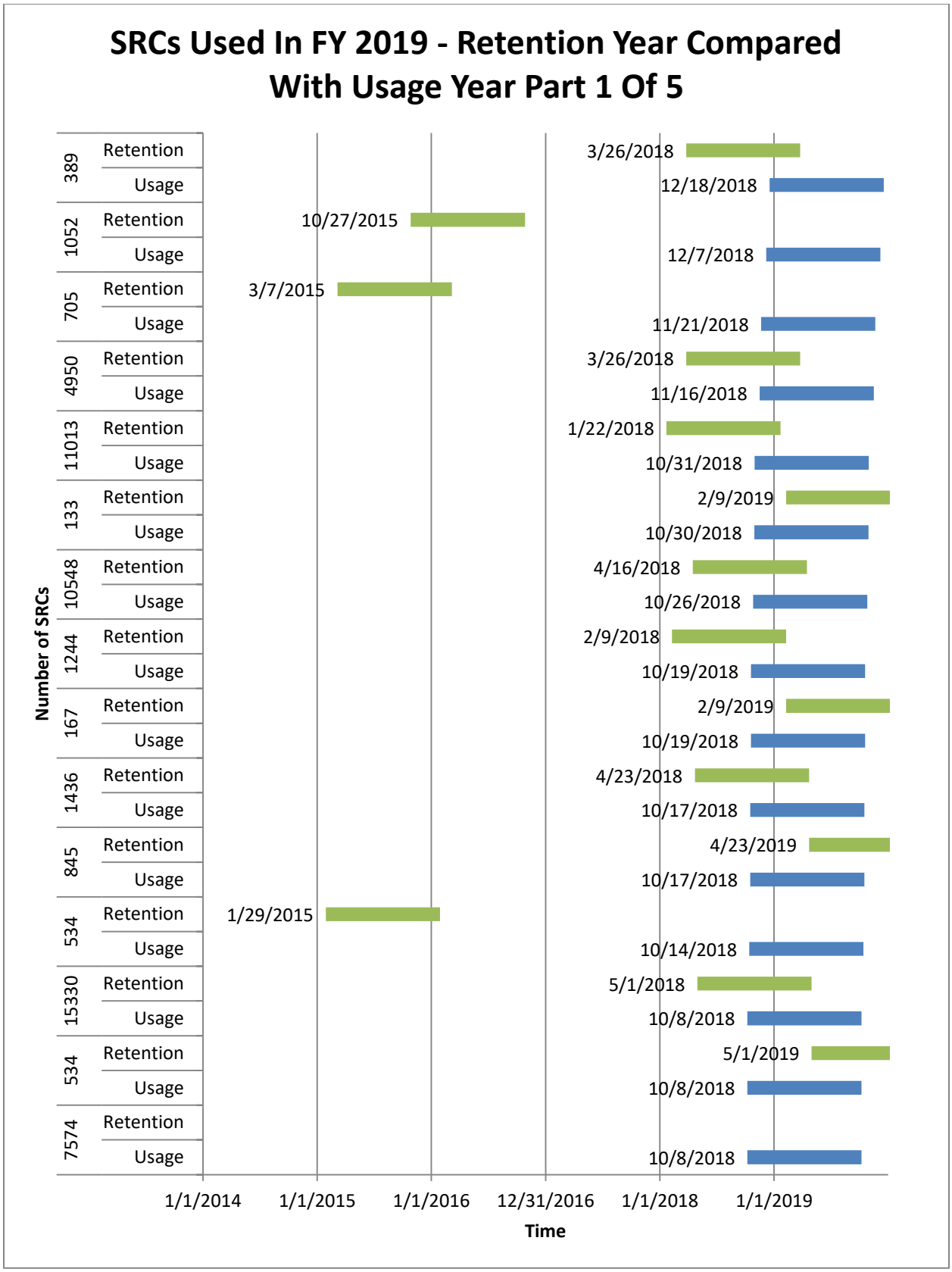

Figure 11. Temporal Distribution of SRCs Used in FY19 Part 1 of 5

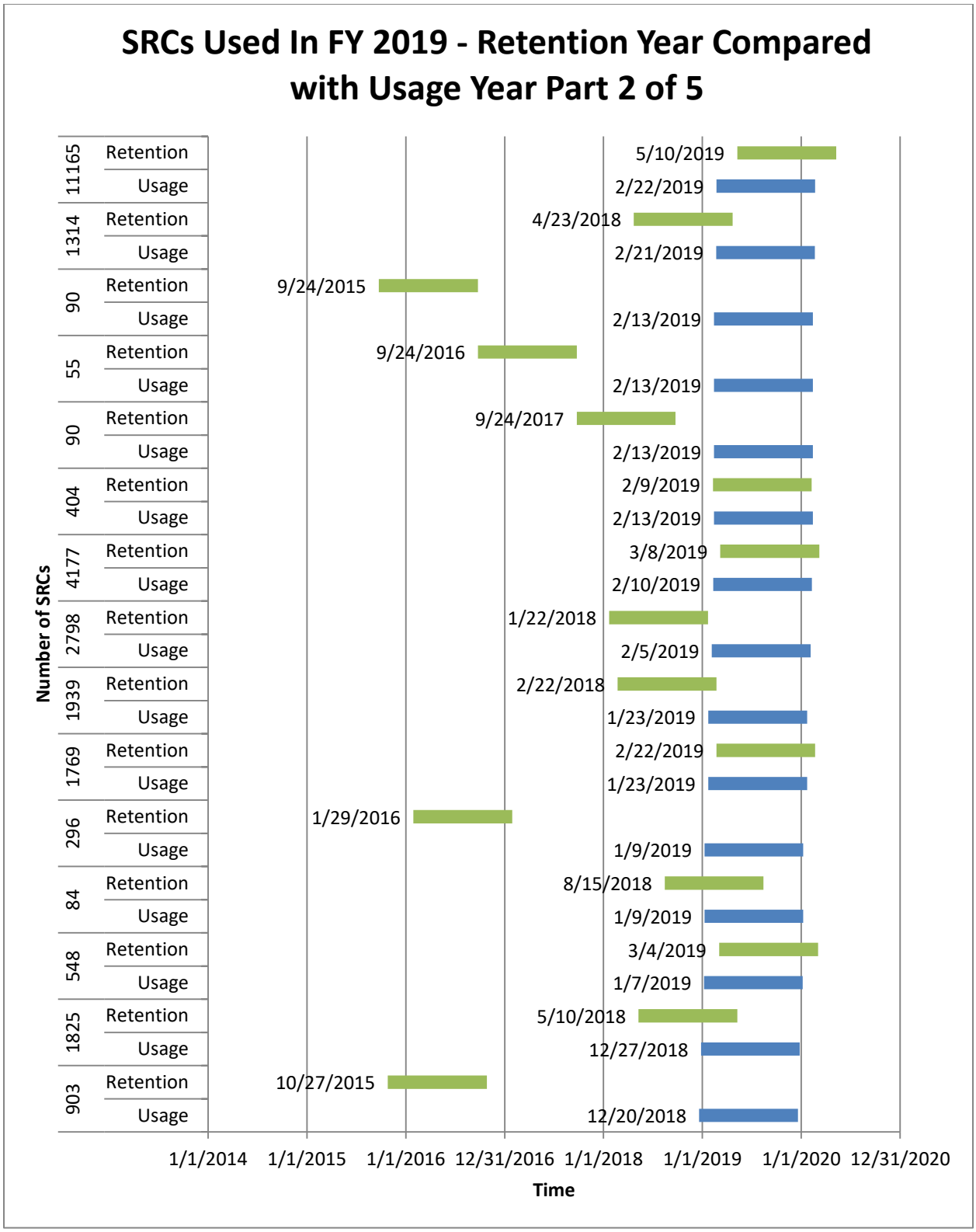

Figure 12. Temporal Distribution of SRCs Used in FY19 Part 2 of 5

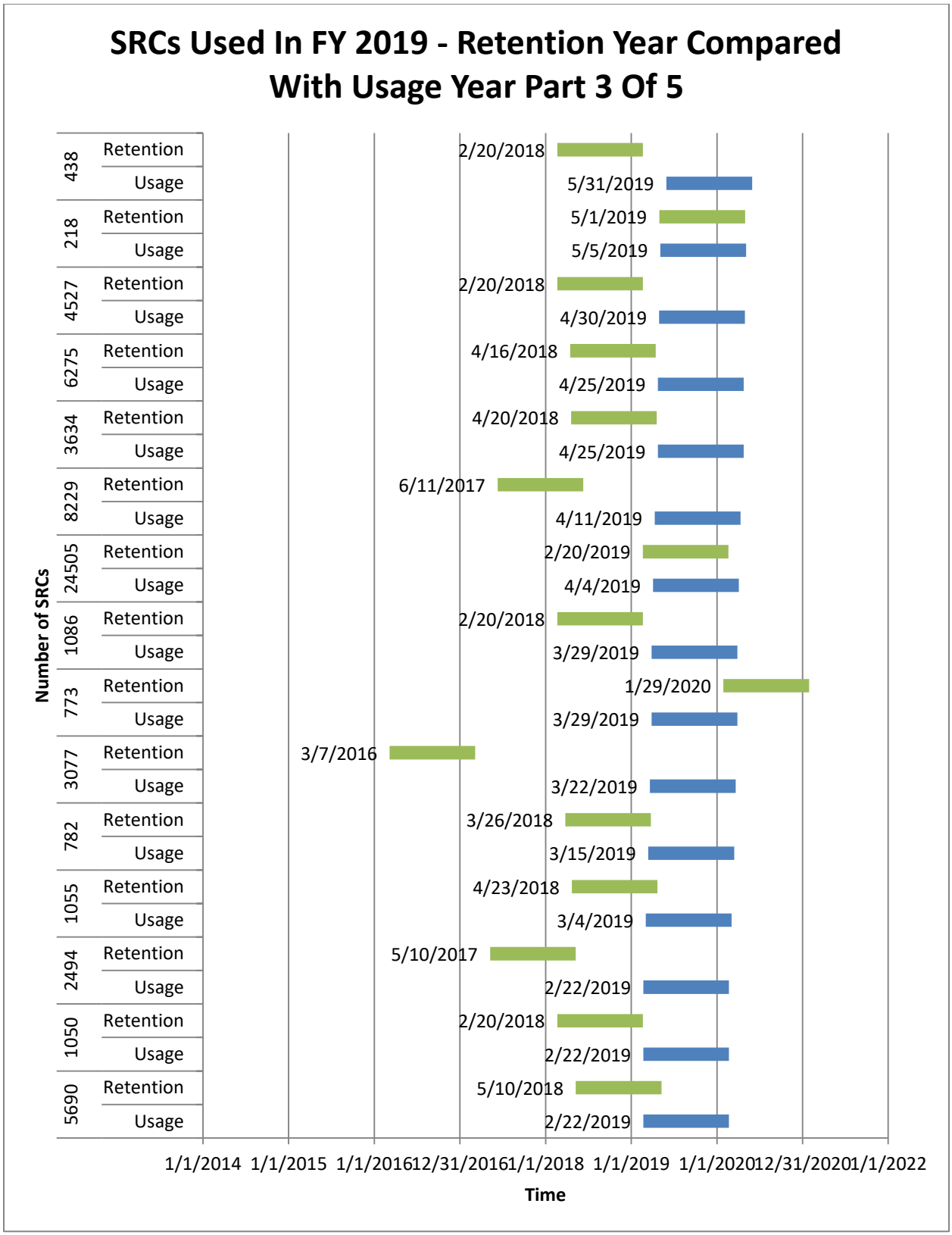

Figure 13. Temporal Distribution of SRCs Used in FY19 Part 3 of 5

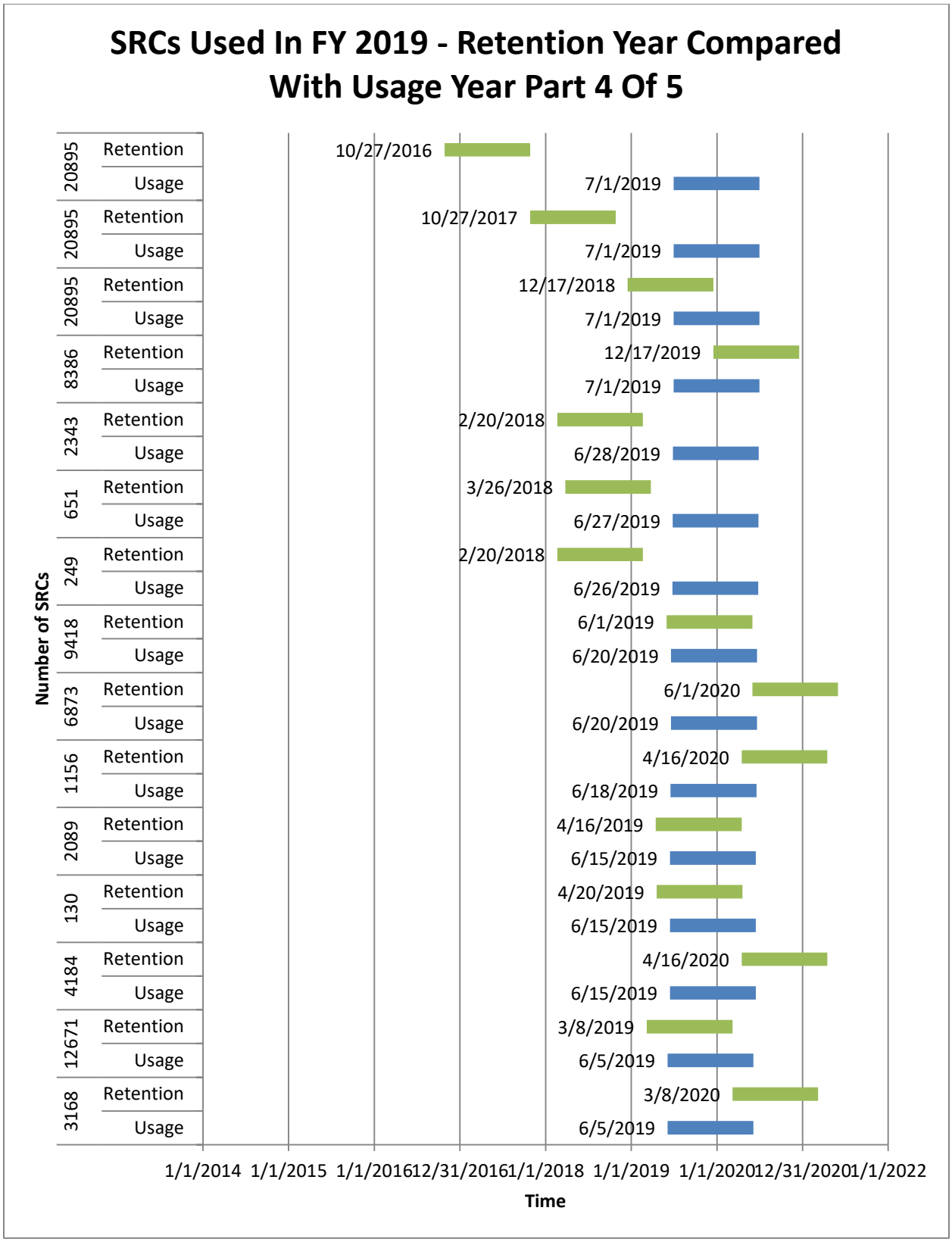

Figure 14. Temporal Distribution of SRCs Used in FY19 Part 4 of 5

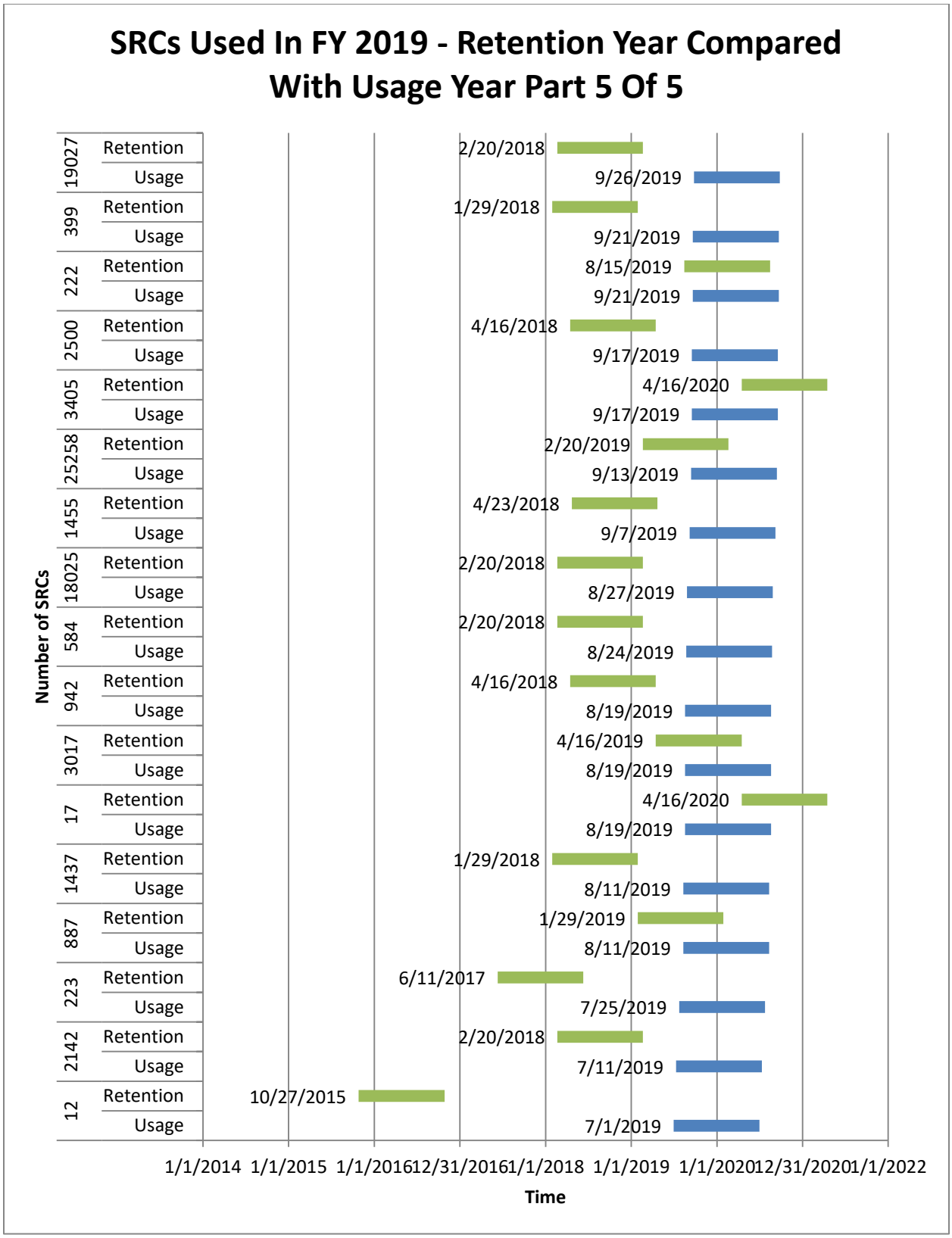

Figure 15. Temporal Distribution of SRCs Used in FY19 Part 5 of 5

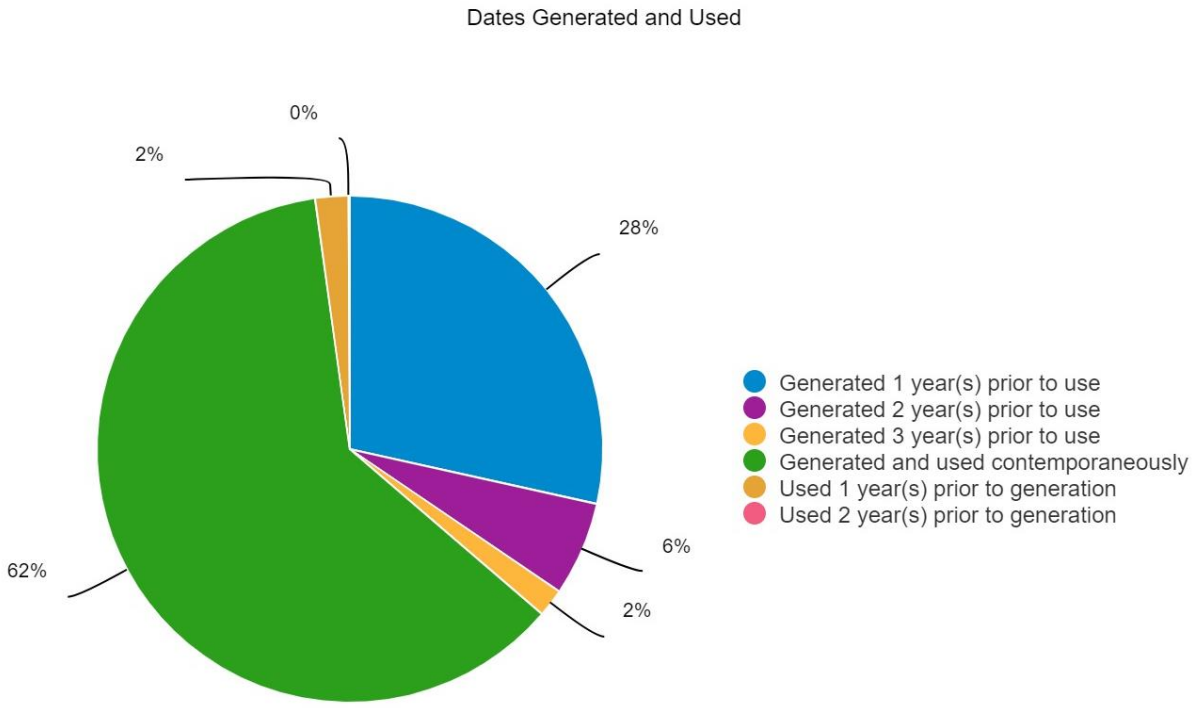

Figure 16. Summary of Temporal Distribution of SRCs Used in FY19

9. FY20 Goals

DOEE continues to enhance the SRC program to encourage more green infrastructure construction in the MS4. To do this, DOEE is focusing on increasing the demand by regulated developers for SRCs from the MS4 and increasing the number of properties in the MS4 that are partnering with SRC aggregators on SRC projects. Specific actions that DOEE is pursuing include the following:

- Continuing to find new ways to actively encourage regulated developers, particularly those working in the CSS, to purchase SRCs from the MS4, especially High-Impact SRCs, to meet their stormwater management performance requirements:
    - Implementing the regulatory amendments finalized in January 2020.
    - Engaging a public process for additional regulatory amendments to prioritize the use of High-Impact SRCs by most new regulated development projects that opt to comply partially or entirely off site.
    - Improving developers' awareness of the SRC program earlier in the planning process, including through efforts to identify project decision-makers and provide them with information about the SRC program while design choices are still ongoing.

    - Partnering with other District agencies involved in the permitting process when appropriate to encourage the use of SRCs.
    - Updating program guidance documents to communicate to developers the benefits of off-site compliance and to address perceived risks regarding the use of SRCs.
    - Updating program procedures related to off-site compliance.
- Expanding the resources that help SRC aggregators partner with property owners to construct green infrastructure:
    - Expanding use of the list of property owners who are interested in green infrastructure. The list is publicly accessible and can help SRC aggregators find project partners.
    - Improving communication of the benefits of green infrastructure to encourage property owners to partner on SRC projects.
    - Improving guidance on the process to generate SRCs, including the permitting process for green infrastructure projects.
    - Continuing to evaluate SRC program incentives to encourage more construction of green infrastructure in the MS4.
- Expanding the resources that are available to SRC generators:
    - Improving access to geographic information system (GIS) data and analysis tools.
    - Creating new guidance documents, including clarifying the permitting processes.

More Information

The SRC Program is managed by the Green Infrastructure Incentives and Assessment Branch in DOEE's Regulatory Review Division. Please visit doee.dc.gov/src for more information. Additional questions may be directed to Matt Johnson at src.trading@dc.gov or (202) 741-0861.