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Data Article

Data for assessment of leached dissolved organic carbon in watersheds

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ABSTRACT

("Dissolved organic carbon leaching flux in a mixed agriculture and forest watershed in Rwanda" [1]).
This article presents data of leached dissolved organic carbon (LDOC), stream water dissolved organic carbon), rainfall amount (Ra), rainfall intensity (Ri), rainfall soil storage (S), runoff (Q), and soil properties such as total organic carbon (TOC), total nitrogen (TN), cation exchange capacity (CEC), and soil texture data collected in the Rukarara River Watershed (RRW), a tropical watershed. All these data were used to analyze leached dissolved organic carbon (LDOC) fluxes in the watershed and their relationship with stream DOC. LDOC and soil properties data were collected at three sites in multiple plots per site located in natural forest (NF), tea plantations (TP), plantation forests (PF), and croplands (CL). Twenty-three plots in total were sampled to collect LDOC data. Soil properties data were analyzed from soil samples collected nearby the plots. Soil texture elements data were used to calculate soil porosity and saturated hydraulic conductivity (Ks).
Data of stream DOC were analyzed from water samples collected and analyzed in the laboratory using a TOC analyzer. Rainfall data were recorded within the RRW using tipping bucket rain gauges installed at three sites. These rainfall data were used to calculate rainfall intensity, potential surface runoff, and rainfall soil storage.

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Specifications Table

Subject	Nature and landscape conservation
Specific subject area	Nature and landscape conservation aims at preserving their important ecological, cultural, and economic services. Leaching of soil dissolved organic carbon, which is linked with a soil's capacity to supply nutrients, may cause both soil and natural water degradation. Therefore, export of soil dissolved organic carbon and is associated with land degradation through soil nutrients depletion. Regarding the runoff effect on natural waters, it is a major source of aquatic ecosystem pollution. Runoff-derived dissolved organic carbon and/or leached dissolved organic carbon reaches aquatic ecosystems. When the rainfall is effective, it causes water to enter the soil and the excess water to run off the land and into aquatic ecosystems. The portion of rainfall that is absorbed into soils through the infiltration process is stored as groundwater, and is slowly discharged to aquatic ecosystems through seeps. Surface and ground runoff can carry excess nutrients such as nitrogen, and phosphorus into aquatic ecosystems. These excess nutrients have the potential to degrade water quality; they spur algae blooms that cause low oxygen and kill aquatic organisms.
Type of data	Table
How data were acquired	LDOC and stream DOC data were analyzed on a TOC analyzer from leached water and stream water samples, respectively. Soil properties were analyzed from soil samples collected using 53×50 mm rings in topsoil (0–20 cm) at three sites in multiple plots per site within natural forest, plantation forests, tea plantations and croplands. Rainfall data were collected using a tipping bucket rain gage (Model OMC-210–2, bucket size of 0.2 mm) with an integrated data logger at three sites. Land use land cover (LULC) data were obtained from [2]. Net primary productivity (NPP) data were retrieved from Moderate Resolution Imaging Spectroradiometer (MODIS) data (MOD17A3: $500\,m \times 500$ m). Potential surface runoff data were calculated by the Soil Conservation Service - curve number (SCS-CN) method. The method assumes antecedent moisture condition to be the primary cause of both surface and ground runoff variation and soil infiltration capacity and the land cover to be the cause of curve number variation. Additionally, the method is assumed to be a lumped model. Hydrological soil group data were retrieved from the ORNL DAAC (HYSOGs250m) [3].
Data format	Raw and analyzed
Parameters for data collection	We collected leached water and stream water samples, soil properties, and rainfall data.
Description of data collection	Plastic boxes (14×22.5 cm), covered by a nylon mesh and installed under the top 20 cm of soil, were used to collect monthly leached water samples in multiple plots (14 cm x 25 cm) per site and located in croplands, plantation forests, tea plantations and natural forest. Leached water was measured using a graduated glass cylinder was used to calculate LDOC fluxes. Stream water samples were collected biweekly at three sites located in natural forest, tea plantation, and cropland land uses and used to get steam DOC. Both leached water and stream water samples were transported in polyethylene bottles of 25 mL to the laboratory on ice for LDOC and stream DOC analysis. Before laboratory analysis, leached water and stream water samples were filtered using a 0.45 μm nylon filter to remove particulate organic carbon.

(*continued on next page*)

	Rainfall characteristics were calculated using collected rainfall and soil properties data. Rainfall data were collected using tipping bucket rain gauges with integrated data loggers (Model OMC-210–2, bucket size of 0.2 mm), installed at the study area at three sites. Soil samples were collected in topsoil (0–20 cm) at three sites to determine total organic carbon (TOC), and total nitrogen (TN), and soil contents of clay, silt, and sand. Samples were collected in plots nearby to LDOC sampling plots using soil sample 53 × 50 mm rings. All samples were transported to a soil laboratory for analysis of TOC, TN, clay, silt and sand contents in the laboratory. The TOC was analyzed using the loss on ignition method [4], the TN (%) by the micro-Kjeldahl digestion - distillation method [5], and soil texture elements by the improved Bouyoucos method [6]. Soil porosity (%) and saturated hydraulic conductivity of plots were calculated using the equations of Saxton et al. [7].
Data source location	Country: Rwanda Region: Rukarara River watershed ($29^0$15–$29^0$35E and $2^0$20N-$2^0$35S)
Data accessibility	Repository name: Mendeley data Data identification number: Reserved DOI:doi:10.17632/fpckbmcvy2.1 Direct URL to data: https://data.mendeley.com/datasets/fpckbmcvy2/draft?a=45528e2c-8e32–420f-91a4-e207fe42cdc3
Related research article	Author's names: Fabien Rizinjirabake, Petter Pilesjö and David E. Tenenbaum Title: Dissolved organic carbon leaching flux in a mixed agriculture and forest watershed in Rwanda" Journal: Hydrology: Regional Studies DOI: https://doi.org/10.1016/j.ejrh.2019.100633

1. Value of the data

- Leached dissolved organic carbon data are useful for land and water resource management; they can be used in consensus-based decision-making for effective integrated management of land and water resources for their sustainable use.
- Environmentalists, decision makers and researchers can benefit from these data; for example, researchers can use these data to quantify effect of climate change on dissolved organic carbon dynamics and therefore set up mitigation strategies.
- Leached DOC data can increase net carbon losses from terrestrial ecosystems into waters and therefore increase DOC content in natural waters, with implications for water quality. Thus, leached DOC data can be used in experiments related to water quality and aquatic biodiversity dynamics analysis.
- Leached DOC data can be used for analyzing soil and inland water degradation and thus can provide information about the potential effect of climate and land cover change on terrestrial and aquatic services.

2. Data description

Provided data presented in this article data include LDOC flux plot data within LULC types and mean monthly LDOC flux data per plot and plot unit surface (Table 1) and LDOC flux plot data within sites and mean monthly LDOC flux data per plot and plot unit surface (Table 2), Table 3 presents mean monthly LDOC data per site and corresponding stream DOC (mg C/L) whereas Tables 4 and 5 present soil properties data including percent content of clay, silt, sand, total organic carbon (TOC), total nitrogen (TN), cation exchange capacity (CEC), saturated hydraulic conductivity and porosity plot data. Rainfall characteristics including rainfall amount and rainfall intensity and corresponding potential runoff at all sites are presented in Tables 6, 7, and 8. Tables 9 and 10 present LDOC flux data and corresponding rainfall amounts, intensities, and potential runoff. All data were used to analyze DOC leaching dynamics and identify their potential implications for stream DOC in the watershed. Additionally, the data can be used for

Table 1
LDOC flux data (mg C/L) per plot within land use land cover types.

Plot code	LULC	Dec-17	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Sep-17	Nov-17	3/25/208	Apr-18	May-18
CL1	CL					1.84	1.77	3.84	9.79	8.21	2.62	2.57
CL2	CL	2.52	0.13	1.31		1.99	2.72	2.58	2.56	7.98	9.45	
CL3	CL	4.75		7.46	1.63		1.14					
CL4	CL	2.48	0.16	1.73	4.37	3.43	5.22	8.44	2.68	3.59	5.70	6.50
CL5	CL				1.88	6.13	20.44	8.89	2.49	7.30	2.87	8.97
CL6	CL	1.25		2.76	3.54	9.35	7.13			0.86	1.56	1.73
CL7	CL	2.95		1.49	4.58	2.35	2.78	6.96	7.53	7.23	1.26	2.53
Mean monthly LDOC flux /plot	CL	2.79	0.14	2.95	3.20	4.18	5.88	6.14	5.01	5.86	3.91	4.46
Mean monthly LDOC flux/plot sqr m	CL	88.66	4.58	93.68	101.51	132.69	186.75	194.96	159.00	186.03	124.13	141.54
NF1	NF	13.49		4.06	4.05	12.76	4.39	21.88	7.63	6.69	16.64	1.16
NF2	NF	10.10		26.99	6.10	12.85	18.24		14.38	35.39	12.59	38.73
NF3	NF			10.49	0.48	27.17	15.79	14.86	10.26	7.16	9.59	9.88
NF4	NF	10.09		10.38			4.57	11.13				
NF5	NF	2.76		3.22	0.63	2.58	14.84	0.56	12.14	4.09	3.22	1.45
NF6	NF	7.03		7.11	2.07	2.54	4.99	9.80	8.30	0.44	0.44	3.48
Mean monthly LDOC flux /plot	NF	8.69		10.38	2.67	11.58	10.47	11.65	10.54	10.75	8.50	10.94
Mean monthly LDOC flux/plot sqr m	NF	275.99		329.38	84.66	367.63	332.35	369.72	334.63	341.41	269.74	347.25
TP1	TP	2.11	8.15	4.50	4.24	1.87	1.83	6.19	2.30	8.21	12.30	15.80
TP2	TP	2.13		2.13	1.20	0.36	1.73	9.07	1.29			
TP3	TP	2.13		10.16	1.22	1.29	4.17	2.71	2.26	0.47	2.72	2.11
TP4	TP	2.24		1.45	1.24	4.02	3.27	15.05	9.14	5.61	0.23	1.78
Mean monthly LDOC flux /plot	TP	2.15	8.15	4.56	1.98	1.88	2.75	8.25	3.75	4.77	5.08	6.56
Mean monthly LDOC flux/plot sqr m	TP	68.24	258.83	144.74	62.74	59.79	87.33	262.06	118.93	151.28	161.42	208.35
PF1	PF	6.95	3.27	18.35	16.41	11.44	10.77	13.01	11.29	9.43	8.26	6.57
PF2	PF	7.50		10.60		11.15	9.50	10.46	12.27	7.10	19.35	
PF3	PF	5.46		8.16	10.00		14.02	16.44	12.10	13.06	15.70	
PF4	PF	17.40		15.60	13.50	21.27	18.85	18.89	13.46	14.03	12.81	15.50
PF5	PF	14.35	25.68	21.00	18.60	16.25	10.70		16.67	10.16	10.56	17.17
PF6	PF	7.44	20.55	14.10	10.58	11.60	9.74		8.46			10.50
Mean monthly LDOC flux /plot	PF	9.85	16.50	14.64	13.82	14.34	12.26	14.70	12.38	10.76	13.34	12.43
Mean monthly LDOC flux/plot sqr m	PF	312.70	523.81	464.60	438.67	455.27	389.29	466.68	392.86	341.46	423.35	394.69

CL, croplands
NF, natural forest
TP, tea plantations.
PF, plantation forests.
LDOC, Leached dissolved organic carbon.

Table 2
LDOC flux data (mg C/L) per plot within sites.

Plot codes	Site	Dec-17	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Sep-17	Nov-17	3/25/208	Apr-18	May-18
CL2	CS	2.52	0.13	1.31		1.99	2.72	2.58	2.56	7.98	9.45	
TP1	CS	2.11	8.15	4.50	4.24	1.87	1.83	6.19	2.30	8.21	12.30	15.80
TP2	CS	2.13		2.13	1.20	0.36	1.73	9.07	1.29			
TP3	CS	2.13		10.16	1.22	1.29	4.17	2.71	2.26	0.47	2.72	2.11
TP4	CS	2.24		1.45	1.24	4.02	3.27	15.05	9.14	5.61	0.23	1.78
PF1	CS	6.95	3.27	18.35	16.41	11.44	10.77	13.01	11.29	9.43	8.26	6.57
PF3	CS	5.46		8.16	10.00		14.02	16.44	12.10	13.06	15.70	
Mean monthly LDOC flux /plot	CS	3.36	3.85	6.58	5.72	3.49	5.50	9.29	5.85	7.46	8.11	6.56
Mean monthly LDOC flux/plot sqr m	CS	106.72	122.25	208.90	181.56	110.88	174.62	295.01	185.65	236.87	257.49	208.36
CL1	ES					1.84	1.77	3.84	9.79	8.21	2.62	2.57
CL3	ES	2.48	0.16	1.73	4.37	3.43	5.22	8.44	2.68	3.59	5.70	6.50
CL5	ES				1.88	6.13	20.44	8.89	2.49	7.30	2.87	8.97
CL6	ES	1.25		2.76	3.54	9.35	7.13			0.86	1.56	1.73
CL7	ES	2.95		1.49	4.58	2.35	2.78	6.96	7.53	7.23	1.26	2.53
PF2	ES	7.50		10.60		11.15	9.50	10.46	12.27	7.10	19.35	
PF6	ES	7.44	20.55	14.10	10.58	11.60	9.74		8.46			10.50
Mean monthly LDOC flux /plot	ES	4.33	10.35	6.14	4.99	6.55	8.08	7.72	7.20	5.71	5.56	5.47
Mean monthly LDOC flux/plot sqr m	ES	137.34	328.71	194.79	158.37	207.90	256.54	244.99	228.64	181.36	176.52	173.52
CL3	WS	4.75		7.46	1.63		1.14					
NF1	WS	13.49		4.06	4.05	12.76	4.39	21.88	7.63	6.69	16.64	1.16
NF2	WS	10.10		26.99	6.10	12.85	18.24		14.38	35.39	12.59	38.73
NF3	WS			10.49	0.48	27.17	15.79	14.86	10.26	7.16	9.59	9.88
NF4	WS	10.09		10.38			4.57	11.13				
NF5	WS	2.76		3.22	0.63	2.58	14.84	0.56	12.14	4.09	3.22	1.45
NF6	WS	7.03		7.11	2.07	2.54	4.99	9.80	8.30	0.44	0.44	3.48
PF4	WS	17.40		15.60	13.50	21.27	18.85	18.89	13.46	14.03	12.81	15.50
PF5	WS	14.35	25.68	21.00	18.60	16.25	10.70		16.67	10.16	10.56	17.17
Mean monthly LDOC flux /plot	WS	10.00	25.68	11.81	5.88	13.63	10.39	12.85	11.83	11.14	9.41	12.48
Mean monthly LDOC flux/plot sqr m	WS	317.33	815.24	375.00	186.74	432.75	329.81	408.04	375.66	353.57	298.64	396.16

CS, center site.
ES, eastern site.
WS, western site.
CL, croplands.
NF, natural forest.
TP, tea plantations.
PF, plantation forests.
LDOC, Leached dissolved organic carbon.

Table 3
Mean monthly LDOC data and corresponding stream DOC.

Dates	LDOC (mgC)	Sream DOC (mg C/L)
5/23/2018	4.76	2.82
1/5/2017	2.18	3.04
5/23/2018	4.08	3.26
2/16/2017	4.03	3.88
1/5/2017	3.04	4.68
3/16/2017	2.26	4.95
4/25/2018	8.50	5.04
4/25/2018	5.25	5.22
4/19/2017	3.57	5.28
5/23/2018	10.94	5.50
3/25/208	6.63	5.69
9/21/2017	5.48	5.84
3/25/208	5.70	5.90
1/5/2017	8.69	6.06
5/18/2017	4.41	6.62
2/16/2017	2.78	6.98
3/16/2017	3.63	7.03
5/18/2017	5.91	7.21
9/21/2017	8.72	7.26
4/19/2017	4.28	8.26
3/16/2017	2.67	8.66
11/23/2017	5.81	8.78
5/18/2017	10.47	9.12
2/16/2017	10.38	10.27
9/21/2017	11.65	10.54
4/19/2017	11.58	10.56
3/25/208	10.75	12.13
11/23/2017	5.71	14.46
4/25/2018	4.22	15.93
11/23/2017	10.24	30.65
1/19/2017	0.14	5.35
1/19/2017	8.15	1.18

soil degradation analysis, and therefore for developing a better understanding of the effects of ongoing environmental change on terrestrial ecosystem function.

3. Experimental design, materials, and methods

3.1. Leached and stream DOC data

Leached water samples were analyzed at the laboratory to get LDOC. Leached water samples were collected monthly at the ES, CS, and WS sites in multiple plots (14 cm x 25 cm) per site during rainy seasons occurring during the period spanning from November 2016 to May 2018. Plots were installed in cropland and patches of plantation forests for the ES site; croplands, patches of tea plantation and plantation forests for the CS site; and natural forest, plantation forest and croplands for the WS site. Twenty-three plots in total were installed in the study area with 6 plots in the natural forest (NF), 6 plots in plantation forests (PF), 4 plots in tea plantations (TP), and 7 plots in croplands (CL). Regarding plots distribution at sites, 7 plots were chosen at ES site, 7 plots at CS site, and 9 plots at WS site. At ES site, 5plots were chosen in croplands and 2 plots in plantation forests. At CS site, 4 plots were chosen in tea plantation patches, 2 plots in plantation forests, and one remaining plot in cropland. At WS site, 6 plots were selected in natural forest, 2 plots in planation forests, and 1 plot in cropland. In each plot, a plastic box (14×22.5 cm) was installed under the top 20 cm of the soil, covered by a nylon mesh to retain the soil and were laterally installed in the soil with an effort made to minimize soil disturbance.

Table 4
Soil properties per plot.

Code	TOC (%)	TN (%)	CEC	Clay (%)	Silt (%)	Sand (%)
CL1	5.51	0.05	6.4	22.05	14.71	63.24
CL2	7.83	0.05	20.8	31.37	10.78	57.85
CL3	7.25	0.05	15.2	32.35	11.27	56.38
CL4	6.09	0.05	12	34.31	6.37	59.32
CL5	6.09	0.05	20.6	35.29	7.84	56.87
CL6	7.25	0.05	31.2	31.37	19.61	49.02
CL7	5.80	0.05	19.2	35.78	5.39	58.83
TP1	3.19	0.04	45.6	25.49	10.78	63.73
TP2	2.32	0.04	34.4	21.41	7.84	62.75
TP3	4.35	0.04	58.4	22.22	5.55	72.23
TP4	4.35	0.04	48	35.30	6.86	57.90
PF1	5.80	0.05	19.2	37.70	12.30	50.00
PF2	11.02	0.06	21.6	25.49	13.78	80.40
PF3	7.83	0.05	8	31.37	6.86	61.77
PF4	17.40	0.08	6.4	21.07	18.14	60.79
PF5	24.94	0.10	11.2	34.80	9.31	55.89
PF6	3.77	0.04	14.4	40.19	8.33	51.48
NF1	11.60	0.06	16.8	27.45	7.84	64.71
NF2	13.92	0.07	17.6	26.96	2.94	70.10
NF3	21.46	0.09	15.2	20.58	11.77	67.65
NF4	15.66	0.08	38.4	27.45	8.82	63.73
NF5	6.96	0.05	36	25.98	6.37	67.65
NF6	23.91	0.10	20.8	20.58	8.34	71.08

CL, Croplands.
NF, Natural forest.
TP, Tea plantation.
PF, Plantation forest.
TOC, Total organic carbon.
TN, Total nitrogen.
CEC, Cation exchange capacity.

The volume of the leached water was measured using a graduated glass cylinder and used to calculate LDOC fluxes.

Stream DOC data were analyzed from stream water samples collected at biweekly frequency at three sites located in natural forest, tea plantation, and cropland. Samples were collected at straight stream reaches with relatively uniform channel banks. One milliliter of sulfuric acid (H_2SO_4) was added to each water sample immediately after collection to reduce microbial activity before laboratory analysis.

Leached and stream water samples were transported in polyethylene bottles (25 ml) on ice and stored in a fridge for two days to the chemistry laboratory of the College of Science of the University of Rwanda for LDOC and stream DOC concentration analysis using a TOC analyzer (the SieversInnovOx Laboratory TOC Analyzer). Before stream DOC analysis, stream water samples were filtered using nylon membrane filters with a pore size of 0.45 μm to remove particulate organic carbon and particles.

3.2. Soil properties data

Twenty-three soil samples were collected in topsoil (0–20 cm) at the WS, CS, and ES sites to determine total organic carbon (TOC), and total nitrogen (TN), and soil contents of clay, silt, and sand. Samples were collected in plots nearby to LDOC sampling plots using soil sample 53×50 mm rings. Each soil sample was labeled by indicating plot code and geographical coordinates. All samples were transported to the laboratory of the College of Agriculture and Veterinary Medicine of the University of Rwanda for analysis of TOC (%), TN (%), clay, silt and sand

Table 5
Saturated hydraulic conductivity and porosity plot data.

Code	Ks	Porosity
CL1	0.55627	0.464999
CL2	0.236789	0.441016
CL3	0.22323	0.442769
CL4	0.185005	0.40973
CL5	0.178588	0.420526
CL6	0.267235	0.474174
CL7	0.167943	0.399407
TP1	0.381544	0.445279
TP2	0.600807	0.43059
TP3	0.513358	0.41086
TP4	0.175866	0.413119
PF1	0.169926	0.443736
PF2	0.336404	0.458885
PF3	0.225462	0.415969
PF4	0.634136	0.477324
PF5	0.187402	0.430404
PF6	0.144312	0.420333
NF1	0.310649	0.426211
NF2	0.310087	0.372212
NF3	0.641501	0.453709
NF4	0.31374	0.432738
NF5	0.350131	0.41577
NF6	0.629599	0.434618

CL, Croplands.
NF, Natural forest.
TP, Tea plantations.
PF, Plantation forests.
Ks, Saturated hydraulic conductivity.

contents (%). The TOC was analyzed using the loss on ignition method [4], the TN (%) by the micro-Kjeldahl digestion - distillation method [5], and soil texture elements by the improved Bouyoucos method [6]. Soil hydrological properties including soil porosity (%) and saturated hydraulic conductivity of plots *(cm/d)* were calculated using the equations of Saxton et al. [7].

3.3. Rainfall characteristics

Rainfall characteristics were calculated based on rainfall data that were collected from November 2016 to May 2018 using tipping bucket rain gauges with integrated data loggers (Model OMC-210–2, bucket size of 0.2 mm) installed in the study area at 60 cm above soil surface in the study area at three sites, namely the Eastern site (ES), the center site (CS) and the Western site (WS). Rainfall data used to calculate rainfall amount, rainfall intensity, potential surface runoff, and rainfall storage. Rainfall amounts (mm) rainfall intensities (mm/h) were calculated respectively by the summation of all rainfall data and by dividing the sum of rainfall amounts (mm) by the sum of durations (hours) of all rainfall individual rainfall events. Surface runoff data were calculated by the SCS-CN method [8] based on rainfall amount and curve number (CN). The latter was calculated based on hydrologic soil groups (HSG) and land use [9]. HSGs data were retrieved from the ORNL DAAC (HYSOGs250m) (Ross et al., 2018) whereas CN data were read in the Mockus handbook [10] after a correspondence of LULC classes was developed between those found in the study area and those given in the handbook. Soil rainfall storage data were calculated by the difference between rainfall amount, initial abstraction and direct surface runoff.

Table 6
Rainfall amounts and corresponding potential runoff at Western site.

Dates	Rain (mm)	Q (mm)
11/12/2016	1.4	0.75
11/13/2016	0	0.00
11/14/2016	7.8	6.91
11/15/2016	0.8	0.28
11/16/2016	1.4	0.75
11/17/2016	0.6	0.15
11/18/2016	7.4	6.51
11/19/2016	0.2	0.00
11/20/2016	9.8	8.89
11/21/2016	0.2	0.00
11/22/2016	0.2	0.00
11/23/2016	30.2	29.25
11/24/2016	53.4	52.44
11/25/2016	4.4	3.56
11/26/2016	1.4	0.75
11/27/2016	0.6	0.15
11/28/2016	0.2	0.00
11/29/2016	5	4.14
11/30/2016	1	0.43
12/1/2016	5.4	4.54
12/2/2016	0.4	0.00
12/3/2016	0.8	0.28
12/4/2016	0.2	0.00
12/5/2016	0	0.00
12/6/2016	0	0.00
12/7/2016	5.6	4.73
12/8/2016	0.2	0.00
12/9/2016	6.6	5.72
12/10/2016	0.2	0.00
12/11/2016	15.8	14.87
12/12/2016	1	0.43
12/13/2016	0	0.00
12/14/2016	0.2	0.00
12/15/2016	0.2	0.00
12/16/2016	11.8	10.88
12/17/2016	0.2	0.00
12/18/2016	0.2	0.00
12/19/2016	4.2	3.36
12/20/2016	0	0.00
12/21/2016	0	0.00
12/22/2016	0	0.00
12/23/2016	0	0.00
12/24/2016	0.2	0.00
12/25/2016	0	0.00
12/26/2016	0.2	0.00
12/27/2016	0	0.00
12/28/2016	14.6	13.67
12/29/2016	11.2	10.28
12/30/2016	2.8	2.02
12/31/2016	22	21.06
1/1/2017	22	21.06
1/2/2017	12.6	11.68
1/3/2017	0	0.00
1/4/2017	5.6	4.73
1/5/2017	0	0.00
1/6/2017	0	0.00
1/7/2017	0	0.00
1/8/2017	0.8	0.28
1/9/2017	3.4	2.59

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Table 6 (*continued*)

Dates	Rain (mm)	Q (mm)
1/10/2017	2.4	1.64
1/11/2017	0.2	0.00
1/12/2017	0	0.00
1/13/2017	0	0.00
1/14/2017	0.4	0.00
1/15/2017	0.4	0.00
1/16/2017	0.2	0.00
1/17/2017	0	0.00
1/18/2017	0	0.00
1/19/2017	22.6	21.66
1/20/2017	0.2	0.00
1/21/2017	3	2.21
1/22/2017	0.4	0.00
1/23/2017	7	6.11
1/24/2017	0.2	0.00
1/25/2017	0	0.00
1/26/2017	2.8	2.02
1/27/2017	12.4	11.48
1/28/2017	1.4	0.75
1/29/2017	28.4	27.45
1/30/2017	2	1.28
1/31/2017	3.4	2.59
2/1/2017	4	3.17
2/2/2017	19	18.06
2/3/2017	21.4	20.46
2/4/2017	0.6	0.15
2/5/2017	0.6	0.15
2/6/2017	2.2	1.46
2/7/2017	0	0.00
2/8/2017	10.6	9.69
2/9/2017	54.6	53.64
2/10/2017	0.2	0.00
2/11/2017	1.6	0.92
2/12/2017	0.2	0.00
2/13/2017	0	0.00
2/14/2017	3.8	2.98
2/15/2017	1.6	0.92
2/16/2017	1.6	0.92
2/17/2017	5.2	4.34
2/18/2017	0.4	0.00
2/19/2017	0.6	0.15
2/20/2017	1.6	0.92
2/21/2017	9.4	8.49
2/22/2017	0.8	0.28
2/23/2017	8	7.10
2/24/2017	28.4	27.45
2/25/2017	0.2	0.00
2/26/2017	21.8	20.86
2/27/2017	15.4	14.47
2/28/2017	12.2	11.28
3/1/2017	6.8	5.92
3/2/2017	0.4	0.00
3/3/2017	2.8	2.02
3/4/2017	17.4	16.46
3/5/2017	0	0.00
3/6/2017	3.8	2.98
3/7/2017	7.6	6.71
3/8/2017	14.6	13.67
3/9/2017	12.4	11.48
3/10/2017	0	0.00

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Table 6 (*continued*)

Dates	Rain (mm)	Q (mm)
3/11/2017	0	0.00
3/12/2017	11	10.08
3/13/2017	2.2	1.46
3/14/2017	17	16.07
3/15/2017	17	16.07
3/16/2017	35.8	34.85
3/17/2017	9	8.10
3/18/2017	4.6	3.75
3/19/2017	1.2	0.58
3/20/2017	0.4	0.00
3/21/2017	0.6	0.15
3/22/2017	7	6.11
3/23/2017	20.8	19.86
3/24/2017	3.4	2.59
3/25/2017	7.8	6.91
3/26/2017	0	0.00
3/27/2017	0	0.00
3/28/2017	19.8	18.86
3/29/2017	6	5.13
3/30/2017	15	14.07
3/31/2017	0	0.00
4/1/2017	0	0.00
4/2/2017	1.4	0.75
4/3/2017	0	0.00
4/4/2017	0.2	0.00
4/5/2017	0	0.00
4/6/2017	0	0.00
4/7/2017	38	37.04
4/8/2017	9	8.10
4/9/2017	3.2	2.40
4/10/2017	9.2	8.29
4/11/2017	0	0.00
4/12/2017	0.4	0.00
4/13/2017	0	0.00
4/14/2017	0.4	0.00
4/15/2017	0	0.00
4/16/2017	12.4	11.48
4/17/2017	0.2	0.00
4/18/2017	0	0.00
4/19/2017	9.6	8.69
4/20/2017	16.4	15.47
4/21/2017	1	0.43
4/22/2017	0.2	0.00
4/23/2017	0.2	0.00
4/24/2017	15.2	14.27
4/25/2017	1.2	0.58
4/26/2017	0	0.00
4/27/2017	0	0.00
4/28/2017	0	0.00
4/29/2017	2.4	1.64
4/30/2017	15.6	14.67
5/1/2017	33	32.05
5/2/2017	6.6	5.72
5/3/2017	7.8	6.91
5/4/2017	0.6	0.15
5/5/2017	4.2	3.36
5/6/2017	17	16.07
5/7/2017	3.6	2.78
5/8/2017	0	0.00

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Table 6 (*continued*)

Dates	Rain (mm)	Q (mm)
5/9/2017	0.4	0.00
5/10/2017	0	0.00
5/11/2017	1.6	0.92
5/12/2017	0.2	0.00
5/13/2017	0.8	0.28
5/14/2017	0	0.00
5/15/2017	0.2	0.00
5/16/2017	0	0.00
5/17/2017	0	0.00
5/18/2017	0	0.00
5/19/2017	3.8	2.98
5/20/2017	0.2	0.00
5/21/2017	0.2	0.00
5/22/2017	0.2	0.00
5/23/2017	7	6.11
5/24/2017	0.2	0.00
5/25/2017	0.2	0.00
5/26/2017	0	0.00
5/27/2017	0	0.00
5/28/2017	0	0.00
5/29/2017	0	0.00
5/30/2017	0	0.00
5/31/2017	0.2	0.00
6/1/2017	0.2	0.00
6/2/2017	0.6	0.15
6/3/2017	2.4	1.64
6/4/2017	0.2	0.00
6/5/2017	0	0.00
6/6/2017	0	0.00
6/7/2017	0.2	0.00
6/8/2017	0	0.00
6/9/2017	0	0.00
6/10/2017	0	0.00
6/11/2017	0	0.00
6/12/2017	0	0.00
6/13/2017	0	0.00
6/14/2017	0	0.00
6/15/2017	0	0.00
6/16/2017	0	0.00
6/17/2017	0	0.00
6/18/2017	0	0.00
6/19/2017	0	0.00
6/20/2017	0	0.00
6/21/2017	0	0.00
6/22/2017	0	0.00
6/23/2017	2.4	1.64
6/24/2017	0	0.00
6/25/2017	0	0.00
6/26/2017	0	0.00
6/27/2017	0	0.00
6/28/2017	0	0.00
6/29/2017	0	0.00
6/30/2017	0	0.00
7/1/2017	0	0.00
7/2/2017	0	0.00
7/3/2017	0	0.00
7/4/2017	12.8	11.88
7/5/2017	0	0.00
7/6/2017	0	0.00

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Table 6 (*continued*)

Dates	Rain (mm)	Q (mm)
7/7/2017	0	0.00
7/8/2017	0	0.00
7/9/2017	0	0.00
7/10/2017	0	0.00
7/11/2017	0	0.00
7/12/2017	0	0.00
7/13/2017	0	0.00
7/14/2017	0	0.00
7/15/2017	0	0.00
7/16/2017	0	0.00
7/17/2017	0	0.00
7/18/2017	0	0.00
7/19/2017	0	0.00
7/20/2017	0	0.00
7/21/2017	0	0.00
7/22/2017	0	0.00
7/23/2017	1.2	0.58
7/24/2017	0	0.00
7/25/2017	0	0.00
7/26/2017	0.4	0.00
7/27/2017	0	0.00
7/28/2017	0	0.00
7/29/2017	0	0.00
7/30/2017	0	0.00
7/31/2017	0	0.00
8/1/2017	0	0.00
8/2/2017	0	0.00
8/3/2017	0	0.00
8/4/2017	0	0.00
8/5/2017	0	0.00
8/6/2017	0.6	0.15
8/7/2017	0	0.00
8/8/2017	0	0.00
8/9/2017	0	0.00
8/10/2017	0	0.00
8/11/2017	0	0.00
8/12/2017	0	0.00
8/13/2017	0	0.00
8/14/2017	0	0.00
8/15/2017	0	0.00
8/16/2017	0	0.00
8/17/2017	15.2	14.27
8/18/2017	4.2	3.36
8/19/2017	12.8	11.88
8/20/2017	0	0.00
8/21/2017	0	0.00
8/22/2017	2.4	1.64
8/23/2017	0.2	0.00
8/24/2017	18	17.06
8/25/2017	15.6	14.67
8/26/2017	0	0.00
8/27/2017	0	0.00
8/28/2017	0	0.00
8/29/2017	0	0.00
8/30/2017	0	0.00
8/31/2017	0	0.00
9/1/2017	0	0.00
9/2/2017	0	0.00
9/3/2017	0	0.00
9/4/2017	8.8	7.90

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Table 6 (*continued*)

Dates	Rain (mm)	Q (mm)
9/5/2017	0.8	0.28
9/6/2017	11	10.08
9/7/2017	0	0.00
9/8/2017	0	0.00
9/9/2017	17.6	16.66
9/10/2017	0.2	0.00
9/11/2017	4.2	3.36
9/12/2017	0.2	0.00
9/13/2017	0.2	0.00
9/14/2017	0	0.00
9/15/2017	0	0.00
9/16/2017	0.2	0.00
9/17/2017	5.4	4.54
9/18/2017	3	2.21
9/19/2017	2.6	1.83
9/20/2017	4.6	3.75
9/21/2017	0	0.00
9/22/2017	0	0.00
9/23/2017	0	0.00
9/24/2017	0	0.00
9/25/2017	0.4	0.00
9/26/2017	19	18.06
9/27/2017	1	0.43
9/28/2017	11.6	10.68
9/29/2017	0.2	0.00
9/30/2017	0	0.00
10/1/2017	1.4	0.75
10/2/2017	8.8	7.90
10/3/2017	4.4	3.56
10/4/2017	12.4	11.48
10/5/2017	0.2	0.00
10/6/2017	0	0.00
10/7/2017	10.6	9.69
10/8/2017	0	0.00
10/9/2017	32.4	31.45
10/10/2017	44.8	43.84
10/11/2017	0	0.00
10/12/2017	13.4	12.47
10/13/2017	0	0.00
10/14/2017	8.4	7.50
10/15/2017	18.6	17.66
10/16/2017	1.4	0.75
10/17/2017	41	40.04
10/18/2017	14	13.07
10/19/2017	5.2	4.34
10/20/2017	4.2	3.36
10/21/2017	6.6	5.72
10/22/2017	0.2	0.00
10/23/2017	0	0.00
10/24/2017	1.6	0.92
10/25/2017	0	0.00
10/26/2017	6	5.13
10/27/2017	19.2	18.26
10/28/2017	8.6	7.70
10/29/2017	1.6	0.92
10/30/2017	2.2	1.46
10/31/2017	11.2	10.28
11/1/2017	0.4	0.00
11/2/2017	3.2	2.40
11/3/2017	1.4	0.75

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Table 6 (*continued*)

Dates	Rain (mm)	Q (mm)
11/4/2017	3.2	2.40
11/5/2017	14	13.07
11/6/2017	30.8	29.85
11/7/2017	16.6	15.67
11/8/2017	2	1.28
11/9/2017	6.2	5.32
11/10/2017	5.2	4.34
11/11/2017	25.4	24.45
11/12/2017	2.6	1.83
11/13/2017	3.8	2.98
11/14/2017	0.2	0.00
11/15/2017	0.4	0.00
11/16/2017	5.4	4.54
11/17/2017	0.6	0.15
11/18/2017	6.4	5.52
11/19/2017	0.2	0.00
11/20/2017	1.6	0.92
11/21/2017	1.2	0.58
11/22/2017	0.6	0.15
11/23/2017	25.4	24.45
11/24/2017	2.6	1.83
11/25/2017	34.6	33.65
11/26/2017	25.4	24.45
11/27/2017	11	10.08
11/28/2017	0.4	0.00
11/29/2017	0.2	0.00
11/30/2017	44.4	43.44
12/1/2017	11	10.08
12/2/2017	0.2	0.00
12/3/2017	3.2	2.40
12/4/2017	0.2	0.00
12/5/2017	0.2	0.00
12/6/2017	0.2	0.00
12/7/2017	0.6	0.15
12/8/2017	4.2	3.36
12/9/2017	6	5.13
12/10/2017	13.8	12.87
12/11/2017	5.8	4.93
12/12/2017	0	0.00
12/13/2017	0.2	0.00
12/14/2017	0	0.00
12/15/2017	0	0.00
12/16/2017	0	0.00
12/17/2017	2.8	2.02
12/18/2017	2	1.28
12/19/2017	0.6	0.15
12/20/2017	2.6	1.83
12/21/2017	3.4	2.59
12/22/2017	2.6	1.83
12/23/2017	0.2	0.00
12/24/2017	0	0.00
12/25/2017	0	0.00
12/26/2017	0.2	0.00
12/27/2017	0.2	0.00
12/28/2017	0.2	0.00
12/29/2017	0.2	0.00
12/30/2017	1.6	0.92
12/31/2017	28	27.05
1/1/2018	5.2	4.34
1/2/2018	1.2	0.58

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Table 6 (*continued*)

Dates	Rain (mm)	Q (mm)
1/3/2018	3.2	2.40
1/4/2018	0.4	0.00
1/5/2018	3.4	2.59
1/6/2018	4.4	3.56
1/7/2018	0	0.00
1/8/2018	0	0.00
1/9/2018	0	0.00
1/10/2018	5	4.14
1/11/2018	7.6	6.71
1/12/2018	22.6	21.66
1/13/2018	6.2	5.32
1/14/2018	19.8	18.86
1/15/2018	5.6	4.73
1/16/2018	20.4	19.46
1/17/2018	0.2	0.00
1/18/2018	5.8	4.93
1/19/2018	3.8	2.98
1/20/2018	7.4	6.51
1/21/2018	18.8	17.86
1/22/2018	0.2	0.00
1/23/2018	0.2	0.00
1/24/2018	2	1.28
1/25/2018	1.4	0.75
1/26/2018	41.6	40.64
1/27/2018	5.6	4.73
1/28/2018	16.6	15.67
1/29/2018	19.2	18.26
1/30/2018	0	0.00
1/31/2018	0.4	0.00
2/1/2018	0	0.00
2/2/2018	0.2	0.00
2/3/2018	0.4	0.00
2/4/2018	39	38.04
2/5/2018	0.6	0.15
2/6/2018	1.4	0.75
2/7/2018	0.4	0.00
2/8/2018	13.2	12.28
2/9/2018	7	6.11
2/10/2018	8.4	7.50
2/11/2018	3	2.21
2/12/2018	0	0.00
2/13/2018	14.2	13.27
2/14/2018	0	0.00
2/15/2018	3.6	2.78
2/16/2018	0.6	0.15
2/17/2018	0	0.00
2/18/2018	14.2	13.27
2/19/2018	0.2	0.00
2/20/2018	21	20.06
2/21/2018	20.4	19.46
2/22/2018	7.2	6.31
2/23/2018	0.6	0.15
2/24/2018	1.8	1.10
2/25/2018	9.8	8.89
2/26/2018	0.2	0.00
2/27/2018	7.8	6.91
2/28/2018	0	0.00
3/1/2018	2.6	1.83
3/2/2018	16.4	15.47
3/3/2018	0	0.00

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Table 6 (*continued*)

Dates	Rain (mm)	Q (mm)
3/4/2018	1.2	0.58
3/5/2018	1.8	1.10
3/6/2018	15.4	14.47
3/7/2018	10.2	9.29
3/8/2018	19.8	18.86
3/9/2018	17	16.07
3/10/2018	0	0.00
3/11/2018	13.6	12.67
3/12/2018	5.8	4.93
3/13/2018	0	0.00
3/14/2018	0.2	0.00
3/15/2018	8.8	7.90
3/16/2018	1.8	1.10
3/17/2018	2	1.28
3/18/2018	4.2	3.36
3/19/2018	17.2	16.26
3/20/2018	7.6	6.71
3/21/2018	12.4	11.48
3/22/2018	0.4	0.00
3/23/2018	13.6	12.67
3/24/2018	0.6	0.15
3/25/2018	0	0.00
3/26/2018	2.2	1.46
3/27/2018	0.2	0.00
3/28/2018	33.2	32.25
3/29/2018	3.8	2.98
3/30/2018	7.6	6.71
3/31/2018	0	0.00
4/1/2018	10.4	9.49
4/2/2018	0.4	0.00
4/3/2018	6	5.13
4/4/2018	2.4	1.64
4/5/2018	33.6	32.65
4/6/2018	9.6	8.69
4/7/2018	4.6	3.75
4/8/2018	3.2	2.40
4/9/2018	3.4	2.59
4/10/2018	4.8	3.95
4/11/2018	0.2	0.00
4/12/2018	0.2	0.00
4/13/2018	27	26.05
4/14/2018	11.4	10.48
4/15/2018	13.4	12.47
4/16/2018	2.6	1.83
4/17/2018	0.4	0.00
4/18/2018	15.8	14.87
4/19/2018	2.2	1.46
4/20/2018	0.8	0.28
4/21/2018	8.4	7.50
4/22/2018	2.8	2.02
4/23/2018	0.4	0.00
4/24/2018	24.2	23.25
4/25/2018	11.4	10.48
4/26/2018	10.8	9.89
4/27/2018	1	0.43
4/28/2018	40.8	39.84
4/29/2018	0.2	0.00
4/30/2018	8.6	7.70
5/1/2018	26.4	25.45
5/2/2018	15.6	14.67

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Table 6 (*continued*)

Dates	Rain (mm)	Q (mm)
5/3/2018	9	8.10
5/4/2018	52.8	51.84
5/5/2018	3.2	2.40
5/6/2018	7.2	6.31
5/7/2018	13	12.08
5/8/2018	0.8	0.28
5/9/2018	6.4	5.52
5/10/2018	0	0.00
5/11/2018	4.6	3.75
5/12/2018	17.2	16.26
5/13/2018	14.6	13.67
5/14/2018	17.6	16.66
5/15/2018	0.4	0.00
5/16/2018	8.4	7.50
5/17/2018	31.8	30.85
5/18/2018	0.4	0.00
5/19/2018	0.2	0.00
5/20/2018	2.2	1.46
5/21/2018	22	21.06
5/22/2018	1	0.43

Table 7
Rainfall amounts and corresponding potential runoff at center site.

Dates	Rain (mm)	Q (mm)
11/12/2016	0.2	0.00
11/13/2016	16.4	15.47
11/14/2016	3.2	2.40
11/15/2016	0.2	0.00
11/16/2016	0	0.00
11/17/2016	0	0.00
11/18/2016	11.6	10.68
11/19/2016	0.2	0.00
11/20/2016	0	0.00
11/21/2016	0.6	0.00
11/22/2016	0.2	0.00
11/23/2016	0	0.00
11/24/2016	0	0.00
11/25/2016	0	0.00
11/26/2016	0	0.00
11/27/2016	0	0.00
11/28/2016	0.4	0.00
11/29/2016	0.2	0.00
11/30/2016	0.2	0.00
12/1/2016	0	0.00
12/2/2016	1	0.43
12/3/2016	10.4	9.49
12/4/2016	0	0.00
12/5/2016	0.4	0.00
12/6/2016	0	0.00
12/7/2016	0	0.00
12/8/2016	0	0.00
12/9/2016	0	0.00
12/10/2016	3.6	2.78
12/11/2016	0.2	0.00
12/12/2016	16.4	15.47
12/13/2016	3.2	2.40
12/14/2016	0.2	0.00
12/15/2016	0	0.00
12/16/2016	0	0.00

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Table 7 (*continued*)

Dates	Rain (mm)	Q (mm)
12/17/2016	11.6	10.68
12/18/2016	0.2	0.00
12/19/2016	0	0.00
12/20/2016	0.6	0.00
12/21/2016	0.2	0.00
12/22/2016	0	0.00
12/23/2016	0	0.00
12/24/2016	0	0.00
12/25/2016	0	0.00
12/26/2016	0	0.00
12/27/2016	0.4	0.00
12/28/2016	0.2	0.00
12/29/2016	0.2	0.00
12/30/2016	0	0.00
12/31/2016	1	0.43
1/1/2017	10.4	9.49
1/2/2017	0	0.00
1/3/2017	0.4	0.00
1/4/2017	0.2	0.00
1/5/2017	0.4	0.00
1/6/2017	0	0.00
1/7/2017	0	0.00
1/8/2017	2.6	1.83
1/9/2017	0.2	0.00
1/10/2017	3.4	2.59
1/11/2017	0.2	0.00
1/12/2017	0	0.00
1/13/2017	0	0.00
1/14/2017	0.8	0.28
1/15/2017	3.4	2.59
1/16/2017	1	0.43
1/17/2017	0.2	0.00
1/18/2017	0.6	0.00
1/19/2017	6.4	5.52
1/20/2017	0.2	0.00
1/21/2017	15.8	14.87
1/22/2017	7.6	6.71
1/23/2017	3.8	2.98
1/24/2017	0	0.00
1/25/2017	0	0.00
1/26/2017	0.6	0.00
1/27/2017	6.2	5.32
1/28/2017	1	0.43
1/29/2017	35.6	34.65
1/30/2017	1	0.43
1/31/2017	5.2	4.34
2/1/2017	1.8	1.10
2/2/2017	15	14.07
2/3/2017	18.2	17.26
2/4/2017	0	0.00
2/5/2017	0	0.00
2/6/2017	1.8	1.10
2/7/2017	0.2	0.00
2/8/2017	15.8	14.87
2/9/2017	6.8	5.92
2/10/2017	0.2	0.00
2/11/2017	2.6	1.83
2/12/2017	0.2	0.00
2/13/2017	0.2	0.00
2/14/2017	2.8	2.02

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Table 7 (*continued*)

Dates	Rain (mm)	Q (mm)
2/15/2017	1.6	0.92
2/16/2017	0.8	0.28
2/17/2017	9.8	8.89
2/18/2017	1.8	1.10
2/19/2017	1	0.43
2/20/2017	1.2	0.58
2/21/2017	4.4	3.56
2/22/2017	1.2	0.58
2/23/2017	3.2	2.40
2/24/2017	4.6	3.75
2/25/2017	0.2	0.00
2/26/2017	2.4	1.64
2/27/2017	7	6.11
2/28/2017	4.4	3.56
3/1/2017	2.4	1.64
3/2/2017	19.6	18.66
3/3/2017	4.4	3.56
3/4/2017	0.2	0.00
3/5/2017	0.4	0.00
3/6/2017	11	10.08
3/7/2017	2.4	1.64
3/8/2017	3	2.21
3/9/2017	4.2	3.36
3/10/2017	0.2	0.00
3/11/2017	0.2	0.00
3/12/2017	12.4	11.48
3/13/2017	2	1.28
3/14/2017	0.2	0.00
3/15/2017	8.2	7.30
3/16/2017	55.2	54.24
3/17/2017	8.6	7.70
3/18/2017	19.8	18.86
3/19/2017	0.2	0.00
3/20/2017	0.2	0.00
3/21/2017	10	9.09
3/22/2017	2.6	1.83
3/23/2017	16.8	15.87
3/24/2017	0.6	0.00
3/25/2017	0.2	0.00
3/26/2017	0.2	0.00
3/27/2017	0.4	0.00
3/28/2017	28.4	27.45
3/29/2017	1.2	0.58
3/30/2017	16.2	15.27
3/31/2017	0.4	0.00
4/1/2017	0.6	0.00
4/2/2017	3.8	2.98
4/3/2017	0.8	0.28
4/4/2017	0.4	0.00
4/5/2017	0	0.00
4/6/2017	0.2	0.00
4/7/2017	21.2	20.26
4/8/2017	9.8	8.89
4/9/2017	0.6	0.00
4/10/2017	9	8.10
4/11/2017	0.2	0.00
4/12/2017	3.2	2.40
4/13/2017	0.2	0.00
4/14/2017	1.2	0.58
4/15/2017	0.2	0.00

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Table 7 (*continued*)

Dates	Rain (mm)	Q (mm)
4/16/2017	13.2	12.28
4/17/2017	0.2	0.00
4/18/2017	0.4	0.00
4/19/2017	5.4	4.54
4/20/2017	15.2	14.27
4/21/2017	2.4	1.64
4/22/2017	0.4	0.00
4/23/2017	0.2	0.00
4/24/2017	8.2	7.30
4/25/2017	22.8	21.86
4/26/2017	0.2	0.00
4/27/2017	0.2	0.00
4/28/2017	0.2	0.00
4/29/2017	16.8	15.87
4/30/2017	7.2	6.31
5/1/2017	18.8	17.86
5/2/2017	1.4	0.75
5/3/2017	16	15.07
5/4/2017	4	3.17
5/5/2017	7.2	6.31
5/6/2017	18.8	17.86
5/7/2017	6.8	5.92
5/8/2017	0	0.00
5/9/2017	3.8	2.98
5/10/2017	0.2	0.00
5/11/2017	5	4.14
5/12/2017	3.6	2.78
5/13/2017	4.2	3.36
5/14/2017	0	0.00
5/15/2017	3.6	2.78
5/16/2017	0	0.00
5/17/2017	4	3.17
5/18/2017	0.2	0.00
5/19/2017	2.8	2.02
5/20/2017	0.2	0.00
5/21/2017	0.4	0.00
5/22/2017	0.2	0.00
5/23/2017	3	2.21
5/24/2017	0	0.00
5/25/2017	0.2	0.00
5/26/2017	0.4	0.00
5/27/2017	0.2	0.00
5/28/2017	0.2	0.00
5/29/2017	0	0.00
5/30/2017	0	0.00
5/31/2017	0.2	0.00
6/1/2017	0.2	0.00
6/2/2017	2.4	1.64
6/3/2017	2.4	1.64
6/4/2017	0.2	0.00
6/5/2017	0.2	0.00
6/6/2017	0.2	0.00
6/7/2017	0.2	0.00
6/8/2017	0.2	0.00
6/9/2017	0.2	0.00
6/10/2017	0.4	0.00
6/11/2017	0.2	0.00
6/12/2017	0.2	0.00
6/13/2017	0	0.00
6/14/2017	0.2	0.00

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Table 7 (*continued*)

Dates	Rain (mm)	Q (mm)
6/15/2017	0.2	0.00
6/16/2017	0.2	0.00
6/17/2017	0	0.00
6/18/2017	0.2	0.00
6/19/2017	0	0.00
6/20/2017	0.4	0.00
6/21/2017	0	0.00
6/22/2017	0.4	0.00
6/23/2017	4	3.17
6/24/2017	0	0.00
6/25/2017	0.2	0.00
6/26/2017	0	0.00
6/27/2017	0.2	0.00
6/28/2017	0.2	0.00
6/29/2017	0.2	0.00
6/30/2017	0	0.00
7/1/2017	0	0.00
7/2/2017	0	0.00
7/3/2017	0	0.00
7/4/2017	2.8	2.02
7/5/2017	0.2	0.00
7/6/2017	0	0.00
7/7/2017	0	0.00
7/8/2017	0.2	0.00
7/9/2017	0.2	0.00
7/10/2017	0.2	0.00
7/11/2017	0	0.00
7/12/2017	0	0.00
7/13/2017	0	0.00
7/14/2017	0	0.00
7/15/2017	0.2	0.00
7/16/2017	0	0.00
7/17/2017	0	0.00
7/18/2017	0	0.00
7/19/2017	0	0.00
7/20/2017	0.2	0.00
7/21/2017	0	0.00
7/22/2017	0	0.00
7/23/2017	8.2	7.30
7/24/2017	0.6	0.00
7/25/2017	0	0.00
7/26/2017	0.2	0.00
7/27/2017	0	0.00
7/28/2017	0	0.00
7/29/2017	0.2	0.00
7/30/2017	0	0.00
7/31/2017	0	0.00
8/1/2017	0	0.00
8/2/2017	0	0.00
8/3/2017	0	0.00
8/4/2017	0	0.00
8/5/2017	0	0.00
8/6/2017	0	0.00
8/7/2017	0	0.00
8/8/2017	0.2	0.00
8/9/2017	0.2	0.00
8/10/2017	0	0.00
8/11/2017	0	0.00
8/12/2017	0	0.00
8/13/2017	0	0.00

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Table 7 (*continued*)

Dates	Rain (mm)	Q (mm)
8/14/2017	0	0.00
8/15/2017	0	0.00
8/16/2017	0	0.00
8/17/2017	5	4.14
8/18/2017	2.4	1.64
8/19/2017	23	22.06
8/21/2017	0.2	0.00
8/22/2017	1.8	1.10
8/23/2017	0.2	0.00
8/24/2017	40.4	39.44
8/25/2017	0.6	0.00
8/26/2017	0.2	0.00
8/27/2017	0.2	0.00
8/28/2017	0.2	0.00
8/29/2017	0.2	0.00
8/30/2017	0.2	0.00
8/31/2017	0	0.00
9/1/2017	9.2	8.29
9/2/2017	0	0.00
9/3/2017	0.2	0.00
9/4/2017	2.8	2.02
9/5/2017	1.2	0.58
9/6/2017	7	6.11
9/7/2017	0.4	0.00
9/8/2017	2.2	1.46
9/9/2017	5.8	4.93
9/10/2017	0.4	0.00
9/11/2017	0.8	0.28
9/12/2017	0.4	0.00
9/13/2017	0	0.00
9/14/2017	0	0.00
9/15/2017	0.2	0.00
9/16/2017	0.8	0.28
9/17/2017	1.6	0.92
9/18/2017	0.2	0.00
9/19/2017	4.2	3.36
9/20/2017	4.8	3.95
9/21/2017	0.4	0.00
9/22/2017	0.2	0.00
9/23/2017	0.2	0.00
9/24/2017	0	0.00
9/25/2017	0	0.00
9/26/2017	14.2	13.27
9/27/2017	0.4	0.00
9/28/2017	3.8	2.98
9/29/2017	2.6	1.83
9/30/2017	0.2	0.00
10/1/2017	0	0.00
10/2/2017	14.6	13.67
10/3/2017	2.4	1.64
10/4/2017	1.2	0.58
10/5/2017	0.8	0.28
10/6/2017	0	0.00
10/7/2017	0.2	0.00
10/8/2017	0	0.00
10/9/2017	0	0.00
10/10/2017	0.2	0.00
10/11/2017	0	0.00
10/12/2017	0	0.00
10/13/2017	0.2	0.00

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Table 7 (*continued*)

Dates	Rain (mm)	Q (mm)
10/14/2017	0	0.00
10/15/2017	1.6	0.92
10/16/2017	12.8	11.88
10/18/2017	1.6	0.92
10/19/2017	0.6	0.00
10/20/2017	0.2	0.00
10/21/2017	0.4	0.00
10/22/2017	0.8	0.28
10/23/2017	0.2	0.00
10/24/2017	0.8	0.28
10/25/2017	0.2	0.00
10/26/2017	0	0.00
10/27/2017	2.2	1.46
10/28/2017	1.6	0.92
10/29/2017	1.4	0.75
10/30/2017	0.6	0.00
10/31/2017	0	0.00
11/1/2017	6.4	5.52
11/2/2017	4.2	3.36
11/3/2017	1.4	0.75
11/4/2017	8.4	7.50
11/5/2017	17	16.07
11/6/2017	33.2	32.25
11/7/2017	7.2	6.31
11/8/2017	2.4	1.64
11/9/2017	5	4.14
11/10/2017	11.8	10.88
11/11/2017	2.4	1.64
11/12/2017	12.4	11.48
11/13/2017	0.8	0.28
11/14/2017	0.4	0.00
11/15/2017	2.2	1.46
11/16/2017	5.2	4.34
11/17/2017	9.4	8.49
11/19/2017	0.6	0.00
11/20/2017	1.6	0.92
11/21/2017	0.2	0.00
11/22/2017	0.4	0.00
11/23/2017	11.6	10.68
11/24/2017	14	13.07
11/25/2017	19.2	18.26
11/26/2017	7.8	6.91
11/27/2017	0.2	0.00
11/28/2017	0.2	0.00
11/29/2017	13.6	12.67
11/30/2017	20.6	19.66
12/1/2017	0.2	0.00
12/2/2017	0.2	0.00
12/3/2017	0.4	0.00
12/4/2017	0.2	0.00
12/5/2017	0.2	0.00
12/6/2017	1.6	0.92
12/7/2017	10.4	9.49
12/8/2017	10.4	9.49
12/9/2017	7.2	6.31
12/10/2017	19	18.06
12/11/2017	0	0.00
12/12/2017	0.2	0.00
12/13/2017	0.2	0.00
12/14/2017	0.2	0.00

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Table 7 (*continued*)

Dates	Rain (mm)	Q (mm)
12/15/2017	0.2	0.00
12/16/2017	1	0.43
12/17/2017	0.2	0.00
12/18/2017	0	0.00
12/19/2017	5.4	4.54
12/20/2017	7.6	6.71
12/21/2017	0.2	0.00
12/22/2017	0.4	0.00
12/23/2017	0.2	0.00
12/24/2017	0.2	0.00
12/25/2017	0	0.00
12/26/2017	0.2	0.00
12/27/2017	0.4	0.00
12/28/2017	0.2	0.00
12/29/2017	18.4	17.46
12/30/2017	21.2	20.26
12/31/2017	1.4	0.75
1/1/2018	1.4	0.75
1/2/2018	2.2	1.46
1/3/2018	0.4	0.00
1/4/2018	9.6	8.69
1/5/2018	2.6	1.83
1/6/2018	0	0.00
1/7/2018	0	0.00
1/8/2018	0	0.00
1/9/2018	10.8	9.89
1/10/2018	0.4	0.00
1/11/2018	1.2	0.58
1/12/2018	8.8	7.90
1/13/2018	0.2	0.00
1/14/2018	15.6	14.67
1/15/2018	37	36.05
1/16/2018	0.8	0.28
1/17/2018	6.2	5.32
1/18/2018	0	0.00
1/19/2018	17.6	16.66
1/20/2018	4	3.17
1/21/2018	0.2	0.00
1/22/2018	7.6	6.71
1/23/2018	1.2	0.58
1/24/2018	61.2	60.24
1/26/2018	5.4	4.54
1/27/2018	12.2	11.28
1/28/2018	0	0.00
1/29/2018	0.2	0.00
1/30/2018	0.6	0.00
1/31/2018	1.4	0.75
2/1/2018	0.2	0.00
2/2/2018	2.4	1.64
2/3/2018	0.2	0.00
2/4/2018	4.2	3.36
2/5/2018	2.4	1.64
2/6/2018	22	21.06
2/7/2018	0.4	0.00
2/8/2018	20.8	19.86
2/9/2018	1.8	1.10
2/10/2018	0	0.00
2/11/2018	32.4	31.45
2/12/2018	0.6	0.00
2/13/2018	4.6	3.75

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Table 7 (*continued*)

Dates	Rain (mm)	Q (mm)
2/14/2018	3.6	2.78
2/15/2018	0.2	0.00
2/16/2018	0.2	0.00
2/17/2018	0	0.00
2/18/2018	0.2	0.00
2/19/2018	0	0.00
2/20/2018	0	0.00
2/21/2018	0.2	0.00
2/22/2018	0	0.00
2/23/2018	0.2	0.00
2/24/2018	0.2	0.00
2/25/2018	0.4	0.00
2/26/2018	1.2	0.58
2/27/2018	0	0.00
2/28/2018	0.2	0.00
3/1/2018	0	0.00
3/2/2018	0	0.00
3/3/2018	0	0.00
3/4/2018	0.2	0.00
3/5/2018	0	0.00
3/6/2018	0	0.00
3/7/2018	0	0.00
3/8/2018	0	0.00
3/9/2018	0	0.00
3/10/2018	0	0.00
3/11/2018	0	0.00
3/12/2018	0	0.00
3/13/2018	0	0.00
3/14/2018	0	0.00
3/15/2018	0	0.00
3/16/2018	0	0.00
3/17/2018	0.2	0.00
3/18/2018	0	0.00
3/19/2018	0.2	0.00
3/20/2018	0	0.00
3/21/2018	0	0.00
3/22/2018	0	0.00
3/23/2018	0	0.00
3/24/2018	0	0.00
3/25/2018	0	0.00
3/26/2018	0	0.00
3/27/2018	0	0.00
3/28/2018	7.8	6.91
3/29/2018	0	0.00
3/30/2018	10.6	9.69
3/31/2018	8.6	7.70
4/1/2018	26	25.05
4/2/2018	2.2	1.46
4/3/2018	41.8	40.84
4/4/2018	19.2	18.26
4/5/2018	0.6	0.00
4/6/2018	20.2	19.26
4/7/2018	1.4	0.75
4/8/2018	10.4	9.49
4/9/2018	0.4	0.00
4/10/2018	0	0.00
4/11/2018	24	23.05
4/12/2018	19	18.06
4/13/2018	27.4	26.45
4/14/2018	0.8	0.28

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Table 7 (*continued*)

Dates	Rain (mm)	Q (mm)
4/15/2018	0.2	0.00
4/16/2018	1.4	0.75
4/17/2018	16.6	15.67
4/18/2018	1.6	0.92
4/19/2018	1.4	0.75
4/20/2018	6	5.13
4/21/2018	23.8	22.85
4/22/2018	7.2	6.31
4/23/2018	37	36.05
4/24/2018	15.2	14.27
4/25/2018	5.6	4.73
4/26/2018	27.4	26.45
4/27/2018	0	0.00
4/28/2018	2.2	1.46
4/29/2018	13.8	12.87
4/30/2018	34.6	33.65
5/1/2018	6.2	5.32
5/2/2018	47.4	46.44
5/3/2018	0.2	0.00
5/4/2018	1.2	0.58
5/5/2018	7.8	6.91
5/6/2018	1.8	1.10
5/7/2018	20.8	19.86
5/8/2018	0.2	0.00
5/9/2018	2.8	2.02
5/10/2018	17	16.07
5/11/2018	10.4	9.49
5/12/2018	6.6	5.72
5/13/2018	0.6	0.00
5/14/2018	11.8	10.88
5/15/2018	79.6	78.64
5/16/2018	0.4	0.00
5/17/2018	1.2	0.58
5/18/2018	5.2	4.34
5/19/2018	13.8	12.87
5/20/2018	5.6	4.73
5/21/2018	32	31.05
5/22/2018	42.8	41.84

Table 8
Rainfall amounts and corresponding potential runoff at Eastern site.

Dates	Rain (mm)	Q(mm)
11/12/2016	0.6	0.00
11/13/2016	9	8.10
11/14/2016	0.2	0.00
11/15/2016	10.2	9.29
11/16/2016	5.4	4.54
11/17/2016	3	2.21
11/18/2016	0.8	0.28
11/19/2016	7.2	6.31
11/20/2016	0	0.04
11/21/2016	8	7.10
11/22/2016	5.2	4.34
11/23/2016	0.2	0.00
11/24/2016	16	15.07
11/25/2016	26.8	25.85

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Table 8 (*continued*)

Dates	Rain (mm)	Q(mm)
11/26/2016	6	5.13
11/27/2016	3	2.21
11/28/2016	0.4	0.05
11/29/2016	0.2	0.00
11/30/2016	0.8	0.28
12/1/2016	0.4	0.05
12/2/2016	0.4	0.05
12/3/2016	10	9.09
12/4/2016	0.2	0.00
12/5/2016	0	0.04
12/6/2016	0.2	0.00
12/7/2016	0	0.04
12/8/2016	0	0.04
12/9/2016	0	0.04
12/10/2016	10.4	9.49
12/11/2016	0.4	0.05
12/12/2016	8.8	7.90
12/13/2016	2.2	1.46
12/14/2016	0.2	0.00
12/15/2016	0	0.04
12/16/2016	0.2	0.00
12/17/2016	5.4	4.54
12/18/2016	0.2	0.00
12/19/2016	0.2	0.00
12/20/2016	3.8	2.98
12/21/2016	0.2	0.00
12/22/2016	0	0.04
12/23/2016	0	0.04
12/24/2016	0	0.04
12/25/2016	0.6	0.15
12/26/2016	0	0.04
12/27/2016	4.4	3.56
12/28/2016	0.2	0.00
12/29/2016	3.2	2.40
12/30/2016	1	0.43
12/31/2016	0.2	0.00
1/1/2017	35.8	34.85
1/2/2017	0.2	0.00
1/3/2017	0.2	0.00
1/4/2017	0	0.04
1/5/2017	0.2	0.00
1/6/2017	2.2	1.46
1/7/2017	0	0.04
1/8/2017	0	0.04
1/9/2017	0.2	0.00
1/10/2017	0	0.04
1/11/2017	0	0.04
1/12/2017	0	0.04
1/13/2017	0	0.04
1/14/2017	1.8	1.10
1/15/2017	0	0.04
1/16/2017	0	0.04
1/17/2017	0	0.04
1/18/2017	0	0.04
1/19/2017	8	7.10
1/20/2017	0.2	0.00
1/21/2017	0.8	0.28
1/22/2017	3.4	2.59
1/23/2017	1.4	0.75
1/24/2017	0.2	0.00

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Table 8 (*continued*)

Dates	Rain (mm)	Q(mm)
1/25/2017	0	0.04
1/26/2017	0	0.04
1/27/2017	0	0.04
1/28/2017	0.2	0.00
1/29/2017	0	0.04
1/30/2017	0.2	0.00
1/31/2017	16	15.07
2/1/2017	5	4.14
2/2/2017	2	1.28
2/3/2017	6.8	5.92
2/4/2017	0	0.04
2/5/2017	0.2	0.00
2/6/2017	9.4	8.49
2/7/2017	0.8	0.28
2/8/2017	5.4	4.54
2/9/2017	0.2	0.00
2/10/2017	0.2	0.00
2/11/2017	0	0.04
2/12/2017	0	0.04
2/13/2017	0.2	0.00
2/14/2017	5.4	4.54
2/15/2017	0.2	0.00
2/16/2017	4.6	3.75
2/17/2017	13.6	12.67
2/18/2017	7.2	6.31
2/19/2017	1	0.43
2/20/2017	4.6	3.75
2/21/2017	0.2	0.00
2/22/2017	0	0.04
2/23/2017	15.8	14.87
2/24/2017	10.4	9.49
2/25/2017	0	0.04
2/26/2017	5.2	4.34
2/27/2017	2.8	2.02
2/28/2017	0.2	0.00
3/1/2017	2.6	1.83
3/2/2017	0.2	0.00
3/3/2017	0.2	0.00
3/4/2017	0	0.04
3/5/2017	0	0.04
3/6/2017	14.8	13.87
3/7/2017	3	2.21
3/8/2017	5.8	4.93
3/9/2017	14.8	13.87
3/10/2017	0	0.04
3/11/2017	0.2	0.00
3/12/2017	5.6	4.73
3/13/2017	0.6	0.15
3/14/2017	0.2	0.00
3/15/2017	14.8	13.87
3/16/2017	50.4	49.44
3/17/2017	6.8	5.92
3/18/2017	0.2	0.00
3/19/2017	0	0.04
3/20/2017	0	0.04
3/21/2017	6.2	5.32
3/22/2017	9	8.10
3/23/2017	24.8	23.85
3/24/2017	2	1.28
3/25/2017	0.2	0.00

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Table 8 (*continued*)

Dates	Rain (mm)	Q(mm)
3/26/2017	0.2	0.00
3/27/2017	0	0.04
3/28/2017	20.4	19.46
3/29/2017	2.6	1.83
3/30/2017	3.8	2.98
3/31/2017	0.8	0.28
4/2/2017	0.8	0.28
4/3/2017	1	0.43
4/4/2017	0.8	0.28
4/5/2017	0.2	0.00
4/6/2017	2.2	1.46
4/7/2017	58.8	57.84
4/8/2017	7.2	6.31
4/9/2017	0.2	0.00
4/10/2017	0.4	0.05
4/11/2017	0.2	0.00
4/12/2017	0	0.04
4/13/2017	0	0.04
4/14/2017	1.2	0.58
4/15/2017	1.4	0.75
4/16/2017	14.6	13.67
4/17/2017	0.2	0.00
4/18/2017	8.4	7.50
4/19/2017	25	24.05
4/20/2017	7	6.11
4/21/2017	0.6	0.15
4/22/2017	0.2	0.00
4/23/2017	0.2	0.00
4/24/2017	7.4	6.51
4/25/2017	3.4	2.59
4/26/2017	0.2	0.00
4/27/2017	0.2	0.00
4/28/2017	0	0.04
4/29/2017	0	0.04
4/30/2017	0	0.04
5/1/2017	26.6	25.65
5/2/2017	2.6	1.83
5/3/2017	10	9.09
5/4/2017	1.4	0.75
5/5/2017	7.4	6.51
5/6/2017	53	52.04
5/7/2017	13.2	12.28
5/8/2017	1	0.43
5/9/2017	3.8	2.98
5/10/2017	0	0.04
5/11/2017	6	5.13
5/12/2017	4	3.17
5/13/2017	0.4	0.05
5/14/2017	0	0.04
5/15/2017	1	0.43
5/16/2017	0	0.04
5/17/2017	0	0.04
5/18/2017	0	0.04
5/19/2017	0.8	0.28
5/20/2017	0	0.04
5/21/2017	0.2	0.00
5/22/2017	0	0.04
5/23/2017	0	0.04
5/24/2017	0	0.04
5/25/2017	0.2	0.00

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Table 8 (*continued*)

Dates	Rain (mm)	Q(mm)
5/26/2017	0	0.04
5/27/2017	0	0.04
5/28/2017	0	0.04
5/29/2017	0	0.04
5/30/2017	0	0.04
5/31/2017	0	0.04
6/1/2017	0	0.04
6/2/2017	1	0.43
6/3/2017	9.6	8.69
6/4/2017	0.2	0.00
6/5/2017	0	0.04
6/6/2017	0	0.04
6/7/2017	0	0.04
6/8/2017	0.2	0.00
6/9/2017	0	0.04
6/10/2017	0	0.04
6/11/2017	0	0.04
6/12/2017	0	0.04
6/13/2017	0	0.04
6/14/2017	0	0.04
6/15/2017	0	0.04
6/16/2017	0	0.04
6/17/2017	0	0.04
6/18/2017	0	0.04
6/19/2017	0	0.04
6/20/2017	0	0.04
6/21/2017	0	0.04
6/22/2017	0	0.04
6/23/2017	5	4.14
6/24/2017	0	0.04
6/25/2017	0	0.04
6/26/2017	0	0.04
6/27/2017	0	0.04
6/28/2017	0	0.04
6/29/2017	0	0.04
6/30/2017	0	0.04
7/1/2017	0	0.04
7/2/2017	0	0.04
7/3/2017	0	0.04
7/4/2017	0	0.04
7/5/2017	0.8	0.28
7/6/2017	0	0.04
7/7/2017	0	0.04
7/8/2017	0	0.04
7/9/2017	0	0.04
7/10/2017	0	0.04
7/11/2017	0	0.04
7/12/2017	0.8	0.28
7/13/2017	0	0.04
7/14/2017	0	0.04
7/15/2017	0	0.04
7/16/2017	0	0.04
7/17/2017	0	0.04
7/18/2017	0	0.04
7/19/2017	0	0.04
7/20/2017	0	0.04
7/21/2017	0	0.04
7/22/2017	0	0.04
7/23/2017	2.6	1.83
7/24/2017	0	0.04

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Table 8 (*continued*)

Dates	Rain (mm)	Q(mm)
7/25/2017	0	0.04
7/26/2017	0	0.04
7/27/2017	0	0.04
7/28/2017	0	0.04
7/29/2017	0	0.04
7/30/2017	0	0.04
7/31/2017	0	0.04
8/1/2017	0	0.04
8/2/2017	0	0.04
8/3/2017	0	0.04
8/4/2017	0	0.04
8/5/2017	0	0.04
8/6/2017	0	0.04
8/7/2017	0	0.04
8/8/2017	0	0.04
8/9/2017	0	0.04
8/10/2017	0	0.04
8/11/2017	0	0.04
8/12/2017	0	0.04
8/13/2017	0	0.04
8/14/2017	0	0.04
8/15/2017	0	0.04
8/16/2017	0	0.04
8/17/2017	15.2	14.27
8/18/2017	0.4	0.05
8/19/2017	14.2	13.27
8/20/2017	1	0.43
8/21/2017	0	0.04
8/22/2017	22.2	21.26
8/23/2017	0	0.04
8/24/2017	0.2	0.00
8/25/2017	0	0.04
8/26/2017	0	0.04
8/27/2017	0	0.04
8/28/2017	0	0.04
8/29/2017	0	0.04
8/30/2017	0	0.04
8/31/2017	3.6	2.78
9/1/2017	0.2	0.00
9/2/2017	0	0.04
9/3/2017	0	0.04
9/4/2017	2	1.28
9/5/2017	3.8	2.98
9/6/2017	17.8	16.86
9/7/2017	0.4	0.05
9/8/2017	0	0.04
9/9/2017	11.2	10.28
9/10/2017	0	0.04
9/11/2017	0.2	0.00
9/12/2017	0	0.04
9/13/2017	0	0.04
9/14/2017	0	0.04
9/15/2017	0.2	0.00
9/16/2017	2	1.28
9/17/2017	2.4	1.64
9/18/2017	1.2	0.58
9/19/2017	1.6	0.92
9/20/2017	2	1.28
9/21/2017	0.2	0.00
9/22/2017	0	0.04

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Table 8 (*continued*)

Dates	Rain (mm)	Q(mm)
9/23/2017	0	0.04
9/24/2017	0	0.04
9/25/2017	0	0.04
9/26/2017	16	15.07
9/27/2017	0	0.04
9/28/2017	18	17.06
9/29/2017	2.6	1.83
9/30/2017	0.2	0.00
10/1/2017	0	0.04
10/2/2017	0	0.04
10/3/2017	0	0.04
10/4/2017	0.2	0.00
10/5/2017	0.2	0.00
10/6/2017	0	0.04
10/7/2017	15	14.07
10/8/2017	0	0.04
10/9/2017	19.6	18.66
10/10/2017	56.8	55.84
10/11/2017	0.4	0.05
10/12/2017	21.8	20.86
10/13/2017	0	0.04
10/14/2017	3.2	2.40
10/15/2017	0	0.04
10/16/2017	0.4	0.05
10/17/2017	6.8	5.92
10/18/2017	1.2	0.58
10/19/2017	8	7.10
10/20/2017	3.6	2.78
10/21/2017	9.4	8.49
10/22/2017	0.2	0.00
10/23/2017	0.2	0.00
10/24/2017	0	0.04
10/25/2017	0	0.04
10/26/2017	0.8	0.28
10/27/2017	1.8	1.10
10/28/2017	1.8	1.10
10/29/2017	5.2	4.34
10/30/2017	2.2	1.46
10/31/2017	0.6	0.15
11/1/2017	0.2	0.00
11/2/2017	0	0.04
11/3/2017	1	0.43
11/4/2017	3.8	2.98
11/5/2017	31.6	30.65
11/6/2017	6.2	5.32
11/7/2017	59.6	58.64
11/8/2017	6.4	5.52
11/9/2017	10.8	9.89
11/10/2017	10.8	9.89
11/11/2017	5.6	4.73
11/12/2017	1.4	0.75
11/13/2017	2.6	1.83
11/14/2017	0	0.04
11/15/2017	3.8	2.98
11/16/2017	10.6	9.69
11/17/2017	2.8	2.02
11/18/2017	0	0.04
11/19/2017	1.8	1.10
11/20/2017	0.2	0.00
11/21/2017	0	0.04

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Table 8 (*continued*)

Dates	Rain (mm)	Q(mm)
11/22/2017	0.6	0.15
11/23/2017	4.2	3.36
11/24/2017	9.6	8.69
11/25/2017	10.2	9.29
11/26/2017	2.8	2.02
11/27/2017	0.4	0.05
11/28/2017	0	0.04
11/29/2017	11.6	10.68
11/30/2017	2	1.28
12/1/2017	0.2	0.00
12/2/2017	3.4	2.59
12/3/2017	3.4	2.59
12/4/2017	0.2	0.00
12/5/2017	0	0.04
12/6/2017	0.2	0.00
12/7/2017	4.8	3.95
12/8/2017	0.2	0.00
12/9/2017	0	0.04
12/10/2017	31.6	30.65
12/11/2017	0	0.04
12/12/2017	0	0.04
12/13/2017	0	0.04
12/14/2017	0	0.04
12/15/2017	0.4	0.05
12/16/2017	0	0.04
12/17/2017	0	0.04
12/18/2017	0	0.04
12/19/2017	16.6	15.67
12/20/2017	11.6	10.68
12/21/2017	0	0.04
12/22/2017	0.4	0.05
12/23/2017	0	0.04
12/24/2017	0	0.04
12/25/2017	0	0.04
12/26/2017	0	0.04
12/27/2017	0	0.04
12/28/2017	0	0.04
12/29/2017	6.4	5.52
12/30/2017	5.2	4.34
12/31/2017	4	3.17
1/1/2018	2.2	1.46
1/2/2018	0.8	0.28
1/3/2018	0.4	0.05
1/4/2018	8.4	7.50
1/5/2018	1.4	0.75
1/6/2018	0	0.04
1/7/2018	0	0.04
1/8/2018	0	0.04
1/9/2018	1.4	0.75
1/10/2018	1.8	1.10
1/11/2018	0.2	0.00
1/12/2018	17.4	16.46
1/13/2018	0.2	0.00
1/14/2018	0.2	0.00
1/15/2018	38.4	37.44
1/16/2018	0.2	0.00
1/17/2018	36.2	35.25
1/18/2018	2.4	1.64
1/19/2018	1.6	0.92
1/20/2018	1	0.43

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Table 8 (*continued*)

Dates	Rain (mm)	Q(mm)
1/21/2018	1.6	0.92
1/22/2018	0.8	0.28
1/23/2018	0.4	0.05
1/24/2018	3.2	2.40
1/25/2018	15.2	14.27
1/26/2018	7.8	6.91
1/27/2018	3	2.21
1/28/2018	0.2	0.00
1/29/2018	0.4	0.05
1/30/2018	0.2	0.00
1/31/2018	0.2	0.00
2/1/2018	0.4	0.05
2/2/2018	0.2	0.00
2/3/2018	0.2	0.00
2/4/2018	0.2	0.00
2/5/2018	0	0.04
2/6/2018	0.2	0.00
2/7/2018	19	18.06
2/8/2018	7.4	6.51
2/9/2018	0.8	0.28
2/10/2018	0	0.04
2/11/2018	0	0.04
2/12/2018	0.2	0.00
2/13/2018	0	0.04
2/14/2018	0.2	0.00
2/15/2018	0	0.04
2/16/2018	0.2	0.00
2/17/2018	0	0.04
2/18/2018	0	0.04
2/19/2018	0.2	0.00
2/20/2018	0.2	0.00
2/21/2018	0.2	0.00
2/22/2018	0.2	0.00
2/23/2018	0	0.04
2/24/2018	0.2	0.00
2/25/2018	0	0.04
2/26/2018	0	0.04
2/27/2018	16.6	15.67
2/28/2018	0	0.04
3/1/2018	0	0.04
3/2/2018	0.2	0.00
3/3/2018	0	0.04
3/4/2018	0	0.04
3/5/2018	0.2	0.00
3/6/2018	4.6	3.75
3/7/2018	14	13.07
3/8/2018	21.4	20.46
3/9/2018	4.2	3.36
3/10/2018	0	0.04
3/11/2018	0	0.04
3/12/2018	0.2	0.00
3/13/2018	0	0.04
3/14/2018	0.2	0.00
3/15/2018	0	0.04
3/16/2018	0.2	0.00
3/17/2018	0.2	0.00
3/18/2018	0	0.04
3/19/2018	0.2	0.00
3/20/2018	0.2	0.00
3/21/2018	0.2	0.00

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Table 8 (*continued*)

Dates	Rain (mm)	Q(mm)
3/22/2018	0.2	0.00
3/23/2018	0	0.04
3/24/2018	0.2	0.00
3/25/2018	0.2	0.00
3/26/2018	0	0.04
3/27/2018	0.2	0.00
3/28/2018	8	7.10
3/29/2018	0.2	0.00
3/30/2018	10.8	9.89
3/31/2018	8.8	7.90
4/1/2018	3.6	2.78
4/2/2018	2.8	2.02
4/3/2018	27.4	26.45
4/4/2018	9.2	8.29
4/5/2018	1	0.43
4/6/2018	15	14.07
4/7/2018	12.8	11.88
4/8/2018	11.2	10.28
4/9/2018	0.2	0.00
4/10/2018	0.2	0.00
4/11/2018	67.2	66.24
4/12/2018	30.8	29.85
4/13/2018	3.4	2.59
4/14/2018	1.2	0.58
4/15/2018	0.4	0.05
4/16/2018	5.4	4.54
4/17/2018	38.6	37.64
4/18/2018	0.4	0.05
4/19/2018	8.8	7.90
4/20/2018	3.2	2.40
4/21/2018	4	3.17
4/22/2018	5	4.14
4/23/2018	0.2	0.00
4/24/2018	12.6	11.68
4/25/2018	3.2	2.40
4/26/2018	34	33.05
4/27/2018	0.2	0.00
4/28/2018	11.2	10.28
4/29/2018	35.8	34.85
4/30/2018	7.2	6.31
5/1/2018	21	20.06
5/2/2018	36	35.05
5/3/2018	0	0.04
5/4/2018	0.2	0.00
5/5/2018	18.4	17.46
5/6/2018	0.2	0.00
5/7/2018	26	25.05
5/8/2018	0.2	0.00
5/9/2018	1.8	1.10
5/10/2018	15.4	14.47
5/11/2018	38.6	37.64
5/12/2018	1.2	0.58
5/13/2018	0.4	0.05
5/14/2018	5.6	4.73
5/15/2018	48.2	47.24
5/16/2018	3.8	2.98
5/17/2018	0.6	0.15
5/18/2018	13.8	12.87
5/19/2018	1.8	1.10
5/20/2018	0	0.04
5/21/2018	16	15.07
5/22/2018	34.6	33.65

Table 9
LDOC flux data and corresponding rainfall amounts and intensities.

Site	LDOC flux (mgC/m²/month)	Ra (mm)	Ri(mm)
CS	106.72	142.80	1.67
CS	208.90	144.20	1.42
CS	181.56	157.20	1.03
CS	110.88	164.40	0.74
CS	174.62	166.20	0.48
CS	295.01	207.40	0.77
CS	185.65	207.60	2.26
CS	236.87	336.20	1.79
CS	257.49	390.20	2.41
CS	208.36	481.40	2.33
ES	137.34	62.40	1.20
ES	194.79	121.00	2.19
ES	158.37	128.40	1.03
ES	207.90	147.80	1.78
ES	256.54	172.00	1.96
ES	244.99	187.40	0.61
ES	228.64	187.60	1.97
ES	181.36	204.20	1.80
ES	176.52	368.20	1.41
ES	173.52	405.80	1.27
WS	317.33	156.80	1.77
WS	375.00	175.20	2.17
WS	186.74	180.80	2.75
WS	432.75	193.20	2.44
WS	329.81	244.80	1.61
WS	408.04	251.20	2.83
WS	375.66	254.20	1.64
WS	298.64	379.40	2.53
WS	396.16	466.00	2.70

CS, center site.
ES, astern site.
WS, Western site.
Ra, Rainfall amount.
Ri, Rainfall intensity.
LDOC, Leached dissolved organic carbon.

Table 10
Potential runoff and corresponding LDOC flux data.

Q (mm)	LDOC flux mg C/m²/month)
0.82	275.99
4.08	68.24
4.09	312.7
0.03	523.81
0.36	329.38
1.65	144.74
1.65	464.6
14.45	84.66
7.7	62.74
6.53	101.51
7.71	438.67
3.38	367.63
3.87	59.79
2.93	132.69
3.88	455.27
2.65	332.35
4.87	87.33
0.12	186.75

(*continued on next page*)

Table 10 (*continued*)

Q (mm)	LDOC flux mg C/m^2/month)
4.88	389.29
0.13	369.72
0.66	262.06
0.66	466.68
2.39	334.63
0.6	159
3.28	392.86
2.39	341.41
1.73	151.28
0.45	186.03
1.73	341.46
1.37	269.74
1.92	161.42
0.38	124.13
1.87	423.35
2.07	347.25
4.07	208.35
1.76	141.54
4.29	394.69

Declaration of Competing Interest

None.

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Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.dib.2020.106163.

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