

Water-Data Report 2011

01363400 ASHOKAN RESERVOIR AT ASHOKAN, NY

Upper Hudson Basin
Middle Hudson Subbasin

LOCATION.--Lat 41°57'01", long 74°12'30" referenced to North American Datum of 1927, Ulster County, NY, Hydrologic Unit 02020006, at gatehouse located at Dividing Weir Dyke, and 1.6 mi south of Shokan.

DRAINAGE AREA.--256 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--September 1913 to current year.

REVISED RECORDS.--WDR NY-72-1: 1968. WDR NY-83-1: (M)(m).

GAGE.--Nonrecording gage read daily at 0800. Datum of gage is NGVD of 1929 (levels by Board of Water Supply, City of New York).

REMARKS.--The reservoir is formed by the masonry Olive Bridge Dam across Esopus Creek and a series of earth embankments between hills. The reservoir is divided into two basins separated by a weir containing a gatehouse. Storage began Sept. 9, 1913. Usable capacity of West basin (01363398) 47,180 mil gal between minimum operating level elevation 495.50 ft and crest of spillway to East basin (01363399), elevation 590.00 ft; dead storage below minimum operating level 2,237 mil gal. Usable capacity of East basin 80,678 mil gal between elevation 500.00 ft and crest of spillway, elevation 587.10 ft; no dead storage. Figures given herein represent total contents for each basin. Reservoir impounds water for diversion (01363401) into Catskill Aqueduct (completed in 1917) for New York City water supply. Any flood spillage enters the Esopus Creek channel below Olive Bridge Dam. Records provided by Department of Environmental Protection, City of New York. Elevation at 0800 hours on last day of month.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, in West basin, 54,541 mil gal, Apr. 3, 2005, elevation, 594.84 ft, in East basin, 89,411 mil gal, Mar. 31, 1951, elevation, 592.23 ft; minimum contents observed, in West basin, 9,098 mil gal, Oct. 24, 1926, elevation, 530.56 ft, in East basin, 8,394 mil gal, Oct. 24, 1926, elevation, 525.91 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents observed, in West basin, 53,091 mil gal, Mar. 11, elevation, 593.47 ft, in East basin, 85,890 mil gal, Aug. 29, elevation, 590.20 ft; minimum contents observed, in West basin, 39,250 mil gal, Oct. 1, elevation, 579.37 ft, in East basin, 42,838 mil gal, Feb. 26, elevation, 561.39 ft.

MONTH-END ELEVATION AND CONTENTS, AND MONTHLY DIVERSION

WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Date	----- West Basin -----			----- East Basin -----			01363401 Monthly Diversion (in ft ³ /s)
	Elevation (feet) *	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)	Elevation (feet) *	Contents (million gallons)	Change in contents (equivalent in ft ³ /s)	
Sept. 30	571.36	32,453		567.41	50,691		
Oct. 31	588.12	47,546	+753	565.52	48,148	-127	354
Nov. 30	588.17	47,595	+2.53	563.73	45,826	-120	374
Dec. 31	587.16	46,589	-50.2	575.89	62,748	+845	148
CAL YR 2010	--	--	-12.0	--	--	-78.1	631
Jan. 31	581.91	41,571	-250	570.85	55,400	-367	394
Feb. 28	590.33	49,767	+453	562.19	43,860	-638	738
Mar. 31	590.30	49,735	-1.60	586.89	80,326	+1,820	244
Apr. 30	590.82	50,286	+28.4	588.13	82,406	+107	237
May 31	590.30	49,735	-27.5	587.41	81,198	-60.3	402
June 30	590.44	49,883	+7.63	587.34	81,080	-6.09	758
July 31	590.14	49,565	-15.9	582.84	73,669	-370	859
Aug. 31	590.78	50,244	+33.9	588.13	82,406	+436	777
Sept. 30	591.42	50,921	+34.9	588.86	83,630	+63.1	488
WTR YR 2011	--	--	+78.3	--	--	+140	479

* Elevation at 0800 hours on last day of month.

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--

PESTICIDE DATA: 1999-2011 (b).

REMARKS.--For many of the samples collected, analysis was performed using multiple analytical methods. When these methods share one or more compounds, separate tables are provided so that each analysis can be presented.

WATER-QUALITY DATA

WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

Part 1 of 8

[µg/L, micrograms per liter; WB, Untreated water supply; <, less than; E, estimated]

Date	Sample start time	Medium code	Sampling method (82398)	1-	2,6-	2-Chloro-	2-Chloro-4-	2-Ethyl-6-	3,4-
				Naphthol, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (49295)	Diethyl-aniline, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82660)	2',6'-diethyl-acetanilide, water, filtered, recoverable, µg/L (61618)	isopropyl-amino-6-amino-s-triazine, water, filtered, recoverable, µg/L (04040)	methyl-aniline, water, filtered, recoverable, µg/L (61620)	Dichloro-aniline, water, filtered, recoverable, µg/L (61625)
05-24-2011	1030	WB	Grab smp tap wat sup	< .036	< .006	< .010	E .005	< .010	< .004
07-18-2011	0900	WB	Grab smp tap wat sup	< .036	< .006	< .010	E .008	< .010	< .004
09-28-2011	1115	WB	Grab smp tap wat sup	< .036	< .006	< .010	E .006	< .010	< .004

WATER-QUALITY DATA

WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than; E, estimated]

Date	Sample start time	4-Chloro-2-	Aceto-	Alachlor,	Atrazine,	Azinphos-	Azinphos-	Benfluralin,	Carbaryl,
		methyl-phenol, water, filtered, recoverable, µg/L (61633)	chlor, water, filtered, recoverable, µg/L (49260)	water, filtered, recoverable, µg/L (46342)	water, filtered, recoverable, µg/L (39632)	methyl oxygen analog, water, filtered, recoverable, µg/L (61635)	methyl, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82686)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82673)	water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82680)
05-24-2011	1030	< .005	< .010	< .008	.005	< .04	< .120	< .014	< .060
07-18-2011	0900	< .005	< .010	< .008	.008	< .04	< .120	< .014	< .060
09-28-2011	1115	< .005	< .010	< .008	.005	< .04	< .120	< .014	< .060

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than; E, estimated]

Date	Sample start time	Chlorpyrifos	Chlorpyrifos	cis-Permethrin, water, filtered	Cyfluthrin, water, filtered, recoverable,	Cypermethrin, water, filtered, recoverable,	DCPA, water, filtered	Desulfinyl-fipronil amide, water, filtered, recoverable,	Desulfinyl-fipronil, water, filtered, recoverable,	Diazinon, water, filtered, recoverable,
		analog, water, filtered, recoverable,	water, filtered, recoverable,	(0.7 micron glass fiber filter), recoverable,	water, filtered, recoverable,	water, filtered, recoverable,	(0.7 micron glass fiber filter), recoverable,	water, filtered, recoverable,	water, filtered, recoverable,	water, filtered, recoverable,
		µg/L (61636)	µg/L (38933)	µg/L (82687)	µg/L (61585)	µg/L (61586)	µg/L (82682)	µg/L (62169)	µg/L (62170)	µg/L (39572)
05-24-2011	1030	< .06	< .004	< .010	< .016	< .020	< .008	< .029	< .012	< .006
07-18-2011	0900	< .06	< .004	< .010	< .016	< .020	< .008	< .029	< .012	< .006
09-28-2011	1115	< .06	< .004	< .010	< .016	< .020	< .008	< .029	< .012	< .006

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than; E, estimated]

Date	Sample start time	Dichlorvos, water, filtered, recoverable,	Dicrotophos, water, filtered, recoverable,	Dieldrin, water, filtered, recoverable,	Dimethoate, water, filtered	Ethion monoxon, water, filtered, recoverable,	Ethion, water, filtered, recoverable,	Fenamiphos sulfone, water, filtered, recoverable,	Fenamiphos sulfoxide, water, filtered, recoverable,	Fenamiphos, water, filtered, recoverable,
		µg/L (38775)	µg/L (38454)	µg/L (39381)	(0.7 micron glass fiber filter), recoverable,	water, filtered, recoverable,	water, filtered, recoverable,	water, filtered, recoverable,	water, filtered, recoverable,	water, filtered, recoverable,
		µg/L (38775)	µg/L (38454)	µg/L (39381)	µg/L (82662)	µg/L (61644)	µg/L (82346)	µg/L (61645)	µg/L (61646)	µg/L (61591)
05-24-2011	1030	< .04	< .08	< .008	< .006	< .02	< .008	< .054	< .08	< .03
07-18-2011	0900	< .04	< .08	< .008	< .006	< .02	< .008	< .054	< .08	< .03
09-28-2011	1115	< .04	< .08	< .008	< .006	< .02	< .008	< .054	< .08	< .03

WATER-QUALITY DATA
WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than; E, estimated]

Date	Sample start time	Fipronil sulfide, water, filtered, recoverable,	Fipronil sulfone, water, filtered, recoverable,	Fipronil, water, filtered, recoverable,	Fonofos, water, filtered, recoverable,	Hexazinone, water, filtered, recoverable,	Iprodione, water, filtered, recoverable,	Isofenphos, water, filtered, recoverable,	Malaoxon, water, filtered, recoverable,	Malathion, water, filtered, recoverable,
		µg/L (62167)	µg/L (62168)	µg/L (62166)	µg/L (04095)	µg/L (04025)	µg/L (61593)	µg/L (61594)	µg/L (61652)	µg/L (39532)
05-24-2011	1030	< .012	< .024	< .018	< .005	< .008	< .014	< .006	< .022	< .016
07-18-2011	0900	< .012	< .024	< .018	< .005	< .008	< .014	< .006	< .022	< .016
09-28-2011	1115	< .012	< .024	< .018	< .005	< .008	< .014	< .006	< .022	< .016

01363400 ASHOKAN RESERVOIR AT ASHOKAN, NY—Continued

WATER-QUALITY DATA

WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than; E, estimated]

Date	Sample start time	Metalaxyl, water, filtered, recoverable, µg/L (61596)	Methidathion, water, filtered, recoverable, µg/L (61598)	Methyl paraoxon, water, filtered, recoverable, µg/L (61664)	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82667)	Metolachlor, water, filtered, recoverable, µg/L (39415)	Metribuzin, water, filtered, recoverable, µg/L (82630)	Myclobutanol, water, filtered, recoverable, µg/L (61599)	Pendimethalin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82683)	Phorate oxygen analog, water, filtered, recoverable, µg/L (61666)
05-24-2011	1030	< .014	< .012	< .01	< .008	< .020	< .012	< .010	< .012	< .03
07-18-2011	0900	< .014	< .012	< .01	< .028	< .020	< .012	< .010	< .012	< .03
09-28-2011	1115	< .014	< .012	< .01	< .008	.005	< .012	< .010	< .012	< .03

WATER-QUALITY DATA

WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than; E, estimated]

Date	Sample start time	Phorate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82664)	Phosmet oxygen analog, water, filtered, recoverable, µg/L (61668)	Phosmet, water, filtered, recoverable, µg/L (61601)	Prometon, water, filtered, recoverable, µg/L (04037)	Prometryn, water, filtered, recoverable, µg/L (04036)	Propyzamide, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82676)	Simazine, water, filtered, recoverable, µg/L (04035)	Tebu-thiuron, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82670)	Terbufos oxygen analog sulfone, water, filtered, recoverable, µg/L (61674)
05-24-2011	1030	< .020	< .05	< .140	< .012	< .006	< .004	< .006	< .03	< .04
07-18-2011	0900	< .020	< .05	< .140	< .012	< .006	< .004	< .006	< .03	< .04
09-28-2011	1115	< .020	< .05	< .140	< .012	< .006	< .004	< .006	< .03	< .04

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WATER-QUALITY DATA

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than; E, estimated]

Date	Sample start time	Terbufos, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82675)	Terbuthyl-azine, water, filtered, recoverable, µg/L (04022)	Tribuphos, water, filtered, recoverable, µg/L (61610)	Trifluralin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82661)
05-24-2011	1030	< .02	< .01	< .018	< .018
07-18-2011	0900	< .02	< .01	< .018	< .018
09-28-2011	1115	< .02	< .01	< .018	< .018

WATER-QUALITY DATA

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than]

Date	Sample start time	Medium code	Sampling method (82398)	2,4-D methyl ester, water, filtered, recoverable, µg/L (50470)	2,4-D, water, filtered, recoverable, µg/L (39732)	2,4-DB, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (38746)	2-Chloro-4-isopropyl-amino-6-triazine, water, filtered, recoverable, µg/L (04040)	2-Chloro-6-ethyl-amino-4-triazine, water, filtered, recoverable, µg/L (04038)	2-Hydroxy-4-iso-propyl-amino-6-ethyl-amino-6-triazine, water, filtered, recoverable, µg/L (50355)
07-18-2011	0905	WB	Grab smp tap wat sup	< .200	< .06	< .02	< .06	< .06	< .060

01363400 ASHOKAN RESERVOIR AT ASHOKAN, NY—Continued

WATER-QUALITY DATA

WATER YEAR OCTOBER 2010 TO SEPTEMBER 2011

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than]

Date	Sample start time	3-Hydroxy carbo-furan, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49308)	Acifluor-fen, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49315)	Aldicarb sulfone, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49313)	Aldicarb sulfoxide, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49314)	Aldicarb, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49312)	Atrazine, water, filtered, recover-able, µg/L (39632)	Bendio-carb, water, filtered, recover-able, µg/L (50299)	Benomyl, water, filtered, recover-able, µg/L (50300)	Ben-sulfuron-methyl, water, filtered, recover-able, µg/L (61693)
07-18-2011	0905	< .040	< .040	< .08	< .060	< .12	< .040	< .04	< .060	< .06

WATER-QUALITY DATA

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than]

Date	Sample start time	Bentazon, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (38711)	Bromacil, water, filtered, recover-able, µg/L (04029)	Brom-oxynil, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49311)	Carbaryl, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49310)	Carbo-furan, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49309)	Chlor-amben methyl ester, water, filtered, recover-able, µg/L (61188)	Chlori-muron-ethyl, water, filtered, recover-able, µg/L (50306)	Clopyralid, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49305)	Cycloate, water, filtered, recover-able, µg/L (04031)
07-18-2011	0905	< .06	< .06	< .12	< .04	< .040	< .10	< .080	< .06	< .04

WATER-QUALITY DATA

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than]

Date	Sample start time	Dacthal monoacid, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49304)	Dicamba, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (38442)	Dichlor-prop, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49302)	Dinoseb, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49301)	Di-phenamid, water, filtered, recover-able, µg/L (04033)	Diuron, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49300)	Fenuron, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (49297)	Flumet-sulam, water, filtered, recover-able, µg/L (61694)	Fluome-turon, water, filtered (0.7 micron glass fiber filter), recover-able, µg/L (38811)
07-18-2011	0905	< .04	< .04	< .04	< .04	< .04	< .04	< .06	< .06	< .04

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WATER-QUALITY DATA

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than]

Date	Sample start time	Imazaquin, water, filtered, recoverable, µg/L (50356)	Imazethapyr, water, filtered, recoverable, µg/L (50407)	Imidacloprid, water, filtered, recoverable, µg/L (61695)	Linuron, water, filtered, recoverable, µg/L (38478)	MCPA, water, filtered, recoverable, µg/L (38482)	MCPB, water, filtered, recoverable, µg/L (38487)	Metalaxyl, water, filtered, recoverable, µg/L (50359)	Methiocarb, water, filtered, recoverable, µg/L (38501)	Methomyl, water, filtered, recoverable, µg/L (49296)
07-18-2011	0905	< .06	< .06	< .060	< .04	< .04	< .20	< .04	< .040	< .120

WATER-QUALITY DATA

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than]

Date	Sample start time	Metsulfuron-methyl, water, filtered, recoverable, µg/L (61697)	N-(4-Chlorophenyl)-N'-methyl-urea, water, filtered, recoverable, µg/L (61692)	Neburon, water, filtered, recoverable, µg/L (49294)	Nicosulfuron, water, filtered, recoverable, µg/L (50364)	Norflurazon, water, filtered, recoverable, µg/L (49293)	Oryzalin, water, filtered, recoverable, µg/L (49292)	Oxamyl, water, filtered, recoverable, µg/L (38866)	Picloram, water, filtered, recoverable, µg/L (49291)	Propham, water, filtered, recoverable, µg/L (49236)
07-18-2011	0905	< .14	< .06	< .02	< .10	< .04	< .04	< .12	< .12	< .040

WATER-QUALITY DATA

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[µg/L, micrograms per liter; WB, Untreated water supply; <, less than]

Date	Sample start time	Propiconazole, water, filtered, recoverable, µg/L (50471)	Propoxur, water, filtered, recoverable, µg/L (38538)	Siduron, water, filtered, recoverable, µg/L (38548)	Sulfometuron-methyl, water, filtered, recoverable, µg/L (50337)	Tebu-thiuron, water, filtered, recoverable, µg/L (82670)	Terbacil, water, filtered, recoverable, µg/L (04032)	Triclopyr, water, filtered, recoverable, µg/L (49235)	Caffeine, water, filtered, recoverable, µg/L (50305)
07-18-2011	0905	< .04	< .060	< .04	< .060	< .060	< .040	< .08	< .080