



Water-Data Report 2010

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, 52,276 mil gal, Mar. 23, elevation, 592.70 ft, in East basin, 83,966 mil gal, Mar. 24, elevation, 589.06 ft; minimum contents observed, in West basin, 28,501 mil gal, Sept. 7, elevation, 566.31 ft, in East basin, 50,193 mil gal, Sept. 29, elevation, 567.04 ft.

MONTH-END ELEVATION AND CONTENTS, AND MONTHLY DIVERSION

WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

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	584.70	44,160		586.25	79,252		
Oct. 31	589.27	48,691	+226	584.43	76,235	-151	691
Nov. 30	586.34	45,773	-150	586.51	79,688	+178	892
Dec. 31	589.99	49,407	+181	587.40	81,181	+74.5	873
CAL YR 2009	--	--	-0.63	--	--	+70.4	720
Jan. 31	589.14	48,561	-42.2	587.48	81,315	+6.69	848
Feb. 28	586.25	45,683	-159	581.40	71,345	-551	744
Mar. 31	591.35	50,847	+258	588.70	83,362	+600	400
Apr. 30	589.81	49,228	-83.5	586.96	80,443	-151	323
May 31	588.85	48,273	-47.7	586.80	80,175	-13.4	828
June 30	583.88	43,400	-251	583.47	74,686	-283	889
July 31	578.42	38,421	-248	578.13	66,201	-424	897
Aug. 31	568.73	30,361	-402	576.42	63,565	-132	891
Sept. 30	571.36	32,453	+108	567.41	50,691	-664	890
WTR YR 2010	--	--	-49.6	--	--	-121	764

* Elevation at 0800 hours on last day of month.

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WATER-QUALITY RECORDS

PERIOD OF RECORD.--

PESTICIDE DATA: 1999-2010 (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 compound can be presented.

WATER-QUALITY DATA

WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

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

Date	Sample start time	Medium code	Sampling method (82398)	1-Naphthol,	2,6-Diethyl-	2-Chloro-	2-Chloro-4-	2-Ethyl-6-	3,4-
				water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (49295)	aniline, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82660)	2',6'-diethylacetanilide, water, filtered, recoverable, µg/L (61618)	isopropyl-amino-6-triazine, water, filtered, recoverable, µg/L (04040)	methyl-aniline, water, filtered, recoverable, µg/L (61620)	Dichloro-aniline, water, filtered, recoverable, µg/L (61625)
05-13-2010	0900	WB	Grab smp tap wat sup	< .04	< .006	< .010	< .014	< .010	< .004
07-20-2010	1000	WB	Grab smp tap wat sup	< .04	< .006	< .010	E .005	< .010	< .004
09-16-2010	0800	WB	Grab smp tap wat sup	< .04	< .006	< .010	E .006	< .010	< .004

WATER-QUALITY DATA

WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

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

Date	4-Chloro-2-	Aceto-	Alachlor,	Atrazine,	Azinphos-	Azinphos-	Benfluralin,	Carbaryl,	Chlorpyrifos
	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)	oxyggen analog, water, filtered, recoverable, µg/L (61636)
05-13-2010	< .003	< .010	< .008	< .007	< .04	< .120	< .014	< .060	< .05
07-20-2010	< .003	< .010	< .008	E .006	< .04	< .120	< .014	< .060	< .05
09-16-2010	< .003	< .010	< .008	.010	< .04	< .120	< .014	< .060	< .05

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WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

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

Date	Chlorpyrifos, water, filtered, recoverable, µg/L (38933)	cis-Permethrin, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82687)	Cyfluthrin, water, filtered, recoverable, µg/L (61585)	Cypermethrin, water, filtered, recoverable, µg/L (61586)	DCPA, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82682)	Desulfinyl-fipronil amide, water, filtered, recoverable, µg/L (62169)	Desulfinyl-fipronil, water, filtered, recoverable, µg/L (62170)	Diazinon, water, filtered, recoverable, µg/L (39572)	Dichlorvos, water, filtered, recoverable, µg/L (38775)	Dicrotophos, water, filtered, recoverable, µg/L (38454)
05-13-2010	< .010	< .014	< .016	< .020	< .008	< .029	< .012	< .005	< .02	< .08
07-20-2010	< .010	< .014	< .016	< .020	< .008	< .029	< .012	< .005	< .02	< .08
09-16-2010	< .010	< .014	< .016	< .020	< .008	< .029	< .012	< .005	< .02	< .08

WATER-QUALITY DATA
WATER YEAR OCTOBER 2009 TO SEPTEMBER 2010

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

Date	Dieldrin, water, filtered, recoverable, µg/L (39381)	Dimethoate, water, filtered (0.7 micron glass fiber filter), recoverable, µg/L (82662)	Ethion monoxon, water, filtered, recoverable, µg/L (61644)	Ethion, water, filtered, recoverable, µg/L (82346)	Fenamiphos sulfone, water, filtered, recoverable, µg/L (61645)	Fenamiphos sulfoxide, water, filtered, recoverable, µg/L (61646)	Fenamiphos, water, filtered, recoverable, µg/L (61591)	Fipronil sulfide, water, filtered, recoverable, µg/L (62167)	Fipronil sulfone, water, filtered, recoverable, µg/L (62168)	Fipronil, water, filtered, recoverable, µg/L (62166)
05-13-2010	< .009	< .006	< .02	< .008	< .053	< .08	< .03	< .013	< .024	< .018
07-20-2010	< .009	< .006	< .02	< .008	< .053	< .08	< .03	< .013	< .024	< .018
09-16-2010	< .009	< .006	< .02	< .008	< .053	< .08	< .03	< .013	< .024	< .018

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

Date	Fonofos, water, filtered, recover- able, µg/L (04095)	Hexa- zinone, water, filtered, recover- able, µg/L (04025)	Iprodione, water, filtered, recover- able, µg/L (61593)	Isofen- phos, water, filtered, recover- able, µg/L (61594)	Malaoxon, water, filtered, recover- able, µg/L (61652)	Malathion, water, filtered, recover- able, µg/L (39532)	Metalaxyl, water, filtered, recover- able, µg/L (61596)	Methida- thion, water, filtered, recover- able, µg/L (61598)	Methyl paraoxon, water, filtered, recover- able, µg/L (61664)	Methyl parathion, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82667)
05-13-2010	< .004	< .008	< .014	< .006	< .080	< .016	< .007	< .006	< .01	< .008
07-20-2010	< .004	< .008	< .014	< .006	< .080	< .016	< .007	< .006	< .01	< .008
09-16-2010	< .004	< .008	< .014	< .006	< .080	< .016	< .007	< .006	< .01	< .008

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

Date	Metola- chlor, water, filtered, recover- able, µg/L (39415)	Metribuzin , water, filtered, recover- able, µg/L (82630)	Myclo- butanil, water, filtered, recover- able, µg/L (61599)	Pendi- methalin, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82683)	Phorate oxygen analog, water, filtered, recover- able, µg/L (61666)	Phorate, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82664)	Phosmet oxygen analog, water, filtered, recover- able, µg/L (61668)	Phosmet, water, filtered, recover- able, µg/L (61601)	Prometon, water, filtered, recover- able, µg/L (04037)	Prometryn, water, filtered, recover- able, µg/L (04036)
05-13-2010	< .014	< .012	< .010	< .012	< .03	< .020	< .05	< .034	< .01	< .006
07-20-2010	E .007	< .012	< .010	< .012	< .03	< .020	< .05	< .034	< .01	< .006
09-16-2010	< .014	< .012	< .010	< .012	< .03	< .020	< .05	< .034	< .01	< .006

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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	Propyz- amide, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82676)	Simazine, water, filtered, recover- able, µg/L (04035)	Tebu- thiuron, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82670)	Terbufos oxygen analog sulfone, water, filtered, recover- able, µg/L (61674)	Terbufos, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82675)	Terbuthyl- azine, water, filtered, recover- able, µg/L (04022)	Tribuphos, water, filtered, recover- able, µg/L (61610)	Trifluralin, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82661)
05-13-2010	< .004	< .006	< .03	< .04	< .02	< .01	< .018	< .018
07-20-2010	< .004	< .006	< .03	< .04	< .02	< .01	< .018	< .018
09-16-2010	< .004	< .006	< .03	< .04	< .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, recover- able, µg/L (50470)	2,4-D, water, filtered, recover- able, µg/L (39732)	2,4-DB, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (38746)	2-Chloro-4- isopropyl- amino-6- triazine, water, filtered, recover- able, µg/L (04040)	2-Chloro-6- ethyl- amino-4- triazine, water, filtered, recover- able, µg/L (04038)	2-Hydroxy- 4-iso- propyl- amino-6- ethyl- amino-s- triazine, water, filtered, recover- able, µg/L (50355)
07-20-2010	1005	WB	Grab smp tap wat sup	< .200	< .06	< .02	< .06	< .06	< .060

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

Date	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)	Bentazon, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (38711)
07-20-2010	< .040	< .040	< .08	< .060	< .12	< .040	< .04	< .060	< .06	< .06

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

Date	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)	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)
07-20-2010	< .06	< .12	< .04	< .040	< .10	< .080	< .06	< .04	< .04	< .04

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

Date	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)	Imazaquin, water, filtered, recover- able, µg/L (50356)	Imaze- thapyr, water, filtered, recover- able, µg/L (50407)	Imi- dacloprid, water, filtered, recover- able, µg/L (61695)
07-20-2010	< .04	< .04	< .04	< .04	< .06	< .06	< .04	< .06	< .06	< .060

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

Date	Linuron, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (38478)	MCPA, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (38482)	MCPB, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (38487)	Metalaxyl, water, filtered, recover- able, µg/L (50359)	Methio- carb, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (38501)	Methomyl, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49296)	Metsul- furon- methyl, water, filtered, recover- able, µg/L (61697)	N-(4- Chloro- phenyl)- N'-methyl- urea, water, filtered, recover- able, µg/L (61692)	Neburon, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49294)	Nico- sulfuron, water, filtered, recover- able, µg/L (50364)
07-20-2010	< .04	< .04	< .20	< .04	< .040	< .120	< .14	< .06	< .02	< .10

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

Date	Nor- flurazon, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49293)	Oryzalin, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49292)	Oxamyl, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (38866)	Picloram, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49291)	Propham, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49236)	Propicon- azole, water, filtered, recover- able, µg/L (50471)	Propoxur, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (38538)	Siduron, water, filtered, recover- able, µg/L (38548)	Sulfo- meturon- methyl, water, filtered, recover- able, µg/L (50337)	Tebu- thiuron, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (82670)
07-20-2010	< .04	< .04	< .12	< .12	< .040	< .04	< .060	< .04	< .060	< .060

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

Date	Terbacil, water, filtered, recover- able, µg/L (04032)	Triclopyr, water, filtered (0.7 micron glass fiber filter), recover- able, µg/L (49235)	Caffeine, water, filtered, recover- able, µg/L (50305)
07-20-2010	< .040	< .08	< .080