

01466500 MCDONALDS BRANCH IN BYRNE STATE FOREST, NJ

DELAWARE RIVER BASIN

LOCATION.--Lat 39°53'06", long 74°30'19" referenced to North American Datum of 1983, Woodland Township, Burlington County, NJ, Hydrologic Unit 02040202, on right bank, 25 ft upstream from culvert on Butterworth Road in Brendan T. Byrne State Forest, 3.4 mi upstream from confluence with Cooper Branch, and 7.0 mi southeast of Browns Mills.

DRAINAGE AREA.--2.35 mi².

SURFACE-WATER RECORDS

PERIOD OF RECORD.--October 1953 to current year. Prior to October 1962, published as "McDonald Branch in Lebanon State Forest". Prior to October 2003, published as "McDonalds Branch in Lebanon State Forest".

REVISED RECORDS.--WDR NJ-82-2: Drainage area.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 117.73 ft above NGVD of 1929 (levels from New Jersey Geological Survey benchmark).

REMARKS.--Records fair except for estimated daily discharges, which are poor. Gage-height record is collected above concrete control and discharge record, which includes leakage around control, is measured at site 785 ft downstream. Several measurements of water temperature were made during the year. Satellite gage-height telemetry at station.

PEAK DISCHARGES FOR CURRENT YEAR.--Peak discharges greater than base discharge of 7.0 ft³/s and (or) maximum (*):

| Date | Time | Discharge (ft³/s) | Gage height (ft) |
|-------------|-------------|-----------------------------------------|-----------------------------|
| Mar 2 | 0845 | 8.7 | 1.75 |
| Apr 16 | 1000 | *18 | *2.00 |

01466500 MCDONALDS BRANCH IN BYRNE STATE FOREST, NJ—Continued

DISCHARGE, CUBIC FEET PER SECOND
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007
DAILY MEAN VALUES

[e, estimated]

| Day | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|--------------|------|------|------|------|------|------|-------|------|------|------|------|-------|
| 1 | 1.5 | 2.1 | 3.0 | 3.4 | e2.2 | 2.7 | 2.3 | 3.5 | 2.1 | 1.6 | 1.4 | 1.0 |
| 2 | 1.5 | 2.0 | 2.9 | 4.5 | e2.2 | 6.7 | 2.3 | 3.4 | 2.1 | 1.5 | 1.3 | 1.0 |
| 3 | 1.4 | 1.9 | 2.8 | 4.1 | e2.2 | 6.8 | 2.3 | 3.3 | 2.2 | 1.5 | 1.2 | 1.0 |
| 4 | 1.4 | 1.9 | 2.7 | 3.3 | e2.1 | 4.8 | 2.8 | 3.1 | 3.5 | 1.4 | 1.2 | 1.0 |
| 5 | 1.4 | 1.9 | 2.6 | 3.0 | e2.1 | 3.8 | 3.0 | 3.0 | 3.1 | 1.6 | 1.1 | 1.0 |
| 6 | 1.6 | 1.8 | 2.6 | 3.1 | e2.0 | e3.1 | 2.8 | 3.0 | 2.5 | 1.5 | 1.3 | 0.99 |
| 7 | 1.6 | 1.8 | 2.6 | 2.9 | e2.0 | e2.5 | 2.6 | 3.0 | 2.2 | 1.5 | 1.2 | 0.96 |
| 8 | 1.6 | 3.4 | 2.5 | 5.1 | e1.9 | e2.5 | 2.5 | 2.9 | 2.1 | 1.4 | 1.1 | 0.96 |
| 9 | 1.5 | 4.7 | 2.5 | 6.0 | e1.9 | e2.4 | 2.4 | 2.9 | 2.0 | 1.4 | 1.1 | 0.95 |
| 10 | 1.5 | 4.3 | 2.5 | 4.3 | e1.9 | e2.6 | 2.3 | 2.9 | 1.9 | 1.4 | 1.2 | 0.97 |
| 11 | 1.7 | 3.2 | 2.5 | 3.5 | e1.9 | 2.8 | 2.3 | 2.9 | 1.9 | 1.3 | 1.2 | 0.97 |
| 12 | 2.2 | 2.9 | 2.4 | 3.2 | e1.9 | 2.7 | 3.6 | 2.9 | 1.9 | 1.3 | 1.1 | 0.95 |
| 13 | 1.9 | 4.5 | 2.5 | 3.0 | e1.9 | 2.5 | 4.4 | 2.8 | 1.9 | 1.3 | 1.1 | 0.93 |
| 14 | 1.7 | 6.2 | 2.5 | 3.0 | e2.1 | 2.6 | 3.8 | 2.7 | 1.9 | 1.3 | 1.1 | 0.89 |
| 15 | 1.6 | 4.7 | 2.4 | 3.0 | e2.4 | 2.6 | 6.6 | 2.6 | 1.9 | 1.3 | 1.0 | 0.92 |
| 16 | 1.6 | 3.9 | 2.4 | 2.9 | e2.4 | 3.0 | 15 | 2.7 | 1.8 | 1.2 | 1.0 | 0.89 |
| 17 | 1.8 | 3.6 | 2.4 | 2.7 | e2.4 | 3.9 | 9.5 | 3.0 | 1.7 | 1.2 | 1.0 | 0.88 |
| 18 | 2.4 | 3.3 | 2.3 | 2.6 | e2.3 | 4.1 | 6.4 | 2.8 | 1.7 | 1.4 | 1.1 | 0.88 |
| 19 | 2.2 | 3.2 | 2.3 | 2.7 | e2.3 | 3.4 | 5.4 | 2.6 | 1.7 | 1.4 | 1.2 | 0.88 |
| 20 | 2.6 | 3.0 | 2.3 | 2.7 | e2.3 | 3.5 | 4.8 | 2.6 | 1.8 | e1.2 | 1.5 | 0.88 |
| 21 | 2.4 | 2.8 | 2.3 | e2.6 | e2.3 | 3.2 | 4.5 | 2.6 | 1.7 | 1.2 | 1.6 | 0.86 |
| 22 | 2.2 | 2.8 | 2.3 | e2.5 | e2.4 | 3.1 | 4.2 | 2.5 | 1.6 | 1.2 | 2.0 | 0.86 |
| 23 | 2.1 | 3.8 | 3.0 | e2.5 | e2.6 | 3.0 | 4.0 | 2.5 | 1.6 | 1.5 | e1.8 | 0.86 |
| 24 | 2.0 | 5.0 | 2.7 | e2.4 | e2.6 | 2.9 | 3.9 | 2.4 | 1.5 | 1.4 | e1.5 | 0.85 |
| 25 | 1.9 | 4.7 | 2.8 | e2.4 | e2.6 | 2.8 | 3.7 | 2.4 | 1.5 | 1.3 | 1.3 | 0.85 |
| 26 | 1.8 | e3.9 | 3.3 | e2.3 | e2.8 | 2.6 | 3.5 | 2.3 | 1.7 | 1.3 | 1.2 | 0.85 |
| 27 | 1.8 | e3.4 | 3.1 | e2.3 | 2.9 | 2.6 | 4.4 | 2.3 | e1.9 | 1.2 | 1.2 | 0.85 |
| 28 | 2.5 | 3.2 | 2.9 | e2.3 | 3.1 | 2.5 | 4.8 | 2.3 | 2.1 | 1.2 | 1.1 | 0.84 |
| 29 | 2.3 | 3.0 | 2.6 | e2.2 | --- | 2.4 | 4.3 | 2.2 | 1.9 | 1.4 | 1.1 | 0.83 |
| 30 | 2.3 | 3.0 | 2.5 | e2.2 | --- | 2.3 | 3.9 | 2.2 | 1.7 | 1.6 | 1.1 | 0.83 |
| 31 | 2.3 | --- | 2.4 | e2.2 | --- | 2.3 | --- | 2.1 | --- | 1.5 | 1.1 | --- |
| Total | 58.3 | 99.9 | 80.6 | 94.9 | 63.7 | 98.7 | 128.3 | 84.4 | 59.1 | 42.5 | 38.4 | 27.38 |
| Mean | 1.88 | 3.33 | 2.60 | 3.06 | 2.27 | 3.18 | 4.28 | 2.72 | 1.97 | 1.37 | 1.24 | 0.91 |
| Max | 2.6 | 6.2 | 3.3 | 6.0 | 3.1 | 6.8 | 15 | 3.5 | 3.5 | 1.6 | 2.0 | 1.0 |
| Min | 1.4 | 1.8 | 2.3 | 2.2 | 1.9 | 2.3 | 2.3 | 2.1 | 1.5 | 1.2 | 1.0 | 0.83 |
| Cfsm | 0.80 | 1.42 | 1.11 | 1.30 | 0.97 | 1.35 | 1.82 | 1.16 | 0.84 | 0.58 | 0.53 | 0.39 |
| In. | 0.92 | 1.58 | 1.28 | 1.50 | 1.01 | 1.56 | 2.03 | 1.34 | 0.94 | 0.67 | 0.61 | 0.43 |

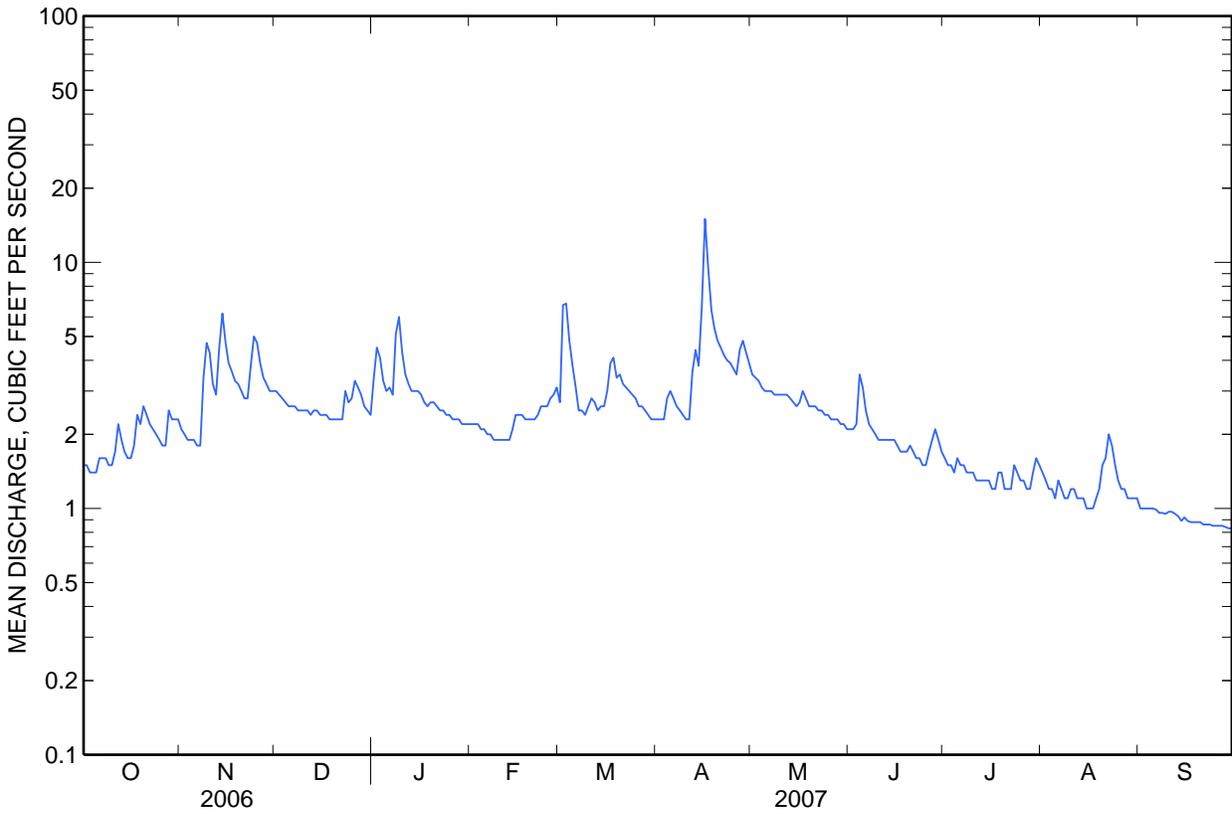
STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 2007, BY WATER YEAR (WY)

| | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep |
|-------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Mean | 1.54 | 1.71 | 2.05 | 2.28 | 2.39 | 2.84 | 2.89 | 2.58 | 2.12 | 1.83 | 1.75 | 1.59 |
| Max | 4.45 | 4.82 | 5.75 | 4.78 | 5.69 | 5.67 | 5.74 | 6.86 | 5.35 | 4.15 | 5.65 | 4.31 |
| (WY) | (1959) | (1973) | (1973) | (1973) | (1973) | (1979) | (1984) | (1998) | (1979) | (1958) | (1958) | (1958) |
| Min | 0.80 | 0.88 | 0.87 | 0.85 | 0.83 | 0.94 | 1.10 | 1.17 | 1.05 | 0.90 | 0.80 | 0.71 |
| (WY) | (1996) | (2002) | (2002) | (2002) | (2002) | (2002) | (2002) | (1995) | (1995) | (2002) | (2002) | (1995) |

01466500 MCDONALDS BRANCH IN BYRNE STATE FOREST, NJ—Continued

SUMMARY STATISTICS

| | Calendar Year 2006 | | Water Year 2007 | | Water Years 1954 - 2007 | |
|---------------------------------|--------------------|--------|-----------------|-----------|-------------------------|--------------|
| Annual total | 742.52 | | 876.18 | | | |
| Annual mean | 2.03 | | 2.40 | | 2.13 | |
| Highest annual mean | | | | | 3.85 | 1973 |
| Lowest annual mean | | | | | 0.95 | 2002 |
| Highest daily mean | 6.2 | Nov 14 | 15 | Apr 16 | 20 | Feb 28, 1958 |
| Lowest daily mean | 0.97 | Aug 23 | 0.83 | Sep 29-30 | 0.50 | Oct 13, 1995 |
| Annual seven-day minimum | 0.99 | Aug 19 | 0.84 | Sep 24 | 0.58 | Oct 8, 1995 |
| Maximum peak flow | | | 18 | Apr 16 | 38 | Jul 13, 2004 |
| Maximum peak stage | | | 2.00 | Apr 16 | 2.33 | Aug 25, 1958 |
| Instantaneous low flow | | | 0.83 | Sep 28-30 | 0.49 | Oct 13, 1995 |
| Annual runoff (cfsm) | 0.866 | | 1.02 | | 0.906 | |
| Annual runoff (inches) | 11.75 | | 13.87 | | 12.31 | |
| 10 percent exceeds | 3.0 | | 3.8 | | 3.5 | |
| 50 percent exceeds | 1.8 | | 2.3 | | 1.8 | |
| 90 percent exceeds | 1.3 | | 1.1 | | 1.1 | |



01466500 MCDONALDS BRANCH IN BYRNE STATE FOREST, NJ—Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-96, 1998 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1968 to September 1992.

pH: October 1984 to September 1992.

WATER TEMPERATURE: October 1960 to September 1992.

DISSOLVED OXYGEN: October 1984 to September 1992.

REMARKS.--Total nitrogen (00600) equals the sum of filtered ammonia-plus-organic nitrogen (00623), filtered nitrite-plus-nitrate nitrogen (00631), and total particulate nitrogen (49570). Chemical analyses are from samples collected as water flows over the weir at the gaging station. All discharge record represents flow at a point 785 ft downstream of the gaging station. Discharges at the weir may be about 1 ft³/s less than the discharge values in the following water-quality table. Cooperative Network Site Descriptor: Background and Low-Level Mercury Assessment special study site, NJ Department of Environmental Protection Watershed Management Area 19. Samples on Nov 16, Feb 06, May 14, and Aug 13 were collected as part of the Ambient Surface-Water-Quality Monitoring Network; those on May 03 and Aug 16 were for the low-level mercury assessment. All other samples were collected as part of the U.S. Geological Survey Hydrologic Benchmark Network.

COOPERATION.--Physical measurements and samples for laboratory analyses on Nov 16, Feb 06, May 03, 14, and Aug 13, 16 were provided by personnel of the NJ Department of Environmental Protection. Determinations of dissolved ammonia, dissolved orthophosphate, and suspended residue on those dates were performed by the NJ Department of Health and Senior Services, Environmental and Chemical Laboratory. Analyses of samples collected as part of the Hydrologic Benchmark Network were performed by the USGS New York Water Science Center Laboratory in Troy, New York.

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 5

[Remark codes: <, less than; E, estimated.]

| Date | Time | Sample type | Instantaneous discharge, cfs (00061) | Turbidity white light, det ang 90+/-30 corrctd NTRU (63676) | UV absorbance, 254 nm, wat flt units /cm (50624) | UV absorbance, 280 nm, wat flt units /cm (61726) | Barometric pressure, mm Hg (00025) | Dissolved oxygen, mg/L (00300) | Dissolved oxygen, percent of saturation (00301) | pH, water, unfltrd field, std units (00400) | Specific conductance, wat unf 25 degC μS/cm (00095) | Temperature, air, deg C (00020) |
|------------|------|---------------|--------------------------------------|-------------------------------------------------------------|--------------------------------------------------|--------------------------------------------------|------------------------------------|--------------------------------|-------------------------------------------------|---------------------------------------------|-----------------------------------------------------|---------------------------------|
| Nov | | | | | | | | | | | | |
| 16... | 1030 | Environmental | 3.9 | .5 | .692 | .521 | 754 | 3.1 | 30 | 3.9 | 65 | 19.0 |
| Feb | | | | | | | | | | | | |
| 06... | 1045 | Environmental | E2.0 | .3 | .294 | .219 | 767 | 6.9 | 51 | 4.2 | 53 | -8.0 |
| May | | | | | | | | | | | | |
| 03... | 0945 | Field Blank | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | 1000 | Environmental | 3.3 | .2 | -- | -- | 765 | 6.2 | 57 | 4.0 | 55 | 17.0 |
| 03... | 1015 | Environmental | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 1045 | Environmental | 2.8 | .3 | .534 | .405 | 765 | 2.8 | 26 | 4.0 | 50 | 17.5 |
| Aug | | | | | | | | | | | | |
| 13... | 1000 | Environmental | 1.1 | .3 | .271 | .212 | 755 | 2.7 | 27 | 4.2 | 30 | 26.0 |
| 16... | 1130 | Field Blank | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 1145 | Environmental | 1.0 | .9 | -- | -- | 758 | 2.5 | 25 | 4.5 | 28 | 27.0 |

01466500 MCDONALDS BRANCH IN BYRNE STATE FOREST, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 5

[Remark codes: <, less than; E, estimated.]

| Date | Temperature, water, deg C (00010) | Hard- ness, water, mg/L as CaCO3 (00900) | Calcium water, fltrd, mg/L (00915) | Magnes- ium, water, fltrd, mg/L (00925) | Potas- sium, water, fltrd, mg/L (00935) | Sodium, water, fltrd, mg/L (00930) | Chlor- ide, water, fltrd, mg/L (00940) | Fluor- ide, water, fltrd, mg/L (00950) | Silica, water, fltrd, mg/L (00955) | Sulfate water, fltrd, mg/L (00945) | Residue on evap. at 180degC wat flt mg/L (70300) | Residue total non- filter- able, mg/L (00530) | Ammonia + org-N, water, fltrd, mg/L as N (00623) |
|--------------|--------------------------------------------|---------------------------------------------------------|------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------|------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------|-----------------------------------------------------------------------|
| Nov 16... | 13.3 | 3 | .68 | .409 | .21 | 1.94 | 3.73 | <.10 | 3.1 | 3.98 | 48 | 1 | .36 |
| Feb 06... | 2.5 | 3 | .51 | .427 | .22 | 1.96 | 3.42 | <.10 | 4.1 | 4.70 | 27 | 2 | .17 |
| May 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | 11.8 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | 12.5 | 2 | .44 | .314 | .12 | 1.77 | 3.19 | <.10 | 2.8 | 4.68 | 32 | <1 | .26 |
| Aug 13... | 16.0 | 2 | .36 | .334 | .24 | 1.84 | 3.38 | <.10 | 4.7 | 3.52 | 23 | 1 | E.06 |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | 16.0 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 3 of 5

[Remark codes: <, less than; E, estimated.]

| Date | Ammonia water, fltrd, mg/L as N (00608) | Nitrate + nitrite water fltrd, mg/L as N (00631) | Partic- ulate nitro- gen, susp, water, mg/L (49570) | Ortho- phos- phate, water, fltrd, mg/L as P (00671) | Phos- phorus, water, fltrd, mg/L (00666) | Phos- phorus, water, unfltrd mg/L (00665) | Total carbon, suspnd sedimnt total, mg/L (00694) | Inor- ganic carbon, suspnd sedimnt total, mg/L (00688) | Organic carbon, suspnd sedimnt total, mg/L (00689) | Organic carbon, water, fltrd, mg/L (00681) | Arsenic water, fltrd, µg/L (01000) | Arsenic water, unfltrd µg/L (01002) | Barium, water, unfltrd recover- able, µg/L (01007) |
|--------------|--------------------------------------------------------|-----------------------------------------------------------------------|--------------------------------------------------------------------------|--------------------------------------------------------------------------|---------------------------------------------------------|----------------------------------------------------------|--------------------------------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------------|-----------------------------------------------------------|------------------------------------------------|-------------------------------------------------|----------------------------------------------------------------------|
| Nov 16... | .018 | <.06 | <.02 | E.003 | E.005 | <.008 | .2 | <.1 | .2 | 17.0 | -- | -- | -- |
| Feb 06... | E.006 | <.06 | <.02 | <.010 | <.008 | <.008 | <.1 | <.1 | <.1 | 6.1 | .21 | .23 | 11.0 |
| May 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 14... | <.010 | <.06 | <.02 | <.010 | <.008 | <.008 | <.1 | <.1 | <.1 | 11.4 | -- | -- | -- |
| Aug 13... | .026 | <.06 | <.02 | <.010 | <.008 | <.008 | .1 | <.1 | .1 | 4.8 | .21 | .27 | 10.9 |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

01466500 MCDONALDS BRANCH IN BYRNE STATE FOREST, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 4 of 5

[Remark codes: <, less than; E, estimated.]

| Date | Beryllium, water, unfltrd recover-able, µg/L (01012) | Boron, water, fltrd, µg/L (01020) | Boron, water, unfltrd recover-able, µg/L (01022) | Cadmium water, unfltrd µg/L (01027) | Chromium, water, unfltrd recover-able, µg/L (01034) | Copper, water, unfltrd recover-able, µg/L (01042) | Iron, water, unfltrd recover-able, µg/L (01045) | Lead, water, unfltrd recover-able, µg/L (01051) | Manganese, water, unfltrd recover-able, µg/L (01055) | Mercury water, unfltrd low level ng/L (50286) | Mercury water, unfltrd recover-able, µg/L (71900) | Nickel, water, unfltrd recover-able, µg/L (01067) | Selenium, water, unfltrd µg/L (01147) |
|---------------------|------------------------------------------------------|-----------------------------------|--------------------------------------------------|-------------------------------------|-----------------------------------------------------|---------------------------------------------------|-------------------------------------------------|-------------------------------------------------|------------------------------------------------------|-----------------------------------------------|---------------------------------------------------|---------------------------------------------------|---------------------------------------|
| | Nov 16... | -- | 14 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Feb 06... | E.04 | 6.9 | 8 | .03 | E.30 | <1.2 | 136 | .77 | 9.1 | -- | <.010 | .53 | .15 |
| May 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | <.04 | -- | -- | -- |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 3.99 | -- | -- | -- |
| 03... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 4.11 | -- | -- | -- |
| 14... | -- | 9.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Aug 13... | <.06 | 8.0 | E8 | .03 | <.60 | <1.2 | 253 | .72 | 6.7 | -- | E.006 | .42 | .11 |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | <.04 | -- | -- | -- |
| 16... | -- | -- | -- | -- | -- | -- | -- | -- | -- | 2.16 | -- | -- | -- |

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 5 of 5

[Remark codes: <, less than; E, estimated.]

| Date | Silver, water, unfltrd recover-able, µg/L (01077) | Zinc, water, unfltrd recover-able, µg/L (01092) | Methylmercury water, unfltrd low level ng/L (50284) |
|---------------------|---------------------------------------------------|-------------------------------------------------|-----------------------------------------------------|
| Nov 16... | -- | -- | -- |
| Feb 06... | <.02 | 9 | -- |
| May 03... | -- | -- | <.04 |
| 03... | -- | -- | .04 |
| 03... | -- | -- | <.04 |
| 14... | -- | -- | -- |
| Aug 13... | <.02 | 3.9 | -- |
| 16... | -- | -- | <.04 |
| 16... | -- | -- | .31 |

01466500 MCDONALDS BRANCH IN BYRNE STATE FOREST, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 1 of 2

[Remark codes: <, less than; E, estimated.]

| Date | Time | Instantaneous discharge, cfs (00061) | Temperature, water, deg C (00010) | Hardness, water, mg/L as CaCO3 (00900) | Calcium water, fltrd, mg/L (00915) | Magnesium, water, fltrd, mg/L (00925) | Potassium, water, fltrd, mg/L (00935) | Sodium, water, fltrd, mg/L (00930) | ANC, water, unfltrd Gran titr., ueq/L (00409) | Chloride, water, fltrd, mg/L (00940) | Silica, water, fltrd, mg/L (00955) | Sulfate water, fltrd, mg/L (00945) | Ammonia water, unfltrd mg/L as N (00610) |
|------------|------|--------------------------------------|-----------------------------------|----------------------------------------|------------------------------------|---------------------------------------|---------------------------------------|------------------------------------|-----------------------------------------------|--------------------------------------|------------------------------------|------------------------------------|------------------------------------------|
| Oct | | | | | | | | | | | | | |
| 18... | 1410 | 2.4 | 12.6 | 4 | .67 | .47 | .13 | 1.92 | -35 | 4.1 | 1.61 | 4.9 | <.028 |
| Nov | | | | | | | | | | | | | |
| 08... | 0850 | 2.8 | 9.7 | 4 | .77 | .47 | .17 | 1.81 | -82 | 4.1 | 1.43 | 5.0 | <.028 |
| 09... | 1400 | 5.3 | 11.1 | 4 | .78 | .40 | .16 | 1.73 | -119 | 3.9 | 1.18 | 5.2 | .028 |
| 13... | 1500 | 4.9 | 12.3 | 3 | .61 | .39 | .16 | 1.71 | -121 | 4.1 | 1.19 | 4.1 | .029 |
| 14... | 0615 | 6.6 | 13.0 | 3 | .75 | .37 | .17 | 1.73 | -125 | 3.7 | 1.25 | 4.2 | .057 |
| 23... | 2010 | 4.1 | 8.9 | 3 | .65 | .36 | .11 | 1.82 | -109 | 3.9 | 1.47 | 3.8 | .068 |
| Dec | | | | | | | | | | | | | |
| 18... | 1330 | 2.3 | 7.4 | 3 | .49 | .35 | .11 | 1.80 | -65 | 3.9 | 1.71 | 5.0 | .035 |
| Jan | | | | | | | | | | | | | |
| 09... | 0550 | 6.6 | 7.7 | 3 | .61 | .34 | .10 | 1.90 | -86 | 3.3 | 1.40 | 4.6 | .143 |
| Feb | | | | | | | | | | | | | |
| 21... | 1200 | E2.3 | 3.2 | 4 | .63 | .47 | .22 | 2.08 | -77 | 4.0 | 1.89 | 5.7 | <.028 |
| Mar | | | | | | | | | | | | | |
| 02... | 0455 | 4.2 | 2.7 | 3 | .63 | .45 | .28 | 1.94 | -98 | 3.6 | 1.52 | 5.8 | .048 |
| 02... | 0650 | 6.2 | 2.5 | 3 | .63 | .42 | .36 | 1.87 | -98 | 3.3 | 1.31 | 5.6 | .061 |
| 02... | 1320 | 8.1 | 2.1 | 4 | .70 | .59 | .34 | 1.75 | -51 | 3.5 | 1.30 | 5.4 | .055 |
| 03... | 0520 | 7.4 | 1.3 | 4 | .53 | .63 | .28 | 1.82 | -75 | 3.0 | 1.56 | 4.7 | .207 |
| 20... | 1120 | 3.5 | 2.5 | 3 | .49 | .34 | .26 | 1.78 | -100 | 2.8 | 1.31 | 4.8 | <.028 |
| 21... | 1330 | 3.2 | 2.6 | 3 | .48 | .34 | .24 | 1.79 | -96 | 3.0 | 1.26 | 5.0 | <.028 |
| Apr | | | | | | | | | | | | | |
| 13... | 2250 | 4.5 | 6.0 | 3 | .49 | .32 | .11 | 1.84 | -67 | 3.0 | .901 | 5.0 | .043 |
| 15... | 1040 | 6.0 | 6.3 | 3 | .50 | .31 | .12 | 1.73 | -104 | 2.8 | .790 | 4.8 | <.028 |
| 15... | 2045 | 9.8 | 8.0 | 3 | .61 | .28 | .12 | 1.62 | -96 | 2.9 | .660 | 4.7 | .035 |
| 16... | 1155 | 17 | 6.2 | 3 | .76 | .29 | .10 | 1.56 | -98 | 2.5 | .836 | 4.3 | <.028 |
| 17... | 0810 | 10 | 6.2 | 2 | .55 | .25 | .08 | 1.55 | -109 | 2.7 | .838 | 3.8 | .028 |
| 19... | 0725 | 5.4 | 6.8 | 3 | .64 | .33 | .11 | 1.61 | -41 | 2.5 | 1.05 | 3.8 | <.028 |
| Jun | | | | | | | | | | | | | |
| 14... | 0815 | 1.9 | 15.0 | 2 | .48 | .28 | .18 | 1.71 | -24 | 3.6 | 1.53 | 2.1 | <.028 |
| Jul | | | | | | | | | | | | | |
| 25... | 1227 | 1.3 | 16.7 | 3 | .43 | .37 | .32 | 1.76 | -36 | 3.7 | 1.91 | 2.5 | <.028 |
| 29... | 1835 | 1.8 | 23.7 | 3 | .44 | .36 | .22 | 1.82 | -29 | 3.7 | 2.04 | 2.6 | .056 |
| Aug | | | | | | | | | | | | | |
| 22... | 1420 | 2.0 | 18.4 | 3 | .55 | .44 | .26 | 1.95 | -79 | 3.7 | 1.73 | 3.5 | .033 |
| Sep | | | | | | | | | | | | | |
| 27... | 0900 | .86 | 14.3 | 2 | .34 | .33 | .24 | 1.77 | -6 | 3.3 | 2.27 | 2.7 | <.028 |

01466500 MCDONALDS BRANCH IN BYRNE STATE FOREST, NJ—Continued

WATER-QUALITY DATA
WATER YEAR OCTOBER 2006 TO SEPTEMBER 2007

Part 2 of 2

[Remark codes: <, less than; E, estimated.]

| Date | Nitrate water, fltrd, mg/L as N (00618) | Organic carbon, water, fltrd, mg/L (00681) | Alum- inum, water, fltrd, µg/L (01106) | Organic mono- meric alum- inum, wat unf µg/L (49288) |
|------------|--------------------------------------------------------|-----------------------------------------------------------|-------------------------------------------------------|---------------------------------------------------------------------------|
| Oct | | | | |
| 18... | <.03 | 12.4 | 256 | 109 |
| Nov | | | | |
| 08... | <.03 | 12.0 | 257 | 108 |
| 09... | <.03 | 18.3 | 365 | 156 |
| 13... | <.03 | 19.5 | 350 | 156 |
| 14... | <.03 | 22.7 | 391 | 144 |
| 23... | <.03 | 17.5 | 358 | 127 |
| Dec | | | | |
| 18... | <.03 | 9.5 | 222 | 65 |
| Jan | | | | |
| 09... | <.03 | 19.5 | 362 | 132 |
| Feb | | | | |
| 21... | .03 | 6.2 | 214 | 52 |
| Mar | | | | |
| 02... | .09 | 9.6 | 244 | 94 |
| 02... | .13 | 10.5 | 246 | 94 |
| 02... | .05 | 13.3 | 282 | 108 |
| 03... | <.03 | 10.8 | 266 | 107 |
| 20... | <.03 | 11.8 | 287 | 107 |
| 21... | <.03 | 11.3 | 269 | 110 |
| Apr | | | | |
| 13... | <.03 | 12.8 | 272 | 115 |
| 15... | .03 | 14.3 | 263 | 114 |
| 15... | <.03 | 14.8 | 285 | 138 |
| 16... | <.03 | 17.9 | 318 | 148 |
| 17... | <.03 | 20.5 | 387 | 160 |
| 19... | <.03 | 14.6 | 290 | 126 |
| Jun | | | | |
| 14... | <.03 | 10.5 | 266 | 104 |
| Jul | | | | |
| 25... | <.03 | 5.8 | 108 | 51 |
| 29... | <.03 | 9.5 | 137 | 66 |
| Aug | | | | |
| 22... | <.03 | 16.3 | 263 | 136 |
| Sep | | | | |
| 27... | <.03 | 2.6 | 62 | <40 |