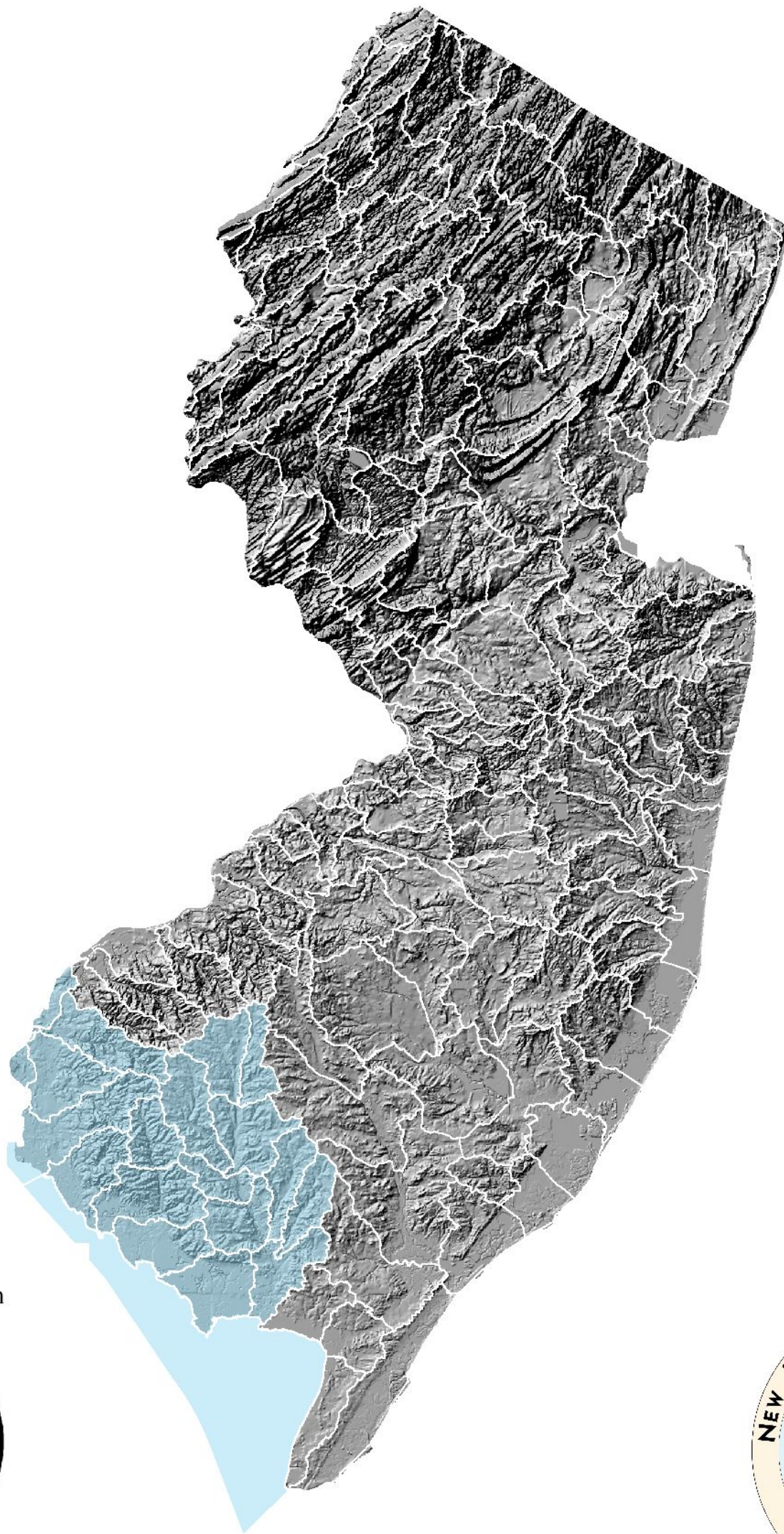


New Jersey Water Withdrawals, Uses, Transfers, and Discharges by HUC11, 1990 to 1999

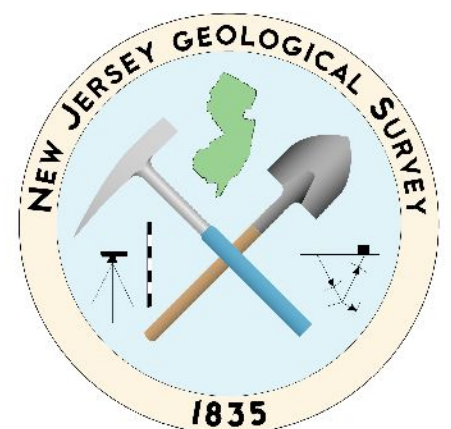
Appendix 17: HUC11 Tables, Figures and Maps WMA 17 - Maurice, Salem and Cohansey



Let's protect our earth



NEW JERSEY DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Water Withdrawals, Transfers and Discharges for DELAWARE BAY (CAPE MAY PT TO FISHING CK) --- 02040204910

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Delaware Bay (Cape May Pt to Fishing Ck)	02040204910

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	0	0	0	0	0	0	0	0	0	0	0
sum	0	0	0	0	0	0	0	0	0	0	0
ground-water:³											
confined	0	0	0	0	0	0	0	0	0	0	0
unconfined	0	0	0	0	0	0	0	0	0	0	0
sum	0	0	0	0	0	0	0	0	0	0	0
total withdrawals:	0	0	0	0	0	0	0	0	0	0	0

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	0	0	0	0	0	0	0	0	0	0	0
exports ¹¹	0	0	0	0	0	0	0	0	0	0	0
net	0	0	0	0	0	0	0	0	0	0	0

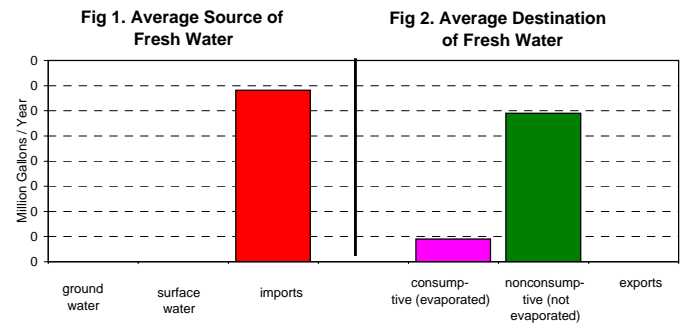


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
domestic wells											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
industrial & commercial & mining											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
agricultural & non-agricultural irrigation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
PERCENTAGES:											
nonconsumptive	85.2%	85.0%	87.0%	87.0%	86.9%	86.9%	86.9%	99.3%	86.6%	87.0%	86.7%
consumptive	14.8%	15.0%	13.0%	13.0%	13.1%	13.1%	13.1%	0.7%	13.4%	13.0%	13.3%

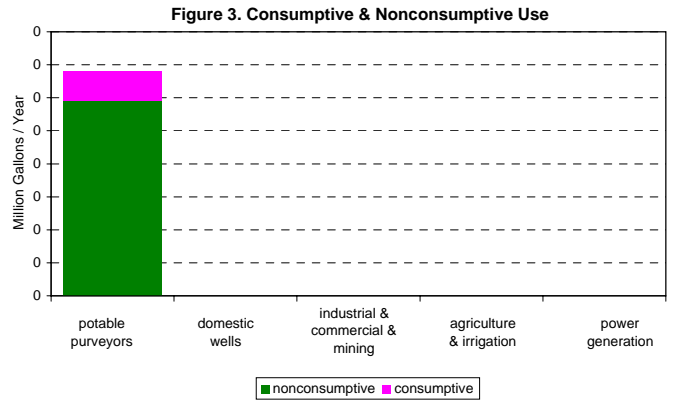


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive
potable purveyors	0	0	0	0	0	0	0	0	0	0
domestic wells	0	0	0	0	0	0	0	0	0	0
industrial & commercial & mining	0	0	0	0	0	0	0	0	0	0
agricultural & non-agricultural irrig.	0	0	0	0	0	0	0	0	0	0
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	0	0	0	0	0	0	0	0	0	0

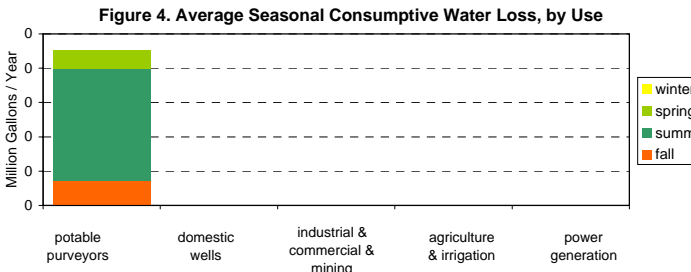


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	1	1	1	1	1	1	1	1	1	1	1
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	1	1	1	1	1	1	1	1	1	1	1

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	0	0	0	0	0	0	0	0	0	0	0

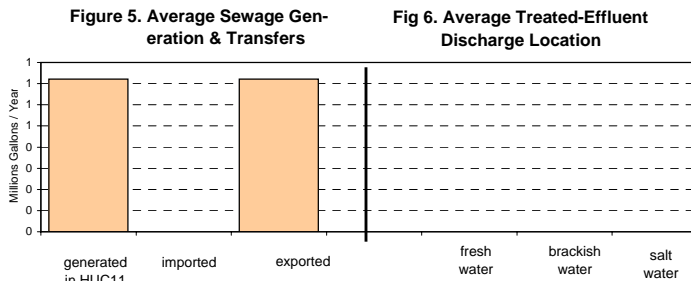


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	0
ground water	0
total	0

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	0
commercial	0
industrial	0
irrigation	0
mining	0
potable supply	0
power generation	0
total	0

Table 9. HUC11 Descriptive Statistics

--- **Area:**

in this HUC11 only	348.6	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	348.6	sq. mi.

(this HUC11 onshore area: 0.0 sq. mi.)

--- **Population of this HUC11:**

Year	Population	Change
1940	0	-
1950	0	43.3%
1960	0	31.7%
1970	0	18.7%
1980	0	13.7%
1990	0	-0.1%
2000	0	8.6%
2010	0	7.7% est. ¹²
2020	0	10.0% est. ¹²
2030	0	7.9% est. ¹²

--- **Land Use of this HUC11:**

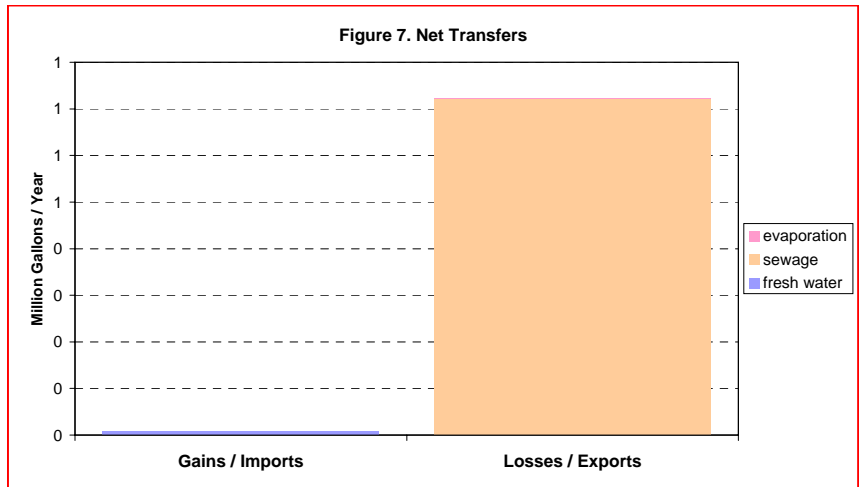
Type	Year		Change
	1986	1995	
ag.	0.0%	0.0%	0.0%
barren	0.0%	0.0%	0.0%
forest	0.0%	0.0%	0.0%
urban	0.0%	0.0%	0.0%
water	100.0%	100.0%	0.0%
wetlands	0.0%	0.0%	0.0%

--- **% of this HUC11 in:**

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

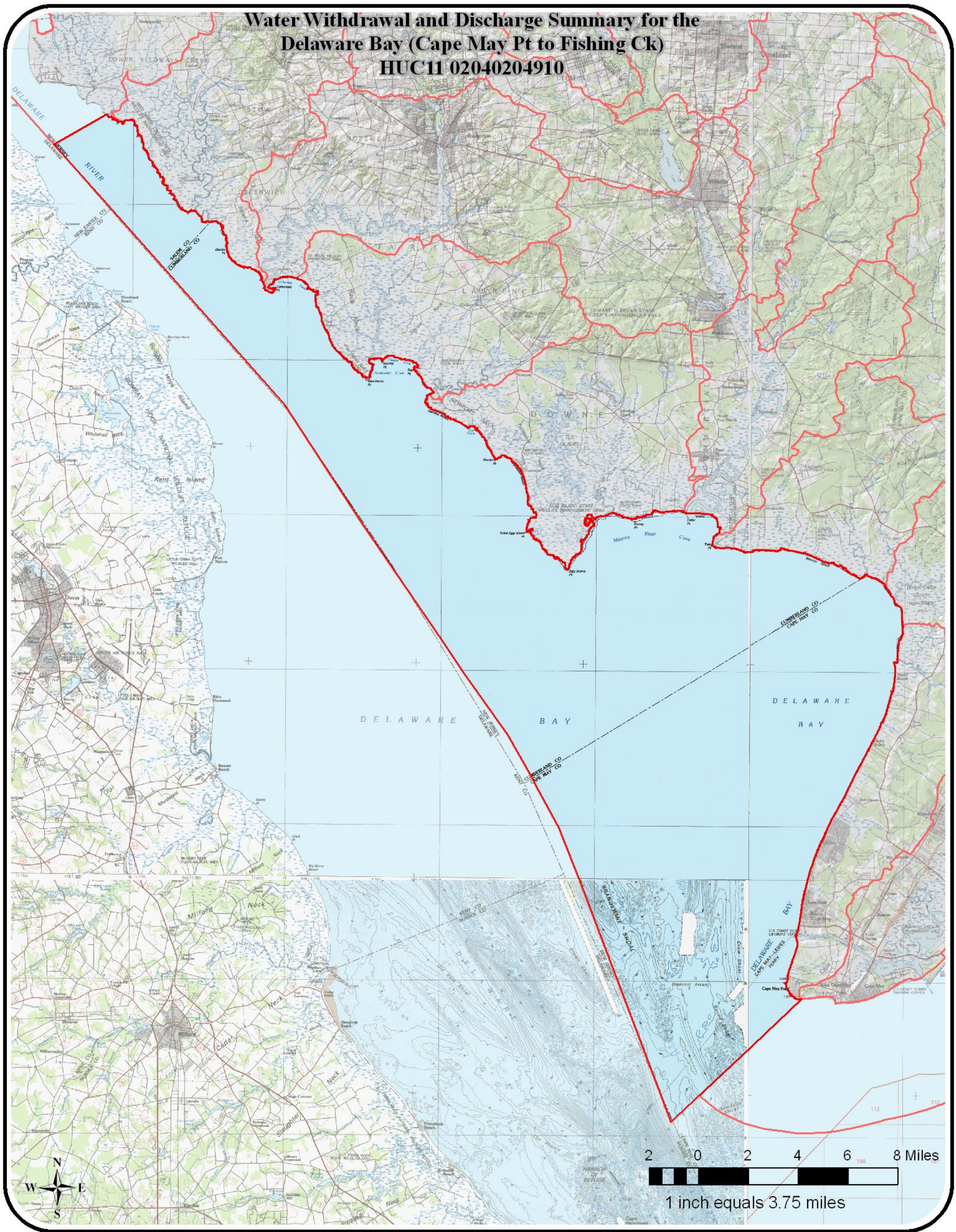
location	#	name
downstream: (if any)	#N/A	#N/A
upstream: (if any)	--	--
	--	--
	--	--
	--	--
	--	--
	--	--
	--	--
	--	--



NOTES:

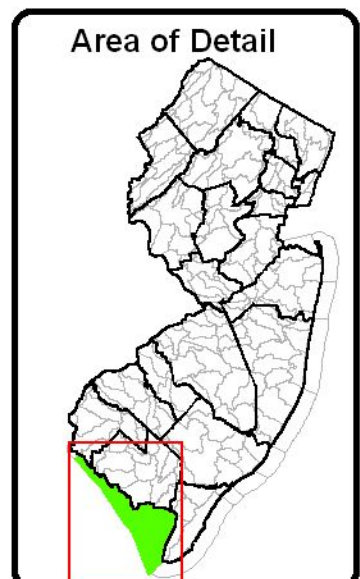
- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

Water Withdrawal and Discharge Summary for the Delaware Bay (Cape May Pt to Fishing Ck) HUC11 02040204910



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	1999 Withdrawal
GW Confined □	No 1999 Use ■●▲
GW Unconfined ○	1 - 50 MGY ■●▲
SW △	51 - 100 MGY ■●▲
	101 - 500 MGY ■●▲
	> 500 MGY ■●▲
	MGY = millions of gallons per year
	Use Group
	Agricultural ●
	Commercial ●
	Industrial ●
	Irrigation ●
	Mining ●
	Not Classified ●
	Potable Supply ●
	Power Generation ●



Water Withdrawals, Transfers and Discharges for PENNSVILLE / PENNS GROVE TRIBS --- 02040206020

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Pennsville / Penns Grove tribs	02040206020

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	0	0	0	0	0	0	0	0	0	0	0
sum	0	0	0	0	0	0	0	0	0	0	0
ground-water:³											
confined	1,386	1,379	1,121	1,225	1,230	1,309	1,104	1,036	1,022	1,111	1,192
unconfined	413	696	846	940	976	859	783	860	880	999	825
sum	1,799	2,075	1,967	2,166	2,206	2,169	1,887	1,896	1,901	2,110	2,018
total withdrawals:	1,799	2,075	1,967	2,166	2,206	2,169	1,887	1,896	1,901	2,110	2,018

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	570	359	336	245	231	265	223	300	264	231	302
exports ¹¹	4	48	49	69	63	62	41	56	61	67	52
net	566	311	287	176	168	204	182	243	203	164	250

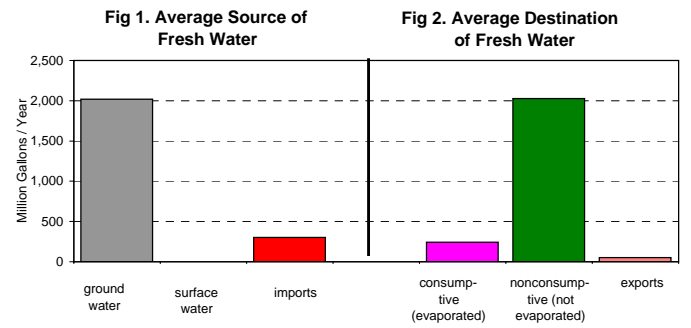


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	824	891	796	809	799	788	662	777	783	797	793
consumptive	91	109	89	95	94	100	75	100	100	102	95
domestic wells											
nonconsumptive	17	17	17	17	18	18	18	19	19	19	18
consumptive	2	2	2	2	3	3	3	3	3	3	3
industrial & commercial & mining											
nonconsumptive	1,280	1,230	1,214	1,266	1,309	1,309	1,176	1,100	1,052	1,203	1,214
consumptive	143	137	135	141	146	146	131	123	117	134	135
agricultural & non-agricultural irrigation											
nonconsumptive	1	0	0	1	1	1	0	2	1	2	1
consumptive	7	0	0	9	5	7	4	17	8	15	7
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	2,122	2,138	2,027	2,094	2,127	2,117	1,857	1,897	1,855	2,020	2,025
consumptive	244	249	227	248	247	256	212	242	228	254	241
PERCENTAGES:											
nonconsumptive	89.7%	89.6%	89.9%	89.4%	89.6%	89.2%	89.7%	88.7%	89.1%	88.8%	89.4%
consumptive	10.3%	10.4%	10.1%	10.6%	10.4%	10.8%	10.3%	11.3%	10.9%	11.2%	10.6%

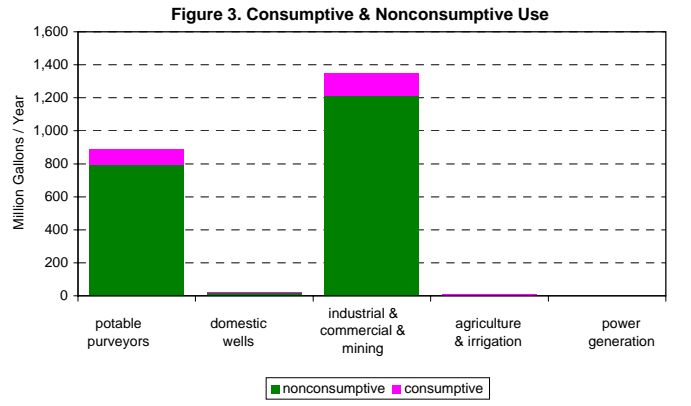


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive
potable purveyors	207	0	199	13	187	65	202	17	795	95
domestic wells	4	0	4	0	5	2	4	0	18	3
industrial & commercial & mining	292	32	298	33	320	36	303	34	1,214	135
agricultural & non-agricultural irrig.	0	0	0	1	1	5	0	2	1	7
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	503	32	502	47	513	108	510	53	2,027	241

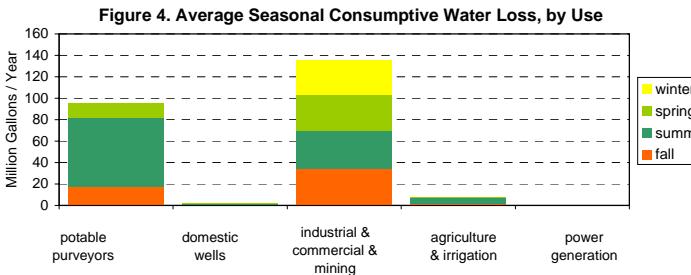


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	551	632	647	672	684	594	809	676	622	647	653
imported to HUC11	133	208	264	271	274	223	376	283	253	279	256
exported from HUC11	0	0	0	0	0	0	0	0	0	0	0

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	229	324	391	430	441	342	564	441	405	415	398
brackish water	454	516	520	513	517	475	621	518	470	511	512
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	683	840	911	943	958	817	1,185	959	876	926	910

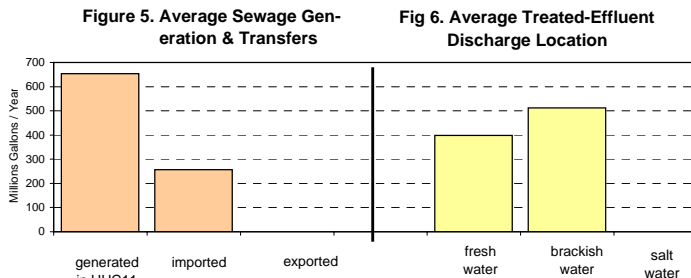


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	0
ground water	8,470
total	8,470

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	28
commercial	37
industrial	7,547
irrigation	37
mining	0
potable supply	821
power generation	0
total	8,470

Table 9. HUC11 Descriptive Statistics

--- **Area:**

in this HUC11 only	23.5	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	23.5	sq. mi.

(this HUC11 onshore area: 22.6 sq. mi.)

--- **Population of this HUC11:**

Year	Population	Change
1940	10,992	-
1950	12,902	17.4%
1960	14,446	12.0%
1970	14,968	3.6%
1980	15,692	4.8%
1990	15,113	-3.7%
2000	14,247	-5.7%
2010	14,119	-0.9% est. ¹²
2020	13,809	-2.2% est. ¹²
2030	13,743	-0.5% est. ¹²

--- **Land Use of this HUC11:**

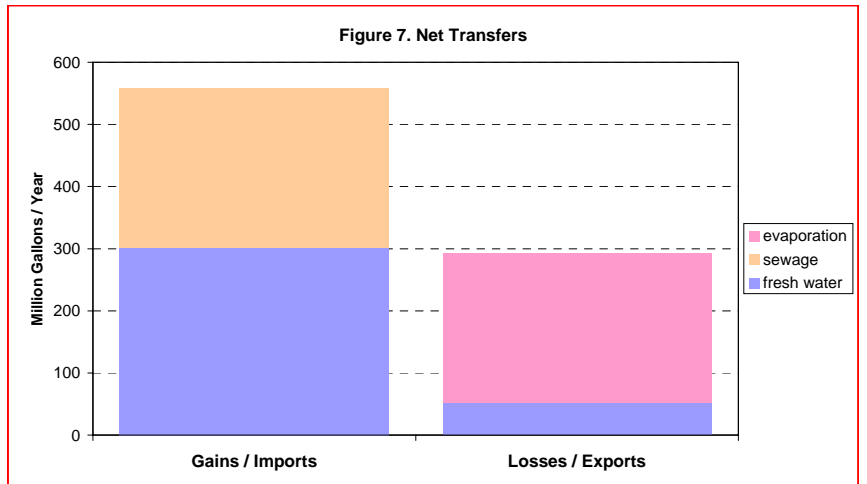
Type	Year		Change
	1986	1995	
ag.	10.6%	9.8%	-0.9%
barren	2.7%	2.7%	0.0%
forest	9.7%	11.1%	1.4%
urban	28.8%	28.9%	0.1%
water	7.7%	7.4%	-0.3%
wetlands	40.5%	40.1%	-0.3%

--- **% of this HUC11 in:**

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

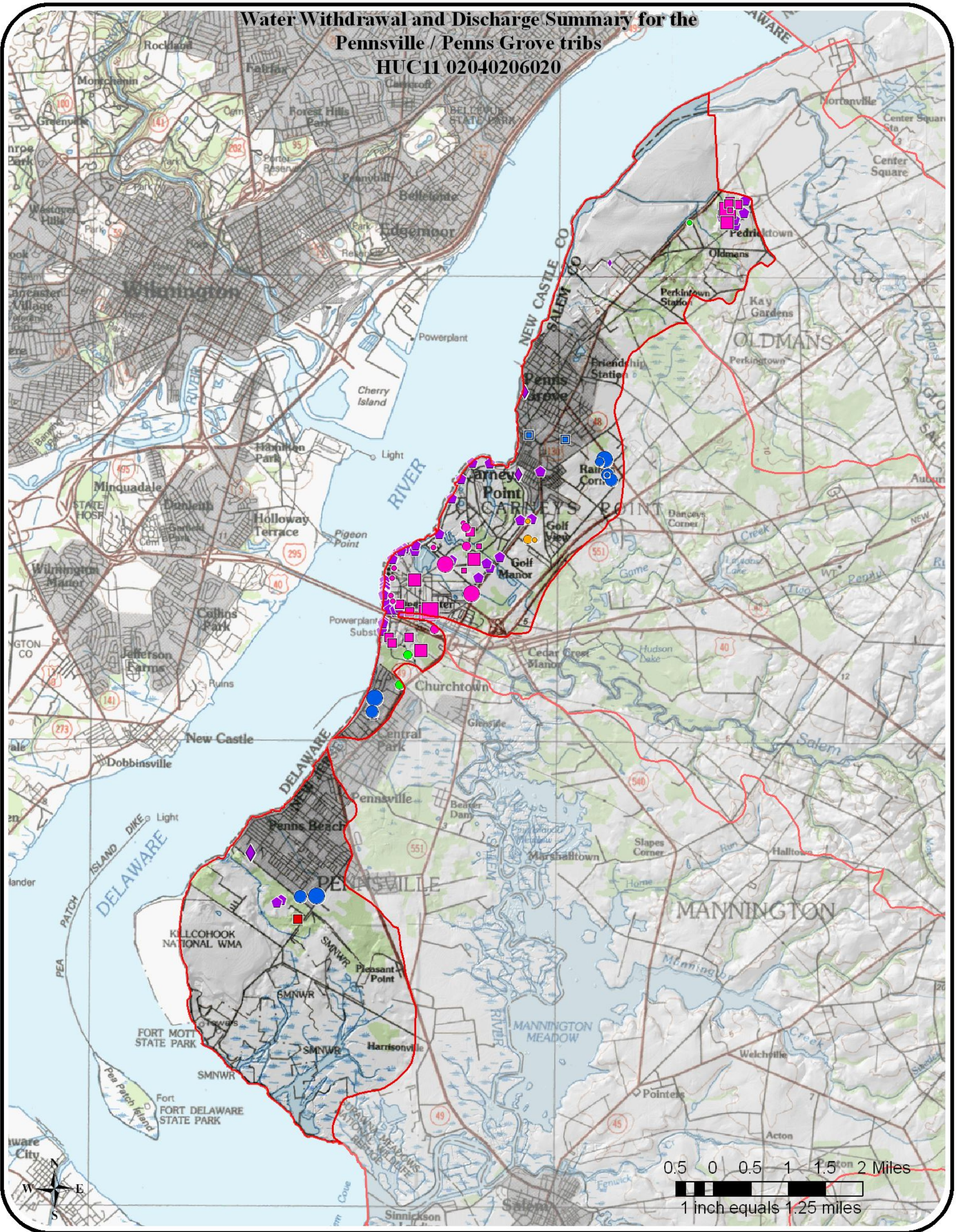
location	#	name
downstream:	02040206040	Salem River (below 39d40m14s dam)
(if any)	--	--
upstream:	--	--
(if any)	--	--



NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

**Water Withdrawal and Discharge Summary for the
Pennsville / Penns Grove tribs
HUC11 02040206020**

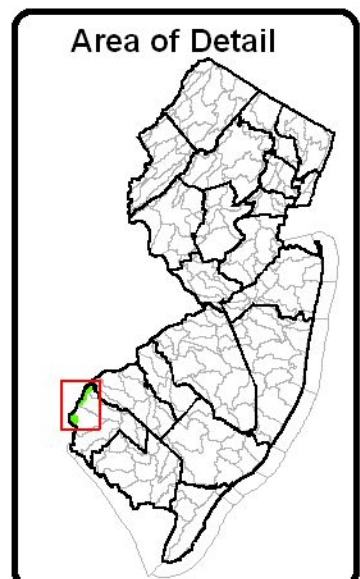


Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	1999 Withdrawal
GW Confined □	No 1999 Use ■●▲
GW Unconfined ○	1 - 50 MGY ■●▲
SW △	51 - 100 MGY ■●▲
	101 - 500 MGY ■●▲
	> 500 MGY ■●▲

MGY = millions of gallons per year

Use Group	
Agricultural	●
Commercial	●
Industrial	●
Irrigation	●
Mining	●
Not Classified	●
Potable Supply	●
Power Generation	●



Water Withdrawals, Transfers and Discharges for UPPER SALEM R/SALEM CANAL --- 02040206030

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Upper Salem River / Salem Canal	02040206030

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	3,940	5,124	4,305	6,345	6,290	6,319	6,264	4,830	4,693	3,829	5,194
sum	3,940	5,124	4,305	6,345	6,290	6,319	6,264	4,830	4,693	3,829	5,194
ground-water:³											
confined	129	182	179	178	217	756	183	177	166	229	239
unconfined	305	315	389	425	346	343	338	377	336	388	356
sum	434	497	568	603	563	1,099	521	554	501	617	596
total withdrawals:	4,374	5,621	4,872	6,948	6,852	7,418	6,785	5,385	5,195	4,446	5,789

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	13	13	13	13	11	13	9	14	13	14	12
exports ¹¹	181	184	181	202	209	179	155	169	187	165	181
net	(168)	(170)	(168)	(189)	(198)	(166)	(147)	(156)	(174)	(152)	(169)

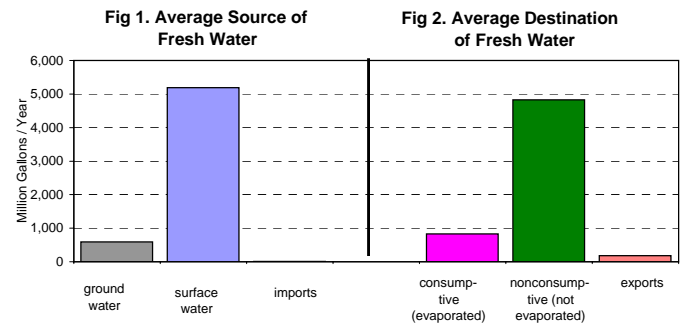


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	103	115	111	112	119	129	120	128	124	122	118
consumptive	12	14	13	14	14	16	13	16	15	15	14
domestic wells											
nonconsumptive	108	109	111	113	116	119	121	122	124	125	117
consumptive	15	15	16	16	16	17	17	17	17	18	16
industrial & commercial & mining											
nonconsumptive	3,527	4,577	3,901	4,584	5,615	6,031	5,600	4,417	4,088	3,288	4,563
consumptive	392	511	436	513	627	684	626	491	454	365	510
agricultural & non-agricultural irrigation											
nonconsumptive	5	11	12	141	15	25	18	28	26	37	32
consumptive	47	99	104	1,269	132	229	159	255	236	333	286
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	3,743	4,812	4,135	4,951	5,865	6,305	5,858	4,695	4,362	3,572	4,830
consumptive	466	639	570	1,812	790	947	815	779	723	731	827
PERCENTAGES:											
nonconsumptive	88.9%	88.3%	87.9%	73.2%	88.1%	86.9%	87.8%	85.8%	85.8%	83.0%	85.4%
consumptive	11.1%	11.7%	12.1%	26.8%	11.9%	13.1%	12.2%	14.2%	14.2%	17.0%	14.6%

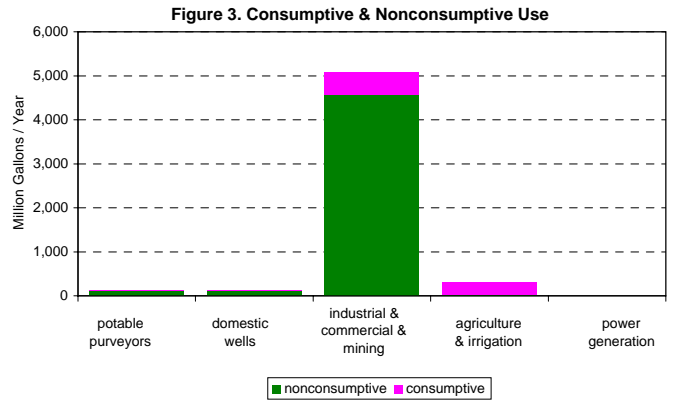


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive
potable purveyors	30	0	30	2	28	10	30	3	118	14
domestic wells	27	0	27	2	34	12	29	3	117	16
industrial & commercial & mining	1,161	129	1,200	134	1,194	135	1,008	112	4,563	510
agricultural & non-agricultural irrig.	0	0	5	48	22	201	4	38	32	286
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	1,219	129	1,263	186	1,278	357	1,071	156	4,830	827

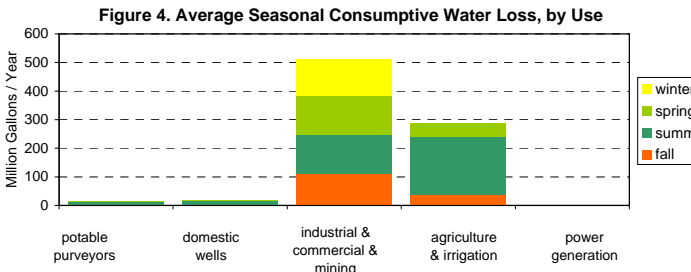


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	88	167	216	231	259	214	341	274	256	265	231
imported to HUC11	3	3	3	4	5	5	5	5	4	4	4
exported from HUC11	9	68	123	131	133	94	207	142	125	140	117

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	82	102	97	103	130	124	139	136	135	129	118
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	82	102	97	103	130	124	139	136	135	129	118

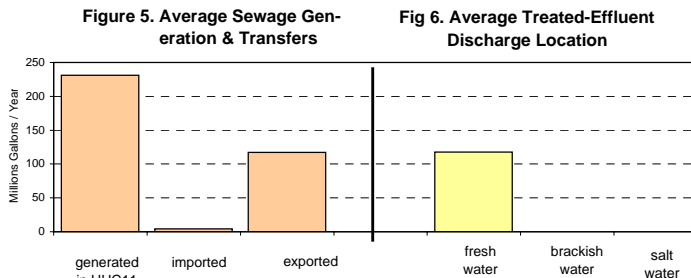


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	3,019
ground water	3,234
total	6,254

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	2,683
commercial	0
industrial	3,020
irrigation	37
mining	0
potable supply	513
power generation	0
total	6,254

Table 9. HUC11 Descriptive Statistics

--- Area:

in this HUC11 only	58.3	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	58.3	sq. mi.

(this HUC11 onshore area: 58.3 sq. mi.)

--- Population of this HUC11:

Year	Population	Change
1940	7,531	-
1950	9,392	24.7%
1960	11,541	22.9%
1970	11,299	-2.1%
1980	12,336	9.2%
1990	12,526	1.5%
2000	12,562	0.3%
2010	12,798	1.9% est. ¹²
2020	13,380	4.5% est. ¹²
2030	13,507	1.0% est. ¹²

--- Land Use of this HUC11:

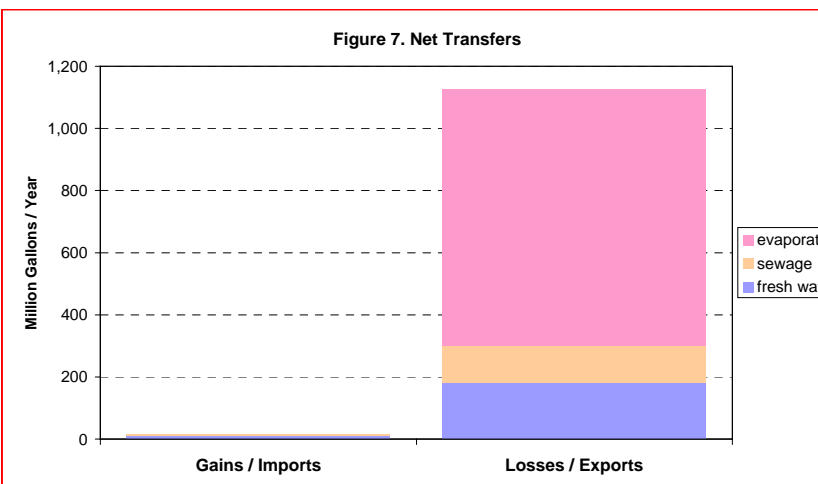
Type	Year		Change
	1986	1995	
ag.	62.0%	59.8%	-2.3%
barren	0.4%	0.2%	-0.1%
forest	9.5%	10.0%	0.5%
urban	8.5%	10.3%	1.9%
water	1.6%	1.7%	0.1%
wetlands	18.0%	17.9%	-0.1%

--- % of this HUC11 in:

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

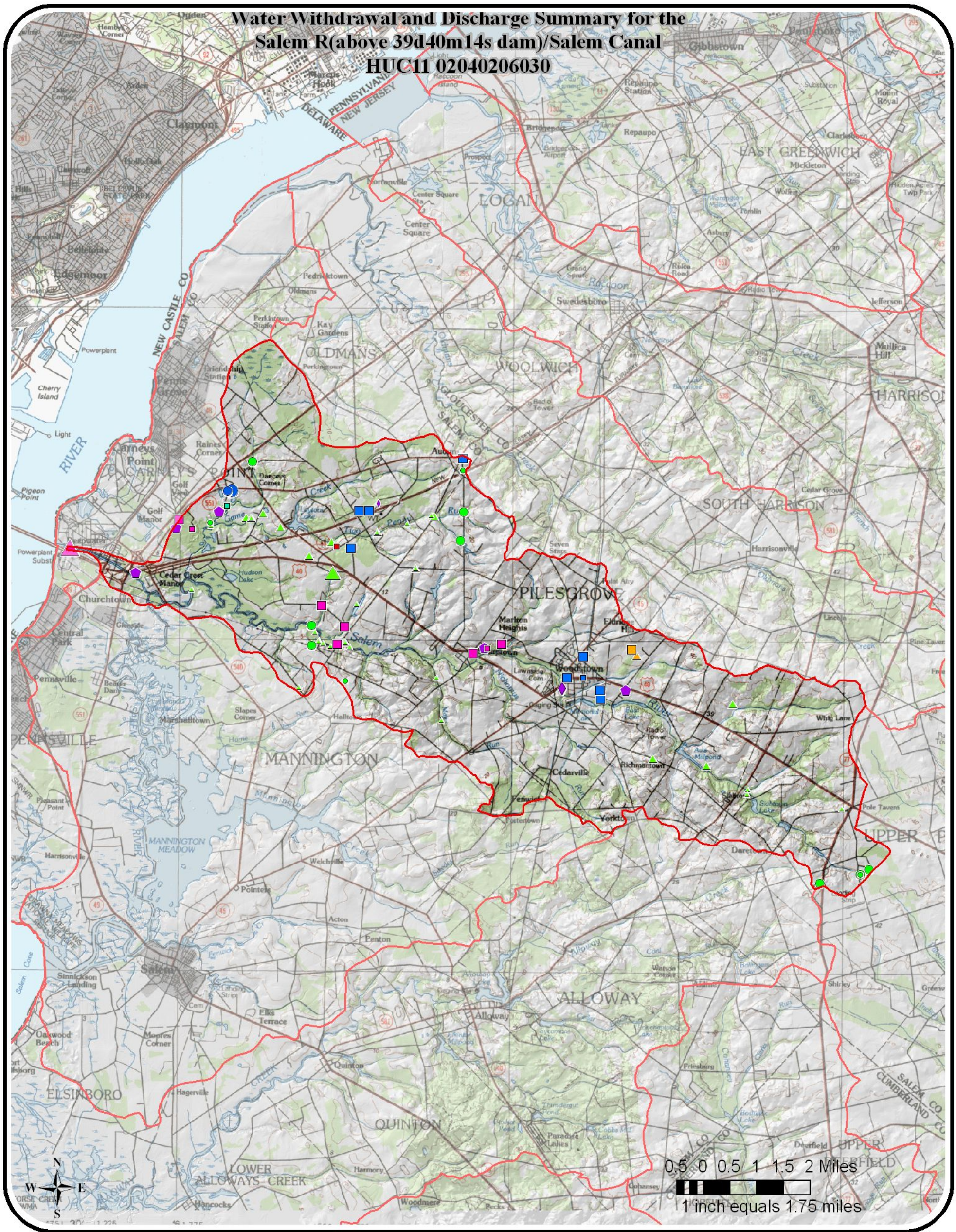
location	#	name
downstream:	02040206020	Pennsville / Penns Grove tribs
(if any)	--	--
upstream:	--	--
(if any)	--	--



NOTES:

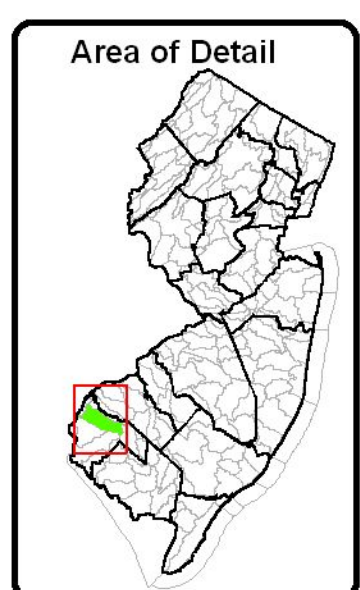
- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

Water Withdrawal and Discharge Summary for the Salem R(above 39d40m14s dam)/Salem Canal HUC11 02040206030



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	1999 Withdrawal
GW Confined □	No 1999 Use ■●▲
GW Unconfined ○	1 - 50 MGY ■●▲
SW △	51 - 100 MGY ■●▲
	101 - 500 MGY ■●▲
	> 500 MGY ■●▲
	MGY = millions of gallons per year
	Use Group
	Agricultural ●
	Commercial ●
	Industrial ●
	Irrigation ●
	Mining ●
	Not Classified ●
	Potable Supply ●
	Power Generation ●



Water Withdrawals, Transfers and Discharges for LOWER SALEM RIVER --- 02040206040

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Lower Salem River	02040206040

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
<i>surface water:</i> ²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	52	81	94	103	98	65	59	113	150	180	99
sum	52	81	94	103	98	65	59	113	150	180	99
<i>ground-water:</i> ³											
confined	559	121	54	8	0	0	79	106	160	181	127
unconfined	73	290	269	139	113	188	167	261	207	197	191
sum	632	412	323	147	113	189	247	368	367	379	318
total withdrawals:	684	492	417	250	211	254	306	481	517	558	417

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	476	503	602	600	540	538	441	433	293	401	483
exports ¹¹	407	188	168	54	31	97	78	155	112	99	139
net	68	314	435	547	509	441	364	278	181	301	344

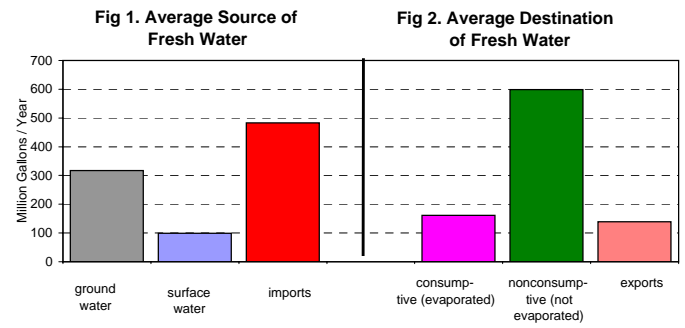


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
<i>potable purveyors</i>											
nonconsumptive	565	583	612	549	486	494	476	490	409	526	519
consumptive	63	69	70	68	59	60	54	59	47	57	61
<i>domestic wells</i>											
nonconsumptive	64	64	65	66	66	67	67	68	68	69	66
consumptive	9	9	9	9	9	9	9	10	10	10	9
<i>industrial & commercial & mining</i>											
nonconsumptive	0	0	0	0	0	0	2	10	11	12	4
consumptive	0	0	0	0	0	0	0	1	1	1	0
<i>agricultural & non-agricultural irrigation</i>											
nonconsumptive	5	8	10	11	10	7	6	12	15	19	10
consumptive	47	73	86	95	89	59	55	108	136	167	91
<i>power generation</i>											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	634	655	686	625	562	567	551	580	504	625	599
consumptive	119	151	165	172	158	128	119	178	194	234	162
PERCENTAGES:											
nonconsumptive	84.2%	81.3%	80.6%	78.5%	78.1%	81.6%	82.3%	76.5%	72.3%	72.7%	78.7%
consumptive	15.8%	18.7%	19.4%	21.5%	21.9%	18.4%	17.7%	23.5%	27.7%	27.3%	21.3%

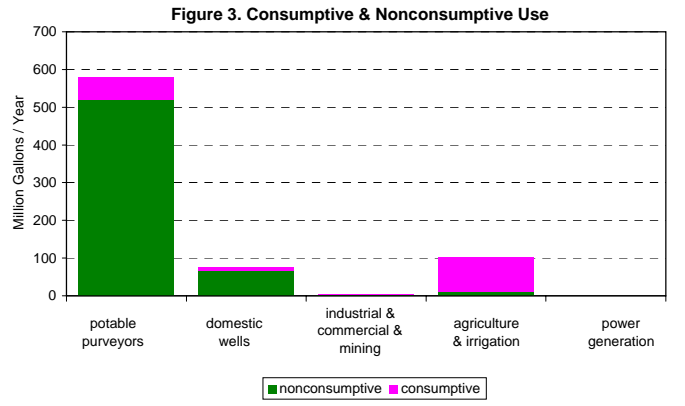


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive
potable purveyors	140	0	134	9	118	41	127	11	519	61
domestic wells	15	0	16	1	19	7	16	1	66	9
industrial & commercial & mining	1	0	1	0	1	0	1	0	4	0
agricultural & non-agricultural irrig.	0	0	0	4	8	76	1	12	10	91
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	156	0	151	14	147	124	145	24	599	162

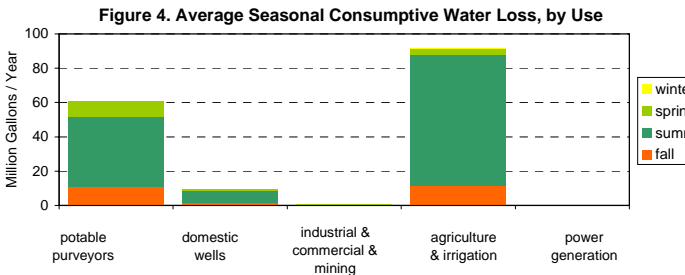


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	408	437	400	466	468	396	552	432	389	410	436
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	126	144	144	143	145	134	174	145	132	143	143

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	1	1	1	2	0	0	0	0	0	0	1
brackish water	281	292	254	321	322	263	378	287	257	267	292
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	282	293	256	323	322	263	378	287	257	267	293

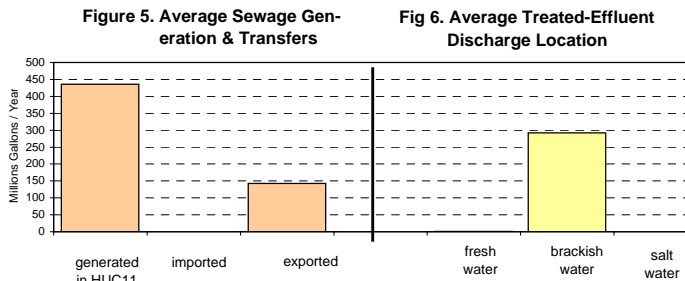


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	1,022
ground water	1,065
total	2,087

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	1,112
commercial	0
industrial	37
irrigation	0
mining	0
potable supply	937
power generation	0
total	2,087

Table 9. HUC11 Descriptive Statistics

--- Area:

in this HUC11 only	58.9	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	58.9	sq. mi.
(this HUC11 onshore area:	54.4	sq. mi.)

--- Population of this HUC11:

Year	Population	Change	
1940	13,177	-	
1950	14,860	12.8%	
1960	16,909	13.8%	
1970	17,041	0.8%	
1980	16,572	-2.8%	
1990	16,358	-1.3%	
2000	14,909	-8.9%	
2010	14,774	-0.9%	est. ¹²
2020	14,445	-2.2%	est. ¹²
2030	14,377	-0.5%	est. ¹²

--- Land Use of this HUC11:

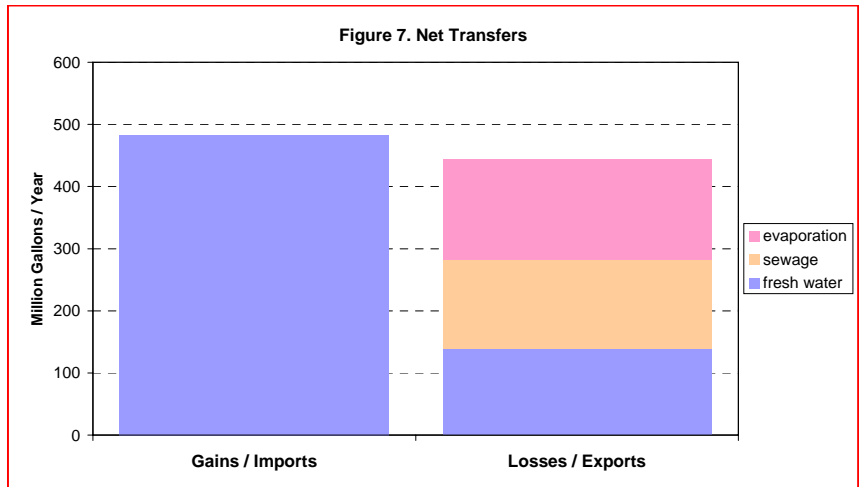
Type	Year		Change
	1986	1995	
ag.	40.2%	39.3%	-0.9%
barren	0.5%	0.6%	0.1%
forest	7.7%	7.9%	0.1%
urban	9.1%	9.8%	0.7%
water	12.8%	13.3%	0.5%
wetlands	29.7%	29.2%	-0.5%

--- % of this HUC11 in:

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

location	#	name
downstream:	02040206060	Alloway Creek / Hope Creek
(if any)	--	--
upstream:	--	--
(if any)	--	--
	--	--
	--	--
	--	--
	--	--
	--	--
	--	--
	--	--
	--	--

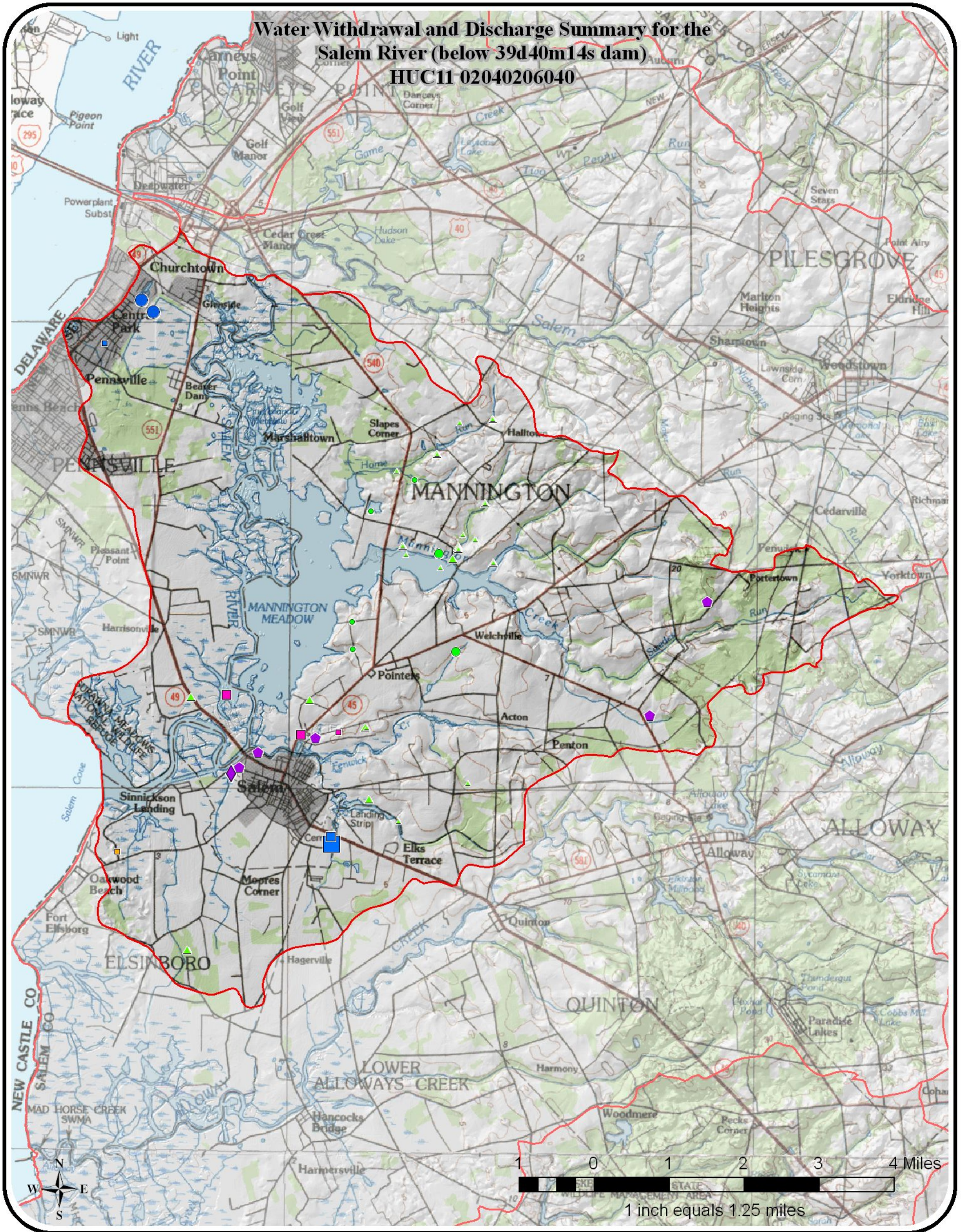


NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

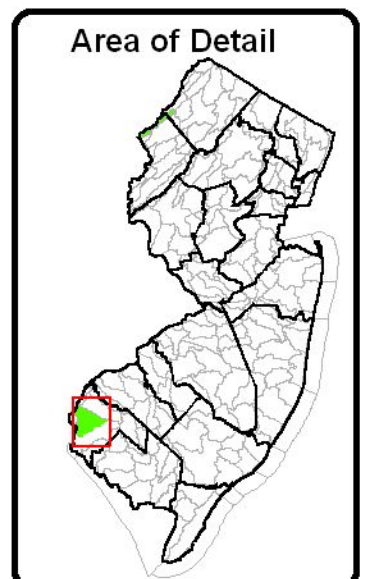
Water Withdrawal and Discharge Summary for the Salem River (below 39d40m14s dam)

HUC11 02040206040



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	
GW Confined	□
GW Unconfined	○
SW	△
1999 Withdrawal	
No 1999 Use	●▲
1 - 50 MGY	■●▲
51 - 100 MGY	■●▲
101 - 500 MGY	■●▲
> 500 MGY	■●▲
MGY = millions of gallons per year	
Use Group	
Agricultural	●
Commercial	●
Industrial	●
Irrigation	●
Mining	●
Not Classified	●
Potable Supply	●
Power Generation	●



Water Withdrawals, Transfers and Discharges for ALLOWAY CREEK / HOPE CREEK --- 02040206060

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Alloway Creek / Hope Creek	02040206060

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
<i>surface water:</i> ²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	496	534	618	653	579	589	471	472	359	401	517
sum	496	534	618	653	579	589	471	472	359	401	517
<i>ground-water:</i> ³											
confined	200	224	200	212	193	233	135	181	165	189	193
unconfined	210	326	210	230	215	240	228	262	323	288	253
sum	410	550	410	442	408	472	363	443	488	477	446
total withdrawals:	906	1,084	1,028	1,095	986	1,061	834	915	847	878	963

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	1	1	0	0	0	0	1	1	1	1	1
exports ¹¹	475	465	563	545	490	488	408	387	243	346	441
net	(474)	(464)	(562)	(544)	(490)	(488)	(407)	(386)	(242)	(345)	(440)

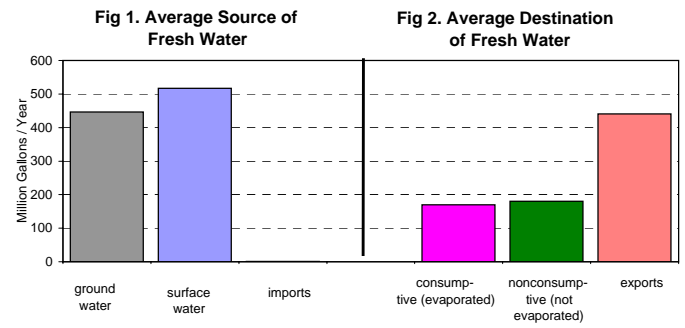


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
<i>potable purveyors</i>											
nonconsumptive	4	5	5	4	4	4	4	4	3	4	4
consumptive	0	24	22	23	20	24	12	19	17	18	18
<i>domestic wells</i>											
nonconsumptive	152	153	155	158	160	161	163	164	165	167	160
consumptive	21	22	22	22	22	23	23	23	23	24	23
<i>industrial & commercial & mining</i>											
nonconsumptive	0	0	0	0	0	0	0	0	0	22	2
consumptive	0	0	0	0	0	0	0	0	0	2	0
<i>agricultural & non-agricultural irrigation</i>											
nonconsumptive	6	22	8	15	12	15	10	16	25	15	14
consumptive	50	199	75	138	105	137	91	141	223	134	129
<i>power generation</i>											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	162	180	168	177	175	180	177	183	193	208	180
consumptive	72	245	118	183	148	184	126	183	263	178	170
PERCENTAGES:											
nonconsumptive	69.2%	42.4%	58.8%	49.2%	54.2%	49.5%	58.4%	50.0%	42.3%	53.8%	51.5%
consumptive	30.8%	57.6%	41.2%	50.8%	45.8%	50.5%	41.6%	50.0%	57.7%	46.2%	48.5%

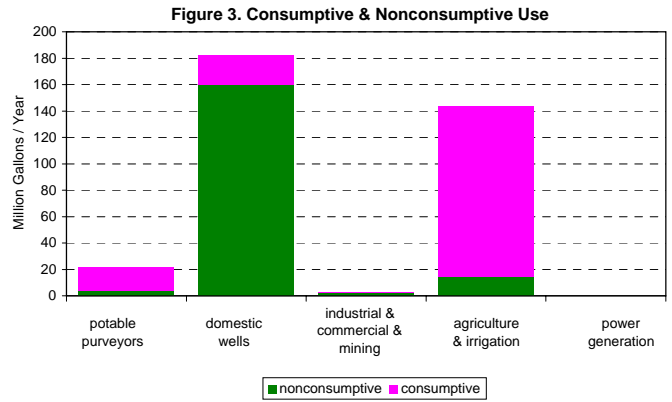


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive
potable purveyors	48	0	42	2	38	13	48	4	177	20
domestic wells	37	0	38	3	47	16	39	4	160	23
industrial & commercial & mining	0	0	0	0	1	0	1	0	2	0
agricultural & non-agricultural irrig.	0	0	1	10	12	110	1	9	14	129
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	85	0	81	16	98	140	89	16	353	172

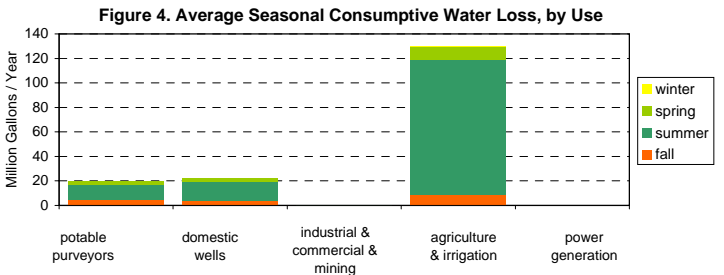


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	3	4	6	8	7	10	10	16	16	12	9
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	0	0	0	0	0	0	0	0	0	0	0

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	2	4	4	4	4	3	3	3	3
brackish water	3	4	4	4	4	6	6	13	13	10	6
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	3	4	6	8	7	10	10	16	16	12	9

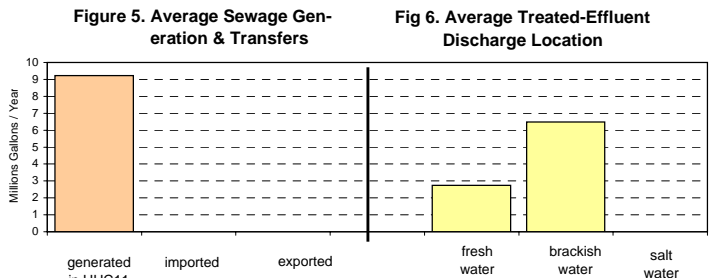


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	1,187
ground water	854
total	2,041

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	1,281
commercial	0
industrial	20
irrigation	31
mining	0
potable supply	709
power generation	0
total	2,041

Table 9. HUC11 Descriptive Statistics

--- Area:

in this HUC11 only	85.8	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	85.8	sq. mi.

(this HUC11 onshore area: 77.1 sq. mi.)

--- Population of this HUC11:

Year	Population	Change
1940	3,222	-
1950	3,726	15.6%
1960	4,781	28.3%
1970	5,149	7.7%
1980	5,587	8.5%
1990	5,573	-0.2%
2000	5,735	2.9%
2010	5,858	2.1% est. ¹²
2020	6,161	5.2% est. ¹²
2030	6,227	1.1% est. ¹²

--- Land Use of this HUC11:

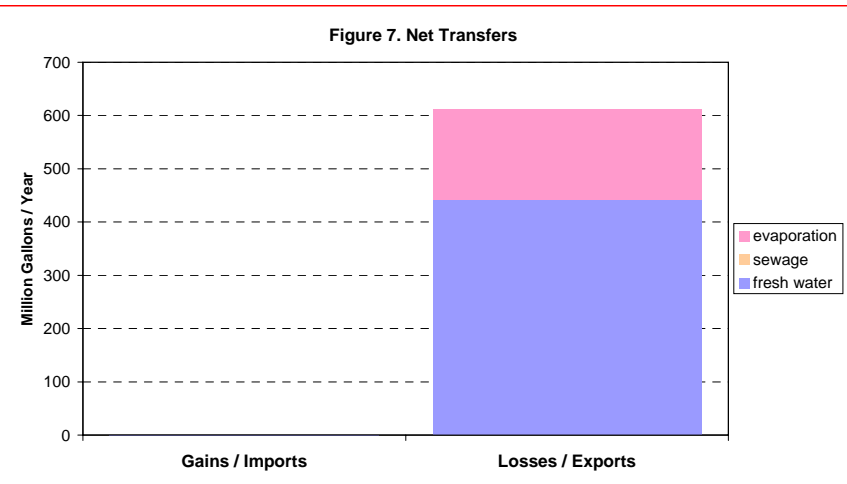
Type	Year		Change
	1986	1995	
ag.	26.6%	25.8%	-0.8%
barren	0.3%	0.2%	0.0%
forest	15.6%	15.9%	0.3%
urban	5.4%	6.0%	0.7%
water	14.2%	14.3%	0.0%
wetlands	37.9%	37.8%	-0.1%

--- % of this HUC11 in:

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

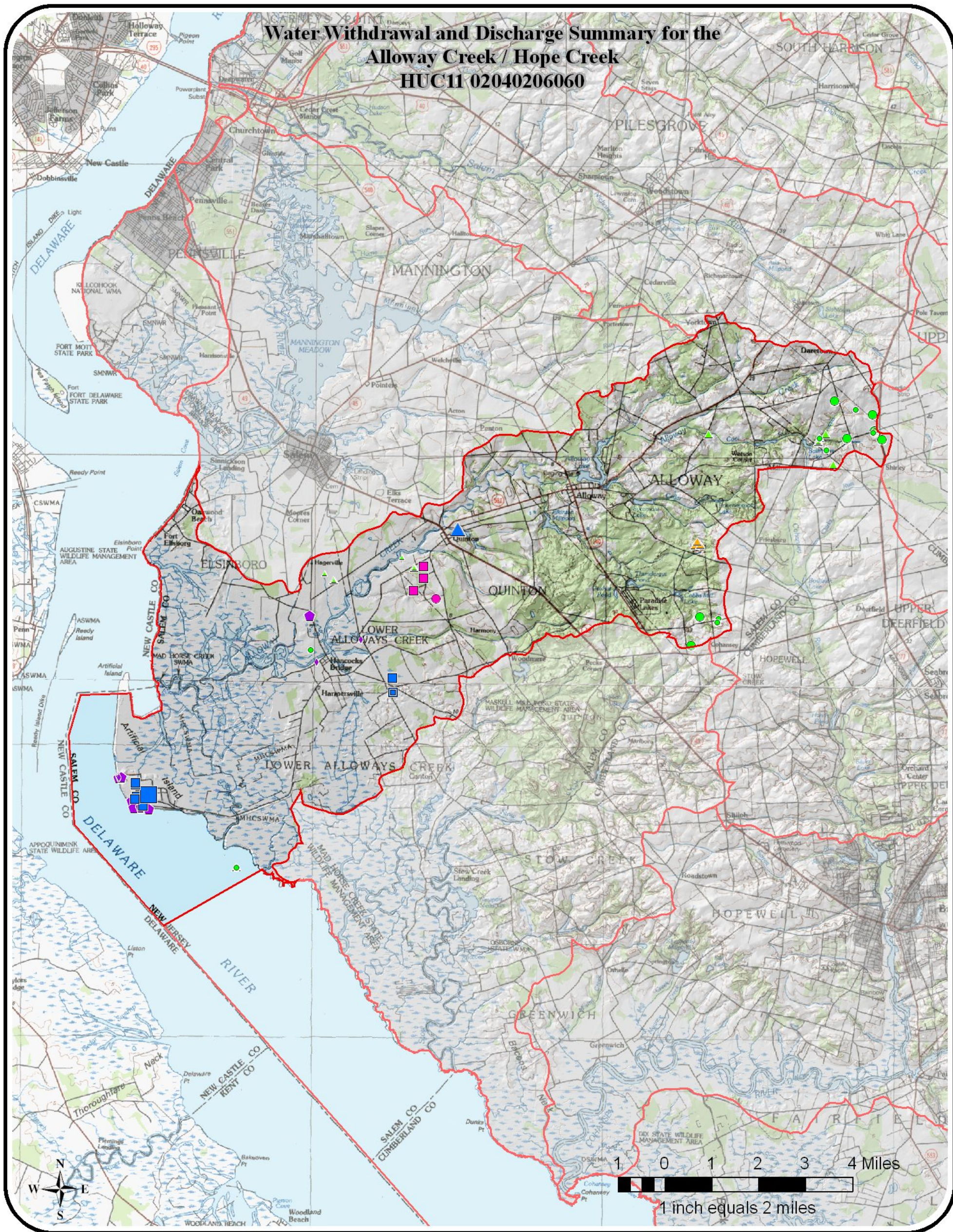
location	#	name
downstream:	02040204910	Delaware Bay (Cape May Pt to Fishing Ck)
(if any)	--	--
upstream:	--	--
(if any)	--	--
--	--	--
--	--	--
--	--	--
--	--	--
--	--	--
--	--	--
--	--	--



NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

Water Withdrawal and Discharge Summary for the Alloway Creek / Hope Creek HUC11 02040206060

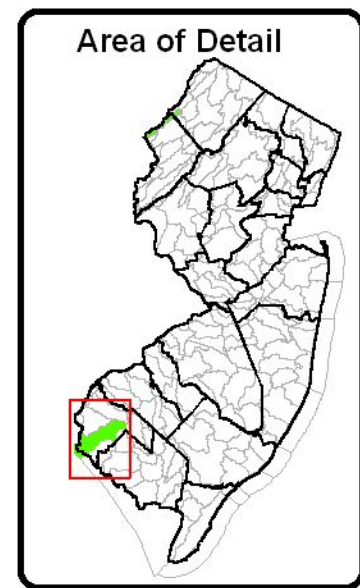


Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	
GW Confined	□
GW Unconfined	○
SW	△
1999 Withdrawal	
No 1999 Use	●▲
1 - 50 MGY	■●▲
51 - 100 MGY	■●▲
101 - 500 MGY	■●▲
> 500 MGY	■●▲

MGY = millions of gallons per year

Use Group	
Agricultural	●
Commercial	●
Industrial	●
Irrigation	●
Mining	●
Not Classified	●
Potable Supply	●
Power Generation	●



Water Withdrawals, Transfers and Discharges for STOW CREEK --- 02040206070

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Stow Creek	02040206070

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	23	65	4	22	8	111	112	163	44	101	65
sum	23	65	4	22	8	111	112	163	44	101	65
ground-water:³											
confined	0	0	0	0	0	0	0	0	0	0	0
unconfined	175	185	322	280	444	288	183	273	307	252	271
sum	175	185	322	280	444	288	183	273	307	252	271
total withdrawals:	198	250	326	303	452	399	295	435	352	352	336

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	0	0	0	0	0	0	0	0	0	0	0
exports ¹¹	0	0	0	0	0	0	0	0	0	0	0
net	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

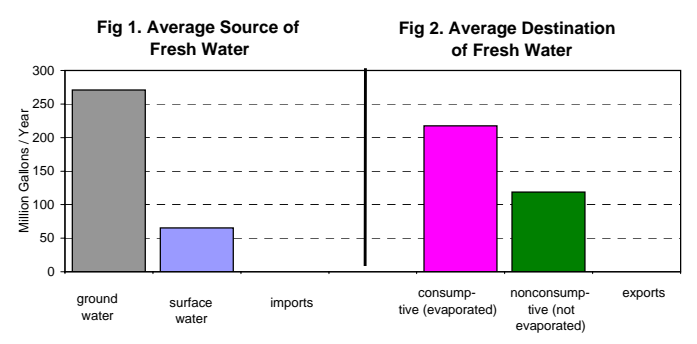


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
domestic wells											
nonconsumptive	92	93	94	95	96	97	98	98	99	100	96
consumptive	13	13	13	13	14	14	14	14	14	14	14
industrial & commercial & mining											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
agricultural & non-agricultural irrigation											
nonconsumptive	9	14	22	19	34	29	18	32	24	24	23
consumptive	83	129	197	174	309	260	165	291	215	214	204
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	102	107	116	115	130	126	116	130	123	124	119
consumptive	96	142	210	188	322	273	179	305	229	228	217
PERCENTAGES:											
nonconsumptive	51.4%	43.0%	35.6%	37.9%	28.8%	31.5%	39.4%	30.0%	34.9%	35.2%	35.4%
consumptive	48.6%	57.0%	64.4%	62.1%	71.2%	68.5%	60.6%	70.0%	65.1%	64.8%	64.6%

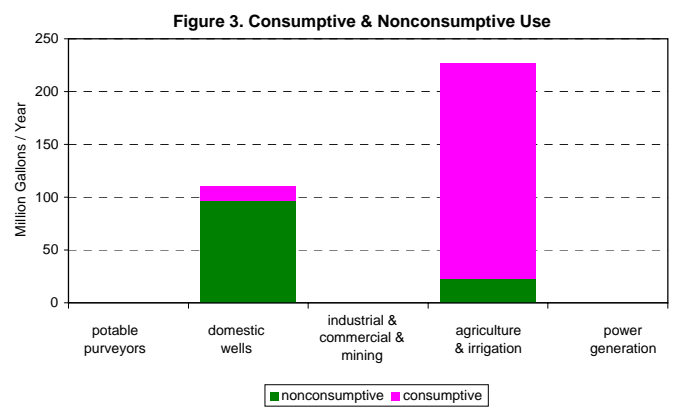


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive
potable purveyors	0	0	0	0	0	0	0	0	0	0
domestic wells	22	0	23	2	28	10	23	2	96	14
industrial & commercial & mining	0	0	0	0	0	0	0	0	0	0
agricultural & non-agricultural irrig.	0	4	2	21	17	149	3	30	23	204
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	23	4	25	22	45	159	27	32	119	217

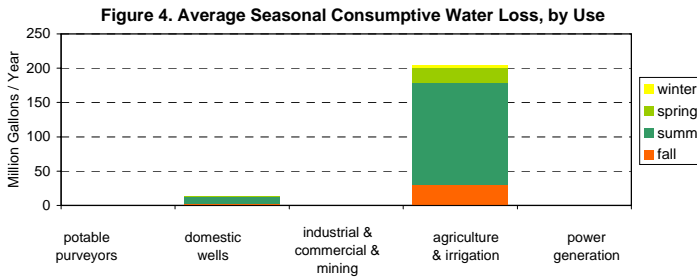


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	1	4	3	5	7	7	7	6	7	6	5
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	0	0	0	0	0	0	0	0	0	0	0

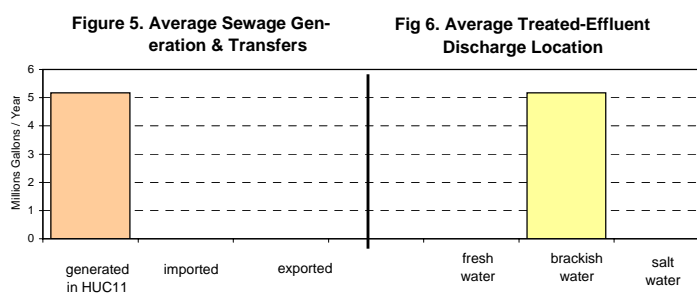


Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	1	4	3	5	7	7	7	6	7	6	5
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	1	4	3	5	7	7	7	6	7	6	5

Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	800
ground water	685
total	1,485

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	1,485
commercial	0
industrial	0
irrigation	0
mining	0
potable supply	0
power generation	0
total	1,485

Table 9. HUC11 Descriptive Statistics

--- **Area:**

in this HUC11 only	55.2	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	55.2	sq. mi.

(this HUC11 onshore area: 54.7 sq. mi.)

--- **Population of this HUC11:**

Year	Population	Change
1940	2,072	-
1950	2,555	23.3%
1960	2,878	12.6%
1970	2,951	2.5%
1980	3,412	15.6%
1990	3,441	0.9%
2000	3,503	1.8%
2010	3,699	5.6% est. ¹²
2020	4,032	9.0% est. ¹²
2030	4,241	5.2% est. ¹²

--- **Land Use of this HUC11:**

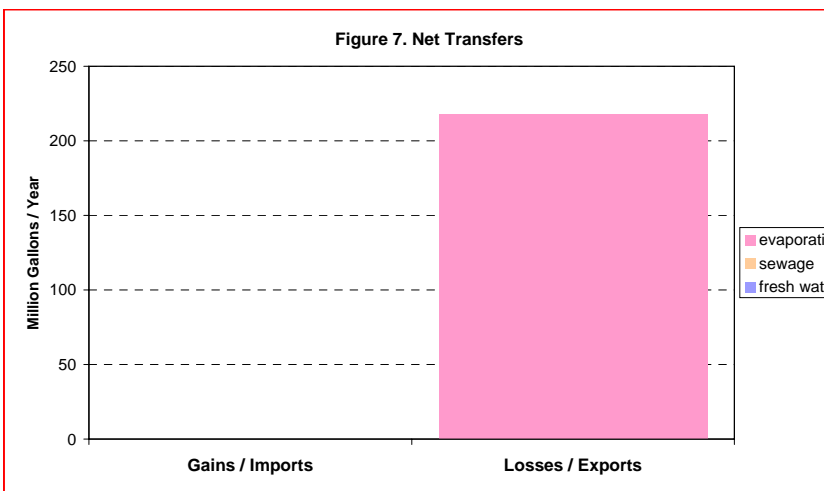
Type	Year		Change
	1986	1995	
ag.	28.5%	28.1%	-0.3%
barren	0.5%	0.4%	-0.1%
forest	20.0%	19.7%	-0.3%
urban	3.6%	4.5%	0.9%
water	5.4%	5.4%	0.1%
wetlands	42.0%	41.9%	-0.1%

--- **% of this HUC11 in:**

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

location	#	name
downstream:	02040204910	Delaware Bay (Cape May Pt to Fishing Ck)
(if any)	--	--
upstream:	--	--
(if any)	--	--



NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

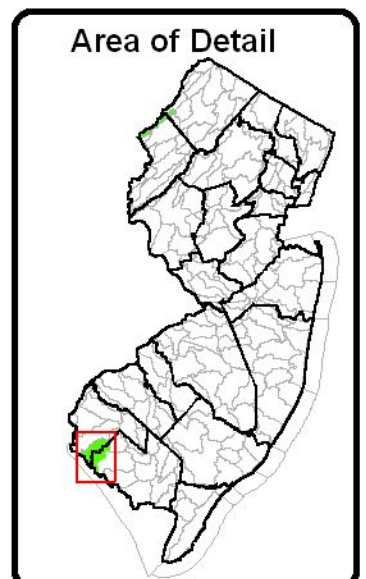
Water Withdrawal and Discharge Summary for the Stow Creek HUC11 02040206070



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	
GW Confined	□
GW Unconfined	○
SW	△
1999 Withdrawal	
No 1999 Use	●▲
1 - 50 MGY	■●▲
51 - 100 MGY	■●▲
101 - 500 MGY	■●▲
> 500 MGY	■●▲
Use Group	
Agricultural	●
Commercial	●
Industrial	●
Irrigation	●
Mining	●
Not Classified	●
Potable Supply	●
Power Generation	●

MGY = millions of gallons per year



Water Withdrawals, Transfers and Discharges for UPPER COHANSEY RIVER --- 02040206080

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Upper Cohansey River	02040206080

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	107	436	258	298	148	261	66	298	396	193	246
sum	107	436	258	298	148	261	66	298	396	193	246
ground-water:³											
confined	0	0	0	0	0	0	0	0	0	0	0
unconfined	2,094	2,205	1,943	2,145	2,793	2,482	1,958	2,518	3,097	2,230	2,346
sum	2,094	2,205	1,943	2,145	2,793	2,482	1,958	2,518	3,097	2,230	2,346
total withdrawals:	2,201	2,640	2,202	2,443	2,941	2,743	2,024	2,816	3,494	2,423	2,593

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

imports ¹¹	0	0	0	0	8	9	4	0	0	0	2
exports ¹¹	0	0	0	0	0	1	27	25	42	41	14
net	0	0	0	0	8	8	(23)	(25)	(42)	(41)	(11)

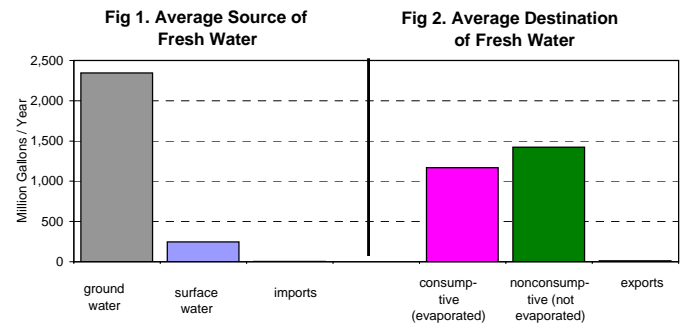


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	141	118	138	115	160	167	166	180	208	181	157
consumptive	19	14	17	17	23	23	19	24	26	20	20
domestic wells											
nonconsumptive	146	147	149	150	152	154	155	156	157	158	153
consumptive	21	21	21	21	21	22	22	22	22	22	21
industrial & commercial & mining											
nonconsumptive	1,037	986	828	996	1,115	803	1,013	1,115	1,107	998	1,000
consumptive	115	110	92	111	124	89	113	124	123	111	111
agricultural & non-agricultural irrigation											
nonconsumptive	72	124	96	101	134	147	53	117	186	97	113
consumptive	649	1,117	862	908	1,202	1,327	480	1,051	1,671	875	1,014
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	1,397	1,375	1,210	1,362	1,561	1,271	1,387	1,567	1,658	1,435	1,422
consumptive	803	1,262	992	1,057	1,370	1,461	633	1,222	1,842	1,029	1,167
PERCENTAGES:											
nonconsumptive	63.5%	52.2%	55.0%	56.3%	53.3%	46.5%	68.7%	56.2%	47.4%	58.2%	54.9%
consumptive	36.5%	47.8%	45.0%	43.7%	46.7%	53.5%	31.3%	43.8%	52.6%	41.8%	45.1%

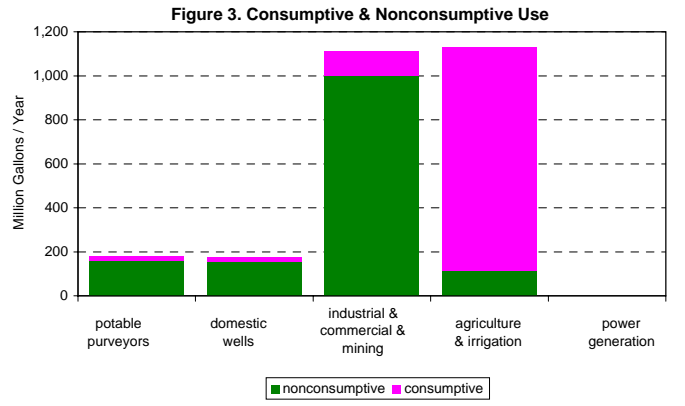


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive
potable purveyors	41	0	40	3	39	13	45	4	165	20
domestic wells	35	0	36	3	44	15	37	3	153	21
industrial & commercial & mining	170	19	227	25	296	33	308	34	1,000	111
agricultural & non-agricultural irrig.	2	19	10	86	86	770	15	139	113	1,014
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	248	38	312	117	464	832	405	181	1,430	1,167

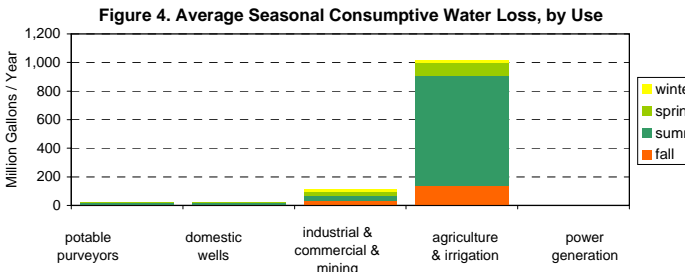


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

generated in HUC11	266	279	276	299	298	288	286	281	296	324	289
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	266	279	276	299	298	288	286	281	296	324	289

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	0	0	0	0	0	0	0	0	0	0	0

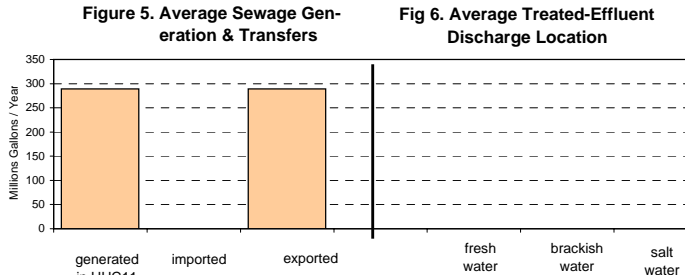


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	2,065
ground water	12,760
total	14,825

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	12,477
commercial	0
industrial	1,887
irrigation	37
mining	0
potable supply	423
power generation	0
total	14,825

Table 9. HUC11 Descriptive Statistics

--- **Area:**

in this HUC11 only	37.4	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	37.4	sq. mi.

(this HUC11 onshore area: 37.4 sq. mi.)

--- **Population of this HUC11:**

Year	Population	Change
1940	2,474	-
1950	4,561	84.3%
1960	5,586	22.5%
1970	6,156	10.2%
1980	6,436	4.5%
1990	6,387	-0.7%
2000	6,896	8.0%
2010	7,377	7.0% est. ¹²
2020	8,071	9.4% est. ¹²
2030	8,665	7.4% est. ¹²

--- **Land Use of this HUC11:**

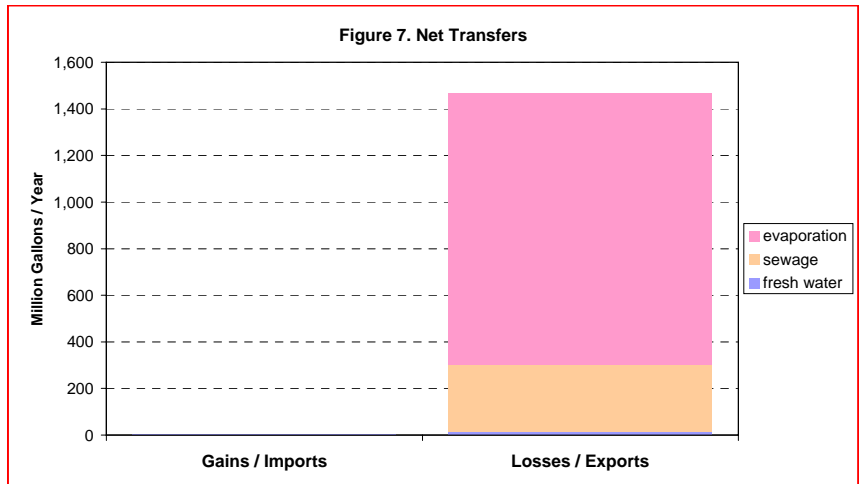
Type	Year		Change
	1986	1995	
ag.	70.9%	69.4%	-1.5%
barren	0.4%	0.3%	-0.1%
forest	12.7%	12.3%	-0.4%
urban	8.4%	10.3%	1.9%
water	0.4%	0.5%	0.0%
wetlands	7.2%	7.2%	0.0%

--- **% of this HUC11 in:**

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

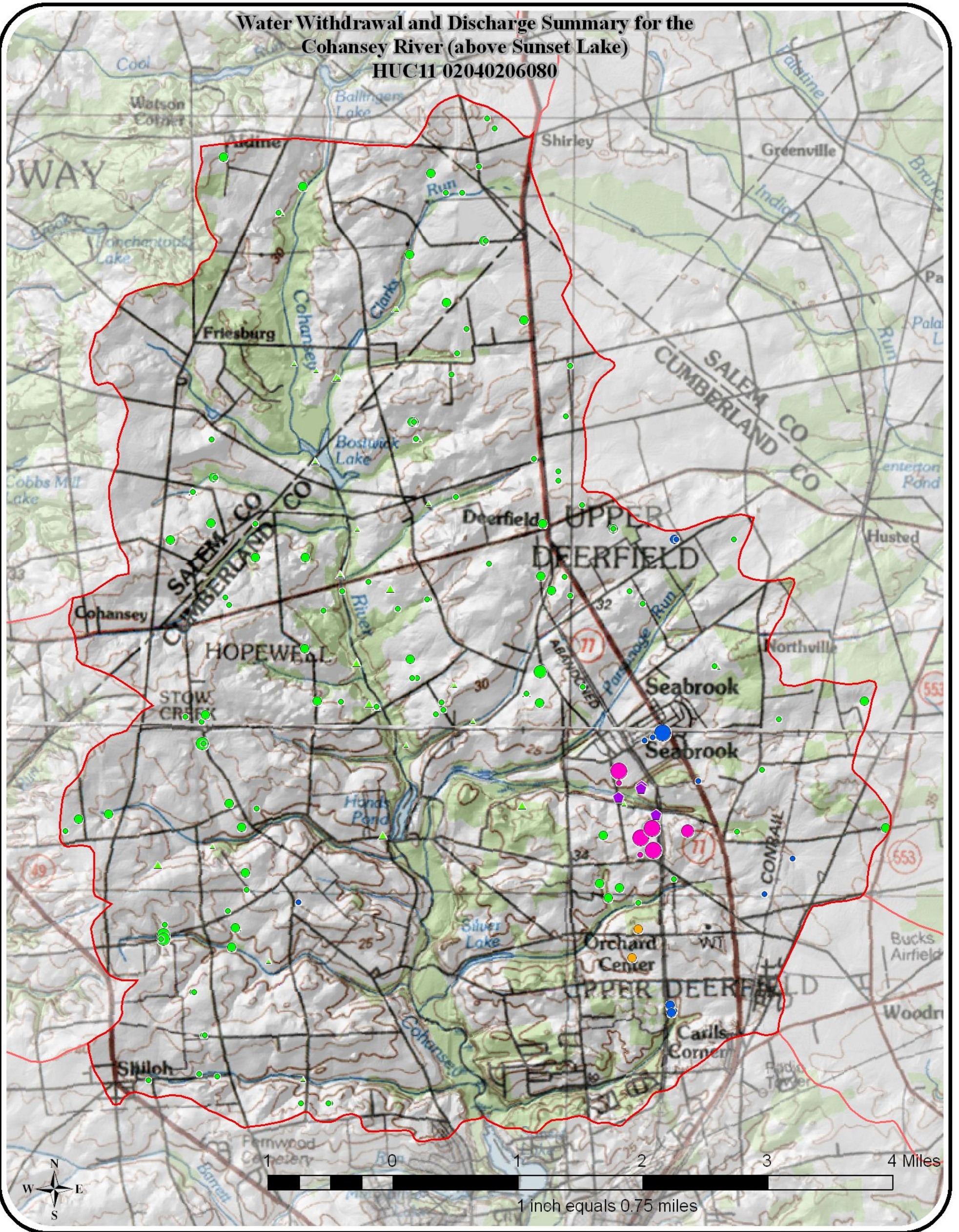
location	#	name
downstream:	02040206090	Cohansey River (below Cornwell Run)
(if any)	--	--
upstream:	--	--
(if any)	--	--



NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

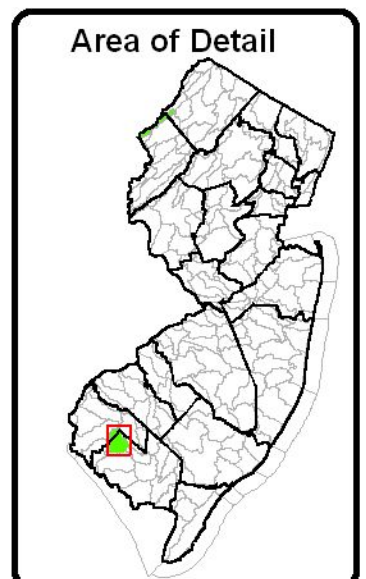
**Water Withdrawal and Discharge Summary for the
Cohansey River (above Sunset Lake)
HUC11 02040206080**



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	
GW Confined	□
GW Unconfined	○
SW	△
1999 Withdrawal	
No 1999 Use	●▲
1 - 50 MGY	■●▲
51 - 100 MGY	■●▲
101 - 500 MGY	■●▲
> 500 MGY	■●▲
Use Group	
Agricultural	●
Commercial	●
Industrial	●
Irrigation	●
Mining	●
Not Classified	●
Potable Supply	●
Power Generation	●

MGY = millions of gallons per year



Water Withdrawals, Transfers and Discharges for LOWER COHANSEY RIVER --- 02040206090

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Lower Cohansey River	02040206090

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	2	170	7	38	26	45	8	32	17	2	35
sum	2	170	7	38	26	45	8	32	17	2	35
ground-water:³											
confined	0	0	0	0	0	0	0	0	0	0	0
unconfined	1,356	1,763	1,722	1,797	2,162	2,035	2,118	2,235	2,382	2,364	1,993
sum	1,356	1,763	1,723	1,797	2,162	2,035	2,118	2,235	2,382	2,364	1,993
total withdrawals:	1,357	1,933	1,730	1,836	2,187	2,080	2,126	2,267	2,399	2,366	2,028

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

imports ¹¹	0	0	0	0	0	1	25	24	39	38	13
exports ¹¹	0	0	0	0	0	0	0	0	0	0	0
net	0	0	0	0	0	1	25	24	39	38	13

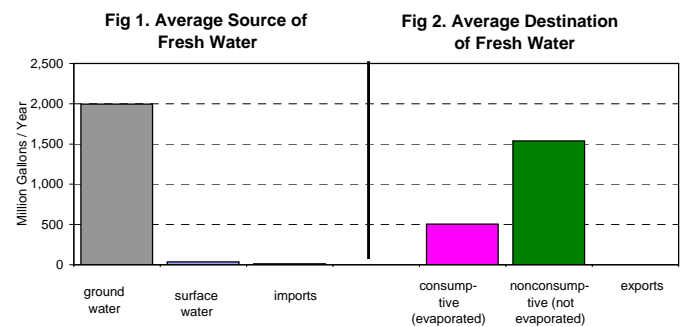


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	881	923	1,033	1,072	1,080	1,055	1,019	1,018	1,055	1,124	1,026
consumptive	106	117	130	139	134	130	120	129	137	146	129
domestic wells											
nonconsumptive	197	198	200	202	204	206	207	208	210	212	204
consumptive	28	28	28	28	29	29	29	29	30	30	29
industrial & commercial & mining											
nonconsumptive	3	5	4	19	338	335	549	500	575	407	274
consumptive	3	5	4	18	46	46	75	68	78	55	40
agricultural & non-agricultural irrigation											
nonconsumptive	16	66	33	36	36	28	15	34	35	43	34
consumptive	148	590	298	322	320	251	136	303	317	385	307
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	1,098	1,193	1,270	1,329	1,658	1,624	1,790	1,761	1,875	1,786	1,538
consumptive	285	740	460	507	529	456	360	529	561	616	505
PERCENTAGES:											
nonconsumptive	79.4%	61.7%	73.4%	72.4%	75.8%	78.1%	83.3%	76.9%	77.0%	74.3%	75.3%
consumptive	20.6%	38.3%	26.6%	27.6%	24.2%	21.9%	16.7%	23.1%	23.0%	25.7%	24.7%

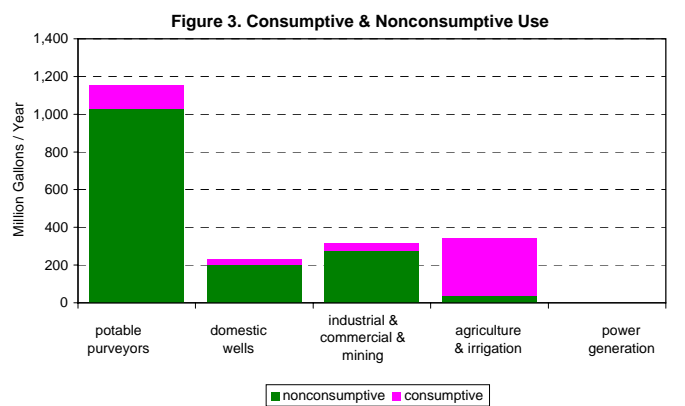


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive
potable purveyors	251	0	266	18	255	88	255	23	1,027	129
domestic wells	47	0	48	4	59	21	50	5	204	29
industrial & commercial & mining	25	4	72	11	93	14	84	12	274	40
agricultural & non-agricultural irrig.	1	5	4	33	25	227	5	42	34	307
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	323	8	390	65	433	350	394	81	1,539	505

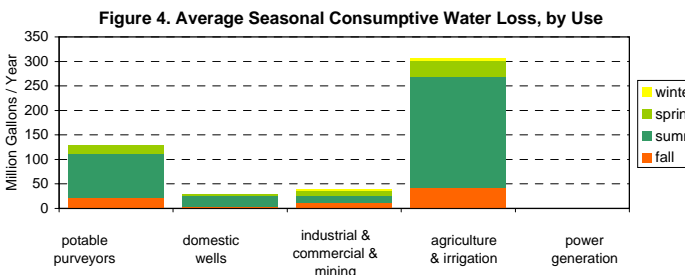


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

generated in HUC11	680	714	706	766	763	737	734	719	759	830	741
imported to HUC11	349	366	362	393	391	378	376	369	389	426	380
exported from HUC11	0	0	0	0	0	0	0	0	0	0	0

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	1,029	1,081	1,069	1,159	1,155	1,116	1,110	1,088	1,148	1,255	1,121
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	1,029	1,081	1,069	1,159	1,155	1,116	1,110	1,088	1,148	1,255	1,121

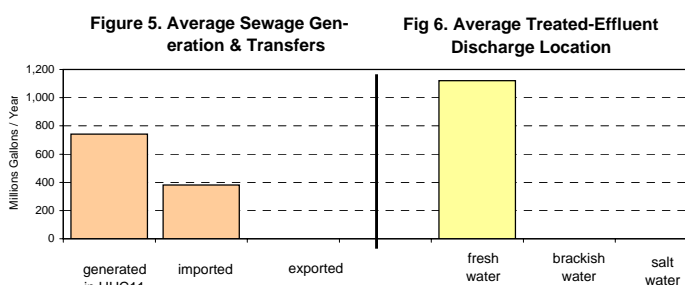


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	643
ground water	4,830
total	5,473

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	3,085
commercial	37
industrial	0
irrigation	149
mining	661
potable supply	1,541
power generation	0
total	5,473

Table 9. HUC11 Descriptive Statistics

--- **Area:**

in this HUC11 only	69.7	sq. mi.
upstream HUC11s	37.4	sq. mi.
total watershed	107.1	sq. mi.
(this HUC11 onshore area:	67.6	sq. mi.)

--- **Population of this HUC11:**

Year	Population	Change
1940	19,552	-
1950	23,259	19.0%
1960	27,416	17.9%
1970	27,760	1.3%
1980	26,828	-3.4%
1990	26,807	-0.1%
2000	31,221	16.5%
2010	33,455	7.2% est. ¹²
2020	36,665	9.6% est. ¹²
2030	39,435	7.6% est. ¹²

--- **Land Use of this HUC11:**

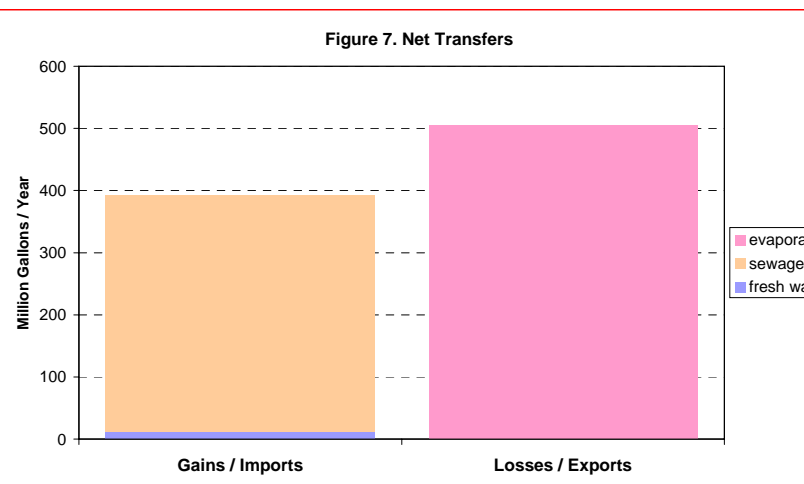
Type	Year		Change
	1986	1995	
ag.	34.2%	33.3%	-0.9%
barren	0.7%	0.8%	0.1%
forest	29.4%	28.5%	-0.8%
urban	13.9%	15.6%	1.6%
water	4.7%	5.9%	1.3%
wetlands	17.1%	15.9%	-1.2%

--- **% of this HUC11 in:**

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

location	#	name
downstream:	02040204910	Delaware Bay (Cape May Pt to Fishing Ck)
(if any)		
upstream:	02040206080	Cohansey River (above Sunset Lake)
(if any)		
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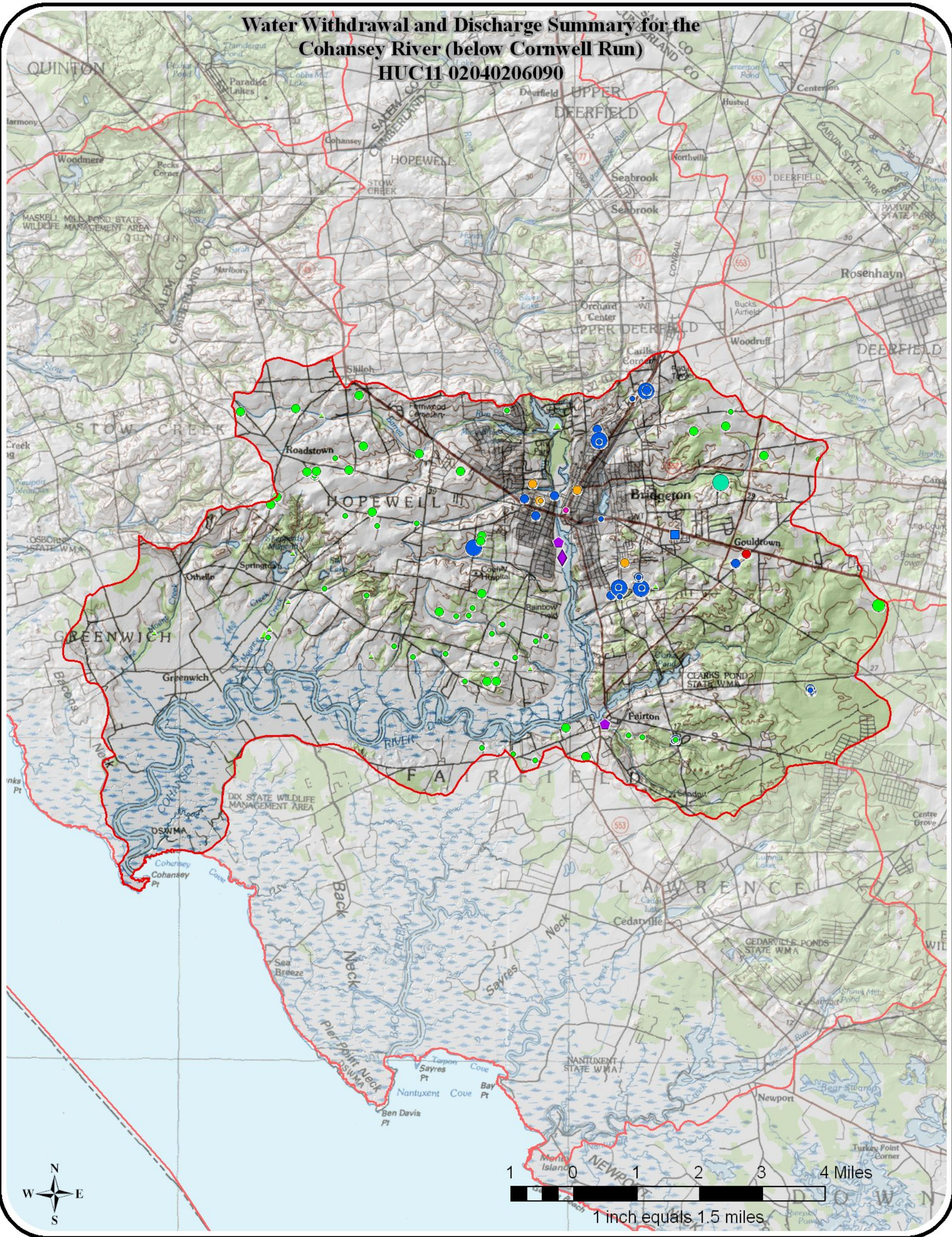


NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

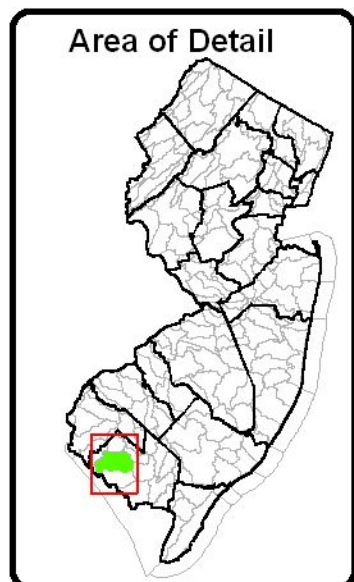
Water Withdrawal and Discharge Summary for the Cohansey River (below Cornwell Run)

HUC11-02040206090



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	
GW Confined	□
GW Unconfined	○
SW	△
1999 Withdrawal	
No 1999 Use	●▲
1 - 50 MGY	■●▲
51 - 100 MGY	■●▲
101 - 500 MGY	■●▲
> 500 MGY	■●▲
MGY = millions of gallons per year	
Use Group	
Agricultural	●
Commercial	●
Industrial	●
Irrigation	●
Mining	●
Not Classified	●
Potable Supply	●
Power Generation	●



Water Withdrawals, Transfers and Discharges for BACK / CEDAR / NANTUXENT CREEKS --- 02040206100

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Back / Cedar / Nantuxent Creeks	02040206100

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	11	2	2	2	0	30	21	26	0	0	9
sum	11	2	2	2	0	30	21	26	0	0	9
ground-water:³											
confined	0	0	0	0	0	0	0	0	0	0	0
unconfined	502	535	382	638	530	617	483	734	547	327	529
sum	502	535	382	638	530	617	483	734	547	327	529
total withdrawals:	513	537	384	639	530	646	503	760	547	327	539

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	0	0	0	0	0	0	0	0	0	0	0
exports ¹¹	0	0	0	0	0	0	0	0	0	0	0
net	0	0	0	0	0	0	0	0	0	0	0

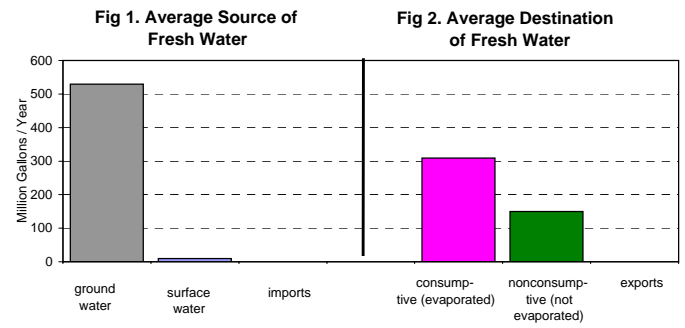


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	15	28	29	26	28	29	26	18
domestic wells											
nonconsumptive	111	113	114	116	119	120	122	123	125	126	119
consumptive	16	16	16	16	17	17	17	17	18	18	17
industrial & commercial & mining											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
agricultural & non-agricultural irrigation											
nonconsumptive	39	41	25	42	24	35	22	46	25	5	31
consumptive	348	368	228	382	214	314	196	418	229	49	275
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	150	154	140	159	142	155	144	170	150	131	149
consumptive	364	384	244	413	259	360	239	464	275	93	309
PERCENTAGES:											
nonconsumptive	29.2%	28.6%	36.4%	27.8%	35.5%	30.2%	37.5%	26.8%	35.3%	58.6%	32.6%
consumptive	70.8%	71.4%	63.6%	72.2%	64.5%	69.8%	62.5%	73.2%	64.7%	41.4%	67.4%

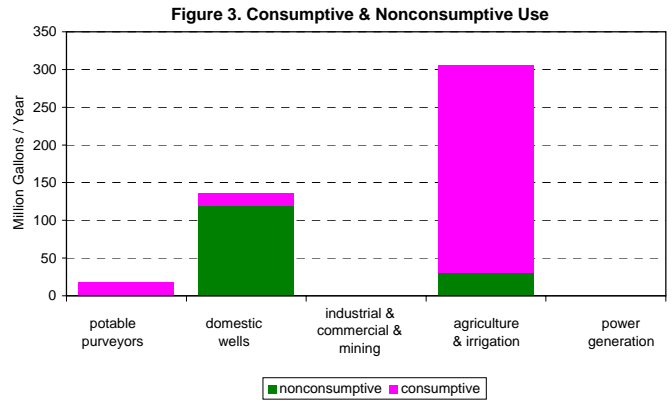


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive
potable purveyors	20	4	18	4	20	4	25	5	82	18
domestic wells	27	0	28	2	35	12	29	3	119	17
industrial & commercial & mining	0	0	0	0	0	0	0	0	0	0
agricultural & non-agricultural irrig.	0	0	6	56	18	163	6	55	31	275
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	47	4	52	62	73	180	60	63	232	309

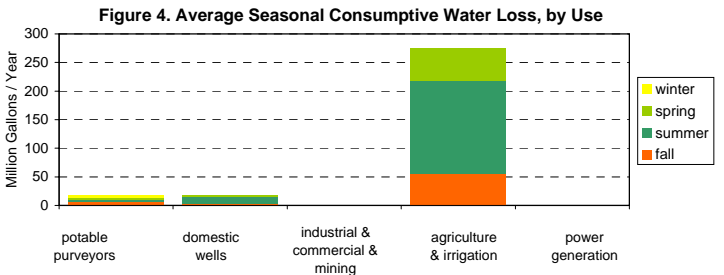


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	16	17	17	19	18	18	18	17	18	20	18
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	16	17	17	19	18	18	18	17	18	20	18

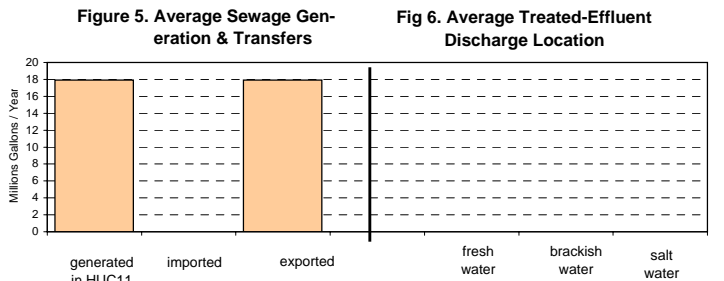


Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	0	0	0	0	0	0	0	0	0	0	0

Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	0
ground water	589
total	589

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	373
commercial	0
industrial	0
irrigation	0
mining	0
potable supply	216
power generation	0
total	589

Table 9. HUC11 Descriptive Statistics

--- **Area:**
in this HUC11 only 51.0 sq. mi.
upstream HUC11s 0.0 sq. mi.
total watershed 51.0 sq. mi.
(this HUC11 onshore area: 49.7 sq. mi.)

--- **Population of this HUC11:**

Year	Population	Change
1940	2,268	-
1950	2,907	28.2%
1960	3,783	30.1%
1970	3,993	5.6%
1980	4,129	3.4%
1990	4,368	5.8%
2000	4,831	10.6%
2010	5,195	7.5% est. ¹²
2020	5,719	10.1% est. ¹²
2030	6,170	7.9% est. ¹²

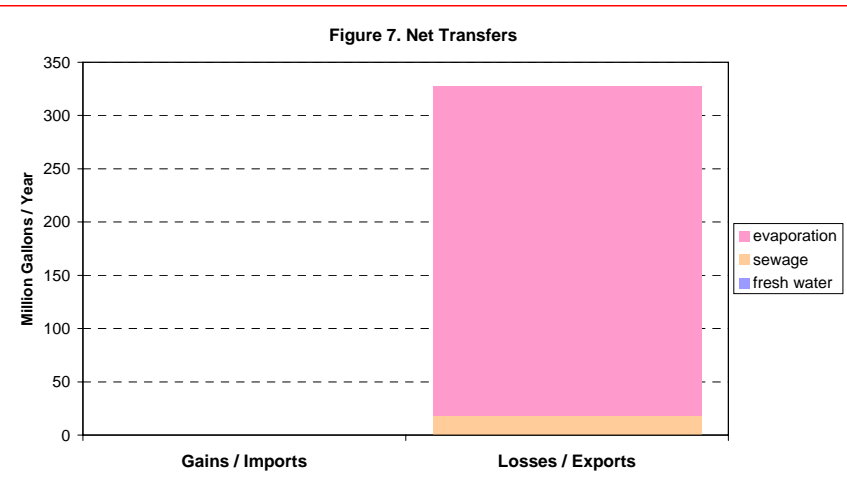
--- **Land Use of this HUC11:**

Type	Year		Change
	1986	1995	
ag.	16.0%	15.2%	-0.8%
barren	0.3%	0.3%	0.0%
forest	18.3%	18.5%	0.2%
urban	2.6%	3.3%	0.7%
water	6.8%	7.6%	0.8%
wetlands	56.0%	55.1%	-0.9%

--- **% of this HUC11 in:**
Pinelands: 0.0%
Highlands: 0.0%

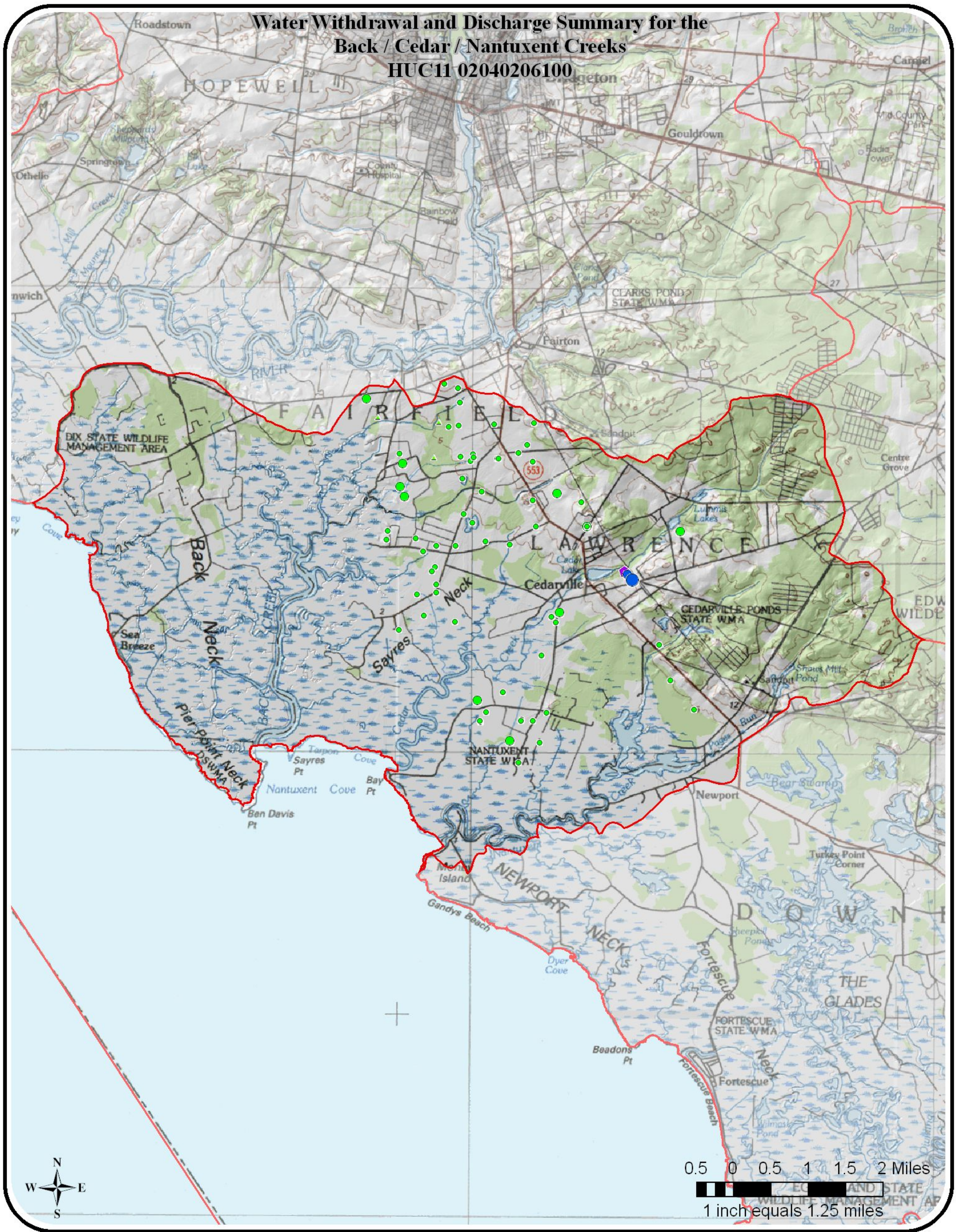
Table 10. Upstream and downstream HUC11s (in NJ)

location	#	name
downstream:	02040204910	Delaware Bay (Cape May Pt to Fishing Ck)
(if any)	--	--
upstream:	--	--
(if any)	--	--



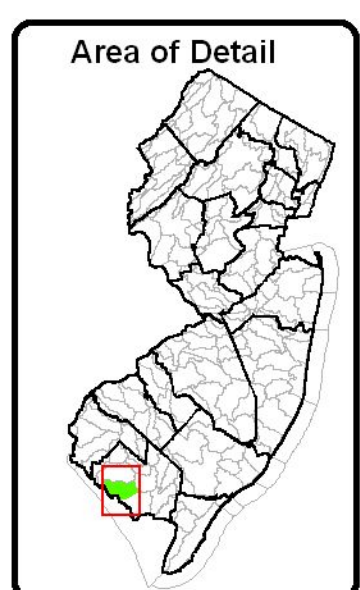
NOTES:
1 Salt and brackish water withdrawal and use is not included in this data.
2 This does not account for water released from onstream reservoirs for downstream intakes.
3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
9 Based on discharge volumes reported under NJPDES program.
10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
13 Subject to revision.
14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

Water Withdrawal and Discharge Summary for the Back / Cedar / Nantuxent Creeks HUC11 02040206100



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	1999 Withdrawal
GW Confined □	No 1999 Use ■●▲
GW Unconfined ○	1 - 50 MGY ■●▲
SW △	51 - 100 MGY ■●▲
	101 - 500 MGY ■●▲
	> 500 MGY ■●▲
	MGY = millions of gallons per year
	Use Group
	Agricultural ●
	Commercial ●
	Industrial ●
	Irrigation ●
	Mining ●
	Not Classified ●
	Potable Supply ●
	Power Generation ●



Water Withdrawals, Transfers and Discharges for DIVIDING CREEK --- 02040206110

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Dividing Creek	02040206110

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	7,646	14,968	23,433	15,642	18,621	19,665	12,948	20,903	14,975	12,448	16,125
sum	7,646	14,968	23,433	15,642	18,621	19,665	12,948	20,903	14,975	12,448	16,125
ground-water:³											
confined	9	9	9	9	9	9	9	9	9	9	9
unconfined	359	321	347	313	450	364	404	404	372	374	371
sum	368	330	356	322	459	373	413	413	381	383	380
total withdrawals:	8,014	15,297	23,789	15,964	19,080	20,038	13,361	21,316	15,356	12,831	16,505

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	0	0	0	0	0	0	0	0	0	0	0
exports ¹¹	0	0	0	0	0	0	0	0	0	0	0
net	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

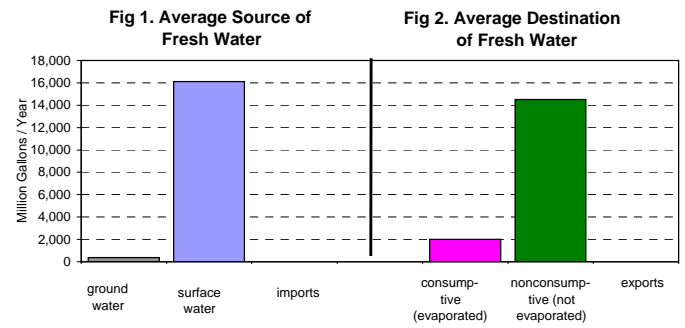


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	4	4	4	4	0	0	4	1	10	10	4
consumptive	1	1	1	1	0	0	1	0	2	2	1
domestic wells											
nonconsumptive	111	111	111	112	113	114	114	115	116	117	113
consumptive	16	16	16	16	16	16	16	16	16	16	16
industrial & commercial & mining											
nonconsumptive	6,919	13,320	20,803	13,916	16,661	17,502	11,623	18,626	13,370	11,148	14,389
consumptive	943	1,816	2,837	1,898	2,272	2,387	1,585	2,540	1,823	1,520	1,962
agricultural & non-agricultural irrigation											
nonconsumptive	2	3	2	2	2	2	2	2	2	2	2
consumptive	19	27	17	16	17	17	16	16	16	16	18
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	7,035	13,438	20,920	14,034	16,776	17,618	11,743	18,744	13,498	11,277	14,508
consumptive	979	1,860	2,870	1,930	2,304	2,420	1,618	2,572	1,858	1,555	1,997
PERCENTAGES:											
nonconsumptive	87.8%	87.8%	87.9%	87.9%	87.9%	87.9%	87.9%	87.9%	87.9%	87.9%	87.9%
consumptive	12.2%	12.2%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%	12.1%

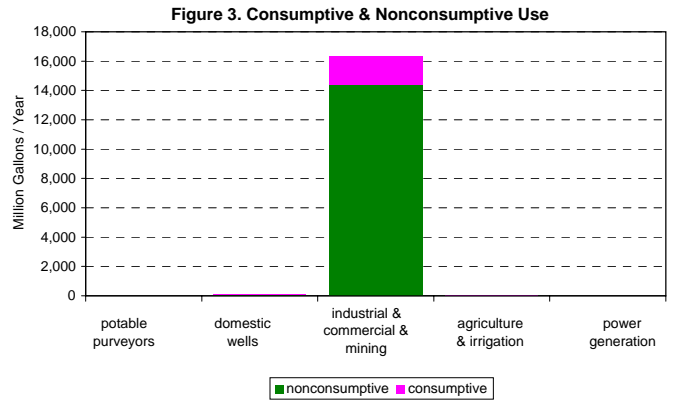


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive
potable purveyors	1	0	1	0	1	0	1	0	4	1
domestic wells	26	0	27	2	33	11	28	3	113	16
industrial & commercial & mining	3,002	409	4,255	580	3,786	516	3,347	456	14,389	1,962
agricultural & non-agricultural irrig.	0	0	0	2	1	12	0	3	2	18
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	3,029	410	4,283	585	3,821	541	3,376	462	14,508	1,997

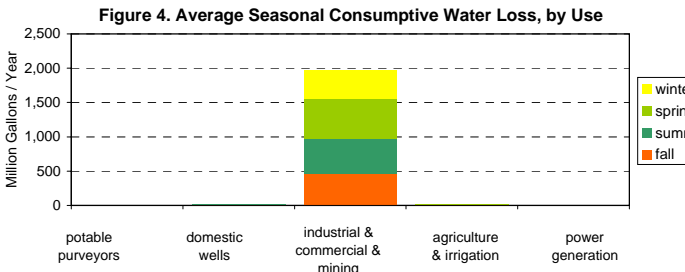


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	0	0	0	0	0	0	0	0	0	0	0
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	0	0	0	0	0	0	0	0	0	0	0

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	0	0	0	0	0	0	0	0	0	0	0

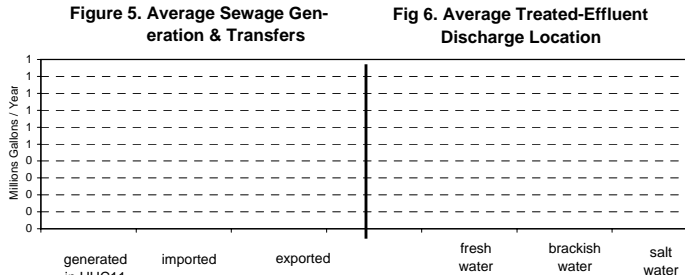


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	9,147
ground water	28,919
total	38,066

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	62
commercial	0
industrial	0
irrigation	0
mining	37,966
potable supply	37
power generation	0
total	38,066

Table 9. HUC11 Descriptive Statistics

--- Area:

in this HUC11 only	60.1	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	60.1	sq. mi.

(this HUC11 onshore area: 59.8 sq. mi.)

--- Population of this HUC11:

Year	Population	Change
1940	2,550	-
1950	2,936	15.1%
1960	3,011	2.5%
1970	3,114	3.4%
1980	3,573	14.7%
1990	3,639	1.8%
2000	3,679	1.1%
2010	3,983	8.2% est. ¹²
2020	4,419	10.9% est. ¹²
2030	4,795	8.5% est. ¹²

--- Land Use of this HUC11:

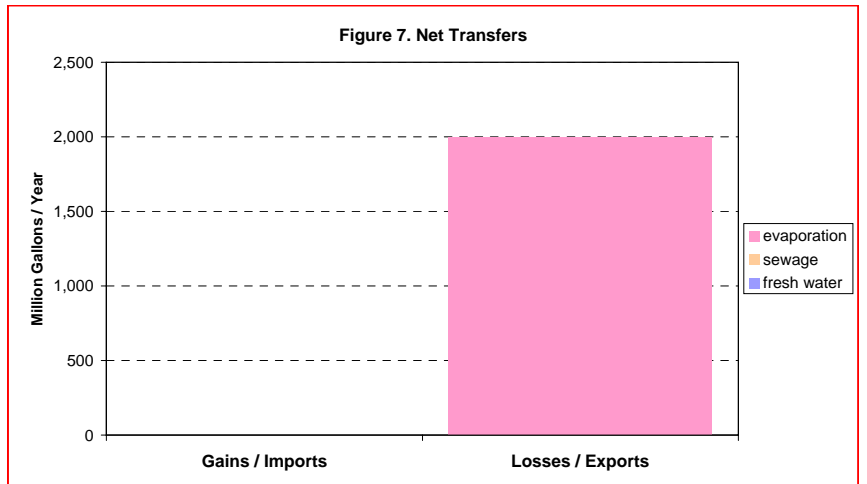
Type	Year		Change
	1986	1995	
ag.	3.0%	2.7%	-0.4%
barren	2.1%	1.7%	-0.4%
forest	11.6%	11.8%	0.2%
urban	2.0%	2.0%	0.1%
water	9.1%	10.8%	1.7%
wetlands	72.2%	71.0%	-1.3%

--- % of this HUC11 in:

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

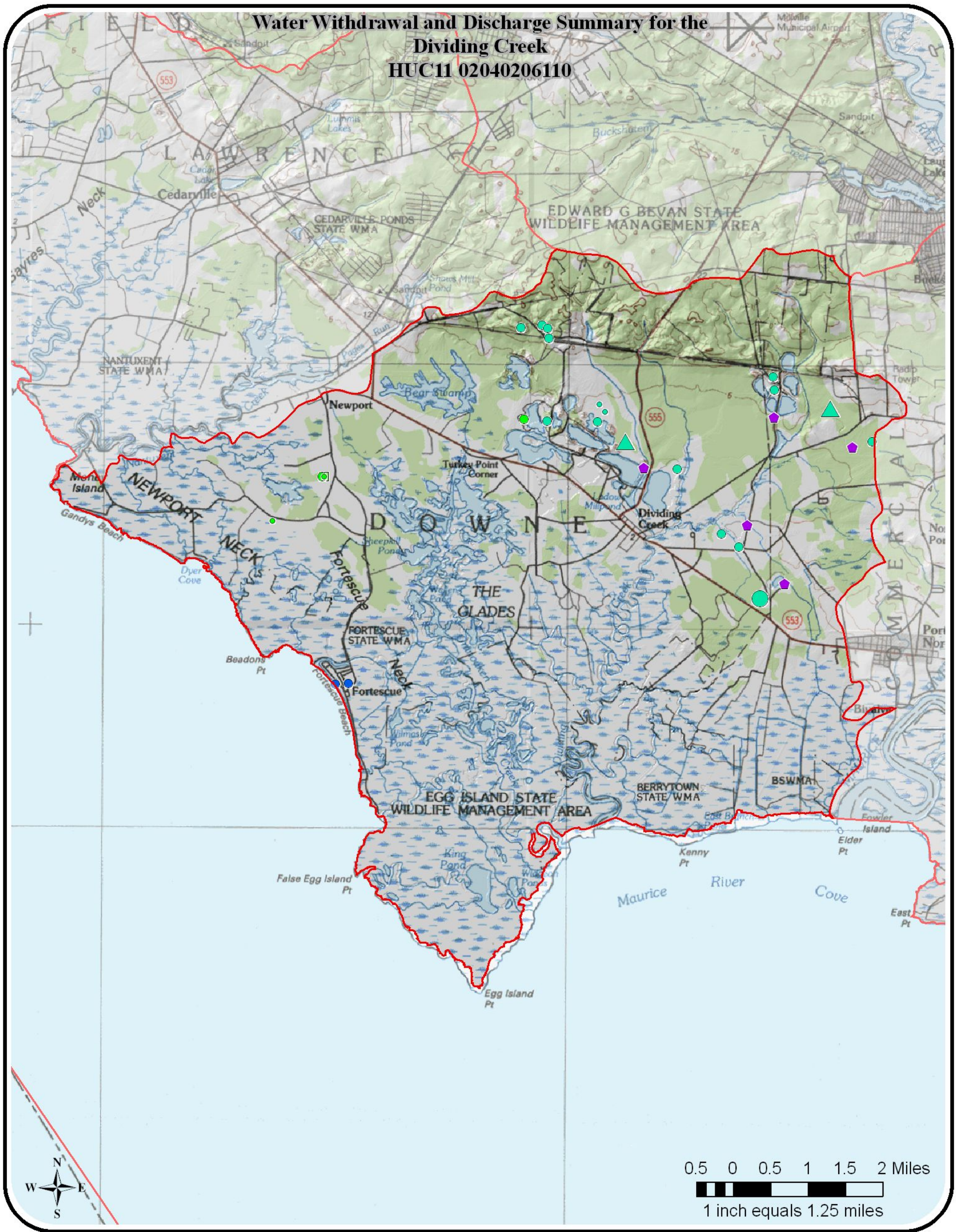
location	#	name
downstream:	02040204910	Delaware Bay (Cape May Pt to Fishing Ck)
(if any)	--	--
upstream:	--	--
(if any)	--	--



NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

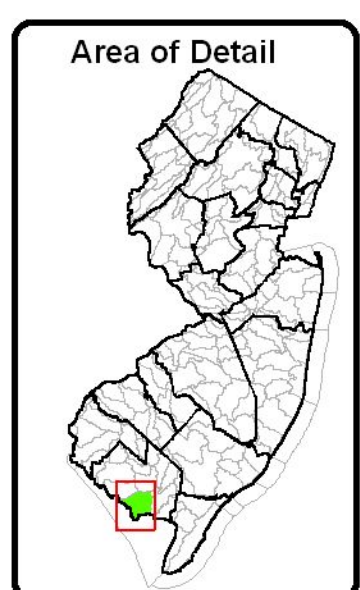
Water Withdrawal and Discharge Summary for the Dividing Creek HUC11 02040206110



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	
GW Confined	□
GW Unconfined	○
SW	△
1999 Withdrawal	
No 1999 Use	●▲
1 - 50 MGY	■●▲
51 - 100 MGY	■●▲
101 - 500 MGY	■●▲
> 500 MGY	■●▲
Use Group	
Agricultural	●
Commercial	●
Industrial	●
Irrigation	●
Mining	●
Not Classified	●
Potable Supply	●
Power Generation	●

MGY = millions of gallons per year



Water Withdrawals, Transfers and Discharges for STILL RUN / LITTLE EASE RUN --- 02040206120

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Still Run / Little Ease Run	02040206120

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	6	49	11	27	22	153	32	170	77	108	65
sum	6	49	11	27	22	153	32	170	77	108	65
ground-water:³											
confined	228	252	246	236	743	672	785	684	714	593	515
unconfined	317	342	314	350	354	450	439	430	489	636	412
sum	545	593	560	585	1,098	1,122	1,224	1,114	1,203	1,229	927
total withdrawals:	550	642	570	612	1,120	1,276	1,256	1,283	1,280	1,337	993

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	155	161	158	163	87	109	81	121	121	120	128
exports ¹¹	20	24	22	22	447	377	474	398	415	402	260
net	135	137	135	141	(360)	(267)	(393)	(276)	(294)	(282)	(132)

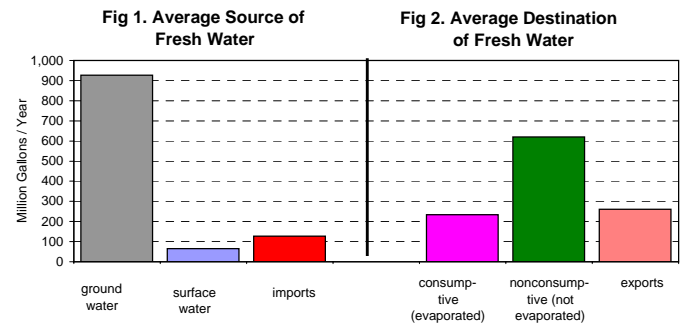


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	323	351	336	342	367	379	368	387	393	376	362
consumptive	39	46	41	46	47	49	45	53	56	56	48
domestic wells											
nonconsumptive	220	221	223	225	227	229	231	233	235	238	228
consumptive	31	31	31	32	32	32	33	33	33	34	32
industrial & commercial & mining											
nonconsumptive	24	16	21	16	13	12	16	0	6	4	13
consumptive	3	2	2	2	1	1	3	0	1	0	2
agricultural & non-agricultural irrigation											
nonconsumptive	4	11	5	9	7	30	16	30	25	32	17
consumptive	40	96	45	77	61	273	148	268	221	286	152
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	571	599	585	591	614	651	632	649	659	651	620
consumptive	112	175	120	157	141	356	228	354	310	377	233
PERCENTAGES:											
nonconsumptive	83.6%	77.4%	83.0%	79.1%	81.3%	64.6%	73.5%	64.7%	68.0%	63.3%	72.7%
consumptive	16.4%	22.6%	17.0%	20.9%	18.7%	35.4%	26.5%	35.3%	32.0%	36.7%	27.3%

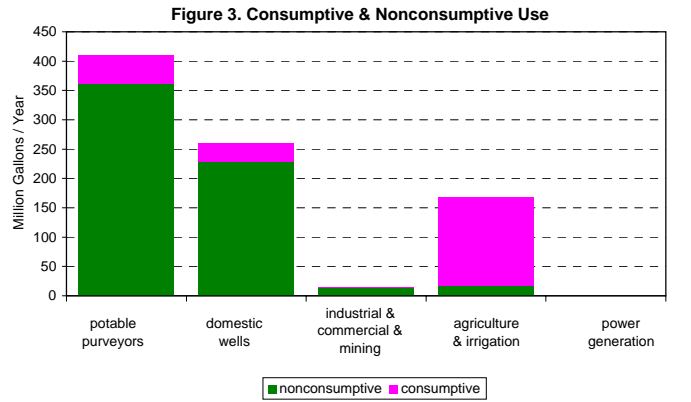


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive
potable purveyors	89	0	92	6	96	33	93	8	369	48
domestic wells	52	0	54	4	66	23	56	5	228	32
industrial & commercial & mining	3	0	4	0	3	0	3	0	13	2
agricultural & non-agricultural irrig.	0	3	1	11	13	118	2	20	17	152
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	144	3	151	21	178	175	154	34	627	233

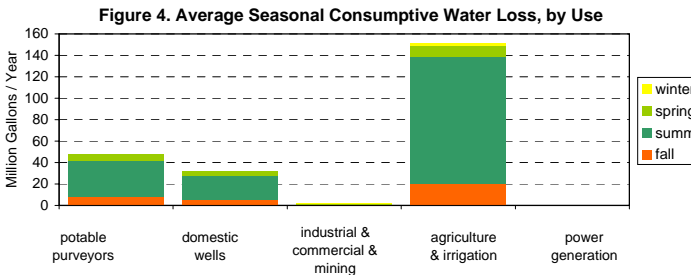


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	720	787	932	637	1,007	926	1,064	1,120	1,030	1,023	925
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	720	787	932	637	1,007	926	1,064	1,120	1,030	1,023	925

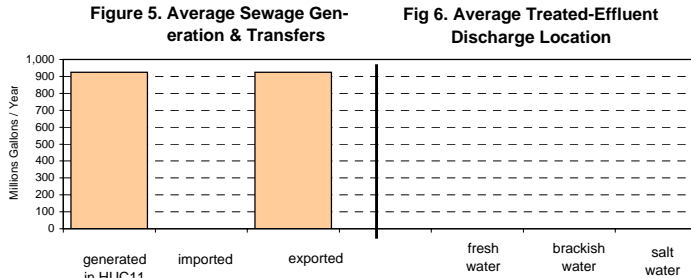


Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	0	0	0	0	0	0	0	0	0	0	0

Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	1,513
ground water	4,576
total	6,089

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	4,905
commercial	37
industrial	37
irrigation	19
mining	0
potable supply	1,091
power generation	0
total	6,089

Table 9. HUC11 Descriptive Statistics

--- **Area:**

in this HUC11 only	46.1	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	46.1	sq. mi.

(this HUC11 onshore area: 46.1 sq. mi.)

--- **Population of this HUC11:**

Year	Population	Change
1940	6,712	-
1950	8,495	26.6%
1960	13,203	55.4%
1970	15,759	19.4%
1980	19,090	21.1%
1990	21,153	10.8%
2000	23,921	13.1%
2010	26,925	12.6% est. ¹²
2020	30,414	13.0% est. ¹²
2030	34,000	11.8% est. ¹²

--- **Land Use of this HUC11:**

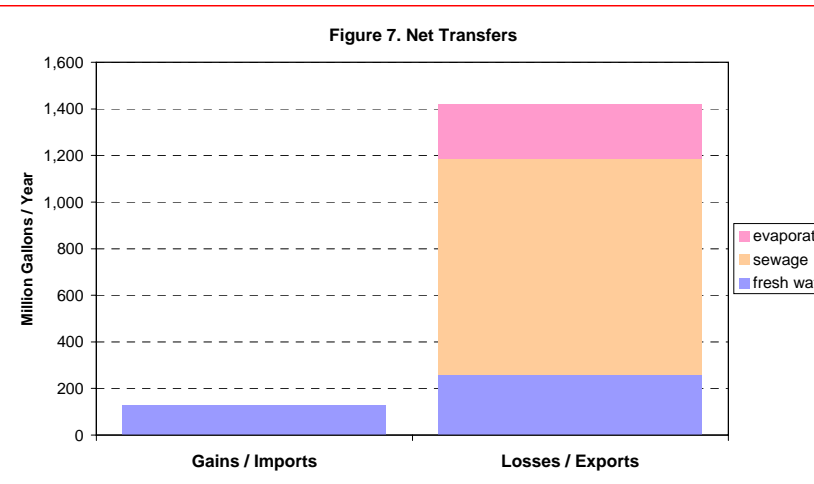
Type	Year		Change
	1986	1995	
ag.	30.0%	27.2%	-2.7%
barren	0.5%	1.0%	0.5%
forest	28.4%	28.2%	-0.2%
urban	17.6%	20.3%	2.7%
water	0.9%	0.9%	0.0%
wetlands	22.6%	22.4%	-0.3%

--- **% of this HUC11 in:**

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

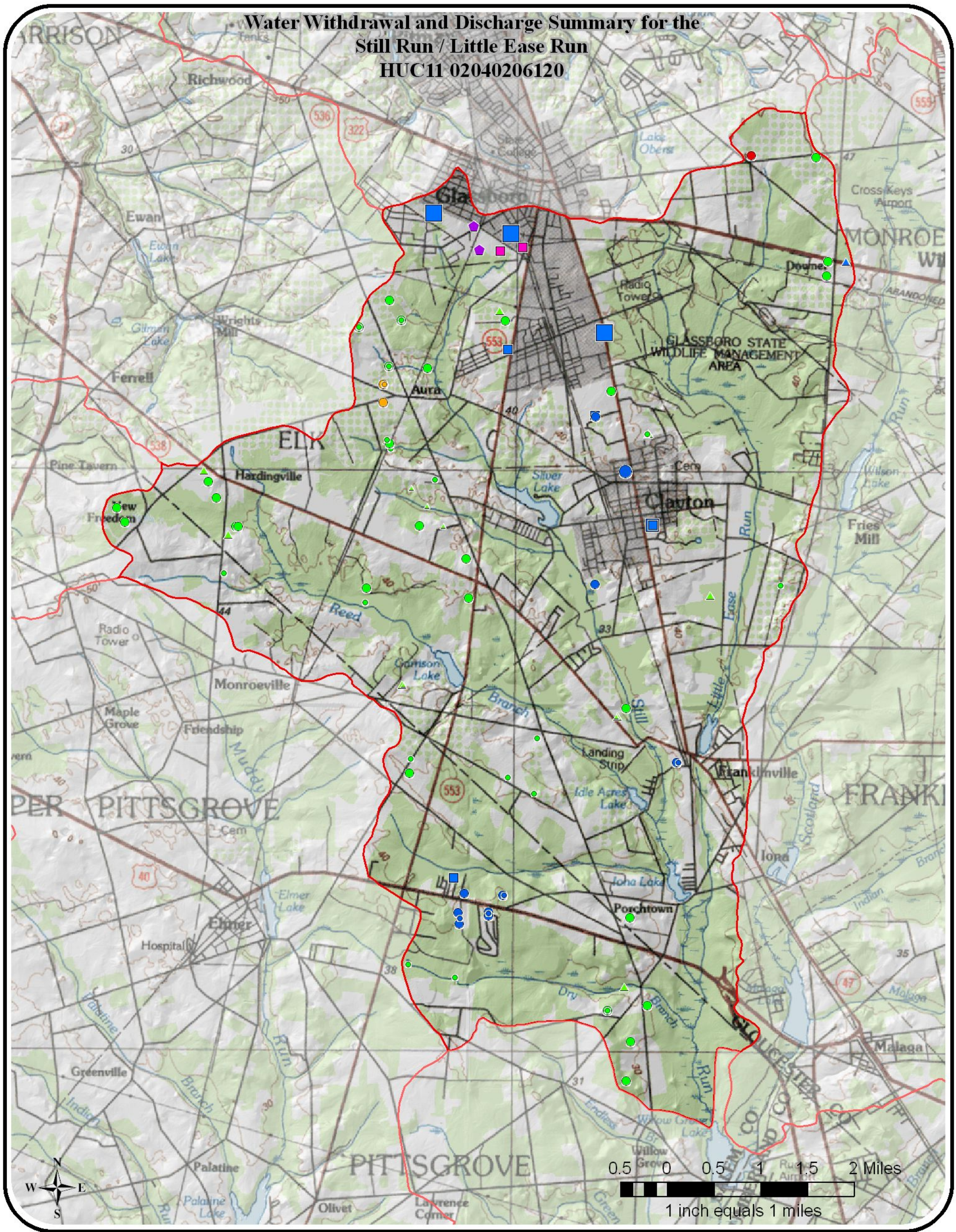
location	#	name
downstream:	02040206140	Maurice River (above Sherman Ave Bridge)
(if any)	--	--
upstream:	--	--
(if any)	--	--



NOTES:

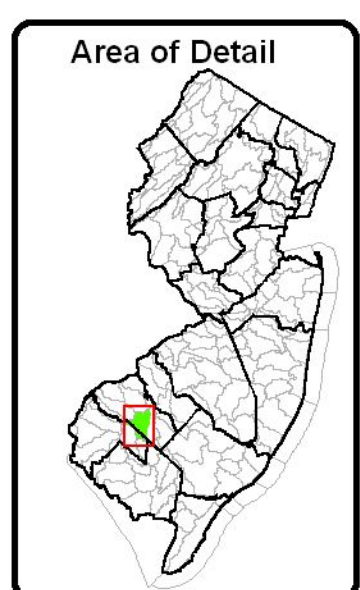
- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

**Water Withdrawal and Discharge Summary for the
Still Run / Little Ease Run
HUC11 02040206120**



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	1999 Withdrawal
GW Confined □	No 1999 Use ●▲
GW Unconfined ○	1 - 50 MGY ■●▲
SW △	51 - 100 MGY ■●▲
	101 - 500 MGY ■●▲
	> 500 MGY ■●▲
	MGY = millions of gallons per year
	Use Group
	Agricultural ●
	Commercial ●
	Industrial ●
	Irrigation ●
	Mining ●
	Not Classified ●
	Potable Supply ●
	Power Generation ●



Water Withdrawals, Transfers and Discharges for SCOTLAND RUN --- 02040206130

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Scotland Run	02040206130

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	33	17	15	17	12	19	17	51	71	108	36
sum	33	17	15	17	12	19	17	51	71	108	36
ground-water:³											
confined	0	0	0	319	331	358	295	391	442	329	246
unconfined	339	510	508	545	620	774	725	1,029	1,109	1,093	725
sum	339	510	508	865	951	1,131	1,020	1,420	1,552	1,422	972
total withdrawals:	372	526	524	882	963	1,151	1,036	1,471	1,622	1,530	1,008

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	190	207	192	184	187	191	187	171	180	166	186
exports ¹¹	8	160	170	487	551	773	652	948	1,045	912	571
net	182	47	23	(303)	(364)	(582)	(465)	(777)	(865)	(746)	(385)

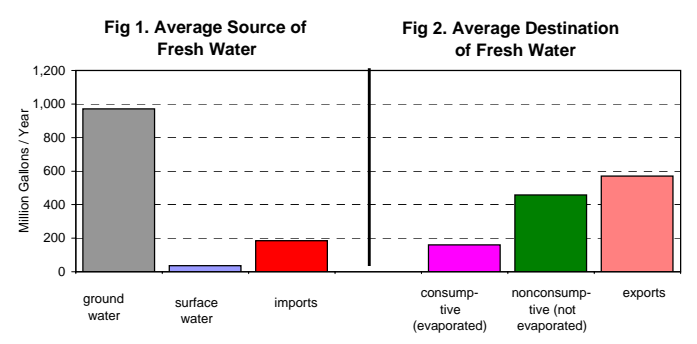


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	205	221	208	205	205	203	200	230	246	237	216
consumptive	24	30	26	28	29	27	24	33	36	33	29
domestic wells											
nonconsumptive	219	220	223	225	227	230	232	234	236	239	228
consumptive	31	31	31	32	32	32	33	33	33	34	32
industrial & commercial & mining											
nonconsumptive	0	0	0	0	7	0	0	0	10	4	2
consumptive	0	0	0	0	1	0	0	0	1	0	0
agricultural & non-agricultural irrigation											
nonconsumptive	7	6	6	8	9	7	8	16	19	24	11
consumptive	62	56	52	72	81	67	73	146	174	213	100
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	432	448	436	437	447	440	440	480	512	503	458
consumptive	118	117	109	132	142	127	130	213	244	280	161
PERCENTAGES:											
nonconsumptive	78.6%	79.3%	80.0%	76.9%	75.9%	77.6%	77.2%	69.3%	67.7%	64.3%	74.0%
consumptive	21.4%	20.7%	20.0%	23.1%	24.1%	22.4%	22.8%	30.7%	32.3%	35.7%	26.0%

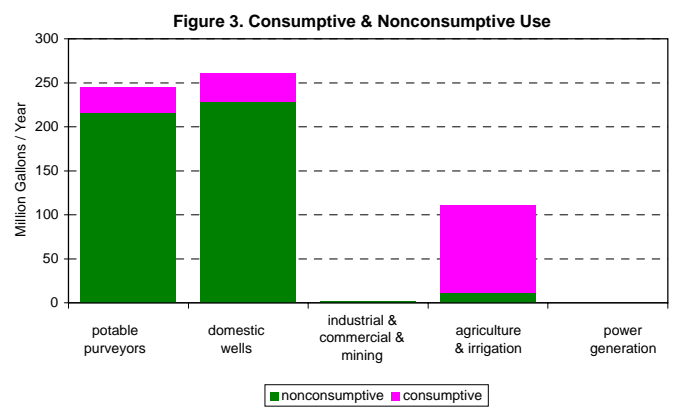


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive
potable purveyors	53	0	55	4	58	20	54	5	220	29
domestic wells	52	0	54	4	66	23	56	5	228	32
industrial & commercial & mining	0	0	0	0	1	0	0	0	2	0
agricultural & non-agricultural irrig.	0	3	2	15	7	62	2	19	11	100
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	106	4	111	23	133	105	113	29	462	161

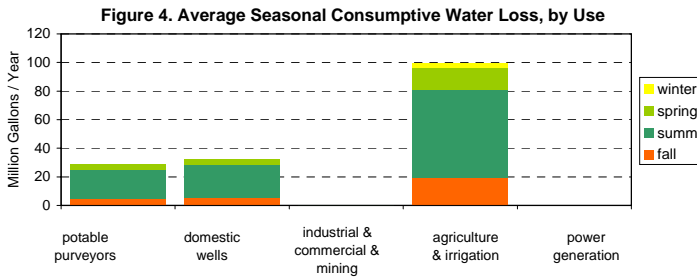


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	296	324	383	262	414	381	438	461	424	421	380
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	296	324	383	262	414	381	438	461	424	421	380

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	0	0	0	0	0	0	0	0	0	0	0

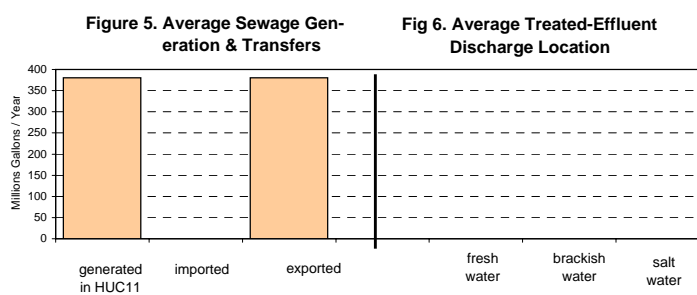


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	255
ground water	2,056
total	2,311

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	1,032
commercial	74
industrial	28
irrigation	37
mining	0
potable supply	1,140
power generation	0
total	2,311

Table 9. HUC11 Descriptive Statistics

--- Area:

in this HUC11 only	29.8	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	29.8	sq. mi.

(this HUC11 onshore area: 29.8 sq. mi.)

--- Population of this HUC11:

Year	Population	Change
1940	2,399	-
1950	3,284	36.9%
1960	5,115	55.8%
1970	7,249	41.7%
1980	10,594	46.1%
1990	13,149	24.1%
2000	14,347	9.1%
2010	15,871	10.6% est. ¹²
2020	17,787	12.1% est. ¹²
2030	19,460	9.4% est. ¹²

--- Land Use of this HUC11:

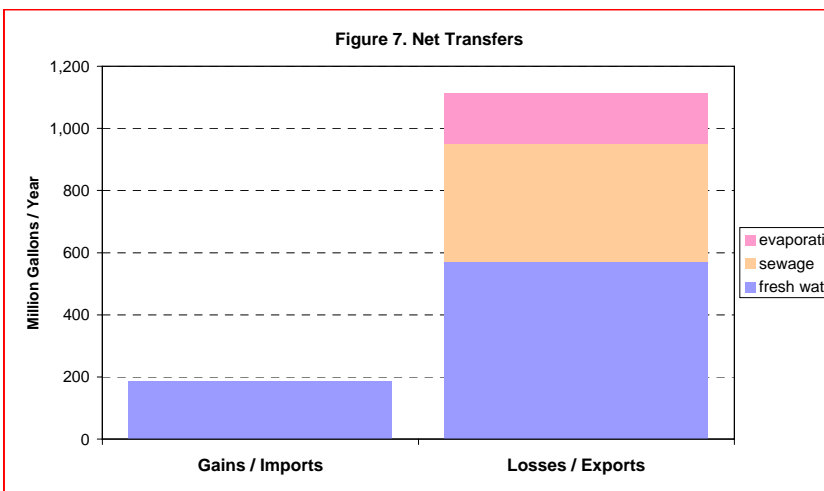
Type	Year		Change
	1986	1995	
ag.	17.8%	14.8%	-3.0%
barren	0.6%	1.4%	0.7%
forest	43.6%	42.4%	-1.2%
urban	18.9%	22.5%	3.5%
water	1.3%	1.3%	0.0%
wetlands	17.7%	17.6%	-0.1%

--- % of this HUC11 in:

Pinelands:	7.4%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

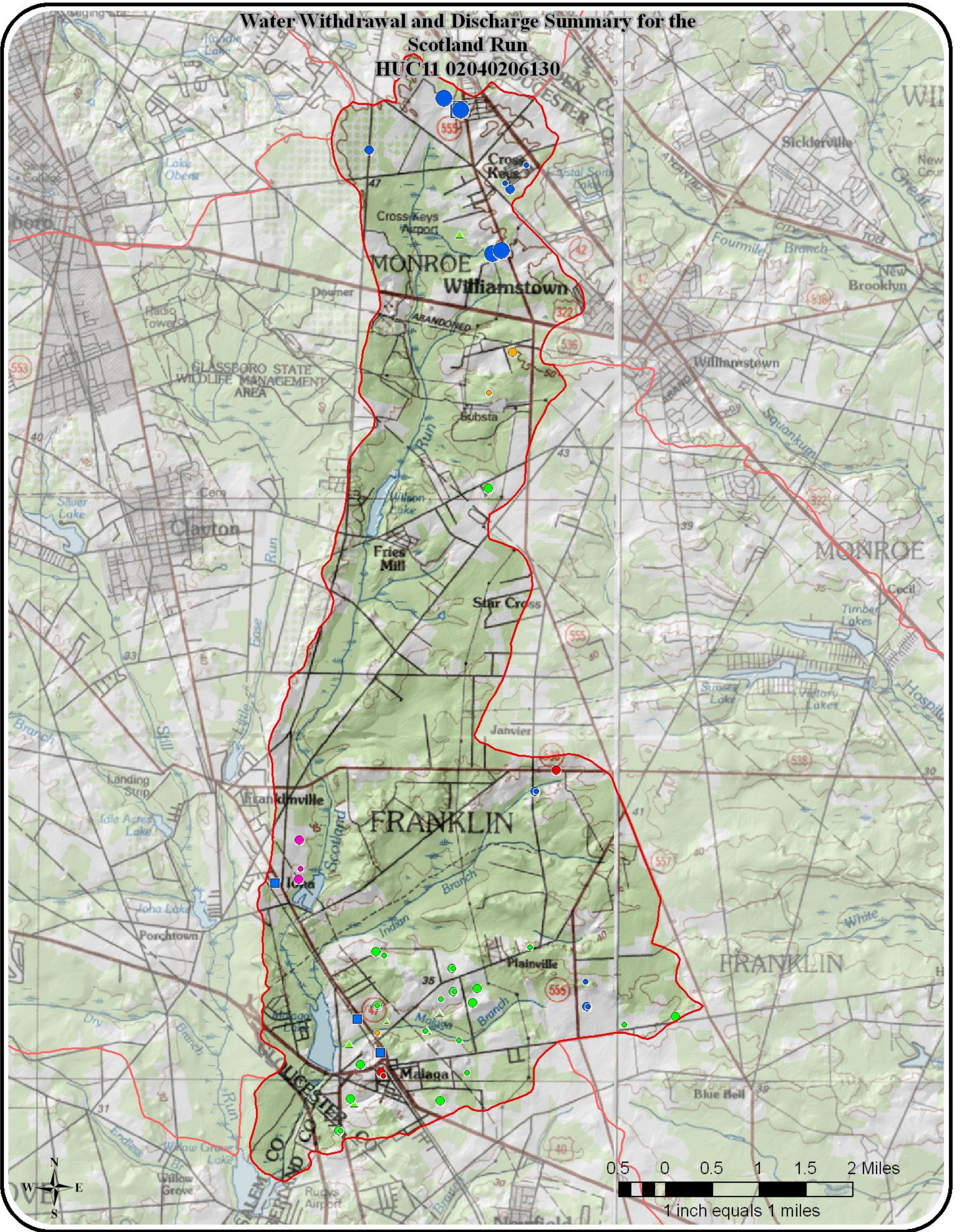
location	#	name
downstream:	02040206140	Maurice River (above Sherman Ave Bridge)
(if any)	--	--
upstream:	--	--
(if any)	--	--



NOTES:

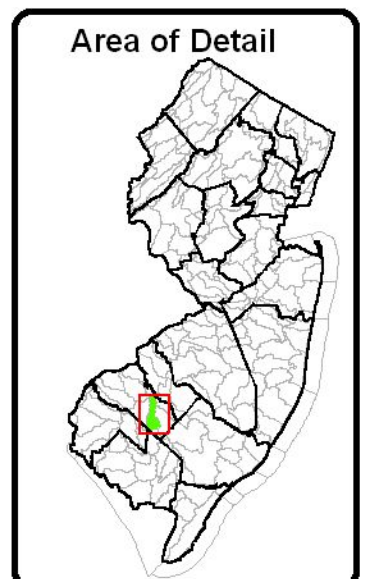
- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

**Water Withdrawal and Discharge Summary for the
Scotland Run
HUC11 02040206130**



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	1999 Withdrawal
GW Confined □	No 1999 Use ■●▲
GW Unconfined ○	1 - 50 MGY ■●▲
SW △	51 - 100 MGY ■●▲
	101 - 500 MGY ■●▲
	> 500 MGY ■●▲
	MGY = millions of gallons per year
	Use Group
	Agricultural ●
	Commercial ●
	Industrial ●
	Irrigation ●
	Mining ●
	Not Classified ●
	Potable Supply ●
	Power Generation ●



Water Withdrawals, Transfers and Discharges for MAURICE RIVER (ABOVE SHERMAN AVE BRIDGE) --- 02040206140

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Maurice River (above Sherman Ave Bridge)	02040206140

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
<i>surface water:</i> ²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	3	4	0	1	1	1	128	1	1	4	14
sum	3	4	0	1	1	1	128	1	1	4	14
<i>ground-water:</i> ³											
confined	0	0	0	0	0	0	0	0	0	0	0
unconfined	4,541	4,626	4,069	4,716	5,181	4,976	4,996	5,669	4,948	4,878	4,860
sum	4,541	4,626	4,069	4,716	5,181	4,976	4,996	5,669	4,948	4,878	4,860
total withdrawals:	4,544	4,630	4,069	4,717	5,182	4,977	5,123	5,669	4,949	4,882	4,874

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	27	261	215	240	182	95	105	338	366	346	217
exports ¹¹	743	751	655	746	787	787	742	886	749	745	759
net	(716)	(490)	(440)	(506)	(605)	(692)	(637)	(548)	(383)	(399)	(542)

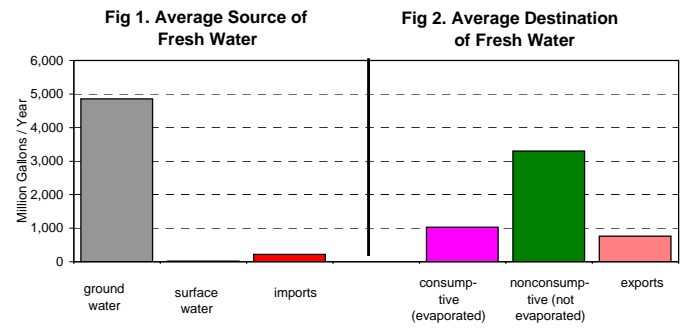


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
<i>potable purveyors</i>											
nonconsumptive	2,108	2,339	2,042	2,294	2,357	2,287	2,146	2,759	2,412	2,369	2,311
consumptive	288	318	263	323	331	323	284	356	336	326	315
<i>domestic wells</i>											
nonconsumptive	222	223	225	228	231	234	236	238	241	243	232
consumptive	31	31	32	32	33	33	33	34	34	34	33
<i>industrial & commercial & mining</i>											
nonconsumptive	743	656	583	755	751	688	684	716	680	672	693
consumptive	85	73	68	87	85	80	78	83	79	77	79
<i>agricultural & non-agricultural irrigation</i>											
nonconsumptive	35	50	42	49	79	64	103	94	78	76	67
consumptive	314	447	374	441	708	576	923	842	705	686	602
<i>power generation</i>											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	3,108	3,268	2,892	3,326	3,417	3,272	3,168	3,807	3,411	3,360	3,303
consumptive	718	870	736	884	1,157	1,012	1,318	1,314	1,154	1,123	1,029
PERCENTAGES:											
nonconsumptive	81.2%	79.0%	79.7%	79.0%	74.7%	76.4%	70.6%	74.3%	74.7%	74.9%	76.3%
consumptive	18.8%	21.0%	20.3%	21.0%	25.3%	23.6%	29.4%	25.7%	25.3%	25.1%	23.7%

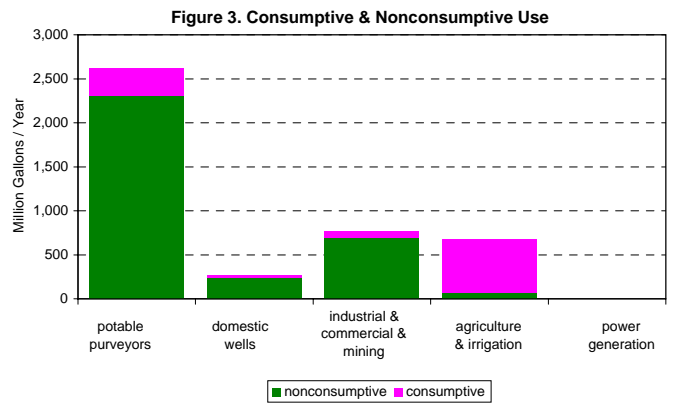


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive
potable purveyors	523	0	578	40	645	224	566	51	2,312	315
domestic wells	53	0	55	4	68	24	57	5	232	33
industrial & commercial & mining	156	18	166	19	190	22	181	21	693	79
agricultural & non-agricultural irrig.	0	2	12	106	43	386	12	108	67	602
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	732	20	809	168	946	656	816	185	3,304	1,029

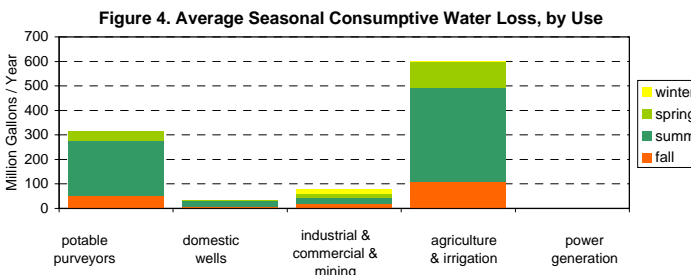


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	25	24	22	24	23	22	23	24	25	23	24
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	25	24	22	24	23	22	23	24	25	23	24

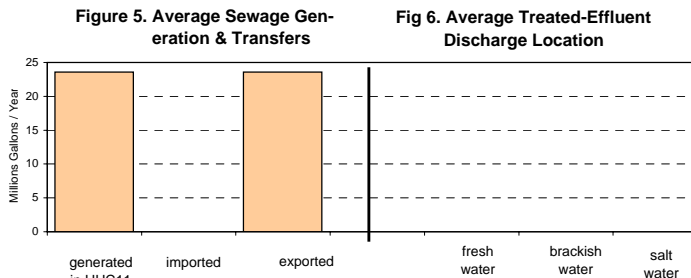


Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	0	0	0	0	0	0	0	0	0	0	0

Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	80
ground water	9,896
total	9,976

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	3,761
commercial	22
industrial	1,363
irrigation	0
mining	1,168
potable supply	3,662
power generation	0
total	9,976

Table 9. HUC11 Descriptive Statistics

--- Area:

in this HUC11 only	56.8	sq. mi.
upstream HUC11s	133.8	sq. mi.
total watershed	190.6	sq. mi.

(this HUC11 onshore area: 56.8 sq. mi.)

--- Population of this HUC11:

Year	Population	Change
1940	12,538	-
1950	15,983	27.5%
1960	20,516	28.4%
1970	25,342	23.5%
1980	29,435	16.1%
1990	30,784	4.6%
2000	31,673	2.9%
2010	34,006	7.4% est. ¹²
2020	37,452	10.1% est. ¹²
2030	40,185	7.3% est. ¹²

--- Land Use of this HUC11:

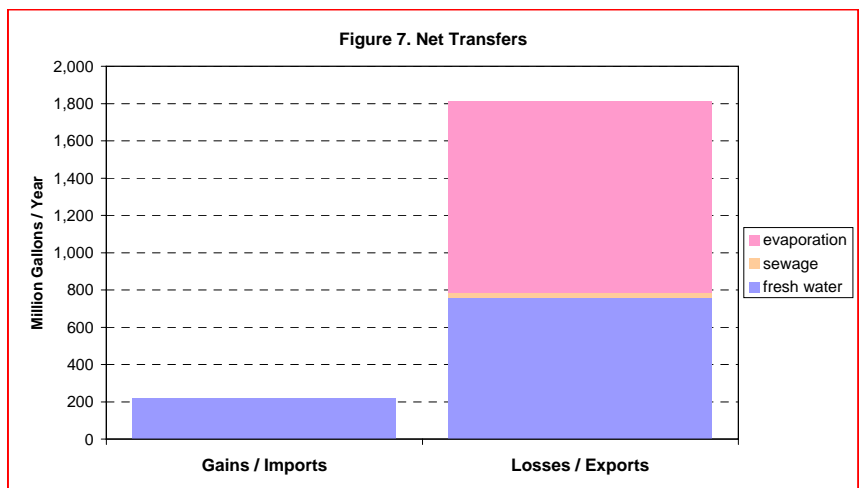
Type	Year		Change
	1986	1995	
ag.	21.4%	21.2%	-0.2%
barren	1.0%	1.2%	0.2%
forest	32.6%	31.1%	-1.5%
urban	28.8%	30.4%	1.6%
water	0.9%	0.8%	-0.1%
wetlands	15.3%	15.3%	0.0%

--- % of this HUC11 in:

Pinelands:	0.7%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

location	#	name
downstream:	02040206160	Maurice River (Union Lk to Sherman Ave)
(if any)		
upstream:	02040206120	Still Run / Little Ease Run
(if any)	02040206130	Scotland Run
	02040206150	Muddy Run
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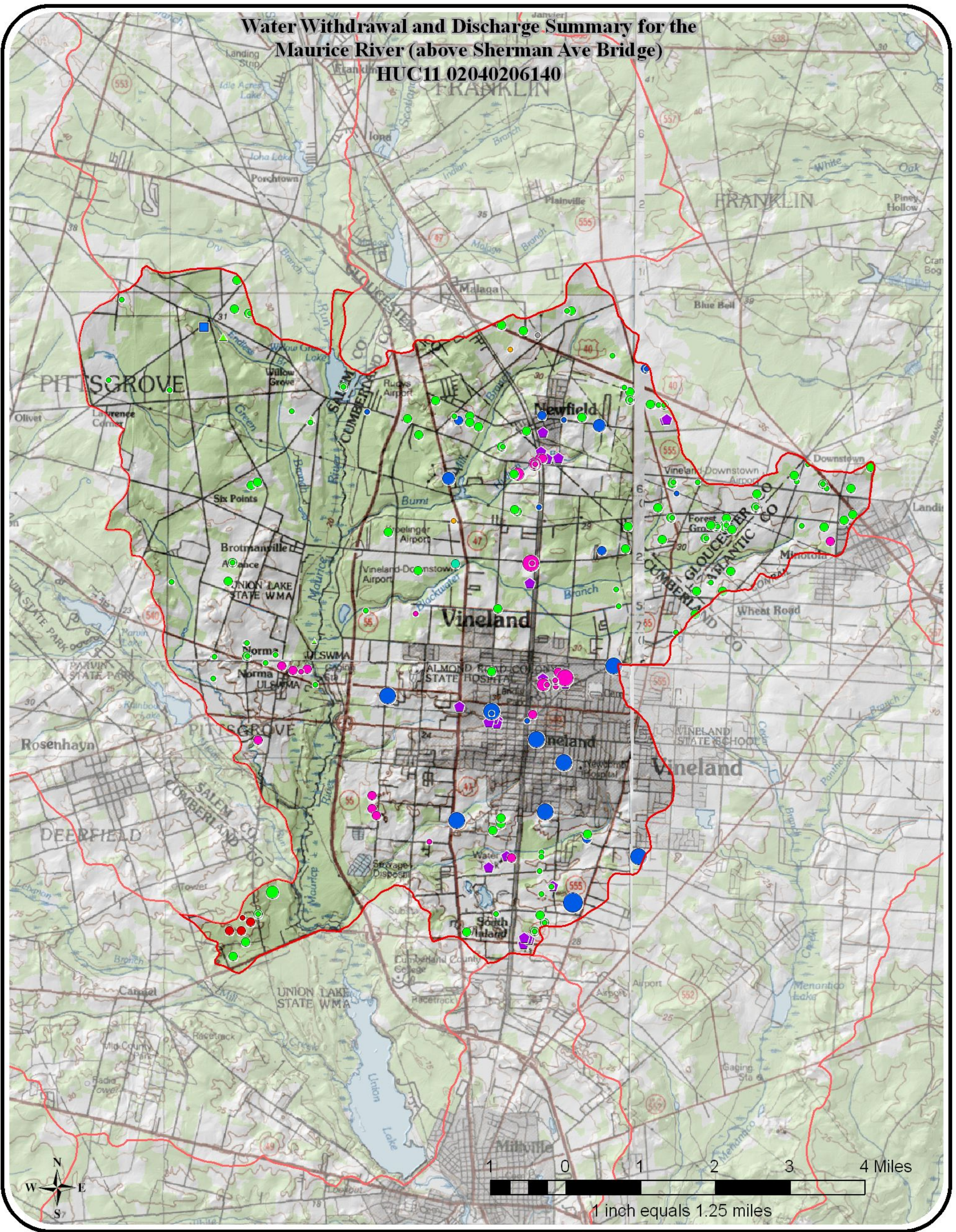


NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

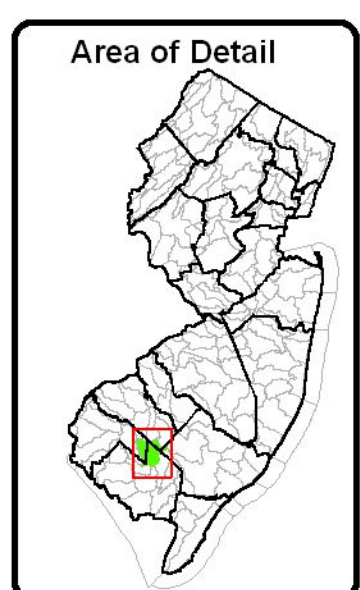
Water Withdrawal and Discharge Summary for the Maurice River (above Sherman Ave Bridge)

HUC11 02040206140



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
1999 Withdrawal	
No 1999 Use	■●▲
1 - 50 MGY	■●▲
51 - 100 MGY	■●▲
101 - 500 MGY	■●▲
> 500 MGY	■●▲
	MGY = millions of gallons per year
Use Group	
Agricultural	●
Commercial	●
Industrial	●
Irrigation	●
Mining	●
Not Classified	●
Potable Supply	●
Power Generation	●



Water Withdrawals, Transfers and Discharges for MUDDY RUN --- 02040206150

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Muddy Run	02040206150

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	73	98	61	101	13	177	58	105	144	127	96
sum	73	98	61	101	13	177	58	105	144	127	96
ground-water:³											
confined	63	83	69	70	71	73	61	70	69	68	70
unconfined	891	1,141	1,229	1,095	1,159	1,275	822	1,394	1,338	1,388	1,173
sum	954	1,224	1,298	1,164	1,230	1,349	884	1,464	1,407	1,456	1,243
total withdrawals:	1,027	1,323	1,360	1,266	1,243	1,525	942	1,569	1,551	1,583	1,339

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

imports ¹¹	0	0	0	0	0	0	2	2	3	3	1
exports ¹¹	0	0	0	0	8	9	4	0	0	0	2
net	0	0	0	0	(8)	(9)	(2)	2	3	3	(1)

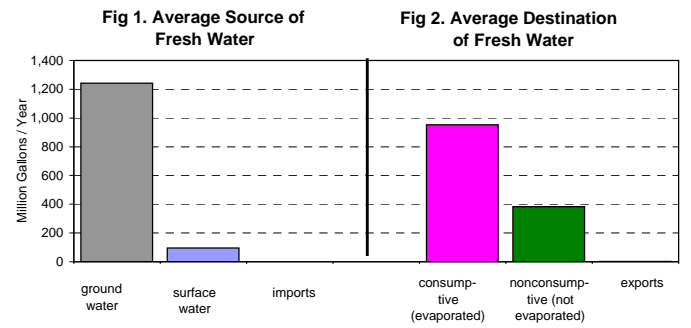


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	55	71	65	67	68	70	63	68	68	67	66
consumptive	7	10	9	10	10	11	8	11	10	11	10
domestic wells											
nonconsumptive	197	199	201	204	207	210	212	215	217	220	208
consumptive	28	28	28	29	29	30	30	30	31	31	29
industrial & commercial & mining											
nonconsumptive	5	8	5	2	6	0	4	17	15	17	8
consumptive	3	6	3	0	0	0	0	2	2	4	2
agricultural & non-agricultural irrigation											
nonconsumptive	73	100	105	95	92	120	62	123	121	123	101
consumptive	659	900	943	859	824	1,077	560	1,106	1,089	1,111	913
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	330	378	376	368	372	399	341	422	421	427	384
consumptive	697	945	983	898	862	1,117	598	1,148	1,132	1,157	954
PERCENTAGES:											
nonconsumptive	32.2%	28.6%	27.7%	29.1%	30.1%	26.3%	36.3%	26.9%	27.1%	27.0%	28.7%
consumptive	67.8%	71.4%	72.3%	70.9%	69.9%	73.7%	63.7%	73.1%	72.9%	73.0%	71.3%

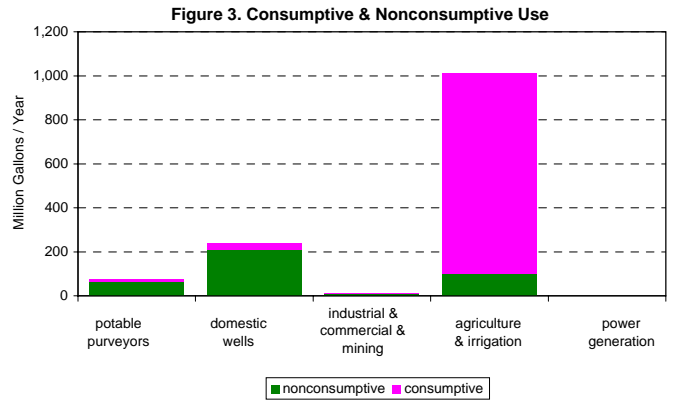


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive	Noncon-sumptive	Consumptive
potable purveyors	15	0	16	1	20	7	16	1	67	10
domestic wells	48	0	49	4	61	21	51	5	208	29
industrial & commercial & mining	2	1	2	1	2	0	2	0	8	2
agricultural & non-agricultural irrig.	2	20	14	122	67	602	19	169	101	913
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	67	21	81	127	150	630	87	175	384	954

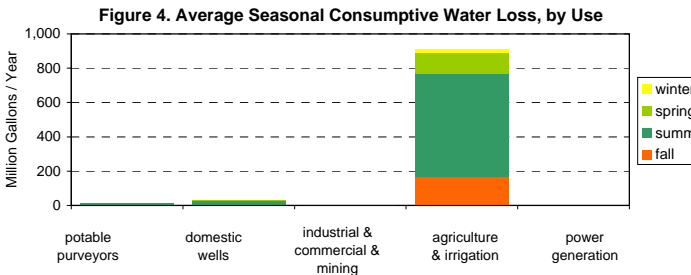


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

generated in HUC11	7	8	7	8	8	8	8	8	8	9	8
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	7	8	7	8	8	8	8	8	8	9	8

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	0	0	0	0	0	0	0	0	0	0	0

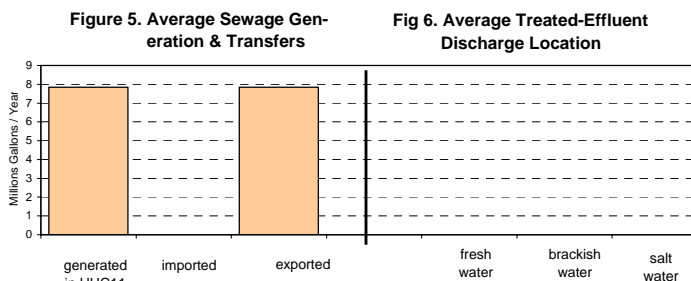


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	1,488
ground water	7,969
total	9,457

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	9,065
commercial	89
industrial	37
irrigation	112
mining	0
potable supply	154
power generation	0
total	9,457

Table 9. HUC11 Descriptive Statistics

--- **Area:**

in this HUC11 only	57.9	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	57.9	sq. mi.

(this HUC11 onshore area: 57.9 sq. mi.)

--- **Population of this HUC11:**

Year	Population	Change
1940	4,460	-
1950	5,742	28.7%
1960	6,834	19.0%
1970	7,745	13.3%
1980	9,137	18.0%
1990	9,972	9.1%
2000	10,458	4.9%
2010	11,003	5.2% est. ¹²
2020	12,119	10.1% est. ¹²
2030	12,561	3.6% est. ¹²

--- **Land Use of this HUC11:**

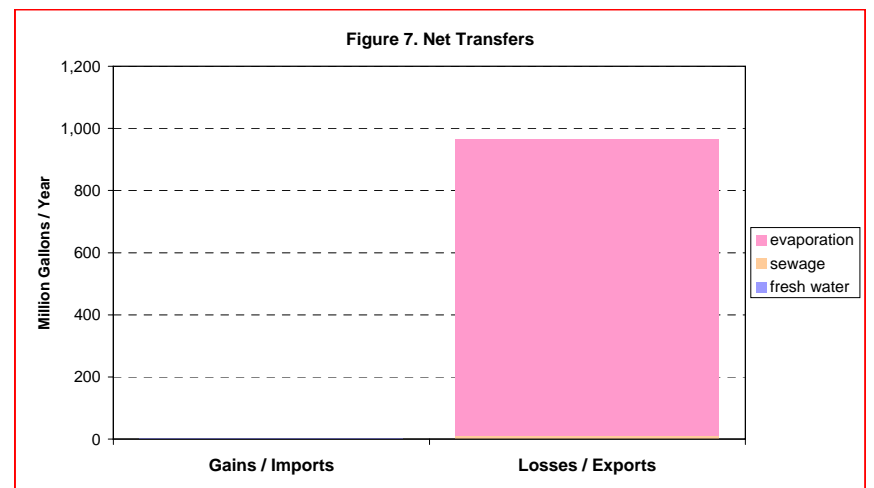
Type	Year		Change
	1986	1995	
ag.	48.7%	47.3%	-1.4%
barren	0.1%	0.4%	0.3%
forest	22.3%	21.6%	-0.7%
urban	9.4%	11.2%	1.9%
water	1.1%	1.1%	0.0%
wetlands	18.5%	18.4%	-0.1%

--- **% of this HUC11 in:**

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

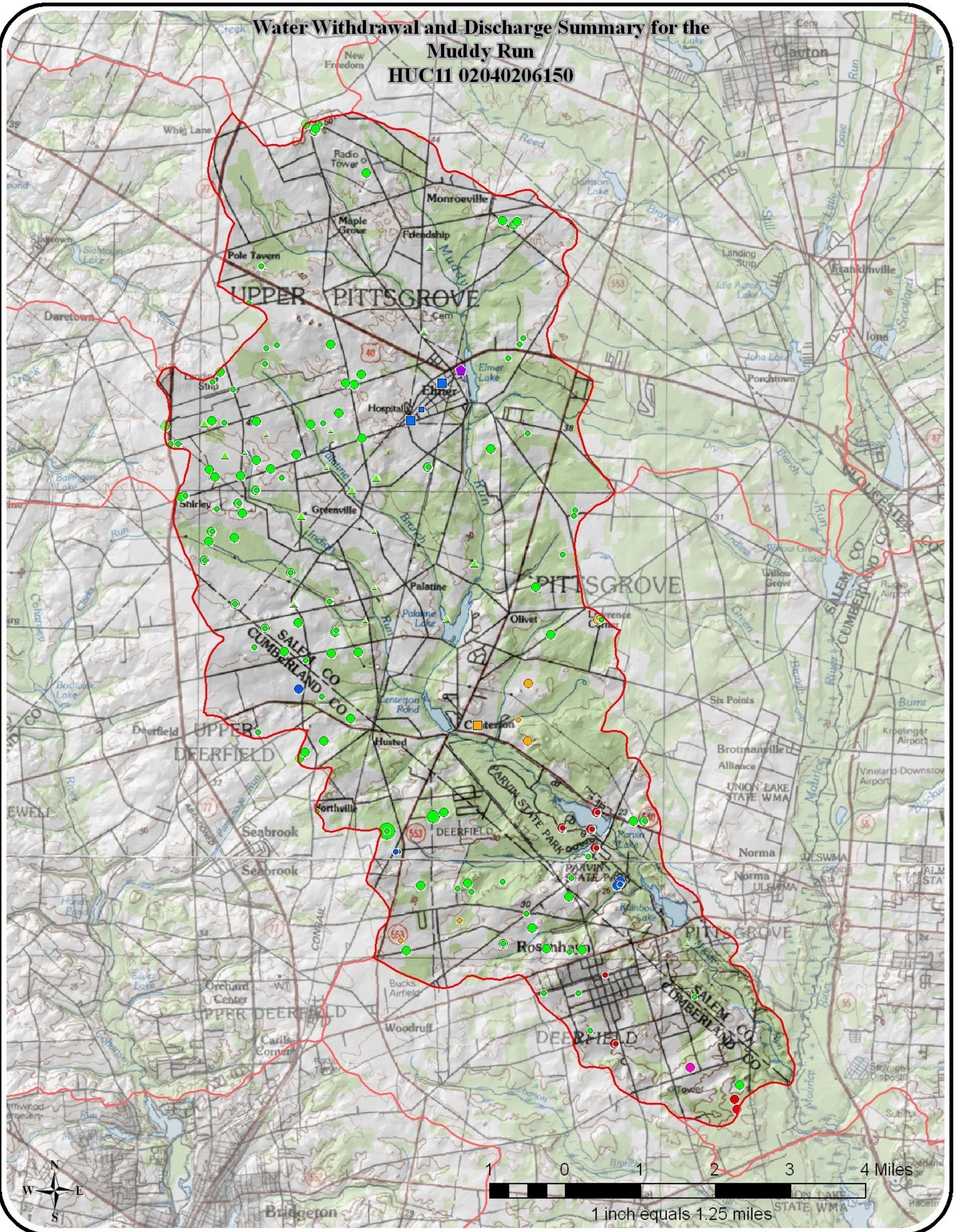
location	#	name
downstream:	02040206140	Maurice River (above Sherman Ave Bridge)
(if any)	--	--
upstream:	--	--
(if any)	--	--



NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

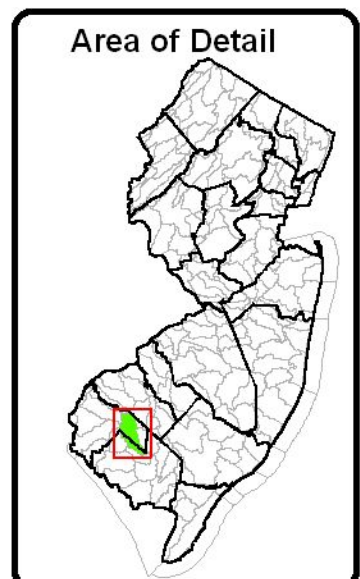
Water Withdrawal and Discharge Summary for the Muddy Run HUC11 02040206150



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	
GW Confined	□
GW Unconfined	○
SW	△
1999 Withdrawal	
No 1999 Use	●▲
1 - 50 MGY	■●▲
51 - 100 MGY	■●▲
101 - 500 MGY	■●▲
> 500 MGY	■●▲
Use Group	
Agricultural	●
Commercial	●
Industrial	●
Irrigation	●
Mining	●
Not Classified	●
Potable Supply	●
Power Generation	●

MGY = millions of gallons per year



Water Withdrawals, Transfers and Discharges for MAURICE RIVER (UNION LK TO SHERMAN AVE) --- 02040206160

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Maurice River (Union Lk to Sherman Ave)	02040206160

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	0	0	0	0	0	0	0	0	0	0	0
sum	0	0	0	0	0	0	0	0	0	0	0
ground-water:³											
confined	0	0	0	0	0	0	0	0	0	0	0
unconfined	168	219	250	476	533	539	399	533	550	521	419
sum	168	219	250	476	533	539	399	533	550	521	419
total withdrawals:	168	219	250	476	533	539	399	533	550	521	419

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	284	344	313	301	294	280	203	276	272	249	282
exports ¹¹	20	0	42	224	283	258	198	255	257	276	181
net	264	344	272	77	12	22	5	21	15	(27)	100

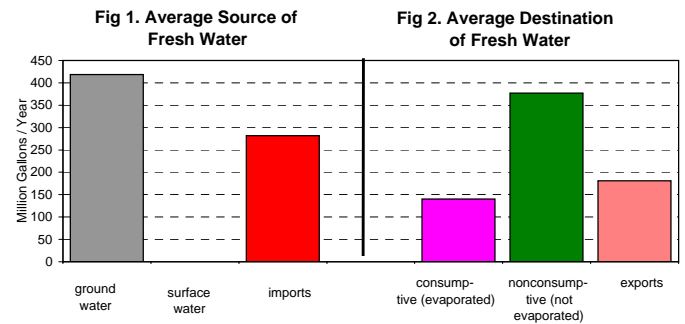


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	251	302	281	302	306	288	210	286	281	264	277
consumptive	37	43	40	41	41	40	30	38	39	37	39
domestic wells											
nonconsumptive	86	87	88	89	90	91	91	92	93	94	90
consumptive	12	12	12	12	13	13	13	13	13	13	13
industrial & commercial & mining											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
agricultural & non-agricultural irrigation											
nonconsumptive	4	11	10	11	9	13	6	12	14	8	10
consumptive	38	102	90	95	84	116	53	112	124	76	89
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	341	400	379	402	405	392	308	391	388	366	377
consumptive	86	157	143	149	138	168	96	163	176	126	140
PERCENTAGES:											
nonconsumptive	79.8%	71.9%	72.7%	73.0%	74.6%	69.9%	76.2%	70.6%	68.8%	74.3%	72.9%
consumptive	20.2%	28.1%	27.3%	27.0%	25.4%	30.1%	23.8%	29.4%	31.2%	25.7%	27.1%

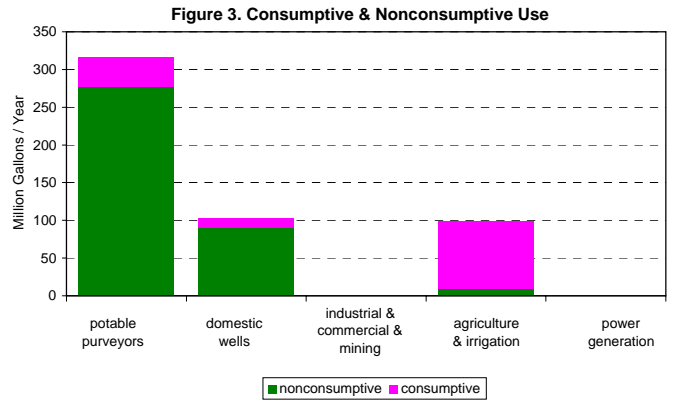


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive
potable purveyors	63	0	68	5	79	27	69	6	279	39
domestic wells	21	0	21	2	26	9	22	2	90	13
industrial & commercial & mining	0	0	0	0	0	0	0	0	0	0
agricultural & non-agricultural irrig.	0	0	1	12	6	53	3	24	10	89
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	84	0	90	19	111	90	93	32	379	140

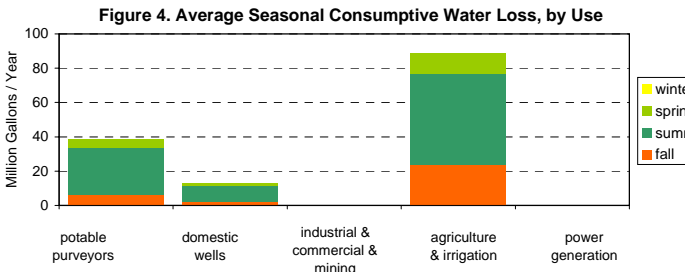


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	269	335	328	314	338	284	299	295	311	306	308
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	269	335	328	314	338	284	299	295	311	306	308

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	0	0	0	0	0	0	0	0	0	0	0

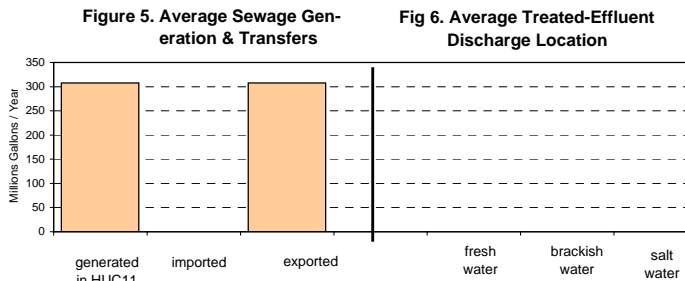


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	0
ground water	907
total	907

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	365
commercial	0
industrial	37
irrigation	56
mining	0
potable supply	450
power generation	0
total	907

Table 9. HUC11 Descriptive Statistics

--- **Area:**

in this HUC11 only	25.0	sq. mi.
upstream HUC11s	190.6	sq. mi.
total watershed	215.7	sq. mi.

(this HUC11 onshore area: 25.0 sq. mi.)

--- **Population of this HUC11:**

Year	Population	Change
1940	5,656	-
1950	6,533	15.5%
1960	7,809	19.5%
1970	8,929	14.3%
1980	10,111	13.2%
1990	10,664	5.5%
2000	11,003	3.2%
2010	11,892	8.1% est. ¹²
2020	13,169	10.7% est. ¹²
2030	14,274	8.4% est. ¹²

--- **Land Use of this HUC11:**

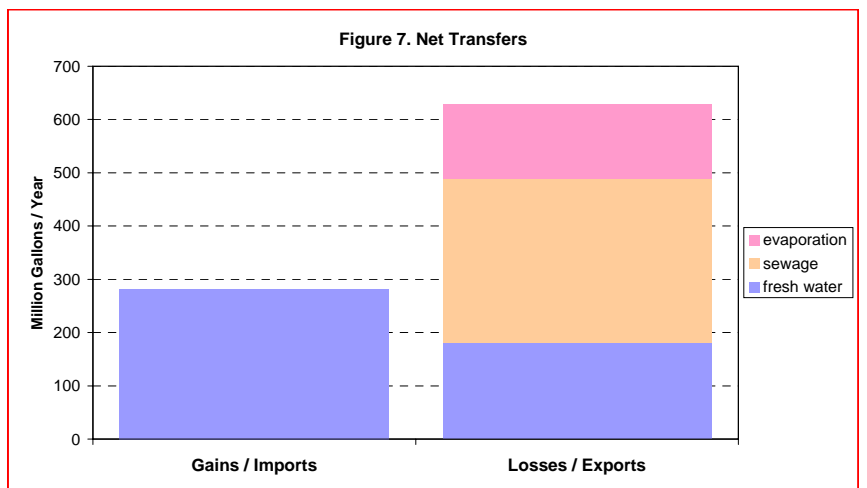
Type	Year		Change
	1986	1995	
ag.	28.6%	27.0%	-1.5%
barren	0.7%	0.5%	-0.2%
forest	42.8%	42.5%	-0.3%
urban	10.1%	12.2%	2.1%
water	5.3%	5.4%	0.1%
wetlands	12.5%	12.3%	-0.2%

--- **% of this HUC11 in:**

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

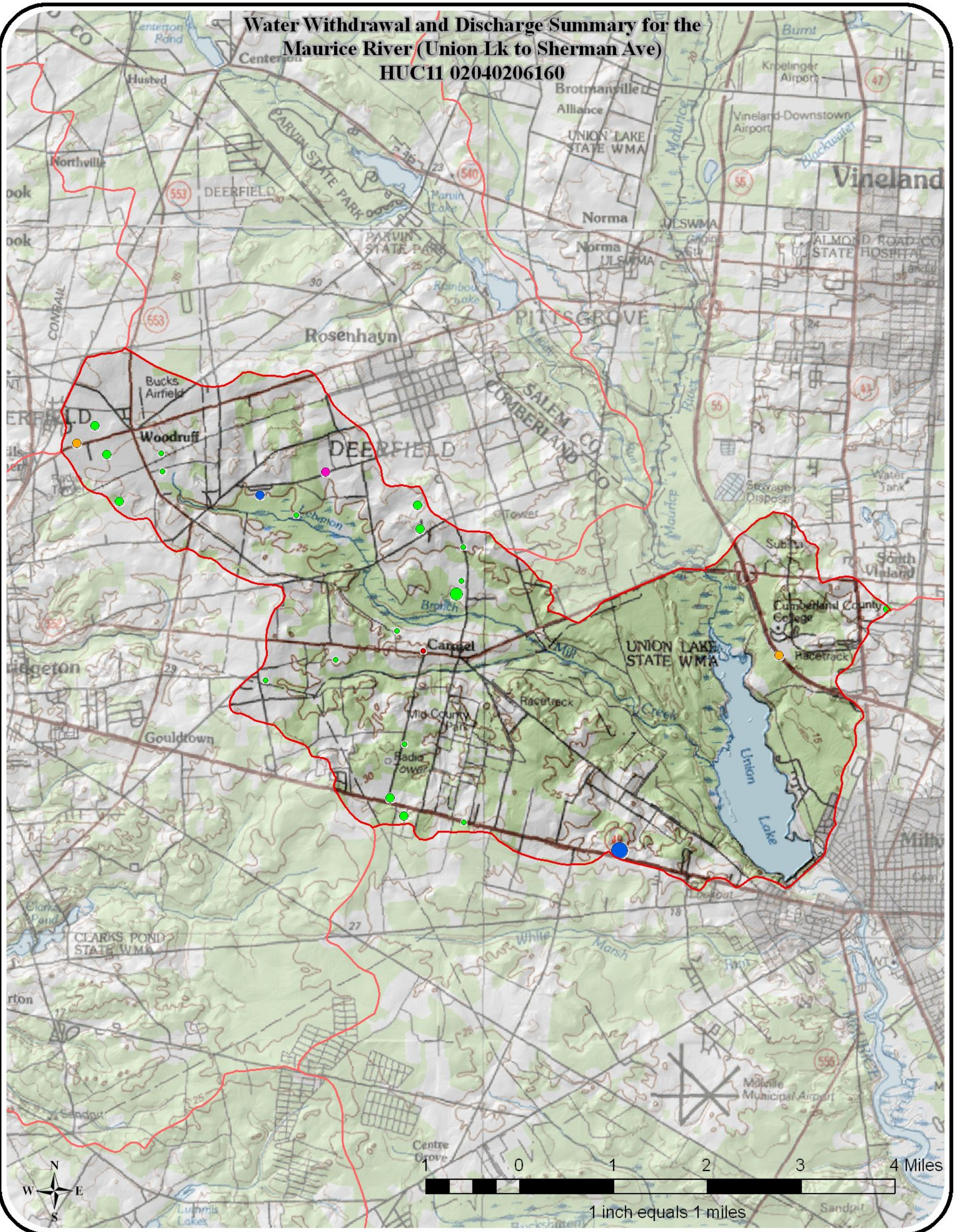
location	#	name
downstream:	02040206170	Maurice River (Menantico Ck to Union Lk)
(if any)		
upstream:	02040206120	Still Run / Little Ease Run
(if any)	02040206130	Scotland Run
	02040206140	Maurice River (above Sherman Ave Bridge)
	02040206150	Muddy Run
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NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

**Water Withdrawal and Discharge Summary for the
Maurice River (Union Lk to Sherman Ave)
HUC11 02040206160**



Key for Discharge Data

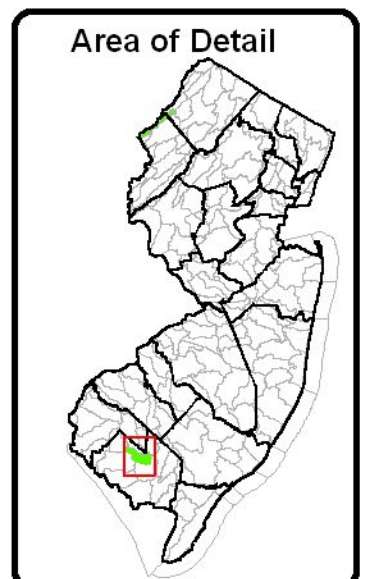
1999 Treated Effluent Discharge

0 - 50	MGY	◆
50 - 100	MGY	◆
100 - 500	MGY	◆
> 500	MGY	◆
<u>Other Permitted Discharge</u>		◆

Key for Withdrawal Data

Source	1999 Withdrawal	Use Group
GW Confined □	No 1999 Use ■●▲	Agricultural ●
GW Unconfined ○	1 - 50 MGY ■●▲	Commercial ●
SW △	51 - 100 MGY ■●▲	Industrial ●
	101 - 500 MGY ■●▲	Irrigation ●
	> 500 MGY ■●▲	Mining ●
		Not Classified ●
		Potable Supply ●
		Power Generation ●

MGY = millions of gallons per year



Water Withdrawals, Transfers and Discharges for MAURICE RIVER (MENANTICO CK TO UNION LK) --- 02040206170

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Maurice River (Menantico Ck to Union Lk)	02040206170

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	0	7	1	2	2	2	0	0	0	0	2
sum	0	7	1	2	2	2	0	0	0	0	2
ground-water:³											
confined	0	0	0	0	0	0	0	0	0	0	0
unconfined	2,281	2,719	2,300	1,806	1,707	1,658	1,099	1,427	1,584	1,504	1,808
sum	2,281	2,719	2,300	1,806	1,707	1,658	1,099	1,427	1,584	1,504	1,808
total withdrawals:	2,281	2,726	2,301	1,808	1,709	1,660	1,099	1,427	1,584	1,504	1,810

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	209	211	222	417	477	447	381	490	459	474	379
exports ¹¹	252	319	297	263	250	235	139	198	216	186	236
net	(44)	(108)	(75)	154	227	211	242	292	244	288	143

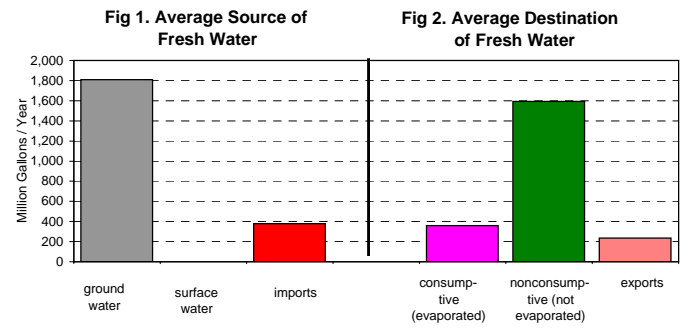


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	994	1,220	1,153	1,227	1,238	1,160	781	1,080	1,104	1,023	1,098
consumptive	147	171	166	163	165	158	115	143	155	143	153
domestic wells											
nonconsumptive	104	105	106	107	109	110	111	112	113	115	109
consumptive	15	15	15	15	15	16	16	16	16	16	15
industrial & commercial & mining											
nonconsumptive	792	798	612	272	208	234	158	182	206	242	370
consumptive	88	89	68	30	23	26	18	20	23	27	41
agricultural & non-agricultural irrigation											
nonconsumptive	10	22	11	15	18	17	14	17	21	23	17
consumptive	89	199	95	133	160	151	127	149	189	203	150
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	1,899	2,145	1,882	1,621	1,573	1,521	1,065	1,391	1,445	1,402	1,594
consumptive	338	473	344	341	363	351	276	328	383	390	359
PERCENTAGES:											
nonconsumptive	84.9%	81.9%	84.5%	82.6%	81.2%	81.3%	79.4%	80.9%	79.0%	78.3%	81.6%
consumptive	15.1%	18.1%	15.5%	17.4%	18.8%	18.7%	20.6%	19.1%	21.0%	21.7%	18.4%

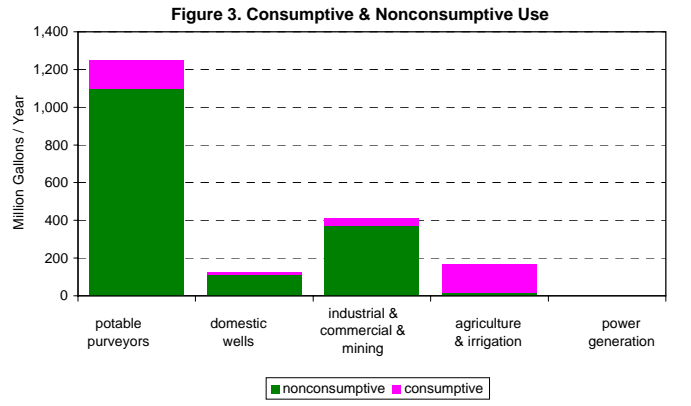


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive
potable purveyors	249	0	265	19	313	109	271	25	1,098	153
domestic wells	25	0	26	2	32	11	27	2	109	15
industrial & commercial & mining	84	9	101	11	105	12	81	9	370	41
agricultural & non-agricultural irrig.	0	0	3	24	10	88	4	37	17	150
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	358	10	394	56	459	220	383	73	1,594	359

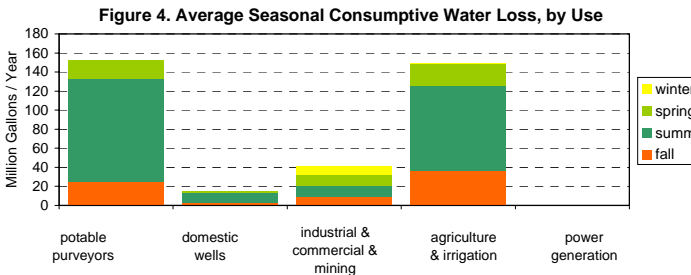


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	474	616	599	560	613	498	532	524	554	531	550
imported to HUC11	325	422	411	384	420	342	365	360	380	364	377
exported from HUC11	0	0	0	0	0	0	0	0	0	0	0

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	800	1,038	1,011	944	1,033	839	897	884	934	895	928
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	800	1,038	1,011	944	1,033	839	897	884	934	895	928

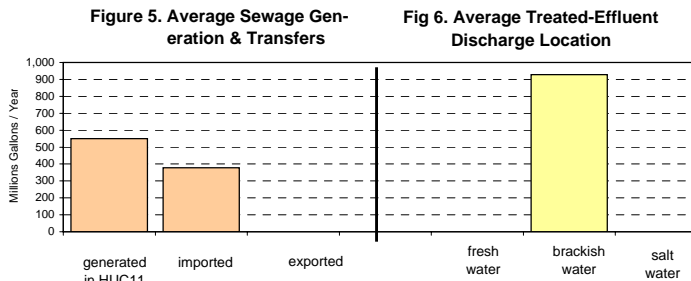


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	0
ground water	4,314
total	4,314

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	2,337
commercial	0
industrial	628
irrigation	37
mining	0
potable supply	1,312
power generation	0
total	4,314

Table 9. HUC11 Descriptive Statistics

--- **Area:**

in this HUC11 only	44.6	sq. mi.
upstream HUC11s	215.7	sq. mi.
total watershed	260.3	sq. mi.

(this HUC11 onshore area: 44.2 sq. mi.)

--- **Population of this HUC11:**

Year	Population	Change
1940	10,340	-
1950	11,403	10.3%
1960	13,641	19.6%
1970	15,348	12.5%
1980	17,676	15.2%
1990	18,486	4.6%
2000	19,126	3.5%
2010	20,667	8.1% est. ¹²
2020	22,881	10.7% est. ¹²
2030	24,795	8.4% est. ¹²

--- **Land Use of this HUC11:**

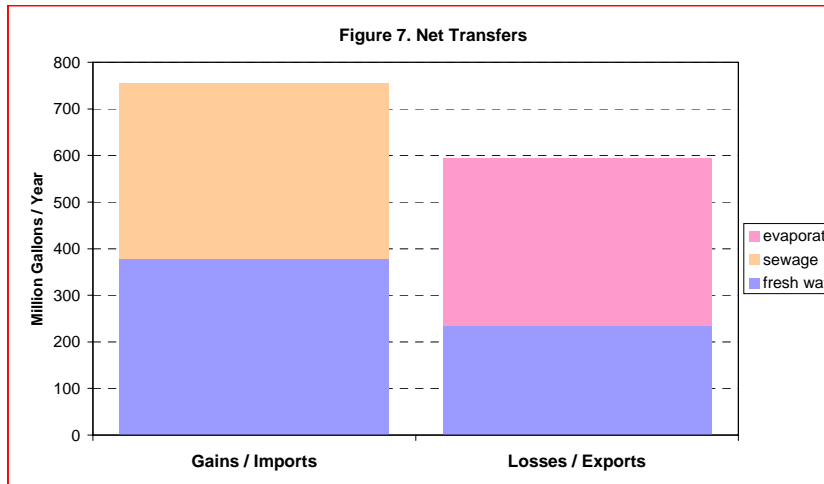
Type	Year		Change
	1986	1995	
ag.	11.5%	11.7%	0.1%
barren	1.8%	1.2%	-0.6%
forest	52.1%	50.1%	-1.9%
urban	18.1%	20.5%	2.5%
water	2.2%	2.2%	0.0%
wetlands	14.4%	14.3%	-0.1%

--- **% of this HUC11 in:**

Pinelands:	0.0%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

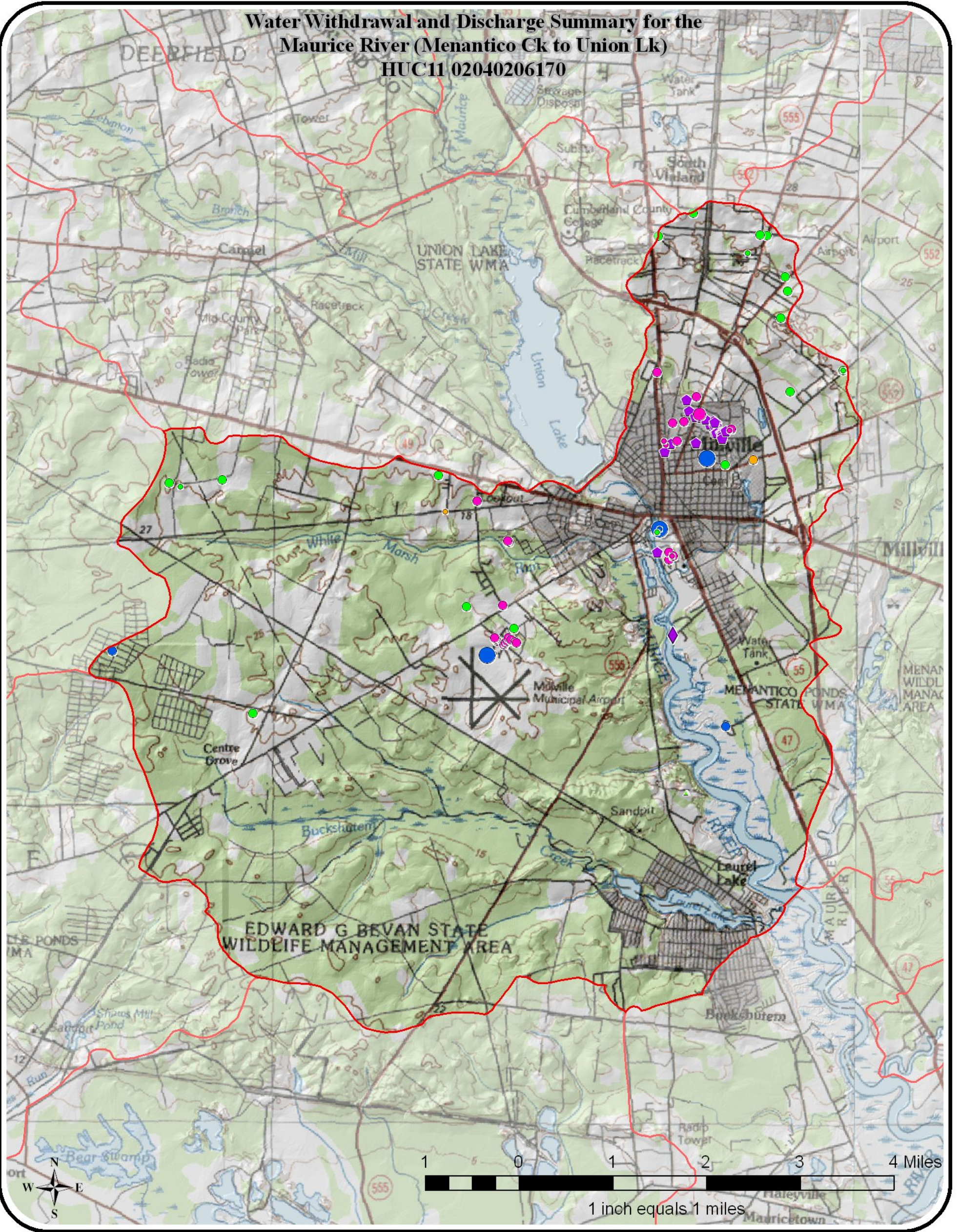
location	#	name
downstream:	02040206200	Maurice River (below Menantico Creek)
(if any)		
upstream:	02040206120	Still Run / Little Ease Run
(if any)	02040206130	Scotland Run
	02040206140	Maurice River (above Sherman Ave Bridge)
	02040206150	Muddy Run
	02040206160	Maurice River (Union Lk to Sherman Ave)
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NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

**Water Withdrawal and Discharge Summary for the
Maurice River (Menantico Ck to Union Lk)
HUC11 02040206170**



Key for Discharge Data

1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

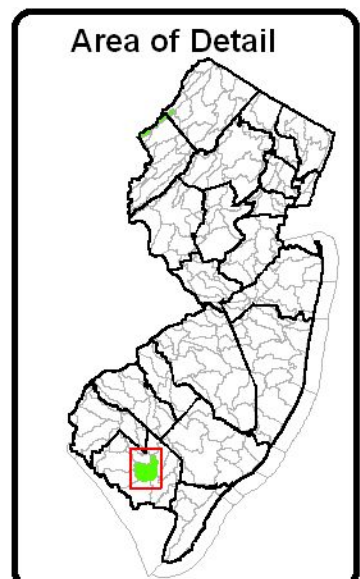
Key for Withdrawal Data

Source	1999 Withdrawal
GW Confined □	No 1999 Use ●▲
GW Unconfined ○	1 - 50 MGY ■●▲
SW △	51 - 100 MGY ■●▲
	101 - 500 MGY ■●▲
	> 500 MGY ■●▲

MGY = millions of gallons per year

Key for Use Group

Agricultural	●
Commercial	●
Industrial	◆
Irrigation	●
Mining	●
Not Classified	●
Potable Supply	●
Power Generation	●



Water Withdrawals, Transfers and Discharges for MENANTICO CREEK --- 02040206180

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Menantico Creek	02040206180

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	44	32	28	64	38	42	16	18	179	65	53
sum	44	32	28	64	38	42	16	18	179	65	53
ground-water:³											
confined	0	0	0	0	0	0	0	0	0	0	0
unconfined	932	1,350	1,013	1,261	1,212	1,253	1,198	1,665	1,702	1,742	1,333
sum	932	1,350	1,013	1,261	1,212	1,253	1,198	1,665	1,702	1,742	1,333
total withdrawals:	977	1,383	1,042	1,325	1,250	1,294	1,213	1,683	1,880	1,807	1,385

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	604	630	563	636	661	661	592	708	633	621	631
exports ¹¹	0	262	212	235	169	69	85	345	375	354	211
net	604	368	351	401	492	592	507	362	258	267	420

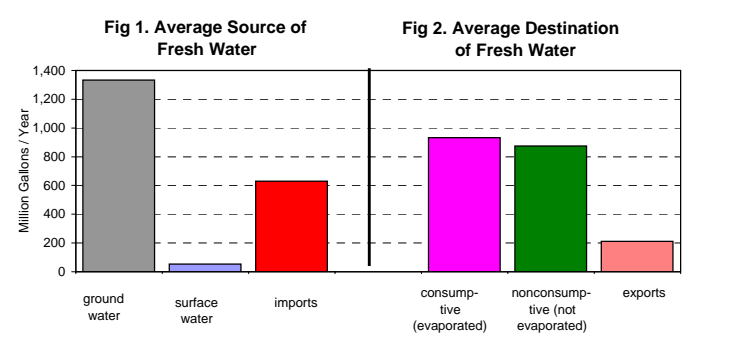


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	548	612	554	618	649	634	578	715	625	633	617
consumptive	74	83	73	87	89	88	77	93	87	88	84
domestic wells											
nonconsumptive	134	135	136	137	138	139	140	141	142	143	139
consumptive	19	19	19	19	19	20	20	20	20	20	20
industrial & commercial & mining											
nonconsumptive	0	0	0	0	37	46	57	19	0	130	29
consumptive	0	0	0	0	4	5	6	2	0	14	3
agricultural & non-agricultural irrigation											
nonconsumptive	81	93	61	86	81	95	84	106	126	104	92
consumptive	726	833	550	777	725	859	756	950	1,137	940	825
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	762	839	751	841	904	915	860	980	894	1,011	876
consumptive	819	935	642	884	837	972	860	1,065	1,244	1,063	932
PERCENTAGES:											
nonconsumptive	48.2%	47.3%	53.9%	48.8%	51.9%	48.5%	50.0%	47.9%	41.8%	48.8%	48.4%
consumptive	51.8%	52.7%	46.1%	51.2%	48.1%	51.5%	50.0%	52.1%	58.2%	51.2%	51.6%

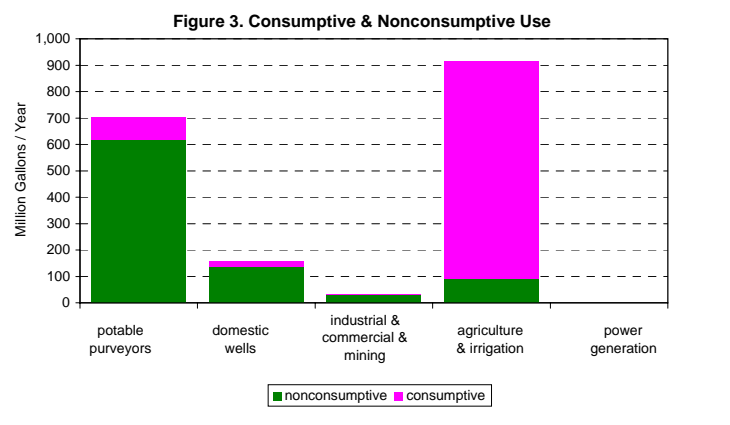


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive
potable purveyors	140	0	153	11	172	60	151	14	617	84
domestic wells	32	0	33	2	40	14	34	3	139	20
industrial & commercial & mining	6	1	7	1	7	1	8	1	29	3
agricultural & non-agricultural irrig.	0	3	17	152	53	474	22	197	92	825
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	179	4	209	166	272	549	215	214	876	932

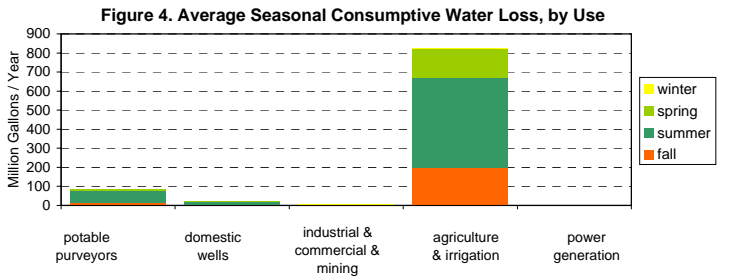


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	176	198	189	184	195	166	178	179	190	174	183
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	176	198	189	184	195	166	178	179	190	174	183

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	0	0	0	0	0	0	0	0	0	0	0

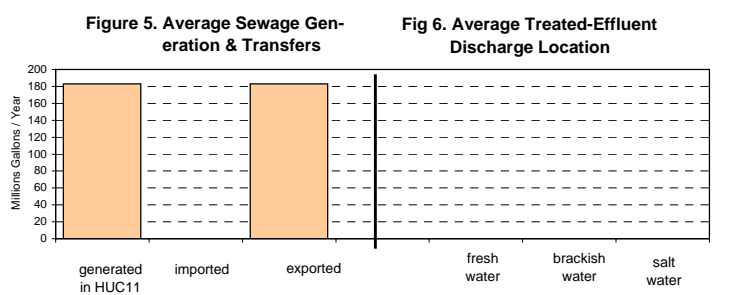


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	603
ground water	5,766
total	6,369

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	5,597
commercial	0
industrial	300
irrigation	112
mining	0
potable supply	360
power generation	0
total	6,369

Table 9. HUC11 Descriptive Statistics

--- Area:

in this HUC11 only	39.2	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	39.2	sq. mi.

(this HUC11 onshore area: 39.2 sq. mi.)

--- Population of this HUC11:

Year	Population	Change
1940	11,123	-
1950	13,650	22.7%
1960	17,346	27.1%
1970	21,171	22.1%
1980	24,338	15.0%
1990	25,208	3.6%
2000	25,657	1.8%
2010	27,641	7.7% est. ¹²
2020	30,452	10.2% est. ¹²
2030	32,895	8.0% est. ¹²

--- Land Use of this HUC11:

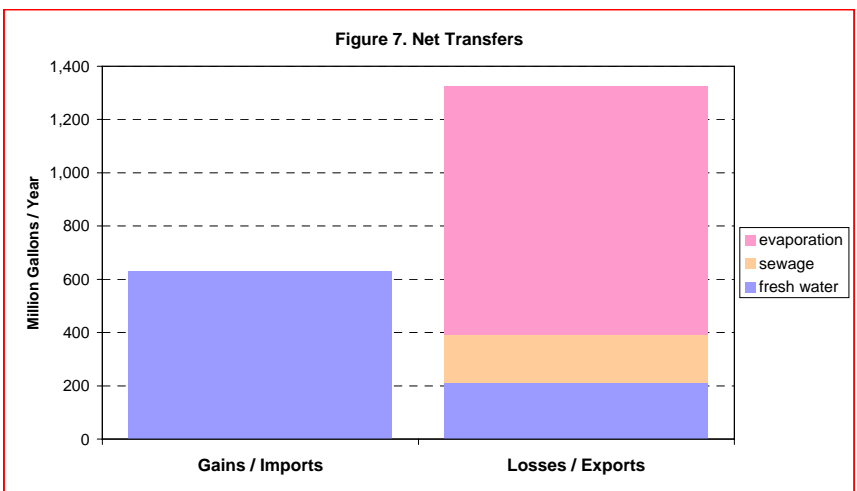
Type	1986	1995	Change
ag.	28.1%	26.6%	-1.4%
barren	1.3%	1.2%	0.0%
forest	37.3%	36.6%	-0.7%
urban	18.7%	21.1%	2.4%
water	1.3%	1.2%	-0.1%
wetlands	13.4%	13.3%	-0.1%

--- % of this HUC11 in:

Pinelands:	3.9%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

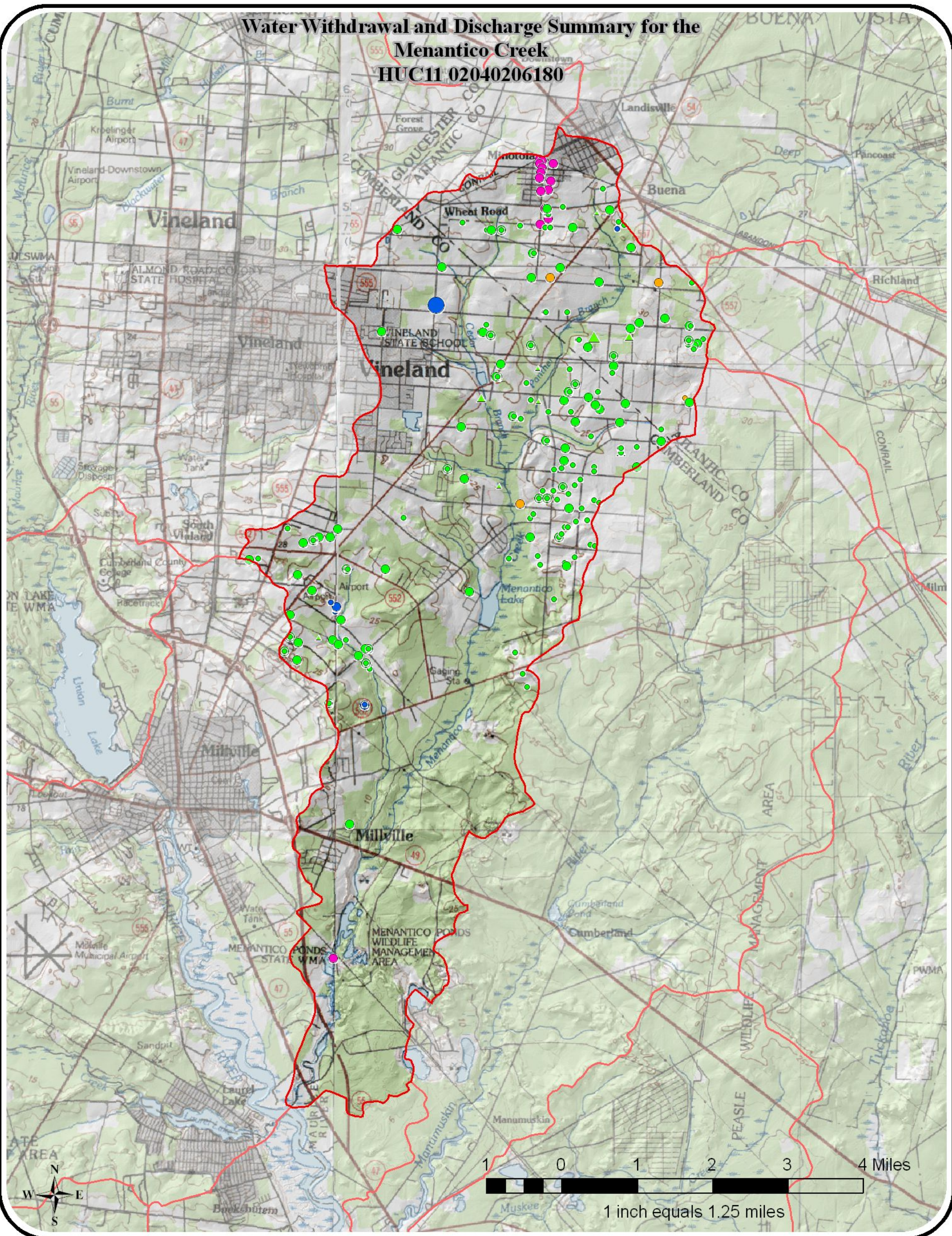
location	#	name
downstream:	02040206200	Maurice River (below Menahtico Creek)
(if any)	--	--
upstream:	--	--
(if any)	--	--



NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

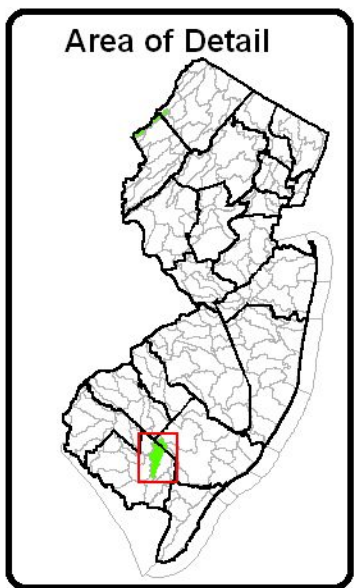
Water Withdrawal and Discharge Summary for the Menantico Creek HUC11 02040206180



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data	
Source	
GW Confined	□
GW Unconfined	○
SW	△
1999 Withdrawal	
No 1999 Use	●▲
1 - 50 MGY	■●▲
51 - 100 MGY	■●▲
101 - 500 MGY	■●▲
> 500 MGY	■●▲
Use Group	
Agricultural	●
Commercial	●
Industrial	●
Irrigation	●
Mining	●
Not Classified	●
Potable Supply	●
Power Generation	●

MGY = millions of gallons per year



Water Withdrawals, Transfers and Discharges for MANAMUSKIN RIVER --- 02040206190

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Manamuskin River	02040206190

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	0	0	0	0	0	0	0	0	0	0	0
sum	0	0	0	0	0	0	0	0	0	0	0
ground-water:³											
confined	0	0	0	0	0	0	0	0	0	0	0
unconfined	389	384	275	434	509	662	339	383	615	596	459
sum	389	384	275	434	509	662	339	383	615	596	459
total withdrawals:	389	384	275	434	509	662	339	383	615	596	459

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	0	0	0	0	0	0	0	0	0	0	0
exports ¹¹	0	0	0	0	0	0	0	0	0	0	0
net	0	0	0	0	0	0	0	0	0	0	0

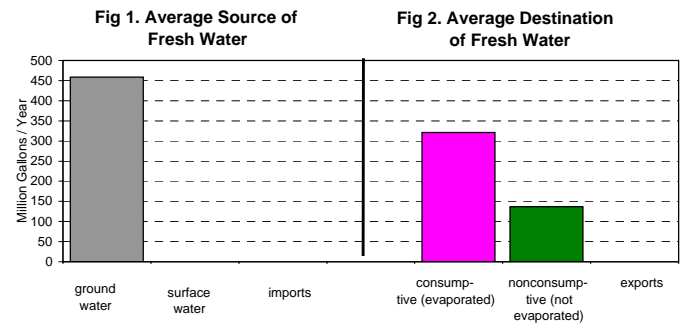


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	0	0	0	0	3	3	3	3	3	3	2
consumptive	0	0	0	0	0	0	0	0	0	0	0
domestic wells											
nonconsumptive	83	83	84	85	85	86	86	87	88	88	85
consumptive	12	12	12	12	12	12	12	12	12	12	12
industrial & commercial & mining											
nonconsumptive	0	0	0	0	19	30	30	26	8	44	16
consumptive	0	0	0	0	3	4	4	4	1	6	2
agricultural & non-agricultural irrigation											
nonconsumptive	29	29	18	34	39	53	20	25	50	44	34
consumptive	265	261	161	304	348	475	182	226	452	398	307
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	112	112	102	118	146	171	140	141	149	180	137
consumptive	277	272	173	316	363	491	199	243	466	417	322
PERCENTAGES:											
nonconsumptive	28.8%	29.1%	37.0%	27.3%	28.7%	25.9%	41.3%	36.7%	24.2%	30.1%	29.9%
consumptive	71.2%	70.9%	63.0%	72.7%	71.3%	74.1%	58.7%	63.3%	75.8%	69.9%	70.1%

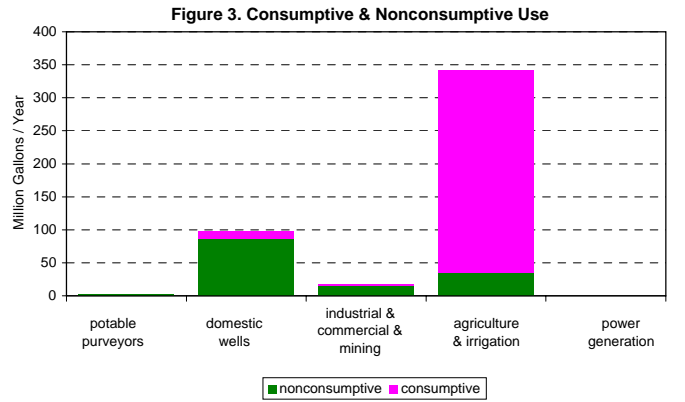


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive
potable purveyors	0	0	0	0	0	0	1	0	2	0
domestic wells	20	0	20	1	25	9	21	2	85	12
industrial & commercial & mining	4	0	3	0	4	1	5	1	16	2
agricultural & non-agricultural irrig.	0	1	6	51	19	174	9	82	34	307
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	24	1	30	53	49	183	35	84	137	322

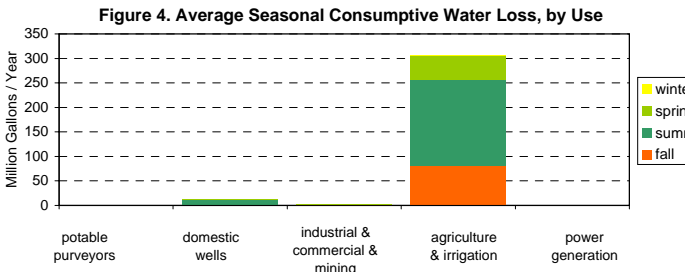


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	14	19	18	17	19	15	16	16	17	16	17
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	14	19	18	17	19	15	16	16	17	16	17

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	0	0	0	0	0	0	0	0	0	0	0

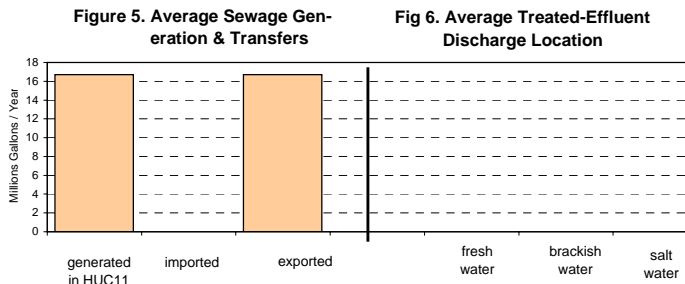


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	0
ground water	1,793
total	1,793

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	892
commercial	0
industrial	0
irrigation	0
mining	864
potable supply	37
power generation	0
total	1,793

Table 9. HUC11 Descriptive Statistics

--- **Area:**

in this HUC11 only	36.2	sq. mi.
upstream HUC11s	0.0	sq. mi.
total watershed	36.2	sq. mi.

(this HUC11 onshore area: 36.2 sq. mi.)

--- **Population of this HUC11:**

Year	Population	Change
1940	4,768	-
1950	5,463	14.6%
1960	6,955	27.3%
1970	8,594	23.6%
1980	10,058	17.0%
1990	10,765	7.0%
2000	11,038	2.5%
2010	11,916	8.0% est. ¹²
2020	13,156	10.4% est. ¹²
2030	14,239	8.2% est. ¹²

--- **Land Use of this HUC11:**

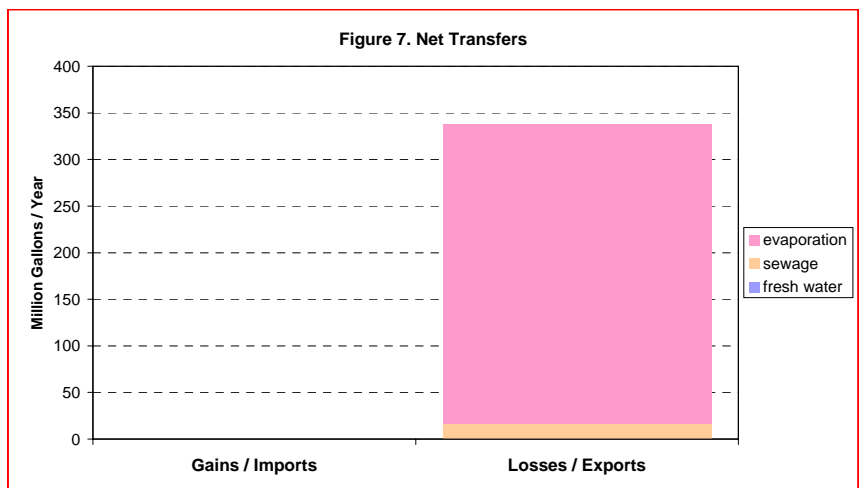
Type	Year		Change
	1986	1995	
ag.	6.7%	6.7%	0.0%
barren	1.6%	1.2%	-0.4%
forest	70.0%	69.1%	-1.0%
urban	4.0%	5.4%	1.3%
water	1.4%	1.5%	0.1%
wetlands	16.3%	16.2%	0.0%

--- **% of this HUC11 in:**

Pinelands:	72.9%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

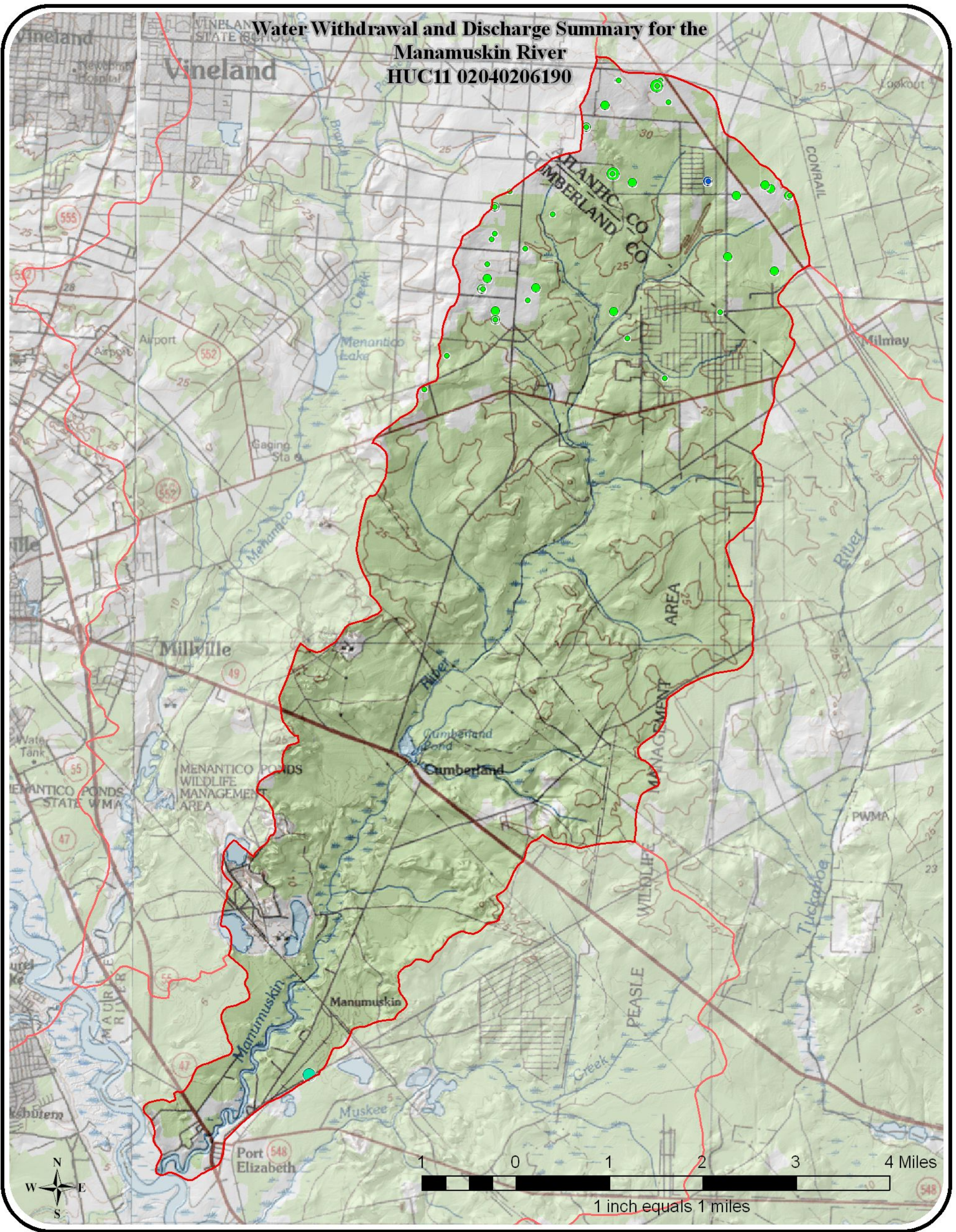
location	#	name
downstream:	02040206200	Maurice River (below Menantico Creek)
(if any)	--	--
upstream:	--	--
(if any)	--	--



NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

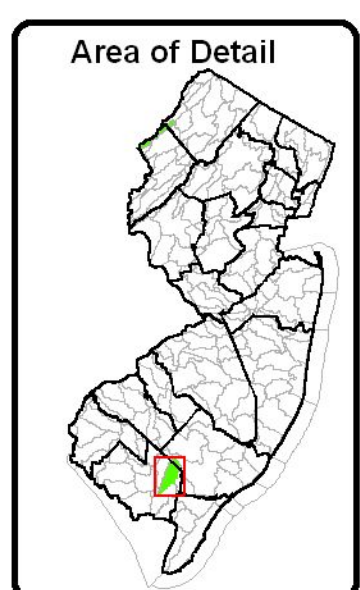
Water Withdrawal and Discharge Summary for the Manumuskinn River HUC11 02040206190



Key for Discharge Data	
1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	
	◆

Key for Withdrawal Data	
Source	
GW Confined	□
GW Unconfined	○
SW	△
1999 Withdrawal	
No 1999 Use	●▲
1 - 50 MGY	■●▲
51 - 100 MGY	■●▲
101 - 500 MGY	■●▲
> 500 MGY	■●▲
Use Group	
Agricultural	●
Commercial	●
Industrial	●
Irrigation	●
Mining	●
Not Classified	●
Potable Supply	●
Power Generation	●

MGY = millions of gallons per year



Water Withdrawals, Transfers and Discharges for MAURICE RIVER (BELOW MENANTICO CREEK) --- 02040206200

WMA:	Maurice, Salem, and Cohansey	17
HUC11:	Maurice River (below Menantico Creek)	02040206200

Table 1. Freshwater¹ Withdrawals in the HUC11 (millions of gallons)

Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
surface water:²											
Delaware River	0	0	0	0	0	0	0	0	0	0	0
other	2,494	2,034	1,997	1,549	1,653	48	118	35	26	29	998
sum	2,494	2,034	1,997	1,549	1,653	48	118	35	26	29	998
ground-water:³											
confined	1	1	1	1	1	1	1	1	1	1	1
unconfined	3,682	2,387	2,255	3,176	3,529	4,415	4,299	4,130	3,122	3,942	3,494
sum	3,683	2,388	2,256	3,177	3,530	4,415	4,300	4,130	3,123	3,942	3,494
total withdrawals:	6,177	4,422	4,253	4,726	5,183	4,464	4,418	4,165	3,149	3,971	4,493

Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
imports ¹¹	0	0	0	0	0	0	0	0	0	0	0
exports ¹¹	0	0	0	0	0	0	0	0	0	0	0
net	0	0	0	0	0	0	0	0	0	0	0

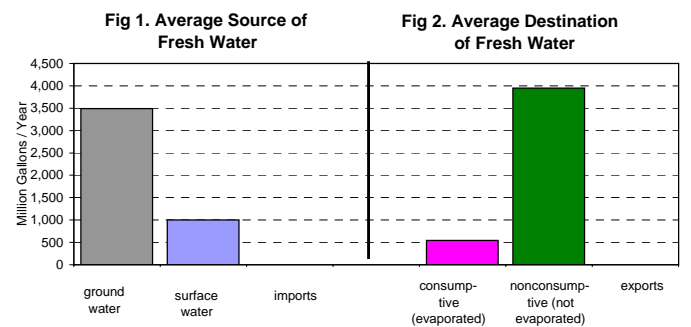


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

Water use	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
potable purveyors											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
domestic wells											
nonconsumptive	108	108	109	110	111	112	113	113	114	115	111
consumptive	15	15	15	15	16	16	16	16	16	16	16
industrial & commercial & mining											
nonconsumptive	5,309	3,781	3,632	4,047	4,449	3,815	3,773	3,549	2,654	3,376	3,839
consumptive	724	516	495	551	606	520	514	483	361	460	523
agricultural & non-agricultural irrigation											
nonconsumptive	2	0	0	0	0	0	0	0	0	0	0
consumptive	17	0	0	0	0	0	0	0	0	0	2
power generation											
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0
consumptive	0	0	0	0	0	0	0	0	0	0	0
SUM:											
nonconsumptive	5,420	3,890	3,741	4,157	4,560	3,927	3,886	3,663	2,769	3,492	3,951
consumptive	756	531	510	567	622	535	530	500	378	477	541
PERCENTAGES:											
nonconsumptive	87.8%	88.0%	88.0%	88.0%	88.0%	88.0%	88.0%	88.0%	88.0%	88.0%	88.0%
consumptive	12.2%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%	12.0%

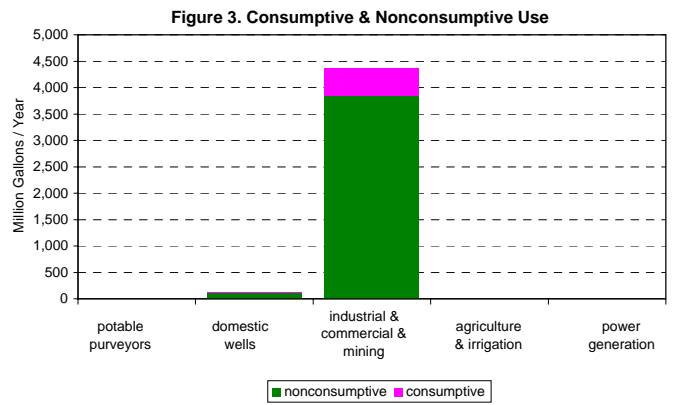


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

Use Group	Winter		Spring		Summer		Fall		Yearly Avg.	
	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive	Non-consumptive	Consumptive
potable purveyors	1	0	1	0	0	0	0	0	2	0
domestic wells	26	0	26	2	32	11	27	2	111	16
industrial & commercial & mining	590	80	965	132	1,158	158	1,125	153	3,839	523
agricultural & non-agricultural irrig.	0	0	0	0	0	1	0	0	0	2
power generation	0	0	0	0	0	0	0	0	0	0
SUM:	616	80	992	134	1,191	170	1,152	156	3,952	541

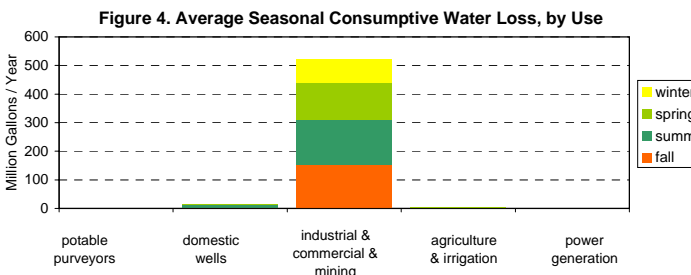


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
generated in HUC11	0	0	0	0	0	0	0	0	0	0	0
imported to HUC11	0	0	0	0	0	0	0	0	0	0	0
exported from HUC11	0	0	0	0	0	0	0	0	0	0	0

Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average
fresh water	0	0	0	0	0	0	0	0	0	0	0
brackish water	0	0	0	0	0	0	0	0	0	0	0
salt water	0	0	0	0	0	0	0	0	0	0	0
sum:	0	0	0	0	0	0	0	0	0	0	0

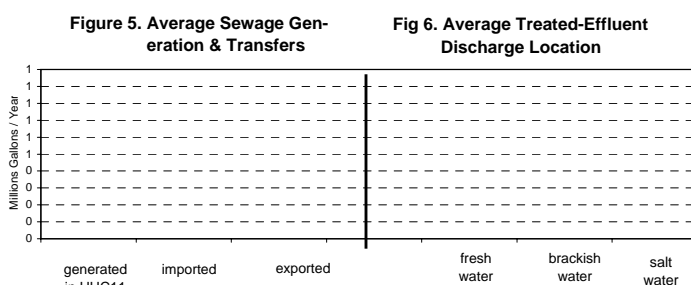


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

Water Source	MGY
surface water	2,260
ground water	7,314
total	9,574

Table 8. 1999 Water Allocations¹⁰ in HUC11 by Water Use Group

Use Group	MGY
agricultural	0
commercial	0
industrial	0
irrigation	0
mining	9,500
potable supply	74
power generation	0
total	9,574

Table 9. HUC11 Descriptive Statistics

--- **Area:**

in this HUC11 only	48.9	sq. mi.
upstream HUC11s	335.7	sq. mi.
total watershed	384.6	sq. mi.

(this HUC11 onshore area: 45.7 sq. mi.)

--- **Population of this HUC11:**

Year	Population	Change
1940	2,046	-
1950	2,426	18.6%
1960	2,518	3.8%
1970	2,923	16.1%
1980	3,661	25.3%
1990	4,504	23.0%
2000	4,703	4.4%
2010	5,078	8.0% est. ¹²
2020	5,618	10.6% est. ¹²
2030	6,084	8.3% est. ¹²

--- **Land Use of this HUC11:**

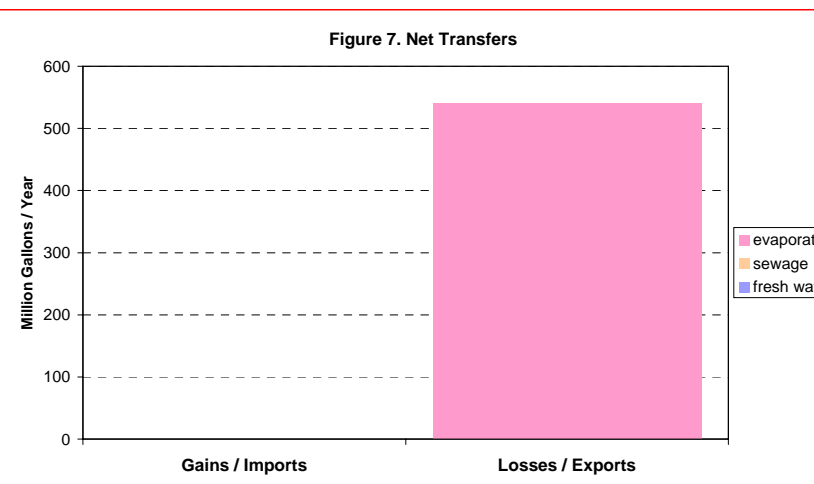
Type	Year		Change
	1986	1995	
ag.	3.4%	2.8%	-0.6%
barren	1.6%	2.1%	0.5%
forest	41.4%	40.7%	-0.7%
urban	5.1%	5.5%	0.4%
water	9.0%	9.6%	0.6%
wetlands	39.5%	39.4%	-0.1%

--- **% of this HUC11 in:**

Pinelands:	41.6%
Highlands:	0.0%

Table 10. Upstream and downstream HUC11s (in NJ)

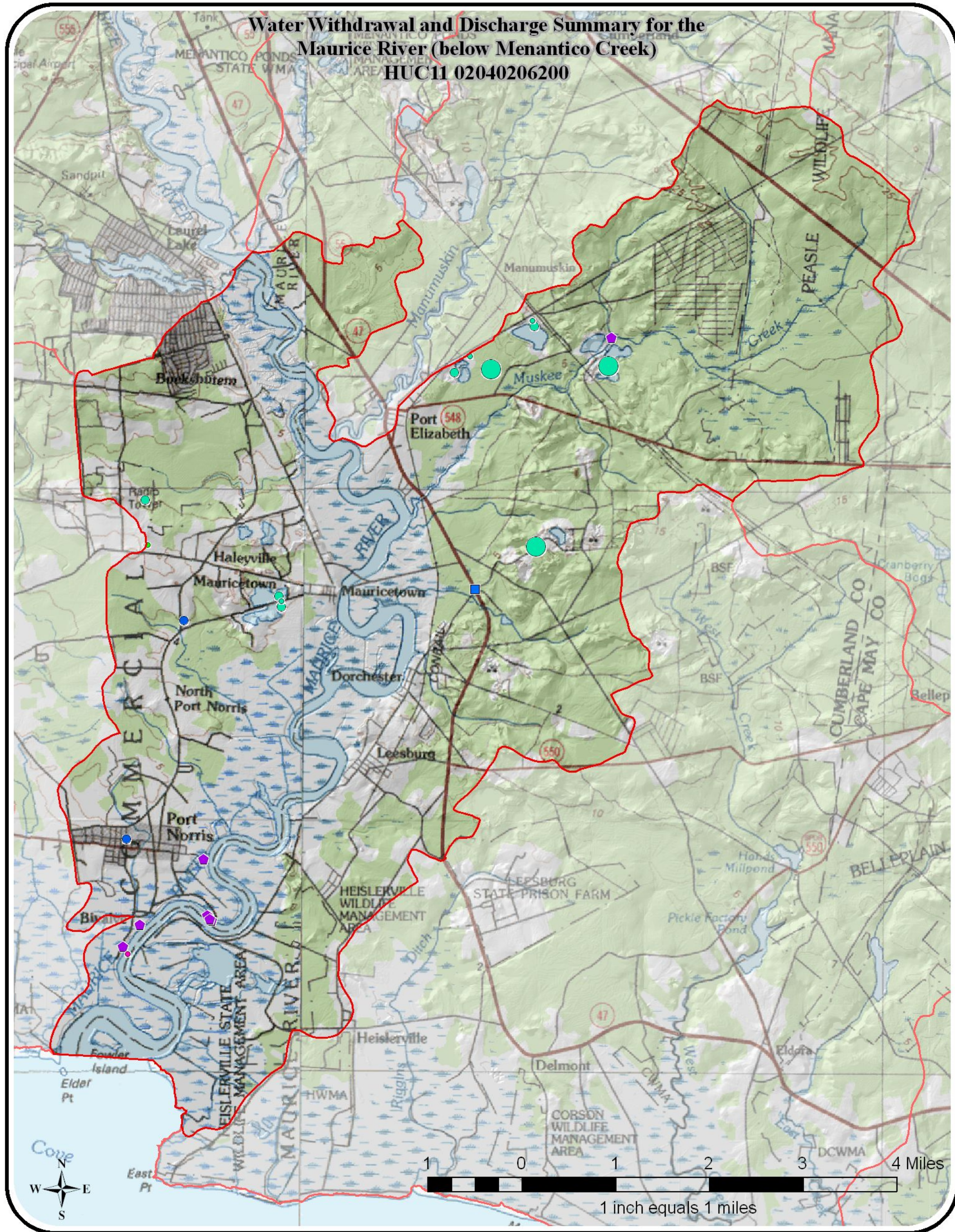
location	#	name
downstream:	02040204910	Delaware Bay (Cape May Pt to Fishing Ck)
(if any)		
upstream:	02040206120	Still Run / Little Ease Run
(if any)	02040206130	Scotland Run
	02040206140	Maurice River (above Sherman Ave Bridge)
	02040206150	Muddy Run
	02040206160	Maurice River (Union Lk to Sherman Ave)
	02040206170	Maurice River (Menantico Ck to Union Lk)
	02040206180	Menantico Creek
	02040206190	Manamuskin River
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NOTES:

- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers to water used in the watershed but not evaporated.
- 5 Consumptive water use refers to water evaporated in the watershed. It does not include exports.
- 6 Use refers only to water actually used in that HUC11. It is equal to freshwater withdrawals + imports - exports.
- 7 Winter is Jan, Feb, Dec of the same year; spring is March-May; summer is June-Aug; fall is Sept-Nov.
- 8 Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
- 9 Based on discharge volumes reported under NJPDES program.
- 10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999.
- 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.
- 12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.
- 13 Subject to revision.
- 14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

Water Withdrawal and Discharge Summary for the Maurice River (below Menantico Creek)
HUC11 02040206200



Key for Discharge Data

1999 Treated Effluent Discharge	
0 - 50 MGY	◆
50 - 100 MGY	◆
100 - 500 MGY	◆
> 500 MGY	◆
Other Permitted Discharge	◆

Key for Withdrawal Data

Source	1999 Withdrawal	Use Group
GW Confined □	No 1999 Use ●▲	Agricultural ●
GW Unconfined ○	1 - 50 MGY ■●▲	Commercial ●
SW △	51 - 100 MGY ■●▲	Industrial ●
	101 - 500 MGY ■●▲	Irrigation ●
	> 500 MGY ■●▲	Mining ●
		Not Classified ●
		Potable Supply ●
		Power Generation ●

MGY = millions of gallons per year

