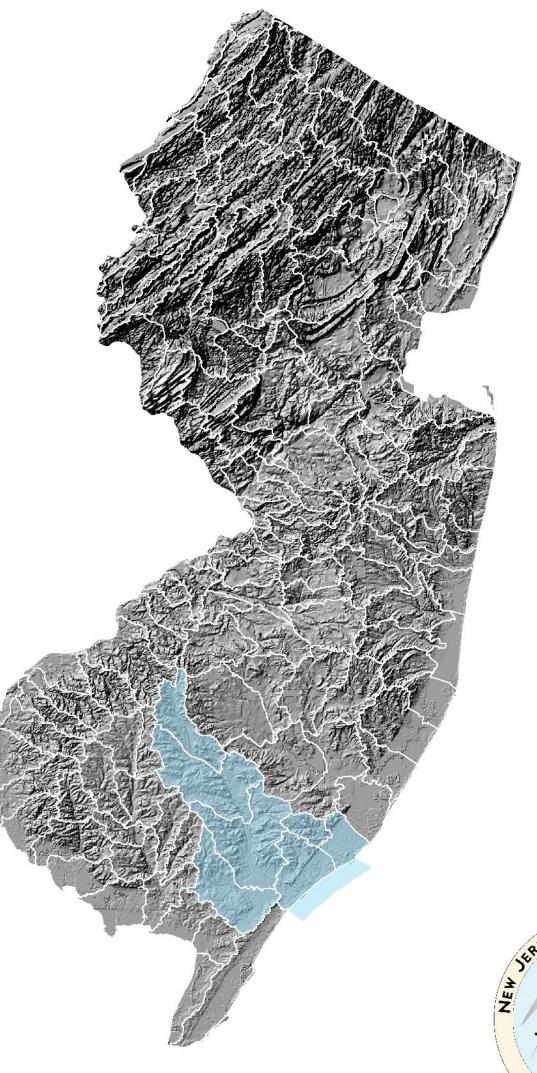
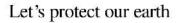
New Jersey Water Withdrawals, Uses, Transfers, and Discharges by HUC11, 1990 to 1999

Appendix 15: HUC11 Tables, Figures and Maps WMA 15 - Great Egg Harbor







NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION



Delvade River sum 0	WMA:		Gre	at Egg H	arbor an	d Tuckaho	e		15				
Other Participant Unit of the set of	HUC11:		Ree	ds Bay / /	Absecon	Bay & trib	s		02	20403020)10		
Unterprod 100 1	Table 1 Freshwater ¹	Withdrawal	s in the HIII	211 (millio	ns of gall	2005)							
Unit Number Base 0	Withdrawals (Q)						1995	1996	1997	1998	1999	average	
ope 0		0	0	0	0	0	0	0	0	0	0	0	
Control Contro Control Control	other	0	0	0	0	0	0	16	5	0	12	3	
$\frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = \frac{ _{1}}{ _{1}} = $		0	0	0	0	0	0	16	5	0	12	3	
		885	693	581	643	506	545	467	561	464	469	581	
Each and methods is: 1/11 81/4 1/81 776 6/5 6/7 776 6/5 6/7 776 6/5 6/7 776 6/5 6/7 776 6/5 6/7 776 6/5 6/7 776 6/5 6/7 776 6/5 6/7													
$\frac{1}{1000} \frac{1}{1000} \frac{1}{1000$													
mptor 1 200 1 200 4 400 4,00 </td <td> </td> <td></td>													
initial initial <t< td=""><td>Table 2. Freshwater In</td><td>nports To &</td><td>Exports Fr</td><td>om the HU</td><td>C11 (milli</td><td>ons of gallor</td><td>is)</td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	Table 2. Freshwater In	nports To &	Exports Fr	om the HU	C11 (milli	ons of gallor	is)						
noi 4.667 2.56 4.56 4.667 4.76 5.77 4.857 4.857 mm													water water tive tive not
Water use 1800 101 192 1930													(evaporated) evaporated)
Water use 1800 101 192 1930													
Interconsumption 4.518 4.794 4.54 4.964 4.56 4.969 4.868 4.969 4.968 4.969 4.968 4.969 4.968 4.969 4.968 4.969 4.968		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	
conservative BS0 DS0 DS7 T<78													
Induction consumptive concurrential concurrential standial concurrential memory 59 59 60 61 61 62 62 63 63 64 91 9		580	505	573	578	572	533	583	589	643	634	579	
$ \frac{1}{10000000000000000000000000000000000$	1	59	59	60	61	61	62	62	63	63	64	61	
monorsurgene 111 154 131 142 0			8	8	9	9	9	9	9	9	9	9	[₩] 4,000 +
Upcalized Anon-spiculated Anon-spiculated Anon-spiculated Anon-spicalized Anon-spicalined Anon-spicalized Anon-spicalized Anon-spicalized Anon-spicaliz	1	•	154	131	142	0	0	14	0	0	0	58	/ suc
Inconcenting the construmption 6 6 9 6 16 14 12 13 16 10 construmption 0	consumptive	37				0	0		0		0		
consumptive regression microconsumptive signation microconsumptive signation microconsumptive signation signation regression signation regression signation regression signation regression signation regression signation regression		•	6	6	9	6	16	14	12	13	16	10	g 2,000
Image: concentration of the second													
Oncumpiping 0 <th< td=""><td>ower generation</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td></td></th<>	ower generation	0	0	0	0	0	0	0	0	0	0	0	
monocosumple 6.24 4.44 4.63 4.76 4.68 4.76 4.68 4.76 4.68 4.76 4.68 4.76 4.68 4.76 4.68 4.76 4.68 4.76 4.68 4.76 4.68 4.76 4.78 4.69 77 78 78 697 77 78 86 697 77 78 86 697 77 78 86 697 13.1%	consumptive											-	0
consumptive prescriptive consumptive consumptive consumptive to 77% 67.9 61.2 66.7 77.5 77.3 78.3 60.7 PRECINATION consumptive consumptive consumptive consumptive to 2.3% 67.7% 87.8% 66.7% 57.7% 57.5% 67.4% 66.7% 57.5% 65.5% 77.1% 66.4% 65.5% 66.9% 14.2% 14.2% 14.2% 14.2% 14.2% 14.2% 14.2% 14.2% 14.1% 14.2%		1 924	1 111	4 631	4 576	4 508	1 1 2 1	4 635	4 765	4 000	4 765	4.625	potable domestic commercial & agriculture power
Inconcernample 87.7% 87.4% 86.7% 87.5% 87.4% 86.5% 86.5% 86.9% Important of the state of													purveyors wells mining & irrigation generation
consumptive 12.3% 12.2% 13.3% 12.1% 14.2% 13.5% 12.9% 13.6% 14.1% 13.1% Table 4. Average Seasonal? Use - Nonconsumptive * & Consumptive * & Consumtive * & Consumptive * & Co		87 7%	87.8%	87 /%	86 7%	87.0%	85.8%	86 5%	87 1%	86.4%	85.9%	86.9%	nonconsumptive consumptive
Writer Spring Summer Fail Yearly Age, sumptive Figure 4. Average Seasonal Consumptive Water Loss, by Use Detaile purveyors 1083 0 1113 76 1.154 400 114 1 18 6 15 1 619 9 ubtainal & commercial & mining agricultural from- agricultural ing. 1 9 2 20 5 44 2 22 10 94 Dower generation 0 <td></td>													
Writer Spring Summer Fail Yearly Age, sumptive Figure 4. Average Seasonal Consumptive Water Loss, by Use Detaile purveyors 1083 0 1113 76 1.154 400 114 1 18 6 15 1 619 9 ubtainal & commercial & mining agricultural from- agricultural ing. 1 9 2 20 5 44 2 22 10 94 Dower generation 0 <td></td>													
Use Group Noncon ⁺ Consumply Noncon ⁺ Consumply <t< td=""><td>Table 4. Average Seas</td><td>sonal⁷ Use</td><td>Nonconsu</td><td>mptive⁴ &</td><td>Consump</td><td>tive⁵ (millio</td><td>ns of gallo</td><td>ns)</td><td></td><td></td><td></td><td></td><td></td></t<>	Table 4. Average Seas	sonal ⁷ Use	Nonconsu	mptive ⁴ &	Consump	tive ⁵ (millio	ns of gallo	ns)					
Use Group Noncon- Consump- Consump- Noncon- Consump- Noncon- Consump- Noncon- Consump- Noncon- Consump- Noncon- Consump- Noncon- Consum- Noncon- Consum-<	-	Wir	iter	Spi	ring	Sum	mer	F					
potable purveyors 1.083 0 1.113 76 1.154 400 1.46 103 4.495 579 domestic wells 14 0 16 1 12 11 16 19 19 agricultural k commercial & commercia	Use Group											•	
ndustrial & commercial & 14 0 16 1 12 11 16 3 58 15 agricultural iring. 1 9 2 20 5 44 2 22 10 94 power generation 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		1,083	0	1,113	76	1,154	400	1,146	103	4,495	579	-	
mining 14 0 16 1 12 11 16 3 58 15 agricultural irrig. 1 9 2 20 5 44 2 22 10 94 power generation 0 <												-	
agricultural indig. 1 9 2 20 5 44 2 22 10 94 agricultural indig. 0	mining	14	0	16	1	12	11	16	3	58	15	_	
power generation 0		1	9	2	20	5	44	2	22	10	94		
Table 5. Sewage Generation & Transfers* in the HUC11 (millions of gallons) Fig. 6. Average Treated-Effluent (millions of gallons) generated in HUC11 1,245 1,382 1,414 1,483 1,495 1,996 1997 1998 1999 average of the second of the secon	power generation											-	
Table 5. Sewage Generation & Transfers [®] in the HUC11 (millions of gallons) generated in HUC11 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 average generated in HUC11 1,239 1,380 1,414 1,483 1,495 1,439 1,565 1,538 1,606 1,481 1,465 Figure 5. Average Sewage Generation & Transfers Fig 6. Average Treated-Effluent Discharge Location Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges ⁹ in the HUC11 (millions of gallons) Generated Effluent (Reclaimed-Water) Discharges ⁹ in the HUC11 (millions of gallons) Generated Effluent (Reclaimed-Water) Discharges ⁹ in the HUC11 (millions of gallons) Generated Effluent (Reclaimed-Water) Discharges ⁹ in the HUC11 (millions of gallons) Generated Effluent (Reclaimed-Water) Discharges ⁹ in the HUC11 (millions of gallons) Generated Effluent (Reclaimed-Water) Discharges ⁹ in the HUC11 (millions of gallons) Generated mathematical mathmathematin mathematical mathematical mathematical mathematical m	SUM:	1,112	9	1,145	98	1,189	461	1,179	129	4,625	697		potable domestic agriculture power
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 average generated in HUC11 1,245 1,382 1,414 1,483 1,495 1,565 1,538 1,606 1,481 1,465 imported to HUC11 0													
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 average generated in HUC11 1,245 1,382 1,414 1,483 1,495 1,565 1,538 1,606 1,481 1,465 imported to HUC11 0													
1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 average generated in HUC11 1,245 1,382 1,414 1,483 1,495 1,565 1,538 1,606 1,481 1,465 imported to HUC11 0	Table 5. Sewage Gene	eration & Tra	ansfers [®] in	the HUC11	(millions	of gallons)							Figure 5. Average Sewage Gen- Fig 6. Average Treated-Effluent
imported to HUC11 0	-	1990	1991	1992	1993	1994							
exported from HUC11 1,239 1,380 1,414 1,483 1,495 1,439 1,565 1,538 1,606 1,481 1,464 Table 6. Destination Treated Effluent (Reclaimed-Water) Discharges ⁹ in the HUC11 (millions of gallons) Image: Contract of the second seco													
Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges ⁹ in the HUC11 (millions of gallons) destination 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 average fresh water 0													
Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges ⁹ in the HUC11 (millions of gallons) destination 1990 1991 1992 1993 1994 1995 1996 1999 average fresh water 0 0 0 0 0 0 0 0 0 salt water 0 0 0 0 0 0 0 0 0													ā
Table 6. Destination of Treated Entruent (Reclaimed-water) Discharges in the HOCTT (millions of gallons): destination 1990 1991 1992 1993 1995 1996 1997 1998 average fresh water 0 0 0 0 0 0 0 0 0 0 0 salt water 0 <t< td=""><td>Tabla & Destination</td><td>f Troots - I F</td><td>Hught /Dr -</td><td>almod M-</td><td>(ar) Diant</td><td></td><td></td><td>illions of</td><td>and le '</td><td></td><td></td><td></td><td>0</td></t<>	Tabla & Destination	f Troots - I F	Hught /Dr -	almod M-	(ar) Diant			illions of	and le '				0
fresh water 0 <th< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>1998</td><td>1999</td><td>average</td><td>² 400 − − − − − − − − − − − − − − − − − −</td></th<>										1998	1999	average	² 400 − − − − − − − − − − − − − − − − − −
brackish water 0 0 0 0 0 0 0 fresh brackish salt salt water 0 0 0 0 0 0 0 0 fresh brackish salt	fresh water	0	0	0	0	0	0	0	0	0	0	0	
generation water water water													generated imported exported fresh brackish salt
		Ŷ											

Table 7. 1999 Water Alloca Water So		in HUC11 by	Table	e 9. HUC
Water Source	MGY	-	Ar	ea:
surface water	11	_	in th	is HUC11
ground water	599		upst	tream HU
total	611	_	tot	al waters
Table 8. 1999 Water Alloca	otions ¹⁰		(this HL	JC11 onsh
Water Use		in noc n by	Рорі	Ilation of
Use Group		MGY	Yea	
a surface the seal				ar Po
agricultural		0	194	
commercial		0 0		0 5
5		0 0 0	194	0 5
commercial		0	194 195	0 5 0 5 0 5
commercial industrial		0	194 195 196	0 5 0 5 0 5 0 5
commercial industrial irrigation		0 0 98	194 195 196 197	0 5 0 5 0 5 0 2 0 2
commercial industrial irrigation mining		0 0 98 0	194 195 196 197 197	0 5 0 5 0 5 0 2 0 2 0 2

Table 9. l	HUC11 Desc	riptive St	tatistics
Area:			
in this HL	JC11 only	39.3	sq. mi.
upstream	HUC11s	26.4	sq. mi.
total wa	atershed	65.8	sq. mi.
this HUC11	onshore area:	25.8	sq. mi.)
- Populatio	on of this HUC	211:	
Year	Population	Change	_
1940	56,627	-	-
1950	55,385	-2.2%	
1960	56,481	2.0%	
1970	48,555	-14.0%	
1980	43,506	-10.4%	
1990	45,030	3.5%	
2000	49,427	9.8%	
0040	54.000	0.00/	12

ocation	#	name
downstream: (if any)	02040302920	Atlantic Coast (Absecon to Great Egg)
upstream:	02040302020	Absecon Creek
(if any)		

2020 52,919 3.4% est. ¹² 2030 54,981 3.9% est. ¹²	2010	51,200	3.6%	est.
2030 54,981 3.9% est. ¹²	2020	52,919	3.4%	est.12
	2030	54,981	3.9%	est.12

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

Type -	Ye	Change					
туре	1986	1995	Change				
ag.	0.4%	0.3%	0.0%				
barren	0.6%	0.6%	0.0%				
forest	11.5%	9.8%	-1.8%				
urban	16.3%	18.2%	1.9%				
water	36.9%	36.7%	-0.2%				
wetlands	34.2%	34.4%	0.2%				
% of this HUC11 in:							
Pinela	nds:	0.0%					
Highla	nds:	0.0%					

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.

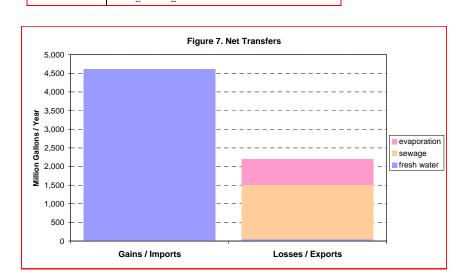
8 Sewage generation and transfers are based on intersection of sever service areas with HUC11s.
 9 Based on discharge volumes reported under NJPDES program.

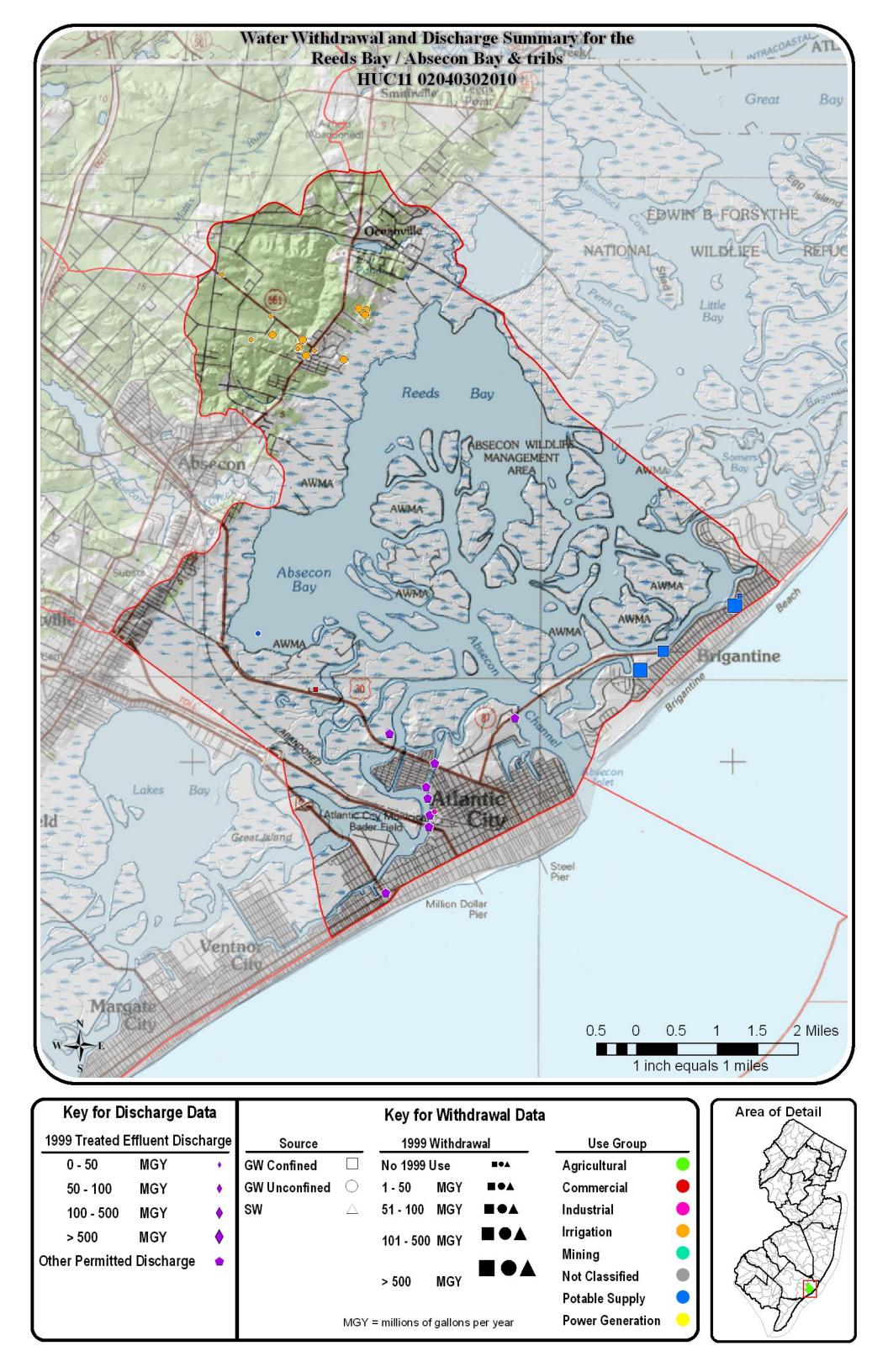
10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999. 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.

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.





WMA:		Gre	at Egg H	arbor an	d Tuckaho	e		15				
HUC11:			Abs	econ Cre	eek			02	20403020)20]	
Table 1. Freshwater ¹	Withdrawa	ls in the HU(C11 (millio	ns of galle	ons)							
Withdrawals (Q) urface water: ²	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	Fig 1. Average Source of Fig 2. Average Destination Fresh Water of Fresh Water
Delaware River other	916	0	0 294	0 428	0 145	0	0 912	0 553	0 393	0 855	0 450	6,000 5,000
round-water: ³		0 736	294 660	428 750	145	0	912 836	553 666	393	855	450 800	5 4,000
confined unconfined sum	3,484	4,043	4,385 5,045	3,880 4,631	852 4,264 5,116	832 3,735 4,568	3,612 4,448	4,469 5,134	1,016 4,425 5,441	921 4,086 5,007	4,038 4,838	§3,000
total withdrawals:	5,128	4,779	5,339	5,059	5,261	4,568	5,360	5,688	5,834	5,863	5,288	
Table 2. Freshwater I												o consump- nonconsump- exports
imports ¹¹ exports ¹¹	909 4,741	960 4,293	881 4,735	969 4,507	1,015 4,688	1,130 4,002	1,060 4,792	1,070 4,992	1,131 5,197	1,114 5,112	1,024 4,706	ground surface imports tive tive (not water water (evaporated) evaporated)
net	(3,833)	(3,333)	(3,854)	(3,538)	(3,674)	(2,871)	(3,732)	(3,922)	(4,066)	(3,998)	(3,682)	
Table 3. Nonconsum Water use	ptive ⁴ & Co 1990	nsumptive ⁵ 1991	Water Use	⁶ in the H 1993	IUC11, by Us 1994	e Type (mi 1995	illions of g 1996	jallons) 1997	1998	1999	average	
nonconsumptive			953	993								Figure 3. Consumptive & Nonconsumptive Use
consumptive		1,016 147	953 129	993 147	1,071 152	1,149 162	1,130 148	1,185 166	1,246 175	1,233 178	1,088 152	1,400
lomestic wells nonconsumptive		160	161	162	162	162	163	163	164	164	162	
consumptive ndustrial & commercial & m		23	23	23	23	23	23	23	23	23	23	
nonconsumptive consumptive	53	65 7	174 19	150 17	131 15	153 17	139 15	202 22	143 16	244 19	145 15	
gricultural & non-agricultur nonconsumptive	al irrigation	0	0	0	0	0	0	0	0	0	0	
consumptive	-	0	0	3	4	3	2	3	1	2	2	
ower generation nonconsumptive	0 0	0 0	0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	
consumptive SUM:												industrial & potable domestic commercial & agriculture power
nonconsumptive consumptive		1,241 177	1,288 171	1,305 190	1,364 194	1,465 205	1,432 189	1,550 215	1,553 214	1,642 223	1,396 192	purveyors wells mining & irrigation generation
PERCENTAGES: nonconsumptive		87.5%	88.3%	87.3%	87.5%	87.7%	88.3%	87.8%	87.9%	88.0%	87.9%	nonconsumptive consumptive
consumptive	11.7%	12.5%	11.7%	12.7%	12.5%	12.3%	11.7%	12.2%	12.1%	12.0%	12.1%	
Table 4. Average Sea						•		- 11				Figure 4. Average Seasonal Consumptive Water Loss, by Use
Use Group	Noncon-	nter Consump-	Noncon-	ring Consump-		Consump-	Noncon-		Noncon-			
potable purveyors	sumptive 252	tive 0	sumptive 262	tive 19	sumptive 310	tive 108	sumptive 282	tive 26	sumptive 1,105	tive 153	-	© 140 120
domestic wells industrial & commercial &	37 35	0 4	38 35	3 4	47 37	<u>16</u> 4	40 38	4	162 145	23 15	-	120 winter 5 100 80 spring 80
mining agricultural & non-											-	60 −
agricultural irrig.	0	0	0	0	0	1	0	0	0	2	-	
SUM:	324	4	336	26	394	130	359	34	1,413	193	-	potable domestic industrial & agriculture power
												purveyors wells commercial & & irrigation generation mining
Table 5. Sewage Gen	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	Figure 5. Average Sewage Gen- eration & Transfers Discharge Location
and a sector of the UNIOMA	1,616 0	1,815 0	1,842 0	1,890 0	1,905 0	1,835 0	1,994 0	1,960 0	2,047 0	1,888 0	1,879 0	
generated in HUC11 imported to HUC11	1,579	1,760	1,802	1,890	1,905	1,835	1,994	1,960	2,047	1,888	1,866	1,000
imported to HUC11				ter) Disch				gallons) 1997	1998	1999	average	
imported to HUC11 exported from HUC11 Table 6. Destination of					1994	1995	Tyyn					
imported to HUC11 exported from HUC11 Table 6. Destination of destination fresh water	1990 38	<u>1991</u> 55	1992 40	1993 0	<u>1994</u> 0	<u>1995</u> 0	<u>1996</u> 0	0	0	0	13	
imported to HUC11 exported from HUC11 Table 6. Destination of destination	1990 38 0 0	1991	1992	1993								

	llocations ¹⁰ i ^r Source	n HUC11 by	Table 9. HUC11 Descriptive Sta	atis
ater Source	MGY	-	Area:	
surface water	321	-	in this HUC11 only 26.4	sq.
ground water	5,116		upstream HUC11s 0.0	sq.
tota	al 5,438	-	total watershed 26.4	sq.
le 8. 1999 Water Al Water L	llocations [™] i Jse Group	n HUC11 by	Population of this HUC11:	
Use Group				
Use Gloup		MGY	Year Population Change	
agricultural		MGY 0	Year Population Change 1940 5,005 -	
		-		
agricultural		0	1940 5,005 -	
agricultural commercial		0 0	1940 5,005 - 1950 5,800 15.9%	
agricultural commercial industrial		0 0 305	1940 5,005 - 1950 5,800 15.9% 1960 8,230 41.9%	

dama atas area 000	#	name
(if any)	40302010	Reeds Bay / Absecon Bay & tribs
upstream:		
(if any)		

5,059

0

2010	14,585	-18.8%	est.12
2020	15,799	8.3%	est.12
2030	17,274	9.3%	est.12

15,277 17,971

23.5% 22.2%

17.6%

- Land Use of this HUC11:

1990

2000

Type -	Ye	Change						
туре	1986	1995	Change					
ag.	0.5%	0.2%	-0.3%					
barren	2.9%	2.2%	-0.7%					
forest	44.9%	42.7%	-2.2%					
urban	40.0%	43.2%	3.3%					
water	2.1%	2.2%	0.1%					
wetlands	9.6%	9.4%	-0.1%					
% of this H	% of this HUC11 in:							
Pinela	nds:	59.0%						
Highla	nds:	0.0%						

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 sever 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.

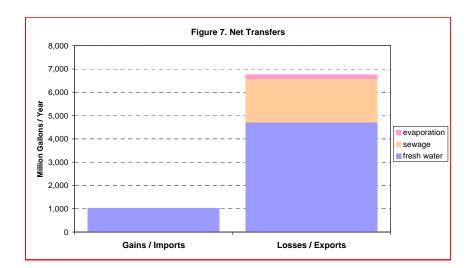
12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.

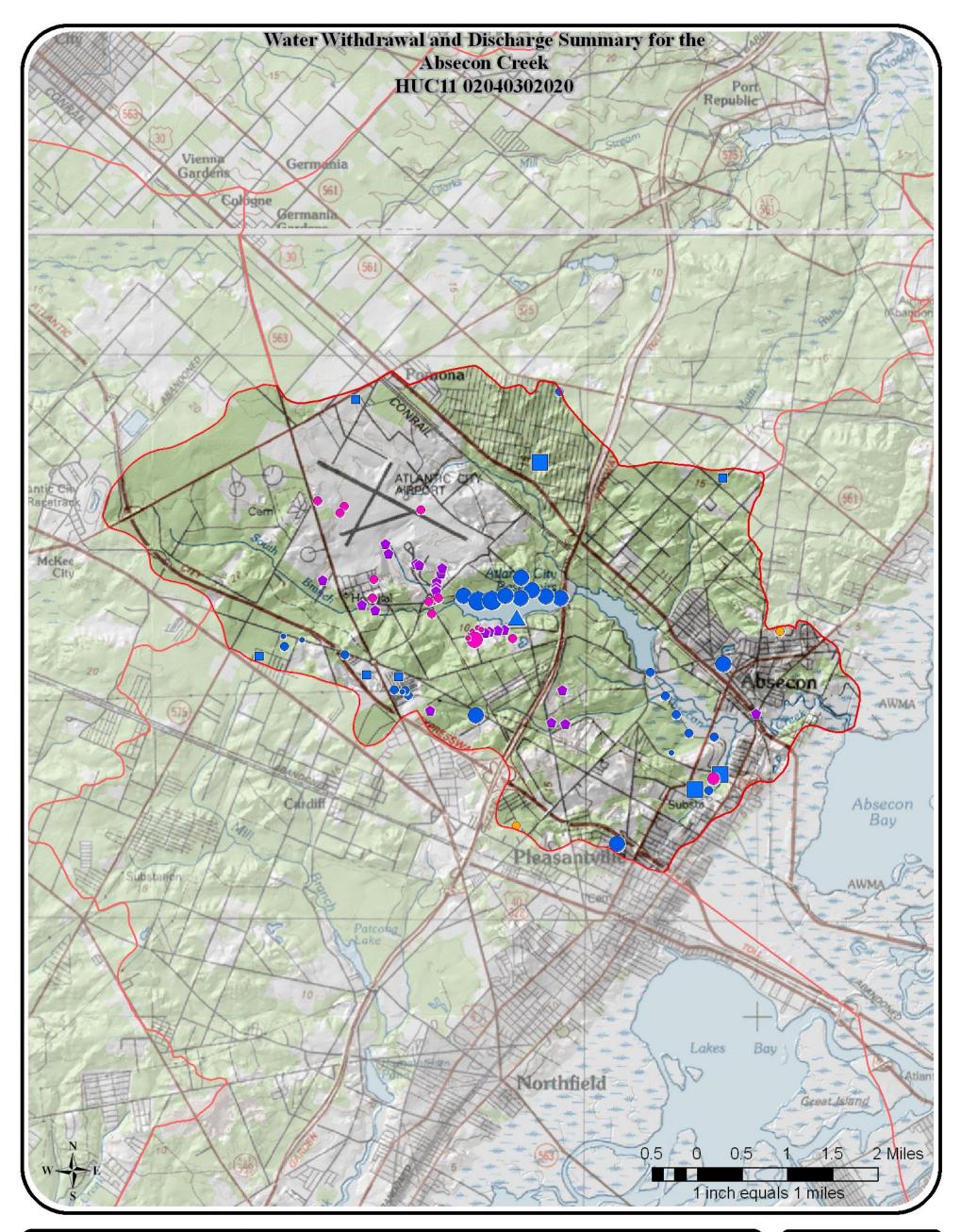
13 Subject to revision.

14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

potable supply

power generation





\bigcap	Key for Dis	scharge Da	ata			Key for Wi	thdrawal Dat	a		Area of Detail
199	1999 Treated Effluent Discharge		Source		1999 With	drawal	Use Group		KAN	
	0 - 50	MGY	•	GW Confined		No 1999 Use	■●▲	Agricultural		FL Ed
	50 - 100	MGY	٠	GW Unconfined	\bigcirc	1-50 MG	Y ∎●▲	Commercial	•	512E
	100 - 500	MGY	•	SW	\bigtriangleup	51 - 100 MG	Y I •A	Industrial	•	K S A
	> 500	MGY	•			101 - 500 MG		Irrigation	•	6 Trad
Oth	er Permitted	Discharge						Mining		CTP 11
		J				> 500 MG		Not Classified		
								Potable Supply		the state of the s
L					MGY	= millions of gall	ons per year	Power Generation	•	

HUC11: Table 1. Freshwater ¹ Withdrawals (Q) 1990 face water. ² Delaware River 0 other 511 sum face water: ³ Confined unconfined 2,678 sum sum 103 confined unconfined 2,678 sum sum 3,579 total withdrawals: 4,090 Table 2. Freshwater Imports Toc imports ¹¹ 1,552 net (1,449) Table 3. Nonconsumptive consumptive nonconsumptive consumptive nonconsumptive consumptive nonconsumptive consumptive nonconsumptive consumptive nonconsumptive consumptive rot consumptive rot consumptive	wals in the HU(1991 0 238 238 990 2,315 3,304 3,543 o & Exports Fr 204 1,719 (1,515) Consumptive ⁵ 1991 745 102 506 71 276 48	1992 0 602 957 2,250 3,207 3,809 0m the HUC 211 1,644 (1,434)	s of gallo 1993 0 772 772 1,125 2,393 3,518 4,290 1,125 4,290 1,783 (1,584)	ns) 1994 0 789 789 1,055 2,320 3,375 4,164 ns of gallor 254 1,605 (1,350)	1995 0 841 1,040 2,667 3,706 4,548 15) 148 1,780 (1,632)	1996 0 773 773 1,041 2,557 3,598 4,371 146 1,687 (1,541) ////////////////////////////////////	1997 0 856 856 2,687 3,563 4,420 317 1,672 (1,354)	0403020 1998 0 875 875 1,085 2,919 4,004 4,880 434 1,956 (1,522) 1998 925 137 523 74 955 135	1999 0 832 832 969 2,883 3,853 4,685 434 1,814 (1,380) 1999 897 137 525 74 916	average 0 709 709 1,004 2,567 3,571 4,280 245 1,721 (1,476) average 786 111 515 73 744			verage S iresh Wat -			of Fr	age Destinat esh Water	
Withdrawals (Q) 1990 face water: ² 0 Delaware River 0 other 511 und-water: ³ 901 inconfined 901 unconfined 2,678 sum 3,579 total withdrawals: 4,090 Table 2. Freshwater Imports ¹¹ 103 exports ¹¹ 1,552 net (1,449) Table 3. Nonconsumptive ⁴ & C Water use unoconsumptive 1990 able purveyors 660 nonconsumptive 505 consumptive 71 ustrial & commercial & mining nonconsumptive nonconsumptive 75 icultural & non-agricultural irrigation nonconsumptive nonconsumptive 680 wer generation 680 wer generation 0 consumptive 0 SUM: nonconsumptive nonconsumptive 1,738	1991 0 238 238 990 2,315 3,304 3,543 0 & Exports Fr 204 1,719 (1,515) Consumptive ⁵ 1991 745 102 506 71 276 48 29 258 0	1992 0 602 957 2,250 3,207 3,809 007 the HUC 211 1,644 (1,434) Water Use ⁶ 1992 721 95 509 72 665 101 22 197 0	1993 0 772 772 1,125 2,393 3,518 4,290 11 (millic 1993 1,783 (1,584) in the HI 1993 755 107 512 72 762 111 39	1994 0 789 789 1,055 2,320 3,375 4,164 0005 of gallor 254 1,605 (1,350) UC11, by Us 1994 810 108 514 72 764 112 44	0 <u>841</u> 1,040 <u>2,667</u> <u>3,706</u> 4,548 ns) 148 <u>1,780</u> (1,632) re Type (mii 1995 768 111 517 73 838 123	0 773 773 1,041 2,557 3,598 4,371 146 1,687 (1,541) 100 715 100 519 73 845	0 856 876 2,687 3,563 4,420 317 1,672 (1,354) 1997 863 133 521 73 919	0 875 875 1,085 2,919 4,004 4,880 4,34 1,956 (1,522) 1998 925 137 523 74 955	0 832 969 2,883 3,853 4,685 434 1,814 (1,380) 1999 897 137 525 74	0 709 709 1,004 2,567 3,571 4,280 245 1,721 (1,476) 245 1,721 (1,476) 786 111 515 73 744	3,500 1,500 1,500 1,500 0 1,500 0 1,000 0 1,000 0 0 0 0 0 0 0 0 0 0 0 0		surface water	er		of Fr	nonconsump- tive (not evaporated)	
Withdrawals (Q) 1990 Tace water: ² 0 Delaware River other 0 sum 511 und-water: ³ confined unconfined 901 2,678 sum 3,579 total withdrawals: 4,090 Table 2. Freshwater Imports To imports ¹¹ 1,552 net (1,449) Table 3. Nonconsumptive consumptive consumptive 660 be purveyors nonconsumptive consumptive 505 nonconsumptive consumptive 71 ustrial & commercial & mining nonconsumptive 497 consumptive consumptive 75 icultural & non-agricultural irrigation nonconsumptive 680 ver generation nonconsumptive 0 sUM: nonconsumptive 0 SUM: nonconsumptive 1,738	1991 0 238 238 990 2,315 3,304 3,543 0 & Exports Fr 204 1,719 (1,515) Consumptive ⁵ 1991 745 102 506 71 276 48 29 258 0	1992 0 602 957 2,250 3,207 3,809 007 the HUC 211 1,644 (1,434) Water Use ⁶ 1992 721 95 509 72 665 101 22 197 0	1993 0 772 772 1,125 2,393 3,518 4,290 11 (millic 1993 1,783 (1,584) in the HI 1993 755 107 512 72 762 111 39	1994 0 789 789 1,055 2,320 3,375 4,164 0005 of gallor 254 1,605 (1,350) UC11, by Us 1994 810 108 514 72 764 112 44	0 <u>841</u> 1,040 <u>2,667</u> <u>3,706</u> 4,548 ns) 148 <u>1,780</u> (1,632) re Type (mii 1995 768 111 517 73 838 123	0 773 773 1,041 2,557 3,598 4,371 146 1,687 (1,541) 100 715 100 519 73 845	0 856 876 2,687 3,563 4,420 317 1,672 (1,354) 1997 863 133 521 73 919	0 875 875 1,085 2,919 4,004 4,880 4,34 1,956 (1,522) 1998 925 137 523 74 955	0 832 969 2,883 3,853 4,685 434 1,814 (1,380) 1999 897 137 525 74	0 709 709 1,004 2,567 3,571 4,280 245 1,721 (1,476) 245 1,721 (1,476) 786 111 515 73 744	3,500 1,500 1,500 1,500 0 1,500 0 1,000 0 1,000 0 0 0 0 0 0 0 0 0 0 0 0		surface water	er		of Fr	nonconsump- tive (not evaporated)	
Delaware River other 0 511 und-water: ³ 501 unconfined 901 unconfined 901 2,678 3,579 total withdrawals: 4,090 Table 2. Freshwater Imports To imports ¹¹ 103 exports ¹¹ 1,552 net net (1,449) Table 3. Nonconsumptive ⁴ & C Water use 1990 able purveyors nonconsumptive consumptive 660 nonconsumptive consumptive 505 consumptive consumptive 71 strial & commercial & mining nonconsumptive 75 cutural & non-agricultural irrigation nonconsumptive 76 consumptive consumptive 680 ver generation nonconsumptive 0 SUM: nonconsumptive 0 SUM: nonconsumptive 1,738	238 238 990 2,315 3,304 3,543 o & Exports Fr 204 1,719 (1,515) Consumptive ⁵ 1991 745 102 506 71 276 48 29 258 0	602 602 957 2,250 3,207 3,809 00m the HUC 211 1,644 (1,434) Water Use ⁶ 1992 721 95 509 72 665 101 22 197 0	772 772 1,125 2,393 3,518 4,290 711 (millio 199 1,783 (1,584) 755 107 512 72 762 111 39	789 789 1,055 2,320 3,375 4,164 Drss of gallor 254 1,605 (1,350) UC11, by Us 1994 810 108 514 72 764 112 44	841 841 1,040 2,667 3,706 4,548 ns) 148 1,780 (1,632) re Type (mil 1995 768 111 517 73 838 123	773 773 1,041 2,557 3,598 4,371 146 1,687 (1,541) ////////////////////////////////////	856 856 876 2,687 3,563 4,420 317 1,672 (1,354) 1997 863 133 521 73 919	875 875 1,085 2,919 4,004 4,880 434 1,956 (1,522) 1998 925 137 523 74 955	832 832 969 2,883 3,853 4,685 434 1,814 (1,380) 1999 897 137 525 74	709 709 709 1,004 2,567 3,571 4,280 245 1,721 (1,476) average 786 111 515 73 744	3,500 1,500 1,500 1,500 0 1,500 0 1,000 0 1,000 0 0 0 0 0 0 0 0 0 0 0 0	- - - - - - - - - - 	surface	imports	ve & Noi	consump- tive (evaporated)	nonconsump- tive (not evaporated)	exports
sum 511 Ind-water: ³ confined unconfined sum 901 2,678 sum 901 2,678 sum 3,579 4,090 Table 2. Freshwater Imports To imports ¹¹ 1,03 1,552 net (1,449) Table 3. Nonconsumptive consumptive suble purveyors nonconsumptive consumptive suble purveyors nonconsumptive consumptive suble suble unconsumptive consumptive consumptive consumptive consumptive consumptive consumptive consumptive consumptive consumptive consumptive consumptive for generation nonconsumptive consumptive for for consumptive for for consumptive for for consumptive for for consumptive for for for for for for for for for for	238 990 2,315 3,304 3,543 o & Exports Fr 204 1,719 (1,515) Consumptive⁵ 1991 745 102 506 71 276 48 29 258 0	602 957 2,250 3,207 3,809 om the HUC 211 1,644 (1,434) Water Use ⁶ 1992 721 95 509 72 665 101 22 197 0	772 1,125 2,393 3,518 4,290 11 (millio 199 1,783 (1,584) 1993 755 107 512 72 762 111 39	789 1,055 2,320 3,375 4,164 Dons of gallor 254 1,605 (1,350) UC11, by Us 1994 810 108 514 72 764 112 44	841 1,040 2,667 3,706 4,548 148 1,780 (1,632) 56 768 111 517 73 838 123	773 1,041 2,557 3,598 4,371 146 1,687 (1,541) <i>llions of g</i> 1996 715 100 519 73 845	856 876 2,687 3,563 4,420 317 1,672 (1,354) (1,354) 1997 863 133 521 73 919	875 1,085 2,919 4,004 4,880 434 1,956 (1,522) 1998 925 137 523 74 955	832 969 2,883 3,853 4,685 434 1,814 (1,380) 1999 897 137 525 74	709 1,004 2,567 3,571 4,280 245 1,721 (1,476) average 786 111 515 73 744	1,000 900 800 1500 1,500 1,500 1,500 1		water		ve & Noi	tive (evaporated)	tive (not evaporated)	exports
confined unconfined 901 2,678 sum 3,579 total withdrawals: 4,090 Table 2. Freshwater Imports To imports ¹¹ 103 exports ¹¹ 1,552 net (1,449) Table 3. Nonconsumptive ⁴ & C Water use 1990 ble purveyors nonconsumptive 660 consumptive 505 consumptive 505 strial & commercial & mining nonconsumptive 71 strial & non-agricultural irrigation nonconsumptive 75 cutural & non-agricultural irrigation nonconsumptive 680 er generation nonconsumptive 0 SUM: nonconsumptive 0 SUM: nonconsumptive 1,738	2,315 3,304 3,543 0 & Exports Fr 204 1,719 (1,515) Consumptive ⁵ 1991 745 102 506 71 276 48 29 258 0	2,250 3,207 3,809 om the HUC 211 1,644 (1,434) Water Use ⁶ 1992 721 95 509 72 665 101 22 197 0	2,393 3,518 4,290 :11 (millio 199 1,783 (1,584) : in the Hi 1993 755 107 512 72 762 111 39	2,320 3,375 4,164 Drss of gallor 254 1,605 (1,350) UC11, by Us 1994 810 108 514 72 764 112 44	2,667 3,706 4,548 ns) 148 1,780 (1,632) ce Type (mil 1995 768 111 517 73 838 123	2,557 3,598 4,371 146 1,687 (1,541) ////////////////////////////////////	2,687 3,563 4,420 317 1,672 (1,354) 1997 863 133 521 73 919	2,919 4,004 4,880 434 1,956 (1,522) 1998 925 137 523 74 955	2,883 3,853 4,685 434 1,814 (1,380) 1999 897 137 525 74	2,567 3,571 4,280 245 1,721 (1,476) average 786 111 515 73 744	2,500 902,000 1,500 0 1,000 0 1,000 900 800 1,000 900 1,000 900 1,000 900 800 1,000 900 1,000 900 1,000 900 1,000 900 1,000 1,000 900 1,000 1,		water		ve & Nor	tive (evaporated)	tive (not evaporated)	exports
unconfined 2,678 sum 3,579 total withdrawals: 4,090 Table 2. Freshwater Imports To imports ¹¹ 103 exports ¹¹ 1,552 net (1,449) Table 3. Nonconsumptive ⁴ & C Water use 1990 ble purveyors nonconsumptive 660 consumptive 505 consumptive 505 consumptive 71 strial & commercial & mining nonconsumptive 497 consumptive 75 cultural & non-agricultural irrigation nonconsumptive 680 er generation nonconsumptive 0 SUM: nonconsumptive 0 SUM: nonconsumptive 0	2,315 3,304 3,543 0 & Exports Fr 204 1,719 (1,515) Consumptive ⁵ 1991 745 102 506 71 276 48 29 258 0	2,250 3,207 3,809 om the HUC 211 1,644 (1,434) Water Use ⁶ 1992 721 95 509 72 665 101 22 197 0	2,393 3,518 4,290 :11 (millio 199 1,783 (1,584) : in the Hi 1993 755 107 512 72 762 111 39	2,320 3,375 4,164 Drss of gallor 254 1,605 (1,350) UC11, by Us 1994 810 108 514 72 764 112 44	2,667 3,706 4,548 ns) 148 1,780 (1,632) ce Type (mil 1995 768 111 517 73 838 123	2,557 3,598 4,371 146 1,687 (1,541) ////////////////////////////////////	2,687 3,563 4,420 317 1,672 (1,354) 1997 863 133 521 73 919	2,919 4,004 4,880 434 1,956 (1,522) 1998 925 137 523 74 955	2,883 3,853 4,685 434 1,814 (1,380) 1999 897 137 525 74	2,567 3,571 4,280 245 1,721 (1,476) average 786 111 515 73 744	0 9 1,000 0 900 1,000 900 800 1,000 900 1,000 900 800 1,000 900		water			tive (evaporated)	tive (not evaporated)	exports
total withdrawals: 4,090 Table 2. Freshwater Imports To imports ¹¹ 103 exports ¹¹ exports ¹¹ 1,552 net net (1,449) Table 3. Nonconsumptive ⁴ & C Water use 1990 ble purveyors nonconsumptive 660 consumptive setic wells nonconsumptive 505 consumptive nonconsumptive 505 consumptive strial & commercial & mining nonconsumptive 497 consumptive consumptive 75 sultural & non-agricultural irrigation nonconsumptive nonconsumptive 680 er generation nonconsumptive SUM: nonconsumptive 0 SUM: nonconsumptive	3,543 o & Exports Fr 204 1,719 (1,515) Consumptive ⁵ 1991 745 102 506 71 276 48 29 258 0	3,809 om the HUC 211 1,644 (1,434) Water Use ⁶ 1992 721 95 509 72 665 101 22 197 0	4,290 11 (millio 199 1,783 (1,584) in the Hu 1993 755 107 512 72 762 111 39	4,164 ens of gallor 254 1,605 (1,350) UC11, by Us 1994 810 108 514 72 764 112 44	4,548 148 1,780 (1,632) 1995 768 111 517 73 838 123	4,371 146 1,687 (1,541) <i>Illions of g</i> 1996 715 100 519 73 845	4,420 317 1,672 (1,354) (1,354) (1,354) 1997 863 133 521 73 919	4,880 434 1,956 (1,522) 1998 925 137 523 74 955	4,685 434 1,814 (1,380) 1999 897 137 525 74	4,280 245 1,721 (1,476) average 786 111 515 73 744	0		water		ve & Noi	tive (evaporated)	tive (not evaporated)	exports
imports ¹¹ 103 exports ¹¹ 1,552 net 1,552 net 1,552 net 1,552 net 1,552 net 1,738 net 1,738 1,552 net 1,738 103 1,552 1,55 1,55	204 1,719 (1,515) Consumptive ⁵ 1991 745 102 506 71 276 48 29 258 0	211 1,644 (1,434) Water Use⁶ 1992 721 95 509 72 665 101 22 197 0	199 1,783 (1,584) in the Hi 1993 755 107 512 72 762 111 39	254 1,605 (1,350) UC11, by Us 1994 810 108 514 72 764 112 44	148 1,780 (1,632) 768 111 517 73 838 123	1,687 (1,541) <i>Ilions of g</i> 1996 715 100 519 73 845	1,672 (1,354)(1,956 (1,522) 1998 925 137 523 74 955	1,814 (1,380) 1999 897 137 525 74	1,721 (1,476) average 786 111 515 73 744	1,000 900 800 900 700		water		ve & Noi	tive (evaporated)	tive (not evaporated)	exports
exports ¹¹ 1,552 net (1,449) Table 3. Nonconsumptive ⁴ & C Water use 1990 ble purveyors nonconsumptive consumptive 505 consumptive 505 consumptive 505 consumptive 505 consumptive 505 consumptive 71 strial & non-agricultural irrigation nonconsumptive 75 cultural & non-agricultural irrigation nonconsumptive 680 er generation nonconsumptive 0 Consumptive 0 SUM: nonconsumptive 1,738	1,719 (1,515) Consumptive ⁵ 1991 745 102 506 71 276 48 29 258 0	1,644 (1,434) Water Use ⁶ 1992 721 95 509 72 665 101 22 197 0	1,783 (1,584) in the Hu 1993 755 107 512 72 762 111 39	1,605 (1,350) UC11, by Us 1994 810 108 514 72 764 112 44	1,780 (1,632)	1,687 (1,541) <i>Ilions of g</i> 1996 715 100 519 73 845	1,672 (1,354)(1,956 (1,522) 1998 925 137 523 74 955	1,814 (1,380) 1999 897 137 525 74	1,721 (1,476) average 786 111 515 73 744	1,000 900 800 900 700		water		ve & Noi	(evaporated)	evaporated)	
Fable 3. Nonconsumptive 4 C Water use 1990 ble purveyors 660 nonconsumptive 85 estic wells 505 nonconsumptive 505 consumptive 71 strial & commercial & mining nonconsumptive nonconsumptive 75 cultural & non-agricultural irrigation 76 nonconsumptive 680 er generation 0 consumptive 0 SUM: 0 SUM: 1,738	Consumptive ⁵ 1991 745 102 506 71 276 48 7 29 258 0	Water Use ⁶ 1992 721 95 509 72 665 101 22 197 0	in the HI 1993 755 107 512 72 762 111 39	UC11, by Us 1994 810 108 514 72 764 112 44	e Type (min 1995 768 111 517 73 838 123	<i>llions of g</i> 1996 715 100 519 73 845	allons) 1997 863 133 521 73 919	1998 925 137 523 74 955	1999 897 137 525 74	average 786 111 515 73 744	+ 000 + 008 + 007		Figure 3	Consumpti	ve & Noi	nconsumpti 	ive Use	
Water use 1990 ble purveyors nonconsumptive 660 consumptive 85 estic wells 505 nonconsumptive 505 consumptive 71 strial & commercial & mining nonconsumptive 497 consumptive 75 cultural & non-agricultural irrigation nonconsumptive 680 er generation 0 sonsumptive 0 SUM: 0 SUM: 1,738	1991 745 102 506 71 276 48 29 258 0	1992 721 95 509 72 665 101 22 197 0	1993 755 107 512 72 762 111 39	1994 810 108 514 72 764 112 44	1995 768 111 517 73 838 123	1996 715 100 519 73 845	1997 863 133 521 73 919	925 137 523 74 955	897 137 525 74	786 111 515 73 744	+ 000 + 008 + 007		Figure 3.	Consumpti	ve & Noi	nconsumpti	ve Use	
Water use 1990 ble purveyors nonconsumptive 660 consumptive 85 estic wells 505 nonconsumptive 71 strial & commercial & mining 97 nonconsumptive 497 consumptive 75 cultural & non-agricultural irrigation 76 nonconsumptive 680 er generation 0 SUM: 0 SUM: 1,738	1991 745 102 506 71 276 48 29 258 0	1992 721 95 509 72 665 101 22 197 0	1993 755 107 512 72 762 111 39	1994 810 108 514 72 764 112 44	1995 768 111 517 73 838 123	1996 715 100 519 73 845	1997 863 133 521 73 919	925 137 523 74 955	897 137 525 74	786 111 515 73 744	+ 000 + 008 + 007		Figure 3.	Consumpti	ve & Noi	nconsumpti 	ve Use	
nonconsumptive consumptive 660 sastic wells 85 nonconsumptive 505 consumptive 71 strial & commercial & mining nonconsumptive 497 consumptive 75 ultural & non-agricultural irrigation nonconsumptive 680 er generation nonconsumptive 0 SUM: nonconsumptive 0 SUM: nonconsumptive 1,738	102 506 71 276 48 29 258 0	95 509 72 665 101 22 197 0	107 512 72 762 111 39	108 514 72 764 112 44	111 517 73 838 123	100 519 73 845	133 521 73 919	137 523 74 955	137 525 74	111 515 73 744	+ 000 + 008 + 007		Figure 3.	Consumpti	ve & Noi	nconsumpti 	ve Use	·
estic wells nonconsumptive 505 consumptive 71 strial & commercial & mining nonconsumptive 497 consumptive 75 ultural & non-agricultural irrigation nonconsumptive 680 er generation nonconsumptive 0 consumptive 0 SUM: nonconsumptive 1,738	506 71 276 48 29 258 0	509 72 665 101 22 197 0	512 72 762 111 39	514 72 764 112 44	517 73 838 123	519 73 845	521 73 919	523 74 955	525 74	515 73 744	- 008 - 007 ear							
nonconsumptive consumptive 505 strial & commercial & mining nonconsumptive 497 ultural & non-agricultural irrigation nonconsumptive 75 ultural & non-agricultural irrigation nonconsumptive 680 er generation nonconsumptive 0 consumptive 0 SUM: nonconsumptive 1,738	71 276 48 29 258 0	72 665 101 22 197 0	72 762 111 39	72 764 112 44	73 838 123	73 845	73 919	74 955	74	73 744	– 007 ^K ear							
strial & commercial & mining nonconsumptive 497 consumptive 75 vultural & non-agricultural irrigation nonconsumptive 76 consumptive 76 consumptive 680 or generation nonconsumptive 0 consumptive 0 SUM: nonconsumptive 1,738	276 48 29 258 0	665 101 22 197 0	762 111 39	764 112 44	838 123	845	919	955		744								
consumptive 75 ultural & non-agricultural irrigation nonconsumptive 76 consumptive 680 er generation nonconsumptive 0 consumptive 0 SUM: nonconsumptive 1,738	48 29 258 0	101 22 197 0	111 39	112 44	123				916		è 500							
nonconsumptive 76 consumptive 680 er generation nonconsumptive 0 SUM: nonconsumptive 1,738	29 258 0	197 0			48				129	109								·
consumptive 680 er generation nonconsumptive 0 consumptive 0 SUM: nonconsumptive 1,738	258 0	197 0				46	42	61	60	47	400 + 300 +							
nonconsumptive 0 consumptive 0 SUM: nonconsumptive 1,738				000	435	411	381	547	541	420	≥ 300 200 -			_				
SUM: nonconsumptive 1,738	0	0	0	0	0	0	0	0	0	0	100 —							·
nonconsumptive 1,738		v	0	0	0	0	0	0	0	0	0 +-	o otobio	dam	ir	dustrial &		lture	
consumptive 911	1,555 479	1,917 464	2,068 645	2,132 688	2,170 741	2,124 704	2,345 718	2,463 892	2,398 880	2,091 712		potable urveyors	dom we		mmercial & mining	& agricu & irrig		power generation
PERCENTAGES:														noncons	umptive	consumptive		
nonconsumptive 65.6% consumptive 34.4%		80.5% 19.5%	76.2% 23.8%	75.6% 24.4%	74.5% 25.5%	75.1% 24.9%	76.6% 23.4%	73.4% 26.6%	73.1% 26.9%	74.6% 25.4%								
able 4. Average Seasonal ⁷ U				•	-	1 1		Veer	h. A.m			Fiaure 4	. Average	Seasonal C	consum	ptive Water	Loss, by Us	e
Use Group Noncon-	Winter - Consump-	Sprin Noncon- C		Sum Noncon-	Consump-		all Consump-		ly Avg. Consump-		450 ₩ 400					_	,,,]
potable purveyors 181	e tive 0	sumptive 194	tive 15	sumptive 227	tive 79	sumptive 193	tive 18	sumptive 795	tive 111	-	ب – – ∞ ² 350					-		winter
domestic wells 118	0	121	9	150	52	126	11	515	73	-	∑ 300 + 0 250 +							· spring
mining 97	15	199	29	222	32	226	33	744	109	-	B 200 G 150							· summer · fall
agricultural & non- agricultural irrig.	2	9	79	30	269	8	70	47	420	_	100 50 +		-		-			
power generation 0 SUM: 397	0 17	0 523	0 132	0 628	0 432	0 552	0 132	0 2,100	0 712	-	0			indus	rial &			
•		-	I					-			potab purvey		domestic wells	comme	rcial &	agriculture & irrigation		
														min	"'Y			
	Trensfer 8 /	4	(ma 111 -	-f										_				
Table 5. Sewage Generation & 1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	F	igure 5.	•	Sewage Gei Transfers	1-		age Treated- narge Locati	
enerated in HUC11 832 mported to HUC11 0	371 0	1,186 0	656 0	1,892 0	1,713 0	1,957 0	1,904 0	1,851 0	1,842 0	1,420 0	1,600					2.001		- *
ported from HUC11 813	370	1,186	656	1,892	1,713	1,952	1,898	1,843	1,835	1,416	1,400 ¹ ,200	-			1-			
											su 1,000 lig 800	-						
able 6. Destination of Treated	d Effluent (Rec.	laimed-Wate	er) Discha	arges ⁹ in the	e HUC11 (m	illions of	gallons)				g 600 -	-		-				·
destination 1990 fresh water 20	<u>1991</u> 0	<u>1992</u> 0	1993 0	<u>1994</u> 0	1995 0	1996 5	<u>1997</u> 6	1998 8	1999 7	average 5	i≣ 400 + 200 +	-			1-			
brackish water 0	0	0	0	0	0	0	0	0	0	0	o #					fres	h bracki	sh co't
salt water 0 sum: 20	0	0	0	0	0	0 5	0	0 8	0 7	0 5		nerated HUC11	imported	exporte	d	wate		
•																		

Table T. 1555 Mater An	ocations	minioon by		Tahlo 0	HUC11 Desc	rintiv
Water	Source			Table 5.	noon bese	input
Water Source	MGY			Area:		
surface water	3,174			in this H	UC11 only	71.
ground water	8,995			upstrear	n HUC11s	0.0
tota	l 12,169			total w	atershed	71.
Table 8. 1999 Water All		° in HUC11 by		`	onshore area:	71.
Water U	se Group		1	Populati	on of this HU	:11:
Use Group		MGY		Year	Population	Char
agricultural		2,313		1940	9,555	-
commercial		74		1950	11,123	16.4
industrial		104		1960	17,043	53.2

		stream HUC11s (in NJ)
location	#	name
downstream:	02040302040	Great Egg Harbor R (Lk Lenape to HospBr)
(if any)		
upstream:		
(if any)		

111

6,040

3,526

0

2010	55,195	9.4%	est. 🖆
2020	60,994	10.5%	est.12
2030	66,442	8.9%	est.12

Population Change 9,555 11,123

71.1 sq. mi. 0.0 sq. mi. 71.1 sq. mi.

sq. mi.)

71.1

16.4%

53.2% 35.8%

56.5%

25.2%

11.3%

-	Land	Use of	this HUC11:	
	T		Year	

17,043 23,150

36,226

45.342

50,453

1970

1980

1990

2000

Type -	16	ai	 Change 					
туре	1986	1995	Change					
ag.	14.0%	12.2%	-1.8%					
barren	1.7%	2.1%	0.4%					
forest	36.6%	34.3%	-2.3%					
urban	21.8%	25.7%	3.8%					
water	0.7%	0.8%	0.0%					
wetlands	25.1%	25.0%	-0.2%					
% of this HUC11 in:								
Pinela	nds:	66.7%						
Highla	nds:	0.0%						

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 sever 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.

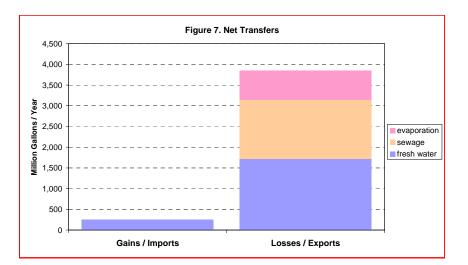
13 Subject to revision.

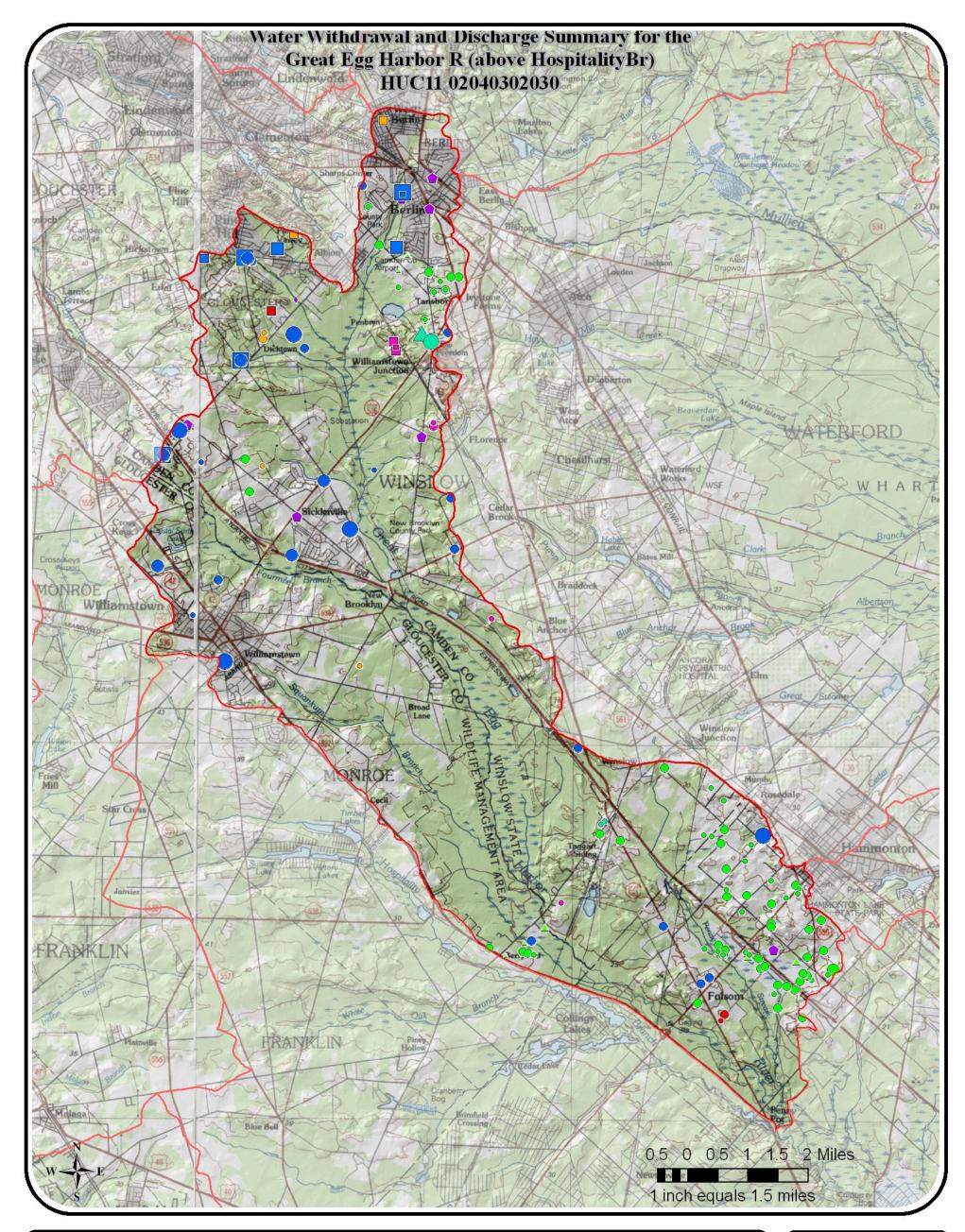
14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

irrigation mining

potable supply

power generation





Key for Discharge Data	Key for Withdrawal Data	Area of Detail
1999 Treated Effluent Discharge	Source 1999 Withdrawal Use Group	1 KAC
0 - 50 MGY • 50 - 100 MGY •	GW Confined□No 1999 Use■●▲AgriculturalGW Unconfined○1 - 50MGY■●▲Commercial	1 公望
100 - 500 MGY 🔶	SW △ 51 - 100 MGY ■●▲ Industrial ●	
> 500 MGY 🔶 Other Permitted Discharge 🍙	101 - 500 MGY ■●▲ Irrigation Mining ●	
	> 500 MGY Not Classified Potable Supply	
	MGY = millions of gallons per year Power Generation	

WMA:		Gre	at Egg H	arbor an	d Tuckaho	e		15				
HUC11:		Great Egg	Harbor R	liver (Lk	Lenape to	HospBr)		02	20403020	940		
<i>Table 1. Freshwater</i> ¹ Withdrawals (Q)	Withdrawa 1990	Is in the HU(1991	C 11 (millic 1992	ons of gall 1993	ons) 1994	1995	1996	1997	1998	1999	average	Fig 1. Average Source of Fig 2. Average Destination
Inface water: 2												Fresh Water of Fresh Water
Delaware River other sum	0 20 20	0 <u>136</u> 136	0 <u>13</u> 13	0 6 6	0 1 1	0 10 10	0 5 5	0 2 2	0 8 8	0 22 22	0 22 22	
ound-water: 3	114	120	160	156	150	101	160	105	100	192	165	2,500
confined unconfined	2,006	120 3,691	169 3,739	156 3,611	159 2,793	191 2,897	169 2,967	195 3,227	190 3,845	182 3,779	165 3,255	<u>5</u> 2,000
sum total withdrawals:	2,120 2,140	3,811 3,948	3,908 3,922	3,767 3,773	2,952 2,953	3,088 3,098	3,137 3,141	3,422 3,424	4,036 4,043	3,961 3,982	3,420 3,442	
Table 2. Freshwater I	mports To a	& Exports Fr	om the HU	IC11 (milli	ons of gallo	ns)						
imports ¹¹ exports ¹¹	91 111	77 300	67 306	74 273	66 352	82 242	80 199	82 325	90 343	91 261	80 271	ground surface imports consump- nonconsump- exports water water (exponented)
net	(19)	(223)	(239)	(199)	(286)	(159)	(119)	(243)	(253)	(170)	(191)	(evaporated) evaporated)
Table 3. Nonconsum Water use	otive ⁴ & Co 1990	nsumptive ⁵ 1991	Water Use 1992	e ⁶ in the H 1993	IUC11, by U 1994	e Type (mi 1995	llions of g 1996	allons) 1997	1998	1999	average	
able purveyors												Figure 3. Consumptive & Nonconsumptive Use
nonconsumptive consumptive	85 10	93 15	86 13	86 16	87 14	88 14	84 12	98 16	106 17	99 16	91 14	1,600
nestic wells												1,400
nonconsumptive consumptive	579 81	581 82	586 83	591 83	596 84	602 85	607 85	611 86	617 87	623 88	599 84	1,200
ustrial & commercial & m	ining											ج ن 1,000
nonconsumptive consumptive	554 71	599 76	614 77	802 97	800 97	665 83	1,284 169	1,355 177	1,381 185	1,267 171	932 120	§ 800
icultural & non-agricultura	al irrigation											
nonconsumptive consumptive	72 645	225 2,029	221 1,993	187 1,686	98 881	139 1,253	77 694	83 746	139 1,248	154 1,386	140 1,256	
ver generation												200
nonconsumptive consumptive	0 0	0 0	0 0	0 0	0 0	0	0 0	0 0	0 0	0 0	0	
SUM:						-						industrial & agriculture power
nonconsumptive consumptive	1,289 807	1,499 2,202	1,508 2,165	1,666 1,881	1,581 1,076	1,495 1,435	2,053 960	2,147 1,024	2,242 1,537	2,142 1,660	1,762 1,475	purveyors wells mining & irrigation generation
PERCENTAGES:												nonconsumptive
nonconsumptive consumptive	61.5% 38.5%	40.5% 59.5%	41.0% 59.0%	47.0% 53.0%	59.5% 40.5%	51.0% 49.0%	68.1% 31.9%	67.7% 32.3%	59.3% 40.7%	56.3% 43.7%	54.4% 45.6%	
Table 4. Average Sea	sonal ⁷ Use	- Nonconsu	mptive ⁴ &	Consum	ntive ⁵ (millio	ns of gallo	ns)					
-		nter	Sp	ring	Sun	mer	F	all		y Avg.		Figure 4. Average Seasonal Consumptive Water Loss, by Use
Use Group	Noncon- sumptive	Consump- tive	Noncon- sumptive	Consump- tive	Noncon- sumptive	Consump- tive	Noncon- sumptive	Consump- tive	 Noncon- sumptive 	Consump- tive		ي بر 1,200
potable purveyors	24	0	26	2	30	10	26	2	105	15	-	∑ 1,000
domestic wells dustrial & commercial &	138	0	141	10	174	61	146	13	599	84	-	800
mining	150	20	233	30	275	35	274	35	932	120	_	¹ / ₅ ¹ / ₆
agricultural & non- agricultural irrig.	1	5	23	209	81	727	35	316	140	1,256		
power generation	0	0	0	0	0	0	0	0	0	0	_	
SUM:	313	24	423	251	560	833	481	367	1,776	1,475		potable domestic industrial & agriculture power purveyors wells commercial & & irrigation generation mining
Table 5. Sewage Gen	eration & Ti 1990	ransfers[®] in 1991	the HUC1 1992	1 (millions 1993	of gallons) 1994	1995	1996	1997	1998	1999	average	Figure 5. Average Sewage Gen- Fig 6. Average Treated-Effluent
generated in HUC11	305	325	359	289	391	365	413	427	408	394	368	eration & Transfers Discharge Location
imported to HUC11 exported from HUC11	100 274	91 297	84 333	88 262	87 365	80 341	87 386	90 399	97 379	83 369	89 340	2 350 +
Table 6. Destination of									0.0			
destination fresh water	1990 131	<u>1991</u> 118	1992 110	1993 115	<u>1994</u> 114	1995 105	1996 114	1997 118	1998 127	1999 108	average 116	
brackish water	0	0	0	0	0	105	0	0	0	0	0	
salt water sum:	0 131	0	0 110	0 115	0	0	0 114	0 118	0	0 108	0 116	generated imported exported fresh brackish salt in HUC11 water water water
sum:	131	110	110	611	114	CUI	114	110	127	108		

Water SourceeMGYer118 Water Source surface water ground water 8,843 8,843 total 8,961

Table 8, 1999 Water Allocations ¹⁰ in HUC11 by

Table 8. 1999 Water Allocations	IN HUC11 b
Water Use Group	
Use Group	MGY
agricultural	5,390
commercial	0
industrial	232
irrigation	37
mining	2,808
potable supply	494
power generation	0

Table 9. HUC11 Descriptive Statistics									
Area:									
in this H	JC11 only	133.5	sq. mi.						
upstrear	n HUC11s	71.1	sq. mi.						
total wa	atershed	204.5	sq. mi.						
(this HUC11	(this HUC11 onshore area: 133.5 sq. mi.)								
Populatio	Population of this HUC11:								
Year	Population	Change	_						
1940	7,666	-							
1950	9,099	18.7%							
1960	14,139	55.4%							
1970	17,521	23.9%							
1980	25,183	43.7%							
1990	31,874	26.6%							
2000	34,800	9.2%							

Table 10. Upstream and downstream HUC11s (in NJ)								
location	#	name						
downstream:	02040302050	Great Egg Harbor R (below Lake Lenape)						
(if any)								
upstream:	02040302030	Great Egg Harbor R (above HospitalityBr)						
(if any)								

2010	39,420	13.3%	est.12
2020	45,285	14.9%	est.12
2030	51,945	14.7%	est.12

- Land Use of this HUC11:

Type -	Ye	ar	Change
туре	1986	1995	Change
ag.	10.2%	9.9%	-0.3%
barren	1.3%	1.1%	-0.1%
forest	50.7%	50.3%	-0.3%
urban	9.5%	10.2%	0.7%
water	1.9%	2.0%	0.1%
wetlands	26.5%	26.4%	0.0%
% of this H	UC11 in:		
Pinela	nds:	97.9%	
Highla	nds:	0.0%	

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.

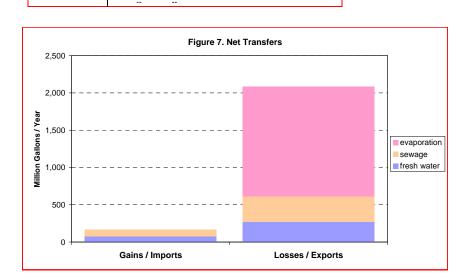
8 Sewage generation and transfers are based on intersection of sever service areas with HUC11s.
 9 Based on discharge volumes reported under NJPDES program.

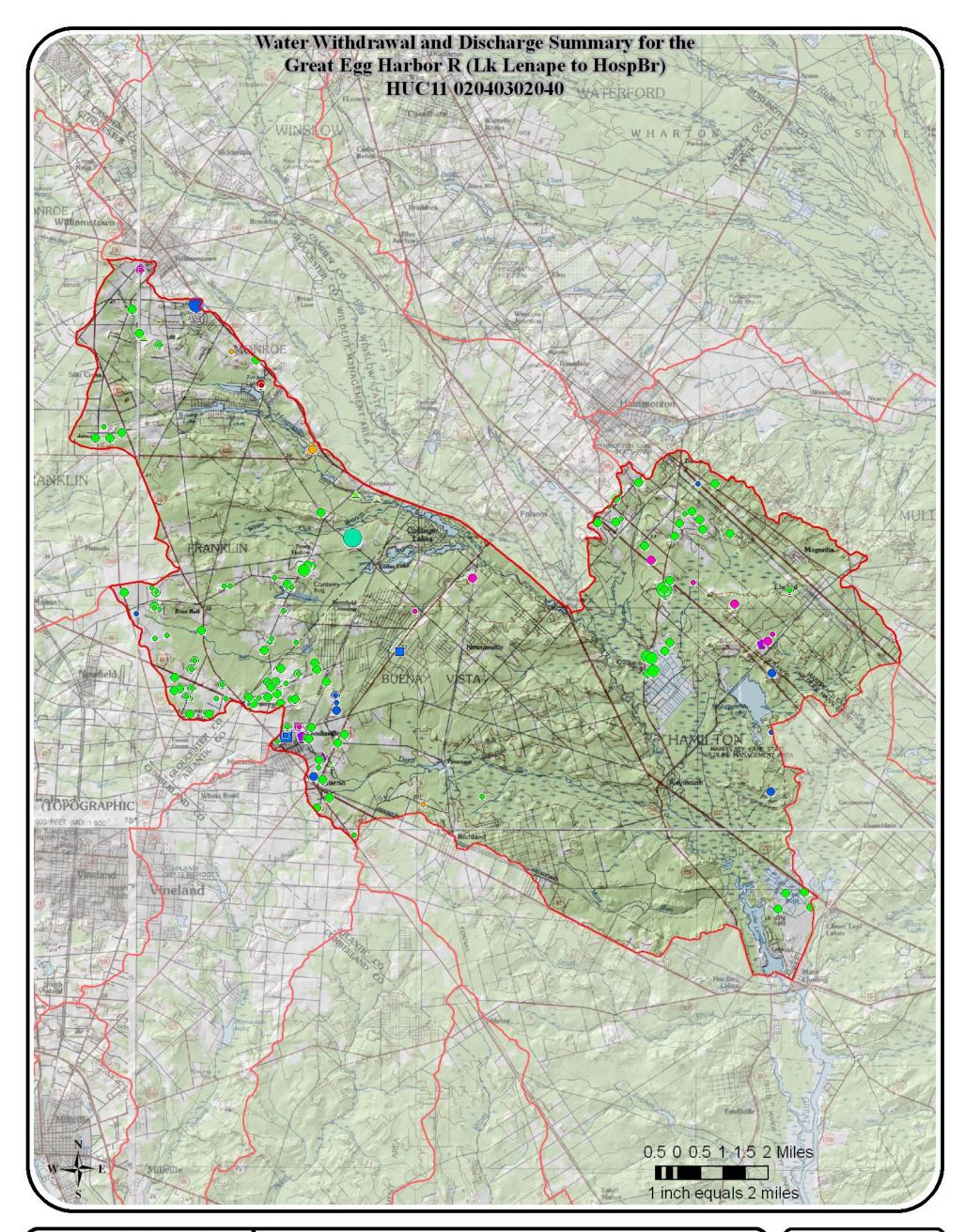
10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999. 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.

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.





Key for Di	scharge D	Data			Key fo	r Withc	Irawal Data		ſ	Area of Detail
1999 Treated E	ffluent Dis	charge	Source		1999	Withdra	wal	Use Group		LAN.
0 - 50	MGY	٠	GW Confined		No 1999	Use	■●▲	Agricultural	۲	3 R. Ed
50 - 100	MGY	٠	GW Unconfined	\bigcirc	1 - 50	MGY		Commercial	•	ちまむ
100 - 500	MGY	•	SW	\bigtriangleup	51 - 100	MGY		Industrial	•	K.S.A
> 500	MGY	•			101 - 500	MGY		Irrigation	•	
Other Permitted	Discharge	•						Mining		C SS SS
	Ŭ				> 500	MGY		Not Classified		
								Potable Supply		No.
				MGY	= millions o	fgallons	per year	Power Generation	•	

WMA:		Gre	at Egg H	arbor and	d Tuckaho	6		15				
HUC11:		Great Egg	Harbor	River (be	low Lake L	.enape)		02	20403020)50		
Table 1. Freshwater ¹	Nithdrowal	in the HU	211 (millio	and of gally							-	
Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	Fig 1. Average Source of Fig 2. Average Destination Fresh Water of Fresh Water
Delaware River other	0 0	0 0	0 1	0 5	0 3	0 6	0 12	0 6	0 0	0 10	0 4	1,400
sum	0	0	1	5	3	6	12	6	0	10	4	5 1,000
confined	1	245	222	214	177	164	154	168	291	371	201	
unconfined sum	1,066 1,067	863 1,108	831 1,053	959 1,173	978 1,155	999 1,163	1,031 1,186	1,028 1,196	1,015 1,306	915 1,285	969 1,169	- ⁸ 600 -
otal withdrawals:	1,067	1,109	1,053	1,178	1,158	1,169	1,197	1,202	1,306	1,296	1,174	
able 2. Freshwater In								40	40	10	07	0 consump- nonconsump- exports
imports ¹¹ exports ¹¹	31 182	35 211	32 199	34 213	36 213	39 219	38 217	40 237	42 251	42 247	37 219	ground surface imports tive tive (not water water (evaporated) evaporated)
net	(152)	(176)	(167)	(179)	(176)	(180)	(179)	(197)	(209)	(205)	(182)	
able 3. Nonconsump		nsumptive⁵	Water Use	e ⁶ in the H	UC11, by Us	e Type (mi	llions of g	allons)				
Water use ble purveyors	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	Figure 3 Consumptive 9 Nonconsumptive Use
nonconsumptive	254	299	276	298	304	315	310	334	353	351	310	Figure 3. Consumptive & Nonconsumptive Use
consumptive estic wells	33	48	43	49	48	51	47	54	54	54	48	450
nonconsumptive consumptive	404 57	405 57	408 57	410 58	413 58	416 59	418 59	421 59	425 60	428 60	415 58	
strial & commercial & mir	ning		7		7	4		7				ي ي عنه المحمد
nonconsumptive consumptive	8 1	2 1	1	12 9	6	1	93 2	1	18 2	17 2	17 3	[€] 250
ultural & non-agricultural nonconsumptive	irrigation 12	8	5	13	11	11	5	8	14	16	10	
consumptive er generation	108	71	43	116	100	97	49	68	130	143	93	≥ ··· 100
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0	50
consumptive SUM:	0	0	0	0	0	0	0	0	0	0	0	o potable domestic industrial & agriculture power
nonconsumptive consumptive	678 200	714 177	696 145	734 232	735 213	743 207	826 157	770 182	810 246	812 260	752 202	purveyors wells mining & irrigation generation
PERCENTAGES: nonconsumptive	77.3%	80.2%	82.8%	76.0%	77.5%	78.2%	84.1%	80.8%	76.7%	75.8%	78.8%	nonconsumptive consumptive
consumptive	22.7%	19.8%	17.2%	24.0%	22.5%	21.8%	15.9%	19.2%	23.3%	24.2%	21.2%	
able 4. Average Seas	onal ⁷ Use	- Nonconsu	mptive⁴ &	Consump	tive⁵ (millio	ns of gallo	ns)					
Use Group	Wii Noncon-	nter Consump-		ring Consump-	Sum Noncon-	mer Consump-		all Consump-		y Avg. Consump		Figure 4. Average Seasonal Consumptive Water Loss, by Use
•	sumptive	tive	sumptive	tive	sumptive	tive	sumptive	tive	sumptive	tive	-	· · · · · · · · · · · · · · · · · · ·
potable purveyors domestic wells	76 95	0	84 98	6 7	98 121	34 42	89 101	8 9	347 415	49 58	-	60
istrial & commercial & mining	2	0	2	1	2	1	11	1	17	3	_	
agricultural & non- agricultural irrig.	0	1	1	13	7	60	2	19	10	93		
power generation SUM:	0 173	0	0 185	0 27	0 227	0 137	0 203	0 37	0 789	0 202	-	o + , , , , ,
50M.	175	I	105	21	221	107	203	57	103	202		potable domestic industrial & agriculture power purveyors wells commercial & & irrigation generation mining
able 5. Sewage Gene	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	Figure 5. Average Sewage Gen- eration & Transfers Fig 6. Average Treated-Effluent Discharge Location
enerated in HUC11 mported to HUC11	2,089 0	2,111 0	2,110 0	2,130 0	2,147 0	2,068 0	2,248 0	2,209 0	2,307 0	2,128 0	2,155 0	2,500
ported from HUC11	1,779	1,983	2,031	2,130	2,147	2,068	2,248	2,209	2,307	2,128	2,103	
					9							
able 6. Destination of destination	1990	1991	1992	ter) Discha 1993	1994	e HUC11 (m 1995	nillions of 1996	gallons) 1997	1998	1999	average	
fresh water brackish water	310 0	128 0	79 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	52 0	
salt water	0	0	0	0	0	0	0	0	0	Ő	0 0	_ generated imported exported fresh brackish salt

Table 7. 1999 Water Alloc	otiono ¹⁰ in		1	
		HUC I'I by		Table 9.
Water Sc				_
Water Source	MGY			Area:
surface water	19			in this H
ground water	1,743			upstrear
total	1,761			total wa
				(this HUC11
Table 8. 1999 Water Alloc	ations ¹⁰ in	HUC11 bv		
Water Use				Populatio
Use Group		MGY		Year
agricultural		250		1940
commercial		74		1950
industrial		113		1960
irrigation		173		1970
mining		0		1980
potable supply		1,151		1990
power generation		0		2000
	te te l	4 704		0040

Table 9. HUC11 Descriptive Statistics										
Area:										
in this Hl	JC11 only	142.2	sq. mi.							
upstream	n HUC11s	204.5	sq. mi.							
total wa	atershed	346.8	sq. mi.							
(this HUC11	onshore area:	139.5	sq. mi.)							
 Population 	on of this HUC	C11:								
Year	Population	Change	_							
1940	4,517	-								
1950	5,178	14.6%								
1960	7,004	35.3%								
1970	9,145	30.6%								
1980	15,222	66.5%								
1990	21,811	43.3%								
2000	26,925	23.4%								
0040	00 000	05 40/	12							

location	#	name
	02040302060	Patcong Creek/Great Egg Harbor Bay
(if any)		3, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1, 1,
upstream:	02040302030	Great Egg Harbor R (above HospitalityBr)
(if any)	02040302040	Great Egg Harbor R (Lk Lenape to HospBr)

2010	20,086	-25.4%	est. 🐃
2020	23,571	17.3%	est.12
2030	28,006	18.8%	est.12

- Land Use of this HUC11:

Type -	Ye	ar	Change
туре	1986	1995	Change
ag.	3.9%	3.8%	-0.1%
barren	0.8%	0.6%	-0.2%
forest	50.5%	49.0%	-1.6%
urban	8.0%	9.8%	1.9%
water	3.6%	3.7%	0.1%
wetlands	33.2%	33.1%	-0.1%
% of this H	IUC11 in:		
Pinela	nds:	62.4%	
Highla	nds:	0.0%	

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 or used in that HCH1. 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 sever service areas with HUC11s.
 9 Based on discharge volumes reported under NJPDES program.

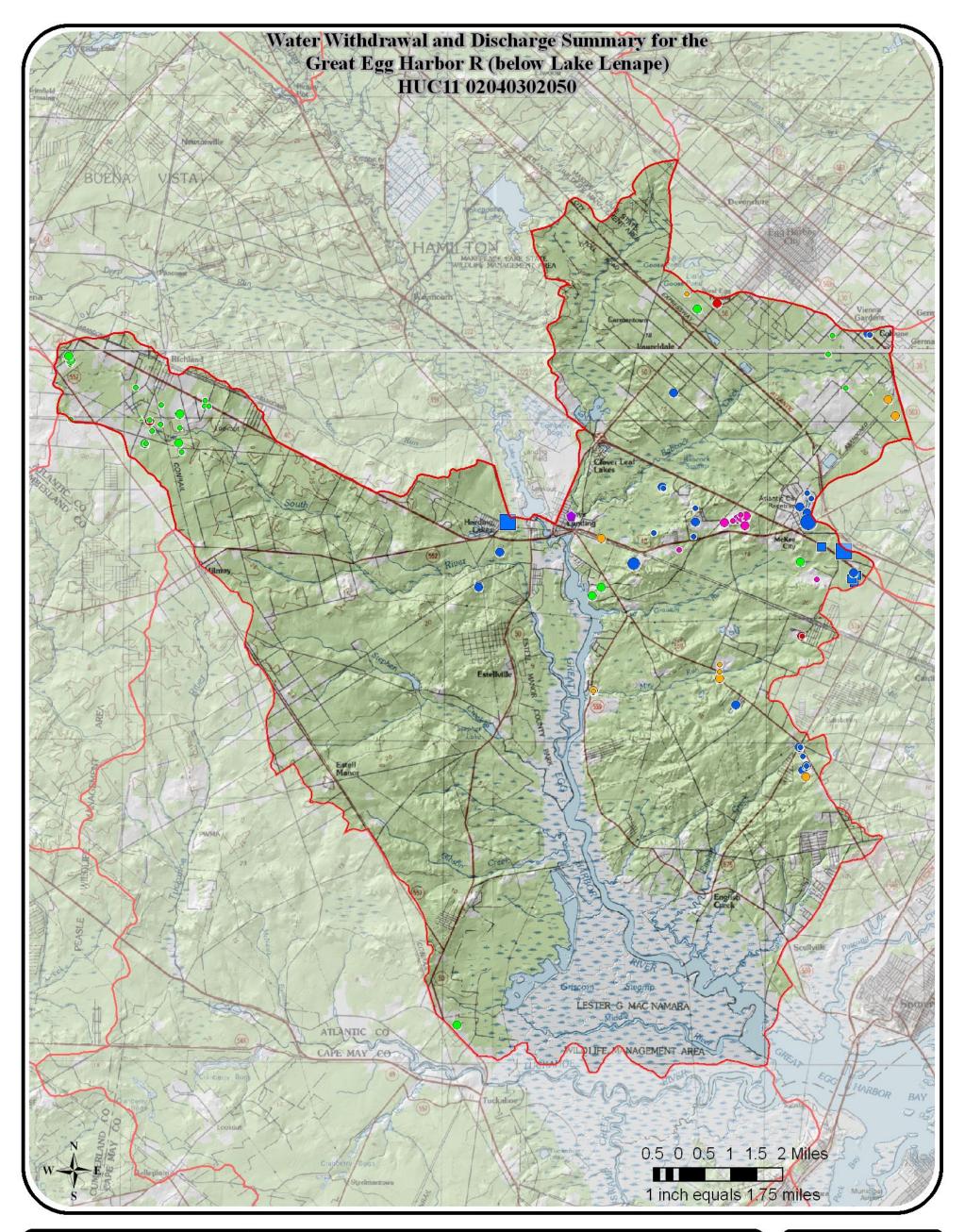
10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999. 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.

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.





Key for Disc	harge Data			Key for With	drawal Data			Area of Detail
1999 Treated Efflu	uent Discharge	Source		1999 Withdr	awal	Use Group		LA
0 - 50 N	AGY 🔸	GW Confined		No 1999 Use		Agricultural	٠	2 Deta
50 - 100 M	AGY 🔸	GW Unconfined	\bigcirc	1-50 MGY		Commercial	•	ちまれ
100 - 500 M	IGY 🔶	SW	\bigtriangleup	51-100 MGY		Industrial	•	XXX 1
> 500 M	IGY 🔶			101 - 500 MGY		Irrigation	•	a trad
Other Permitted D	ischarge 🍵					Mining	•	CH YA
				> 500 MGY		Not Classified		
						Potable Supply	•	
			MGY	= millions of gallons	sper year	Power Generation	•	

WMA:		Gre	at Egg Ha	arbor an	d Tuckaho	e		15				
HUC11:		Patco	ng Creek	/Great E	gg Harbor I	Вау		02	0403020	60	I	
Table 1. Freshwater ¹	Withdrawal	s in the HU(211 (millio	ns of gall	ons)							
Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	Fig 1. Average Source of Fig 2. Average Destination Fresh Water of Fresh Water
Delaware River other	0 63	0 258	0 47	0 47	0 47	0 49	0 47	0 47	0 57	0 59	0 72	
sum sund-water: 3	63	258	47	47	47	49	47	47	57	59	72	
confined unconfined	1,953 2,478	1,962 2,476	1,948 2,247	1,837 2,366	2,016 2,347	1,985 2,446	2,166 2,257	2,363 2,264	2,203 2,504	2,224 2,418	2,066 2,380	ġ 3,000 +
sum	4,431	4,438	4,195	4,203	4,362	4,431	4,423	4,627	4,706	4,642	4,446	⁽⁷ 2,000 ↓
total withdrawals:	4,494	4,696	4,242	4,250	4,409	4,480	4,470	4,674	4,763	4,701	4,518	
Table 2. Freshwater I							4 000	4 405	4 500	4.045	1 4 646	
imports ¹¹ exports ¹¹	862 1,099	1,130 1,089	1,102 981	1,335 1,014	1,336 1,081	1,456 1,167	1,292 1,150	1,465 1,154	1,539 1,218	1,645 1,187	1,316 1,114	ground surface imports tive tive (not water water (evaporated)
net	(237)	41	121	320	255	289	143	311	320	458	202	
Table 3. Nonconsum												, ,
Water use able purveyors	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	Figure 3. Consumptive & Nonconsumptive Use
nonconsumptive	3,196	3,441	3,295 474	3,425	3,566	3,658	3,572	3,844	3,923	4,025	3,595	4,500
consumptive nestic wells	462	512		524	513	526	472	578	580	595	524	4,000
nonconsumptive consumptive	317 45	317 45	318 45	318 45	319 45	319 45	320 45	320 45	320 45	321 45	319 45	3,500
ustrial & commercial & m nonconsumptive	nining 45	38	65	56	33	36	54	34	32	6	40	ž 3,000 + § 2,500 +
consumptive	5	4	7	6	4	4	6	4	4	1	5	
cultural & non-agricultur nonconsumptive	al irrigation 17	37	15	19	18	17	14	15	15	14	18	
consumptive er generation	154	337	137	173	162	157	124	138	135	122	164	1,000 -
nonconsumptive	120 3	111 3	101 3	116 3	117 3	149 4	174 5	180 5	203 5	278 7	155 4	
SUM:												potable domestic industrial & agriculture power
nonconsumptive consumptive	3,695 669	3,946 901	3,793 666	3,934 751	4,053 726	4,180 736	4,133 652	4,394 770	4,494 769	4,643 770	4,127 741	purveyors wells mining & irrigation generation
PERCENTAGES: nonconsumptive	84.7%	81.4%	85.1%	84.0%	84.8%	85.0%	86.4%	85.1%	85.4%	85.8%	84.8%	nonconsumptive
consumptive	15.3%	18.6%	14.9%	16.0%	15.2%	15.0%	13.6%	14.9%	14.6%	14.2%	15.2%	
Table 4. Average Sea	sonal ⁷ Use	- Nonconsu	mptive⁴ &	Consum	otive⁵ (millio	ns of gallo	ns)					
Use Group	Wir Noncon-		Spr Noncon-	ring	Sum Noncon-	-	E F	all Consump	Yearl		_	Figure 4. Average Seasonal Consumptive Water Loss, by Use
	sumptive	tive	sumptive	tive	sumptive	tive	sumptive	tive	sumptive	tive	_	ğ 500
potable purveyors domestic wells	714 73	0	778 75	59 5	1,096 93	381 32	858 78	83 7	3,445 319	524 45	_	5 400 +
ustrial & commercial & mining	2	0	5	1	22	2	10	1	40	5		
agricultural & non- agricultural irrig.	0	2	4	35	11	102	3	26	18	164	-	
power generation SUM:	36 825	1	39 901	1 101	42 1,264	1 519	38 987	1 119	155 3,977	4 741	-	
SOM:	620	3	901	101	1,204	219	967	119	3,977	741		potable domestic industrial & agriculture power purveyors wells commercial & & irrigation generation mining
Table 5. Sewage Gen	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	Figure 5. Average Sewage Gen- eration & Transfers Discharge Location
generated in HUC11 imported to HUC11	3,134 0	3,509 0	3,613 0	3,767 0	3,815 0	3,639 0	4,001 0	3,861 0	3,999 0	3,648 0	3,699 0	4,000
exported from HUC11	3,134	3,509	3,613	3,767	3,815	3,639	4,001	3,861	3,999	3,648	3,699	3.500
	of Treated Ef	fluent (Recl	aimed-Wat	ter) Discha	arges [°] in the	e HUC11 (n	nillions of	gallons)				
Table 6. Destination of	1990	<u>1991</u> 0	1992 0	<u>1993</u> 0	<u>1994</u> 0	<u>1995</u> 0	1996 0	<u>1997</u> 0	1998 0	1999 0	average 0	
Table 6. Destination of destination of destination	0			-		-		Ő	0 0	Ő	0	
destination	0 0	0	0	0	0 0	0	0 0	0	0	0	0	generated imported exported fresh brackish salt

able 7. 1999 Water Allocation Water Source		Table 9. HUC11 Descriptive
Water Source MC	GY	Area:
surface water 4	6	in this HUC11 only 71.0
ground water 5,7	07	upstream HUC11s 449.
total 5,7	53	total watershed 520.
		(this HUC11 onshore area: 54.9
ble 8. 1999 Water Allocation	ns ¹⁰ in HUC11 by	
Water Use Gro	up	Population of this HUC11:
Use Group	MGY	Year Population Chan
agricultural	168	1940 31,352 -
commercial	37	1950 36,393 16.1
industrial	81	1960 50,063 37.6
irrigation	186	1970 62,952 25.7
mining	0	1980 69,576 10.5
potable supply	4,993	1990 73,737 6.09
power generation	288	2000 80,736 9.59
	total E 7E2	2010 71.927 11.0

Table 10. Upstream and downstream HUC11s (in NJ)								
location	#	name						
downstream:	02040302920	Atlantic Coast (Absecon to Great Egg)						
(if any)								
upstream:	02040302030	Great Egg Harbor R (above HospitalityBr)						
(if any)	02040302040	Great Egg Harbor R (Lk Lenape to HospBr)						
	02040302050	Great Egg Harbor R (below Lake Lenape)						
	02040302070	Tuckahoe River						

2010	71,827	-11.0%	est.12
2020	74,610	3.9%	est.12
2030	77,555	3.9%	est.12

- Land Use of this HUC11:

Type	Ye	Change						
туре	1986	1995	Change					
ag.	1.8%	1.4%	-0.4%					
barren	1.0%	1.4%	0.4%					
forest	18.7%	17.1%	-1.6%					
urban	27.5%	29.4%	1.9%					
water	24.6%	24.6%	0.0%					
wetlands	26.3%	26.0%	-0.2%					
% of this HUC11 in:								
Pinela	nds:	23.6%						
Highla	nds:	0.0%						

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.

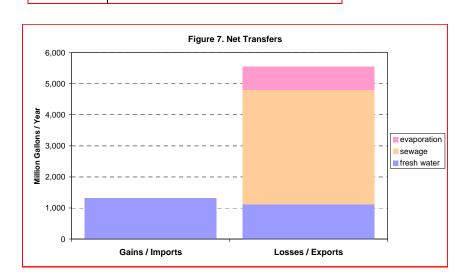
8 Sewage generation and transfers are based on intersection of sever service areas with HUC11s.
 9 Based on discharge volumes reported under NJPDES program.

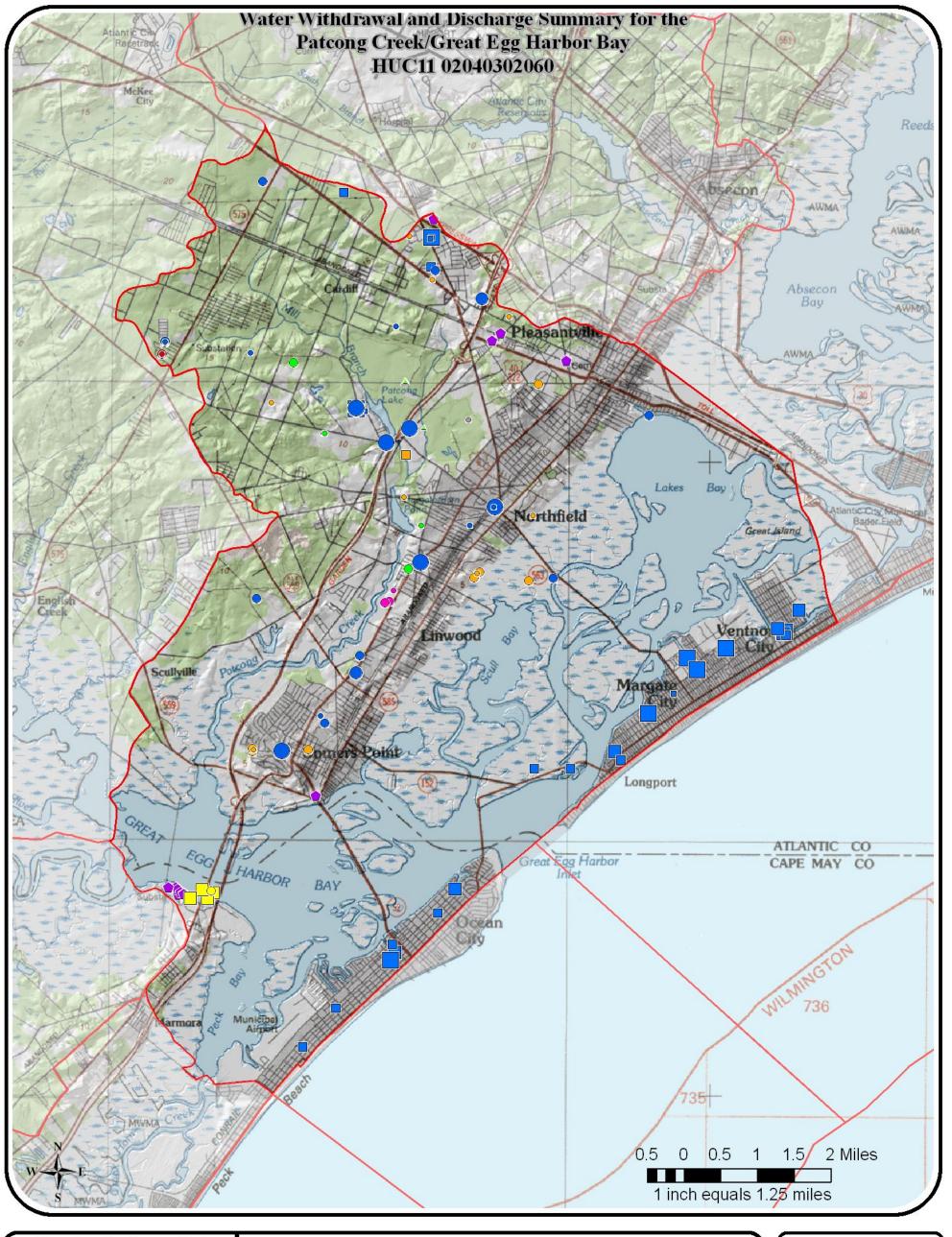
10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999. 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.

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.





ſ	Key for Di	scharge Da	ita			Key for	Withd	lrawal Data	Ì	Area of Detail	
19	999 Treated Effluent Discharge		Source		1999 Withdrawal			Use Group		L A	
	0 - 50	MGY	•	GW Confined		No 1999 U	se		Agricultural	٠	FL Ed
	50 - 100	MGY	٠	GW Unconfined	\bigcirc	1 - 50	MGY		Commercial	•	517E
	100 - 500	MGY	•	SW	\bigtriangleup	51 - 100	MGY		Industrial	•	45/7
	> 500	MGY				101 - 500	MGY		Irrigation	•	E The
Oth	er Permittec	l Discharge	•						Mining	•	CH XX
		J				> 500	MGY		Not Classified		
									Potable Supply		No. 1
L					MGY	= millions of g	gallons	per year	Power Generation	•	

WMA:		Gre	eat Egg H	arbor an	d Tuckaho	e		15									
HUC11:			Tuc	kahoe Ri	ver			02	0403020)70]						
Table 1. Freshwater ¹												Fig. 4	A		F ¹ A A A A	Destination	
Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	Fig 1	. Average S Fresh Wat		Fig 2. Averag of Free	e Destination	1
Delaware River other	0 1,021	0 1,031	0 1,014	0 942	0 869	0 387	0 522	0 761	0 1,058	0 1,093	0 870	2,500					
sum round-water: ³	1,021	1,031	1,014	942	869	387	522	761	1,058	1,093	870		1				
confined	0	0	0	0	0	0	0	0	0	129	13	g 1,500 +					
unconfined sum	1,942 1,942	1,559 1,559	1,784 1,784	1,898 1,898	2,191 2,191	2,113 2,113	1,794 1,794	1,881 1,881	1,909 1,909	2,134 2,263	1,921 1,933	9 1,000 -				· · · ·	
total withdrawals:	2,963	2,590	2,798	2,840	3,060	2,500	2,316	2,643	2,967	3,356	2,803	500 –					
Table 2. Freshwater In											1	₀ ا			consump-	nonconsump-	exports
imports ¹¹ exports ¹¹	0 74	0 67	0 71	0 74	1 76	1 74	0 72	1 70	1 69	1 198	1 84	ground water	surface water	imports	tive	tive (not	oxporto
net	(73)	(66)	(70)	(73)	(75)	(73)	(72)	(69)	(69)	(197)	(84)				(evaporated)	evaporated)	
Table 3. Nonconsump Water use	tive ⁴ & Cor 1990	n sumptive⁵ 1991	Water Use 1992	e ⁶ in the H 1993	IUC11, by Us 1994	e Type (mi 1995	llions of g 1996	allons) 1997	1998	1999	average						
otable purveyors nonconsumptive	33	30	31	33	34	33	32	31	31	31	32	2,500	Figure 3.	Consumptive &	Nonconsumptive	Use	
consumptive omestic wells	5	4	4	4	5	5	4	4	4	4	4	2,000]
nonconsumptive consumptive	279 39	281 40	285 40	290 41	296 42	301 42	304 43	309 44	314 44	318 45	298 42	2,000 +]
dustrial & commercial & mi	ning											≻ يُ 1,500					
nonconsumptive consumptive	2,220 309	1,895 258	2,075 284	2,093 285	2,252 311	1,789 244	1,634 223	1,910 260	2,169 296	2,375 324	2,041 279	Gallon					
gricultural & non-agricultura	l irrigation																
nonconsumptive consumptive	0 4	2 15	1 7	2 18	5 42	1 12	0 4	2 14	4 36	6 55	2 21						
ower generation												500 — — — — —					1
nonconsumptive consumptive	0 0	0 0	0 0	0 0	0	0 0	0 0	0 0	0 0	0 0	0	o –					
SUM:				-		-						potable	dom	industri		re po	ower
nonconsumptive consumptive	2,533 357	2,207 317	2,393 335	2,418 349	2,586 399	2,124 303	1,971 274	2,251 322	2,518 380	2,730 428	2,373 346	purveyor		commen	cial o -		eration
PERCENTAGES:														nonconsumption	ve consumptive		
nonconsumptive consumptive	87.6% 12.4%	87.4% 12.6%	87.7% 12.3%	87.4% 12.6%	86.6% 13.4%	87.5% 12.5%	87.8% 12.2%	87.5% 12.5%	86.9% 13.1%	86.4% 13.6%	87.3% 12.7%						
			,.														
Table 4. Average Seas		- Nonconsu							Voorl			Figure	e 4. Average	Seasonal Cons	umptive Water L	oss, by Use	
Use Group	Noncon-	Consump-	Sp Noncon-	Consump-	Sum Noncon-	Consump-		all Consump-		y Avg. Consump		300					
	sumptive	tive	sumptive	tive	sumptive	tive	sumptive	tive	sumptive	tive	-	 × 250					-
potable purveyors domestic wells	7 68	0	8 70	<u>1</u> 5	9 87	3 30	8 73	1 7	32 298	4 42	-	200					 winter spring
ndustrial & commercial &	263	36	465	64	675	93	638	87	2,041	279	-	150					summer
mining agricultural & non-	0	0	0	2	2	15	0	3	2	21	-	50					fall
agricultural irrig. power generation	0	0	0	0	0	15 0	0	0	0	0	-	≣ 50					- 1
SUM:	338	36	543	72	772	142	719	97	2,373	346	-	0 +		industrial &		1	
												potable purveyors	domestic wells	commercial & mining	agriculture & & irrigation	power generatior	1
Table 5. Sewage Gene	ration & Tr. 1990	ansfers [®] in 1991	the HUC11 1992	1 (millions 1993	of gallons) 1994	1995	1996	1997	1998	1999	average		Average Se		Fig 6. Average		uent
generated in HUC11	0	0	0	0	0	0	0	0	0	0	0	1	eration & T	ansiers	Dischar	e Location	1
imported to HUC11 exported from HUC11	0 0	0 0	0	0 0	0 0	0	0 0	0 0	0 0	0 0	0	1		ł			
	v	0	0	v	v	U	0	0	0	v		÷ 1 +					
												Ogio 1 +					
Table 6. Destination o	f Treated E	ffluent (Rec	laimed-Wa	ter) Discha	arges [®] in the	e HUC11 (n	nillions of	gallons)				0					
destination	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	≣ 0 -		:::::			
fresh water brackish water	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0	0					
	0	0	0	0	0	0	0	0	0	0	0	generated	imported	exported	fresh water	brackish water	salt
salt water sum:	0	0	0	0	0	0	0			0	0	in HUC11				water	water

Water Sauras		-
Water Source	MGY	-
surface water	1,527	
ground water	4,289	_
total	5,816	_
		n HUC11 by
Water Us		
Water Us Use Group		MGY
Water Us Use Group agricultural		
Water Us Use Group		MGY
Use Group agricultural		MGY
Water Us Use Group agricultural commercial		MGY
Water Us Use Group agricultural commercial industrial		MGY 600 0 0
Water Us Use Group agricultural commercial industrial irrigation	e Group	MGY 600 0 0 56

Table 9. HUC11 Descriptive Statistics									
Area:									
in this Hl	JC11 only	102.4	sq. mi.						
upstrean	n HUC11s	0.0	sq. mi.						
total wa	atershed	102.4	sq. mi.						
(this HUC11	onshore area:	101.2	sq. mi.)						
	on of this HU(C11:							
Year	Population	Change	_						
1940	3,297	-							
1950	3,643	10.5%							
1960	4,514	23.9%							
1970	5,312	17.7%							
1980	8,530	60.6%							
1990	12,527	46.8%							
2000	13,969	11.5%							
0040	15 005	0.00/	, 12						

ocation	#	name
downstream: (if any)	02040302060	Patcong Creek/Great Egg Harbor Bay
upstream:		
(if any)		

0

2010	15,265	9.3%	est.12
2020	16,579	8.6%	est.12
2030	17,906	8.0%	est.12

- /	Land	Use	of	this	нυ	C1	1:	

Туре	Ye	ar	Change					
туре	1986	1995	Change					
ag.	5.0%	4.5%	-0.5%					
barren	1.2%	1.3%	0.1%					
forest	47.9%	47.0%	-0.9%					
urban	5.4%	6.6%	1.2%					
water	2.9%	3.1%	0.2%					
wetlands	37.6%	37.5%	-0.1%					
% of this HUC11 in:								
Pinela	inds:	64.9%						
Highla	inds:	0.0%						

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.

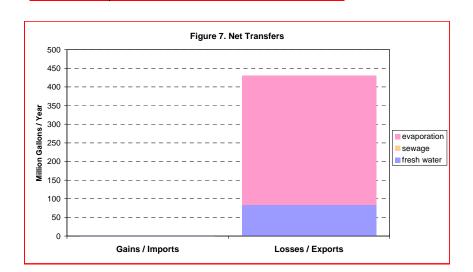
10 The allocated volume is calculated from allocation permits on file with the Bureau of Water Allocation, NJDEP, as of 1999. 11 Import and export volumes based on reported transfers between purveyors and on intersection of purveyor service areas with HUC11s.

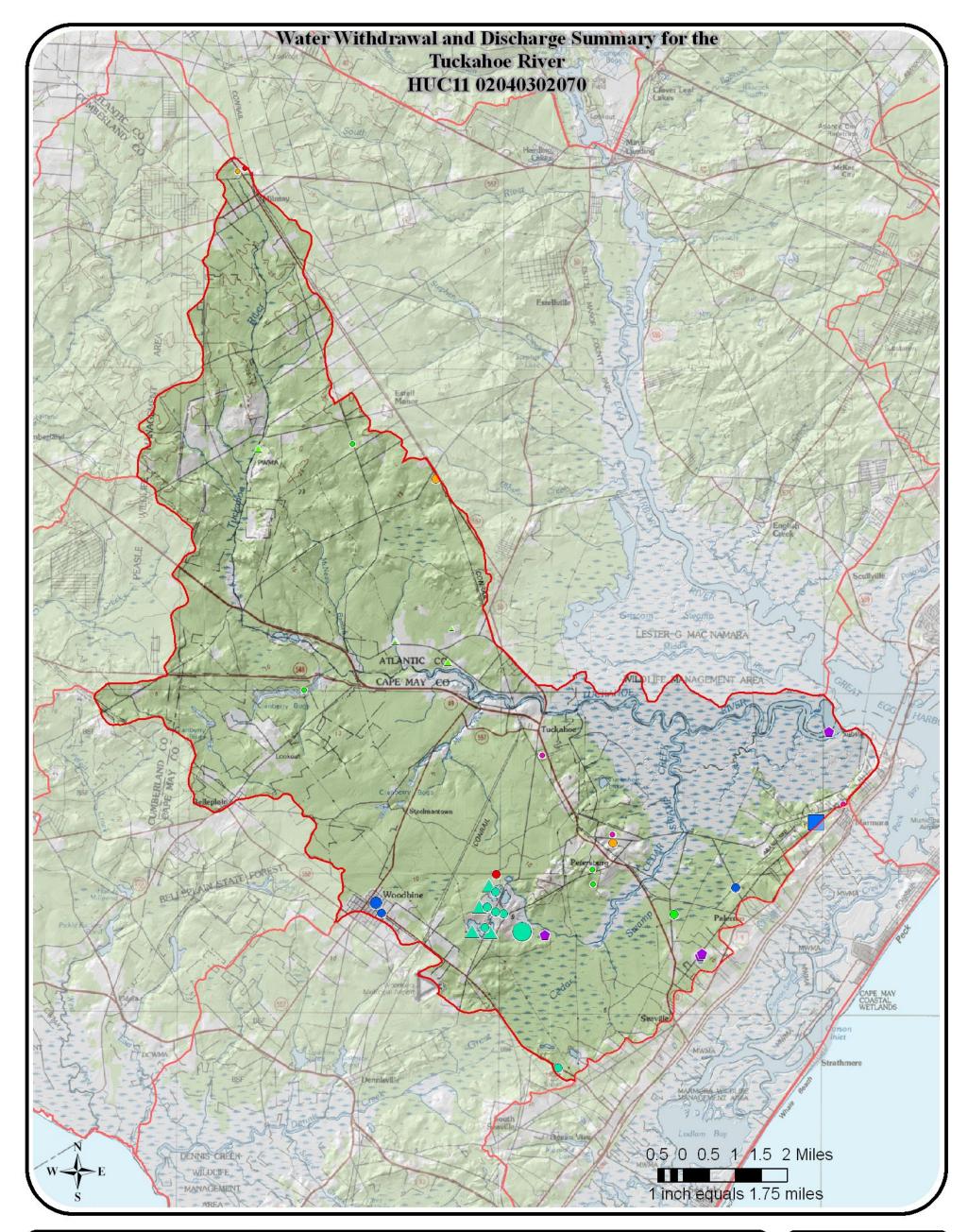
12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.

13 Subject to revision.

14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

irrigation mining potable supply power generation





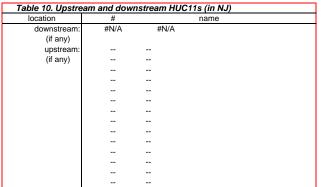
Ke	ey for Dis	charge Dat	ta			Key for	r Witho	lrawal Data		Area of Detail	
1999 1	1999 Treated Effluent Discharge		arge	Source		1999 Withdrawal			Use Group		KAN
0.	- 50	MGY	•	GW Confined		No 1999	Use	H ¢A	Agricultural		2 Edd
50) - 100	MGY	٠	GW Unconfined	\bigcirc	1 - 50	MGY		Commercial	•	SIZE.
10	00 - 500	MGY		SW	\bigtriangleup	51 - 100	MGY		Industrial	•	4507
>	500	MGY	•			101 - 500	MGY		Irrigation	•	a tot
Other F	Permitted	Discharge					in e i		Mining		ALL SI
		J				> 500	MGY		Not Classified		
									Potable Supply		No.
					MGY	= millions of	fgallons	per year	Power Generation	•	

WMA:		Gre	at Egg H	arbor and	d Tuckaho	е		15										
HUC11:		Atlanti	c Coast ((Absecor	to Great	Egg)		02	0403029	20								
able 1. Freshwater ¹	Nithdrawal	s in the HU	211 (millic	ons of gallo	nns)													
Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average			verage Sou resh Water	ce of		ge Destination sh Water	
Delaware River other	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	500 450 -						
sum nd-water: ³	0	0	0	0	0	0	0	0	0	0	0	× 400 × 350 +					··	
confined	196 0	185 0	255 0	361 0	521 0	469 0	446 0	504 0	495 0	383 0	382 0	se 300 - e 250 -					· · · · · · · · · · · · · · · · · · ·	
unconfined sum	196	185	255	361	521	469	446	504	495	383	382	9 ₂₀₀ -					·· – –	
otal withdrawals:	196	185	255	361	521	469	446	504	495	383	382	≣ 130 - 100 - 50 -					-	
able 2. Freshwater In imports ¹¹	ports To 8 300	Exports Fre	om the HU 292	C11 (milli 281	ons of gallo 290	ns) 251	290	298	306	300	288	0	ground	surface	imports	consump-	nonconsump-	exports
exports ¹¹	0	0	79	198	173	217	156	135	148	159	127		water	water	imports	tive (evaporated)	tive (not evaporated)	
net	300	267	214	83	117	34	134	163	158	142	161							
able 3. Nonconsump																		
Water use ble purveyors	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average			Figure 2	oncumntive	& Nonconsumptiv		
nonconsumptive	266 33	239 28	260 33	253 33	261 33	226 29	261 33	267 33	274 36	268 36	257 33	³⁵⁰ T		rigule 3. (Jonsumptive]
consumptive estic wells												300	· <u></u> -					
nonconsumptive consumptive	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0 0	0	jag 250 –	-					
trial & commercial & mir	ning 176	167	158	143	288	201	236	307	291	207	217	~	_					
consumptive	20	19	18	143	56	47	51	60	53	15	35	200 - 9 150 -	_					
ultural & non-agricultural nonconsumptive	irrigation 0	0	0	0	0	0	0	0	0	0	0	uoillii 100 -						
consumptive er generation	0	0	0	0	0	0	0	0	0	0	0	_						
nonconsumptive	0	0	0	0	0	0	0	0	0	0	0	50 -						
consumptive SUM:	0	0	0	0	0	0	0	0	0	0	0	0 +	potable	domest		strial & agricult	ure pr	ower
nonconsumptive consumptive	443 53	406 47	418 51	396 49	549 89	427 76	497 84	574 93	564 89	474 50	475 68		purveyors	wells	COMIN	ercial & agricult ning & irriga		eration
PERCENTAGES: nonconsumptive	89.4%	89.7%	89.1%	89.0%	86.0%	84.8%	85.5%	86.0%	86.3%	90.4%	87.4%				nonconsum	otive consumptive		
consumptive	10.6%	10.3%	10.9%	11.0%	14.0%	15.2%	14.5%	14.0%	13.7%	9.6%	12.6%							
able 4. Average Seas	onal ⁷ Use Wi			Consump		ons of gallo nmer		all	Year	y Avg.			Figure 4	. Average	Seasonal Co	nsumptive Water	Loss, by Use	
Use Group	Noncon- sumptive	Consump- tive		Consump- tive	Noncon- sumptive	Consump- tive						± 35						_
potable purveyors	63	0	64	4	65	23	66	6	257	33	-	- + 35 + - ≻ 30 + 2 25 +	-					- winter
domestic wells strial & commercial &	0 54	0	0 59	0	0 52	0 18	0 53	0 8	0 217	0 35	-	20 - 20 - 9 15 -	-					spring
mining agricultural & non-											-	0 15 - ioi 10 - W 5 -						fall
agricultural irrig.	0	0	0	0	0	0	0	0	0	0	-	₩ 5						-
SUM:	116	3	123	11	117	41	119	14	475	68	-		otable	domestic	industrial	& agriculture	power	
													veyors	wells	commercia mining	al & & irrigation		ı
															-			
able 5. Sewage Gene	ration & Tr	ansfers [®] in	the HUC1	1 (millions	of gallons)								Figure 5	. Average §	Sewage Gen-	Fig 6. Aver	age Treated-Ef	fluent
enerated in HUC11	1990 113	1991 126	1992 129	1993 136	1994 137	1995 132	1996 143	1997 141	1998 147	1999 136	average 134			eration &		-	age Treated-Li harge Location	
mported to HUC11	8,608	9,595	9,828	10,305	10,388	10,005	10,875	10,689	11,162	10,296	10,175	12,000						
ported from HUC11	0	0	0	0	0	0	0	0	0	0	0	- 00,000 × 8,000						
												ologia 100,000 - 100,000 -		-				-
able 6. Destination of destination	Treated E 1990	ffluent (Recl 1991	laimed-Wa 1992	ter) Discha 1993	arges [®] in th 1994	e HUC11 (n 1995	nillions of 1996	gallons) 1997	1998	1999	average	SU 4,000 -						-
fresh water	0	0	0	0	0	0	0	0	0	0	0	≥ 2,000 - 0 -						
brackish water salt water	0 8,722	0 9,722	0 9,957	0 10,441	0 10,525	0 10,137	0 11,018	0 10,830	0 11,309	0 10,432	0 10,309	U 1	generated	imported	exported	fresh		salt
sum:	8,722	9,722	9,957	10,441	10,525	10,137	11,018	10,830	11,309	10,432	10,309		in HUC11			wate	r water	water

Water Source Water Source MGY surface water 0 ground water 560 total 560

Table 8. 1999 Water Allocations 10 in HUC11 by Water Use Group MGY Use Group 0 210 agricultural commercial industrial 210 irrigation 0 0 mining potable supply 140 power generation 0

Table 9. HUC11 Descriptive Statistics --- Area: in this HUC11 only 54.0 sq. mi. 0.0 sq. mi. 54.0 sq. mi. upstream HUC11s total watershed (this HUC11 onshore area 1.6 sq. mi.) Population of this HUC11: Year 1940 Population Change 7,236 7,361 1.7% 1950 1960 8,049 9.3% 7,342 6,581 1970 -8.8% 1980 -10.4% 1990 6,199 -5.8% 2000 6,511 5.0%



2010	6,658	2.2%	est.12						
2020	6,773	1.7%	est.12						
2030	6,892	1.8%	est.12						
Land Use of this HUC11:									
	Ye	ar	Change						
Туре	Ye: 1986	ar 1995	- Change						
			- Change 0.0%						
Туре	1986	1995	0						

barren	1.3%	1.3%	0.0%					
forest	0.0%	0.0%	0.0%					
urban	4.7%	4.7%	0.0%					
water	94.0%	94.0%	0.0%					
wetlands	0.0%	0.0%	0.0%					
% of this HUC11 in:								
Pinela	nds:	0.0%						
Highla	nds:	0.0%						

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.

Sewage generation and transfers are based on intersection of sewer service areas with HUC11s.
 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.

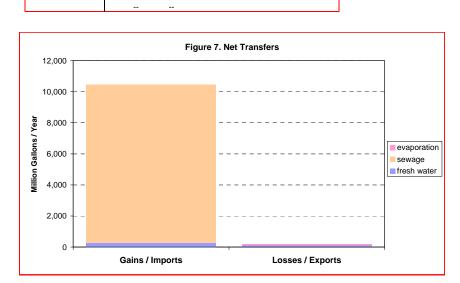
12 Projected population estimates based on NJ Metropolitan Planning Organization estimates.

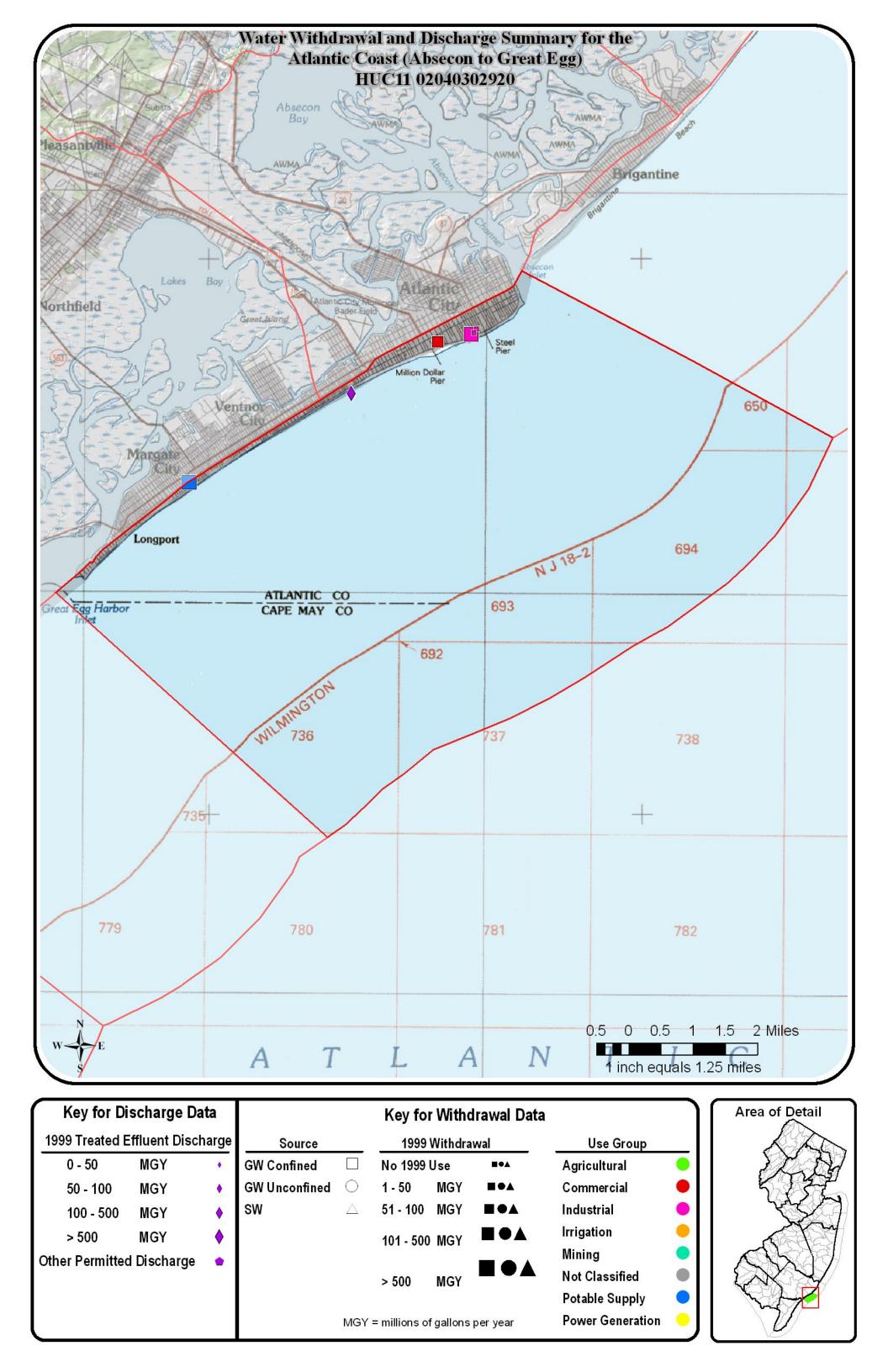
13 Subject to revision.

14 Withdrawals for offstream reservoirs are problematic and complicate Figures 1 and 2.

2006 New Jersey Water Supply Plan

V3.0 NJ Department of Environmental Protection - Land Use Management - New Jersey Geological Survey & Division of Water Supply

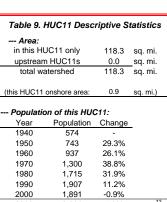




WMA:		Gre	at Egg H	arbor and	d Tuckaho	е		15									
HUC11:		Atlan	tic Coast	(Great E	gg to 34th	St)		02	20403029	930]						
Table 1. Freshwater ¹	Withdrawal	s in the HU(C11 (millic	ons of galle	ons)												
Withdrawals (Q)	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	average	Fig	1. Average Sour Fresh Water	ce of	Fig 2. Average of Fres		
Delaware River other	0 0	0 0	0 0	0 0	0	0 0	0 0	0 0	0 0	0 0	0	250					
sum	0	0	0	0	0	0	0	0	0	0	0	- 200 -					l l
ound-water: 3 confined	151	256	193	303	240	264	160	222	263	255	231	کے یو 150 –					
unconfined	0	0	0	0	0	0	0	0	0	0	0	/s150 + <u>9</u> 100 +					
sum total withdrawals:	151 151	256 256	<u>193</u> 193	303 303	240 240	264 264	<u>160</u> 160	222 222	263 263	255	231 231	50 –					
Table 2. Freshwater I												0			consump-	nonconsump-	exports
imports ¹¹ exports ¹¹	18 148	16 251	15 190	14 297	15 235	15 259	16 157	18 218	16 258	17 250	16 226	ground water	surface water	imports	tive (evaporated)	tive (not evaporated)	опрона
net	(130)	(235)	(175)	(283)	(220)	(244)	(141)	(200)	(242)	(233)	(210)					ovaporated)	
Table 2 Nancana	ntivo ⁴ e O		Mator Ha	6 in 4 1		Time (~)	illions -f	allene)									
Table 3. Nonconsum Water use	1990	1991	1992	e° <i>in the H</i> 1993	UC11, by Us 1994	se Type (m i 1995	illions of g 1996	jallons) 1997	1998	1999	average						
table purveyors nonconsumptive	17	18	16	17	17	17	16	18	18	19	17	25	Figure 3. C	Consumptive &	& Nonconsumptive	Use	
consumptive	3	3	3	3	3	3	3	3	3	3	3	25					
mestic wells nonconsumptive	0	0	0	0	0	0	0	0	0	0	0	20 -					
consumptive	0	0	0	0	0	0	0	0	0	0	0	Year					
dustrial & commercial & m nonconsumptive	ining 0	0	0	0	0	0	0	0	0	0	0						
consumptive	0	0	0	0	0	0	0	0	0	0	0	/ 15 +					
ricultural & non-agricultur nonconsumptive	al irrigation 0	0	0	0	0	0	0	0	0	0	0	u 10 —					
consumptive	0	0	0	0	Ő	0	0	0	0	0	0	∑ 5 —					
wer 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	0		induct	ial &		
SUM: nonconsumptive	17	18	16	17	17	17	16	18	18	19	17	potabl purvey		commen	cial & agricultur		wer ration
consumptive	3	3	3	3	3	3	3	3	3	3	3	purey		minii	ng a mgauc	gone	
PERCENTAGES: nonconsumptive	84.4%	84.3%	84.7%	84.4%	85.3%	84.7%	85.2%	84.2%	84.5%	84.4%	84.6%			nonconsumpti	ve consumptive		
consumptive	15.6%	15.7%	15.3%	15.6%	14.7%	15.3%	14.8%	15.8%	15.5%	15.6%	15.4%						
Table 4. Average Sea		- Nonconsu nter		Consump	tive° (millio Sum			all	Year	ly Avg.		Fig	jure 4. Average S	Seasonal Con	sumptive Water L	oss, by Use	
Use Group	Noncon-	Consump-	Noncon-	Consump-	Noncon-	Consump-	Noncon-	Consump	- Noncon-	Consump	-	≥ ⁴					7
potable purveyors	sumptive 3	tive 0	sumptive 3	tive 0	sumptive 7	tive 2	sumptive 4	tive 0	sumptive 17	tive 3	_	+ 2 ar - 2 →					winter
domestic wells	0	0	0	0	0	0	0	0	0	0	_	su 2 -					spring
dustrial & commercial & mining	0	0	0	0	0	0	0	0	0	0		2 - 2 gall					summer
agricultural & non-	0	0	0	0	0	0	0	0	0	0	_	501 + ₩ 1 +					fall
agricultural irrig.	0	0	0	0	0	0	0	0	0	0	_	≥ 1 =					
SUM:	3	0	3	0	7	2	4	0	17	3		potable	domestic	industrial 8	agriculture	power	
												purveyors	wells	commercial mining	& & irrigation	generation	
														2			
Table 5. Same of C	orotian 0 =	anof8 .	the 1110	1 (ma:111:	of actions?									-		_	
Table 5. Sewage Gen	eration & Tr 1990	ansfers° in 1991	the HUC11 1992	1 (millions 1993	of gallons) 1994	1995	1996	1997	1998	1999	average	Figu	re 5. Average Se eration & Ti		Fig 6. Averag	e Treated-Effl ge Location	uent
generated in HUC11	247	282	297	302	312	287	330	295	295	256	290	350			JISCHAR	ge Location	1
imported to HUC11 exported from HUC11	0 247	0 282	0 297	0 302	0 312	0 287	0 330	0 295	0 295	0 256	0 290				-		
				· · ·		-					<u> </u>	¥ 250 - 8 200 -					
												0 150 -					
Table 6. Destination	of Treated E 1990	ffluent (Recl 1991	laimed-Wat	ter) Discha 1993	arges [®] in the 1994		nillions of 1996		1998	1999	avoraça	suoj			-		
	1990 0	<u>1991</u> 0	<u>1992</u> 0	1993 0	1994 0	<u>1995</u> 0	<u>1996</u> 0	<u>1997</u> 0	<u>1998</u> 0	1999	average 0	≥ ₅₀ -			-		
destination fresh water		0	0	0	0	0	0	0	0	0	0	0 +		l,	fresh	brackish	14
destination fresh water brackish water	0		~	~		~										DIACKISH	
destination fresh water	0 0 0	0	0	0	0	0	0	0	0	0	0	generat in HUC		exported	water	water	salt water

И	Water Source									
Water Source		MGY								
surface water		0								
ground water		130								
	total	130								

Table 8. 1999 Water Allocations ¹⁰ Water Use Group	in HUC11 by
Use Group	MGY
agricultural	0
commercial	0
industrial	0
irrigation	0
mining	0
potable supply	130
power generation	0



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

Land Use of this HUC11:								
2030	2,221	5.2%	est.12					
2020	2,112	5.5%	est.12					
2010	2,001	5.9%	est.					

Type	Ye	Change								
туре	1986	1995	Change							
ag.	0.0%	0.0%	0.0%							
barren	0.7%	2.2%	1.5%							
forest	0.0%	0.0%	0.0%							
urban	5.0%	5.0%	0.0%							
water	94.0%	92.5%	-1.5%							
wetlands	0.3%	0.3%	0.0%							
% of this HUC11 in:										
Pinela	inds:	0.0%								
Highla	inds:	0.0%								

NOTES:

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