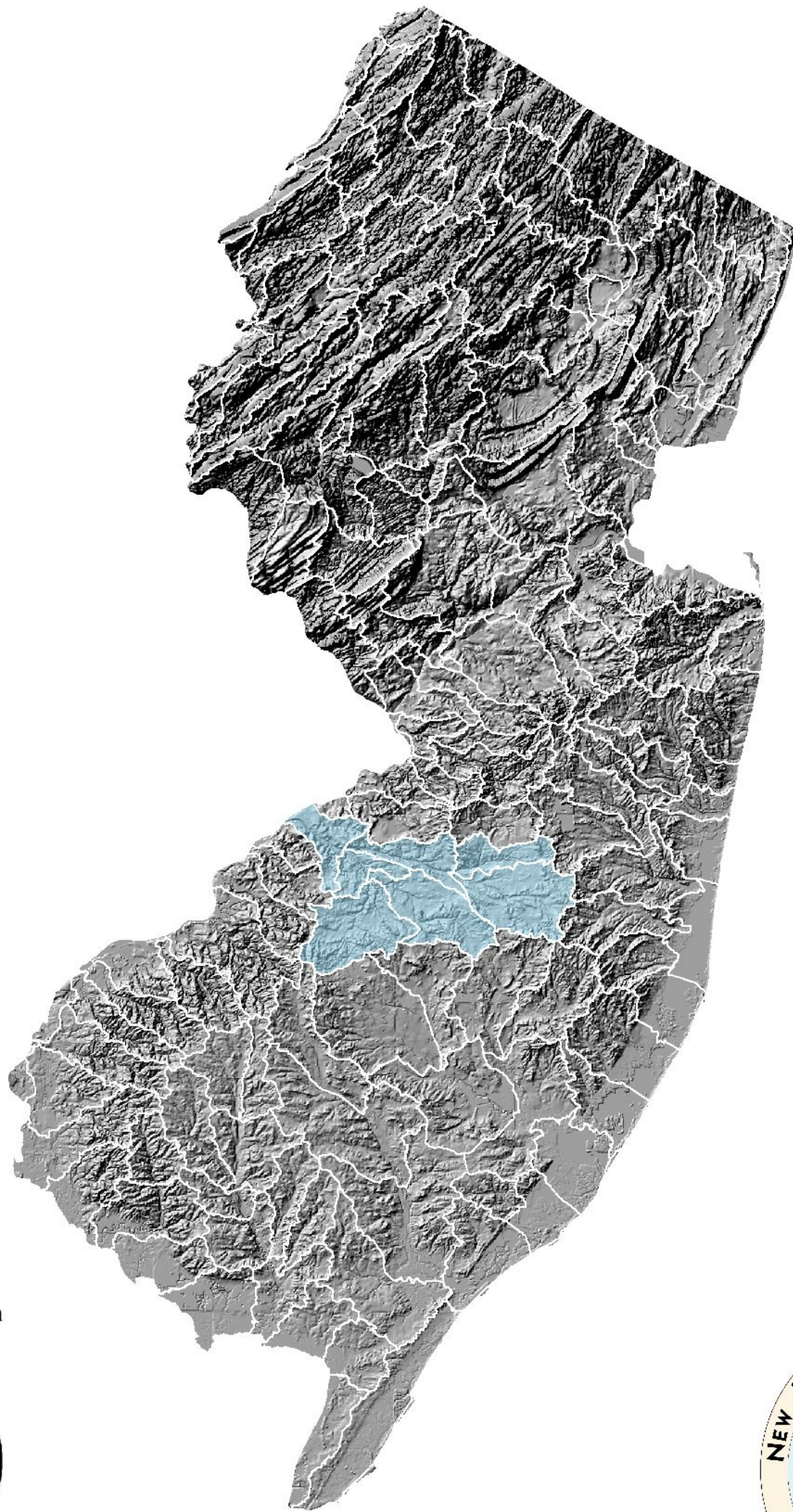


New Jersey Water Withdrawals, Uses, Transfers, and Discharges by HUC11, 1990 to 1999

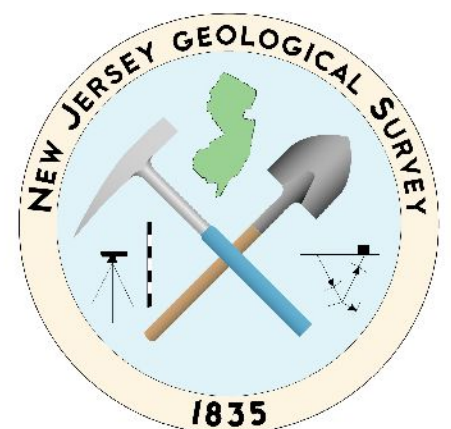
Appendix 19: HUC11 Tables, Figures and Maps WMA 19 - Rancocas



Let's protect our earth



NEW JERSEY DEPARTMENT
OF ENVIRONMENTAL PROTECTION



Water Withdrawals, Transfers and Discharges for RANCOCAS CREEK NB (ABOVE NEW LISBON DAM) --- 020402020

| | | |
|---------------|---|------------------|
| WMA: | Rancocas | 19 |
| HUC11: | North Branch Rancocas Creek (above New Lisbon dam) | 020402020 |

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 | 572 | 473 | 346 | 216 | 478 | 300 | 232 | 324 | 191 | 292 | 343 |
| sum | 572 | 473 | 346 | 216 | 478 | 300 | 232 | 324 | 191 | 292 | 343 |
| ground-water:³ | | | | | | | | | | | |
| confined | 431 | 86 | 72 | 134 | 214 | 224 | 223 | 251 | 199 | 205 | 204 |
| unconfined | 128 | 129 | 131 | 133 | 134 | 136 | 138 | 140 | 142 | 145 | 136 |
| sum | 560 | 216 | 203 | 266 | 348 | 360 | 361 | 391 | 341 | 349 | 339 |
| total withdrawals: | 1,131 | 689 | 549 | 483 | 826 | 660 | 593 | 714 | 532 | 642 | 682 |

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 | 106 | 413 | 425 | 352 | 228 | 259 | 254 | 281 | 263 | 270 | 285 |
| exports ¹¹ | 461 | 340 | 249 | 167 | 363 | 240 | 193 | 288 | 161 | 233 | 269 |
| net | (356) | 73 | 177 | 185 | (135) | 19 | 60 | (7) | 102 | 37 | 16 |

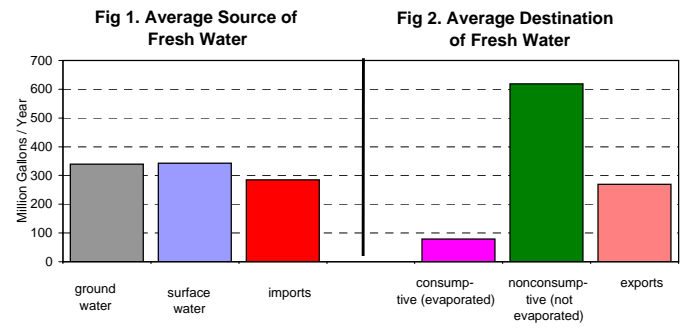


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

| Water use | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| potable purveyors | | | | | | | | | | | |
| nonconsumptive | 580 | 566 | 531 | 477 | 497 | 485 | 457 | 504 | 431 | 467 | 500 |
| consumptive | 67 | 66 | 64 | 58 | 60 | 58 | 58 | 64 | 61 | 67 | 62 |
| domestic wells | | | | | | | | | | | |
| nonconsumptive | 113 | 113 | 115 | 116 | 118 | 119 | 121 | 122 | 124 | 127 | 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 | 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 | 693 | 680 | 646 | 593 | 615 | 605 | 578 | 626 | 556 | 594 | 618 |
| consumptive | 83 | 82 | 80 | 74 | 77 | 74 | 75 | 81 | 79 | 85 | 79 |
| PERCENTAGES: | | | | | | | | | | | |
| nonconsumptive | 89.3% | 89.2% | 89.0% | 88.9% | 88.9% | 89.1% | 88.6% | 88.5% | 87.6% | 87.5% | 88.7% |
| consumptive | 10.7% | 10.8% | 11.0% | 11.1% | 11.1% | 10.9% | 11.4% | 11.5% | 12.4% | 12.5% | 11.3% |

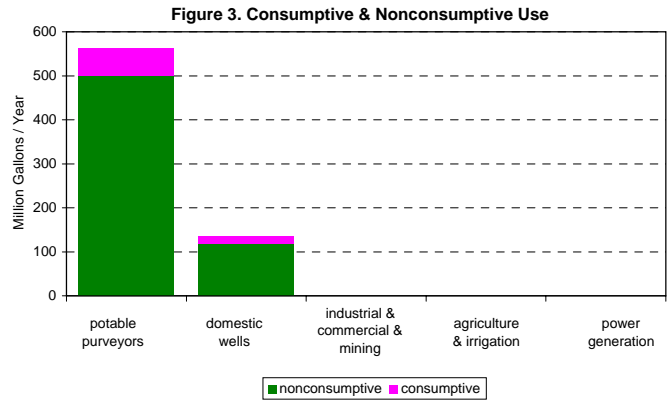


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

| 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 | 126 | 0 | 125 | 8 | 124 | 43 | 125 | 11 | 500 | 62 |
| 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| power generation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM: | 153 | 0 | 153 | 10 | 159 | 55 | 154 | 13 | 618 | 79 |

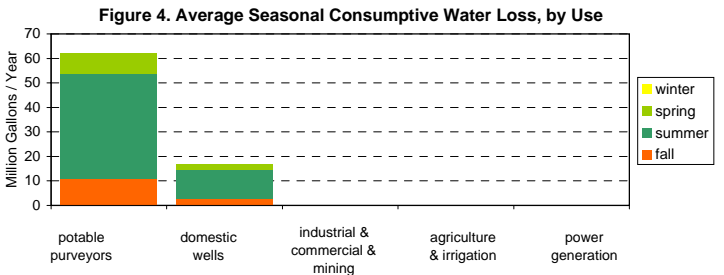


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|---------------------|------|------|------|------|------|------|------|------|------|------|---------|
| generated in HUC11 | 0 | 215 | 280 | 300 | 296 | 269 | 310 | 300 | 296 | 278 | 254 |
| imported to HUC11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| exported from HUC11 | 0 | 215 | 280 | 300 | 296 | 269 | 310 | 300 | 296 | 278 | 254 |

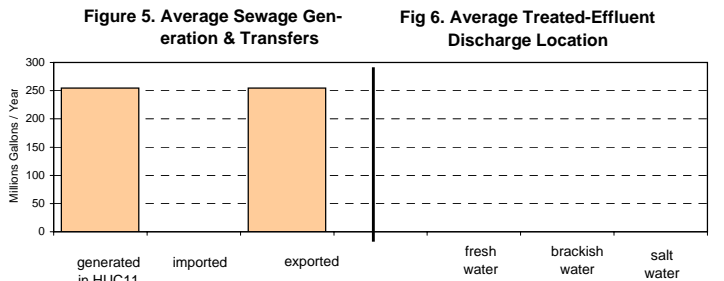


Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

| 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 | 310 |
| ground water | 252 |
| total | 562 |

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

| Use Group | MGY |
|------------------|-----|
| agricultural | 27 |
| commercial | 0 |
| industrial | 0 |
| irrigation | 0 |
| mining | 0 |
| potable supply | 535 |
| power generation | 0 |
| total | 562 |

Table 9. HUC11 Descriptive Statistics

--- Area:

| | | |
|--------------------|------|---------|
| in this HUC11 only | 32.1 | sq. mi. |
| upstream HUC11s | 0.0 | sq. mi. |
| total watershed | 32.1 | sq. mi. |

(this HUC11 onshore area: 32.1 sq. mi.)

--- Population of this HUC11:

| Year | Population | Change |
|------|------------|-------------------------|
| 1940 | 1,196 | - |
| 1950 | 7,875 | 558.3% |
| 1960 | 13,730 | 74.4% |
| 1970 | 14,925 | 8.7% |
| 1980 | 13,252 | -11.2% |
| 1990 | 12,489 | -5.8% |
| 2000 | 12,358 | -1.0% |
| 2010 | 13,303 | 7.6% est. ¹² |
| 2020 | 14,271 | 7.3% est. ¹² |
| 2030 | 15,393 | 7.9% est. ¹² |

--- Land Use of this HUC11:

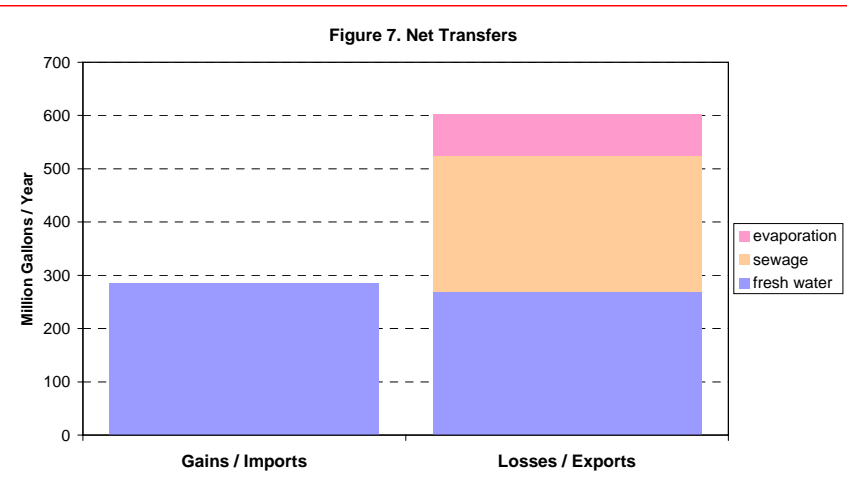
| Type | Year | | Change |
|----------|-------|-------|--------|
| | 1986 | 1995 | |
| ag. | 1.4% | 1.3% | -0.1% |
| barren | 1.0% | 1.1% | 0.1% |
| forest | 57.3% | 57.0% | -0.3% |
| urban | 18.0% | 18.2% | 0.2% |
| water | 1.7% | 1.8% | 0.1% |
| wetlands | 20.6% | 20.6% | 0.0% |

--- % of this HUC11 in:

| | |
|------------|--------|
| Pinelands: | 100.0% |
| Highlands: | 0.0% |

Table 10. Upstream and downstream HUC11s (in NJ)

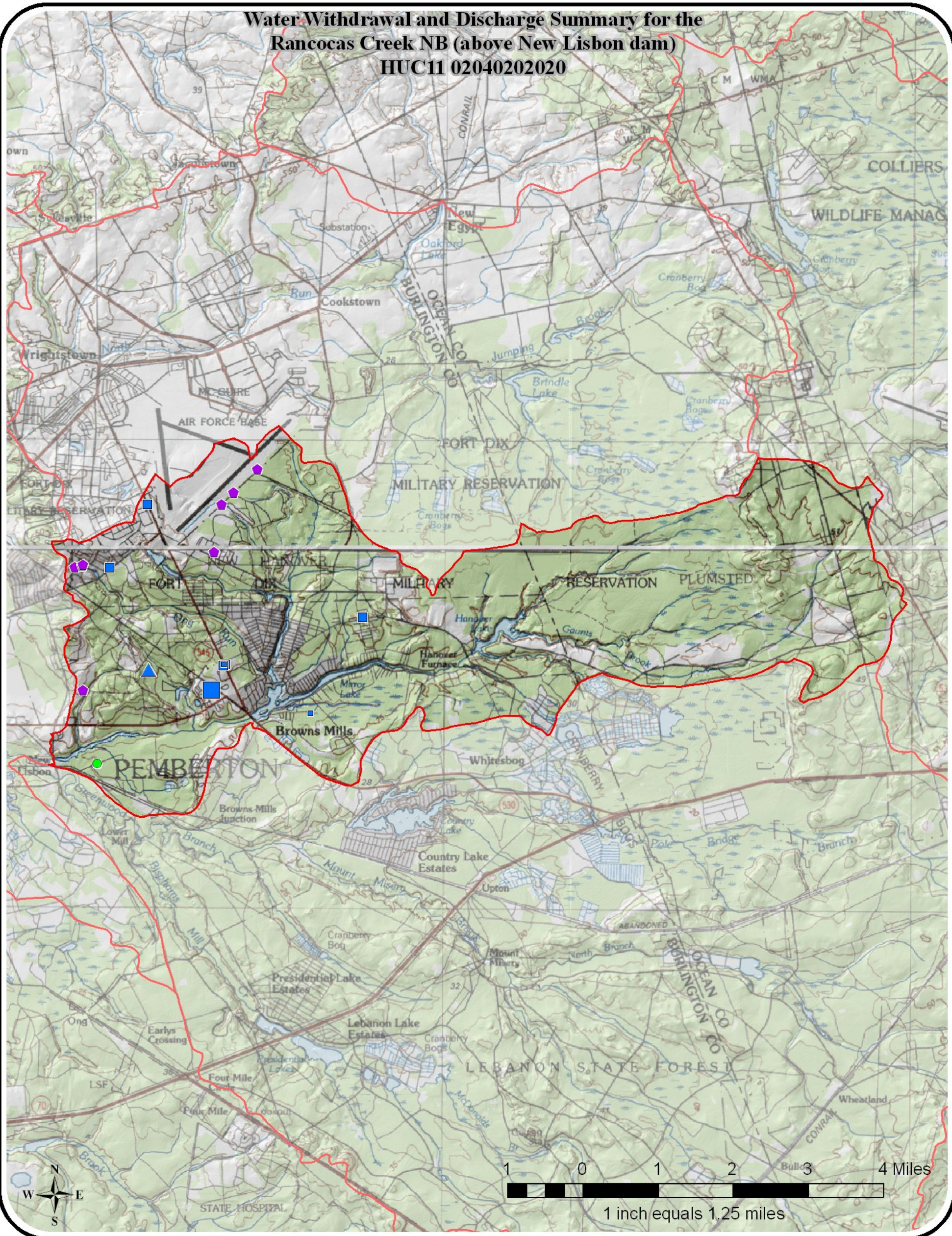
| location | # | name |
|-------------|-------------|--|
| downstream: | 02040202040 | Rancocas Creek NB (below New Lisbon dam) |
| (if any) | -- | -- |
| upstream: | -- | -- |
| (if any) | -- | -- |



NOTES:

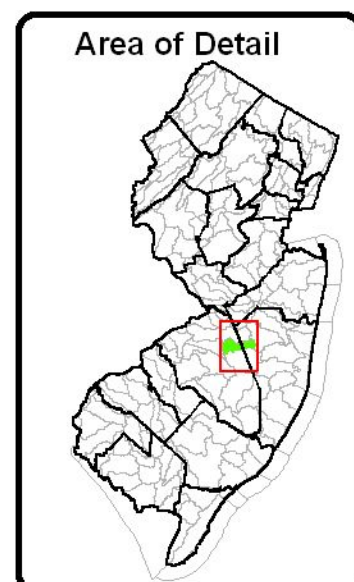
- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers 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
Rancocas Creek NB (above New Lisbon dam)
HUC11 020402020**



| 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 GREENWOOD BRANCH (NB RANCOCAS CREEK) --- 02040202030

| | | |
|---------------|---|--------------------|
| WMA: | Rancocas | 19 |
| HUC11: | Greenwood Branch (NB Rancocas Creek) | 02040202030 |

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 | 323 | 345 | 350 | 329 | 364 | 344 | 357 | 56 | 521 | 647 | 364 |
| sum | 323 | 345 | 350 | 329 | 364 | 344 | 357 | 56 | 521 | 647 | 364 |
| <i>ground-water:</i> ³ | | | | | | | | | | | |
| confined | 545 | 880 | 896 | 868 | 659 | 1,086 | 703 | 245 | 951 | 817 | 765 |
| unconfined | 1,879 | 1,588 | 1,593 | 1,965 | 1,683 | 1,739 | 2,029 | 2,008 | 2,257 | 2,165 | 1,891 |
| sum | 2,424 | 2,468 | 2,490 | 2,833 | 2,342 | 2,824 | 2,732 | 2,253 | 3,208 | 2,983 | 2,656 |
| total withdrawals: | 2,747 | 2,813 | 2,840 | 3,162 | 2,706 | 3,168 | 3,089 | 2,309 | 3,729 | 3,630 | 3,019 |

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

| | | | | | | | | | | | |
|-----------------------|----|-------|-------|-------|-------|-------|------|-------|-------|-------|-------|
| imports ¹¹ | 81 | 32 | 27 | 42 | 43 | 54 | 52 | 53 | 52 | 52 | 49 |
| exports ¹¹ | 8 | 291 | 305 | 278 | 190 | 185 | 151 | 190 | 192 | 194 | 198 |
| net | 73 | (259) | (278) | (237) | (147) | (131) | (99) | (138) | (140) | (142) | (150) |

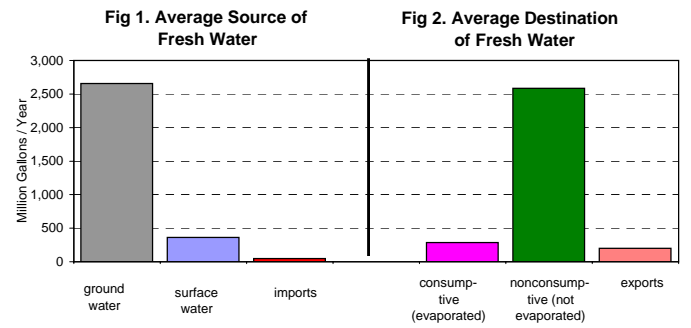


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

| Water use | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| <i>potable purveyors</i> | | | | | | | | | | | |
| nonconsumptive | 105 | 115 | 106 | 116 | 108 | 119 | 107 | 115 | 115 | 116 | 112 |
| consumptive | 13 | 16 | 14 | 16 | 14 | 16 | 14 | 16 | 16 | 16 | 15 |
| <i>domestic wells</i> | | | | | | | | | | | |
| nonconsumptive | 238 | 239 | 240 | 241 | 243 | 245 | 247 | 249 | 251 | 253 | 245 |
| consumptive | 34 | 34 | 34 | 34 | 34 | 35 | 35 | 35 | 35 | 36 | 34 |
| <i>industrial & commercial & mining</i> | | | | | | | | | | | |
| nonconsumptive | 1,351 | 1,059 | 1,114 | 1,357 | 1,172 | 1,240 | 1,486 | 1,463 | 1,669 | 1,582 | 1,349 |
| consumptive | 184 | 144 | 152 | 185 | 160 | 168 | 200 | 198 | 226 | 215 | 183 |
| <i>agricultural & non-agricultural irrigation</i> | | | | | | | | | | | |
| nonconsumptive | 855 | 905 | 860 | 914 | 786 | 1,113 | 852 | 90 | 1,197 | 1,203 | 878 |
| consumptive | 39 | 41 | 41 | 62 | 41 | 101 | 65 | 8 | 77 | 66 | 54 |
| <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 | 2,549 | 2,318 | 2,321 | 2,628 | 2,309 | 2,716 | 2,693 | 1,917 | 3,233 | 3,154 | 2,584 |
| consumptive | 270 | 235 | 240 | 297 | 249 | 320 | 315 | 257 | 355 | 333 | 287 |
| PERCENTAGES: | | | | | | | | | | | |
| nonconsumptive | 90.4% | 90.8% | 90.6% | 89.8% | 90.3% | 89.5% | 89.5% | 88.2% | 90.1% | 90.4% | 90.0% |
| consumptive | 9.6% | 9.2% | 9.4% | 10.2% | 9.7% | 10.5% | 10.5% | 11.8% | 9.9% | 9.6% | 10.0% |

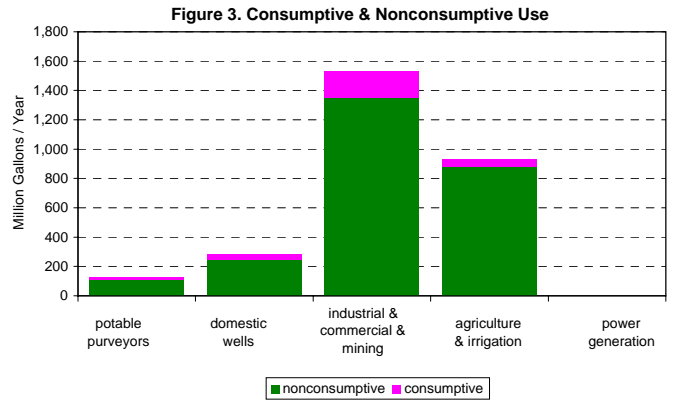


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

| 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 | 27 | 0 | 28 | 2 | 31 | 11 | 28 | 2 | 113 | 15 |
| domestic wells | 56 | 0 | 58 | 4 | 71 | 25 | 60 | 5 | 245 | 34 |
| industrial & commercial & mining | 194 | 26 | 345 | 47 | 390 | 53 | 421 | 57 | 1,349 | 183 |
| agricultural & non-agricultural irrig. | 278 | 0 | 137 | 13 | 136 | 41 | 327 | 0 | 878 | 54 |
| power generation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM: | 554 | 27 | 567 | 66 | 628 | 129 | 835 | 65 | 2,585 | 287 |

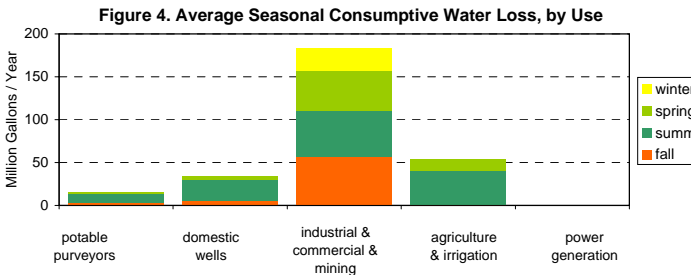


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

| | | | | | | | | | | | |
|---------------------|---|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| generated in HUC11 | 0 | 118 | 154 | 165 | 163 | 148 | 171 | 165 | 163 | 153 | 140 |
| imported to HUC11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| exported from HUC11 | 0 | 118 | 154 | 165 | 163 | 148 | 171 | 165 | 163 | 153 | 140 |

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 |

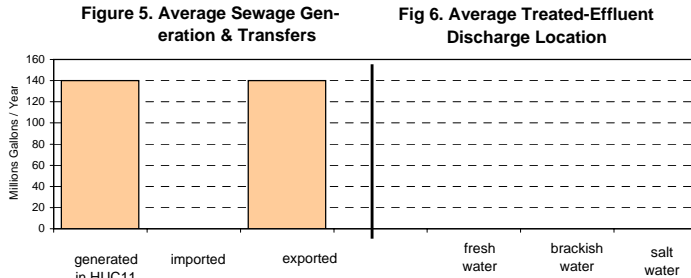


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

| | |
|---------------|-------|
| Water Source | MGY |
| surface water | 1,156 |
| ground water | 4,701 |
| total | 5,858 |

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

| | |
|------------------|-------|
| Use Group | MGY |
| agricultural | 2,780 |
| commercial | 0 |
| industrial | 81 |
| irrigation | 0 |
| mining | 2,580 |
| potable supply | 417 |
| power generation | 0 |
| total | 5,858 |

Table 9. HUC11 Descriptive Statistics

--- **Area:**

| | | |
|--------------------|------|---------|
| in this HUC11 only | 78.2 | sq. mi. |
| upstream HUC11s | 0.0 | sq. mi. |
| total watershed | 78.2 | sq. mi. |

(this HUC11 onshore area: 78.2 sq. mi.)

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

| Year | Population | Change |
|------|------------|--------------------------|
| 1940 | 1,563 | - |
| 1950 | 2,777 | 77.7% |
| 1960 | 6,916 | 149.0% |
| 1970 | 10,583 | 53.0% |
| 1980 | 21,910 | 107.0% |
| 1990 | 25,523 | 16.5% |
| 2000 | 25,481 | -0.2% |
| 2010 | 28,593 | 12.2% est. ¹² |
| 2020 | 30,622 | 7.1% est. ¹² |
| 2030 | 33,551 | 9.6% est. ¹² |

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

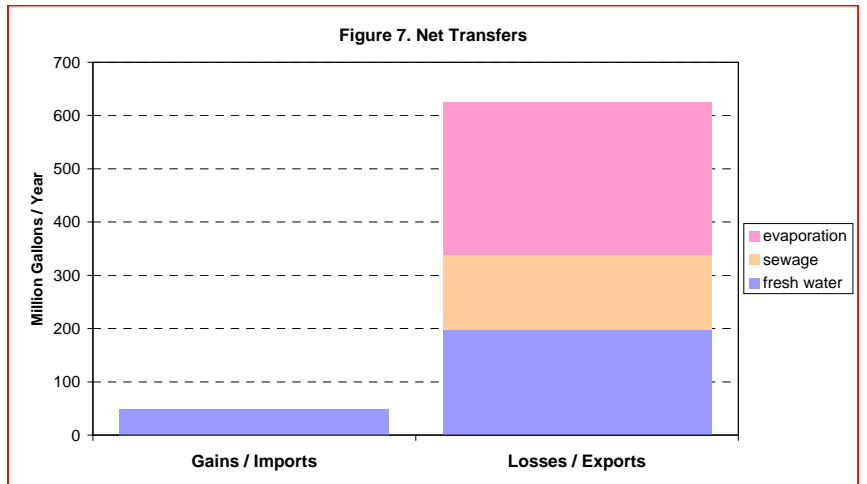
| Type | Year | | Change |
|----------|-------|-------|--------|
| | 1986 | 1995 | |
| ag. | 1.0% | 1.0% | 0.0% |
| barren | 0.7% | 0.8% | 0.1% |
| forest | 64.4% | 64.0% | -0.4% |
| urban | 4.6% | 4.8% | 0.2% |
| water | 1.7% | 1.8% | 0.1% |
| wetlands | 27.5% | 27.5% | 0.0% |

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

| | |
|------------|-------|
| Pinelands: | 99.9% |
| Highlands: | 0.0% |

Table 10. Upstream and downstream HUC11s (in NJ)

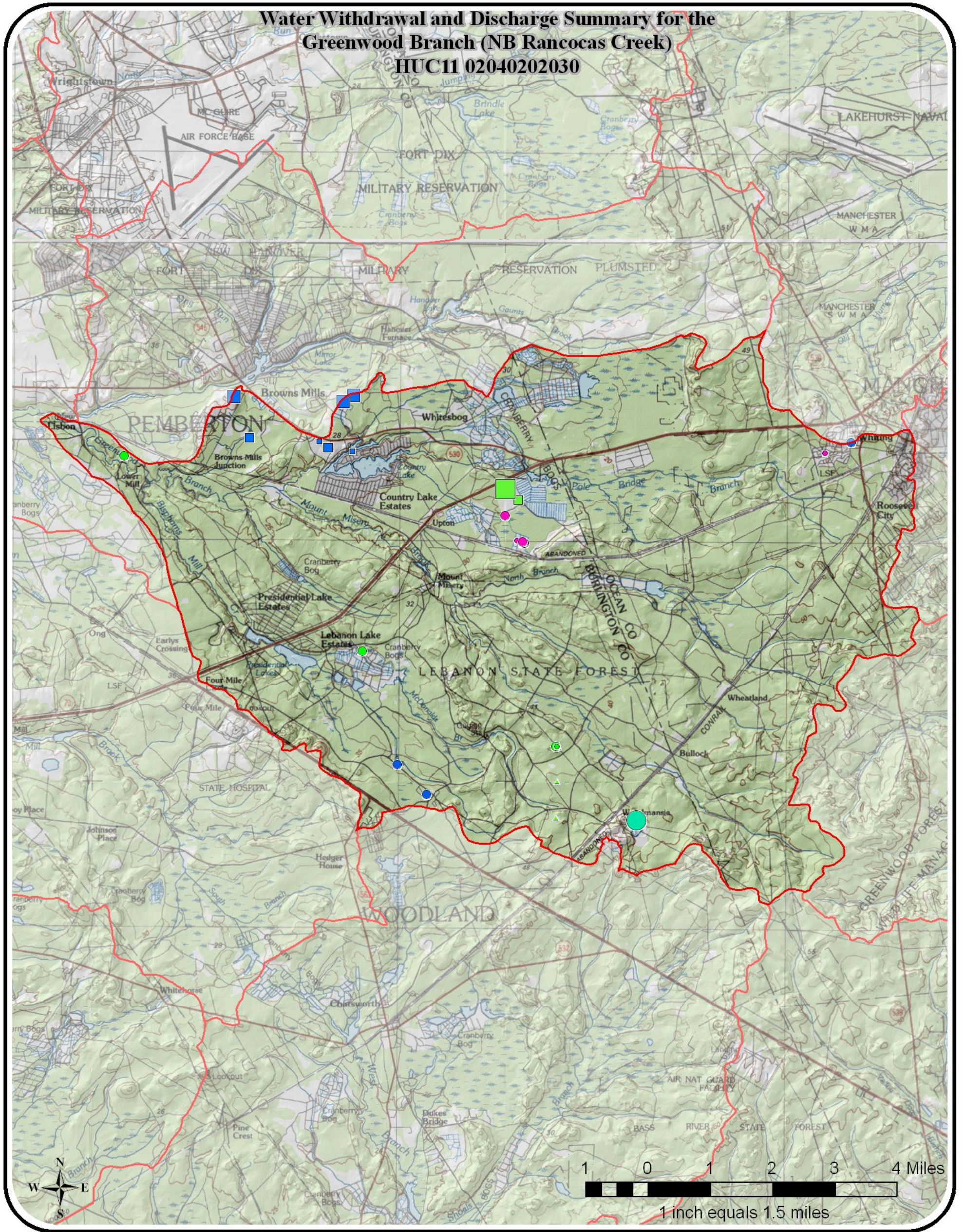
| location | # | name |
|-------------|-------------|--|
| downstream: | 02040202040 | Rancocas Creek NB (below New Lisbon dam) |
| (if any) | -- | -- |
| upstream: | -- | -- |
| (if any) | -- | -- |



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 Greenwood Branch (NB Rancocas Creek) HUC11 02040202030

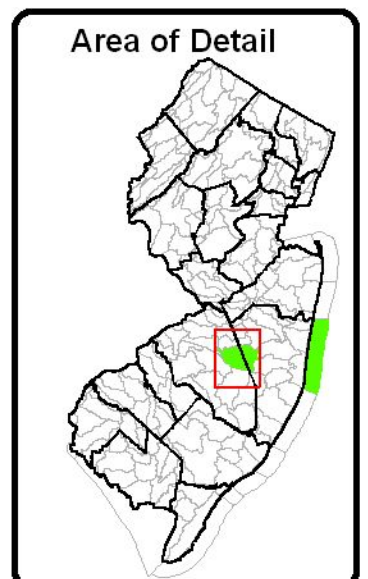


| Key for Discharge Data | |
|---------------------------------|---|
| 1999 Treated Effluent Discharge | |
| 0 - 50 MGY | ◆ |
| 50 - 100 MGY | ◆ |
| 100 - 500 MGY | ◆ |
| > 500 MGY | ◆ |
| Other Permitted Discharge | ◆ |

| 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 ■●▲ |

| 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 RANCOCAS CREEK NB (BELOW NEW LISBON DAM) --- 02040202040

| | | |
|---------------|---|--------------------|
| WMA: | Rancocas | 19 |
| HUC11: | North Branch Rancocas Creek (below New Lisbon dam) | 02040202040 |

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 | 50 | 0 | 105 | 0 | 118 | 50 | 50 | 50 | 79 | 50 |
| sum | 0 | 50 | 0 | 105 | 0 | 118 | 50 | 50 | 50 | 79 | 50 |
| ground-water:³ | | | | | | | | | | | |
| confined | 1,526 | 1,451 | 1,298 | 1,101 | 1,211 | 1,427 | 1,383 | 1,205 | 934 | 845 | 1,238 |
| unconfined | 195 | 197 | 182 | 185 | 185 | 190 | 183 | 188 | 197 | 543 | 225 |
| sum | 1,721 | 1,647 | 1,480 | 1,286 | 1,396 | 1,617 | 1,566 | 1,393 | 1,132 | 1,388 | 1,463 |
| total withdrawals: | 1,721 | 1,697 | 1,480 | 1,391 | 1,396 | 1,736 | 1,616 | 1,443 | 1,182 | 1,466 | 1,513 |

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 | 109 | 310 | 300 | 350 | 346 | 295 | 331 | 393 | 286 | 309 | 303 |
| exports ¹¹ | 513 | 604 | 496 | 322 | 328 | 480 | 498 | 361 | 253 | 227 | 408 |
| net | (404) | (295) | (196) | 28 | 18 | (185) | (167) | 31 | 33 | 81 | (105) |

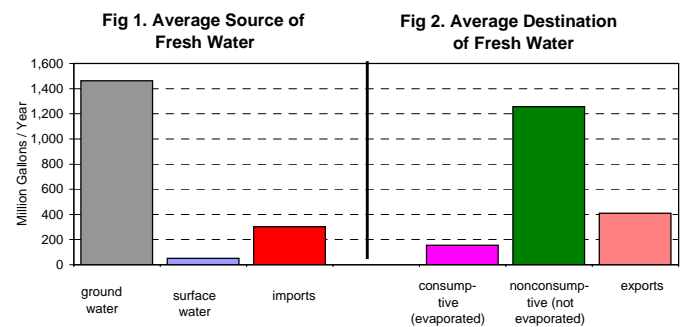


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

| Water use | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| potable purveyors | | | | | | | | | | | |
| nonconsumptive | 750 | 803 | 742 | 760 | 778 | 763 | 754 | 802 | 636 | 638 | 743 |
| consumptive | 92 | 102 | 90 | 96 | 98 | 104 | 90 | 106 | 83 | 87 | 95 |
| domestic wells | | | | | | | | | | | |
| nonconsumptive | 150 | 150 | 151 | 153 | 154 | 155 | 156 | 157 | 159 | 160 | 155 |
| consumptive | 21 | 21 | 21 | 21 | 22 | 22 | 22 | 22 | 22 | 23 | 22 |
| industrial & commercial & mining | | | | | | | | | | | |
| nonconsumptive | 243 | 214 | 235 | 234 | 279 | 273 | 282 | 255 | 219 | 175 | 241 |
| consumptive | 27 | 24 | 26 | 26 | 31 | 30 | 31 | 28 | 24 | 19 | 27 |
| agricultural & non-agricultural irrigation | | | | | | | | | | | |
| nonconsumptive | 27 | 80 | 14 | 115 | 37 | 175 | 96 | 88 | 159 | 398 | 119 |
| consumptive | 5 | 7 | 3 | 6 | 8 | 22 | 10 | 11 | 5 | 42 | 12 |
| 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 | 1,171 | 1,248 | 1,142 | 1,262 | 1,248 | 1,366 | 1,288 | 1,302 | 1,173 | 1,372 | 1,257 |
| consumptive | 145 | 154 | 140 | 150 | 159 | 177 | 153 | 167 | 135 | 171 | 155 |
| PERCENTAGES: | | | | | | | | | | | |
| nonconsumptive | 89.0% | 89.0% | 89.1% | 89.4% | 88.7% | 88.5% | 89.4% | 88.6% | 89.6% | 88.9% | 89.0% |
| consumptive | 11.0% | 11.0% | 10.9% | 10.6% | 11.3% | 11.5% | 10.6% | 11.4% | 10.4% | 11.1% | 11.0% |

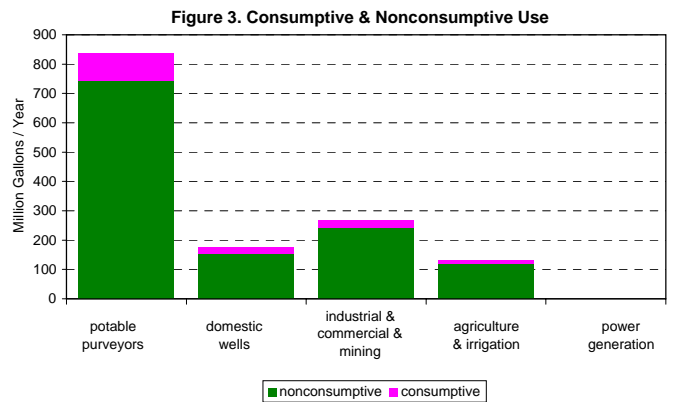


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

| 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 | 180 | 0 | 193 | 13 | 187 | 65 | 188 | 17 | 747 | 95 |
| domestic wells | 36 | 0 | 36 | 3 | 45 | 16 | 38 | 3 | 155 | 22 |
| industrial & commercial & mining | 59 | 7 | 65 | 7 | 61 | 7 | 57 | 6 | 241 | 27 |
| agricultural & non-agricultural irrig. | 29 | 0 | 20 | 4 | 19 | 7 | 51 | 1 | 119 | 12 |
| power generation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM: | 303 | 7 | 314 | 27 | 311 | 94 | 333 | 27 | 1,262 | 155 |

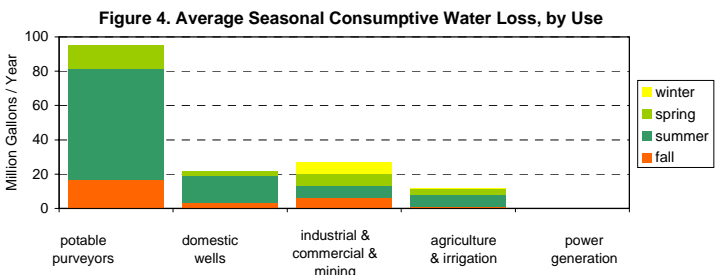


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|---------------------|------|------|------|-------|-------|-------|-------|-------|-------|-------|---------|
| generated in HUC11 | 304 | 506 | 550 | 628 | 657 | 625 | 700 | 621 | 698 | 699 | 599 |
| imported to HUC11 | 457 | 829 | 930 | 1,048 | 1,074 | 1,018 | 1,143 | 1,041 | 1,130 | 1,141 | 981 |
| exported from HUC11 | 3 | 3 | 3 | 3 | 4 | 3 | 4 | 3 | 3 | 3 | 3 |

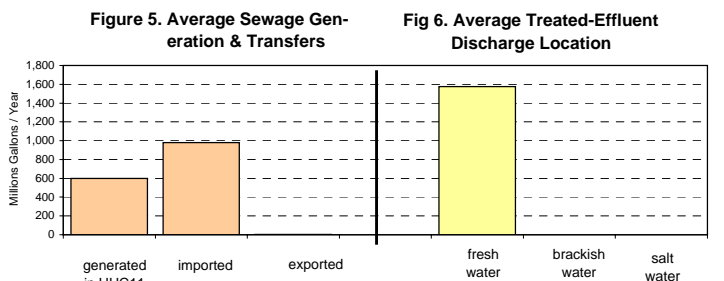


Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

| destination | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|----------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| fresh water | 758 | 1,332 | 1,477 | 1,673 | 1,727 | 1,639 | 1,839 | 1,659 | 1,825 | 1,837 | 1,577 |
| 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: | 758 | 1,332 | 1,477 | 1,673 | 1,727 | 1,639 | 1,839 | 1,659 | 1,825 | 1,837 | 1,577 |

Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

| Water Source | MGY |
|---------------|-------|
| surface water | 1,305 |
| ground water | 2,292 |
| total | 3,598 |

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

| Use Group | MGY |
|------------------|-------|
| agricultural | 2,017 |
| commercial | 0 |
| industrial | 320 |
| irrigation | 37 |
| mining | 0 |
| potable supply | 1,224 |
| power generation | 0 |
| total | 3,598 |

Table 9. HUC11 Descriptive Statistics

--- Area:

| | | |
|--------------------|-------|---------|
| in this HUC11 only | 37.7 | sq. mi. |
| upstream HUC11s | 110.3 | sq. mi. |
| total watershed | 148.0 | sq. mi. |

(this HUC11 onshore area: 37.6 sq. mi.)

--- Population of this HUC11:

| Year | Population | Change |
|------|------------|--------------------------|
| 1940 | 8,781 | - |
| 1950 | 12,662 | 44.2% |
| 1960 | 22,860 | 80.5% |
| 1970 | 24,687 | 8.0% |
| 1980 | 26,849 | 8.8% |
| 1990 | 29,125 | 8.5% |
| 2000 | 28,634 | -1.7% |
| 2010 | 32,776 | 14.5% est. ¹² |
| 2020 | 34,769 | 6.1% est. ¹² |
| 2030 | 36,725 | 5.6% est. ¹² |

--- Land Use of this HUC11:

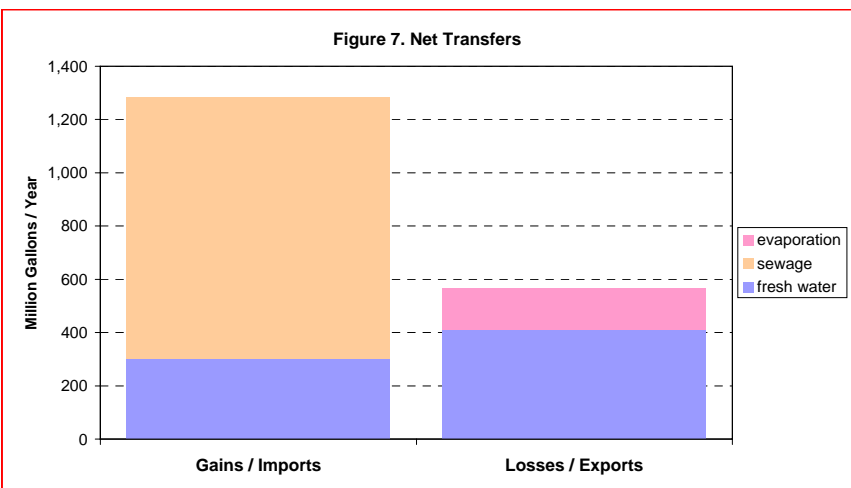
| Type | Year | | Change |
|----------|-------|-------|--------|
| | 1986 | 1995 | |
| ag. | 27.1% | 24.3% | -2.8% |
| barren | 1.2% | 1.3% | 0.2% |
| forest | 19.9% | 20.3% | 0.4% |
| urban | 21.3% | 23.6% | 2.4% |
| water | 1.5% | 1.5% | 0.0% |
| wetlands | 29.1% | 28.9% | -0.1% |

--- % of this HUC11 in:

| | |
|------------|-------|
| Pinelands: | 42.7% |
| Highlands: | 0.0% |

Table 10. Upstream and downstream HUC11s (in NJ)

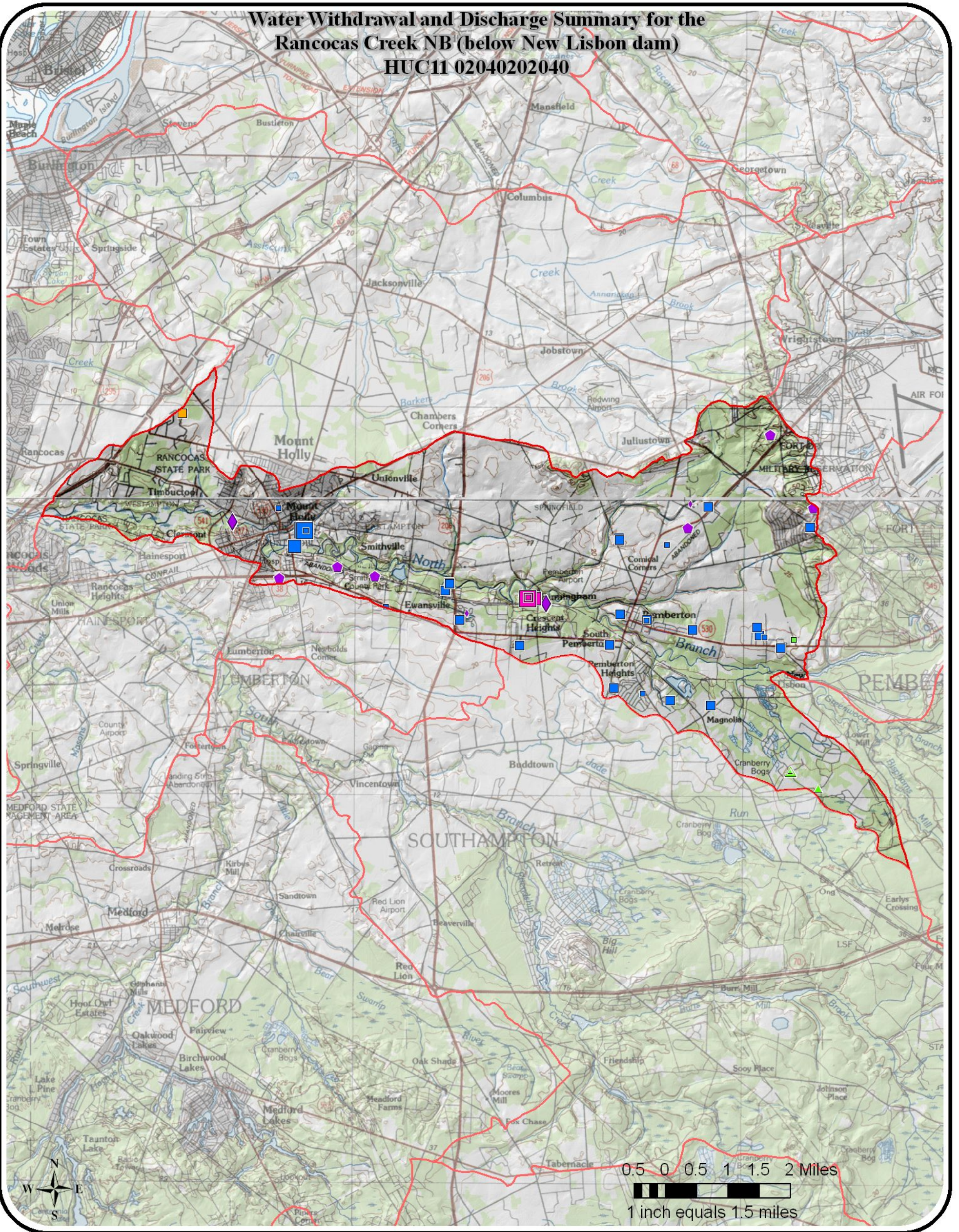
| location | # | name |
|-------------|-------------|--|
| downstream: | 02040202080 | Rancocas Creek |
| (if any) | | |
| upstream: | 02040202020 | Rancocas Creek NB (above New Lisbon dam) |
| (if any) | 02040202030 | Greenwood Branch (NB Rancocas Creek) |
| | -- | -- |
| | -- | -- |
| | -- | -- |
| | -- | -- |
| | -- | -- |
| | -- | -- |
| | -- | -- |



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 Rancocas Creek NB (below New Lisbon dam) HUC11 02040202040

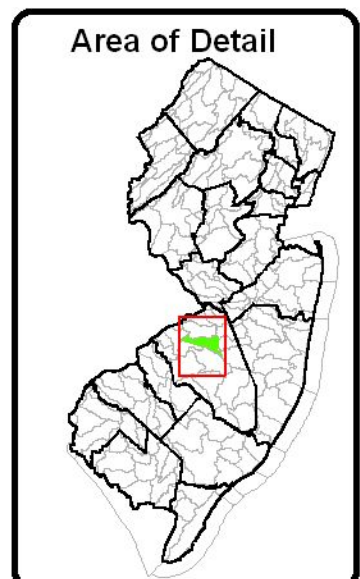


| Key for Discharge Data | |
|---------------------------------|---|
| 1999 Treated Effluent Discharge | |
| 0 - 50 MGY | ◆ |
| 50 - 100 MGY | ◆ |
| 100 - 500 MGY | ◆ |
| > 500 MGY | ◆ |
| Other Permitted Discharge | ◆ |

| Key for Withdrawal Data | |
|-------------------------|-----------------|
| Source | 1999 Withdrawal |
| GW Confined | □ |
| GW Unconfined | ○ |
| SW | △ |
| | 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 | ● |

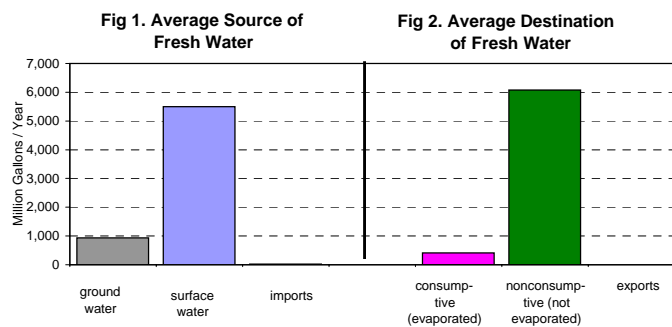
MGY = millions of gallons per year



Water Withdrawals, Transfers and Discharges for RANCOCAS CREEK SB (ABOVE BOBBYS RUN) --- 02040202050

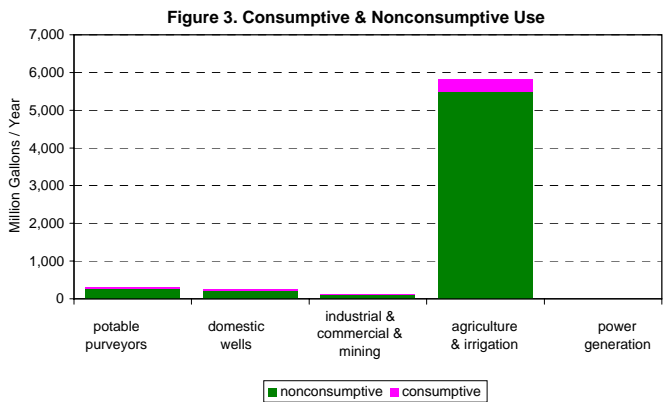
| | | |
|---------------|---|--------------------|
| WMA: | Rancocas | 19 |
| HUC11: | South Branch Rancocas Creek (above Bobbys Run) | 02040202050 |

| 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 | 6,062 | 6,084 | 2,047 | 5,790 | 4,722 | 8,049 | 3,335 | 6,683 | 8,067 | 4,138 | 5,498 |
| sum | 6,062 | 6,084 | 2,047 | 5,790 | 4,722 | 8,049 | 3,335 | 6,683 | 8,067 | 4,138 | 5,498 |
| ground-water: ³ | | | | | | | | | | | |
| confined | 236 | 268 | 219 | 248 | 274 | 298 | 202 | 288 | 287 | 250 | 257 |
| unconfined | 535 | 471 | 565 | 609 | 456 | 1,117 | 723 | 849 | 934 | 528 | 679 |
| sum | 772 | 739 | 784 | 856 | 730 | 1,415 | 926 | 1,137 | 1,221 | 778 | 936 |
| total withdrawals: | 6,834 | 6,823 | 2,831 | 6,646 | 5,452 | 9,464 | 4,260 | 7,821 | 9,288 | 4,916 | 6,433 |

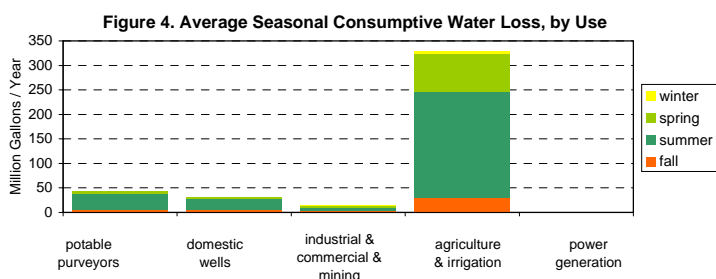


| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|-----------------------|------|------|------|------|------|------|------|------|------|------|---------|
| imports ¹¹ | 22 | 24 | 22 | 24 | 24 | 24 | 23 | 25 | 20 | 19 | 23 |
| exports ¹¹ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| net | 22 | 24 | 22 | 24 | 24 | 24 | 23 | 25 | 20 | 19 | 23 |

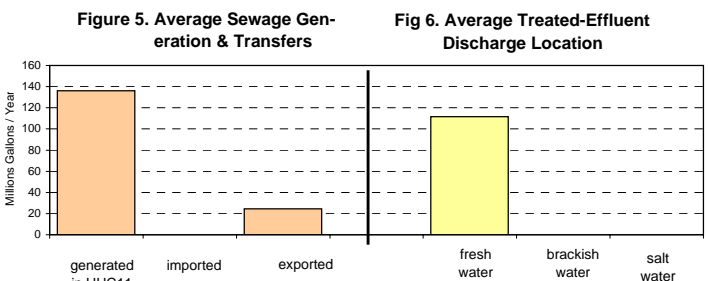
| Water use | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| potable purveyors | | | | | | | | | | | |
| nonconsumptive | 236 | 261 | 236 | 255 | 266 | 273 | 230 | 288 | 278 | 254 | 258 |
| consumptive | 37 | 43 | 37 | 43 | 43 | 47 | 34 | 49 | 47 | 42 | 42 |
| domestic wells | | | | | | | | | | | |
| nonconsumptive | 214 | 215 | 217 | 219 | 222 | 225 | 227 | 229 | 231 | 233 | 223 |
| consumptive | 30 | 30 | 30 | 31 | 31 | 32 | 32 | 32 | 33 | 33 | 31 |
| industrial & commercial & mining | | | | | | | | | | | |
| nonconsumptive | 111 | 72 | 87 | 97 | 109 | 122 | 103 | 108 | 111 | 113 | 103 |
| consumptive | 15 | 10 | 12 | 13 | 15 | 17 | 14 | 15 | 15 | 15 | 14 |
| agricultural & non-agricultural irrigation | | | | | | | | | | | |
| nonconsumptive | 6,046 | 5,942 | 2,112 | 5,781 | 4,504 | 8,383 | 3,506 | 6,738 | 8,113 | 3,848 | 5,497 |
| consumptive | 225 | 353 | 223 | 406 | 286 | 390 | 138 | 388 | 481 | 396 | 329 |
| 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 | 6,606 | 6,489 | 2,652 | 6,352 | 5,101 | 9,003 | 4,066 | 7,362 | 8,733 | 4,449 | 6,081 |
| consumptive | 307 | 437 | 302 | 494 | 375 | 486 | 218 | 484 | 576 | 486 | 416 |
| PERCENTAGES: | | | | | | | | | | | |
| nonconsumptive | 95.6% | 93.7% | 89.8% | 92.8% | 93.2% | 94.9% | 94.9% | 93.8% | 93.8% | 90.2% | 93.6% |
| consumptive | 4.4% | 6.3% | 10.2% | 7.2% | 6.8% | 5.1% | 5.1% | 6.2% | 6.2% | 9.8% | 6.4% |



| Use Group | Winter | | Spring | | Summer | | Fall | | Yearly Avg. | |
|--|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|
| | Nonconsumptive | Consumptive | Nonconsumptive | Consumptive | Nonconsumptive | Consumptive | Nonconsumptive | Consumptive | Nonconsumptive | Consumptive |
| potable purveyors | 44 | 0 | 60 | 5 | 87 | 30 | 67 | 7 | 258 | 42 |
| domestic wells | 51 | 0 | 52 | 4 | 65 | 23 | 54 | 5 | 223 | 31 |
| industrial & commercial & mining | 2 | 0 | 32 | 4 | 36 | 5 | 33 | 5 | 103 | 14 |
| agricultural & non-agricultural irrig. | 2,442 | 5 | 1,580 | 77 | 329 | 217 | 1,147 | 30 | 5,497 | 329 |
| power generation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM: | 2,539 | 5 | 1,724 | 90 | 517 | 275 | 1,301 | 46 | 6,081 | 416 |



| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|---------------------|------|------|------|------|------|------|------|------|------|------|---------|
| generated in HUC11 | 123 | 148 | 143 | 123 | 124 | 132 | 131 | 138 | 152 | 147 | 136 |
| imported to HUC11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| exported from HUC11 | 18 | 21 | 21 | 25 | 26 | 25 | 28 | 24 | 28 | 30 | 24 |



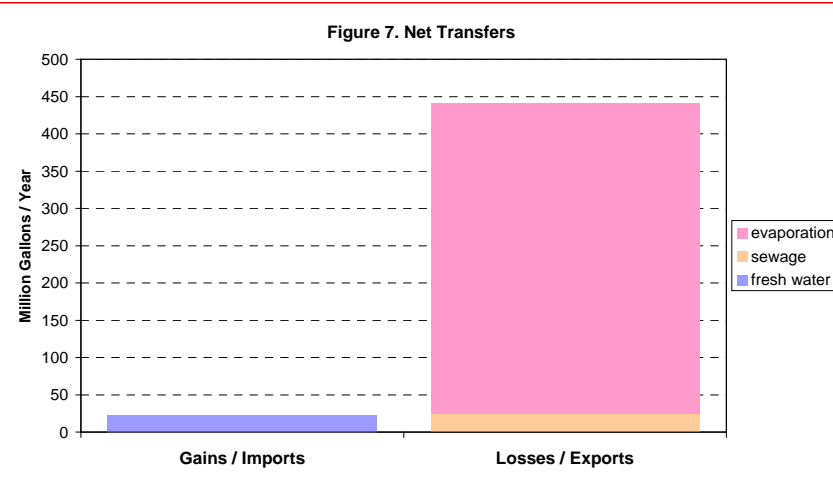
| destination | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|----------------|------|------|------|------|------|------|------|------|------|------|---------|
| fresh water | 105 | 127 | 122 | 98 | 99 | 107 | 104 | 113 | 124 | 117 | 112 |
| brackish water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| salt water | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| sum: | 105 | 127 | 122 | 98 | 99 | 107 | 104 | 113 | 124 | 117 | 112 |

| Water Source | MGY |
|---------------|--------|
| surface water | 11,174 |
| ground water | 2,149 |
| total | 13,323 |

| | | | |
|--------------------------------------|------------|----------|--------------------|
| --- Area: | | | |
| in this HUC11 only | 68.6 | sq. mi. | |
| upstream HUC11s | 76.0 | sq. mi. | |
| total watershed | 144.7 | sq. mi. | |
| (this HUC11 onshore area: | 68.6 | sq. mi.) | |
| --- Population of this HUC11: | | | |
| Year | Population | Change | |
| 1940 | 2,088 | - | |
| 1950 | 2,908 | 39.3% | |
| 1960 | 4,928 | 69.5% | |
| 1970 | 7,185 | 45.8% | |
| 1980 | 12,022 | 67.3% | |
| 1990 | 13,601 | 13.1% | |
| 2000 | 13,869 | 2.0% | |
| 2010 | 15,271 | 10.1% | est. ¹² |
| 2020 | 16,561 | 8.4% | est. ¹² |
| 2030 | 18,006 | 8.7% | est. ¹² |
| --- Land Use of this HUC11: | | | |
| Type | 1986 | 1995 | Change |
| ag. | 17.2% | 16.5% | -0.7% |
| barren | 0.6% | 0.5% | 0.0% |
| forest | 35.4% | 34.4% | -1.0% |
| urban | 8.4% | 10.1% | 1.7% |
| water | 1.3% | 1.5% | 0.2% |
| wetlands | 37.1% | 36.9% | -0.2% |
| --- % of this HUC11 in: | | | |
| Pinelands: | 88.6% | | |
| Highlands: | 0.0% | | |

| location | # | name |
|-------------|-------------|--------------------------------------|
| downstream: | 02040202070 | Rancocas Creek SB (below Bobbys Run) |
| (if any) | | |
| upstream: | 02040202060 | Rancocas Creek SB SW Branch |
| (if any) | | |
| -- | -- | -- |
| -- | -- | -- |
| -- | -- | -- |
| -- | -- | -- |
| -- | -- | -- |
| -- | -- | -- |
| -- | -- | -- |

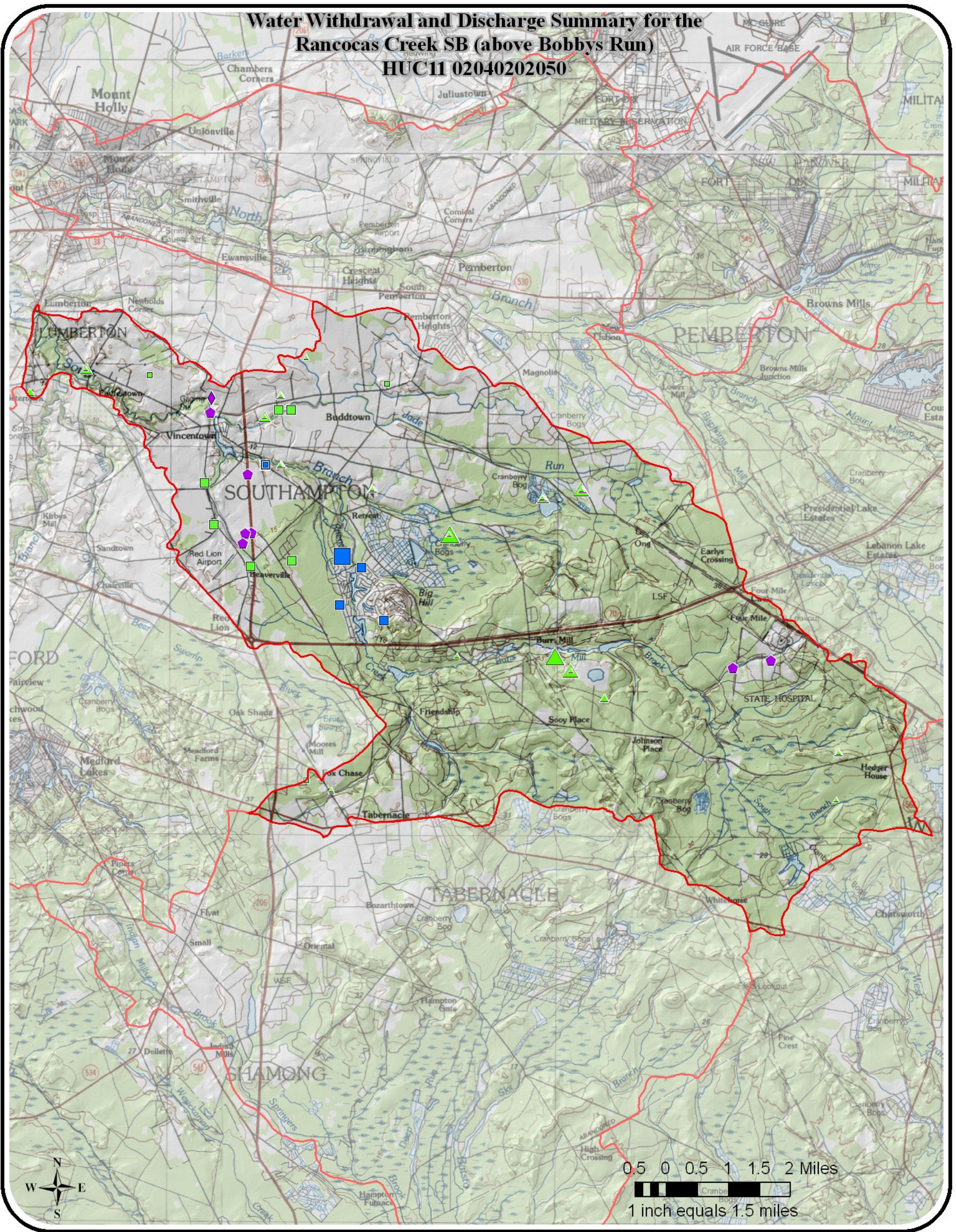
| Use Group | MGY |
|------------------|--------|
| agricultural | 12,760 |
| commercial | 0 |
| industrial | 0 |
| irrigation | 0 |
| mining | 180 |
| potable supply | 383 |
| power generation | 0 |
| total | 13,323 |



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 Rancocas Creek SB (above Bobbys Run) HUC11 02040202050

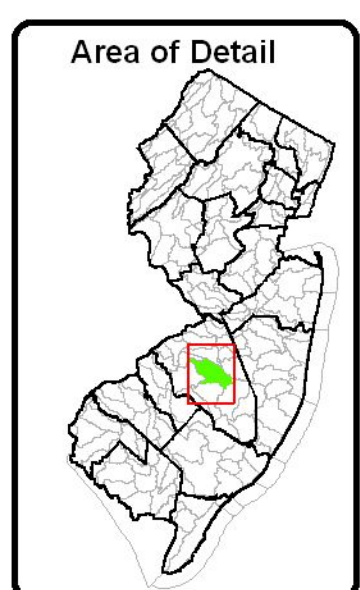


| Key for Discharge Data | |
|---------------------------------|---|
| 1999 Treated Effluent Discharge | |
| 0 - 50 MGY | ◆ |
| 50 - 100 MGY | ◆ |
| 100 - 500 MGY | ◆ |
| > 500 MGY | ◆ |
| Other Permitted Discharge | ◆ |

| 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 ■●▲ |

| 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 RANCOCAS CREEK SB SW BRANCH --- 02040202060

| | | |
|---------------|---|--------------------|
| WMA: | Rancocas | 19 |
| HUC11: | South Branch Rancocas Creek, SW Branch | 02040202060 |

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 | 143 | 48 | 32 | 32 | 44 | 209 | 126 | 222 | 101 | 226 | 118 |
| sum | 143 | 48 | 32 | 32 | 44 | 209 | 126 | 222 | 101 | 226 | 118 |
| ground-water:³ | | | | | | | | | | | |
| confined | 1,518 | 1,829 | 1,700 | 1,812 | 1,927 | 1,917 | 1,726 | 1,682 | 1,840 | 1,764 | 1,771 |
| unconfined | 750 | 768 | 746 | 737 | 716 | 760 | 759 | 810 | 817 | 782 | 765 |
| sum | 2,268 | 2,597 | 2,446 | 2,548 | 2,643 | 2,677 | 2,485 | 2,493 | 2,657 | 2,547 | 2,536 |
| total withdrawals: | 2,411 | 2,645 | 2,478 | 2,580 | 2,687 | 2,886 | 2,611 | 2,714 | 2,757 | 2,773 | 2,654 |

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 | 350 | 271 | 266 | 281 | 274 | 276 | 225 | 281 | 294 | 265 | 278 |
| exports ¹¹ | 450 | 534 | 492 | 510 | 527 | 510 | 447 | 432 | 453 | 423 | 478 |
| net | (100) | (263) | (226) | (229) | (253) | (234) | (221) | (151) | (159) | (158) | (199) |

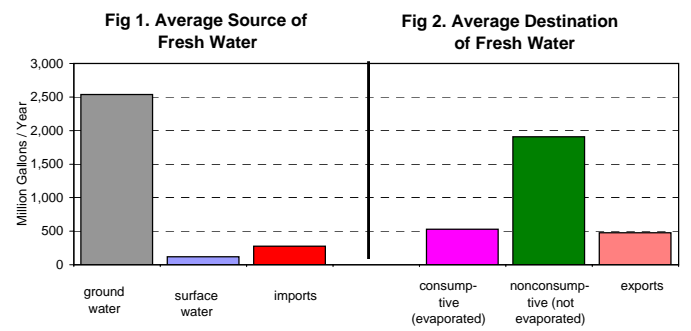


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

| Water use | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| potable purveyors | | | | | | | | | | | |
| nonconsumptive | 1,253 | 1,346 | 1,272 | 1,341 | 1,424 | 1,444 | 1,315 | 1,345 | 1,425 | 1,355 | 1,352 |
| consumptive | 165 | 188 | 168 | 193 | 190 | 201 | 167 | 200 | 221 | 205 | 190 |
| domestic wells | | | | | | | | | | | |
| nonconsumptive | 493 | 493 | 495 | 497 | 499 | 501 | 503 | 506 | 509 | 511 | 501 |
| consumptive | 69 | 69 | 70 | 70 | 70 | 71 | 71 | 71 | 72 | 72 | 71 |
| industrial & commercial & mining | | | | | | | | | | | |
| nonconsumptive | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 2 | 2 | 1 |
| consumptive | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| agricultural & non-agricultural irrigation | | | | | | | | | | | |
| nonconsumptive | 42 | 34 | 44 | 36 | 36 | 53 | 43 | 58 | 72 | 134 | 55 |
| consumptive | 298 | 228 | 180 | 190 | 188 | 358 | 272 | 363 | 278 | 315 | 267 |
| 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 | 1,788 | 1,873 | 1,812 | 1,874 | 1,961 | 1,999 | 1,862 | 1,911 | 2,008 | 2,003 | 1,909 |
| consumptive | 532 | 486 | 417 | 453 | 449 | 629 | 510 | 635 | 571 | 593 | 528 |
| PERCENTAGES: | | | | | | | | | | | |
| nonconsumptive | 77.1% | 79.4% | 81.3% | 80.5% | 81.4% | 76.0% | 78.5% | 75.1% | 77.8% | 77.2% | 78.3% |
| consumptive | 22.9% | 20.6% | 18.7% | 19.5% | 18.6% | 24.0% | 21.5% | 24.9% | 22.2% | 22.8% | 21.7% |

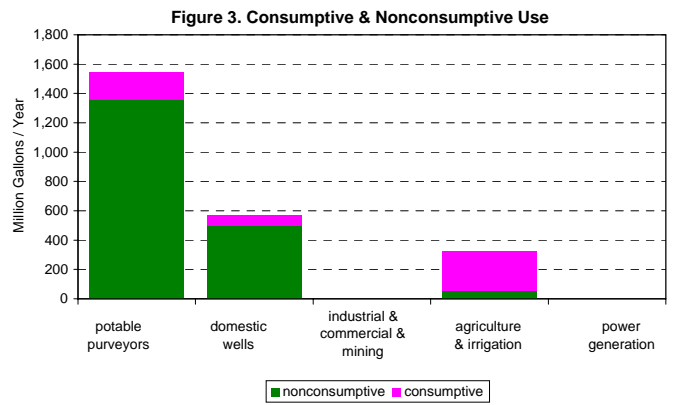


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

| 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 | 298 | 0 | 344 | 26 | 385 | 134 | 331 | 31 | 1,358 | 190 |
| domestic wells | 115 | 0 | 118 | 9 | 146 | 51 | 122 | 11 | 501 | 71 |
| industrial & commercial & mining | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 |
| agricultural & non-agricultural irrig. | 6 | 12 | 15 | 63 | 21 | 131 | 14 | 61 | 55 | 267 |
| power generation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM: | 419 | 12 | 477 | 97 | 552 | 315 | 467 | 103 | 1,915 | 528 |

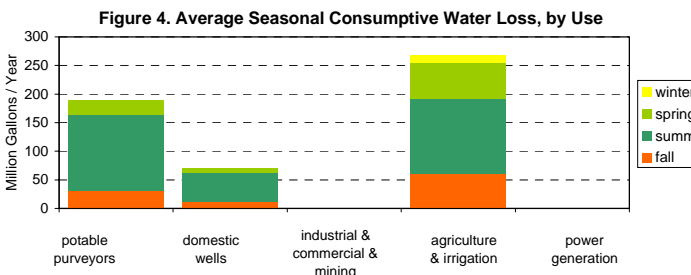


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

| | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|---------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| generated in HUC11 | 1,037 | 1,021 | 1,455 | 1,292 | 1,946 | 1,767 | 1,991 | 1,885 | 1,875 | 1,851 | 1,612 |
| imported to HUC11 | 131 | 153 | 160 | 167 | 174 | 172 | 186 | 181 | 184 | 183 | 169 |
| exported from HUC11 | 273 | 9 | 436 | 202 | 806 | 725 | 824 | 782 | 773 | 772 | 560 |

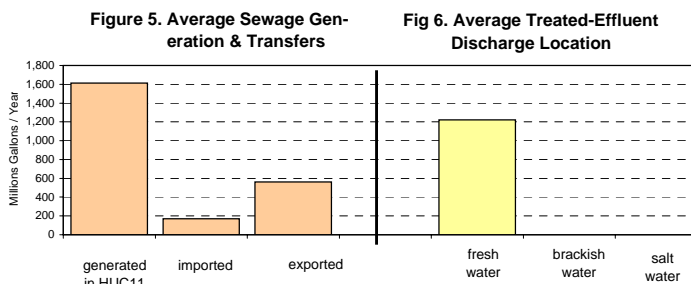


Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges⁹ in the HUC11 (millions of gallons)

| destination | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|----------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| fresh water | 896 | 1,165 | 1,179 | 1,256 | 1,313 | 1,214 | 1,352 | 1,284 | 1,286 | 1,261 | 1,221 |
| 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: | 896 | 1,165 | 1,179 | 1,256 | 1,313 | 1,214 | 1,352 | 1,284 | 1,286 | 1,261 | 1,221 |

Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

| Water Source | MGY |
|---------------|-------|
| surface water | 778 |
| ground water | 2,724 |
| total | 3,502 |

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

| Use Group | MGY |
|------------------|-------|
| agricultural | 1,419 |
| commercial | 37 |
| industrial | 50 |
| irrigation | 252 |
| mining | 0 |
| potable supply | 1,744 |
| power generation | 0 |
| total | 3,502 |

Table 9. HUC11 Descriptive Statistics

--- **Area:**

| | | |
|--------------------|------|---------|
| in this HUC11 only | 76.0 | sq. mi. |
| upstream HUC11s | 0.0 | sq. mi. |
| total watershed | 76.0 | sq. mi. |

(this HUC11 onshore area: 76.0 sq. mi.)

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

| Year | Population | Change |
|------|------------|--------------------------|
| 1940 | 4,900 | - |
| 1950 | 6,467 | 32.0% |
| 1960 | 13,903 | 115.0% |
| 1970 | 27,562 | 98.2% |
| 1980 | 44,686 | 62.1% |
| 1990 | 61,487 | 37.6% |
| 2000 | 69,410 | 12.9% |
| 2010 | 77,633 | 11.8% est. ¹² |
| 2020 | 81,999 | 5.6% est. ¹² |
| 2030 | 87,434 | 6.6% est. ¹² |

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

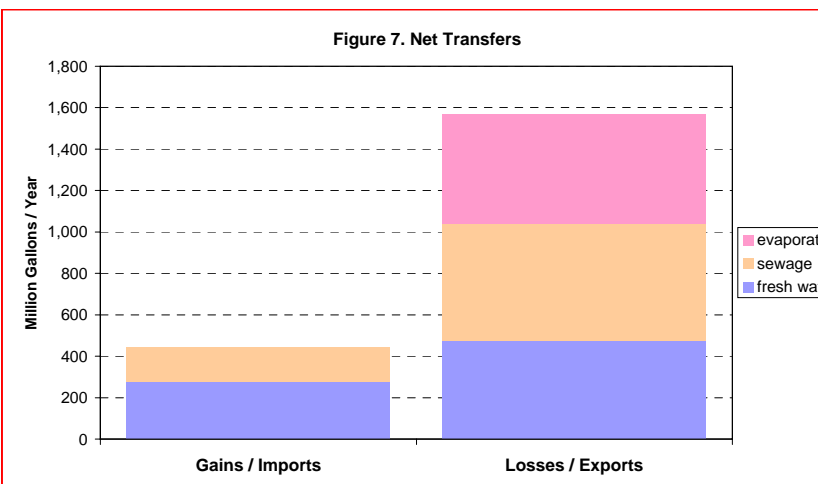
| Type | Year | | Change |
|----------|-------|-------|--------|
| | 1986 | 1995 | |
| ag. | 10.3% | 8.1% | -2.2% |
| barren | 0.7% | 0.5% | -0.2% |
| forest | 26.4% | 23.9% | -2.4% |
| urban | 26.3% | 31.8% | 5.5% |
| water | 1.8% | 1.9% | 0.1% |
| wetlands | 34.5% | 33.8% | -0.7% |

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

| | |
|------------|-------|
| Pinelands: | 65.7% |
| Highlands: | 0.0% |

Table 10. Upstream and downstream HUC11s (in NJ)

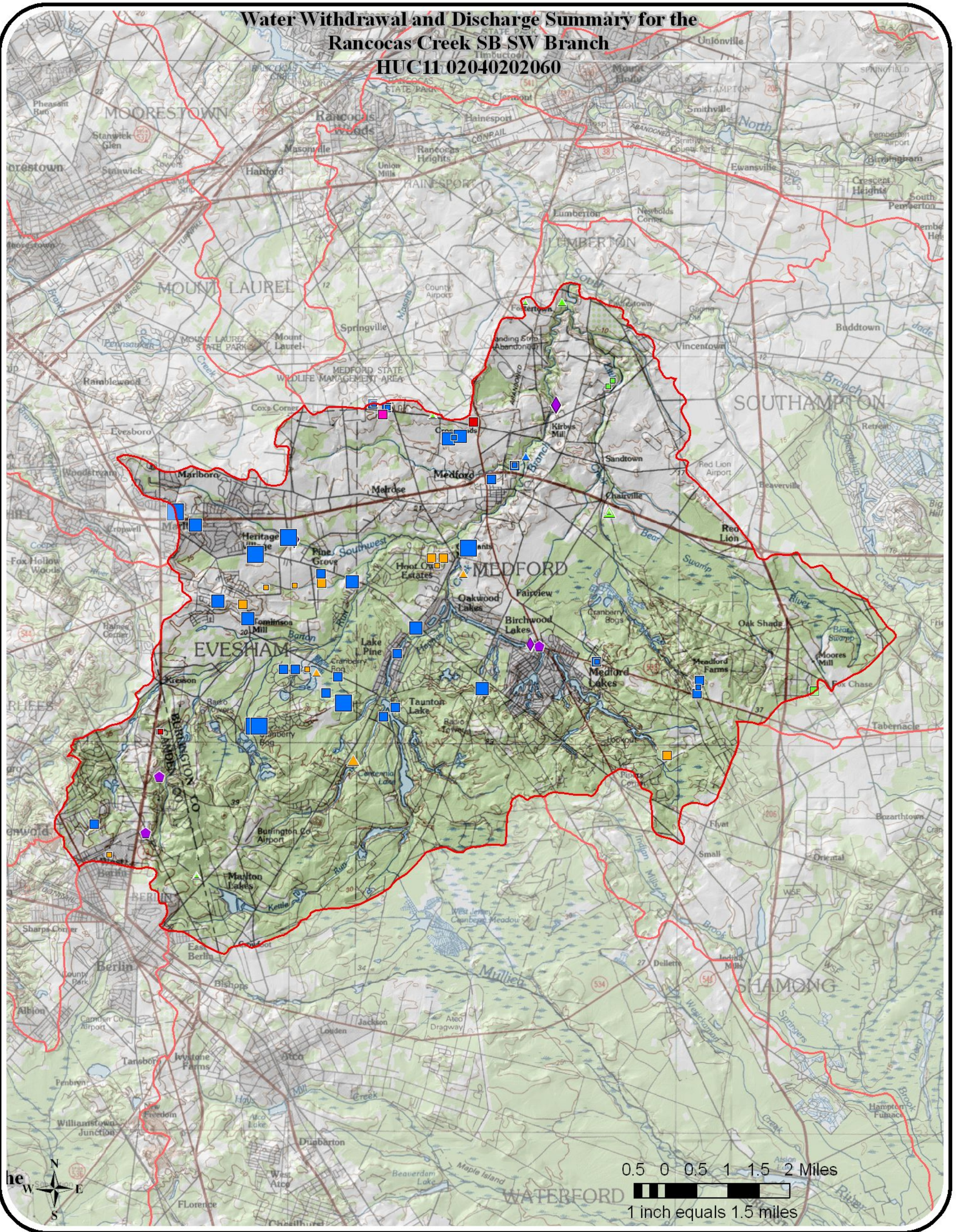
| location | # | name |
|-------------|-------------|--------------------------------------|
| downstream: | 02040202050 | Rancocas Creek SB (above Bobbys Run) |
| (if any) | -- | -- |
| upstream: | -- | -- |
| (if any) | -- | -- |



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.

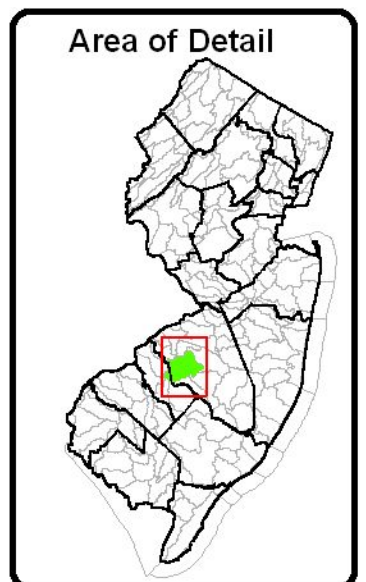
Water Withdrawal and Discharge Summary for the Rancocas Creek SB SW Branch HUC11 02040202060



| 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 ■●▲ |
| | 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 RANCOCAS CREEK SB (BELOW BOBBYS RUN) --- 02040202070

| | | | |
|---------------|---|--------------------|--|
| WMA: | Rancocas | 19 | |
| HUC11: | South Branch Rancocas Creek (below Bobbys Run) | 02040202070 | |

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 | 1 | 0 | 22 | 5 | 5 | 0 | 90 | 18 | 5 | 15 |
| sum | 6 | 1 | 0 | 22 | 5 | 5 | 0 | 90 | 18 | 5 | 15 |
| ground-water: ³ | | | | | | | | | | | |
| confined | 70 | 56 | 70 | 60 | 62 | 63 | 63 | 66 | 76 | 67 | 65 |
| unconfined | 77 | 77 | 78 | 78 | 79 | 755 | 134 | 136 | 139 | 162 | 172 |
| sum | 147 | 132 | 148 | 139 | 141 | 818 | 196 | 203 | 215 | 229 | 237 |
| total withdrawals: | 154 | 134 | 148 | 160 | 147 | 823 | 196 | 293 | 233 | 234 | 252 |

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

| | | | | | | | | | | | |
|-----------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| imports ¹¹ | 425 | 472 | 452 | 484 | 481 | 500 | 474 | 495 | 379 | 380 | 454 |
| exports ¹¹ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| net | 425 | 472 | 452 | 484 | 481 | 500 | 474 | 495 | 379 | 380 | 454 |

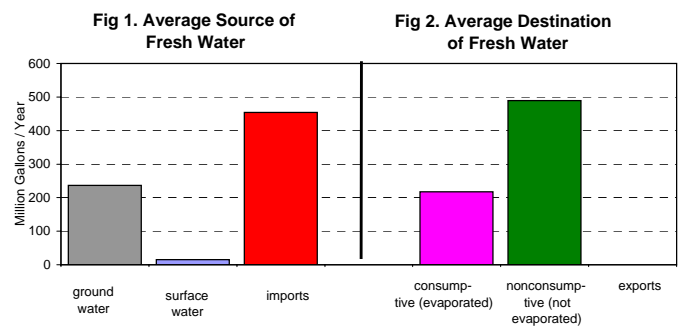


Table 3. Nonconsumptive⁴ & Consumptive⁵ Water Use⁶ in the HUC11, by Use Type (millions of gallons)

| Water use | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | average |
|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|---------|
| potable purveyors | | | | | | | | | | | |
| nonconsumptive | 379 | 417 | 402 | 429 | 426 | 438 | 421 | 436 | 337 | 333 | 402 |
| consumptive | 46 | 55 | 50 | 56 | 55 | 63 | 54 | 59 | 44 | 47 | 53 |
| domestic wells | | | | | | | | | | | |
| nonconsumptive | 67 | 67 | 68 | 69 | 69 | 70 | 71 | 71 | 72 | 73 | 70 |
| consumptive | 9 | 9 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| industrial & commercial & mining | | | | | | | | | | | |
| nonconsumptive | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 6 | 0 | 1 |
| consumptive | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 |
| agricultural & non-agricultural irrigation | | | | | | | | | | | |
| nonconsumptive | 8 | 6 | 7 | 8 | 7 | 74 | 12 | 21 | 15 | 15 | 17 |
| consumptive | 70 | 51 | 63 | 74 | 61 | 668 | 104 | 187 | 132 | 132 | 154 |
| 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 | 453 | 489 | 477 | 505 | 502 | 582 | 503 | 531 | 430 | 421 | 489 |
| consumptive | 126 | 116 | 123 | 139 | 126 | 741 | 168 | 256 | 187 | 190 | 217 |
| PERCENTAGES: | | | | | | | | | | | |
| nonconsumptive | 78.3% | 80.8% | 79.5% | 78.4% | 80.0% | 44.0% | 75.0% | 67.4% | 69.7% | 68.9% | 69.3% |
| consumptive | 21.7% | 19.2% | 20.5% | 21.6% | 20.0% | 56.0% | 25.0% | 32.6% | 30.3% | 31.1% | 30.7% |

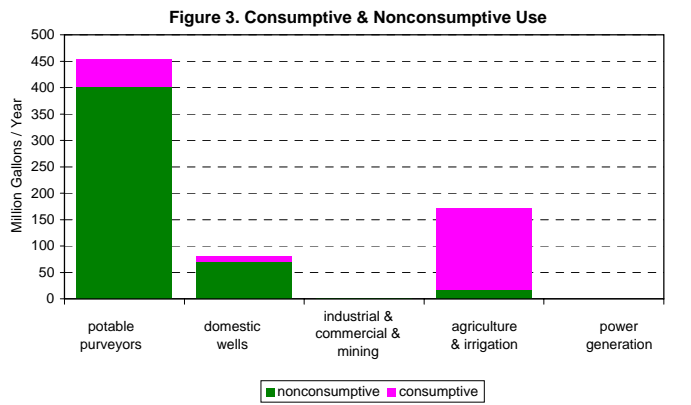


Table 4. Average Seasonal⁷ Use - Nonconsumptive⁴ & Consumptive⁵ (millions of gallons)

| 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 | 93 | 0 | 104 | 7 | 105 | 36 | 102 | 9 | 403 | 53 |
| domestic wells | 16 | 0 | 16 | 1 | 20 | 7 | 17 | 2 | 70 | 10 |
| industrial & commercial & mining | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 | 0 |
| agricultural & non-agricultural irrig. | 0 | 0 | 3 | 24 | 13 | 120 | 1 | 10 | 17 | 154 |
| power generation | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| SUM: | 109 | 0 | 123 | 33 | 139 | 164 | 120 | 20 | 491 | 217 |

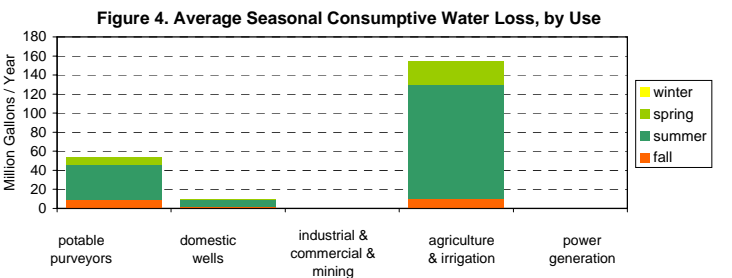


Table 5. Sewage Generation & Transfers⁸ in the HUC11 (millions of gallons)

| | | | | | | | | | | | |
|---------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| generated in HUC11 | 572 | 490 | 502 | 553 | 589 | 579 | 630 | 573 | 631 | 657 | 578 |
| imported to HUC11 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| exported from HUC11 | 572 | 490 | 502 | 553 | 589 | 579 | 630 | 573 | 631 | 657 | 578 |

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 |

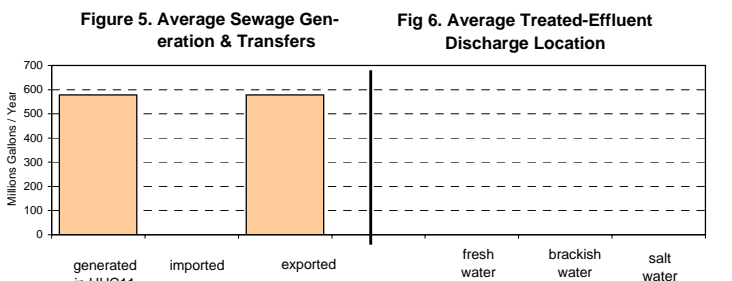


Table 7. 1999 Water Allocations¹⁰ in HUC11 by Water Source

| | |
|---------------|------------|
| Water Source | MGY |
| surface water | 70 |
| ground water | 433 |
| total | 503 |

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

| | |
|------------------|------------|
| Use Group | MGY |
| agricultural | 404 |
| commercial | 0 |
| industrial | 50 |
| irrigation | 0 |
| mining | 0 |
| potable supply | 50 |
| power generation | 0 |
| total | 503 |

Table 9. HUC11 Descriptive Statistics

--- Area:

| | | |
|--------------------|-------|---------|
| in this HUC11 only | 22.6 | sq. mi. |
| upstream HUC11s | 144.7 | sq. mi. |
| total watershed | 167.2 | sq. mi. |

(this HUC11 onshore area: 22.4 sq. mi.)

--- Population of this HUC11:

| Year | Population | Change |
|------|------------|--------------------------|
| 1940 | 2,016 | - |
| 1950 | 3,204 | 58.9% |
| 1960 | 6,066 | 89.3% |
| 1970 | 7,785 | 28.3% |
| 1980 | 10,502 | 34.9% |
| 1990 | 13,733 | 30.8% |
| 2000 | 18,752 | 36.5% |
| 2010 | 23,895 | 27.4% est. ¹² |
| 2020 | 26,161 | 9.5% est. ¹² |
| 2030 | 29,336 | 12.1% est. ¹² |

--- Land Use of this HUC11:

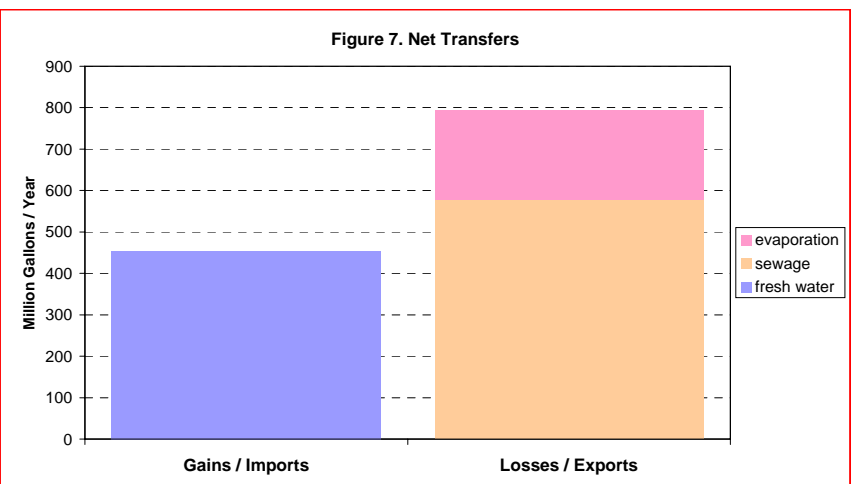
| Type | Year | | Change |
|----------|-------|-------|--------|
| | 1986 | 1995 | |
| ag. | 38.4% | 29.9% | -8.5% |
| barren | 1.1% | 2.1% | 0.9% |
| forest | 12.7% | 12.8% | 0.0% |
| urban | 18.5% | 27.3% | 8.7% |
| water | 1.0% | 1.1% | 0.1% |
| wetlands | 28.2% | 26.9% | -1.3% |

--- % of this HUC11 in:

| | |
|------------|------|
| Pinelands: | 4.8% |
| Highlands: | 0.0% |

Table 10. Upstream and downstream HUC11s (in NJ)

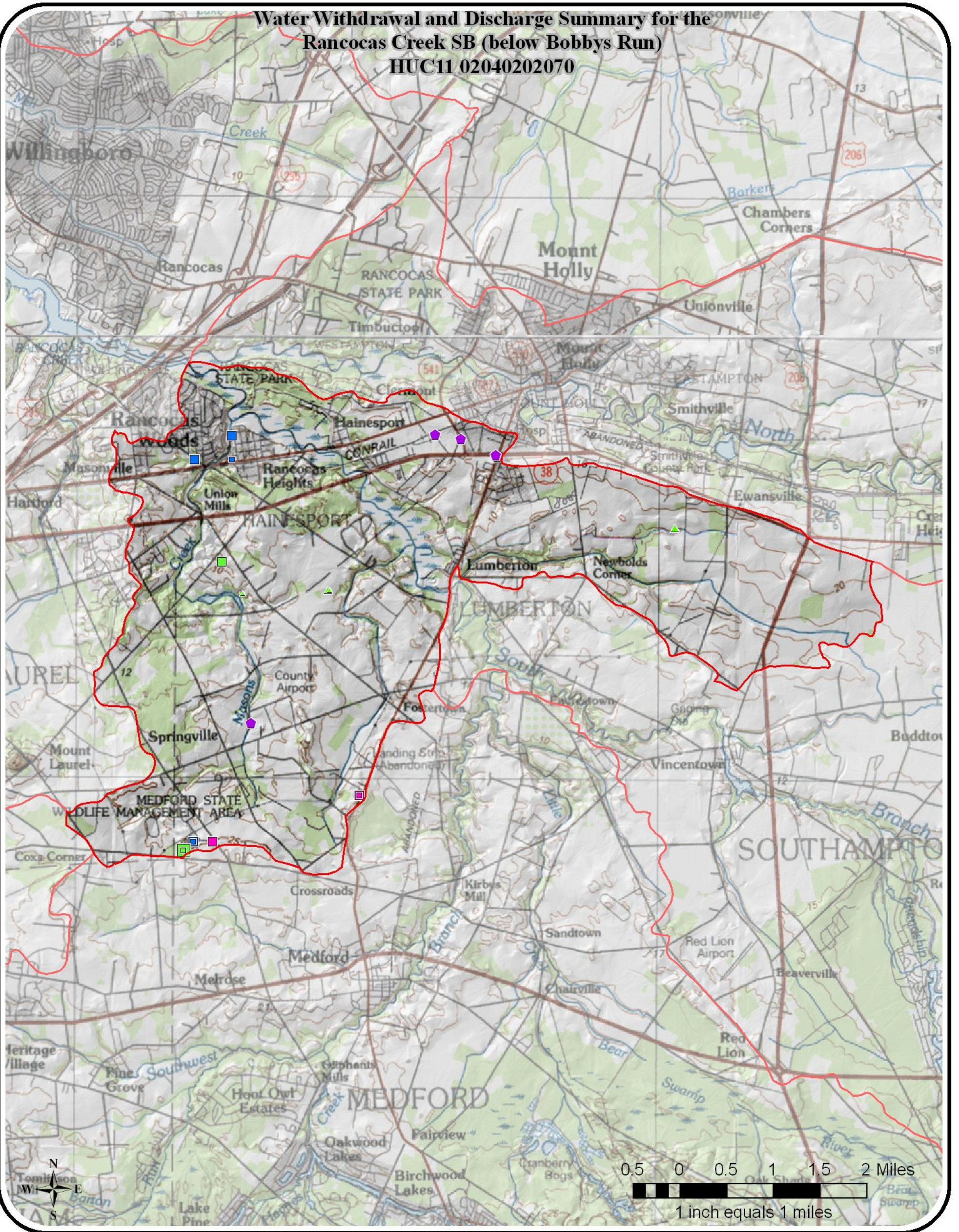
| location | # | name |
|----------------------|-------------|--------------------------------------|
| downstream: (if any) | 02040202080 | Rancocas Creek |
| upstream: (if any) | 02040202050 | Rancocas Creek SB (above Bobbys Run) |
| | 02040202060 | Rancocas Creek SB SW Branch |
| | -- | -- |
| | -- | -- |
| | -- | -- |
| | -- | -- |
| | -- | -- |
| | -- | -- |



NOTES:

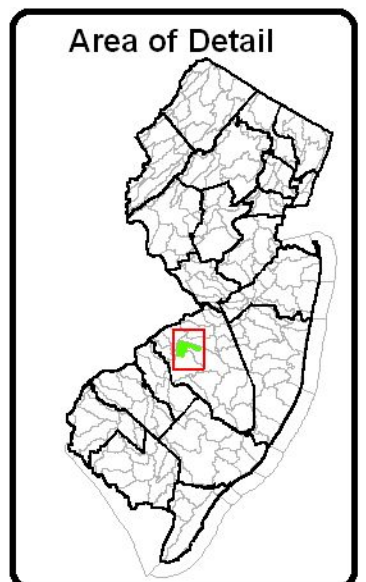
- 1 Salt and brackish water withdrawal and use is not included in this data.
- 2 This does not account for water released from onstream reservoirs for downstream intakes.
- 3 Includes both permitted ground-water withdrawals and estimated domestic well withdrawals.
- 4 Nonconsumptive water use refers 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
Rancocas Creek SB (below Bobbys Run)
HUC11 02040202070**



| 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 RANCOCAS CREEK --- 02040202080

Table with 2 rows: WMA: Rancocas 19; HUC11: Rancocas Creek 02040202080

Table 1. Freshwater Withdrawals in the HUC11 (millions of gallons) with columns for years 1990-1999 and average

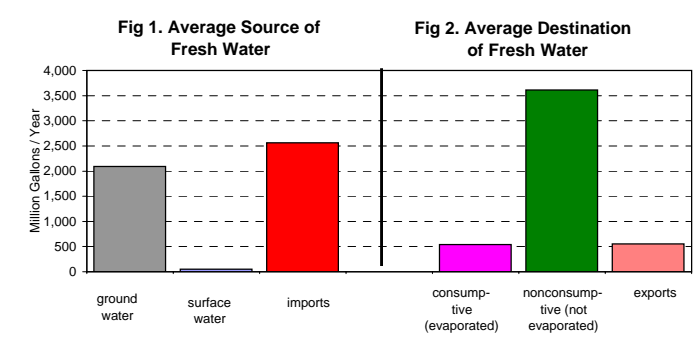


Table 2. Freshwater Imports To & Exports From the HUC11 (millions of gallons)

Table 3. Nonconsumptive & Consumptive Water Use in the HUC11, by Use Type (millions of gallons)

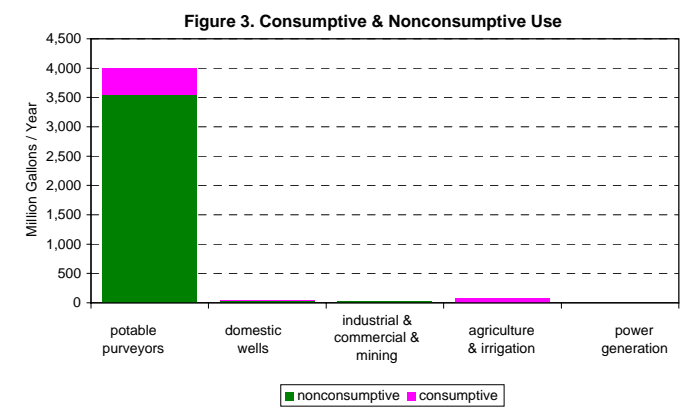


Table 4. Average Seasonal Use - Nonconsumptive & Consumptive (millions of gallons)

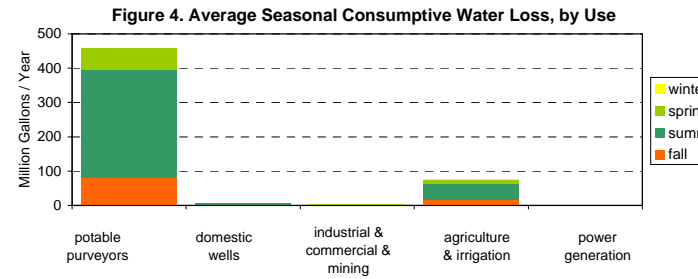


Table 5. Sewage Generation & Transfers in the HUC11 (millions of gallons)

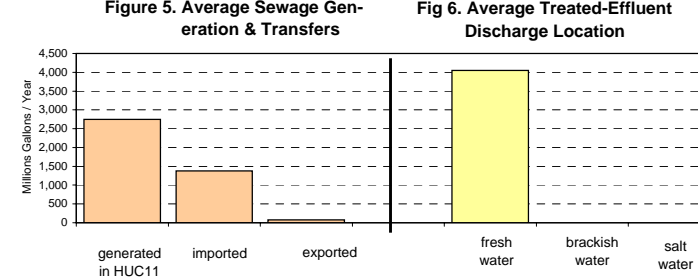


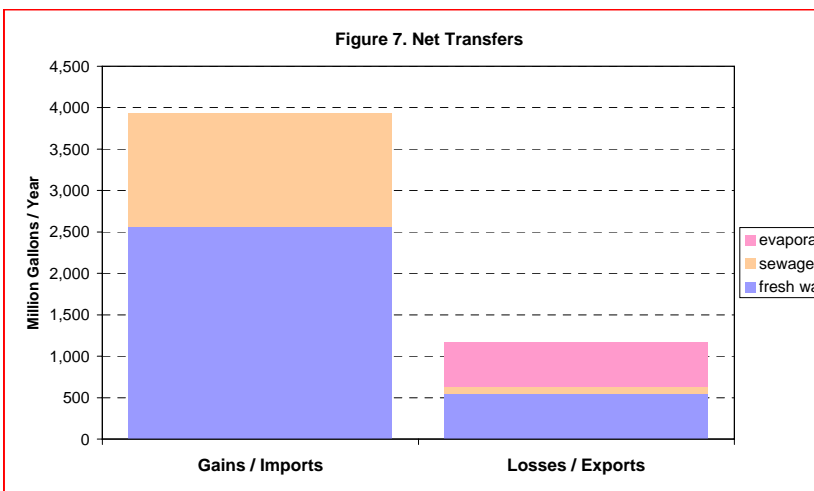
Table 6. Destination of Treated Effluent (Reclaimed-Water) Discharges in the HUC11 (millions of gallons)

Table 7. 1999 Water Allocations in HUC11 by Water Source

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

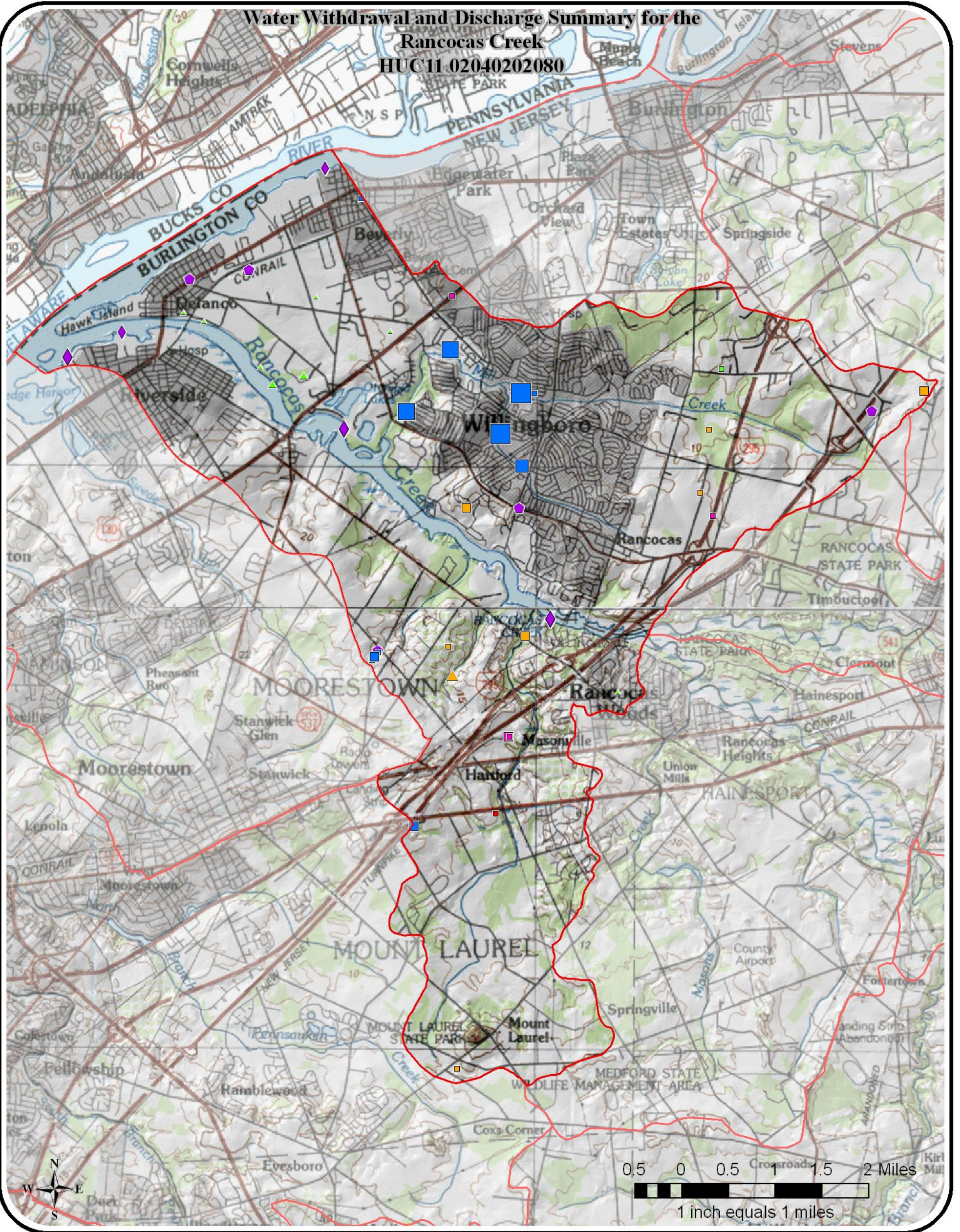
Table 9. HUC11 Descriptive Statistics including Area, Population, and Land Use

Table 10. Upstream and downstream HUC11s (in NJ)



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.

**Water Withdrawal and Discharge Summary for the
Rancocas Creek
HUC11 02040202080**



| 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 ● |

