Fishing Regulations for Trout

Overview

The regulation of angling activity is an important tool used by resource managers to protect and enhance the fishery resource for the benefit users. Each year New Jersey's freshwater fishing regulations are adjusted based upon biological findings, changing conditions, and angler preferences. The state Fish and Game Council is responsible for proposing and adopting the Fish Code, a legal document that specifies the freshwater fishing regulations that anglers must follow while fishing. Regulations should not be overly complex and a recent survey indicated that 84% of New Jersey anglers found the freshwater fishing regulations to be clear and easy to understand. Conservation Officers enforce the fishing regulations by conducting patrols by vehicle, foot, or boat to detect or deter violations.

New Jersey's trout fishing regulations can be separated into a general regulation, that applies statewide to most waters, and special regulations that apply to specific waters. Each regulation is comprised of four components (seasons, creel limits, length limits, and gear restrictions) that vary by regulation type. Some regulations are predicated on traditions established long ago, while others reflect more recent changes in resources and angler attitudes. Although each trout regulation provides a different angling opportunity, the lack of measurable objectives hampers efforts to evaluate regulation success and need for change.

Regulatory Authority and Legal Process

The responsibility for regulating recreational and commercial fishing in New Jersey freshwaters rests with the DFW and the Fish and Game Council. The statutory and administrative codes for New Jersey's freshwater fishing regulations are found in N.J.S.A. 23:5-1.1 et seq. and N.J.A.C. 7:25-6.1 et seq. The administrative code is the legal document that is commonly referred to as the "Fish Code." The Fish and Game Council (successor to the Fish and Game Commission) was empowered by the Legislature in 1945 with the independent responsibility to adopt the Fish and Game Codes for the purpose of providing a system for the protection and conservation of fish and wildlife.

The Fish Code establishes the legal angling methods, seasons, size and catch limits, and defines the trout stocked waters for freshwater fishing in New Jersey. Regulations specific to trout fishing are generally found in N.J.A.C. 7:25-6.3 through 6.9. The opening day of trout season in New Jersey is traditionally the first or second Saturday in April. Every year this date is adjusted and all other dates that are dependent upon this date must also be changed. The list of trout-stocked waters is specified and most of these waters are closed to fishing during the three week period prior to opening day, when trout stocking commences. The number of times a trout-stocked water is stocked during the spring in-season period is specified. Details pertaining to special regulation trout fishing areas are specified.

Each year the Council reviews and revises the Fish Code based on biological findings, angler preferences and changing situations. Then, through an established legal process, the Council proposes the next year's Fish Code, solicits public comment, and officially adopts the proposal with or without changes. This annual process begins nearly one year before each Fish Code becomes effective. In December/January DFW fisheries biologists prepare recommendations that undergo internal peer and law enforcement review. Desirable changes, in the form of a preliminary proposal, are forwarded to the Director for approval and then given to members of the Fish and Game Council's Fish Committee for their review. At the Committee's meeting (February), refinements, if needed or requested, are made and the proposal is then submitted to the full council for review and approval at their March meeting. Upon Council approval the proposal is forwarded to the Department's Office of Legal Affairs for review. When released by this office, the proposal is submitted for publication in the New Jersey Register in June/July. The public is notified of the proposal and the date of the public hearing (scheduled at least 15 days into the public comment period) through public notices, press releases, the Statehouse bulletin board, and Department website. After a mandated 60-day public comment period, responses to comments received are prepared and sent through the Office of Legal Affairs to the Fish and Game Council. The Council reviews the public comments and then votes to adopt the proposal, with or without changes (September/October). The adopted proposal is returned to the Office of Legal Affairs, submitted for publication in the Register in December, and becomes effective by January 1st.

Enforcement of Fishing Regulations

The DFW's Bureau of Law Enforcement is charged with the responsibility of enforcing the regulations in the Fish Code (as well as the Game Code, marine regulations, and wildlife management area regulations). The administrative staff is headquartered in Trenton office and the field staff (conservation officers, their supervisors, and dispatchers) work out of three regional offices. Because they are uniformed employees, Conservation Officers are the DFW's most visible representatives. These officers and their volunteer deputies come into contact with thousands of citizens each year. As they conduct general patrols by four-wheel drive vehicles, foot, or boat, their presence helps detect or deter violations. In the field they educate and redirect the actions of wildlife users to ensure compliance with applicable regulations. Their inspections of persons hunting, fishing, and visiting wildlife management areas result in the issuance of thousands of summonses and written warnings. The public also has the opportunity to assist officers in the apprehension of violators by reporting illegal activities through the Operation Game Thief program.

Fishing Regulations[1]

The regulation of angling activity is an important fisheries management tool that involves balancing biological issues and problems with social and economic issues and desires. Regulations should be designed to meet established management goals through measurable objectives. Examples of measurable objectives include catch rates, harvest

[1] Note: General information presented was obtained primarily from Noble and Jones (1999).

rates, man-days of fishing, and angler satisfaction. Biological and ecological objectives focus on protecting fish populations from over exploitation (by limiting the harvest and distributing the catch among anglers), and enhancing them (quality or trophy fishery). Sociological objectives typically deal with angler expectations and satisfaction and may be used to divide the resource between users (i.e. "opening day," fishing with artificials vs. bait, etc.). Economic reasons are related to generating revenue through fees (licenses and stamps) to support fishery-related programs and generate statistics used to secure federal aid funding.

Regulations that limit the size and quantity of fish harvested by anglers are typically intended to reduce the rate of fishing mortality to allow growth of overexploited populations and/or distribute the catch among anglers. However, it should be noted that these types of regulations only restrict the harvest by individual anglers, not the overall harvest, and may result in an unintended outcome (Post et al. 2003). For example, the imposition of a more restrictive minimum size or daily creel regulation could potentially attract more anglers to the fishery, resulting in higher mortality rates (due to hooking) even if harvest were not allowed. The imposition of a regulation may have its greatest impact by altering participation (the number of anglers or angler hours) rather than restricting individual anglers.

Because the outcome of angler response to a regulatory change is not always predictable, regulations should have defined management goals that are supported with explicit objectives (e.g. to maintain a catch rate of one fish/hr and a population where 20% of the fish are over 177 mm (7 inches)). This enables fisheries managers to objectively evaluate the effectiveness of a regulation or a regulatory change and respond appropriately. When a regulatory change is being considered, efforts to inform and educate the public about basis for the change should be an integral part of the process. To achieve the broadest base of support for regulations, unnecessary or discriminatory restrictions should be avoided (Behnke 1987). Angling regulations that are easily understood and justifiable help maintain and strengthen agency credibility.

The effectiveness of fishing regulations can also be compromised by noncompliance. It is important that regulations not be overly complex as angler compliance may suffer if they are poorly understood. The majority (84%) of licensed anglers that fish in New Jersey feel that the freshwater fishing regulations are clear and easy to understand (Responsive Management 2003).

Regulations governing the recreational fishing activity of properly licensed anglers (or those entitled to fish without a license) can be separated into four broad categories:

Seasons - when an angler may fish or harvest trout

Creel limits - how many trout may be harvested

Length limits - what size of trout may be harvested

Gear restrictions - what type of fishing gear may be used

Seasons Seasonal closures may be imposed for biological reasons, to protect fish populations during a vulnerable period in their life cycle (i.e. spawning period), or for social reasons (i.e. to allow stocking before "Opening Day"). Regulations, such as harvest and gear restrictions, may also change seasonally to conserve fish. Through a variety of trout regulations, anglers today have opportunities to fish for trout year round in New Jersey. However, traditionally most anglers regard opening day (the first or second Saturday in April) as the start of the annual trout fishing season. During the three-week period preceding opening day, the DFW stocks trout in nearly all of the waters designated for trout stocking. For the most part these designated waters are closed to fishing during this "pre-season" closure period. Consequently, trout anglers eagerly anticipate opening day because it affords an opportunity to fish for stocked trout when they are most abundant and vulnerable to angling (because the trout have not been subjected to angling). Special regulation waters, such as trophy trout lakes and wild trout streams, have seasonal closures to protect spawning fish from harvest during spawning periods.

Creel Limits The daily harvest of trout by individuals is limited through imposition of creel limits, or daily limits. However, only a small proportion of anglers regularly harvests their limit. Consequently, the primarily purpose of creel limits is to distribute the trout resource among anglers, rather than protect the resource from over-harvest. A creel limit also provides anglers with a measurable means of judging their skill and success. The statewide creel limit for most New Jersey trout waters is six trout initially, from opening day in April through May, and four trout thereafter. Special regulation trout waters (trophy and holdover trout lakes, wild trout streams, conservation areas) have lower creel limits to promote "catch and release" fishing and/or to maintain a quality fishery. Delayed harvest regulations, designed to restrict harvest initially and later liberalize harvest when conditions may be more marginal for trout survival, have not been implemented in New Jersey.

Opportunity – Investigate the feasibility of reducing creel limits providing for delayed harvest of cultured trout.

Length Limits The most common length regulation is a minimum length requirement, where fish shorter than a specified length must be released upon capture. Minimum length limits have been historically used to prevent excessive harvest of a fish population, allow individual fish to grow to a desirable size, and, in some cases, protect fish until they reach spawning age and size. Growth rates and natural mortality should be considered when setting minimum length requirements. In New Jersey the statewide minimum length for trout is seven inches and was adopted in 1997 to protect naturally reproducing trout populations in streams that were not included under the Wild Trout Streams regulations. High minimum size limits are used to maintain a fishery for quality or trophy-sized fish (Trophy Trout Lakes), or to promote catch and release fishing (Trout Conservation Areas). A more specialized type of length limit employs a size range designed to either protect fish (slot limit) or allow harvest (inverse slot limit) within that range. This type of regulation was employed at Round Valley Reservoir for several years (to encourage harvest of an overabundant year class of lake trout), but currently there are no regulations of this type in effect for trout.

Gear Restrictions Restrictions on gear are imposed to decrease angling efficiency, reduce hooking mortality, and promote a diversity of fishing experiences (Noble and Jones 1999). Management strategies for salmonid fisheries often include special regulations for specific waters that restrict the use of rod and reel (fly vs. spinning), terminal tackle (artificials vs. bait, barbed vs. barbless hooks, single vs. treble hooks), and use of artificial scents. In New Jersey, management decisions and angler demand have resulted in the establishment of several special regulations for salmonids that involve gear restrictions (Wild Trout Streams, Trout Conservation Areas, and Fly Fishing Only Areas). The adoption, elimination, or modification of a special regulation that involves gear restrictions, and its imposition on specific waters, has often been a source of controversy.

The effect of terminal tackle (hooks, lures, and flies) and their effect on hooking mortality on salmonids have been widely studied. Studies have shown that hooking mortality of salmonids released following capture was higher for natural baits (30-50%) than flies and lures (5-10%) (Mongillo 1984). While mortality is greatest when fish are deeply hooked and vital organs are injured, studies have also shown that mortality resulting from bait fishing can be reduced (33-72%) if the line is cut on critically-hooked salmonids (Schill 1996). Mortality is also substantially higher when synthetic (scented) baits were used (22-32%) versus traditional artificial flies (3.9%) (Schisler and Bergersen 1996).

Consequently, the development of management strategies that depend upon the release of trout have traditionally relied upon regulations that impose restrictions on terminal tackle. However, some evidence suggests that fishing with bait need not be routinely prohibited in all special regulation waters (Carline et al. 1991). While a bait restriction may always be justifiable when the stated management goal is to provide the very best quality fishery possible (in terms of size structure or to prevent imminent collapse), if the management goal is simply to improve it above current conditions a bait restriction may not always be necessary (Schill 1996). Hook types used in bait fishing, which depart from traditional hook designs (e.g. circle hooks), may warrant further consideration if their ability to reduce hooking mortality in salmonids can be validated by scientific studies.

Scientific investigations have also demonstrated that there is no biological basis for barbed hook restrictions in artificial fly and lure fisheries for resident salmonids. For flies and lures combined, only minor differences in mean hooking mortality have been found between barbed (4.5%) and barbless (4.2%) hooks, in ten of eleven studies (Schill and Scarpella 1997). Because natural mortality rates for wild trout in streams commonly range from 30% to 65% annually, a 0.3% mean difference in hooking mortality for the two hook types is irrelevant at the population level, even when fish are subjected to repeated capture. Restricting barbed hooks in artificial fly and lure fisheries appears to be a social issue and managers should consider the social costs of implementing a barbed hook restrictions that produce no demonstrable biological gain. Anglers may always chose to use barbless hooks because they can be removed more easily (from humans as well as fish) thereby making the process less stressful and allow the angler to resume fishing more quickly.

Opportunity – Complete a review of scientific literature on the effectiveness of barbless hooks in reducing mortality and/or injury to salmonids.

Restrictions on fishing gear types (spinning vs. fly fishing) to reduce hooking mortality are not biologically justifiable. Therefore, a fly fishing only regulation should be considered primarily social in nature because there is no biological justification for maintaining this type of special regulation. Fly fishing Only areas are popular with fly anglers and may facilitate their spatial separation (which is generally considered to be a requirement for this form of angling). In New Jersey only one stream (Big Flatbrook) currently has a section regulated specifically for fly-fishing. During the 1960's, a three year study conducted on the Big Flatbrook, provided insight into the factors affecting the catch and harvest of trout stocked weekly for put and take fishery (Pyle and Soldwedel 1971)

New Jersey Trout Fishing Regulations

New Jersey's trout fishing regulations have evolved over more than a century, increasing in number and complexity to reflect changes in angler attitudes, interests, and the status of trout resources. These trout regulations can be separated into three categories that are referred to as general, special, and boundary water regulations. The statewide general trout regulation governs the majority of trout fishing activity statewide and separates trout-stocked waters into those with and without closed in-season stocking dates. The special regulation trout areas (wild trout streams, trout conservation areas, fly fishing only waters, trophy and holdover trout lakes) provide anglers with alternative opportunities to fish for trout under more restrictive conditions. Special regulation waters characteristically support trout year round and are managed through regulation to enhance the fishery and/or angling experience. In addition to the general and special regulations, waterbodies whose boundaries are shared with adjacent states, and thus in need of regulatory uniformity, have separate fishing regulations. Regulations in effect as of 2004 are stated below and include a narrative describing the background, current status, and management opportunities.

The privilege of fishing in New Jersey is generally available to all individuals provided they abide by established regulations. In New Jersey, individuals 16 to 69 years of age must obtain a fishing license prior to engaging in any angling activity in freshwaters (both public and private). In addition, licensed anglers must also possess a trout stamp when fishing for trout. A license and a trout stamp are valid for a calendar year. Specific details regarding licensing requirements and fees can be found in the Funding section of this plan.

General Statewide Trout Regulations

<table>
<tr><td colspan="4">2005 GENERAL TROUT REGULATIONS
(Brook, brown, and rainbow trout, and hybrids thereof)</td></tr>
<tr><th>SEASON</th><th>MINIMUM SIZE</th><th>DAILY LIMIT</th><th>EXCEPTIONS</th></tr>
<tr><td>Jan. 1 through March 20</td><td>7 inches</td><td>4</td><td rowspan="4">1) Waters with in-season spring stocking closures are closed to fishing 5 a.m. to 5 p.m. on days listed for stocking.
2) Special regulation areas (wild trout streams, year round & seasonal trout conservation areas, fly-fishing, trophy & holdover trout lakes).
3) Lk. Hopatcong, Prospertown Lake, Manasquan Res., Farrington Lake, Pompton Lake, Lake Shenandoah and Spruce Run Res. – fishing is permitted during the period Mar. 21 to April 10 at 8 a.m. All trout caught during this period must immediately be released.
4) Greenwood Lk. & Delaware River – see separate regulations for Boundary Waters.</td></tr>
<tr><td>March 21 to Opening Day at 8 a.m.</td><td colspan="2">Season Closed
Fishing is prohibited on all waters listed for trout stocking</td></tr>
<tr><td>Opening Day 8 a.m. through May 31</td><td>7 inches</td><td>6</td></tr>
<tr><td>June 1 through December 31</td><td>7 inches</td><td>4</td></tr>
<tr><td colspan="4">LAKE TROUT REGULATIONS</td></tr>
<tr><td>Jan. 1 through December 31</td><td>15 inches</td><td>2</td><td>Trophy Trout Lakes – Round Valley Reservoir, Merrill Creek Reservoir</td></tr>
</table>

Background:

In the years immediately prior to 1951 the regulations pertaining to trout fishing were fairly simple and straightforward. The trout season began at 8 a.m. on the 1st or 2nd Saturday in April and ended on September 30th. Other than on opening day, fishing hours during this season were from sunrise to 9 p.m. EST. There was a seven-inch minimum size limit on trout (brook, brown, and rainbow) and a daily creel limit of eight trout. In addition, it was illegal to fish in any water listed for trout stocking between March 1st and 8 a.m. on opening day. There was only one special trout regulation, and it pertained to fly fishing areas on two streams.

In 1951 the seven-inch minimum size limit was eliminated so that anglers could harvest all of the trout that were being stocked. At that time many of the stocked trout (especially those from federal fish hatcheries) were small, and since they were not expected to survive year round, it made little sense to protect them. In 1956 the trout season was extended to November 30th. Significant changes to the trout regulations occurred in 1959. The daily creel limit was reduced from eight to six trout daily. It became legal to fish for trout during the period January 1st through March 15th and the trout season was also extended beyond November 30th, to mid-March of the following year. Thus, anglers could fish for trout year round except for a pre-season closure period that began in early March and ended on opening day in April. In addition, certain specified trout-stocked waters had fishing closures on the days listed for stocking (see Trout Stocked Waters with Closed In-season Stocking Dates regulation).

Beginning in 1965 and continuing until 1977, the stocking dates were published for all trout-stocked waters (both those with and without closed in-season stocking dates). In 1977, this practice was discontinued, except on those waters that had closed in-season stocking dates. Waters not having closed in-season stocking dates continued to be listed, however, the number of in-season stockings, rather than the stocking dates, were given. In 1976 the daily creel limit for trout was reduced from six to four, for the period June 1st, to the start of the pre-season closure the following March. The traditional daily creel limit of six trout, from opening day to the end of May, was retained

Several large, trout-stocked waters (Lake Hopatcong, Swartswood Lake, Lake Wawayanda, and Spruce Run Reservoir) were opened to angling during the pre-season closure period in 1986. Anglers, particularly those targeting gamefish species other than trout (black bass, northern pike, muskellunge, walleye, hybrid striped bass), were no longer excluded from fishing at these large public lakes during the three-week period preceding opening day. However, all trout caught during this period had to be immediately released. Five waters have since been added to this exception, including Prospertown Lake, Manasquan Reservoir, Farrington Lake, Pompton Lake, and Lake Shenandoah.

In 1997 the seven-inch minimum size was re-established after a 46-year hiatus. This change was made primarily to protect naturally reproducing trout populations in streams not regulated as *Wild Trout Streams*. As an added benefit, small (subcatchable) surplus hatchery trout, particularly those stocked in the fall, would also be protected from immediate harvest. This minimum size requirement had a negligible impact on the harvestability of catchable trout that were stocked in the spring and fall since their average size is nine inches or more.

Current Status:

The current *General Trout Regulation* for brook, brown, and rainbow trout (and their hybrids) pertains to all waters statewide except those designated as special regulation trout waters or boundary waters. Anglers may generally fish for trout year round except during the three-week period before opening day in April on those waters listed for trout stocking (Appendix H). This "pre-season" closure allows DFW sufficient time to stock trout in nearly 200 waters listed for stocking prior to opening day. Most trout anglers eagerly anticipate opening day because it gives them the opportunity to fish for newly stocked trout that have not been subjected to any (or minimal) fishing pressure.

Opening day is traditionally selected to coincide with the first or second Saturday in April, and anglers must wait until 8 a.m. to begin fishing on that day. Saturday is the preferred day of the week for the season opener because angler participation is expected to be higher than if scheduled during the workweek (Monday through Friday). The date of opening day varies from year to year and over the last decade has ranged from April 6th to the 13th. New Jersey's opening date has occasionally coincided with Pennsylvania's opening day, (the Saturday in April closest to April 15th), but it does not conflict with New York's opening day (always April 1st).

Trout may be harvested year round from all waters statewide (excluding those designated under special trout regulations) except during the three-week pre-season period. The daily creel limit allows anglers to take six trout from opening day through May 30th, which encompasses the seven-week stocking period that follows opening day. From June 1st to the start of the preseason closure the following year (mid-March) the daily creel is reduced to four trout. The current higher creel limit in the spring season is considered desirable, particularly on those waters that can not sustain trout through the summer months. It permits anglers to harvest trout that would otherwise succumb to unfavorable elevated water temperatures. The stocking dates for trout-stocked water are announced in advance (on the Trout Hotline, DFW website, and through news releases) to further encourage immediate utilization of the resource. The reduction in the daily creel later in the spring is intended to spread out the harvest of the trout resource whose numbers have gradually dwindled since opening day as stocking is scaled back. Waters may be replenished with trout through the fall and winter trout stocking programs.

Under the general regulation anglers may keep trout during the open season provided they are at least seven inches long. Because the catchable trout stocked as part of the spring, fall, and winter stocking programs typically measure at least nine inches long they can be immediately creeled by anglers. The seven-inch minimum also corresponds to the minimum size established under the *Wild Trout Stream* regulation. This was purposely done in order to provide some measure of protection to naturally reproducing trout populations in streams that are not designated as a *Wild Trout Stream*. In addition, more than 20 streams (or stream sections) that have reproducing trout populations are also trout-stocked and this minimum size is helpful in preventing the harvest of small, wild trout.

There are two notable exceptions to the statewide general regulations, aside from the special regulation trout areas. Seven trout-stocked waters are exempt from the pre-season closure (see exception #3) because they offer excellent opportunities to fish for other popular gamefish such as northern pike, muskellunge, walleye, hybrid striped bass, and black bass). Fishing is allowed on these waters during the pre-season period, however, all trout caught during this period must be immediately released. The other exception is the trout-stocked waters having closed in-season stocking dates which prohibits angling until 5 p.m. on the dates stocked (described separately later in this section).

In 2005, a statewide minimum size and creel limit was established for lake trout. Prior to 2005, size and creel limits for lake trout were established only for designated Trophy Trout waters. This change allows for introductions of lake trout into waters of the state other than Trophy Trout lakes.

Opportunity – Management goals and measurable objectives, and evaluation procedures need to be established for the general regulation.

Opportunity – Other states have special trout regulations that curtail harvest initially and liberalize harvest later in the season to extend the fishery (delayed harvest). The desirability of instituting a similar regulation on select trout streams should be explored.

Opportunity – Investigate the feasibility and overall effectiveness of developing regulations for individual trout species, of particular interest the brook trout, the State's only native salmonid, which may be more susceptible to angling pressure.

Trout Stocked Waters With Closed In-Season Stocking Dates

TROUT STOCKED WATERS WITH CLOSED IN-SEASON STOCKING DATES Waters specified below are closed to fishing 5 a.m. to 5 p.m. on dates listed for stocking, including all tributaries, for a distance of 100 ft. from the main channel.	
MONDAYS	Manasquan River – Rt. 9 bridge downstream to Bennetts bridge, Manasquan WMA Metedeconk River, N/Br. – Aldrich Rd. bridge to Ridge Ave. Metedeconk River, S/Br. – Bennetts Mill dam to twin wooden foot bridge, opposite Lake Park Blvd. on South Lake Drive, Lakewood Rockaway River – Longwood Lk., dam (Jefferson Twp.) to Jersey City Reservoir in Boonton Toms River – Rt. 528, Holmansville, to confluence with Maple Root Branch, and Rt. 70 bridge to Rt. 571 bridge (Exception: The section regulated as a year-round trout conservation area.) Walkill River – Lake Mohawk dam to Rt. 23, Hamburg
TUESDAYS	Pohatcong Creek – Rt. 31 to Delaware River Raritan River, S/Br. – Budd Lake, dam to jct. With N/Br. Raritan River (Exception: The sections regulated as year-round trout conservation areas.)
WEDNESDAYS	Raritan River, N/Br. – Peapack Rd. bridge in Far Hills to jct. With S/Br. Raritan River
THURSDAYS	Black River – Rt. 206, Chester to the posted Black River Fish & Game Club property at the lower end of Hacklebarney State Park Paulinskill River, E/Br. and W/Br. – Limecrest RR spur bridge on E/Br., Sparta Twp., and Warbasse Jct. Rd. to (Rt. 663) on W/Br., Lafayette Twp., to Columbia Lake (Exception: The section regulated as a year-round trout conservation area.) Ramapo River – State line to Pompton Lk. (including Potash Lake)
FRIDAYS	Big Flat Brook – 100 ft. above Steam Mill bridge on Crigger Rd. in Stokes S.F. to Delaware River Musconetcong River – Lk. Hopatcong dam to Delaware R. including all mainstream impoundments except for Lk. Musconetcong Pequest River – Source downstream to Delaware River Wanaque River – Greenwood Lk. Dam to jct. with Pequannock River, excluding Wanaque Res., Monksville Res., and Lk. Inez

Background:

Prior to 1959 the statewide general trout regulation applied uniformly to all freshwaters except those designated as *Fly-Fishing Waters*. In 1959, 25 trout-stocked waters (19 streams and 6 lakes) were selected for a regulation that was initially referred to as "Special Closed Days." Beginning with the 3rd week in April and continuing weekly through June, these designated waters were closed to fishing, beginning ½ hour before sunrise on the weekday listed for stocking and continued for 24 or 48 hours. This included all feeder streams and tributaries to the main channel of these designated waters.

In 1960, the time for the closure was modified to 4 a. m. and 4 p. m, and one year later changed again, to 5 a.m. and 5 p.m. In 1963 a 24-hour closure period (beginning at 5 a.m.) was established for all designated waters. In 1965, the list of waters having "special

closed days" was greatly expanded to include more than 150 trout-stocked streams and lakes. The 24-hour closure period was shortened to 12 hours (5 a.m. to 5 p.m.) in 1972.

In 1976 this regulation was significantly modified when the number of waters was drastically reduced to 17 major streams in north and central Jersey. These waters were closed to fishing (from 5 a.m. to 5 p.m.) on a set day of the week, over a six-week period commencing ten days after opening day. The remaining waters listed for trout stocking had the number of anticipated in-season stockings indicated. Two years later, in 1978, the number of in-season stockings was increased to seven for most of the streams. By 1979 the number of waters covered under this regulation stood at 16 and since that time the regulation has changed little.

Current Status:

Sixteen streams are designated as *Trout Stocked Water Having Closed In-season Stocking Dates* (Figure 13). Over the seven-week period following opening day, each stream is stocked weekly with trout on an established day of the week (Monday through Friday) and is closed to fishing from 5 a.m. to 5 p.m. on the days listed for stocking. These streams are often simply referred to as "Closed Waters." While the rationale behind the original adoption of this regulation 45 years ago is not known, currently it is viewed as a means of giving anglers a reasonably equal opportunity to fish for newly stocked.

Catchable trout stocked in the spring are often quickly caught and harvested soon after they are stocked, many anglers prefer to fish for trout as soon as possible following stocking to maximize success and to have a satisfying experience. However, many anglers are unable to fish for trout during the morning and early afternoon on weekdays (Monday through Friday) because of work obligations. The late afternoon starting time (5 p.m.) gives anglers time to arrive at a stream and have the same opportunity as others to fish for trout stocked earlier in the day. The 12-hour closure also gives the newly stocked trout an opportunity to disperse before angling commences. The closure also has the added benefit of discouraging anglers from following the hatchery truck to gain an advantage by being the first on the scene to fish for freshly stocked trout.

Although this regulation is widely accepted by the majority of anglers, individual anglers periodically request that the stream remain closed until the morning of the day following stocking. This change would give trout additional time to acclimate to their new surroundings. It might also benefit anglers who can not get off work in time to reach the stream by 5 p.m. (but could fish the stream at 5 a.m. the following morning). However, an overnight closure would pose enforcement difficulties (closure period extending outside the normal working hours of law enforcement staff and the cover of darkness would be conducive to poaching) that would quickly outweigh any perceived benefits of such a change.

Opportunity – Management goals, measurable objectives, and evaluation procedures need to be established that would assist managers in evaluating success of the regulation governing water having closed in-season stocking dates.

Opportunity – Several streams (or stream reaches) covered by the "closed in-season stocking dates" regulation experience late spring and summer water temperatures that can negatively affect trout survival. Trout stocked in these waters during the latter part of the spring in-season stocking period (Weeks 6 and 7) may be underutilized if temperature and stress related mortalities occur.

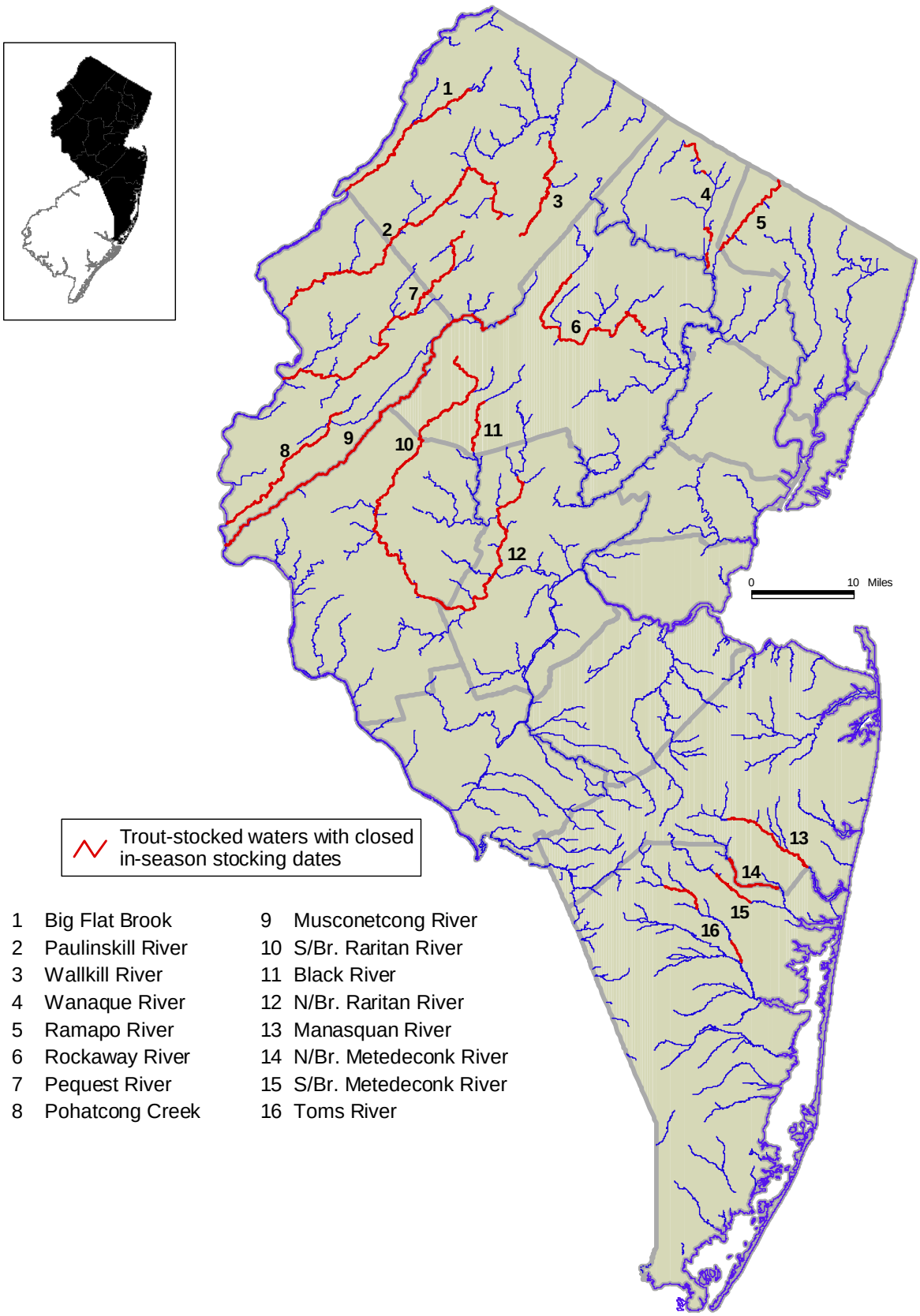

FIGURE 13.— New Jersey waters designated as *Trout Stocked Waters Having Closed In-season Stocking Dates*, in 2005.

Wild Trout Stream Regulation

<table>
<tr><th colspan="4">WILD TROUT STREAM REGULATION</th></tr>
<tr><th>SEASON</th><th>MINIMUM SIZE</th><th>DAILY LIMIT</th><th>RESTRICTIONS (in effect year round)</th></tr>
<tr><td>Opening Day at 8 a.m. through Sept. 15</td><td>7 inches (see #3)</td><td>2</td><td rowspan="2">1) Only artificial lures may be used.
2) Possession or use of bait (live or preserved) or any substance (natural or synthetic) that contains a concentration of bait scent is prohibited.
3) The minimum size for brown trout in Vans Campens Bk. & Pequannock R. is 12 inches.</td></tr>
<tr><td>Jan. 1 to Opening Day at 8 am.
And
Sept. 16 through Dec. 31</td><td colspan="2">Catch & Release Only</td></tr>
<tr><td colspan="4">Bear Creek (Southtown)
Bear Swamp Brook (Mahwah)
Black Brook (Clinton WMA)
Burnett Brook (Ralston)
Cold Brook (Oldwick)
Dark Moon Brook (Johnsonburg)
Dunnfield Creek (Del. Water Gap)
Flanders Brook (Flanders)
Hances Brook (Penwell)
Hickory Run (Califon)
India Brook (source to Mountainside Ave., Mendham)
Indian Grove Brook (Bernardsville)
Jackson Brook (source to Hedden Park Lake, Mine Hill Twp.)
Ledgewood Brook (Ledgewood)
Little York Brook (Little York)
Lomerson Brook (Pottersville)
Merrill Creek (Stewartsville)
Mill Brook (Montague)
N/Br. Rockaway Creek (Mountainville)
Parker Brook (Stokes S.F.)
Passaic River (source to Rt. 202, Bernardsville)
Pequannock River (NewarkWatershed, Oak Ridge Rd. bridge downstream to railroad bridge immediately upstream of Charlottesburg Res.)
Rhineharts Brook (Hacklebarney S.P.)
Rocky Run (Clinton Twp.)
Saddle River (stateline to Lake Street, Upper Saddle River)
Stephensburg Creek (Stephensburg)
Stony Brook (Stokes S.F.)
Stony Brook (Washington Twp, Morris Co.)
Tetertown Brook (Tetertown)
Trout Brook (Hacklebarney SP)
Turkey Brook (Mt. Olive)
Van Campens Brook (Delaware Water Gap Nat'l Recreation Area)
West Brook (source downstream to Windbeam Club property)
Whippany River (source to Tingley Road, Mendham Twp.)
Willoughby Brook (Clinton Twp.)</td></tr>
</table>

Background:

New Jersey first began to manage a reproducing trout population in a specific stream, using a biologically based fishing regulation, in 1974 when the *Natural Trout Fishing Area* regulation was adopted. This regulation was developed partially in response to interest expressed by members of Trout Unlimited. The DFW initially recommended to the Fish and Game Council that two stream sections, the Blewitt tract on the Big Flatbrook, and Mulhockaway Creek be included under the new regulation. However, the proposed Blewitt Tract section, already regulated as a *Fly Fishing Only Area,* did not have the support of the local landowners, and the Council opted to confine the regulation to Mulhockaway Creek.

A 0.3 mile stretch of Mulhockaway Creek (Hunterdon County), inhabited by a reproducing brown trout population, was selected for special regulation and stocking was discontinued. Anglers were only allowed to fly-fish using artificial flies having barbless hooks and could only harvest one trout per day measuring at least 12 inches. Fishing was permitted from 5 a.m. to 9 p.m. except during the statewide pre-season closure period. This regulation was evaluated over a three-year period using a manned creel survey to estimate angler utilization and harvest (Soldwedel and Pyle 1977). Electrofishing surveys to monitor the trout population status were also conducted during the spring, summer, and

fall. A nearby stretch of Spruce Run Creek, a trout-stocked water, was used as a control in the study.

This study showed the growth of wild brown trout compared favorably to the growth rates of hatchery brown trout. Influxes of brown trout stocked from Spruce Run Reservoir occurred during the summer (because of poor water quality conditions in the reservoir) and late fall (for spawning purposes). Although the Mulhockaway Creek Natural Trout Fishing Area was used less frequently by anglers during the spring than Spruce Run Creek, the remainder of the year it was more heavily used by anglers. Angler catch rates for the Natural Trout Area, over the entire study period, were lower than on Spruce Run Creek (0.19 and 0.48 trout per hour, respectively). For the period June through November the catch rates were slightly greater on Mulhockaway Creek than Spruce Run Creek (0.23 and 0.20 trout per hour. respectively).

The low overall catch rate from the Mulhockaway Creek Natural Trout Area was considered the sole detracting point of the special regulation and appeared to be most likely related to the low susceptibility of the wild brown trout to angling. It was suggested that the catch rate might be increased, without jeopardizing the trout population, by liberalizing the gear restriction so as to permit the use of any barbless, single hook, artificial lure and by physically improving the area to increase trout holding capacity and angler access.

In 1979 a 3.3 mile section of Van Campens Brook (Warren County), from the powerline at the Watergate recreation area downstream to the Delaware River, was included under this regulation. Although trout stocking was discontinued in the special regulation stretch, stocking continued further upstream. Anglers were allowed to use artificial flies and lures having a single pointed barbless hook. A ten-inch minimum size was instituted for trout on Van Campens Brook, which was inhabited by reproducing populations of brook, brown, and rainbow trout. In 1982 the single barbless hook requirement was dropped and in 1984 the special regulation area on Mulhockaway Creek was dropped. In 1985 the entire length of Van Campens Brook was designated a *Natural Trout Fishing Area* and trout stocking ceased. Fishing and the harvest of trout were permitted year round.

In the late 1960's and early 1970's the DFW had identified over 100 trout production streams and tributaries statewide. The DFW fought hard for, and by the early 1980's achieved, recognition of the fragile nature and needs of the state's natural trout reproduction waters in the planning and regulatory programs of other NJDEP agencies. Yet, as of 1989 only one of these streams, Van Campens Brook, was being managed under a special fishing regulation designed to provide an attractive angling experience while conserving wild trout. In 1990, as part of a major adjustment to the DFW's coldwater fisheries management programs, the existing *Natural Trout Fishing Area* regulation was replaced with a new regulation called *Wild Trout Streams*. Twenty-nine streams (or stream sections) which had reproducing trout populations were selected for inclusion under this newly created regulation. Selection was loosely based upon a stream's ability to support a quality fishery for wild trout. A good geographic distribution of trout production streams across north Jersey was also a factor since increasing public awareness

and recognition of these waters was considered important. A number of the streams selected had been traditionally stocked with cultured trout and this practice was discontinued.

Fishing was permitted year round in designated streams with harvest allowed from opening day in April through September 15th. The reduced creel limit (two trout per day), coupled with a minimum harvestable size (seven inches), harvest season, and gear restrictions (artificials only) were intended to allow for a reasonable use while protecting the population from over harvest. A higher minimum size was imposed on several streams (Van Campens Brook and the Pequannock River stretch) because of good brown trout growth rates. In 1992 the use of scented or natural baits was banned to further minimize hooking mortality. Also the 12 inch minimum size for Van Campens Brook and the Pequannock River was modified to apply only to brown trout.

Over the years the following streams have been added to this program when supported by biological data: Indian Grove Brook and the headwaters of the Passaic River (1992), lower Merrill Creek (1996), Dunnfield Creek (1997), portions of Jackson Brook, Saddle River and Whippany River (2004).

Current Status:

Currently there are 35 streams (or portions thereof), flowing through both publicly and privately owned lands, that are regulated as *Wild Trout Streams* (Figure 14). This figure represents 20 percent of the streams that have been identified as having reproducing trout populations. Private ownership can and does limit the ability of an angler to legally access some of these streams. Angling activity on most of the *Wild Trout Streams* is believed to be low with the majority of anglers practicing catch-and-release fishing.

Opportunity – Management goals and measurable objectives, and evaluation procedures need to be established for streams governed by the *Wild Trout Stream* regulation. This information would assist managers in evaluating regulation success on individual waters and justify management decisions.

Opportunity – There are approximately 140 additional trout production streams that could potentially be included under this regulation. Specific criteria, which would assist managers in selecting additional trout production streams for inclusion under the *Wild Trout Stream* regulation, need to be established.

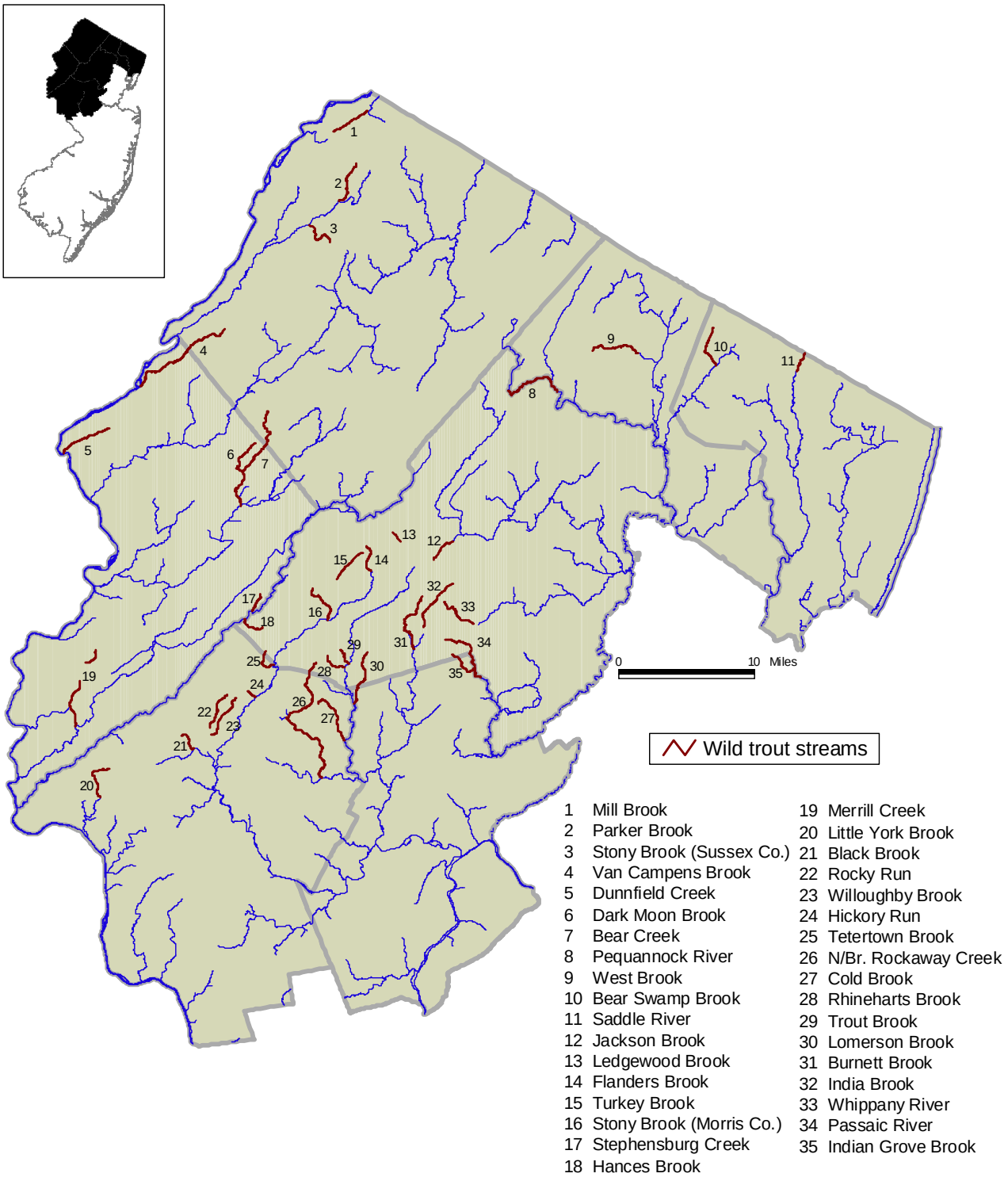

FIGURE 14.— New Jersey streams designated as *Wild Trout Streams*, in 2005.

Year Round Trout Conservation Area Regulation

<table>
<tr><th colspan="4">2005 YEAR ROUND TROUT CONSERVATION AREA REGULATION -</th></tr>
<tr><th>SEASON</th><th>MINIMUM SIZE</th><th>DAILY LIMIT</th><th>RESTRICTIONS (in effect year round)</th></tr>
<tr><td>January 1 though March 20</td><td>15 inches</td><td>1</td><td rowspan="3">1) Only artificial lures may be used.
2) Possession or use of bait (live or preserved) or any substance (natural or synthetic) that contains a concentration of bait scent is prohibited.
3) Fishing is permitted during the in-season stocking closures, which apply to the river. All trout caught during these periods must be immediately released.</td></tr>
<tr><td>March 21 to Opening Day at 8 a.m.</td><td colspan="2">Catch & Release Only</td></tr>
<tr><td>Opening Day at 8 a.m. through Dec. 31</td><td>15 inches</td><td>1 (see #3)</td></tr>
<tr><td colspan="4">Paulinskill River, E/Br. (Sussex County) – from the Limecrest railroad spur bridge downstream to its confluence with the W/Br. Paulinskill at Warbasse Jct. (approx. 2.25 miles)
Raritan River, S/Br. (Hunterdon County) – the stretch of water known as the Ken Lockwood Gorge, a distance of approximately 2.5 miles
Raritan River, S/Br. (Morris County) – a section of river, known locally as the Claremont Stretch, extending from the downstream end of the posted Anglers Anonymous property downstream to its junction with Electric Brook (approximately 1.1 miles)
Toms River (Ocean County) – the downstream end of Riverwood Pk. in Dover Twp., defined by markers, downstream to the Rt. 571 bridge (approximately 1 mile)</td></tr>
</table>

Background:

As part of a broad effort to address changing angler attitudes and trout resources, the *Year Round Trout Conservation Area* (YTCA) regulation was adopted in 1990 to provide an alternative to traditional put-and-take trout fisheries. The regulation was designed to exploit the potential of a stream's trout carrying capacity, while recognizing the need for periodic stocking of catchable trout to maintain high angling quality. The regulation allowed anglers to fish year round with artificial lures only, and retain one trout 15 inches or greater per day, except during the traditional 3 week pre-season period and in-season stocking closures all trout caught had to be immediately released. Stocking was curtailed in the spring, with catchable trout (averaging 10.5 inches) stocked once pre-season and twice in-season (Weeks 3 and 7). Stream selection was based upon a stream's ability to support a quality year round trout fishery under restrictive regulations. Streams were to have the capacity to carry a substantial number of trout, with little or no loss in condition of the fish. Only superior trout maintenance or proven trout production streams would be considered for this regulation.

Originally 6 stream sections were proposed for inclusion under this regulation: Toms River (Rt. 70 bridge downstream to Rt. 571 bridge), Paulinskill River (Limecrest to Lafayette), Black River (Hacklebarney State Park), Big Flat Brook (Rt. 206 bridge downstream to Roy bridge), S/Br. Raritan River (Ken Lockwood Gorge), and Pequest River (RR bridge above Hatchery Rd. bridge downstream to Pequest-Furnace Rd. bridge).

However, in response to angler opposition to this regulatory change for several streams (in particular the Big Flat Brook and S/Br. Raritan River, which were regulated as *Fly Fishing Only Areas* at the time) the original proposal was scaled back. Only sections of the E/Br. Paulinskill River and a shortened Toms River stretch (2¼ miles and ½ mile, respectively) were initially adopted. In 1992 a prohibition banning the use of scented or natural baits was added to further minimize hooking mortality and the Toms River stretch was lengthened to 1 mile.

The Claremont stretch of the S/Br. Raritan River (1.1 miles) was added in 1995 and stocking was discontinued in this stretch to allow the existing wild brook and brown trout populations to provide a fishery. In 2002, another section of the S/Br. Raritan River, known as the Ken Lockwood Gorge (2.5 miles) was also designated a YTCA. Both of these regulatory changes were controversial when first proposed. In particular the change for the Gorge, which had been regulated as a *Fly Fishing Only Area*, was hotly debated. Anglers concerned about losing the nearly exclusive fly fishing only privileges in the Gorge voiced opposition, while others (Trout Unlimited and the Hunterdon County Federation of Sportsmen's Clubs) supported the change.

Current Status:

Four stream segments, encompassing almost nine miles of stream, are currently covered by the *Year Round Trout Conservation Area* regulation (Figure 15). These areas are considered primarily catch-and-release fisheries because of the low daily creel limit (1 per day, except no harvest allowed during the pre-season and in-season closures) and high minimum harvestable size of 15 inches. In the spring these stream sections are stocked with catchable trout less frequently than the stream as a whole (three, rather than eight times). The first spring stocking (brook trout)is done as early as possible during the pre-season period to provide a quality angling experience at a time when trout fishing opportunities are limited. The next two stockings occur in-season, Week 3 (rainbows) and Week 7 (browns).

Opportunity – Management goals and measurable objectives need to be established for streams governed by the *Year Round Trout Conservation Area* regulation. This information would assist managers in evaluating regulation success on designated waters and justify management decisions.

Opportunity – Other trout maintenance and trout production streams that support trout year round may be suitable for inclusion under this regulation. In particular the section of the Musconetcong River currently regulated as a *Seasonal Trout Conservation Area* may warrant further consideration. Specific criteria, which would assist managers in selecting additional stream segments for inclusion under the *Year Round Trout Conservation Area* regulation, need to be established.

Opportunity – Determine if current regulations on designated *Seasonal* and *Year Round Trout Conservation Areas* waters provide appropriate protection for these popular recreational areas.

Opportunity - The Claremont stretch on the S/Br. Raritan River supports a reproducing brook and brown trout population. Existing data should be re-examined to determine if it would be more appropriately regulated as a *Wild Trout Stream*.

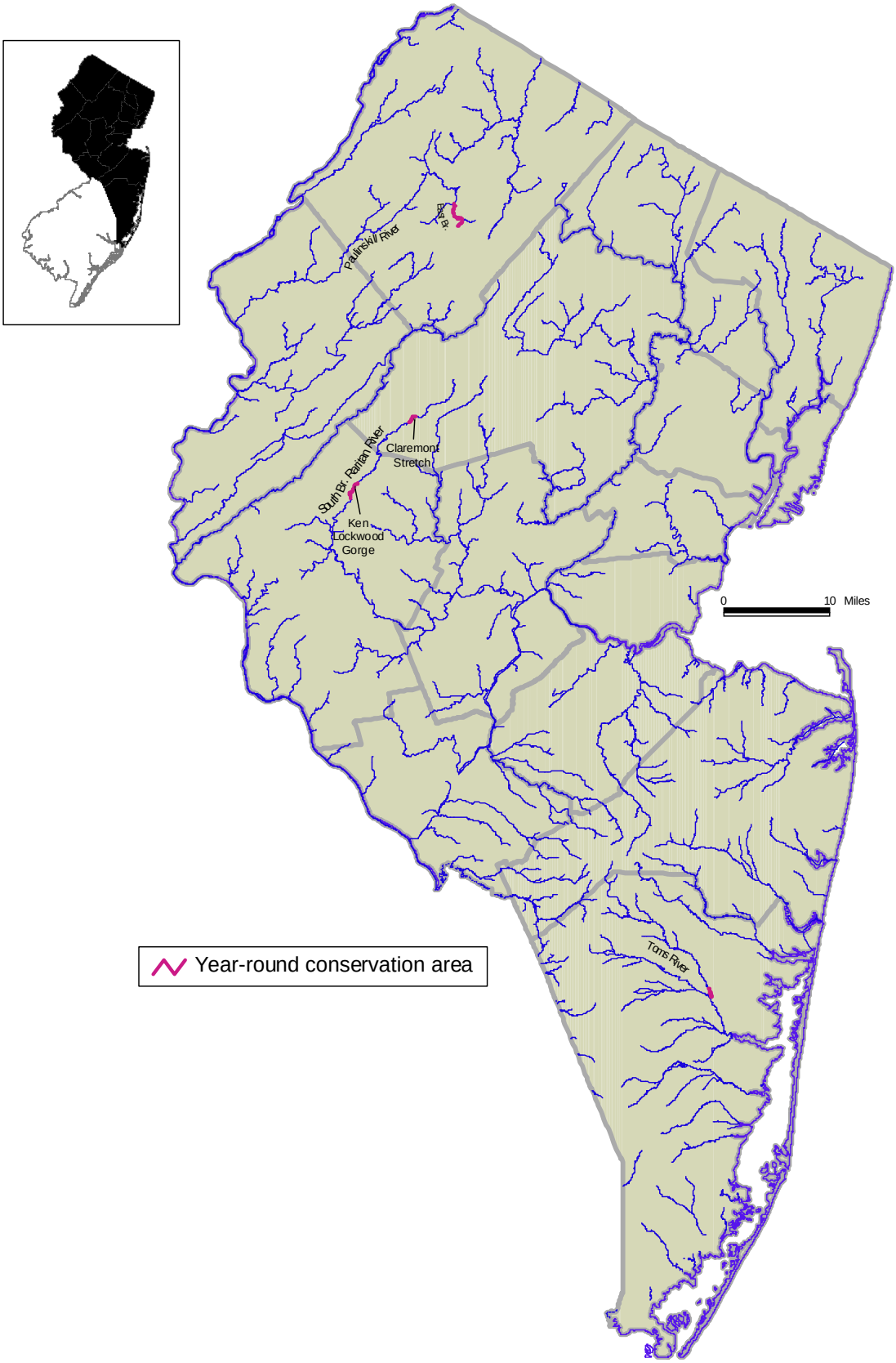

FIGURE 15.— New Jersey streams designated as Year Round Trout Conservation Areas, in 2005

Seasonal Trout Conservation Area Regulation

<table>
<tr><th colspan="4">2005 SEASONAL TROUT CONSERVATION AREA REGULATION</th></tr>
<tr><th>SEASON</th><th>MINIMUM SIZE</th><th>DAILY LIMIT</th><th>RESTRICTIONS</th></tr>
<tr><td>January 1 though March 20</td><td>15 inches</td><td>1</td><td rowspan="4">1) Only artificial lures may be used.
2) Possession or use of bait (live or preserved) or any substance (natural or synthetic) that contains a concentration of bait scent is prohibited.
3) Pequest River – fishing is not permitted during the first six in- season stocking closure dates. Fishing is permitted during the last in-season stocking closure date (May 27), but all trout caught between 5 a.m. and 5 p.m. must be immediately released.</td></tr>
<tr><td>March 21 to April 8.</td><td colspan="2">Catch & Release Only</td></tr>
<tr><td>Opening Day (12:01 a.m. to 8 a.m.)</td><td colspan="2">Fishing Prohibited</td></tr>
<tr><td>Opening Day at 8 a.m. through May 22
Gear restrictions do not apply</td><td>7 inches</td><td>6</td></tr>
<tr><td>May 23 through December 31</td><td>15 inches</td><td>1</td><td></td></tr>
<tr><td colspan="4">Pequannock River (Morris/Passaic Counties) – Rt. 23 bridge at Smoke Rise downstream to the Rt. 23 bridge at Smith Mills (approximately 1.2 miles)
Pequest River (Warren County) – from the Conrail Railroad bridge located upstream of the Pequest Trout Hatchery Access Rd. downstream to Rt. 625 (Pequest Furnace Rd.) bridge (approximately 1 mile)
Musconetcong River (Hunterdon/Warren Counties) – Penwell Road bridge downstream to the Point Mtn. Road bridge, a distance of approximately 1.2 miles</td></tr>
</table>

Background:

When the Pequest Trout Hatchery was constructed in mid-1980 a ½ mile section of the Pequest River adjacent to the hatchery was selected for regulation as a trout conservation area (TCA). When enacted in 1987, the regulation was in effect from May 30th through October 2nd, and anglers were restricted to using artificial lures and flies and one trout per day 15 inches or greater. The season was intentionally sandwiched between the spring and fall trout stocking periods so as not to impact anglers accustomed to fishing with bait for stocked trout in this stretch.

In 1989 it was proposed that the Pequest River stretch be switched over to the newly proposed year round regulation. Sections of the following four waters were also recommended for the seasonal category: Manasquan River (RR bridge in Howell Twp, downstream to I-195 bridge), Musconetcong River (Stephens State Park), Wanaque River (Greenwood lake downstream to Monksville Reservoir), and the Rockaway River (Washington Pond downstream to Rt. 46 bridge). These major streams were considered good candidates for this "extended catch" regulation. However, the angling public did not favor these changes and these waters were dropped from consideration and the Pequest River retained its seasonal designation.

Since its initial adoption, the *Seasonal Trout Conservation Area* (STCA) regulation and designated waters have been modified several times. In 1991 the length of the Pequest River stretch was doubled to 1 mile and the season was substantially lengthened to include

the last week of the spring stocking season all the way to the pre-season closure the following March. This change effectively protected the catchable trout stocked during Week 7 of the spring stocking period and in the fall, from immediate harvest, thereby affording anglers with a more sustainable fishery. A 1.2 mile stretch of the Pequannock River was added in 1992.

The next regulatory change did not occur until 2000, when catch-and-release fishing (with gear restrictions) was allowed during the pre-season stocking closure. This change gave anglers more opportunities to fish for trout at a time of year when most trout-stocked streams were closed to fishing. In 2002 a 1.2 mile stretch of the Musconetcong River near Point Mountain was added when thermal studies indicated this stretch could hold trout year round. The *No Kill* regulation (year round catch-and-release fly fishing with single hook, barbless artificial flies), located further upstream near Hackettstown, was eliminated when the same study indicated water temperatures there frequently exceeded levels that were stressful and lethal to trout.

Current Status:

Three stream sections, encompassing 3.4 total stream miles are currently designated under the *Seasonal Trout Conservation* Area regulation (Figure 16). This seasonal regulation allows anglers to fish without gear restrictions on opening day and the following six weeks. Therefore, anglers who fish with bait, and those who enjoy creeling trout, are not displaced during this six-week period, when trout fishing is most popular. Thereafter only artificial flies and lures may be used (no artificial bait scent allowed). Trout are stocked weekly in the spring on two rivers (Musconetcong and Pequest) that are also designated with closed in-season stocking dates, and less frequently on the Pequannock River (six times in-season).

These stream sections may also be fished during the three weeks prior to opening day (gear restrictions and catch-and-release regulations apply). They are stocked as early as possible during the pre-season period to provide an attractive fishery and to increase participation at a time when most other trout-stocked waters are closed to angling. The Musconetcong and Pequest Rivers are also stocked with catchable rainbow trout in the fall. The Pequannock is not stocked with brown trout because of an existing wild brown trout population.

Opportunity – Management goals and measurable objectives need to be established for streams governed by the *Seasonal Trout Conservation Area* regulation. This information would assist managers in evaluating regulation success on designated waters and justify management decisions.

Opportunity – Other trout maintenance and trout production streams that support trout year round may be suitable for inclusion under this regulation. Specific criteria, which would assist managers in selecting additional stream segments for inclusion under the *Seasonal Trout Conservation Area* regulation, need to be established.

Opportunity – The daily creel limit in effect on opening day and six weeks thereafter is currently six per day on waters designated *Seasonal Trout Conservation Area* waters. A reduced creel limit during this period should be considered to improve trout availability during the remainder of the year when special regulations are in effect.

Opportunity – There is speculation that few trout attain the 15-inch minimum harvestable size on designated *Seasonal Trout Conservation Area* waters. Data should be collected that would assist managers in evaluating and determining if a lower minimum size would be appropriate.

Opportunity – The Pequest River stretch consistently harbors large trout (which probably escape from the hatchery but continue to linger because of the hatchery discharge to the Pequest), particularly in the fall. This situation may present a unique opportunity for development of a management strategy that would capitalize on this fishery.

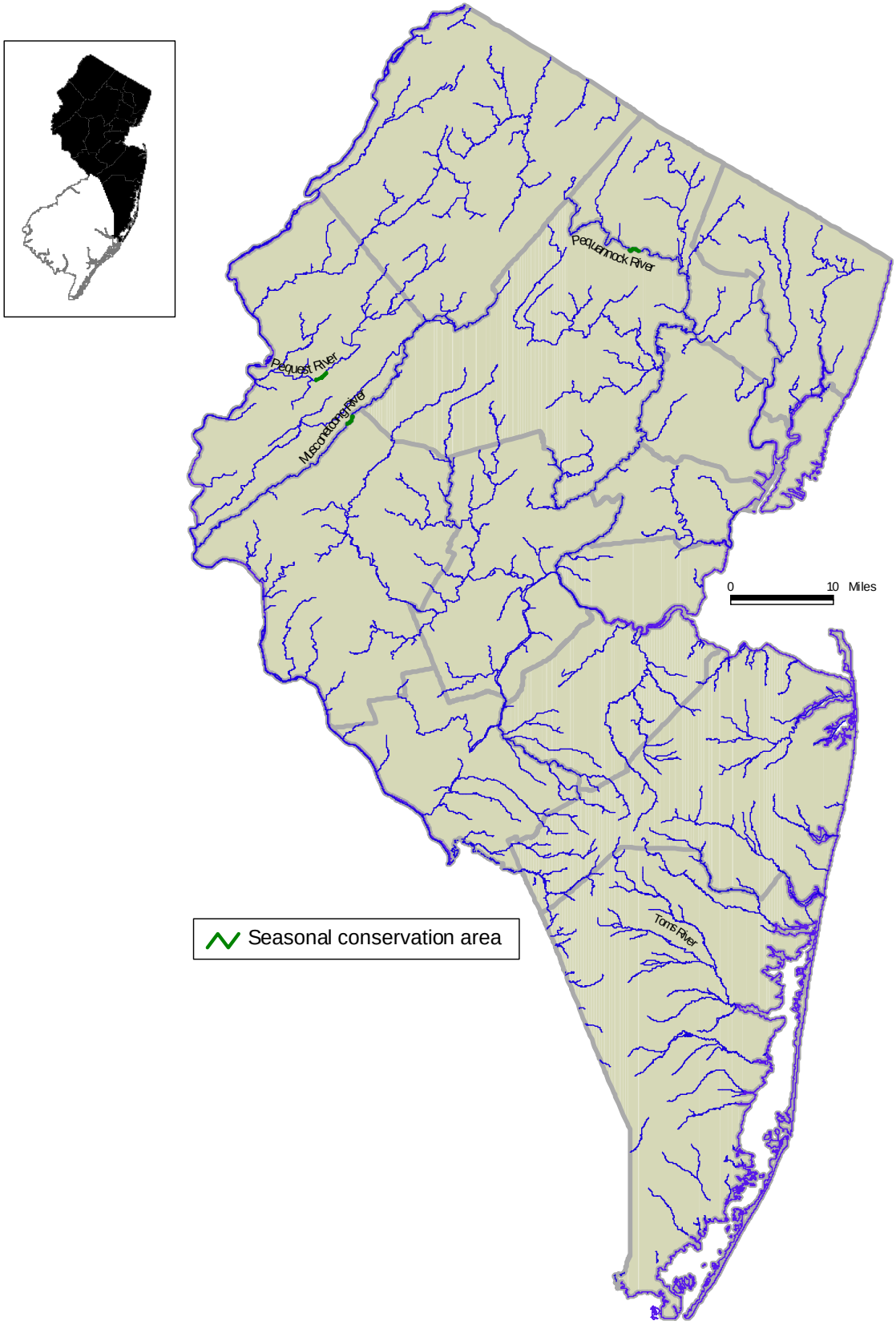

FIGURE 16.— New Jersey streams designated as *Seasonal Trout Conservation Areas*, in 2005.

Fly Fishing Only Area Regulation

<table>
<tr><th colspan="4">2005 FLY FISHING ONLY AREA REGULATION</th></tr>
<tr><th>SEASON</th><th>MINIMUM SIZE</th><th>DAILY LIMIT</th><th>RESTRICTIONS</th></tr>
<tr><td>January 1 through March 20</td><td>7 inches</td><td>4</td><td rowspan="5">1) Only artificial flies are allowed, which are expressly limited to dry flies, wet flies, bucktails, nymphs and streamers. Expressly prohibited are metal, plastic, or wooden lures, plugs, spinners, and flies with spinners attached or any multiple hooked device.
2) Possession or use of bait (live or preserved) or any substance (natural or synthetic) that contains a concentration of bait scent is prohibited.
3) Fishing is not permitted from 5 a.m. to 5 p.m. during the in-season stocking closures</td></tr>
<tr><td>March 21 to Opening Day at 8 a.m.</td><td colspan="2">Fishing prohibited</td></tr>
<tr><td>Opening Day at 8 a.m. to April 18 at 5 a.m.
Gear restrictions do not apply except on Blewett Tract</td><td>7 inches</td><td>6</td></tr>
<tr><td>April 18 at 5 a.m. through May 31</td><td>7 inches</td><td>6</td></tr>
<tr><td>June 1 through December 31</td><td>7 inches</td><td>4</td></tr>
<tr><td colspan="4">Big Flat Brook (Sussex County) – Rt. 206 bridge downstream to the Roy bridge on Mountain Rd., a distance of approximately 4 miles, except that portion known as the Blewett Tract
Blewett Tract (Sussex County) – a 0.5 mile portion on the Big Flat Brook clearly defined by markers, which extends from the Three Bridges Rd. to a point upstream of the jct. of the Big Flat Bk. And Little Flat Bk.</td></tr>
</table>

Background:

This regulation was established more than 40 years ago, presumably in response to public demand for fly fishing locations. Over the years a number of streams had sections designated as Fly Fishing Only, including the Rahway River, Paulinskill River, Musconetcong River, Flatbrook, and S/Br. Raritan River. One trout-stocked lake, Lake Wapalanne, was also included under this regulation for one year (1966). Originally the regulation specified that only fly fishing would be allowed for about a six month period that began 30 days after opening day in April (the first or second Monday in May) and ended on November 30th. Anglers could use only artificial flies (bait was prohibited) during this period and creel six trout daily. At other times of the year anglers were allowed to fish with spinning gear and bait and harvest six trout daily (fishing was not allowed during the pre-season closure).

Several of the designated fly fishing waters had additional restrictions related to season, creel limits, and gear. Until dropped from this regulation in the late 1960's the Paulinskill River had several sections designated for fly fishing only year round (a one mile stretch below Paulinskill Lake and the Emmons property, a 1¼ mile stretch upstream of Fredon-Stillwater Road). Another notable exception was a short, ½ mile stretch of the Big Flat Brook known as the "Blewett Tract." The owner of this property (Mr. Blewett) allowed people to fish provided they always used fly fishing gear. When the property was sold to the federal government in the early 1960's this tradition was continued by specifying in the Fish Code that this stretch would be regulated as fly fishing only year round. Lake Wapalanne was also designated fly fishing only year round. These year-round exceptions did stipulate that fishing was not permitted during the spring pre-season and in-season

closures that applied to the river as a whole. Restrictions on daily creel limits and gear came into play during the 1960's. Several waters were designated "no-kill" (all trout caught must be returned to the water unharmed), including the Paulinskill River stretches, Lake Wapalanne, and a one mile stretch on the Musconetcong River near Hackettstown (in 1965). The use of barbless hooks also became a requirement on the no-kill waters in the 1960's.

In 1970 the fly fishing stretches on the Paulinskill River were dropped from the regulation. A section of the Rahway River in a Union County Park (a half mile stretch, from Wall Street to Oceola Falls) was briefly included under the Fly Fishing Only regulation but was dropped after 1970. Over the next three decades, until 2002, three streams retained this special regulation – the Flatbrook (Rt. 206 bridge downstream to the end of the Roy Tract, including the Blewett Tract), the S/Br. Raritan River (Ken Lockwood Gorge), and the Musconetcong River (Schooley's Mountain Road bridge downstream). The year round fly fishing requirement also continued on both the Blewett Tract (closed to fishing during the pre-season period) and the no-kill stretch on the Musconetcong River.

The fly fishing period was gradually lengthened, by increments of one week, over the 1960's and 1970's by moving the start date closer to opening day. By 1974 the fly fishing only period, that once began 30 days after opening day, went into effect nine days after opening day. The fly fishing period was further increased in 1993, when the ending date was extended from November 30th through the winter to mid-March (coinciding with the start of the pre-season closure). The only times of year that an angler could fish (on the Flatbrook and S/Br. Raritan River fly stretches) with conventional spinning gear, lures, or bait was during a ten-day period commencing with opening day. In the late 1970's the statewide daily creel limit was reduced from six to four trout daily after May 31st, and this change was also applied to the fly fishing waters (except on the no-kill Musconetcong River stretch).

In 2002 two significant and controversial changes occurred when two waters were removed from the *Fly Fishing Only* regulation. The no-kill stretch of the Musconetcong River was dropped when a water temperature study on the river indicated temperatures stressful and lethal to trout frequently occurred in the no-kill stretch during the summer. To counter this change a downstream section of the river near Point Mountain, which had summer water temperatures favorable for trout, was designated a *Seasonal Trout Conservation Area*. The Ken Lockwood Gorge (S/Br. Raritan River) was also dropped from this regulation as a result of public input and incorporated into the *Year Round Trout Conservation Area* regulations.

Current Status:

Since 2002 only the Big Flatbrook section (four miles), which includes the ½ mile Blewett Tract stretch, has been retained under the *Fly Fishing Only Area* regulation (Figure 17). The statewide general regulations, with respect to minimum size and daily creel, apply (six per day from opening day through May 31st, and four daily thereafter, closed to fishing the three weeks prior to opening day). On opening day, and the next eight days thereafter, there are no gear restrictions, except on the Blewett Tract. The remainder of

the year anglers may only use fly fishing equipment and artificial flies (no bait scent). The stream is stocked weekly during the seven weeks following opening day and is closed to fishing on the scheduled stocking dates (*see Trout Stocked Waters with Closed In-Season Stocking Dates*

The Fly Fishing Only regulation is considered to be socially (not biologically) based because differences in hooking mortality between flies and lures is insignificant. Therefore, restricting anglers to fly fishing gear may not be necessary to achieve biologically based fisheries management objectives. However, the *Fly Fishing Only* regulation may attract more anglers or result in more angler effort than if another regulation were applied.

Opportunity – Management goals and measurable objectives need to be established for streams governed by the *Fly Fishing Only* regulation. This information would assist managers in evaluating regulation success on designated waters and justify management decisions.

Opportunity – The desirability and suitability of continuing the *Fly Fishing Only* regulation should be explored. It is possible that another special regulation (*Seasonal* or *Year Round Trout Conservation Area*, or a *Wild Trout Stream*) might be appropriate. Angler preferences and the need to provide fly fishing anglers with adequate spatial segregation from other types of anglers are factors that should also be taken into consideration.

Opportunity – The Blewett Tract (0.5 miles long) is located within the *Fly Fishing Only* stretch of the Big Flatbrook and is currently singled out for gear restrictions year round. The benefit of having this gear exclusion applicable to a half mile section of the brook for the first 9 days of the spring season is questionable. Consideration should be given to modifying the Blewett Tract regulation to be consistent with the *Fly Fishing Only* regulation on the adjacent sections of the Big Flatbrook.

Opportunity – Trout anglers periodically request that additional streams be regulated as fly fishing only based upon their perception that fish mortality will be reduced. Anglers, particularly those who fly fish for trout, should be made aware of hooking mortality studies that demonstrate that mortality differences between lures and flies is insignificant and the basis for the *Fly Fishing Only* regulation is social not biological.

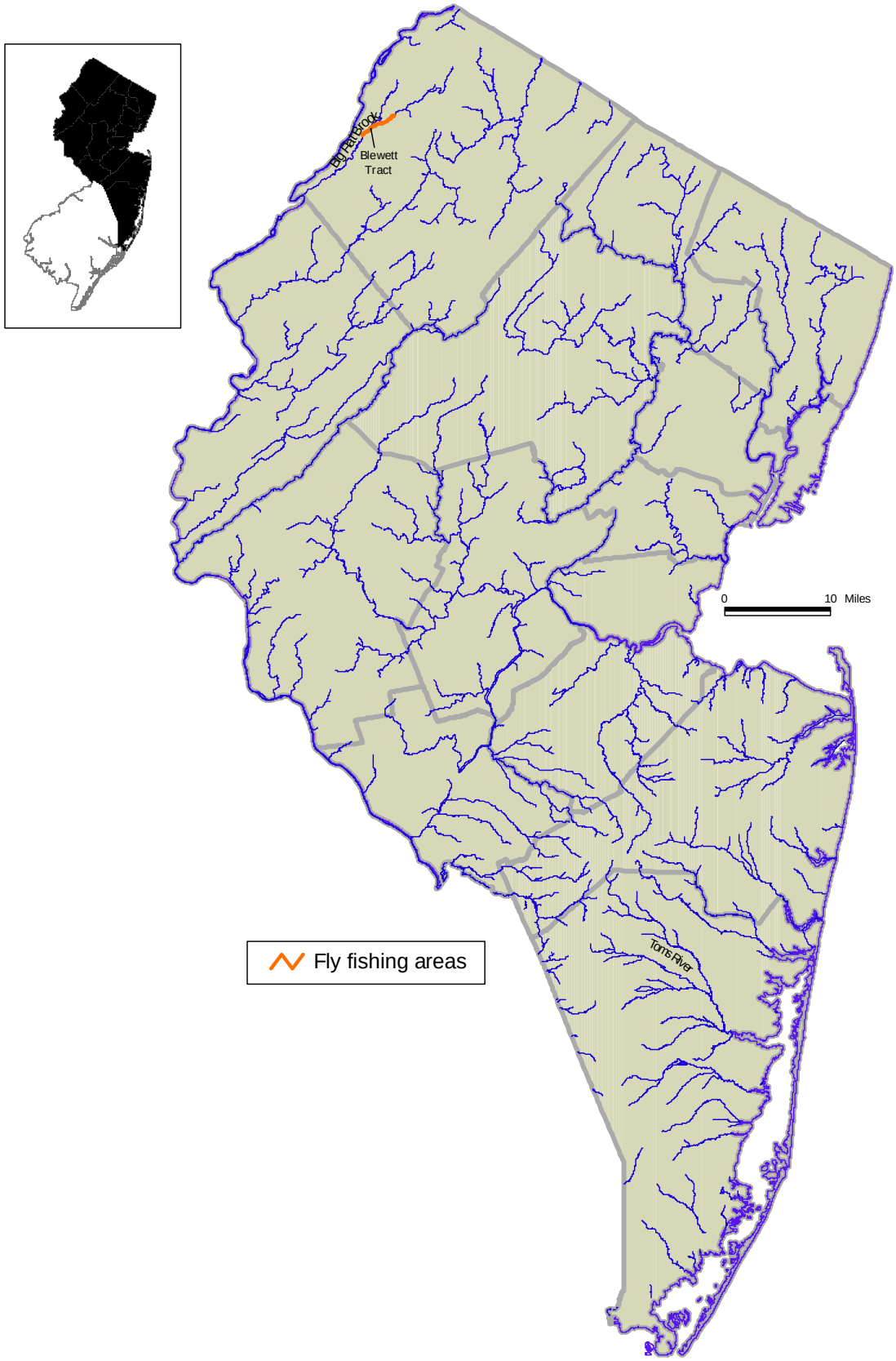

FIGURE 17.— New Jersey streams designated as *Fly Fishing Only Areas*, in 2005.

Trophy Trout Lake Regulation

TROPHY TROUT LAKES REGULATION				
LOCATIONS	**SPECIES**	**SEASON**	**MINIMUM SIZE**	**DAILY LIMIT**
Merrill Creek Reservoir	brown & rainbow trout	January 1 through December 31	15 inches	2
	lake trout	January 1 through September 15 & December 1 through December 31	15 inches	2
Round Valley Reservoir	brown & rainbow trout	January 1 through December 31	15 inches	2
	lake trout	January 1 through September 15 & December 1 through December 31	20 inches	1

Background:

In 1982 special regulations for trout were instituted at Round Valley Reservoir in response to the introduction of lake trout and the excellent fishery for holdover brown and rainbow trout. Initially a 13-inch minimum size, daily limit of two, with no closed season was established for brown and rainbow trout. Anglers were allowed to harvest lake trout, from "opening day" in April through the end of September, and could creel one laker per day, at least 26 inches in size. The season was designed to protect mature adult fish as they congregated over spawning grounds during the fall/early winter spawning period. The minimum size was based upon survey data that indicated 1½ year classes of spawning age lake trout would be protected from harvest.

In 1983 the lake trout minimum size was reduced to 24 inches because of better than expected growth. The harvest period for this species was increased to include the period January through mid-March. The lake trout harvest regulation was modified in 1985 to allow anglers to keep three fish (two measuring 18 – 22 inches and one at least 28 inches) to encourage the removal of an overly abundant year class that was dominating the population. In 1986 the lake trout regulation returned to the 24-inch minimum length, one per day limit.

In 1990 the *Trophy Trout Lake* designation was officially adopted under the Fish Code for Round Valley Reservoir. The minimum size for brown and rainbow trout was increased to 15 inches following a study on growth rates which showed that this increase would prevent catchable trout stocked in the spring from being harvested until after their first summer of growth. Because studies showed that adult lake trout were maturing earlier in the year than originally expected, the closed season was moved to earlier in the fall (September 16th to Nov 30th) to better protect spawning lakers from harvest.

Merrill Creek Reservoir was designated a *Trophy Trout Lake* in 1992 and a 13-inch minimum size (two per day) was established for rainbow trout. Brown trout were not introduced into the reservoir until 1994, at which time the minimum size for brown and rainbow trout was made consistent with Round Valley Reservoir (15 inches). In 1985 Lake Aeroflex (a.k.a. New Wawayanda Lake), a newly acquired public lake, was

designated a *Trophy Trout Lake*. Although the lake had a reputation for producing holdover trout, it was found that deep-water trout habitat was limited in the summer due to anoxic conditions. Lake Aeroflex was subsequently reassigned to the *Holdover Trout Lakes* regulation in 1997.

By 1997 annual studies conducted on the fish population in Merrill Creek Reservoir had begun to reveal poor lake trout growth due to a lack of suitable forage (alewives) and overly abundant year classes of lakers. To improve growth rates (by reducing laker biomass) the size limit on lake trout was reduced from 24 to 15 inches and the daily creel limit was increased from one to two fish in 1998. Similar problems with poor condition of lake trout were also observed at Round Valley and in 2001 the minimum size was lowered to 20 inches.

Current Status:

Two lakes, Round Valley and Merrill Creek Reservoirs, are currently designated under the *Trophy Trout Lake* regulation (Figure 18). Trophy trout lakes are stocked by the DFW with catchable rainbow trout and brown trout (1/3 rainbows, 2/3 browns) and fall fingerling lake trout (Merrill Creek Reservoir only). Lakers have not been stocked in Round Valley Reservoir since 1995 because natural reproduction is sufficient to maintain the population. As part of a cooperative study with the DFW, the Round Valley Trout Association, a local angling club, has stocked Kamloops rainbow trout since 2000 to determine if growth rates of this strain surpass that of the rainbows from the Pequest Hatchery.

Currently the lake trout population is monitored annually in the fall at both reservoirs to document size distribution and reproductive success. In addition the attendants at the boat launch facility at Merrill Creek Reservoir monitor angler catch daily through a creel survey (creel surveys have been conducted in 1999 and 2001 at Round Valley Reservoir). Similar to ongoing studies at Merrill Creek Reservoir, a study of the productivity of Round Valley Reservoir is scheduled to begin in 2004.

Opportunity – Management goals and measurable objectives need to be established for lakes governed by the *Trophy Trout Lakes* regulation. This information would assist managers in evaluating regulation success on designated waters and justify management decisions.

Opportunity – The status of the forage base (alewife) at Merrill Creek Reservoir is a concern. Methods for examining alewife population dynamics, and its relation to primary and secondary productivity, should be explored to determine appropriate management strategies.

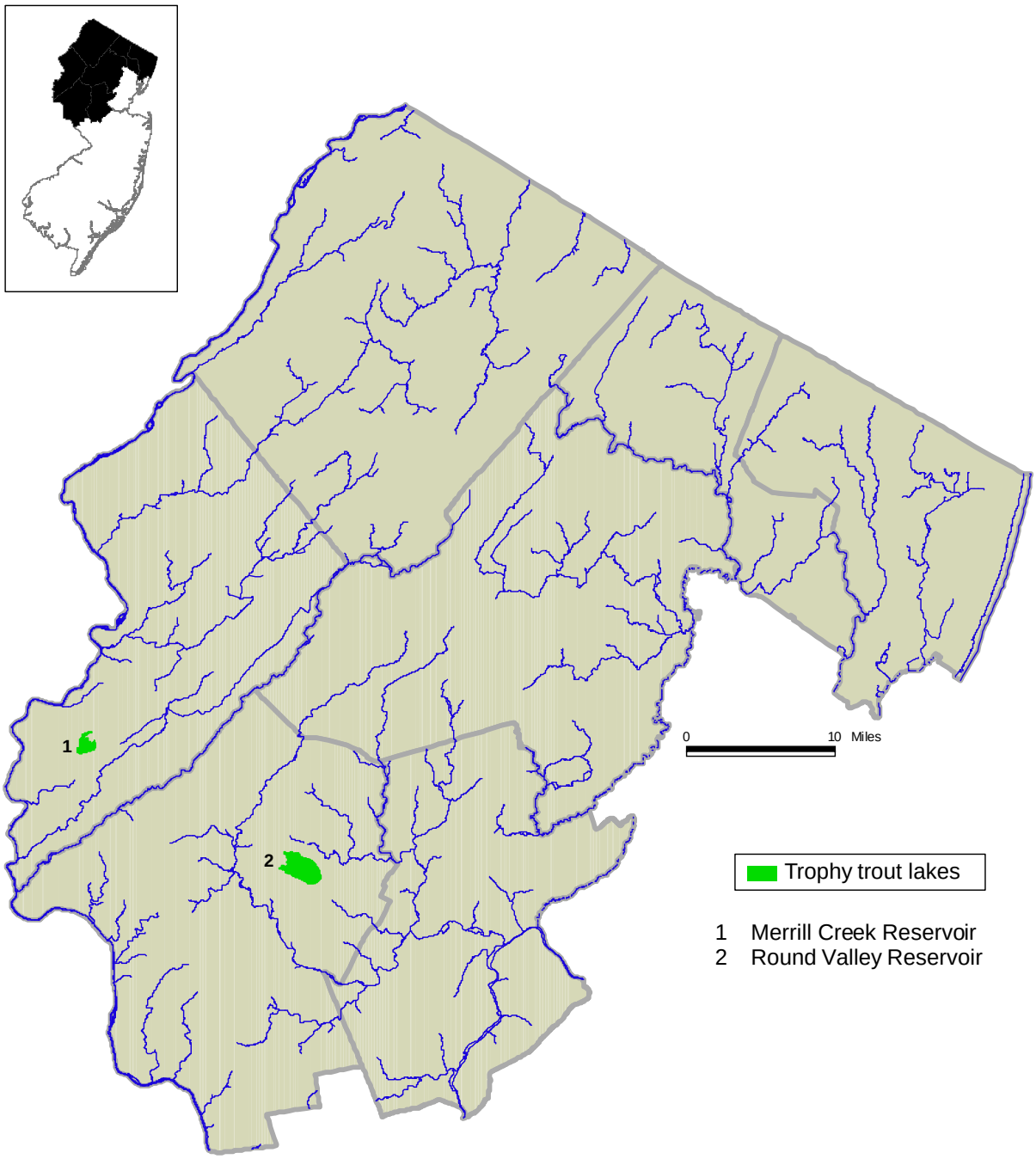

FIGURE 18.— New Jersey lakes designated as *Trophy Trout Lakes* in 2005.

Holdover Trout Lake Regulation

2005 HOLDOVER TROUT LAKE REGULATION -				
LOCATIONS	**SPECIES**	**SEASON**	**MINIMUM SIZE**	**DAILY LIMIT**
Clinton Reservoir Lake Aeroflex Lake Wawayanda Shepherd Lake Swartswood Lake White Lake (Warren Co)	all trout species	January 1 through March 20	7 inches	2
		March 21 to Opening Day at 8 a.m.	Catch & Release Only	
		Opening Day at 8 a.m. through May 31	7 inches	4
		June 1 through December 31	7 inches	2

Background: In 1990 a regulation, called "Major Trout Stocked Lakes," was adopted for seven northern lakes and reservoirs (Canistear Reservoir, Clinton Reservoir, Lake Hopatcong, Merrill Creek Reservoir, Monksville Reservoir, Swartswood Lake, and Lake Wawayanda). This regulation was developed to recognize and manage trout-stocked lakes that provided a good fishery for holdover trout. Under this regulation anglers were allowed to fish these waters year round, however harvest was not permitted during the pre-season period. This regulatory change was first recommended to the Council with a reduced creel limit (four from opening day to May 31st, and two thereafter) and no minimum size (consistent with the statewide general regulation at that time). However, the Fish and Game Council modified this part of the recommendation such that the statewide daily creel limit applied (six from opening day to May 31st, and four thereafter), and no more than two of the trout creeled by an angler could exceed 15 inches. Also, the harvest of lake trout at Merrill Creek Reservoir was limited to one fish daily, 24 inches or greater, with no harvest permitted from September 16th through November 30th.

The first change to this regulation occurred in 1992 when Merrill Creek Reservoir was reassigned to the *Trophy Trout Lake* regulation. In 1994 the *Major Trout Stocked Lakes* regulation was renamed *Holdover Trout Lakes* to more adequately reflect the trout management strategy for these lakes. The size limit restriction was eliminated, and the daily creel limit for the split harvest season was reduced from six to four trout, and from four to two trout. Lake Hopatcong was also removed from this special regulation category because recurring summer water quality problems had negatively impacted the lake's ability to produce holdover trout. One year later Canistear Reservoir was dropped from this regulatory category for similar reasons.

In 1997 a seven-inch minimum size for trout was adopted statewide, and this requirement was also incorporated into the holdover trout lake regulation for consistency. The trout fishery in Lake Aeroflex, formerly regulated as a *Trophy Trout Lake* for two years, was judged better suited for the *Holdover Trout Lake* regulation and was switched in 1997. White Lake (Warren County), a private lake with a reputation for producing big holdover brown trout, was purchased by Warren County in 1997 and was designated a Holdover Trout Lake in 2000. No further changes have been made to this regulation since 2000.

Current Status

Currently there are seven waterbodies covered by the *Holdover Trout Lake* regulation in the northern part of the state (Figure 19). These lakes are stocked annually in the spring with catchable brown and rainbow trout (10 – 11 inches). Generally the first stocking (pre-season) consists of rainbow trout and the next three stockings (Weeks 2, 4, and 6) are brown trout. Swartswood Lake has received all brown trout since 1999. Large brood stock trout are not stocked because the stocked catchable trout are able to survive year round and grow to a large size by foraging upon alewives. Whenever possible the hatchery trout are spread out by float-stocking to maximize their long-term survival.

Temperature and dissolved oxygen profiles are annually conducted at each lake in August to evaluate the extent of summer trout habitat. Reductions in the volume of suitable summer trout habitat have occurred in several lakes over time and as a consequence the holdover trout fishery at some lakes is poor, marginal, or unknown. Predation on stocked trout by coolwater and warmwater fish species may also be a significant problem (i.e. Monksville Reservoir). Good documentation and better communication with stakeholders is needed for lakes that are not providing a successful holdover trout fishery to counter angler resistance to change.

Opportunity – Management goals and measurable objectives need to be established for lakes governed by the *Holdover Trout Lakes* regulation. Evaluation procedures (the collection of data to evaluate lake suitability, regulation effectiveness, and determination of stocking rates) are needed in order to assist managers in evaluating regulation success on individual waters and justify management decisions.

Opportunity – Other lakes that support trout year round may be suitable for inclusion under this regulation. Specific criteria, which would assist managers in selecting additional lakes for inclusion under the *Holdover Trout Lake* regulation, need to be established.

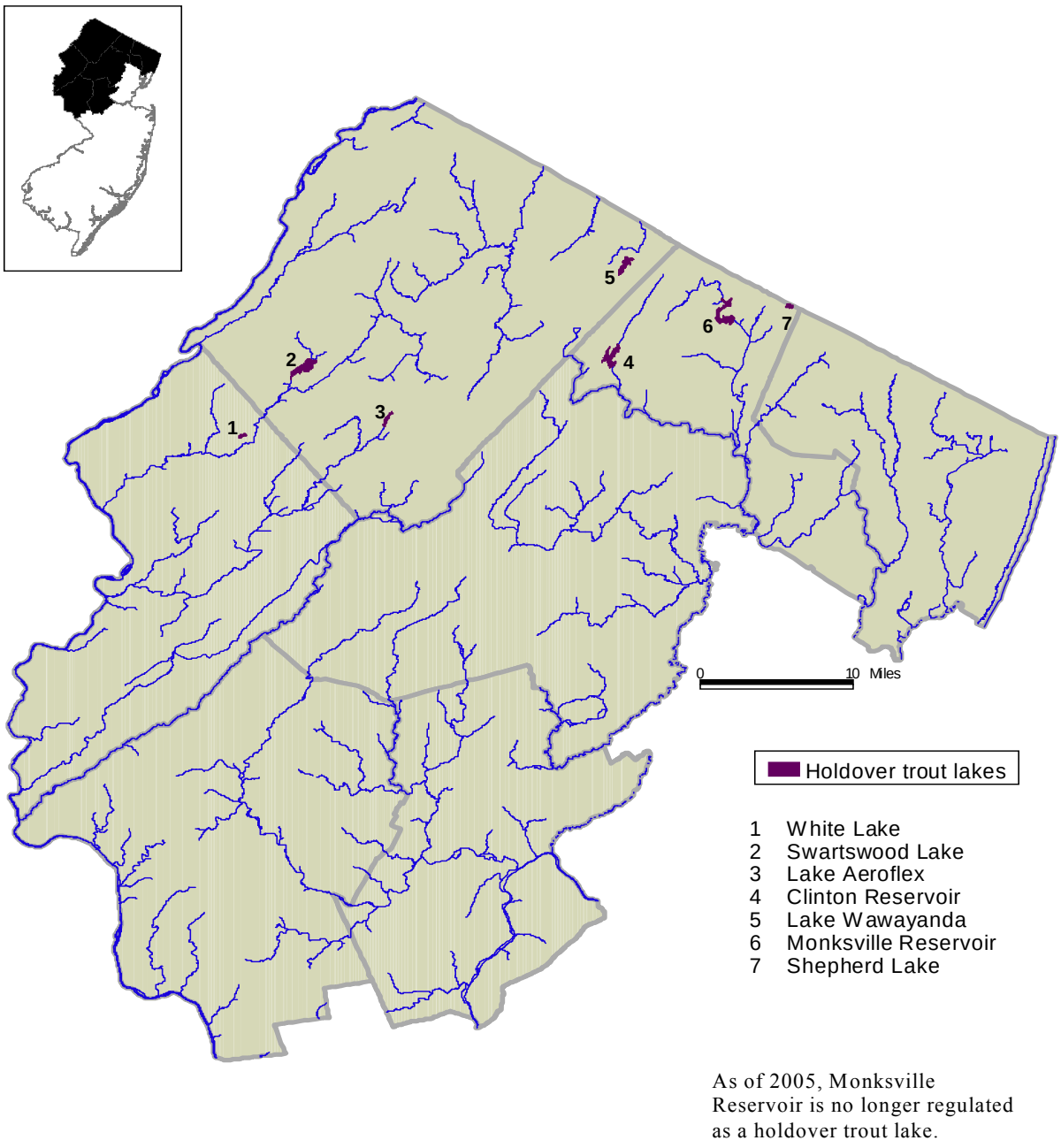

FIGURE 19.— New Jersey waters designated as *Holdover Trout Lakes*, in 2005.

Boundary Waters Regulation

2005 BOUNDARY WATERS REGULATION				
LOCATIONS	**SPECIES**	**SEASON**	**MINIMUM SIZE**	**DAILY LIMIT**
Delaware River (Between NJ and PA)	all trout species	April 16 through September 30 (trout caught at other times must be immediately released)	no min. size	5
Greenwood Lake	all trout species	January 1 through December 31	no min. size	3

Background:

New Jersey and Pennsylvania share the Delaware River and the fishery is co-managed through the Delaware River Fisheries Cooperative (representatives include NY, NJ, PA, and DE state agencies, and the federal government). Between New Jersey and PA, fishing licenses from either state are recognized. The Delaware River, between New Jersey and Pennsylvania, is not stocked with trout by either state.

Greenwood Lake was trout stocked by both New Jersey and New York and produced holdover trout for a number of years until poor summer water conditions caused the demise of the holdover trout fishery. New York discontinued stocking the lake in the early 1990's, and in 1998 New Jersey followed suit after a study documented poor returns of catchable trout stocked in the spring. The trout regulation was left intact to cover the occasional catch of trout that might find their way into the lake. A valid New Jersey or New York fishing license may be used anywhere in the lake.

Current Status:

Two waters, the Delaware River (between New Jersey and Pennsylvania) and Greenwood Lake (between New Jersey and New York) are currently designated as *Boundary Waters* (Figure 20). These waters are not stocked with trout because warm summer water temperatures, the inability to maintain high trout densities through stocking for an attractive put-and-take fishery, and predation of stocked trout by other fishes. However, regulations for trout have been established for these waters to maintain regulatory uniformity, in the event trout are caught. In the Delaware River trout may move in from other areas (further upstream or tributaries).

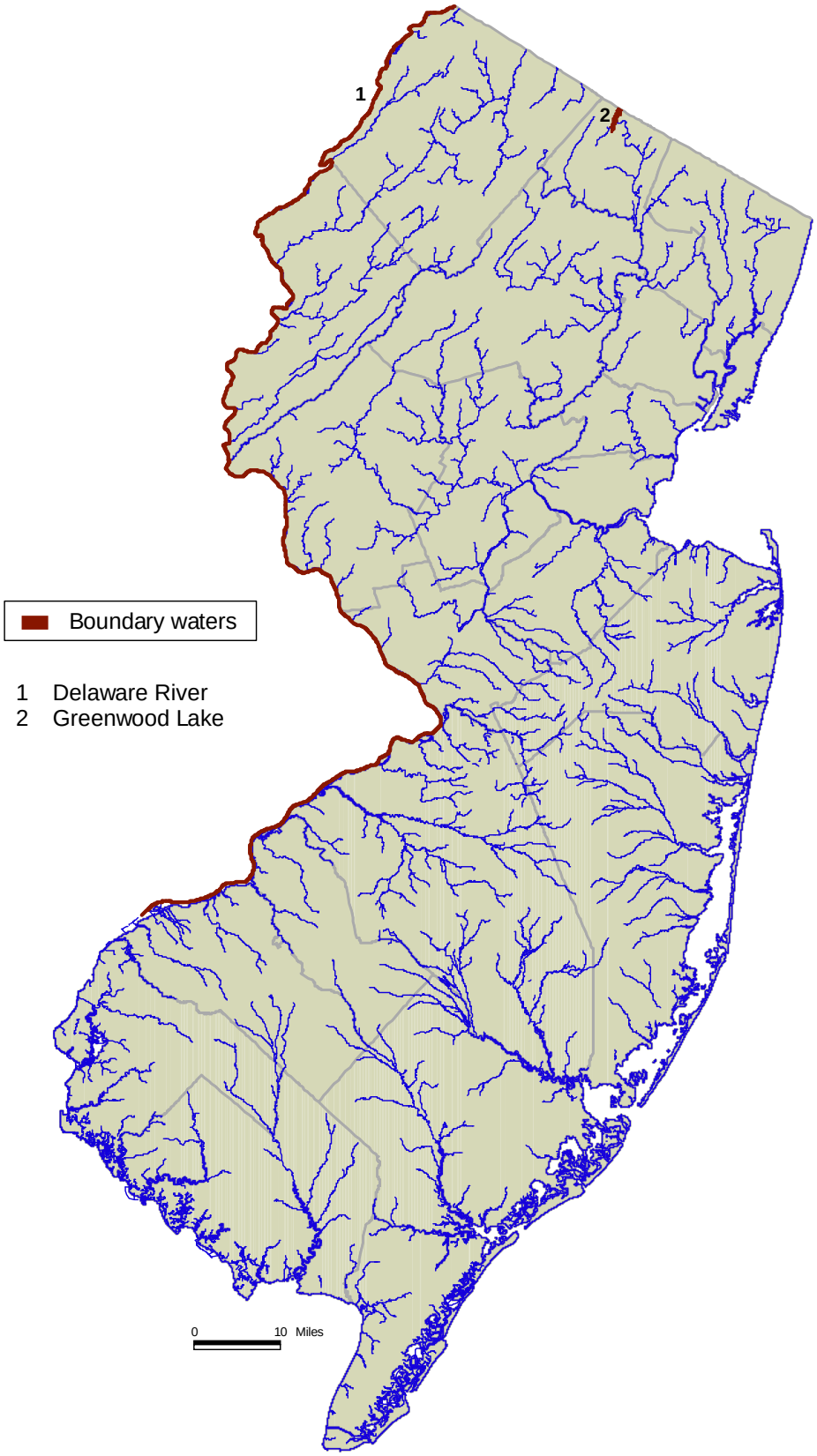

FIGURE 20.— New Jersey waters designated as *Boundary Waters*, in 2005.