

## METHODS FOR MANAGING BOATING VOLUME ON LAKE LURE

### Background

This is an issue of supply and demand and an exercise in demand management. On Lake Lure, boating demand is a reflection of the number of times an individual desires to operate a boat on the lake, at a given time, for a given activity. The lake has a finite supply of boating capacity. Although the capacity is theoretically infinite (you could always squeeze in one more boat), prudent lake management practices would consider the boating capacity as limited...bounded by size, depth profile, available boating time and an established "safe full capacity" level of concurrent boats on the lake. Once the town has determined the lake's full capacity for safe boating (a separate exercise), it must then implement a demand management program. It is inevitable that, over time, the demand for this boating capacity will exceed Lake Lure's safe and desired capacity.

### Managing The Supply

- The geography of the lake is fixed, as is the amount of daylight hours available. You can't make the lake bigger or the days longer. Short of adding lights and allowing nighttime high-speed boating activities, there's not much you can do to create additional acre-hours for the kinds of boating activities in highest demand.
- Boating capacity is measured in acre-hours and is a calculation based on several variables and assumptions. The principal assumption is how much safe boating distance is needed for different kinds of boating activities. Reducing this distance in the calculation will yield a higher boating capacity, with the effect of expanding the supply. In essence, this would be an acknowledgement that more boats, operating together in closer proximity, are acceptable on the lake (either deemed to be safe or representing an acceptable level of risk). Note that this reduction in safe operating distance would be a departure from the figures recommended by the U.S. Coast Guard, EPA, and U.S. Army Corps of Engineers.

### Managing the Demand

Demand is driven by human nature. People are drawn to the beauty and recreation opportunities of the lake and will seek to use boats to enjoy it. There's little that can be done to directly influence how many people wish to use a boat on the lake (and for what purpose). Factors such as the weather, the economy, social and recreational trends will all influence the demand over time; but, the town has little control over them.

- The town can, through its action or inaction, indirectly influence the level of demand. Managing the town and the lake in a way that maintains the attractiveness of its offerings will serve to increase the demand. This is a bit of a paradox...the better job you do at managing, the more demand pressure you'll face because word gets out and more people will want to take part in Lake Lure. Conversely, if mismanagement leads to conditions that negatively impact the experience of residents and visitors, the perceptions of value will diminish and there will be less demand as people look elsewhere for their recreational and residential choices.
- A demand management program is a concerted set of actions that are intended to more closely match the demand with the supply. This could include efforts to increase demand if there is excess supply (e.g.,; encouraging off-season boating or under-used boating activities in order to increase boat permit revenues). More likely, it will be efforts to restrict demand, slow its growth or allocate the supply such that not all demands can be met.
- The table following offers a number of methods for managing demand and allocating limited supply. There are pros and cons to any method and multiple methods could be employed together as part of a comprehensive management program.

Boating Capacity Restriction Methods	Characteristics	Advantages	Disadvantages
Self-restriction	<ul style="list-style-type: none"> <li>▪ No limits on boat permits</li> <li>▪ Development on new lots will expand mooring capacity, but there is an eventual limit on this as well</li> <li>▪ On peak weekends, once the boating activity reaches an overcrowded state, people will stay off of the lake.</li> </ul>	<ul style="list-style-type: none"> <li>▪ No limits or changes</li> </ul>	<ul style="list-style-type: none"> <li>▪ Potentially unsafe boating conditions.</li> <li>▪ Uncertain whether boaters will stay off of lake (e.g., Lake Norman crowds)</li> <li>▪ Potential for Lake Lure to earn reputation as overcrowded and experience diminished property values</li> </ul>
Establish a ceiling on the total number of boat permits issued	<ul style="list-style-type: none"> <li>▪ By Permit Type or Boating Activity</li> <li>▪ Can be adjusted to match usage patterns</li> <li>▪ Current property owners (or boat permit holders) are grandfathered—given perpetual, transferable rights to permits</li> </ul>	<ul style="list-style-type: none"> <li>▪ Offers long-term protection against overcrowding, mitigates risks for all</li> <li>▪ Transferable rights to grandfathered permits become extremely valuable if ceiling is reached.</li> <li>▪ Flexible as community values change</li> </ul>	<ul style="list-style-type: none"> <li>▪ If capacity is reached before all lots have been developed, then the lake is “full” and property owners (existing and future) may feel unduly restricted if they can’t permit a boat. Values of remaining land would likely diminish.</li> </ul>
One permit per household, transferable to multiple boats	<ul style="list-style-type: none"> <li>▪ By owner or property</li> <li>▪ Would need to register all boats that may use permit (to keep boat database accurate)</li> <li>▪ Would fees be based on permit or total number of boats in household?</li> </ul>	<ul style="list-style-type: none"> <li>▪ Prevents use of multiple boats (by same owner) at the same time on the lake</li> <li>▪ Fewer permit stickers to administer</li> </ul>	<ul style="list-style-type: none"> <li>▪ Doesn’t really do much to limit overcrowding due to development growth (new homes, boat moorings and boats)</li> <li>▪ Easier to “lend” permit to someone that hasn’t paid for one (resident or non-resident) resulting in unauthorized boats and lost revenues.</li> </ul>

Boating Capacity Restriction Methods	Characteristics	Advantages	Disadvantages
Establish a ceiling on the total number of boat mooring locations on the lake	<ul style="list-style-type: none"> <li>▪ Ceiling is set using the safe boating capacity model and assumptions of usage patterns. These assumptions will establish a maximum concurrent boating level that is a correlated to the total boats moored.</li> <li>▪ Example: 2,000 moored boats, at current usage patterns, typically generate 10 days per season with overcrowded conditions. The town deems this to be “full”.</li> <li>▪ Existing slips grandfathered</li> <li>▪ New slips limited to 1 or 2 per lot until ceiling is reached, then slips can only be added when others are removed.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Easier to inventory, monitor and control boat slips (through lake structures permitting) than boats permitted or boats in use</li> <li>▪ Sets clear expectations for owners, developers and purchasers of remaining undeveloped land</li> <li>▪ If capacity is reached before all lots have established a boat slip, existing slips become highly valuable.</li> </ul>	<ul style="list-style-type: none"> <li>▪ If capacity is reached before all lots have established a boat slip, then the lake is “full” and property owners (existing and future) may feel unduly restricted if they can’t build a boat mooring. Their property values will likely diminish.</li> <li>▪ For truly effective modeling, there should be a distinction between active slips (with a boat) and inactive slips. Many homes have multiple slips, but only one boat (currently). If we set a limit at 3,000, but 1,000 of them are empty, we could build this into the model, but this assumption could dramatically change over time (leading to overcrowding)</li> </ul>
Limit or Control Growth of Boat Slips	<ul style="list-style-type: none"> <li>▪ Doesn’t put a cap or ceiling on boats or slips, but simply slows growth</li> <li>▪ New slips limited to 1 or 2 per lot</li> <li>▪ A restricted number of new lake structure permits will be approved each year (set by Town Council). First-come, first-serve basis.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Undeveloped land will still have boating potential</li> <li>▪ Fair and equitable</li> <li>▪ If a mooring slip is not yet approved, a new owner may still permit and trailer a boat to enjoy its use while on the waiting list.</li> <li>▪ Reduces the size of new boathouses to avoid an overbuilt aesthetic</li> </ul>	<ul style="list-style-type: none"> <li>▪ May accelerate speculative building of lake structures in order to secure each year’s limited approvals.</li> <li>▪ Doesn’t prevent overcrowding, just slows the rate at which we’ll get there.</li> <li>▪ During high-growth periods, a lengthy backlog and waiting period may develop.</li> </ul>
Reduce allowable boat permits to 1 or 2 per lot/household (from 3 today).	<ul style="list-style-type: none"> <li>▪ Reduces the number of boats moored and available for use.</li> <li>▪ Existing residents with multiple permitted boats could be grandfathered or required to permit and moor fewer boats.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Reduces the size of boathouses to avoid an overbuilt aesthetic</li> <li>▪ Slows proliferation of boats on newly developed lots</li> <li>▪ Frees capacity for new development by reducing capacity of existing boaters (if not grandfathered)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Current owners of multiple boats would need to remove boats from the lake (unless grandfathered)</li> <li>▪ Forces choice of primary boating activities (skiing vs. pontoon vs. fishing)</li> </ul>

Boating Capacity Restriction Methods	Characteristics	Advantages	Disadvantages
Restrict the lower-cost residential permit rates to lakefront property owners only.	<ul style="list-style-type: none"> <li>Off-lake property owners in town would pay higher boat permit rates, which could serve as a disincentive and reduce the boating demand by this group (as was done with non-resident permit rates).</li> </ul>	<ul style="list-style-type: none"> <li>Will tend to reserve capacity and usage of the lake for lakefront property owners (who have paid higher prices and taxes for the privilege).</li> </ul>	<ul style="list-style-type: none"> <li>Doesn't cap growth, just slows it.</li> <li>Inconsistent with history and values of town (the lake is a resource for all citizens)</li> <li>No data currently on the number of lakefront vs. off-lake resident boats. Could be determined with some research.</li> </ul>
<p>The growth of nearby developments that are candidates for town annexation creates a potential new source of resident boat demand.</p> <p>Establish a policy to not expand town boundaries, or, if doing so, do not extend preferential boat permit rates to these new areas.</p>	<ul style="list-style-type: none"> <li>Preventive measure to avoid making the boating capacity situation worse.</li> </ul>	<ul style="list-style-type: none"> <li>Limits the growth of potential boaters that will be attracted to residential rate permits (a way of managing demand)</li> </ul>	<ul style="list-style-type: none"> <li>Loss of potential tax revenues from areas like the Peaks, Grey Rock, etc.</li> <li>Would it be legal to annex but not extend all rights and privileges?</li> </ul>
<b>Establish usage minimization techniques for peak periods:</b>			
Standard permits not applicable on holiday weekends: additional permits are required. Could be allocated on a first-come, first-serve basis or via a lottery.		<ul style="list-style-type: none"> <li>Allows a higher number of boats to receive annual permits and be moored (to take advantage of plenty of non-peak-day capacity)</li> <li>More closely matches anticipated usage with available permits on peak days. Boaters who will be away for a weekend will forego a peak permit, thereby freeing up capacity for other boaters.</li> </ul>	<ul style="list-style-type: none"> <li>Adds administrative overhead</li> <li>Adds enforcement challenge</li> </ul>
Discontinue weekly permits for non-residents during peak season.		<ul style="list-style-type: none"> <li>Frees capacity for residents (85 nonresident boat-weeks permitted in 2005)</li> <li>Would redirect weekly visitor boating demand to commercial businesses (tours, ski school, fishing guides)</li> </ul>	<ul style="list-style-type: none"> <li>Limits resort guests, renters and friends of owners from bringing their boat to Lake Lure on peak days.</li> </ul>

Boating Capacity Restriction Methods	Characteristics	Advantages	Disadvantages
Establish odd-even numbered boating days during peak weekends		<ul style="list-style-type: none"> <li>▪ Would see an immediate 50% drop in boating activity</li> <li>▪ Predictable: allows families to plan vacations and boating activities</li> </ul>	<ul style="list-style-type: none"> <li>▪ Adds enforcement challenge</li> <li>▪ Seems a drastic, last-resort measure</li> </ul>
Prohibit boat rentals on peak days (from liveries and from rental homes)		<ul style="list-style-type: none"> <li>▪ Frees capacity for residents</li> <li>▪ Likely to reduces the amount of inexperienced boaters using the lake on busy peak days</li> </ul>	<ul style="list-style-type: none"> <li>▪ Adds enforcement challenge</li> </ul>

#### ALLOCATION METHODS FOR LIMITED SUPPLY

Allocation Methods When Boating Demand Exceeds Capacity	Characteristics	Advantages	Disadvantages
Price of permit is variable to balance supply and demand.	<ul style="list-style-type: none"> <li>▪ # of permits is fixed</li> <li>▪ Can use incremental pricing based on seniority (newer applicants pay higher)</li> <li>▪ Dutch auction. After the grandfathered permits are sold, open bids are taken for remaining ones. Permits are awarded starting with highest bid and continuing until none remain.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Free market system. Those who most want to boat and are capable of paying the most for the privilege will get it.</li> <li>▪ Increased revenues for the town.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Desire or deservability aren't factors here. Clearly the wealthy are advantaged, which may lead to unwanted perceptions of the lake.</li> </ul>
Lottery	<ul style="list-style-type: none"> <li>▪ Current property owners or boat permit holders are grandfathered (transferable right)</li> <li>▪ Remaining capacity is randomly allocated.</li> <li>▪ Would lottery winners have to go back into the lottery each year, or would they be grandfathered? If grandfathered, the lottery would only exist until the number of permits equals the capacity. If not grandfathered, then only the permit holders as of the first lottery have dependable boating access.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fair and equitable to all those who do not already have property or boats permitted on the lake</li> <li>▪ If grandfathered boat permits are transferable, could greatly enhance property values for existing boat permit holders.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Undeveloped property owners (current and potential) have no guarantee that they'll get boat permits. Would certainly diminish value of these properties</li> <li>▪ Without grandfathering, new</li> </ul>

Allocation Methods When Boating Demand Exceeds Capacity	Characteristics	Advantages	Disadvantages
Allocation criteria applied by committee; Residential boat permit applications	<ul style="list-style-type: none"> <li>▪ This technique is currently used for the allocation of a limited number of commercial boat permits (until full capacity is reached).</li> <li>▪ Minimum acceptable criteria are established and a committee reviews applications. If demand exceeds supply, then an equitable ranking method is used (seniority, lottery, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Fair, as it can balance many factors relating to who should get the boating privilege</li> </ul>	<ul style="list-style-type: none"> <li>▪ Susceptible to personal influence</li> <li>▪ Could be highly cumbersome and bureaucratic</li> <li>▪ Difficult to accommodate changes in boating behavior, family usage patterns over time.</li> </ul>