EXECUTIVE SUMMARY

The goal of this project was to construct an informative management tool for the Guadalupe - Blanco River Authority (GBRA) to better manage the pressures of increased recreational use and shoreline development on Lakes Dunlap, McQueeney, Placid, Nolte (Meadow Lake), Gonzales (H4), and Wood (H5).

In so doing, for each lake and the system of lakes, this investigation identified users/potential users:

a. Household characteristics (e.g., socio-demographics characteristics);
b. Mode of use (e.g., preferred activity, timing and area of use);
c. Areas of concern and avoidance related to safety and crowding;
d. Perceptions of lake conditions for the 2009 boating season and the preceding five years;
e. Preferences for managing recreational boating on the system lakes; and
f. The impact of recreational boating on shoreline structures.

Method

- Surveys (online and hard-copy) were administered to boaters exiting lakes at public boat ramps, shoreline property owners, and select stakeholders. A total of 585 were completed (Dunlap – 111; McQueeney – 276; Placid – 110; Nolte (Meadow) – 22; Gonzales (H4) – 13; Wood (H5) – 31; Other lakes – 22).

Respondents' Characteristics

- For the most part, respondents were older (*M*=57 years), well educated (72% were college graduates), White (93.2%) men (75.3%).
- Eighty three percent of respondents were active boaters spending, on average, 48 days boating over the last 12 months and with over 26 years of boating experience.
- Speed/ski boats were the most popular watercraft (46.5%) followed by fishing/bass boats (22.7%), pontoon boats (21.3%) and personal watercraft (PWC) (20.0%).
- Two thirds of respondents were lakeshore property owners (66.2%) who had lived on the lake for over 16 years (*M*=16.3).

Perceptions of Setting Density

- Concern over the level of use occurring on the lakes was most pronounced on Lakes Dunlap, Placid and McQueeney.
- In general, respondents:
    - Indicated wanting to have seen fewer people;
    - Indicated that the number of people encountered detracted from their experience;
    - Expressed mild concern over safety in response to the number of people encountered and the behavior of other boaters;
    - Indicated feeling moderately crowded.

Issues of Concern

Issues that respondents expressed concern over included:

- The level of use – especially on public holiday weekends. These crowded conditions exacerbate concerns over the behavior of other boaters, safety, and boaters' enjoyment/satisfaction.
- The size of other boaters' wakes resulting in damage to shorelines and shoreline structures in addition to the disruption other boaters' activities;
- Careless and inconsiderate behavior of other boaters (e.g., traveling at unsafe speed);
- The volume of amplified music (i.e., too loud);
- The use of personal watercraft. This relates to their behavior (e.g., jumping wakes, cutting close of other watercraft, speed) and noise;
- The towing of inflatable water toys (i.e., zig-zagging in crowded or narrow areas of the lake).
- To varying extents, other issues affecting all six lakes include lake depth (i.e., shallow in areas) and submerged obstacles (e.g., tree stumps) and aquatic vegetation.

Table 1. Potential Management Action

Proposition	Need	Applications Across the US
Ban watercraft with sleeping quarters	Area lakes not capable of supporting overnight use	Often managed though regulations targeting overnight use
Ban high performance watercraft	Safety concerns related to their size, speed and engine noise	Often managed through speed limits. Bans have been instituted on several lakes in Alabama (Lakes Martin, Weiss, & Harris), and have been controversial. Bans also target high performance PWCs.
Ban the use of airboats	Safety concerns related to their exhaust fan and engine noise	On specific USACE lakes, airboats are restricted from some environmentally sensitive areas of the lakes. Some ordinances also manage their use through noise restrictions.
Limit the length of boats to be equal to or less than 24 feet. Limit the length of pontoon boats to be equal of less than 28 feet	Safety concerns owing to the width of the lakes and level of use occurring on the lakes	Idaho, Connecticut has boat length limits set for specific lakes. A city in Washington state (Kirkland), has a boat length restriction (24') applied at public boat ramps during the boating season only (4/1 to 10/31). In special management areas along the Kenai River in Alaska, the state prohibits the use of watercraft over 21 feet (also have a 50hp restriction and no two stroke engines).
Ban the use of pontoon planes with the exception of those permitted by GBRA	Safety concerns related to planes taking off/landing on the lake while boating is taking place	Most often implemented to restrict use in pristine settings (CA, NY, OR)
Ban the use of towing inflatables on the 4th of July public holiday weekend	Safety concerns during peak use periods	We could not find any comparable restriction. It appears that the type of use and lake conditions make these lakes unique.

Table 1. Potential Management Action (cont.)

Ban the use of personal watercraft on the 4th of July public holiday weekend	Safety concerns during peak use periods	Federal agencies (National Park Service, NOAA) instituted or recommended bans citing environmental concerns of impacts n visitor experiences. The City of Austin has instituted a PWC ban on Lake Austin for public holiday weekends citing concerns over safety.
Permitting use on area lakes	Need for greater boater education/courtesy. Permits acquired after taking online boater safety/education course.	Permitting use on inland waterways is not uncommon (e.g., City of Fort Worth – Lake Worth; City of Arlington – Lake Arlington), across Texas TPWD offers an online boater safety/education course. A number of other states around the country impose an education course requirement for the issuance of a license
Institute a lake-wide speed limit of 45 miles per hour	Safety concerns and shoreline erosion	Speed limits most often effected with the use of no-wake zones in coves and other designated areas of a lake. Some lakes around the US have lake-wide speed restrictions (e.g., Lake Winnipesaukee in New Hampshire) that are also set at 45 miles/hour during the day and 25 miles/hour during the evening.