

From: T.J. Fudge  
To: Andrea Flower; Jessie Fudge  
Subject: Reasonable Use and Minimum Water Depth  
Date: Wednesday, February 24, 2016 8:39:02 PM  
Attachments: [support\\_documents.pdf](#)

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Ande,

Here is what I have written up about reasonable use and minimum water depth as part of my opening statement. I've attached a packet which has some of the supporting documents in case they are needed. I hope this helps you with your staff report.

T.J.

### Reasonable Use and Minimum Necessary Water Depth

We interpret "reasonable use" of a lakefront property to include the ability to moor a family power boat. This is reflected in the Shoreline Master Plan which specifically permits boatlifts as accessories to residential dwellings. The Shoreline Analysis Report in 2005 noted that there were 95 boat lifts on the 129 piers (on 135 waterfront lots), so a large majority of waterfront properties have this use. In Section 8.5 of the Shoreline Master Plan, Regulation B.3.c.i. explicitly lists 10ft of water depth as a target as a criteria for allowing longer piers. 10ft of water depth, which is 8ft of water depth at the lake low level, allows for moorage of large vessels capable of entering Puget Sound. A family power boat is not such a vessel. We view a family power boat as runabout of approximately 20ft length which is capable of pulling a skier or a tube and traveling within the protected waters of the Lake Washington.

To obtain reasonable use of our lakefront property, we are requesting a pier to reach 5ft OHW. Because Lake Washington has an approximately 2ft annual cycle in water level, 5ft OWH is 3ft at low water (page 1). We have determined that 3ft of water depth is the minimum to be able to operate a family ski boat on a boatlift for year round use. Below we describe why 3ft is the minimum water depth necessary.

The amount of water needed to operate a boatlift depends on two things: 1) the water needed by the boatlift and 2) the draft of the boat.

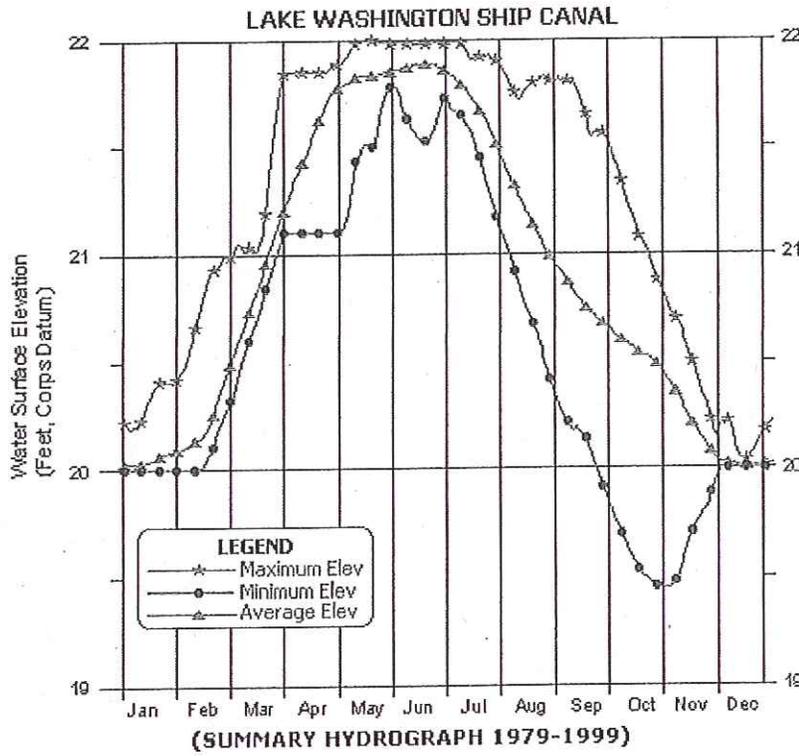
We investigated boat lifts and use the Sunstream SL4010AR with the Shallow Water Roller kit as a reference because of the shallow water features allows it to operate in less water than other lifts. With the shallow water roller kit, the lift requires 16" of water (reduced from 25" without the kit) under the keel of the boat (page 2).

We investigated boat drafts for approximately 20ft length family recreational boats. There are a near infinite number of boat manufacturers and models, so we started with MasterCraft because our neighbor has one. The first model, the X20, has a draft of 27" under the keel (Page 3). Slightly mortified at such a large draft, we realized this boat was targeted at wakeboarding which requires a larger draft to produce a large wake. We then compared the draft with the ProStar, a boat targeted for water skiing rather than wakeboarding, which is 22" (Page 4). (Waterskiing boats typically have smaller drafts because they do not need to produce large wakes). Still slightly concerned about the amount of draft, we decided to look into a less-premium boat manufacturer, Glastron, which is what Jessie's parents operate on a

lake in Minnesota. The GT205 requires a draft of 18" (Page 5). Other manufacturers had boats with similar drafts (i.e. Sea Ray – 19"; Tahoe – 19"; Monterey – 21"). We also looked at a jet boat (propulsion drive rather than prop), the Yamaha 212X which has a draft of 16". We recognized that the large draft of boats targeted at wakeboarding will not be possible at our shallow water site, and settled on 20" as a reasonable draft for a typical family recreational boat after considering that the quoted drafts will be a little larger because they do not account for the boat being filled with fuel.

We added the 16" of the boat lift and 20" of the boat draft to obtain the 36" or 3ft minimum water depth estimate. We also contacted a rep from Sunstream who confirmed that approximately 3ft of water depth is needed to operate a family boat with the lift (Page 6).

EXHIBIT # 17.3



# Specifications

## Sunstream SunLift™

SunLift Model	SL2006AR	SL2008AR	SL3070	SL4010AR	SL6012AR	SL8012ER	SL10014ER	SL12018ER	SL18020ER	SL24025ER
Capacity (pounds)	2,000	2,000	3,000	4,000	6,000	8,000	10,000	12,000	18,000	24,000
Lifting Ranges*	36"/48"/60"	36"/48"/60"	48"	36"/48"/60"/72"/1'	36"/48"/60"/72"/1'	60"/72"/1'	60"/72"/1'	60"/72"/1'	60"/72"/1'	60"/72"/1'
Capacity at Max. Lifting Range	1,800	1,800	3,000	4,000	4,500	8,000	9,500	9,500	14,250	19,000
Bunk Length	6'	8'	10'	10'	12'	12'	14'	18'	20'	22'
Frame Length	95"	95"	10'5"	10'5"	12'5"	12'5"	14'5"	18'5"	20'5"	24'
Frame Width	5'6"	5'6"	9'6"	9'6"	10'	11'	11'	11'	12'6"	12'6"
Weight (pounds)	200	210	450	550	655	1,000	1,050	1,500	2,000	2,500
Lifting Speed (Typ.)	15 sec	15 sec	15 sec	25 sec	35 sec	50 sec	50 sec	50 sec	55 sec	60 sec
Min. Water Depth Required (Typ.)	18"	18"	23"	25"	27"	36"	40"	44"	50"	62"
Min. Depth w/Shallow Water Roller (Typ.)	N/A	N/A	N/A	16"	17"	30"	34"	38"	N/A	N/A
Remote Control	Opt.	Opt.	Opt.	Std.	Std.	Std.	Std.	Std.	Std.	Std.
Leg Lengths Available	2'-12"	2'-12"	2'-16"	2'-16"	2'-16"	2'-16"	2'-16"	2'-16"	2'-16"	2'-16"

\*Some lifting ranges require optional leg extensions. Standard ranges are shown with underline (example: 25').

\*\*Special Order Model XR 72" Range.

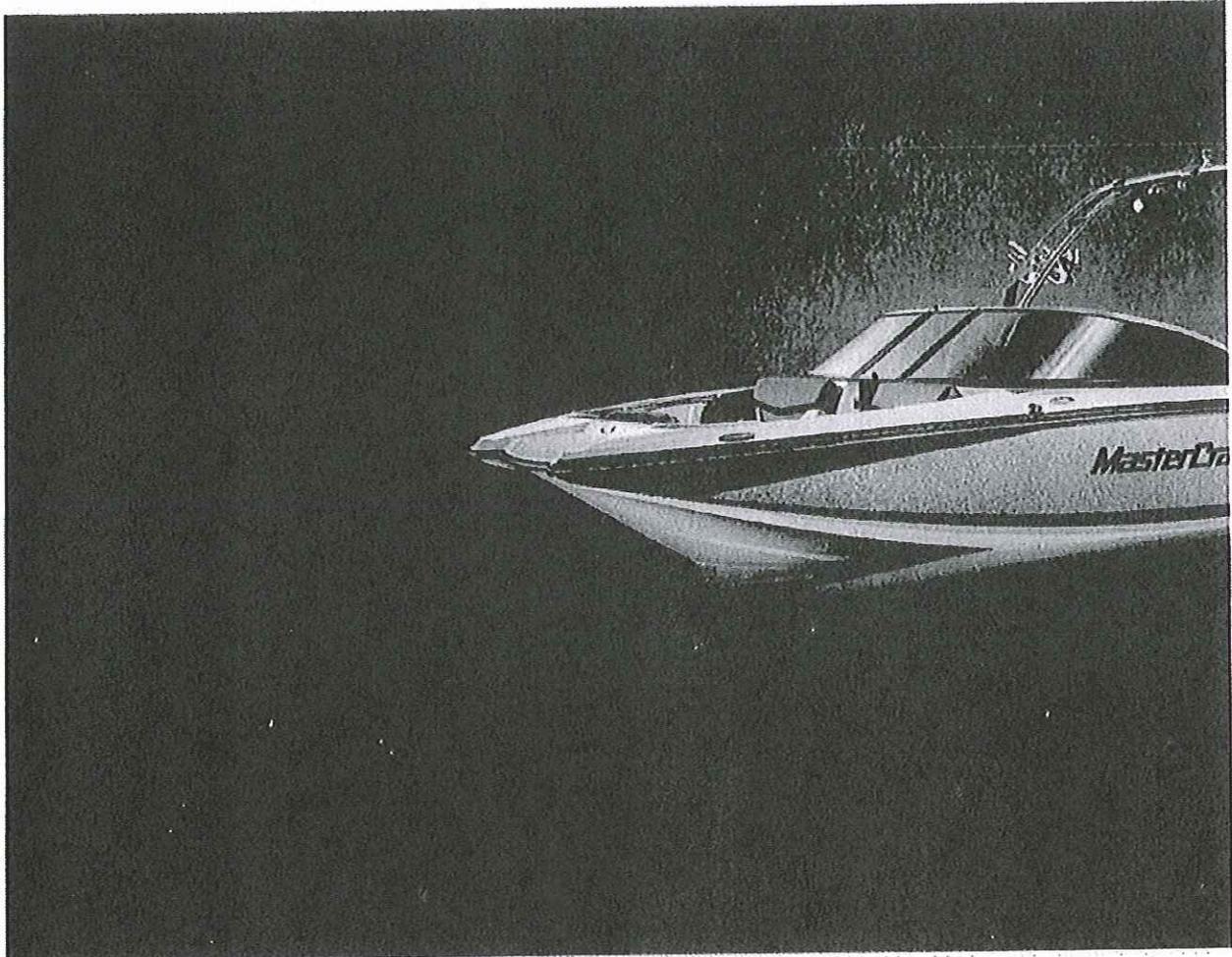
## Sunstream FloatLift™

FloatLift Model	FL6012	FL10014	FL13018	FL13018W
Capacity (pounds)	6,000	10,500	13,000	13,000
Bunk Length	12'	14'	18'	18'
Lift Length	20'	24'	29'	29'
Lift Width UP Position	10'6"	11'11"	11'11"	13'4"
Weight (pounds)	1,300	2,500	2,900	3,100
Launching Speed (Typ.)	18 sec	18 sec	40 sec	40 sec
Water Depth Required	draft + 12"	draft + 12"	draft + 12"	draft + 12"
Remote	Std.	Std.	Std.	Std.
Minimum Slip Width	12'	14"	14"	16"
Maximum Boat Beam	8'6"	10'6"	10'6"	12'

\*Water str. required for beams over 9'6"

\* Minimum water depth needed under keel of boat (approximate)  
www.sunstreamcorp.com/find-your-boat-(FA)

EXHIBIT # 17.4



X2



THE COMEBACK

By popular demand, the X2 is back and better than ever. At 20 feet, it turns on a dime in the water and fits easily in your garage at the end of the day. There's plenty of room for 11 people—with the crossover capabilities to ski, wakeboard and roll out surf waves all summer long. Match it up with MasterCare and Ilmor power and you have a comeback for the ages.

X2 - LAKE OSWEGO EDITION

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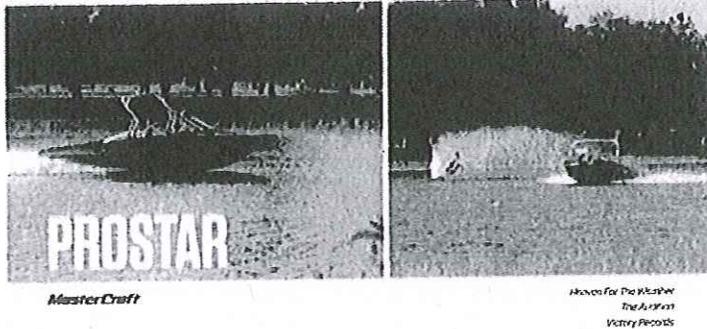
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Specs

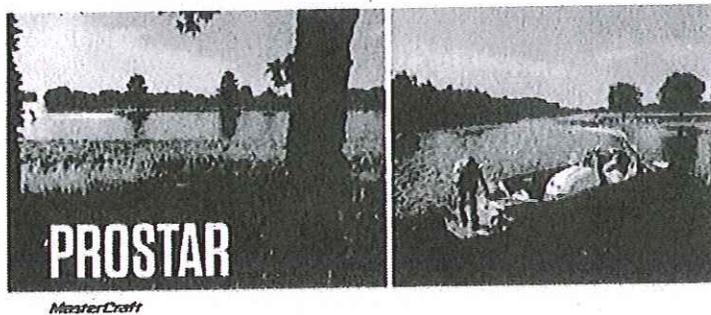
Boat length	20' 0" / 6.10 M
Beam	96" / 2.44 M
Interior width *	84" / 2.13 M
Weight	4300 LBS / 1950 KG
Fuel capacity	42 GAL / 159 L
Draft	27" / 69M
Capacity	1446 LBS / 656 KG
Boat height **	111"
Hull	Vector Drive
Seating	11 People
Color options	Infinite
Storage	76 cu Ft / 2.15 cu M
Wake	Thick - Rampy Wake w/ Crisp Lip Flat - Slalom/Clean Wake Surf - Powerful Wake Shape

MasterCraft  
X20

Top Waterskiing Boat | 2014 ProStar | MasterCraft



2016 MasterCraft ProStar - Product Review The new ProStar owns a unique space on the water: where engineering and science meet passion and dedication. It's the purest, most distilled and highest performing tournament ski boat ever created. The proof is in the world, national and course records that keep getting destroyed behind it. Hop in and check out the quick rundown of the MasterCraft ski machine.



2016 MasterCraft ProStar most distilled and highest performing tournament ski boat ever created. The proof is in the world, national and course records that keep getting destroyed behind it. Hop in and set a new best of your own.

Specs

Boat length	20'0" / 6.10 M
Beam	96" / 2.44 M
Interior width *	87.25" / 2.22 M
Weight	3300 LBS / 1497 KG
Fuel capacity	25 G / 95 L
Draft	22" / .56 M
Capacity	1341 LBS / 608 KB
Boat height **	93" / 2.36 M, Without Tower = 66" / 1.67 M
Hull	Direct Drive
Seating	7 People
Color options	Infinite
Storage	24 cu ft / .68 cu M (40 cu ft w/ bow lid)
Wake	Flat - Slalom Wake
Activity	Slalom Ski - Open Water Slalom Ski - World Competition

*Mastercraft  
ProStar*

Starting from USA MSRP \$74,600

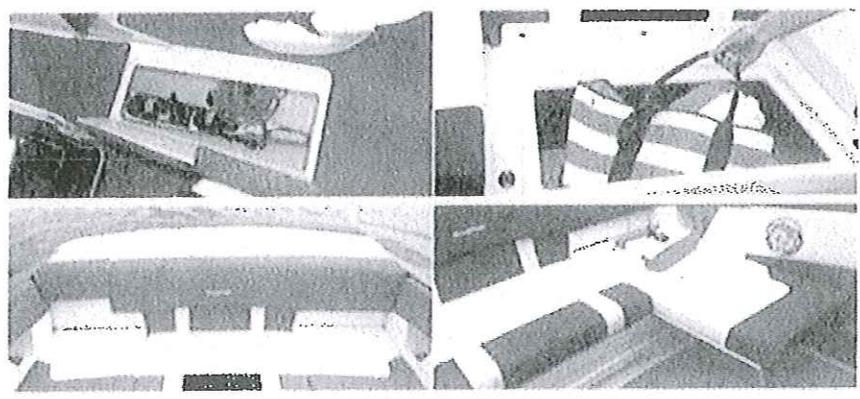
\* Interior Width is measured from fiberglass inner gunnel to fiberglass inner gunnel.

\*\* Boat Height specs reflect the height of a ZFT4 tower to the lowest point of the boat's running gear.

View More

 MasterCraft ProStar Boat ProStar MasterCraft

BOAT GALLERY



**Key Features**

- |                          |                           |
|--------------------------|---------------------------|
| SSV® hull                | Unique pull-knob switches |
| Glastron custom trailer  | Sundeck w/lounge seating  |
| Two-tone deck and hull   | Ski locker in-floor       |
| Unique windshield design | Fiberglass cockpit floor  |
| Glastron custom gauges   |                           |

**Tools**

- [Boat Loan Calculator](#)
- [Cost Comparison Tool](#)
- [Spousal Conversion Kit](#)
  
- [Specifications](#)
- [Standards](#)
- [Options](#)

Glastron  
 # GT205

	US	Metric
LOA	20' 6"	6.25 m
LOA w/Extended Swim Platform	23' 0"	7.01 m
Beam	8' 0"	2.44 m
Fuel Capacity	32 gal	121 L
Draft (drive up)	18"	46 cm
Draft (drive down)	35"	89 cm
Maximum Capacity	1500 lbs	680 kg
Persons Capacity	9 USA	7 CE
Approx. Boat & Engine Weight	3010 lbs	1370 kg
Trailer Weight	971 lbs	440 kg
Deadrise	21°	21°
Storage Length on Trailer	23' 0"	7.01 m