

Fountain for Jose Marti Pond

Joseph Liszka would like to pay for a fountain to be installed at Jose Marti Pond. He wanted it as a thank you to the people of Key West for all that he feels the community has given him.

1. Fountain Options

Because the area experiences tides, we had to design a fountain that could float, was tolerant of salt water, could handle full submersion during a storm event and would shut off in high winds.

The one that meets all the qualifications is from Kasco. The maximum tides around Key West according to NOAA are 2.5 feet, so we designed a system that can easily move 3.5 feet up or down. In the event of a storm event, it would have no problem being fully submerged.

Attached to the fountain is a device that monitors wind speed. If the wind exceeds a pre-set level, it will shut off automatically so it won't spray onto the road.

Maintenance required would be a cleaning approximately every 2 months (1 hour), replacing the zinc anode yearly (2 hours) and replacement of the motor seals every four years (3 hours).

Specific Concerns:

Turbidity of the Water - Generally speaking there will be water movement from a few feet as the water above it is displaced, but the velocity is slow (i.e. they are not a vacuum cleaner.)

Ongoing Maintenance - It is good to occasionally check for debris on the intake screen. This could be every two months but is determined by conditions. Every year the zinc anode should be checked for deterioration. After four years or so you may wish to replace the motor seals.

Anchoring to the bottom of the bay: Typically a rigid mooring point is desirable. According to NOAA the maximum tides in 2015 (estimated) are 2.5 feet (76 centimeters). We're designing the rope slack to accommodate 3 feet of tides. Tying a brick in the middle of the rope span will maintain tension. Obviously if you were going to be hit with a hurricane or storm surge you might want to pull the unit to be on the safe side.

The material to tether the fountain to the anchor or anchoring device: The units come with three 50' lengths of black nylon anchor rope. The fountain will be tethered to three "anchors" or weights in the pond.

Engine Model: Kasco makes their own submersible pump motor.

The fountains are about three feet in diameter. They will have LED lights mounted as in the attached picture 038. (obviously the LED cord will not be stretched over the top!)

The pumps need 26 inches of depth minimum for the center 5hp and 20" for the 2hp. I included picture 004 so you can see the elevation of the unit and its bottom intake screen.

Power Needs: The 2hp is 11A. Residential power cost is .13 cents per kWh. Our commercial rate is the same, so I calculated the power cost at .13 cents per kWh, using the 11 amp, 2 HP motor. Monthly electrical estimate is \$198.23 and annual is \$2378.79.

We will be getting a single phase (even though that's more expensive over time) because Keys Energy won't install 3-phase unless there's 7.5 kWh or more.

The fountain company is a UL 508a panel shop and would build a unified control panel for the set that included wind control.

The float bodies are intended for salt water use. They have 316 stainless components on a UV stabilized foam filled float body.

2. Approvals Needed

Greg Veliz, Assistant City Manager

He was in favor of the project, provided all necessary permits were pulled.

Devon Steckly, Senior Project Manager - Engineering

Obtained approval from the South Florida Water Management District (Letter Attached.) We also found: no other agency reviews required.

Jay Johnston put together the planning document you see.

3. AIPP Approval

We're looking for approval, provided certain conditions are met.

- A. Full cost of the fountain would be covered, including all parts, permits and installation. Done. Josephe Liszka has agreed to that.
- B. That the city would not incur any cost for ongoing maintenance or operations. Josephe Liszka has agreed to give the city the money necessary to operate the fountain for a period of two years. After that, an agreement that we are working on with the city of Key West will kick in where the city will receive a

specified amount of money each year to cover ongoing maintenance. We will work with the city attorneys to draft that agreement.

- C. We'd like input from this panel on the location of the monument and suggestions on it's appearance. We'll move ahead once we have those recommendations and a sketch to show final appearance.

For Further Questions:

Joseph Liszka or Marcus Varner
(305) 294-7928
(305) 304-5670 Cell



Magnolia

Year	Model	Height	Flow	Power
2015	1500	15 FT	150 GPM	1.5 HP
2016	1500	15 FT	150 GPM	1.5 HP

Standard Water Features

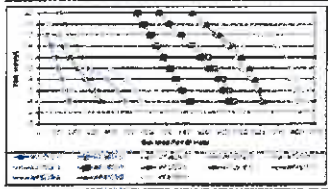
A water feature is a decorative element that adds visual interest and sound to a landscape. Water features can be used to create a focal point, provide a source of water for wildlife, or simply provide a decorative element. Water features can be used in a variety of settings, from residential to commercial. Water features can be used to create a peaceful atmosphere, provide a source of water for wildlife, or simply provide a decorative element.

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SINGLE FLOATING FOUNTAIN SPECIFICATIONS:
 5 HORSEPOWER SUBMERSIBLE ELECTRIC PUMP AND NOZZLES ARE STAINLESS STEEL CONSTRUCTION WITH 6 - 27 WATT SALTWATER BRONZE LED LIGHT FIXTURES. PUMP CONTROLLER SYSTEM INCLUDES WIND VELOCITY SENSOR WITH AUTOMATIC PUMP SHUTOFF PROTECTION AT SELECTED MAXIMUM WIND VELOCITY.



City of Key West

Engineering Services
 3192 Flagler Avenue, Key West, FL 33040

NOTES:

1.) ALL SCALES AND DIMENSIONS SHOWN ARE APPROXIMATE.



SCALE 1"=50'

FOUNTAIN LOCATION

JOSE MARTI DR

DATE	JTJ
SCALE	AS NOTED
DATE	08/08/15
SHEET	1 of 1

Kasco
Aeration

Premium Nozzles

*For Kasco J Series
Fountains*

Madrone



Magnolia



Palm



Mahogany



WWW.KASCOMARINE.COM

Premium Nozzles

Premium nozzles offer splendid beauty above and beyond our included patterns for the 2,3, 5, and 7.5 hp J series. They may be purchased separately and allow you to define your experience by selecting the premium nozzle of your choice. They simply fit on the fountain and are held in place with three set screws. Choose from one of the following four patterns:



Mahogany

Part No.	820213K (2HP)	820213K (3HP)	820214K (5 HP)	820314K (7.5 HP)
Pattern Size	12'H x 34'W	14'H x 42'W	16'H x 50'W	19'H x 60'W



Magnolia

Part No.	820223K (2HP)	820223K (3HP)	820220K (5 HP)	820320K (7.5 HP)
Pattern Size	14'H x 42'W	16'H x 52'W	19'H x 60'W	22'H x 69'W



Madrone

Part No.	820216K (2HP)	820216K (3HP)	820221K (5 HP)	820321K (7.5 HP)
Pattern Size	13'H x 36'W	15'H x 46'W	17'H x 50'W	20'H x 60'W



Palm

Part No.	820215K (2HP)	820215K (3HP)	820211K (5 HP)	820311K (7.5 HP)
Pattern Size	13'H x 24'W	15'H x 28'W	18'H x 30'W	20'H x 34'W



800 Deere Rd
Prescott, WI 54021
PH 715-262-4488
FX 715-262-4487
sales@kascomarine.com

Redwood Premium nozzle
for 7.5 HP J Fountain
also available.
Size: 30'H x 10'W





8400JF

Aerating Fountain 2HP, 240V, Single Phase



Includes all 6
Patterns

Patterns (Upper L to R)

- Redwood**—22'H x 7'W
- Linden**—18'H x 4'W Inner, 9'H x 30'W Outer
- Spruce**—19'H x 10'W
- Birch**—12'H x 11'W
(Operating w/out nozzle)

Patterns (Lower L to R)

- Willow**—12.5'H x 28'W
- Juniper**—8'H x 46'W

Quick Facts

- ⇒ Complete Package includes Assembled Motor Unit, Power Control Panel, UV Resistant High Density Thermoplastic Float, Three 50' Braided Nylon Mooring Lines, SJTOW Rated 3 Wire Power Cable, and 5 UV Resistant Glass Filled Thermoplastic Deflector Nozzles to Create 6 Unique Patterns
- ⇒ Operates in 20" (51cm) of Water
- ⇒ Total Component Listed by ETL to meet UL and CSA Standards for Safety in Water
- ⇒ Sacrificial Zinc Anode Installed for Corrosion Protection and use in Salt Water Applications
- ⇒ Series 300 Austenitic Stainless Steel Construction of Exposed Metal; Salt Water Compatible
- ⇒ 3 Year Warranty
- ⇒ UPS Shippable
- ⇒ Power Cable Potted Quick Disconnect on 12 Gauge and Larger Cord Options with Stainless Steel Strain Relief
- ⇒ Optional Bronze Halogen Lighting or LED Lighting Available
- ⇒ 2 Light Sets per Fountain with Optional Brackets
- ⇒ Energy Efficient with Excellent GPM/kW Rates
- ⇒ Industrial Strength Design
- ⇒ Top Intake for Shallow Water Operation
- ⇒ Bottom Screen with 84 Vertical Screening Bars with Less Than 1" Gaps to Keep Debris Out and Allow for Maximum Water Flow Into the Unit with additional mesh bottom screening

Features

Motor Unit

- ⇒ 2HP, 240V, Single Phase
- ⇒ 1750 RPM Motor
- ⇒ Oil Cooled, Continuous Duty Rated
- ⇒ Two Long Life Bearings
- ⇒ Thermal Overload Protection
- ⇒ Fully Unitized Heavy Duty Silicon Carbide Mechanical Seal
- ⇒ Series 300 Austenitic Stainless Steel Motor Can with Engineering Grade Thermoplastic Top

Fountain Components

- ⇒ Single UV Resistant Thermoplastic Impeller
- ⇒ UV Resistant Thermoplastic Cone and Fountain Housing with 300 Series Stainless Steel Hardware
- ⇒ All 5 Deflector Nozzles Included with 300 Series Stainless Steel Hardware
- ⇒ Glass Filled UV Resistant Thermoplastic Deflectors
- ⇒ Less than 5 Minute Nozzle Change/Replacement

Control Panel

- ⇒ U.L. Listed per N.E.C.
- ⇒ 20 Amp Class A Human Rated GFCB
- ⇒ Surge Protector
- ⇒ 24 Hour Mechanical Timer for Lights
- ⇒ NEMA Type 3r/4x Thermoplastic Enclosure
- ⇒ 24 Hour Mechanical Timer for Unit
- ⇒ Terminal Block for Wiring

Float

- ⇒ UV Resistant High Density Thermoplastic
- ⇒ 3-Piece Lap Joint Float
- ⇒ Protective Coated 300 Series Stainless Steel Hardware
- ⇒ Protective Coated, 300 Series Stainless Steel Top and Bottom Screens with additional 3/4" mesh bottom screening
- ⇒ Three 50' Braided Nylon Mooring Ropes

Power Cable

- ⇒ SJTOW UL, CSA, & NEC Approved Underwater Rated Cable
- ⇒ 3 Wire
- ⇒ Available in 50', 100', 150', 200', 250', 300', & 400' (500' special order) Options (Cord Gauges depend on length)
- ⇒ Potted Quick Disconnect and Stainless Steel Strain Relief on 12 AWG and Larger Cords
- ⇒ 6' Flex Sleeve Protection

Optional Lights

- ⇒ 3 or 6 ETL Approved Bronze, Halogen 75W, MR-16 Fixtures with thermal overload protection
- ⇒ 3 or 6 Light LED, Sealed Fixtures with Quick Connect Splitter and No Bulb Changing
- ⇒ 2 x 3 Light Kits recommended

Kasco 8400JF Specifications

Model #	HP	Cord Length	Cord Gauge*	Voltage/Phase/Hz	Running Amps	Lock Rotor Amps	Sugg. Pond Size (SA) **	Min. Depth of Operation	Shipping Weight	Number of Boxes
8400JF050	2	50'	14/3	240/1/60	11	40	Up to 1	20"	134 Lbs.	3
8400JF100	2	100'	12/3	240/1/60	11	40	Up to 1	20"	144 Lbs.	4
8400JF150	2	150'	12/3	240/1/60	11	40	Up to 1	20"	151 Lbs.	4
8400JF200	2	200'	12/3	240/1/60	11	40	Up to 1	20"	157 Lbs.	4
8400JF250	2	250'	12/3	240/1/60	11	40	Up to 1	20"	163 Lbs.	4
8400JF300	2	300'	10/3	240/1/60	11	40	Up to 1	20"	206 Lbs.	4
8400JF400	2	400'	8/3	240/1/60	11	40	Up to 1	20"	321 Lbs.	4

* 12 AWG and Larger Cords included potted quick disconnect and stainless steel strain relief.

** Surface acreage (SA) is determined by multiplying length x width of the pond. The actual shape, depth, and oxygen demand should be considered when selecting a unit size.

Kasco Optional Lighting Package Specifications

Model #	Cord Length	Number of Fixtures	Voltage/Phase/Hz	Wattage Per Fixture	Total Wattage	Lens Position	Shipping Weight	Number of Boxes
LR375050	50'	3	120/1/60	75	225	Above Water	20 Lbs.	1
LR375100	100'	3	120/1/60	75	225	Above Water	24 Lbs.	1
LR375150	150'	3	120/1/60	75	225	Above Water	28 Lbs.	1
LR375200	200'	3	120/1/60	75	225	Above Water	31 Lbs.	1
LR375250	250'	3	120/1/60	75	225	Above Water	35 Lbs.	1
LR375300	300'	3	120/1/60	75	225	Above Water	38 lbs.	1
LR375400	400'	3	120/1/60	75	225	Above Water	56 lbs.	1
LED3125050	50'	3	120/1/60	9	27	Above Water	9 Lbs.	1
LED3125100	100'	3	120/1/60	9	27	Above Water	13 Lbs.	1
LED3125150	150'	3	120/1/60	9	27	Above Water	16 Lbs.	1
LED3125200	200'	3	120/1/60	9	27	Above Water	20 Lbs.	1
LED3125250	250'	3	120/1/60	9	27	Above Water	23 Lbs.	1
LED3125300	300'	3	120/1/60	9	27	Above Water	29 Lbs.	1
LED3125400	400'	3	120/1/60	9	27	Above Water	34 Lbs.	1

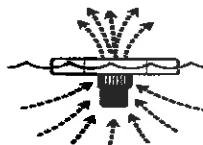
LR Light Kits include a built in, remote Low Voltage Transformer.

LED Light Kits include drivers in each fixture.

Operation

- ⇒ Submersed motor with top intake draws water into the fountain housing and pushes the water past the deflector nozzle and into the air.
- ⇒ Individual water droplets absorb oxygen from the atmosphere and return to the body of water transferring oxygen from the air and into the water.
- ⇒ Moving water mixes and agitates the water, spreading oxygenated water throughout.
- ⇒ Single impeller and deflector nozzle design allows for greater water flow with a lower likelihood of clogging.
- ⇒ Stainless Steel bottom screen

During unit operation, water is circulated from 360. Top intake for shallow water operation.



The motor unit attaches using stainless steel hardware. 3 section, U.V. resistant, high density thermoplastic float. Bottom screen to protect the unit from debris.



Each 8400JF Includes a UL Approved, 240V Power Control Panel complete with Class A Human Rated GFCB, 24 Hour Mechanical Timer, Surge Protector, and 24 Hour Timer for the optional lights. NEMA Type 3r/4x Thermoplastic enclosure.



The Optional Bronze Lighting mounts to the float. ETL approved for Floating Fountains; UL-676. LED Lights also available.

Kasco Marine, Inc.
800 Deere Rd.
Prescott, WI 54021

Ph: (715) 262-4488 * Fax: (715) 262-4487
www.KascoMarine.com * www.GotAlgae.com
Sales@KascoMarine.com





NOAA Tide Predictions

Key West, Florida, 2015

The NOAA Tide Predictions application provides predictions in both graphical and tabular formats, with many user selected options, for over 3000 stations broken down by key areas in each state. Users can also access stations via the Google map interface. Additional information can be found in the help page.

Station Types: The NOAA Tide Predictions application provides predictions from 2 distinct categories of stations at over 3000 locations:

Harmonic - The predicted height values for Harmonic stations are conducted by combining the harmonic constituents into a single tide curve.

Subordinate - The high and low height values for Subordinate stations are obtained by means and differences, and ratios applied to the full harmonic constant predictions at a specific Harmonic station (a Reference station).

Disclaimer: The official Tide prediction tables are published annually on October 1, for the following calendar year. Tide predictions generated prior to the publishing date of the official tables are subject to change. The predictions from the web based NOAA Tidal Predictions are based upon the latest information available as of the date of your request. Tide predictions generated may differ from the official published predictions if information for the station requested has been updated since the publishing date of the official published tables.



January				February				March																																																																																	
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1 Th 12:52 AM -0.1 -3 07:39 AM 1.0 30 12:04 PM 0.3 9 07:04 PM 1.8 55	16 F 12:17 AM -0.1 -3 07:00 AM 0.8 24 11:25 AM 0.4 12 06:13 PM 1.6 49	1 Su 02:17 AM -0.3 -9 08:58 AM 0.9 27 01:29 PM 0.2 6 08:24 PM 1.6 49	16 M 01:31 AM -0.4 -12 08:18 AM 0.9 27 12:54 PM 0.1 3 07:47 PM 1.8 55	1 Su 01:10 AM -0.1 -3 07:54 AM 0.9 27 12:29 PM 0.3 9 07:26 PM 1.5 46	16 M 01:07 AM -0.2 -6 08:02 AM 1.0 30 12:40 PM 0.3 9 07:32 PM 1.6 49	2 F 01:45 AM -0.2 -6 08:31 AM 1.0 30 12:54 PM 0.3 9 07:51 PM 1.8 55	17 Sa 01:09 AM -0.3 -9 07:56 AM 0.9 27 12:18 PM 0.3 9 07:07 PM 1.7 52	2 M 02:55 AM -0.3 -9 09:31 AM 0.9 27 02:15 PM 0.1 3 09:02 PM 1.6 49	17 Tu 02:17 AM -0.5 -15 08:59 AM 1.1 34 01:49 PM 0.0 0 08:41 PM 1.9 58	2 M 01:53 AM -0.1 -3 08:30 AM 1.0 30 01:21 PM 0.2 6 08:11 PM 1.5 46	17 Tu 02:00 AM -0.2 -6 08:46 AM 1.1 34 01:45 PM 0.1 3 08:37 PM 1.7 52	3 Sa 02:30 AM -0.3 -9 09:14 AM 1.0 30 01:41 PM 0.3 9 08:33 PM 1.9 58	18 Su 01:56 AM -0.4 -12 08:43 AM 1.0 30 01:10 PM 0.2 6 07:59 PM 1.8 55	3 Tu 03:30 AM -0.3 -9 10:00 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43 05:33 PM -0.1 -3	8 Su 12:02 AM 1.3 40 06:01 AM 0.0 0 12:27 PM 1.3 40 06:20 PM 0.0 0	23 M 12:59 AM 1.3 40 06:25 AM 0.0 0 01:00 PM 1.6 49 07:26 PM -0.3 -9	8 Su 05:51 AM 0.0 0 12:14 PM 1.4 43 06:16 PM -0.1 -3	23 M 12:57 AM 1.4 43 06:09 AM 0.0 0 12:40 PM 1.8 55 07:09 PM -0.4 -12	9 F 06:12 AM -0.1 -3 12:36 PM 1.2 37 05:59 PM 0.3 9	24 Sa 12:13 AM 1.7 52 06:15 AM -0.3 -9 12:52 PM 1.4 43 06:35 PM -0.1 -3	9 M 12:43 AM 1.2 37 06:31 AM 0.1 3 01:01 PM 1.3 40 07:10 PM 0.0 0	24 Tu 01:59 AM 1.0 30 07:10 AM 0.1 3 01:50 PM 1.6 49 08:35 PM -0.2 -6	9 M 12:47 AM 1.3 40 06:19 AM 0.1 3 12:44 PM 1.4 43 06:56 PM -0.1 -3	24 Tu 01:48 AM 1.2 37 06:52 AM 0.1 3 01:25 PM 1.8 55 08:08 PM -0.3 -9	10 Sa 12:21 AM 1.5 46 06:47 AM 0.0 0 01:15 PM 1.2 37 06:51 PM 0.3 9	25 Su 01:09 AM 1.4 43 07:00 AM -0.1 -3 01:39 PM 1.5 46 07:43 PM -0.1 -3	10 Tu 01:31 AM 1.0 30 07:05 AM 0.2 6 01:40 PM 1.3 40 08:09 PM 0.0 0	25 W 03:09 AM 0.8 24 08:02 AM 0.2 6 02:50 PM 1.5 46 09:51 PM -0.1 -3	10 Tu 01:28 AM 1.2 37 06:49 AM 0.2 6 01:16 PM 1.4 43 07:41 PM -0.1 -3	25 W 02:43 AM 1.0 30 07:37 AM 0.3 9 02:13 PM 1.7 52 09:09 PM -0.2 -6	11 Su 01:06 AM 1.3 40 07:23 AM 0.1 3 01:54 PM 1.2 37 07:50 PM 0.3 9	26 M 02:13 AM 1.2 37 07:47 AM 0.0 0 02:32 PM 1.5 46 08:59 PM -0.1 -3	11 W 02:29 AM 0.9 27 07:44 AM 0.2 6 02:26 PM 1.3 40 09:18 PM 0.0 0	26 Th 04:36 AM 0.7 21 09:04 AM 0.3 9 04:03 PM 1.4 43 11:08 PM -0.1 -3	11 W 02:15 AM 1.0 30 07:22 AM 0.3 9 01:53 PM 1.4 43 08:35 PM -0.1 -3	26 Th 03:48 AM 0.9 27 08:31 AM 0.4 12 03:11 PM 1.5 46 10:19 PM -0.1 -3	12 M 01:59 AM 1.1 34 08:01 AM 0.2 6 02:38 PM 1.3 40 08:59 PM 0.3 9	27 Tu 03:29 AM 0.9 27 08:39 AM 0.2 6 03:32 PM 1.5 46 10:18 PM -0.1 -3	12 Th 03:45 AM 0.8 24 08:35 AM 0.3 9 03:22 PM 1.3 40 10:32 PM -0.1 -3	27 F 06:03 AM 0.7 21 10:16 AM 0.3 9 05:21 PM 1.4 43	12 Th 03:11 AM 0.9 27 08:03 AM 0.3 9 02:38 PM 1.4 43 09:39 PM -0.1 -3	27 F 05:07 AM 0.8 24 09:37 AM 0.4 12 04:22 PM 1.4 43 11:31 PM 0.0 0	13 Tu 03:03 AM 1.0 30 08:44 AM 0.3 9 03:27 PM 1.3 40 10:11 PM 0.2 6	28 W 04:58 AM 0.8 24 09:37 AM 0.2 6 04:40 PM 1.5 46 11:34 PM -0.1 -3	13 F 05:16 AM 0.7 21 09:39 AM 0.4 12 04:30 PM 1.4 43 11:41 PM -0.2 -6	28 Sa 12:16 AM -0.1 -3 07:08 AM 0.8 24 11:27 AM 0.3 9 06:31 PM 1.4 43	13 F 04:23 AM 0.8 24 08:56 AM 0.4 12 03:37 PM 1.4 43 10:53 PM -0.1 -3	28 Sa 06:29 AM 0.9 27 10:56 AM 0.5 15 05:45 PM 1.4 43	14 W 04:24 AM 0.9 27 09:34 AM 0.4 12 04:21 PM 1.4 43 11:19 PM 0.1 3	29 Th 06:23 AM 0.8 24 10:40 AM 0.3 9 05:48 PM 1.5 46	14 Sa 06:35 AM 0.7 21 10:48 AM 0.3 9 05:42 PM 1.5 46	14 Sa 05:50 AM 0.8 24 10:07 AM 0.4 12 04:53 PM 1.4 43	29 Su 12:36 AM 0.1 3 07:31 AM 0.9 27 12:13 PM 0.4 12 07:01 PM 1.4 43	15 Th 05:49 AM 0.8 24 10:29 AM 0.4 12 05:17 PM 1.5 46	30 F 12:40 AM -0.2 -6 07:28 AM 0.8 24 11:42 AM 0.3 9 06:48 PM 1.6 49	15 Su 12:40 AM -0.3 -9 07:32 AM 0.8 24 11:54 AM 0.3 9 06:48 PM 1.6 49	15 Su 12:05 AM -0.1 -3 07:06 AM 0.8 24 11:26 AM 0.4 12 06:17 PM 1.5 46	30 M 01:30 AM 0.1 3 08:16 AM 1.1 34 01:17 PM 0.4 12 08:01 PM 1.4 43	31 Sa 01:33 AM -0.3 -9 08:18 AM 0.8 24 12:39 PM 0.2 6 07:40 PM 1.6 49	31 Tu 02:13 AM 0.1 3 08:50 AM 1.2 37 02:10 PM 0.3 9 08:49 PM 1.4 43



StationId:8724580
 Source:NOAA/NOS/CO-OPS
 Station Type:Harmonic
 Time Zone:LST/LDT
 Datum:mean lower low water (MLLW) which is the chart datum of soundings

NOAA Tide Predictions

Key West, Florida, 2015

Times and Heights of High and Low Waters

April				May				June			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft	h m	ft	h m	ft	h m	ft	h m	ft	h m	ft
1 W	02:49 AM 0.1 3 09:18 AM 1.3 40 02:54 PM 0.1 3 09:30 PM 1.5 46	16 Th	02:10 AM 0.0 0 08:51 AM 1.6 49 02:37 PM -0.2 -6 09:26 PM 1.6 49	1 F	02:32 AM 0.3 9 08:59 AM 1.6 49 03:15 PM 0.0 0 09:47 PM 1.3 40	16 Sa	02:17 AM 0.2 6 09:00 AM 1.9 58 03:24 PM -0.4 -12 10:14 PM 1.3 40	1 M	02:48 AM 0.4 12 09:26 AM 1.8 55 04:07 PM -0.3 -9 10:50 PM 1.1 34	16 Tu	03:18 AM 0.3 9 10:07 AM 2.0 61 04:50 PM -0.4 -12 11:36 PM 1.1 34
2 Th	03:20 AM 0.1 3 09:45 AM 1.4 43 03:33 PM 0.0 0 10:07 PM 1.5 46	17 F	02:53 AM 0.0 0 09:30 AM 1.8 55 03:31 PM -0.3 -9 10:20 PM 1.6 49	2 Sa	03:02 AM 0.3 9 09:29 AM 1.7 52 03:51 PM -0.1 -3 10:27 PM 1.3 40	17 Su	03:01 AM 0.2 6 09:42 AM 2.0 61 04:14 PM -0.5 -15 11:03 PM 1.3 40	2 Tu	03:25 AM 0.4 12 10:03 AM 1.9 58 04:46 PM -0.4 -12 11:33 PM 1.1 34	17 W	04:04 AM 0.3 9 10:49 AM 2.0 61 05:33 PM -0.4 -12
3 F	03:49 AM 0.1 3 10:11 AM 1.5 46 04:10 PM -0.1 -3 10:43 PM 1.5 46	18 Sa	03:35 AM 0.1 3 10:10 AM 1.9 58 04:22 PM -0.5 -15 11:10 PM 1.5 46	3 Su	03:32 AM 0.3 9 10:00 AM 1.7 52 04:27 PM -0.2 -6 11:06 PM 1.3 40	18 M	03:44 AM 0.2 6 10:24 AM 2.1 64 05:02 PM -0.5 -15 11:49 PM 1.2 37	3 W	04:03 AM 0.4 12 10:42 AM 1.9 58 05:26 PM -0.4 -12	18 Th	12:16 AM 1.1 34 04:49 AM 0.3 9 11:30 AM 1.9 58 06:15 PM -0.3 -9
4 Sa	04:17 AM 0.2 6 10:38 AM 1.6 49 04:45 PM -0.1 -3 11:20 PM 1.4 43	19 Su	04:16 AM 0.1 3 10:49 AM 2.0 61 05:12 PM -0.5 -15 11:59 PM 1.4 43	4 M	04:02 AM 0.3 9 10:32 AM 1.8 55 05:03 PM -0.3 -9 11:46 PM 1.3 40	19 Tu	04:27 AM 0.3 9 11:06 AM 2.0 61 05:49 PM -0.5 -15	4 Th	12:16 AM 1.1 34 04:44 AM 0.3 9 11:23 AM 1.9 58 06:08 PM -0.4 -12	19 W	12:55 AM 1.1 34 05:36 AM 0.3 9 12:10 PM 1.8 55 06:57 PM -0.2 -6
5 Su	04:44 AM 0.2 6 11:07 AM 1.6 49 05:20 PM -0.2 -6 11:57 PM 1.4 43	20 M	04:56 AM 0.2 6 11:29 AM 2.0 61 06:02 PM -0.5 -15	5 Tu	04:34 AM 0.3 9 11:05 AM 1.8 55 05:41 PM -0.3 -9	20 W	12:34 AM 1.2 37 05:11 AM 0.3 9 11:48 AM 2.0 61 06:35 PM -0.4 -12	5 F	01:00 AM 1.1 34 05:29 AM 0.4 12 12:07 PM 1.9 58 06:53 PM -0.4 -12	20 Sa	01:34 AM 1.1 34 06:24 AM 0.4 12 12:51 PM 1.7 52 07:39 PM -0.1 -3
6 M	05:11 AM 0.2 6 11:36 AM 1.7 52 05:57 PM -0.2 -6	21 Tu	12:46 AM 1.3 40 05:38 AM 0.2 6 12:11 PM 2.0 61 06:53 PM -0.4 -12	6 W	12:28 AM 1.2 37 05:09 AM 0.4 12 11:40 AM 1.8 55 06:22 PM -0.4 -12	21 Th	01:18 AM 1.1 34 05:56 AM 0.3 9 12:30 PM 1.9 58 07:23 PM -0.3 -9	6 Sa	01:46 AM 1.2 37 06:20 AM 0.4 12 12:56 PM 1.8 55 07:41 PM -0.3 -9	21 Su	02:14 AM 1.2 37 07:17 AM 0.4 12 01:35 PM 1.6 49 08:21 PM 0.0 0
7 Tu	12:37 AM 1.3 40 05:41 AM 0.3 9 12:07 PM 1.7 52 06:37 PM -0.3 -9	22 W	01:35 AM 1.2 37 06:22 AM 0.3 9 12:55 PM 1.9 58 07:45 PM -0.3 -9	7 Th	01:12 AM 1.2 37 05:47 AM 0.4 12 12:19 PM 1.8 55 07:07 PM -0.3 -9	22 F	02:04 AM 1.1 34 06:45 AM 0.4 12 01:15 PM 1.7 52 08:12 PM -0.1 -3	7 Su	02:34 AM 1.2 37 07:18 AM 0.4 12 01:50 PM 1.7 52 08:31 PM -0.2 -6	22 M	02:55 AM 1.2 37 08:16 AM 0.5 15 02:22 PM 1.4 43 09:03 PM 0.1 3
8 W	01:19 AM 1.2 37 06:14 AM 0.3 9 12:41 PM 1.7 52 07:21 PM -0.2 -6	23 Th	02:26 AM 1.1 34 07:09 AM 0.4 12 01:42 PM 1.7 52 08:41 PM -0.1 -3	8 F	02:01 AM 1.1 34 06:31 AM 0.4 12 01:03 PM 1.8 55 07:57 PM -0.3 -9	23 Sa	02:52 AM 1.1 34 07:41 AM 0.5 15 02:03 PM 1.6 49 09:03 PM 0.0 0	8 M	03:25 AM 1.3 40 08:27 AM 0.4 12 02:54 PM 1.6 49 09:23 PM -0.1 -3	23 Tu	03:38 AM 1.3 40 09:23 AM 0.5 15 03:17 PM 1.3 40 09:47 PM 0.2 6
9 Th	02:07 AM 1.1 34 06:51 AM 0.4 12 01:20 PM 1.6 49 08:13 PM -0.2 -6	24 F	03:23 AM 1.0 30 08:05 AM 0.5 15 02:35 PM 1.6 49 09:42 PM 0.0 0	9 Sa	02:54 AM 1.1 34 07:23 AM 0.5 15 01:55 PM 1.7 52 08:53 PM -0.2 -6	24 Su	03:44 AM 1.1 34 08:47 AM 0.6 18 02:57 PM 1.4 43 09:55 PM 0.1 3	9 Tu	04:18 AM 1.3 40 09:45 AM 0.4 12 04:08 PM 1.4 43 10:17 PM 0.1 3	24 W	04:23 AM 1.3 40 10:36 AM 0.5 15 04:22 PM 1.1 34 10:31 PM 0.3 9
10 F	03:03 AM 1.0 30 07:37 AM 0.5 15 02:08 PM 1.6 49 09:13 PM -0.1 -3	25 Sa	04:29 AM 1.0 30 09:13 AM 0.5 15 03:38 PM 1.4 43 10:45 PM 0.1 3	10 Su	03:53 AM 1.1 34 08:29 AM 0.5 15 02:58 PM 1.6 49 09:53 PM -0.1 -3	25 M	04:38 AM 1.1 34 10:03 AM 0.6 18 04:01 PM 1.3 40 10:47 PM 0.2 6	10 W	05:13 AM 1.5 46 11:06 AM 0.2 6 05:33 PM 1.2 37 11:11 PM 0.2 6	25 Th	05:10 AM 1.4 43 11:45 AM 0.4 12 05:38 PM 1.0 30 11:16 PM 0.4 12
11 Sa	04:10 AM 0.9 27 08:36 AM 0.5 15 03:10 PM 1.5 46 10:21 PM -0.1 -3	26 Su	05:38 AM 1.0 30 10:34 AM 0.6 18 04:54 PM 1.3 40 11:45 PM 0.2 6	11 M	04:54 AM 1.2 37 09:49 AM 0.5 15 04:17 PM 1.5 46 10:53 PM 0.0 0	26 Tu	05:30 AM 1.2 37 11:20 AM 0.5 15 05:16 PM 1.2 37 11:36 PM 0.3 9	11 Th	06:07 AM 1.6 49 12:21 PM 0.1 3 06:58 PM 1.2 37	26 F	05:57 AM 1.5 46 12:46 PM 0.2 6 06:56 PM 1.0 30
12 Su	05:24 AM 1.0 30 09:53 AM 0.5 15 04:30 PM 1.5 46 11:29 PM 0.0 0	27 M	06:37 AM 1.1 34 11:52 AM 0.5 15 06:15 PM 1.3 40	12 Tu	05:52 AM 1.3 40 11:12 AM 0.4 12 05:45 PM 1.4 43 11:50 PM 0.1 3	27 W	06:17 AM 1.3 40 12:27 PM 0.4 12 06:33 PM 1.1 34	12 Th	12:04 AM 0.2 6 06:59 AM 1.8 55 01:27 PM -0.1 -3 08:12 PM 1.1 34	27 Sa	12:00 AM 0.4 12 06:44 AM 1.6 49 01:38 PM 0.1 3 08:03 PM 1.0 30
13 M	06:31 AM 1.1 34 11:17 AM 0.5 15 05:58 PM 1.5 46	28 Tu	12:37 AM 0.2 6 07:22 AM 1.2 37 12:58 PM 0.4 12 07:24 PM 1.3 40	13 W	06:45 AM 1.4 43 12:28 PM 0.2 6 07:08 PM 1.4 43	28 Th	12:21 AM 0.3 9 06:58 AM 1.4 43 01:23 PM 0.2 6 07:40 PM 1.1 34	13 Sa	12:55 AM 0.3 9 07:50 AM 1.9 58 02:25 PM -0.3 -9 09:14 PM 1.1 34	28 Su	12:44 AM 0.4 12 07:30 AM 1.7 52 02:24 PM -0.1 -3 08:59 PM 1.0 30
14 Tu	12:30 AM 0.0 0 07:25 AM 1.2 37 12:33 PM 0.3 9 07:19 PM 1.6 49	29 W	01:21 AM 0.3 9 07:58 AM 1.3 40 01:51 PM 0.3 9 08:19 PM 1.3 40	14 Th	12:43 AM 0.2 6 07:33 AM 1.6 49 01:33 PM 0.0 0 08:19 PM 1.4 43	29 F	01:01 AM 0.4 12 07:37 AM 1.5 46 02:10 PM 0.1 3 08:36 PM 1.1 34	14 Su	01:44 AM 0.3 9 08:38 AM 2.0 61 03:17 PM -0.4 -12 10:06 PM 1.1 34	29 M	01:28 AM 0.4 12 08:14 AM 1.8 55 03:06 PM -0.2 -6 09:47 PM 1.0 30
15 W	01:23 AM 0.0 0 08:10 AM 1.4 43 01:39 PM 0.1 3 08:27 PM 1.6 49	30 Th	01:59 AM 0.3 9 08:29 AM 1.5 46 02:35 PM 0.1 3 09:05 PM 1.3 40	15 F	01:31 AM 0.2 6 08:17 AM 1.8 55 02:31 PM -0.2 -6 09:20 PM 1.4 43	30 Sa	01:38 AM 0.4 12 08:13 AM 1.6 49 02:51 PM -0.1 -3 09:24 PM 1.1 34	15 M	02:31 AM 0.3 9 09:23 AM 2.0 61 04:05 PM -0.4 -12 10:53 PM 1.1 34	30 Tu	02:11 AM 0.4 12 08:58 AM 1.9 58 03:46 PM -0.3 -9 10:31 PM 1.1 34
						31 Su	02:13 AM 0.4 12 08:49 AM 1.7 52 03:30 PM -0.2 -6 10:08 PM 1.1 34				

Disclaimer: These data are based upon the latest information available as of the date of your request, and may differ from the published tide tables.



StationId:8724580
 Source:NOAA/NOS/CO-OPS
 Station Type:Harmonic
 Time Zone:LST/LDT
 Datum:mean lower low water (MLLW) which is the chart datum of soundings

NOAA Tide Predictions

Key West, Florida, 2015

Times and Heights of High and Low Waters

July				August				September			
Time	Height	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
h m	ft cm	h m	ft cm	h m	ft cm	h m	ft cm	h m	ft cm	h m	ft cm
1 W	02:55 AM 0.4 12 09:42 AM 2.0 61 04:27 PM -0.4 -12 11:13 PM 1.1 34	16 Th	03:48 AM 0.3 9 10:36 AM 2.0 61 05:13 PM -0.2 -6 11:50 PM 1.2 37	1 Sa	04:17 AM 0.2 6 11:06 AM 2.2 67 05:26 PM -0.2 -6	16 Su	05:03 AM 0.4 12 11:34 AM 1.9 58 05:49 PM 0.2 6	1 Tu	12:07 AM 2.0 61 05:58 AM 0.1 3 12:41 PM 2.0 61 06:15 PM 0.3 9	16 W	06:02 AM 0.4 12 12:31 PM 1.8 55 06:03 PM 0.7 21
2 Th O	03:40 AM 0.3 9 10:27 AM 2.0 61 05:08 PM -0.4 -12 11:55 PM 1.2 37	17 F	04:34 AM 0.3 9 11:14 AM 1.9 58 05:50 PM -0.2 -6	2 Su	12:04 AM 1.5 46 05:11 AM 0.1 3 11:56 AM 2.1 64 06:07 PM -0.1 -3	17 M	12:12 AM 1.6 49 05:44 AM 0.4 12 12:10 PM 1.8 55 06:19 PM 0.3 9	2 W	12:49 AM 2.1 64 06:55 AM 0.1 3 01:35 PM 1.8 55 06:57 PM 0.4 12	17 Th	12:27 AM 2.0 61 06:41 AM 0.4 12 01:12 PM 1.7 52 06:33 PM 0.7 21
3 F	04:28 AM 0.3 9 11:13 AM 2.0 61 05:51 PM -0.4 -12	18 Sa	12:23 AM 1.2 37 05:19 AM 0.3 9 11:52 AM 1.8 55 06:26 PM -0.1 -3	3 M	12:45 AM 1.6 49 06:07 AM 0.1 3 12:48 PM 2.0 61 06:49 PM 0.0 0	18 Tu	12:42 AM 1.6 49 05:48 AM 0.4 12 12:49 PM 1.7 52 06:49 PM 0.4 12	3 Th	01:34 AM 2.1 64 07:57 AM 0.1 3 02:34 PM 1.6 49 07:43 PM 0.6 18	18 F	01:01 AM 2.0 61 06:41 AM 0.5 15 01:58 PM 1.6 49 07:05 PM 0.8 24
4 Sa	12:37 AM 1.2 37 05:18 AM 0.3 9 12:01 PM 2.0 61 06:34 PM -0.4 -12	19 Su	12:56 AM 1.3 40 06:04 AM 0.4 12 12:30 PM 1.7 52 07:01 PM 0.0 0	4 Tu	01:27 AM 1.7 52 07:07 AM 0.1 3 01:43 PM 1.7 52 07:32 PM 0.1 3	19 W	01:14 AM 1.7 52 07:10 AM 0.4 12 01:30 PM 1.6 49 07:19 PM 0.5 15	4 F	02:25 AM 2.1 64 09:06 AM 0.2 6 03:42 PM 1.4 43 08:34 PM 0.7 21	19 Sa	01:39 AM 1.9 58 08:17 AM 0.5 15 02:52 PM 1.4 43 07:44 PM 0.9 27
5 Su	01:20 AM 1.3 40 06:13 AM 0.2 6 12:52 PM 1.9 58 07:18 PM -0.3 -9	20 M	01:29 AM 1.3 40 06:51 AM 0.4 12 01:10 PM 1.6 49 07:36 PM 0.1 3	5 W	02:12 AM 1.8 55 08:12 AM 0.1 3 02:43 PM 1.5 46 08:17 PM 0.3 9	20 Th	01:49 AM 1.7 52 07:59 AM 0.5 15 02:16 PM 1.4 43 07:52 PM 0.6 18	5 Sa O	03:25 AM 2.1 64 10:21 AM 0.3 9 05:02 PM 1.3 40 09:35 PM 0.8 24	20 Su	02:24 AM 1.9 58 09:20 AM 0.5 15 03:59 PM 1.4 43 08:34 PM 1.0 30
6 M	02:04 AM 1.4 43 07:14 AM 0.2 6 01:48 PM 1.7 52 08:04 PM -0.1 -3	21 Tu	02:04 AM 1.4 43 07:42 AM 0.4 12 01:53 PM 1.5 46 08:11 PM 0.2 6	6 Th	03:02 AM 1.8 55 09:24 AM 0.2 6 03:52 PM 1.3 40 09:06 PM 0.4 12	21 F	02:28 AM 1.7 52 08:56 AM 0.5 15 03:11 PM 1.3 40 08:29 PM 0.7 21	6 Su	04:35 AM 2.0 61 11:38 AM 0.4 12 06:27 PM 1.2 37 10:46 PM 0.8 24	21 M O	03:21 AM 1.9 58 10:31 AM 0.5 15 05:19 PM 1.3 40 09:42 PM 1.0 30
7 Tu	02:50 AM 1.5 46 08:22 AM 0.2 6 02:49 PM 1.5 46 08:51 PM 0.0 0	22 W	02:42 AM 1.4 43 08:40 AM 0.4 12 02:42 PM 1.3 40 08:47 PM 0.3 9	7 F O	03:59 AM 1.9 58 10:41 AM 0.2 6 05:15 PM 1.1 34 10:02 PM 0.5 15	22 Sa O	03:13 AM 1.7 52 10:02 AM 0.5 15 04:19 PM 1.2 37 09:15 PM 0.7 21	7 M	05:52 AM 2.0 61 12:47 PM 0.4 12 07:36 PM 1.3 40 11:58 PM 0.8 24	22 Tu	04:32 AM 1.9 58 11:42 AM 0.5 15 06:34 PM 1.4 43 11:00 PM 1.0 30
8 W O	03:40 AM 1.6 49 09:37 AM 0.2 6 04:01 PM 1.3 40 09:41 PM 0.2 6	23 Th	03:23 AM 1.5 46 09:45 AM 0.4 12 03:41 PM 1.2 37 09:26 PM 0.4 12	8 Sa	05:03 AM 1.9 58 11:58 AM 0.1 3 06:41 PM 1.0 30 11:03 PM 0.6 18	23 Su	04:07 AM 1.7 52 11:14 AM 0.4 12 05:43 PM 1.1 34 10:15 PM 0.8 24	8 Tu	07:04 AM 2.0 61 01:44 PM 0.4 12 08:27 PM 1.4 43	23 W	05:50 AM 2.0 61 12:42 PM 0.4 12 07:31 PM 1.5 46
9 Th	04:35 AM 1.7 52 10:56 AM 0.1 3 05:24 PM 1.1 34 10:34 PM 0.3 9	24 F O	04:09 AM 1.5 46 10:54 AM 0.4 12 04:52 PM 1.0 30 10:11 PM 0.5 15	9 Su	06:12 AM 1.9 58 01:08 PM 0.1 3 07:55 PM 1.1 34	24 M	05:10 AM 1.8 55 12:22 PM 0.3 9 07:03 PM 1.1 34 11:22 PM 0.8 24	9 W	01:02 AM 0.7 21 08:03 AM 2.0 61 02:29 PM 0.4 12 09:07 PM 1.5 46	24 Th	12:13 AM 0.9 27 07:03 AM 2.1 64 01:34 PM 0.4 12 08:16 PM 1.7 52
10 F	05:33 AM 1.7 52 12:12 PM 0.0 0 06:50 PM 1.0 30 11:29 PM 0.4 12	25 Sa	05:00 AM 1.6 49 12:01 PM 0.3 9 06:15 PM 1.0 30 11:03 PM 0.6 18	10 M	12:07 AM 0.6 18 07:17 AM 1.9 58 02:07 PM 0.1 3 08:51 PM 1.1 34	25 Tu	06:18 AM 1.9 58 01:19 PM 0.2 6 08:04 PM 1.2 37	10 Th	01:58 AM 0.7 21 08:51 AM 2.1 64 03:07 PM 0.4 12 09:40 PM 1.6 49	25 F	01:17 AM 0.7 21 08:07 AM 2.2 67 02:19 PM 0.4 12 08:56 PM 1.8 55
11 Sa	06:32 AM 1.8 55 01:19 PM -0.1 -3 08:05 PM 1.0 30	26 Su	05:55 AM 1.6 49 01:01 PM 0.2 6 07:32 PM 1.0 30 11:57 PM 0.6 18	11 Tu	01:07 AM 0.5 15 08:15 AM 2.0 61 02:55 PM 0.1 3 09:36 PM 1.2 37	26 W	12:27 AM 0.7 21 07:22 AM 2.0 61 02:09 PM 0.1 3 08:51 PM 1.3 40	11 F	02:46 AM 0.6 18 09:32 AM 2.1 64 03:40 PM 0.4 12 10:08 PM 1.7 52	26 Sa	02:15 AM 0.5 15 09:05 AM 2.3 70 03:01 PM 0.4 12 09:34 PM 2.0 61
12 Su	12:25 AM 0.4 12 07:30 AM 1.9 58 02:18 PM -0.2 -6 09:06 PM 1.0 30	27 M	06:51 AM 1.7 52 01:53 PM 0.0 0 08:33 PM 1.0 30	12 W	02:03 AM 0.5 15 09:03 AM 2.0 61 03:36 PM 0.0 0 10:13 PM 1.3 40	27 Th	01:27 AM 0.6 18 08:21 AM 2.2 67 02:53 PM 0.1 3 09:33 PM 1.5 46	12 Sa	03:29 AM 0.5 15 10:09 AM 2.1 64 04:10 PM 0.4 12 10:34 PM 1.8 55	27 Su	03:09 AM 0.3 9 09:58 AM 2.3 70 03:41 PM 0.4 12 10:12 PM 2.2 67
13 M	01:20 AM 0.4 12 08:24 AM 2.0 61 03:09 PM -0.2 -6 09:55 PM 1.0 30	28 Tu	12:51 AM 0.5 15 07:45 AM 1.9 58 02:39 PM -0.1 -3 09:22 PM 1.1 34	13 Th	02:52 AM 0.5 15 09:46 AM 2.0 61 04:12 PM 0.1 3 10:46 PM 1.4 43	28 F	02:23 AM 0.5 15 09:15 AM 2.3 70 03:35 PM 0.0 0 10:11 PM 1.6 49	13 Su	04:08 AM 0.5 15 10:43 AM 2.0 61 04:40 PM 0.5 15 11:00 PM 1.9 58	28 M O	04:02 AM 0.1 3 10:50 AM 2.2 67 04:21 PM 0.4 12 10:51 PM 2.3 70
14 Tu	02:12 AM 0.4 12 09:12 AM 2.0 61 03:54 PM -0.3 -9 10:37 PM 1.1 34	29 W	01:44 AM 0.5 15 08:37 AM 2.0 61 03:22 PM -0.2 -6 10:05 PM 1.2 37	14 F	03:38 AM 0.4 12 10:24 AM 2.0 61 04:45 PM 0.1 3 11:15 PM 1.4 43	29 Sa O	03:17 AM 0.3 9 10:07 AM 2.3 70 04:15 PM 0.1 3 10:49 PM 1.8 55	14 M	04:46 AM 0.4 12 11:18 AM 2.0 61 05:08 PM 0.5 15 11:28 PM 1.9 58	29 Tu	04:54 AM 0.0 0 11:41 AM 2.1 64 05:01 PM 0.5 15 11:31 PM 2.4 73
15 W	03:01 AM 0.3 9 09:56 AM 2.0 61 04:35 PM -0.2 -6 11:15 PM 1.1 34	30 Th	02:35 AM 0.4 12 09:27 AM 2.1 64 04:04 PM -0.3 -9 10:46 PM 1.3 40	15 Sa	04:21 AM 0.4 12 10:59 AM 2.0 61 05:18 PM 0.1 3 11:43 PM 1.5 46	30 Su	04:09 AM 0.2 6 10:58 AM 2.3 70 04:55 PM 0.1 3 11:27 PM 1.9 58	15 Tu	05:24 AM 0.4 12 11:53 AM 1.9 58 05:35 PM 0.6 18 11:56 PM 2.0 61	30 W	05:47 AM 0.0 0 12:32 PM 2.0 61 05:42 PM 0.6 18
		31 F O	03:26 AM 0.3 9 10:16 AM 2.2 67 04:45 PM -0.3 -9 11:25 PM 1.4 43			31 M	05:03 AM 0.1 3 11:49 AM 2.2 67 05:35 PM 0.2 6				

Disclaimer: These data are based upon the latest information available as of the date of your request, and may differ from the published tide tables.



Key West, Florida, 2015

Times and Heights of High and Low Waters

October					November					December							
	Time	Height	Time	Height		Time	Height	Time	Height		Time	Height	Time	Height			
	h m	ft	h m	ft		h m	ft	h m	ft		h m	ft	h m	ft			
1	12:14 AM	2.4	06:19 AM	0.3	1	01:24 AM	2.3	16	06:31 AM	0.2	12:49 AM	1.9	16	12:22 AM	1.8		
Th	06:42 AM	0.1	12:59 PM	1.7	Su	07:19 AM	0.3	M	01:24 PM	1.4	Tu	07:41 AM	0.2	W	06:58 AM	0.0	
	01:24 PM	1.8	05:54 PM	0.8		02:02 PM	1.5		05:55 PM	0.8		02:21 PM	1.3		01:48 PM	1.3	
	06:25 PM	0.7				06:41 PM	0.9					07:24 PM	0.7		06:51 PM	0.5	
2	01:01 AM	2.4	12:24 AM	2.1	2	01:20 AM	2.1	17	12:30 AM	2.0	2	01:44 AM	1.7	17	01:21 AM	1.7	
F	07:40 AM	0.2	07:02 AM	0.4	M	08:21 AM	0.4	Tu	07:24 AM	0.2	W	08:35 AM	0.3	Th	07:48 AM	0.1	
	02:21 PM	1.6	01:45 PM	1.6		03:07 PM	1.4		02:20 PM	1.4		03:18 PM	1.4		02:38 PM	1.4	
	07:11 PM	0.8	06:30 PM	0.9		07:50 PM	0.9		06:57 PM	0.9		08:41 PM	0.7		08:05 PM	0.4	
3	01:52 AM	2.3	18	01:02 AM	2.1	3	02:26 AM	1.9	18	01:29 AM	1.9	3	02:49 AM	1.5	18	02:31 AM	1.5
Sa	08:44 AM	0.3	Su	07:51 AM	0.4	Tu	09:25 AM	0.5	W	08:21 AM	0.3	Th	09:29 AM	0.4	F	08:41 AM	0.2
	03:26 PM	1.5		02:39 PM	1.5		04:16 PM	1.5		03:19 PM	1.5		04:11 PM	1.4		03:33 PM	1.5
	08:05 PM	0.9		07:12 PM	1.0		09:12 PM	1.0		08:13 PM	0.8		10:00 PM	0.7		09:26 PM	0.3
4	02:52 AM	2.2	19	01:49 AM	2.1	4	03:42 AM	1.8	19	02:43 AM	1.8	4	04:04 AM	1.4	19	03:54 AM	1.3
Su	09:55 AM	0.4	M	08:49 AM	0.5		10:26 AM	0.6	Th	09:21 AM	0.4	F	10:20 AM	0.5	Sa	09:37 AM	0.3
	04:41 PM	1.4		03:43 PM	1.5		05:17 PM	1.6		04:18 PM	1.6		05:01 PM	1.5		04:29 PM	1.6
	09:12 PM	0.9		08:08 PM	1.0		10:33 PM	0.9		09:37 PM	0.7		11:11 PM	0.6		10:45 PM	0.2
5	04:04 AM	2.1	20	02:48 AM	2.0	5	05:02 AM	1.7	20	04:09 AM	1.7	5	05:23 AM	1.3	20	05:23 AM	1.2
M	11:07 AM	0.5	Tu	09:55 AM	0.5	Th	11:19 AM	0.7	F	10:20 AM	0.5	Sa	11:08 AM	0.6	Su	10:32 AM	0.4
	06:00 PM	1.4		04:54 PM	1.5		06:05 PM	1.7		05:11 PM	1.7		05:45 PM	1.6		05:25 PM	1.8
	10:32 PM	1.0		09:23 PM	1.0		11:40 PM	0.8		10:55 PM	0.6					11:55 PM	0.0
6	05:25 AM	2.0	21	04:03 AM	2.0	6	06:10 AM	1.7	21	05:34 AM	1.7	6	12:09 AM	0.4	21	06:42 AM	1.2
Tu	12:13 PM	0.6	W	11:02 AM	0.5	F	12:04 PM	0.7	Sa	11:13 AM	0.5	Su	06:30 AM	1.3	M	11:27 AM	0.4
	07:04 PM	1.5		05:59 PM	1.6		06:42 PM	1.8		06:00 PM	1.9		11:50 AM	0.6		08:19 PM	1.9
	11:50 PM	0.9		10:47 PM	1.0							06:24 PM	1.7				
7	06:41 AM	2.0	22	05:27 AM	2.0	7	12:35 AM	0.7	22	12:03 AM	0.3	7	12:58 AM	0.3	22	12:56 AM	-0.2
W	01:08 PM	0.6	Th	12:02 PM	0.5	Sa	07:05 AM	1.7	Su	06:47 AM	1.7	M	07:25 AM	1.3	Tu	07:45 AM	1.2
	07:52 PM	1.6		06:53 PM	1.7		12:42 PM	0.7		12:03 PM	0.5		12:29 PM	0.6		12:19 PM	0.4
							07:14 PM	1.9		06:46 PM	2.1		07:01 PM	1.8		07:11 PM	2.0
8	12:56 AM	0.9	23	12:04 AM	0.8	8	01:20 AM	0.5	23	01:02 AM	0.1	8	01:40 AM	0.1	23	01:51 AM	-0.3
Th	07:43 AM	2.0	F	06:47 AM	2.0	Su	07:51 AM	1.7	M	07:50 AM	1.7	Tu	08:11 AM	1.3	W	08:41 AM	1.2
	01:51 PM	0.6		12:55 PM	0.5		01:16 PM	0.7		12:49 PM	0.5		01:04 PM	0.6		01:09 PM	0.3
	08:29 PM	1.7		07:39 PM	1.9		07:44 PM	2.0		07:31 PM	2.2		07:38 PM	1.9		08:00 PM	2.1
9	01:50 AM	0.8	24	01:10 AM	0.6	9	02:00 AM	0.4	24	01:56 AM	-0.1	9	02:18 AM	0.0	24	02:41 AM	-0.4
F	08:32 AM	2.0	Sa	07:56 AM	2.1	M	08:32 AM	1.7	Tu	08:46 AM	1.6	W	08:52 AM	1.3	Th	09:28 AM	1.2
	02:28 PM	0.6		01:41 PM	0.5		01:48 PM	0.7		01:34 PM	0.5		01:39 PM	0.5		01:57 PM	0.3
	09:00 PM	1.8		08:20 PM	2.1		08:13 PM	2.1		08:15 PM	2.3		08:14 PM	1.9		08:47 PM	2.1
10	02:36 AM	0.7	25	02:08 AM	0.4	10	02:37 AM	0.3	25	02:47 AM	-0.2	10	02:55 AM	-0.1	25	03:27 AM	-0.4
Sa	09:14 AM	2.0	Su	08:56 AM	2.1	Tu	09:10 AM	1.7	W	09:36 AM	1.6	Th	09:32 AM	1.3	F	10:12 AM	1.2
	03:00 PM	0.7		02:25 PM	0.5		02:17 PM	0.7		02:18 PM	0.5		02:13 PM	0.5		02:45 PM	0.3
	09:27 PM	1.9		09:00 PM	2.2		08:44 PM	2.1		08:59 PM	2.4		08:50 PM	2.0		09:32 PM	2.1
11	03:16 AM	0.6	26	03:02 AM	0.1	11	03:12 AM	0.2	26	03:36 AM	-0.3	11	03:31 AM	-0.2	26	04:11 AM	-0.4
Su	09:51 AM	2.0	M	09:51 AM	2.1	W	09:47 AM	1.7	Th	10:23 AM	1.5	F	10:11 AM	1.3	Sa	10:52 AM	1.2
	03:30 PM	0.7		03:06 PM	0.6		02:47 PM	0.7		03:03 PM	0.5		02:49 PM	0.5		03:31 PM	0.2
	09:53 PM	2.0		09:40 PM	2.4		09:15 PM	2.1		09:43 PM	2.4		09:28 PM	2.0		10:15 PM	2.0
12	03:54 AM	0.5	27	03:54 AM	0.0	12	03:47 AM	0.1	27	04:24 AM	-0.3	12	04:07 AM	-0.2	27	04:53 AM	-0.3
M	10:26 AM	2.0	Tu	10:43 AM	2.0	Th	10:25 AM	1.6	F	11:09 AM	1.5	Sa	10:51 AM	1.3	Su	11:31 AM	1.2
	03:59 PM	0.7		03:47 PM	0.6		03:18 PM	0.7		03:47 PM	0.5		03:27 PM	0.5		04:18 PM	0.3
	10:20 PM	2.1		10:21 PM	2.5		09:48 PM	2.2		10:28 PM	2.3		10:06 PM	2.0		10:57 PM	1.9
13	04:29 AM	0.4	28	04:45 AM	-0.1	13	04:23 AM	0.1	28	05:12 AM	-0.2	13	04:46 AM	-0.2	28	05:35 AM	-0.2
Tu	11:02 AM	1.9	W	11:32 AM	1.9	F	11:05 AM	1.6	Sa	11:54 AM	1.4	Su	11:32 AM	1.3	M	12:09 PM	1.2
	04:26 PM	0.7		04:29 PM	0.6		03:50 PM	0.7		04:34 PM	0.5		04:09 PM	0.5		05:07 PM	0.3
	10:48 PM	2.1		11:03 PM	2.5		10:22 PM	2.2		11:13 PM	2.2		10:47 PM	2.0		11:39 PM	1.8
14	05:05 AM	0.3	29	05:36 AM	-0.1	14	05:02 AM	0.1	29	06:00 AM	-0.1	14	05:27 AM	-0.2	29	06:16 AM	-0.1
W	11:38 AM	1.8	Th	12:21 PM	1.8	Sa	11:47 AM	1.5	Su	12:40 PM	1.4	M	12:15 PM	1.3	Tu	12:48 PM	1.2
	04:54 PM	0.8		05:11 PM	0.6		04:26 PM	0.7		05:24 PM	0.6		04:55 PM	0.5		05:58 PM	0.3
	11:18 PM	2.2		11:47 PM	2.5		11:00 PM	2.1					11:32 PM	1.9			
15	05:41 AM	0.3	30	06:27 AM	0.0	15	05:44 AM	0.1	30	12:00 AM	2.1	15	06:11 AM	-0.1	30	12:21 AM	1.6
Th	12:17 PM	1.8	F	01:11 PM	1.6	Su	12:33 PM	1.5	M	06:50 AM	0.1	Tu	01:00 PM	1.3	W	06:58 AM	0.0
	05:23 PM	0.8		05:56 PM	0.7		05:07 PM	0.8		01:29 PM	1.3		05:48 PM	0.5		01:28 PM	1.2
	11:49 PM	2.2					11:41 PM	2.1		06:19 PM	0.7					06:55 PM	0.4
31	12:34 AM	2.4	31	12:34 AM	2.4										31	01:08 AM	1.4
Sa	07:21 AM	0.1		07:21 AM	0.1										Th	07:41 AM	0.1
	02:04 PM	1.5		02:04 PM	1.5											02:11 PM	1.3
	06:45 PM	0.8		06:45 PM	0.8											08:00 PM	0.4

Disclaimer: These data are based upon the latest information available as of the date of your request, and may differ from the published tide tables.



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

Regulation

September 14, 2015

Elizabeth Ignoffo, E.I.
City of Key West
P.O. Box 1409
Key West, FL 33041-1409

Dear Ms. Ignoffo:

Subject: Permit No.: 44-00378-P
Project: Jose Marti Pond Fountain
Location: City of Key West, Monroe County

District staff has reviewed the information submitted on September 10, 2015 for the installation of a fountain in the existing pond as shown on the attached plan. Based on the proposed activity, a modification of the permit will not be required and the submitted information will be added to the permit file.

This does not relieve you of the responsibility of obtaining all necessary Federal, State, Local or special District authorizations prior to the start of any construction.

If you have any questions please contact Carlos de Rojas, P.E. at (561)-682-6505.

Sincerely,



Ricardo A. Valera, P.E.
Bureau Chief – Environmental Resource Compliance
Regulation Division

Cc Permit File

DISTRICT HEADQUARTERS: 3301 Gun Club Road, West Palm Beach, Florida 33406 • (561) 686-8800 • (800) 432-2045

Mailing Address: PO BOX 24680 West Palm Beach FL, 33416-4680

LOWER WEST COAST SERVICE CENTER: 2301 McGregor Boulevard, Fort Myers, FL 33901 • (239) 338-2929 • (800) 248-1201

OSKEECHOBEE SERVICE CENTER: 3800 N.W. 16th Blvd, Suite A, Okeechobee, FL 34972 • (863) 462-5260 • (800) 250-4200

ORLANDO SERVICE CENTER: 1707 Orlando Central Parkway, Suite 200, Orlando FL 32809 • (407) 858-6100 • (800) 250-4256

9/11/15

sfwmd.gov

NOTICE OF RIGHTS

As required by Sections 120.569 and 120.60(3), Fla. Stat., the following is notice of the opportunities which may be available for administrative hearing or judicial review when the substantial interests of a party are determined by an agency. Please note that this Notice of Rights is not intended to provide legal advice. Not all of the legal proceedings detailed below may be an applicable or appropriate remedy. You may wish to consult an attorney regarding your legal rights.

RIGHT TO REQUEST ADMINISTRATIVE HEARING

A person whose substantial interests are or may be affected by the South Florida Water Management District's (SFWMD or District) action has the right to request an administrative hearing on that action pursuant to Sections 120.569 and 120.57, Fla. Stat. Persons seeking a hearing on a SFWMD decision which affects or may affect their substantial interests shall file a petition for hearing with the Office of the District Clerk of the SFWMD, in accordance with the filing instructions set forth herein, within 21 days of receipt of written notice of the decision, unless one of the following shorter time periods apply: (1) within 14 days of the notice of consolidated intent to grant or deny concurrently reviewed applications for environmental resource permits and use of sovereign submerged lands pursuant to Section 373.427, Fla. Stat.; or (2) within 14 days of service of an Administrative Order pursuant to Section 373.119(1), Fla. Stat. "Receipt of written notice of agency decision" means receipt of written notice through mail, electronic mail, or posting that the SFWMD has or intends to take final agency action, or publication of notice that the SFWMD has or intends to take final agency action. Any person who receives written notice of a SFWMD decision and fails to file a written request for hearing within the timeframe described above waives the right to request a hearing on that decision.

If the District takes final agency action which materially differs from the noticed intended agency decision, persons who may be substantially affected shall, unless otherwise provided by law, have an additional Rule 28-106.111, Fla. Admin. Code, point of entry.

Any person to whom an emergency order is directed pursuant to Section 373.119(2), Fla. Stat., shall comply therewith immediately, but on petition to the board shall be afforded a hearing as soon as possible.

A person may file a request for an extension of time for filing a petition. The SFWMD may, for good cause, grant the request. Requests for extension of time must be filed with the SFWMD prior to the deadline for filing a petition for hearing. Such requests for extension shall contain a certificate that the moving party has consulted with all other parties concerning the extension and that the SFWMD and any other parties agree to or oppose the extension. A timely request for an extension of time shall toll the running of the time period for filing a petition until the request is acted upon.

FILING INSTRUCTIONS

A petition for administrative hearing must be filed with the Office of the District Clerk of the SFWMD. Filings with the Office of the District Clerk may be made by mail, hand-delivery, or e-mail. Filings by facsimile will not be accepted. A petition for administrative hearing or other document is deemed filed upon receipt during normal business hours by the Office of the District Clerk at SFWMD headquarters in West Palm Beach, Florida. The District's normal business hours are 8:00 a.m. – 5:00 p.m., excluding weekends and District holidays. Any document received by the Office of the District Clerk after 5:00 p.m. shall be deemed filed as of 8:00 a.m. on the next regular business day. Additional filing instructions are as follows:

- Filings by mail must be addressed to the Office of the District Clerk, P.O. Box 24680, West Palm Beach, Florida 33416.

- Filings by hand-delivery must be delivered to the Office of the District Clerk. Delivery of a petition to the SFWMD's security desk does not constitute filing. It will be necessary to request that the SFWMD's security officer contact the Office of the District Clerk. An employee of the SFWMD's Clerk's office will receive and file the petition.
- Filings by e-mail must be transmitted to the Office of the District Clerk at clerk@sfwmd.gov. The filing date for a document transmitted by electronic mail shall be the date the Office of the District Clerk receives the complete document. A party who files a document by e-mail shall (1) represent that the original physically signed document will be retained by that party for the duration of the proceeding and of any subsequent appeal or subsequent proceeding in that cause and that the party shall produce it upon the request of other parties; and (2) be responsible for any delay, disruption, or interruption of the electronic signals and accepts the full risk that the document may not be properly filed.

INITIATION OF AN ADMINISTRATIVE HEARING

Pursuant to Sections 120.54(5)(b)4. and 120.569(2)(c), Fla. Stat., and Rules 28-106.201 and 28-106.301, Fla. Admin. Code, initiation of an administrative hearing shall be made by written petition to the SFWMD in legible form and on 8 1/2 by 11 inch white paper. All petitions shall contain:

1. Identification of the action being contested, including the permit number, application number, SFWMD file number or any other SFWMD identification number, if known.
2. The name, address, any email address, any facsimile number, and telephone number of the petitioner and petitioner's representative, if any.
3. An explanation of how the petitioner's substantial interests will be affected by the agency determination.
4. A statement of when and how the petitioner received notice of the SFWMD's decision.
5. A statement of all disputed issues of material fact. If there are none, the petition must so indicate.
6. A concise statement of the ultimate facts alleged, including the specific facts the petitioner contends warrant reversal or modification of the SFWMD's proposed action.
7. A statement of the specific rules or statutes the petitioner contends require reversal or modification of the SFWMD's proposed action.
8. If disputed issues of material fact exist, the statement must also include an explanation of how the alleged facts relate to the specific rules or statutes.
9. A statement of the relief sought by the petitioner, stating precisely the action the petitioner wishes the SFWMD to take with respect to the SFWMD's proposed action.

MEDIATION

The procedures for pursuing mediation are set forth in Section 120.573, Fla. Stat., and Rules 28-106.111 and 28-106.401–.405, Fla. Admin. Code. The SFWMD is not proposing mediation for this agency action under Section 120.573, Fla. Stat., at this time.

RIGHT TO SEEK JUDICIAL REVIEW

Pursuant to Section 120.68, Fla. Stat., and in accordance with Florida Rule of Appellate Procedure 9.110, a party who is adversely affected by final SFWMD action may seek judicial review of the SFWMD's final decision by filing a notice of appeal with the Office of the District Clerk of the SFWMD in accordance with the filing instructions set forth herein within 30 days of rendition of the order to be reviewed, and by filing a copy of the notice with the clerk of the appropriate district court of appeal.

**Thank you Key West
for your love and generosity.**

-Frank Romano and Joe Liszka

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