

Constitution Marina Sustainability Plan



Team Members:

David D'Amore

Kelly DeMello

Mike Freeman

Todd Isherwood

12.12.09



Table of Contents

<u>Section</u>		<u>Page</u>
I.	Client Background	3
II.	History of Boston Harbor Clean Up	3
III.	Client Requirements and Sustainable Initiatives	4
IV.	Corporate Sustainability Model for Recycling	6
V.	Cost Benefit Analysis	18
VI.	Performance Metrics and Reporting	19
VII.	Future Initiatives – Phase Two	20
VIII.	Exhibits	27
IX.	End Notes and References	52

I. Client Background

Constitution Marina is a 300 slip marina that provides limited year round services for the New England's pleasure craft industry. The Marina manages one of the largest live aboard communities on the east coast with approximately 100 people making the marina their home. Constitution Marina is located right on the Freedom Trail in the fashionable Charlestown neighborhood of Boston, Massachusetts, just a 5 minute walk from North Station and the Boston Garden, convenient to water transportation, all major highways, Logan Airport and the many great things Boston has to offer¹.

II. History of Boston Harbor Clean Up

Boston Harbor is one of the region's greatest natural resources. Native Americans, European settlers, shipping magnets, and business tycoons have taken advantage of these waterways making Boston a desired place to do business and to live. Unfortunately, over the past four centuries Boston Harbor has been a dumping conduit for sewage, construction debris, and trash with the hope that the tide would magically make it disappear.

An environmental organization, Save the Harbor Save the Bay, notes "In 1972, the federal government passed the Clean Water Act requiring secondary as well as primary sewage treatment, but Boston failed to update its sewage system to meet those requirements. By the early 80's the media was calling Boston Harbor the "filthiest Harbor in the nation"².

In 1985, a city councilor sued the City of Boston for violating the Clean Water Act and won. This was the beginning of the cleanup of Boston Harbor. The government created the Massachusetts Water Resource Authority (MWRA) to implement an environmental clean-up with ongoing sustainable initiatives. The MWRA's completion of the Deer Island sewage treatment plant is

the pinnacle of this urban harbor clean-up plan. Noticeable differences in the harbor wildlife and fishing activities can be observed today because of these efforts. The MWRA continues to monitor the harbor and is an example for other communities with similar challenges.

Today, non-government organizations such as The Boston Harbor Association have created their own clean up initiatives. They note, “The most common types of debris removed from the Harbor are plastic bottles, paper and Styrofoam cups, plastic wrappers, and cigarette butts, particularly in high-activity areas such as Fort Point Channel, Long Wharf, Central Wharf, and Rowes Wharf.”³ Tourism, residents and business’ contribute to the daily debris found in Boston Harbor. Ongoing sustainable initiatives must be developed to mitigate these problems. The private and public sector must continue to work together to maintain our greatest natural resource.

III. Client Requirements and Sustainable Initiatives

This program provides Constitution Marina with a sustainable implantation plan in order to reduce operational costs, promote environmental awareness, and increase customer satisfaction. A Massachusetts Maritime Academy student team has conducted research towards three initiatives: recycling and waste, dock maintenance, and marina lighting upgrades. This program primarily focuses on implementing the recycling and waste initiative, Phase One. It is team’s hope that Phase Two, sustainable dock maintenance and efficient lighting upgrades, will continue as future sustainable initiatives building upon the success of Phase One.

Recycling and Waste Brief:

Currently, Constitution Marina promotes a small recycling program that has been dwarfed by the large amounts of waste produced by its customers. Recycling is a voluntary program for marina clients and has exhibited obstacles in participation. The recycling initiative conducted in the past was

ineffective due to a lack of management oversight, client involvement, and process. As no goals were initially defined, it presented a difficult challenge for management to measure success or failure.

Marina clients were confused as to the separation process of recyclables from waste. This accounted for its primary failure. The city's multi-stream recycling program forced additional effort on behalf of the marina to sort paper, plastic, and metals respectively. The marina's primary waste dumpster is 10 cubic yards and emptied weekly. The marina incurs an approximate annual cost of \$13,000 for waste removal. An improved recycling initiative would provide the stepping stone towards an economic, social and environmental sustainability model for Constitution Marina.

Initiative on Recycling and Waste:

Our sustainable recycling and waste initiative will follow "The Corporate Sustainability Model" as outlined in Mark Epstein's "Making Sustainability Work"⁴. This model outlines inputs, processes, outputs / outcomes and feedback towards an effective sustainable strategy in recycling and waste reduction. Participation will be required from various stakeholders such as marina staff, clients / boat owners, marina subcontractors / vendors, and associated government and non government organizations. The goal is to reduce cost of waste removal, exhibit leadership in environmental awareness, and build better community relationships through sustainable practices.

Potential Risks of Non-action:

Over the past four years, waste costs have increased an average of 15% annually and is expected to continue this trend. Lack of participation will continue to burden landfills with materials that would otherwise be recycled. Social risks include missed opportunities for future business with environmentally conscious boaters.

IV. Corporate Sustainability Model for Recycling

The Corporate Sustainable Model is based on a business process that allows Constitution Marina the ability to review the inputs that influence the initiation of a recycling plan. In addition, the process includes a strong leadership structure to carry this plan to completion and continuation. Systems, strategies, plans and action are vital to the implementation of the process. The desired output and outcomes will be measured to determine the success rate. The outputs and outcome of the program will provide the hard facts needed to continue, alter or abandon the recycling plan. The Corporate Sustainability Model (**Exhibit 1**) provides a diagram for the following this recycling initiative below.

Inputs

External context

- On the water
- Weather
- Limited dock space
- City of Boston Recycle curb side pick-up
- WasteWise⁵ federal and state initiative and MassRecycle⁶

Internal context

- Current Mission Statement: Constitution Marina is committed to quality customer service. We understand that our efforts affect the actual life experiences of our customers. We will provide the same quality and exceptional service that we would expect to and want to receive as customers. We will provide the atmosphere and environment that will improve the quality of the lives of our customers.
- Failed initiative

- Change Mission Statement to include environmental sustainability plan
- Constitution Marina has owners who eagerly support a new recycling initiative

Business context

- Cost of waste verses cost of time invested in recycling
- Getting customers involved
- Service industry: Constitution Marina would be better served focusing on the social aspect of sustainability
- How to monitor?

Human / Financial Resources

- Currently curbside recycling pick-up costs are included in CM City taxes
- Minimal costs to create dock-side recycle drop-boxes (WasteWise / Massrecycle provides a reduction in recycling container costs)
- Utilize unused areas for recycle station
- Incentive programs for involvement

Processes

Leadership

- Put recycling / sustainability in the mission statement (**Exhibit 2**)
- Make recycling visible in the office. Place recycling containers where customers can see them. Educate employees in participating. Get employee input for making the program work
- Create a highly qualified team to initiate program: team should include upper management, recycling coordinator (middle management staff) and several key customers (live aboard or “green captains”)
- Evaluation of the program

Sustainability Strategy

- Managing regulatory Compliance: Boston has little regulatory compliance for recycling. Currently, the City of Boston moved to a single-stream recycle program⁷

- Achieving a competitive advantage: The next generation of boaters is going to be more environmentally conscious. By creating a working sustainability plan now it will draw the next generation
- Behavior Change: Complete social, economic, and environmental integration. Constitution Marina had a strong mission statement and code of conduct. By including these initiatives in these areas and promoting employees to work by these standards it will become easier for Constitution Marina to achieve sustainability (**Exhibit 3**)

Sustainability Structure

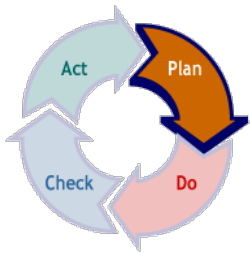
- *Research*
 - Waste audit for both summer and winter months
 - Survey level of customer commitment
- *Marketing*
 - Educate management, staff, and customers
 - Educate through postings, e-mails, and social events (pool parties)
 - Create incentives
 - 1% reduction of fee through “Green Captain” recycling participation
 - Green buoy or flag at dock indication recycling boater participation (non-Green Captains)
 - Added employee assistance during docking to bring recyclables to the recycle station
 - Promote recycling plan through website
- *Production*
 - Get input from employees and customers for creating an easy to use recycling process
 - Create three recycle stations for throughout the dock system
- *Management Accounting*
 - Keep accurate account of recyclables vs. general waste costs

- *Financial reporting and auditing*
 - Disclose findings
 - Yearly waste audit
 - Yearly cost analysis

- *Non-Government Organizations*
 - Boston Harbor Island Alliance⁸ – Tom Cox was a past member of this organization. The website, capitol development (Spectacle Island: green marina & green teaching classroom)
 - Boston Harbor Association – Peter Davidoff past board member and has been affiliated with the association for several years
 - MassRecycle.org – CM to consider partnership. Geared towards business entities interested in reducing overall waste and increasing recyclables

Sustainability Systems, Programs, Actions

- Environmental Management Systems
 1. **Plan**
 2. **Do**
 3. **Check**
 4. **Act**

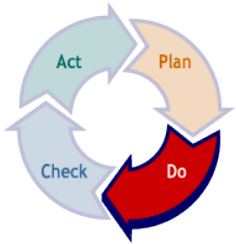


1. Plan

- Management Goals: Reinstate recycling initiative as beginning stages of a sustainability plan. With benefits for the environment, the customers and reduced waste costs

- Secure Management Commitment: Peter & Tom
- Select Champion: Initially this can be a live aboard committed to making change. Later as the sustainability plan grows at the marina a new hire with experience may be more beneficial in helping with other initiatives
- Build a team: The “G.R.E.E.N. Wave” (Guest Recycling and Environmentally Efficient Network) / Green Captains, non-Green Captains, and C.M. Staff
- Hold kick-off meeting: Clearly define goals to team. Possible training. Show management support and assign roles. April 17th ,2010 is “Earth Day”⁹
- Preliminary review: Recycling Audit (**Exhibit 4**) commitment to recycling and other environmental areas (energy reduction, dock upgrades)
- Budget planning: Currently curb-side pick-up is included as part of city taxes:
 - Cost of recycle stations on docks (Partnership with WasteWise / MassRecycle could reduce upfront container costs)
 - Cost of employee time to empty bins on dock. (Possible Green Captain volunteers to empty for a reduction in dock fee)
 - Baseline cost for waste removal in order to determine future volume reduction in savings
- Involve Employees – Get all employees involved in program:
 - All employees training
 - Asking for employee participation with non government organizations
- Communication: Make sure an easy communication plan is in place for each stakeholder:
 - Employees
 - ❖ Systems and procedures (**Exhibit 5**)
 - ❖ Staff meetings
 - ❖ Calendar Board
 - ❖ Email Tagging
 - ❖ Signage including recycling benefits

- ❖ Include within code of conduct
- Live Aboard Population
 - ❖ Dockage license agreement addendum to include recycling efforts – Section V. **(Exhibit 6)**
 - ❖ Introduction of a welcome letter detailing recycling efforts. **(Exhibit 7)**
 - ❖ Mailbox letter campaign
 - Website update to include new page for sustainability efforts for all stakeholders to view

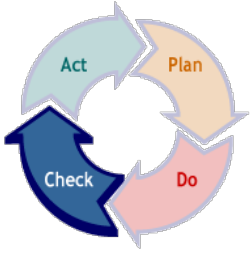


2. Do

- **Step 1:** Identify Legal and other requirements: There are no specific recycling laws regarding the city of Boston. Waste management is regulated through laws against putting hazardous materials directly into the waste system. Batteries, fuel, oil, fuel / oil filters. (i.e. MGL Ch 21.c)¹⁰
- **Step 2:** Identify Environmental Aspects and Related Products, Operations, and Activities
- **Step 3:** Define views of interested parties: Survey customers, managers, employees – audit forms are handed out to clients, staff meetings conducted, employee training and kick off party
- **Step 4:** Prepare environmental Policy: Create new mission statement, and code of conduct to reflect
- **Step 5:** Define key roles and responsibilities:
 - List and Identify staff member roles
 - ❖ Leadership – Tom and Peter
 - ❖ Process manager – Any chosen staff member
 - ❖ Green Captain – Ideally an enthusiastic live aboard

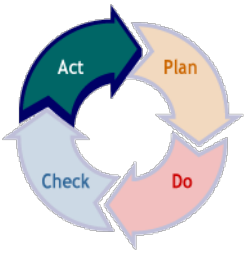
- **Step 6:** Establish objectives and targets:
 - Establish recycling program
 - Client Initiative
 - Establish target of 50% participation of live aboard population
 - Establish 100% employee participation
 - Sub-Contractor Initiative
 - Refer to sub-contractor procedures documentation (**Exhibit 8**)
 - Target reduce waste cost by 25%
 - Join WasteWise and MassRecycling as a cost saving initiative
- **Step 7:** Develop environmental management programs, identify operational controls, and the identification monitoring and measurement needs.
 - Control current operations:
 - ❖ Current operation entails separation of recyclables at designated waste storage area. All marina clients currently transport recyclables to waste storage area in parking lot
 - Are these controls adequate to meet our objectives and to ensure compliance?
 - ❖ Current operations are ineffective due to lack of participation and / or confusion of where to put trash and recycle materials
 - If additional controls are needed, what types of controls make sense?
 - ❖ Develop environmental management programs:
 - Identify and establish on-dock recycle stations. See Dock Layout (**Exhibit 9**)
 - Increase footprint of the waste storage area
 - Building individual local recycle stations which include separation tables, signage, and recycle bag storage. See hand sketch (**Exhibit 10**)

- Modify deck hand process during morning dock walk to provide boaters recycling bags for return trip. Action during evening dock walk and / or during tie up assistance will ensure recycling material is picked up from participating boaters (not trash pick)
- G.R.E.E.N. Wave program
 - ✓ Green Captains –
 - Building community by promoting environmental awareness
 - Incentive / Reward program participation
 - ✓ Earth Day education pool party “kick-off”
 - Mascot introduction, invite all clients to party
 - Pool party will provide incentives and prizes. i.e. free night and / or bed and breakfast etc.
 - ✓ October 24th, 2010 “United Nations Day”¹¹ will be the end of season party
 - ✓ Education for staffing
- ❖ Identify Operations Control:
 - Systems and procedures documentation
 - List of what, and what not to recycle. See Guide (**Exhibit 11**)
- ❖ Identification monitoring and measurement needs:
 - Dock walk checklist (**Exhibit 12**)
 - Identifying how many trips / bins have been delivered to waste storage area
- Monitoring measurement is needed:
 - ❖ Dock walk checklist reported to Dock master reporting chart



3. Check

- Conduct Audits:
 - Conduct initial audit ensuring all “do’s” are completed
 - Green captains to make weekly reports of who was talked to how many boaters want to participate (new arrivals list provided to Green Captains weekly)
 - Taking account of how many dumpster hauls were conducted monthly
- Create scorecards
 - Survey measures participation / happiness / difficulty of initiative / G.C. experience / initiative improvements
- Metrics
 - Total operating costs towards initiative including paybacks and / or R.O.I. (See Cost-Benefit Analyses in next section)



4. Act

- Implement Program – continue cycle
 - April to November timeframe
- Evaluation Systems
 - Scorecard system

- Green captains will report weekly visits (**Exhibit 13**)
 - Dock Walk Log for daily reported including “end of the week” accounting for barrels taken to the street curb (**Exhibit 14**)
 - Evaluating the cost for the dumpster pickup based on a monthly basis, included within the dock-masters report
- Surveys
 - Customer surveys
 - ❖ Surveys will be provided to the clients one week prior to kickoff party (**Exhibit 15**)
 - ❖ Kick-off party will collect client surveys and will be directed towards G.C.’s.
 - Sub-Contractor Surveys
 - ❖ Office administrator / Accounting to provide invoiced payment. See Sub-Contractor Survey (**Exhibit 16**)
- Audit review and comparison
 - Will be conducted both during the ON and OFF seasons for comparative and reporting purposes
- Internal Actions
 - Evaluate how many employees participated internally during staff meetings
 - Evaluate how many employees attended training and what was learned
 - Evaluate sustainable performance of current initiatives
- External Actions
 - Provide required data for WasteWise and MassRecycle programs
 - Provide required data to any additional partners / NGO’s / programs

Outputs

Sustainability Performance (can be output or outcome)

- *Economics*
 - Reduction of waste cost
- *Environmental*
 - Reduction of waste going to landfills per barrel of recyclables
 - Reduction in GHG emissions (how do we calculate this?)
- *Social*
 - A more environmentally educated client / boater, employee and sub-contractor
 - Building a new community culture based on sustainable initiatives
 - Establishing stronger stakeholder relationships
 - Sub-contractors
 - NGO's
 - Suppliers
 - Clients / boaters

Stakeholder Reactions

- *Clients*
 - Increased client loyalty and repeat business opportunities
 - New clients based on advertising performance of sustainable initiatives
 - Positive reactions based on incentives
- *Employees*
 - Motivation to participate in the creation and execution of an effective initiative
 - Attracting higher caliber employees through program success
- *Regulators / Non Government Organizations*

- Increased rapport with NGO's and/or regulators

Outcomes

- *Long term corporate financial performance*
 - After an eleven-month payback period, program provides an active annual revenue stream
- *Gained environmental recognition by doing the right thing*
- *Increased public perception of being an environmental leader*
- *First marina in New England to be a partner of WasteWise / MassRecycle*

Feedback Loop

- Report results to leadership (**Exhibit 17**)
 - Recycling Initiative (goals achieved)
 - Achieved 25%+ waste reduction, increased customer satisfaction, improved sub-contractor relations, and gained public recognition
 - How to improve, maintain, and/or refine recycling initiative?
 - What other sustainability initiatives can be implemented phase II / phase III?
 - Recycling Initiative (goals not achieved).
 - 25% waste reduction not achieved, poor customer / sub-contractor relations, and no public recognition
 - Identify weakness in program
 - Evaluate inputs, leadership and process
 - Alter program to address weaknesses
 - See advice from NGO's and other regulatory agencies
 - Set new outputs / outcomes (goals)

V. Cost-Benefit Analysis

Implementation cost:

<u>Product</u>	<u>Quantity</u>	<u>Cost</u>	<u>Net Cost</u>
<i>Recycle Bins</i>	9	\$75.00	\$675.00
Remote Recycling Stations	3	\$500.00	\$1,500.00
Signage	3	\$100.00	\$300.00
Green Captains Slip Discount (1% of season fee)	3	\$100.00	\$300.00
MassRecycle Membership	1	\$175.00	\$175.00
		Total Cost	\$2,950.00

Waste Analysis:

<u>Service</u>	<u>Term</u>	<u>Annual Cost</u>	<u>Total Cost</u>
<i>EZ Disposal Dumpster Service</i>	<i>12 mo</i>	<i>\$13,000.00/yr</i>	<i>\$13,000.00/yr</i>

Reduction Targets:

<u>Service</u>	<u>Goal</u>	<u>Current Annual Cost</u>	<u>Targeted Annual Savings</u>
<i>EZ Disposal Dumpster Service</i>	<i>25% reduction</i>	<i>\$13,000.00/yr</i>	<i>\$3,250.00</i>

Payback Period:

<u>Implementation Cost</u>		<u>Targeted Annual Savings</u>	<u>Payback Period</u>
<i>\$2,950.00</i>	<i>/</i>	<i>\$3,250.00</i>	<i>11 months</i>

VI. Performance Metrics and Reporting

- Recycling Audit (**Exhibit 4**)
- Green Captains – Weekly Reports (**Exhibit 13**)
- Dock Walk Log (**Exhibit 14**)
- Client Boater Survey (**Exhibit 15**)
- Subcontractor Survey (**Exhibit 16**)
- Recycle Procedures (**Exhibit 17**)

VII. Future Initiative – Phase Two

Sustainable Dock Replacement Program – Capital Improvements Brief

The Constitution Marina is currently looking forward to a long term major upgrade of their existing docking system. They are early in the process at the moment but they are thinking about and just beginning to conduct research. The Constitution Marina owners do have environmental sustainability as a priority but the capital improvements budget will have an effect on the choice of materials.

The existing docking system has been kept up well over the years but is ready for some heavy improvements. In the past, repairs have been made as they were needed but there is no improvement plan currently in place. It has worked so far to just replace misc. decking as its life cycle has elapsed. Now it is getting to the point where the structural support system in certain areas needs to be upgraded.

Their dedication to environmental sustainability will play a part in a number of different ways. The current support system is based on having 48” spacing for most of the dock sections. The wood decking that is currently used has not been upgraded so far because it will span the 48” that the lower support system offers. The wood decking also offers a structural element to the overall support of the dock system. With this current system, there are very few material options that will provide the support that wood decking does in this situation. This will push for a new design to be developed for the dock support system to have considerably smaller spacing to accommodate a more sustainable decking product.

The new design of this structural support system for the dock will have to keep the marina’s electrical requirements in mind. The current docking system does not have a proper raceway to

safely house the electrical cables that run within the dock. The new design will need to work with the existing conditions to work in the long term plan for the dock replacement.

Dock Replacement – Initiative on Sustainability

The new docking system will have a new environmentally sustainable decking product. There are many different materials to be considered keeping sustainability in mind. Products such as concrete, plastic, composite, aluminum, and steel are all possibilities as an alternative to wood. All of these products will have a considerably smaller impact of the environment, will use no chemical preservatives, and are all recyclable at the end of their life cycle.

Sustainable Dock Replacement – Cost Benefit Analysis on:

	cost per square foot	life cycle / warranty	Recycled material used	recyclable at end of life
SYP PT wood	\$3.13	10 year life span	0	no
everblue dock boards		25 year life span	90%	Yes
steel deck	\$11.00	25 year warranty	30%	Yes
everblue aqua deck	\$4.50	15 year life span	Not specified	Yes
everblue teck deck	\$5.10	20 year life span	Not specified	Yes
aluminum decking	\$7.96	25 year warranty	Not specified	Yes

Sustainable Dock Lighting Brief

Addressing Constitution Marina's energy consumption, in comparison to that of other commercial entities, proved to be a challenge due to the fact that a majority of their energy usage is utilized by their clients. The marina handles this incurred cost by assessing a general fee within their clients slip fees for on-season usage. Trying to identify static processes in their operations that account for any significant portion of their demand is virtually impossible although recommendations will be made for future cost control. With this being said, we have identified the following cost saving opportunities within the following areas:

- Solar exterior flood lighting alternatives utilizing L.E.D. technology
- Solar dock lighting alternatives utilizing L.E.D. technology
- Compact fluorescent lighting upgrades where applicable

Current Lighting Configuration

Each shore power post along the docks is configured with USHIO® UFL-CF7S/841 compact fluorescent bulbs for illumination purposes; refer to **Table 1a** for the bulb specifications. This provides ample ambient light for dusk until dawn operations. The manner in which their replacement schedule is exercised is simply when they burn out. Pylon lighting provided by Constitution Marina is intended to prevent liability from individuals jumping over the rail onto the dock area. The lighting used for this application is the POLARLITE® HPS70W-MED, refer to **Table 2a** for bulb specifications. High pressure sodium lamps typically provide high efficiency, low operating cost, long life and efficient lumen output.

Future Sustainable Dock Lighting Program

Illuminating a marina's dock is an expensive undertaking and a maintenance challenge. Lights have to be coupled to an electrical supply, bulbs need replacing and sealing any light from surrounding water and moisture is a problem. Solar powered dock lighting is a solution that is safe, affordable and maintenance free. Safety is the primary concern; lighting must be upgraded as to preserve the current illumination requirements while providing a cost effective, socially and environmentally sound replacement. It has been determined that a photovoltaic replacement system will suffice these outdoor requirements.

Benefits of Solar Lighting

- **Energy savings** – Solar L.E.D. lighting requires no grid tie-in for power supply effectively reducing each post by 7-45 watts consumption
- **Longer lifespan** – Solar L.E.D. lighting provides 60,000+ hours of illumination in comparison to that of compact fluorescents 10,000 hour rating
- **Health benefits** – Solar L.E.D. lighting units are self contained, thus reducing exposure to potential electrocution from actual assembly or ballasts

Dock Lighting Replacement Strategy

Power post lighting will be replaced with the RD05 Solar 'Vision' Recessed Dock lighting (Table 3a). This versatile, compact, cost effective, and maintenance free unit will suffice the existing lumen requirements while also providing protection to employees and clients from risk of shock as it is a self contained unit. It is designed to withstand marina foot traffic while providing an ease of installation and providing over 10 hours of illumination during dusk to dawn operations. Pylon

lighting and associated ballasts will be replaced with the FL03 Solar 'Multi-Purpose' 24 LED Floodlight (Table 4a). This unit is ideal for night time operation and will provide over 9 hours of ambient light equal to that of the current configuration while providing significant cost savings. The RD05 based on current electrical costs of 9.38 cents per kilowatt hour furnished by NStar electric in addition to equipment costs will provide a 3.2 year return on initial investment. The FL03 based on current electrical costs of 9.38 cents per kilowatt hour in addition to equipment costs will provide a 4.1 year return on initial investment. Upgrading both areas of lighting will provide a five time greater life span than conventional means.

Table 1a:
Part # Ushio UFL-CF7S.841


Price:	\$3.07 Average	
Type:	Lamp	
Family:	Fluorescent	
Brand:	Can Vary	
Volts:	45	
Watts:	7	
Shape:	Single U Tube	
Base Type:	2 Pin, GX23	
Weight:	2 oz.	
Description:	Compact Fluorescent, Cool White, 10000 Hours, 400 Lumens, 4100 Degrees K, 82 CRI, 5.3" MOL	
Notes:	Equal To Light Output Of 40 Watt Incandescent	

Table 2a

Part # POLARLITE HPS70W-MED


Price:	\$12.00 Average	
Type:	HID	
Family:	Hg Vapor	
Brand:	Can Vary	
Volts:	52V AC	
Watts:	70W	
Shape:	Single U Tube	
Base Type:	2 Pin, GX23	
Weight:	2 oz.	
Description:	HID, Hg Vapor, 24000 Hours, 5160 Lumens, 2000 Degrees K,	
Notes:	Equal To Light Output Of 40 Watt Incandescent	

Table 3a

Part # RD05 Solar 'Vision' Recessed Deck / Dock / Ground Light

Price:	\$29.99
Type:	L.E.D.
Family:	Photo-Voltaic
Brand:	Solar Vision
Volts:	45V equivalent
Watts:	12W equivalent
Shape:	Self contained unit
Base Type:	Recessed/Self Contained
Weight:	12.8oz
Description:	Walk over applications. Drive over applications not recommended. High quality solar panel set within the fixture face. 2 Super bright LED bulbs. Built-in photocell for automatic dusk-to-dawn operation. Up to 10 hours illumination time.
Notes:	Equal To Light Output Of 12 Watt Incandescent

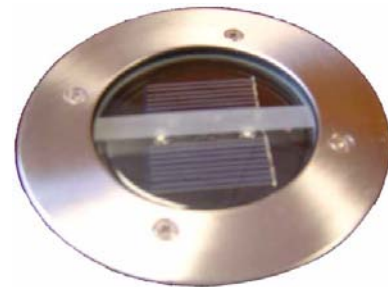


Table 4a

Part # FL03 Solar 'Multi-Purpose' 24 LED Floodlight / Sign Light

Price:	\$169.99
Type:	L.E.D.
Family:	Photo-Voltaic
Brand:	Solar Vision
Volts:	45V equivalent
Watts:	30-40W equivalent
Shape:	Self contained unit
Weight:	3.2lb
Description:	Compact floodlight head (adjustable tilt/swivel for accurate aiming). Compact main body to which floodlight head is fixed to. On/off mode switch on main floodlight body. 24 super bright Cree LED's providing approximately 30-40 watts of incandescent light. Total 192 Lumens. Integral high capacity 4 volt 4.5 Amp/Hour sealed lead acid rechargeable battery (replaceable). Built-in photocell for automatic night time operation.



Exhibits

Exhibit 1

The Corporate Sustainability Model

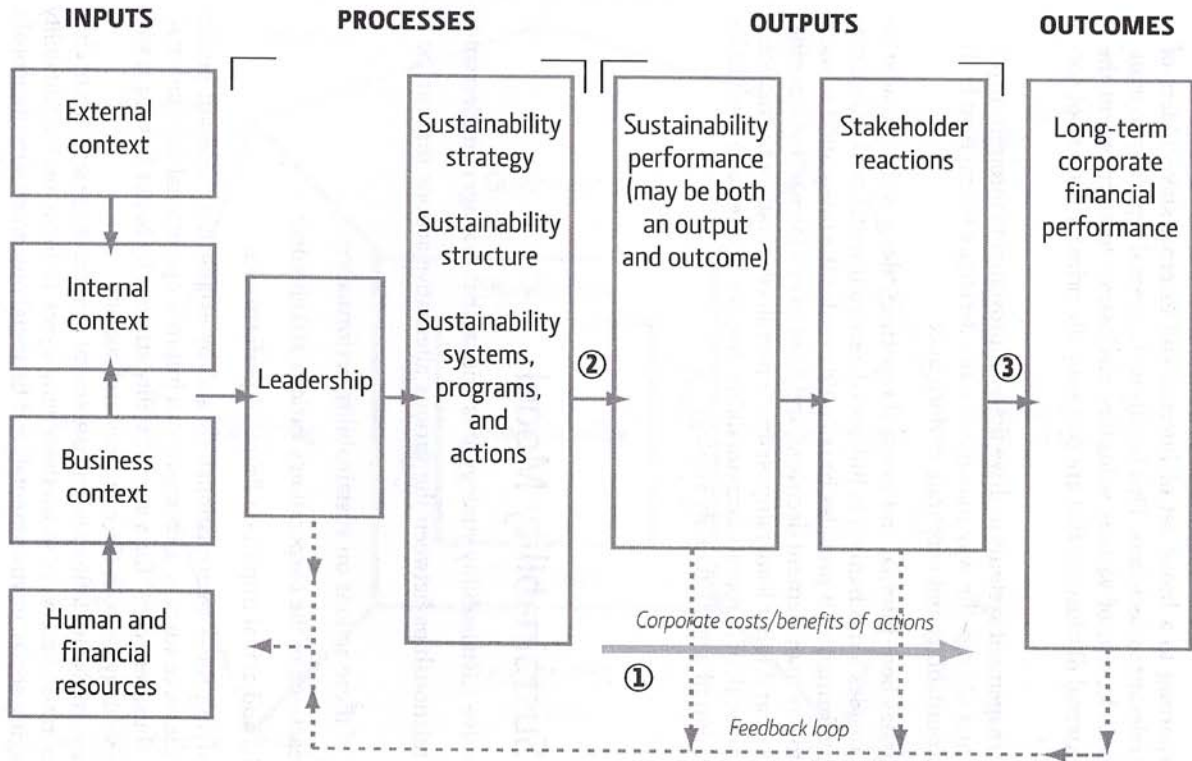


Exhibit 2

Revised Mission Statement and Code of Conduct

MISSION STATEMENT

Constitution Marina will lead the marina industry in its commitment to quality customer service and sustainable environmental practices. We understand that our efforts affect the environment and the life experience of our customers. We will provide exceptional service that we would expect to receive as customers through helpful staff and efficient practices. We are committed to providing a positive atmosphere in which our customer can enjoy the environment as well as preserve it.

CODE OF CONDUCT

To deliver exceptional service we are committed to the following principles:

- We will treat each customer with **courtesy**. Greet them with a **smile** and by name. We will make our customers' experience with us easy and hassle free, treating them **fairly, professionally** and **promptly**.
- We are **responsible** for the sustainability of this marina, the environmental footprint we make, and the positive influence we can have on our customers.
- When we make a mistake we will acknowledge it, apologize, and correct it **quickly and cheerfully**. We will be **honest** in our dealings, always **deliver on promises**, and meet deadlines, never forgetting to keep in communication with our customers.
- We will **listen empathetically** to our customers and exceed their expectations, doing whatever it takes to address their needs.

- We will take responsibility for our **attitudes** knowing that we are the masters of our thoughts. We will be **proactive and not reactive** to problems. We will decide how we are going to react to situations and will not let situations direct us or determine our attitudes.
- We will **positively assist** them throughout their experience in the recycling initiative.
- We are **empowered** to solve problems on the spot even if it means we may have to modify or bend rules on occasion when necessary.
- We will let every customer know that he or she is our **most important customer**.
- We will not make excuses, pass blame, procrastinate, patronize or treat our customers in any way, which we would not want to be treated ourselves.
- We will do the job right the first time.
- We will follow up with our customers to discover if we are meeting their expectations and we will modify our Mission Statement as needed.
- We will dress and present ourselves in a **professional** manner and provide the environment that our customers can be comfortable with and proud of.
- We will be knowledgeable in our duties and always know the facts when answering questions. If we do not know the answer we will say so and get the answer promptly.
- We will never ignore a problem or complaint. We will move quickly to solve all problems. We will be patient and tolerant knowing that anyone may have a “bad day” but we will not take it personally.
- We will treat our peers as well as we do our customers.
- We will organize and execute around our priorities.







Exhibit 3

Change Management

Current behavior	Expected behavior	Barriers	Benefits	Strategies
Recycling policy not being utilized.	-follow recycling policy	-lack of interest in recycling -lack of knowledge about recycling	-reduced waste costs	-educate clients of the current recycling policy.
Users place trash in recycling bins	-separate recyclables from trash -Separate recyclables into proper categories	-lack of recycling policy knowledge -laziness -more work than they are willing to perform.	-assists in effective recycling program -reduction in trash costs	-educate users of current recycling policy -develop easier recycling process to follow
Users do not separate recyclables	-separate glass, plastic, and paper into proper bins	-lack of motivation -lack of knowledge of the recycling program	-recycling organization	-rework recycling program to single stream recycling.

Exhibit 4

Recycling Audit

MATERIAL	RECYCLE	% of total waste	 DO NOT RECYCLE 	% of total waste
 Aluminum	Beverage Cans and Clean Aluminum Foil		No Food Trays, Pie Plates, Folding Chair Frames	
 Aseptic Boxes	Milk, Juice and Ice Cream Containers		No Foil Juice Bags	
 Cardboard Chipboard	Corrugated Cardboard Boxes, Dry Food Boxes such as cereal, cake mix and cracker containers (please remove liner) shoe boxes, pizza boxes, empty paper towel and toilet tissue tubes		No Packing Material, Bar Soap or Detergent Boxes, Wax / Plastic Liners	
 Glass	Glass Food and Beverage Containers (clear, green or amber)		No Light Bulbs, Window Glass, Mirror Glass, Ceramics or Pottery	
 Magazines	All Magazines and Telephone Books		No Paperback or Hardbound Books	





 <p>Metal Cans</p>	<p>Food Cans made of Steel or Tin, Aerosol Cans (empty only please)</p>		<p>No Other Metals, paint cans or toxic materials</p>	
 <p>Newspaper</p>	<p>Newspaper and All Inserts</p>		<p>No Bags or Rubber Bands</p>	
 <p>Paper</p>	<p>Computer and Writing Paper, Junk Mail, Brown Paper Grocery Bags, File Folders</p>		<p>No Facial or Toilet Tissue, Paper Towels, Paper Plates, Paper Beverage Cups, Napkins, Gift Wrap, Diapers, Pet Food Bags, FedEx or Self-sealing Envelopes</p>	
 <p>Plastics</p>	<p>All plastic cups and containers #1-7, plastic bottles, jugs, jars, yogurt containers, cottage cheese containers, margarine and whipped topping tubs, plastic "Clamshell" food containers and disposable plastic cups</p>		<p>No Plastic Bags *, Motor Oil or Pool Chemical Containers or Styrofoam * <u>Clear</u> plastic bags can be used to contain shredded paper.</p>	

Exhibit 5

Constitution Marina Systems & Procedures

Index

AED:	AED.doc	
Alarm Building:	Alarm Procedures.doc	
Constitution Marina Systems & Procedures		Error! Bookmark not defined.
AED:	AED.doc	34
Alarm Building:	Alarm Procedures.doc	34
Dock Hands		34
Schedule of Duties AM:	Schedule of Duties AM.doc	34
Schedule of Duties PM:	Schedule of Duties PM.doc	34
B&B		34
B&B Cleaning Check List:	B&B Cleaning Checklist.doc	34
B&B Preparation Check List:	Bed And Breakfast Preparation Check List.doc	34
Booking B&B Afloat:	Bed & Breakfast Afloat Booking.doc	34
Boat Was Moved Notice:	Boat was Moved Notice.doc	35
Contractors		35
Contractor Work Permit:	Contractors Work Permit Pass.doc	35
Contractors:	Contractors.doc	35
Contractors the Issue:	Contractors - The Issue.doc	35
Contractors the Issue 1:	Contractors - The Issue 1.doc	35
Pool		35
Pool Duties:	Pool Duties.doc	35
Pool Modification:	Pool Modification.doc.	35
Parking Cards & Stickers:	Parking Cards - Lost & Replacement.doc	35
Pulling Up Dockwalk:	Dock Walk.doc	35
Pumpout Management:	Pumpout Management.doc	35
Recycling Program:	Recycling.doc	2
Restroom Check off List:	Restroom Check Off List.doc	35
Reservation Procedure:	Reservation Procedure.doc	35
Severe Weather Preparation:	Severe Weather preparations.doc	35
Shrink Wrap:	Shrink wrap.doc	35
Procedure to Access this file:	PROCEDURES TO ACCESS THE PROCEDURES INDEX FILE.doc	35

Dock Hands		
Schedule of Duties AM:	Schedule of Duties AM.doc	
Schedule of Duties PM:	Schedule of Duties PM.doc	
B&B		
B&B Cleaning Check List:	B&B Cleaning Checklist.doc	
B&B Preparation Check List:	Bed And Breakfast Preparation Check List.doc	
Booking B&B Afloat:	Bed & Breakfast Afloat Booking.doc	

Boat Was Moved Notice: [Boat was Moved Notice.doc](#)
Contractors
Contractor Work Permit: [Contractors Work Permit Pass.doc](#)
Contractors: [Contractors.doc](#)
Contractors the Issue: [Contractors - The Issue.doc](#)

Contractors the Issue 1: [Contractors - The Issue 1.doc](#)
Pool
Pool Duties: [Pool Duties.doc](#)
Pool Modification: [Pool Modification.doc](#)
Parking Cards & Stickers: [Parking Cards - Lost & Replacement.doc](#)
Pulling Up Dock walk: [Dock Walk.doc](#)
Pump out Management: [Pump out Management.doc](#)
Recycling Program: [Recycling Systems and Procedures](#)
Restroom Check off List: [Restroom Check off List.doc](#)
Reservation Procedure: [Reservation Procedure.doc](#)
Severe Weather Preparation: [Severe Weather preparations.doc](#)
Shrink Wrap: [Shrink wrap.doc](#)
Procedure to Access this file: [PROCEDURES TO ACCESS THE PROCEDURES INDEX FILE.doc](#)

Exhibit 6

Dockage license agreement addendum

Section 5. The Licensee bears all risk of loss or damage.

The Licensee assumes all risk of damage, theft or loss to the vessel, its equipment or any other property of the licensee and further assumes all risk of damage or loss caused by the vessel, its equipment or any other property of the licensee, to any other vessel or vessels, equipment, or property of Bosport, its clients or any other person or entity, including but not limited to the docks, chains, moorings, walkways, electric distribution posts, fresh water spigots, pump-out equipment and other facilities. Bosport shall not be required to provide or maintain any security or fire alarm services or systems at the Marina and shall be held harmless for any failure to provide said services or systems.

Licensee acknowledges that Bosport has a lease with Tudor Wharf Hotel, LLC for use of the so-called "T-dock" and will be bound by and comply with the provisions of this Lease while Licensee's boat is docked on "T-dock". Licensee agrees to indemnify Tudor Wharf Hotel, LLC & Bosport for the charges, damages, costs and risks relating to Hazardous Materials. Licensee shall be bound by all rules and regulations from time to time promulgated regarding the use of "T-dock" pursuant to Bosport's lease with Tudor Wharf Hotel, LLC and this License agreement.

Licensee shall use good faith efforts in order to comply with all laws and conditions listed in this agreement and the Tudor Wharf, LLC lease regarding the disposal, release or threat of release of Hazardous Materials on or about the property and marine environment.

Any handling, treatment, transportation, storage, **recycling**, disposal or use of hazardous Materials by Licensee or its agents, servants, employees, contractors, guests, customers or invitees in or about the Premises and Licensee's use of the Premises and the water and surrounding marine environment and/or Bosport's & Tudor Wharf, LLC's Project shall comply with all applicable Environmental Laws

Licensee shall indemnify, defend upon demand with counsel reasonably acceptable to Bosport, and hold Bosport & Tudor Wharf, LLC harmless from and against, any liabilities, losses claims, damages, interest, penalties, fines, attorneys' fees, experts', fees, court costs, remediation costs, and other expenses which result from the use, storage, handling, treatment, transportation, release, threat of release or disposal of Hazardous Materials in or about the property and in the surrounding water and marine environment and/or on Tudor Wharf LLC's project

Section 6. The Licensee shall maintain the required casualty insurance.

The Licensee continuously shall maintain with a reputable insurance company qualified to do business in Massachusetts adequate liability insurance and shall also continuously insure the Vessel under an "all risks" insurance policy - the policy or policies shall include wreck removal coverage. The vessel shall at all times be insured under the "all risks" policy in an amount not less than its declared value or in such greater amount as is required to prevent the Licensee from becoming a co-insurer. The bodily injury and property damage limits not less than \$1,000,000 (or such greater amount as Bosport may from time to time require) per occurrence and in the aggregate. At any time the Vessel is at the Marina, the licensee warrants that said insurance is in full effect. The licensee shall provide a copy of the valid insurance binders with Bosport listed as an "additional insured", within ten (10) days of executing this agreement, shall deliver to Bosport prior to each Extended License Period a certificate or binder evidencing such terms, and shall provide Bosport at least thirty (30) days prior written notice of any cancellation thereof.

Exhibit 7

Welcome Letter

John Doe
123 Sunshine Street
Manchester, NH 01944

March 14, 2010

Dear John,

This up coming season we are anticipating our largest transient guest season ever. We have clubs scheduled to visit from all over the East Coast. Many clubs are returning from past seasons, others will be seeing the Boston skyline for the first time. If you have not had the opportunity to experience Constitution Marina, this is the year to do so! Give your club the chance to meet fellow boaters in and around Boston and from around the world.

During your next club meeting, we invite your members to experience Constitution Marina by viewing the enclosed DVD. You will find the DVD captures all the important topics when deciding a destination flotilla - full-service facility, restaurants and shopping within walking distance, trolley tours and other numerous amenities.

We have begun to initiate sustainable marina programs that allow our boaters to participate in a clean and alive harbor. We are continuing to build on our performance and service to our clients and the community.

We've now made it even easier to plan a flotilla. Just press PLAY! From there our experienced staff will handle any major and minor details for you.

I will work personally with you organizing a truly memorable 2006 boating experience.

Sincerely,

Keith McClearn

Dockmaster
Constitution Marina
28 Constitution Road
Boston, MA 02129
617-241-9640
VHF CH 69
Km@bosport.com
www.constitutionmarina.com

Exhibit 8

Sub-contractor Procedures Documentation

Constitution Marina Sub-Contractor Guidelines and Preferred Contractor Agreements

Sub-Contractor _____

Date _____

Our primary concern at Constitution Marina is to provide efficient, quality, and timely service for our boat owners for all of their boating needs. Constitution Marina is not in the boat repair business, however we recognize that our boat owners require boat services in order to enjoy their vessels and we make every effort to ensure that they receive good service.

Sub-Contractors provide a valuable service for our customers and we are happy to work with qualified service providers and help them to provide the same quality service to our customers that we provide in other areas on a daily basis. Constitution Marina operates an open yard for service companies with the standard restrictions applied by most marinas in the Commonwealth of Massachusetts. The standard requirements are:

1. **MOLL Insurance** Certificates naming Bosport Docking, LLC as an additional insured with limits equal or greater than those provided by the marina on file at the marina (currently one million dollars). **Workmen’s Compensation** insurance must be on file if the sub-contractor is employed by a corporation.....a sole proprietor will need workmen’s comp insurance if the company is set up as a corporation. **Protection and Indemnity** insurance is necessary if the sub-contractor takes a vessel off the dock.
2. Proper disposal of hazardous materials (not in the marina dumpster). Sub contractors must adhere to all city, state, federal and marina regulations. Old batteries cannot be left at the marina or in the marina dumpster. Waste oil, shrinkwrap, anti-freeze and other hazardous materials must be properly recycled or disposed of by the sub-contractor.
3. **Bosport Docking is concern with the environment and has initiated a sustainability plan for recycling cardboard, bottles, and cans. We encourage sub-contractors to participate within our facilities with the following conditions:**
 - a. **Review and approve with the dockmaster or deckhand your desire to participate in the recycling. They will instruct you further for drop off locations and limitations within the marina**
 - b. **Boater owners at Constitution Marina participate too. They’re participation is primary and sub-contractors are secondary.**
 - c. **All recycled materials must be able to fit within the Bosport Docking’s recycling bins. This means all boxes shall be broken down and/or cut to size.**
 - d. **No material shall be left on the ground near, besides or on top of recycling bins.**
4. Sign in and sign out daily with the Dockmaster when working on a boat on the premises.

5. Limit hours of service (except in an emergency as determined by the Dockmaster) to regular marina business hours as posted.
6. Leave the marina property as clean as they find it. This also includes customer's vessels. When working in the garage sub-contractors must take special care not to track mud or dirt onto vessels, or into the dock office, bathrooms, or marina offices.
7. Carry MSDS specifications on all materials brought onto the marina property and leave copies with the dockmaster.
8. Signs are not permitted on boats or marina property.
9. Certain activities are not allowed at the facility including but not limited to: fueling, sand-blasting, spray painting, welding and other activities stipulated by the dockmaster. If in doubt, ask the dockmaster.
10. Parking is not guaranteed. Sub-contractors may park in the marina parking lot only if directed to do so by marina personnel. At times it will be necessary for sub-contractors to park on neighboring parking areas for a fee.
11. Marina carts are not to be used by sub-contractors.
12. Sub-contractors may be subject to fees. Typical fees may be from \$25/day or up to 25% of labor billings.

It is the goal of the marina to work with sub-contractors that are servicing our customer's vessels to help provide the best possible service to our customers, while providing a safe environment for all customers and employees and guests.

Preferred Contractor Agreements

Realizing that sub-contractors provide a useful function for our customers, Constitution Marina operates an open yard, with restrictions as noted, and may at times partner with a select group of sub-contractors that, in the opinion of the marina, have proven to be reliable, knowledgeable, and trustworthy.

Recognizing the sub-contractor _____ operates a marine service company that provides the following services: _____

 Constitution Marina agrees to enter into a relationship to provide services to boat owners at Constitution Marina. As a preferred contractor, _____, will be allowed open access to the facility, will be issued parking access cards and parking decals (preferred sub-contractors will be expected to follow the same guidelines for parking as marina employees and not use patrons parking spaces during heavy use periods), will not have to check in on a daily basis, and may use areas of the marina not normally reserved for sub-contractors (For example, space in the winter storage garage.)

Constitution Marina will promote the business of the preferred sub-contractors and will initiate work orders and keep work orders on file in the marina office. In addition, Constitution Marina will handle all billing for the preferred sub-contractor for all marina customers. Constitution Marina will take deposits and collect fees on invoices for preferred sub-contractors. Preferred Sub-Contractors must

abide by all of the standard requirements as outlined except for those specifically deleted because of their status as a preferred sub-contractor. Constitution Marina will deduct a fee equal to _____% of labor billings and _____% of material billings for the above recognized preferred sub-contractor. All work performed by the preferred sub-contractor will be subject to the fees and all work done by the preferred sub-contractor on boats at Constitution Marina must be processed thru the marina office.

Special Considerations: _____

Signed:

For Constitution Marina _____ date _____

For Preferred Sub-Contractor _____ date _____

Exhibit 9

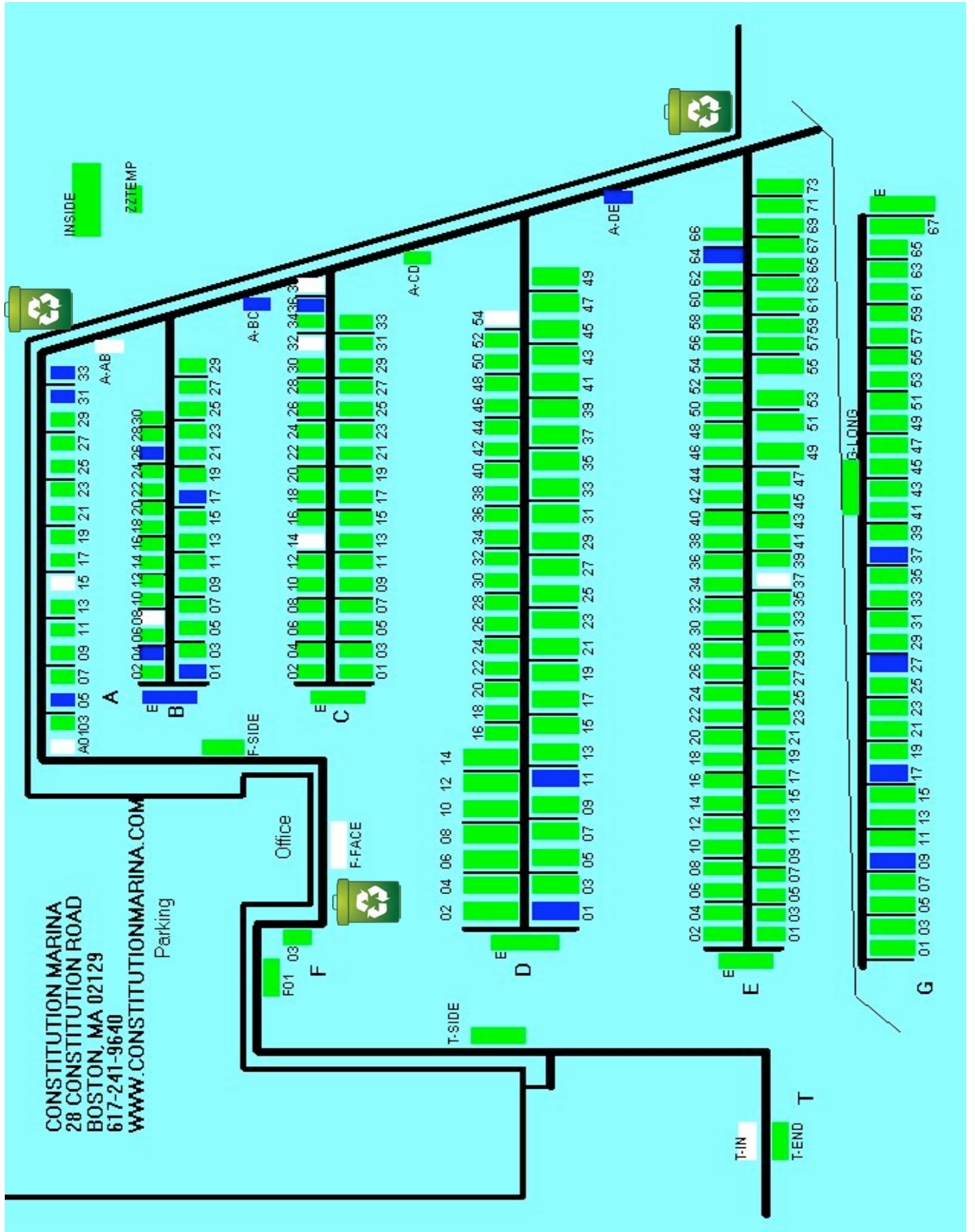


Exhibit 10

RECYCLE STATION
CONSTITUTION MARINA
12.12.09

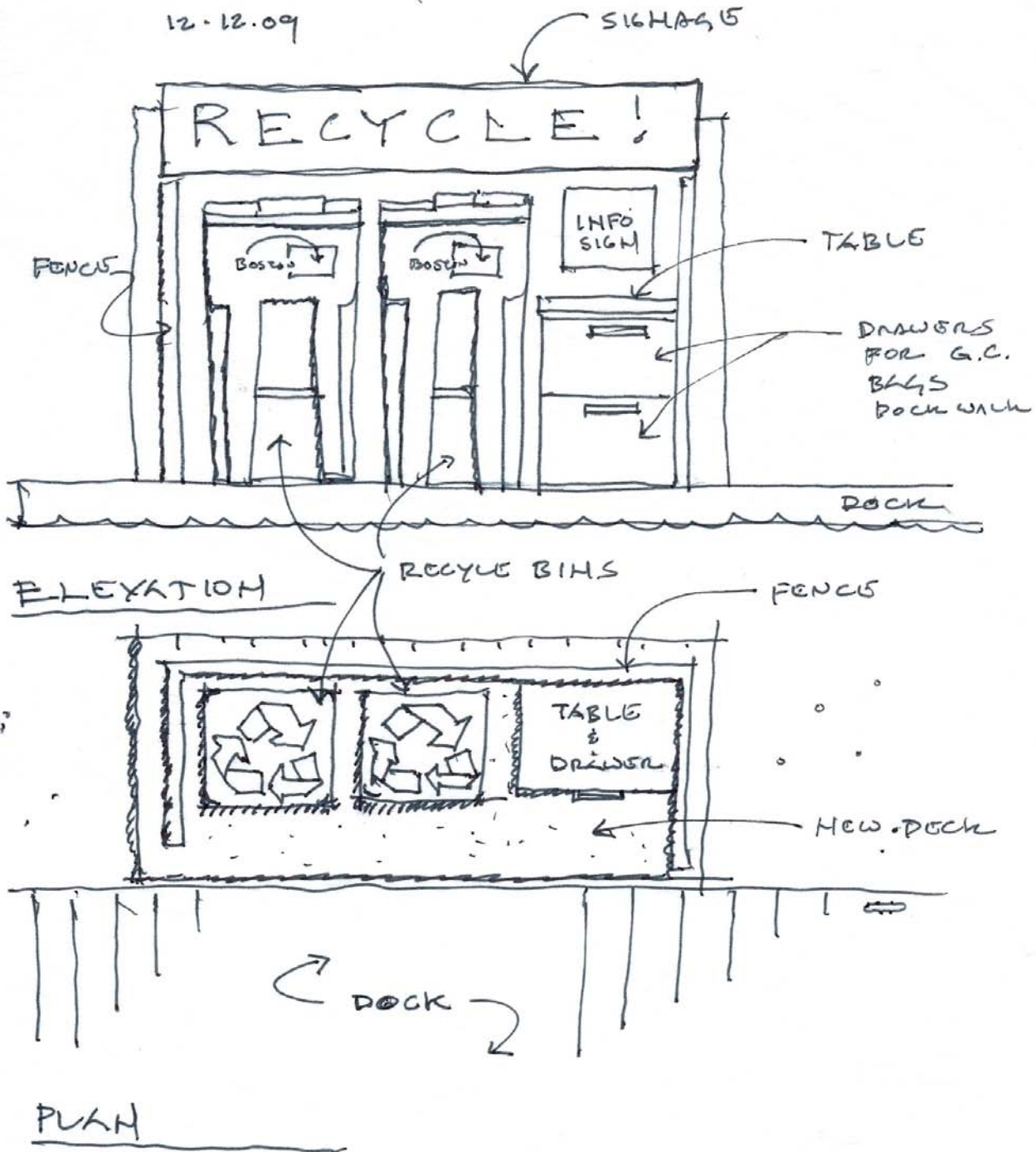


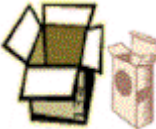


Exhibit 11

Recyclable and Non-Recyclable Guide

MATERIAL	RECYCLE	DO NOT RECYCLE
 Aluminum	Beverage Cans and Clean Aluminum Foil	No Food Trays, Pie Plates, Folding Chair Frames
 Aseptic Boxes	Milk, Juice and Ice Cream Containers	No Foil Juice Bags
 Cardboard Chipboard	Corrugated Cardboard Boxes, Dry Food Boxes such as cereal, cake mix and cracker containers (please remove liner) shoe boxes, pizza boxes, empty paper towel and toilet tissue tubes	No Packing Material, Bar Soap or Detergent Boxes, Wax / Plastic Liners
 Glass	Glass Food and Beverage Containers (clear, green or amber)	No Light Bulbs, Window Glass, Mirror Glass, Ceramics or Pottery
 Magazines	All Magazines and Telephone Books	No Paperback or Hardbound Books





 <p>Metal Cans</p>	<p>Food Cans made of Steel or Tin, Aerosol Cans (empty only please)</p>	<p>No Other Metals, paint cans or toxic materials</p>
 <p>Newspaper</p>	<p>Newspaper and All Inserts</p>	<p>No Bags or Rubber Bands</p>
 <p>Paper</p>	<p>Computer and Writing Paper, Junk Mail, Brown Paper Grocery Bags, File Folders</p>	<p>No Facial or Toilet Tissue, Paper Towels, Paper Plates, Paper Beverage Cups, Napkins, Gift Wrap, Diapers, Pet Food Bags, FedEx or Self-sealing Envelopes</p>
 <p>Plastics</p>	<p>All plastic cups and containers #1-7, plastic bottles, jugs, jars, yogurt containers, cottage cheese containers, margarine and whipped topping tubs, plastic "Clamshell" food containers and disposable plastic cups</p>	<p>No Plastic Bags *, Motor Oil or Pool Chemical Containers or Styrofoam * <u>Clear</u> plastic bags can be used to contain shredded paper.</p>

Exhibit 12

Dock Walk Checklist

HOW TO DO DOCK WALK

1. Marina Program
2. Journal Reports
3. Occupancy/Vacancy Inventory
4. Dock Check Meter
5. Dock Check Only
6. Walk Order
- 7. Check conditions of Recycling Stations and check in with “Green Captains”**
8. Change date to 5/1/06 to 10/31/06
9. Print
10. Start on A Dock with Pokey
11. If the boat is on slip put check mark on it; if not on slip put a circle around slip
12. While doing Dock Walk also check for: the condition of the boats, broken finger, cleats, water leaks, waterlines, alarms sounding off, spring lines properly placed, fenders in place, trash, check lines on boats, loose boards, and anything out of the ordinary.

Check on top of Dock Walk what the weather is like for that day.

Also take time to talk and get to know our customers, make them feel welcome, ask how they are doing, invite them to any up and coming parties, flotillas, navigation, CPR classes, or any other events taking place at the Marina, **and finally, ask them if recycling is making a positive impact with their boating experience.** Ask if they are going out that day, and when they are coming back. Write on open slip. Write up condition reports on any conditions that need attention, especially on customer’s boats. Also react immediately to any questions or concerns the customers may have. If you are able to solve the problem on the spot by making a phone call or VHF do so.

Dock Walk needs to be done every day in the summer time, once a week in the winter.

Encourage Green Captains to visit other boats in their designated dock area to discuss and promote recycling initiatives. It’s a great way to build community.

Weekend Dock Walks need to be done either by Keith or Sebastian.

Exhibit 13

Green Captain - Weekly Reports

Date:

Questions

How many boats arrived this week?

How many boats did you talk to this week?

How boats signed up for the Green Wave program?

Name of Boats participating in Green Wave this week

Name of Boat

Name of boat owner

- | | | |
|-----|-------|-------|
| 1. | _____ | _____ |
| 2. | _____ | _____ |
| 3. | _____ | _____ |
| 4. | _____ | _____ |
| 5. | _____ | _____ |
| 6. | _____ | _____ |
| 7. | _____ | _____ |
| 8. | _____ | _____ |
| 9. | _____ | _____ |
| 10. | _____ | _____ |
| 11. | _____ | _____ |
| 12. | _____ | _____ |
| 13. | _____ | _____ |
| 14. | _____ | _____ |
| 15. | _____ | _____ |
| 16. | _____ | _____ |
| 17. | _____ | _____ |
| 18. | _____ | _____ |
| 19. | _____ | _____ |
| 20. | _____ | _____ |

Exhibit 14

Dock Walk Log

Day of week	Number of bins moved from dock to recyclables storage	Rough percentage of the volume of the bin moved	Time and date of bin relocation	Employee initials who completed this work
Saturday				
Sunday				
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Total Number of Bins to Curb _____				
Week of _____				

Exhibit 15

[Client Boater Survey] - Constitution Marina Recycling Program

Questions

- | | | | | | |
|---|------|------|------|------|---|
| 1. Did you participate in CM Recycling Program?
(circle one) | Yes | No | N/A | | |
| 2. How much did you participate in CM Recycle Program
(circle one) | 25% | 50% | 75% | 100% | |
| 3. How easy or difficult was your efforts
(1 = easy to 5 = difficult) (circle one) | 1 | 2 | 3 | 4 | 5 |
| 4. Did you find the C.M. staff helpful with recycling?
(circle one) | Yes | No | | | |
| 5. Did you find your "Green Captain" helpful with recycling?
(circle one) | Yes | No | | | |
| 6. How much more are you recycling this year from last year?
(circle one) | Same | More | Less | | |
| 7. Would you participate again in CM recycling program?
(circle one) | Yes | No | | | |

8. If you answered no to question 7, then why?

9. Do you have any suggestion or recommendations for improving C.M. recycling program?

Exhibit 16

[Subcontractor Survey] - Constitution Marina Recycling Program

Questions

- | | | | | |
|---|-------|-----|-----|-------|
| 1. Did you participate in CM Recycling Program?
(circle one) | Yes | No | N/A | |
| 2. How much did you participate in CM Recycle Program
(circle one) | 25% | 50% | 75% | 100% |
| 3. How easy or difficult was your efforts
(1 = easy to 5 = difficult) (circle one) | 1 | 2 | 3 | 4 5 |
| 4. Did you find the C.M. staff helpful with recycling?
(circle one) | Yes | No | | |
| 5. Would you participate again in CM recycling program?
(circle one) | Yes | No | | |
| 6. If you answered no to question 5, then why? | | | | |
| | <hr/> | | | |
| | <hr/> | | | |
| | <hr/> | | | |
| | <hr/> | | | |

7. Do you have any suggestion or recommendations for improving C.M. recycling program?
-
-
-
-

Exhibit 17

RECYCLING PROCEDURES

1. Distribute the recycling audit two weeks (2) prior to recycle kick-off party (Earth Day) and continuously to clients. Collect and track audits returned during dock walks and/or from green captains.
2. Ensure two (2) blue recycling bins are located at designated areas.
3. Follow dock walk checklist for inspecting and transporting **full** recycle bins to main storage area daily.
4. Log bin relocations daily in dock walk log.
5. Follow A.M. dock walk procedures for ensuring green captain responsibilities daily. Collect green captain's weekly reports at the beginning of every week and provide those reports to dock-master to be recorded in dock-master log.
6. Follow P.M. dock walk procedures for organizing recycling designated areas.
7. Distribute Sub-Contractor surveys to appropriate partners. Collect Sub-Contractor surveys upon receipt and provide to dock-master and recorded in dock-master log.
8. Distribute the recycling client boater surveys two weeks (2) prior to the end of season party (U.N. Day). Collect and track surveys returned during dock walks and/or from green captains in dock-master log.
9. Record in dock-master log when dumpster pickups are conducted.

10. Record the volume of the dumpster in dock-master log prior to pickup to evaluate whether current dumpster volume (approximate percentage full) requirements suffice or if reduction in dumpster volume can be achieved over the course of the season.
11. Record number of dumpster hauls conducted weekly in dock-master log.
12. Tabulate data from client boater surveys to evaluate success of recycling program and/or if changes in procedures are needed. (End of season duties)
13. Tabulate data from Sub-contractor surveys to evaluate success of recycling program and/or if changes in procedures are needed. (End of season duties)

ENDNOTES AND REFERENCES:

1. Constitution Marina. Retrieved from: <http://www.constitutionmarina.com>
2. Save the Harbor Save the Bay. Retrieved from: <http://www.savetheharbor.org>
3. The Boston Harbor Association. Retrieved from: <http://www.tbha.org>
4. Epstein, Mark J. (January 2008) Making Sustainability Work: Best Practices in Managing and Measuring Corporate Social, Environmental and Economic Impacts, Berrett-Kohler Publishers, San Francisco.
5. WasteWise. Retrieved from: <http://www.wastewise.com>
6. MassRecycle. Retrieved from: <http://www.massrecycle.org>
7. City of Boston 2009. Retrieved from: <http://www.cityofboston.gov/publicworks/recycling>
8. Boston Harbor Island Alliance. Retrieved from: <http://www.islandalliance.org>
9. Earth Day. Retrieved from: <http://www.earthday.net>
10. THE GENERAL LAWS OF MASSACHUSETTS. Retrieved from:
<http://www.mass.gov/legis/laws/mgl>
11. United Nations Day. Retrieved from: <http://www.un.org/events/unday>