City of Miami Beach

Cleanliness Index Manual
(As of 8-20-21)

City of Miami Beach
Public Area Cleanliness Index

Objective

The objective of the Public Area Cleanliness Index is to define a set of standards that can be used to measure the cleanliness of the City of Miami Beach's public areas. The public areas that will be measured by this index are as follows:

Public Area	Department Responsible for Cleanliness
Streets and Sidewalks (includes medians, alleys, and adjacent public green space areas)	Sanitation
Parks	Parks and Recreation
Surface Parking Lots	Parking
Waterways	Sanitation
Beach Areas (Beachwalk, Boardwalk, sand dunes, and beach spoils)	Sanitation / Parks and Recreation

Using this index assessments of the public area are conducted to score the cleanliness of the area based on contributing factors. The cleanliness index and assessments will assist in achieving the following:

- The index will provide a quantitative measurement to gauge the cleanliness of the City as it relates to the vision statement.
- The departments responsible for cleaning the public area can use the data captured by the index to direct their efforts in improving their maintenance functions. For example, Sanitation may use their cleanliness rating score to evaluate whether the service level assigned to a street and sidewalk is sufficient to keep the area acceptably clean.
- The index can assist the departments in determining what factors affect the cleanliness of the public area.
- The index can evaluate if different initiatives and service levels are effective in making the public area cleaner.

Approach

When determining the index and a process to assess the cleanliness of the City's public areas, five factors were considered and defined:

- *Index* – Defines the standard and numerical rating scale used to measure the cleanliness of the public area.
- *Areas to assess* – Determines which areas will be evaluated against the index and defines the process on how to evaluate each of those areas to obtain an accurate cleanliness score. When the areas have been defined, a sample size must be calculated to accurately represent the area as a whole for the City.

- *Frequency of the assessments* – Defines the number of times an area must be assessed. This is important to determine if the cleanliness of the public area is affected by different times of the day, week, or year.
- *Assessors* – Identifies the number of assessors needed to assess the cleanliness of the areas.
- *Reporting* – Identifies how the assessment data will be reported to the departments

Many municipalities were first researched to leverage best practices when defining the cleanliness index and assessment process for the Miami Beach public areas. For a listing and brief descriptions of approaches used by other municipalities, please refer to Appendix B – References and Best Practices. Information was also gathered from the Sanitation, Parks and Recreation, and Parking departments on defining the index and a process to assess each of the public areas. Preliminary test runs were then conducted with each department to test the index and the process and to determine the time needed to assess a specific area.

After the test runs were conducted, the total population of public areas was identified. Calculations were then made to determine the sample size of each of the public areas and the frequency for the assessments. After the sample size for each public area was determined, the number of volunteer inspectors was identified. Finally, reports were defined to allow each of the departments the ability to use the data collected by the cleanliness index in an effective manner.

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Cleanliness Index

The challenge when defining a set of ratings is that the definition of cleanliness may mean something different from one person to the next. What one person considers an acceptably clean sidewalk may be a dirty sidewalk to the next person. To avoid this issue, the Public Area Cleanliness Index must be a defined set of ratings that can effectively provide an objective measurement on the cleanliness of the city.

When defining the index, interviews were conducted with all departments responsible for cleaning their public areas. In addition, other municipalities were contacted or researched, in order to obtain best practices on measuring cleanliness. A summary of the information from other municipalities is contained in the Appendix B – References and Best Practices.

The proposed cleanliness index is based on a 6 point scale that rates four factors that directly affect the cleanliness of the public area. The four factors are Trash/Litter, Litter/Garbage Cans, Organic Materials, and Fecal Matter. The tables beginning on the next page contains the proposed cleanliness index.

Cleanliness Index for Streets, Sidewalks, Right-of-Ways, Parks, Parking, and Alleys

Index	Litter / Trash	Litter / Garbage Cans	Organic Materials	Fecal Matter
1 Extremely Clean	• No litter and/or debris on entire block face.	• Can is in good working order and none are no more than 3/4 full. • Can is in a clean condition free of items, such as stickers, graffiti.	• Isolated instances of small fresh organic material, such as leaves, branches, etc., cover the paved area. • No large organic material, such as tree limbs or palm fronds on the ground.	• Fecal matter is not visible.
2 Clean	• Isolated pieces of litter on the entire assessed area. The area is not void of litter, but may contain an isolated incidence of litter.	• Can is in good working order and none are no more than 3/4 full. There is isolated piece of trash outside of the can. • Can is in a clean condition free of items, such as stickers, graffiti.	• Less than 10% of a 10 step distance paved area is covered by small organic materials, but occurring no more than 10% of the entire assessed area. If occurring in more than 10% of the entire assessed area, then add 1 point. • No large organic material on the ground.	• Past residue of fecal matter. It seems that an attempt was made to clean the fecal matter, but residue was left behind.
3 Somewhat Clean	• Small to moderate amounts of litter. In a 10 step distance the litter accumulation should account to less than 10 small pieces or 2-4 pieces of large litter, but occurring in no more than 10% of the entire assessed area. • If the litter density is occurring between 10-25% of the assessed area, then add 1 point from the rating scale. • If the litter density is occurring more than 25% of the assessed area, then add 2 points from the rating scale. *Guideline:* Is the litter something you notice, but your eye is not constantly drawn to it? The area has a clean appearance, but does need some attention.	• Can is functioning, but is full with trash, which can be seen from the eye level. There is no litter above the rain guard. There is some residue from past garbage. • Can is in a clean condition, but may have one small isolated instance of a sticker or graffiti, which the eye is not drawn to it.	• Between 10% - 30% of a 10 step paved area is covered by organic materials, but occurring in no more than 10% of the entire assessed area. If occurring in more than 10% of the entire assessed area, then add 1 point. • Between 1 and 3 pieces of large organic materials is on the ground. • Isolated case of organic material accumulation caused by standing water and poor drainage.	• One instance of fecal matter is present on the public area.

Cleanliness Index for Streets, Sidewalks, Right-of-Ways, Parks, Parking, and Alleys

Index	Litter / Trash	Litter / Garbage Cans	Organic Materials	Fecal Matter
4 Somewhat Dirty	• Consistently scattered trash. In a 10 step distance the trash accumulation should account to more than 10 pieces of small litter or over 4 pieces of large litter occurring in no more than 10% of the entire assessed area. • If the litter density is occurring between 10-25% of the assessed area, then add 1 point from the rating scale. • If the litter density is occurring more than 25% of the assessed area, then add 2 points from the rating scale. *Guideline:* Trash or litter is obvious and your eye is constantly drawn to it.	• Can is full and there is trash above the rain guard. In some cases, there is evidence that there is improper use by the residents. • Can is in a working condition, but contains items such as stickers or graffiti on them. • Can has some damage, such as dents, but is usable.	• Between 30% - 50% of a 10 step paved area is covered by organic materials, but occurring in no more than 10% of the entire assessed area. If occurring in more than 10% of the entire assessed area, then add 1 point. • Between 4 and 10 pieces of large organic materials is on the ground. • 2 to 3 instances of organic material accumulation caused by standing water and poor drainage. • The organic material is beginning to turn brown.	• Two instances of fecal matter are present on the public area.
5 Dirty	• Consistent accumulation of trash. In a 10 step distance there are multiple piles of trash consisting of more than 10 pieces of small litter or over 4 pieces of large litter. • If the litter density is occurring between 10-25% of the assessed area, then add 1 point from the rating scale.	• Can is full and there is trash above the rain guard and beginning to overflow since there is no room to put additional trash. There may be evidence of improper use by the residents. • Can has considerable damage, but is usable. • A large area of the can contains items such as stickers or graffiti on them.	• Over 50% of a 10 step paved area is covered by organic materials, but occurring in no more than 10% of the entire assessed area. If occurring in more than 10% of the entire assessed area, then add 1 point. • Over 10 pieces of large organic materials is on the ground. • 3-4 instances of organic material accumulation caused by standing water and poor drainage. • Faint foul odor is present due to standing water. • The organic material has been on the ground for some time and has turned brown.	• Three instances of fecal matter are present on the public area.

Cleanliness Index for Streets, Sidewalks, Right-of-Ways, Parks, Parking, and Alleys

Index	Litter / Trash	Litter / Garbage Cans	Organic Materials	Fecal Matter
6 Extremely Dirty	Area is blocked by an accumulation of trash and litter. Illegal dumping may be evident. Hazardous materials on the street. *Guideline:* This area has been neglected for a long time and needs help. Heavy equipment will be required to clean this area. The area may also be affected due to other circumstances (i.e. nearby constructions sites, homeless activity, etc.)	• Can is full and trash has overflowed to the ground. In some cases, there is a rat/rodent/insect infestation. • Can is damaged and needs to be replaced. • Can is covered of items such as stickers or graffiti.	• 90-100% of a 10 step paved area is covered with organic material. The organic material has been on the ground for some time and has turned brown. • Over 5 instances of organic material accumulation caused by standing water and poor drainage. • Strong foul odor is present due to standing water.	• Four or more instances of fecal matter are present on the public area.

Cleanliness Index for Beaches

Index	Litter / Trash	Litter / Garbage Cans	Organic Materials	Fecal Matter
1 Extremely Clean	• No litter and/or debris on entire block of the beach.	• Can is in good working order and none are no more than 3/4 full. • Can is in a clean condition free of items, such as stickers, graffiti.	• Isolated instances of small fresh organic material, such as seaweed. • No large organic material, such as tree limbs or palm fronds on the ground.	Fecal matter is <u>not</u> visible.
2 Clean	• Isolated pieces of litter on the entire beach block. The area is not void of litter, but may contain an isolated incidence of litter. • No harmful litter, such as broken glass or syringes	• Can is in good working order and none are no more than 3/4 full. There is isolated piece of trash outside of the can. • Can is in a clean condition free of items, such as stickers, graffiti.	• Less than 10% of a 10 step area of the beach block is covered by small organic materials, but occurring in no more than 10% of the beach block. If occurring in more than 10% of the entire beach block, then add 1 point. • No large organic material on the ground.	Past residue of fecal matter. It seems that an attempt was made to clean the fecal matter, but residue was left behind.
3 Somewhat Clean	• Small to moderate amounts of litter. In a 10 step distance the litter accumulation should account to less than 10 small pieces or 2-4 pieces of large litter, but occurring in no more than 10% of the entire block segment. • If the litter density is occurring between 10-25% of the block segment, then add 1 point from the rating scale. • If the litter density is occurring more than 25% of the block segment, then add 2 points from the rating scale. • No harmful litter. *Guideline:* Is the litter something you notice, but your eye is not constantly drawn to it? The area has a clean appearance, but does need some attention.	• Can is functioning, but is full with trash, which can be seen from the eye level. There is no litter above the rain guard. There is some residue from past garbage. • Can is in a clean condition, but may have one small isolated instance of a sticker or graffiti, which the eye is not drawn to it.	• Between 10% - 30% of a 10 step area of the beach block is covered by organic materials, but occurring in no more than 10% of the beach block. If occurring in more than 10% of the entire beach block, then add 1 point. • Between 1 and 3 pieces of large organic materials is on the ground.	<u>One</u> instance of fecal matter is present on the public area.

Cleanliness Index for Beaches

Index	Litter / Trash	Litter / Garbage Cans	Organic Materials	Fecal Matter
4 Somewhat Dirty	• Consistently scattered trash. In a 10 step distance the trash accumulation should account to more than 10 pieces of small litter or over 4 pieces of large litter, but occurring in no more than 10% of the entire block segment. • If the litter density is occurring between 10-25% of the block segment, then add 1 point from the rating scale. • If the litter density is occurring more than 25% of the block segment, then add 2 points from the rating scale. • One instance of harmful litter. *Guideline:* Trash or litter is obvious and your eye is constantly drawn to it. The area is neglected and requires organized cleanup.	• Can is full and there is trash above the rain guard. In some cases, there is evidence that there is improper use by the residents. • Can is in a working condition, but contains items such as stickers or graffiti on them. • Can has some damage, such as dents, but is usable.	• Between 30% - 50% of a 10 step area of the beach block is covered by organic materials, but occurring in no more than 10% of the beach block. If occurring in more than 10% of the entire beach block, then add 1 point. • Between 4 and 10 pieces of large organic materials is on the ground.	Two instances of fecal matter are present on the public area.
5 Dirty	• Consistent accumulation of trash. In a 10 step distance there are multiple piles of trash consisting of more than 10 pieces of small litter or over 4 pieces of large litter, but occurring in no more than 10% of the entire block segment. • If the litter density is occurring between 10-25% of the block segment, then add 1 point from the rating scale. • Two to three instances of harmful litter.	• Can is full and there is trash above the rain guard and beginning to overflow since there is no room to put additional trash. There may be evidence of improper use by the residents. • Can has considerable damage, but is usable. • A large area of the can contains items such as stickers or graffiti on them.	• Over 50% of a 10 step area of the beach block is covered by organic materials, but occurring in no more than 10% of the beach block. If occurring in more than 10% of the entire beach block, then add 1 point. • Over 10 pieces of large organic materials is on the ground.	Three instances of fecal matter are present on the public area.

Cleanliness Index for Beaches

Index	Litter / Trash	Litter / Garbage Cans	Organic Materials	Fecal Matter
6 Extremely Dirty	• Beach block contains a large accumulation of trash and litter. Conditions may be hazardous. • More than three instances of harmful litter.	• Can is full and trash has overflowed to the ground. In some cases, there is a rat/rodent/insect infestation. • Can is damaged and needs to be replaced. • Can is covered of items such as stickers or graffiti.	• 90-100% of a 10 step area of the beach block is covered with organic material.	Four or more instances of fecal matter are present on the public area.

Cleanliness Index for Waterways

Index	Litter / Trash	Organic Materials
1 Extremely Clean	• No litter and/or debris floating on or in the water and up to the high tide watermark. No signs of floating liquid. • No extra-large pieces of litter, such as tires, grocery carts, etc. • No smell is being emitted.	• No or isolated instances of small fresh organic material. • No large organic material, such as tree limbs or palm fronds in the water and up to the high tide watermark.
2 Clean	• Isolated pieces of litter floating on or in the entire area of water and up to the high tide watermark. No signs of floating liquid. • No extra-large pieces of litter, such as tires, grocery carts, etc. • No smell is being emitted.	• Less than 10% of about a 20 sq. foot area of water and up to the high tide watermark is covered by organic material, but occurring in no more than 10% of the entire water area. If occurring in more than 10% of the entire water area up to the high tide watermark, then add 1 point. • No large organic material, such as tree limbs or palm fronds in the water and up to the high tide watermark.
3 Somewhat Clean	• Small amount of litter including floating liquids, such as oil. This includes litter floating on the water or in the water and up to the high tide watermark. More than two pieces of litter and less than 5% of about a 20 sq. foot area of water up to the high tide watermark are covered by litter, but occurring in no more than 10% of the entire water area up to the high tide watermark being assessed. • If the litter density is occurring between 10-25% of the water area up to the high tide watermark, then add 1 point from the rating scale. • If the litter density is occurring more than 25% of the water area up to the high tide watermark, then add 2 points from the rating scale. • No extra-large pieces of litter, such as tires, grocery carts, etc. • No smell is being emitted. *Guideline:* Is the litter something you notice, but your eye is not constantly drawn to it? The area has a clean appearance, but does need some attention.	• Between 10% - 30% of about a 20 sq. foot area of water and up to the high tide watermark is covered by organic material, but occurring in no more than 10% of the entire water area. If occurring in more than 10% of the entire water area up to the high tide watermark, then add 1 point. • Between 1 and 3 pieces of large organic material, such as tree limbs or palm fronds in the water and up to the high tide watermark.

Cleanliness Index for Waterways

Index	Litter / Trash	Organic Materials
4 Somewhat Dirty	• Small to moderate amounts of litter, including floating liquids, such as oil. This includes litter floating on the water or in the water and up to the high tide watermark. Between 5% and 10% of about a 20 sq. foot area of water up to the high tide watermark is covered by litter, but occurring in no more than 10% of the entire water area being assessed. • If the litter density is occurring between 10-25% of the water area up to the high tide watermark, then add 1 point from the rating scale. • If the litter density is occurring more than 25% of the water area up to the high tide watermark, then add 2 points from the rating scale. • No extra-large pieces of litter, such as tires, grocery carts, etc. • Slight unnatural or foul smell is being emitted. *Guideline:* Trash or litter is obvious and your eye is constantly drawn to it.	• Between 30% - 50% of about a 20 sq. foot area of water and up to the high tide watermark is covered by organic material, but occurring in no more than 10% of the entire water area up to the high tide watermark. If occurring in more than 10% of the entire water up to the high tide watermark, then add 1 point. • Between 4 and 10 pieces of large organic material, such as tree limbs or palm fronds in the water and up to the high tide watermark.
5 Dirty	• Consistent accumulation of trash including floating liquids, such as oil. This includes litter floating on the water or in the water and up to the high tide watermark. Between 10% and 25% of about a 20 sq. foot area of water up to the high tide watermark is covered by litter, but occurring in no more than 10% of the entire water area up to the high tide watermark being assessed. • If the litter density is occurring between 10-25% of the water area up to the high tide watermark, then add 1 point from the rating scale. • One extra-large piece of litter, such as a tire, a grocery cart, etc. • Strong unnatural or foul smell is being emitted.	• Over 50% of about a 20 sq. foot area of water and up to the high tide watermark are covered by organic material, but occurring in no more than 10% of the entire water area up to the high tide watermark. If occurring in more than 10% of the entire water area up to the high tide watermark, then add 1 point. • Over 10 pieces of large organic material, such as tree limbs or palm fronds in the water and up to the high tide watermark.
6 Extremely Dirty	• Large accumulation of litter and trash including floating liquids, such as oil. Over 25% of about a 20 sq. foot area of water area up to the high tide watermark are covered by litter. This includes litter floating on the water or in the water and up to the high tide watermark. There may be evidence of illegal dumping. • Two or more extra-large pieces of litter, such as tires, a grocery carts, etc. • Very strong unnatural or foul smell is being emitted.	• 90-100% of the water and up to the high tide watermark is covered by organic material.

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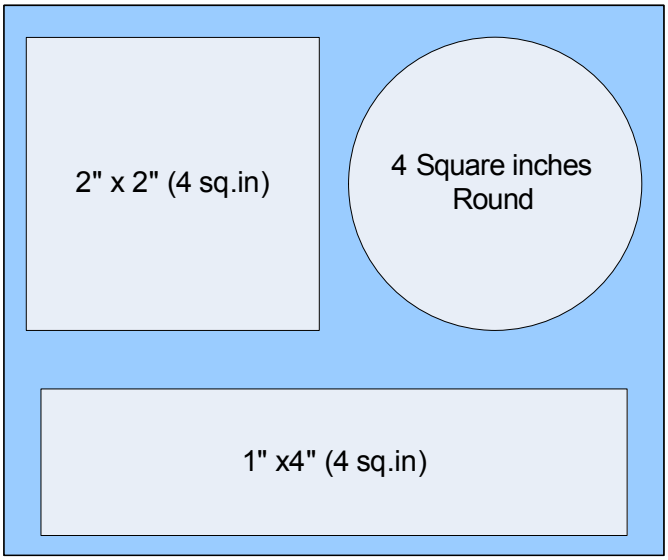
The cleanliness index makes references to small and large litter, which can directly affect the cleanliness score of a public area. The definition used to distinguish the difference between small and large litter came from the Florida Center for Solid and Hazardous Waste Management (the Center). Each year the Center conducts a roadside litter survey for the State of Florida and is funded through the Florida Department of Environmental Protection (FDEP). Starting in 1993, the Florida Legislature designated the Center and funded the litter survey to measure progress toward the state's litter reduction goal as defined in the Solid Waste Management Act.

Using the Center's definition for litter, items or pieces of items four square inches or larger in size are classified as "large litter," and items or pieces of items under four square inches are classified as "small litter." As a reference, the figure below contains three templates of 4 square inch areas in a rectangle, square, and round shape are depicted in the figure below. If the litter fits in any of these areas, then it is considered small litter. If the litter is too big to fit in any of these areas, then it is considered large litter.

The two tables following the templates contain examples of small versus large litter or trash.



Templates for Small Litter Distinctions

Examples of Small Litter

- Cigarette butts
- Bottle caps
- Straws
- Candy packaging and wrappers
- Polyfoam packing materials
- Plastic expresso coffee cups

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Examples of Large Litter

- Beer cans
- Beer bottles
- Soft drink (glass)
- Soft drink (cans)
- Soft drink (plastic)
- Sport drink (glass)
- Sport drink (plastic)
- Wine / Liquor (glass)
- Wine / Liquor (plastic/other)
- Milk / Juice (Plastic)
- Milk / Juice (Glass)
- Six pack plastic rings
- Plastic drink cups
- Paper Cups (Hot)
- Paper Cups (Cold)
- Polystyrene cups (foam)
- Cup lids
- Plastic retail bags
- Paper retail bags
- Paper bags – fast food
- Plastic bags – not retail
- Paper bags – not retail
- Zipper bags /sandwich bags
- Cardboard boxes
- Paperboard (cereal type)
- Paper beverage cases
- Plastic jars / bottles/ lids
- Glass jars / bottles misc.
- Cans – steel
- Cans – aluminum
- Aerosol cans
- Paper food wrap
- Utensils
- Napkins
- Paper fast food plates
- Poly fast food plates
- Clothing
- Printed materials (newspapers, flyers, books, etc.)

Assessment Areas and Frequencies

The areas to be assessed and the frequency of the assessments are specific to each of the public areas. The number of areas to be assessed and the assessment frequency will also determine the number of volunteers needed to conduct the assessments. Volunteer assessors will be discussed in Section V: Assessor.

The Sanitation, Parks and Recreation, and Parking departments have reviewed and agreed to use the cleanliness index to conduct assessments internally on either a weekly or monthly basis. The frequency of assessments discussed in this section is pertinent to those assessments conducted by OBPI on a quarterly and annual basis. The assessment areas and frequency per public areas are as follows:

Streets / Sidewalks
Streets and sidewalks will be assessed as block segments. A sample size of 293 block segments was calculated using a 95% confidence interval ±5%. The frequency of the assessments will depend on the usage of that street; therefore, streets and sidewalks were classified by their usage utilizing the Sanitation service levels. The sample size was then divided into their usage classification based on their percentage of streets from the total. The assessment details for streets and sidewalks are as follows:

- *Commercial-Entertainment* (Service Levels A and B)
  - 39 block segments will be assessed quarterly
  - Each sample block segment will be assessed 5 times (Weekday Daytime, Weekday Night, Weekend Daytime, Weekend Night, and Weekend Late Night) totaling 195 assessments per quarter.
- *Commercial-Non-Entertainment* (Service Levels B-1 through D)
  - 38 block segments will be assessed quarterly
  - Each sample block segment will be assessed 3 times (Weekday Daytime, Weekend Daytime, and Weekend Night) totaling 115 assessments per quarter.
- *Residential* (Service Level E through H)
  - 54 block segments will be assessed annually
  - Each sample block segment will be assessed 2 times (Weekday Daytime and Weekend Daytime) totaling 108 assessments per quarter.

Starting in FY05/06 Q2, a sample of 30 alleys will be assessed separately from the other streets. Just like in the streets, the times of the day and week that the alley is assessed is dependent on whether the alley is located in a Commercial – Entertainment, Commercial-Non-Entertainment, and Residential area. The separate assessment of the alleys is an addition to the original Public Area Cleanliness Assessment program, and the sampling size is still being analyzed to determine the feasibility and accuracy of the assessment results that will be achieved.

Figure 1 depicts the calculations to determine the sample size, number of block segments, number of assessments, and assessment frequency.

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Total Sample Size Determination

	Number of Block Segments	95% Confidence Level	Confidence Interval (+/- 5%)	Sample Size
Total	1226	1.96	0.05	293

Determination of the Number of Assessment per Block Segment Classification

						Per Quarter		
Block Segment Classification (based on usage*)	Actual # of Block Segments	% of Block Segment Total	Sample Size	Assessment Frequency	Assessment Time (hrs) per block segment	Number of Sample Block Segments	# of Assessments	Total Time (hrs)
Commercial - Entertainment	163	13.3%	39	Quarterly	0.25	39	195	48.64
Commercial - Non-Entertainment	161	13.1%	38	Quarterly	0.25	38	115	28.83
Residential	902	73.6%	215	Annually	0.25	54	108	26.92
	1226	100%	293			131	418	104.39

Assessment Times		
Classification	Time of the Week	Time of the Day
Commercial - Entertainment	Weekday (Mon-Fri)	Daytime (8am - 5pm) Night (9pm - 1am)
	Weekend (Sat-Sun)	Daytime (8am - 5pm) Night (9pm - 1am) Late Night (1am - 8am)
Commercial - Non-Entertainment	Weekday (Mon-Fri)	Daytime (8am - 5pm)
	Weekend (Sat-Sun)	Daytime (8am - 5pm) Night (9pm - 1am)
Residential	Weekday (Mon-Fri)	Daytime (8am - 5pm)
	Weekend (Sat-Sun)	Daytime (8am - 5pm)

Figure 1

Parks

All parks will be assessed quarterly. Parks open during the daytime will be assessed once during the week and once during the weekend during the daytime hours. Those parks open during the night will also be assessed at night once during the week and once during the weekend, in addition to the daytime assessments. Currently, there are 5 parks open at night. These parks are Flamingo Park, Lummus Park, Fairway Park, North Shore Park, and Palm Island Park.

Assessments of the parks will be conducted on their sub-areas. Only those areas that are free of charge to the public will be assessed. Facilities that require a charge will not be assessed at this time, but will be assessed later when the Public Appearance Index or the Facility Index has been defined. The sub areas that will be assessed are as follows:

- Playgrounds
- Pedestrian Trails (includes the Serpentine in Lummus Park)
- Pavilion Shelters
- Open Green Spaces
- Bark Parks
- Basketball Courts
- Sport Courts / Fields
- Beach Access / Beach Spoil

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Figure 2 contains a list of the parks that will be assessed on a quarterly basis and the sub-areas contained in each park.

Park Name	Playgrounds	Pedestrian Trails	Beach Access / Beach Spoil	Basketball Courts	Bark Parks	Baseball Diamond	Handball Courts	Open Green Space	Pavillions Shelters	Tennis Courts	Nightime Usage?	Number of Sub-areas to be Assessed
Belle Isle Park								X			No	1
Collins Park								X			No	1
Flamingo Park	X	X		X	X	X	X	X		N	Yes	7
Lummus Park	X	X	X					X			Yes	4
North Shore Open Space Park		X	X					X	X		No	4
Pier Park			X								No	1
Marjory Stoneman Park	X										No	1
South Pointe Park								X	X		No	2
Washington Park											No	0
South Beach Park			X								No	1
Sunset Lake Park Sunset #4								X			No	1
Triangle Park											No	0
Maurice Gibb Memorial Park	X	X						X			No	3
Sunset Island II Park								X			No	1
Brittany Bay Park		X									No	1
Crespi Park	X			X				X	X		No	4
Fairway Park	X			X				X		X	Yes	4
Fisher Park	X							X			No	2
Normandy Isle Park											No	0
Normandy Shores Park	X									N	No	1
Muss Park	X							X	X		No	3
North Shore Park				X				X		X	Yes	3
Palm Island Park	X			X			X	X	X		Yes	5
Pinetree Park		X			X			X			No	3
Polo Park	X			X				X		X	No	4
Stillwater Park	X			X				X	X		No	4
Tatum Park	X			X				X	X		No	4
Hibiscus Island Park								X			No	1
Parkview Island								X			No	1
Poinciana Park								X			No	1
La Gorce Park	X										No	1
Buoy Park (Star Island)								X			No	1

Figure 2

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Parking Lots

All parking lots, not garages, will be assessed once quarterly during the day and semi-annually at night totaling 159 assessments. Garages will be assessed later when the appearance index is defined. The frequency of the assessments will depend on the usage of where the parking lot is located. The assessment details for parking lots are as follows:

- *Commercial-Entertainment*
  - 23 parking lots will be assessed quarterly
  - Each parking lot will be assessed 5 times (Weekday Daytime, Weekday Night, Weekend Daytime, Weekend Night, and Weekend Late Night).
- *Commercial-Non-Entertainment*
  - 39 parking lots will be assessed quarterly
  - Each parking lot will be assessed 3 times (Weekday Daytime, Weekend Daytime, and Weekend Night).

Waterways

All identified waterway hotspots will be assess quarterly once during the week and once during the weekend during the daytime hours. For non-hotspot waterway locations, a sample size of 74 waterway locations was calculated using a 95% confidence interval ±5% and will be assessed annually once during the week and once during the weekend during the daytime hours. Figure 3 depicts the calculations to determine the sample size, number of assessments and assessment frequency and also contains a list of the waterway hotspots.

# of Waterway Viewing Locations (Excluding hotspots)	95% Confidence Level	Confidence Interval (+/- 5%)	Sample Size
147	1.96	0.05	73.5

				Per Quarter		Per Year	
Waterway Locations	Assessment Frequency	Number of Locations to be Assessed	Assessment Time (hrs) per location	# of assessments	Total Time (hrs)	# of assessments	Total Time (hrs)
Hotspots	Quarterly	9	0.25	18	4.5	72	18
Other Locations	Annually	74	0.25	37	9.19	147	36.75
Total		83		55	13.69	219	54.8

Waterway Hotspots (assessed quarterly)
Collins between 23rd and 24th St.
North Shore Drive between South Shore Drive and Marselle Drive
85th Street between Crespi Blvd and Byron Avenue
Bridge between on Waterway Drive between 80th and 81st Street
Dead end on 75th St and Dickens Ave.
73rd Street between Dickens Ave. and Wayne St.
Indian Creek Drive and 72nd St.
77th Street bridge between Hawthorne and Tatum
81th Street bridge between Noremac Ave. and Hawthorne

Figure 3

Beaches

Only the areas of the beach that are serviced by the City will be assessed. These areas include the sand dunes, beachwalk/boardwalk, and the beach spoils. A sample size of 44 beach blocks was

calculated using a 95% confidence interval ±5% and will be assess quarterly once during the week and once during the weekend during the daytime hours. Discussions will be held with the County to determine if they can adopt and use the cleanliness index for the area of the beach that is serviced by the County, not the City.

Figure 4 contains information and the calculations to determine the sample size, number of assessments and assessment frequency.

Total Beach Blocks	Confidence Level	Confidence Interval	Sample Size
87	1.96	0.05	44

					Per Quarter	
Beach Area	Total Blocks per area	Sample Distribution	Assessment Frequency	Assessment time (hrs) per beach block	# of assessments per Qtr.	Total Time (hrs)
South Beach	23	12	Quarterly	0.33	23	8
Mid Beach	40	20	Quarterly	0.33	40	13
North Beach	24	12	Quarterly	0.33	24	8
Total	87	44			87	29

Figure 4

Cleanliness Assessment Process

Streets / Sidewalks
The assessment team is provided with the addresses of streets/sidewalks that need to be assessed. The assignments of streets/sidewalks will take into consideration the driving distances and will try to keep them in close proximity of each other. Forms (provided in Appendix A) for each street and sidewalk assigned to a team will be provided. For a cleanliness evaluation to be considered complete, the form must be completed in its entirety using the index. Each team will also be provided with a digital camera to take pictures of ratings scores of 4, 5, or 6. The photographs will be used for quality control, reporting, and training of future assessors.

The following is a list of steps that an assessor must follow when assessing the cleanliness of a street and sidewalk. Figure 1 provides a graphical representation of the process on assessing the cleanliness of a sidewalk and street.

1. The assessor will drive to the first location and will begin at the first corner of the street. At the first corner of the street, each assessor will record their start time on the form.
2. Using the index the assessor will conduct a walkthrough to observe in detail the cleanliness of the first side of the street and sidewalk (up to the top of street curb). For approximately every 10 steps, he will observe and determine how the sidewalk and the first half of the street separately should be evaluated on cleanliness based on four factors: Litter/Waste, Litter/Garbage Cans, Organic Materials, and Animal Fecal Matter. Any condition that causes the cleanliness rating of the street and/or sidewalk to be evaluated as having a cleanliness rating of 4, 5, or 6, will require a picture to be taken and a comment to be written. The assessor can also use the bottom of the form to write any notes that will help in making the final rating score.
3. When the assessor reaches the end of the street and sidewalk, he will cross the street that was assessed and face the direction they just walked from, but on the other side of the street. The team will then conduct a walkthrough to observe in detail the cleanliness of the second sidewalk and of the second side of the street (up to the middle of the street).
4. When the assessor reaches the end of the street, using index he will rate the detailed cleanliness of the two sidewalks together and both sides of the street together for each factor based on what they observed in the walkthrough. When rating each factor, the assessor should record the worst score of what they observed in the walkthrough. If the sidewalk does not contain a garbage can, then that factor should be rated as Not Applicable (N/A). If a street or sidewalk cannot be rated due to certain conditions, such as construction, then the assessor must provide a comment on why it was not possible to assess the location. If a rating of a 4, 5, or 6 is given for any factor or if there is a hazardous condition, a picture must be taken and comment must be provided to explain the reasoning for that rating.
5. The assessor must record the stop time and the cleanliness assessment for that address is considered complete.

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Public Area Cleanliness Index

6. At the end of the shift, the assessor must report all streets and sidewalks that were rated a 4, 5, or 6 to the Sanitation department, so that they may address the issue.
7. After reporting all the unacceptable conditions, the assessor must return all completed forms to OBPI.

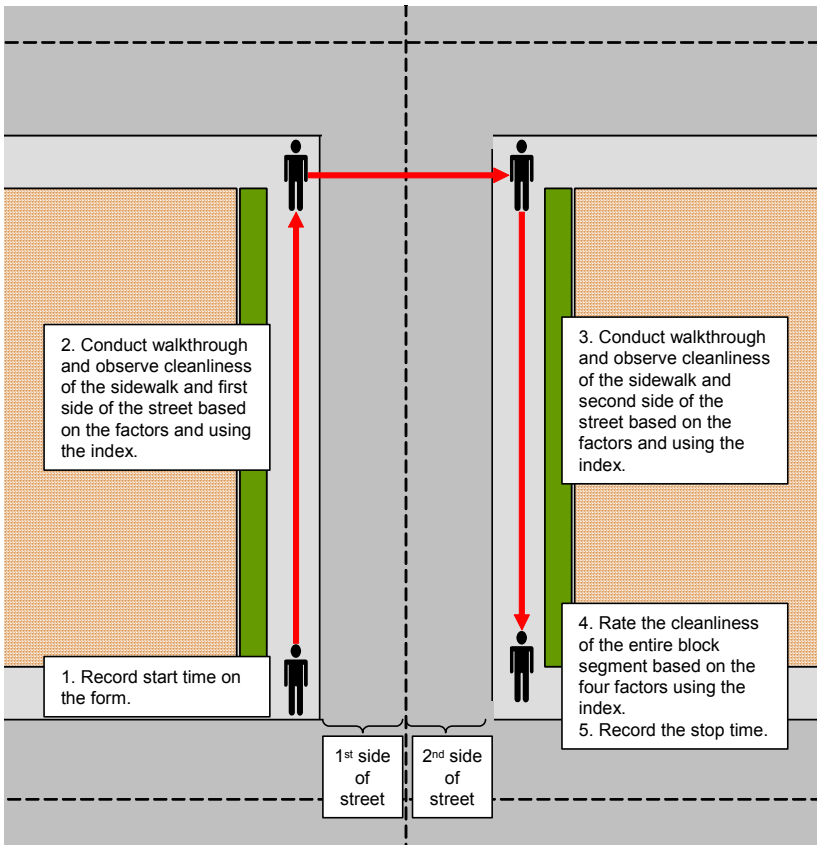

Figure 1

Parks

The rating of the Parks' cleanliness is conducted on its specific sub-areas. For example, if a park contains a playground and bark parks, then those two features are rated separately on cleanliness.

The assessment team is provided with forms for each of the specific parks that need to be assessed. The assignment of parks will take into consideration the driving distances and will try to keep them in close proximity of each other. For a cleanliness evaluation to be considered complete, the form (provided in Appendix A) must be completed in its entirety. Each team will also be provided with a digital camera to take pictures of ratings

scores of 4, 5, or 6. The photographs will be used for quality control, reporting, and training of future assessors.

The following is a list of steps that an assessor must follow when assessing the cleanliness of a park.

1. The assessor team will drive to the park and walk to their first sub-area. He must record the start time on the form, when he is ready to begin the cleanliness assessment.
2. The assessor will then conduct a walkthrough of the park sub-area to assess its cleanliness. The assessor should walk through the sub-area and along its boundary to observe the cleanliness of the sub-area based on four factors: Litter/Waste, Litter/Garbage Cans, Organic Materials, and Animal Fecal Matter. The assessor can also use the bottom of the form to write any notes that will help in making the final rating score.
3. After completing the walkthrough, using the index the assessor will rate the cleanliness of the park sub-area for each factor. When rating each factor, the assessor should record the worst score of what he observed in the walkthrough. If the sub-area does not contain a garbage can, then that factor should be rated as Not Applicable (N/A). If sub-area cannot be rated due to certain conditions, such as construction, then the assessor must provide a comment on why it was not possible to assess the location. If a rating of a 4, 5, or 6 is given for any factor or if there is a hazardous condition, a picture must be taken and comment must be provided to explain the reasoning for that rating.
4. After the assessor has rated the cleanliness of the sub-area, he will move onto the next park sub-area and follow the same procedure described in Steps 1-3 until they have rated all of the park's sub-areas. After all of the park's sub-areas have been assessed, the assessor must record the stop time and the cleanliness assessment for that park is considered complete.
5. At the end of the shift, the assessor must report all parks and their sub-areas that were rated a 4, 5, or 6 to the Parks and Recreation department, so that they may address the issue.
6. After reporting all the unacceptable conditions, the assessor must return all completed forms to OBPI.

Parking

The assessment team is provided with forms for specific surface parking lots that need to be assessed. The parking garages will not be assessed as part of the cleanliness index. The assignment of parking lots will take into consideration the driving distances and will try to keep them in close proximity of each other. For a cleanliness evaluation to be considered complete, the form (provided in Appendix A) must be completed in its entirety. Each team will also be provided with a digital camera to take pictures of ratings scores of 4, 5, or 6. The photographs will be used for quality control, reporting, and training of future assessors.

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The following is a list of steps that an assessor must follow when assessing the cleanliness of a parking lot.

1. The assessor will drive to the park lot, and he must record the start time on the form, when he is ready to begin the cleanliness assessment.
2. The assessor will conduct a walkthrough to observe the cleanliness of the parking lot using the index against four factors: Litter/Trash, Litter/Garbage Cans, Organic Materials, and Animal Fecal Matter. In conducting the walkthrough, each assessor will inspect each row of the parking lot taking care to inspect between each car and between the car and the curve. For large parking lots, the inspectors can inspect every other row if the lot is relatively empty. Any condition that causes the rating of that the parking lot to be evaluated as having a cleanliness rating of 4, 5, or 6, will require a picture to be taken and a comment describing the situation. The example photographs provided below contains an example of a parking lot rated as "2 – Clean" for litter/garbage due to an isolated instance. This is same parking lot that received a "1 – Extremely Clean" overview rating in Step 2. The assessor can also use the bottom of the form to write any notes that will help in making the final rating score.

Example of "2-Clean" overview rating

3. After completing the walkthrough, using the index the assessor will rate the cleanliness of the parking lot for each factor. When rating each factor, the assessor should record the worst score of what he observed in the walkthrough. If the sub-area does not contain a garbage can, then that factor should be rated as Not Applicable (N/A). If sub-area cannot be rated due to certain conditions, such as construction, then the assessor must provide a comment on why it was not possible to assess the location.
4. After the assessor has assessed the cleanliness of the parking lot, he must record the stop time on the form and the cleanliness assessment for that parking lot is considered complete.
5. At the end of the shift, the assessor must report all parking lots that were rated a 4, 5, or 6 to the Parking department, so that they may address the issue.

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6. After reporting all the unacceptable conditions, the assessor must return all completed forms to OBPI.

Waterways

The assessment team is provided with forms for the specific waterway hot spots that need to be assessed. The assignment of waterways will take into consideration the driving distances and will try to keep them in close proximity of other public areas that will be assessed. For a cleanliness evaluation to be considered complete, the form (provided in Appendix A) must be completed in its entirety. Each team will also be provided with a digital camera to take pictures of ratings scores of 4, 5, or 6. The photographs will be used for quality control, reporting, and training of future assessors.

The following is a list of steps that an assessor must follow when assessing the cleanliness of a waterway.

1. The assessor will drive to the assigned waterway segment, and he must record their start time on the form, when he is ready to begin the cleanliness assessment.
2. The assessor will walk toward the specific waterway location and position themselves so that they can best view the waterway. The assessor will then rate the cleanliness of the waterway and the surrounding land area using the index against two factors: Litter/Trash and Organic Materials. Any condition that causes the rating of the waterway area to be evaluated as having a cleanliness rating of 4, 5, or 6, will require a picture to be taken and a comment describing the situation.
3. After the assessor has rated the waterway, then he must record the stop time and the cleanliness assessment for that waterway segment is considered complete.
4. At the end of the shift, the assessor must report all waterways that were rated a 4, 5, or 6 to the Sanitation department, so that they may address the issue.
5. After reporting all the unacceptable conditions, the assessor must return all completed forms to OBPI.

Beaches

The assessment team is provided with forms of the specific blocks of the beach that need to be assessed. The following areas of the beach will be assessed: the beach, dunes, beachwalk / boardwalk / serpentine, and beach spoils. Since the cleaning of the beach area belongs to the County, discussions will be held to determine if they can adopt the cleanliness index and assessment process.

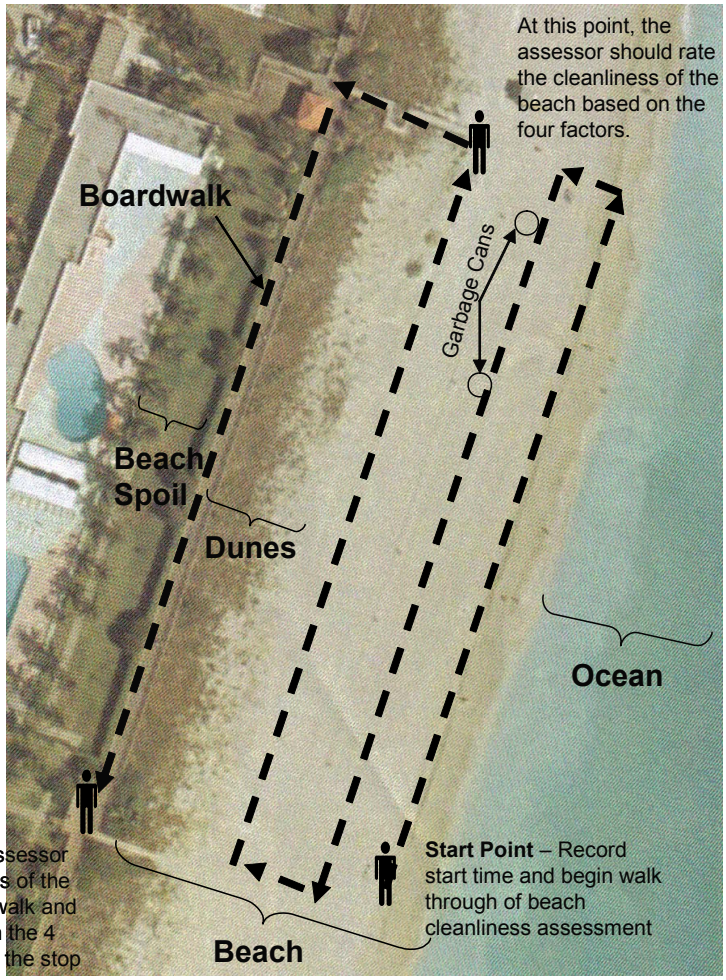
The assignment of beach blocks will take into consideration the driving distances and will try to keep them in close proximity of other public areas that will be assessed. For a cleanliness evaluation to be considered complete, the form (provided in Appendix A) must be completed in its entirety. Each team will also be provided with a digital camera to take pictures of ratings scores of 3, 4, 5, or 6. The photographs will be used for quality control, reporting, and training of future assessors.

City of Miami Beach
Public Area Cleanliness Index

The following is a list of steps that an assessor must follow when assessing the cleanliness of the beach. Figure 2 depicts a graphical representation of the process on assessing the cleanliness of the beach.

1. The assessor will drive to the assigned beach block and take a picture of a street sign or landmark to confirm the location.
2. The assessor will record the time on the assessment form and will begin assessing the beach block from about 5-10 yards in from the high tide waterline.
3. The assessor will walk to the end of the beach block assessing every 10 step area for cleanliness. The assessor will take a picture and write a comment describing the situation for any area that rates a score of 4 or lower.
4. The assessor will walk to the middle of the beach area and walk back to the beginning of the beach block (alongside the garbage cans) assessing every 10 step area for cleanliness.
5. The assessor will walk to the boundary between the beach area and the sand dune and walk to the end of the beach block assessing every 10 step area for cleanliness. He or she will record the cleanliness rating for the beach for each factor on the form.
6. If applicable, the assessor will walk to the beachwalk or boardwalk and walk back to the beginning of the beach block on the boardwalk or beachwalk or the beach spoil assessing every 10 step area for cleanliness.
7. When the assessor reaches the beginning of the beach block, he or she will record the cleanliness rating for the sand dunes, boardwalk/beachwalk/serpentine and the beach spoil for each factor on the form and record the time.

City of Miami Beach
Public Area Cleanliness Index



End Point – The assessor rates the cleanliness of the sand dunes, boardwalk and spoil area based on the 4 factors and records the stop time.

Start Point – Record start time and begin walk through of beach cleanliness assessment

Figure 2

City of Miami Beach
Public Area Cleanliness Index

Best Practices

The following municipalities and organization were either interviewed or researched to obtain best practices on the development of cleanliness index and assessment process.

New York City (Contact: Tony Longo)

- Scorecard cleanliness measures were developed by studying the public's perception and expectations of street and sidewalk cleanliness.
- The measurements are based on rigorous photographic standards of cleanliness for streets and sidewalks
- Actual Inspections and ratings of streets and sidewalks are based on a seven-point scale of cleanliness. The scale is provided below:
  - Acceptably Clean:
    - 1.0 = A clean street. No litter.
    - 1.2 = A clean street, except for a few traces of litter
  - Not Acceptably Clean:
    - 1.5 = More than a few traces, but no concentration of litter. There are no piles of litter, and there are large gaps between pieces of litter.
  - Filthy:
    - 1.8 = Litter is concentrated in spots; there may either be large gaps between piles of litter, or small gaps between pieces of litter.
    - 2.0 = Litter is concentrated; there are small gaps between piles of litter.
    - 2.5 = Litter is highly concentrated; there are no gaps in the piles of litter. The litter is a straight line along the curb.
    - 3.0 = Litter is very highly concentrated; there are no gaps in the piles of litter. The litter is a straight line along and over the curb.
- New York City is divided into 59 community districts, which are divided into sections and then block faces. Seven inspectors conduct cleanliness inspections on 2 districts per day during the working hours of Monday through Friday.
- The samples of areas to be inspected were selected randomly, when the program started in the early 1980s, but they stayed fixed and are kept confidential.
- Inspectors record their rating on a handheld computer that uploads to a database

Washington DC (Contact: Merrit Drucker)

- Every quarter the corridors/interstate highways, high-visibility communities, residential streets and alleys, and industrial areas within each of the City's wards are surveyed and rated on their cleanliness levels.
- The Cleanliness Rating System used was based on the Keep America Beautiful litter index and rate four areas: Litter and Waste, Litter Cans, Vegetation Growth, Posters and Graffiti. The table on the next page provides the details behind the rating system.
- The city's streets are divided into 4 rating zones based on the amount of traffic. These four zones are as follows:
  - Zone 1 – 16 major routes from the National Highway System
  - Zone 2 – High visibility streets (15 surveyed) and alleys (15 surveyed)

City of Miami Beach
Public Area Cleanliness Index

- Zone 3 – Residential area streets (113 routes surveyed) and alleys (111 surveyed)
- Zone 4 – Industrial area streets (14 areas surveyed)

- The rating teams consist of the following: 1 representative from councilmember's office, 1 neighborhood service coordinator, 2 volunteer community representative, 2 employee participants from the Street and Alley Cleaning Division of the Department of Public Works.
- Cleanliness Assessment rating are recorded on PDAs with the Cleanliness Computer Application Program.

	1 CLEAN	2 MODERATELY CLEAN	3 DIRTY	4 IMMEDIATE HAZARD
REQUIRED RESPONSE	*No attention necessary.* Area is generally free of the items listed below.	*Some cleaning required.* Actions Needed: ▪ Push sweep operator ▪ Encourage BID and citizen involvement	*Substantial amount of cleaning required.* Actions Needed: ▪ Increase frequency of maintenance. ▪ Deploy Litter Vacs and Billy Goats (for sidewalks or curbs).	*Requires immediate attention.* Actions Needed: ▪ Rapid response. ▪ One or more of the hazards listed below is present.
LITTER AND WASTE	No loose litter and/or debris.	Small to moderate amounts of litter.	Consistently scattered trash that interferes with catch basins.	▪ Passage way is blocked by an accumulation of litter. ▪ Household hazardous materials** on the street and/or illegal dumping.
LITTER CANS	▪ In good working order. ▪ None are overflowing.	▪ Little damage. ▪ Some are overflowing.	▪ Overflowing and/or damaged. ▪ Rubbish piled up. ▪ Evident improper use by residents.	▪ Rat/rodent infestation.
VEGETATION GROWTH	No growth within sidewalk cracks or around catch basins.	▪ Minimal overgrowth. ▪ Needs weed control due to growth under 10" in one or two spots.	▪ Excessive overgrowth. ▪ Needs weed control due to growth over 10".	▪ Obstruction of traffic. ▪ Public safety problem (e.g. tree canopy interfering with traffic signals).
POSTERS AND GRAFFITI	All public/private property is free of posters and graffiti. This includes buildings, lamp posts, mailboxes, etc.	Posters and graffiti mark 2 to 3 pieces of public/private property **per block**.	Posters and graffiti mark **all** public/private property.	Obstruction to traffic directions, signals, and/or signs.

San Francisco (Contact: Linda S. Yeung)

- The Department of Public Works (DPW) with assistance from the Controller's Office created standards to evaluate 3 features: (1) street cleaning, (2) graffiti, and (3) trash receptacles.

City of Miami Beach
Public Area Cleanliness Index

- During the first year of implementation, DPW will evaluate one street cleaning route in each of the 11 supervisorial districts once a month. A segment of the routes will be evaluated as a sample of the whole route. DPW regularly inspect the routes against the new standards and the results will be entered into a database. Reports will be reviewed on a monthly basis by the Director and Deputy Director of Operations and posted on the DPW website on a quarterly basis.
- Street Cleaning – When evaluating the street cleanliness, the public streets are inspected from the curb to the middle of the street on the side of the street that is mechanically swept. Median strips, with or without vegetation, and catch basins are included. The street cleaning standard is a three-point scale, including one acceptable condition and two categories of unacceptable conditions. The first choice is 1.0 point for "Acceptably Clean," with less than 5 pieces of litter per 100 curb feet examined. The second choice is 2.0 points for "Not Acceptably Clean," with 5-15 pieces of litter per 100 curb feet examined. The third choice is 3.0 points for "Filthy," with over 15 pieces of litter per 100 curb feet examined.
- Graffiti – When evaluating graffiti, the street surface, public and private structures and buildings visible from and immediately adjacent to the streets in the 11 selected street cleaning routes. The standard is zero tolerance of graffiti and to remove graffiti on public property within 48 hours of reporting.
- Trash Receptacles – When evaluating the trash receptacles, the City's trash receptacles that are adjacent to the public streets in the selected 11 street cleaning routes. Evaluations will be conducted approximately 2 hours before and 2 hours after the receptacles are emptied. The standard is that the receptacles must not be overflowing, have little or no litter around them, be free of graffiti and damage, and have secured doors.

Florida Center for Solid and Hazardous Waste Management (Contact: Rosemary McDaniel)

- Each year the Florida Center for Solid and Hazardous Waste Management (the Center) conducts a roadside litter survey for the State of Florida and is funded through the Florida Department of Environmental Protection (FDEP). Starting in 1993, the Florida Legislature designated the Center and funded the litter survey to measure progress toward the state's litter reduction goal as defined in the Solid Waste Management Act.
- The litter survey method counts "accumulated litter." This is in contrast to "fresh litter" counts, where a sight is cleaned, then researchers return after a set time to count the number of pieces of litter that have been deposited. Accumulated litter allows for an examination of the occurrence of litter as it has developed over time.
- To identify site locations for a given jurisdiction, a GIS database is acquired. Using the program, center-line coordinates for all potential public street locations within the jurisdiction is selected. Sites to be audited are selected randomly using a random number generator feature of Microsoft Excel.
- Litter surveys are conducted by teams of two working independently from each other. When arriving at each site, each team measures the area using a "wheel-measuring device, in order to define a fixed area of 200 ft long and 18 feet wide. The teams will then begin auditing, counting, and classifying the litter found in the area. Figure 1 depicts the how each team measure the litter audit area.

City of Miami Beach
Public Area Cleanliness Index

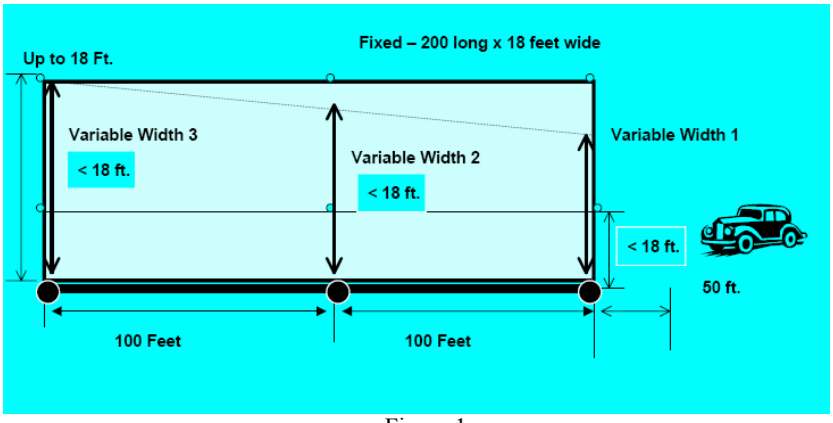


Figure 1

- Teams classify the litter between large and small litter. Large litter is defined to be that which is over 4 square inches in size, while small litter are those pieces that were less than 4 square inches in size. Three templates are provided to each survey team of an area of 4 square inches in rectangle, square, and round shapes to the aid field teams. Figure 2 depicts the small litter templates.

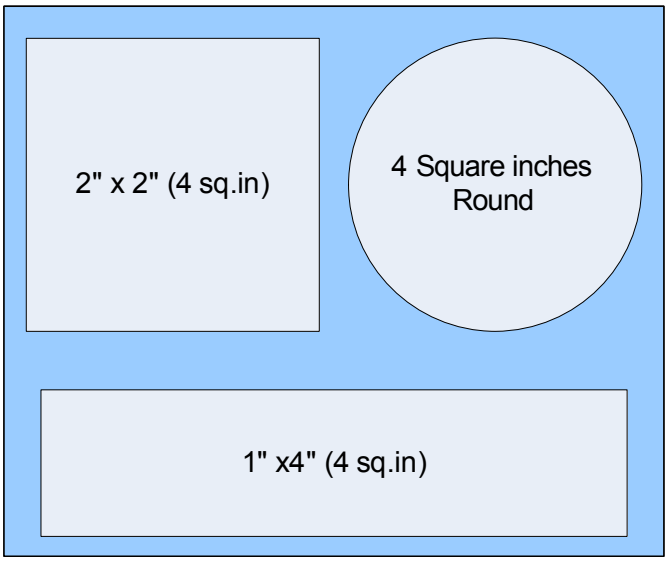


Figure 2

City of Miami Beach
Public Area Cleanliness Index

City of Toronto (Contact: Mark McKenney, MGM Management Consultants)

- The City of Toronto hired MGM Management Consultants to conduct litter surveys. MGM used the same process as the Florida Center for Solid and Hazardous Waste Management used for the State of Florida. The process consisted of counting and categorizing small and large litter.
- MGM selected the survey sites using GIS software and a random number generator. The sample consisted of 70% highly populated roads and 30% suburb roads and totaled 250 sites. They always surveyed the same sites each year, so that they can compare the same area.
- MGM used four teams of 2 inspectors, which consisted of summer students employed by the City. Each team would survey about 6-8 sites per day.
- MGM will store the survey data and generate reports from a proprietary MS Access database.

Keep America Beautiful

- Keep America Beautiful (KAB) has developed the litter index to assist its affiliations in measuring the litter situation in their community with the aim of achieving long-term, sustainable results.
- The Litter Index uses a four-point scoring system to estimate the presence of litter in the area to be scored. The scale used is as follows:
  - 1 "No Litter": Virtually no litter can be observed in the sub-area being scored. The scorer has to look hard to see any litter, perhaps a very occasional litter item or two in a city block, or equivalent. Any litter seen could be quickly collected by one individual. The entire sub-area has a generally neat and tidy appearance; nothing grabs the eye as being littered or messy.
  - 2 "Slightly Littered": Upon careful inspection, a small amount of litter is obvious to the scorer. The litter in the sub-area could be collected by one or two individuals in a short period of time. While the sub-area has a small amount of litter, the eye is not continually grabbed by litter items.
  - 3 "Littered": Visible litter can readily be seen throughout the sub-area, likely requiring an organized effort for removal. This area is "littered" and clearly needs to be addressed.
  - 4 "Extremely Littered": A continuous amount of litter level is one of the first things noticed about the sub-area. Major illegal dumpsites might be seen in the sub-area, requiring equipment and/or extra manpower for removal. There is a strong impression of a lack of concern about litter in the sub-area.
- The community being assessed buy the litter index should be divided into 5-15 sub-areas. The determination of the sub-areas should achieve the following objectives: (1) break down the work into manageable units; (2) identify comparable areas based on such parameters as population, square miles, etc.; and (3) facilitate year to year, or "before and after" comparisons throughout the community.

Keep Cincinnati Beautiful (Contact: Linda Holterhoff)

- Keep Cincinnati Beautiful (KCB) developed the Blight Index as a way for communities to visually assess their neighborhood and to measure change over time. The Blight Index is based on Keep America Beautiful's Litter Index. The data gathered by conducting the Blight Index helps in determining the types of community improvement plans to implement in the

community. It also helps in determining the problem areas within the community, as well as zero in on what types of blight affect the community. The Blight Index has also been used to determine whether improvements in Blight lead to less crime in Cincinnati's neighborhoods.

- The Blight Scale is as follows:
  - 1 "No Blight": Virtually no blight can be observed in the sub-area. The scorer has to look hard to see any evidence of blight. The entire sub-area has a generally neat and tidy appearance.
  - 2 "Slightly Blight": Upon careful inspections, a small amount of blight is obvious to the scorer. While the sub-area has a small amount of
  - 3 "Blight": Visible blight can readily be seen throughout the sub-area, requiring an organized effort for removal. This area is clearly "blighted" and needs to be addressed.
  - 4 "Extremely Blighted": Excessive amounts of blight are one of the first things noticed about the sub-area. There is a strong impression of a lack of concern about blight in the sub-area.
  - The community was divided into 5-10 areas, which were then divided into block faces, in order to be assessed against the blight index. More than 20% of the blocks in the area need to be inspected.

Miami-Dade County Parks (Contact: Jack Kardys)

- Miami-Dade County Parks current conducts "sparkle tours." The purpose of the Sparkle Tour process is to insure this quality experience through a formal and quantifiable process of regular facility maintenance inspections and customer service evaluations and surveys. The data will be organized so as to provide meaningful park management evaluation and planning through the use of performance measures, which essentially is a maintenance inspection of the parks. Cleanliness is one of several factors that are inspected.
- A numbering system of 1 to 5, 1 being the "Disney" quality standard and 5 being the worst, is used to score, as the customer sees it, a variety of facility aspects from restroom cleanliness and landscape maintenance to ballfield turf grass management and building maintenance. An "Optimum" rating is given each facility based on the realistic achievement of objectives within the constraints of funding and development levels.
- The inspection system and frequency is provided in the table below:

Inspected by	Frequency	Documentation
Park Manager	Daily	Restroom log Facility Mtc. check sheet
Service Area Manager	Weekly	Service area checklist monthly report
Region Manager	Monthly	Customer Service level and Facility maintenance evaluation
Assistant Director for Operations	Semi-Annually	Sparkle Tour

Assessors

A total of 17 volunteers will be needed to conduct assessments of all public areas each quarter. These volunteers will be working daytime, night, or late night shifts either during the week or during the weekend. Volunteers will be expected to commit 16 hours (equivalent to 2 working days) per quarter. Volunteers will work in 4 hour shifts and will be assigned the assessment areas.

Based on the total assessments needed, the following number of volunteers is needed per shift:

- *Daytime Shift* (Weekday and Weekend) – 12 inspectors needed per quarter
- *Night Shift* (Weekday and Weekend) – 4 inspectors needed per quarter
- *Late Night Shift (Weekend Only)* – 1 inspector needed per quarter.

The assessments shifts will depend on which public area is being assessed. A volunteer may not be assigned to conduct the assessment of one specific public area; instead volunteers will most likely be assigned a variety of different public areas to assess during one shift. The location of the public area will be taken into account when making the assignment, in order to efficiently and maximize the amount of assessment that can be conduct during one shift.

Figure 1 provides the data on the number of inspectors and shifts needed per public area and per quarter.

Total Assessors

Public Area	Number of Volunteers Per Quarter	# of 4-hour shifts per Quarter	# of Total Hours per Quarter
Streets/Sidewalks	7	26.1	104.4
Parks	3	11.6	46.5
Parking	3	12.0	48.1
Waterways	1	3.4	13.7
Beaches	3	10.9	43.5
Total	17	64.0	256.2

Shifts Per Time of day per Quarter	# of Volunteers per Qtr.		
	Total	Monday - Friday	Saturday - Sunday
Daytime (8am - 5pm)	12.0	6.0	6.0
Night (9pm - 1am)	3.3	0.8	1.2
Late Night (1am - 8am)	0.8	0	0.4
	16.0	6.8	7.6

Figure 1

A breakdown of the number of shifts and volunteers needed per public area is provided in the following sub-sections.

City of Miami Beach
Public Area Cleanliness Index

Streets / Sidewalks

A total of 7 volunteers are needed each quarter to assess the streets and sidewalks. Volunteers are needed during the week and during the weekend during the day, night, and late night hours. The assessment times are dependent on the usage of the street and sidewalk, which was described in Section III: Assessment Areas and Frequency. The assessor details for streets and sidewalks are as follows:

- *Daytime Shift* (8am – 5pm)
  - Approximately 4 assessors needed per quarter
  - 16.4 total shifts needed
    - 8.2 shifts during the week
    - 8.2 shifts during the weekend
- *Night Shift* (9pm – 1am)
  - Approximately 2 assessors needed per quarter
  - 7.3 total shifts needed
    - 2.4 shifts during the week
    - 4.8 shifts during the weekend
- *Late Night Shift* (1am – 8am)
  - Approximately 1 assessor needed per quarter
  - 2.4 total shifts needed
    - No shifts needed during the week
    - 2.4 shifts during the weekend

Figure 2 provides the calculations to determine the number of assessments, shifts, and volunteers needed per quarter.

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Determination of the Number of Assessment per Block Segment Classification

Block Segment Classification (based on usage*)	Actual # of Block Segments	% of Block Segment Total	Sample Size	Assessment Frequency	Assessment Time (hrs) per block segment	Per Quarter: Number of Sample Block Segments	Per Quarter: # of Assessments	Per Quarter: Total Time (hrs)
Commercial - Entertainment	163	13.3%	39	Quarterly	0.25	39	195	48.64
Commercial - Non-Entertainment	161	13.1%	38	Quarterly	0.25	38	115	28.83
Residential	902	73.6%	215	Annually	0.25	54	108	26.92
	1226	100%	293			131	418	104.39

Determination of Work Shifts

Work Shifts	Number of 4 hour shifts needed: Per Quarter	Weekdays (Mon-Fri)	Weekend Sat-Sun	Number of Volunteers** needed: Per Quarter	Per Year
# of daytime Shifts	16.4	8.2	8.2	4.10	16.40
# of night shifts	7.3	2.4	4.8	1.82	7.27
# of late night shifts	2.4	0.0	2.4	0.61	2.43
Total	26.10			6.52	26.10
			Actual Volunteers Needed	7	27

Assessment Times		
Classification	Time of the Week	Time of the Day
Commercial - Entertainment	Weekday (Mon-Fri)	Daytime (8am - 5pm) Night (9pm - 1am)
	Weekend (Sat-Sun)	Daytime (8am - 5pm) Night (9pm - 1am) Late Night (1am - 8am)
Commercial - Non-Entertainment	Weekday (Mon-Fri)	Daytime (8am - 5pm)
	Weekend (Sat-Sun)	Daytime (8am - 5pm) Night (9pm - 1am)
Residential	Weekday (Mon-Fri)	Daytime (8am - 5pm)
	Weekend (Sat-Sun)	Daytime (8am - 5pm)

Figure 2

Parks

A total of 3 volunteers are needed each quarter to assess the parks. Volunteers are needed during the week and during the weekend during the day and night hours. Only the parks open during the night will require an assessment at night. The time to assess each park is dependent on the number of sub-areas contained in the park. The assessor details for parks are as follows:

- *Daytime Shift* (8am – 5pm)
  - Approximately 2 assessors needed per quarter
  - 8.8 shifts needed
    - 4.4 shifts during the week
    - 4.4 shifts during the weekend
- *Night Shift* (5pm – 9pm)
  - Approximately 1 assessor needed per quarter
  - 2.9 shifts needed
    - 1.4 shifts during the week
    - 1.4 shifts during the weekend

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Public Area Cleanliness Index

Figure 3 provides the assessment time for each park and contains the calculations to determine the number of assessments, shifts, and volunteers needed per quarter.

Park Name	Nightime Usage?	Number of Sub-areas to be Assessed	Time (hrs) to Assess a sub-area	Assessment Time (hrs) per Park*	Total Time (hrs) to conduct all assessments per Qtr.
Belle Isle Park	No	1	0.25	0.25	0.50
Collins Park	No	1	0.25	0.25	0.50
Flamingo Park	Yes	7	0.25	1.75	7.00
Lummus Park	Yes	4	0.25	1.00	4.00
North Shore Open Space Park	No	4	0.25	1.00	2.00
Pier Park	No	1	0.25	0.25	0.50
Marjory Stoneman Park	No	1	0.25	0.25	0.50
South Pointe Park	No	2	0.25	0.50	1.00
Washington Park	No	0	0.25	0.00	0.00
South Beach Park	No	1	0.25	0.25	0.50
Sunset Lake Park Sunset #4	No	1	0.25	0.25	0.50
Triangle Park	No	0	0.25	0.00	0.00
Maurice Gibb Memorial Park	No	3	0.25	0.75	1.50
Sunset Island II Park	No	1	0.25	0.25	0.50
Brittany Bay Park	No	1	0.25	0.25	0.50
Crespi Park	No	4	0.25	1.00	2.00
Fairway Park	Yes	4	0.25	1.00	4.00
Fisher Park	No	2	0.25	0.50	1.00
Normandy Isle Park	No	0	0.25	0.00	0.00
Normandy Shores Park	No	1	0.25	0.25	0.50
Muss Park	No	3	0.25	0.75	1.50
North Shore Park	Yes	3	0.25	0.75	3.00
Palm Island Park	Yes	5	0.25	1.25	5.00
Pinetree Park	No	3	0.25	0.75	1.50
Polo Park	No	4	0.25	1.00	2.00
Stillwater Park	No	4	0.25	1.00	2.00
Tatum Park	No	4	0.25	1.00	2.00
Hibiscus Island Park	No	1	0.25	0.25	0.50
Parkview Island	No	1	0.25	0.25	0.50
Poinciana Park	No	1	0.25	0.25	0.50
La Gorce Park	No	1	0.25	0.25	0.50
Buoy Park (Star Island)	No	1	0.25	0.25	0.50
		70		17.50	46.50

Work Shifts	# of Shifts per Qtr.			Number of Volunteers** needed	
	Per Quarter	Weekdays (Mon-Fri)	Weekends (Sat-Sun)	Per Quarter	Per Year
# of daytime shifts (8am-5pm)	8.8	4.4	4.4	2.2	8.8
# of night shifts (5pm-9pm)	2.9	1.4	1.4	0.7	2.9
	11.6			2.9	11.6
			Actual Volunteers Needed	3.0	12.0

Figure 3

City of Miami Beach
Public Area Cleanliness Index

Parking

Three volunteer is needed each quarter to assess the parking lots. The volunteer is needed during the week and during the weekend during the day, night, and late night hours. The assessment frequency of each lot per quarter is dependent on the usage of the parking lots, which is described in Section III. The time to assess one parking lot is dependent on the size of the lot (Large, Medium, or Small). The assessor details for the parking lots are as follows:

- *Daytime Shift* (8am – 5pm)
  - 8.4 total shifts needed
    - 4.2 shifts during the week
    - 4.2 shifts during the weekend
- *Night Shift* (9pm – 1am)
  - 2.9 total shifts needed
    - 1 shift during the week
    - 1.9 shifts during the weekend
- *Late Night Shift* (1am – 8am)
  - 0.8 total shifts needed
    - No shifts needed during the week
    - 0.8 shifts during the weekend

Figure 4 provides the calculations to determine the number of assessments, shifts, and volunteers needed per quarter.

Parking Lot Size Breakdown (each lot assessed once annually)

Parking Size	Number of Surface Lots	Time (hrs) to Assess each lot	Entertainment	Non-Entertainment
Large	4	0.5	1	3
Medium	3	0.33	3	0
Small	55	0.25	19	36
Total	62		23	39

Parking Lot Usage Classification Breakdown

			Per Quarter		Per Year	
Parking Usage Classification	Number of Surface Lots	Assessment Frequency	Number of Assessments	Total Time (hrs) to assess lots once per Qtr.	Number of Assessments	Total Time (hrs) to assess lots once per Qtr.
Entertainment (Daytime Only)	23	Quarterly	46	12.48	184	49.92
Entertainment (Night and Late Night Only)		Semiannually	34.5	9.36	138	37.44
Non-Entertainment (Daytime Only)	39	Quarterly	78	21.00	312	84
Non-Entertainment (Night Only)		Semiannually	19.5	5.25	78	21.00
	62		158.5	42.84	634	171.36

Determination of Work Shifts

	# of shifts per Qtr			Number of Volunteers Needed	
	Per Quarter	Monday - Friday	Saturday - Sunday	Per Quarter	Per Year
# of daytime Shifts	8.4	4.2	4.2	2.09	8.37
# of night shifts	2.9	1.0	1.9	0.72	2.87
# of late night shifts	0.8	0.0	0.8	0.20	0.78
Total	12.0			3.01	12.02
			Actual Volunteers Needed	3.00	12.00

Classification	Time of the Week	Time of the Day
Commercial - Entertainment	Weekday (Mon-Fri)	Daytime (8am - 5pm) Night (9pm - 1am)
	Weekend (Sat-Sun)	Daytime (8am - 5pm) Night (9pm - 1am) Late Night (1am - 8am)
Commercial - Non-Entertainment	Weekday (Mon-Fri)	Daytime (8am - 5pm)
	Weekend (Sat-Sun)	Daytime (8am - 5pm) Night (9pm - 1am)

Figure 4

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Waterways

One volunteer is needed each quarter to assess the waterways. The volunteer is needed during the week and during the weekend during the daytime hours. All identified waterway hotspots will be assessed every quarter, while a sample of non-hotspot waterway locations will be assessed annually. The assessor details for the waterways are as follows:

- *Daytime Shift* (8am – 5pm)
  - 1 assessor needed per quarter
  - 3.4 shifts needed
    - 1.7 shifts during the week
    - 1.7 shifts during the weekend

Figure 5 provides the calculations to determine the number of assessments, shifts, and volunteers needed per quarter.

# of Waterway Viewing Locations (Excluding hotspots)	95% Confidence Level	Confidence Interval (+/- 5%)	Sample Size
147	1.96	0.05	73.5

				Per Quarter		Per Year	
Waterway Locations	Assessment Frequency	Number of Locations to be Assessed	Assessment Time (hrs) per location	# of assessments	Total Time (hrs)	# of assessments	Total Time (hrs)
Hotspots	Quarterly	9	0.25	18	4.5	72	18
Other Locations	Annually	74	0.25	37	9.19	147	36.75
Total		83		55	13.69	219	54.8

	Number of 4-hour shifts needed			Number of Volunteers*	
Waterway Locations	Per Quarter	Weekdays (Monday - Friday)	Weekend (Saturday - Sunday)	Per Quarter	Per Year
Hotspots	1.1	0.56	0.56	0.28	1.13
Other Locations	2.3	1.15	1.15	0.57	2.30
Total	3.4	1.7	1.7	0.86	3.4
			Actual Volunteers Needed	1.00	4.00

Figure 5

Beach Areas

Two volunteers are needed each quarter to assess the beach areas (sand dunes, boardwalk/beachwalk, and the beach spoils). The volunteer is needed during the week and during the weekend during the daytime hours. A sample of beach block locations will be assessed quarterly. The assessor details for the beach areas are as follows:

- *Daytime Shift* (8am – 5pm)
  - Approximately 2 assessors needed per quarter
  - 7.2 shifts needed
    - 3.6 shifts during the week
    - 3.6 shifts during the weekend

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Figure 6 provides the calculations to determine the number of assessments, shifts, and volunteers needed per quarter.

Total Beach Blocks	Confidence Level	Confidence Interval	Sample Size
87	1.96	0.05	44

					Per Quarter	
Beach Area	Total Blocks per area	Sample Distribution	Assessment Frequency	Assessment time (hrs) per beach block	# of assessments per Qtr.	Total Time (hrs)
South Beach	23	12	Quarterly	0.33	23	8
Mid Beach	40	20	Quarterly	0.33	40	13
North Beach	24	12	Quarterly	0.33	24	8
Total	87	44			87	29

	Number of 4-hour shifts needed			Number of Volunteers	
	Per Quarter	Monday - Friday	Saturday - Sunday	Per Quarter	Per Year
Beaches	7.2	3.6	3.6	1.8	7.2
			Actual Volunteers Needed	2.00	8.00

Figure 6

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