Firewise Community Plan

For

Greenbriar Oceanaire,

Ocean Township

Ocean County, New Jersey

2018

Firewise Community Plan

for

Greenbriar Oceanaire

in

Township of Ocean, Ocean County,

Firewise Communities/USA Enrollment

Prepared: 2018

This Firewise Community Plan is a cooperative effort to guide wildfire protection activities in the community of Greenbriar Oceanaire, Township of Ocean, Ocean County NJ. These activities are appropriate to meet stated objectives to reduce the risk from wildfire. This plan is voluntary and intended to apply the recommended practices herein, where possible, to increase the public safety at Greenbriar.

(917)992-1817 Greenbriar Oceanaire Community
Cosmo LaCosta, Firewise Committee, Chairperson

(609)349-4247 Community Firewise Representative
Joe Battersby, NJ Forest Fire Service

(609)693-3302 Waretown Fire Department
(609)661-5724 Chief Brent Cunningham
50 Railroad Ave, Waretown, NJ 08758

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Table of Contents

I. Community Name and Location and Date of Plan:

Greenbriar Oceanaire Homeowners Association, Ocean Township Ocean County; prepared 2018

II. Community Contacts:

(917)992-1817	Cosmo LaCosta Firewise Committee Chairperson
(609)693-6242	Zone 1 Coordinator, Walter Szczerba
(908)370-7266	Zone 2 Coordinator, Tom McDonough
(201)709-6944	Zone 3 Coordinator, Rick Eggers
(973)760-7720	Zone 4 Coordinator, Dennis DiGuglielmo
(646)258-4555	Zone 5 Coordinator, Walter Fox
(732)673-0064	Zone 6 Coordinator, Bob Watt
(973)296-4361	Zone 7 Coordinator, Jim Pasquariello
(732)614-0560	Zone Clubhouse Coordinator, Dennis Boccasino

III. Goals and Objectives:

Goals

- Obtain National Firewise Communities/USA program recognition.
- Promote awareness and increase knowledge among the residents of **Greenbriar Oceanaire** concerning wildfire and the need for forest fire management and wildfire mitigation.
- Implement a hazard mitigation plan.

Objectives

- Develop and Maintain defensible space around high risk homes
- Conduct an annual Firewise awareness program.

IV. Community Description:

Greenbriar Oceanaire is an aged restricted community of about 1,425 units on approximately 951 acres located in Ocean Township, Ocean County. Greenbriar Oceanaire is located south of County Route 532, east of the Garden State Parkway, west of State Route 9, and north of Lochiel County Park. The community was built in phases beginning in 2002.

Wildfire History:

Larger fires (those comprising more than 100 acres in size) generally occur in this region during March, April, & May (Spring Fire Season) because of warm temperatures, low humidity, and gusty winds. These weather conditions are common during the spring. However, due to the high chemical content of these flammable forest fuels, large fires have occurred in this region during summer months of the year during periods of low rain fall and high winds. In May of 1992, a 4,800 acre wildfire affected Lacey and Ocean Townships near where the development is today. Another wildfire burning 5,400 acres, again in Lacey Twp. occurred in June of that year. Then in 1995, a wind driven 20,000 acre wildfire was heading toward present day Greenbriar but was stopped at the Garden State Parkway less than a ¼ mile away. Again in 2007, a 16,000 acre wildfire was heading for the area. However, it was contained in adjacent Barnegat Twp. Smaller fires have been reported annually for this area. The last known major wildfire that burned through the forest where Greenbriar Oceanaire stands today was in 1947. Presently, there are 71 years of growth for the fuels that burned from that wildfire. Because most species of the Pine Barrens are fire dependent, nature has rebounded with an abundance of immature growth to create a "ladder fuel' source and thick mid canopy layer that would allow a surface fire to *ladder up* to the canopy and create a crown fire.

In addition to these accumulated fuels and adjacent homes, Greenbriar Oceanaire is a typical example of wildland urban interface (WUI), a community within the forest where precaution and prevention can reduce the risk to the residents of wildfire. Personal property such as decks, fences and siding may become additional fuel and could become damaged from such wildfires. Pictured below is a recent 4 acre wildfire which occurred on Easter Sunday 2017. This wildfire's location is ¼ mile from Greenbriar Oceanaire.

Photo: Pheasant Run Lacey Twp May 3rd, 1992 Powerplant Wildfire 4,800 acres

V. Forest Stand Summary:

The community's perimeter and common ground is covered by Pine Barrens forest consisting of Pitch Pine & Scrub Oak in the uplands and Atlantic White Cedar & Maple in the lowlands. Individual homes in the community have light vegetated lots. Perimeter homes are adjacent to large unbroken tracts of forest. Greenbriar Oceanaire HOA owns and maintains nearly 400 acres of common grounds along the perimeter and interior portions of the community.

VI. Wildland/Urban Interface Community Hazard Assessment:

It is important to keep in mind that even though some home dwellings do not seem to pose a significant wildfire risk due to the proximity to the forest or wooded areas, it is important to assess the community as a whole. There is a large misconception that only homes that adjoin to wooded areas pose a risk, but what many don't know is that very few homes are destroyed by an encroaching flame front. The majority of homes that succumb to damage from an approaching wildfire could have been saved if proper care had been taken to eliminate significant wildfire hazards in or around their home. For example, as mentioned previously, the flame front is not always responsible for damage to structures from wildfire. Often it is

embers that fall in front of a flame front (spot fires) that can do just as much damage. These embers can become independent of the main fire because as they get carried off into the air by super-heated rising smoke they can retain their heat for a much longer period of time and if the conditions are conducive to ignition where they land then the embers may ignite the fuels they land on and create a new fire, independent of the main fire front. These smaller spot fires can catch yard waste, leaves in gutters, woody vegetation around homes or even mulch on fire and spread to the structure itself, hence, the importance of cleaning all combustible debris from and around your home on a regular basis.

Structure assessments as a demonstration can be performed by randomly visiting homes and visually evaluating hazard criteria according to the Hazard Assessment Structure Ranking Form. This form, which was developed by the NJ Forest Fire Service, based on national criteria (Appendix C) assigns a point value to several variables related to a structure's hazard susceptibility. A score of 0 to 40 indicates a Low Hazard; a score of 41 to 69 indicates a Moderate Hazard; a score of 70 to 99 indicates a High Hazard; and any score greater than 100 indicates an Extreme Hazard.

Much of the hazard assessment values are determined based on the proximity of homes to the forest. Many homes were constructed very close to the edge of the forest and/or in close proximity to one another.

Additional attributes of the community evaluated as part of any assessment include:

1. Access:
    a. Most roads have adequate street widths with no weight or height limitations. However, there are various cul de sacs. There are two main access points which can be located off of State Route 9 and County Route 532.

2. Available Fire Protection:
    a. Greenbriar Oceanaire has a pressurized water source. Additionally, no home is located more than 5 miles from a fire station.
    b. The community is assisted by the Waretown Fire Dept in the event of a fire threatening homes.

3. Defensible Space:
    a. The vegetation surrounding the community (predominately Pine Barren Forest) was determined to be high hazard.
    b. Most homes had less than 30 feet of defensible space and less than 30 feet of separation to adjacent structures which contribute to fire spread.
    c. Property debris was minimal for most homes. Some lawns are manicured but many have trees and shrubs close to or overhanging the structures. There are some homes that have mulch up against and sometimes almost surrounding the entire structure, which does pose a significant potential for wildfire hazard.

4. Building Materials and Construction:
    a. Most homes were constructed with combustible siding such as vinyl.

b. Roofs were made mostly of asphalt shingles.

5. Utilities:
   a. Homes have natural gas.
   b. Jersey Central Power and Light (First Energy) supplies electricity.
   c. Water and sewer service is provided by Ocean Twp MUA which includes the community's fire hydrants.
   d. All utilities are underground.
6. Miscellaneous Factors:
   a. The fire history occurrence was rated high.
   b. Fire weather was rated high.
   c. Structure separation was rated high.

Home assessments were completed in July of 2018. The Greenbriar Oceanaire Firewise Committee designated the community into 8 zones for management and implementation. Random homes were assessed in each zone to give an average. These averages were compiled to give an overall rating for the entire community. The community, as a whole, scored 92 points out of a possible 210 points or "High Hazard" classification.

VII. Firewise Activities Conducted/Completed:

Dates of activities following the NJ Forest Fire Service initial assessment are as follows:

Greenbriar Oceanaire has formed a committee and plans to promote wildfire awareness among the community since their initial contact. Initial contact was made in 2018 at an Ocean Township CWPP / CPAW event to get the public involved. Concerned residents and the property board met with the New Jersey Forest Fire Service (NJFFS) and Ocean Twp officials to educate themselves on related wildfire protection. The Firewise program was introduced to get them started. Throughout 2018, various meetings and education for the newly formed committee here held. This was done to empower the committee to become Firewise and start the process. Plans are now in place for an initial outreach program to educate residents on the potential they may witness if a wildfire were to impact their community. The goal is for residents to see what defensible space looks like in hopes to get more homeowners involved. The Firewise committee, through planning meetings, met with Firewise Liaison John Cowie from the NJ Forest Fire Service, Asst. Division Warden Joseph Battersby, Section Fire Warden Scott Knauer to review planning to become Firewise. The meetings reviewed where they are, how they got here and where they want to go. Over the summer of 2018, the Greenbriar Firewise Plan was initially drafted. A Firewise community information and education event will be held at their clubhouse on October 7th, 2018. All facets of Firewise principles will be explained along with handouts.

VIII. Education, Awareness and Improvement Activities Needed:

As suggested by the Firewise Committee and as part of the Wildland/Urban Interface Community Hazard Assessment, several measures could be implemented to improve Firewise awareness in the community. These include:

1. Host a Firewise Community Day annually with the goal of increased participation and Firewise awareness among residents.
2. Create defensible space in areas needed.
3. Remove "ladder fuels" in common grounds and along perimeter for designed effectiveness.
4. Host a brush clean up and garbage disposal day annually to reduce ignition points and hazard areas in and around homes.
5. Focus on Firewise landscaping by reducing ignitable materials, such as mulch and combustible shrubbery, located directly adjacent to structures.

IX. Firebreak Maintenance and Fuel break Implementation:

GOAL: Implement forest management activities to reduce wildfire potential in, and around the community. Reduce the density, distribution and arrangement of vegetation to prevent wildfire spread and intensity. Maintain treated areas in aesthetically pleasing and visually attractive manner that is consistent with the landscape through the development.

CONDITIONS AND RECOMMENDATIONS:

1. Remove ladder fuels contained in the perimeter common areas. Remove any downed trees/brush. Chip tops and small branches and spread chips on site.

2. Disseminate information about defensible space, Firewise and Ready-Set-Go principles.

3. Engage community to create a clean-up day to remove potential fuels from around buildings and structures.

FOLLOW-UP AND MAINTENANCE:

Future maintenance should consist of reducing understory shrub growth at regular intervals. Treatments such as mowing should be applied every 2 to 3 years. The goal is to prevent the existing vegetation from developing at a density and height that will contribute to wildfire intensity and spread. Repeated treatments overtime should help to reduce the density of vegetation and gradually change the species composition to more desirable, native lower growing shrubs.

X. Activity Timeline:

2018

- Host a Firewise awareness day for community residents.
- Submit application for Firewise Community designation by NJFFS.
- Create and disseminate a Firewise Plan for the community.
- Awareness campaign to build involvement.
- Create defensible space pilot project in Zone Clubhouse.

2019

- Continue to educate residents regarding Firewise principles and Introduce Ready Set Go.
- Have a brush & vegetation clean up day.
- Host a Firewise awareness day for community residents.
- Create defensible space for perimeter homes in Zones 4 & 5.
- Maintain vegetation control around entire community.

2020

- Continue to educate residents regarding Firewise principles and Ready Set Go.
- Create defensible space for perimeter homes in Zones 2 & 3.
- Introduce & educate residents on Firewise landscaping with pilot project at Clubhouse.
- Host a Firewise awareness day for community residents.
- Have a brush & vegetation clean up day
- Maintain vegetation control around entire community.
- Build partnerships with adjacent land owners to have defensible space completed on their land adjacent to our property.

2021

- Continue to educate residents regarding Firewise principles and Ready Set Go.
- Create defensible space for perimeter homes & Clubhouse within Heritage Circle (Zone Clubhouse).
- Create defensible space for perimeter homes in Zone 1.
- Continue to educate residents on Firewise landscaping.
- Host a Firewise awareness day for community residents.
- Have a brush & vegetation clean up day
- Maintain vegetation control around entire community.
- Continue partnership with other landowners to have defensible space completed on their land adjacent to our property.
- Assess Firewise plan for overall effectiveness.
- Plan for updating next 4 years objectives.

Appendices

A. Suggested references and tree species for planting

B. NRCS Potential Damage by Fire Map Unit

C. Hazard Assessment Structure Ranking Form

D. Greenbriar Oceanaire Zone Identification Map

Appendix A
References

Wildfire:

1. Selecting plants for flame resistance around the home landscaping, Ohio State University. http://ohiodnr.com/Portals/18/fire/pdf/firewise9214.pdf

2. Portal for information on Firewise landscaping and plant selection. http://firewise.org/wildfire-preparedness/firewise-landscaping-and-plant-lists.aspx?sso=0

3. Comprehensive information on protecting your home from wildfire. firewise.org.

4. New Jersey Forest Fire Service. http://www.nj.gov/dep/parksandforests/fire/ff_aboutus.htm

Tree Planting:

1. Tree seedling and liner nurseries. Greenwood Nurseries, McMinnville, Tennessee. http://forestry.about.com/gi/o.htm?zi=1/XJ&zTi=1&sdn=forestry&cdn=education&tm=40&f=00&su=p284.13.342.ip_&tt=2&bt=8&bts=8&zu=http%3A//www.greenwoodnursery.com/

2. Vernon Barnes and Sons Nursery, 257 Kesey Ford Road, McMinnville, TN, 37110. (931) 668.8576. No web presence, call for catalog.

3. Musser Forests. http://www.musserforests.com/

4. Croshaw Nursery. (NJ Seedling grower) http://www.croshawnursery.com/Welcome.html

5. NJDEP Forest Tree Nursery http://www.state.nj.us/dep/parksandforests/forest/nj_forest_nursery.htm

6. Firewise Landscaping Plants for New Jersey

Suggested Tree Species for Planting

Shade Trees - Upland Area

Scientific Name	Common Name
Liriodendron tulipfera	Tuliptree
Tilia Americana	American basswood
Quercus alba	White oak
Quercus rubra	Red oak
Acer saccharum	Sugar maple

Shade Trees – Wet Area

Acer rubrum	Red maple
Quercus	Swamp white oak
Nyssa sylvatica	Blackgum
Liquidambar styraciflua	Sweetgum
Betula nigra	River birch

Understory/Ornamental Trees

Cornus florida	Flowering dogwood
Celtis Canadensis	Redbud
Oxydendron arborea	Sourwood
Amelanchier arborea	Serviceberry

Appendix B

Wildfire Damage Susceptibility

Wildfire is a naturally occurring event that has helped maintain ecosystem function in wildlands. Wildfire can be caused by natural ignition such as lightning strike, or by man-caused ignition. Buildup of excess fuel loads can result in high severity fires that damage the soils in the burn area. Prescribed burning is a restoration practice that is primarily designed to help return the natural fire cycle to the landscape. Properly carried out on suitable sites, burning can be a very effective and cost efficient treatment method to help restore the desired composition of plant species in an ecological site, improve livestock access on heavy brush or slash sites, rejuvenate sprouting browse species and stagnant grass plants, release nutrients into the soil, improve palatability and nutrient content of forage, reduce fuel loading, and prepare an ash seedbed for artificial or natural seeding. Burning may be combined with mechanical or chemical rangeland treatments.

Fuel ignition for prescribed burning can be natural or artificial using hand-held drip torches, aerial ignition, and other methods. Fire lines can be established using natural fuel breaks, wet lines, or the removal of fuel by hand or machinery.

The susceptibility to fire damage ratings represent the relative risk of creating a water repellant layer, volatilization of essential soil nutrients, destruction of soil biological activity, and vulnerability to water and wind erosion prior to reestablishing adequate watershed cover on the burned site. The ratings are directly related to burn severity (e.g. a low-moderate severity burn will not result in water repellant layer formation). This rating should be used in conjunction with the rangeland seeding ratings or the soil restoration potential rating depending upon whether seeding or natural regeneration will be utilized on the site.

Sandy soils are more susceptible to formation of a water repellant layer. High rock fragment content increases the rate of heat transfer into the soil. Steep slopes increase the vulnerability to water erosion. Susceptibility to formation of hydrophobic or water repellant layers varies by vegetation type. As an example, pinyon-juniper, Arizona chaparral, and California chaparral vegetation types are more susceptible to hydrophobicity than other shrubland or grassland vegetation types.

The impacts of wildfire to soils of the burn area need to be assessed to prioritize burned area emergency rehabilitation and re-vegetation efforts.

Prescribed burning should be carefully planned and executed. It should be carried out following a well designed prescription and burn plan under the supervision of a qualified prescribed burning team. Burning objectives should be clearly defined and should be evaluated during post-burn assessments. Minimizing risks to human health, safety, and property damage and containment of the burn are of paramount importance.

Hot, dry south-facing slopes are more susceptible to fire damage than cooler, north-facing slopes. Fire mortality of desirable plants needs to be taken into consideration during wildfire restoration and prescribed burning planning. On-site investigation is recommended before implementing any wildfire restoration or prescribed burning projects.

The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect soil damage by fire. "Highly susceptible" indicates that the soil has one or more features that are very favorable for soil damage by fire. "Moderately

susceptible" indicates that the soil has features that are moderately favorable for damage to occur. "Slightly susceptible" indicates that the soil has features that generally make it unfavorable for damage to occur.

Numerical ratings indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.01 to 1.00. They indicate gradations between the point at which a soil feature has the greatest impact favoring soil damage by fire (1.00) and the point at which the soil feature is not favorable to damage occurring (0.00).

The map unit components listed for each map unit in the accompanying Summary by Map Unit table in Web Soil Survey or the Aggregation Report in Soil Data Viewer are determined by the aggregation method chosen. An aggregated rating class is shown for each map unit. The components listed for each map unit are only those that have the same rating class as listed for the map unit. The percent composition of each component in a particular map unit is presented to help the user better understand the percentage of each map unit that has the rating presented.

Other components with different ratings may be present in each map unit. The ratings for all components, regardless of the map unit aggregated rating, can be viewed by generating the equivalent report from the Soil Reports tab in Web Soil Survey or from the Soil Data Mart site. Onsite investigation may be needed to validate these interpretations and to confirm the identity of the soil on a given site.

Wildland Fire Risk & Hazard Assessment Form **Assessor:** **Date:**

A. Occupancy Information

Name: _____
Address (911): _____
City: _____ State: ____ ZIP: _____
Phone: ( ) _____
1. Livestock (please list)_____

Mailing Address if different :_____
City: _____ State: _____ ZIP: _____
2. Occupancy type: ☐Permanent ☐Seasonal ☐Other
☐Multiple Structures ☐Commercial ☐Outbuilding
☐Government ☐Recreational ☐Public Utility

B. Means of Access	Points	
1. Limiting Factors for Engines		
a. None	0	
b. Weight limit, height clearance <10', width <8' or curves to tight for fire apparatus to gain access to within 75' of structure.	30	
2. Street ingress/egress		
a. Two or more streets in/out	0	
b. One street in/out	5	
3. Street width		
a. double lane (>16' wide)	0	
b. single lane (<16' wide)	5	
4. Street condition		
a. Paved, grade < 12%	0	
b. Paved, grade > 12%	2	
c. Gravel/Stone, grade < 12%	2	
d. Gravel/Stone, grade > 12%	4	
e. Unimproved	5	
5. Street turnaround		
a. turnaround (radius>60')	0	
b. no turnaround	5	
6. Driveway ingress/egress (if >75' from structure)		
a. Two or more ways in/out	0	
b. One way in/out	5	
7. Driveway condition		
a. Paved, grade < 12%	0	
b. Paved, grade > 12%	2	
c. Gravel/stone, grade < 12%	2	
d. Gravel/stone, grade > 12%	4	
e. Unimproved	5	
8. Driveway turnaround		
a. turnaround (radius>60')	0	
b. no turnaround	5	
9. Street signs		
a. Present (4in. in size and contrasting)	0	
b. Present	2	
c. Not present	5	
10. Address sign		
a. Present (4in. in size and contrasting)	0	
b. Present	2	
c. Not present	5	

C. Available Fire Protection

1. Water source availability		
a. Hydrant <1000' away	0	
b. Non-pressurized water source availability (off-site). Draft <5miles.	5	
c. Water >5miles	10	
2. Fire Dept		
a. Station <5miles from structure	0	
b. Station >5miles from structure	5	
Protection Subtotal		

D. Vegetation	Points
1. Characteristics of predominate vegetation within 300 feet. Areas affected by frost, disease or insect kills add 5 points.	
a. Light (e.g., farmland, landscaped)	0
b. Moderate (e.g., Hardwood forest, phragmites)	5
c. High (e.g., Pine Barrens forest, mature pine, pine-oak, oak-pine, laurel)	15
d. Extreme (e.g., Immature or dwarf pine-oak or oak-pine, pine-lowland)	25
2. Defensible space	
a. >100' feet of vegetation treatment (from the structure)	0
b. 76 – 100' of vegetation treatment	5
c. 30-75' of vegetation treatment	15
d. <30 feet of vegetation treatment	25
3. Property debris/vegetation. Yard accumulation and foundation vegetation.	0 - 10

E. Topography within 300' of structure			
1. Slope <9%	0	4. Slope 31-40%	8
2. Slope 10-20%	4	5. Slope >41%	10
3. Slope 21-30%	7		

F. Additional Rating Factors	
1. Areas with a history of higher fire occurrence.	0-5
2. Areas that are exposed to unusually severe fire weather and strong dry winds.	0-5
3. Seperation of adjacent structures that may contribute to fire spread (e.g., fence or outbuilding)	0-5

G. Building Construction	
1. Materials (predominant)	
a. Noncombustible/fire resistant siding, and deck	0
b. Noncomb/fire resistant siding, combust. deck	5
c. Combustible siding and deck	10
2. Roofing	
a. Firesafe (pitched, metal, concrete)	0
b. Nonfiresafe (flat, untreated)	10
3. Building Setback from slopes of 30%+	
a. >=30' from slope	0
b. <30' from slope	10

H. Placement of Gas and Electric Utilities	
1. Both utilities underground	0
2. Gas/Propane or Electric above ground	3
3. Gas/Propane and Electric above ground	5

Survivability Subtotal :

Wildland Fire Risk & Hazard Assessment Total (Protection + Survivability)

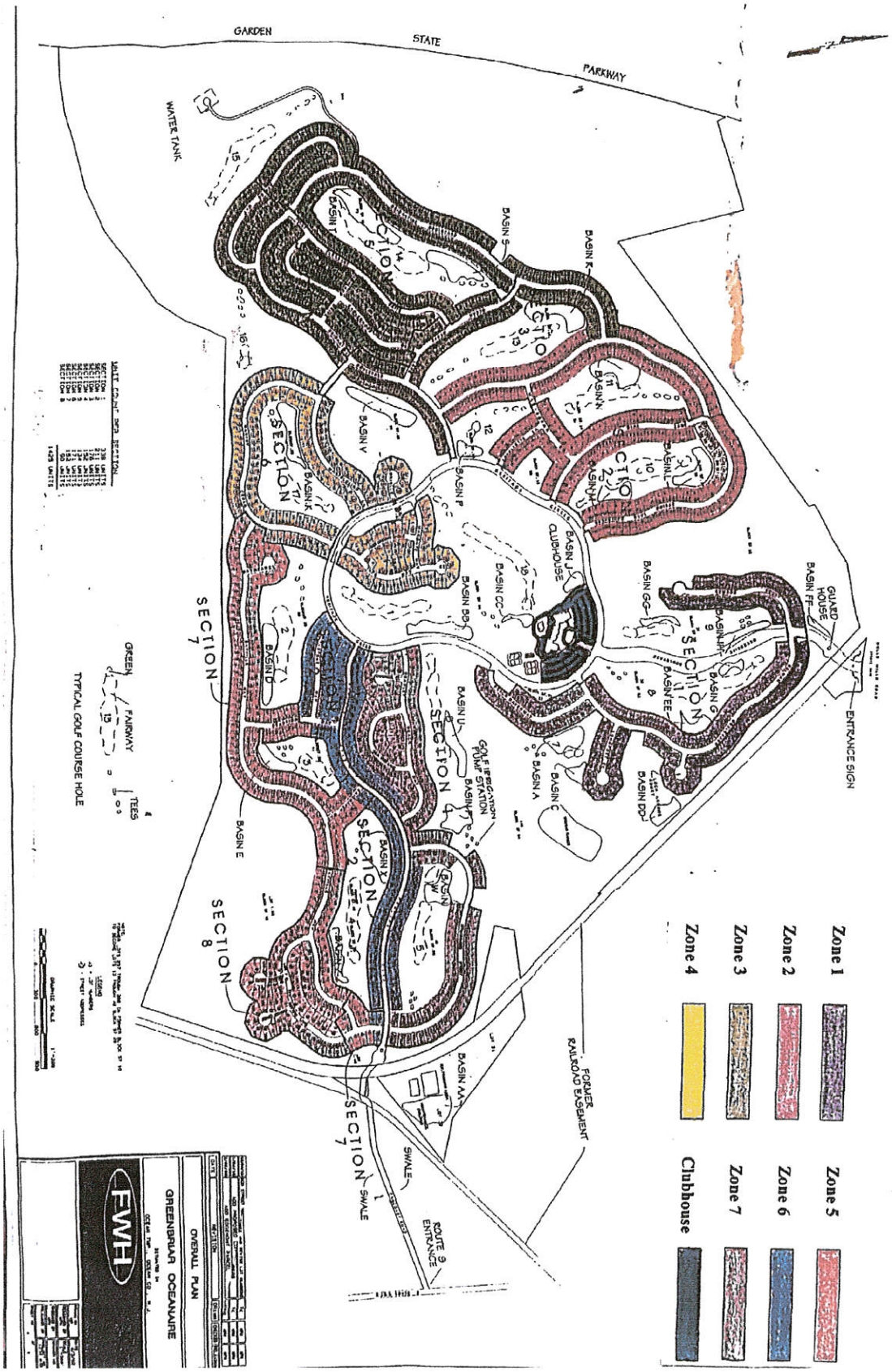
Possible 210 points
Low Hazard: <40
Moderate Hazard: 41-69
High Hazard: 70-99
Extreme Hazard: >100

Notes:

*Ratings adopted from the NFPA 299 Form

Appendix D


GARDEN STATE PARKWAY
Water Tower
Clubhouse & Amenities
Golf Maintenance Building
Route 532 Wells Mills Road
J.C.P.L. Easement
Greenbriar Oceanaire
GOLF & COUNTRY CLUB


GARDEN STATE PARKWAY
WATER TANK
SECTION 1
SECTION 2
SECTION 3
SECTION 4
SECTION 5
SECTION 6
SECTION 7
SECTION 8
BASIN S
BASIN K
BASIN V
BASIN F
BASIN J
CLUBHOUSE
BASIN BB
BASIN CC
BASIN GG
GUARD HOUSE
BASIN FF
ENTRANCE SIGN
BASIN EE
BASIN DD
BASIN A
BASIN C
BASIN U
GOLF IRRIGATION PUMP STATION
BASIN T
BASIN E
BASIN Y
BASIN W
BASIN XX
FORMER RAILROAD EASEMENT
SWALE
ROUTE 9 ENTRANCE
GREEN
FAIRWAY
TEES
TYPICAL GOLF COURSE HOLE
Zone 1
Zone 2
Zone 3
Zone 4
Zone 5
Zone 6
Zone 7
Clubhouse
FWH
OVERALL PLAN
GREENBRIAR OCEANAIRE