

Plain language represents language previously reviewed and accepted by the Task Force.
Plain underlined or strikethru represents language or revisions previously discussed.
Staff proposed clarifications or suggestions are in bold underlined.

ARTICLE XIII. DIVISION 2. LANDSCAPING, LAND CLEARING AND TREE PROTECTION

Section 62-3631. Purpose and Intent.

The Brevard County Board of County Commissioners finds that the health, safety and welfare of its citizens can best be protected by land use regulations that support and enforce the following community goals:

- (1) Promote the establishment, management and conservation of native vegetative communities.
- (2) Promote visual and aesthetic buffers between land uses.
- (3) Encourage the protection of champion, heritage or specimen trees.
- (4) Promote water conservation and aquifer recharge.
- (5) Encourage creative landscape designs.
- (6) Protect life and property by appropriately planting trees and vegetation
- (7) Preserve property values.
- (8) Control soil erosion and mitigate heat, air and water pollution.
- (9) Provide regulations that are user-friendly, flexible and minimize conflicts with other land development regulations while protecting property rights.

Section 62-3632. Definitions

Active development order means an action by the county approving a site development plan, final development plan or subdivision plat, or the issuance of a permit pursuant to Chapter 22, Brevard County Code, or the approval of a conditional use permit for a borrow pit, commercial borrow pit or private lake.

Adverse site conditions means existing site conditions that adversely affect the implementation of the provisions of this Article and that hinder plant viability and growth. Examples include but are not limited to:

- (1) Existing topographic elevation changes that would result in the likelihood that preserved and/or planted materials would not survive.
- (2) Existing areas of buried solid waste at a depth that would affect viability of preserved and/or planted materials.
- (3) Existing electrical lines or utility easements that prevent or restrict the preservation and/or planting of landscape materials.
- (4) Beachside planting conditions that cannot support certain hardwood species.
- (5) Existing, expansive water bodies or preserved natural areas where their location might prohibit the installation of required landscaping or buffers or that conflict with preservation.
- (6) Redevelopment sites where existing landscaping does not meet current standards and where existing site conditions, such as but not limited to impervious surfaces,

access locations, or building locations, prevent the site from meeting the current landscaping requirements,

- (7) Sites where type or distribution of existing canopy or other protected trees are such that preservation requirements would prohibit site development or conflict with required development standards, such as stormwater or roadway designs, and where alternative site plan designs do not result in meeting the specific landscaping/tree protection requirements as outlined elsewhere in the code.

Adverse site conditions do not include plan designs that do not avoid preservation areas or trees to the greatest extent feasible.

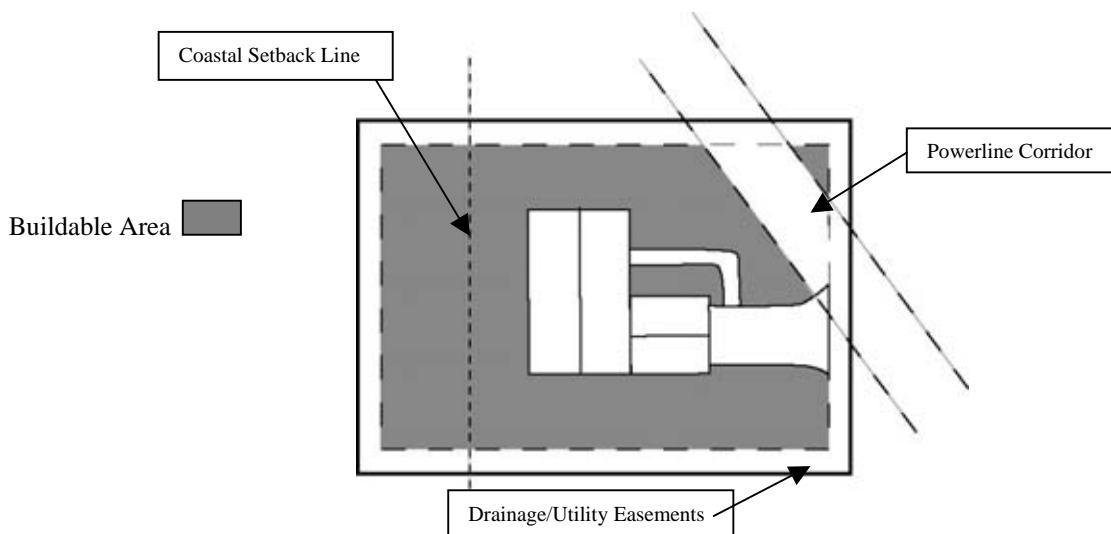
After-the-fact permit means a permit issued after a violation has occurred for the primary purpose of correcting the violation (if the activity would have been permissible) or for bringing the violator into compliance with existing regulations.

Agricultural Activity means any use or action commonly associated with the raising of crops, livestock, silviculture, forestry, groves, pasture, nurseries, or combinations of such activities. (this definition provided at the Task Force’s request to try to address other ag uses)

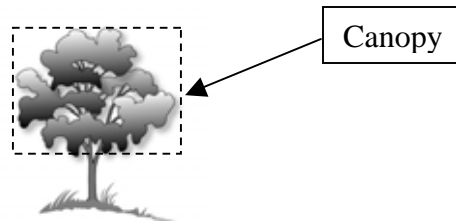
Alternate Landscape Enhancement Plan means a plan that provides property owners with adverse conditions the flexibility to design a landscape plan to manage the specific, adverse site conditions.

Bona Fide Agricultural Use means the commercial agricultural use of a site, parcel, or lot which has been classified as "Green Belt" pursuant to s. 193.461, F.S.

Buildable area means the gross area of a site, parcel or lot excluding any area of a site, parcel or lot which is not eligible for the issuance of a building permit by the county, except building setback areas, shoreline protection buffers, coastal construction setback areas, wetlands and other similar areas required pursuant to the applicable provisions of articles II, VI, X, XII and XIII of this chapter. If any of the excluded areas will be credited towards the required landscaping, then the area(s) is considered buildable area in for the purposes of landscaping and preservation requirements calculation. Areas that may be potentially cleared in the future cannot be credited towards landscaping and preservation and plantings are discouraged in these areas.

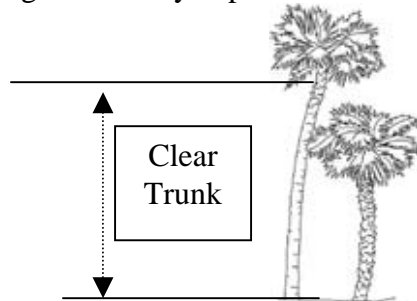


Canopy means the area consisting of a tree's branches in all directions from its trunk, the outer edge of which is the dripline.



Canopy Coverage means the areal extent of ground within the drip line of the tree.

Clear Trunk means a measurement from the soil line to the point in the canopy where the trunk caliper begins to taper abruptly. On many palms, this point will lie at the base of the petiole of the third or fourth youngest but fully expanded leaf.



Diameter at breast height (dbh) means the diameter of the trunk of a tree, or the sum of the stems of a multi-stemmed tree, measured 4.5 feet above natural or development grade.

Dripline means an imaginary vertical plumb line that extends downward from the tips of the outermost tree branches and intersects the ground.



Florida Friendly Landscaping means the utilization of nine principles in landscape design.

These nine principles are; 1) Right Plant, Right Place; 2) Drought Tolerant Plantings; 3) Fertilize Appropriately; 4) Mulch; 5) Attract Wildlife; 6) Control Yard Pests Responsibly; 7) Recycle; 8) Reduce Stormwater Runoff; and 9) Protect the Waterfront.

Greatest extent feasible shall include but not be limited to relocation of roads, buildings, ponds, increasing building height to reduce building footprints and/or reducing parking areas.

Heat island effect means the increase in temperature in urban areas compared to the surrounding rural lands usually because of reduced vegetative cover or excessive use of impervious surfaces.

Heritage Tree means any tree that is listed in the American Forest Association's Big Tree list or any tree that is listed in the Florida Big Trees List as determined by the Florida Dept. of Forestry or that would measure 80 percent of the points of a tree on the Florida Big Trees List.

Hydrozone means the grouping of plant species with similar watering needs in landscaped areas having appropriate microclimate, soil, and water conditions so that all plants in that area thrive.

Improper Pruning means the following:

- (1) Improper pruning that reduces the height or spread of a tree that has not attained maturity, by altering the dominant stem(s) within the tree crown to such a degree as to remove the natural canopy of the tree; or
- (2) Improper pruning that leaves stubs or results in a flush cut (a cut to close to the main branch or trunk that does not allow for proper healing); or splitting of limb ends; or
- (3) Peeling or stripping of bark; or the removal of bark to the extent that, if a line is drawn at any height around the circumference of the tree, over one-third (1/3) of the length of the line falls on portions of the tree where bark no longer remains; or
- (4) Using climbing spikes and hooks, except for purposes of total tree removal or as specifically permitted by the Florida Urban Forestry Council or American National Standards Institute (ANSI A-300); or
- (5) Destroying the natural habit of growth which causes irreparable damage and permanent disfigurement to a tree such that, even with regrowth, the tree will never regain the original characteristics of its tree species, or is a danger to the public or property; or
- (6) Improper pruning that results in flat-cutting the top or sides of a tree, to sever the leader or leaders or to prune a tree by stubbing off mature wood, except where removal of a branch is necessary to protect public safety;
- (7) Exception: The removal of diseased or dead portions of a tree, the removal of an interfering, obstructing or weak branch shall not constitute improper tree pruning under this section. Interference with or obstruction of streetlights, stop signs or traffic signals is an example of pruning which, if accomplished by the International Society of Arboriculture's pruning standards, American National Standards Institute (ANSI A-300), the Florida Urban Forestry Council, or the University of Florida Cooperative Extension Service's circular publication #853 entitled Pruning Landscape Trees and Shrubs, is not a violation of this division.
- (8) All undesirable species as defined in this section are exempt from improper tree pruning standards.

Land clearing means the removal or cutting down of vegetation from any site, parcel or lot including root-raking and improper tree pruning; provided, however, that it does not include mowing, trimming or pruning so as to maintain vegetation in a healthy, viable condition.

Landscape earth berm means an earthen mound which is not greater than four feet in height and which is sodded and planted with additional vegetation to meet the specifications of the required vegetative buffer classification.

Landscape plan means a plan drawn to an appropriate engineering scale depicting existing and proposed vegetation and prepared by a recognized knowledgeable person.

Landscaping means the preservation or planting of vegetation to enhance the natural or built environment pursuant to the provisions of this article.

Mangrove means any specimen of the species *Avicennia germinans* (Black mangrove), *Laguncularia racemosa* (White mangrove) or *Rhizophora mangle* (Red mangrove).

Mature means the plant has reached 80% of the expected ultimate size.

Native species means those species indigenous to Brevard County as determined by the best available scientific and historical documentation. The Atlas of Florida Native Plants maintained by the Institute for Systemic Botany, University of South Florida shall be used as a reference. <http://www.plantatlas.usf.edu>.

NRMO means the Brevard County Natural Resources Management Office or its successor agency.

Non-native noxious invasive plant, for the purposes of this ordinance, means the following species:

Common Name	Scientific Name
Air-potato	<i>Dioscorea bulbifera</i> and <i>Dioscorea alata</i>
Climbing fern	<i>Lygodium japonicum</i> and <i>Lygodium microphyllum</i>
Melaleuca	<i>Melaleuca quinquenervia</i>
Kudzu Vine	<i>Pueraria montana</i>
Brazilian Pepper	<i>Schinus terebinthifolius</i>

Pervious area means an area that permits water and air to permeate or penetrate to the roots of existing or planted vegetation. Pervious areas do not include materials such as compacted marl or clay, pavement, concrete, or pavers.

Protected Tree means, with the exception of undesirable species, a hardwood tree having dbh of ten (10) inches or greater located on the mainland or Merritt Island or having a dbh of one and a half (1.5) inches on the barrier island; or a softwood tree, such as a pine, having a dbh of 14 inches or greater or one and a half (1.5) inches on the barrier island; or scrub oaks on the mainland, Merritt Island or barrier island (*Quercus myrtifolia*, *Q. chapmanii*, *Q. inopina*, *Q. virginiana* var. *maritima*) having a dbh of one and a half (1.5) inches.

Recognized knowledgeable person means an individual recognized by the county as being knowledgeable in the identification and evaluation of vegetative resources, such as a forester, biologist, ecologist, horticulturist, Florida registered landscape architect, licensed landscape contractor, certified ISA arborist, certified nurseryman or person having similar recognized skills and experience.

Re-growth control means removal or trimming of individual plants before the plants reach the onset of flowering.

Root Protection Zone means the area beneath a tree centered on the trunk with a radius equal to five times the projected mature trunk's dbh.

Soil amendment means a replacement and/or improvement to the soil providing for optimum root and plant growth of vegetative materials.

Specimen Tree means a tree or group of trees considered an important community asset due to its unique or noteworthy characteristics or values. A tree or a group of trees may be considered a specimen tree based on its size, age, rarity or special historical or ecological significance.

Examples include large hardwoods (oaks, maples, etc.) or softwoods (pines, cypress, cedars, etc.) in good condition as determined by a recognized knowledgeable person, with a dbh of 24 inches or greater and smaller understory trees (stoppers, hollies, etc.) in good or better condition with a dbh of ten inches or greater.

Spread means the crown diameter measured by taking the average of the widest branch spread and the branch spread perpendicular to it.

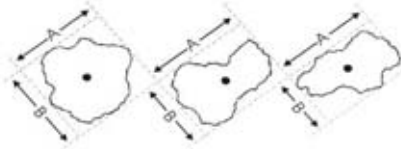


Fig. 1 Add A and B together and divide by 2 to get the spread.

Tree is a perennial, woody plant that is generally characterized by having a self-supporting trunk with secondary branches. Trees shall be classified as follows:

- (1) Large/medium trees: Average mature height of a minimum of 25 feet to over 60 feet.
- (2) Small trees: Average mature height of a minimum of ten feet and less than 25 feet.

Tree removal includes any act that physically removes the tree or its root system from the earth or causes a tree to die, changing the natural grade above or below the root system or around the trunk or improper pruning where the natural form of the tree is permanently changed and/or results in tree death or decline.

Understory means an underlying layer of low native vegetation usually associated with trees.

Undesirable species means any of the following species: *Casuarina equisetifolia* (Australian pine), *Casuarina glauca* (suckering Australian pine), *Dioscorea bulbifera* (air potato), *Lantana camara* (lantana), *Melaleuca quinquenervia* (melaleuca), *Sapium sebiferum* (Chinese tallow tree), *Schinus terebinthifolium* (Brazilian pepper), *Sansevieria hyacinthoides* (African bowstring hemp), *Ricinus communis* (castor bean plant), *Rhodomyrtus tomentosa* (downy rose myrtle), and including the species as found on the Florida Exotic Pest Plant Council's List of Florida's Most Invasive Species, as may be amended.

Vegetative buffer area means an area of undisturbed native vegetation or vegetation established consistent with the surrounding vegetation and soil types. This area shall be located along the perimeter of properties where required by the county.

Vegetation means any plant material, including but not limited to trees, shrubs, vines, herbs and grasses. (The following language moved from old species classification definition) Vegetation shall be classified as follows:

- (1) Large/medium trees: Average mature height of a minimum of 25 feet to over 60 feet.
- (2) Small trees: Average mature height of a minimum of ten feet and less than 25 feet.
- (3) Shrubs, ground cover and vines: Average mature height of less than ten feet, which completely covers the ground at maturity.
- (4) Palm trees: All heights.

Vegetative communities means a natural association of vegetative plants, including but not limited to both trees and understory.

Vehicular use area means any area used for the purpose of driving, maneuvering, parking, storage, loading or unloading or displaying of motor vehicles and boats, excluding rivers, lagoons, streams, public rights-of-way, and permitted driveways and parking areas for single-family residences. Motor vehicles shall include but are not limited to automobiles, trucks, vans, campers and motorcycles.

Viable means plant material exhibiting a healthy and vigorous condition having live foliage out to the tips of all branches and stems. Palms shall have no dead spots or yellowing.

Xeriscaping™ or Water-Wise Landscaping means the utilization of seven principles to conserve water in the landscape. These seven principles are 1) plan and design 2) soil analysis and amendment 3) appropriate plant selection 4) reduction of turf areas 5) efficient irrigation 6) mulching, and 7) proper maintenance.

Section 62-3633. Applicability

The provisions of this Article shall apply to the unincorporated areas of Brevard County. The requirements to remove non-native noxious invasive plants at the time of development and control re-growth of such plants in the required area within the site shall apply countywide and prospectively to property after the effective date of this ordinance.

Section 62-3634. Exemptions

The following land uses and/or activities shall be exempt from the requirements of this Article:

- (1) Per the Florida Agricultural Lands and Practices Act (Chapter 163.3162(4), Florida Statutes), any activity of a bona fide ~~agricultural use farm operation~~ on land classified as agricultural land ("Green Belt") pursuant to s. 193.461, F.S. ~~if such activity is regulated through implemented best management practices, interim measures, or regulations developed by the Department of Environmental Protection, the Department of Agriculture and Consumer Services, or a water management district and adopted under chapter 120 as part of a statewide or regional program; or if such activity is expressly regulated by the United States Department of Agriculture, the United States Army Corps of Engineers, or the United States Environmental Protection Agency.~~
- (2) Single-family properties 2.5 acres or less that have a certificate of occupancy and the minimum landscaping and tree preservation as may be required by this Article is maintained.
- (3) The removal of any plant that is listed in the Florida Exotic Pest Plant Council List of Invasive Species, as may be amended except within shoreline protection buffers as defined by Article X, the Brevard County Coastal Construction Setback Line as defined by Article XII, and wetlands as defined by Article X. Within these areas, invasive plant removal is exempt if:
 - a. No mechanical equipment is used.
 - b. Roots shall not be removed below ground. Above ground foliage may be cut and stumps treated appropriately.
 - c. Herbicides are used to treat the invasive species as approved for aquatic use.

Other methods will be considered on a case by case basis subject to approval of a waiver pursuant to section 62-3644.

- (4) Linear Projects that are public or privately owned constructed exclusively for public thoroughway transportation from the tree protection and canopy preservation requirements but not landscaping code requirements. Such linear projects include federal, state and County roadways, such as arterial and collector roads, that do not terminate on or at private lands or serve exclusively residential subdivisions or commercial/industrial parks, and would exclude internal roads for subdivisions, roads that are part of a subdivision or commercial site plan, or other roads proposed for private use and not constructed for the primary purpose of public thoroughfare or commerce transportation, sidewalks, trails and paths. Such projects are exempt from tree protection and canopy requirements but still shall comply with landscaping requirements.

Task Force is unanimously opposed to exempting linear projects and recommends that this subsection be deleted. All projects, whether private or public, should comply with these regulations.

Ernie Brown to research whether utilities, pipelines, etc would be exempt.

- (5) Emergency removal of a dead or seriously damaged tree that adversely affects the health, safety and welfare of the property owners or the general public.
- (6) When the proposed land clearing activity is regulated by another State of Florida or federal agency, which regulations may supercede those of the county.
- (7) The removal of vegetation that has been ordered by the county, pursuant to the provisions of chapter 114, article II. Prior to issuing the order for removal of vegetation pursuant to the provisions of chapter 114, article II, if the removal conflicts with the requirements or intent of this article, the county manager or designee shall negotiate a resolution of the conflict.
- (8) All lands that have an existing land clearing permit, approved site plan or building permit shall be exempt from the requirements of this article that are inconsistent with the previous ordinance.

Section 62-3635. Agricultural Activities

- (1) Agricultural activities on lands not classified as "Green Belt" pursuant to s. 193.461, F.S. shall meet the following requirements:
 - a. NRMO shall be provided one (1) copy of a completed and signed Conservation Plan from USDA that shall contain the following information, at a minimum: Proposed agricultural activities, Best Management Practices that are being utilized and completed agricultural application.
 - b. The proposed agricultural activity shall be a use or activity permitted by the existing zoning of the property.
 - c. Abutting properties shall be notified by the applicant of the proposed agricultural use. Written verification of the notification shall be required by NRMO.
 - d. For properties where the proposed agricultural activity is not a bona fide agricultural use, after approval by the NRMO, the owner shall complete and record the Agricultural Covenant (Appendix D) in the Public Records of Brevard County prior to any land clearing. The agricultural covenant shall be effective for a minimum of ten (10) years.
- (2) For proposed bona fide agricultural use activities on lands classified as "Green Belt" pursuant to s. 193.461, F.S. shall meet the following requirements:
 - a. Where the proposed agricultural activity is intended for bona fide agricultural use, the owner shall complete and record the Agricultural Covenant (Appendix D) in the Public Records of Brevard County prior to any land clearing. The agricultural covenant shall be effective for a minimum of three (3) years.
 - b. It shall be a refutable presumption that when land clearing has occurred on lands classified as "Green Belt" pursuant to F.S. ch. 193.491 within three (3) years of the recordation of Agricultural Covenant (Appendix D), the activity shall not be in furtherance of bona fide agricultural use and the property shall be required to meet the performance standards in Sections 62-3639 and 62-3640.
 - c. The property owner may provide evidence to refute the above presumption in cases of hardship, such as but not limited to bankruptcy or estate situations, to the Board of County Commissioners in a duly noticed public hearing. The Board of County Commissioners may grant a waiver to the restoration requirements of the agricultural covenant.

Staff clarification: What happens when no covenant has been filed, when does the 3 year time frame start?

Section 62-3636. Violations

Penalties and enforcement for violations of this Article shall be as specified in Chapter 62-5 and Chapter 2, Brevard County Code, as amended. Each quarter acre, or fraction thereof, of land clearing in violation of this Article shall constitute a separate violation. If protected trees are cut down on or removed from the site, each tree shall constitute a separate violation. In addition, both fines and restoration shall be required. If one or more specimen or heritage trees are cut down on or removed from the site, each tree shall constitute a separate violation and require triple fines, replacement, and restoration. The director of the NRMO or his/her designee shall be responsible for reviewing and approving all restoration plans. The provisions of this section are an additional and supplemental means of enforcing county codes and ordinances. Nothing in this section shall prohibit the county from enforcing this Article by injunctive relief, issuance of stop-work orders or by any other means provided by law. In addition, properties that are in violation of this Article shall not have permits approved nor certificate of occupancy or completion issued pursuant to this Article until the violation has been resolved to the satisfaction of the County. At the request of the Special Magistrate, fine recommendations may be made using the calculations outlined in Section 62-3644 (3). Fines that are collected will be deposited into a trust fund to be utilized for re-vegetation of public lands or for the purchase of environmentally sensitive lands. All acquisitions made through this program shall be voluntary acquisitions.

Ernie Brown to provide language from Terri Jones regarding allowance of administrative remedies.
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Section 62-3637. Permit Application Requirements and Review Process

Unless specifically exempted by Section 62-3634 (Exemptions), a permit shall be required prior to any cutting, clearing, digging, filling or otherwise injurious activity to existing vegetation. The NRMO shall provide application forms for those properties not part of an application for a building permit, subdivision or site plan. If a property is the subject of a building permit, subdivision or site plan permit, the information required in this section shall be provided in the appropriate application. Prior to submittal of the plans required in this section, the applicant is strongly encouraged to meet with the County to discuss the requirements of this Article. All landscape and/or land clearing plans shall be prepared by a recognized knowledgeable person. All plans submitted for landscaping and/or land clearing permits that are part of a subdivision or site plan application, shall be approved in writing by a professional civil engineer, professional architect or landscape architect, registered in the State of Florida and proficient in site design.

STAFF NOTE: This is consistent with the Land Development site plan and subdivision plan requirements.

- (1) Application Requirements:
 - a. Name, address and phone number. If the applicant is not the property owner of record, written authorization from the property owner to apply on his/her behalf is required.
 - b. Legal description of the property.
 - c. Location map showing the property's relationship to nearby roads and landmarks.
 - d. Boundary survey drawn to scale not to exceed one inch to 100 feet, depicting all existing and proposed structures, lot dimensions, and location and amount of clearing proposed.
 - e. Survey of all existing protected trees and canopy coverage, and identified to species and dbh. For properties greater than 5 acres, an alternative methodology

of locating individual trees may be used if the methodology is approved by the NRMO. The tree survey shall be prepared by a professional land surveyor registered in the State of Florida.

- f. Depiction of existing and proposed tree canopy boundaries.
 - g. The zoning district and land uses for the property and abutting properties.
 - h. Wetlands and their boundaries that have been delineated pursuant to Chapter 62-340, Florida Administrative Code, as amended.
 - i. Proposed use of the property.
 - j. Aerial photograph depicting location of proposed activities on the property.
 - k. If the application is for approval of a landscape plan as part of a building permit, subdivision or site plan application, the following additional information is required on the plans.
 - i. All parking areas
 - ii. All other vehicular use areas, access aisles and drives;
 - iii. Natural and man-made water bodies;
 - iv. On-site sewage disposal systems or central sewer lines;
 - v. Location of proposed source of irrigation supply;
 - vi. Size, number and species of all required landscape materials;
 - vii. Description and location of all existing trees and native vegetation and vegetative communities to be preserved.
 - viii. All existing and proposed utility and drainage easements, poles or structures.
 - ix. All applicable setback and buffers as may be required by Article X and XII of this chapter.
 - x. Limits of fill, excavation, and clearing with applicable square footages.
 - l. Any other information that is necessary to determine compliance with the County's land development regulations.
- (2) Review Process for applications other than building permits:
- a. Upon receipt of the application and fee, the NRMO shall review the application within fifteen calendar (15) days to determine that all required information has been submitted and is sufficient for review purposes. This review period may be extended by the NRMO due to unusual circumstances, including but not limited to, natural disasters resulting in an increased workload. The applicant shall be notified of the deficient items. Upon submittal of the deficient or missing information by the applicant, the NRMO shall review the application to determine that the requested information has been provided. If the requested information has not been provided or is insufficient, the applicant shall be notified that no further review will be performed by the NRMO until the requested information is provided or sufficient.
 - b. Once the application has been deemed complete or the applicant has notified the NRMO in writing that no further information will be provided, the NRMO shall review the application within fifteen calendar (15) days to determine its compliance with the performance standards contained in this Article and shall either approve or deny the permit application. This review period may be extended by the NRMO due to unusual circumstances, including but not limited to, natural disasters resulting in an increased work load.

- (3) Building Permit Applications shall be processed and reviewed through the Building Code Office procedures.

Section 62-3638. Land Clearing Performance Standards Unless specifically exempted by Section 62-3634, all land clearing activities shall meet the performance standards for the applicable activity listed in this section.(1) Land clearing activities for lands with existing Certificates of Occupancy or Completion shall meet the minimum standards in Sections 62-3638 and 62-3639 in perpetuity as approved by NRMO. Any land clearing activities shall be in compliance with Articles II, X, XII, and XIII of the County Code. All land clearing activities shall comply with the following performance standards.

- (1) A land clearing permit shall expire 90 days from the date of issuance for single-family lots and shall expire concurrently with the construction permit for subdivisions and multifamily, commercial, institutional, public and industrial projects. Two, thirty (30)-day extensions may be authorized by the county manager or designee for single-family residential provided appropriate justification warrants, such as unusual weather, seasonal situations or inability to obtain permits from other agencies.
- (2) Where a written land clearing permit has been issued, the applicant shall post the land clearing permit on the affected property in such a manner as to be visible from an abutting road right-of-way. The land clearing permit shall remain posted on the affected property during all applicable land clearing activity. It is the responsibility of the applicant to maintain the land clearing permit in a clearly visible manner at all times.
- (3) The trimming, pruning, maintenance or removal of mangroves shall be consistent with applicable federal or state regulations. Permits from appropriate agencies shall be provided for verification prior to the issuance of a land clearing permit by the county.
- (4) Vegetative buffers or other ground covers that retard erosion must be established or installed within seven (7) days after final grade of a subdivision, commercial, industrial or multi-family project has been obtained or within fourteen (14) days after the last construction activity has occurred. ~~A minimum of sixty (60) percent of the total altered area must contain either a vegetative buffer or other ground cover. Vegetative buffers or other ground covers may include seeding, sprigs, sod, mulch or other plant material or products that can be placed on the ground and maintained or managed to minimize erosion.~~ Erosion and sedimentation control measures shall be in compliance with the Best Management Practices as outlined in the "Florida Stormwater, Erosion, and Sedimentation Control Inspectors Manual". 2005. Florida Department of Environmental Protection and Florida Department of Transportation, as may be amended and as required by Chapter 62-25, Florida Administrative Code, as may be amended.
- (5) The buildable area of a single-family residential lot or parcel, including lots or parcels in the AU zoning category, in excess of one-half acre which has been designated on a landscape plan as an area on which no alterations shall occur shall be considered for the purposes of this division to be one-half acre. Where clearing takes place on more than one-half acre, the buildable area shall be considered to be that amount of land that has been or is being cleared or altered.

- (6) (This language inserted from current code at the request of the Task Force) Survey permit. A survey permit is required for clearing for surveys greater than five feet in width and soils testing and engineering testing greater than eight feet in width or within building setback areas, shoreline protection buffers, coastal construction setback areas, wetlands and other similar areas required pursuant to the applicable provisions of articles II, VI, X, XII and XIII of this chapter. Protected trees may not be cleared for survey or soil and engineering testing purposes.
- i. Prior to any land clearing for surveying greater than five feet in width or soils testing or engineering testing greater than eight feet in width with a reasonable turnaround, the owner of the property proposed to be cleared, or his authorized agent, shall submit an application for the proposed land clearing activity to the county, on such form as provided by the county. The survey permit shall expire 30 days from the date of issuance. The county manager or designee may grant an administrative waiver for an additional 30 days for hardship, including adverse weather, size of property and inability to obtain permits from other agencies.
 - ii. Where a written survey permit has been submitted, the applicant shall post the survey permit on the affected property in such a manner as to be visible from an abutting road right-of-way. The survey permit shall remain posted on the affected property during all applicable land clearing activity. It is the responsibility of the applicant to maintain the survey permit form in a clearly visible manner at all times.
- (7) If the project is not completed prior to the expiration date of the active development order, the cleared areas shall be vegetated to the minimum canopy preservation, tree preservation and landscaping standards.
- (8) No land clearing permit shall be issued prior to approval of a site plan, subdivision, building permit, land alteration permit or private lake permit. No land clearing shall take place prior to the issuance of the required land clearing permit.

Section 62-3639. Canopy and Tree Preservation Performance Standards

Unless specifically exempted by Section 62-3634, all development shall meet the performance standards listed in this section.

- (1) The amount of canopy coverage preservation on each property shall be determined using the following standards based on the property's Buildable Area:

Land Use	Minimum Preservation	Canopy Achieved by Planted Trees	Total
Single-Family Residential	20%	10%	30%
Multi-Family Residential	15%	10%	25%
Commercial, Institutional, Public	10%	10%	20%
Industrial	10%	5%	15%

- a. No more than fifty (50)% of planted trees shall be of any one genus (i.e. *Quercus*, *Pinus*, *Acer*, etc.) to encourage biodiversity and decrease impacts from disease.
 - b. Preserved trees shall have a root protection zone and protective barriers.
 - c. Credits for canopy preservation greater than the minimum required shall be given in accordance with the provisions in Section 62-3643.
 - d. Canopy preservation areas in new subdivisions, industrial or commercial developments shall be within separate tracts or conservation easements with sufficient protective language to prohibit activities that are detrimental to the perpetual preservation of the area.
 - e. Activities permitted within canopy preservation areas include landscaping, ~~habitat management activities such as prescribed fire~~, passive recreation areas, fences, boardwalks, trails, common use decks and paths as long as these areas are pervious and not within the root protection zone of any tree, and do not necessitate the removal of vegetation. Boardwalks and trails may not exceed six (6) feet in width. Decks may not exceed 25% of the total root protection zone. Habitat management practices, such as prescribed fire, may occur with the root protection zone.
 - f. Credit for canopy preservation shall not be given for areas excluded from the Buildable Area.
 - g. Canopy coverage achieved through the use of planted trees shall be credited at 25% of the projected canopy at maturity of the species. If the actual canopy of the planted tree is larger than 25% of the mature canopy size, actual canopy coverage of the particular tree shall be credited.
 - h. Existing trees that are successfully relocated elsewhere on the property can be credited towards the canopy coverage requirements but shall not be credited towards preservation requirements.
- (2) All development subject to this Article shall preserve protected trees.
- (3) Where on-site canopy and tree preservation performance standards cannot be met due to adverse site conditions, the process and standards in Section 62-3644 shall be applied.

STAFF NOTE: the following deleted language is moved to Section 62-3642 per Task Force request.

- ~~(3) — Removal criteria. A protected tree in excess of the minimum number of trees required for preservation, as specified in subsection (b) of this section, may only be approved for removal after evaluation by County staff, and if one or more of the following criteria are met:~~
- ~~a. — Where site design modifications, as determined by a pre-clearing inspection, are not feasible to allow the use permitted, as determined by the specific zoning of the subject property. Streets, rights-of-way, easements, utilities, lake perimeters, septic tanks, and lot lines shall be shifted whenever possible to preserve trees.~~
 - ~~b. — Where the trunk of a protected tree is located closer than ten feet, or 25 feet for any protected pine, from the foundation of the proposed structure, and it is not feasible to relocate the structure.~~
 - ~~c. — Where the location of the tree prevents direct access to the property from a publicly dedicated and maintained roadway, or where the tree constitutes a hazard~~

~~to pedestrian or vehicular traffic which cannot be mitigated without removing the tree. Removal of the tree pursuant to this criterion shall be exempt from the replacement criteria in Section 62-3643.~~

- ~~d. Where the location of the tree prevents the construction of utility lines, drainage facilities, on-site sewage disposal systems, roadways or required parking areas which cannot be practically relocated or rerouted or where the trees cannot be utilized as part of these systems. Removal of the tree pursuant to this criterion shall be exempt from the replacement criteria in Section 62-3643.~~
- ~~e. Where the tree is weakened by age, storm, fire or other injury so as to pose a danger to persons, property, site improvements or other trees. Removal of a protected tree pursuant to this criterion shall be exempt from the replacement criteria in Section 62-3643.~~
- ~~f. Where the tree or trees reduce the visibility of a nonresidential development more than 50 percent of the linear footage of the lot along the roadway to which the project has primary frontage.~~

Section 62-3640. Landscaping Performance Standards

Unless specifically exempted by Section 62-3634, all development shall meet the performance standards listed in this section.

- (1) No active development order, certificate of occupancy or certificate of completion shall be issued by the county without full satisfaction of the following landscaping requirements by the applicant for such active development order, certificate of occupancy or certificate of completion.
- (2) Satisfaction of the landscaping standards shall be achieved through the preservation of existing native vegetation to the greatest extent feasible. When the minimum landscaping standards cannot be achieved through preservation, plantings of new vegetation shall be required to meet the standards.
- (3) All development` shall meet the following standards through preservation, plantings, or a combination thereof:

Minimum Trees Per Acre of Buildable Area Minimum standard is four (4) inch dbh, twelve foot height	5
Minimum Inches of DBH per Acre of Buildable Area	60
Minimum Number of Shrubs and Groundcovers, not including sod, per Acre of Buildable Area Minimum standard is three gallon fully rooted 15-18 inches in height shrub or equivalent. <u>Preservation of 25 square feet of native understory is equal to one three gallon fully rooted 15-18 inches in height planted shrub.</u>	250

All plantings shall be at least Florida No. 1 grade as defined by the "Grades & Standards" for Nursery Plants. 1998. Division of Plant Industry, Florida Department Agriculture and Consumer Services, as may be amended.

- (4) At least, fifty (50) percent of trees required for preservation and/or planting shall be of native species. At least fifty (50) percent of shrubs and groundcovers shall be native

species or recommended by "Waterwise Florida Landscapes. 2004. Florida water management districts, as may be amended.

(5) Road frontage and vehicular use areas.

This section does not apply to single-family lots parcels or lots platted as part of a previously approved subdivision. For residential subdivisions and commercial, public, institutional, industrial or projects, the following specific locational landscape requirements shall be satisfied:

- a. Type B, roadway buffer. A vegetative buffer area adjacent to a public road or private road rights-of-way shall be preserved or established along the road frontage in accordance with the vegetative buffering requirements of this Article.
- b. Street Plantings. A continuous landscaped buffer shall be constructed along sidewalks and public or private rights-of-way internal to the project except at points of ingress and egress into the property and intersections with other rights-of-way. Such landscape buffers shall be a minimum of eight (8) feet in width and shall contain trees planted a maximum of forty (40) feet on center along the entire length. There shall be no parking or structures other than permitted signage located within this vegetated area. All landscaped areas, including trees located in public rights-of-way that are counted towards the fulfillment of this requirement, shall be properly maintained in accordance with the approved landscape plans. Appropriate tree selection shall be approved by the NRMO. If a tree or any plant material dies, it shall be replaced so as to meet all requirements of this Article.
- c. To mitigate the heat island effect, parking areas shall have appropriate shading.
 - i For each ten parking spaces, one landscape island and tree shall be provided. For all parking lots, fifty (50) percent of the required trees shall be large species with a minimum size of four (4) inches dbh. Medium size tree species shall be at least two (2) inches dbh. Small species trees may be planted but shall not be credited towards the fulfillment of these requirements.
~~For each ten parking spaces there shall be one planted or preserved tree (minimum four (4) inches dbh) and a minimum of 300 square feet per large size tree species of associated pervious area within the interior of a vehicular use area to mitigate the heat island effect.~~
 - ii ~~For those projects with less than thirty (30) internal parking spaces, 240 square feet of associated pervious area with medium tree species shall be provided for each ten parking spaces. 300 This landscaping, which shall be equivalent to twenty (20) points, must be placed within the vehicular use area.~~
 - iii Where the parking space immediately abuts the required or provided landscaping adjacent to a public road right-of-way that meets the standards in Appendix B, that parking space shall be exempted from this subsection.
 - iv Where bus, recreational vehicle, boat, motorcycle, golf cart, or any other non-standard spaces are provided, a landscape island twice the size of each non-standard space shall be provided for each ten non-standard spaces. There shall be one planted or preserved tree (minimum four (4) inches dbh) for every 300 square feet contained within the landscape island.-

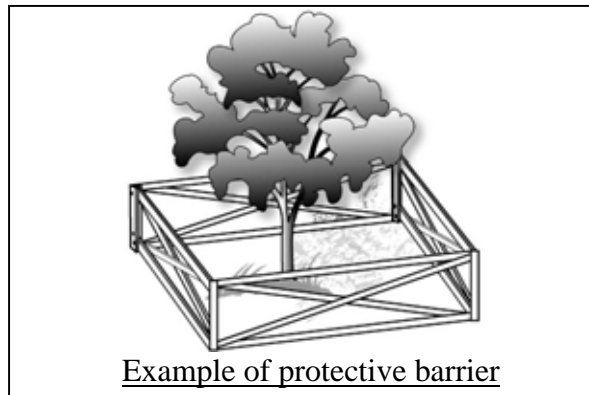
- v Vehicular use area landscaping shall be evenly distributed throughout the parking area.
- vi For all sites, there shall be no more than fifteen (15) consecutive spaces permitted without a required landscape island.
- vii For all parking areas, islands shall not be less than twelve (12) feet in width for medium size tree species or fifteen (15) feet in width for large size tree species. Length will be determined by the length of the adjacent parking space.

Parking lot drawing example to be amended and reinserted.

Task Force Stopped Here on December 14, 2006

- d. For commercial and industrial uses, for each 400 square feet of vehicular use area other than parking, there shall be an additional ten (10) square feet of landscaping. The placement of this must be in association with the vehicular use area and shall be integrated within the vehicular use area in a manner compatible with vehicular movement.
- (5) Additions or modifications to existing structures.
Any applicant for an active development order for an external expansion, modification or addition to structures existing on the property, where the expansion or addition shall increase the applicable floor area of the project at least 25 percent, shall comply with all landscaping requirements specified in this Article. Where demolition of existing buildings or creation of separate buildings is being proposed or has occurred, these areas shall meet current performance standards. Where parking areas are being altered, such areas shall be required to meet the standards in Section 62-3640(4) as applicable.
- (6) Standards for plant materials. Whether preserved or newly planted, all plant materials utilized to satisfy the landscaping requirements in this division shall conform to the standards for Florida No. 1 plants, as specified in Grades and Standards for Nursery Plants, parts I and II, 1973, as may be amended, published by the Division of Plant Industry, Florida Dept. of Agriculture and Consumer Services or their successor agency.
- (7) Minimum size of newly planted trees. Trees used to fulfill the landscaping requirements in this division, shall meet the following overall height, diameter (dbh) and spread requirements, at the time of planting, by species classification:
- a. For single-family residential uses:
 - i Trees: Eight (8) feet tall with one and a half inch diameter (dbh) minimum and two-foot spread.
 - ii Palms: Eight (8) feet of clear trunk.
 - b. For multi-family, commercial, and industrial uses:
 - i Large species: Twelve (12) feet tall with four (4)-inch diameter (dbh) minimum and **five (5)** foot spread, and if required to be planted within vehicular use areas at least 300 square foot pervious area.

- ii Medium species: Ten (10) feet tall with two inch (2) inch diameter (dbh) minimum and **three (3)** foot spread, and if required to be planted within vehicular use areas at least 240 square feet pervious area.
 - iii Small species: Eight (8) feet tall with two and a half (2.5) inch diameter (dbh) minimum and two-foot spread.
 - iv Palms: Ten (10) feet of clear trunk.
- (8) Use of undesirable species. The undesirable species as defined in section 62-3633 are discouraged from being retained on the site. In no case shall they be used to fulfill requirements.
- (9) Use of palms. Preservation of palms, or the planting of palms, may only be used to satisfy up to twenty-five (25) percent of the required landscaping unless beachside conditions prohibit the use of less salt-tolerant plants. In no event shall more than 24 palms per acre be utilized to satisfy the landscaping requirements in this division.
- (10) Use of synthetic plants. In no event shall synthetic plants such as manmade, plastic, rubber or silk plants be used in the landscape. Removal of landscape materials for installation of synthetic plants is prohibited.
- (11) Selection of plant materials. The selection of new plant materials to satisfy the landscaping requirements in this division shall be compatible with, the proposed use of the site, type of soils, hydroperiods, climate, water quality and other general environmental concerns.
- (12) Location of plant materials. The vegetation utilized to satisfy the landscaping requirements in this **Article** shall be located on the site in such a manner that the vegetation shall:
 - a. Not interfere with drainage systems or utility services or create an unsafe visual clearance or other safety hazard. This does not prohibit the appropriate plantings in stormwater retention or detention areas or within utility easements, if approved by the county manager or designee.
 - b. Be placed in a manner that will not interfere with vehicular or pedestrian traffic and circulation or visibility, both within a project and at the entrance or exit of a project.
 - c. Be protected from vehicular encroachment.
- (13) Protection of preserved vegetation during construction. All vegetation to be preserved on the site must be protected to ensure survivability during and after construction on the site. An applicant shall provide the proposed methods of vegetation protection for during and after construction to the **NRMO**. The methods shall be approved by the **NRMO** prior to issuance of the land clearing permit. Protective methods and barriers for preserved vegetation shall be deployed prior to the beginning of construction or any alteration of the site. No soil disturbance or compaction, construction materials, traffic, trenching, fill or other land disturbing activities are allowed within the root protection zone of preserved vegetation.



- (14) Site preparation. Before landscape installation, soil samples from the areas to be planted should be evaluated for pH and drainage capacity. These results are to be noted and recommended soil amendments such as yellow sand, charcoal, dolomite lime, perlite, or compost will be added as needed to ensure proper growth and drainage for the planting environment. In areas where soils have been compacted or hard pan exists, these soils will be removed and replaced with a soil mixture to ensure proper growth and drainage for the planting environment. When necessary, the soils shall be amended to a depth 1.5 times and twice the diameter of the root ball of the plant. Soil amendments shall be approved by staff prior to installation. For multi-family, **institutional, public, residential subdivisions**, commercial and industrial development, certification by a registered or certified landscape professional will be required as proof that such soil improvements have been made prior to the issuance of the Certificate of Occupancy **or Completion**.
- (15) Prior to the issuance of the certificate of occupancy or certificate of completion for single-family, subdivision, multifamily, commercial, and industrial projects, and at the time of development of government-owned lands, all non-native noxious invasive plants, as defined in this Article, shall be removed. For lots greater than five (5.0) acres, the requirement to remove and control re-growth of non-native noxious invasive plants applies to five (5.0) contiguous acres to and including the buildable area as defined in section 62-3633. After the issuance of the certificate of occupancy or certificate of completion, re-growth of non-native noxious invasive plants shall be controlled in perpetuity. The requirements to remove non-native noxious invasive plants at the time of development and control re-growth of such plants in the required area within the site shall apply countywide and prospectively to property after the effective date of this ordinance.
- (16) For projects using Xeriscape[™] or Water-Wise landscaping, the following criteria shall be met:
- a. Native landscape materials are used for at least eighty-five (85) % of materials provided. Remainder of landscape materials must be Florida-friendly per Appendix B, as amended.
 - b. Property must be one hundred (100) % free of non-native noxious invasive plant species or undesirable species as defined in Sec. 62-3633.
 - c. A layer of at least three (3) inches of inorganic or organic mulches must be present. **Dyed mulches are not permissible. Staff note: Task Force was provided additional information and was to revisit dyed mulches.**

- d. Less than fifty (50) % of all landscape areas may be irrigated.
 - e. Vegetation must clearly be grouped in hydrozones on landscape plan and implemented per approved plan.
 - f. Less than fifteen (15) % of landscape materials may be sod excluding playing fields or grass playing courts. When Seashore Paspalum (*Paspalum vaginatum*) is used, up to 25 % of landscape materials may be provided by this grass species.
 - g. Soil analysis and letter confirming appropriate amendments must be submitted to the **NRMO**.
 - h. Property must be free of weeds and pests and not declared as an overgrowth public nuisance as defined in Chapter 114, Article II .
 - i. Landscape must be appropriately maintained. Improper pruning shall not constitute appropriate maintenance. In no event shall overgrowth as defined in Chapter 114, Article II be allowable as Xeriscapetm or Water-Wise Landscaping.
 - j. Automatic irrigation system, if any, must be equipped with automatic rain sensor shut-off device.
 - k. If criteria a-j are met in their entirety, a fifty (50) percent reduction of the required shrubbery square footage-per acre of buildable area shall be credited.
- (17) Performance bond. When the county manager or designee determines that circumstances indicate that the planting of trees or vegetation prior to the issuance of a certificate of occupancy or certificate of completion would not be prudent, for reasons such as an improper time of year for the planting of trees, the applicant may post a performance bond with the board of county commissioners, in a form acceptable to the county. The performance bond, if posted, shall be in an amount of no less than 125 percent of the estimated cost of all trees and vegetation to be planted, plus labor, pursuant to the requirements of this division. The performance bond shall be received and accepted by the county prior to the issuance of the certificate of occupancy or certificate of completion.

<p>STAFF NOTE: Although the Task Force requested that staff relocate the removal criteria to the Incentives section, staff does not believe the removal criteria provide incentives, and requests further clarification on the relocation of verbiage.</p>
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- (18) Removal criteria. A protected tree in excess of the minimum number of trees required for preservation, as specified in this Article, may be approved for removal by NRMO if one or more of the following criteria are met:
- a. Where site design modifications, as determined by a pre-clearing inspection, are not feasible to allow the use permitted, as determined by the specific zoning of the subject property. Streets, rights-of-way, easements, utilities, lake perimeters, septic tanks, and lot lines shall be shifted whenever possible to preserve trees.
 - b. Where the trunk of a protected tree is located closer than ten feet, or 25 feet for any protected pine, from the foundation of the proposed structure, and it is not feasible to relocate the structure.
 - c. Where the location of the tree prevents any access to the property from a publicly dedicated and maintained roadway, or where the tree constitutes a hazard to pedestrian or vehicular traffic that cannot be mitigated without removing the tree.
 - d. Where the location of the tree prevents the construction of utility lines, drainage facilities, on-site sewage disposal systems, roadways or required parking areas

which cannot be practically relocated or rerouted or where the trees cannot be utilized as part of these systems.

- e. Where the tree is weakened by age, storm, fire or other injury so as to pose a danger to persons, property, site improvements or other trees.
- f. Where the tree or trees reduce the visibility of a nonresidential development more than 50 percent of the linear footage of the lot along the roadway to which the project has primary frontage.

Section 62-3641. Landscape Buffers.

The purpose of the vegetative buffering requirements set out in this section is to provide visual and physical screening and buffering between potentially incompatible uses and to reduce the effects of glare, noise and incompatible activities, to include commercial and industrial uses when they abut existing residential uses.

- (1) Vegetative buffer classifications. Where a fence or wall is required by article VI of this chapter, the type A buffer, as defined in this subsection, may be utilized in lieu of the required fence or wall:
 - a. Type A, compatibility buffer. This buffer classification shall be used to separate commercial or industrial uses from residential uses. The Type A buffer shall be completely opaque from the ground up to a height of at least six feet, except where located within 25 feet of a road right-of-way, where it shall be four feet in height. In conjunction with this buffer, a minimum 20-foot vegetated area shall be provided. There shall be no parking or structures other than permitted signage located within this vegetated area. The opaque buffer may utilize a masonry wall, wood fence, landscaped earth berm, planted or existing vegetation or any combination thereof that maintains a completely opaque buffer.
 - b. Type B, roadway buffer. This buffer classification shall be required for all development excluding individual single-family homes not within platted subdivisions. Subdivisions shall provide external Type B buffer and street plantings per section 62-3640. This buffer shall be landscaped, be located adjacent to any public right-of-way and have a minimum width of 15 feet. There shall be no parking or structures other than permitted signage located within this vegetated area.
 - (i) Planting requirements. The planting requirements for the vegetative buffer areas shall be consistent with appendix B as amended, and shall be credited toward the overall landscaping requirements. Minimum buffering and landscaping of parking areas shall be met regardless of other requirements.
 - (ii) Location of fences and walls. Where a fence or wall is used to fulfill the screening requirements within a vegetative buffer, it shall be located one foot inside of the property line that abuts the residential zoning. When an impediment such as a drainage easement, ditch or water body runs along a property line, an administrative waiver may be granted by the NRMO Director or his/her designee to allow the masonry wall or fence to be placed along the edge of the ditch or water body instead of on the property

line. Where there are existing trees within the buffer area, the fence or wall shall be located so as to preserve the trees.

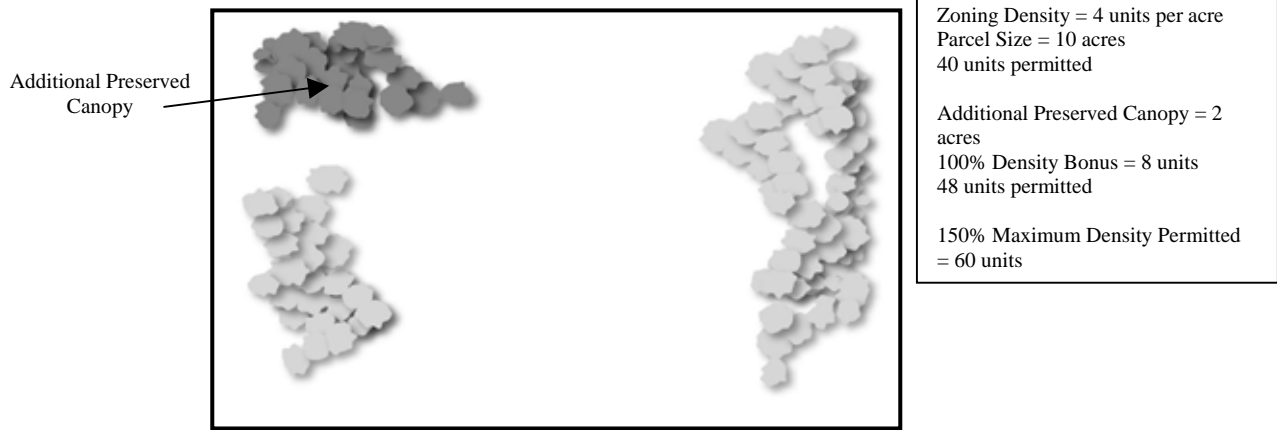
Section 62-3642. Maintenance and Inspections.

- (1) The health and viability of all required landscape materials on the site, whether preserved or newly planted, must be maintained through proper care or replacement in perpetuity after issuance of the certificate of occupancy, certificate of completion, or restoration as may be required to resolve a code violation. For multi-family, residential subdivisions, commercial and industrial projects, the county may perform a courtesy inspection of the landscaping within 90 days after issuance of the certificate of occupancy or certificate of completion. If the vegetation appears to be under stress, the staff shall notify the property owner. A second inspection may be performed ten to twelve months after the issuance of the certificate of occupancy or certificate of completion. If the vegetation is not viable at that inspection, notice shall be given to the property owner and the property owner shall be responsible for replacing that dead vegetation with equivalent landscape material. Failure to have viable landscape materials and/or preserved areas consistent with the approved landscape plan after of the issuance of the certificate of occupancy or certificate of completion shall constitute a violation as described under section 62-3635. Failure to remove non-native noxious invasive plants and control re-growth prior to the final landscaping inspection is a violation of this article and shall be enforced pursuant to section 62-3635. A maintenance bond, cash bond or letter of credit shall be collected in conjunction with the application fee for multi-family, commercial and industrial projects equal to 25 percent of the cost of vegetation other than sod. This maintenance bond, cash bond or letter of credit shall be forfeited if vegetation consistent with the approved landscape plan is not maintained in a viable state or if re-growth of non-native noxious invasive plants is not controlled for the twelve-month duration of the bond. The county reserves the right to cross property to make the necessary inspections.
- (2) An onsite inspection shall be conducted prior to the approval of the land clearing permit.

Section 62-3643. Incentives for Increased Canopy and Tree Preservation and Increased Landscaping.

To encourage the preservation of canopy, protected trees, specimen trees and heritage trees, the following incentives are provided.

- (1) For preservation of canopy greater than the minimum **total canopy** required for the land use and its associated native understory, a density bonus equal to 100% of the excess canopy preservation area shall be granted not to exceed 150% of the density assigned to the property. If other density transfers or bonuses are used in combination with this incentive, the overall density of the property shall not exceed 150% of that permitted by the zoning district.



Example of Density Bonus

STAFF NOTE: the following language is current language relocated and adapted per the Task Force's direction.

(2) Preservation of vegetation of special concern.

In addition to credit for additional preservation of trees or canopy, landscaping credit may be accumulated for the preservation on the site of any of the following vegetation of special concern that is in a healthy condition:

- a. For rare, endangered or threatened plant species as listed in Volume 5, Plants, Rare and Endangered Biota of Florida, University Presses of Florida, Gainesville, Florida, and as listed in F.S. § 581.185, requirements for the class of vegetation shall be reduced by half. No species of mangroves shall be eligible for points under this subsection.
- b. For each one hundred (100) square feet of vegetation classified as hardwood hammock, barrier island scrub, wetlands as defined within article X, division 4, of this chapter, cypress domes or sand pine scrub associations preserved on the site, total landscaping requirements shall be reduced by 25% when the vegetative community is preserved intact; and the vegetative community preserved comprises an area of no less than one hundred (100) square feet with no dimension less than ten feet.
- c. For each one hundred (100) square feet of vegetation classified as barrier island association preserved on the site, landward of the county coastal setback line, total landscaping requirements shall be reduced by 25% when the vegetative community is preserved intact and the vegetative community preserved comprises an area of no less than one hundred (100) square feet with no dimension less than ten feet.
- d. For each one hundred (100) square feet of native vegetation preserved adjacent to a scenic vista or public roadway classified as arterial or collector, Type B Roadway Buffer requirements may be waived for the equivalent area if the native vegetative community is preserved and maintained intact and the vegetative community preserved comprises an area of no less than one hundred (100) square feet with no dimension less than ten (10) feet.
- e. If mangroves do not presently exist on shorelines contiguous to estuarine waters and are planted on four (4) centers, the requirements for shrubs may be reduced

accordingly. The minimum size of newly planted mangroves shall be fully rooted 3-gallon container plants with a minimum height of 5-18 inches.

- f. For preservation of each Specimen or Heritage Tree, the corresponding tree planting requirements shall be reduced by the dbh of the Specimen or Heritage Tree divided by four inches.

Section 62-3644. Waivers and Alternative Landscape Enhancement Plans.

In cases of adverse site conditions or hardship, alternative landscape enhancement plans may be considered. Such plans shall be signed and sealed by a landscape architect registered in the state of Florida except for **individual** single-family homes not part of a platted subdivision.

Alternative landscape enhancement plans may consist solely of or a combination of on-site preservation, landscaping enhancement, on-site mitigation, off-site mitigation, and compensation. In all cases, the standards for alternative landscape enhancement plans shall be, in order of priority, on-site preservation of existing native vegetation, on-site landscape enhancement, on-site mitigation, off-site mitigation, and compensation.

- (1) Alternative Landscape Enhancement Plans are intended to provide increased flexibility for sites demonstrating existing adverse site conditions.

a. Alternative landscape enhancement plans shall meet the following performance standards on-site:

- i. Results in landscaping that exceed specific goals and intent of landscape regulations.
- ii. Provides sufficient tree plantings to achieve a tree canopy equal to 30% of the site at the time of development.
- iii. Provides heat island mitigation and landscape buffers, as required by the landscaping code.
- iv. Replaces protected trees with new plantings of the same species at a rate of 150% of the cumulative diameter at breast height (dbh) of the trees removed, using minimum 4" dbh plantings.
- v. Reduction of parking requirements up to 30% in order to preserve existing protected trees and their canopy.
- vi. When the applicant provides clear and convincing evidence that demonstrates the canopy preservation and tree preservation performance standards listed within this article cannot be met on the subject property, the applicant may submit an alternative plan that includes mitigation for consideration.

- (2) Mitigation

When the applicant has provided clear and convincing evidence that demonstrates the canopy preservation and tree preservation performance standards listed within this article cannot be met on the subject property, the applicant may submit an alternative landscape enhancement plan that includes mitigation for consideration. Specimen or heritage trees are not eligible for consideration of mitigation and must be preserved or relocated on-site. Mitigation can consist of a combination of restoration and replacement of trees and canopy through tree plantings, relocation of trees to another site (with the receiving property owner's or owners' permission), or monetary compensation. For all types of mitigation, except for compensation, the applicant is responsible for maintenance in

perpetuity and bonding as outlined in Section 62-3642. The types of mitigation and their standards are as follows:

- a. Restoration and Replacement
 - i. For every protected tree that cannot be preserved or re-located on-site, the size of the planted tree shall be at least six (6) inches dbh and the number of planted trees required shall be determined by a ratio of 150% of the protected tree's dbh.
 - ii. All restoration or replacement areas shall be permanently protected in a conservation easement.
- b. Relocation
 - i. For every protected tree that cannot be preserved or reasonably relocated on-site, the protected tree may be relocated to another site acceptable to the County. Reasonable relocation includes techniques such as root pruning, tree spades and other similar techniques. Relocation techniques shall be reviewed and approved by the County prior to being used for any relocation of trees both on and off the property.
 - ii. All relocation areas shall be permanently protected in a conservation easement.
- c. When the applicant has provided clear and convincing evidence that demonstrates the canopy and tree preservation performance standards and alternative landscape enhancement plan objectives listed within this article cannot be met on the subject property or through mitigation, the applicant may submit a compensation proposal for consideration.

STAFF requests discussion. Since the LLTP increased the compensation cost per acre, should the costs in subsections a and b also be increased?

(3) Compensation

Compensation for the loss of canopy and protected trees shall be determined as follows:

- a. Compensation (C) for trees of known Number REMoved (NREM) and known Total DBH (TDBH) shall be calculated by the formula

$$C = \$200.00(NREM) + \$60.00(TDBH)$$
- b. Compensation for trees of known Number REMoved (NREM) but unknown total diameter shall be calculated by the formula

$$C = \$1,500(NREM)$$
- c. Compensation for trees for which neither the total diameter nor the number can be determined shall be made under the assumption that the site was 100% forested. Compensation shall be calculated by the formula.

$$C = \$60,000/\text{acre or the valuation provided by a tree appraisal conducted by an arborist certified by the International Society of Arboriculture or landscape architect registered in the state of Florida and where the appraisal was conducted in accordance with the methodology contained in the Guide for Plant Appraisal,}$$

9th edition, as amended and published by the International Society of Arboriculture.

- d. Compensation for specimen or heritage trees illegally removed or destroyed shall be three (3) times the calculated cost of C.
- e. All compensation funds shall be deposited in the trust fund established by Section 62-3635 of this Article.

(4) Waivers

- a. When the Director or his/her designee has determined that the site will not support the required trees and vegetative communities to be preserved as well as the required landscaping, an administrative waiver to tree planting requirements may be granted. It is the intent of this article that preservation of native and Florida-friendly trees and vegetation shall take precedence over additional planting of trees and vegetation.
- b. When the Director or his/her designee determines that a minor administrative adjustment to the applicable parking standards in nonresidential zoning classifications would allow for the preservation or additional planting of native or Florida-friendly trees on the site, upon a written request by the applicant, together with a vegetation survey, submitted with the required landscaping plan, the county manager or designee may administratively waive up to thirty (30) percent of the applicable parking standards for the property. Where the Director or his/her designee determines that additional preservation would occur if required parking reduction were granted, applicant must submit for parking reduction by up to thirty percent to allow preservation. The total parking spaces shall not be less than seventy (70)% of the parking as required by the land development regulations. If the parking requirements of any other section of this Code conflict with the landscaping requirements of this division, the conflict may be resolved administratively by the county manager or designee.

Section 62-3645. Appeals and Variances

- (1) Any appeals relating to any administrative decision or determination concerning implementation or application of the provisions of this Article shall be filed in accordance with the provisions set forth in Section 62-507, Brevard County Code.
- (2) Variances to the requirements of this Article may be granted by the Board of Adjustment only if all of the following criteria have been met by the applicant.
 - a. An application and fee has been filed by the applicant with the NRMO and;
 - b. The application provides clear and convincing evidence that the applicant cannot comply with the requirements and process in Section 62-3644 due to unique site characteristics not commonly found on similar properties and;
 - c. The unique site characteristics are not the result of the applicant's activities.

Appendix A
Undesirable Plant Species

Scientific Name Common Name

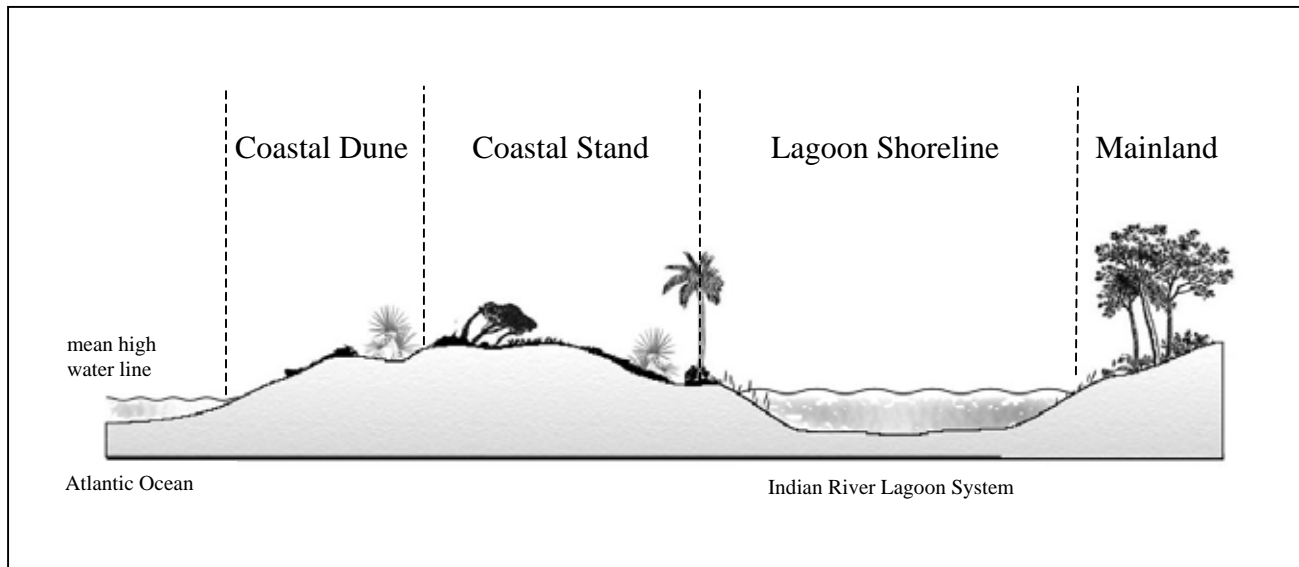
Abrus precatorius	rosary pea	Pennisetum purpureum	Napier grass
Acacia auriculiformis	earleaf acacia	Pistia stratiotes	waterlettuce
Albizia julibrissin	mimosa, silk tree	Psidium cattleianum (=P. littorale)	strawberry guava
Albizia lebbek	woman's tongue	Psidium guajava	guava
Ardisia crenata	coral ardisia	Pueraria montana var. lobata (=P. lobata)	kudzu
Ardisia elliptica	shoebutton ardisia	Rhodomyrtus tomentosa	downy rose-myrtle
Asparagus aethiopicus	asparagus-fern	Rhoeo spathacea (see Tradescantia spathacea)	
Bauhinia variegata	orchid tree	Rhynchelytrum repens	Natal grass
Bischofia javanica	bischofia	Ruellia tweediana (=R. brittoniana)	Mexican petunia
Calophyllum antillanum	santa maria (names "mast wood," "Alexandrian laurel" used in cultivation)	Sapium sebiferum (=Triadeca sebifera)	popcorn tree, Chinese tallow tree
Casuarina equisetifolia	Australian pine	Scaevola taccada (=Scaevola sericea, S. frutescens)	scaevola, half-flower, beach naupaka
Casuarina glauca	suckering Australian pine	Schefflera actinophylla (=Brassaia actinophylla)	schefflera, Queensland umbrella tree
Cinnamomum camphora	camphor-tree	Schinus terebinthifolius	Brazilian pepper
Colocasia esculenta	wild taro	Senna pendula var. glabrata (=Cassia coluteoides)	climbing cassia, Christmas cassia, Christmas senna
Colubrina asiatica	lather leaf	Solanum tampicense (=S. houstonii)	wetland night shade, aquatic soda apple
Cupaniopsis anacardioides	carrotwood	Solanum viarum	tropical soda apple
Dioscorea alata	winged yam	Syngonium podophyllum	arrowhead vine
Dioscorea bulbifera	air-potato	Syzygium cumini	jambolan, Java plum
Eichhornia crassipes	water-hyacinth	Tectaria incisa	incised halberd fern
Eugenia uniflora	Surinam cherry	Thespesia populnea	seaside mahoe
Ficus microcarpa (F. nitida and F. retusa var. nitida misapplied)	laurel fig	Tradescantia fluminensis	white-flowered wandering jew
Hydrilla verticillata	hydrilla	Tradescantia spathacea (= Rhoeo spathacea, Rhoeo discolor)	oyster plant I S
Hygrophila polysperma	green hygro	Urochloa mutica (= Brachiaria mutica)	Pará grass
Hymenachne amplexicaulis	West Indian marsh grass	Adenanthera pavonina	red sandalwood
Imperata cylindrica (I.brasiliensis misapplied)	cogon grass	Agave sisalana	sisal hemp
Ipomoea aquatica	waterspinach	Aleurites fordii (= Vernicia fordii)	tung oil tree
Jasminum dichotomum	Gold Coast jasmine	Alstonia macrophylla	devil-tree
Jasminum fluminense	Brazilian jasmine	Alternanthera philoxeroides	alligator weed
Lantana camara	lantana, shrub verbena	Antigonon leptopus	coral vine
Ligustrum lucidum	glossy privet	Aristolochia littoralis	calico flower
Ligustrum sinense	Chinese privet, hedge privet	Asystasia gangetica	Ganges primrose
Lonicera japonica	Japanese honeysuckle	Begonia cucullata	wax begonia
Lygodium japonicum	Japanese climbing fern	Blechum pyramidatum	green shrimp plant, Browne's blechum
Lygodium microphyllum	Old World climbing fern	Broussonetia papyrifera	paper mulberry
Macfadyena unguis-cati	cat's claw vine	Callisia fragrans	inch plant, spironema
Manilkara zapota	sapodilla	Casuarina cunninghamiana	Australian pine
Melaleuca quinquenervia	melaleuca, paper bark	Cecropia palmata	trumpet tree
Mimosa pigra	catclaw mimosa	Cestrum diurnum	day jessamine
Nandina domestica	nandina, heavenly bamboo	Chamaedorea seifrizii	bamboo palm
Nephrolepis cordifolia	sword fern	Clematis terniflora	Japanese clematis
Nephrolepis multiflora	Asian sword fern	Cryptostegia madagascariensis	rubber vine
Neyraudia reynaudiana	Burma reed, cane grass		
Paederia cruddasiana	sewer vine, onion vine		
Paederia foetida	skunk vine		
Panicum repens	torpedo grass		

Cyperus involucratus (C. *alternifolius* umbrella plant misapplied)
Cyperus prolifer dwarf papyrus
Dalbergia sissoo Indian rosewood, sissoo
Elaeagnus pungens thorny eleagnus
Epipremnum pinnatum cv.
Aureum pothos
Ficus altissima false banyan, council tree
Flacourtia indica governor's plum
Hemarthria altissima limpo grass
Hibiscus tiliaceus mahoe, sea hibiscus
Ipomoea fistulosa (= *I. carnea* ssp. *fistulosa*) shrub morning-glory
Jasminum sambac Arabian jasmine
Kalanchoe pinnata life plant
Koelreuteria elegans ssp. *formosana* (= *K. formosana*; *K. paniculata* misapplied) flamegold tree
Leucaena leucocephala lead tree
Limnophila sessiliflora Asian marshweed
Livistona chinensis Chinese fan palm
Melia azedarach Chinaberry
Merremia tuberosa wood-rose
Murraya paniculata orange-jessamine
Myriophyllum spicatum Eurasian water-milfoil
Nymphoides cristata snowflake
Panicum maximum Guinea grass
Passiflora biflora two-flowered passion vine
Pennisetum setaceum green fountain grass
Phoenix reclinata Senegal date palm
Pittosporum pentandrum Philippine pittosporum, Taiwanese cheesewood
Phyllostachys aurea golden bamboo
Pteris vittata Chinese brake fern
Ptychosperma elegans solitary palm
Ricinus communis castor bean
Sansevieria hyacinthoides bowstring hemp
Scleria lacustris Wright's nutrush
Sesbania punicea purple sesban, rattlebox
Solanum diphyllum Two-leaf nightshade
Solanum jamaicense Jamiaca nightshade
Solanum torvum susumber, turkey berry
Sphagneticola trilobata wedelia (= *Wedelia trilobata*)
Stachytarpheta urticifolia (= *S. cayennensis*) nettle-leaf porterweed
Syagrus romanzoffiana (= *Arecastrum romanzoffianum*) queen palm
Syzygium jambos rose-apple
Terminalia catappa tropical almond
Terminalia muelleri Australian almond
Tribulus cistoides puncture vine, burr-nut
Urena lobata Caesar's weed
Vitex trifolia simple-leaf chaste tree
Washingtonia robusta Washington fan palm
Wedelia (see *Sphagneticola* above)
Wisteria sinensis Chinese wisteria
Xanthosoma sagittifolium malanga, elephant ear

Appendix B
Vegetative Buffers Planting Requirements

The following planting guidelines shall be met when establishing or re-establishing a vegetative buffer. Each planting zone shall contain plantings from all groups within the zone.

Brevard County can be divided into four planting zones traversing the County from East to West.



(1) PLANTING ZONES

(A) MAINLAND AND COASTAL STAND ZONES

1. GROUP 1 PLANTS- shall plant a minimum of three (3) feet in height four (4) feet on center.
2. GROUP 2 PLANTS- shall plant a minimum of four (4) trees for every one hundred (100) linear feet having a minimum height of eight (8) feet. Two (2) palms equal one (1) hardwood tree.
3. GROUP 3 PLANTS- shall be a minimum of twelve (12) inches in height planted three (3) feet on center.

(B) COASTAL DUNE ZONE

1. GROUP 1 PLANTS- Saw Palmetto and Coontie shall be a minimum of twelve (12) inches in height planted three (3) feet on center. All other Group 1 Plants shall be a minimum of three (3) feet in height planted four (4) feet on center.
2. GROUP 2 PLANTS- shall plant a minimum of four (4) trees for every one hundred (100) lineal feet having a minimum height of eight (8) feet. Two (2) palms equal one (1) hardwood tree.
3. GROUP 3 PLANTS- shall have four (4) inch minimum liners planted twelve (12) inches on center.

(C) LAGOON SHORELINE

1. GROUP 4 PLANTS- shall plant ten (10) inch seedlings a minimum of four (4) feet on center.
2. GROUP 5 PLANTS- shall plug twelve (12) inches on center.
3. GROUP 6 PLANTS- shall plant or plug native sod to ensure total coverage of the buffer area.

(2) PLANT GROUPS

The following is a partial list of recommended plants and trees which should be considered when re-establishing a required vegetative buffer as referenced in the planting requirements above. This list is intended as a recommendation, and is not to be construed to be mandatory. Other appropriate plantings may be suggested to the NRM0 for review and approval.

(A) GROUP 1 PLAN

<u>Mainland Zone</u>	<u>Coastal Stand Zone</u>	<u>Coastal Dune Zone</u>
Wax Myrtle	Wax Myrtle	
Privet	Cocoplum	Natal Plum
Sea Grape		Sea Grape
Native Viburnum Inkberry		Native Scaevola
Eleagnus		Saw Palmetto
Ligustrum		Cocoplum
Pampas Grass		Pittosporum
Sea Grape	Pittosporum	

(B) GROUP 2 PLANTS

<u>Mainland Zone</u>	<u>Coastal Zone</u>	<u>Coastal Dune Zone</u>
Oak	Sand Live Oak	Sand Pine
Maple	Cabbage Palm	Cabbage Palm
<u>Longleaf or</u>		
Slash Pine	So. Red Cedar	Sand Live Oak
So. Red Cedar	Washington Palm	So. Red Cedar
Cabbage Palm	Red Bay	Red Bay
Bottlebrush	European Olive	European Olive
Canary Island		
Date Palm	So. Magnolia	Myrtle Oak
Pindo Palm	Myrtle Oak	<u>Chapman's Oak</u>
Chinese Elm	<u>Chapman's Oak</u>	
Cherry Laurel		
So. Magnolia		
Queen Palm		

(C) GROUP 3 PLANTS

<u>Mainland Zone</u>	<u>Coastal Zone</u>	<u>Coastal Dune Zone</u>
Yaupon Holly	Yaupon Holly	Beach Elder
Juniper	Carissa	Inkberry
	Crinum Lily	Sea Oats
	Saw Palmetto	Railroad Vine
Saw Palmetto	Coontie	Beach Sunflower
	Seaside Oxeye Daisy	
	Coontie	
	Coastal Panicum	
	Grass	

Cordgrass

(D) GROUP 4 PLANTS

Lagoon Shoreline

White Mangrove

Black Mangrove

Red Mangrove

(E) GROUP 5 PLANTS

Lagoon Shoreline

Salt Jointgrass

Cordgrass

Seashore Saltgrass

Christmas Berry

Buttonwood

(F) GROUP 6 PLANTS

Lagoon Shoreline

~~Bermuda Grass~~

~~St. Augustine Grass~~

Seashore Paspalum

Appendix C Recommended Plants for Brevard County

LEGEND

L=LOW, M=MEDIUM[0], H=HIGH, P=POOR, F=FAIR, G=GOOD, FS=FULL SUN, PS=PARTIAL SUN, SH=SHADE, B=BARRIER AND MI, S=SOUTH, C=CENTRAL, N=NORTH

Species Scientific Name	Common Name	Location	Watering Needs	Salt Tolerance	Wind Resistance	Light Range (listed in order of preference)	Mature size (ft.) HXW ³	Expected Mature Diameter (feet)	Expected Mature Height (feet)	Comments
LARGE/MEDIUM TREES > 25 feet										
Acer rubrum	red maple	B,S,C,N	M	L	P	PS,FS	50X30	25-35	60-75	deciduous
Avicennia germinans	black mangrove	B,S,C	H	H		FS	30X25	10-30	10-40	evergreen
Bursera simaruba	gumbo-limbo	B,S,C	L	H	G ²	PS,FS	40X35	35-50	25-50	semi-deciduous
Catalpa bignonioides	southern catalpa	C,N	L	L		PS,FS	50X40			deciduous
Carpinus carolinia	American hornbeam	C,N	M	L		SH,PS	25X25	20-30	20-30	deciduous
Carya floridana	scrub hickory	S,C,N	L	L	P	FS	30X15	15-20	30-40	deciduous
Carya glabra	pignut hickory	S,C,N	L	L	P	FS	60X40	30-100	50-100	deciduous
Carya tomentosa	mockernut hickory	C,N	L	L	P	PS,FS	60X35			deciduous
Celtis laevigata	hackberry, sugarberry	S,C,N	L	L	P	PS,FS	50X35	50-60	50-70	deciduous
Cercis canadensis	eastern redbud	N	L	L		PS,FS	25X20	15-25	20-30	deciduous
Chrysophyllum oliviforme	satinleaf	B,S	L	M		FS	30X20	10-30	15-30	evergreen
Coccoloba diversifolia	pigeon plum	B,S	L	H	G	SH,FS	25X20	25-40	25-50	evergreen
Coccoloba uvifera	seagrape	B,S,C	L	H	G	PS,FS	30X25	20-30	25-30	evergreen
Cordia sebestena	geiger tree	B,S	L	H		PS,FS	25X20	20-25	25-30	evergreen
Conocarpus erectus	buttonwood	B,S,C	L	H		FS	35X25	20-30	30-45	evergreen
Cupressocyparis x leylandii	Leyland cypress	S,C,N	M	M		FS	45X20			evergreen

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Diospyros virginiana	American persimmon	B,S,C,N	M	L		FS,PS	50X30	20-35	40-60	deciduous
Ficus aurea	strangler fig	B,S,C	L	M		FS,PS,SH	50X50	50-60	40-50	evergreen, aggressive root system
Fraxinus caroliniana	water ash	S,C,N	H	L	P	FS	40X25	25-30	30-40	deciduous
Gordonia lasianthus	loblolly-bay	S,C,N	H	L		PS,FS	40X15	10-15	35-60	evergreen
Ilex opaca	American holly	C,N	L	M	G	PS,FS	40X20	15-25	35-50	evergreen
Ilex cassine	dahoon holly	S,C,N	L	M	G	PS,FS	25X15	8-30	25-40	evergreen
Ilex x attenuata	East Palatka holly	B,S,C,N	M	M	G	PS,FS	30X15	10-15	25-50	evergreen
Juniperus virginiana	Eastern red cedar	S,C,N	L	H	P	FS	35X25	20-30	30-45	evergreen
Jacaranda mimosifolia	Jacaranda	S,C,N	L	L	P	FS	40X50	45-60	25-40	deciduous
Laguncularia racemosa	white mangrove	B,S,C	H	H		FS	35X30	25-30	25-40	evergreen
Liquidambar styraciflua	sweetgum	C,N	L	L		PS,FS	70X40	35-50	60-75	deciduous
Liriodendron tulipifera	yellow poplar	C,N	H	L	P	FS	90X40	30	100	deciduous
Magnolia grandiflora	southern magnolia	B,S,C,N	M	M	G	PS,FS	80X40	30-40	60-80	evergreen
Magnolia virginiana	sweet bay	S,C,N	W	s		FS,PS	90X60	15-25	40-50	evergreen
Morus rubra	red mulberry	S,C,N	M	M		FS	30X25	20-40	50-70	deciduous
Nyssa sylvatica	black tupelo	N	M	L	G	PS,FS	60X30	25-35	65-75	deciduous
Ocotea coriacea	lancewood	B,S,C	L	L		PS,SH		25	15-25	evergreen
Persea borbonia	red bay	B,S,C,N	L	H	P	PS,FS	40X30	30-50	30-50	evergreen
Persea palustris	swamp bay	S,C,N	M	H		PS,FS	35X20	35-40	25-50	evergreen
Piscidia piscipula	Jamaican dogwood	B,S	L	H		PS,FS	45X25			deciduous
Pinus elliotii	slash pine	B,S,C,N	L	M	F	FS	100X30	35-50	50-70	evergreen
Pinus glabra	spruce pine	C,N	M	L	G	FS	75X25	25-40	30-60	evergreen
Pinus palustris	long-leaf pine	S,C,N	L	L	F	FS	70X35	30-40	60-80	evergreen
Pinus serotina	pond pine	S,C,N	H	L	F	FS		20-25	40-50	evergreen
Pinus taeda	loblolly pine	S,C,N	L	L		FS	100X25			evergreen
Platanus occidentalis	sycamore	S,C,N	L	M	G	FS	90X60	50-70	75-90	deciduous
Prunus caroliniana	cherry laurel	S,C,N	M	M	P	PS,FS	25X15	15-25	25-30	evergreen, poisonous
Quercus geminata	sand live oak	B,S,C,N	L	H		PS,FS	40X40	50-60	25-40	evergreen
Quercus hemisphaerica	laurel oak	S,C,N	L	L		FS,PS	80X40	30-40	40-60	semi-evergreen
Quercus incana	bluejack oak	C,N	L	L		FS	40X20	20-35	25-40	deciduous
Quercus laevis	turkey oak	S,C,N	L	M	P	FS	50X20	25-30	30-40	deciduous
Quercus laurifolia	laurel oak	S,C,N	L	L	P	FS	80X45	35-45	60-70	evergreen
Quercus myrtifolia	myrtle oak	S,C,N	L			FS	35X15	20-30	20-30	evergreen
Quercus nigra	water oak	S,C,N	M	L	P	FS	80X50	60-70	50-60	evergreen
Quercus virginiana	live oak	B,S,C,N	L	H	G ¹	FS	60X40	60-120	60-80	evergreen
Rhizophora mangle	red mangrove	B,S,C	H	H		FS	30X30	15-25	15-25	deciduous
Salix babylonica	weeping willow	S,C,N	H	L	P	FS	35X30	45-70	45-70	deciduous
Sapindus saponaria	soapberry	B,S,C,N	L	H		PS,FS	25X15			semi-deciduous

Sideroxylon foetidissimum	mastic, false mastic paradise tree,	B	L	M		PS,FS	45X30	30-50	50-80	evergreen
Simarouba glauca	bitterwood	B	L	M		PS,FS	50X30	30	50	evergreen
Taxodium ascendens	pond cypress	S,C,N	L	M	G	PS,FS	80X25	10-40	50-75	deciduous
Taxodium distichum	bald cypress	S,C,N	L	M	G	PS,FS	75X15	20-35	75-100	deciduous
Ulmus americana var. floridana	Florida elm	S,C,N	M	L	P	PS,FS	60X40	50-60	60-80	semi-evergreen
Ulmus alata	Winged elm	B,S,C,N	L	L		FS,PS	40X5	30-40	45-70	deciduous
Ulmus parviflora	Chinese elm	C,N	L	L		PS,FS	45X30	35-50	40-50	semi-deciduous
Zanthoxylum clavaherculis	Hercules-club	B,S,C,N	L	H		PS,FS	30X15	15-20	25-30	deciduous
SMALL TREES < 25 feet height										
Acacia farnesiana	sweet acacia	B,S,C,N	L	H	P	FS	20X20	15-25	15-25	evergreen
Aesculus pavia	red buckeye	S,C,N	M	L		PS	25X15	15-25	15-20	deciduous, seeds poisonous
Amyris elemifera	torchwood	B,S	L	H		PS,FS			15-20	evergreen
Annona glabra	pond-apple, custard-apple	S	H	M		FS	20X15	10-20	12-20	semi-deciduous
Ardisia escallonioides	marlberry, marbleberry	B,S	M	L		PS,SH		6-10	12-20	evergreen, poisonous
Bumelia tenax	tough bumelia	B,S,C,N	H	H		FS		10-20	15-30	evergreen
Callistemon citrinus	lemon bottlebrush	B,S,C,N	M	M		FS	20X10	10-15	10-15	evergreen
Carya floridana	scrub hickory	B,S,C,N	L	L	P	FS		15	25	deciduous
Chionanthus virginicus	fringe tree	C,N	H	L		FS,PS,SH	20X12	10-15	12-20	deciduous
Citharexylum spinosum	fiddlewood	B,S	L	M		PS,FS	20X15	15-20	20-30	evergreen
Cordia boissieri	wild olive	S,C,N	L	L		FS	20X15	10-15	15-20	evergreen
Cornus florida	dogwood	N	H	L	F	PS,FS	20X15	10-15	20-30	deciduous
Cornus foemina	swamp dogwood	S,C,N	H	L		FS,PS,SH		10-15	10-25	deciduous
Crataegus flava	summer haw	S,C,N	L	L		PS,FS	20X10	35-40	20-30	deciduous
Cyrilla racemiflora	titi	C,N	H	L		FS,PS		10-25	10-35	semi-evergreen
Dodonaea viscosa	varnish leaf	B,S,C,N	L	H		PS,FS		6-15	10-15	evergreen
Eriobotrya japonica	loquat	S,C,N	L	M		FS	20X15	30-35	20-30	evergreen
Guapira discolor	blolly	B,S	L	H		FS	30X40	30	40	evergreen
Ilex vomitoria	yaupon holly	B,S,C,N	L	H		PS,FS	20X15	15-20	15-25	evergreen
Jatropha integerrima	peregrina	S	L	M		FS		10-15	10-15	evergreen, poisonous
Krugiodendron ferreum	black ironwood, leadwood	B,S	L	M		PS,FS	20X10	10-20	15-25	evergreen
Lagerstroemia spp.	crepe myrtle	S,C,N	L	M	F	FS	25X15	15-25	10-30	deciduous
Lyonia ferruginea	rusty lyonia	S,C,N	H	L		FS		4-6	12-15	evergreen

Magnolia grandiflora	Little Gem variety southern magnolia	B,S,C,N	M	M		FS,PS	10-15	20-25	evergreen	
Myrcianthes fragrans	Simpson's stopper	B,S,C	L	H		FS,PS	15-20	20-30	evergreen	
Myrica cerifera	wax myrtle	B,S,C,N	H	H	F	PS,FS	20-25	15-25	evergreen	
Osmanthus americanus	wild olive	S,C,N	L	L		PS,FS	10-15	15-25	evergreen	
Parkinsonia aculeata	Jerusalem thorn	B,S,C,N	L	H		FS	20X35	20-25	15-20	deciduous
Platycladus orientalis	arborvitae	S,C,N	L	L		PS		10-15	15-20	evergreen
Plumeria rubra	frangipani	S	L	M		PS,FS	20X20	20-25	20-25	deciduous
Prunus augustifolia	Chickasaw plum	S,C,N	L	H		PS,FS	25X15	15-20	12-20	deciduous
Prunus umbellata	flatwoods plum	S,C,N	M	L		PS,FS	20X15	15	20	deciduous
Quercus chapmanii	Chapman's oak	B,S,C,N	M	M		FS	20X10	10	20	briefly deciduous
Vaccinium arboreum	sparkleberry	S,C,N	M	L		PS, SH		10-15	12-18	deciduous
Viburnum odoratissimum	sweet viburnum	S,C,N	M	L		FS,PS,SH		15-25	25-30	evergreen
Zanthoxylum fagara	wild-lime	B,S,C,N	L	H		PS,FS	15X12	15-25	15-25	evergreen

PALMS

Acoelorrhaphe wrightii	Everglades paurotis palm	S,C	H	M	G	FS,PS		10-15	15-25	evergreen
Butia capitata	Pindo palm	B,S,C,N	M	M		PS,FS			10-20	evergreen
Livistona australis	Australian fan palm	S,C,N	M			FS			40-80	evergreen
Phoenix canariensis	Canary Island date palm	B,S,C,N	L	M		FS			30-60	evergreen
Rhapidophyllum hystrix	needle palm	B,S,C,N	H	L	G	SH		4-8	3-8	evergreen
Rhapis excelsa	broad leaf lady palm	S,C,N	M	M		SH, PS			8-10	evergreen
Sabal etonia	Florida scrub palmetto	S,C,N	L	H	G	FS,PS		4-6	4-6	evergreen
Sabal minor	dwarf palmetto	S,C,N	L	M	G	FS,PS		3-6	4-6	evergreen
Sabal palmetto	cabbage palm	B,S,C,N	L	H	G	FS,PS		10-15	25-50	evergreen
Serenoa repens	saw palmetto	B,S,C,N	D	S	G	FS,PS		3-8	3-20	evergreen

SHRUBS

Agave americana	century plant	B,S,C,N	L	H		FS		6-8		evergreen
Alpinia zerumber	shell ginger	S,C	M	M		PS,FS		8		herbaceous perennial
Argusia gnaphalodes	sea lavender	B,S,C,N	L	H		FS		3-5		evergreen
Baccharis halimifolia	saltbush	B,S,C,N	L	H		FS, PS		10-12		semi-evergreen
Berberis julianae	wintergreen barberry	S,C,N	M	M		PS,FS		5		evergreen
Berberis thunbergii hybrid	crimson pygmy barberry	S,C,N	M	M		FS,PS			3-5	deciduous
Bougainvillea glabra	bougainvillea, paper flower	B,S,C,N	L	H		FS		8		evergreen
Buddleja davidii	butterfly bush	S,C,N	M	M		FS		8-10		evergreen

Buxus microphylla v. japonica	littleleaf boxwood	S,C,N	M	L	PS,FS	4	evergreen
Caesalpinia pulcherrima	dwarf poinciana	S,C,N	L	M	FS	P	evergreen, poisonous
Callicarpa americana	American beautyberry	B,S,C,N	L	L	PS,FS	4-6	deciduous
Calliandra haematocephala	red powderpuff	S,C,N	L	L	FS	15	evergreen
Camellia sasanqua	Sasanqua camellia	S,C,N	H	L	FS	15	evergreen
Capparis cynophallophora	Jamaica caper-tree	S,C	L	H	FS	9	evergreen
Cephalanthus occidentalis	buttonbush	S,C,N	H	L	PS,FS	8-12	deciduous
Cestrum nocturnum	night-blooming jasmine	S,C	M	M	FS	10	evergreen
Chiococca alba	snowberry	B,S,C	M	L	FS,PS	3	evergreen
Chrysobalanus icaco "red tip"	red-tip coco-plum	B	M	L	FS,PS	12-15	evergreen
Cocculus laurifolius	snail seed	S,C,N	M	L	PS,FS	13	evergreen, poisonous leaves
Codiaeum variegatum	croton	S,C	L	M	PS,FS	8	evergreen
Conradina canescens	wild rosemary	S,C,N	L	M	FS	4	evergreen
Crinum asiaticum	crinum lily	S,C,N	M	M	FS,PS	5	herbaceous perennial, poisonous
Dodonaea viscosa	varnish leaf	B,S,C,N	L	H	PS,FS	6	evergreen
Duranta repens	golden dewdrop	S,C,N	L	M	PS,FS	12-14	evergreen, fruit is poisonous
Erythrina herbacea	coralbean, Cherokee bean	B,S,C,N	L	M	PS,FS	15	evergreen, seeds poisonous
Eugenia foetida	Spanish stopper	B	L	H	PS,FS	10x15	evergreen
Forestiera segregata	Florida privet	B,S,C,N	L	H	FS	10	evergreen
Gamolepis chrysanthemoides	African bush daisy	S,C,N	M	L	FS	3	evergreen
Garberia heterophylla	garberia	C,N	L	M	FS	6	evergreen
Gardenia augusta	gardenia	S,C,N	H	L	FS	6	evergreen
Gossypium hirsutum	wild cotton	B,S,C,N	L	H	PS,FS	6-12	evergreen, endangered in wild
Hamelia patens	firebush	B,S,C	L	M	PS,FS	3-10	evergreen
Hibiscus rosa-sinensis	Hibiscus	S,C	H	M	FS	8-10	evergreen
Hibiscus coccineus	swamp hibiscus	S,C	H	L	PS,FS	5-6	herbaceous perennial
Hibiscus syriacus	Rose-of-Sharon	S,C,N	H	L	FS	10	deciduous
Hydrangea macrophylla	hydrangea	S,C,N	H	L	FS	5	deciduous
Ilex cornuta	Buford holly	S,C,N	M	L	PS,FS	8-15	evergreen
Ilex crenata	Japanese holly	S,C,N	H	L	PS,FS	8-10	evergreen
Ilex glabra	inkberry, gallberry	S,C,N	L	M	PS,FS	6-7	evergreen
Ilex vomitoria "Nana"	dwarf yaupon holly	B,S,C,N	L	H	PS,FS	3	evergreen, poisonous

<i>Illicium anisatum</i>	anise tree	S,C,N	M	L	PS,FS	15	evergreen
<i>Illicium parviflorum</i>	Florida anise	S,C,N	M	L	PS,FS	8-10	evergreen
<i>Itea virginica</i>	Virginia sweetspire	S,C,N	H	L	PS,FS	4-7	semi-evergreen
<i>Iva imbricata</i>	beach elder	B,S,C,N	L	H	FS	3	evergreen
<i>Ixora coccinea</i>	red ixora	S,C	M	M	FS	5	evergreen
<i>Lantana involucrata</i>	wild lantana	B,S,C,N	L	S	FS,PS	5	evergreen
<i>Leucophyllum frutescens</i>	Texas sage	S,C,N	L	M	FS	5	evergreen
<i>Lycium carolinianum</i>	Christmasberry	B,S,C,N	L	H	PS,FS	7	evergreen
<i>Lyonia ferruginea</i>	rusty lyonia	S,C,N	L	L	FS	10-15	evergreen
	fetterbush, shiny						
<i>Lyonia lucida</i>	lyonia	B,S,C,N	H	L	FS,PS	3-5	evergreen
<i>Myrica cerifera</i>	wax myrtle	B,S,C,N	L	H	PS,FS	20	evergreen
<i>Nerium oleander</i>	oleander	B,S,C,N	L	H	FS	15	evergreen, entire plant is very poisonous
<i>Osmanthus fragrans</i>	wild olive	S,C,N	M	L	PS,FS	20	evergreen
<i>Plumbago auriculata</i>	blue plumbago	S,C,N	L	M	FS	5	evergreen
<i>Pittosporum tobira</i>	green pittosporum	B,S,C,N	M	H	FS	6-8	evergreen
<i>Podocarpus macrophyllus</i>	yew podocarpus	S,C,N	M	M	PS,FS	35	conifer
<i>Psychotria nervosa</i>	shiny-leaf wild-coffee	B,S,C,N	M	M	PS,SH	5	evergreen
<i>Psychotria sulzneri</i>	dull-leaf wild-coffee	B,S,C	M	M	PS,SH	6-9	evergreen
<i>Randia aculeata</i>	white indigo berry	B,S	L	H	FS	8	evergreen
<i>Rapanea punctata</i>	myrsine	B,S,C,N	L	H	PS,FS	9	evergreen
<i>Rhapiolepis indica</i>	indian hawthorne	S,C,N	M	M	PS	4	evergreen
<i>Rhododendron austrinum</i>	Florida flame azalea	S,C,N	H	L	PS	6	deciduous
<i>Rhododendron hybrids</i>	azaleas	S,C,N	H	L	PS,SH	4-6	evergreen
<i>Rosa spp.</i>	rose	S,C,N	M	L	FS	10	evergreen
<i>Sambucus canadensis</i>	elderberry	B,S,C,N	M	L	FS	10-15	deciduous
<i>Scaevola plumieri</i>	beachberry	B	L	H	FS	3-5	evergreen
<i>Sideroxylon tenax</i>	buckthorn	B,S,C,N	L	H	FS	20	evergreen
<i>Sophora tomentosa</i> var.							
<i>truncata</i>	yellow necklacepod	B,S,C,N	L	H	PS,FS	6-8	evergreen, seeds and pods are poisonous
<i>Stachytarpheta urticifolia</i>	blue porterweed	B,S,C,N	L	H	FS	4-5	evergreen
<i>Tibouchina urvilleana</i>	glorybush	S,C,N	H	L	PS,FS	10	evergreen
<i>Tournefolia=Argusia</i>							
<i>gnophalodes</i>	sea lavender	S,C	L	H	FS	6	evergreen
<i>Turnera ulmifolia</i>	yellow alder	B,S,C,N	L	H	PS,FS	2-4	evergreen
<i>Vaccinium myrsinites</i>	shiny blueberry	B,S,C,N	L	L	PS,FS	2	evergreen
<i>Viburnum obovatum</i>	Walter's viburnum	S,C,N	L	L	PS,FS	12-15	evergreen
<i>Viburnum suspensum</i>	Sandankwa viburnum	S,C,N	H	L	PS, FS	6	evergreen
<i>Viburnum odoratissimum</i>	sweet viburnum	S,C,N	M	L	PS,FS	8-10	evergreen

Yucca aloifolia	spanish bayonet	B,S,C,N	L	H	FS	12-14	evergreen
Yucca smalliana	Adam's needle	B,S,C,N	L	H	FS	5	evergreen
Zamia floridana	coontie	B,S,C,N	L	H	FS,PS	2	evergreen

GROUNDCOVERS

Aloe spp.	aloe	B,S,C,N	L	H	FS,PS	1	perennial
Bacopa monnieri	waterhyssop	B,S,C,N	H	H	FS	0.5	perennial
Borrichia frutescens	bushy sea oxeye daisy	B,S,C,N	M	H	FS	3	perennial
Canavalia rosea	beach bean	B,S,C	L	H	FS	0.5	perennial
Ernodea littoralis	beach-creeper	B,S	L	H	FS	2	perennial
Hemerocallis spp.	daylily	B,S,C,N	L	H	FS	2	perennial
Juniperus spp.	juniper, many varieties	B,S,C,N	L	M-H	FS	varies	evergreen
Licania michauxii	gopher-apple	B,S,C,N	L	H	FS	1	evergreen
Sesuvium portulacastrum	sea-purslane	B,S,C,N	L	H	FS	1-3	perennial

GRASSES

Andropogon brachystachyus	short-spike bluestem	S,C,N	w		FS		
Andropogon glomeratus	bushy bluestem	B,S,C,N	W		FS		
Andropogon virginicus	broomsedge bluestem	B,S,C,N	w		FS		
Aristida spiciformis	bottlebrush grass	S,C,N	D,w		FS		
Aristida stricta var. beyrichiana	wiregrass	S,C,N	D,w		FS,PS		
Cladium jamaicense	saw-grass	B,S,C,N	W	S	FS		
Distichlis spicata	saltgrass	B,S,C,N	W	S	FS		
	scouring rush, horsetail	S,C,N	A		FS		
Eragrostis elliotii	Elliott's lovegrass	B,S,C,N	d,w	S	FS,PS		
Eragrostis spectabilis	purple lovegrass	B,S,C,N	d,w		FS,PS		
Hypericum reductum	scrub hypericum	S,C,N	d		FS		
Juncus effusus	soft rush	B,S,C,N	W		FS,PS		
Liriope muscari	lilyturf	S,C,N	d	s	PS,SH		
Muhlenbergia capillaris	muhly grass	B,S,C,N	d,w	s	FS		
Ophiopogon japonicus	mondo grass	S,C,N	d	S	SH		
Panicum hemitomon	maidencane	S,C,N	W		FS,PS		
Panicum virgatum	switchgrass	B,S,C,N		S	FS		
Paspalum distichum	salt jointgrass	B	W	S	FS		
Paspalum vaginatum	seashore paspalum	B,S,CN	d,w	S	FS		
Scirpus californicus	giant bulrush	S,C,N	A		FS		

Sorghastrum secundum	lopsided Indiangrass	S,C,N	D,w	S	FS	
Spartina alterniflora	saltmarsh cordgrass	B,S,C,N	d,w	S	FS,PS	
Spartina bakeri	sand cordgrass	B,S,C,N	d,w	S	FS,PS	
Spartina patens	marshhay cordgrass	B,S,C,N	D,W	S	FS	
Sporobolus junceus	pineywoods dropseed	S,C,N	D	S	FS,PS	
Sporobolus virginicus	seashore dropseed	B,S,C,N	D	S	FS	
Tripsacum dactyloides	eastern gamagrass, Fakahatchee grass	B,S,C,N	L	M	FS	4-6 herbaceous perennial
Uniola paniculata	sea oats	B	D	S	FS	
Zizaniopsis miliacea	southern wild rice	S,C,N	A	S	FS	
VINES						
Campsis radicans	trumpet creeper	S,C,N	d		FS,PS	
Canavalia rosea	beach bean	B,S,C,N	D	S	FS	
Gelsemium sempervirens	yellow jessamine	S,C,N	D,w		FS,PS	
Ipomopsis rubra	standing-cypress	S,C,N	D		FS	
Lonicera sempervirens	coral honeysuckle	B,S,C,N	d		FS,PS	
Parthenocissus quinquefolia	Virginia creeper	B,S,C,N	D,w		FS,PS,SH	
Passiflora incarnata	passion vine	B,S,C,N	D	s	FS	
Passiflora suberosa	corky passion-flower	B,S,C,N	D	s	FS,PS	
Symphyotrichum carolinianum	climbing aster	S,C,N	W		FS,PS	
Trachelospermum jasminoides	confederate jasmine	B,S,C,N	D	S	FS,PS	
Vitis rotundifolia	muscadine grape	B,S,C,N	d		FS,PS	
Ipomoea alba	moonflower	B,S,C,N	w		FS	
Ipomoea imperati	beach morningglory	B	D	S	FS	
Ipomoea pes-caprae subsp. Brasiliensis	railroad vine	B	D	S	FS	
Ipomoea purpurea	purple morningglory	B,S,C,N			FS	
Tecomaria capensis	cape honeysuckle	S,C	M	L	FS	6-8 evergreen, can be maintained as shrub
WILDFLOWERS						
Arisaema triphyllum	jack-in-the-pulpit	S,C,N	W		PS,SH	
Asclepias incarnata	swamp milkweed	S,C,N	W		FS,PS	
Berlandiera subacaulis	Florida greeneyes	S,C,N	D		FS,PS	
Boehmeria cylindrica	small-spike false-nettle	S,C,N	W		FS,PS,SH	
Canna flaccida	golden canna	S,C,N	W		FS	

Conoclinium coelestinum	mistflower	S,C,N	w		FS
	large-flowered				
Conradina grandiflora	conradina	S,C,N	D	S	FS
Coreopsis floridana	Florida tickseed	S,C,N	W		FS
	Leavenworth's				
Coreopsis leavenworthii	tickseed	S,C,N	w		FS,PS
	blanket-flower,				
Gaillardia pulchella	gaillardia	B,S,C,N	D	S	FS
Helianthus angustifolius	narrow leaf sunflower	S,C,N			FS,PS
Helianthus debilis	dune sunflower	B,S,C,N	D	S	FS
Heliotropium					
angiospermum	scorpion-tail	B	d		FS,PS
Heliotropium polyphyllum	pineland heliotrope	B,S,C,N	D,w	s	FS,PS
Hibiscus coccineus	scarlet hibiscus	S,C,N	W		FS,PS
Hibiscus grandiflorus	swamp rosemallow	S,C,N	W		FS
	mangrove spiderlily,				
Hymenocallis latifolia	perfumed spiderlily	B,S,C,N	d,w	S	FS,PS
Hymenocallis palmeri	alligator-lily	S,C,N	w		FS,PS
Hypericum hypericoides	St. Andrew's-cross	B,S,C,N	d,w		FS,PS
	four-petal St. Peter's-				
Hypericum tetrapetalum	wort	S,C,N	d,w		FS,PS
Iris hexagona	prairie iris	S,C,N	W		FS,PS
Iva frutescens	marsh elder	B	D,W	S	FS
Lachnanthes caroliana	redroot	S,C,N	d,W		FS,PS
	Chapman's blazing-				
Liatris chapmanii	star				FS
Liatris gracilis	slender blazing-star	B,S,C,N	d,w		FS
Liatris spicata	spiked blazing-star	S,C,N	d,w		FS
Liatris tenuifolia	blazing-star	S,C,N	D		FS
Lythrum alatum var.					
lanceolatum	winged loosestrife	S,C,N	W		FS,PS
Melanthera nivea	snow squarestem	S,C,N	w		FS,PS
Monarda punctata	dotted horsemint	B,S,C,N	d	s	FS
Opuntia humifusa	prickly-pear cactus	B,S,C,N	D		FS
	manyflower				
Penstemon multiflorus	beardtongue	S,C,N	D		FS
Phoebanthus grandiflorus	phoebanthus	S,C,N	D		FS,PS,SH
Piloblephis rigida	pennyroyal	S,C,N	D		FS
Pityopsis graminifolia	silk-grass	B,S,C,N	D		FS
Rhexia cubensis	meadow-beauty	S,C,N	W		FS
Rhexia mariana	pale meadow-beauty	S,C,N	W		FS

Rhynchospora colorata	fineleaf whitetop sedge	S,C,N	w		FS
Rudbeckia hirta	blackeyed-susan	B,S,C,N		s	FS
Ruellia caroliniensis	Carolina wildpetunia scarlet sage, tropical sage	S,C,N	D,w	s	FS,PS,SH
Salvia coccinea		B,S,C,N	d,w	s	FS,PS
Salvia lyrata	lyre-leaved sage	S,C,N	d,w		FS,PS
Scutellaria integrifolia	rough skullcap	B,S,C,N	w		FS,PS
Solidago fistulosa	hollow goldenrod	S,C,N	W	S	FS,PS
Solidago odora var. chapmanii	sweet goldenrod	B,S,C,N	D,w		FS,PS
Solidago sempervirens	seaside goldenrod	B,S,C,N	d,w	S	FS
Symphotrichum dumosum	bush aster	S,C,N	w		FS,PS
Teucrium canadense	wood-sage	S,C,N	W	S	FS,PS
Viola lanceolata	long-leaf violet	S,C,N	W		PS,SH
Viola sororia	violet	S,C,N	w		PS,SH
Yucca filamentosa	Adam's needle	B,S,C,N	D	S	FS,PS
Zephyranthes simpsonii	Simpson's zephyr lily	S,C,N	d,w		FS,PS
Asclepias tuberosa	butterflyweed	B,S,C,N	D	S	FS

FERNS

Acrostichum danaeifolium	giant leather fern	B,S,C,N	W	s	FS,PS,SH
Blechnum serrulatum	swamp fern	B,S,C,N	W		PS,SH
Nephrolepis exaltata	wild Boston fern	B,S,C,N	w		PS,SH
Osmunda cinnamomea	cinnamon fern	B,S,C,N	W		FS,PS
Osmunda regalis var. spectabilis	royal fern	B,S,C,N	W		FS,PS,SH
Pteridium aquilinum	bracken fern widespread maiden fern	B,S,C,N	d	s	FS,PS,SH
Thelypteris kunthii		S,C,N	w		PS,SH
Woodwardia areolata	netted chain fern	S,C,N	W		PS,SH
Woodwardia virginica	chain fern	S,C,N	W		FS,PS,SH

AQUATIC

Nuphar advena= N. lutea	cowlily, spatterdock	S,C,N	A		FS
Nymphaea mexicana	yellow water-lily	S,C,N	A		FS
Nymphaea odorata	white water-lily	B,S,C,N	A		FS
Pontederia cordata	pickerelweed lance-leaved	S,C,N	A		FS,PS
Sagittaria lancifolia	arrowhead	S,C,N	A		FS,PS

Saururus cernuus	lizard's-tail	S,C,N	W	PS,SH
Scirpus californicus	giant bulrush	S,C,N	A	FS
Thalia geniculata	alligator flag	S,C,N	A	FS,PS

<p>PLANTS FOR INLAND WET AREAS</p>

Hydrangea quercifolia	oakleaf hydrangea	S,C,N	H	L	PS,FS	5-6	deciduous, poisonous
Rhododendron canescens	pinxter azalea	S,C,N	H	L	PS	10	deciduous
Viburnum nudum	possum haw	S,C,N	H	L	PS,SH	6-12	deciduous

1- Live Oaks can blow over if not given adequate room to spread and if planted in moist soils

2- If grown from small plantings to develop stronger root systems

3- SFWMD Waterwise Publications

APPENDIX D**COVENANT RUNNING WITH THE LAND OF _____ IN FAVOR OF THE BOARD OF COUNTY COMMISSIONERS OF BREVARD COUNTY, FLORIDA, CONCERNING THE ESTABLISHMENT OF BONA FIDE AGRICULTURE LOCATED AT _____ BREVARD COUNTY, FLORIDA.**

The undersigned owner(s) of a parcel of real property legally described as set forth in Exhibit “A”, attached hereto and incorporated herein by reference, located at _____, Brevard County, Florida, and further identified for ad valorem tax purposes by all or part of Parcel ID # _____, (hereinafter referred to as the “Property”), hereby create(s) a covenant (the “Covenant”) on behalf of the undersigned owner(s) and his/theirs heirs, successors, assigns and grantees, running with the land to and in favor of the Board of County Commissioners of Brevard County, Florida (hereinafter referred to as the “Board”), their successors and assigns, with respect to the Property, as follows:

1. The undersigned agree(s) and covenant(s) that, for the term of this Covenant, the Property shall be used only for the agricultural activities authorized by this covenant. For purposes of this covenant, “agricultural activities” are defined as provided in Chapter 62, Article 2, Brevard County Code.
2. For a period of ten (10) years commencing on the date of recordation in the official records of Brevard County, the undersigned owner(s) or his/her representative of the property agrees to not submit an application to the County or any municipality within Brevard County for any and all of the following:
 - (1) rezoning action;
 - (2) site plan review;
 - (3) subdivision review;
 - (4) flag lot, access easement or unpaved road review;
 - (5) proposed plans for public facilities;
 - (6) building permit application except one single-family home may be permitted;
 - (7) certificate of use and occupancy for other than the one single-family home permitted;
 - (8) platting action.

After the Covenant is executed and accepted by the Director of the NRMO, the Covenant shall be promptly filed with the Clerk of the Circuit Court for recording in the official records of Brevard County. A certified copy of the recorded document shall be furnished to the NRMO within five (5) working days of the recording date.

- 3. The undersigned owner(s) covenant(s) and agrees(s) that all successors, heirs, assigns and grantees of undersigned owner(s) with respect to the Property shall be notified in writing of the stipulations contained herein and Brevard County NRMO shall receive copies of all such written notifications. The failure of the undersigned owner(s) to provide such writtten notice to all said successors, heirs, assigns, and grantees or the undersigned owner(s) shall not, however, affect the validity or enforceability of this Covenant as to any such successors, heirs, assigns, and grantees.
- 4. If, during the term of this Covenant, the Property, in whole or in part, is utilized for any purpose other than agricultural activities or is the subject of an application for approval of non-agricultural uses or activities, then the owners of the property shall, as to the whole or part of the property which is no longer used for agricultural activities, immediately comply with the tree replacement conditions set forth in Exhibit "B" hereto (incorporated herein by reference). Nothing herein shall be construed to exempt the Property from compliance with requirements otherwise imposed by law.
- 5. During the term of this Covenant, the Covenant shall never be concealed, revised, altered or amended without the consent of the Board of the County Commissioners.
- 6. This Covenant is a Covenant Running With The Land, and is subject to specific enforcement by the Director of the NRMO on behalf of Brevard County, Florida. In the event that the provisions of this Covenant are not complied with, the Director of NRMO may commence an action in law or equity to ensure adherence to all provisions and requirements of Chapter 62 of the Code of Brevard County, Exhibit B and this Covenant.
- 7. This Covenant shall be in full force and effect for a period of ten (10) years commencing from the date of its recording in the official records of Brevard County. This Covenant shall be binding upon the undersigned, his/theirs heirs, legal representatives, estates, successors, grantees, and assigns. If the property, in whole or in part, has been classified as "Green Belt" pursuant to Florida Statute Chapter 193.461 after the Covenant has been in effect for three (3) years after the date of its recording in the official records of Brevard County, the undersigned owner(s) or his or her successors, heirs, assigns, and grantees may petition the Board of County Commissioners for release of this Covenant.

IN WITNESS WHEREOF, the undersigned, being the owner(s) of the Property, agree(s) to the terms of this Covenant, hereby create(s) same as a Covenant Running with the Land, and set(s) his/theirs hands(s) and seal(s) unto this Covenant this _____ day of _____, 20__.

Witnesses:
(2 witnesses for each property owner)

Property Owner(s):

(NAME & TITLE)

EXHIBIT A
Legal Description

Exhibit B
Restoration and Replacement Minimum Standards