

- New additions are underlined.
- New deletions are indicated by ~~strike-throughs~~.
- Sources for any additions not discussed in the last LLTP meeting are identified in capital letters (e.g., from staff and Jim Spratt)

**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.

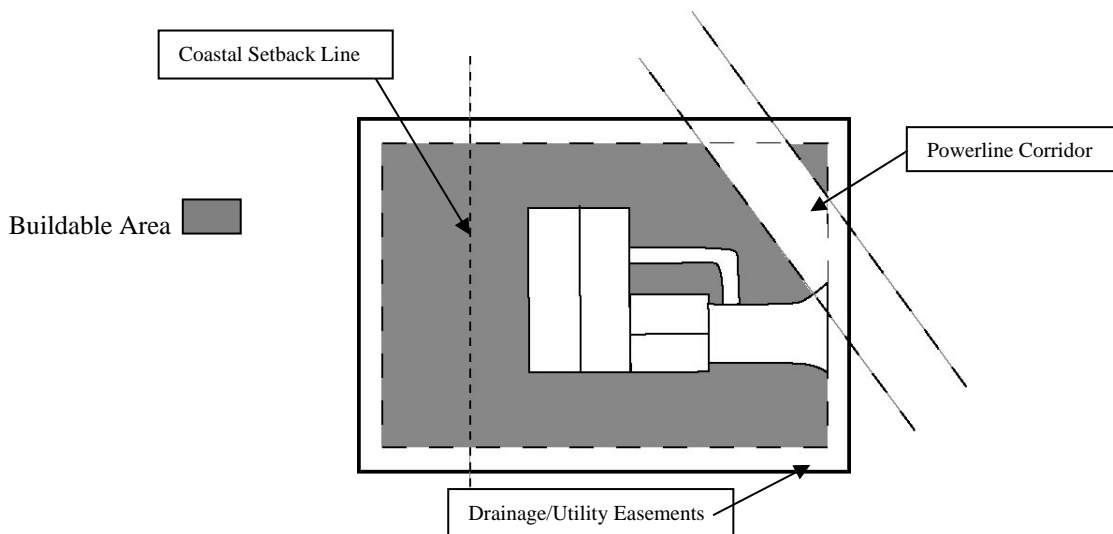
**After-the-fact permit** means a permit issued after a violation has occurred for the primary purpose of correcting the violation (if the activity would have been permissible) or for bringing the violator into compliance with existing regulations.

**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.

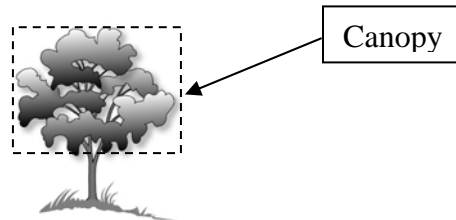
**Alternate Landscape Enhancement Plan** means a plan that provides property owners with adverse conditions the flexibility to design a landscape plan to manage the specific, adverse site conditions.

**Bona Fide Agricultural Use** means the commercial agricultural use of a site, parcel, or lot that 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.

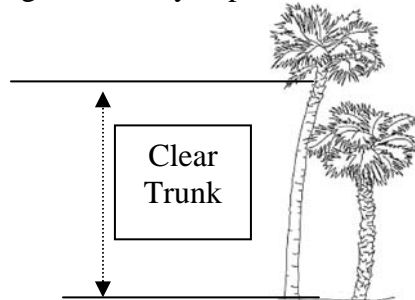


**Canopy** means the area consisting of a tree’s branches in all directions from its trunk, the outer edge of which is the dripline.



**Canopy Coverage** means the aerial 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: **JIM SPRATT'S CHANGES (as requested by the task force):** All plant species listed in the Florida Department of Agriculture and Consumer Services rule 5B-57.007 Florida Administrative Code, as may be amended.

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

**END OF J. SPRATT'S CHANGES**

**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 (*Quercus myrtifolia*, *Q. chapmanii*, *Q. inopina*, *Q. virginiana var. maritima*) on the mainland, Merritt Island or barrier island 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.

**STAFF Roll Back:** As a condition of approval, in accordance with Section 62-3635, Non-Bona Fide Agricultural Land Clearing Activities, land clearing activities on lands not currently classified as Green Belt which are engaged in agricultural pursuits not classified as bona fide as per s. 193.461, F.S. No new development order or rezoning requests may be submitted which would enjoy the current cleared state for a minimum of three years from the date of approval. Specifically, if a new development order or rezoning request is submitted within three years of the date the approval, the submittal shall reflect the pre-cleared conditions of the site and apply the current ordinance to the pre-cleared conditions.

**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.

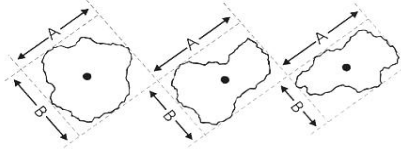


Fig. 1 Add A and B together and divide by 2 to get the spread.

**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 trees: Average mature height of a minimum of 40 feet.
- (2) Medium trees: Average mature height of a minimum of 25 feet to less than 40 feet.
- (3) 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 ([refer to Appendix A](#)), 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. Vegetation shall be classified as follows:

- (1) Large trees: Average mature height of a minimum of 40 feet.
- (2) Medium trees: Average mature height of a minimum of 25 feet to less than 40 feet.
- (3) Small trees: Average mature height of a minimum of ten feet and less than 25 feet.
- (4) Shrubs, ground cover and vines: Average mature height of less than ten feet, which completely covers the ground at maturity.
- (5) 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.

**Weeds JIM SPRATT IS DEVELOPING A DEFINITION OF WEEDS FOR DISCUSSION AT THE 3/2 LLTP MEETING.**

**Xeriscaping<sup>tm</sup> 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 on land classified as agricultural land ("Green Belt") pursuant to s. 193.461, F.S.
- (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 **JIM SPRATT'S CHANGES in section 62-3632 of this Article or on END OF SPRATT'S CHANGES** the Florida Exotic Pest Plant Council List of Invasive Species (refer to Appendix A), 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 throughway 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.

**~~STAFF NOTE: The Task Force requested staff to research whether electrical or gas corridors would be exempt. Chapter 403, Florida Statutes pre-empts local government regulation of transmission corridors and natural gas pipelines. These multi-jurisdictional activities are certified and permitted by the State.~~**

- (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. Non-Bona Fide Agricultural Land Clearing Activities**

- (1) Any activity of a bona fide agricultural use on land classified as agricultural land ("Green Belt") pursuant to s. 193.461, F.S. is exempt from the requirements of this Article (see Section 62-3634, Exemptions). Agricultural ~~However, land clearing~~ 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 with a completed Non-Bona Fide Agricultural Land Clearing Application ~~STAFF (NOTE: THE EXISTING DOMESTIC AG FORM WOULD NEED TO BE REVISED BY STAFF.)~~
  - b. 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. ~~STAFF (WHILE NOT SPECIFICALLY DISCUSSED DURING THE LAST LLTP MEETING, STAFF IS PROPOSING TO DELETE THE FOREGOING VERBIAGE FROM THIS SENTENCE SINCE ALL CONSERVATION PLANS AUTHORIZED BY THE USDA HAVE THESE ITEMS CONTAINED IN THEM. STAFF IS ALSO PROPOSING THAT ". . . completed agricultural application" BE MOVED TO ITEM a. AS INDICATED ABOVE.)~~
  - c. ~~b.~~ The proposed agricultural activity shall be a use or activity permitted by the existing zoning of the property.
  - d. ~~e.~~ Abutting properties shall be notified by the applicant of the proposed agricultural use land clearing activity. Written verification of the notification shall be required by NRMO.

~~e.—d.—For p~~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. shall be subject to the roll-back requirements in this Article as defined in Section 62-3633, Definitions.~~

~~(2) For proposed bona fide agricultural use Land clearing activities on agricultural lands that are proposed, but not yet classified as "Green Belt" pursuant to s. 193.461, F.S. shall be subject to the roll-back requirements in this Article as defined in Section 62-3633, Definitions. 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.~~

~~**STAFF NOTE: The following section is not clear to staff. Although we captured the suggested language, we recommend the Task Force revisit this section to clarify its intent.**~~

~~b. —It shall be a rebuttable 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.~~

### 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. ~~No active development order shall be pursued for the period of three (3) years from proof of date of last violation or when a property owner applies for an active development order, whichever is later.~~ 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, restoration and management of public

conservation lands or for the purchase of environmentally sensitive lands. It is expected that collected funds will be utilized – not accrued for future use. All acquisitions made through this program shall be voluntary ~~acquisitions~~.

~~STAFF NOTE: staff requests clarification on the Task Force's revision of the above section.~~

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.

- (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.
1. 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 except as allowed by this article and 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. 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) *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 <u>of the buildable area</u>	Canopy Achieved by Planted Trees <u>of the buildable area</u>	Total Percentage <u>of the buildable area</u>
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, 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: (refer to Appendix C). 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.

**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 (43) 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. Preservation of 25 square feet of native understory is equal to one three gallon fully rooted 15-18 inches in height planted shrub.	250

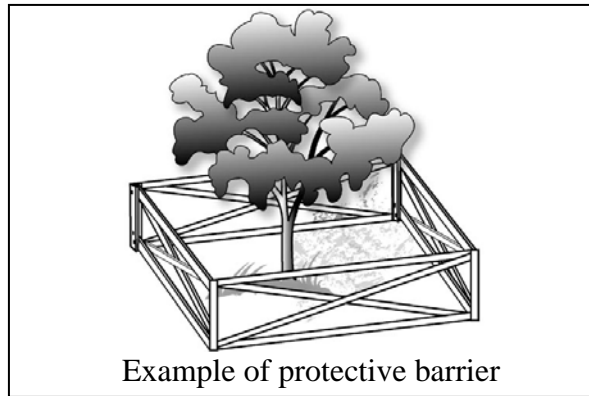
All plantings shall be at least Florida No. 1 grade as defined by the "Grades & Standards" for Nursery Plants. 1998. Division of Plant Industry, Florida Department Agriculture and Consumer Services, as may be amended.

- (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 of minimum size. Medium size tree species shall also meet minimum size requirements. Small species trees may be planted but shall not be credited towards the fulfillment of these requirements.
    - ii 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.
    - iii 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 three (3) inches dbh) for every 300 square feet contained within the landscape island.
    - iv Vehicular use area landscaping shall be evenly distributed throughout the parking area.
    - v For all sites, there shall be no more than fifteen (15) consecutive spaces permitted without a required landscape island.
    - vi 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.
  - 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.
- (6) 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.

- (7) 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.
- (8) Minimum size of newly planted trees. Trees used to fulfill the landscaping requirements in this Article, 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 inch diameter (dbh) minimum and two-foot spread.
    - ii Palms: Eight (8) feet of clear trunk.
  - b. For multi-family, commercial, institutional, and industrial uses:
    - i Large species: Twelve (12) feet tall with three (3) 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 one inch (1) 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 one (1) inch diameter (dbh) minimum and two-foot spread.
    - iv Palms: Ten (10) feet of clear trunk.
- (9) 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 **STAFF landscaping** requirements.
- (10) 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.
- (11) Use of synthetic plants. In no event shall synthetic plants such as manmade, plastic, rubber or silk plants be used for landscaping credits. Removal of existing landscape materials for installation of synthetic plants is prohibited.
- (12) 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.
- (13) 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.
- (14) 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.



- (15) 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.
- (16) 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.

- (17) For projects using Xeriscape™ or Water-Wise landscaping, the following criteria shall be met: **JIM SPRATT'S CHANGES FOLLOW**
- 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. Landscape plans must clearly demonstrate that plant species are grouped by water requirements (i.e., natural areas, drought tolerant areas, and oasis areas).~~
  - 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 non-synthetic inorganic or organic mulches must be present. ~~Dyed mulches are not permissible. The use of mulch containing Chromated Copper Arsenate (CCA) is expressly prohibited. Brevard NRMO has the authority to inspect and test (STAFF suggests: "requiring testing of") newly placed mulch material for CCAs and the responsibility to deny final approval of a landscape plan if mulches containing CCAs are used.~~
- ~~The Task Force did not reach the 70% consensus on whether dyed mulches should be permitted. Vote was 6-3 against permitting dyed mulches.~~
- d. ~~Less than~~ No more than fifty (50) % of all the landscape shall be equipped with low volume (micro) irrigation delivery systems. ~~areas may be irrigated.~~
  - e. ~~Vegetation must clearly be grouped in hydrozones on landscape plan and implemented per approved plan.~~
  - e. 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 twenty-five (25) % of landscape materials may be provided by this grass species. Turf grass shall not be planted in areas less than 400 feet. (Jim wrote: "The committee brought up concerns that the turf requirement might not be the best recommendation. I will conduct some additional research on the issue but, I am committed to getting away from a percentage number requirement for turf grass.")~~
  - f. g. ~~Soil analysis and letter confirming appropriate amendments must be submitted to the NRMO.~~
  - g. h. ~~Property must be free of weeds and pests and not declared as an overgrowth public nuisance as defined in Chapter 114, Article II .~~
  - h. 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 Xeriscape™ or Water-Wise Landscaping.~~
  - i. j. ~~Consistent with Florida Law, the A~~automatic irrigation system, if any, must be equipped with automatic rain sensor shut-off device.
  - j. ~~Brevard NRMO may provide a variance from the turf or landscape requirements, in circumstances where landscape irrigation systems incorporate demand-based irrigation scheduling.~~
  - k. k. ~~If criteria a-j~~ are met in their entirety, NRMO shall provide special recognition in the form of a listing on the Brevard County web site and/or via signage to be displayed in the landscape and a fifty (50) % reduction of the required shrubbery square footage-per acre of buildable area shall be credited.
- (18) 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.

- (19) Removal criteria. A protected tree in excess of the minimum number of trees required for preservation, as specified in this Article, shall 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, institutional, and industrial uses when they abut existing residential uses.

- (1) Type A, Compatibility Buffer. 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. This buffer classification shall be used to separate commercial, institutional, 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.

- (2) 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.
  - a. 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.
  - b. 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 NRM 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 except as allowed by this article (refer to Section 62-3640 (19), Landscaping Performance Standards, Removal Criteria), after issuance of the certificate of occupancy, certificate of completion, or restoration as may be required to resolve a code violation.
- 2) For multi-family, residential subdivisions, commercial, institutional, 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, institutional, 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.

~~3) (2)~~ An onsite inspection shall be conducted prior to the approval of the land clearing permit.

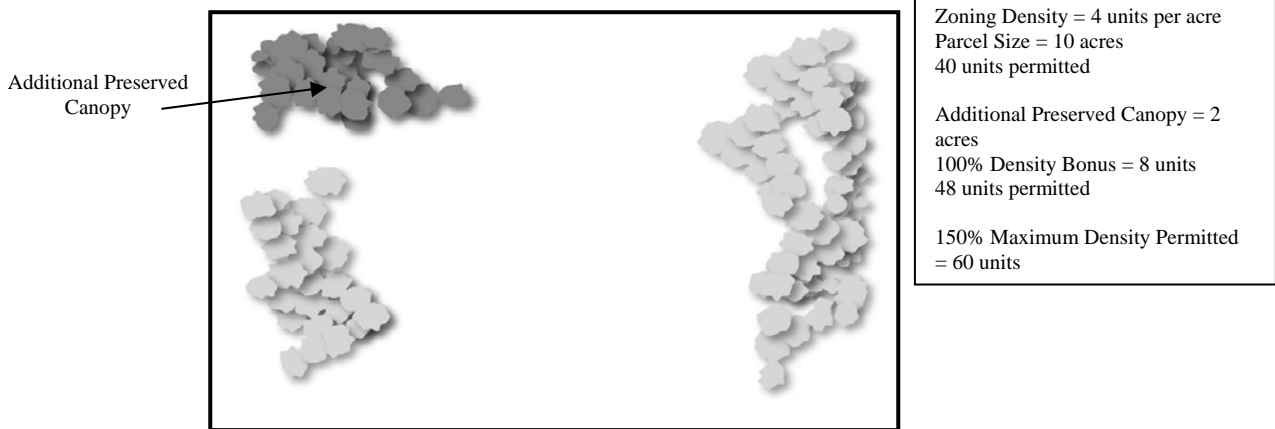
**Section 62-3643. Incentives for Increased Canopy and Tree Preservation and Increased Landscaping.**

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 root protection zone, 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.

~~The Task Force recommends that a reduction of lot widths and sizes be considered in addition to density bonuses.~~

~~STAFF NOTE: Staff requests discussion on the incentives and whether they will be used.~~



Example of Density Bonus

- (2) Preservation of vegetation of special concern.

~~STAFF NOTE: percentages were determined by relating the previous point system to square footage. I.E. 30 points previously awarded/480 points per acre required = 6%~~

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 each one hundred (100) square feet of land containing no dimension less than ten (10) feet, that is predominately vegetated by ~~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, ~~landscape requirements for the class of vegetation shall be reduced by 50% half- the property owner shall receive 200 square feet of landscape credit for that class of vegetation.~~ 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, cypress domes or sand pine scrub associations preserved on the site, total tree planting requirements shall be reduced by ~~six (6)~~ five (5) % 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 ~~four (4)~~ five (5) % 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-foot (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 15-18 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 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 five (5) % greater than the minimum required 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. Parking shall not exceed the minimum required for the proposed use(s).
- 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 replacement tree shall be at least five (5) 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.

## (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 using the costs established by Resolution No. 06-\*\*\*, as may be amended.
- b. Compensation for trees of known Number REMoved (NREM) but unknown total diameter shall be calculated using the costs established by Resolution No. 06-\*\*\*, as may be amended.
- 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 is 100% forested. Compensation shall be calculated using the costs established by Resolution No. 06-\*\*\*, as may be amended, 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 62-3636 of this Article.

The Task Force recommends costs should be established via Resolution. Please see attached resolution.

## (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

Source: Florida Exotic Pest Plant Council

### **STAFF NOTE: List is to be reviewed by the FNPS and ENGLA**

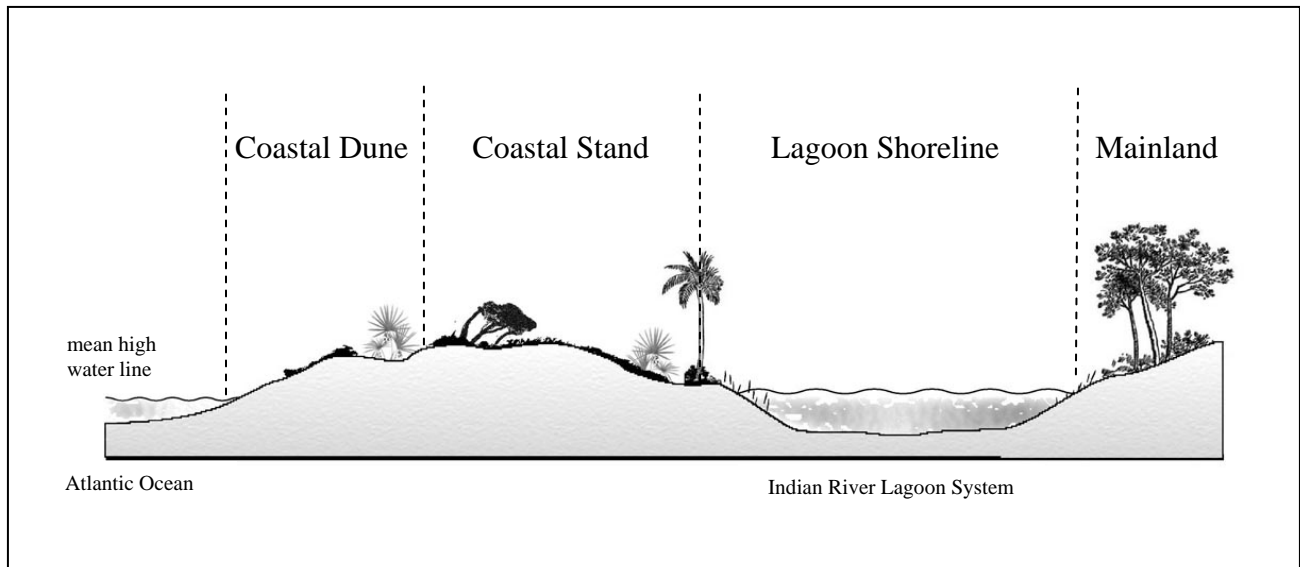
<b>Scientific Name</b>	<b>Common Name</b>
	Pennisetum purpureum Napier grass
	Pistia stratiotes waterlettuce
Abrus precatorius	rosary pea
Acacia auriculiformis	earleaf acacia
Albizia julibrissin	mimosa, silk tree
Albizia lebbek	woman's tongue
Ardisia crenata	coral ardisia
Ardisia elliptica	shoebutton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

*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 (~~40~~ 15-18) 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. Other appropriate plantings may be suggested to the NRMO 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	Natal Plum
Sea Grape	Cocoplum	Sea Grape
Native Viburnum	Sea Grape	Native Scaevola
	Inkberry	Saw Palmetto
	Eleagnus	Cocoplum
		Cocoplum

(B) GROUP 2 PLANTS

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

(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
Saw Palmetto	Saw Palmetto	Railroad Vine
	Coontie	Beach Sunflower
	Seaside Oxeye	Sea Oats
	Daisy	
	Coastal Panicum	
	Cord Grass	

(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

Seashore Paspalum

### Appendix C Recommended Plants for Brevard County<sup>1</sup>

**LEGEND**

L=LOW, M=MEDIUM, 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

**NOTE: To determine expected mature canopy size for the requirements of Section 62-3639(1)(g), the midpoint of the Expected Mature Canopy Diameter ranges given in the source publications was used.**

Species Scientific Name	Common Name	Location	Watering Needs	Salt Tolerance	Wind Resistance	Light Range (listed in order of preference)	Expected Mature Canopy Diameter (feet)	25% of the Expected Mature Canopy Area (pi r <sup>2</sup> )	Expected Mature Height (feet)	Comments
<b>LARGE TREES</b>										
<i>Acer rubrum</i>	red maple	B,S,C,N	M	L	P	PS,FS	30	177	68	deciduous
<i>Carpinus carolinia</i>	American hornbeam	C,N	M	L		SH,PS	25	123	25	deciduous
<i>Carya glabra</i>	pignut hickory	S,C,N	L	L	P	FS	65	830	75	deciduous
<i>Carya tomentosa</i>	mockernut hickory	C,N	L	L	P	PS,FS	35	241	60	deciduous
<i>Catalpa bignonioides</i>	southern catalpa	C,N	L	L		PS,FS	40	314	50	deciduous
<i>Celtis laevigata</i>	hackberry, sugarberry	S,C,N	L	L	P	PS,FS	55	594	60	deciduous
<i>Cupressocyparis x leylandii</i>	Leyland cypress	S,C,N	M	M		FS	20	79	45	evergreen
<i>Diospyros virginiana</i>	American persimmon	B,S,C,N	M	L		FS,PS	28	154	50	deciduous
<i>Ficus aurea</i>	strangler fig	B,S,C	L	M		FS,PS,SH	55		45	evergreen, aggressive root system
<i>Gordonia lasianthus</i>	loblolly-bay	S,C,N	H	L		PS,FS	13	33	48	evergreen
<i>Guaipira discolor</i>	blolly	B,S	L	H		FS	30	177	40	evergreen
<i>Ilex opaca</i>	American holly	C,N	L	M	G	PS,FS	20	79	43	evergreen
<i>Juniperus virginiana</i>	Eastern red cedar	S,C,N	L	H	P	FS	25	123	38	evergreen
<i>Liquidambar styraciflua</i>	sweetgum	C,N	L	L		PS,FS	43	363	68	deciduous
<i>Liriodendron tulipifera</i>	yellow poplar	C,N	H	L	P	FS	30	177	100	deciduous
<i>Magnolia grandiflora</i>	southern magnolia	B,S,C,N	M	M	G	PS,FS	35	241	70	evergreen

<i>Magnolia virginiana</i>	sweet bay	S,C,N	H	M		FS,PS	20	79	45	evergreen
<del><i>Morus rubra</i></del>	<del>red mulberry</del>	<del>S,C,N</del>	<del>M</del>	<del>M</del>		<del>FS</del>	<del>30</del>	177	<del>60</del>	<del>deciduous</del>
<i>Nyssa sylvatica</i>	black tupelo	N	M	L	G	PS,FS	30	177	70	deciduous
<i>Persea borbonia</i>	red bay	B,S,C,N	L	H	P	PS,FS	40	314	40	evergreen
<i>Pinus elliottii</i>	slash pine	B,S,C,N	L	M	F	FS	43	363	60	evergreen
<i>Pinus glabra</i>	spruce pine	C,N	M	L	G	FS	33	214	45	evergreen
<i>Pinus palustris</i>	long-leaf pine	S,C,N	L	L	F	FS	35	241	70	evergreen
<i>Pinus serotina</i>	pond pine	S,C,N	H	L	F	FS	23	104	45	evergreen
<i>Pinus taeda</i>	loblolly pine	S,C,N	L	L		FS	25	123	100	evergreen
<i>Piscidia piscipula</i>	Jamaican dogwood	B,S	L	H		PS,FS	25	123	45	deciduous
<i>Platanus occidentalis</i>	sycamore	S,C,N	L	M	G	FS	60	707	83	deciduous
<i>Prunus caroliniana</i>	cherry laurel	S,C,N	M	M	P	PS,FS	20	79	28	evergreen, poisonous
<i>Quercus hemisphaerica</i>	laurel oak	S,C,N	L	L		FS,PS	35	241	50	semi-evergreen
<i>Quercus laurifolia</i>	laurel oak	S,C,N	L	L	P	FS	40	314	65	evergreen
<i>Quercus nigra</i>	water oak	S,C,N	M	L	P	FS	65	830	55	evergreen
<i>Quercus virginiana</i>	live oak	B,S,C,N	L	H	G <sup>2</sup>	FS	90	1590	70	evergreen
<i>Salix babylonica</i>	weeping willow	S,C,N	H	L	P	FS	58	661	58	deciduous
<i>Sideroxylon foetidissimum</i>	mastic, false mastic	B	L	M		PS,FS	40	314	65	evergreen
<i>Simarouba glauca</i>	paradise tree, bitterwood	B	L	M		PS,FS	30	177	50	evergreen
<i>Taxodium ascendens</i>	pond cypress	S,C,N	L	M	G	PS,FS	25	123	63	deciduous
<i>Taxodium distichum</i>	bald cypress	S,C,N	L	M	G	PS,FS	28	154	88	deciduous
<i>Ulmus alata</i>	Winged elm	B,S,C,N	L	L		FS,PS	35	241	58	deciduous
<i>Ulmus americana var. floridana</i>	Florida elm	S,C,N	M	L	P	PS,FS	55	594	70	semi-evergreen
<i>Ulmus parviflora</i>	Chinese elm	C,N	L	L		PS,FS	43	363	45	semi-deciduous
<b>MEDIUM TREES</b>										
<i>Avicennia germinans</i>	black mangrove	B,S,C	H	H		FS	20	79	25	evergreen
<i>Bursera simaruba</i>	gumbo-limbo	B,S,C	L	H	G	PS,FS	43	363	38	semi-deciduous
<del><i>Carpinus carolinia</i></del>	<del>American hornbeam</del>	<del>C,N</del>	<del>M</del>	<del>L</del>		<del>SH,PS</del>	<del>25</del>		<del>25</del>	<del>deciduous</del>
<i>Carya floridana</i>	scrub hickory	S,C,N	L	L	P	FS	18	64	35	deciduous
<i>Carya floridana</i>	scrub hickory	B,S,C,N	L	L	P	FS	15	44	25	deciduous

<i>Cercis canadensis</i>	eastern redbud	N	L	L		PS,FS	20	79	25	deciduous
<i>Citharexylum spinosum</i>	fiddlewood	B,S	L	M		PS,FS	18	64	25	evergreen
<i>Coccoloba diversifolia</i>	pigeon plum	B,S	L	H	G	SH,FS	33	214	38	evergreen
<i>Coccoloba uvifera</i>	seagrape	B,S,C	L	H	G	PS,FS	25	123	28	evergreen
<i>Conocarpus erectus</i>	buttonwood	B,S,C	L	H		FS	25	123	38	evergreen
<i>Cordia sebestena</i>	geiger tree	B,S	L	H		PS,FS	23	104	28	evergreen
<i>Cornus florida</i>	dogwood	N	H	L	F	PS,FS	13	33	25	deciduous
<i>Crataegus flava</i>	summer haw	S,C,N	L	L		PS,FS	38	284	25	deciduous
<i>Eriobotrya japonica</i>	loquat	S,C,N	L	M		FS	33	214	25	evergreen
<i>Fraxinus caroliniana</i>	pop ash	S,C,N	H	L	P	FS	38	284	35	deciduous
<i>Ilex cassine</i>	dahoon holly	S,C,N	L	M	G	PS,FS	19	71	33	evergreen
<i>Ilex x attenuata</i>	East Palatka holly	B,S,C,N	M	M	G	PS,FS	13	33	38	evergreen
<i>Jacaranda mimosifolia</i>	Jacaranda	S,C,N	L	L	P	FS	53	552	33	deciduous
<i>Juniperus virginiana</i>	<del>Eastern red cedar</del>	<del>S,C,N</del>	<del>L</del>	<del>H</del>	<del>P</del>	<del>FS</del>	<del>25</del>	123	<del>38</del>	<del>evergreen</del>
<i>Laguncularia racemosa</i>	white mangrove	B,S,C	H	H		FS	28	154	33	evergreen
<i>Magnolia grandiflora</i>	<u>Little Gem variety southern magnolia</u>	B,S,C,N	M	M		FS,PS	13	33	23	evergreen
<i>Morus rubra</i>	red mulberry	S,C,N	M	M		FS	30	177	60	deciduous
<i>Persea palustris</i>	swamp bay	S,C,N	M	H		PS,FS	38	284	38	evergreen
<i>Prunus caroliniana</i>	<del>cherry laurel</del>	<del>S,C,N</del>	<del>M</del>	<del>M</del>	<del>P</del>	<del>PS,FS</del>	<del>20</del>		<del>28</del>	<del>evergreen, poisonous</del>
<i>Quercus geminata</i>	sand live oak	B,S,C,N	L	H		PS,FS	55	594	33	evergreen
<i>Quercus incana</i>	bluejack oak	C,N	L	L		FS	28	154	33	deciduous
<i>Quercus laevis</i>	turkey oak	S,C,N	L	M	P	FS	28	154	35	deciduous
<i>Quercus myrtifolia</i>	myrtle oak	S,C,N	L			FS	25	123	25	evergreen
-	-	-	-	-	-	-	-	-	-	-
<i>Sapindus saponaria</i>	soapberry	B,S,C,N	L	H		PS,FS	15	44	25	semi-deciduous
<i>Viburnum odoratissimum</i>	<del>sweet viburnum</del>	<del>S,C,N</del>	<del>M</del>	<del>L</del>		<del>FS,PS,SH</del>	<del>20</del>		<del>28</del>	<del>evergreen</del>
<i>Zanthoxylum clava-herculis</i>	Hercules-club	B,S,C,N	L	H		PS,FS	18	64	28	deciduous
<i>Chrysophyllum oliviforme</i>	satinalf	B,S	L	M		FS	20	79	23	evergreen
<i>Ocotea coriacea</i>	lancewood	B,S,C	L	L		PS,SH	25	123	20	evergreen

<i>Rhizophora mangle</i>	red mangrove	B,S,C	H	H		FS	20	79	20	deciduous
<b>SMALL TREES &lt; 25 feet height</b>										
<i>Acacia farnesiana</i>	sweet acacia	B,S,C,N	L	H	P	FS	20	79	20	evergreen
<i>Aesculus pavia</i>	red buckeye	S,C,N	M	L		PS	18	64	18	deciduous, seeds poisonous
<i>Amyris elemifera</i>	torchwood	B,S	L	H		PS,FS		0	18	evergreen
<i>Annona glabra</i>	pond-apple, custard-apple	S	H	M		FS	15	44	16	semi-deciduous
<i>Ardisia escallonioides</i>	marlberry, marbleberry	B,S	M	L		PS,SH	8	13	16	evergreen, poisonous
<i>Bumelia tenax</i>	tough bumelia	B,S,C,N	H	H		FS	15	44	23	evergreen
<i>Callistemon citrinus</i>	lemon bottlebrush	B,S,C,N	M	M		FS	13	33	13	evergreen
<i>Chionanthus virginicus</i>	fringe tree	C,N	H	L		FS,PS,SH	13	33	16	deciduous
<i>Cordia boissieri</i>	wild olive	S,C,N	L	L		FS	13	33	18	evergreen
<i>Cornus foemina</i>	swamp dogwood	S,C,N	H	L		FS,PS,SH	13	33	18	deciduous
<i>Cyrilla racemiflora</i>	titi	C,N	H	L		FS,PS	18	64	23	semi-evergreen
<i>Dodonaea viscosa</i>	varnish leaf	B,S,C,N	L	H		PS,FS	11	24	13	evergreen
<i>Ilex vomitoria</i>	yaupon holly	B,S,C,N	L	H		PS,FS	18	64	20	evergreen
<i>Jatropha integerrima</i>	peregrina	S	L	M		FS	13	33	13	evergreen, poisonous
<i>Krugiodendron ferreum</i>	black ironwood, leadwood	B,S	L	M		PS,FS	15	44	20	evergreen
<i>Lagerstroemia spp.</i>	crepe myrtle	S,C,N	L	M	F	FS	20	79	20	deciduous
<i>Lyonia ferruginea</i>	rusty lyonia	S,C,N	H	L		FS	5	5	14	evergreen
<i>Magnolia grandiflora</i>	Little Gem variety southern magnolia	B,S,C,N	M	M		FS,PS	13		23	evergreen
<i>Myrcianthes fragrans</i>	Simpson's stopper	B,S,C	L	H		FS,PS	18	64	25	evergreen
<i>Myrica cerifera</i>	wax myrtle	B,S,C,N	H	H	F	PS,FS	23	104	20	evergreen
<i>Osmanthus americanus</i>	wild olive	S,C,N	L	L		PS,FS	13	33	20	evergreen
<i>Parkinsonia aculeata</i>	Jerusalem thorn	B,S,C,N	L	H		FS	23	104	18	deciduous
<i>Platycladus orientalis</i>	arborvitae	S,C,N	L	L		PS	13	33	18	evergreen
<i>Plumeria rubra</i>	frangipani	S	L	M		PS,FS	23	104	23	deciduous
<i>Prunus augustifolia</i>	Chickasaw plum	S,C,N	L	H		PS,FS	18	64	16	deciduous
<i>Prunus umbellata</i>	flatwoods plum	S,C,N	M	L		PS,FS	15	44	20	deciduous

<i>Quercus chapmanii</i>	Chapman's oak	B,S,C,N	M	M		FS	10	20	20	briefly deciduous
<i>Vaccinium arboreum</i>	sparkleberry	S,C,N	M	L		PS, SH	13	33	16	deciduous
<i>Viburnum odoratissimum</i>	sweet viburnum	S,C,N	M	L		FS,PS,SH	20	79	28	evergreen
<i>Zanthoxylum fagara</i>	wild-lime	B,S,C,N	L	H		PS,FS	20	79	20	evergreen
<b>PALMS</b>										
<i>Acoelorrhaphe wrightii</i>	Everglades paurotis palm	S,C	H	M	G	FS,PS	13	33	20	evergreen
<i>Butia capitata</i>	Pindo palm	B,S,C,N	M	M		PS,FS			15	evergreen
<i>Livistona australis</i>	Australian fan palm	S,C,N	M			FS			60	evergreen
<i>Phoenix canariensis</i>	Canary Island date palm	B,S,C,N	L	M		FS			45	evergreen
<i>Rhapidophyllum hystrix</i>	needle palm	B,S,C,N	H	L	G	SH	6	7	6	evergreen
<i>Rhapis excelsa</i>	broad leaf lady palm	S,C,N	M	M		SH, PS			9	evergreen
<i>Sabal etonia</i>	Florida scrub palmetto	S,C,N	L	H	G	FS,PS	5	5	5	evergreen
<i>Sabal minor</i>	dwarf palmetto	S,C,N	L	M	G	FS,PS	5	5	5	evergreen
<i>Sabal palmetto</i>	cabbage palm	B,S,C,N	L	H	G	FS,PS	13	33	38	evergreen
<i>Serenoa repens</i>	saw palmetto	B,S,C,N	H	H	G	FS,PS	6	7	12	evergreen
<b>SHRUBS</b>										
<i>Agave americana</i>	century plant	B,S,C,N	L	H		FS			8-Jun	evergreen
<i>Alpinia zerumber</i>	shell ginger	S,C	M	M		PS,FS			8	herbaceous perennial
<i>Argusia gnaphalodes</i>	sea lavender	B,S,C,N	L	H		FS			5-Mar	evergreen
<i>Baccharis halimifolia</i>	saltbush	B,S,C,N	L	H		FS, PS			12-Oct	semi-evergreen
<i>Berberis julianae</i>	wintergreen barberry	S,C,N	M	M		PS,FS			5	evergreen
<i>Berberis thunbergii hybrid</i>	crimson pygmy barberry	S,C,N	M	M		FS,PS			5-Mar	deciduous
<i>Bougainvillea glabra</i>	bougainvillea, paper flower	B,S,C,N	L	H		FS			8	evergreen
<i>Buddleja davidii</i>	butterfly bush	S,C,N	M	M		FS			10-Aug	evergreen
<i>Buxus microphylla v. japonica</i>	littleleaf boxwood	S,C,N	M	L		PS,FS			4	evergreen
<i>Caesalpinia pulcherrima</i>	dwarf poinciana	S,C,N	L	M		FS			P	evergreen, poisonous

<i>Callicarpa americana</i>	American beautyberry	B,S,C,N	L	L		PS,FS			6-Apr	deciduous
<i>Calliandra haematocephala</i>	red powderpuff	S,C,N	L	L		FS			15	evergreen
<i>Camellia sasanqua</i>	Sasanqua camellia	S,C,N	H	L		FS			15	evergreen
<i>Capparis cynophallophora</i>	Jamaica caper-tree	S,C	L	H		FS			9	evergreen
<i>Cephalanthus occidentalis</i>	buttonbush	S,C,N	H	L		PS,FS			12-Aug	deciduous
<i>Cestrum nocturnum</i>	night-blooming jasmine	S,C	M	M		FS			10	evergreen
<i>Chiococca alba</i>	snowberry	B,S,C	M	L		FS,PS			3	evergreen
<i>Chrysobalanus icaco "red tip"</i>	red-tip coco-plum	B	M	L		FS,PS			15-Dec	evergreen
<i>Cocculus laurifolus</i>	snail seed	S,C,N	M	L		PS,FS			13	evergreen, poisonous leaves
<i>Codiaeum variegatum</i>	croton	S,C	L	M		PS,FS			8	evergreen
<i>Conradina canescens</i>	wild rosemary	S,C,N	L	M		FS			4	evergreen
<i>Crinum asiaticum</i>	crinum lily	S,C,N	M	M		FS,PS			5	herbaceous perennial, poisonous
<i>Dodonaea viscosa</i>	varnish leaf	B,S,C,N	L	H		PS,FS			6	evergreen
<i>Duranta repens</i>	golden dewdrop	S,C,N	L	M		PS,FS			14-Dec	evergreen, fruit is poisonous
<i>Erythrina herbacea</i>	coralbean, Cherokee bean	B,S,C,N	L	M		PS,FS			15	evergreen, seeds poisonous
<i>Eugenia foetida</i>	Spanish stopper	B	L	H		PS,FS				evergreen
<i>Forestiera segregata</i>	Florida privet	B,S,C,N	L	H		FS			10	evergreen
<i>Gamolepis chrysanthemoides</i>	African bush daisy	S,C,N	M	L		FS			3	evergreen
<i>Garberia heterophylla</i>	garberia	C,N	L	M		FS			6	evergreen
<i>Gardenia augusta</i>	gardenia	S,C,N	H	L		FS			6	evergreen
<i>Gossypium hirsutum</i>	wild cotton	B,S,C,N	L	H		PS,FS			12-Jun	evergreen, endangered in wild
<i>Hamelia patens</i>	firebush	B,S,C	L	M		PS,FS			10-Mar	evergreen
<i>Hibiscus rosa-sinensis</i>	Hibiscus	S,C	H	M		FS			10-Aug	evergreen
<i>Hibiscus coccineus</i>	swamp hibiscus	S,C	H	L		PS,FS			6-May	herbaceous perennial
<i>Hibiscus syriacus</i>	Rose-of-Sharon	S,C,N	H	L		FS			10	deciduous
<i>Hydrangea macrophylla</i>	hydrangea	S,C,N	H	L		FS			5	deciduous

<i>Ilex cornuta</i>	Buford holly	S,C,N	M	L		PS,FS			15-Aug	evergreen
<i>Ilex crenata</i>	Japanese holly	S,C,N	H	L		PS,FS			10-Aug	evergreen
<i>Ilex glabra</i>	inkberry, gallberry	S,C,N	L	M		PS,FS			7-Jun	evergreen
<i>Ilex vomitoria "Nana"</i>	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			10-Aug	evergreen
<i>Itea virginica</i>	Virginia sweetspire	S,C,N	H	L		PS,FS			7-Apr	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	H		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			15-Oct	evergreen
<i>Lyonia lucida</i>	fetterbush, shiny lyonia	B,S,C,N	H	L		FS,PS			5-Mar	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			8-Jun	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			9-Jun	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>Rhaphiolepis 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			6-Apr	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			15-Oct	deciduous
<i>Scaevola plumieri</i>	beachberry	B	L	H		FS			5-Mar	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			8-Jun	evergreen, seeds and pods are poisonous
<i>Stachytarpheta urticifolia</i>	blue porterweed	B,S,C,N	L	H		FS			5-Apr	evergreen
<i>Tibouchina urvilleana</i>	glorybush	S,C,N	H	L		PS,FS			10	evergreen
<i>Tournefolia=Argusia</i> <i>gnopthalodes</i>	sea lavender	S,C	L	H		FS			6	evergreen
<i>Turnera ulmifolia</i>	yellow alder	B,S,C,N	L	H		PS,FS			4-Feb	evergreen
<i>Vaccinium myrsinities</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			15-Dec	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			10-Aug	evergreen
<i>Yucca aloifolia</i>	spanish bayonet	B,S,C,N	L	H		FS			14-Dec	evergreen
<i>Yucca smalliana</i>	Adam's needle	B,S,C,N	L	H		FS			5	evergreen
<i>Zamia floridana</i>	coontie	B,S,C,N	L	H		FS,PS			2	evergreen
<b>GROUNDCOVERS</b>										
<i>Aloe spp.</i>	aloe	B,S,C,N	L	H		FS,PS			1	perennial
<i>Bacopa monnieri</i>	waterhyssop	B,S,C,N	H	H		FS			0.5	perennial
<i>Borrchia frutescens</i>	bushy sea oxeye daisy	B,S,C,N	M	H		FS			3	perennial
<i>Canavalia rosea</i>	beach bean	B,S,C	L	H		FS			0.5	perennial
<i>Ernodea littoralis</i>	beach-creeper	B,S	L	H		FS			2	perennial
<i>Hemerocallis spp.</i>	daylily	B,S,C,N	L	H		FS			2	perennial
<i>Juniperus spp.</i>	juniper, many varieties	B,S,C,N	L	M-H		FS			varies	evergreen
<i>Licania michauxii</i>	gopher-apple	B,S,C,N	L	H		FS			1	evergreen
<i>Sesuvium portulacastrum</i>	sea-purslane	B,S,C,N	L	H		FS			3-Jan	perennial
<b>GRASSES</b>										

<i>Andropogon brachystachyus</i>	short-spike bluestem	S,C,N	M			FS				
<i>Andropogon glomeratus</i>	bushy bluestem	B,S,C,N	H			FS				
<i>Andropogon virginicus</i>	broomsedge bluestem	B,S,C,N	M			FS				
<i>Aristida spiciformis</i>	bottlebrush grass	S,C,N	M			FS				
<i>Aristida stricta</i> var. <i>beyrichiana</i>	wiregrass	S,C,N	M			FS,PS				
<i>Cladium jamaicense</i>	saw-grass	B,S,C,N	H	H		FS				
<i>Distichlis spicata</i>	saltgrass	B,S,C,N	H	H		FS				
<i>Equisetum hyemale</i>	scouring rush, horsetail	S,C,N	A			FS				
<i>Eragrostis elliotii</i>	Elliott's lovegrass	B,S,C,N	M	H		FS,PS				
<i>Eragrostis spectabilis</i>	purple lovegrass	B,S,C,N	M			FS,PS				
<i>Hypericum reductum</i>	scrub hypericum	S,C,N	M			FS				
<i>Juncus effusus</i>	soft rush	B,S,C,N	H			FS,PS				
<i>Liriope muscari</i>	lilyturf	S,C,N	M	M		PS,SH				
<i>Muhlenbergia capillaris</i>	muhly grass	B,S,C,N	M	M		FS				
<i>Ophiopogon japonicus</i>	mondo grass	S,C,N	M	H		SH				
<i>Panicum hemitomon</i>	maidencane	S,C,N	H			FS,PS				
<i>Panicum virgatum</i>	switchgrass	B,S,C,N		H		FS				
<i>Paspalum distichum</i>	salt jointgrass	B	H	H		FS				
<i>Paspalum vaginatum</i>	seashore paspalum	B,S,C,N	M	H		FS				
<i>Scirpus californicus</i>	giant bulrush	S,C,N	A			FS				
<i>Sorghastrum secundum</i>	lopsided Indiangrass	S,C,N	M	H		FS				
<i>Spartina alterniflora</i>	saltmarsh cordgrass	B,S,C,N	M	H		FS,PS				
<i>Spartina bakeri</i>	sand cordgrass	B,S,C,N	M	H		FS,PS				
<i>Spartina patens</i>	marshhay cordgrass	B,S,C,N	M	H		FS				
<i>Sporobolus junceus</i>	pineywoods dropseed	S,C,N	H	H		FS,PS				
<i>Sporobolus virginicus</i>	seashore dropseed	B,S,C,N	H	H		FS				
<i>Tripsacum dactyloides</i>	eastern gamagrass, Fakahatchee grass	B,S,C,N	L	M		FS			6-Apr	herbaceous perennial

<i>Uniola paniculata</i>	sea oats	B	H	H		FS				
<i>Zizaniopsis miliacea</i>	southern wild rice	S,C,N	A	H		FS				
<b>VINES</b>										
<i>Campsis radicans</i>	trumpet creeper	S,C,N	M			FS,PS				
<i>Canavalia rosea</i>	beach bean	B,S,C,N	H	H		FS				
<i>Gelsemium sempervirens</i>	yellow jesamine	S,C,N	M			FS,PS				
<i>Ipomopsis rubra</i>	standing-cypress	S,C,N	H			FS				
<i>Lonicera sempervirens</i>	coral honeysuckle	B,S,C,N	M			FS,PS				
<i>Parthenocissus quinquefolia</i>	Virginia creeper	B,S,C,N	M			FS,PS,SH				
<i>Passiflora incarnata</i>	passion vine	B,S,C,N	H	M		FS				
<i>Passiflora suberosa</i>	corky passion-flower	B,S,C,N	H	M		FS,PS				
<i>Symphyotrichum carolinianum</i>	climbing aster	S,C,N	H			FS,PS				
<i>Trachelospermum jasminoides</i>	confederate jasmine	B,S,C,N	H	H		FS,PS				
<i>Vitis rotundifolia</i>	muscadine grape	B,S,C,N	M			FS,PS				
<i>Ipomoea alba</i>	moonflower	B,S,C,N	M			FS				
<i>Ipomoea imperati</i>	beach morningglory	B	H	H		FS				
<i>Ipomoea pes-caprae subsp. Brasiliensis</i>	railroad vine	B	H	H		FS				
<i>Ipomoea purpurea</i>	purple morningglory	B,S,C,N				FS				
<i>Tecomaria capensis</i>	cape honeysuckle	S,C	M	L		FS		8-Jun		evergreen, can be maintained as shrub
<b>WILDFLOWERS</b>										
<i>Arisaema triphyllum</i>	jack-in-the-pulpit	S,C,N	H			PS,SH				
<i>Asclepias incarnata</i>	swamp milkweed	S,C,N	H			FS,PS				
<i>Berlandiera subcaulis</i>	Florida greeneyes	S,C,N	H			FS,PS				
<i>Boehmeria cylindrica</i>	small-spike false-nettle	S,C,N	H			FS,PS,SH				
<i>Canna flaccida</i>	golden canna	S,C,N	H			FS				
<i>Conoclinium coelestinum</i>	mistflower	S,C,N	M			FS				

<i>Conradina grandiflora</i>	large-flowered conradina	S,C,N	H	H		FS				
<i>Coreopsis floridana</i>	Florida tickseed	S,C,N	H			FS				
<i>Coreopsis leavenworthii</i>	Leavenworth's tickseed	S,C,N	M			FS,PS				
<i>Gaillardia pulchella</i>	blanket-flower, gaillardia	B,S,C,N	H	H		FS				
<i>Helianthus angustifolius</i>	narrow leaf sunflower	S,C,N				FS,PS				
<i>Helianthus debilis</i>	dune sunflower	B,S,C,N	H	H		FS				
<i>Heliotropium angiospermum</i>	scorpion-tail	B	M			FS,PS				
<i>Heliotropium polyphyllum</i>	pineland heliotrope	B,S,C,N	M	M		FS,PS				
<i>Hibiscus coccineus</i>	scarlet hibiscus	S,C,N	H			FS,PS				
<i>Hibiscus grandiflorus</i>	swamp rosemallow	S,C,N	H			FS				
<i>Hymenocallis latifolia</i>	mangrove spiderlily, perfuned spiderlily	B,S,C,N	M	H		FS,PS				
<i>Hymenocallis palmeri</i>	alligator-lily	S,C,N	M			FS,PS				
<i>Hypericum hypericoides</i>	St. Andrew's-cross	B,S,C,N	M			FS,PS				
<i>Hypericum tetrapetalum</i>	four-petal St. Peter's-wort	S,C,N	M			FS,PS				
<i>Iris hexagona</i>	prairie iris	S,C,N	H			FS,PS				
<i>Iva frutescens</i>	marsh elder	B	M	H		FS				
<i>Lachnanthes caroliana</i>	redroot	S,C,N	H			FS,PS				
<i>Liatris chapmanii</i>	Chapman's blazing-star					FS				
<i>Liatris gracilis</i>	slender blazing-star	B,S,C,N	M			FS				
<i>Liatris spicata</i>	spiked blazing-star	S,C,N	M			FS				
<i>Liatris tenuifolia</i>	blazing-star	S,C,N	H			FS				
<i>Lythrum alatum var. lanceolatum</i>	winged loosestrife	S,C,N	H			FS,PS				
<i>Melanthera nivea</i>	snow squarestem	S,C,N	M			FS,PS				
<i>Monarda punctata</i>	dotted horsemint	B,S,C,N	M	M		FS				
<i>Opuntia humifusa</i>	prickly-pear cactus	B,S,C,N	H			FS				

<i>Penstemon multiflorus</i>	manyflower beardtongue	S,C,N	H			FS			
<i>Phoebanthus grandiflorus</i>	phoebanthus	S,C,N	H			FS,PS,SH			
<i>Piloblephis rigida</i>	pennyroyal	S,C,N	H			FS			
<i>Pityopsis graminifolia</i>	silk-grass	B,S,C,N	H			FS			
<i>Rhexia cubensis</i>	meadow-beauty	S,C,N	H			FS			
<i>Rhexia mariana</i>	pale meadow-beauty	S,C,N	H			FS			
<i>Rhynchospora colorata</i>	fineleaf whitetop sedge	S,C,N	M			FS			
<i>Rudbeckia hirta</i>	blackeyed-susan	B,S,C,N		M		FS			
<i>Ruellia caroliniensis</i>	Carolina wildpetunia	S,C,N	M	M		FS,PS,SH			
<i>Salvia coccinea</i>	scarlet sage, tropical sage	B,S,C,N	M	M		FS,PS			
<i>Salvia lyrata</i>	lyre-leaved sage	S,C,N	M			FS,PS			
<i>Scutellaria integrifolia</i>	rough skullcap	B,S,C,N	M			FS,PS			
<i>Solidago fistulosa</i>	hollow goldenrod	S,C,N	H	H		FS,PS			
<i>Solidago odora var. chapmanii</i>	sweet goldenrod	B,S,C,N	M			FS,PS			
<i>Solidago sempervirens</i>	seaside goldenrod	B,S,C,N	M	H		FS			
<i>Symphotrichum dumosum</i>	bush aster	S,C,N	M			FS,PS			
<i>Teucrium canadense</i>	wood-sage	S,C,N	H	H		FS,PS			
<i>Viola lanceolata</i>	long-leaf violet	S,C,N	H			PS,SH			
<i>Viola sororia</i>	violet	S,C,N	M			PS,SH			
<i>Yucca filamentosa</i>	Adam's needle	B,S,C,N	H	H		FS,PS			
<i>Zephyranthes simpsonii</i>	Simpson's zephyr lily	S,C,N	M			FS,PS			
<i>Asclepias tuberosa</i>	butterflyweed	B,S,C,N	H	H		FS			
<b>FERNS</b>									
<i>Acrostichum danaeifolium</i>	giant leather fern	B,S,C,N	H	M		FS,PS,SH			
<i>Blechnum serrulatum</i>	swamp fern	B,S,C,N	H			PS,SH			
<i>Nephrolepis exaltata</i>	wild Boston fern	B,S,C,N	M			PS,SH			

<i>Osmunda cinnamomea</i>	cinnamon fern	B,S,C,N	H			FS,PS				
<i>Osmunda regalis var. spectabilis</i>	royal fern	B,S,C,N	H			FS,PS,SH				
<i>Pteridium aquilinum</i>	bracken fern	B,S,C,N	M	M		FS,PS,SH				
<i>Thelypteris kunthii</i>	widespread maiden fern	S,C,N	M			PS,SH				
<i>Woodwardia areolata</i>	netted chain fern	S,C,N	H			PS,SH				
<i>Woodwardia virginica</i>	chain fern	S,C,N	H			FS,PS,SH				
<b>HERBACEOUS AQUATIC PLANTS</b>										
<i>Nuphar advena= N. lutea</i>	cowlily, spatterdock	S,C,N	A			FS				
<i>Nymphaea mexicana</i>	yellow water-lily	S,C,N	A			FS				
<i>Nymphaea odorata</i>	white water-lily	B,S,C,N	A			FS				
<i>Pontederia cordata</i>	pickerelweed	S,C,N	A			FS,PS				
<i>Sagittaria lancifolia</i>	lance-leaved arrowhead	S,C,N	A			FS,PS				
<i>Saururus cernuus</i>	lizard's-tail	S,C,N	H			PS,SH				
<i>Scirpus californicus</i>	giant bulrush	S,C,N	A			FS				
<i>Thalia geniculata</i>	alligator flag	S,C,N	A			FS,PS				
<b>HERBACEOUS PLANTS FOR INLAND WET AREAS</b>										
<i>Hydrangea quercifolia</i>	oakleaf hydrangea	S,C,N	H	L		PS,FS			6-May	deciduous, poisonous
<i>Rhododendron canescens</i>	pinxter azalea	S,C,N	H	L		PS			10	deciduous
<i>Viburnum nudum</i>	possum haw	S,C,N	H	L		PS,SH			12-Jun	deciduous
<b>FOOTNOTES</b>										
1- <i>Waterwise</i> , published by the Water Management Districts										
2- Live Oak will topple if not given adequate room for proper root structure										

~~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 ACTIVITY 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 or 3 years depending on type of land use)** 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 vegetation 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 or 3 years depending on type of land use** 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: \_\_\_\_\_ Property Owner(s):  
(2 witnesses for each property owner)~~

\_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(NAME & TITLE)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
(NAME & TITLE)

STATE OF FLORIDA \_\_\_\_\_ )  
\_\_\_\_\_)SS  
COUNTY OF BREVARD \_\_\_\_\_ )

~~BEFORE ME, personally appeared \_\_\_\_\_ to me well known to be there person(s) described in and who executed the foregoing instrument, and acknowledge to and before me that they executed said instrument under oath, and for the purposes therein expressed.~~

Witness my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Notary Public, State of Florida at Large

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
My commission expires:  
\_\_\_\_\_

**EXHIBIT A**  
**Legal Description**

~~Exhibit B~~  
~~Vegetation Restoration and Replacement Minimum Standards~~

**RESOLUTION 06- \_\_\_\_****A RESOLUTION ESTABLISHING COMPENSATION COSTS FOR TREES AND VEGETATION REMOVED FROM LANDS WITHIN BREVARD COUNTY.**

**WHEREAS**, Brevard County' Landscaping, Land Clearing and Tree Protection regulations provide the compensation of trees and vegetation removed from lands within Brevard County; and

**WHEREAS**, these costs should reflect actual costs of replacement trees, vegetation and lands; and

**WHEREAS**, this resolution will allow for periodic review and update of the compensation costs; and

**WHEREAS**, the Brevard County Board of County Commissioners, Florida, has determined that the fees hereinafter specified are reasonable.

**NOW, THEREFORE BE IT RESOLVED, BY THE BREVARD COUNTY BOARD OF COUNTY COMMISSIONERS, FLORIDA**, that:

**SECTION 1. Establishment of Schedule of Compensation Costs.**

A schedule of compensation costs used for the implementation of the Landscaping, Land Clearing and Tree Protection Regulations, as specified herein, is established and adopted for the Natural Resources Management Office as follows:

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

$$C = \$400.00(NREM) + \$120.00(TDBH)$$
- (B) Compensation for trees of known Number REMoved (NREM) but unknown total diameter shall be calculated by the formula  

$$C = \$3,000(NREM)$$
- (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 is 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 62-3636 of this Article.

**SECTION 3. Revision of Schedule of Fees and Charges.** The schedule of charges as established herein may, by resolution of the Board of County Commissioners of Brevard County, Florida, be amended or repealed, in whole or in part, as required for economical provision of such services.

**SECTION 4. Public Record and Posting.** In accordance with Brevard County Ordinance No. 73-17, a certified copy of this Resolution shall be posted for public inspection in the Brevard County Natural Resources Management Office.

**SECTION 6. Effective Date.** This Resolution shall take effect on the effective date of Ordinance No. 06-\*\*\*.

Adopted this \_\_\_\_ day of \_\_\_\_\_2006 in regular session.

ATTEST:

BOARD OF COUNTY COMMISSIONERS  
OF BREVARD COUNTY, FLORIDA

-----  
Scott Ellis, Clerk

-----  
Helen Voltz, Chairperson  
As approved by the Board on

\_\_\_\_\_