Avoiding Invasive Plants in the City of Dana Point

The temperate climate, broad range in elevation and latitude, and rich soils found in California sustain a rich diversity of native plants throughout the state. This same rich environment can support many species of plants from around the world. Some are beautiful and useful, while others become invasive pests. Invasive plants are fierce competitors that threaten California's native biodiversity and ecosystems. Unfortunately, about 450 plants originally imported for use in ornamental horticulture in California have migrated from their original locations and have created serious environmental problems.

Without the natural controls found in their place of origin, invasive plants move quickly into watersheds, invading our natural open spaces and agricultural land. In the home garden they can become a significant weeding chore, but even more importantly, their infiltration into natural open spaces and agricultural areas are a disaster for land stewards and a financial drain for both farmers and consumers. Natural landscapes, waterways and recreation areas are impacted by decreased quality of animal habitat and increased risk of wildfires as invasive plants take over and crowd out native vegetation. The costs to manage the problem are overwhelming. Invasive plants are the second greatest threat to biodiversity and ecosystems after human caused habitat destruction.

This guide has been prepared to help identify invasive plants that are of highest concern in the City of Dana Point, in order to discontinue their use and encourage eradication.

What is an "invasive" plant?

Invasive plants are species that are non-native (i.e. "exotic" or have been introduced from other regions) and cause or are likely to cause harm to the environment, economics and/or human health.

What is the concern with invasive plants?

Invasive plants displace native plants and wildlife, causing disruption of natural ecosystem processes which can result in increased wildfire, flood danger and erosion. Invasive plants can also c*log valuable waterways, degrade recreational opportunities, and destroy productive range and timber lands.*

What invasive plants should I be concerned about?

The City prohibits the planting of the following invasive plants. This information has been compiled for simplicity from the best resources available and is subject to change with priorities and time.

List of Top 25 Invasive Plants Observed in the City of Dana Point – Text Only

(a table with photos and notes follows)

The City prohibits the planting of the following invasive plants.

Botanical Name	Common Name
Acacia longifolia	Sydney golden wattle, golden wattle
Anagallis arvensis	Scarlet Pimpernel
Arundo donax	Arundo, Giant Reed, Giant Cane,
Asparagus asparagoides	Bridal Creeper / Wild Asparagus / Asparagus Fern
Brassicaceae spp. *(Cruciferae)*	Mediterranean Hoary Mustard, Summer Mustard, Wild mustard, short podded mustard
Carpobrotus edilus	Iceplant, Highway iceplant, Hottentot fig, sea fig
Centaurea solstitialis	Yellow Star-thistle
Cortaderia selloana	Pampas Grass
Cynara cardunculus	Artichoke Thistle
Eucalyptus spp.	Eucalyptus
Ficus carica	Edible Fig
Foeniculum Vulgare	Fennel, Sweet Fennel, Wild Fennel, Biscuit Root
Genista monspessula-na	French Broom, Broom, Genista
Hypericum canariense	St. John's Wort, Canary Island hypericum
*Limonium perezii**	Perez's Sea Lavender *Note: At this time, this is prohibition is limited to parcels adjacent to the Headlands Biological Open Space.
Malephora crocea	Croceum Iceplant
Mesembryanthemum crystallinum	Crystalline Ice Plant
Myoporum laetum	Myoporum, Mousehole Tree, Ngaio Tree
Nicotiana glauca	Tree Tobacco
Oxalis pescaprae	Bermuda Buttercup
Raphanus sativus	Wild Radish
Ricinus communis	Castor Bean
Salsola tragus	Russian Thistle
Spartium junceum	Spanish Broom
Tamarix spp.	Salt Cedar, Tamarisk

List of Top 25 Invasive Plants Observed in the City of Dana Point with Photos & Notes

The City prohibits the planting of the following invasive plants.

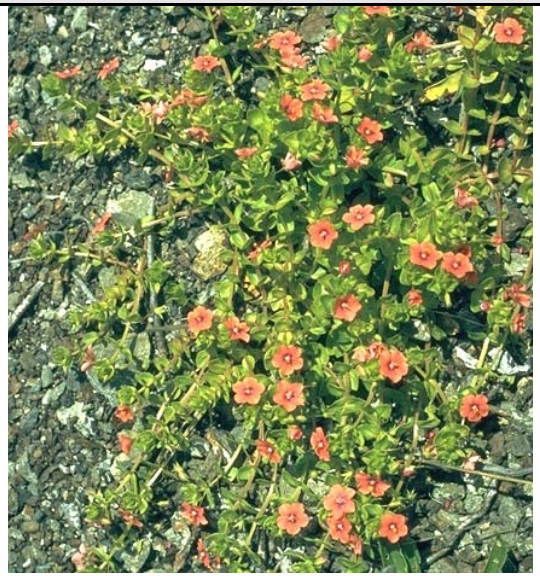
Common Name	Botanical Name	Photo(s)	Notes
Bridal Creeper / Wild Asparagus / Asparagus Fern	*Asparagus asparagoides*	 © 2011 P.Roullard.	Plant shoots can form dense mats that limit light levels and then die back in the summer, creating a fire hazard. Plant colonies may also form a dense tuberous mat underground, preventing other plants from accessing soil moisture and nutrients.
Castor Bean	*Ricinus communis*	 © Br. Alfred Brousseau	*Ricinus communis* grows easily and quickly in our mild climate. One plant can produce at least 10,000 seeds. Once established in riparian areas, it can be difficult to control. It seeds within 3-6 months and quickly produces multiple generations within one year. Seeds can also be poisonous to wildlife. It is difficult to confine to landscaped areas, and is not recommended for landscaping. Castorbean contains ricin, an extremely toxic chemical that can kill an adult who consumes only four to eight seeds. Handling foliage and seeds can cause severe dermatitis.

Common Name	Botanical Name	Photo(s)	Notes
Mediterranean Hoary Mustard, Summer Mustard, Wild mustard, short podded mustard	*Brassicaceae* spp. *(Cruciferae)*		This plant grows profusely and may produce allelopathic chemicals that inhibit germination of native plants.
Yellow Star-thistle	*Centaurea solstitialis*	 © 2008 Luigi Rignanese	Yellow starthistle inhabits open hills, grasslands, open woodlands, fields, roadsides, and rangelands, and it is considered one of the most serious rangeland weeds in the state. It propagates rapidly by seed, and a large plant can produce nearly 75,000 seeds.

Common Name	Botanical Name	Photo(s)	Notes
Giant Reed, Giant Cane, Arundo	*Arundo donax*	 J. Giessow, www.cal-ipc.org  © 2002 David Graber	*Arundo donax* is a tall perennial grass that has severe ecological impacts on ecosystems, plant and animal communities. Its reproductive biology and other attributes are conducive to moderate to high rates of dispersal and establishment. It sometimes occupies entire river channels from bank to bank. It displaces native plants and associated wildlife species because of the massive stands it forms. It is also believed to alter hydrological regimes and reduce groundwater availability and presents fire hazards due to the massive quantity of fuel available, often near urban areas.

Common Name	Botanical Name	Photo(s)	Notes
Artichoke Thistle	*Cynara cardunculus*	 © Br. Alfred Brousseau, Saint Mary's College	Artichoke thistle prefers disturbed open sites, including grassland, chaparral, coastal scrub, and riparian areas. This thistle is closely related to cultivated artichokes (Cynara scolymus), and the two species hybridize frequently. Artichoke thistle is also sometimes grown as an ornamental plant, and is available commercially. It reproduces by seed and sometimes by resprouting from root fragments. When attempting control by mechanical removal, most of the plant's large taproot must be removed to avoid resprouting.
Crystalline Ice Plant	*Mesembryant -hemum crystallinum*	 © Joseph Dougherty, M.D./ecology.org	Crystalline iceplant inhibits the growth of native plants by accumulating salt in the soil and by leaving behind mats of dry plant matter that may take several years to decompose.

Common Name	Botanical Name	Photo(s)	Notes
Russian Thistle	*Salsola tragus*	 © 2010 Jean Pawek	Russian-thistle can impede traffic, create fire hazards, and is a host of the beet leaf-hopper, an agricultural insect pest.
St. John's Wort, Canary Island hypericum	*Hypericum canariense*	 © Br. Alfred Brousseau, Saint Mary's College	Canary Island hypericum infests disturbed areas, especially in coastal sage scrub and grassland habitats. This ornamental shrub forms dense stands that exclude native species.

Common Name	Botanical Name	Photo(s)	Notes
Scarlet Pimpernel	*Anagallis arvensis*	 © Br. Alfred Brousseau, Saint Mary's College	The low growth and small root system of A. arvensis suggest that it is not a very competitive weed. However, it may germinate early in spring before other plants become established, develop into dense masses, and thereby suppress the early growth of other native plants.
Bermuda Buttercup	*Oxalis pescaprae*	 © Br. Alfred Brousseau, Saint Mary's College	Due to its extensive occurrence in yards and gardens, Bermuda Buttercup has the potential to rapidly spread via the production of bulbs and the movement of contaminated soils into adjacent natural areas and it is practically impossible to eradicate infested soils of this weed.

Common Name	Botanical Name	Photo(s)	Notes
Pampas Grass	*Cortaderia selloana*		Pampas grass competes with native vegetation, reduces the aesthetic and recreational value of these areas, and also increases the fire potential with excessive build-up of dry leaves, leaf bases, and flowering stalks. Each plume produces up to 100,000 seeds that are widely dispersed by wind and develop without fertilization. Vast root systems dominate soil.
Tree Tobacco	*Nicotiana glauca*	 Dr. Samuel J. Pusateri © California Academy of Sciences	*Nicotiana glauca* poses a threat to biodiversity by competing with native species for resources and displacing native plants. All parts of the plant are poisonous.

Common Name	Botanical Name	Photo(s)	Notes
Myoporum, Mousehole Tree, Ngaio Tree	*Myoporum laetum*	 Dr. G Dallas & Margaret Hanna ©California Academy of Sciences. 	This is fast growing, adaptable, 15 to 30 foot tall evergreen shrub shading, that shades, outcompetes and displaces native species. Its heavy seed production results in dense monocultures. Birds disperse seeds over long distances resulting in rapid expansion of infested areas. Leaves and fruits are potentially toxic to wildlife. It can survive periods of drought.

Common Name	Botanical Name	Photo(s)	Notes
Iceplant, Highway iceplant, Hottentot fig, sea fig	*Carpobrotus edilus*	 Carsten Niehaus	Iceplant tolerates a range of soil moisture and nutrient conditions and competes directly with several threatened or endangered plant species for nutrients, water, light, and space In addition, it can lower soil pH in loamy sand. It can reproduce both vegetatively and by seed. Seed production is high, with hundreds of seeds produced in each fruit. Fruits mature on the plant and are eaten by mammals such as deer, rabbits, and rodents. Because of the ability to produce roots and shoots at every node, any shoot segment can become a propagule.
Salt Cedar, Tamarisk	*Tamarix* spp.	 © 2006 J. G. Riend	Tamarisk species spread easily to natural areas and once established in natural lands or open spaces it directly competes with native plants. It alters stream hydrology and soil salinity, and it uses more water then native plants, lowering the water table. It can reproduce by seed and vegetative growth, roots also sprout adventitiously; individual plants can produce 500,000 tiny seeds per year, which are easily dispersed by wind and water.

Common Name	Botanical Name	Photo(s)	Notes
Wild Radish	*Raphanus sativus*	 ©Rebecca Snyder http://www.fallbrooksource.com	*Raphanus sativus* is an annual or occasionally a perennial that frequently invades grasslands and open/disturbed areas, including roadsides in California. Wild radish may also be found in wetland areas. Wild radishes are capable of excluding native plant species and are, on rare occasion, toxic to livestock.
Croceum Iceplant	*Malephora crocea*	 © Br. Alfred Brousseau, Saint Mary's College	A long-blooming, sturdy, succulent groundcover, resistant to fire, heat and drought, *Malephora crocea* is well adapted to the coastal and foothill climates and is tolerant of a wide variety of soil conditions. It is frequently used as ground cover for erosion control. Naturalizes and invades vegetatively by creeping into adjacent areas, or breaks off and can be transferred through storm drains to establish a foothold in wetland areas downstream.

Common Name	Botanical Name	Photo(s)	Notes
Fennel, Sweet Fennel, Wild Fennel, Biscuit Root	*Foeniculum Vulgare*	 © 2011 Barry Breckling	Fennel can drastically alter the composition and structure of many plant communities, including grasslands, coastal scrub, riparian, and wetland communities. It grows quickly, out-competing native plants for sunlight and water. It is still unclear whether culinary varieties of fennel are invasive. The ability of this species to tolerate heat, aridity, wind, salt spray and drought has facilitated its spread throughout the watershed.
Sydney golden wattle, golden wattle	*Acacia longifolia*	 © 2002 Dean Wm. Taylor	This species is able to tolerate heat, aridity, wind, salt spray and drought. It has been used extensively for landscaping along freeways and has spread into watersheds.

Common Name	Botanical Name	Photo(s)	Notes
Spanish Broom	*Spartium junceum*	 © 2006 Luigi Rignanese	Spanish Broom rapidly colonizes disturbed habitats and develops thick shrub communities that prevent colonization by native soft or hard chaparral species. Stands contain a large amount of dead wood and can become a fire hazard in dry months. It is also poor forage for wildlife species.
French Broom, Broom, Genista	*Genista monspessula-na*	 © Br. Alfred Brousseau, Saint Mary's College	French broom is an aggressive invader, forming dense stands that exclude native plants and wildlife. This species produces dense, long-lived seed banks making eradication difficult.

Common Name	Botanical Name	Photo(s)	Notes
Eucalyptus	*Eucalyptus* spp.	 Shelagh Fritz, www.nps.gov/goga/photosmultimedia/index.htm	Native plants are unable to grow underneath groves of eucalyptus. This has been attributed to either the thick litter layer that can develop, or perhaps an allelopathic effect. *Eucalyptus globulus* also contributes to the spread of fire because of its characteristic long, stringy bark.
Edible Fig	*Ficus carica*	 @ 2005 Luigi Rignanese (CalPhotos)	*Ficus carica* (edible fig) is a shrub to tree (family Moraceae). Research is underway to determine which cultivars of fig become invasive.

Common Name	Botanical Name	Photo(s)	Notes
Perez's Sea Lavender* *Note: At this time, this is prohibition is limited to parcels adjacent to the Headlands Biological Open Space.	*Limonium perezii*	 © Br. Alfred Brousseau, Saint Mary's College	Sea Lavender is fully adapted to mild and dry coastal climates and grows easily in seaside gardens. It is these characteristics that have enabled this plant to escape cultivation and grow on dunes and bluffs in coastal areas.1 Because of its ability to grow and spread in coastal and riparian areas, it is not recommended for landscaping adjacent to these areas.

NOTE:

This list is not exhaustive and has been condensed from the best available local resources used in the industry. The intent of the list is to provide a short and simple list of invasive plants that pose the biggest threat to our City. The Guide is provided solely for informational purposes and is not intended to be a standard. The city of Dana Point shall not be liable for errors of fact or omission with regards to the data contained herein or for damages resulting from the use of information contained in the Guide.

For a more comprehensive list of invasive plants, along with other information, please refer to the following resources: www.cal-ipc.org, www.plantright.org, www.calflora.org, *Nonnative Invasive Plants of the Pacific Coast Forests, A Field Guide for Identification*, USDA, May 2011, http://weedwatch.lasgrwc.org, OC Natural History at http://nathistoc.bio.uci.edu/, and the *San Diego County Invasive Ornamental Plant Guide*.

This Guide is intended to be a living document to ensure the most up-to-date information on current conditions. If you have any questions, please visit the Dana Point Nature Interpretive Center at 34558 Scenic Drive, Dana Point or contact the City's Natural Resource Protection Officer at 949-542-4755. Thank you for your interest.

Last Update: May 2012