



CITIZEN'S GUIDE TO ENVIRONMENTALLY SENSITIVE LANDS

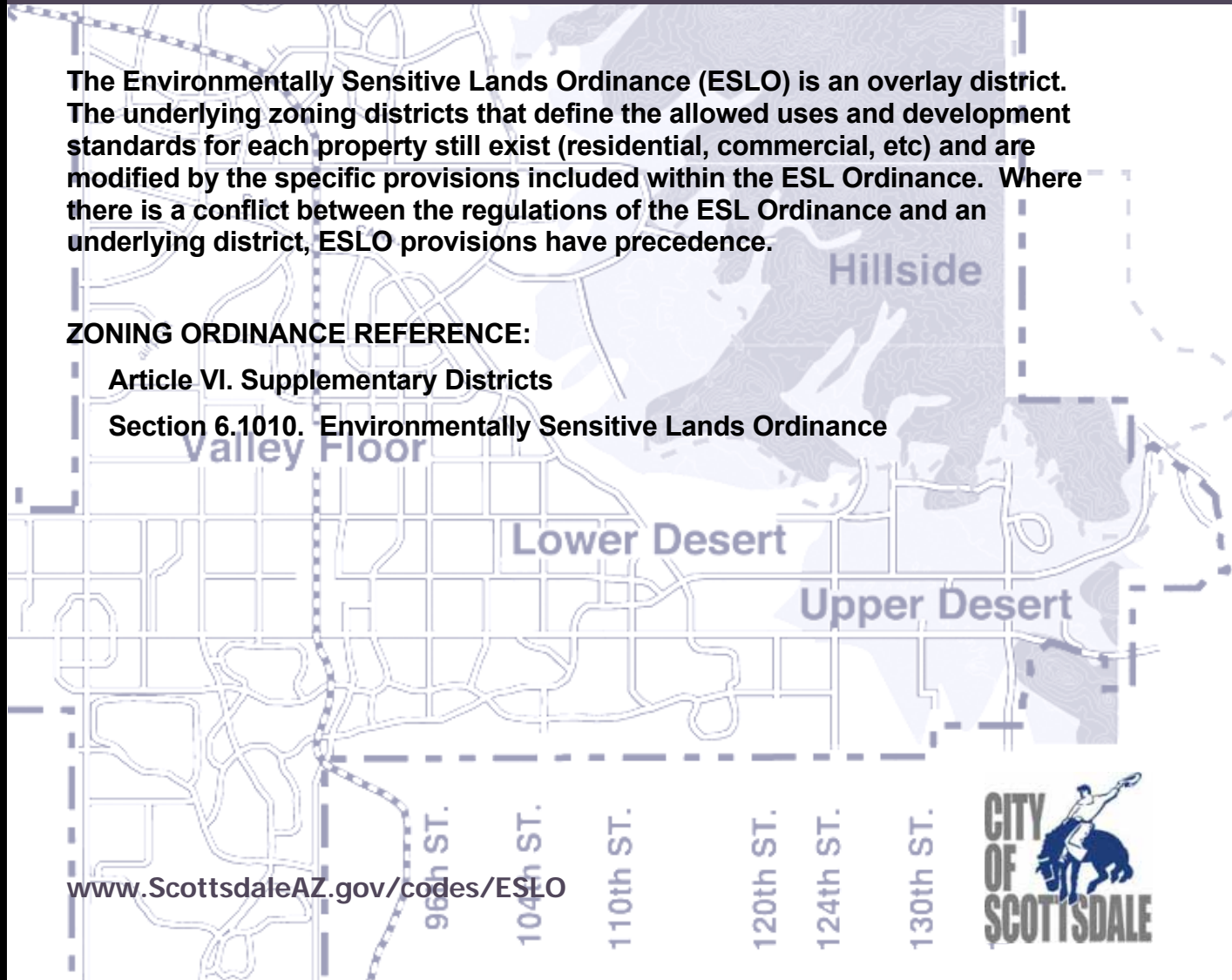
Third Amendment to the ESL Ordinance – Effective May 21, 2004

The Environmentally Sensitive Lands Ordinance (ESLO) is an overlay district. The underlying zoning districts that define the allowed uses and development standards for each property still exist (residential, commercial, etc) and are modified by the specific provisions included within the ESL Ordinance. Where there is a conflict between the regulations of the ESL Ordinance and an underlying district, ESLO provisions have precedence.

ZONING ORDINANCE REFERENCE:

Article VI. Supplementary Districts

Section 6.1010. Environmentally Sensitive Lands Ordinance



www.ScottsdaleAZ.gov/codes/ESLO



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OVERVIEW

History/Background

The Environmentally Sensitive Lands Ordinance (ESLO) is a set of zoning regulations adopted by the City Council in 1991 (amended in 2001, 2003 and 2004) to guide development throughout the 134 square miles of desert and mountain areas of northern Scottsdale. These areas are generally located north and east of the Central Arizona Project canal (see map at right).

Purpose

The intent and purpose of the ESLO is to identify and protect environmentally sensitive lands in the City and to promote public health and safety by controlling development on these lands. The ordinance requires that a percentage of each property be permanently preserved as Natural Area Open Space and that specific environmental features be protected, including vegetation, washes, mountain ridges and peaks, to assure appropriate development.

Goals

The Environmentally Sensitive Lands Ordinance has been established in order to:

- Encourage the protection of unique and sensitive natural features in the Upper Sonoran Desert, including but not limited to the mountains and hills, large rock formations, native landscape, archeological and historical sites and significant washes,
- Encourage development that blends with the character and nature of this special desert setting,
- Protect the public and property from the special hazards that can be found in this desert setting, and
- Minimize the costs to build and maintain the public infrastructure needed to sustain the use of the land.

This ordinance is not intended to deny the reasonable use of the land, but rather guide its use in ways that are sustainable and recognize the unique opportunities this setting provides.

Community Benefit

The ESLO has a direct impact on the residents of Scottsdale by determining the location and design of residential, commercial, industrial and institutional development in almost two-thirds of the City. Application of the ESLO, and its predecessor the Hillside Ordinance, has resulted in the preservation of over 9,000 acres of Sonoran Desert open space while protecting our residents from potential flooding, erosion and detrimental visual impacts.



KEY CONSIDERATIONS

ESLO Landform Areas

Many of the provisions of ESLO are organized by Landform Areas. A Landform Area is one where the geological structure, soil types, land slopes, natural vegetation and drainage patterns are relatively consistent and are distinctive from other areas. For the purposes of the ESLO there are three Landform Areas.

Lower Desert Landform

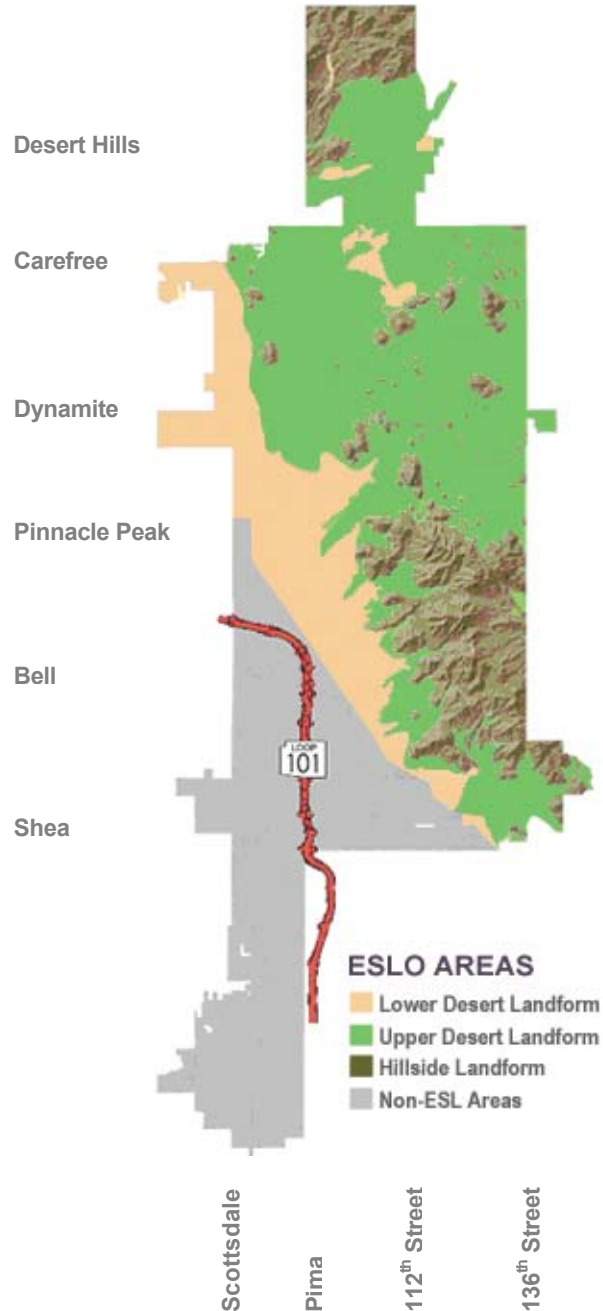
Lower Desert valley floors are generally characterized by relatively flat land slopes (less than 5%), deep fine grained soils with little or no exposed bedrock present, widely scattered washes that do not have distinctive channels and relatively sparse vegetation.

Upper Desert Landform

There are two somewhat distinct sub-units within the Upper Desert landform: bajada areas at the base of the mountains and pediment areas across an elevated plain. Bajada areas are the sedimentary outfall deposits from the nearby mountains and have moderate land slopes of 5% to 35%, granular, relatively deep soils that often have strong caliche hardpan layers below the surface, and a wide variety of vegetation that is relatively dense, particularly closer to the mountains. The pediment areas are eroded remnants of mountains and hills that form rolling plains and ridges that have moderate slopes of 5% to 35%, shallow well drained soils over a granitic bedrock outcrops and are covered with lush desert vegetation.

Hillside Landform

This landform is the significant peaks, mountains, buttes, and hills of the northern parts of the city. Some of the notable features include the McDowell Mountains, Troon Mountain, Pinnacle Peak, Brownie’s Butte, Fraesfield Mountain, Granite Mountain, Lone Mountain, Apache Peak, Continental Mountain and Gold Hill. The topography in these areas features steep (15% to over 50%) slopes, shallow or non-existent soils, rock outcrops and a variety of high desert and mountain types of vegetation.



Special Features

In addition to the major landform areas as described above, the ESLO also provides focus on and protection for Peaks and Ridges and Boulder Features. These are:

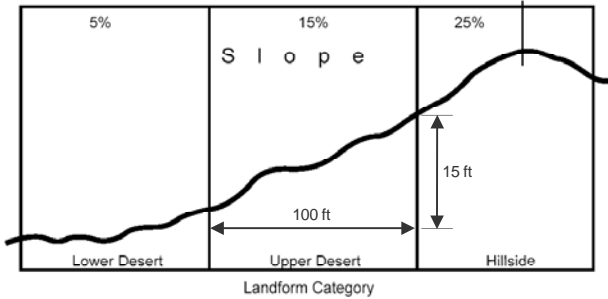
- Peaks and Ridges – The tops of mountains and hills that provide “skylining” on the horizon for large areas of the city, and
- Boulder Features – Very large boulders and clusters of boulders that are prominent in local areas.

The key peaks and ridges in the city are identified on ESL Landform maps that can be viewed on-line at www.scottsdaleaz.gov/codes/ESLO.

Land Slopes

Land slope is a key factor in determining how the ESLO is applied. Land slope is the ratio of the vertical rise of the land across a specified horizontal distance. For the purposes of this ordinance this is measured as a percentage. For example, a rise of ten feet vertically in a 100 feet distance would equal a 10% slope.

Slope Analysis



The City uses the slope of the property to determine the amount of dedicated Natural Area Open Space (NAOS) that is required by ordinance. Generally, the amount of NAOS required is determined by the slope of the land and the landform in which the site is located.

Watercourses

Although Scottsdale’s desert has no streams that flow year round, there are a great number of natural watercourses, (usually called washes) which cross over the desert floor and carry periodic stormwater flow. Wash features are important not only because they carry storm flows, but because they support more dense and mature vegetation than the rest of the desert and therefore are the habitat for many desert animals.

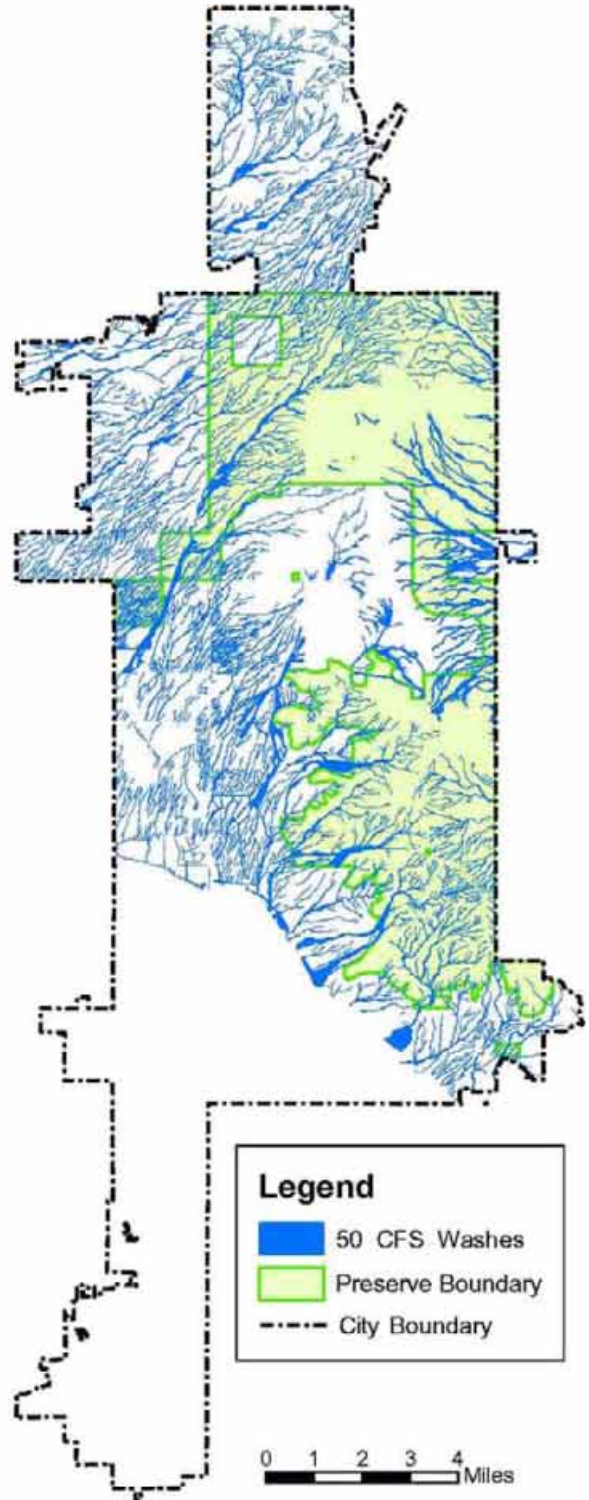
There are two categories of watercourses that are important in ESLO: major and minor.

The basic distinction is the amount of storm flow that typically occurs in a specified storm event. The flows are measured in cubic feet per second (cfs), which is a standard way to describe the magnitude of stream flows, i.e. major watercourses have a storm flow of 750 cfs or more while minor watercourses have a storm flow of between 50 and 750 cfs. The type of storm used to calculate the size of the watercourse is a 100-year event.

In general, there are some key distinctions in the character of the natural watercourses within each of the landform areas. In the Hillside Landform the watercourses are located at the bottom of deep canyons or in rock-strewn routes running straight down the steep slopes. In the Upper Desert Landform the watercourses are typically located in well-defined channels and have fairly distinct divides between the basins or watersheds feeding into each channel.

Watercourses in the Lower Desert Landform often have low banks that can be easily topped in storm flows, and there is little distinction in the basin divides from one to the next.

Draft 50 CFS Wash Map (incomplete)



MAJOR COMPONENTS

Applicability of Regulations

This first section of ESLO identifies what and how the ordinance is applied to properties. In general, all properties located within the ESL overlay area must comply with the ESL Ordinance.

Since development has occurred over the past two decades under the both the Hillside and ESL ordinances and there have been significant changes made to the ESL requirements since their initial adoption in 1991. Because of this, existing projects and neighborhoods are allowed to follow the rules that were in force at the time the development was approved, with minor exceptions (Section 6.1022.A-C).

In addition, there is a Hardship Exemption review process that can allow properties to follow an earlier version of the ordinance if it can be shown that the application of the current ESL standards results in a significant hardship and that using an earlier set of rules will still achieve the purposes of the ordinance (Section 6.1022.D).

ESLO Hardship Exemption Criteria
<p>Hardship Exemptions are heard by the City Council, and are only granted if applicants demonstrate that they meet the four criteria:</p> <ol style="list-style-type: none"> 1. A Substantial Hardship reduces the ability to use the parcel(s). 2. The exemption is consistent with the intent and purpose of the ESL Ordinance. 3. The application of the new ESLO standards does not achieve significant benefit for protection of the environment and community. 4. The proposal conforms to a previously adopted version of the ESL Ordinance.



Approvals Required

The ordinance identifies the types and standards of approvals that are required for different forms and stages of development. Due to the sensitive nature of the terrain, developments in some areas have additional approvals or requirements than developments in other areas of the city.

Intensity of Development

The intensity of a development is the amount of land use and building that occurs within a specific amount of land area. For residential land uses this is typically measured in units (residences) per overall gross acreage of the property and is referred to as density. For other types of land use, the intensity is most often measured by Floor Area Ratio (FAR), which is the total floor area on the property divided by the area of the parcel. For example, a lot with a FAR of 0.25 would permit the total floor area of on-site buildings to be up to ¼ of the net lot area of the site.

In the Lower Desert and Upper Desert Landforms there are no additional limits on the land use intensity from what is allowed by the underlying zoning district. However, there are additional limits that apply in the Hillside Landform. In Hillside landforms the amount of use and development that is allowed decreases as the slope of the land becomes steeper (see example below).

Hillside Slope	Density Allowed
Less than 25%	1 home per 5 acres
25% - 35%	1 home per 20 acres
Greater than 35%	1 home per 40 acres

These density limits recognize the difficulties, hazards and costs associated with developing on steep terrain. Exceptions to these limits may be granted by the City Council subject to certain limitations and qualifications.

Open Space Requirements

In the ESLO there are requirements for providing open space. This takes the form of Natural Area Open Space (NAOS). NAOS areas are either natural desert that has been undisturbed by development activity or where development has restored the desert terrain and vegetation to its natural condition. These open spaces are generally different than those required by the underlying zoning districts, but in some cases it may be possible for an open space area to meet requirements for both the ESLO and zoning district requirements.

The amount of NAOS required to be set aside with each development is based upon two factors -- the landform area and land slopes. The NAOS requirement increases

ESLO Citizens Guide

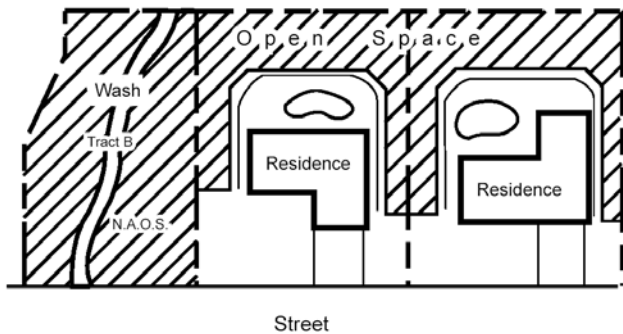
from the Lower Desert to the Hillside landform areas and from land slopes of under 2% to those over 25%. The NAOS requirement ranges from a low of 15-20% to a high of 80% of the total property area.

Land Slope	Lower Desert	Upper Desert	Hillside
0--2%	20%	25%	50%
Over 2% up to 5%	25%	25%	50%
Over 5% up to 10%	30%	35%	50%
Over 10% up to 15%	30%	45%	50%
Over 15% up to 25%	30%	45%	65%
Over 25%	30%	45%	80%
Minimum NAOS after reductions*	15%	20%	40%

(*If applicable. See Sec. 6.1060B & Sec. 6.1060F)

In subdivisions and master planned developments, this requirement may be calculated as a whole for the project and then redistributed within the project, provided that no single property or project receiving an allocation shall have less than 15% of its area provided as NAOS. In many cases individual lots and properties will have an NAOS allocation, however where the lots are smaller than 22,000 square feet in size NAOS cannot be placed on the lot and must be located in tracts.

Meaningful Open Space



To encourage preservation of certain key features, ESLO provides incentives to set aside Conservation areas, revegetate old scars such as off-road trails and preserve archeological and historic sites. In such cases it may be possible to reduce the total NAOS requirement, subject to conditions and limitations.

A related incentive, subject to specific conditions, allows for an increase in the allowed density of a property proportionate to additional dedication of NAOS.

Undisturbed vs. Revegetated (Disturbed)

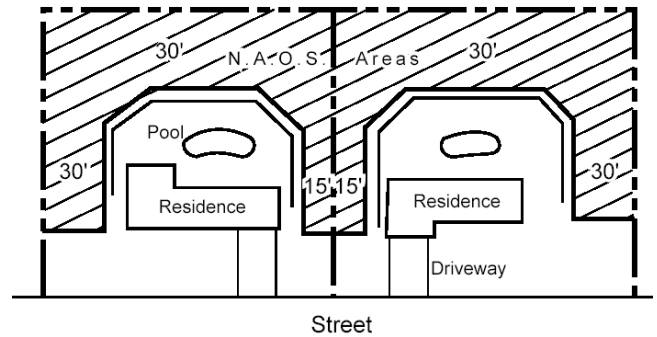
There are two forms of landscape that can be found in NAOS areas:

1. Natural and untouched desert, known as undisturbed NAOS areas; and
2. Scarred or graded areas that have been revegetated and restored to natural desert conditions, known as revegetated NAOS. The land should be contoured to match the slopes and character of nearby natural desert areas and the plant mix should match the surrounding desert.

As natural desert, NAOS areas are intended to be sustainable and unmanaged areas of desert vegetation and terrain. Therefore, regular raking, pruning, thinning and other such activities should not occur within NAOS areas. Minimal clearing of fire prone annual plant materials, such as grass and weeds, within 30 feet of an occupied building or the pruning of dead material that might endanger adjacent construction if it were to fall over may be accepted (Refer to Fire Department guidelines for brush fire prevention).

In order to provide NAOS areas that are large enough to be self-sustaining, any single NAOS area must be at least 4,000 square feet and at least 30 feet across (or 20 feet across if located next to a street). Under certain conditions, two adjoining property owners may each dedicate 15 ft of NAOS area along a common property line to obtain the minimum required 30 ft NAOS width.

Minimum N.A.O.S. Dimensions



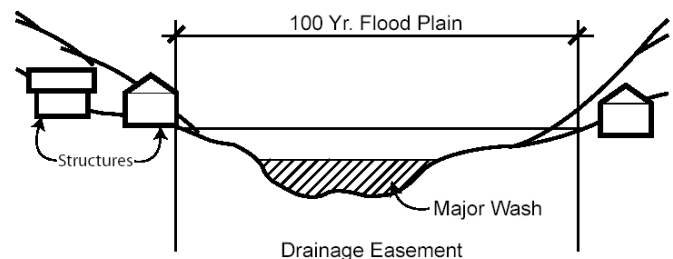
In order to assure that the provision for NAOS retains meaningful retention of the desert within a development site, ESLO provides guidelines and priorities about the location and placement of NAOS. Because they provide the greatest source of habitat in the desert and the greatest opportunity for establishing continuous, connected open space between projects, the highest priority for locating NAOS is along watercourses. It is very important to provide continuous open spaces along the washes in order to sustain both the desert plants and animals.



In order to minimize the disturbance of the natural desert and better protect key natural features:

- a. Streets should be kept to a minimum on steeper slopes and should be designed to avoid unnecessary exposed cuts and fills and locating cul-de-sacs and intersections within watercourses.
- b. NAOS areas should not be placed in front yards that are less than 40 feet deep.
- c. Grading and construction should be kept within clearly identified building envelopes so that NAOS areas are not damaged.
- d. Development should be kept away from and below protected peaks and ridges.
- e. In general, development should not intrude on or damage boulder features or major boulders. If allowed, construction that is in physical contact with boulders should be designed and conducted in a manner that minimizes any potential threat to the boulder or property adjacent to the boulder.
- f. Washes should be left in their natural state wherever this is feasible. If it is necessary and appropriate to modify a natural watercourse, the modifications should be minimal and the watercourse should be restored to a natural condition.
- g. Development of buildings and structures is not allowed within the 100-year flood plain limits of inundation of major or minor watercourses.

Major Washes / Flood Plains



Other standards seek to blend buildings and landscaping into the character of the desert setting by:

- a. Keeping building heights to a maximum of 24 feet in single-family residential districts.
- b. Measuring the allowed building height from the natural grade, which encourages buildings to follow the form of the natural topography.

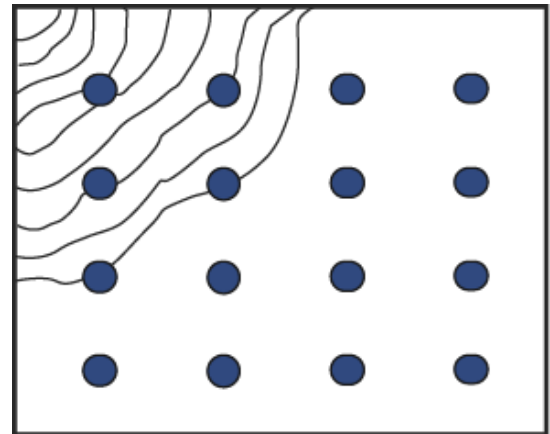
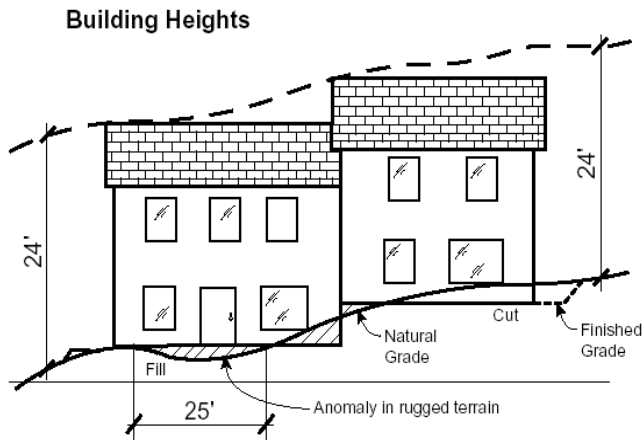
Other priorities include:

- Along the edge of the McDowell Sonoran Desert Preserve;
- Along major roadways and scenic corridors;
- Around boulder features;
- Along connected routes in and through neighborhoods;
- Along areas of steep slopes and potentially hazardous land for normal development; and
- NAOS areas should not be located in places hidden from the adjacent properties and streets.

Design Standards and Guidelines

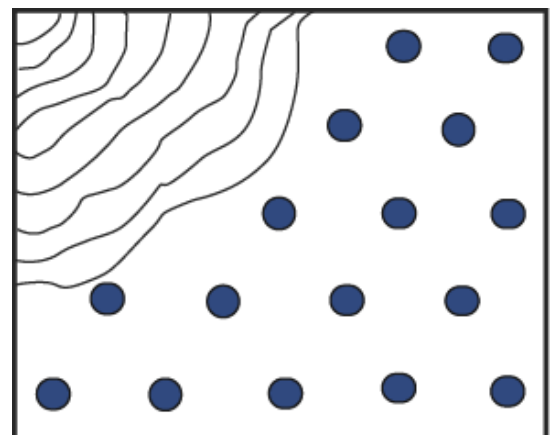
ESLO includes a number of standards and guidelines intended to achieve development designs that are sensitive to the special features of the Sonoran Desert and encourage development that blends into and respects the character of this natural desert setting. Some of these standards/guidelines relate to how development is placed into the existing desert landscape and others focus on the visual character of structures.

Density Allowed by underlying zoning without ESL overlay:



- c. Discouraging the use of subdivision perimeter walls
- d. Requiring rear and side walls on larger lots to be set back from the property lines to allow for wildlife movement and stormwater flow.
- e. Not allowing walls to cross watercourses.
- f. Reducing the glare and reflection of buildings materials by not allowing mirror-like or shiny materials and limiting the brightness of colored materials to a Light Reflective Value (LRV) of 35%.
- g. Using restrained lighting, pole heights and fixtures that do not spill glare onto adjacent properties.
- h. Limiting use of non-native plants to enclosed yard areas (enclosed by a solid wall); non-native plants with the potential of reaching over 20-ft in height are not allowed.

Option 1 - Density Transfer from mountain to flatter land:



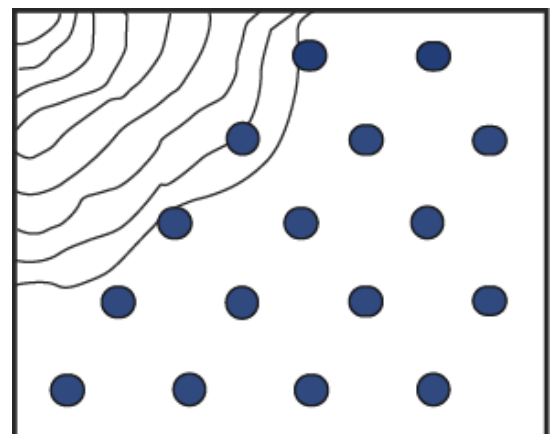
Sensitive Design Options

A number of different development techniques can be used to maximize the protection of significant and sensitive natural features. Among the major techniques provided in the ordinance are: Density Transfer, Clustering and Amended Development Standards.

Density Transfer

Density Transfer is a technique where development potential is moved off of sensitive environmental features and relocated onto less sensitive areas. Once the development potential is removed from an area, the area becomes designated as a Conservation Area either by special easements or by rezoning the area to the Conservation Open Space district. Often the area to which the development potential is moved will need to be rezoned to a different zoning district in order to reflect and allow the changed intensity of land use. This technique is most often used on large properties.

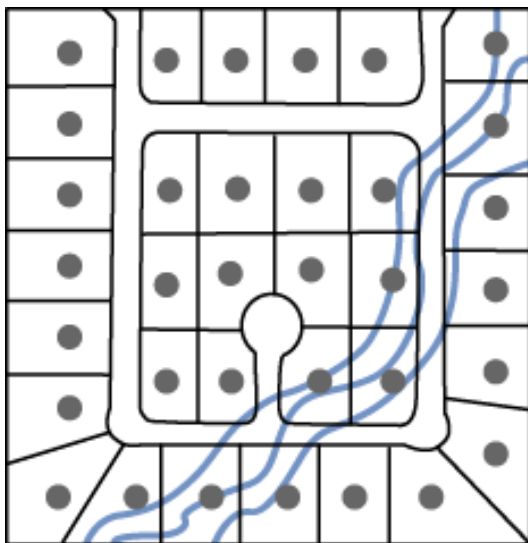
Option 2 – Build on mountain at reduced intensity:



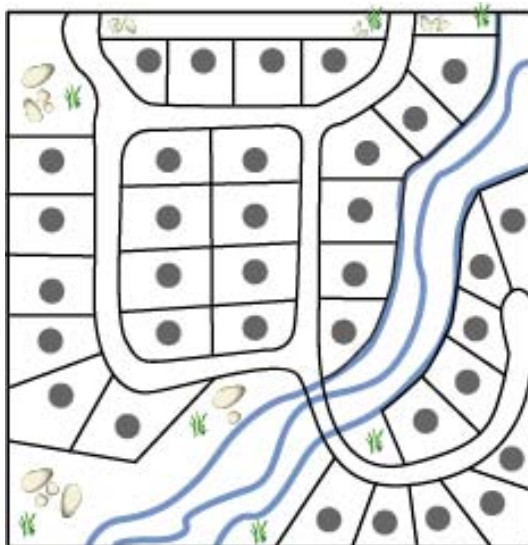
Clustering

Clustering is similar to Density Transfer but is typically done at a smaller scale. With this technique the allowed density is concentrated on those portions of a property that are less sensitive. In so doing, sensitive features are protected while the allowed development potential is not diminished. The overall character of the developed areas of the site is not changed into a different type of housing although lot areas may be reduced as sensitive portions of the site remain as open space. This technique works well on medium sized to larger properties and illustrated by the following examples.

34 Lot Subdivision, without ESL overlay – no open space requirement:



34 Lot Subdivision, with ESL overlay – Natural Area Open Space (NAOS) required:



Amended Development Standards

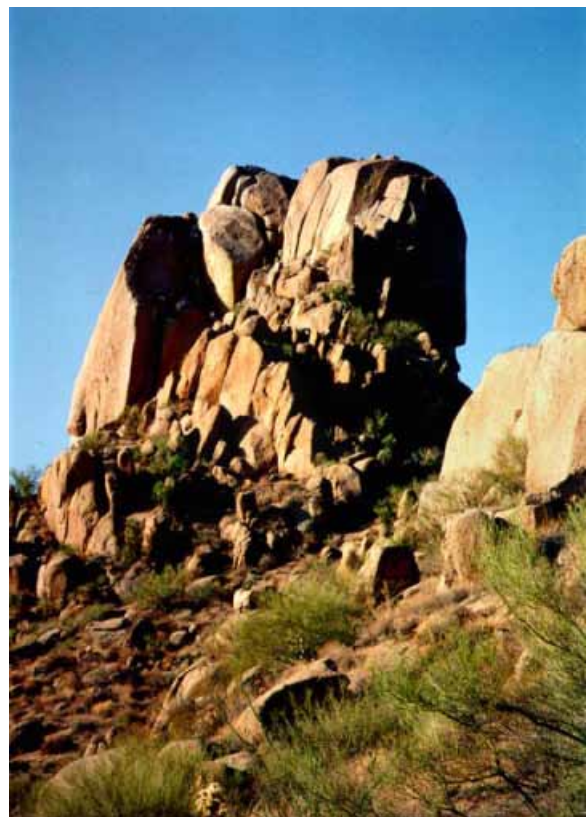
Amended Development Standards are changes to the setbacks, lot sizes and widths, which may be approved in order to allow development yet protect sensitive areas.

Typical development standards are based on a grid street pattern with lots that are the same size and orientation; this approach is not sensitive to the irregular patterns of washes, steep slopes and boulders in the desert setting. Allowing minimum lot sizes and dimensions and setbacks to be modified can encourage more sensitive lot layouts that respect such features.

If the modifications are 25% or less from the typical zoning district standards, the Development Review Board (DRB) may approve them as a part of their approval of a preliminary plat. Requests for modifications over this amount need City Council approval.

Submittal Requirements

ESLO includes an extended list of items to be included with plan submittals to assure provisions of the ordinance are met. Checklists with these and other requirements are available in the Planning and Development Services Department offices, many of which area included in the handouts as a part of a pre-application meeting.



SPECIAL CONSIDERATIONS

What rules apply to areas that were platted before the area was annexed into the city?

Since subdivisions recorded under County authority did not have a comparable zoning to the ESLO, these areas are required to follow the regulations included in the latest version of ESLO. ESLO does provide a “Hardship” process that enables the City Council to grant exemptions from the latest ESLO version, but still requires the use of an earlier version of the ordinance.

What rules apply for additions to existing homes and buildings?

If the home is in a subdivision that has been recorded and has amended development standards, or is within a master planned community, additions or expansions are allowed to develop under the amended development standards. New buildings in other properties must conform to ESLO standards unless a hardship exemption is granted by City Council.

Planning Staff can assist you in determining the regulations that apply to your property.

Does ESLO apply to accessory buildings and structures?

ESLO applies to any buildings, structures or other improvements that are required to have a permit or otherwise regulated by the provisions contained in the ordinance.

Does ESLO apply to model home complexes and standard plan home designs?

ESLO regulations do apply to these types of buildings, but there may be considerations to allow for interim parking areas, temporary information and sales centers, collective grading techniques and partial reviews where the site plan is reviewed separately from the building plans. In general, model homes should be used as examples of how ESLO will be applied to future project development.

What building permits are considered exempt as identified on the ESLO Exemptions Schedule?

This exemption is a one-time only process that applies to any buildings that received construction permits prior to the effective date of the ordinance (May 21, 2004). This allows those buildings to proceed without having to be redesigned to meet the latest revisions.

Which lots fall under the “Individual Lot Walls” provisions of the ESLO Exemptions Schedule?

Any lot that has at least 35,000 square feet in area, regardless of location or zoning district.



What are the penalties for not following the regulations of the ESLO?

For sites where the violation is in association with approved on-site construction, a violation of these provisions may result in re-inspections, requests to remedy, re-submittal of plans, or possibly a “stop work order”. For properties that are already built, violations of these regulations are considered a violation of the Zoning Ordinance and may be processed through the notice, ticketing, court proceedings and fines sections as provided by this ordinance.

RELATED RESOURCES

There are a number of other ordinances and policies that support the environmental sensitivity of the ESLO, but focus on other policies and issues as well:

- **Native Plants Ordinance** – This section of the zoning ordinance focuses on the consideration for the protection and transplanting of major native plant specimens. This section not only applies to lands within the ESLO overlay, but to all parts of the city.
-- <http://www.scottsdaleaz.gov/codes/NativePlant/>
- **Water Conservation Ordinance** – This ordinance focuses on standards and approaches that help to conserve the limited water resources available to the city.
-- <http://www.scottsdaleaz.gov/water/>
-- <http://www.scottsdaleaz.gov/codes/>
- **Foothills Overlay Ordinance** – This section of the zoning ordinance was created to maintain the open, rural character of certain neighborhoods in the city.
-- <http://www.scottsdaleaz.gov/codes/>
-- <http://eservices.scottsdaleaz.gov/cosmap/>
- **Scenic Corridors Design Guidelines** – This document focuses on design and operational standards for special setbacks along key major roads in the city
-- <http://www.scottsdaleaz.gov/design/CorridorPlans/>
- **Desert Foothills Character Area Plan** – This policy document outlines design guidelines for development to ensure a good fit with the established character of the Desert Foothills area.
-- <http://www.scottsdaleaz.gov/Design/AreaPlans/>
- **Dynamite Foothills Character Area Plan** – This policy document is similar to the previous described plan but focuses on a different neighborhood
-- <http://www.scottsdaleaz.gov/Design/AreaPlans/>

Questions or Comments?

Contact the Planning Department
Customer Relations Division.
Call 480-312-7800 or e-mail
PlanningInfo@ScottsdaleAZ.gov.

Special Maps

In support of ESLO, the city has established a series of maps that depict information that can help an applicant for a development proposal prepare their submittal. These include:

- **Aerial photographs** of the entire city
-- <http://eservices.scottsdaleaz.gov/cosmap/>
- **Topographic contour maps** with 2 foot contours
-- <http://eservices.scottsdaleaz.gov/cosmap/>
- **ESL Landform Maps** that show the locations of the landform areas and protected peaks and ridges
-- <http://www.scottsdaleaz.gov/codes/ESLO/>
- **ESLO NAOS Priority Maps** that show the locations of significant environmental and open space features that show be given priority in the placement of NAOS areas
-- <http://www.scottsdaleaz.gov/codes/ESLO/>



Customer Relations

(480) 312-7800

PlanningInfo@ScottsdaleAZ.gov

Current Planning Services

(480) 312-7000

Coordinates review of all development requests

Plan Review

(480) 312-7080

Review of final plans for construction projects

Inspections and Land Survey Services

(480) 312-5750

Field inspections and compliance with building codes

Permit Services

(480) 312-2500

Permits and plan submittal

Records

(480) 312-2356

Recorded documents and plat information



City of Scottsdale
Planning & Development Services
One Civic Center, First Floor
7447 E Indian School Road, Suite 105
Scottsdale, AZ 85251