



NOTICE AND AGENDA
SANTA CLARA CITY COUNCIL SPECIAL WORK MEETING
WEDNESDAY, SEPTEMBER 2, 2026
TIME: 5:00 PM

Public Notice is hereby given that the Santa Clara City Council will hold a Special Work Meeting in the Santa Clara City Council Chambers located at 2603 Santa Clara Drive, Santa Clara Utah on Wednesday, September 2, 2026, commencing at 5:00 PM. The meeting will be broadcasted on our city website at <https://santaclarautah.gov>.

1. Call to Order:

2. Working Agenda:

A. General Business:

1. Discussion regarding Hillside Ordinance Update. Presented by Jim McNulty, Planning Director.

3. Adjournment:

Note: In compliance with the Americans with Disabilities Act, individuals needing special accommodation during this meeting should notify the city no later than 24 hours in advance of the meeting by calling 435-673-6712. In accordance with State Statute and Council Policy, one or more Council Members may be connected via speakerphone or may by two-thirds vote to go into a closed meeting.

The undersigned, duly appointed City Recorder, does hereby certify that the above notice and agenda was posted within the Santa Clara City limits on this 28th day of August 2026 at the Santa Clara City Hall, on the City Hall Notice Board, at the Santa Clara Post Office, on the Utah State Public Notice Website, and on the City Website at <http://santaclarautah.gov>.


Selena Nez, CMC
City Recorder



TO: Santa Clara City Council
FROM: Jim McNulty, Planning Director
DATE: September 2, 2026
RE: Hillside Ordinance Update **(Discussion Item)**

City staff and the Hillside Committee would like to provide an update to the City Council and Planning Commission. City Ordinance 2026-07 was adopted by the City Council on April 27, 2026. This included a temporary land use regulation implementing a six-month moratorium on review and approval of land use applications in the Hillside Protection Overlay Zone HPOZ. A Committee was created in May 2026 and tasked to rewrite/update the current Hillside Ordinance. Committee members include Rick Rosenberg (Chair), Dave Black, Logan Blake, Melodee Finlinson, Wayne Rogers, Casey Stratton, Cody Mitchell, Dan Cazier, and Jim McNulty.

A copy of the Draft Ordinance has been included for your review. The new zone will be known as the Sensitive Lands Overlay Zone SLOZ. Additionally, a series of Sensitive Lands Maps/Layers will be presented at the meeting. The Maps are intended to be a tool that property owners, developers, engineers, realtors, and others would be able to utilize to determine if a property is located within a SLOZ.

CHAPTER 17.80

SENSITIVE LANDS OVERLAY ZONE

SECTION:

17.80.010: Purpose And Intent

17.80.020: Applicability

17.80.030: Sensitive Lands Review Board

17.80.040: Identification Required and Pre-Application Process

17.80.050: Remediation of Mitigatable Sensitive Lands

17.80.060: Dispute Resolution/Peer Review

17.80.070: Development and Land Disturbance Application Submittal

17.80.080: Development Constraints and Limitations

17.80.090: Geotechnical/Geologic Hazard and Engineering Geology Reports

17.80.100: Special Exemptions

17.80.110: Other Considerations

17.80.120: Review and Approval of Required Reports and Applications

17.80.130: On Site Professional and Final Inspection

17.80.140: Acceptable Permanent Sensitive Lands Preservation

17.80.150: Warning and Disclaimer

17.80.160: Definitions

17.80.010: PURPOSE AND INTENT:

This chapter shall provide standards, guidelines, and design criteria to protect the natural scenic character of sensitive lands areas in the City while allowing development in a manner that provides for the health, safety, and welfare of residents, maintains the aesthetics of the community, and protects property values.

17.80.020: APPLICABILITY:

A. The Sensitive Lands Overlay Zone SLOZ is defined as any area that is either:

1. Located within areas identified on the Sensitive Lands Map included in the Santa Clara City General Plan.

2. Contains slopes steeper than 15 percent based on a detailed topographic survey and proposed to be disturbed by construction/development and has planned cuts or fills greater than 12 feet in height.

3. Affected by potential geologic hazards or geologic constraints identified by a geologic evaluation.

4. Contains intermittent or constant flow stream corridors and floodplains, riparian areas, wetlands and springs as regulated by the Utah State Engineer, the Federal Emergency Management Agency (FEMA) or the Corps of Engineers (COE); ephemeral washes draining more than 0.15 square miles; exposed rock outcroppings larger than ten feet (10') wide and ten feet (10') tall.

B. Any land use application for development or land disturbance in the SLOZ including but not limited to, building permits for a new structure or existing structures that add additional square footage to the primary or secondary structure, permitted and conditional uses, preliminary and final subdivision plats, shall include a sensitive lands identification analysis addressing the requirements of this chapter.

C. Any land use application for development or land disturbance in the SLOZ shall be supported by a Geotechnical Investigation, Geologic Evaluation, Storm Drainage Report & Management Plan, provided by the applicant. The required reports are shown in Table 17.80.020.X and such reports will vary based on the severity and type of sensitive lands found within the development or land disturbance application.

D. The City retains a City Engineer/Geotechnical Consultant/Geologist for review, analysis, and to suggest modifications, and recommend approval of the development or land disturbance application. Any costs incurred for the City including contracted specialized engineering services, geotechnical services, site inspection, testing, and review time due to the proposed development will be passed along to the applicant or developer and deposited with the City. Such costs shall be based on an estimate provided by the City Engineer/Geotechnical Engineer/Geologist, a subsequent full deposit by the applicant/developer cost plus 10%. Unused funds will be returned to the applicant, without interest.

E. Any sensitive lands identified because of the requirements of this chapter shall be recognized in a development or land disturbance application. Some risks associated with development or land disturbance of sensitive lands cannot be mitigated. If the risks cannot be mitigated to the satisfaction of the City Land Use Authority, such lands shall be designated on the site plan or subdivision plat in a manner that permanently restricts the area from future development or land disturbance.

17.80.030: SENSITIVE LANDS REVIEW BOARD:

A. Established: There is hereby established a Sensitive Lands Review Board SLRB for the City.

B. Powers And Duties: The Sensitive Lands Review Board shall have the following responsibilities:

1. As requested by City staff, review developments proposed within the Sensitive Lands Overlay Zone SLOZ and make a recommendation for approval, conditional approval, or denial to the Planning Commission.

2. Provide advice and support as needed to City staff, and the Planning Commission in connection with reviewing requests for development applications within the SLOZ.

C. Membership, Appointment: The Sensitive Lands Review Board SLRB shall consist of five (5) members as follows:

1. Three (3) persons who are experts in any of the following fields: geotechnical engineering, civil engineering, geology, architecture, landscape architecture, land planning, or similar applicable areas of expertise; and two (2) citizens of the city representing the public at large. If it is determined to be not feasible to fill the member positions of those with the identified fields of expertise, these positions shall be assumed by citizens at large. In addition to the five (5) members mentioned above, two (2) alternate members may be appointed to serve when a quorum is not otherwise present. The alternate members need not be any citizen of Santa Clara City. The experts need not be residents of Santa Clara City.

2. All SLRB members shall be appointed by the Mayor with the approval of the City Council. The SLRB shall select a chair and vice-chair from among its members yearly. The election of the chair and vice-chair will occur during the first regularly scheduled meeting each year.

D. Membership, Terms, And Vacancies: The members of the SLRB, appointed as provided above, shall serve for five (5) years and members shall not serve more than two (2) consecutive five (5) year terms. The terms of the members shall be staggered so that no more than two (2) terms shall expire at the same time.

E. Quorum; Vote Required: A quorum of the SLRB shall be three (3) members, and a majority vote of a quorum shall be required for a decision of any matter before the board, but the minimum number of yes votes required for a decision shall never be less than three (3). If a quorum is not present, no meeting shall be held, and any items of business shall be continued to the next meeting of the SLRB

17.80.040: IDENTIFICATION REQUIRED AND PRE-APPLICATION PROCESS:

A. Designation and possible preservation or avoidance of the identified Sensitive Lands features and their associated areas in their natural state are required. Geotechnical Investigation, Geologic Evaluation, Storm Drainage Report & Management Plan, and

potentially Geologic Hazard reports are required for lands located in the SLOZ. The Geologic Evaluation may be included in the Geotechnical Report. All sensitive lands areas defined in this chapter shall be shown in the development or land disturbance application site plans, subdivision plats, and construction plans. It is the intent of these requirements to promote a development design that incorporates and integrates the sensitive lands into the development design process.

B. Pre-Application Process (to be developed soon).

17.80.050: REMEDIATION OF MITIGATABLE SENSITIVE LANDS

Certain Sensitive Lands have the potential to be remediated and/or mitigated. Determination and mitigation techniques proposed which when reviewed by the City Engineer/Geotechnical Engineer/Geologist, do not clearly resolve any identified issues may be subject to a Peer Review at the City's discretion. The process for a Peer Review is set forth in Section 17.80.070. The City Engineer/Geotechnical Consultant/Geologist, and Sensitive Lands Review Board SLRB shall have the right to review, provide comments and suggested changes, and ultimately approve, deny, or modify the mitigation techniques. Such mitigation techniques shall be stamped by the applicant's geotechnical engineer and/or geologist as applicable. All disturbed lands shall be rehabilitated and revegetated, except where buildings and impervious surfaces are proposed on the approved site plan and/or subdivision plat.

17.80.060: DISPUTE RESOLUTION/PEER REVIEW:

When the City Engineer/Geotechnical Engineer/Geologist determine that a third-party review is necessary based upon the information submitted by the developer and/or applicant is needed, the developer shall pay for such additional studies/peer reviews. Such costs shall be based on an estimate provided by an engineer and/or geologist of the City's choosing. This will require a full deposit from the applicant/developer of the estimated cost plus 10 percent (10%). Drawdowns may be approved by the City as work is completed leading to a final report. Unused funds will be returned to the applicant/developer, without interest. Such studies or peer reviews may be required for any identified sensitive lands.

17.80.070: DEVELOPMENT & LAND DISTURBANCE APPLICATION SUBMITTAL:

A. Application shall be made for any development and land disturbance within the SLOZ using the form provided by the City. The application form shall be accompanied by the required plans, reports and fees described herein.

1. A topographic base map of the subject site, prepared and sealed by a Utah Licensed Civil Engineer or Land Surveyor. This base topographical map shall include the

proposed development boundary and show ownership of all adjoining properties within one hundred fifty feet (150') of the site boundaries. Natural ground contours shall be shown using no greater than two-foot (2') contour intervals with ten-foot (10') contours being clearly labeled at a scale of not less than one-inch equals one hundred feet (1" = 100'). Existing topography and features shall be drawn with a dashed line.

2. A slope analysis shall be prepared using CAD based or GIS based software specifically designed for such purposes. The slope analysis exhibit shall delineate slope bands with contrasting colors, for the following slope ranges: zero percent (0%) to fifteen percent (15%), 15.01 percent to twenty five percent (25%), 25.01 percent to thirty percent (30%), 30.01 percent to forty percent (40%), and 40.01 percent or greater. A tabulation chart indicating the land area in acres within each slope category as identified herein shall be included. The slope analysis calculations shall be prepared by a Utah licensed professional who is proficient in creating exhibits with the use of computer software designed for preparing said exhibits.

3. A grading plan shall be prepared in accordance with the requirements for Engineered Grading Plans as provided in Chapter 16.24, Design Standards of City Code, as well as the Santa Clara Construction Design Standards. The grading plan shall show proposed finish ground contours using no greater than two-foot (2') contour intervals with ten foot (10') contours being clearly labeled and at a scale of not less than one-inch equals one hundred feet (1" = 100'). Finish ground contours and features shall be drawn with a solid line. The grading plan shall establish the limits of disturbance (LOD) as defined below. The grading plan will also show the estimated earthwork quantities of total cut & fill in cubic yards proposed. The maximum cut and fill location and amounts shall be labeled.

4. The limits of disturbance (LOD) is defined as the area(s) in which construction and development activity shall be contained, including development and construction of the primary building, accessory structures, recreation areas, utilities, services, driveways, storm drainage, and other similar improvements. LOD areas shall not encroach into setbacks required by the underlying zone or the specified buffers as defined in this chapter.

5. A sufficient number of slope cross-sections shall be included to clearly illustrate the extent of the proposed grading. The slope cross-sections shall:

- a. Be drawn at the same scale and indexed, or keyed, to the existing topography, grading plan, and project site map. Both vertical and horizontal scales shall be indicated and be of the same scale. The slope cross-sections shall extend at least one hundred fifty feet (150') outside of the project boundary to clearly show impact on adjacent property. Slopes shall be calculated in intervals no greater than forty feet (40') along the cross-sections.

- b. At a minimum, cross-sections shall be drawn along those locations of the project site where:

- i. The greatest alteration of the existing topography is proposed;

- ii. The most intense or massive development is proposed;
- iii. The site is most visible from surrounding land uses;
- iv. Where grading will impact natural drainage conditions.

c. At least two (2) of the slope profiles shall be roughly parallel to each other and roughly perpendicular to existing contour lines.

d. The slope cross-sections shall be stamped and signed by a Utah licensed professional proficient in creating such cross-sections indicating the datum, source, and scale of topographic data used in the slope profiles. The signer shall attest to the fact that the slope profiles have accurately calculated and identified.

B. Slope Cuts and Grading. Slope cuts and grading shall conform to the following:

1. Prior to issuance of a building permit, final plans shall be in accordance with a grading and excavation plan and the Geotechnical report for the site, as approved by City staff.

2. Cantilevers/eaves located on a second floor and above may encroach in the LOD up to two feet (2'), provided the cantilevered setback can be constructed entirely from within the LOD.

3. The following limits apply to graded cut and fill slopes:

a. Graded cut and fill slopes may not exceed the maximum slope supported by a geotechnical study and constructed per the geotechnical engineers' requirements not to exceed fifty percent (50%).

b. Graded cut and fill slopes may not exceed a slope of fifty percent (50%) unless it is substantiated by the geotechnical report prepared and certified by a qualified professional, that the slope was constructed in accordance with the geotechnical report recommendations.

c. All cut, filled, and graded slopes shall be re-contoured to the natural, varied contour of the surrounding terrain.

d. Stormwater retention or detention is prohibited on slopes greater than 25 percent (25%).

4. Excavation of footings and foundations shall not occur outside limits of disturbance (buildable area). Intended excavations must be supported by detailed engineering plans submitted as part of the application for site plan approval.

D. All development and land disturbance are required to obtain a Land Disturbance and Stormwater Quality Permit (LDP) as set forth in Chapter 15.36 of city code, and if required shall provide evidence of a Utah State Department of Environmental Quality General

Construction Storm water UPDES Permits at building permit issuance. Geotechnical reports are required as set forth in this chapter and in the Engineering Requirements Checklist and are catered to the type of Sensitive Lands encountered, shall also include an analysis of the soil types and their potential movement when additional moisture is applied, as may occur from heavy rainfall, landscape irrigation and/or impervious surface runoff or saturation, on any lot with a slope over 15 percent (15%). Geotech reports shall also identify (1) the depth to water table, and (2) potential fluctuations in seasonal water tables, if buildings with basements are to be constructed within the proposed development.

F. Landscape Plan. A landscape plan and report shall be prepared by a professional licensed to practice landscape architecture in the State of Utah. The report shall describe how the landscape plan meets the requirements of the SLOZ and Chapter 17.92, Water Efficient Landscaping and Conservation Standards of city code. The plan shall include a description of existing vegetation, a plan of proposed vegetation of the site or modifications to existing vegetation, and a plan for the preservation of existing vegetation during site construction activities. Erosion protection measures for the existing and proposed slopes shall be included in the plan.

G. Mitigating Cuts and Fills. Development shall mitigate the visibility of cuts and fills and buildings on hillsides that are visible from adjacent streets. Mitigation shall include methods to conceal such cuts and fills and buildings, such as landscaping, hill terracing.

H. Additional Exhibits or Reports: The City Engineer, SLRB and/or City staff may require additional visual analysis exhibits or other reports to adequately address unique circumstances and comprehend the full impact of any proposed development in the SLOZ.

17.80.080 DEVELOPMENT CONSTRAINTS AND LIMITATIONS:

1. Applications with geologic hazards such as flooding, erosion, liquefaction, landslide/slope instability, and rockfall require specialized detailed studies and mitigation techniques. A Geological Hazards Disclosure and Acknowledgement shall be on a form provided by the City.

A. Landslide, Rockfall, and Liquefaction Hazard studies and mitigation techniques shall follow the procedures of Chapter 15.34, Geologic Hazards of city code.

B. Flooding and Erosion Hazard studies and mitigation techniques shall follow the procedures set forth in Chapter 15.36, Flood Damage prevention of city code.

2. Applications with geological constraints such as expansive soil/rock, compressible/collapsible soils, shallow groundwater, and slope stability concerns, may require special geotechnical and structural considerations. Geotechnical Investigations and mitigation techniques shall follow the advisement of a qualified Geotechnical Engineer and shall follow the procedures of Section 3.3 of the Santa Clara City Construction Design Standards. Considering the complexity of certain geotechnical investigations may be required at some sites to adequately address the constraint(s), and to provide mitigations requirements.

3. Applications shall avoid and preserve as undisturbed/natural open space, the following areas:

A. Slopes 40% or greater: Except for the installation of fencing and live plant materials, land disturbance is prohibited on slopes of 40 percent (40%) or greater.

2. Usable Land.

a. Single-family structures shall be located only upon areas constituting useable land, which area shall be fully contiguous, be at least 5,000 square feet in size and have a minimum dimension, both length and width, of 50 feet.

b. All other structures, including clustered single-family, multi-family, accessory structures, and non-residential uses, shall be located upon usable land as may be determined through the Site Plan Review process.

3. Setback Requirements.

a. No dwellings or accessory structures shall be constructed within an average of 20 feet (no point being closer than 10 feet) of a continuous hillside slope (upslope or downslope) of 30 percent (30%) or greater. The SLRB and City staff may require greater setbacks from slopes based upon geotechnical information.

b. All other structures which require a building permit, including commercial, industrial, institutional, and structures accessory thereto, shall be setback as may be determined through Site Plan review of the impacts of development and proposed mitigation measures to address those impacts including aesthetic concerns.

c. Structures requiring a building permit shall be set back no further than 150 feet from a public or private street unless otherwise approved by the Fire Department.

4. Grading, Cuts and Fill. Cuts and fills shall be avoided in project design to the greatest extent possible and shall not exceed fifty percent (50%) slope. Retaining walls extending over six feet (6') in height shall include a leveled landscape terrace, a minimum of six feet (6') in width for every six feet (6') in height. Terraces may be created at lesser heights to meet slope related issues, but the minimum terrace width shall be in six-foot (6') intervals.

a. Exposed unstable surfaces of a cut or fill shall not be steeper than one vertical to two horizontal.

b. All permanent fill shall be stabilized and finished to reduce risk associated with settling, sliding or erosion.

c. The top and bottom edges of slopes caused by an excavation of fill up to ten vertical feet shall be at a minimum of five horizontal feet from the property line or public right-of-way line.

d. The maximum vertical height of all cuts and fill shall be twelve feet (12'). Under exceptional circumstances, the Planning Commission may approve cuts and/or fills in excess of ten feet with a recommendation from the City Engineer, SLRB and City staff. Cuts and fills shall be measured from natural grade to finished grade. The burden of demonstrating exceptional circumstances shall be on the developer of the property, and may include:

1. Cutting or filling of areas designated as anomalies.
2. Cutting to allow for required sight triangles.
3. Areas previously modified, altered or disturbed.
4. Cuts or fills as required by the SLRB and City staff to mitigate any unsafe condition, such as slopes exceeding 50 percent (50%).

5. Unusual topographic features, such as bowls or rises that don't exceed slope limitations but may inhibit sound construction methods.

6. Other conditions as approved by the Planning Commission.

e. All structures, except retaining walls or soil stabilization improvements, shall have a setback from the crest of the fill or base of the cut of a minimum distance equal to the depth of the fill or the height of the cut, unless a structurally sound retaining wall is built for the cut or fill slope.

f. No grading, cuts, fills, or terracing will be allowed on a continuous hillside containing 30 percent (30%) or greater slope, crest (upslope or downslope) unless otherwise determined by the Planning Commission upon recommendation by the SLRB and City staff.

5. Landslides, prominent rock outcroppings, and rockfall areas. These topographical features shall be avoided.

6. Stream beds (including intermittent), gullies, ditches, flood channels, flood plains, areas of springs, seeps and surface water. Pollution sources including but not limited to fuel tanks and their containment systems, septic tanks, parking lots, shall be setback at least 50 feet from the hydrologic feature or as required by the Utah Department of Water.

a. Additional vegetation may be required between the hydrologic features and development for erosion control or for public amenities. Hydrologic features that are accompanied by an amenity such as a park or trail shall include sufficient open area along and surrounding the feature to ensure ample room to protect the feature and to provide area for enjoyment of the amenity; generally such buffering/setback from a building should be an average of 50 feet from the top edge of the bank or high water mark of the feature of a perennial stream and 50' from any other feature mentioned above.

17.80.090 GEOTECHNICAL, GEOLOGIC, AND GEOLOGIC HAZARD REPORTS:

Geotechnical Investigations, Geologic Evaluation, and potentially Geologic Hazard reports (as necessary) are required by the City for all commercial and industrial projects, and all residential lots in subdivisions. The City Sensitive Lands Overlay Maps (UGS, 2008, and City GIS), indicate areas within the City where potential geologic hazards and geologic constraints may be present. Each geotechnical investigation and geology evaluation shall be site-specific and shall identify all known or suspected potential geologic constraints and/or geologic hazards, and whether they may affect the subject property, both on and adjacent to the property. A geologic evaluation report may be combined with a geotechnical report and contain information on multiple hazards and constraints. Where geologic hazard conditions are present that may impact the proposed development, both on and adjacent to the property, a geologic hazard study and mitigation techniques shall follow the procedures of Chapter 15.34, Geologic Hazards of city code.

The geotechnical and geologic reports shall be submitted at the same time improvement plans are submitted to the City representative. The findings contained in the geotechnical report shall be used as the basis for the design and construction of the project improvements unless otherwise directed by the City's representative.

- A. Geotechnical Investigation Reports shall be site-specific and prepared, signed, and stamped by a qualified Utah Professional Engineer specializing in geotechnical engineering. If the geotechnical investigation was completed more than 3 years (1095 days) prior to the project submittal date, then it's no longer valid without a current update letter/report. All updates to a geotechnical report must include the following statements:
1. The site has been visited, and the geotechnical report has been reviewed.
 2. The new geotechnical engineer of record (if applicable) is in agreement with all the recommendations in the geotechnical report, with any revisions to the recommendations clearly noted.

In addition to the requirements set forth in Chapter 18 of the 2000 International Building Code, the Geotechnical Report shall include, but need not be limited to, the following information:

1. A site plan(s) showing the general site vicinity, the project boundary clearly identified, the location of any existing or proposed structures within the site, and the location of exploration test pits and/or borings.
2. A general description of the topography, drainage conditions, vegetation, surface features such as rock outcrops, existing structures, debris, and unstable or wet surface conditions.

3. A description of the proposed structure(s) and improvements to be constructed on the site, as well as anticipated structural loads.

4. Continuous logs of all test pits/borings. Soil classification shall be by the Unified Soil Classification System. Elevations, when possible, shall be shown on the tops of explorations on the same elevation datum as the project improvement plans. Elevation and depth of groundwater, if encountered, shall be shown. A description of the exploration and sampling methodology shall be provided. The minimum exploration requirements are as follows:

a. For single lot projects, a minimum of 2 (two) test pit/boring shall be provided. Additional test pits/borings shall be provided for larger projects at the discretion of the city representative.

b. For subdivisions, a minimum of 1 (one) test pit/boring on each proposed lot.

c. For proposed planned unit developments, a minimum of 1 (one) test pit/boring per one-half (1/2) acre of total area within the planned development not designated as open space areas, and 1 (one) test pit/boring per 300 to 600 lineal feet of public street proposed for construction.

d. For street improvement projects, a minimum of 1 (one) test pit/boring per 300 to 600 lineal feet of public street proposed for construction shall be provided.

e. Exploration depths shall be a minimum of 20 feet below the proposed lowest floor elevation, including basements, in building areas and 10 feet below the finish street grade elevation in public street areas.

f. In areas where highly expansive soil of encountered have known to exist, geotechnical investigations shall be based upon a minimum of 3 test pits/borings, with at least 1 test pit/boring on each lot. A highly expansive soil consists of a soil/rock that expands/swells a minimum of 8 percent (under a 60 psf surcharge) with the addition of water. Each exploration shall extend 5' minimum into the expansive soil layer, or 20' minimum total depth, whichever is less.

5. An evaluation of the site for the presence of potential geologic constraints such as expansive soils/bedrock, compressible/collapsible soils, gypsiferous (soluble) soils, corrosive soils, uncontrolled fills, shallow groundwater, shallow bedrock, and slope stability (natural and graded). The extent of any geologic constraints identified on the site shall be mapped and addressed in the geotechnical investigation report including any required mitigation.

6. An evaluation of possible impacts of the proposed development on adjoining properties, and any mitigating measures that should be

undertaken. Some impacts to be considered are: (a) extensive cuts and fills and associated slope stability; (b) surface drainage; and (c) the addition of subsurface water in sensitive soil areas.

7. Laboratory test results. Laboratory testing shall be conducted, according to American Society for Testing Materials, (ASTM) Standards, to evaluate the nature and engineering properties of the subgrade soils.
8. Conclusions and recommendations which shall contain, but not be limited to, the following information:
 - a. Site preparation and grading requirements, including the suitability of on-site soils for use as fill material, fill placement procedures, and compaction requirements, etc.
 - b. Geotechnical design considerations for drainage structures and/or erosion control, if applicable.
 - c. Procedures for mitigation of any potential geologic constraints, such as special foundation systems (in accordance with Ordinance No. 96-25), groundwater control, and any special grading recommendations such as over excavation and re-compaction, etc.
 - d. For design recommendations involving expansive soils, the soils engineer shall use a wet depth model based upon the current load standard of practice. Suitable foundation types, with allowable bearing pressures and estimated settlements.
 - e. Slope grading recommendations for stable cut and fill slopes.
 - f. Design recommendations for street improvement areas, which shall include pavement design recommendations, sub-grade preparation, suitability of the on-site soils for use as pipe bedding, pipe zone, and general backfill materials, and trench excavation and stability.
- B. Geologic Evaluation Reports shall be site-specific and prepared, signed, and stamped by a qualified civil engineer specializing in geotechnical engineering, or a qualified engineering geologist. If the geologic evaluation was completed more than 3 years (1095 days) prior to the project submittal date, then it's no longer valid without a current update letter/report. All updates to a geologic evaluation report must include the following statements:
 1. The site has been visited and the geologic evaluation report has been reviewed.
 2. The new geotechnical engineer/geologist of record (if applicable) is in agreement with all of the conclusions and recommendations in the geologic evaluation report, with any revisions to the recommendations clearly noted.

The Geologic Evaluation Report may be combined with a geotechnical report and shall include, but need not be limited to, the following information:

- a. A geologic map (with reference) showing the surface geology, bedding attitudes, structural features, and the locations of any potential geologic hazards related to the study area.
 - b. A summary of reviewed geologic maps, hazard maps, geologic reports, and/or geotechnical reports covering the area (with references).
 - c. A site-specific evaluation of the geologic conditions found at the study area, including the identifications and description of all known or suspected potential geologic hazards, whether previously identified or unrecognized, that may affect the subject property, both on and adjacent to the property.
 - d. Conclusions addressing: (a) the presence or absence of geologic hazard conditions found at the study area; and (b) and the potential effects of the geologic conditions and/or geologic hazards on the proposed development, both on and adjacent to the property, in terms of risk and potential damage.
 - e. Recommendations addressing whether or not more detailed geologic hazard studies are required to: (a) understand or quantify any identified geologic hazard or condition; (b) evaluate whether mitigation measures are required; and (c) evaluate avoidance or mitigation options in accordance with Chapter 15.34, Geologic Hazard Ordinance.
 - f. Clearly stated evidence on which conclusions and recommendations are based.
- C. Geologic Hazard Reports shall be site-specific and prepared, signed, and stamped by a qualified civil engineer specializing in geotechnical engineering (and/or qualified registered Geologist where required). Hazard studies and mitigation techniques shall follow the procedures of Chapter 15.34, Geologic Hazard Ordinance.
- D. If the conclusions contained in the Geotechnical Investigation, Geologic Evaluation, or Geologic Hazard Report are questioned, they may be subject to peer review at the developers' cost as set forth in Chapter 17.80.070.

17.80.100 SPECIAL EXEMPTIONS:

A. The owner of an existing property or a lot of record legally created prior to adoption of this chapter is not entitled to a building permit, unless that building permit complies with this chapter, and all other applicable requirements. These requirements are intended to protect the health, safety, and welfare of the community.

B. Natural Slopes that were Previously Disturbed or Developed. A property owner/developer whose property contains or is adjacent to what was a natural continuous 30 percent (30%) or greater slope may request a special exception to allow construction at reduced setbacks or no setback from the slope or on the slope. A property owner/developer may request a special exemption from the Planning Commission during the preliminary subdivision review or, upon individual lots. Property which qualifies for the exemption is limited to the following:

1. The property contains or is adjacent to areas of a continuous 30 percent (30%) or greater slope.
2. The slope was previously disturbed or altered.
3. The disturbance or alteration was conducted legally prior to the Sensitive Lands Area regulations in effect at the time the disturbance or alteration was conducted.
4. The slope is stable and suitable for construction as determined by the SLRB and City Engineer.
5. Measures can be imposed which mitigate or eliminate hazards created by construction near to or additional disturbance or alteration of the slope.
6. All development on the property complies with all other requirements of this chapter, such as driveway slopes, cuts and fills, maximum impervious coverage, etc.
7. No other exceptions are requested or necessary.

C. Determination of Anomalies for 30 percent (30%) or Greater Slopes. The City Engineer, SLRB and City staff shall review all requests for development on 30 percent (30%) or greater slopes to determine if anomalies exist. If an anomaly is determined to exist, the City Engineer, SLRB and City staff shall forward to the Planning Commission a recommendation regarding development of the area affected by the anomaly. This recommendation will be made prior to the preliminary subdivision plat review with the Planning Commission. The City Engineer, SLRB and City staff shall consider the following criteria in making a recommendation:

1. An anomaly in the terrain is an isolated odd, peculiar or irregular terrain feature not consistent with the surrounding terrain. It is typically naturally occurring.
2. For engineering purposes there are two types of anomalies recognized:

- a. Bump/bulge/dish. A bump, bulge or dish can be found on a hillside where the hill in general does not exceed a 30 percent (30%) slope, but the bump, bulge or dish does. This type of anomaly should stand alone and be relatively small in area (less than the buildable area of a residential lot). It should not be part of a series of bumps, bulges or dishes that could be considered a single larger protected feature, thus no longer an anomaly. For example, in the course of excavating for a foundation, the anomaly is actually removed or filled. If the bump/bulge type terrain feature is determined to be an anomaly, setback standards (ten-foot minimum with a 20-foot average) would apply only to the remaining areas designated as over 30 percent (30%).

b. Ribbon. The ribbon represents a long narrow and abrupt ridge line. The terrain both above and below the ridge has a slope less than 30 percent (30%), but the narrow ridge line, or ribbon, exceeds 30 percent (30%) over a small distance. The impact of a cut through the ribbon on drainage and erosion should also be considered. All standard specifications regarding construction of roads and driveways remain in place.

3. The following questions should be considered as a minimum when requesting a recommendation to declare a terrain feature an anomaly:

a. Is it truly an isolated feature not in proximity to other areas of 30 percent (30%) or greater slope?

b. What is the relationship (e.g., orientation, distance) of this feature to other areas that exceed 30 percent (30%) or greater slope area?

c. What cuts/fills are planned (e.g., will the feature disappear during construction)?

d. Can you maintain a slope of less than 30 percent (30%) after the cut/fill, or does the surrounding area have too much slope to accomplish that?

e. Is the feature manmade?

f. Does it reasonably conform to the intent of the definition?

D. Land disturbance associated with construction of a master planned public infrastructure projects described in the City Capitol Improvement Plans shall be exempt from the requirements of this ordinance, including transportation facilities, utilities, parks, trails, and drainage improvements.

17.80.110 OTHER CONSIDERATIONS:

A. Public Streets and Private Driveways.

1. Public streets and private driveways through 30 percent of greater slopes are prohibited unless all of the following criteria are met and approved by the Planning Commission upon recommendation of the SLRB and City staff:

a. No alternative location for access is feasible or available;

b. No individual segment or increment of the public street, or private driveway is more than 150 feet in length that crosses any continuous 30 percent (30%) or greater slopes;

c. All crossings of a continuous 30 percent (30%) or greater slope shall be designed and constructed to eliminate significant adverse environmental or safety impacts as determined by the AASHTO guidelines and Geotech report recommendations:

d. Under no circumstances shall any segment of a public street or private driveway cross a continuous slope greater than 50 percent (50%); and

e. Public streets and private driveways shall follow natural contour lines where possible. If natural contour lines do not reasonably facilitate access to the development site, a private driveway may be designed and submitted for approval or denial.

f. Access easements shall be provided to all adjoining developed and non-developed areas for emergency and firefighting equipment when determined necessary by the Fire Department.

g. Variations of the public street design standards developed to solve visual aesthetics and functional problems may be presented to the Planning Commission upon recommendation from the SLRB and City staff for consideration. Examples of such variations may be the use of split roadways to avoid deep cuts, one-way streets, modifications to surface drainage treatments, sidewalk design, or the extension of a cul-de-sac.

h. The maximum grade of all streets or rights-of-way for vehicle traffic shall be 10 percent, unless permitted by the SLRB and City staff.

B. Architectural Design.

1. Buildings proposed for construction in the Sensitive Lands Overlay Zone shall be designed to be visually compatible with the natural setting of the hillsides and canyons. The use of building materials and colors that will blend harmoniously with the natural settings are encouraged. Materials such as wood or composite materials such as hardi board, brick, stone, stucco (earth tone colors), with architectural grade tile or asphalt shingles, are considered to be appropriate.

2. The Planning Commission shall review the design and specified exterior materials and colors for all single-family, multi-family, and non-residential structures within a Planned Development Zone. The design and materials shall comply with Chapter 17.68 of city code.

3. The Planning Commission shall review the design and specified exterior materials and colors for all non-residential structures located within any commercial zoning district.

17.80.120 REVIEW AND APPROVAL OF REQUIRED REPORTS AND APPLICATIONS:

A. The City Engineer/Geotechnical Consultant/Geologist shall review any proposed land use which requires preparation of a geotechnical and/or Sensitive Lands/Geologic Hazard Report under this chapter as shown on the Sensitive Lands map to determine the possible risk to the safety of persons, property or City infrastructure from sensitive lands.

B. Prior to development consideration, the Geotechnical and/or Geologic Hazard report shall be delivered/submitted to the City Engineer/Geotechnical Consultant/Geologist on behalf of the City for review and recommendation. The City Engineer/Geotechnical Consultant/Geologist may request the Utah Geological Survey, the U.S. and/or other experts to review the report (third-party review) and provide additional recommendations. Any cost the City must pay for third-party reviews shall be paid by the applicant before the review is complete. If not paid, the City will not release the third-party review to the applicant. Additionally, the City Engineer/Geotechnical Consultant/Geologist shall file a copy of any report involving significant geologic hazards with the Utah Geological Survey, with another copy submitted to the Planning Department to be documented in the project file.

C. The City Engineer/Geotechnical Consultant/Geologist on behalf of the City and other retained experts in their view of the report, in consultation with the SLRB and Planning Director, shall determine whether the development complies with the following standards:

1. A suitable geotechnical and/or geologic hazard report has been prepared by a qualified professional as defined above.
2. The proposed land use shall not include land to be developed that encompasses unmitigable hazards, including buildings, storm drains and systems, culinary water facilities, public streets, utilities or critical facilities, whether off-site or on-site. Natural functions of the landscape (including but not limited to slopes, streams or other waterways, drainage, wildlife habitat, on site or off-site) shall be retained where the presence of geologic hazards or because of modifications to the site due to the proposed land use negatively impacts such functions.
3. If the applicant submits substantial evidence in the Geotechnical/Geologic Hazard report that, using best available practices according to bona fide industry standards, including but not limited to AWWA, IBC, IFC, IRC, APWA, AASHTO, NFID, FEMA, WDDW, and UDEQ, the identified hazard can be mitigated to a level where the risk of human life and damage to property are reduced to an acceptable level, in a manner which has a minimum effect on the natural environment and the built environment will not violate applicable federal, state or local statutes, ordinances or regulations, then the proposed mitigations and land use may be approved by the City. Additionally, the City Engineer/Geotechnical Consultant/Geologist shall provide an advisory letter that assesses the value and appropriateness of any proposed mitigation techniques.
4. Areas determined to be undevelopable shall be designated as permanent open space within the subdivision or site plan and shall be designated through an acceptable sensitive lands preservation instrument as set forth in Chapter 17.80.120 of city code.

D. The City Engineer/Geotechnical Consultant/Geologist on behalf of the City may impose other requirements as are necessary to overcome geologic hazards and ensure that the purposes of this chapter are met. These requirements may include, but are not limited to the following:

1. Additional or more detailed studies to understand or quantify the hazard or determine whether the mitigation measures recommended in the report are adequate.
2. Specific mitigation requirements; establishment of buildable and/or non-buildable areas; limitations on slope grading; and/or revegetation.
3. Installation of monitoring equipment and seasonal monitoring of surface and subsurface geological conditions, including groundwater levels.
4. Areas determined to contain high risk geologic hazards that are hazardous to life or property, and are not mitigated, shall not be approved.
5. Other requirements, including but not limited to time schedules for completion of the mitigation and phasing of development.
6. A Notice of Hazard shall be required on subdivision final plats.

17.80.130 ON SITE PROFESSIONAL AND FINAL INSPECTIONS:

- A. Professional inspection. The City requires that a qualified professional be on site, at the cost of the developer, during certain phases of construction, particularly during grading phases, to verify that development is occurring in the manner compliant with the approved Geotech report. Verification includes, but is not limited to, the construction of retaining walls, density testing as required by the design engineer, and the construction of any approved mitigation(s).
- B. Design Engineer Verification. The design engineer shall inspect the construction of all slopes or cut and fill areas, provide all documentation of compaction/densities and inspection reports within 14 days of each major completed task. Including but not limited to drain system/canyon drain, benching, soil nails and material with optimal moisture content used with proctor. The design engineer must certify in writing that all slopes are built per the approved design and shall submit that certification to both Engineering and Planning.

17.80.140 ACCEPTABLE PERMANENT LANDS PRESERVATION :

- A. If sensitive lands are not retained in private ownership, such areas shall be preserved through a dedication as accessible open space to the City with a conservation easement, a deed restriction with an HOA or common area maintenance commitment, or other means that assure permanent preservation acceptable to the City. Such areas shall include public access points, where trails are included in preserved sensitive lands. If one of the techniques is not utilized, other preservation techniques may be negotiated as part of a Development Agreement approved by City Council. Undevelopable sensitive lands held privately shall include a recorded deed restriction easily found in a Title report that indicates portions of the lot(s) are undevelopable.

B. Sensitive Lands Preservation Incentive through Density transfers within a development. To promote the preservation and avoidance of identified sensitive lands, density transfers/clustering may occur within a development proposal. The density shall reflect only the additional units that could have been built on the preserved areas. Any of the sensitive lands defined in this ordinance may qualify for a density transfer except for unbuildable areas above a 30% slope, landslide/mud/debris flow corridors, fault lines, and areas delineated by the Army Corp of Engineers ACOE as wetlands. Such transfers shall be included in a Development Agreement negotiated with the City Council.

C. Developments that include Homeowner's Associations. These developments shall include restrictive covenants with mitigation techniques for the continued maintenance, preservation, and enhancement of Sensitive Lands and their associated open space.

17.80.150 WARNING AND DISCLAIMER:

A. The Sensitive Lands Overlay Zone ordinance codified in this chapter and associated Sensitive Lands Hazard maps represent only those hazardous areas known to the City and should not be construed to include all possible hazard areas. This ordinance and associated maps may be amended as new information becomes available pursuant to procedures set forth in this ordinance. The provisions of this chapter do not assure or imply that areas outside its boundaries will be free from possible adverse effects of geologic hazards. This chapter shall not create liability on the part of the City, any officer or employee thereof for any damages from geologic hazards that result from reliance on this chapter.

17.80.160 DEFINITIONS:

As used in the Sensitive Lands Overlay Zone, the following terms have the following meanings:

ACCEPTABLE AND REASONABLE RISK: No loss or significant injury to occupants, no release of hazardous or toxic substances, and minimal structural damage to buildings or infrastructure during a hazard event allowing occupants egress outside.

ACCESSORY BUILDING: Any structure not designed for human occupancy, which may include tool or storage sheds, gazebos, and swimming pools. Accessory dwelling units and businesses located in accessory buildings must comply with all requirements as buildings designed for human occupancy.

ALLUVIAL FAN: A fan shaped deposit where a fast-flowing stream flattens, slows, and spreads, typically at the exit of a canyon onto a flatter plain.

BUILDABLE AREA: Based on an accepted geologic hazard investigation report, the portion of a site not impacted by geologic hazards, or the portion of a site where it is concluded the identified geologic hazards can be mitigated to an acceptable and reasonable risk, and

where structures may be safely located. Buildable areas must be clearly marked on approved site plans and/or final approved plats, as appropriate.

CANYON: A deep, narrow valley having high, steep slopes.

CLUSTERING: Land planning technique appropriate for subdivisions in which some areas are reserved as open space or sensitive lands. Clustering allows the permitted units in an area to be grouped more densely in the most developable parts of a site.

CONTOUR: A line drawn on a plan which connects all points of equal elevation.

CRITICAL FACILITIES: Essential, hazardous, special occupancy, and all Risk Categories III and IV structures, as defined in the statewide adopted International Building Code (IBC), and lifelines, such as major utility, transportation, communication facilities, and their connections to critical facilities.

CUESTA: A landform that has a steep ascent in one direction and a gentle descent in the opposite direction. The steep slope is the cuesta face, and erosion escarpment, and the gentle face is the back slope of the cuesta. The crest of the cuesta forms a ridgeline.

CUT: The mechanical removal of soil, rock or other earth material.

CUT AND FILL: The excavating of earth material in one place as cut and depositing of it as fill in an adjacent place.

DEVELOPMENT: All critical facilities, subdivisions, single-family dwellings, duplexes, and multi-family dwellings, commercial and industrial buildings; also includes additions to or intensification of existing buildings, storage facilities, pipelines and utility conveyances, and other land uses.

ELEVATION: Height or distance above sea level.

ENGINEERING GEOLOGIST: A Utah-licensed Professional Geologist, who, through education, training, and experience, practices in the field of engineering geology and geologic hazards.

ENGINEERING GEOLOGY: Geologic work that is relevant to engineering and environmental concerns, and the health, safety, and welfare of the public. Engineering geology is the application of geological data, principles, and interpretation affecting the planning, design, construction, and maintenance of engineered works, land use planning, and groundwater issues.

EROSION: The process by which the soil and rock components of the earth's crust are worn away and moved from one place to another by natural forces such as weathering, solution and transportation.

ESCARPMENT: A long cliff or steep slope separating two (2) comparatively level or more gently sloping surfaces and resulting from erosion or faulting.

ESSENTIAL FACILITY: Buildings and other structures intended to remain operational in the event of an adverse geo-logic event, including all structures with

an occupancy greater than 1000 shall also be considered IBC Risk Category III when not meeting the criteria for IBC Risk Category IV; and IBC Risk Category IV buildings and other structures are designated as essential (critical) facilities.

EXCAVATION: Any disturbance to the ground, including, but not limited to, clearing, grubbing, rock removal, cutting, tunneling, drilling or any other activity which alters the natural ground. "Minor" excavation shall mean a vertical cut of three feet (3') or less, or a disturbance of less than one acre of surface area. "Major" excavation shall mean a vertical cut of more than three feet (3'), or disturbance of more than one acre of surface area.

EXISTING GRADE: The grade of land prior to grading.

EXPORT: Excess cut that is removed from a grading project and deposited off site.

FILL: A deposit of rock, soil or other earth material placed by artificial means.

FINISH GRADE: The final elevation of the ground surface after development, which conforms to the approved plan.

FLOODPLAIN: The land area adjacent to a watercourse which is subject to the overflow of floodwaters.

GEOLOGIC HAZARD: A geologic condition that presents a risk to life, of substantial loss of real property, or of substantial damage to real property (Utah Code 17-27a-103[19]: <https://le.utah.gov/xcode/Title17/Chapter27A/17-27a-S103.html>) and includes, but not limited to surface fault rupture, liquefaction, landslides, slope stability, debris flows, rock-falls, avalanches, radon gas, and other hazards.

GEOLOGIC HAZARD STUDY AREA: A potentially hazardous area where geologic hazard investigations are required prior to development.

GEOTECHNICAL ENGINEER: A Utah-licensed Professional Engineer who, through education, training, and experience, is competent in the field of geotechnical or geological engineering.

GEOTECHNICAL ENGINEERING: The investigation and engineering evaluation of earth materials, including soil, rock, and manmade materials and their interaction with earth retention systems, foundations, and other civil engineering works. The practice involves the fields of soil and rock mechanics and earth sciences, and requires the knowledge of engineering laws, formulas, construction techniques, and performance evaluation.

GRADE: The vertical location of the ground surface.

GRADING: To bring an existing surface to a designed form by excavating, filling or smoothing operations.

INFRASTRUCTURE: Those improvements which are required to be installed and guaranteed in conjunction with an approved subdivision or other land use approval. Infrastructure may be public or private, on site or off site, depending on development

design, and may include streets, curb, gutter, sidewalk, water and sanitary sewer lines, storm sewers, flood control facilities, and other similar facilities.

IMPORT: Fill material obtained off site to balance a grading project.

INTERNATIONAL BUILDING CODE (IBC): The latest, statewide adopted International Code Council International Building Code (Utah Code Title 15A, <https://le.utah.gov/xcode/Title15A/15A.html>). An online version of the 2018 IBC is available at <https://codes.iccsafe.org/content/IBC2018> and the 2018 International Residential Code (IRC) is available at <https://codes.iccsafe.org/content/IRC2018>.

KNOLL: A small, round hill or mound.

LANDSLIDE: The downslope movement of a mass of soil, surficial deposits, and/or bedrock, including a continuum of processes between landslides, earth flows, debris flows, debris avalanches, and rockfalls.

LIMITS OF DISTURBANCE: An area in which construction and development activity are to be contained, including development and construction of the principal building, accessory structures, recreation areas, utilities, services, driveways, and related system requirements, storm drainage, and other similar improvements.

LIQUEFACTION: A sudden, large decrease in shear strength of a saturated, cohesionless soil (generally sand and silt) caused by a collapse of soil structure and temporary increase in pore water pressure during earthquake ground shaking. May lead to ground failure, including lateral spreads and flow-type landslides.

MESA: A typically flat-topped landform with generally steep sides.

NATIVE VEGETATION: The natural vegetation commonly found in an area.

NATURAL AREAS: Undeveloped sites which have not been graded.

NATURAL OPEN SPACE: The landform as created by nature or subsequently modified by either agricultural activities or to meet fuel modification fire standards of the plan. Within natural open spaces, vegetation introduced for agricultural purposes may be removed and the area revegetated to a natural condition. Existing trees, riparian vegetation and native plant communities within natural open spaces shall be preserved and protected. Manmade water bodies and trails through natural open spaces may be considered as natural open space.

NATURAL SLOPE: A slope which is not manmade. A natural slope may retain the natural vegetation during adjacent grading operations, or it may be partially or completely removed and replanted.

NON-BUILDABLE AREA: That portion of a site which a geologic hazard investigation report has concluded is impacted by geologic hazards that present an unreasonable and unacceptable risk, and where the siting of habitable structures, accessory structures which house an accessory dwelling unit or business, or critical facilities, are not permitted.

OUTCROPPING: The part of a rock formation that appears above the surface of the surrounding land.

PLATEAU: A flat or predominantly flat area of land which is raised sharply above adjacent land on at least one side.

PRIMARY BUILDING:

RIDGE: A long, narrow, or sharply defined conspicuous elevation of land.

RIDGELINE: An area of topographical change, running parallel to a slope and having at least a 20' rise over a 60' wide area on one side of the ridge and extending for at least 300'.

ROCKFALL: A rock or mass of rock, newly detached from a cliff or other steep slope which moves downslope by falling, rolling, toppling, and/or bouncing; includes rockslides, rock-fall avalanches, and talus.

SCAR: A highly visible cut in a hillside or ridge in which all topsoil has been removed and vegetation will be unable to establish itself within a significant period (5 years).

SETBACK: An area subject to risk from a geologic hazard within which habitable structures or critical facilities and their supports are not permitted.

SLOPE: An inclined ground surface, the inclination of which is expressed as a ratio of the vertical distance (rise), or change in elevation, divided by the horizontal distance (run), and expressed as a percentage.

SLOPE, MANUFACTURED: A manmade slope consisting wholly or partly of either cut or filled material.

SLOPE TRANSITION: The area where a slope bank meets the natural terrain or a level graded area either vertically or horizontally.

SLOPE STABILITY: The resistance of a natural or constructed slope to failure by landsliding and assessed under both static and dynamic (earthquake-induced) conditions.

SENSITIVE LANDS REVIEW BOARD: The Santa Clara Sensitive Lands Review Board SLRB.

STREAM, EPHEMERAL: Those channels, swales, gullies, or low areas that do not have flow year-round or are not shown on the United States Geological Services USGS topographic maps as perennial streams. These are generally channels that are tributary to perennial streams, other ephemeral streams, terminal low areas, ponds, or lakes. They are typically dry except during periods of snowmelt runoff or intense rainfall.

STREAM, PERENNIAL: Those streams, excluding ephemeral streams, or ditches and canals constructed for irrigation and drainage purposes, which flow year-round

during years of normal rainfall, and that are identified on the appropriate United States Geological Services USGS topographic maps as perennial streams.

STREAM CORRIDOR: The corridor defined by a perennial stream's ordinary high-water mark.

TALUS: Rock fragments lying at the base of a cliff or a very steep rocky slope.

TOE OF SLOPE: The lowest elevation of a slope which transitions to a flatter area or pad.

TOP OF SLOPE: The highest elevation of a slope which transitions to a flatter area or pad.

TOPOGRAPHY: General term to include characteristics of the ground surface such as plains, hills, mountains, degree of relief, steepness of slope, and other physiographic features.

VIEWSHED: Areas which can be viewed from arterial roads, major collector roads or public gathering places which visually dominate an individual's cone of vision.

WILDLAND URBAN INTERFACE: The line, area or zone where structures or other human development (including critical infrastructure that, if destroyed, would result in hardship to communities) meet or intermingle with undeveloped wildland or vegetative fuel.