

**Shapefile Descriptions
for Spatial Data used in the
Central Coast Joint Effort for Hydromodification Control and LID
May 2012**

Watershed Management Zones

Shapefile Name: WatershedManagementZones_v3

This layer shows Watershed Management Zones (WMZ) for the Central Coast Joint Effort for Hydromodification Control project area. This dataset is the result of the combination of 3 layers: Receiving Water Types, Physical Landscape Zones (PLZ), Groundwater basin. Please refer to each individual layer metadata for details about these datasets. The key attribute of WMZ is 'WMZ_VALUE', represented by a number and an associated category of watershed management zone. Those are as follow: 1 = OF, GW /IF, ET; 2 = OF / GW, IF, ET; 3 = CBT / OF, ET; 4 = CBT (*); 5 = DS / GW, IF, ET; 6 = DS / OF, ET; 7 = DS / (*); 8 = / GW, IF, ET; 9 = / OF, ET; 10 = / (*), where: OF = apply strategies to protect OVERLAND FLOW (avoidance); GW = apply strategies to protect GROUNDWATER RECHARGE; IF = apply strategies to protect INTERFLOW; ET = apply strategies to protect EVAPOTRANSPIRATION; CBT = apply strategies to protect CHEMICAL AND BIOLOGICAL TRANSFORMATIONS; DS = apply strategies to protect DELIVERY OF SEDIMENT; DO = apply strategies to protect DELIVERY OF ORGANICS; (*) = apply strategies to protect GROUNDWATER RECHARGE, but only where underlain by mapped groundwater basin. Processes before the “/” = key watershed processes; of primary concern for protection; should be subject to most stringent numerical criteria. Processes after the “/” = watershed processes of less critical importance; could be subject to less stringent numerical criteria.

Physical Landscape Zones

Shapefile Name: ProjectArea_PLZ

This layer shows Physical Landscape Zones (PLZ, a.k.a. Topographic-Litho Units) for the Central Coast Joint Effort for Hydromodification Control project area. This layer is used as an input in the creation of Watershed Management Zones. The field 'PLZ_TYPE' attributes each polygon with its respective combination of geology and slope category. The data used to create this layer are: Slope categories: derived from USGS 10m DEM and refined via post-processing. Custom geology layer (ProjectArea_geol_v3_vMod.shp): see it metadata for further details.

Receiving Water Type

Shapefile Name: ReceivingWaterType

This layer shows basins and sub-basins attributed with their receiving water types (field 'DrainsTo'): Drains direct to lake; Drains to stream to lake; Drains to stream to ocean;

Drains to stream to wetland; Drains direct to wetland; Drains to stream to big river; Drains direct to big river; Drains direct to ocean. This layer and its classification are used in the creation of Watershed Management Zone maps. The source of the basin boundaries are 'NHD plus Catchments' (1:100,000). However, we modified several of the boundaries to accommodate the layer for our purposes. Any modification of basin boundaries was based on USGS 1:24k topographic maps, local knowledge of an area, or professional judgment. Receiving water types were determined using NHD high stream layers and water bodies, and the national wetland inventory dataset (NWI). In the case of wetlands, uncertainties were addressed by: 1. Aerial interpretation; 2. Guided by 7.5 minute USGS topo (or other direct reference (park & rec maps, etc.)); Moreover, in the context of this analysis wetland classification excluded river banks (unless very prominent and large), treated most freshwater ponds as wetlands, and considered the wetlands regional context (small wetlands relevant in the absence of larger wetlands, and vice versa). In addition, the term 'Big river' refers to streams segments that have a drainage area larger than 200 square miles. Other attribute fields included in this layer are not relevant outside the geoprocessing of WMZ.

Groundwater Basins

Shapefile Name: CDWR_groundwaterBasins

This shape file shows groundwater basins and subbasins as defined by the California Department of Water Resources. The file is intended for use with GIS software able to import files of suffix '.shp'. Groundwater basins are designated on the basis of geological and hydrological conditions, these usually being the occurrence of alluvial or unconsolidated deposits. When practical, large basins are also subdivided by political boundaries, as in the Central Valley. Basins are named and numbered per the convention of the Department of Water Resources. The basin boundaries for the revised groundwater basin map were primarily defined using geologic contacts and hydrogeologic divides. Specifically the identification of the groundwater basins was initially based on the presence and areal extent of unconsolidated alluvial soils identified on 1:250,000 scale geologic maps provided by the California Department of Conservation, Division of Mines and Geology. The identified groundwater basin areas were then further evaluated through review of relevant geologic and hydrogeologic reports, well completion reports, court-determined adjudicated basin boundaries, and contact with local agencies to refine the basin boundaries. Downloaded from CADWR on July 12, 2010:

http://www.water.ca.gov/groundwater/bulletin118/gwbasin_maps_descriptions.cfm

Geology

Shapefile Name: ProjectArea_geol_v3_vMod

This layer has been modified to include finer scale geology for certain areas, with the purpose of developing more accurate Physical Landscape Zones (PLZ) and Watershed Management Zones (WMZ) maps. All areas show Jennings 1977 geology (1:750,000) except for: Santa Cruz County: USGS (1:62,500); San Luis Obispo County: USGS (1:24,000 for the western part of the county, and 1:62,500 for the eastern part); Santa Barbara County: USGS (1:62,500); Monterey 7.5 min Quad (and its adjacent quad to the east): USGS (1:24,000). The following urban boundaries were modified using 1:62,500 geology: Lompoc; Solvang; Soledad; Gilroy; Morgan Hill; Los Alamos CDP; Santa Ynez CDP; Vandenberg AFB CDP; Carmel Valley Village CDP; Prunedale CDP; San Martin CDP; Paso Robles.

Urban Nodes

Shapefile Name: UrbanNodes

The TIGER/Line Files are shapefiles and related database files (.dbf) that are an extract of selected geographic and cartographic information from the U.S. Census Bureau's Master Address File / Topologically Integrated Geographic Encoding and Referencing (MAF/TIGER) Database (MTDB). The MTDB represents a seamless national file with no overlaps or gaps between parts, however, each TIGER/Line File is designed to stand alone as an independent data set, or they can be combined to cover the entire nation. The TIGER/Line Files include both incorporated places (legal entities) and census designated places or CDPs (statistical entities). An incorporated place is established to provide governmental functions for a concentration of people as opposed to a minor civil division (MCD), which generally is created to provide services or administer an area without regard, necessarily, to population. Places always nest within a State, but may extend across county and county subdivision boundaries. An incorporated place usually is a city, town, village, or borough, but can have other legal descriptions. CDPs are delineated for the decennial census as the statistical counterparts of incorporated places. CDPs are delineated to provide data for settled concentrations of population that are identifiable by name, but are not legally incorporated under the laws of the State in which they are located. The boundaries for CDPs often are defined in partnership with State, local, and/or tribal officials and usually coincide with visible features or the boundary of an adjacent incorporated place or another legal entity. CDP boundaries often change from one decennial census to the next with changes in the settlement pattern and development; a CDP with the same name as in an earlier census does not necessarily have the same boundary. The only population/housing size requirement for CDPs for the 2010 Census is that they must contain some housing and population. The boundaries of all 2010 Census incorporated places are as of January 1, 2010 as reported through the Census Bureau's Boundary and Annexation Survey

(BAS). The boundaries of all 2010 Census CDPs were delineated as part of the Census Bureau's Participant Statistical Areas Program (PSAP).

Hydrologic Soil Groups

Shapefile Name: HydrologicSoilGroups_SSURGO

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms. The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission. If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.