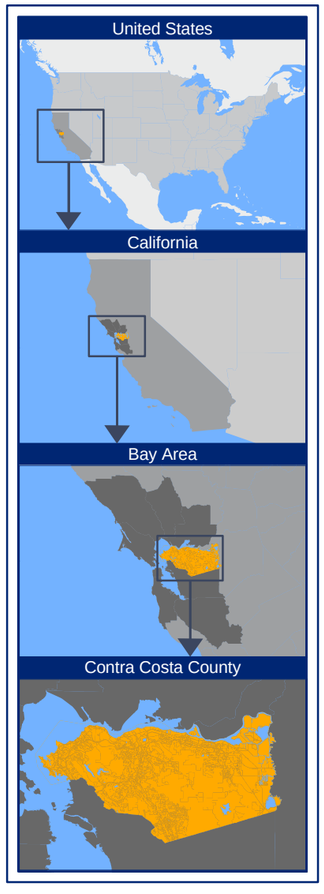
Stephen Joseph

Contra Costa County and the Contra Costa Watershed Forum

Located in the San Francisco Bay Area, Contra Costa County is home to almost one million people, beautiful landscape, and important natural resources. Because creeks are a primary connection between the human and natural environments, community groups, local non-profits and local governments have become increasingly concerned with the health of watersheds. These groups have formed a multi-stakeholder coalition, the Contra Costa Watershed Forum.

The Contra Costa Watershed Forum (CCWF) is an outgrowth of the first county-wide Creek and Watershed Symposium in 1999. The Forum is an open committee of some fifty organizations, including federal, state, and local agencies; local governments; professional watershed research organization; local non-profit environmental and education organizations; community volunteer groups; and private citizens. This diverse group of stakeholders is united by their concern for the watersheds of Contra Costa County.



Creeks that flow through urban communities provide a tangible connection to the natural landscapes upstream. The work of CCWF participants is premised on the notion that actions in a watershed are inter-related and, therefore, that broad participation and cooperation is needed to affect change. The members of the CCWF work together to find common approaches to making our variety of water resources into healthy, functional, attractive, and safe community assets.

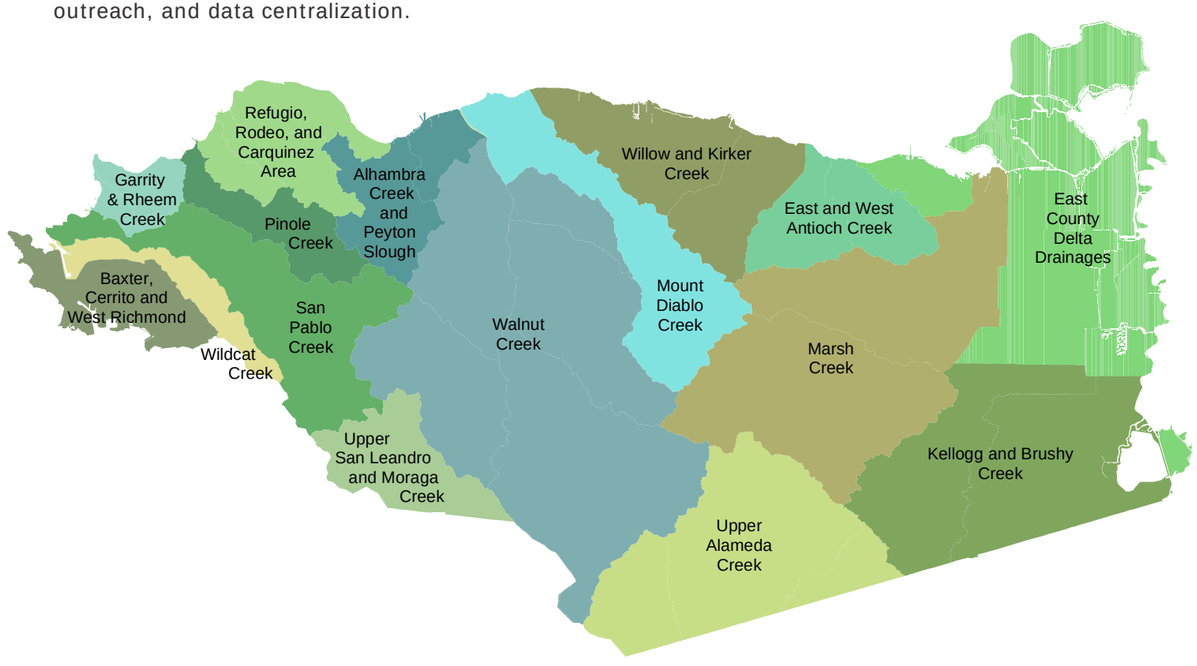
Since the inception of the CCWF, there has been a marked increase in watershed restoration and preservation activities, activism, and awareness. Earthday festivals are held at creek restoration sites, new volunteer groups have formed, and programs to educate, research and document the health of creeks and watersheds are more widely available. Persistence and perseverance of community groups, as well as hard work from local agencies and governments resulted in an effective and productive coalition of organizations concerned with the health of Contra Costa County watersheds.

A culmination of this collective effort is the convening of the 2003 Creek and Watershed Symposium: Progress, Opportunities and Challenges in the Watersheds of Contra Costa County, and the release of the *Contra Costa Watershed Atlas.*

Contra Costa Watershed Atlas

In preparation for the 2nd Quadrennial Creek and Watershed Symposium in 2003, members of the Watershed Forum combined forces to create the *Contra Costa Watershed Atlas* (Atlas). Through the process of creating the *Atlas*, organizations, agencies, and volunteers came together to centralize, create, and share GIS data; consolidate databases; and provide text and graphics for the Atlas.

These efforts have been realized at many different levels, each representing important developments in the cooperation involved with effective watershed management. Strong community volunteer groups have surveyed miles of creeks through a Global Positioning System (GPS) data collection program launched by the CCWF. Governmental, regulatory, and local agencies have fostered relationships to share GIS data. This data has been compiled in the first *Contra Costa Watershed Atlas*. In effect, the Atlas provided the catalyst for these groups to collaborate to create a resource for restoration coordination, education and outreach, and data centralization.



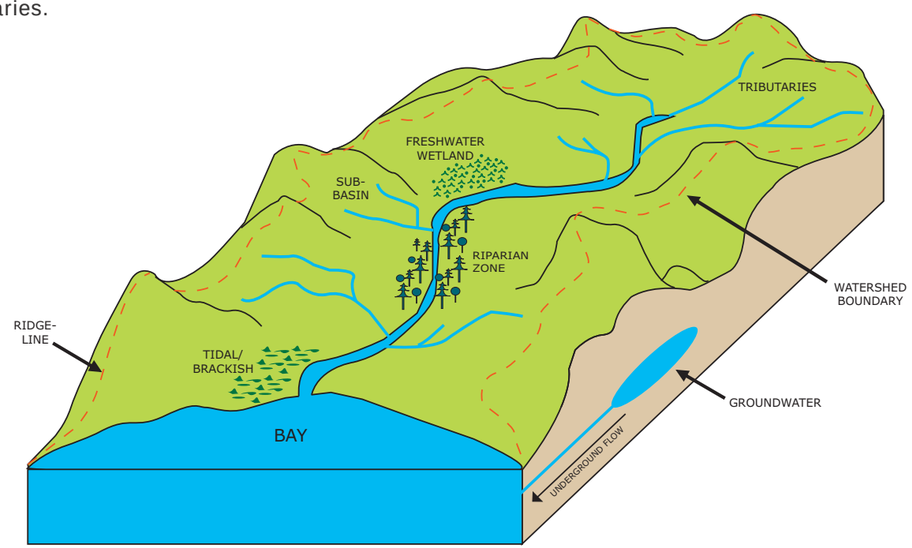
How the Atlas is Organized

Though focused on the state of natural ecosystems on a watershed scale, the Atlas also provides information about the human community and the county as an eco-region. The first chapter provides an overview of the county. Subsequent chapters document individual watersheds. Smaller watersheds have been grouped with neighboring watersheds. Walnut Creek, a very large watershed, includes additional data on its major sub-basins.

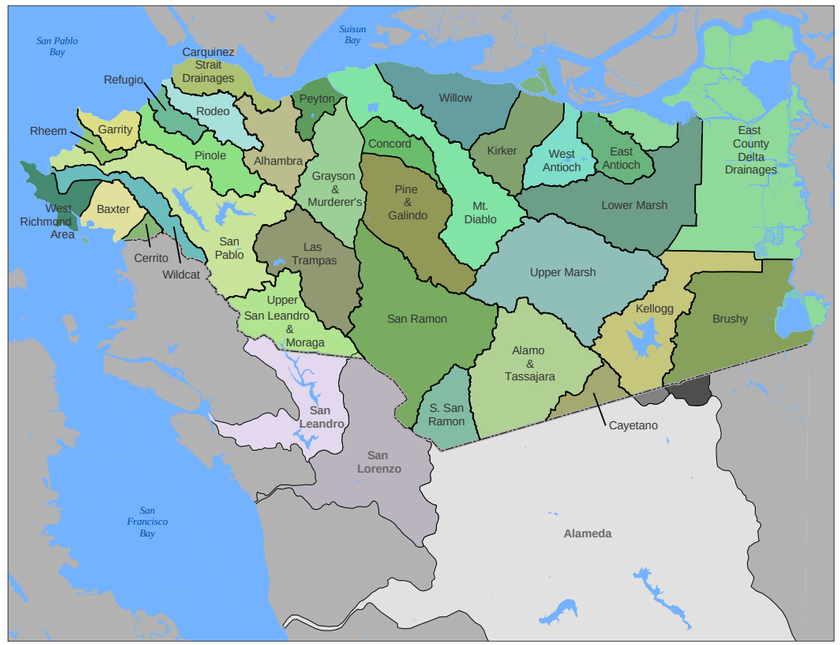
The first chapter, *Contra Costa County Watersheds Overview,* presents data that is pertinent at a county-wide scale. This first chapter also introduces some key concepts in understanding watershed ecology. Chapters 2 - 17 display data at a watershed scale. Some watersheds have been grouped together, as illustrated in the map above. Data tables, scattered through out the document presented as one comprehensive resource in *Appendix 1: Statistical Comparisons of Contra Costa County Watersheds.*

What is a Watershed?

A watershed is the basic geographic unit that is defined by hydrology. It is an area of land that drains water to a given reference point, typically a confluence with another major creek or large water body. All land is part of a watershed. Defined by their natural hydrological functions, watershed do not follow state, county, or city boundaries.



Contra Costa County has 31 major watersheds that drain to the Bay or Delta. Additionally, Contra Costa County includes the headwaters of creeks that drain through other counties before reaching the Bay.



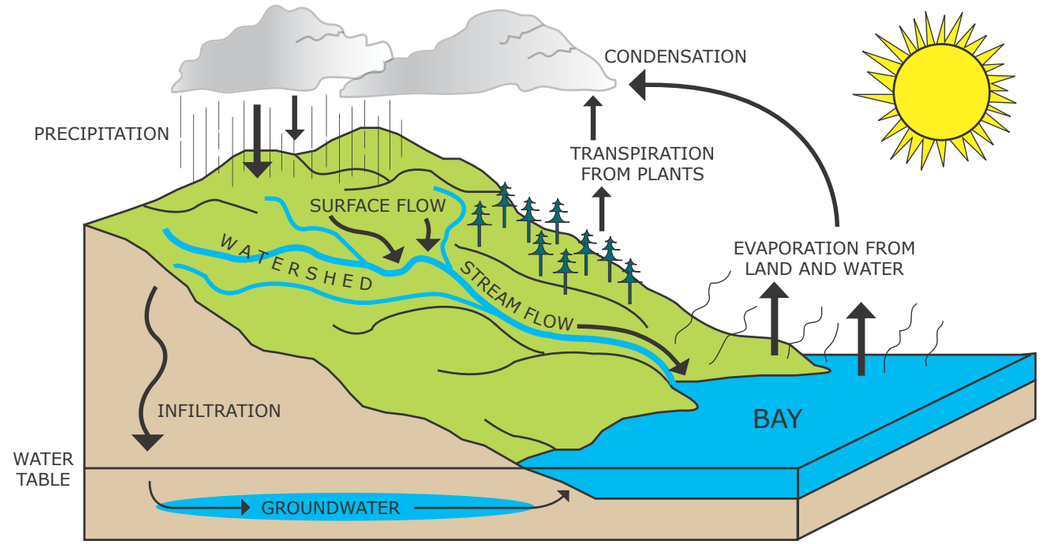
Watersheds outside Contra Costa County are approximate and based on USGS maps.

Hydrologic Cycle

There are five distinct processes that make up the hydrologic cycle: evaporation and transpiration (shortened to evapotranspiration), condensation, precipitation, run-off, and infiltration. Interruptions of the hydrologic cycle can have effects that can dramatically affect water quality, habitat integrity, and climate.

Evapotranspiration is a combination of two processes. Evaporation describes the transforming of water into a vapor by energy in light and heat. Transpiration is the release of water in vapor form through plants and animals. You can see water vapor in your breath on a cold day.

As water vapor in the atmosphere cools, it clings to fine particles in the air to form clouds. This is called **condensation**. Depending on temperature and topography, clouds laden with moisture can release water in the form of rain, hail or snow. This process is called **precipitation**.



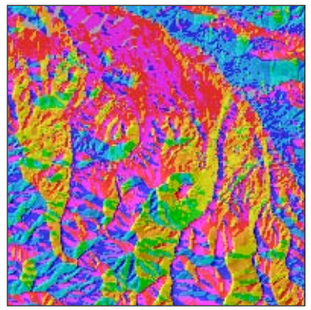
Water released from clouds can take a few different routes to complete the hydrologic cycle. Water may evaporate immediately and in vapor form return to the atmosphere. If the water reaches the ground, it can funnel off land into natural or man-made drainages. This step is called **run-off**. Alternately, water can be absorbed into the ground through a process called **infiltration**. Water that infiltrates recharges groundwater resources. The groundwater storage is the source of well water and dry season water for creeks in the watershed. When water eventually returns to vapor form, it completes the hydrologic cycle.

Watershed Protection Approach

This strategy for protecting and restoring aquatic ecosystems is based on the premise that many water quality and creek problems are best solved at the watershed scale rather than at the individual waterbody or discharger level. Major components of the Watershed Protection Approach are: geographic focus, integration of new science as it is available, and a high level of stakeholder involvement.

Guide to the Map Layers

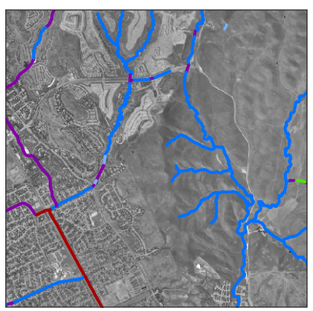
Almost all data presented in the following chapters is specific to Contra Costa County. Though we recognize that watersheds and creeks do not adhere to political boundaries, unfortunately most of our data does. Where possible we have included data across Contra Costa County's border into Alameda County (to the south) and San Joaquin County (to the east). All map data is projected in NAD 83, CA Stateplane Zone III.



Aspect: Aspect is the compass direction that a slope faces, measured counterclockwise in degrees from 0 (North) to 360 (North again). This aspect layer was created from a countywide Digital Elevation Model (DEM) which was generated from digital aerial photography and surveys performed by the County and the Contra Costa Clean Water Program in May of 2000.

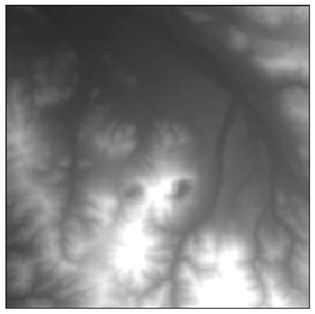
City limits and Spheres of Influence (SOI): Contra Costa County Community Development Department has created electronic maps of these boundaries based on the official paper maps maintained by the County Assessor. City Limits and SOIs were drawn using the Public Works parcel data as a base map. The terms are further defined in Chapter One.

Contours: Elevation contours are a common means for representing topography and should be familiar to anyone who has used a U.S. Geological Survey Quad Map. The County has created 10-foot and 50-foot interval contours from digital aerial photography and elevation surveys performed by the County and the Contra Costa Clean Water Program in May of 2000. Maps in the Atlas display contours at 50 and 100-foot intervals.

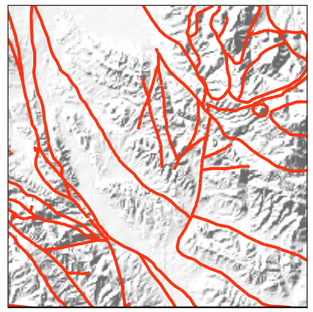


Creeks and Drainages: The Community Development and Public Works Departments worked together to generate a new creeks and drainages layer for use in this Atlas (to name one purpose). The layer was mapped by interpreting orthographic photographs, 10' contours, and storm drain data. USGS creek data (NHD High, where available, and NHD Medium in other areas) were used to help determine the drainages that should be mapped, but substantial drainages absent from USGS maps were included. Draft data were "ground-truthed" and proofread extensively both by staff and by CCWF volunteers knowledgeable of each watershed. Though storm drains often discharge to creeks, the detailed storm drain network is not a part of the Creeks and Drainages data set, though pipes or drains that connect to creeks at both ends are. The data are referred to as "Creeks and Drainages" because the term "creek" usually refers to a channel with bed and bank, and based on the methods used to develop the data, it is impossible to know where bed and bank exists in the drainage lines that were mapped. No attempt was made to characterize the drainages by perennial, seasonal, or intermittent flow pattern. There are more names labeled on creeks than are available through USGS data. Local knowledge and conventions have been recorded. Though these names are listed – they are not confirmed as the 'official' names of creeks.

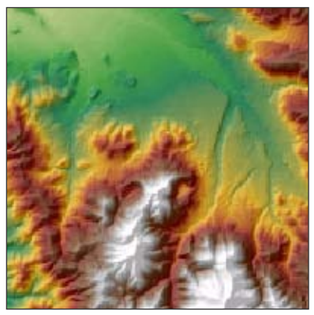
Demography (Population Density): Demographic data used was provided by the U.S. Census Bureau. Census tracts and blocks displayed reflect the units used in the 2000 census. Unless otherwise noted, demographic data on population, race and ethnicity, income, and education is from the 2000 Census. Population density maps displayed for each watershed (such as shown in this image), use Census blocks, the smallest geographic unit at which the Census Bureau collects data.



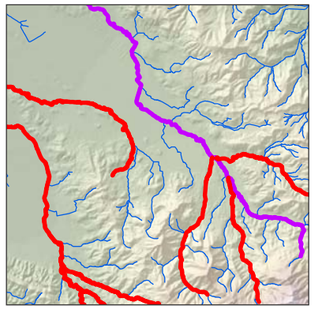
Digital Elevation Model (DEM): This DEM layer is a grid of 30 by 30-foot square cells, each containing an elevation value. It is based on elevation information generated by digital aerial photography and elevation surveys performed by the County and the Contra Costa Clean Water Program in May of 2000. Like elevation contours, a DEM is basically one alternative means for representing elevation and topography, but it can be more useful for certain types of analysis and 3-dimensional modeling. The DEM can be color-coded with a variety of color schemes to display elevation value.



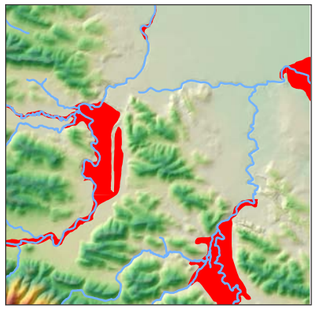
Earthquake Fault lines: U.S. Geological Survey information on the location of fault lines is presented in the Atlas. Fault line classifications have been simplified in consultation with the County's geologist. It is important to note that many fault lines are classified as inactive.



Elevation: See Digital Elevation Model. For the purposes of display in the Watershed Atlas, elevation has been represented using the Digital Elevation Model, color-coded by elevation using a standard physical relief map color spectrum. The hillshade data (see below) shows through the DEM to provide a 3D feel.

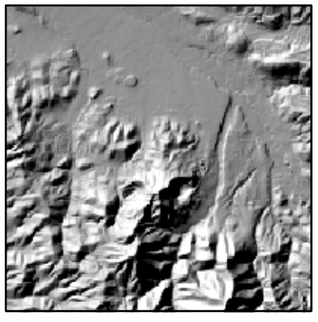


Fish (historical and present steelhead populations): Data were provided by the Center for Ecological Management and Research, 2003. Information on current populations is based mainly on sampling by Rob Leidy (between 1992 and 2002) and other researchers. Historical information is based on published and unpublished survey reports, museum specimens, interviews, and scientific collection permit reports. Data were digitized by the Contra Costa County Public Works staff in 2003. Fish maps are not for planning purposes. The maps are subject to revision.

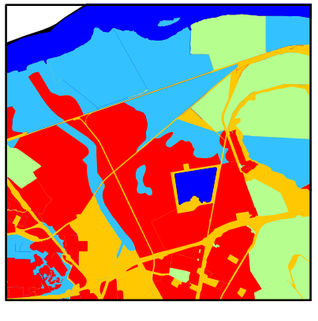


Flood Plains: Information on flood plains was developed by the Federal Emergency Management Agency (FEMA). FEMA has estimated flood risk by identifying those areas that are at risk of flooding at least once every 100 years ("Special Flood Hazard Area") FEMA maps are frequently revised and were not developed to align with the County's detailed base maps. These data are only displayed at a countywide scale and should be used for planning purposes.

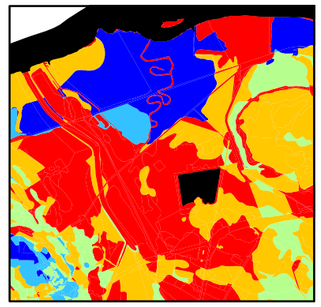
GPS data collection (CCWF Volunteers): The Contra Costa Watershed Forum launched a Global Positioning System (GPS) data collection on local creeks in Summer 2001. Volunteers are trained in data collection protocols and GPS and collect detailed information on a variety of physical creek features. Select queries from the collected data are presented in watershed chapters. For more information, contact Kae Ono, Contra Costa County at kono@cd.cccounty.us.

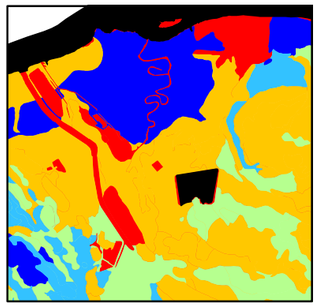


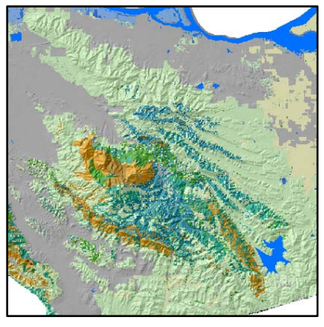
Hillshade: Hillshade models the amount of sun or shadow falling on a slope, given a fixed azimuth (compass direction) and altitude of the sun. This hillshade layer was made by the Contra Costa County Community Development department from the countywide DEM. Each cell in the raster stores a number value between 0 (black) and 255 (white) depending on how much light or shade it is receiving from the sun at that moment.



Impervious Surface: Percent impervious has been estimated from Planned Land Use. With guidance from staff at the County Public Works Department, the percent of impervious surface was estimated for different land use categories based on past evaluations of specific areas. These impervious estimates were applied to the Planned Land Use data to create the map in the upper right corner of this page. Please note that this method produces a rough estimate of percent impervious at build-out.







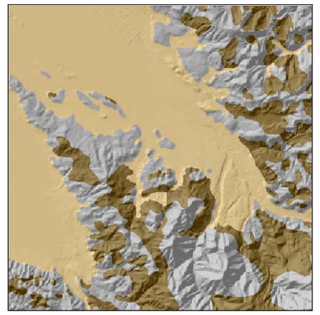
Soil permeability: The U.S. Department of Agriculture's soil data (see Soils) were displayed according to the permeability ratings designated for each soil type. The soil data estimate the hydrological properties of soil types in various ways. The "Perm_Low" designation was used for the Atlas.

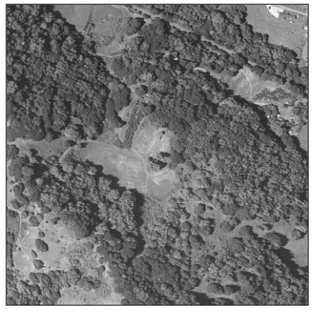
Soil permeability (composite): To illustrate one manner in which natural and constructed conditions influence watershed hydrology, the Soil Permeability and the Impervious Surface were combined to form the map at the bottom center of this page. To combine the maps, the soil permeability was reduced in proportion the estimated percent of impervious surface above the soils. Staff at the Contra Costa County Flood Control and Water Conservation District provided assistance and guidance for this analysis.

Land-cover (county-wide): The land-cover maps show the predominant vegetative cover in the County. Such maps are often referred to as land-cover maps rather as vegetation maps because some classifications, such as "urban", do not relate to vegetation. The California Department of Forestry and Fire Protection's Fire and Resources Assessment Program provides the land-cover data used in countywide maps. The map information used in the Atlas was updated in October of 2002. These and other data are available at http://frap.cdf.ca.gov/data/frapgisdata/select.asp.

Land-cover - Detailed (East Contra Costa County): Detailed land-cover data was created for use in the development of the East Contra Costa County Habitat Conservation Plan (HCP). For more information on the HCP see www.cocohcp.org. The data were created by interpreting the color and black and white orthographic photographs. Field visits were used to correlate and confirm photo interpretation.

Landslides: Data displayed in the Atlas on past landslides was collected by the U.S. Geological Survey (USGS). The USGS mapped past landslide locations by examining topographic shapes to recognize landslide "signatures". Most of the historic slides they mapped range in size from a few acres to several square miles and most show no evidence of recent movement. Detailed background information on the USGS landslide data can be accessed at: http://wrgis.wr.usgs.gov/open-file/of97-745/ccdl.html



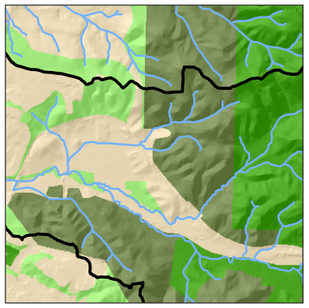


Orthographic photos, Black and White: Aerial photographs were taken May of 2000 of the County and the Contra Costa Clean Water Program. The photographs are orthographically corrected and projected for use in a GIS—that is, they have been carefully pulled and stretched to correct for the curvature of the earth and align with flat maps. The pixel size in the photos is one-half foot in urban areas and one foot in rural areas. Elevation and topography modeling was an additional component of the aerial survey and enabled creation of the 10 foot contours.

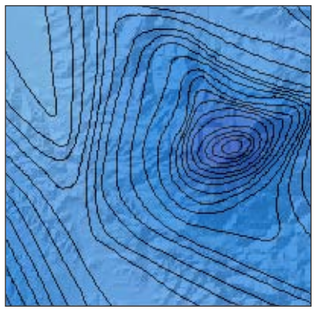
Orthographic photos, Color: Aerial photographs were taken in the March of 2003 and were purchased by the County shortly thereafter. The photographs are orthographically corrected and projected for use in a GIS in a manner similar to that used for the black and white aerials.

Parcels: The Contra Costa County Public Works Department parcel data layer is displayed in the Atlas in conjunction with Planned Land Use. This detailed and precise data set serves as a base map or point of reference for nearly all other data layers developed by the County.

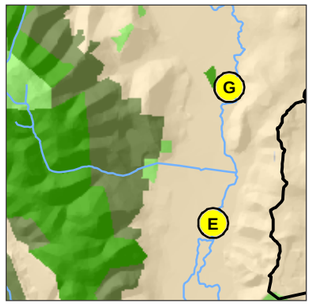
Planned Land use: The Planned Land Use map layer presents information distilled from the Draft Digital Contra Costa County General Plan Map, which was created by the Contra Costa County Community Development Department. In the Planned Land Use data, similar General Plan land use designations have been combined to create a simpler map. The County General Plan Map attempts to represent City General Plan policies in a common category system, but is not the official land use map for incorporated areas. In summary, the Planned Land Use data are not an actual representation or measurement of land use regulations, but a generalized estimation of various land use plans.



Public, Protected and Agricultural lands: Locations were excerpted from the Contra Costa County general Plan. Facility names were provided by Community Development Department staff.

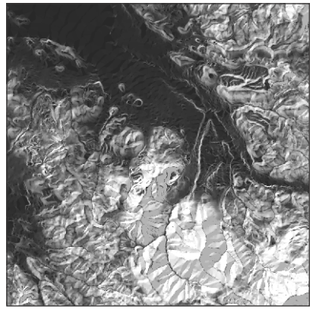


Rainfall: Rainfall isohyetals (contours) were created by hydrologists at the Contra Costa County Flood Control and Water Conservation District. The isohyetals were based on observed rainfall measurements at gauge stations throughout the County, and were interpolated based on topographic considerations. The isohyetals were digitized (mapped in a computer) by the Contra Costa County Public Works department and converted from the original CAD files in 2003 by the Contra Costa County Community Development Department.

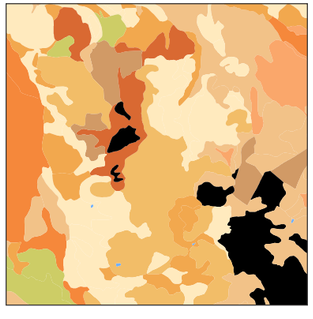


Restoration Projects: Restoration project information was collected from a variety of sources including: Contra Costa Watershed Forum Restoration Project Database, San Francisco Bay Joint Venture Restoration Project Database, East Bay Municipal Utility District, East Bay Regional Parks, Contra Costa County Flood Control and Water Conservation District, and local creek and watershed volunteer groups. Data were digitized by Contra Costa County Community Development, 2003.

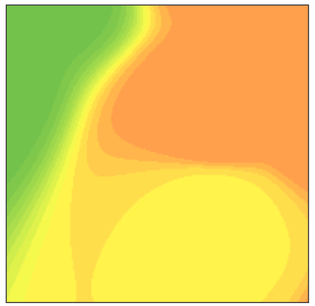
Roads: Thomas Brothers, a mapping and cartography company created the road data used. The 2003 version of the road data were used.



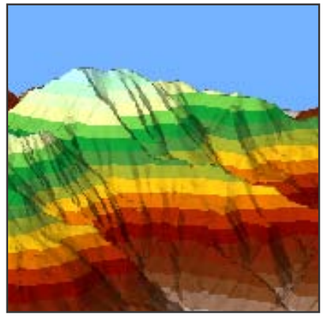
Slope: The slope layer was developed by the Contra Costa County Community Development Department from the countywide DEM. Like the DEM, the slope is represented with a grid system. Each cell in the grid contains a value from 0 (flat) to 223 percent (the steepest slope measured in the County by this method), depending on the steepness of the slope.



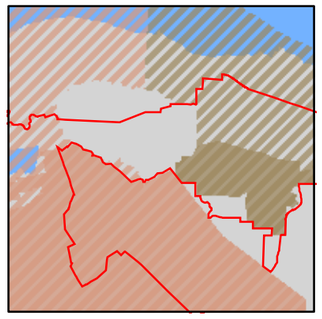
Soils: The U.S. Department of Agriculture's Natural Resources Conservation Service leads the National Cooperative Soils Survey. The data displayed is from the Soil Survey Geographic (SSURGO) database. Information and data can be downloaded from http://www.ca.nrcs.usda.gov/mlra02/.



Temperature: A geographic display of summer and winter high and low temperatures was developed by the Contra Costa County Community Development Department using temperature data from the National Weather Service. Thirteen temperatures gauge stations in Contra Costa County provided the base temperature data. Using ESRI 3D Analyst, the base data was interpolated for other county areas.



TIN (Triangulated Irregular Network): A TIN is another means for representing topography. A TIN is created by connecting sample elevation points with lines to form an elevation surface made of contiguous, non-overlapping triangles. This countywide TIN was made from 10-foot contour lines, and is one approach used to make three-dimensional illustrations of the County such as appear in the Atlas.



Urban Limit Line (ULL): Approved by County voters in 1990 and amended by the Board of Supervisors in 2000, the ULL designates areas where the County is prohibited from approving urban land uses. The computer map of the ULL was created by the Contra Costa County Community Development Department in 2003.

Watershed Boundaries: Updated watershed boundaries were created by the Contra Costa County Public Works Department using ESRI's ArcHydro in combination with a 10-foot digital DEM dataset and Contra Costa County streams layer. Boundaries in flat and developed areas were edited using additional background data including: the storm drain inventory, 10-foot contours, formed drainage areas and digital orthophotos (2000). These and other questionable areas were delineated by interpretation (and input from CCC Flood Control Hydrologists and Engineers).

Watershed Vital Statistics

Watershed Size: The area of the watershed was determined by measuring the polygon shape in the GIS Watersheds map layer.

Length of Longest Branch of Creek: The longest continuous stream reach in each watershed was calculated using the Creeks and Drainages map layer. Segments of this longest stream reach may have differing names, but are connected by the flow of water.

Total Channel Length in Watershed: The length of all mapped Creeks and Drainage segments in a watershed were combined to determine the total channel length.

Average Annual Rainfall: Rainfall was estimated by overlaying the Rainfall map layer with the Watersheds, and taking a weighted average of areas between the rainfall isohyetals or contours within each watershed.

Estimated Mean Daily Flow: Mean Daily Flow has been estimated at the mouth of major creeks using formulas developed by staff at the Contra Costa County Flood Control and Water Conservation District. The formulas were derived by correlating observed stream flow records at eight stream gauges in Contra Costa County. The correlation was based on flow records, drainage area, and estimated percent developed. Please note that the Mean Daily Flow estimates represent the average flow per day during an average year. Flows during the wet season or during a wet year would be much higher. Flows during the dry season or during a dry year would be much lower. High-intensity, short-duration rainfalls can significantly increase instantaneous flows and these flows should not be used for design of drainage facilities.

Estimated 100-Year Flood Flow: The predicted flow during a rainfall event so large that it is estimated to occur only once every 100 years. Flood risk and the effectiveness of flood protection measures and facilities is normally gauged against 100 year flood events. Staff from the Contra Costa County Flood Control and Water Conservation District provided estimates of the expected 100-year flood flow at various points throughout the County. The 100-year flood flow estimates may be for creek reaches upstream of the mouth and flows at the mouth would likely be higher. Note the significant difference in the magnitude of the estimated mean daily flow and the 100-year flood flow.

Guide to the Data Tables
The data tables and graphs presented in the Atlas were created by querying the various map layers described on the previous pages. Geographic Information System computer software was used to measure the area and length of features in the map layers. To cross-tabulate map information such as population or land use by watershed, map layers were stacked on top of each other, cut or sorted by the map layer(s) above, and the resulting combined map layer was queried to provide the desired statistics. The sources and disclaimers on the data in the data tables are explained more fully below.

Wildcat Creek Watershed Vital Statistics

Watershed Size	6,848	acres
Length of Longest Branch of Creek	13.43	miles
Total Channel Length in Watershed	22.22	miles
Average Annual Rainfall	24	inches
Estimated Mean Daily Flow	7.7	cfs
Estimated 100-Year Flood Flow	2,280	cfs*
Highest Elevation in Watershed	1905	feet
Population (estimated)	24,000	people
Estimated Percent Impervious	20	%
Recognized Pollutants of Concern	Diazinon**	

* At 23rd Street (5,300 acres upstream, or 77% of watershed)
** Wildcat Creek is listed as an Impaired Water Body in the State's 303(d) list. Diazinon is the Pollutant of Concern.

Highest Elevation: These heights were located using the Elevation Contours map layer. Names provided on topographic maps were inferred from the USGS base maps for the County.

Population: Population was determined by overlaying the U.S. Census Bureau Census Blocks (2000) map layer with the Watersheds, and apportioning the population of Census Blocks spanning more than one watershed between the watersheds based on the portion of the Census Block area within each watershed. Since population is not distributed evenly within Census Blocks, the resulting figures should be considered rough estimates only.

Estimated Percent Impervious: Estimated by overlaying the Impervious Surface map layer with the Watersheds and taking a weighted average, these numbers are approximate only. Please note, the Impervious Surface map layer was developed using Planned Land Use--not actual land use--and may reflect development planned but not built. Discrepancies between planned and actual land use and the uncertainty involved in predicting impervious cover based on land use designations lead to significant uncertainty in the impervious estimates. Consider these figures as ballpark estimates only.

Recognized Pollutants of Concern: Pollutants identified by the State Water Resources Control Board (SWRCB) in their 303(d) list of Impaired Water Bodies for water bodies within this watershed are included in the chart. The SWRCB prepares this list in accordance with requirements of the federal Clean Water Act. If the watershed in question contains no water bodies designated as "Impaired" by the SWRCB, no recognized pollutants of concern are listed. This does not mean such watersheds are free of pollution. For example, the SWRCB has determined that urban streams in the Bay Area are impaired for Diazinon. But the "Impaired" designation can only apply to water bodies identified in the SWRCB Basin Plan for the San Francisco region, and not all minor water bodies are identified in the Basin Plan.

One acre is equivalent to 43,560 square feet, 1/640th of a square mile, or just under one football field (minus the end zones).

Cfs stands for cubic feet per second. For comparison purposes, the flow from a typical 3/4 inch garden house may be about 1/50th of a cfs (approximately 9 gallons per minute) when the valve is fully open.

Channel Length Statistics

The Creeks and Drainages map layer was queried by watershed to develop these statistics. Storm drains and any features missed when compiling the Creeks and Drainages map layer are not reflected.

Type of Bank or Channel: When the Creeks and Drainages map layer was created, aerial photo interpretation, surveys of the flood control channels, and some field-checking by staff and watershed organizations were used to classify/estimate the character of the creek banks or channel type. For instance, if the aerial photo and/or channel design plans for constructed channels showed the creek going underground, that segment of the creek and drainage was classified as "underground". If surveys or aerial photo interpretation revealed that the creek ran through a concrete structure, that segment was classified as "concrete". Bank type and channel condition features less than 100 feet in length were not mapped. Otherwise, bank type was designated as "natural (no obvious reinforcements)". Given the limits of the methodology, the 100 foot minimum on classifying segments, the difficulty of compiling data on more than 1300 miles of creeks, and the omission of storm drain collectors from the data, the bank channel figures clearly underestimate the extent of "non-natural" channel conditions.

Natural (not obviously reinforced): Banks presumed to be in either a natural condition or to not be obviously constructed or reinforced.

Concrete: Banks lined with concrete. Underground segments were also classified as concrete, though in fact the underground segments may be either concrete or metal pipes.

Earth (constructed): Channel banks are made of earth but have been constructed to convey water efficiently and/or prevent bank erosion. Typically, the banks are constructed to a uniform slope and bank vegetation may be frequently managed.

Riprap: Banks lined with large rocks or boulders.

Underground: Creek or drainage flows below the surface. This feature was tracked and queried separately from bank type. The sum of percent natural, concrete, constructed earth, and riprap is 100%. Percent underground overlaps with percent concrete.

Creek Profile

Creek profiles illustrate the gradient of the main stem of the creek channel. That is, these graphs show the elevation of the creek bed at specific distances from the creek mouth. Distance from the creek mouth is not measured in a straight line. It is measured along the creek itself and reflects the sinuosity of the channel. Major landmarks are labeled in the profiles.

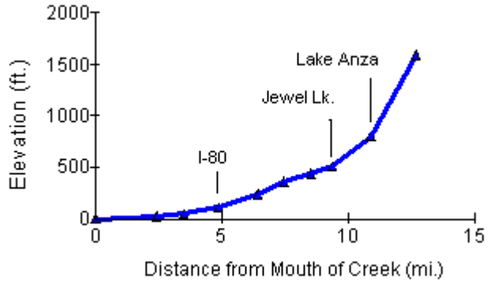
Wildcat Creek Channel Length Statistics*

	Miles	Percent
Length of Longest Branch of Creek	13.43	
Total Channel Length in Watershed	22.22	
Type of Bank or Channel:		
Natural (no obvious reinforcements)	19.98	89.9%
Concrete	0.36	1.6%
Earth (constructed)	1.75	7.9%
Riprap	0.14	0.6%
Underground	0.28	1.3%

*Data relate to mapped channels only. Does not include storm drains. Bank type for segments shorter than 100 feet was not mapped.

Planned Land Uses *Wildcat Creek Watershed*	Acres
Agricultural Lands	52
Business Parks and Offices	0
Commercial	33
Industrial	657
Mixed Use	160
Multiple Family Residential	99
Open Space	252
Parks and Recreation	4,309
Public/ Semi-Public	270
Single Family Residential	828
Water	164
Watershed (Public)	25
Total	**6,848**

Wildcat Creek Profile



Demographic Profiles

Demographic profiles are presented for cities and unincorporated communities (Census Designated Places) in or near the subject watershed. Statistics are provided on population, race and ethnicity, education, and income. The percentage figures for education reflect a subset of the overall population, namely persons 25 years of age or older. The source for all data in the Demographic Profiles is the U.S. Census Bureau's 2000 U.S. Census.

Planned Land Use Tables and Pie Charts

These figures were created by overlaying the Planned Land Use map layer with the Watersheds. As explained previously, the Planned Land Use map layer and data were extrapolated from the Draft Digital County General Plan Map by combining similar categories of land use designations. The Planned Land Use data are not an actual representation or measurement of land use regulations, but a generalized estimation of various land use plans.

Most of the Planned Land Use type categories are self-explanatory, but a few merit further explanation.

The Agricultural Lands category encompasses several similar General Plan designations that restrict minimum parcel size to five or more acres, but lands with such designations may not actually be used for agricultural purposes.

The Public/Semi-Public category covers a variety of uses, from large public transportation facilities like freeways, to government offices, to schools, to private facilities with a public purpose, such as hospitals and cemeteries.

The Watershed (Public) category encompasses open lands owned and maintained by water districts for the purpose of protecting water quality upstream of drinking water reservoirs.

Political Jurisdiction Pie Charts

Incorporated/Unincorporated Pie Charts compare the percentage of the watershed within city limits to the percentage outside city limits. Cities regulate land use within city limits. The County regulates land use outside city limits (see below).

Urban Limit Line Pie Charts compare the percentage of the watershed within the County Urban Limit Line (ULL) [i.e., the "urban side" of the ULL] to the percentage outside the ULL [the "non-urban" side of the ULL]. The County cannot redesignate lands outside the ULL to an urban land use (see below).