
Data Repository

Supplementary Text
Bivariate correlation analysis of major elements.
K-means cluster analysis of catchment sample major element principal components and radiogenic isotopes.
Combined analysis of major element composition, $^{87}\text{Sr}/^{86}\text{Sr}$, $\varepsilon_{\text{Nd}}$, and predominant mineralogy. Proportional suspended sediment flux to the Santa Barbara Bight.

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References Cited
Bivariate correlation analysis of major elements

A Kendall’s rank correlation was run to determine relationships between major elements. Significant positive relationships occur between Al and Fe, Al and Ti, Fe and Mg, and Fe and Ti \((p<0.01; \text{sample } n=27, \text{or } n=26 \text{ for Ti correlations})\) (Figure DR1). Samples with individual elemental concentrations that exceeded the \(2\sigma\) range of all samples were considered outliers and excluded from the correlation analysis for certain elements (see main text; e.g., L4 was excluded from Ti correlation).

K-means cluster analysis of catchment sample major element principal components and radiogenic isotopes

K-means cluster analysis was used to identify groups of samples within major element PC1 and PC2 space. Samples L3 and L30 were removed prior to clustering analysis, as these samples are outliers. To determine the appropriate number of sample groups, we applied the k-means cluster analysis using 2-6 groups, respectively, and assessed the silhouette values of each respective clustering result (Figure DR3). Higher silhouette values indicate a more appropriate clustering solution. The clustering result with four groups has the greatest number of samples with high silhouette values; for example, there are 11 samples with silhouette values over 0.7 (Figure DR3). Therefore, four groups is the most appropriate clustering solution for the catchment samples in PC1 and PC2 space, and was used in this study.

K-means cluster analysis was also used to determine the appropriate grouping of the Sr and Nd radiogenic isotope results. Catchment sample \(^{87}\text{Sr}/^{86}\text{Sr}\) and \(^{143}\text{Nd}/^{144}\text{Nd}\) were used for this analysis, and both were standardized prior to analysis. To determine the appropriate number of sample groups, we applied the k-means cluster analysis with group numbers of 2-6, respectively,
and assessed the silhouette values of each respective clustering result (Figure DR4). The clustering result with five groups has the greatest number of samples with high silhouette values; for example, there are 21 samples with silhouette values over 0.4 (Figure DR4). Therefore, the most appropriate clustering solution for the catchment samples in Sr-Nd isotope space includes five groups, and this approach was used in this study.

**Combined analysis of major element composition, **$^{87}\text{Sr}/^{86}\text{Sr}$, $\varepsilon_{\text{Nd}}$, and predominant mineralogy**

Isotopic measurements, major element composition, and mineralogy can all be used to characterize and discriminate sediment source areas. Principal component analysis (PCA) of the bed sediment samples’ major element composition, $^{87}\text{Sr}/^{86}\text{Sr}$, $\varepsilon_{\text{Nd}}$, and predominant mineralogy enabled assessment of the influences on sample composition (Table DR6). All variables were standardized prior to PCA. The first principal component (PC1) has high positive loadings for plagioclase, $\varepsilon_{\text{Nd}}$, Al, Ti, and Fe, with strong negative loadings for $^{87}\text{Sr}/^{86}\text{Sr}$, K, quartz, and potassium feldspar. Thus, PC1 appears to be driven by feldspar type. The second principal component (PC2) has high positive loadings for Al, potassium feldspar, $^{87}\text{Sr}/^{86}\text{Sr}$, and plagioclase, and strong negative loadings for $\varepsilon_{\text{Nd}}$, calcite, Na, and Ca. Positive PC2 may be associated with a composition that is more clastic, while negative PC2 may be associated with more carbonate. The third principal component has high positive loadings for Ca, Fe, Mg, Na, and chlorite, and strong negative loadings for $\varepsilon_{\text{Nd}}$, kaolinite, and smectite. This dichotomy may be associated with mafic versus felsic compositions.

K-means cluster analysis was used to determine the appropriate grouping of the major element, isotope, and mineralogy PCA results. Catchment bed sediment was used for this
analysis. To determine the appropriate number of sample groups, we applied the k-means cluster analysis with group numbers of 2-9, respectively, and assessed the silhouette values of each respective clustering result (Figure DR5). The clustering result with four groups has the greatest number of samples with high silhouette values; for example, there are 21 samples with silhouette values at or above 0.6, and 11 samples with silhouette values at or above 0.8 (Figure DR5). Therefore four groups is the most appropriate clustering solution for the catchment samples in combined major element, isotope, and mineralogy principal component space, and was used in this study (Figure DR6).

The groupings of samples contain some similarities to those identified in the major element PC space and the Sr-Nd isotope space. Samples collected from the Eastern Santa Clara River sub-catchment are again grouped together (L1, L2, L4, L5; Figure DR6), although sample L7 is also included in this group in the combined variable space. The Northern and Western SCR sub-catchment samples plot within the same group as the Southern Slopes samples, as also occurred in the isotope grouping (Figure 6). The Santa Rosa Island samples plot close together, but are separated from the other bed sediment samples, as also occurred in the isotope cluster analysis. Surprisingly, one group consists of samples L30, L24-1, GC, MC, and L3. This grouping did not occur in the isotopic or major element analyses. The SBB samples again plot within/near the expanded Southern Slopes group. Yet, in this combined major element, isotope, and mineralogy principal component space, the SBB Holocene flood samples and SBB LGM samples again have separation from one another, with the LGM samples again plotting closer to the SRI (Channel Island) samples.

**Proportional suspended sediment flux to the Santa Barbara Bight**
Warrick and Farnsworth (2009) calculated the mean annual suspended sediment fluxes of the Santa Clara River (SCR), Ventura River, Santa Ynez Mountains coastal creeks and Channel Islands creeks. As only the creeks north of the drainage divides on the Channel Islands contribute sediment to the Santa Barbara Bight, we used half the value of the Channel Islands creeks suspended sediment flux for our calculations. In Warrick and Mertes (2009), the mean annual suspended-sediment budget of watersheds within the SCR catchment is presented. We estimated the proportions of each creek watershed’s mean annual suspended-sediment budget within the SCR, and assumed that these proportions also hold for the mean annual suspended sediment fluxes. Then we calculated the mean annual suspended sediment flux proportion of each source area (Eastern SCR, Northwest SCR as represented by the Northern SCR geographic region [Figure 2C], Western SCR, Southern Slopes and Channel Islands). We added together the Southern Slopes and Western SCR proportions to represent the extended Southern Slopes source area. The results of these calculations are presented in Table DR6.
Figure DR1. Major element correlation matrix and elemental histograms. Correlation lines in pink. Kendall’s rank correlation coefficients displayed in the top left of each correlation plot; red text indicated significant correlation. All stream bed sediment and sediment core samples (n=27) were used in correlation plots except for sample L4 in the Ti plots, L29 in the Na plots, and L2 and L4 in the Sr plots, as the respective elemental concentrations in those samples were greater than the 2σ range of all the samples (n=27).
Figure DR2. Shale-normalized (PAAS; McLennan, 1989) REE patterns for stream bed sediment samples and sediment core samples. Asterisks denote averaging of results from multiple analyses of a sample. SCR–Santa Clara River catchment, VR–Ventura River catchment, SRI–Santa Rosa Island, SYR–Santa Ynez River catchment, SBB–Santa Barbara Basin, LGM–last glacial maximum.
Figure DR3. K-means clustering analysis of catchment samples major element PC1 and PC2. Clustering results in left panels and silhouette values for each clustering result in the corresponding right panels. The centroid of each k-means cluster is denoted by black ‘X’.
Figure DR4. K-means clustering analysis of catchment samples $^{87}\text{Sr}/^{86}\text{Sr}$ and $^{143}\text{Nd}/^{144}\text{Nd}$. Clustering results in left panels and silhouette values for each clustering result in the corresponding right panels. The centroid of each k-means cluster is denoted by black ‘X’.
Figure DR5.
K-means clustering analysis of silhouette profiles of catchment samples' major element compositions (Al, Ca, Fe, K, Mg, Na, Ti), $^{87}\text{Sr}/^{86}\text{Sr}$, $\varepsilon_{\text{Nd}}$, and predominant mineralogy (plagioclase, potassium feldspar, quartz, calcite, muscovite, illite, kaolinite, smectite, and chlorite). The colored profile (four clusters) is considered the most appropriate grouping, and was used for further analysis.
Figure DR6. Stream bed sediment and Santa Barbara Basin (SBB) sediment core samples expressed as the first (PC1), second (PC2), and third (PC3) principal components after combined principal component analysis of major element (Al, Ca, Fe, K, Mg, Na, Ti), \(^{87}\text{Sr}^{86}\text{Sr}\), \(\varepsilon_{\text{Nd}}\), and predominant mineralogy (plagioclase, potassium feldspar, quartz, calcite, muscovite, illite, kaolinite, smectite, and chlorite) (Table DR6). Samples CC1 sand, WC1 sand, and the SBB samples were excluded from the PC analysis. The principal component scores were calculated for the SBB samples using the loadings in Table DR6. Composition groups identified by k-means cluster analysis of the stream bed sediment samples are shaded. The three panels (A, B, C) are views of the same plot rotated about a vertical axis. Composition group abbreviations: SYR–Santa Ynez River, SS–Southern Slopes, N SCR–Northern Santa Clara River, W SCR–Western Santa Clara River, SRI–Santa Rosa Island, E SCR–Eastern Santa Clara River, SBB–Santa Barbara Basin, LGM–Last Glacial Maximum.
<table>
<thead>
<tr>
<th>Fault name</th>
<th>Slip rate (mm/yr)</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Big Pine</td>
<td>2 – 7</td>
<td>Peterson and Wesnousky (1994), and therein</td>
</tr>
<tr>
<td>Hollywood</td>
<td>0.33 – 0.75</td>
<td>Peterson and Wesnousky (1994), and therein</td>
</tr>
<tr>
<td>Holser</td>
<td>0 – 0.4</td>
<td>Peterson (1996)</td>
</tr>
<tr>
<td>Malibu Coast</td>
<td>0.03 – 0.09</td>
<td>Peterson and Wesnousky (1994), and therein</td>
</tr>
<tr>
<td>Mission Ridge/Arroyo Parida</td>
<td>0.35 – 1.27</td>
<td>Rockwell et al. (1984)</td>
</tr>
<tr>
<td>Northridge</td>
<td>0.35 – 1.7</td>
<td>Davis and Namson (1994); Dolan et al. (1997); Huftile and Yeats (1996)</td>
</tr>
<tr>
<td>Oak Ridge</td>
<td>1.7 – 12.5</td>
<td>Huftile and Yeats (1996); Peterson and Wesnousky (1994), and therein</td>
</tr>
<tr>
<td>Raymond</td>
<td>0.10 – 0.22</td>
<td>Peterson and Wesnousky (1994), and therein</td>
</tr>
<tr>
<td>Red Mountain</td>
<td>0.31 – 7.16</td>
<td>Huftile and Yeats (1996)</td>
</tr>
<tr>
<td>San Andreas (Tejon and Cajon Passes)</td>
<td>16 – 38</td>
<td>Peterson and Wesnousky (1994), and therein</td>
</tr>
<tr>
<td>San Cayetano</td>
<td>0.85 – 10.7</td>
<td>Huftile and Yeats (1996); Peterson and Wesnousky (1994), and therein; Rockwell (1988)</td>
</tr>
<tr>
<td>San Gabriel</td>
<td>0.5 – 1</td>
<td>Peterson and Wesnousky (1994), and therein</td>
</tr>
<tr>
<td>Santa Cruz Island</td>
<td>0.2 – 0.9</td>
<td>Wesnousky (1986), and therein</td>
</tr>
<tr>
<td>Santa Monica</td>
<td>0.27 – 5.9</td>
<td>Davis and Namson (1994); Dolan and Pratt (1997); Peterson and Wesnousky (1994), and therein</td>
</tr>
<tr>
<td>Santa Rosa Island</td>
<td>1</td>
<td>Colson thesis, 1996</td>
</tr>
<tr>
<td>Santa Susana</td>
<td>2.1 – 9.8</td>
<td>Huftile and Yeats (1996)</td>
</tr>
<tr>
<td>Santa Ynez</td>
<td>0.05 – 6.7</td>
<td>Peterson and Wesnousky (1994), and therein</td>
</tr>
<tr>
<td>Sierra Madre</td>
<td>0.36 – 5.0</td>
<td>Peterson and Wesnousky (1994), and therein; Tucker and Dolan (2001); Rubin et al. (1998)</td>
</tr>
<tr>
<td>Simi</td>
<td>0.4 – 0.9</td>
<td>Gonzalez and Rockwell (1991); Hitchcock (2001)</td>
</tr>
<tr>
<td>Ventura</td>
<td>0.8 – 2.4</td>
<td>Peterson and Wesnousky (1994)</td>
</tr>
</tbody>
</table>
### Table DR2. Description of Sample Locations in Southern California.

<table>
<thead>
<tr>
<th>Sample</th>
<th>Location</th>
<th>Stream name</th>
<th>Sample type</th>
<th>Sampling notes</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Lat (°N)</td>
<td>Long (°W)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Santa Clara River</td>
<td>34.429028</td>
<td>118.354694</td>
<td>Santa Clara River bed sediment</td>
</tr>
<tr>
<td>3</td>
<td>Bouquet Creek</td>
<td>34.553722</td>
<td>118.414778</td>
<td>N.D.</td>
</tr>
<tr>
<td>4</td>
<td>Santa Clara River</td>
<td>34.424028</td>
<td>118.483056</td>
<td>Grain size ranges from clay to 50 cm in diameter. Bedload contains fragments of (sub-rounded) gneiss, white and pink granite, basalt, chlorite, phyllite, tuff, sandstone grading into phyllite.</td>
</tr>
<tr>
<td>5</td>
<td>Santa Clara River</td>
<td>34.425972</td>
<td>118.579361</td>
<td>Grain size ranges same as Loc. 4. Rock fragments same as Loc. 4 plus sandstone.</td>
</tr>
<tr>
<td>7</td>
<td>N.D.</td>
<td>34.418222</td>
<td>118.657250</td>
<td>SCR tributary-Chiquito Canyon. Bedload classes up to 40 cm in length; up to 300 cm near bridge. Gneiss, granite, sandstone.</td>
</tr>
<tr>
<td>9</td>
<td>Piru Creek</td>
<td>34.616833</td>
<td>118.745139</td>
<td>Boulders in streambed up to 1 m in length. Rocks in streambed: gneiss, sandstone, granite.</td>
</tr>
<tr>
<td>11</td>
<td>Piru Creek</td>
<td>34.703972</td>
<td>118.939583</td>
<td>Many boulders in creek (&gt;1 m in length). Granite and gneiss.</td>
</tr>
<tr>
<td>13</td>
<td>Santa Clara River</td>
<td>34.394639</td>
<td>118.799361</td>
<td>Grain size ranges from clay/silt up to boulders 1 m in length. Rock types: Granite, gneiss, conglomerate, sandstone. Well-rounded to sub-rounded.</td>
</tr>
<tr>
<td>14</td>
<td>Sespe Creek</td>
<td>34.444528</td>
<td>118.927028</td>
<td>Grain size ranges from clay/silt up to 1.5 m boulders. Gneiss, andesite, red sandstone (Sespe Fm.), tan sandstone, granite, red conglomerate. Rounded to sub-angular.</td>
</tr>
<tr>
<td>16</td>
<td>Santa Clara River</td>
<td>34.356139</td>
<td>119.035056</td>
<td>Sandstone, gneiss, granite. Clast size clay/silt up to 40 cm.</td>
</tr>
<tr>
<td></td>
<td>Ventura River</td>
<td>34.424444</td>
<td>119.302278</td>
<td>Coyote Creek bed sediment</td>
</tr>
<tr>
<td>20</td>
<td>Bedload sample collected just above weir. Clasts are sub-rounded to rounded; range in size from silt/sand to 70 cm. Sandstones, chert, granite/diorite, limestone/diatomite.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>Ventura River</td>
<td>34.418278</td>
<td>119.825944</td>
<td>Clasts sub-angular to well-rounded. Grain size is sand up to boulders ~ &lt;2 m in length. Sandstones, granite, conglomerate, breccia. All boulders are sandstone.</td>
</tr>
<tr>
<td></td>
<td>Santa Ynez Mountains</td>
<td>34.545472</td>
<td>119.791694</td>
<td>Goleta Slough bed sediment</td>
</tr>
<tr>
<td>22</td>
<td>N.D.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Site</td>
<td>Lat.</td>
<td>Long.</td>
<td>River/Creek</td>
<td>Sediment Type</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
<td>---------</td>
<td>-------------</td>
<td>---------------</td>
</tr>
<tr>
<td>GC</td>
<td>N.D.</td>
<td>N.D.</td>
<td>Gaviota Creek</td>
<td>bed sediment</td>
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<tr>
<td>MC</td>
<td>34.412583</td>
<td>119.687500</td>
<td>Mission Creek</td>
<td>suspended load</td>
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**Santa Ynez River**

<table>
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<tr>
<th>Site</th>
<th>Lat.</th>
<th>Long.</th>
<th>River/Creek</th>
<th>Sediment Type</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>34.545472</td>
<td>119.791694</td>
<td>Santa Ynez River</td>
<td>bed sediment</td>
<td>Bedload samples collected above and below weir; also collected bedload mud. Clasts in bedload range from mud to ~1 m. Rocks: diatomite/limestone, chert, sandstone, serpentinite, greenstone.</td>
</tr>
<tr>
<td>28</td>
<td>34.471361</td>
<td>120.226806</td>
<td>Santa Ynez River</td>
<td>bed sediment</td>
<td>Grain size: sand. Rounded to sub-rounded. Rocks: sandstone, diatomite, limestone (fossiliferous), granite, tuff, greenstone, serpentinite, chert, siltstone.</td>
</tr>
<tr>
<td>30</td>
<td>34.677917</td>
<td>120.424944</td>
<td>Santa Ynez River</td>
<td>bed sediment</td>
<td>Clasts range from clay/mud to ~200 mm. Well-rounded to sub-angular. Sandstone, diatomite, chert, greenstone (few), serpentinite (few).</td>
</tr>
</tbody>
</table>

**Santa Rosa Island**

<table>
<thead>
<tr>
<th>Site</th>
<th>Lat.</th>
<th>Long.</th>
<th>River/Creek</th>
<th>Sediment Type</th>
<th>Notes</th>
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<tr>
<td>WC1</td>
<td>33.989500</td>
<td>120.048600</td>
<td>N.D.</td>
<td>bed sediment</td>
<td>Water Canyon</td>
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<td>WC2</td>
<td>33.993233</td>
<td>120.040800</td>
<td>N.D.</td>
<td>bed sediment</td>
<td>Water Canyon</td>
</tr>
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<td>CC1</td>
<td>34.007800</td>
<td>120.050967</td>
<td>N.D.</td>
<td>bed sediment</td>
<td>Cherry Canyon</td>
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<td>CC2</td>
<td>34.008717</td>
<td>120.050150</td>
<td>N.D.</td>
<td>bed sediment</td>
<td>Cherry Canyon</td>
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*WGS84 projection.
†No data.
TABLE DR3. MAJOR, MINOR, AND TRACE ELEMENT ANALYTICAL RESULTS FOR LABORATORY STANDARDS GBM908-10 AND MRGeo08.

<table>
<thead>
<tr>
<th>Standard sample batch</th>
<th>Al (%)</th>
<th>Ca (%)</th>
<th>Fe (%)</th>
<th>Ga (ppm)</th>
<th>In (ppm)</th>
<th>K (%)</th>
<th>Mg (%)</th>
<th>Na (ppm)</th>
<th>Nb (ppm)</th>
<th>Rb (ppm)</th>
<th>Sr (ppm)</th>
<th>Ta (%)</th>
<th>Ti (%)</th>
<th>Y (ppm)</th>
<th>Rb/Sr</th>
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<tr>
<td>GBM908-10 Target Range</td>
<td></td>
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<td></td>
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<td></td>
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<tr>
<td>Lower bound</td>
<td>6.40</td>
<td>3.33</td>
<td>5.21</td>
<td>18.65</td>
<td>0.064</td>
<td>1.86</td>
<td>1.59</td>
<td>2.02</td>
<td>9.3</td>
<td>153.0</td>
<td>258</td>
<td>0.68</td>
<td>0.591</td>
<td>36.2</td>
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<tr>
<td>Upper bound</td>
<td>7.84</td>
<td>4.10</td>
<td>6.39</td>
<td>22.90</td>
<td>0.092</td>
<td>2.29</td>
<td>1.97</td>
<td>2.50</td>
<td>11.6</td>
<td>187.0</td>
<td>316</td>
<td>0.97</td>
<td>0.733</td>
<td>44.5</td>
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<tr>
<td>SPR0901-04BC sample batch</td>
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<tr>
<td>GBM908-10</td>
<td>7.08</td>
<td>4.01</td>
<td>5.71</td>
<td>20.40</td>
<td>0.081</td>
<td>2.14</td>
<td>1.91</td>
<td>2.18</td>
<td>10.9</td>
<td>174.0</td>
<td>297</td>
<td>0.82</td>
<td>0.673</td>
<td>39.1</td>
<td>0.59</td>
</tr>
<tr>
<td>GBM908-10</td>
<td>7.23</td>
<td>3.84</td>
<td>5.62</td>
<td>21.00</td>
<td>0.069</td>
<td>2.26</td>
<td>1.88</td>
<td>2.26</td>
<td>11.1</td>
<td>186.0</td>
<td>303</td>
<td>0.82</td>
<td>0.684</td>
<td>41.8</td>
<td>0.61</td>
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<td>GBM908-10</td>
<td>7.19</td>
<td>3.89</td>
<td>5.65</td>
<td>21.40</td>
<td>0.086</td>
<td>2.10</td>
<td>1.87</td>
<td>2.19</td>
<td>10.7</td>
<td>176.5</td>
<td>301</td>
<td>0.75</td>
<td>0.666</td>
<td>39.9</td>
<td>0.59</td>
</tr>
<tr>
<td>GBM908-10</td>
<td>7.16</td>
<td>3.73</td>
<td>5.45</td>
<td>20.30</td>
<td>0.080</td>
<td>2.02</td>
<td>1.80</td>
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Note: Bolded values indicate that a variable has a higher loading than would be expected if each variable were independent of one another. Loadings were bolded if their value was greater than the square root of (1/n), where n = the number of elements used in the principal component analysis.
TABLE DR6. STRONTIUM AND NEODYMIUM ISOTOPIC RESULTS FROM SOURCE LOCALITIES WITHIN THE STUDY AREA (SOUTHERN CALIFORNIA).

<table>
<thead>
<tr>
<th>Locality</th>
<th>Rock type</th>
<th>⁸⁷Sr/⁸⁶Sr(₀)</th>
<th>⁴⁴Nd/⁴⁴Nd(₀)</th>
<th>⁶⁷Nd(₀)</th>
<th>Reference</th>
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<td>-11.8</td>
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Note: Dashes indicate data not determined.

*Subscript (0) denotes present-day measurement.

¹⁴⁴Nd/¹⁴⁴NdCHUR = 0.512638

§WPC = Willows Plutonic Complex.

#Ocean Drilling Program.

**Greater than 63 µm size fraction.
TABLE DR7. CALCULATION OF SEDIMENT FLUX TO SANTA BARBARA BIGHT PROPORTIONS
(SOUTHERN CALIFORNIA, U.S.A.)

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<th>River or region</th>
<th>*Mean annual suspended sediment flux to Santa Barbara Bight (t/yr)</th>
<th>Mean annual suspended sediment flux to Santa Barbara Bight proportion</th>
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<td>Santa Ynez Mountain coastal creeks</td>
<td>640000</td>
<td>0.15</td>
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<td>Ventura River</td>
<td>270000</td>
<td>0.06</td>
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<td>Santa Clara River</td>
<td>3100000</td>
<td>0.72</td>
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<tr>
<td>Channel Island creeks, northern drainages</td>
<td>295,000</td>
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<td><strong>Total:</strong></td>
<td>4305000</td>
<td>1.00</td>
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Santa Clara River catchment

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<th>Sub-catchment</th>
<th>†Approximate mean annual suspended sediment budget (Mt/yr)</th>
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<tr>
<td>SCR at LA co line</td>
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<td>Piru Creek</td>
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<tr>
<td>Hopper Creek</td>
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<td>Sespe Creek</td>
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<td>SCR at Montalvo + Santa Paula Creek</td>
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<td><strong>Total:</strong></td>
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Santa Clara River catchment

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<th>Mean annual suspended sediment budget proportion</th>
<th>Mean annual suspended sediment flux to Santa Barbara Bight proportion</th>
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<td>Northern SCR</td>
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<td>Western SCR</td>
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Source Areas

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<th>Mean annual suspended sediment flux to Santa Barbara Bight proportion</th>
</tr>
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<tbody>
<tr>
<td>Extended Southern Slopes</td>
</tr>
<tr>
<td>Eastern SCR</td>
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<tr>
<td>Northern SCR</td>
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<tr>
<td>Channel Islands (SRI)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

*From Warrick and Farnsworth (2009).
†From Warrick and Mertes (2009:Figure 10A).
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