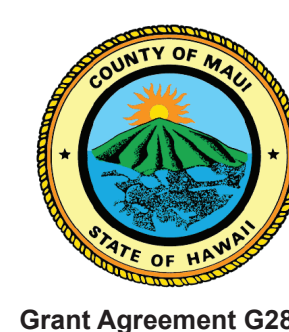


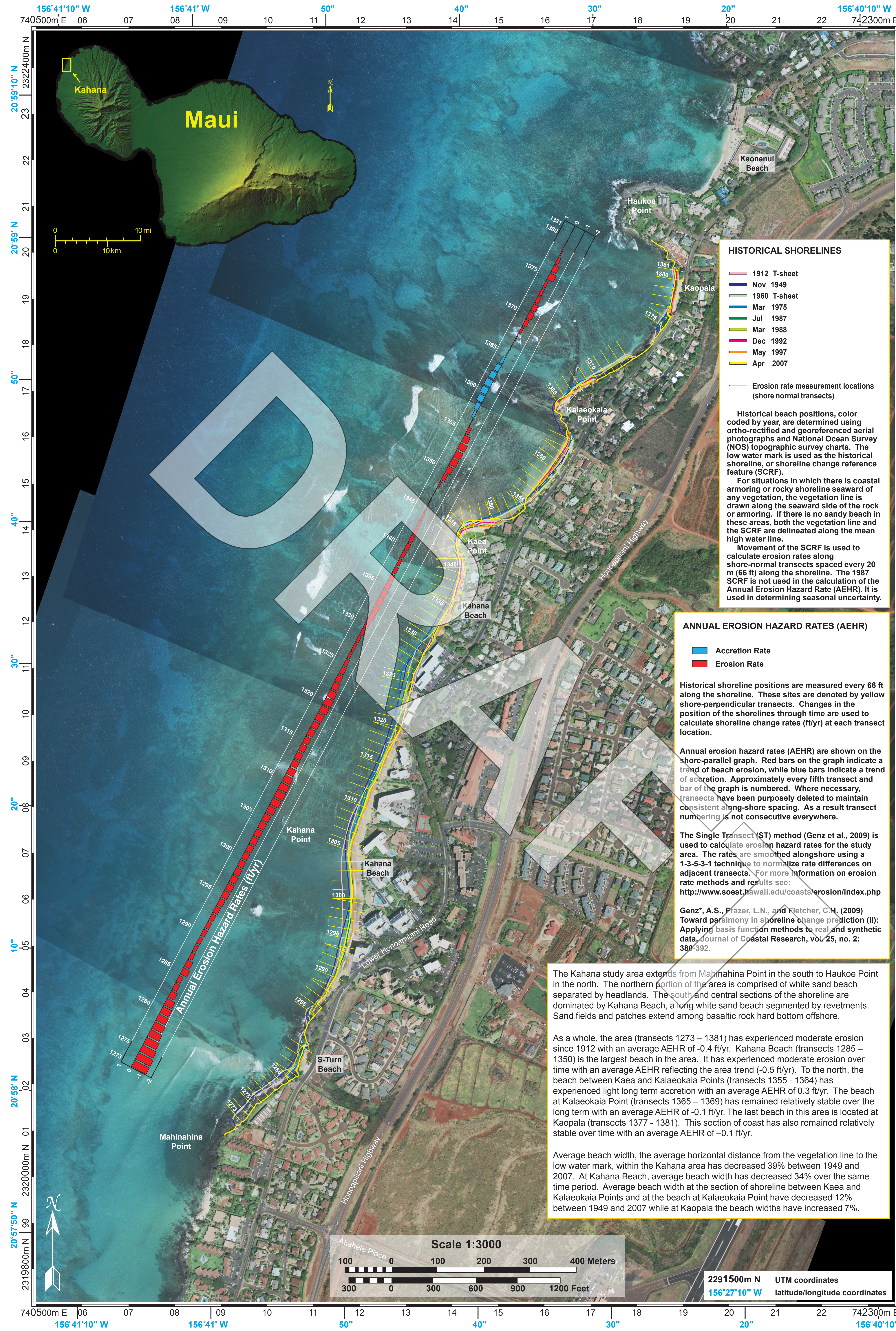
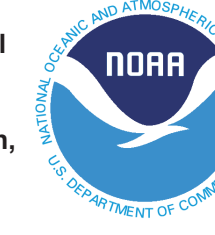
# Kahana, Maui, Hawaii

## Annual Erosion Hazard Rates



2012  
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| TRANSECT | AEHR (ft/yr) |
|----------|--------------|
| 1273     | -1.465       |
| 1274     | -1.439       |
| 1275     | -1.346       |
| 1276     | -1.229       |
| 1277     | -1.119       |
| 1278     | -1.010       |
| 1279     | -0.932       |
| 1280     | -0.870       |
| 1281     | -0.778       |
| 1282     | -0.586       |
| 1283     | -0.439       |
| 1284     | -0.379       |
| 1285     | -0.647       |
| 1286     | -0.518       |
| 1287     | -0.369       |
| 1288     | -0.303       |
| 1289     | -0.320       |
| 1290     | -0.368       |
| 1291     | -0.392       |
| 1292     | -0.411       |
| 1293     | -0.455       |
| 1294     | -0.517       |
| 1295     | -0.576       |
| 1296     | -0.608       |
| 1297     | -0.600       |
| 1298     | -0.560       |
| 1299     | -0.522       |
| 1300     | -0.518       |
| 1301     | -0.547       |
| 1302     | -0.569       |
| 1303     | -0.573       |
| 1304     | -0.573       |
| 1305     | -0.609       |
| 1306     | -0.702       |
| 1307     | -0.798       |
| 1308     | -0.842       |
| 1309     | -0.827       |
| 1310     | -0.770       |
| 1311     | -0.687       |
| 1312     | -0.609       |
| 1313     | -0.558       |
| 1314     | -0.536       |
| 1315     | -0.538       |
| 1316     | -0.556       |
| 1317     | -0.593       |
| 1318     | -0.641       |
| 1319     | -0.726       |
| 1320     | -0.758       |
| 1321     | -0.697       |
| 1322     | -0.574       |
| 1323     | -0.480       |
| 1324     | -0.401       |
| 1325     | -0.318       |
| 1326     | -0.218       |
| 1327     | -0.211       |
| 1328     | -0.255       |
| 1329     | -0.316       |
| 1330     | -0.394       |
| 1331     | -0.472       |
| 1332     | -0.483       |
| 1333     | -0.467       |
| 1334     | -0.459       |
| 1335     | -0.451       |
| 1336     | -0.396       |
| 1337     | -0.329       |
| 1338     | -0.288       |
| 1339     | -0.293       |
| 1340     | -0.322       |
| 1341     | -0.325       |
| 1342     | -0.275       |
| 1343     | -0.212       |
| 1344     | -0.161       |
| 1345     | -0.099       |
| 1346     | -0.035       |
| 1347     | -0.034       |
| 1348     | -0.149       |
| 1349     | -0.349       |
| 1350     | -0.514       |
| 1351     | -0.604       |
| 1352     | -0.656       |
| 1353     | -0.684       |
| 1354     | -0.558       |
| 1355     | -0.277       |
| 1356     | 0.024        |
| 1357     | 0.241        |
| 1358     | 0.417        |
| 1359     | 0.534        |
| 1360     | 0.599        |
| 1361     | 0.614        |
| 1362     | 0.553        |
| 1363     | 0.426        |
| 1364     | 0.252        |
| 1365     | 0.071        |
| 1366     | 0.018        |
| 1367     | -0.077       |
| 1368     | -0.211       |
| 1369     | -0.365       |
| 1370     | -0.461       |
| 1371     | -0.437       |
| 1372     | -0.321       |
| 1373     | -0.250       |
| 1374     | -0.228       |
| 1375     | -0.614       |
| 1376     | -0.485       |
| 1377     | -0.255       |
| 1378     | -0.081       |
| 1379     | -0.006       |
| 1380     | -0.011       |
| 1381     | -0.039       |

The Kahana study area extends from Mahinahina Point in the south to Hauko Point in the north. The northern portion of the area is comprised of white sand beach separated by headlands. The south and central sections of the shoreline are dominated by Kahana Beach, a long white sand beach segmented by revetments. Sand fields and patches extend among basaltic rock hard bottom offshore.

As a whole, the area (transects 1273 – 1381) has experienced moderate erosion since 1912 with an average AEHR of -0.4 ft/yr. Kahana Beach (transects 1285 – 1350) is the largest beach in the area. It has experienced moderate erosion over time with an average AEHR reflecting the area trend (-0.5 ft/yr). To the north, the beach between Kaea and Kalaeokaia Points (transects 1355 - 1364) has experienced light long term accretion with an average AEHR of 0.3 ft/yr. The beach at Kalaeokaia Point (transects 1365 – 1369) has remained relatively stable over the long term with an average AEHR of -0.1 ft/yr. The last beach in this area is located at Kaopala (transects 1377 - 1381). This section of coast has also remained relatively stable over time with an average AEHR of -0.1 ft/yr.

Average beach width, the average horizontal distance from the vegetation line to the low water mark, within the Kahana area has decreased 39% between 1949 and 2007. At Kahana Beach, average beach width has decreased 34% over the same time period. Average beach width at the section of shoreline between Kaea and Kalaeokaia Points and at the beach at Kalaeokaia Point have decreased 12% between 1949 and 2007 while at Kaopala the beach widths have increased 7%.