





# MAPA GEOLOGICO DE ESPAÑA

E. 1:50.000



INSTITUTO GEOLOGICO Y MINERO DE ESPAÑA

CHELVA

666  
27-26



EDITA: SERVICIO DE PUBLICACIONES M-INISTERIO DE INDUSTRIA C.S.G. 1972  
Base topográfica, dibujo y reproducción: Instituto Geográfico y Catastral.—Capítulo 401. M. 9.209. 1972

CITULIA (694)  
Escala 1:50.000

Las altitudes se refieren al nivel medio del Mediterráneo en Alicante.  
Cuadrícula Lambert.—Equipotencia de las curvas de nivel. 20 metros.  
Proyección U.T.M.—Ulpode Internacional

## LEYENDA

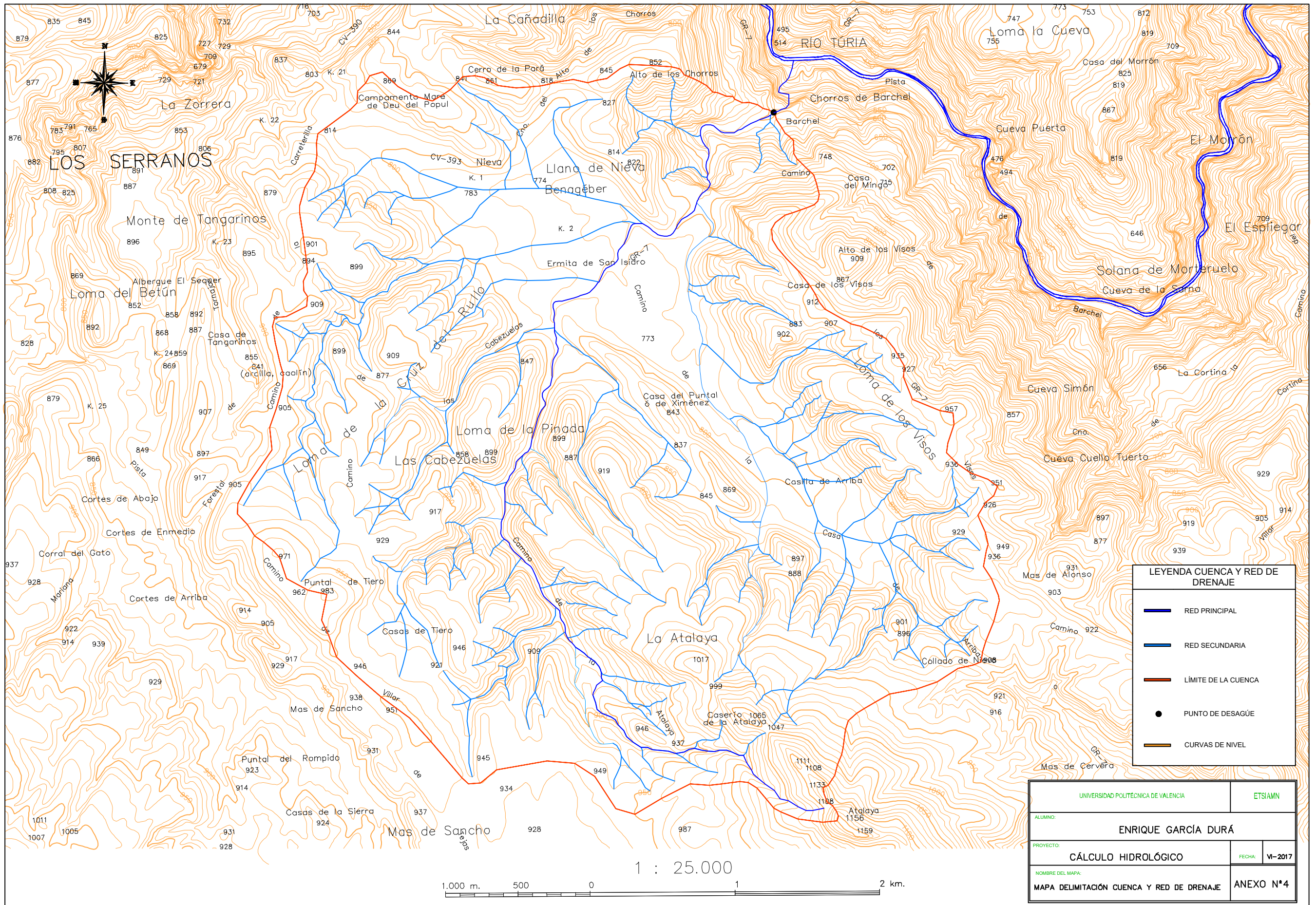
| CUATERNARIO  |               | Q                 | Q                 | Aluviones, fondos de valles indiferenciados           |  |   |  |
|--------------|---------------|-------------------|-------------------|---|--|---|--|
| TER. NEOG.   | MIOCENO       | T <sub>1</sub>    | T <sub>1</sub>    | Conglomerados, arenas y arcillas calcáreas rojas      |  |   |  |
|              |               | C <sub>1</sub>    | C <sub>1</sub>    | Calizas arcillosas y margas arcillosas blanco rosadas |  |   |  |
|              | SUPERIOR      | MAESTRICHT F. G.  | C <sub>1</sub> -M | C <sub>1</sub> -M                                     | Calizas microcristalinas con <i>Miliolites</i>                                       |   |  |
|              |               | CAMPANIENSE       | C <sub>1</sub>    | C <sub>1</sub>  | Dolomías sacroides   |   |  |
|              |               | SANTONIENSE       | C <sub>1</sub>    | C <sub>1</sub>  | Calcarentas y calizas arenosas. Orbitolinas y Ostreoides                             |   |  |
|              |               | CONIACIENSE       | C <sub>1</sub>    | C <sub>1</sub>  | Arenas blancas y amarillentas e intercalaciones de arcillas. (Fn. Arenas de Utilias) |   |  |
|              |               | TURONIENSE        | C <sub>1</sub>    | C <sub>1</sub>  | Calizas y calcarenitas con Orbitolinas, Rudistas y Ostreoides                        |   |  |
|              |               | CENOMANIENSE      | C <sub>1</sub>    | C <sub>1</sub>  | Arcillas limolíticas con intercalaciones de areniscas                                |   |  |
|              | INFERIOR      | ALBIENSE          | C <sub>1</sub>    | C <sub>1</sub>  | Areniscas, gravas, arcillas y margas   |   |  |
|              |               | APTIENSE          | C <sub>1</sub>    | C <sub>1</sub>  | Arcillas calcáreas y calizas arenosas con Anchirocycling (J <sub>1</sub> )           |   |  |
|              |               | BARREMIENSE F. W. | C <sub>1</sub>    | C <sub>1</sub>  | Calizas microcristalinas psolíticas o con inocistatos. (J <sub>1</sub> )             |   |  |
|              | JURASICO      | MALM              | PORTLANDIENSE     | J <sub>1</sub>  | J <sub>1</sub>   | Atenuancia de calizas arcillosas y margas |  |
|              |               |                   | KIMMERIDG.        | SUPERIOR  | J <sub>1</sub>   | J <sub>1</sub>                            | Margas grises y calizas arcillosas. Ammonites, Belemnites, Esponjas                                |
|              |               |                   |                   | MEDIO   | J <sub>1</sub>   | J <sub>1</sub>                            | Calizas microcristalinas, arcillosas y nodulosas en algunos niveles, con nódulos de sílex en otros |
| OXFORDIENSE  |               | J <sub>1</sub>    | J <sub>1</sub>    | Margas y calizas arcillosas. <i>Braquiópodos</i>      |  |   |  |
| DOGGER       |               | J <sub>1</sub>    | J <sub>1</sub>    | Dolomías y calizas microcristalinas                   |  |   |  |
| LIAS         |               | TOARCIENSE        | J <sub>1</sub>    | J <sub>1</sub>  | Arcillas o margas vericostosas y yesos. Niveles dolomíticos                          |   |  |
|              |               | PLIENSACHIENSE    | J <sub>1</sub>    | J <sub>1</sub>  | Dolomías y calizas dolomíticas. Intercalación de arcillas con yeso.                  |   |  |
|              |               | SINEMURIENSE      | J <sub>1</sub>    | J <sub>1</sub>  | Areniscas, conglomerados y arcillas.   |   |  |
| HETTANGIENSE |               | J <sub>1</sub>    | J <sub>1</sub>    | Firmas y cuarcitas.                                   |  |   |  |
| TRIASICO     |               | KEUPER            | T <sub>1</sub>    | T <sub>1</sub>  |  |   |  |
|              | MUSCHELKALK   | T <sub>1</sub>    | T <sub>1</sub>    |   |  |   |  |
|              | BUNTSANDSTEIN | T <sub>1</sub>    | T <sub>1</sub>    |   |  |   |  |
| ORDOVICICO   | O             | O                 |                   |   |  |   |  |

|   |  |                |  |
|---|--|----------------|--|
| UNIVERSIDAD POLITÉCNICA DE VALENCIA                       |  | ETSIAMN        |  |
| ALUMNO: ENRIQUE GARCÍA DURÁ                               |  |                |  |
| PROYECTO: CÁLCULO HIDROLÓGICO                             |  | FECHA: VI-2017 |  |
| NOMBRE DEL MAPA: MAPA GEOLÓGICO DEL TERRITORIO DE TRABAJO |  | ANEXO N°2      |  |





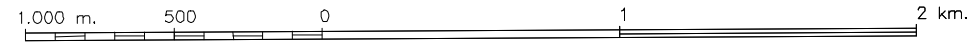


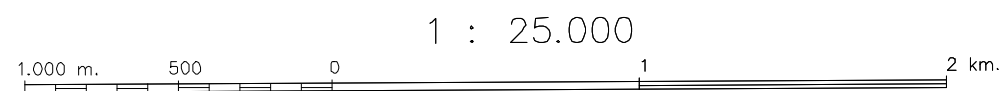
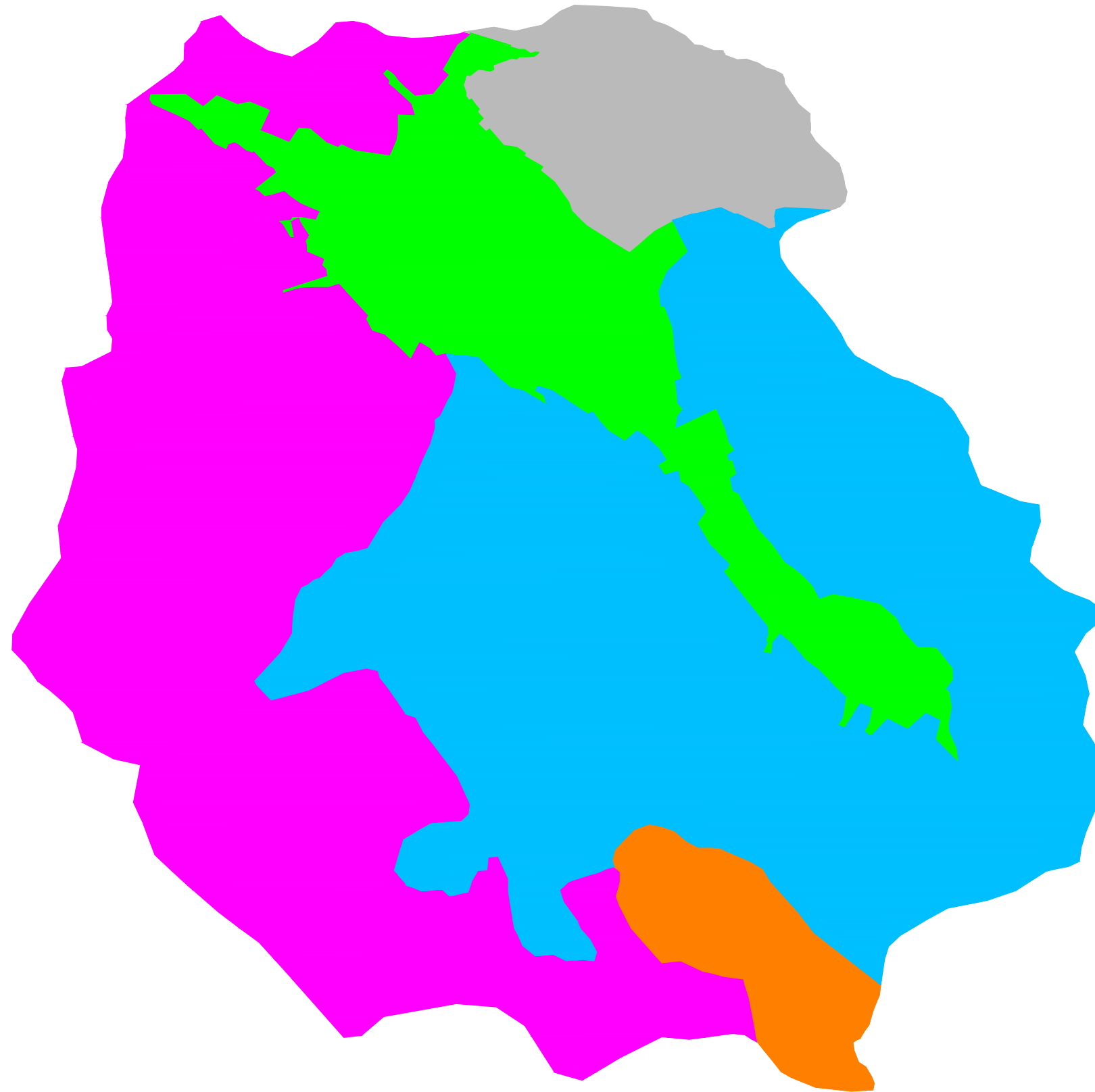
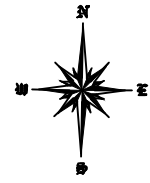







| LEYENDA CUENCA Y RED DE DRENAJE |                     |
|---------------------------------|---------------------|
|                                 | RED PRINCIPAL       |
|                                 | RED SECUNDARIA      |
|                                 | LÍMITE DE LA CUENCA |
|                                 | PUNTO DE DESAGÜE    |
|                                 | CURVAS DE NIVEL     |

|  |                |
|--|----------------|
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| ALUMNO: ENRIQUE GARCÍA DURÁ                                |                |
| PROYECTO: CÁLCULO HIDROLÓGICO                              | FECHA: VI-2017 |
| NOMBRE DEL MAPA: MAPA DELIMITACIÓN CUENCA Y RED DE DRENAJE | ANEXO N°4      |

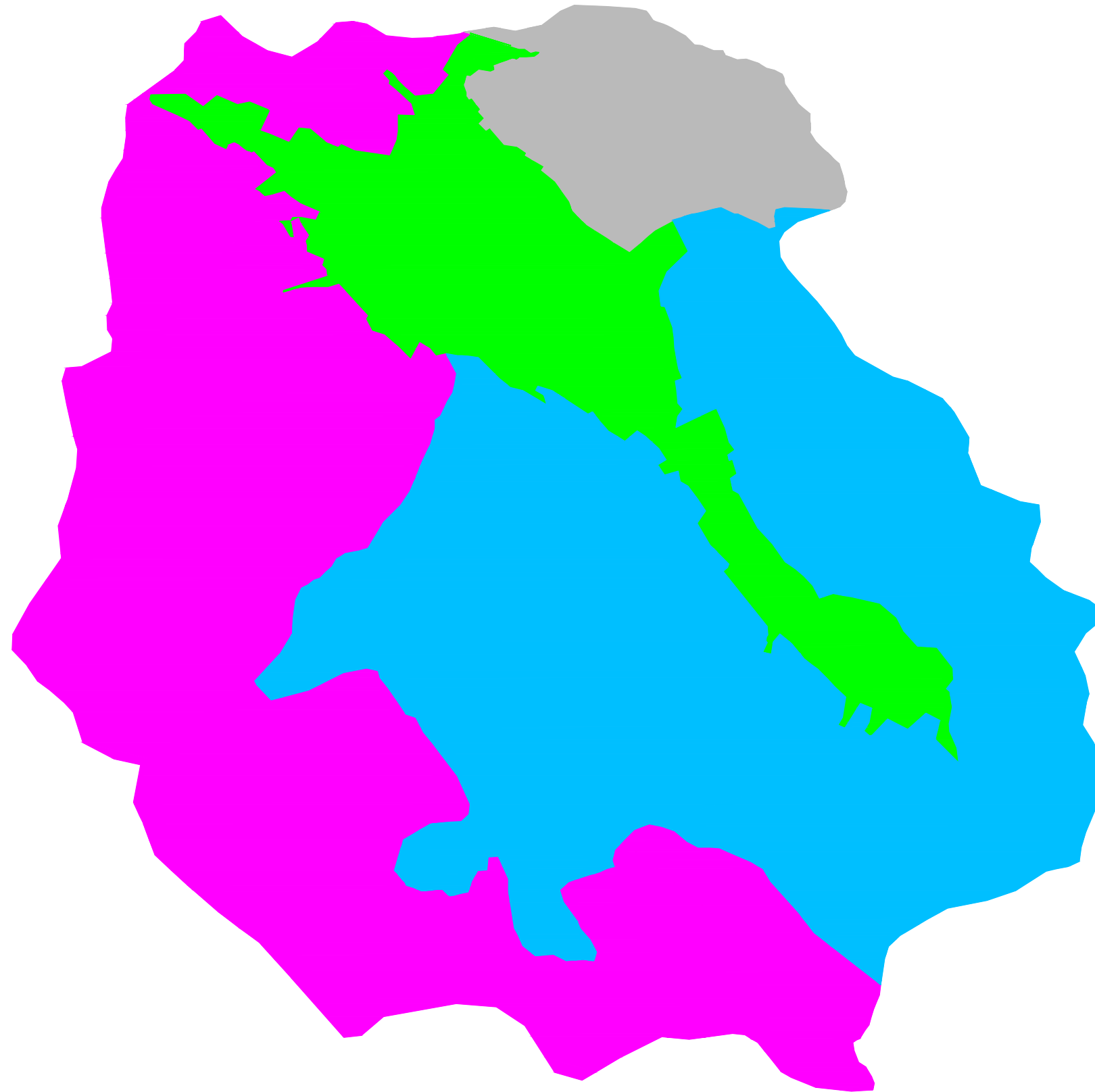
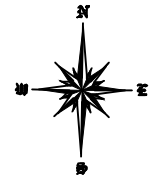
1 : 25.000







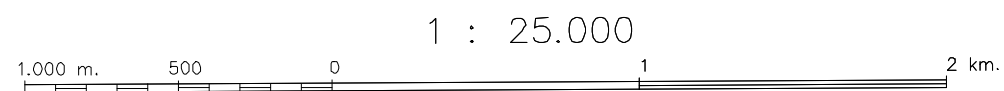


| LEYENDA DE SUELOS   |                                   |
|---|-----------------------------------|
|  | FLUVISOL                          |
|  | LEPTOSOL                          |
|  | LUVISOL LÍTICO / CALCISOL HÁPTICO |
|  | LUVISOL CRÓMICO                   |
|  | LUVISOL CÁLCICO / LUVISOL CRÓMICO |

|                                     |  |                |  |
|-------------------------------------|--|----------------|--|
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| ALUMNO: ENRIQUE GARCÍA DURÁ         |  |                |  |
| PROYECTO: CÁLCULO HIDROLÓGICO       |  | FECHA: VI-2017 |  |
| NOMBRE DEL MAPA: MAPA DE SUELOS     |  | ANEXO N°5      |  |

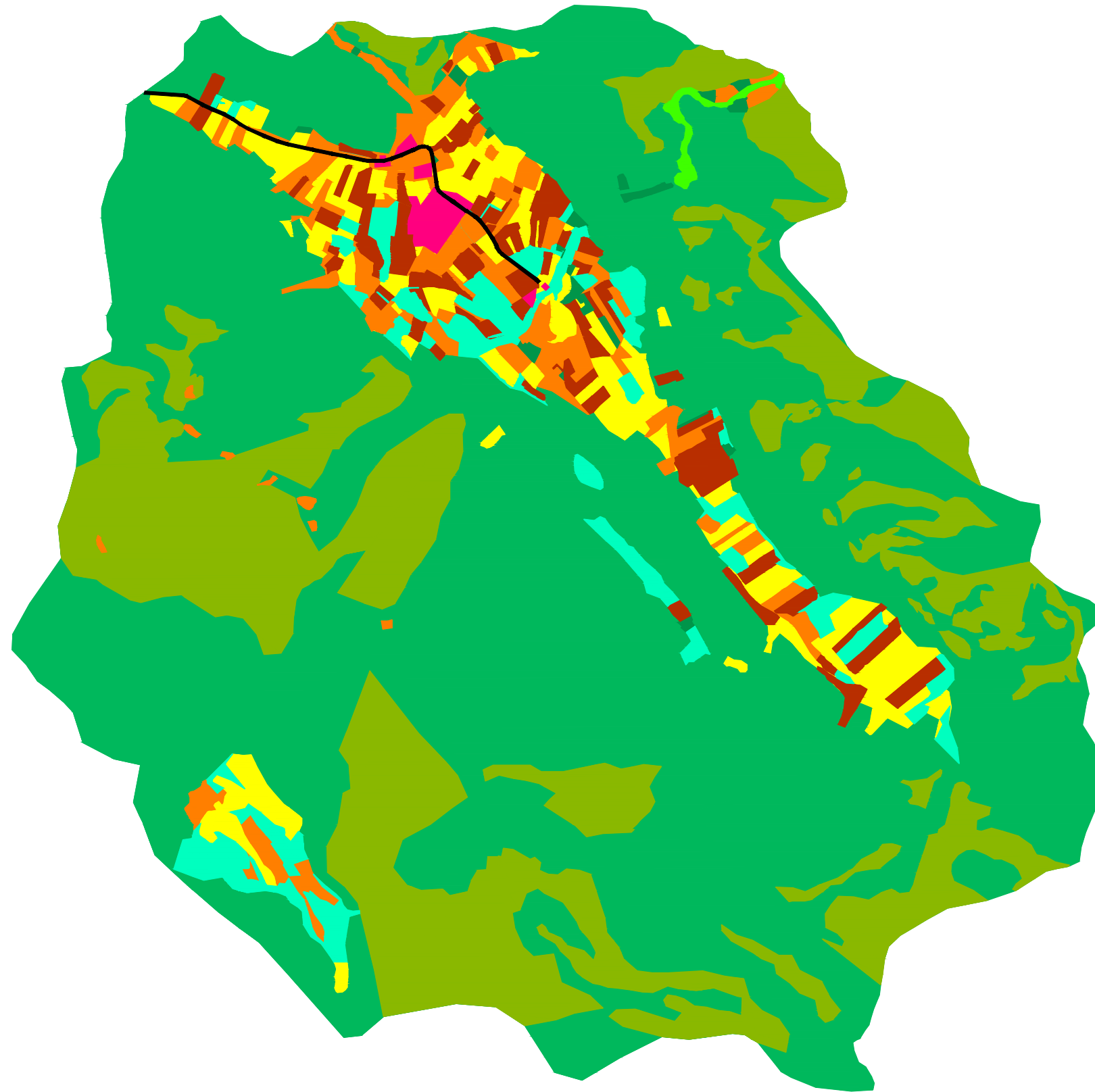
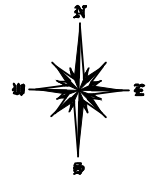


| LEYENDA DE SUELOS   |                                   |
|---|-----------------------------------|
|  | FLUVISOL                          |
|  | LEPTOSOL                          |
|  | LUVISOL LÍTICO / CALCISOL HÁPTICO |
|  | LUVISOL CÁLCICO / LUVISOL CRÓMICO |

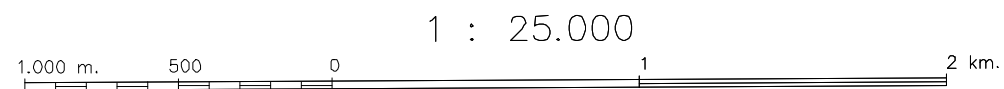


|   |  |                |  |
|---|--|----------------|--|
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| ALUMNO: ENRIQUE GARCÍA DURÁ                     |  |                |  |
| PROYECTO: CÁLCULO HIDROLÓGICO                   |  | FECHA: VI-2017 |  |
| NOMBRE DEL MAPA: MAPA DE SUELOS PARA EL CÁLCULO |  | ANEXO N°6      |  |

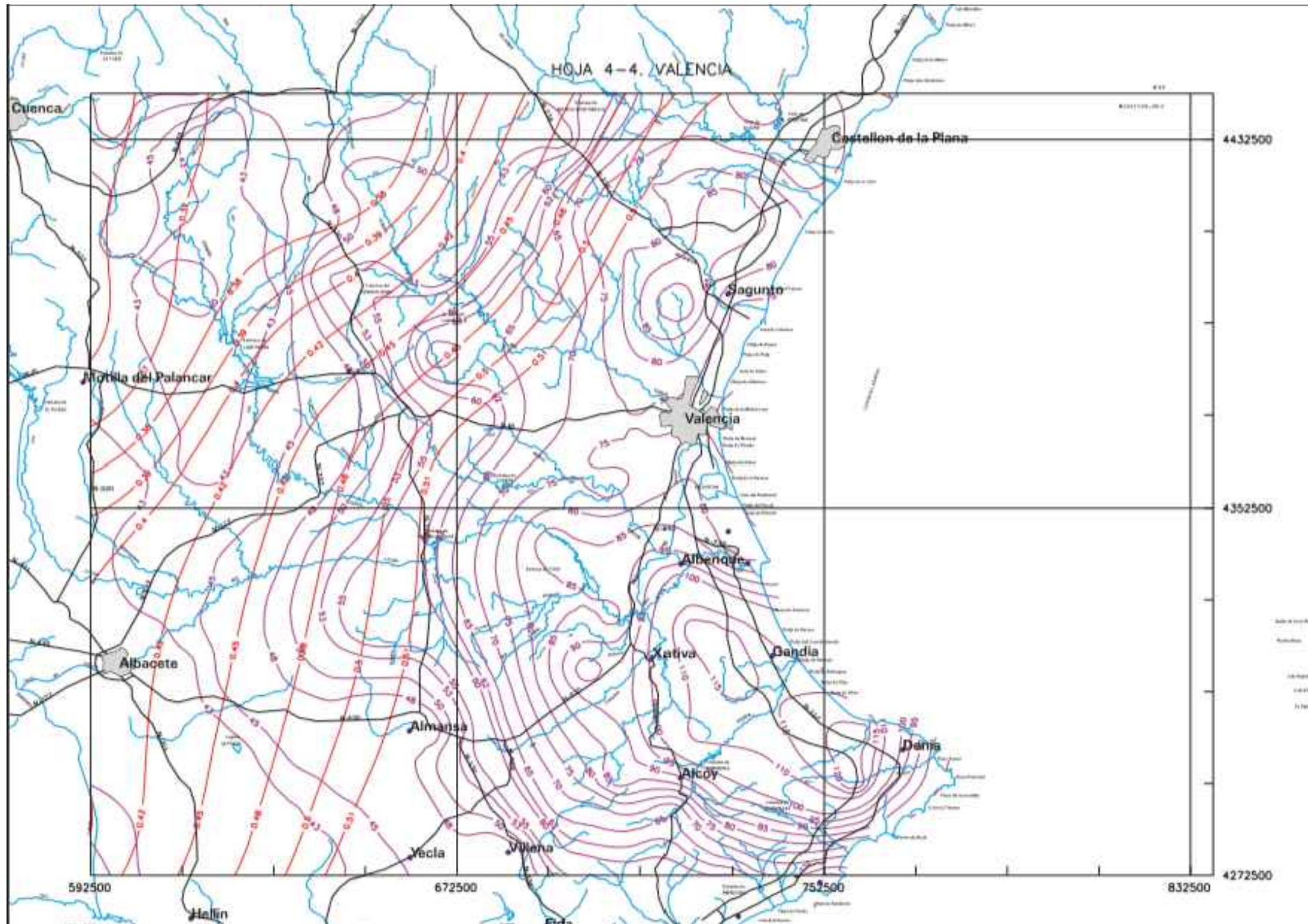




| LEYENDA DE APROVECHAMIENTOS DEL SUELO   |                      |
|---|----------------------|
|  | URBANO               |
|  | PASTIZAL             |
|  | CONIFERAS            |
|  | MATORRAL             |
|  | VEGETACIÓN DE RIBERA |
|  | OLIVOS               |
|  | VIÑEDOS              |
|  | CEREAL DE INVIERNO   |
|  | BARBECHO             |
|  | CARRETERA            |



|  |  |                |           |
|--|--|----------------|-----------|
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| ALUMNO: ENRIQUE GARCÍA DURÁ                      |  |                |           |
| PROYECTO: CÁLCULO HIDROLÓGICO                    |  | FECHA: VI-2017 |           |
| NOMBRE DEL MAPA: MAPA APROVECHAMIENTOS DEL SUELO |  |                | ANEXO N°7 |



- Coeficiente de variación (Cv)
- Valor medio anual de la máxima precipitación (Pm)

|                                     |  |         |                |
|-------------------------------------|--|---------|----------------|
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| ALUMNO: ENRIQUE GARCÍA DURÁ         |  |         |                |
| PROYECTO: CÁLCULO HIDROLÓGICO       |  |         | FECHA: VI-2017 |
| NOMBRE DEL MAPA: MAPA 4-4 VALENCIA  |  |         | ANEXO N°8      |



**ANEXO Nº9 CÁLCULOS Y RESULTADOS**


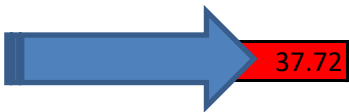
| Barranco de los Carriles                      |           |          |
|---|-----------|----------|
| Parámetros                                    | Valor     | Unidades |
| Área  | 2014.1066 | ha       |
| Área  | 20141066  | m        |
| Longitud máxima de salida                     | 7685.10   | m        |
| Cota máxima                                   | 1156      | m        |
| Cota punto de desagüe                         | 610       | m        |
| Diferencia de cotas                           | 546       | m        |
| Pendiente media del cauce principal           | 7.10      | %        |
| Precipitación media anual                     | 58        | mm / dia |
| Precipitación máxima en 24 horas (T=10 años)  | 89.84     | mm       |
| Precipitación máxima en 24 horas (T=50 años)  | 130.56    | mm       |
| Precipitación máxima en 24 horas (T=100 años) | 149.99    | mm       |
| Precipitación máxima en 24 horas (T=500 años) | 199.11    | mm       |

| CARACTERISTICAS DE LA CUENCA PARTICULARES |             |            |         |                   |              |    |            |              |
|---|-------------|------------|---------|-------------------|--------------|----|------------|--------------|
| USO DEL SUELO                             | (m2)        | (km2)      | (%)     | CODIGO TIPO SUELO | UMB. INICIAL | ID | Área Total |              |
| URBANO                                    | 72607.98    | 0.07260798 | 0.360%  | FLUVISOL          | B            | 1  | 1          | 2647260.873  |
| PASTIZAL                                  | 374210.58   | 0.37421058 | 1.858%  | FLUVISOL          | B            | 23 | 2          |              |
| CONIFERAS                                 | 131292.43   | 0.13129    | 0.652%  | FLUVISOL          | B            | 34 | 3          |              |
| OLIVOS                                    | 39553.75    | 0.03955375 | 0.196%  | FLUVISOL          | B            | 19 | 4          | N1,Ap1, D244 |
| VIÑEDOS                                   | 614676.30   | 0.6146763  | 3.052%  | FLUVISOL          | B            | 19 | 5          | 49-35-16     |
| CEREAL INVIERNO                           | 850071.06   | 0.85007    | 4.221%  | FLUVISOL          | B            | 21 | 6          | FRANCA       |
| CULTIVO ABANDONADO                        | 564848.77   | 0.56484877 | 2.804%  | FLUVISOL          | B            | 14 | 7          | 2647260.87   |
| PASTIZAL                                  | 49658.42    | 0.04965842 | 0.247%  | Luv. CRÓM. LI.    | D            | 9  | 8          | 769224.92    |
| CONIFERAS                                 | 6182658.139 | 6.18266    | 30.697% | Luv. CRÓM. LI.    | D            | 16 | 9          |              |
| MATORRAL                                  | 1439295.26  | 1.43929526 | 7.146%  | Luv. CRÓM. LI.    | D            | 10 | 10         |              |
| OLIVOS                                    | 3401.25     | 0.00340125 | 0.017%  | Luv. CRÓM. LI.    | D            | 8  | 11         | N17,2BT,D166 |
| VIÑEDOS                                   | 6281.52     | 0.00628    | 0.031%  | Luv. CRÓM. LI.    | D            | 8  | 12         | 36-16-48     |
| CEREAL DE INVIERNO                        | 9203.06     | 0.00920306 | 0.046%  | Luv. CRÓM. LI.    | D            | 10 | 13         | ARCILLOSA    |
| CULTIVO ABANDONADO                        | 1727.28     | 0.00172728 | 0.009%  | Luv. CRÓM. LI.    | D            | 8  | 14         | 7692224.92   |



|                      |             |            |         |                |   |    |    |              |
|----------------------|-------------|------------|---------|----------------|---|----|----|--------------|
| PASTIZAL             | 167487.6    | 0.16749    | 0.832%  | Luv. CRÓM. LI. | B | 23 | 15 | 8483668.053  |
| CONIFERAS            | 5588977.94  | 5.58897794 | 27.749% | luv. CRÓM.     | B | 47 | 16 |              |
| MATORRAL             | 2493130.153 | 2.49313015 | 12.378% | luv. CRÓM.     | B | 17 | 17 | N19,BT1,D155 |
| OLIVOS               | 885.013     | 0.00089    | 0.004%  | luv. CRÓM.     | B | 16 | 18 | 55-15-30     |
| VIÑEDOS              | 8096.62     | 0.00809662 | 0.040%  | luv. CRÓM.     | B | 16 | 19 | FRANCO ARC.  |
| CEREAL DE INVIERNO   | 116673.78   | 0.11667378 | 0.579%  | luv. CRÓM.     | B | 19 | 20 | ARENOSA      |
| CULTIVO ABANDONADO   | 108416.99   | 0.10842    | 0.538%  | luv. CRÓM.     | B | 14 | 21 | 8483668.0    |
| URBANO               | 451.79      | 0.00045179 | 0.002%  | LEPTOSOL       | C | 1  | 22 | 1317912.37   |
| VEGETACIÓN DE RIBERA | 40102.78    | 0.04010278 | 0.199%  | LEPTOSOL       | C | 22 | 23 | N5,Ah,D155   |
| CONIFERAS            | 974110.08   | 0.97411    | 4.836%  | LEPTOSOL       | C | 22 | 24 | 18-45-37     |
| MATORRAL             | 266960.87   | 0.26696087 | 1.325%  | LEPTOSOL       | C | 8  | 25 | FRANCO ARC.  |
| OLIVOS               | 19368.47    | 0.01936847 | 0.096%  | LEPTOSOL       | C | 11 | 26 | LIMOSA       |
| CULTIVO ABANDONADO   | 16918.39    | 0.01692    | 0.084%  | LEPTOSOL       | C | 11 | 27 | 1317912.37   |
| TOTAL                | 20141066.2  | 20.141066  | 100%    | 20141066       |   |    |    | 2014.1066    |

### TIEMPO DE CONCENTRACION (tc)

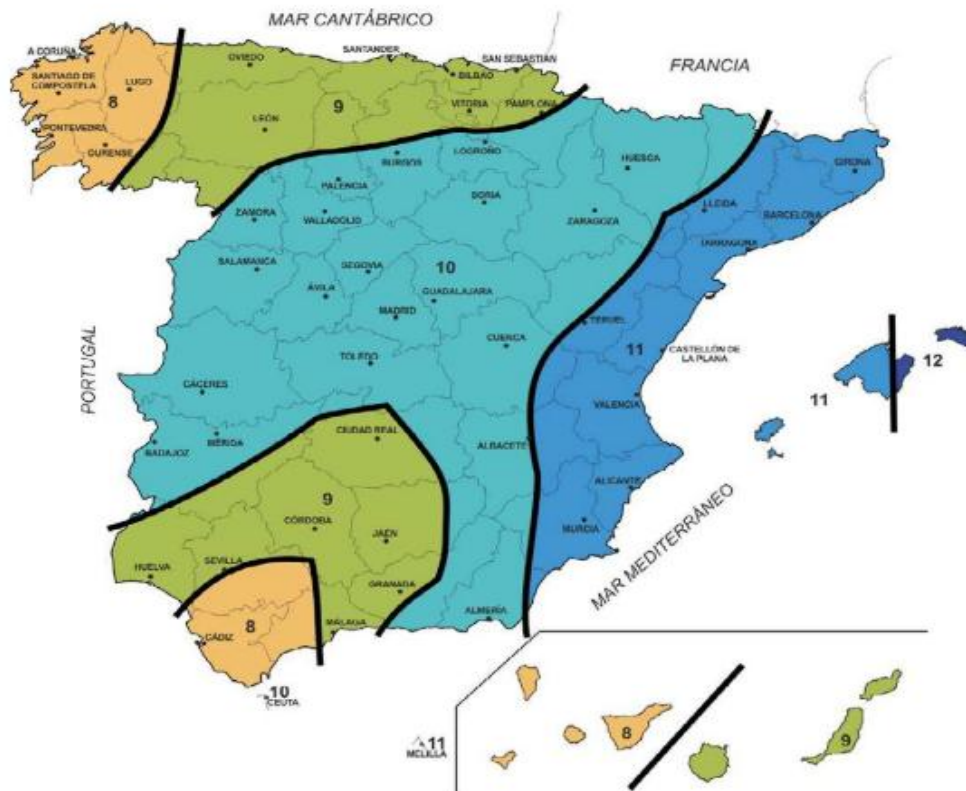
|                                       |   |  |
|---------------------------------------|---|--|
| Dirección General de Carreteras (DGC) | $tc=0.3x (L/J^{0.25})^{0.76}$   | 0.629  |
| tc(horas)                             |  |  |
| L(km)                                 | 7.685   |  |
| H(m)                                  | 546   |  |
| J(H/L)                                | 71.05   |  |
| Método                                | t concentracion (min)   |  |
| Dirección General de Carreteras (DGC) | 37.72   |  |
| Dirección General de Carreteras (DGC) | 37.72   |  |



**INTENSIDAD MÁXIMA**

**TÉMEZ**  $I_t/I_d = (I_h/I_d)^{3.529 - 1.679 \times t^{0.1}}$

$$\frac{I_t}{I_d} = \left( \frac{I_h}{I_d} \right)^{3.529 - 1.679 \times t^{0.1}}$$



|                             |                   |
|-----------------------------|-------------------|
| T=10 años                   |                   |
| $I_h/I_d =$ Líneas Isobaras | 11                |
| X10 =                       | 89.842 mm en 24 h |
| $I_d =$                     | 3.42 mm/h         |
| $t_c =$                     | 37.72 min         |
| $I_t$                       | 49.56 mm/h        |

|                             |                    |
|-----------------------------|--------------------|
| T=50 años                   |                    |
| $I_h/I_d =$ Líneas Isobaras | 11                 |
| X50 =                       | 130.558 mm en 24 h |
| $I_d =$                     | 4.97 mm/h          |
| $t_c =$                     | 37.72 min          |
| $I_t$                       | 72.01 mm/h         |



| T=100 años          |                 |            |
|---------------------|-----------------|------------|
| lh/l <sub>d</sub> = | Lineas Isobaras | 11         |
| X <sub>100</sub> =  | 149.988         | mm en 24 h |
| l <sub>d</sub> =    | 5.71            | mm/h       |
| t <sub>c</sub> =    | 37.72           | min        |
| l <sub>t</sub>      |                 | 82.73 mm/h |

| T=500 años          |                 |             |
|---------------------|-----------------|-------------|
| lh/l <sub>d</sub> = | Lineas Isobaras | 11          |
| X <sub>500</sub> =  | 199.114         | mm en 24 h  |
| l <sub>d</sub> =    | 7.58            | mm/h        |
| t <sub>c</sub> =    | 37.72           | min         |
| l <sub>t</sub>      |                 | 109.83 mm/h |

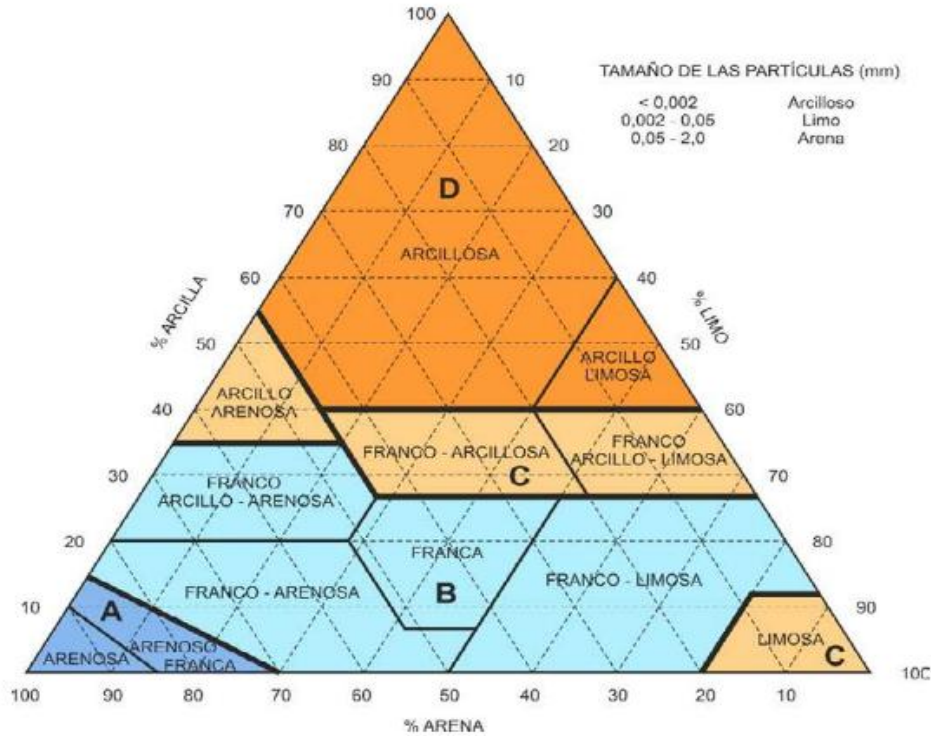
| COEFICIENTE REDUCTOR ÁREA     |                                |
|-------------------------------|--------------------------------|
| $K_A = 1$                     | $\rightarrow A < 1$            |
| $K_A = 1 - \frac{\log A}{15}$ | $\rightarrow 1 \leq A < 3.000$ |
| K <sub>a</sub> =              | 0.9131                         |

| PRECIPITACIÓN MÁXIMA CORREGIDA |              |      |
|--------------------------------|--------------|------|
| T=años                         | Pd Corregida | mm/h |
| 10                             | 82.03124159  |      |
| 50                             | 119.2074402  |      |
| 100                            | 136.9482187  |      |
| 500                            | 181.8032617  |      |

**ESTIMACIÓN DE COEFICIENTE**

**Umbrales de escorrentia**

$$C = \frac{(P'_d - P'_0) \times (P'_d + 23P'_0)}{(P'_d + 11P'_0)^2}$$



| Grupo | Infiltración (cuando están muy húmedos) | Potencia                                    | Textura   | Drenaje           |
|-------|---|---|---|-------------------|
| A     | Rápida                                  | Grande                                      | Arenosa<br>Areno-limosa   | Perfecto          |
| B     | Moderada                                | Media a grande                              | Franco-arenosa<br>Franca<br>Franco-arcillosa-arenosa<br>Franco-limosa | Bueno a moderado  |
| C     | Lenta                                   | Media a pequeña                             | Franco-arcillosa<br>Franco-arcillo-limosa<br>Arcillo-arenosa          | Imperfecto        |
| D     | Muy lenta                               | Pequeño (litosuelo) u horizontes de arcilla | Arcillosa   | Pobre o muy pobre |

Nota: Los terrenos con nivel freático alto se incluirán en el Grupo D.

**COEFICIENTE CORRECTOR UMBRAL ESCORRENTIA**

**2.8**

Para T=10 años

Pd' 82.03 mm en 24 h

| TIPO | Po:                          | Características:         |
|------|------------------------------|--------------------------|
| 1    | Umbral escorrentia URBANO    |                          |
|      | 1                            | → 2.8   Pd'-Po' 79.2312  |
| 2    | Umbral escorrentia PASTIZAL  |                          |
|      | 23                           | → 64.4   Pd'-Po' 17.6312 |
| 3    | Umbral escorrentia CONÍFERAS |                          |
|      | 34                           | → 95.2   Pd'-Po' -13.169 |



|    |                                  |                 |
|----|----------------------------------|-----------------|
| 4  | Umbral escorrentia OLIVOS        |                 |
|    | 19 —————>53.2                    | Pd'-Po' 28.8312 |
| 5  | Umbral escorrentia VIÑEDOS       |                 |
|    | 19 —————>53.2                    | Pd'-Po' 28.8312 |
| 6  | Umbral escorrentia CER. INVIERNO |                 |
|    | 21 —————>58.8                    | Pd'-Po' 23.2312 |
| 7  | Umbral escorrentia BARBECHO      |                 |
|    | 14 —————>39.2                    | Pd'-Po' 42.8312 |
| 8  | Umbral escorrentia PASTIZAL      |                 |
|    | 9 —————>25.2                     | Pd'-Po' 56.8312 |
| 9  | Umbral escorrentia CONÍFERAS     |                 |
|    | 16 —————>44.8                    | Pd'-Po' 37.2312 |
| 10 | Umbral escorrentia MATORRAL      |                 |
|    | 10 —————>28                      | Pd'-Po' 54.0312 |
| 11 | Umbral escorrentia OLIVOS        |                 |
|    | 8 —————>22.4                     | Pd'-Po' 59.6312 |
| 12 | Umbral escorrentia VIÑEDOS       |                 |
|    | 8 —————>22.4                     | Pd'-Po' 59.6312 |
| 13 | Umbral escorrentia CER. INVIERNO |                 |
|    | 10 —————>28                      | Pd'-Po' 54.0312 |
| 14 | Umbral escorrentia BARBECHO      |                 |
|    | 8 —————>22.4                     | Pd'-Po' 59.6312 |
| 15 | Umbral escorrentia PASTIZAL      |                 |
|    | 23 —————>64.4                    | Pd'-Po' 17.631  |
| 16 | Umbral escorrentia CONÍFERAS     |                 |
|    | 47 —————>131.6                   | Pd'-Po' -49.569 |
| 17 | Umbral escorrentia MATORRAL      |                 |
|    | 17 —————>47.6                    | Pd'-Po' 34.4312 |
| 18 | Umbral escorrentia OLIVOS        |                 |
|    | 16 —————>44.8                    | Pd'-Po' 37.2312 |
| 19 | Umbral escorrentia VIÑEDOS       |                 |
|    | 16 —————>44.8                    | Pd'-Po' 37.2312 |
| 20 | Umbral escorrentia CER. INVIERNO |                 |
|    | 19 —————>53.2                    | Pd'-Po' 28.8312 |
| 21 | Umbral escorrentia BARBECHO      |                 |
|    | 14 —————>39.2                    | Pd'-Po' 42.8312 |
| 22 | Umbral escorrentia URBANO        |                 |
|    | 1 —————>2.8                      | Pd'-Po' 29.2969 |
| 23 | Umbral escorrentia VEG. RIBERA   |                 |
|    | 22 —————>61.6                    | Pd'-Po' 20.4312 |
| 24 | Umbral escorrentia CONÍFERAS     |                 |
|    | 22 —————>61.6                    | Pd'-Po' 20.4312 |
| 25 | Umbral escorrentia MATORRAL      |                 |
|    | 8 —————>22.4                     | Pd'-Po' 59.6312 |
| 26 | Umbral escorrentia OLIVOS        |                 |
|    | 11 —————>30.8                    | Pd'-Po' 51.2312 |
| 27 | Umbral escorrentia BARBECHO      |                 |
|    | 11 —————>30.8                    | Pd'-Po' 51.2312 |

| TIPO | C=%Sup1xC1+ %Sup2xC2+%Sup3xC3... |         |         |
|------|----------------------------------|---------|---------|
| 1    | C1                               | 0.9113  |         |
|      | %Sup1                            | 0.360%  | 0.0033  |
| 2    | C2                               | 0.0441  |         |
|      | %Sup2                            | 1.858%  | 0.0008  |
| 3    | C3                               | -0.0235 |         |
|      | %Sup3                            | 0.652%  | -0.0002 |
| 4    | C4                               | 0.0846  |         |
|      | %Sup4                            | 0.196%  | 0.0002  |
| 5    | C5                               | 0.0846  |         |
|      | %Sup5                            | 3.052%  | 0.0026  |
| 6    | C6                               | 0.0627  |         |
|      | %Sup6                            | 4.221%  | 0.0026  |
| 7    | C7                               | 0.1599  |         |
|      | %Sup7                            | 2.804%  | 0.0045  |
| 8    | C8                               | 0.2914  |         |
|      | %Sup8                            | 0.247%  | 0.0007  |
| 9    | C9                               | 0.1253  |         |
|      | %Sup9                            | 30.7%   | 0.0385  |
| 10   | C10                              | 0.2579  |         |
|      | %Sup10                           | 7.146%  | 0.0184  |
| 11   | C11                              | 0.3302  |         |
|      | %Sup11                           | 0.017%  | 0.0001  |
| 12   | C12                              | 0.3302  |         |
|      | %Sup12                           | 0.031%  | 0.0001  |
| 13   | C13                              | 0.2579  |         |
|      | %Sup13                           | 0.046%  | 0.0001  |
| 14   | C14                              | 0.3302  |         |
|      | %Sup14                           | 0.009%  | 0.0000  |
| 15   | C15                              | 0.0441  |         |
|      | %Sup15                           | 0.832%  | 0.0004  |
| 16   | C16                              | -0.0659 |         |
|      | %Sup16                           | 27.7%   | -0.0183 |
| 17   | C17                              | 0.1105  |         |
|      | %Sup17                           | 12.38%  | 0.0137  |
| 18   | C18                              | 0.1253  |         |
|      | %Sup18                           | 0.004%  | 0.0000  |
| 19   | C19                              | 0.1253  |         |
|      | %Sup19                           | 0.040%  | 0.0001  |
| 20   | C20                              | 0.0846  |         |
|      | %Sup20                           | 0.579%  | 0.0005  |
| 21   | C21                              | 0.1599  |         |
|      | %Sup21                           | 0.538%  | 0.0009  |
| 22   | C22                              | 0.3370  |         |
|      | %Sup22                           | 0.002%  | 0.0000  |
| 23   | C23                              | 0.0531  |         |
|      | %Sup23                           | 0.199%  | 0.0001  |
| 24   | C24                              | 0.0531  |         |
|      | %Sup24                           | 4.836%  | 0.0026  |

0.0764

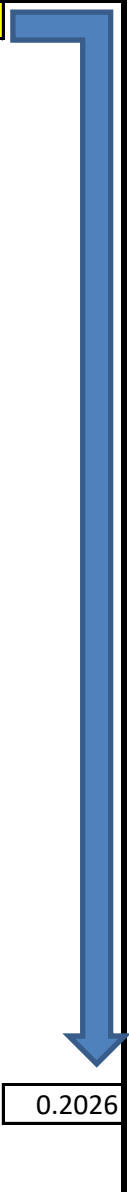


|    |        |        |        |
|----|--------|--------|--------|
| 25 | C25    | 0.3302 |        |
|    | %Sup25 | 1.325% | 0.0044 |
| 26 | C26    | 0.2287 |        |
|    | %Sup26 | 0.096% | 0.0002 |
| 27 | C27    | 0.2287 |        |
|    | %Sup27 | 0.084% | 0.0002 |

| TIPO           |                                  | Po:                   | Características:  |
|----------------|----------------------------------|-----------------------|-------------------|
| Para T=50 años |                                  |                       |                   |
|                |                                  | Pd' 119.21 mm en 24 h |                   |
| 1              | Umbral escorrentia URBANO        |                       |                   |
|                | 1                                | → 2.8                 | Pd'-Po' = 116.41  |
| 2              | Umbral escorrentia PASTIZAL      |                       |                   |
|                | 23                               | → 64.4                | Pd'-Po' = 54.8074 |
| 3              | Umbral escorrentia CONÍFERAS     |                       |                   |
|                | 34                               | → 95.2                | Pd'/Po' = 24.0074 |
| 4              | Umbral escorrentia OLIVOS        |                       |                   |
|                | 19                               | → 53.2                | Pd'/Po' = 66.0074 |
| 5              | Umbral escorrentia VIÑEDOS       |                       |                   |
|                | 19                               | → 53.2                | Pd'/Po' = 66.0074 |
| 6              | Umbral escorrentia CER. INVIERNO |                       |                   |
|                | 21                               | → 58.8                | Pd'/Po' = 60.4074 |
| 7              | Umbral escorrentia BARBECHO      |                       |                   |
|                | 14                               | → 39.2                | Pd'/Po' = 80.0074 |
| 8              | Umbral escorrentia PASTIZAL      |                       |                   |
|                | 9                                | → 25.2                | Pd'/Po' = 94.0074 |
| 9              | Umbral escorrentia CONÍFERAS     |                       |                   |
|                | 16                               | → 44.8                | Pd'-Po' = 74.4074 |
| 10             | Umbral escorrentia MATORRAL      |                       |                   |
|                | 10                               | → 28                  | Pd'-Po' = 91.2074 |
| 11             | Umbral escorrentia OLIVOS        |                       |                   |
|                | 8                                | → 22.4                | Pd'-Po' = 96.8074 |
| 12             | Umbral escorrentia VIÑEDOS       |                       |                   |
|                | 8                                | → 22.4                | Pd'-Po' = 96.8074 |
| 13             | Umbral escorrentia CER. INVIERNO |                       |                   |
|                | 10                               | → 28                  | Pd'-Po' = 91.2074 |
| 14             | Umbral escorrentia BARBECHO      |                       |                   |
|                | 8                                | → 22.4                | Pd'-Po' = 96.8074 |
| 15             | Umbral escorrentia PASTIZAL      |                       |                   |
|                | 47                               | → 131.6               | Pd'-Po' = -12.39  |
| 16             | Umbral escorrentia CONÍFERAS     |                       |                   |
|                | 23                               | → 64.4                | Pd'-Po' = 54.8074 |
| 17             | Umbral escorrentia MATORRAL      |                       |                   |
|                | 17                               | → 47.6                | Pd'-Po' = 71.607  |
| 18             | Umbral escorrentia OLIVOS        |                       |                   |
|                | 16                               | → 44.8                | Pd'-Po' = 74.4074 |
| 19             | Umbral escorrentia VIÑEDOS       |                       |                   |
|                | 16                               | → 44.8                | Pd'-Po' = 74.4074 |

|    |                                  |                            |
|----|----------------------------------|----------------------------|
| 20 | Umbral escorrentia CER. INVIERNO |                            |
|    | 19                               | → 53.2   Pd'-Po' = 66.0074 |
| 21 | Umbral escorrentia BARBECHO      |                            |
|    | 14                               | → 39.2   Pd'-Po' = 80.0074 |
| 22 | Umbral escorrentia URBANO        |                            |
|    | 1                                | → 2.8   Pd'-Po' = 116.41   |
| 23 | Umbral escorrentia VEG. RIBERA   |                            |
|    | 22                               | → 61.6   Pd'-Po' = 57.6074 |
| 24 | Umbral escorrentia CONÍFERAS     |                            |
|    | 22                               | → 61.6   Pd'-Po' = 57.6074 |
| 25 | Umbral escorrentia MATORRAL      |                            |
|    | 8                                | → 22.4   Pd'-Po' = 96.8074 |
| 26 | Umbral escorrentia OLIVOS        |                            |
|    | 11                               | → 30.8   Pd'-Po' = 88.4074 |
| 27 | Umbral escorrentia BARBECHO      |                            |
|    | 11                               | → 30.8   Pd'-Po' = 88.4074 |

| TIPO | C=%Sup1xC1+ %Sup2xC2+%Sup3xC3... |         |         |
|------|----------------------------------|---------|---------|
| 1    | C1                               | 0.9498  |         |
|      | %Sup1                            | 0.360%  | 0.0034  |
| 2    | C2                               | 0.1281  |         |
|      | %Sup2                            | 1.858%  | 0.0024  |
| 3    | C3                               | 0.0407  |         |
|      | %Sup3                            | 0.652%  | 0.0003  |
| 4    | C4                               | 0.1786  |         |
|      | %Sup4                            | 0.196%  | 0.0004  |
| 5    | C5                               | 0.1786  |         |
|      | %Sup5                            | 3.052%  | 0.0055  |
| 6    | C6                               | 0.1515  |         |
|      | %Sup6                            | 4.221%  | 0.0064  |
| 7    | C7                               | 0.2696  |         |
|      | %Sup7                            | 2.804%  | 0.0076  |
| 8    | C8                               | 0.4181  |         |
|      | %Sup8                            | 0.247%  | 0.0010  |
| 9    | C9                               | 0.2284  |         |
|      | %Sup9                            | 30.7%   | 0.0701  |
| 10   | C10                              | 0.3814  |         |
|      | %Sup10                           | 7.146%  | 0.0273  |
| 11   | C11                              | 0.4595  |         |
|      | %Sup11                           | 0.017%  | 0.0001  |
| 12   | C12                              | 0.4595  |         |
|      | %Sup12                           | 0.031%  | 0.0001  |
| 13   | C13                              | 0.3814  |         |
|      | %Sup13                           | 0.046%  | 0.0002  |
| 14   | C14                              | 0.4595  |         |
|      | %Sup14                           | 0.040%  | 0.0002  |
| 15   | C15                              | -0.0159 |         |
|      | %Sup15                           | 0.832%  | -0.0001 |



0.2026

|    |        |        |        |
|----|--------|--------|--------|
| 16 | C16    | 0.1281 |        |
|    | %Sup16 | 27.7%  | 0.0355 |
| 17 | C17    | 0.2104 |        |
|    | %Sup17 | 12.38% | 0.0260 |
| 18 | C18    | 0.2284 |        |
|    | %Sup18 | 0.004% | 0.0000 |
| 19 | C19    | 0.2284 |        |
|    | %Sup19 | 0.040% | 0.0001 |
| 20 | C20    | 0.1786 |        |
|    | %Sup20 | 0.579% | 0.0010 |
| 21 | C21    | 0.2696 |        |
|    | %Sup21 | 0.538% | 0.0015 |
| 22 | C22    | 0.9498 |        |
|    | %Sup22 | 0.002% | 0.0000 |
| 23 | C23    | 0.1394 |        |
|    | %Sup23 | 0.199% | 0.0003 |
| 24 | C24    | 0.1394 |        |
|    | %Sup24 | 4.836% | 0.0067 |
| 25 | C25    | 0.4595 |        |
|    | %Sup25 | 1.325% | 0.0061 |
| 26 | C26    | 0.3488 |        |
|    | %Sup26 | 0.096% | 0.0003 |
| 27 | C27    | 0.3488 |        |
|    | %Sup27 | 0.084% | 0.0003 |

| TIPO                  |                                  | Po:    | Características:  |
|-----------------------|----------------------------------|--------|-------------------|
| Para T=100 años       |                                  |        |                   |
| Pd' 136.95 mm en 24 h |                                  |        |                   |
| 1                     | Umbral escorrentia URBANO        |        |                   |
|                       | 1                                | → 2.8  | Pd'-Po' = 134.15  |
| 2                     | Umbral escorrentia PASTIZAL      |        |                   |
|                       | 23                               | → 64.4 | Pd'-Po' = 72.5482 |
| 3                     | Umbral escorrentia CONÍFERAS     |        |                   |
|                       | 34                               | → 95.2 | Pd'-Po' = 41.7482 |
| 4                     | Umbral escorrentia OLIVOS        |        |                   |
|                       | 19                               | → 53.2 | Pd'-Po' = 83.7482 |
| 5                     | Umbral escorrentia VIÑEDOS       |        |                   |
|                       | 19                               | → 53.2 | Pd'-Po' = 83.7482 |
| 6                     | Umbral escorrentia CER. INVIERNO |        |                   |
|                       | 21                               | → 58.8 | Pd'-Po' = 78.1482 |
| 7                     | Umbral escorrentia BARBECHO      |        |                   |
|                       | 14                               | → 39.2 | Pd'-Po' = 97.7482 |
| 8                     | Umbral escorrentia PASTIZAL      |        |                   |
|                       | 9                                | → 25.2 | Pd'-Po' = 111.75  |
| 9                     | Umbral escorrentia CONÍFERAS     |        |                   |
|                       | 16                               | → 44.8 | Pd'-Po' = 92.1482 |
| 10                    | Umbral escorrentia MATORRAL      |        |                   |
|                       | 10                               | → 28   | Pd'-Po' = 108.95  |




|    |                                  |  |
|----|----------------------------------|--|
| 11 | Umbral escorrentia OLIVOS        |  |
|    | 8 —————> 22.4                    | P <sub>d'</sub> -P <sub>o'</sub> = 114.548 |
| 12 | Umbral escorrentia VIÑEDOS       |  |
|    | 8 —————> 22.4                    | P <sub>d'</sub> -P <sub>o'</sub> = 114.55  |
| 13 | Umbral escorrentia CER. INVIERNO |  |
|    | 10 —————> 28                     | P <sub>d'</sub> -P <sub>o'</sub> = 108.95  |
| 14 | Umbral escorrentia BARBECHO      |  |
|    | 8 —————> 22.4                    | P <sub>d'</sub> -P <sub>o'</sub> = 114.55  |
| 15 | Umbral escorrentia PASTIZAL      |  |
|    | 23 —————> 64.4                   | P <sub>d'</sub> -P <sub>o'</sub> = 72.5482 |
| 16 | Umbral escorrentia CONÍFERAS     |  |
|    | 47 —————> 131.6                  | P <sub>d'</sub> -P <sub>o'</sub> = 5.3482  |
| 17 | Umbral escorrentia MATORRAL      |  |
|    | 17 —————> 47.6                   | P <sub>d'</sub> -P <sub>o'</sub> = 89.3482 |
| 18 | Umbral escorrentia OLIVOS        |  |
|    | 16 —————> 44.8                   | P <sub>d'</sub> -P <sub>o'</sub> = 92.1482 |
| 19 | Umbral escorrentia VIÑEDOS       |  |
|    | 16 —————> 44.8                   | P <sub>d'</sub> -P <sub>o'</sub> = 92.1482 |
| 20 | Umbral escorrentia CER. INVIERNO |  |
|    | 19 —————> 53.2                   | P <sub>d'</sub> -P <sub>o'</sub> = 83.7482 |
| 21 | Umbral escorrentia BARBECHO      |  |
|    | 14 —————> 39.2                   | P <sub>d'</sub> -P <sub>o'</sub> = 97.7482 |
| 22 | Umbral escorrentia URBANO        |  |
|    | 1 —————> 2.8                     | P <sub>d'</sub> -P <sub>o'</sub> = 134.148 |
| 23 | Umbral escorrentia VEG. RIBERA   |  |
|    | 22 —————> 61.6                   | P <sub>d'</sub> -P <sub>o'</sub> = 75.3482 |
| 24 | Umbral escorrentia CONÍFERAS     |  |
|    | 22 —————> 61.6                   | P <sub>d'</sub> -P <sub>o'</sub> = 75.3482 |
| 25 | Umbral escorrentia MATORRAL      |  |
|    | 8 —————> 22.4                    | P <sub>d'</sub> -P <sub>o'</sub> = 114.548 |
| 26 | Umbral escorrentia OLIVOS        |  |
|    | 11 —————> 30.8                   | P <sub>d'</sub> -P <sub>o'</sub> = 106.148 |
| 27 | Umbral escorrentia BARBECHO      |  |
|    | 11 —————> 30.8                   | P <sub>d'</sub> -P <sub>o'</sub> = 106.15  |

| TIPO | C=% <sup>Sup1</sup> xC1+ % <sup>Sup2</sup> xC2+% <sup>Sup3</sup> xC3... |        |        |
|------|---|--------|--------|
| 1    | C1  | 0.9599 |        |
|      | % <sup>Sup1</sup>   | 0.360% | 0.0035 |
| 2    | C2  | 0.1643 |        |
|      | % <sup>Sup2</sup>   | 1.858% | 0.0031 |
| 3    | C3  | 0.0693 |        |
|      | % <sup>Sup3</sup>   | 0.652% | 0.0005 |
| 4    | C4  | 0.2185 |        |
|      | % <sup>Sup4</sup>   | 0.196% | 0.0004 |
| 5    | C5  | 0.2185 |        |
|      | % <sup>Sup5</sup>   | 3.052% | 0.0067 |
| 6    | C6  | 0.1895 |        |
|      | % <sup>Sup6</sup>   | 4.221% | 0.0080 |

|    |        |        |        |
|----|--------|--------|--------|
| 7  | C7     | 0.3145 |        |
|    | %Sup7  | 2.804% | 0.0088 |
| 8  | C8     | 0.4668 |        |
|    | %Sup8  | 0.247% | 0.0012 |
| 9  | C9     | 0.2712 |        |
|    | %Sup9  | 30.7%  | 0.0833 |
| 10 | C10    | 0.4298 |        |
|    | %Sup10 | 7.146% | 0.0307 |
| 11 | C11    | 0.5083 |        |
|    | %Sup11 | 0.017% | 0.0001 |
| 12 | C12    | 0.5083 |        |
|    | %Sup12 | 0.031% | 0.0002 |
| 13 | C13    | 0.4298 |        |
|    | %Sup13 | 0.046% | 0.0002 |
| 14 | C14    | 0.5083 |        |
|    | %Sup14 | 0.009% | 0.0000 |
| 15 | C15    | 0.1643 |        |
|    | %Sup15 | 0.832% | 0.0014 |
| 16 | C16    | 0.0067 |        |
|    | %Sup16 | 27.7%  | 0.0019 |
| 17 | C17    | 0.2522 |        |
|    | %Sup17 | 12.38% | 0.0312 |
| 18 | C18    | 0.2712 |        |
|    | %Sup18 | 0.004% | 0.0000 |
| 19 | C19    | 0.2712 |        |
|    | %Sup19 | 0.040% | 0.0001 |
| 20 | C20    | 0.2185 |        |
|    | %Sup20 | 0.579% | 0.0013 |
| 21 | C21    | 0.2185 |        |
|    | %Sup21 | 0.538% | 0.0012 |
| 22 | C22    | 0.2185 |        |
|    | %Sup22 | 0.002% | 0.0000 |
| 23 | C23    | 0.3145 |        |
|    | %Sup23 | 0.199% | 0.0006 |
| 24 | C24    | 0.9599 |        |
|    | %Sup24 | 4.836% | 0.0464 |
| 25 | C25    | 0.1764 |        |
|    | %Sup25 | 1.325% | 0.0023 |
| 26 | C26    | 0.1764 |        |
|    | %Sup26 | 0.096% | 0.0002 |
| 27 | C27    | 0.5083 |        |
|    | %Sup27 | 0.084% | 0.0004 |

0.2335



| TIPO |   | Po:                       | Características: |
|------|---|---------------------------|------------------|
| 1    |   | Umbral escorrentia URBANO |                  |
| 1    | → | 2.8                       | Pd'-Po' = 179.00 |

Para T=500 años  
Pd' 181.80 mm en 24 h

|    |                                  |  |
|----|----------------------------------|--|
| 2  | Umbral escorrentia PASTIZAL      |  |
|    | 23 —————> 64.4                   | P <sub>d'</sub> -P <sub>o'</sub> = 117.40  |
| 3  | Umbral escorrentia CONÍFERAS     |  |
|    | 34 —————> 95.2                   | P <sub>d'</sub> -P <sub>o'</sub> = 86.6033 |
| 4  | Umbral escorrentia OLIVOS        |  |
|    | 19 —————> 53.2                   | P <sub>d'</sub> -P <sub>o'</sub> = 128.60  |
| 5  | Umbral escorrentia VIÑEDOS       |  |
|    | 19 —————> 53.2                   | P <sub>d'</sub> -P <sub>o'</sub> = 128.60  |
| 6  | Umbral escorrentia CER. INVIERNO |  |
|    | 21 —————> 58.8                   | P <sub>d'</sub> -P <sub>o'</sub> = 123.00  |
| 7  | Umbral escorrentia BARBECHO      |  |
|    | 14 —————> 39.2                   | P <sub>d'</sub> -P <sub>o'</sub> = 142.60  |
| 8  | Umbral escorrentia PASTIZAL      |  |
|    | 9 —————> 25.2                    | P <sub>d'</sub> -P <sub>o'</sub> = 156.60  |
| 9  | Umbral escorrentia CONÍFERAS     |  |
|    | 16 —————> 44.8                   | P <sub>d'</sub> -P <sub>o'</sub> = 137.00  |
| 10 | Umbral escorrentia MATORRAL      |  |
|    | 10 —————> 28                     | P <sub>d'</sub> -P <sub>o'</sub> = 153.80  |
| 11 | Umbral escorrentia OLIVOS        |  |
|    | 8 —————> 22.4                    | P <sub>d'</sub> -P <sub>o'</sub> = 159.40  |
| 12 | Umbral escorrentia VIÑEDOS       |  |
|    | 8 —————> 22.4                    | P <sub>d'</sub> -P <sub>o'</sub> = 159.40  |
| 13 | Umbral escorrentia CER. INVIERNO |  |
|    | 10 —————> 28                     | P <sub>d'</sub> -P <sub>o'</sub> = 153.80  |
| 14 | Umbral escorrentia BARBECHO      |  |
|    | 8 —————> 22.4                    | P <sub>d'</sub> -P <sub>o'</sub> = 159.40  |
| 15 | Umbral escorrentia PASTIZAL      |  |
|    | 23 —————> 64.4                   | P <sub>d'</sub> -P <sub>o'</sub> = 117.40  |
| 16 | Umbral escorrentia CONÍFERAS     |  |
|    | 47 —————> 131.6                  | P <sub>d'</sub> -P <sub>o'</sub> = 50.20   |
| 17 | Umbral escorrentia MATORRAL      |  |
|    | 17 —————> 47.6                   | P <sub>d'</sub> -P <sub>o'</sub> = 134.20  |
| 18 | Umbral escorrentia OLIVOS        |  |
|    | 16 —————> 44.8                   | P <sub>d'</sub> -P <sub>o'</sub> = 137.00  |
| 19 | Umbral escorrentia VIÑEDOS       |  |
|    | 16 —————> 44.8                   | P <sub>d'</sub> -P <sub>o'</sub> = 137.00  |
| 20 | Umbral escorrentia CER. INVIERNO |  |
|    | 19 —————> 53.2                   | P <sub>d'</sub> -P <sub>o'</sub> = 128.60  |
| 21 | Umbral escorrentia BARBECHO      |  |
|    | 14 —————> 39.2                   | P <sub>d'</sub> -P <sub>o'</sub> = 142.60  |
| 22 | Umbral escorrentia URBANO        |  |
|    | 1 —————> 2.8                     | P <sub>d'</sub> -P <sub>o'</sub> = 179.00  |
| 23 | Umbral escorrentia VEG. RIBERA   |  |
|    | 22 —————> 61.6                   | P <sub>d'</sub> -P <sub>o'</sub> = 120.20  |
| 24 | Umbral escorrentia CONÍFERAS     |  |
|    | 22 —————> 61.6                   | P <sub>d'</sub> -P <sub>o'</sub> = 120.20  |
| 25 | Umbral escorrentia MATORRAL      |  |
|    | 8 —————> 22.4                    | P <sub>d'</sub> -P <sub>o'</sub> = 159.40  |
| 26 | Umbral escorrentia OLIVOS        |  |
|    | 11 —————> 30.8                   | P <sub>d'</sub> -P <sub>o'</sub> = 151.00  |



|    |                             |                  |
|----|-----------------------------|------------------|
| 27 | Umbral escorrentia BARBECHO |                  |
| 11 | → 30.8                      | Pd'-Po' = 151.00 |

| TIPO | C=%Sup1xC1+ %Sup2xC2+%Sup3xC3... |        |        |
|------|----------------------------------|--------|--------|
| 1    | C1                               | 0.9750 |        |
|      | %Sup1                            | 0.360% | 0.0035 |
| 2    | C2                               | 0.2464 |        |
|      | %Sup2                            | 1.858% | 0.0046 |
| 3    | C3                               | 0.1360 |        |
|      | %Sup3                            | 0.652% | 0.0009 |
| 4    | C4                               | 0.3072 |        |
|      | %Sup4                            | 0.196% | 0.0006 |
| 5    | C5                               | 0.3072 |        |
|      | %Sup5                            | 3.052% | 0.0094 |
| 6    | C6                               | 0.2749 |        |
|      | %Sup6                            | 4.221% | 0.0116 |
| 7    | C7                               | 0.4111 |        |
|      | %Sup7                            | 2.804% | 0.0115 |
| 8    | C8                               | 0.5660 |        |
|      | %Sup8                            | 0.247% | 0.0014 |
| 9    | C9                               | 0.3649 |        |
|      | %Sup9                            | 30.7%  | 0.1120 |
| 10   | C10                              | 0.5294 |        |
|      | %Sup10                           | 7.146% | 0.0378 |
| 11   | C11                              | 0.6059 |        |
|      | %Sup11                           | 0.017% | 0.0001 |
| 12   | C12                              | 0.6059 |        |
|      | %Sup12                           | 0.031% | 0.0002 |
| 13   | C13                              | 0.5294 |        |
|      | %Sup13                           | 0.046% | 0.0002 |
| 14   | C14                              | 0.6059 |        |
|      | %Sup14                           | 0.009% | 0.0001 |
| 15   | C15                              | 0.2464 |        |
|      | %Sup15                           | 0.832% | 0.0020 |
| 16   | C16                              | 0.0607 |        |
|      | %Sup16                           | 27.7%  | 0.0168 |
| 17   | C17                              | 0.3443 |        |
|      | %Sup17                           | 12.38% | 0.0426 |
| 18   | C18                              | 0.3649 |        |
|      | %Sup18                           | 0.004% | 0.0000 |
| 19   | C19                              | 0.3649 |        |
|      | %Sup19                           | 0.040% | 0.0001 |
| 20   | C20                              | 0.3072 |        |
|      | %Sup20                           | 0.579% | 0.0018 |
| 21   | C21                              | 0.4111 |        |
|      | %Sup21                           | 0.538% | 0.0022 |
| 22   | C22                              | 0.9750 |        |
|      | %Sup22                           | 0.002% | 0.0000 |

|    |        |        |        |
|----|--------|--------|--------|
| 23 | C23    | 0.2602 |        |
|    | %Sup23 | 0.199% | 0.0005 |
| 24 | C24    | 0.2602 |        |
|    | %Sup24 | 4.836% | 0.0126 |
| 25 | C25    | 0.6059 |        |
|    | %Sup25 | 1.325% | 0.0080 |
| 26 | C26    | 0.4960 |        |
|    | %Sup26 | 0.096% | 0.0005 |
| 27 | C27    | 0.4960 |        |
|    | %Sup27 | 0.084% | 0.0004 |

| ESCORRENTÍA                                |           |
|--|-----------|
| Fórmula racional                           |           |
| con la intensidad maxima corregida (Témez) |           |
| Q= CIA/360                                 |           |
| T=10 años                                  |           |
| C  | 0.0764    |
| I(mm/h)                                    | 49.56     |
| A(ha)                                      | 2014.1066 |
| Q(m3/s)                                    | 21.1815   |
| T=50 años                                  |           |
| C  | 0.2026    |
| I(mm/h)                                    | 72.01     |
| A(ha)                                      | 2014.1066 |
| Q(m3/s)                                    | 81.6226   |
| T=100 años                                 |           |
| C  | 0.2335    |
| I(mm/h)                                    | 82.73     |
| A(ha)                                      | 2014.1066 |
| Q(m3/s)                                    | 108.0762  |
| T= 500 años                                |           |
| C  | 0.2816    |
| I(mm/h)                                    | 109.83    |
| A(ha)                                      | 2014.1066 |
| Q(m3/s)                                    | 173.0512  |

| Método Racional Modificado por Témez                      |          |
|---|----------|
| Q= (CIA/360) . K  |          |
| Coeficiente uniformidad Témez                             |          |
| $K = 1 + \left( \frac{tc^{1.25}}{tc^{1.25} + 14} \right)$ |          |
| K=  | 1.03845  |
| T=10 años   |          |
| Q=  | 21.9959  |
| T=50 años   |          |
| Q=  | 84.7609  |
| T=100 años  |          |
| Q=  | 112.2315 |
| T=500 años  |          |
| Q=  | 179.7046 |



## ANEXO Nº 10. ÁLBUM FOTOGRÁFICO



**FOTOGRAFÍA 1.** Cuenca de Los Carriles.

Fuente: Elaboración propia.



**FOTOGRAFÍA 2.** Cuenca de Los Carriles.

Fuente: Elaboración propia.



**FOTOGRAFÍA 3.** Sierra de La Atalaya y límite del Llano de Nieva. Fuente: Elaboración propia.



**FOTOGRAFÍA 4.** Pueblo de Benagéber.

Fuente: Elaboración propia.



**FOTOGRAFÍA 5.** Llano de Nieva y cultivos de la zona.

Fuente: Elaboración propia.





**FOTOGRAFÍA 6.** Consecuencia de la escorrentía superficial. Fuente: Elaboración propia.



**FOTOGRAFÍA 7.** Barranco de los Carriles con agua superficial. Fuente: Elaboración propia.