

**ANEXO 7. MODELACIÓN SWMM EL SOCORRO**

STORM WATER MANAGEMENT MODEL - VERSION 5.0 vE (Build 5.0.018 vE)  
 Traducido por el Grupo Multidisciplinar de Modelación de Fluidos  
 Universidad Politécnica de Valencia

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 NOTA: El resumen estadístico mostrado en este informe se basa en los resultados obtenidos en todos los intervalos de cálculo, no sólo en los intervalos registrados en el informe.  
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Opciones de Análisis

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Unidades de Caudal ..... LPS  
 Modelos utilizados:  
   Lluvia/Escoorrentía ..... NO  
   Deshielo de Nieve ..... NO  
   Flujo Subterráneo ..... NO  
   Cálculo Hidráulico ..... SI  
   Permitir Estancamiento . NO  
   Calidad del Agua ..... NO  
 Método de Cálculo Hidráulico .... DYNWAVE  
 Fecha de Comienzo ..... NOV-11-2017 00:00:00  
 Fecha de Finalización ..... NOV-11-2017 02:00:00  
 Días Previos sin Lluvia ..... 0.0  
 Report Time Step ..... 00:15:00  
 Intervalo de Cálculo Hidráulico . 30.00 s

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Errores de Continuidad

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| *****                      | Volumen | Volumen            |
|----------------------------|---------|--------------------|
| Cálculo Hidráulico         | ha · m  | 10 <sup>3</sup> m3 |
| *****                      | -----   | -----              |
| Aporte Tiempo Seco .....   | 0.000   | 0.000              |
| Aporte Tiempo Lluvia ..... | 0.000   | 0.000              |
| Aporte Ag. Subterranea ... | 0.000   | 0.000              |
| Aportes dep. Lluvia .....  | 0.000   | 0.000              |
| Aportes Externos .....     | 0.010   | 0.101              |
| Descargas Externas .....   | 0.009   | 0.094              |
| Descargas Internas .....   | 0.000   | 0.000              |
| Perdidas Almacenamiento .. | 0.000   | 0.000              |
| Vol. Almacenado Inicial .. | 0.000   | 0.000              |
| Vol. Almacenado Final .... | 0.001   | 0.006              |
| % Error Continuidad .....  | 0.634   |                    |

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Máximos Errores de Continuidad

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Nudo 10 (2.46%)  
 Nudo 14 (2.32%)  
 Nudo 3 (2.19%)

Nudo 31 (2.12%)  
 Nudo 39 (1.38%)

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 Incremento de Tiempo de Elementos Críticos  
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 Línea 44 (99.85%)

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 Máximos Índices de Inestabilidad  
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 Todas las líneas son estables.

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 Resumen de Intervalo de Cálculo Hidráulico  
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 Intervalo de Cálculo Mínimo : 0.68 seg  
 Intervalo de Cálculo Medio : 0.71 seg  
 Intervalo de Cálculo Máximo : 30.00 seg  
 Porcentaje en Reg. Permanente : 0.00  
 N° medio iteraciones por instante : 2.00

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 Resumen de Nivel en Nudos  
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| Nudo | Tipo     | Nivel Medio Metros | Nivel Máximo Metros | Altura Máxima Metros | Instante Nivel Máx. días hr:min |
|------|----------|--------------------|---------------------|----------------------|---------------------------------|
| 1    | JUNCTION | 0.03               | 0.03                | 123.76               | 0 00:14                         |
| 2    | JUNCTION | 0.03               | 0.03                | 123.59               | 0 00:15                         |
| 3    | JUNCTION | 0.03               | 0.03                | 123.44               | 0 00:50                         |
| 4    | JUNCTION | 0.03               | 0.03                | 122.94               | 0 00:55                         |
| 5    | JUNCTION | 0.02               | 0.02                | 122.13               | 0 00:56                         |
| 6    | JUNCTION | 0.02               | 0.02                | 122.43               | 0 00:00                         |
| 7    | JUNCTION | 0.03               | 0.03                | 120.67               | 0 00:29                         |
| 8    | JUNCTION | 0.03               | 0.03                | 120.40               | 0 00:33                         |
| 9    | JUNCTION | 0.04               | 0.04                | 120.07               | 0 01:04                         |
| 10   | JUNCTION | 0.04               | 0.04                | 119.89               | 0 01:01                         |
| 11   | JUNCTION | 0.04               | 0.04                | 119.38               | 0 01:17                         |
| 12   | JUNCTION | 0.02               | 0.02                | 121.42               | 0 00:37                         |
| 13   | JUNCTION | 0.04               | 0.04                | 119.24               | 0 01:24                         |
| 14   | JUNCTION | 0.05               | 0.05                | 118.90               | 0 01:39                         |
| 15   | JUNCTION | 0.05               | 0.05                | 118.37               | 0 01:39                         |
| 16   | JUNCTION | 0.04               | 0.04                | 118.09               | 0 01:36                         |
| 16'  | JUNCTION | 0.04               | 0.04                | 116.14               | 0 01:27                         |
| 17   | JUNCTION | 0.02               | 0.02                | 119.30               | 0 00:00                         |
| 18   | JUNCTION | 0.02               | 0.02                | 118.58               | 0 00:11                         |
| 19   | JUNCTION | 0.03               | 0.03                | 117.81               | 0 00:40                         |
| 20   | JUNCTION | 0.02               | 0.02                | 117.45               | 0 00:35                         |
| 21   | JUNCTION | 0.02               | 0.02                | 116.20               | 0 00:51                         |

|     |          |      |      |        |   |       |
|-----|----------|------|------|--------|---|-------|
| 22  | JUNCTION | 0.04 | 0.05 | 113.00 | 0 | 01:54 |
| 23  | JUNCTION | 0.02 | 0.02 | 124.99 | 0 | 00:12 |
| 24  | JUNCTION | 0.02 | 0.02 | 123.95 | 0 | 00:14 |
| 25  | JUNCTION | 0.02 | 0.02 | 122.79 | 0 | 00:16 |
| 26  | JUNCTION | 0.02 | 0.05 | 121.43 | 0 | 00:00 |
| 27  | JUNCTION | 0.02 | 0.02 | 120.35 | 0 | 00:21 |
| 27' | JUNCTION | 0.02 | 0.02 | 121.79 | 0 | 00:26 |
| 28  | JUNCTION | 0.03 | 0.03 | 118.71 | 0 | 00:23 |
| 28' | JUNCTION | 0.02 | 0.02 | 119.92 | 0 | 00:04 |
| 29  | JUNCTION | 0.03 | 0.03 | 117.98 | 0 | 00:25 |
| 30  | JUNCTION | 0.03 | 0.03 | 116.72 | 0 | 00:25 |
| 31  | JUNCTION | 0.04 | 0.04 | 113.06 | 0 | 00:51 |
| 32  | JUNCTION | 0.02 | 0.02 | 119.70 | 0 | 00:18 |
| 33  | JUNCTION | 0.02 | 0.02 | 119.02 | 0 | 00:39 |
| 34  | JUNCTION | 0.02 | 0.02 | 116.32 | 0 | 00:38 |
| 35  | JUNCTION | 0.05 | 0.05 | 112.79 | 0 | 00:52 |
| 36  | JUNCTION | 0.02 | 0.02 | 120.22 | 0 | 00:14 |
| 37  | JUNCTION | 0.02 | 0.02 | 119.79 | 0 | 00:22 |
| 38  | JUNCTION | 0.02 | 0.02 | 117.92 | 0 | 00:32 |
| 39  | JUNCTION | 0.02 | 0.02 | 115.18 | 0 | 00:34 |
| 40  | JUNCTION | 0.03 | 0.03 | 112.37 | 0 | 01:30 |
| 41  | JUNCTION | 0.06 | 0.06 | 110.16 | 0 | 01:20 |
| 42  | OUTFALL  | 0.00 | 0.00 | 108.67 | 0 | 00:00 |

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Resumen de Aportes en Nodos  
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| Nudo | Tipo     | Aporte Lateral<br>Máximo<br>LPS | Aporte Total<br>Máximo<br>LPS | Instante<br>de Aporte<br>Máximo<br>días hr:min | Volumen<br>Aporte<br>Lateral<br>10^6 ltr | Volumen<br>Aporte<br>Total<br>10^6 ltr |
|------|----------|---------------------------------|-------------------------------|--|--|--|
| 1    | JUNCTION | 1.50                            | 1.50                          | 0 00:00  | 0.011                                    | 0.011                                  |
| 2    | JUNCTION | 0.00                            | 1.50                          | 0 00:14  | 0.000                                    | 0.011                                  |
| 3    | JUNCTION | 0.00                            | 1.50                          | 0 00:15  | 0.000                                    | 0.011                                  |
| 4    | JUNCTION | 0.00                            | 1.50                          | 0 00:51  | 0.000                                    | 0.010                                  |
| 5    | JUNCTION | 0.05                            | 1.55                          | 0 01:01  | 0.000                                    | 0.011                                  |
| 6    | JUNCTION | 1.50                            | 1.50                          | 0 00:00  | 0.011                                    | 0.011                                  |
| 7    | JUNCTION | 1.50                            | 1.50                          | 0 00:00  | 0.011                                    | 0.011                                  |
| 8    | JUNCTION | 0.00                            | 1.50                          | 0 00:29  | -0.011                                   | 0.011                                  |
| 9    | JUNCTION | 0.00                            | 2.34                          | 0 00:55  | -0.005                                   | 0.016                                  |
| 10   | JUNCTION | 0.36                            | 2.70                          | 0 00:58  | 0.003                                    | 0.018                                  |
| 11   | JUNCTION | 0.00                            | 2.70                          | 0 01:01  | 0.000                                    | 0.018                                  |
| 12   | JUNCTION | 1.50                            | 1.50                          | 0 00:00  | 0.011                                    | 0.011                                  |
| 13   | JUNCTION | 0.00                            | 3.36                          | 0 01:38  | -0.006                                   | 0.022                                  |
| 14   | JUNCTION | 0.80                            | 4.16                          | 0 01:25  | 0.006                                    | 0.028                                  |
| 15   | JUNCTION | 0.51                            | 4.67                          | 0 01:36  | 0.004                                    | 0.031                                  |
| 16   | JUNCTION | 0.74                            | 5.41                          | 0 01:36  | 0.005                                    | 0.036                                  |
| 16'  | JUNCTION | 0.74                            | 6.15                          | 0 01:11  | 0.005                                    | 0.041                                  |
| 17   | JUNCTION | 1.50                            | 1.50                          | 0 00:00  | 0.011                                    | 0.011                                  |
| 18   | JUNCTION | 1.50                            | 1.50                          | 0 00:00  | 0.011                                    | 0.011                                  |
| 19   | JUNCTION | 1.50                            | 1.50                          | 0 00:00  | 0.011                                    | 0.011                                  |
| 20   | JUNCTION | 0.00                            | 1.67                          | 0 00:40  | -0.020                                   | 0.012                                  |
| 21   | JUNCTION | 0.85                            | 2.90                          | 0 00:00  | 0.006                                    | 0.018                                  |

|     |          |      |       |   |       |        |       |
|-----|----------|------|-------|---|-------|--------|-------|
| 22  | JUNCTION | 0.25 | 8.92  | 0 | 01:53 | 0.002  | 0.060 |
| 23  | JUNCTION | 1.50 | 1.50  | 0 | 00:00 | 0.011  | 0.011 |
| 24  | JUNCTION | 0.00 | 1.50  | 0 | 00:11 | 0.000  | 0.011 |
| 25  | JUNCTION | 0.00 | 3.17  | 0 | 00:00 | 0.000  | 0.011 |
| 26  | JUNCTION | 0.00 | 7.02  | 0 | 00:00 | 0.000  | 0.011 |
| 27  | JUNCTION | 0.00 | 4.63  | 0 | 00:00 | -0.011 | 0.011 |
| 27' | JUNCTION | 1.50 | 1.50  | 0 | 00:00 | 0.011  | 0.011 |
| 28  | JUNCTION | 0.00 | 1.88  | 0 | 00:21 | -0.008 | 0.013 |
| 28' | JUNCTION | 1.50 | 1.50  | 0 | 00:00 | 0.011  | 0.011 |
| 29  | JUNCTION | 0.35 | 4.11  | 0 | 00:00 | 0.003  | 0.016 |
| 30  | JUNCTION | 0.72 | 2.95  | 0 | 00:25 | 0.005  | 0.021 |
| 31  | JUNCTION | 0.05 | 3.00  | 0 | 00:25 | 0.000  | 0.021 |
| 32  | JUNCTION | 1.50 | 1.50  | 0 | 00:00 | 0.011  | 0.011 |
| 33  | JUNCTION | 0.00 | 1.50  | 0 | 00:18 | 0.000  | 0.011 |
| 34  | JUNCTION | 0.00 | 1.99  | 0 | 00:00 | 0.000  | 0.011 |
| 35  | JUNCTION | 0.00 | 4.28  | 0 | 00:51 | -0.002 | 0.029 |
| 36  | JUNCTION | 1.50 | 1.50  | 0 | 00:00 | 0.011  | 0.011 |
| 37  | JUNCTION | 0.00 | 1.50  | 0 | 00:14 | 0.000  | 0.011 |
| 38  | JUNCTION | 0.00 | 1.50  | 0 | 00:22 | 0.000  | 0.011 |
| 39  | JUNCTION | 0.21 | 2.92  | 0 | 00:00 | 0.002  | 0.012 |
| 40  | JUNCTION | 0.00 | 5.92  | 0 | 01:01 | -0.001 | 0.041 |
| 41  | JUNCTION | 0.00 | 13.96 | 0 | 01:20 | -0.006 | 0.094 |
| 42  | OUTFALL  | 0.00 | 13.96 | 0 | 01:56 | 0.000  | 0.094 |

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Resumen de Sobrecarga en Nudos  
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No hay ningún nudo en carga.

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Resumen de Inundación en Nudos  
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No hay inundación en ningún nudo.

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Resumen de Vertidos  
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| Nudo de Vertido | Frec. Vertido % Porc. | Caudal Medio LPS | Caudal Máximo LPS | Volumen Total 10^6 ltr |
|-----------------|-----------------------|------------------|-------------------|------------------------|
| 42              | 99.94                 | 13.55            | 13.96             | 0.094                  |
| Sistema         | 99.94                 | 13.55            | 13.96             | 0.094                  |

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Resumen de Caudal en Líneas  
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| Línea | Tipo    | Caudal<br>Máximo<br>LPS | Instante<br>Caudal Máx<br>días hr:min | Veloc.<br>Máxima<br>m/sec | Caudal<br>Máx/<br>Lleno | Nivel<br>Máx/<br>Lleno |
|-------|---------|-------------------------|---------------------------------------|---------------------------|-------------------------|------------------------|
| 1     | CONDUIT | 1.50                    | 0 00:14                               | 0.59                      | 0.05                    | 0.15                   |
| 2     | CONDUIT | 1.50                    | 0 00:15                               | 0.58                      | 0.05                    | 0.16                   |
| 3     | CONDUIT | 1.50                    | 0 00:51                               | 0.56                      | 0.06                    | 0.16                   |
| 4     | CONDUIT | 1.50                    | 0 01:01                               | 0.60                      | 0.05                    | 0.15                   |
| 5     | CONDUIT | 1.55                    | 0 00:55                               | 1.21                      | 0.02                    | 0.10                   |
| 6     | CONDUIT | 1.84                    | 0 00:01                               | 1.20                      | 0.02                    | 0.11                   |
| 7     | CONDUIT | 1.50                    | 0 00:29                               | 0.56                      | 0.05                    | 0.16                   |
| 8     | CONDUIT | 1.50                    | 0 00:55                               | 0.57                      | 0.05                    | 0.16                   |
| 9     | CONDUIT | 2.34                    | 0 00:58                               | 0.64                      | 0.09                    | 0.20                   |
| 10    | CONDUIT | 2.70                    | 0 01:01                               | 0.62                      | 0.11                    | 0.22                   |
| 11    | CONDUIT | 2.70                    | 0 01:36                               | 0.68                      | 0.10                    | 0.21                   |
| 12    | CONDUIT | 1.50                    | 0 00:37                               | 1.27                      | 0.03                    | 0.11                   |
| 13    | CONDUIT | 3.36                    | 0 01:25                               | 0.70                      | 0.13                    | 0.24                   |
| 14    | CONDUIT | 4.16                    | 0 01:36                               | 0.69                      | 0.17                    | 0.28                   |
| 15    | CONDUIT | 4.67                    | 0 01:36                               | 0.72                      | 0.19                    | 0.30                   |
| 16    | CONDUIT | 5.41                    | 0 01:11                               | 1.37                      | 0.10                    | 0.21                   |
| 17    | CONDUIT | 6.15                    | 0 01:27                               | 1.65                      | 0.09                    | 0.20                   |
| 18    | CONDUIT | 1.50                    | 0 00:11                               | 1.14                      | 0.03                    | 0.11                   |
| 19    | CONDUIT | 1.74                    | 0 00:00                               | 1.18                      | 0.02                    | 0.11                   |
| 20    | CONDUIT | 1.50                    | 0 00:40                               | 0.55                      | 0.06                    | 0.16                   |
| 21    | CONDUIT | 2.05                    | 0 00:00                               | 0.92                      | 0.04                    | 0.14                   |
| 22    | CONDUIT | 2.52                    | 0 00:53                               | 1.90                      | 0.03                    | 0.13                   |
| 23    | CONDUIT | 8.92                    | 0 01:50                               | 1.78                      | 0.13                    | 0.25                   |
| 24    | CONDUIT | 1.50                    | 0 00:11                               | 1.32                      | 0.03                    | 0.11                   |
| 25    | CONDUIT | 3.17                    | 0 00:00                               | 1.37                      | 0.05                    | 0.14                   |
| 26    | CONDUIT | 7.02                    | 0 00:00                               | 4.58                      | 0.12                    | 0.11                   |
| 27    | CONDUIT | 5.79                    | 0 00:00                               | 1.19                      | 0.12                    | 0.24                   |
| 28    | CONDUIT | 1.50                    | 0 00:26                               | 0.92                      | 0.03                    | 0.12                   |
| 29    | CONDUIT | 1.59                    | 0 00:01                               | 1.09                      | 0.03                    | 0.12                   |
| 30    | CONDUIT | 1.99                    | 0 00:00                               | 10.73                     | 0.02                    | 0.09                   |
| 31    | CONDUIT | 3.76                    | 0 00:00                               | 0.89                      | 0.10                    | 0.22                   |
| 32    | CONDUIT | 2.23                    | 0 00:25                               | 1.03                      | 0.04                    | 0.14                   |
| 33    | CONDUIT | 2.95                    | 0 00:25                               | 1.37                      | 0.04                    | 0.19                   |
| 34    | CONDUIT | 3.00                    | 0 00:51                               | 0.67                      | 0.12                    | 0.23                   |
| 35    | CONDUIT | 1.50                    | 0 00:18                               | 1.03                      | 0.03                    | 0.12                   |
| 36    | CONDUIT | 1.99                    | 0 00:00                               | 1.26                      | 0.03                    | 0.11                   |
| 37    | CONDUIT | 4.43                    | 0 00:00                               | 5.73                      | 0.07                    | 0.10                   |
| 38    | CONDUIT | 4.28                    | 0 01:33                               | 0.77                      | 0.15                    | 0.27                   |
| 39    | CONDUIT | 1.50                    | 0 00:14                               | 0.90                      | 0.04                    | 0.13                   |
| 40    | CONDUIT | 1.50                    | 0 00:22                               | 1.11                      | 0.02                    | 0.11                   |
| 41    | CONDUIT | 2.71                    | 0 00:00                               | 5.52                      | 0.04                    | 0.11                   |
| 42    | CONDUIT | 1.71                    | 0 00:37                               | 1.04                      | 0.03                    | 0.11                   |
| 43    | CONDUIT | 5.92                    | 0 00:52                               | 1.76                      | 0.08                    | 0.19                   |
| 44    | CONDUIT | 13.96                   | 0 01:56                               | 2.12                      | 0.21                    | 0.31                   |

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Resumen de Tipo de Flujo  
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Longitud - Fracción de Tiempo en Tipo de Flujo - Número Variac

| Conducto | Ajustada /Real | Seco (Caudal 0) |            | Sub-Crít. | Super Crít. | Crítico |       | Froude Medio | Media Caudal |        |
|----------|----------------|-----------------|------------|-----------|-------------|---------|-------|--------------|--------------|--------|
|          |                | Todo            | Ini. Final |           |             | Ini.    | Final |              |              |        |
| 1        | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.34         | 0.0000 |
| 2        | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.32         | 0.0000 |
| 3        | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.27         | 0.0000 |
| 4        | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.38         | 0.0000 |
| 5        | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 3.54         | 0.0000 |
| 6        | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 3.43         | 0.0000 |
| 7        | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.27         | 0.0000 |
| 8        | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.29         | 0.0000 |
| 9        | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.28         | 0.0000 |
| 10       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.17         | 0.0000 |
| 11       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.33         | 0.0000 |
| 12       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.49         | 0.0000 |
| 13       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.25         | 0.0000 |
| 14       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.15         | 0.0000 |
| 15       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.17         | 0.0000 |
| 16       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.66         | 0.0000 |
| 17       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 3.28         | 0.0000 |
| 18       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.51         | 0.0000 |
| 19       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 3.37         | 0.0000 |
| 20       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.24         | 0.0000 |
| 21       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.18         | 0.0000 |
| 22       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 3.31         | 0.0000 |
| 23       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 3.18         | 0.0000 |
| 24       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.49         | 0.0000 |
| 25       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.60         | 0.0000 |
| 26       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.56         | 0.0000 |
| 27       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.27         | 0.0000 |
| 28       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.38         | 0.0000 |
| 29       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.40         | 0.0000 |
| 30       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 4.01         | 0.0000 |
| 31       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.77         | 0.0000 |
| 32       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.38         | 0.0000 |
| 33       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 1.00    | 0.00  | 0.00         | 1.87         | 0.0000 |
| 34       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.24         | 0.0000 |
| 35       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.14         | 0.0000 |
| 36       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.82         | 0.0000 |
| 37       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.91         | 0.0000 |
| 38       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.33         | 0.0000 |
| 39       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 1.94         | 0.0000 |
| 40       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.65         | 0.0000 |
| 41       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.86         | 0.0000 |
| 42       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 2.78         | 0.0000 |
| 43       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 3.65         | 0.0000 |
| 44       | 1.00           | 0.00            | 0.00       | 0.00      | 0.00        | 0.00    | 0.00  | 1.00         | 3.17         | 0.0000 |

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Resumen de Sobrecarga de Conductos

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Ningún conducto ha entrado en carga.

Instante de inicio del análisis: Fri Nov 24 08:39:12 2017

Instante de finalización del análisis: Fri Nov 24 08:39:12 2017

Tiempo total transcurrido: < 1 s