

# XP-Culvert

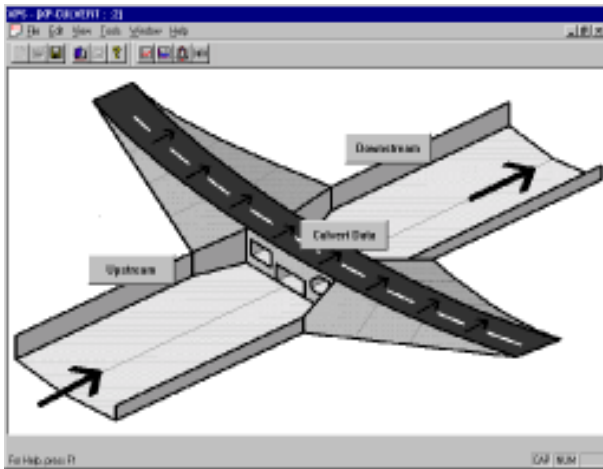
## for Microsoft Windows 95/98/NT Technical Description

### PRODUCT OVERVIEW

XP-Culvert is a new product introduced by XP-Software to supersede the extremely popular Culvert for Windows software.

XP-Culvert uses the universally accepted procedures of the US Department of Transportation, Federal Highways Administration (FHWA), Hydraulic Design of Highway Culverts.

XP-Culvert takes you beyond the approximations of the nomograph to a detailed and precise computational solution to the



complex problem of culvert hydraulics. You can now model flows well beyond the useful range of existing graphical methods.

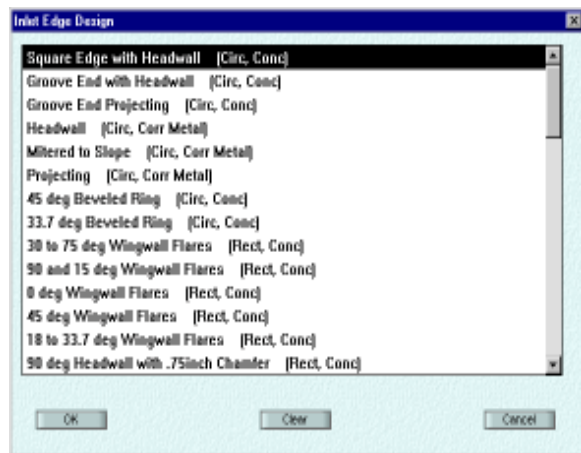
### DESIGN AND ANALYSIS

There are many useful features in XP-Culvert designed to make all styles of projects easy.

The software can be used to design and analyse multi-cell culverts, unlike many current market products that can only design or analyse a single conduit.

### INLET CONTROL

XP-Culvert has incorporated 57 different types of inlet control configurations. This makes it possible to model nearly every type of inlet configuration used today.



### OUTLET CONTROL

Within XP-Culvert we have several types of outlet control, they range from a quite simple free outfall option, tidal controls generated using a tidal curve, a user defined rating table and also a fixed backwater condition such as a river water level.

### CONDUITS AND WEIRS

The user can model multiple culverts in the system, and each of those conduits can have a different invert level. You can also model varying combinations of conduits ranging from circular to rectangular and many other different shapes. We can accommodate even some of the more uncommon shapes such as arch, horseshoe and even a user definable shape.

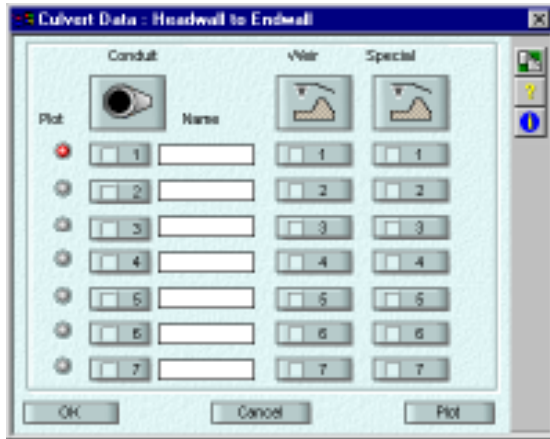
One of the superior additions to the software is the inclusion of a roadway crossing or weir. By simply entering your roadway profile you can generate results for both your

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culvert and its overflow structure.

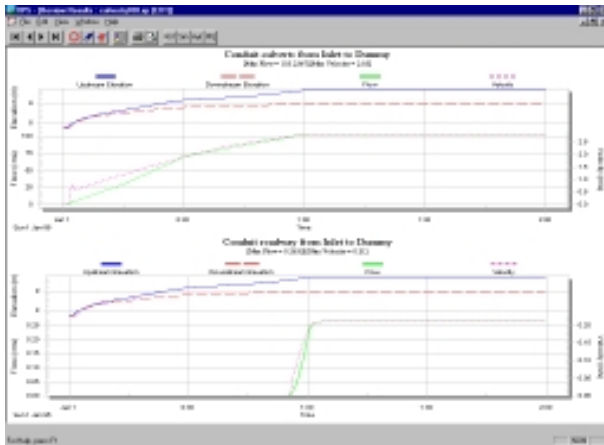
After generating your input and output



flows, a rating table can be generated for any group of mutli-cell culverts the table can also include the roadway crossing or weir.

### GRAPHICAL OUTPUTS

After your data has been generated and you have suitable results you can output those results in a number of different ways. XP-Culvert has a variety of both visual and printable outputs available to the user. Graphs of Flow vs



Velocity and Upstream and downstream water levels can be generated. Data tables can be generated showing any of the model inputs and outputs. These tables are user definable and can be setup and saved by the user for use with other projects.

### DATA EXCHANGE

XP-Culvert can export its tabular results directly to an excel spreadsheet. To export your data it is a simple matter of copying and then pasting your values into the spreadsheet software.

File Name	Link	Inlet (m/s)	US Road	US Load	Elevation (m)	Inlet Head
road 1	road 1	10.00	1000	10.00	1.000	10.00
road 2	road 2	10.00	1000	10.00	1.000	10.00
road 3	road 3	10.00	1000	10.00	1.000	10.00

### OPTIONAL STORAGE

A storage option has been created as an add-on to the XP-Culvert software. The storage calculations are combined with the culvert calculations to generate more accurate results.

### OPERATING REQUIREMENTS

XP-Culvert is a true 32 bit software package. It requires either windows 95/98 or windows NT for its operation.

### FURTHER INFORMATION

Further information can be obtained on XP-Culvert from your local XP-Software office. You can also refer to documentation provided at XP Software's internet web site located at [www.xpssoftware.com.au](http://www.xpssoftware.com.au).

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