

# KISTERS Australia News

July 2013

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## From The GM's Desk

*By Bill Steen, General Manager, KISTERS Pty Ltd*

The annual user group meeting is approaching very fast with the two-day event on the 28th & 29th August in Canberra. As per recent user groups there will be two threads to address the WISKI and HYDSTRA user needs. iQuest will also be presenting an update on the HydroTel product as many of the WISKI / HYDSTRA clients now have HydroTel installed.

This year the venue will be the Hellenic Club in the centre of Canberra [13 Moore Street] and there are many options for accommodation within walking distance. The user group dinner will also be held at the Hellenic Club.

There has been a lot of progress within the Kisters products and the user group meeting offers an ideal forum to hear what is going on and how others are applying the various products and concepts.

An agenda for the user group meeting will be available shortly.

Since the last newsletter Kisters would like to welcome several new clients, including Environment Canterbury from New Zealand, Malawi National Hydrological Service, Hidroelectrica de Cahora Bassa Mozambique, Arrow Energy and Ballina Shire Council.

Along with the above new clients, Kisters have also been busy with the preparation for the release of HYDSTRA V11, the running of a variety of training courses, and ongoing work / projects.

We look forward to seeing you in August.

Bill Steen

General  
Manager

KISTERS Pty Ltd



# 2013 KISTERS User Group Meetings

## *Canberra 28-29 August, 2013*

The Australian KISTERS User Group meeting will be held on 28/29 August 2013 in Canberra at the Hellenic Club, 13 Moore St, Canberra City 2600.

The KISTERS Users Group meeting provides users with an opportunity to:

- Learn about the latest products and services
- Listen to informative user presentations on a wide range of products
- Participate in a question and answer session with our industry experts

The Hellenic Club is in the middle of the city on a busy street with little parking, but there are several pay parking lots nearby.

### *Registration*

The cost for the two days will be \$638 inc GST. Please contact Debbie Cockburn for more information, or to register, at [Debbie.cockburn@kisters.com.au](mailto:Debbie.cockburn@kisters.com.au).

Unfortunately the Hellenic Club does not offer accommodation, but there are plenty of hotels around Civic. Please do not confuse the City Hellenic Club with the Woden Hellenic Club, which is a completely different location.

### *Agenda*

As usual, it's too early yet to list an agenda in detail, but a few proposals have already emerged. We are hoping for presentations on such diverse topics as:

- Monitoring IT infrastructure with [Nagios](#)
- Experience with the Kisters new biological add-on for KiWQM
- iQuest overview of new products and software
- Hydstra on the move - a discussion of phones, tablets, virtualisation and the cloud
- An introduction to the energy market and the Kisters portfolio of energy products.
- Peter Heweston will be talking about Windows 8 and the future directions that Microsoft are taking, and demonstrating and discussing the Microsoft Surface tablet.
- and of course the standard topics like what's New in Hydstra, What's New in Technology, What's New in WISKI etc.

### *Participation*

To make this meeting a success, we need the participation of current WISKI and Hydstra users. If you would like to give a presentation on the product you are using or a related project, we would love to hear about it. Please contact Peter Heweston or Chris Michl to discuss proposals for presentations.

## *San Diego September 9-10 September, 2013*

The 2013 KISTERS Users Group meeting will take place on September 9-10, 2013 at the Bahia Resort Hotel in San Diego. The annual meeting provides a valuable opportunity for users and anyone interested in learning more about our software and to receive advice and hear solutions from other professionals in the industry.

### *Registration*

To register, complete the registration form, and mail or fax it along with your payment to:

KISTERS North America

7777 Greenback Lane, Suite 209

Citrus Heights, CA 95610

Attn: Jennifer Durda

Fax: (916) 723-1626

You can register by going to <http://www.kisters.net/docs/Registration-KUG2013.pdf>.

### *More Information*

For more information please contact:

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*The Bahia Resort*



*The Bahia Belle*

## Hydstra Installation at ECAN

In May Peter Heweston and Callum Ramage spent two weeks in Christchurch installing Hydstra for Environment Canterbury. ECAN had previously been a Tideda user, so much of their legacy data was exported to XML from Tideda and imported into Hydstra using a newly developed script NZTID2HYD.

Although the welcome from the staff at ECAN was warm and friendly the weather was decidedly less so, with plenty of rain, sleet and snow.

Christchurch is slowly recovering from the 2010/2011 earthquakes. The city centre was very badly hit, with many buildings having to be demolished, and debate continues over the future of others, including the iconic ChristChurch Cathedral. It will be a long time before Christchurch is back to any semblance of normality, and it was a sombre and moving experience to witness the devastation.



*ChristChurch Cathedral*



*Quake City container shopping mall*



*Containers used to support dangerous facade*



*Deserted downtown streets*

# NT Water Monitoring Portal



WILLEM WESTRA VAN HOLTHE MLA | Member for KATHERINE

## MEDIA RELEASE

### LAUNCH OF NEW WATER MONITORING PORTAL

06 April 2013

Minister for Land Resource Management, Willem Westra van Holthe, has today launched a new water data portal.

Speaking at the Katherine Farm and Garden Day Mr Westra van Holthe said the new portal would allow residents and stakeholders to more readily access river height data in a timely manner.

"This is a user friendly way for people to keep up to speed with what heights the rivers are flowing at," Mr Westra van Holthe said.

"Katherine was devastated by floods on Australia Day in 1998 and there has been significant community interest in monitoring river heights, particularly during periods of flooding."

"This is a free portal and allows users to access historical information about water levels, some of it going back to the 1960's. The Department of Land Resource Management have done a fantastic job with this portal."

"I encourage everyone to jump on the net and check out the new portal."

To see the portal go to: <http://www.lrm.nt.gov.au/water/water-data-portal>

## Kisters Enters Energy Market in Australia

*By Massimo Antinarelli*

Kisters develops and supports information technology products for the energy industry through fully integrated IT software and consultancy services for energy management, procurement, trading, retail, transmission and distribution operations.

KISTERS offers utilities and industry a comprehensive suite of software for Energy Data Analytics, Renewable Production and Demand Load Forecasting, Smart Grid and Demand Response Solutions, Portfolio and Risk Management, Generation Portfolio Optimisation for modelling highly complex and multi-commodity environment for both short and long term analysis. Plus Resource Management tools to support energy managers in responsible handling of resources, benchmarking of sites, bill validation and energy auditing.

For more information about the Belvis suite of energy industry products please contact Massimo at [Massimo.antinarelli@kisters.com.au](mailto:Massimo.antinarelli@kisters.com.au).

## Hydstra Product News

### *Hydstra 10.04 Current Release*

Hydstra 10.04 was released on August 16, 2012 and is well and truly in production in many agencies. The main areas of change are a SQL Server version (at a cost), the instruments system and the groundwater system, but there are hundreds of enhancements and features that should make 10.04 attractive to everyone.

We strongly recommend that you copy your production system to a test location, get it running there, and then do a trial upgrade. Only when you are happy that your local extensions and enhancements are



working fine should you go ahead with a production system upgrade.

If you work closely with other agencies and trade Hydstra data with them you should liaise with them before upgrading. Time-series files have not change between 10.03 and 10.04, but every database table has changed because they now carry additional auditing fields (DATECREATE, TIMECREATE, USERCREATE).

It is possible with care to downgrade most tables from 10.04 back to 10.03 using HYDBUTIL UPGRADE, but if you use instruments or groundwater there have been enough changes that HYDBUTIL UPGRADE cannot do the job.

If you use Hydstra/WEB you will need to liaise with Denby Angus about your 10.04 upgrade as he will need to be involved.

We expect Hydstra V11 to be released next year some time.

### **Hydstra Patch News**

A new Hydstra patch is released every Friday as a rule, and can be accessed via <http://kna.kisters.net/hydstra/>. You can read the Change Log document at a link like <ftp://ftp.kisters.net/Hydstra/releases/hydstra.10.04.20130621.changelog.htm> (change the date accordingly) to see what patches have been made. You will need to contact us for the user login and password. Please include your HYACCESS.INI in your request email.

The current patch at time of printing is *hydstra.10.04.20130607.patch.zip*.

If you are planning to migrate your instruments system to 10.04 you should pick up a system dated after 1 Mar 2013 as the migration scripts have had some serious work done on them recently.

It is worth noting that all web programs are excluded from the patch set, so you can safely patch a system without disturbing your Hydstra/WEB site.

### **HYDLLPX - Accessing The Hydstra DLL as an Executable**

HYDLLP is the Hydstra DLL, which enables you to access many aspects of Hydstra by linking the DLL into your program, and calling it by passing strings of JSON in and receiving JSON strings back. We offer examples of how to call HYDLLP from Perl, Visual Basic, C# and Delphi, and calling from other languages should be fairly simple to support.

Sometimes it is not desirable to link Hydstra code directly into another product, such as a SCADA or telemetry system, and a more hands-off approach is required. In these cases you might consider using HYDLLPX, which is an executable that accepts input on STDIN and posts output to STDOUT.

For example:

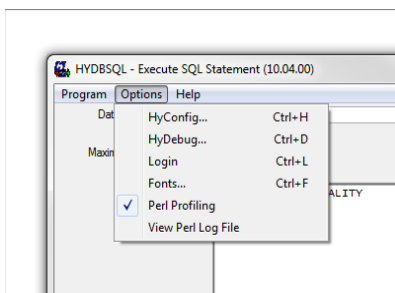
```
echo {"function" : "get variable list", "version" : 1, "params" : { "site list" : "HYDSYS01",  
"datasource" : "A" }} | hydllpx
```

returns the response on STDOUT (without the nice formatting) of:

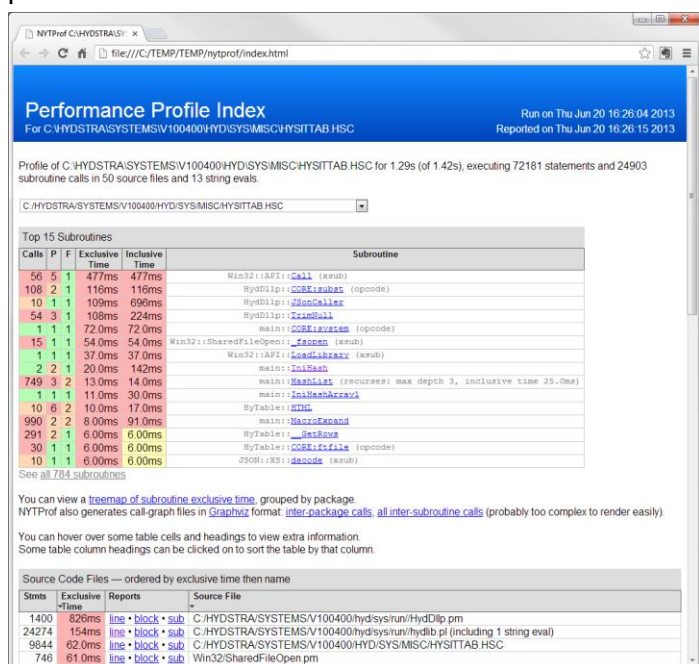
```
{ "buff_required" : 1252,  
  "buff_supplied" : 5000,  
  "error_num" : 0,  
  "return" : { "sites" : [ { "site" : "HYDSYS02",  
    "site_details" : { "name" : "Hydstra Test Station - Secondary rainfall data",  
      "short name" : "Hydstra Test Station"  
    },  
    "variables" : [ { "name" : "Rainfall",  
      "period_end" : "19860405082200",  
      "period_start" : "19791218111500",  
      "subdesc" : "",  
      "units" : "Millimetres",  
      "variable" : "10.00"  
    },  
    { "name" : "Rainfall",  
      "period_end" : "19970516124300",  
      "period_start" : "19850831090000",  
      "subdesc" : "Test series",  
      "units" : "Millimetres",  
      "variable" : "10.01"  
    },  
    . . . etc for other variables  
  ] ] }  
}
```

### **Profiling HYSCRIPT Jobs**

Recently (21 June 2013) we patched HYSCRIPT in 10.04 to integrate Perl profiling into it. From any HYSCRIPT job select Options/Perl Profiling:



Then go on and run the script. At the end of the script you will be presented with an HTML file in your preferred browser as follows:



Read up on Devel::NTYProf in the Perl help file to understand what the report is telling you, or watch an introductory video at <http://timbunce.blip.tv/file/3913278/>.

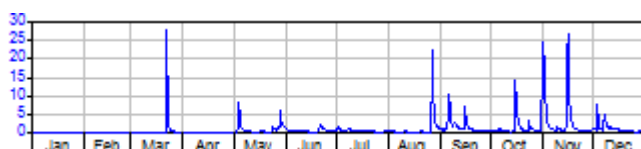
The basic take-home lessons we have learned from profiling our own code are as follows:

- The *Prt* statement in *hydlib.pl* is convenient but slow – don't use it for millions of records, use native *print* instead.
- The *CSVSplit* routine in *hydlib.pl* is convenient but slow – don't use it for millions of records, use *Text::CSV\_XS* instead
- Pattern matching can be expensive – minimise it where possible, but test that you aren't making things slower

## Advanced HYPLOT Tricks

HYPLOT is capable of producing a wide variety of advanced plots, but to master some of the features of HYPLOT you need to delve into HYPLOT.INI to use it to full advantage. Even during the life of Hydstra 10.04 many new features have been added to HYPLOT.INI, so make sure you are recently patched before to attempt some the examples below.

The following gallery of shots illustrates a few of the more advanced HYPLOT features at work:



This is a bare plot, sized to exactly 360\*75 pixels for use within a publication, plotted to a PNG file using destination of PNG(360,75) to match the target width and height, and plotted with a HYPLOT.INI Plot Options of WIDGET:

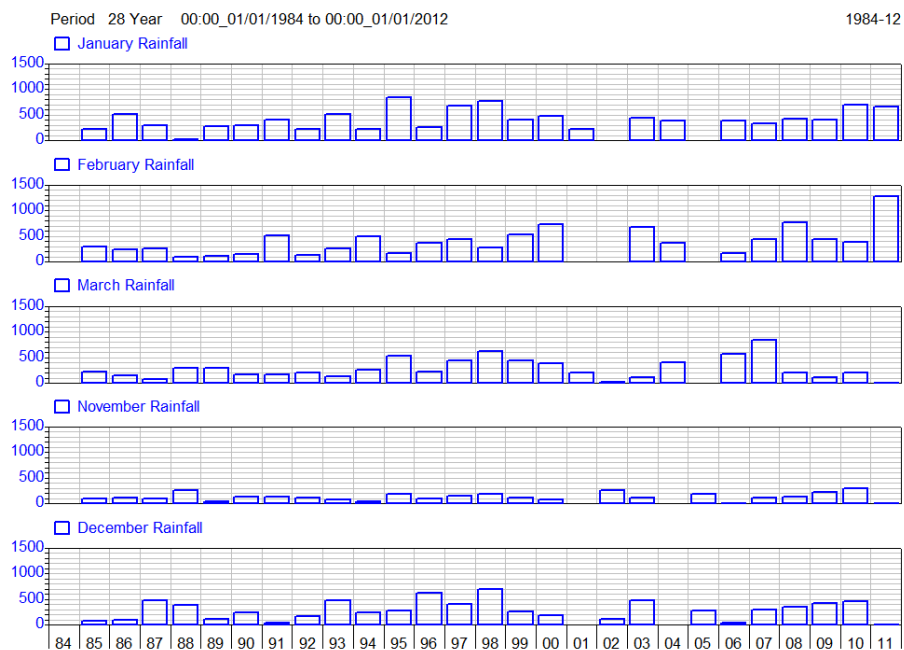
```
[WIDGET PlotOptions]
StackedOptions = LABELINSIDE
Orientation = landscape
TraceLabels =
PlotHeading = no
PlotTitle = no
BareMode = yes
TargetWidth = 360
TargetHeight = 75
WriteXML = no
Showperiodandinterval=no
```



This plot uses MODSYN datasources to create the historic maximum and the maximum last year. The relevant HYPLOT Trace Options sections then put the simple trace labelling on to the traces, instead of above the plot:

```
[ANNMAX TraceOptions]
TraceLabel =Historic Maximum
LabelPosition = TRACEMIDDLE
```

```
[LASTMAX TraceOptions]
TraceLabel =Maximum Last Year
LabelPosition = TRACEMIDDLE
```



This plot uses a MODSYN datasource to compute the monthly rainfall totals but show them spread out over the year, and then uses HYPLOT trace options for each month to simplify the trace labelling:

```
[JAN TraceOptions]
TraceLabel      =January Rainfall
OverrideTiming=1,year

[FEB TraceOptions]
TraceLabel      =February Rainfall
OverrideTiming=1,year

[MAR TraceOptions]
TraceLabel      =March Rainfall
OverrideTiming=1,year

...etc
```

Read up on the HYPLOT documentation to see how you can leverage some of the advanced features of HYPLOT.

## Hydstra Version 11 Developments

### Introduction

We propose that the next major Hydstra release will be V11. It is unlikely to be released before the end of this year, but we may preview some aspects at the User Group meetings in August/September.

If you are still running Hydstra Version 9 please redouble your efforts to upgrade to V10.04, as V9 will become unsupported when V11 is released.

### Programs for Possible Removal

Does anyone still use any of the following programs? As part of our regular clean-up for a new version we would like to remove them if they are obsolete.

HYCHECK	Plot Logger Traces for Month
HYCHECKKL	Plot LOGPOLL database Check Plots
HYLOGPLO	Plot LOGPOLL Database
HYMODEL	Produce Data for BOUGHTON or HYDROLOG Modelling Programs
HYDBBAT	Generate a Batch File from a Database Table
HYDBTOHY	Generate a Hydstra data file from a dBase III+ Database
HYMACEMC	Process MACE Monkey Creek Logger Data
HYMACE	Read a MACE Data Logger File
HYMETCLI	Create a Hydstra file from Met Bureau Climate Data File
HYMETDAY	Create a Hydstra file from Met Bureau Climate Daily File
HYMETPLU	Create a Hydstra file from Met Bureau Climate Pluvio File
HYPROADS	Process ADS Data to Hydstra File
HYDMPADS	Dump ADS Data to Text File
HYPROWES	Process WESDATA Logger File
HYRRDUNL	Unload a Hydrological Services RRDL-3 Data Logger
HYRRDPOR	Unload a Hydrological Services RRDL3 to Time Series File
HYSERMAC	Service a HYDRO-MACE TRS Logger
HYWINPIC	Display a photo from the HYBATCH framework (we propose to use the default picture viewer that comes with Windows)
HYWINVID	Display a video from the HYBATCH framework (we propose to use the default video driver that come with Windows)

As part of a recent installation in New Zealand we developed two new scripts NZTIDTOXML, which exports Tideda files to XML, and NZTID2HYD.HSC which import the corresponding XML files into Hydstra.

In consequence we would like to drop a handful of very old Delphi programs which we suspect nobody is using, namely:

NZTIDTS	Import TIDEDA Time-Series Data
NZTIDRAT	Import TIDEDA Ratings
NZTIDGAG	Convert TIDEDA Gaugings to Hydstra

Please let us know if you use these programs.

### Hydstra Path Clean-up

We propose to remove knowledge of a number of legacy paths from Hydstra. Many of them became obsolete when we moved all tables to DBFPATH.

The following HYCONFIG macros will be removed from Hydstra in V11:

RATEPATH, GAUGPATH, SECTPATH, QDBPATH, RESPATH, GDBPATH, LDBFPATH, OPSPATH, OSYSPATH, LOCPATH, QWKPATH, SUMPATH, COMPATH.
---------------------------------------------------------------------------------------------------------------------------

In addition the following directory trees will be completely removed, including all subdirectories:

\HYD\DAT\RATE, \HYD\DAT\GAUG, \HYD\DAT\SECT, \HYD\WQA, \HYD\GWA
-----------------------------------------------------------------

LOCPATH is a special case - the *&hyd-locpath*. macro will no longer be recognised, but we won't delete the contents just in case you have anything of value in \HYD\LOC\BAT. You should move them to INIPATH



if you do.

If you have been keeping anything non-standard in any of the paths mentioned above, now is the time to tidy them up, as in V11 they will be whisked away.

## WISKI Product News

The WISKI product news gives a preview of some new features of WISKI 7.2 and 7.3, has a look at the WISKI web products, and shows some examples how to use the WISKI tool 'KiGraphCreator', as well as announcing the upcoming KISTERS KiScript training and user conference in August this year.

### ***KISTERS User Group meeting 2013 – WISKI session***

The WISKI session of the upcoming user conference will focus on the new WISKI/TSM release 7.2/7.3, KiScript as the internal scripting language for agents and reports and the development of Field Notes as a field application for WISKI. Also Burkhard Losch will report on the developments with KiScript and the Script server. Additionally, it is important to present and discuss WISKI user experiences in a session. Any user who wants to contribute to that session please contact Chris Michl.

### ***KiScript Training***

Before the upcoming user group meeting in Canberra KISTERS is offering a two day KiScript workshop with the KiScript developer Burkhard Losch from Germany. The workshop will take place on the 26<sup>th</sup> and 27<sup>th</sup> of August in the KISTERS Canberra office and will focus on user examples and template development of agent and report scripts. If you have not registered please contact Chris in the Canberra office for further details or to register. The training will cost \$1500 inc GST per person for the two days.

The KiScript Forum (<http://forum.kiscript.org>) launched after the last workshops in Australia in 2012 in Canberra and at MHL has been well received and is used by our users across the world.

### ***KISTERS Web Technology***

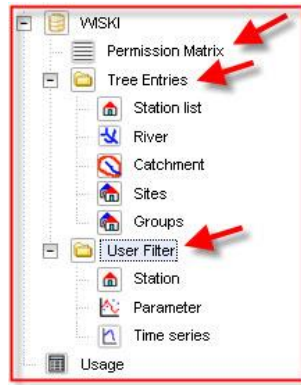
KISTERS web technology is used by our clients Manly Hydraulics (NSW) and Seqwater (QLD). The Bureau of Meteorology (BOM) is implementing the public deployment of WISKI Web Public and KiWIS for web service sharing of data in WDTF format. Waikato Regional Council in NZ is using the KiWIS API to publish water data as SOS service and in WaterML2.

KISTERS also offers a WISKI web input and mobile solution as well as KiWIS as an API solution and interactive Widgets. WISKI Field Notes has been redesigned and will be presented at the user group meeting.

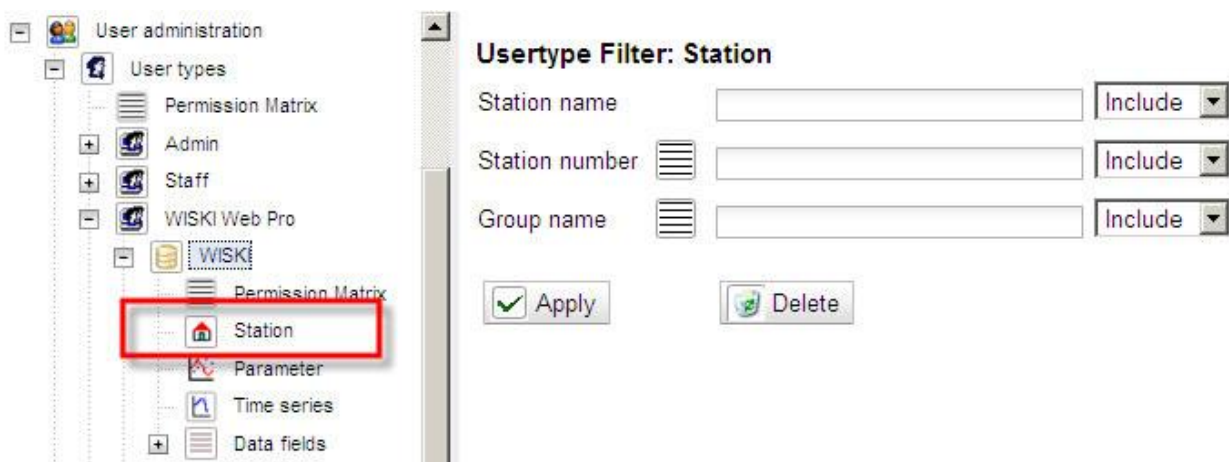
### ***WISKI Web Pro***

WISKI Web Pro is a web server based product which enables browser visualization of the WISKI data (based on WISKI7). It provides an easy way to "publish" WISKI information without the need of a WISKI client on each desktop. WISKI Web Pro uses an additional database to the WISKI7 DB (i) to store configurations of data-storages and access rights for user, (ii) to maintain users lists, rights and login protocols and (iii) to record user specifics like last session settings, favourites, session course, etc.. This database can run on Oracle, Postgres, MSSQL, or with a local file based database called SQLite. Based on this system infrastructure the application serves maps, lists, graphs, downloads (txt, csv, xls, pdf, png, ...) into the users browser. With WISKI Web Pro map servers like ArcServer can be integrated, or it can serve publically available background maps from ArcIMS, Google, Yahoo, VirtualEarth, etc.

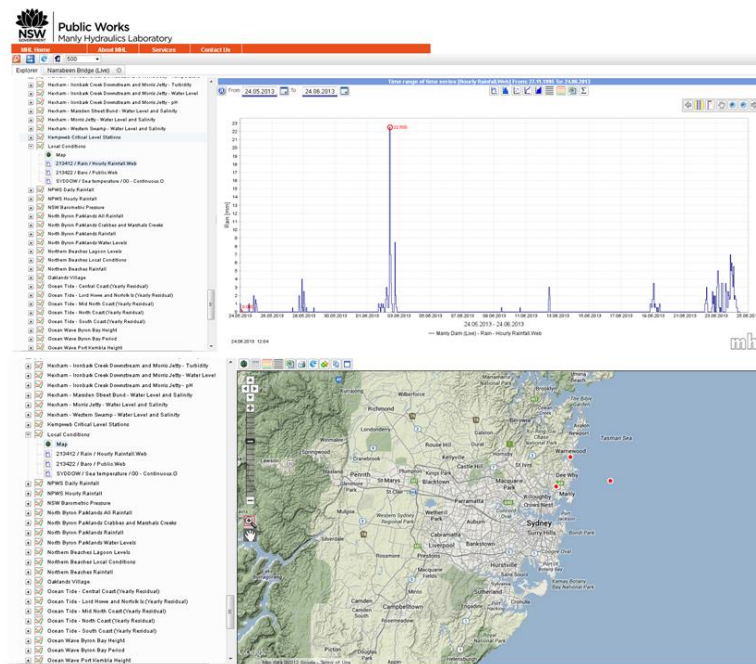
The WISKI data displayed in WISKI Web Web Pro can be either configured within WISKI Web Pro defining certain permissions to stations, parameters and time series (see dialog below):



or as a system “look” onto the WISKI database with varying data sources using username and password of a WISKI user. In the first case a station filter can use explicit station selections to enter filter criteria for station name and station number allowing to define the INCLUDE or EXCLUDE of stations. Also, a group can be specified using the group configuration of the WISKI system without re-visiting the web configuration.

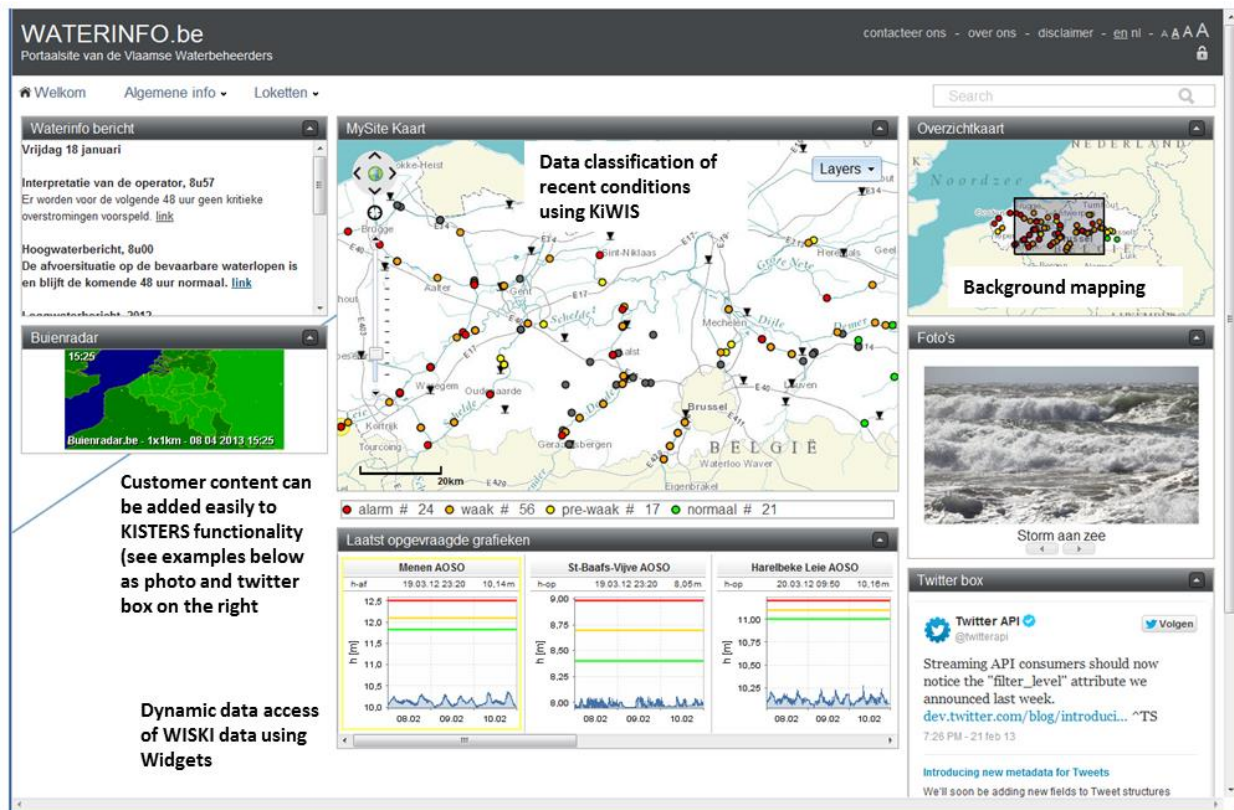


In the second case using the WISKI user configuration the view in WISKI Web Pro is directly reduced to the WISKI system to exactly those stations, parameter, time-series that have been assigned to the user in the WISKI user administration. The look and feel of WISKI Web Pro (MHL) is shown below:

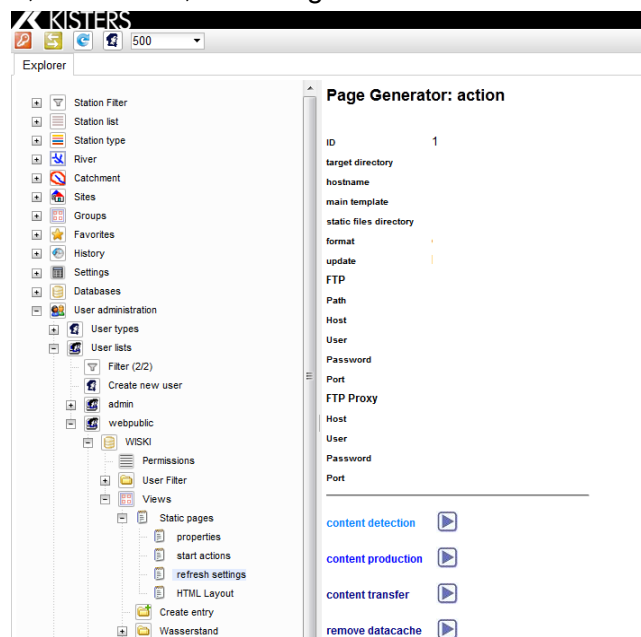


**WISKI Web Public**

The purpose of WISKI Web Public is to provide an easy-to-use and highly available solution (for example for flood situations) for the public and when no user authentication is required. The pages are internally pre-processed and served as static files on a public web server (which is usually a corporate web server not operated by KISTERS). The pages can easily be integrated or adapted to the customers corporate design. All different layouts are not a "standard" layout and the result of requirements and discussion with the customer (see example below).

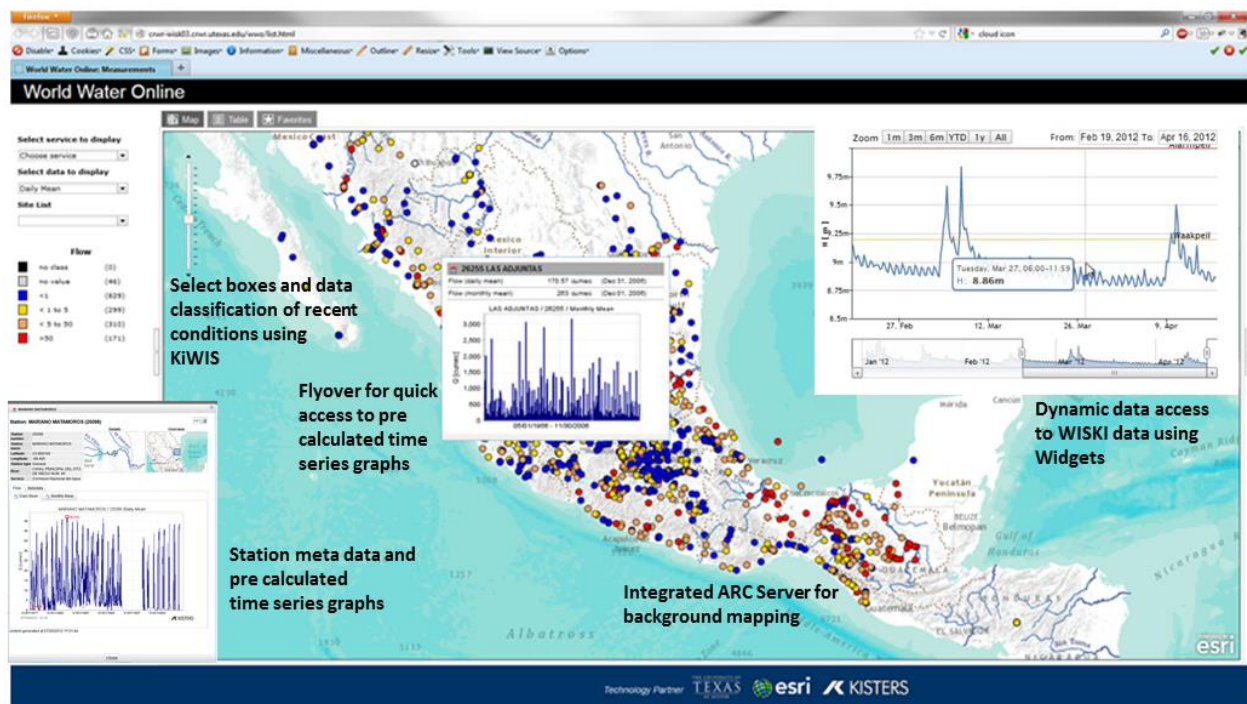


To generate the content of the web pages WISKI Web Public uses the same user administration interface as WISKI Web Pro. The preconditions for the generation of the web content is for the public solution that all the time series graphs and tables are based on the defined WISKI groups. Similar to WISKI Web Pro a map server can be configured. Using a page generator (see below) the content configured for a WISKI Web Public user is detected in the WISKI system (WISKI groups). From the configuration the defined graphs, tables, stations pages, downloads, etc. are generated and transferred to the web server.





In the WISKI Web Public solution the integration of the KiWIS API allows dynamic data access to WISKI data and can be enhanced using Widgets to display the data in WISKI Web Public (see example below).



## KiGraphCreator

The KiGraphCreator was integrated into WISKI 7.1 as a standard tool to create graphic files based on WISKI standard graphs or layouts. The enhancement was driven by MHL and is now part of all WISKI 7 standard releases. The tool uses the following exe and libs:

```
KiGraphCreator.exe
KiGrphAPI.dll
KiLayout.dll
```

The KiGraphCreator is a command line tool and can be run in batch mode using the following syntax:

```
KiGraphCreator.exe <parameter 1> <parameter 2> ... <parameter N>
```

The following parameters can be specified:

```
tsmUser - TSM user
tsmPwd - TSM login password
host - TSM host
port - TSM port
rangeFrom - the time series range from timestamp, format as 2011-01-01T00:00:00
rangeTo - the time series range until timestamp, format as 2011-02-01T00:00:00
rangeFromHours - backwards hours
rangeFromDays - backwards days
rangeFromMonths - backwards months
rangeFromYears - backwards years
rangeToTodayTime - range until time of today, format as 12:00:00
StdGraphName - the standard graph name
LayoutTemplateName - the layout template name
tsCount - the layout time series number(used with tsPathName_N)
tsPathName_(1..N) - the layout time series's path name
picWidth - the output picture width(default unit is mm)
picHeight - the output picture height(default unit is mm)
picUnit - the output picture size unit("mm", "cm", "inch" and "Pixel", default is "mm")
picFormat - the output picture format("png", "bmp" and "jpg", default is "png")
picOutputDir - the output picture folder(It should be really exist)
picFileName - the output picture file name
picFileOverWrite - the output picture file over write flag, set "true" to over write, default is "false"
```

Below are some examples:

*General example 1 - create a standard graph:*

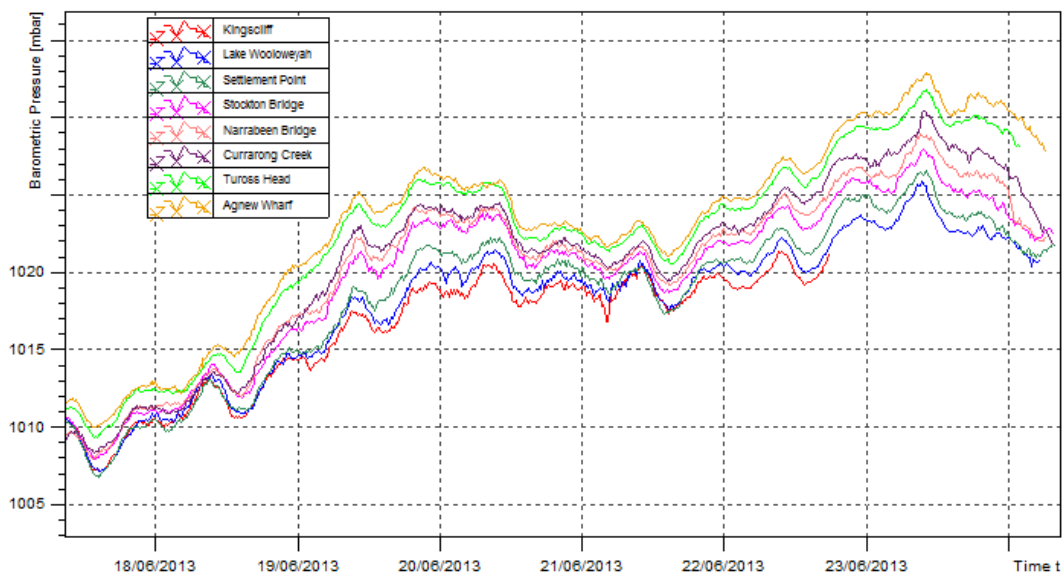
```
KiGraphCreator.exe /tsmUser **** /tsmPwd **** /host 1**** /port **** /rangeFrom 2011-01-01T00:00:00 /rangeTo 2011-02-01T00:00:00 /StdGraphName testStdGrf /picWidth 200 /picHeight 150 /picUnit mm /picFormat bmp /picOutputDir C:\bin\test1 /picFileName testStdGrf.bmp
```

*General example 2 - create a layout picture:*

```
KiGraphCreator.exe /tsmUser **** /tsmPwd **** /host 1**** /port **** /rangeFrom 2011-01-01T00:00:00 /rangeTo 2011-02-01T00:00:00 /LayoutTemplateName testLayTmp2 /tsCount 2 /tsPathName 1 W7BaseFlow/Location/Q/Day.Cmd-4 /tsPathName_2 W7BaseFlow/Location/Q/Cmd /picWidth 200 /picHeight 150 /picOutputDir C:\bin\test1 /picFormat bmp
```

*MHL example 1 - Create a standard graph using relative time ranges with result:*

```
C:\Wiski\Client\KiGraphCreator.exe /tsmUser **** /tsmPwd **** /host **** /port **** /rangeFromDays 7 /rangeToTodayTime /StdGraphName "Barometric Plot" /picWidth 220 /picHeight 120 /picOutputDir C:\img\Test_Plots /picFileName Barometric_Plot.png
```

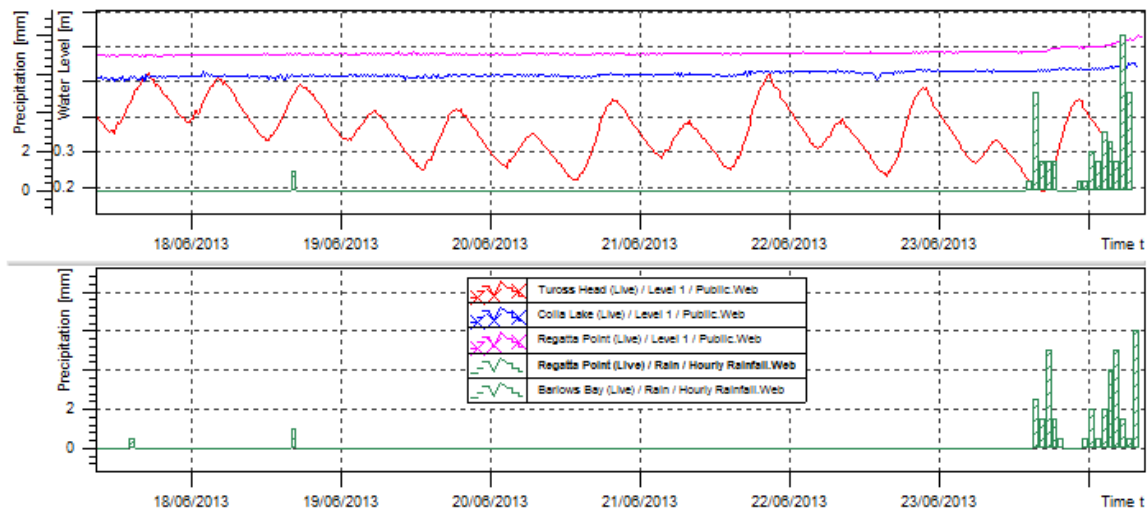


With the settings / rangeFromDays 7 and /rangeToTodayTime a plot can be created displaying the last seven days from today backwards.

*MHL example 2 - Create a standard graph using relative time ranges with result and place holders:*

```
set group=Test Plots
set output_dir=C:\img\%group%
set width=220
set height=120
set password=****
set host=****
set user=****
set port=7430
set ndays=7
C:\Wiski\Client\KiGraphCreator.exe /tsmUser %user% /tsmPwd %password% /host %host% /port %port% /rangeFromDays %ndays% /rangeToTodayTime /StdGraphName Telemetry_Plot /picWidth %width% /picHeight %height% /picOutputDir %output_dir% /picFileName Telemetry_Plot.png
```





Indicate the output file name and over write flag:

```
KiGraphCreator.exe /tsmUser **** /tsmPwd **** /host 1**** /port **** /rangeFrom 2011-01-01T00:00:00 /rangeTo 2011-02-01T00:00:00 /StdGraphName testStdGrf /picWidth 200 /picHeight 150 /picUnit mm /picFormat bmp /picOutputDir C:\bin\test1 /picFileName MyGrfName.bmp /picFileOverWrite true
```

In the example above the output file's name will be "MyGrfName.bmp". If the "MyGrfName.bmp" file is already existing in the "C:\bin\test1", the new created file will overwrite it.

Additional examples of WISKI standard graphs publically published by MHL can be viewed under:

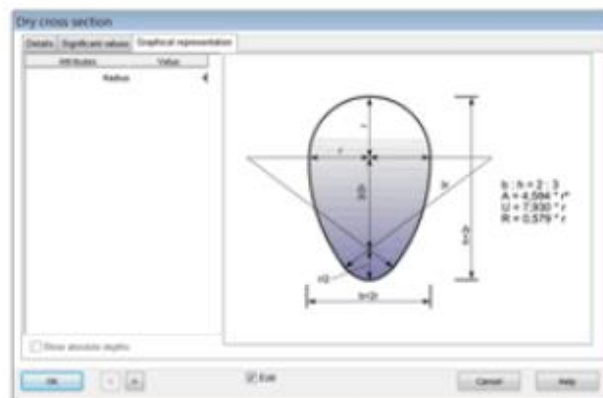
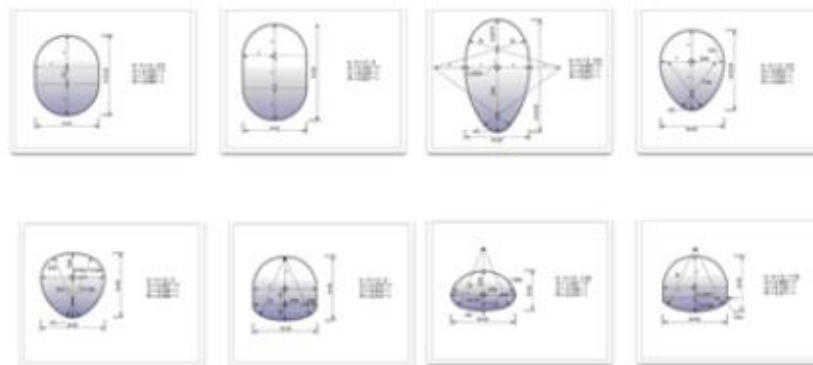
<http://new.mhl.nsw.gov.au/data/realtime/barometric/>

<http://new.mhl.nsw.gov.au/users/NorthernBeachesLagoonWatch-CurrentConditions>

### New features of WISKI 7.2/7.3: Functions for pipe and channel cross sections

WISKI now also supports the management and definition of closed pipe and sewer cross-sections. The libraries have been expanded to include additional variants of circular, rectangular, egg, and elliptical profiles.

#### Closed channel cross-sections



Circle (1:1), elongated circle (2:2.5), circular profile with dry weather channel, circle excessive (2:3), rectangle, rectangle with necking, egg profile (2:3), egg profile compressed (2:2), egg profile wide (2:2.5), egg profile excessive (2:3.5), elliptical profile (2:1.5), elliptical profile compressed (2:1.25), elliptical profile shrunk (2:1), elliptical profile stretched (2:1.75), elliptical profile excessive (2:2), elliptical profile outlet (2:2.5), kite (2:2), and hood (2:2).

#### *Discharge gauging and pipe rating curves*

A number of algorithms can be stored for discharge gauging and cross-section calculations for each profile type. WISKI 7 includes from version 7.2.3 onwards pipe rating curves as standard processes for discharge gauging in closed channel cross sections.

#### **New features of WISKI 7.2/7.3: Field Visits expansion pack for WISKI 7.3**

Periodic visits to monitoring sites are essential to ensure the quality and consistency of the measured data. The overall goal is to provide consistent, high-quality, long-term observations. To achieve this goal, monitoring sites must be highly available and operate reliably.

The new, expanded functions and the new data model of the Release of WISKI 7.3 effectively make Field Visits more powerful, user friendly and future-proof. In addition, mobile computing is fully supported. The human-readable mark-up language KiWISKIML enables the user to harmonise data formats. Subsequent data exchanges are instrument-independent and platform-independent.

Field Visits provides the standard functionality to input, visualise and process data acquired in the field. An area of further interest is the new function to merge all data and comments generated by all actions carried out during a site visit into a single data object called a "Visit". Each Visit is identified by its own set of Meta data cross-linked with the Meta data of the visited site. "Visits" can be transferred from the WISKI database to a mobile device, taken to the field and synchronised after use. In addition, time series data linked to the monitoring site can be copied from the WISKI database to the mobile device to be used at the site, for instance in data visualisation or in complex calculations.

The new version of KISTERS' Field Visits sets new standards in terms of both efficiency and innovation.

## **Kisters On the Web**

Kisters technology is at the heart of an increasing number of customer web sites, whether they be based on Hydstra or Wiski web technology or their own web developers.

The following list shows a selection of user sites, with a brief description of the underlying platform. We take no responsibility for the accuracy of this list, nor the health of the web sites listed.

Please contact Kisters Pty Ltd for advice on how to publish your data on the web.

Let us know if you would like your web site to be added to or removed from this list.

Client	Link	Technology
California Department of Water Resources	<a href="http://www.water.ca.gov/waterdatalibrary/">http://www.water.ca.gov/waterdatalibrary/</a>	Client web site using Hydstra products
County of San Bernardino Department of Public Works	<a href="http://www.sbcounty.gov/dpw/floodcontrol/water_resources.asp">http://www.sbcounty.gov/dpw/floodcontrol/water_resources.asp</a>	
County of Ventura Watershed Protection District	<a href="http://portal.countyofventura.org/portal/page/portal/PUBLIC_WORKS/Watershed_Protection_District/About_Us/CWPD_Divisions/Planning_and_Regulatory/Hydrology/Historic%20Rain%20Stream%20Data%20(WISKI%20Web-prod)">http://portal.countyofventura.org/portal/page/portal/PUBLIC_WORKS/Watershed_Protection_District/About_Us/CWPD_Divisions/Planning_and_Regulatory/Hydrology/Historic%20Rain%20Stream%20Data%20(WISKI%20Web-prod)</a>	Wiski Web Public over Hydstra
Germany Environmental State Agency of Bavaria	<a href="http://www.nid.bayern.de/grundwasser/index.php?t_hema=niedrigwasser&amp;days=0&amp;wert=grundwasser">http://www.nid.bayern.de/grundwasser/index.php?t_hema=niedrigwasser&amp;days=0&amp;wert=grundwasser</a>	WISKI Web Public with customised content
Germany National wwHydrometric Network (WSV)	<a href="http://www.pegelonline.wsv.de/gast/start">http://www.pegelonline.wsv.de/gast/start</a>	Web portal solution (not from KISTERS) publishing WISKI data
Minnesota Department of Natural Resources	<a href="http://www.dnr.state.mn.us/waters/csg/index.html">http://www.dnr.state.mn.us/waters/csg/index.html</a>	Client web site using Hydstra DLL and ODBC driver
Nevada Irrigation District	<a href="http://nidwater.com/recreation/river-lake-hourly-data/">http://nidwater.com/recreation/river-lake-hourly-data/</a>	Client web site using Hydstra products
NSW Manly Hydraulics	<a href="http://new.mhl.nsw.gov.au/">http://new.mhl.nsw.gov.au/</a>	Public Website MHL with WISKI content and user login to WISKI Web Pro
NSW Office of Water	<a href="http://realtimedata.water.nsw.gov.au/water.stm">http://realtimedata.water.nsw.gov.au/water.stm</a>	Hydstra/WEB for desktop PCs
NSW Office of Water	<a href="http://realtimedata.water.nsw.gov.au/mobile/">http://realtimedata.water.nsw.gov.au/mobile/</a>	Hydstra/WEB for modern mobile phones and tablets.
NSW Office of Water	<a href="http://realtimedata.water.nsw.gov.au/mobtext/">http://realtimedata.water.nsw.gov.au/mobtext/</a>	Hydstra/WEB for older mobile phones
NT Land Resource Management	<a href="http://www.lrm.nt.gov.au/water/water-data-portal">http://www.lrm.nt.gov.au/water/water-data-portal</a>	Hydstra/WEB for desktop PCs

Provincia Autonoma di Trento	<a href="http://hydstraweb.provincia.tn.it/web.htm">http://hydstraweb.provincia.tn.it/web.htm</a>	Hydstra/WEB for desktop PCs (in Italian)
QLD Dept of Natural Resources and Mines	<a href="http://watermonitoring.derm.qld.gov.au/host.htm">http://watermonitoring.derm.qld.gov.au/host.htm</a>	Hydstra/WEB for desktop PCs
QLD Dept of Natural Resources and Mines	<a href="http://watermonitoring.derm.qld.gov.au/mobile/">http://watermonitoring.derm.qld.gov.au/mobile/</a>	Hydstra/WEB for modern mobile phones and tablets.
QLD Dept of Natural Resources and Mines	<a href="http://watermonitoring.derm.qld.gov.au/mobtext/">http://watermonitoring.derm.qld.gov.au/mobtext/</a>	Hydstra/WEB for older mobile phones
Riverside County Flood Control and Water Conservation District	<a href="http://www.floodcontrol.co.riverside.ca.us/RainFallMap.aspx">http://www.floodcontrol.co.riverside.ca.us/RainFallMap.aspx</a>	Client web site using Hydstra products
Southern California Edison	<a href="http://kna.kisters.net/scepublic/">http://kna.kisters.net/scepublic/</a>	Wiski Web Public
Spain Confederación Hydrográfica del Duero	<a href="http://www.chduero.es/aforos/list.html">http://www.chduero.es/aforos/list.html</a>	WISKI Web Public
St Johns River Water Management District	<a href="http://www.sjrwm.com/toolsGISdata/">http://www.sjrwm.com/toolsGISdata/</a>	Client web site using Hydstra products
State of Washington Department of Ecology	<a href="https://fortress.wa.gov/ecy/wrx/wrx/flows/regions/state.asp">https://fortress.wa.gov/ecy/wrx/wrx/flows/regions/state.asp</a>	Client web site using Hydstra products
Suwanee River Water Management District	<a href="http://www.mysuwanneeriver.com/index.aspx?NID=35">http://www.mysuwanneeriver.com/index.aspx?NID=35</a>	Client web site using Hydstra products
Switzerland Hydrological Service of the Kanton Thurgau und Schaffhausen	<a href="http://hydrodaten.tg.ch/tg/index.html">http://hydrodaten.tg.ch/tg/index.html</a>	WISKI Web Public
US Central Texas Hub, World Water Online	<a href="http://www.centraltexashub.org/wiskiweb.htm">http://www.centraltexashub.org/wiskiweb.htm</a>	WISKI Web Public and KISTERS Web Interoperability
VIC Dept of Sustainability and Environment	<a href="http://203.12.195.132/dseweb.htm">http://203.12.195.132/dseweb.htm</a>	Hydstra/WEB for desktop PCs
Yuba County Water Agency	<a href="http://www.ycwa.com/conditions">http://www.ycwa.com/conditions</a>	Client web site over Hydstra data

### Mobile Web Sites and Apps

Hydstra/WEB has the ability to offer a mobile web site as part of the client web site. You can see a couple of examples of Hydstra/WEB for mobile at <http://watermonitoring.derm.qld.gov.au/mobile/> and <http://realtimedata.water.nsw.gov.au/mobile/>. These sites will run on iPhone and Android phones, recent Blackberries, as well as modern desktop browsers such as Chrome and Firefox. We offer a text version for older Windows phones, Blackberries and Nokias such as <http://realtimedata.water.nsw.gov.au/mobtext/>.

On any modern phone you can save a shortcut to a web site to the desktop, making it appear to be another application. If you set up your icons correctly on the web site you also get a nice icon for the shortcut.

The question has been asked as to whether there would be benefit in wrapping these web sites into an application that would be available from the iTunes or Android stores. Given that you can save a bookmark to the phone desktop, where it looks like an app, it's an open question as to whether the effort of producing an app has benefit. What do you think? Would you prefer an app or a web site? Do you care?

## Worldwide KISTERS News

You can keep up to date with all the news from KISTERS worldwide through the following links:

<http://www.kistersnews.com/au/index.html>

<http://www.kisters.net/news.html>

## WMO Publications Online

The World Meteorological Organisation (WMO) publishes a valuable library of free publications relating to data collection standards. You can see the collection at:

[http://library.wmo.int/opac/index.php?lvl=etagere\\_see&id=39](http://library.wmo.int/opac/index.php?lvl=etagere_see&id=39).

Of particular relevance to the water industry are:

[Guide to Hydrological Practices, Volume I : Hydrology – From Measurement to Hydrological Information](#)

[Guide to Hydrological Practices, Volume II : Management of Water Resources and Applications of Hydrological Practices](#)

[Guidelines for the education and training of personnel in meteorology and operational hydrology - Vol.1 Meteorology](#)

[Guidelines for the education and training of personnel in meteorology and operational hydrology - Volume II: Hydrology](#)

[Manual on Stream Gauging, Vol. I: Fieldwork](#)

[Manual on Stream Gauging, Vol. II: Computation of discharge](#)

[Manual on estimation of Probable Maximum Precipitation \(PMP\)](#)

Load them up on your Kindle or iPad and you'll have reading for a month!

## Training Courses

We are happy to provide training courses on any aspect of Hydstra provided there are sufficient people interested in attending. Please contact us at [\*support@kisters.com.au\*](mailto:support@kisters.com.au) with expressions of interest for any training requirements you have. We can provide training at your office or here in Canberra. Training in Canberra is based on a per-person per-day cost, provided we have sufficient people attending. Training at your office will be charged at our standard consulting rates per day for the trainer, plus a preparation day, plus travel and accommodation at cost. Courses we can offer include:

- Basic Hydstra
- Advanced Hydstra
- Administering Hydstra
- Administering Hydstra/WEB
- Hydstra Modelling with MODSYN
- Hydstra/SVR Server
- Ratings and Gaugings
- HYWDTF\_OUT
- Using Perl with Hydstra

Please contact us via [\*support@kisters.com.au\*](mailto:support@kisters.com.au) if you wish to attend. We will register your interest and notify you when the next course is planned.

### *Using Perl with Hydstra*

We are planning to give another five-day Using Perl with Hydstra course towards the end of the year. In order to attend this course you should be familiar with programming concepts in some language, and have completed a five-day Programming Perl course run by Perl Training Australia. You can find their upcoming training schedule on their web site at [\*perltraining.com.au\*](http://perltraining.com.au). The Hydstra course will cover all aspects of integrating Perl into Hydstra, and will cost \$3500 per person. The topic list will include:

- Hydstra Perl libraries
- CMD Scripting
- Perl batch jobs
- Perl pre-processors
- Perl post-processors
- Perl datasources
- HYSCRIPT
- Dealing with databases in Perl
- Dealing with time series in Perl
- Using HYDLL
- Perl and XML
- Perl and MODSYN
- HYPLORE dynamic menus
- OLE Automation

Please send expressions of interest at this stage to us via [\*support@kisters.com.au\*](mailto:support@kisters.com.au). We require a minimum of four attendees to run this course.

# Information

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