



RURAL WATER NEWS

Magazine of the Group Water Scheme Sector

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New Era Dawns

Irish Water takeover of LA assets

1 January 2014 marked an historic day in terms of water services delivery, as Uisce Éireann/Irish Water took over all local authority water assets, including sources, treatment facilities, reservoirs and distribution mains, as well as all local authority wastewater treatment facilities.

Although group water scheme assets are not part of the transfer to Irish Water, the changeover will have implications for those publicly sourced group water schemes

that are awaiting word on the cost of water delivered into their networks, amongst other matters.

While most of the focus to date has been on the issue of universal metering and on the investment that Irish Water will undoubtedly have to make in reducing the unacceptably high water demand across the public networks, the wider challenges posed in relation to water quality, both at source and tap, were being brought firmly into focus in recent months.

EPA report

Following publication of the EPA Drinking Water Quality Report for 2012, Gerard O’Leary, Director of EPA’s Office of Environmental Enforcement said:

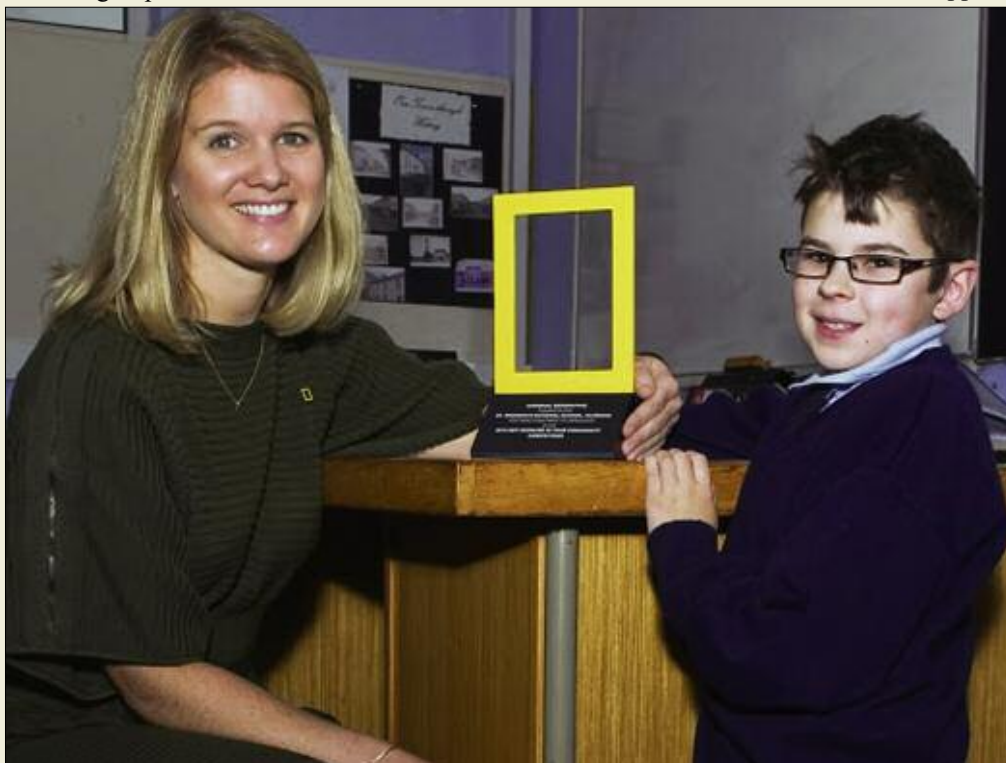
‘The results show progress, but the results also show that Irish Water, the new state utility, has a lot of work to do to provide safe and secure drinking water to the public.’

‘In Roscommon, 15,443 people on public supplies are currently on boil water notices and, overall, 30 supplies

across the country are currently on boil water notices or water restrictions. These figures are unacceptable.’

For his part, Minister of State at the Department of the Environment, Community and Local Government, (and the minister with special responsibility for the New Era initiative) Fergus O’Dowd, TD, emphasised the positive potential of Irish Water in his response to the recently published Water Services Bill (No. 2) [see page 7].

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Colby Bishop of the National Geographic Society presenting an award to St Brendan’s National School, Kilmeena in recognition of the sterling work done to raise water awareness in the community [see page 8]. Pic by Martin McIntyre

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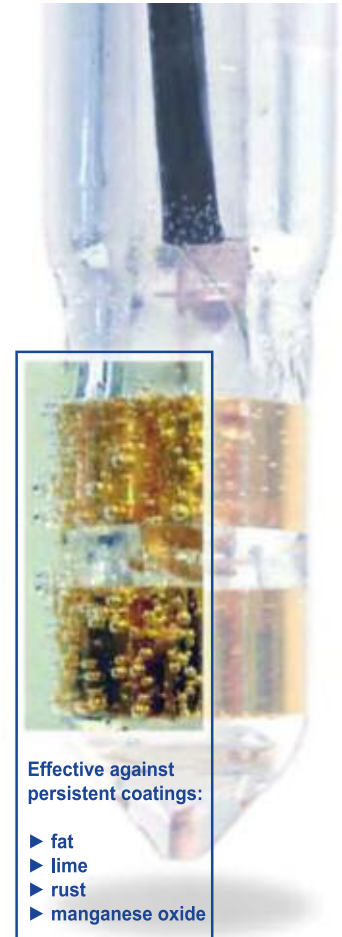
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Comment

While the spotlight of media attention is on Irish Water, as it assumes control of Local Authority water and wastewater assets, group water schemes across Ireland will quietly get on with the job of providing a quality service to their members, providing drinking water that consistently meets all of the regulatory standards at excellent value.

Privately sourced GWSs will continue to source, treat and distribute water to their members and will experience little direct impact from the arrival of Irish Water. Without a shadow of a doubt, the value of these community owned and community-run utilities will be increasingly appreciated by their members in the years ahead, for they maintain a certain level of control of their own destiny.

Unfortunately, it is too early to say if those schemes currently receiving their water supplies from local authorities can have the same confidence in their future. These schemes will be supplied by Irish Water with effect from 1st January 2014. Clarification on a range of issues identified by the NFGWS regarding the future relationship between these schemes and Irish Water is needed in order for the committees and estimated 80,000 members of the schemes involved to be in a position to make informed decisions on their future. One of the key answers being sought is in relation to the price these schemes will be charged by Irish Water for their water supply. Lack of clarity on these issues is making it very difficult for publicly-sourced group water schemes to consider, in any meaningful way, their future direction.

Our attention has been drawn to a scam being perpetrated online, whereby correspondence purporting to come from Irish Water has been sent to people on group water schemes requesting their bank details. GWS members need to be informed clearly by their committees/managers that Irish Water has nothing to do with them and, furthermore, that such requests for bank/visa card details should always be ignored, regardless of how convincing the correspondence may appear.

Finally, let us extend *bon voyage* to those charged with steering the good ship *Uisce Éireann*/Irish Water into what are already stormy waters.

Rural Water News is published by the National Federation of Group Water Schemes. For further information, go to www.nfgws.ie or contact one of our offices: Monaghan (00-353-47-72766); Kiltimagh (00-353-94-9381802); Tuam (00-353-93-28712; Tullamore (00-353-57-9328068).

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Commentary

Some media commentary has been less optimistic, however, and criticisms from local authorities across the country over several months have fuelled public anxiety over what Irish Water will mean for the individual householder and for businesses.

In reality, members of the public are unlikely to notice much difference in the short-term, as a 12-year service agreement with local authorities will mean that the transfer of assets will not, for the most part, mean a transfer in personnel to manage those assets.

There are concerns within local authorities that the money likely to be allocated to them by Irish Water to manage water and wastewater services will fall short

of what is actually required, a point raised recently by the Director of Services for Mayo County Council, Paddy Mahon when he pointed to a €0.5 million shortfall between what Irish Water has proposed for 2014 and what the council feels that is needed.

No turning back

Such debates and disagreements are bound to arise at a time of major change, but there is no going back on the path agreed to radically transform Irish public water and wastewater services.

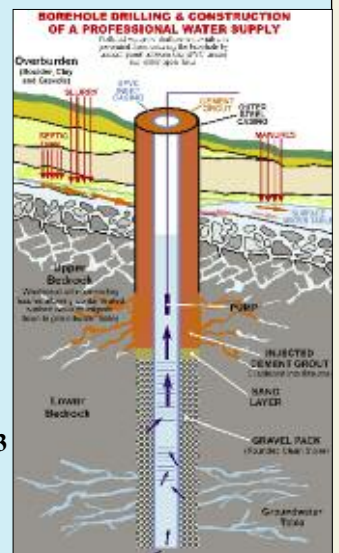
Only time will tell if the hopes and expectations held out for the new entity by Minister O'Dowd and his government colleagues will be realised, but all will agree that the goal of securing proper investment in water services into the future is worth some risks.

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EPA drinking water quality report (2012)

GWS improvement acknowledged

The year-on-year improvement in the microbiological quality being achieved on privately-sourced GWS drinking water supplies continued in 2012 according to a recent report from the Environmental Protection Agency (EPA).

The compliance rate in respect of the crucial faecal coliform parameters saw significant progress, but the continued rate of failure in terms of *E.coli* contamination is described in the annual drinking water quality report as being still 'unacceptably high'.

'There has been a significant improvement in the microbiological quality of the private group water schemes in 2012 ... Since 2005, the number of private group water schemes contaminated with E. coli has dropped by 89%.'

EPA report

A total of 23 schemes had *E.coli* exceedances in 2012, as opposed to 46 in 2011. Similarly, the rate of Enterococci failures fell, from 13 schemes in 2011 to 9 in 2012.

There is an overlap, as virtually all of the schemes that had Enterococci failures also had *E.coli* non compliance at least once during the year.

Trend

Looking at the longer term trend in microbiological compliance rates, the report acknowledges an 89% improvement since 1985, but stresses that more is required, calling for strong action to be taken by Water Services Authorities where schemes show no inclination to upgrade their disinfection facilities or to manage their water supply properly.

The EPA recognises that heavy rainfall in the summer

of 2012, and sudden changes in raw water quality arising from subsequent flooding, compromised a number of water supplies.

Regionally, the divide east and west of the Shannon is clear, with Galway and Mayo and Leitrim accounting for all but six of the serious microbiological failures.

Even then, there has been significant progress, as the rate of scheme failures in Galway dropped from 23 in 2011 to 9 in 2012.

This improvement is largely accounted for by a number of DBO upgrade projects incorporating schemes that were formerly non-compliant, but a worrying feature of the results is that there remains a core group of repeat 'offender' schemes that have microbiological failures in every year, largely through lack of effective disinfection or poor management of disinfection systems.

Key parameters

In terms of the five other key parameters – Lead, Nitrate, THMs, Aluminium and Turbidity (at treatment plants) – privately sourced group water schemes outperform public supplies, the results remaining largely unchanged on 2011.

Even so, there were 17 schemes that recorded non-compliance with the THM parameter and 16 that had aluminium exceedances. As both these parameters indicate inadequate filtration and/or a failure to respond appropriately to raw water changes, these are management issues that have to be overcome in the treatment process.

Another contributor to THM failure is the residency

time of chlorinated water in a distribution network, there will be concern amongst publicly sourced group schemes that their rate of non compliance has increased substantially, standing at 52 THM failures in 2012.

The EPA stresses that regular cleaning of the pipe network to remove organic matter (which reacts with chlorine) must become a priority on such schemes, as on all water supply networks.

The continued high numbers of coliform bacteria exceedances provides further evidence of insufficient flushing of mains and/or insufficient chlorine dosing that would provide a residual to the end of the line.

While there was almost 93% compliance on privately sourced group water schemes, the fact that 90 had failures confirms that these issues need to be addressed.

The report acknowledges the importance of training programmes in improving GWS compliance and it refers positively to source protection initiatives within the sector.

'The level of non-compliance with the trihalomethanes parametric value in public group water schemes disimproved from 12.4% in 2011 to 28.4% in 2012. The incidence of failure to meet the trihalomethanes parametric value was higher than the parent public water supplies (14.9%) from which the water is taken, indicating that management of the networks needs to be improved.'

EPA report



The doubling of VTEC *E.coli* contamination incidents – especially on private wells – is singled out as a major concern by David Flynn of the EPA. He said: *‘Any form of E.coli is an indicator of faecal matter in the water supply, and VTEC can have particularly serious consequences. We would urge the owners of private supplies to check their water sources, and ensure that they are adequately protected and the water is disinfected.’*

Recommendations

The EPA report makes two recommendations in respect of GWS supplies:

1. Water Services Authorities (WSAs) should focus on the private group water schemes that are not being upgraded as part of a planned design build operate (DBO) bundle. Where a group water scheme has not prepared a corrective action programme in accordance with the requirements

of Regulation 10 of the Regulations and where there is little evidence of action being taken to improve the quality of the water supply, the WSA should use enforcement powers under the 2007 Regulations to bring the supply into compliance.

2. WSAs should ensure that operators of public group water schemes clean and maintain the distribution networks regularly so that the quality of the water supplied by the WSA does not deteriorate in the group water schemes distribution network.

NFGWS

Responding to the findings, NFGWS National Co-ordinator, Colm Brady, said:

‘While the report confirms that we are going in the right direction, it also shows that more must be done to ensure that there is effective disinfection on all schemes and that there is effective maintenance on distribution networks.’



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First phase of ZOC reports finalised



Hydrogeologists, Peter Conroy and Taly Hunter Williams (GSI) measuring the overflow from Frolic Carney GWS spring source as part of the ZOC delineation work.

Final zone of contribution (ZOC) reports in respect of more than three dozen group water scheme raw water sources were expected to be completed by 31 December, while preparations are already underway to have similar evaluations carried out on substantially more GWS sources in 2014.

By late October – less than two months after the issuing to all local authorities of DECLG Circular L5/13 and explanatory memorandum outlining grant aid towards specific source protection works on group water schemes – draft reports were submitted to the Geological Survey of Ireland (GSI) in respect of 37 ZOC studies.

To date 28 of these have been reviewed by the GSI and returned to the relevant professional hydrogeologist with comments and observations, while the review process was at an advanced

stage on the remaining reports.

The first final report was ready by 15 November. Since then a total of 17 final reports have been completed, with the remainder expected to be finalised very shortly.

Both the GSI and the appointed hydrogeological consultants will meet with the relevant GWS committees in the coming weeks to explain their findings.

Funding

Anticipating the announcement of the funding initiative by the DECLG and with a view to being ready to ‘hit the ground running’ when it was confirmed, preparatory meetings between the GSI and the NFGWS had already identified a total of 43 GWS that had expressed an interest in taking part, while the GSI had provided the NFGWS with a template for the collation in advance of relevant preliminary source data.

NFGWS staff worked with the individual schemes to collate this data, while the GSI moved ahead in identifying additional ‘desktop’ data that hydrogeologists would require.

Furthermore, the GSI had already procured a panel of 10 appropriately qualified and experienced professional hydrogeologists that were available to complete this work.

Taken together, these preparations meant that the hydrogeologists could focus on site visits and on the interpretation of the data that had been gathered by the local schemes, the NFGWS and the GSI.

Anticipation

Based on the lessons learned from a pilot project conducted in Limerick and Cork in 2011, each of the 10 hydrogeologists was allocated schemes in geographically convenient groupings, where possible.

This meant that several site visits could be conducted in a single day, with the hydrogeologist being introduced to their designated group schemes by an NFGWS development officer.

GSI personnel were also on hand at these preliminary site visits, providing sound guidance to the hydrogeologists in terms of what was expected of them.

In particular, they emphasised the importance of reports being concise and easily understood (i.e. using the model developed as part of the pilot project).

The individual group schemes were assisted by the NFGWS with the completion and submission of the relevant “Application for Approval of Funding (Form SP1)” to their local authority in accordance with the terms of the funding memorandum.

Raw water analysis

Due to limited availability of raw water quality data on many group water schemes, the GSI compiled a list of parameters that would provide additional valuable information on potential contaminants in raw water supplies.

Individual schemes agreed to fund raw water analysis out of their own resources in order to ensure that their reports would be as comprehensive and relevant as possible.

To keep costs down, the NFGWS co-ordinated and carried out the raw water sampling. The laboratory results were sent to each GWS and to their hydrogeologist.

2014

Applications for approval of funding are currently being submitted to the Local Authorities in respect of the coming year.

The NFGWS has already begun working with approved group schemes in gathering relevant data, with a view to progressing the next phase of work early in 2014.

Water Services Bill (No. 2) published

Legislation providing for the transfer of public water services functions from the local authorities to Irish Water was published on 2 December last.

Welcoming the Water Services (No. 2) Bill, Minister of State at the Department of Environment, Community and Local Government, Fergus O'Dowd said:

'This Bill paves the way for fundamental reform of water services delivery in this country, services that currently cost over €1 billion a year.

'A national, public utility providing water services and infrastructure, underpinned by a sustainable funding model, will

help to ensure greater security of quality water supply for Irish people and the economy.

'Independent, economic regulation of Irish Water's services, and charges, by the Commission for Energy Regulation (CER), will ensure customers are protected.'

Explaining that the measure, 'charted a new way for water and wastewater service delivery' the Minister said that 'Irish Water will be able to deliver the level of infrastructure needed to meet demographic, economic and environmental requirements in the years and decades ahead' and would also help attract water intensive industries to Ireland.

Service level agreements

Referring to 'the continued involvement of local authorities

in service delivery at the local level for the next 12 years', he added:

'This will see the local expertise in assets management and operations combined with the considerable network and utility management experience available to Irish Water. I am very confident this will prove to be a positive collaborative arrangement.'

On the provision for independent, economic regulation of the water sector, the Minister said that Irish Water will be required to prepare water charges plans setting out details of its tariffs and related matters, including payment methods. These plans, including the tariffs, will be subject to the approval of the Commissioner for Energy Regulation (CER). He added:

'The CER will play an important role in controlling the costs of Irish Water and protecting the interests of customers more generally by approving codes of practice to be adopted by Irish Water.'

Work is 'being progressed' on the approach to the proposed free allowance and affordability measures being introduced 'to

ameliorate the impact of water charges on domestic customers', Minister O'Dowd said.

Plans

Minister O'Dowd also said that under the terms of the bill, Irish Water's strategic plans will have to be consistent with the National Spatial Strategy, the regional planning guidelines and the Water Framework Directive's river basin management plans.

Adding that such plans 'will be produced in consultation with the EPA and regional and planning authorities', the Minister concluded.

'This will help ensure coherence between water services and infrastructural planning and other socio-economic policies, driven by a long-term sustainable approach.'



Minister O'Dowd

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Kilmeena success story goes global

Following on from their triumph in winning national and local awards, the story of how Kilmeena National School has mobilised community awareness about water issues went global in November when a team from the prestigious US-based National Geographic Society visited.

In this article posted on the National Geographic website (<http://newswatch.nationalgeographic.com/2013/11/22/youth-change-irelands-water-course/>), Colby Bishop reflects on the team's visit to West Mayo.

The dry Colorado River may be starkly different from the green landscape and rushing rivers of County Mayo in western Ireland, but students in the county have become water ambassadors – teaching themselves, their families, and their community about the importance of water conservation efforts.

Water was a hot topic at Ireland's National Science Week, where a panel of local, national, and global water experts (including National Geographic's Freshwater Fellow and Water Currents host Sandra Postel), came together to discuss Clean Water: 2040.

Mayo County Council's Enterprise and Investment Unit invited Sandra and the National Geographic team to participate in the week's events.

Students

St Brendan's National School in Kilmeena, a rural town in County Mayo, won Ireland's national competition *Get Involved in Your Community* for their work to raise awareness about the importance of water conservation in their community.

As part of Science Week, the school invited the National Geographic team to visit and learn about their project.

The Kilmeena school teamed up with Kilmeena Group Water Scheme and Irish TV to meet a range of objectives to raise awareness about the importance of the long-term sustainability of their water source, a nearby lake.

A big motivation for the project came from Seán Corrigan, manager of the Kilmeena, Ballycroy and Killeen Group Water

Schemes, who said that he felt a duty to start a movement to give students the tools they need to create a sustainable environment for their future, 'a future where we value water and use it to our advantage and cherish it'.

The school incorporated freshwater into its curriculum, educating the students on topics ranging from where freshwater comes from to the importance of conservation and sustainability.

In turn, the students are now educating the community on 'how water gets to your tap', increasing knowledge of watershed protection.

'It really is amazing to see how the students are educating their families and neighbors on water', said the school's principal, Mickey Carney:

'Many of these students have watched water meters being installed in their own homes and now monitor their family's water usage and compare with their friends in school the next day.'

After learning how little was actually known in the community about water, the students devised a number of vehicles to catch the attention of people to get their message across.

Waste It, Pay for It

Some 160 students, from first through sixth grade, greeted our team chanting the motto, 'if you waste it, you pay for it, every drop counts'.

As part of their outreach efforts, the students and a local TV company created a CSI documentary, in which the students take on the role of the crime investigators in a water waste crime. After narrowing the suspects down to Principal Carney, he promises to change his habits and stop wasting water.

This documentary was shown at an open night at the

local town hall, where several hundred residents gathered to learn from the students and see their work.

The students also produced and distributed a futuristic newspaper dated 30 years from now to demonstrate the long-term benefits of the project.

Sandra Postel sat down with the students to congratulate them for their hard work and to discuss the water hidden in things they use every day.

Water footprint

Postel discussed the *Change the Course* campaign as a way that we in the United States are working to conserve water and invited the students and their families to participate by taking the free pledge to conserve and calculate their own water footprints using the National Geographic Freshwater Calculator.

'This is truly a special school initiative', said Postel:

'Students can help develop and spread the kind of conservation ethic we as a society need to solve our freshwater problems, as well as generating the compelling stories that are the trademark of National Geographic.'

National Geographic recognised St Brendan's National School for its work in freshwater conservation with a custom-made trophy.

The students plan to continue their water conservation efforts throughout the school year with more outreach to the local community.

'Water is in everything we use, not just in the tap', said a 6th grade student:

'From my t-shirt to my desk, water is used to make everything.'

Sandra Postel of the National Geographic Society urged the students of St Brendan's NS, Kilmeena to continue their water conservation work.



‘Smart farming’ tips makes sense

– IFA

A new guide aimed at helping improve farm returns through better resource management was launched by the Irish Farmers’ Association (IFA) on 4 November.

The farm organisation linked up with no fewer than eight other organisations (including the NFGWS), to provide tips to farmers on how they can reduce bills and help the environment by implementing simple and sensible measures to avoid wastage of precious resources, including water.

Arguing that these measures are ‘good for your pocket and the environment too’, the ini-

tiative grew out of contacts between the IFA and the EPA’s National Resource Efficiency Programme on how farmers might be persuaded to reduce wastage.

Water conservation

Speaking at the launch of the IFA pack, Brian MacDonald of the NFGWS said that water conservation and the avoidance of wastage represent a win-win situation both for the farmer, the water supplier and the environment.

He explained that the Federation has developed a tool whereby farmer members of group schemes can determine how much water they should be using.



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Group schemes advised to prepare for SEPA

NFGWS National Co-ordinator, Colm Brady has urged group water schemes to contact their financial institution/bank and their billing software provider in good time for advice on what they need to do prior to the commencement of the Single Euro Payments Area (SEPA) on 1 February 2014.

SEPA is a European Union regulation that aims to simplify electronic financial transactions within and across 32 European countries, including Ireland.

The new system will particularly apply to credit transfers, standing orders and direct debits which are wide-

ly used by group schemes for payments to staff and creditors and for receipt of payments from members and grants and subsidies.

Changes

Outlining the main changes that SEPA will introduce, Mr Brady explains that national sort codes and account numbers for all banks and all business and personal accounts will be replaced by a Bank Identifier Code (BIC) and an International Bank Account Number (IBAN).

Explaining that 'this work is already well under way', he adds that 'there is a very simple converter available

which provides the BIC and IBAN when the account number and sort code are entered'.

As for other changes, from 1 February, existing financial transaction arrangement systems will cease and all euro electronic payments (within and between the 32 countries) will be processed ONLY through new SEPA systems and arrangements.

By that stage, all national electronic financial transactions (direct debits, credit transfers etc.) must be SEPA-compliant.

This will include everything from staff payroll systems to paying creditors or receiving euro electronic payments from customers, members or funding organisations.

Under EU regulation 260/2012 all businesses (including GWS) must conform to the new SEPA standards before the 1 February deadline.

Changes

Besides getting advice from their financial institution, Mr Brady explains that group schemes should make sure that the relevant BIC and IBAN are used when setting up new direct debit mandates or standing order arrangements prior to 1 February.

When filling in bank details on any grant or subsidy applications prior to the deadline, the group scheme's BIC and IBAN should be inserted as well as the sort code and account number.

Schemes using Computer Software billing systems to generate and process electronic transactions from members should contact their billing software provider who will be in a position to advise if the software system is compatible with the new SEPA arrangements or will require updating and, if so, when the updates will be available.

VTEC *E.coli* pilot results suggest widespread raw water contamination

The risk posed by VTEC *E.coli* to drinking water sources was highlighted by a recent EPA-funded pilot study that found consistent contamination in five of six group water scheme boreholes sampled.

The findings suggest that this pathogen is widespread in the Irish environment, including water sources, and that drinking water suppliers (as well as those with private wells) need to ensure that raw water is effectively disinfected.

The pilot, conducted by the Antimicrobial Resistance and Microbial Ecology (ARME) Group at the School of Medicine NUI Galway,

included the deployment of a monitoring system for VTEC and other *E.coli*. According to Dr Dearbháile Morris of ARME:

'The incidence of human infection with VTEC has increased significantly in recent years and water is recognised as a major route of transmission.

'We developed and validated a system to monitor large volumes of water for VTEC. Part of the validation process involved sampling raw and treated water of six supplies in the East Galway area.

'Raw and treated waters were sampled on three separate occasions between August and October. VTEC was con-

sistently detected in the raw waters of five of the six participating schemes.

'The source of all these supplies was groundwater and the results suggest that contamination of groundwater with VTEC is widespread.' Dr Morris added that VTEC

was not detected in treated waters, indicating that treatment measures are being successfully applied.

The ARME group is currently evaluating the data generated and the implications of the findings for drinking water supplies.



It began with the electricity bill

... [a cautionary tale reprinted from *The Farmers Journal*]

Some years ago we installed, at significant expense, a deep well submersible pump. Touch wood, it has given remarkably little trouble.

We brought in a diviner who identified a few areas where we should get water and we sank the well near the cattle sheds.

At the same time, we took a sample of the shallow well beside the dwelling house on which the cattle and ourselves had been dependent for decades.

The shallow well analysis was disturbingly high in all kinds of microbes – why, I am not sure as it is well away from any possible source of pollution.

Nevertheless, we discarded the old and linked up the

house to the new deep well supply, which gave a pure analysis.

As cattle numbers expanded and as political correctness took hold in banning cattle from streams and ditches, the pump was called on to supply cattle all year round.

Rise in bills

I accepted the inevitable rise in electricity bills that followed. However, on the recent trawl through my accounts the IFAC representative asked me what exactly I was doing to consume so much electricity.

I have a separate meter for the house and yard and, as he accurately pointed out, we are not dairy farmers.

We then began to trace the various pipes and connec-

tions from the pump. Unlike the old shallow well pump, there is no audible noise when the submersible pump, 80 ft down, is working.

Insulated

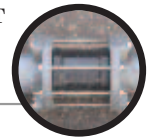
The pumphouse itself is carefully insulated with aeroboard to prevent frost damage, but it also kills any slight noise.

When we investigated fully, we found three really serious leaks, with water flowing down to the nearest ditch or draining away underground.

Anyway, there has been a reduction in the yard ESB bill. I need to take another meter reading to see the full extent of the reduction in electricity usage, but the lesson is clear – pumping water needlessly costs money as well as wasting a precious resource.

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Tenders invited for research on fracking

Two year study to inform decision making

It will be at least two years before any licence is considered in respect of the controversial process of 'fracking' for shale gas, according to the Environment Protection Agency (EPA).

With the weight of public opinion strongly opposed to the commencement of fracking – in the absence of evidence that the process will be safe – the EPA recently announced a tendering process for a research programme that will 'further the understanding of the potential impacts on the environment and human health from Unconventional Gas Exploration & Extraction (fracking) projects and operations, including construction, operation and aftercare'.

Speaking on *RTÉ News* on 22 November, Brian Donlon of the EPA explained that the research programme is being

conducted as part of an all-Ireland initiative, as this is an issue affecting communities on both sides of the border, not least in Leitrim and Fermanagh.

He added that while tenders must be returned by mid January, it will be 'quarter two' of 2014 before the research contract is awarded.

Mr Donlon explained that the objective of the 'tailored' research programme is 'to assist government bodies North & South to make informed decisions about future licencing and management of operations on the island of Ireland.

He added that the programme is being jointly funded by the EPA, the Dept of Communications, Energy and Natural Resources (DCENR) and the Northern Ireland Environment Agency (NIEA).

Background to study

Explaining the process by which the terms of reference underpinning the research programme had been formulated, an EPA press release revealed that a total of 1,356 submissions were received as part of a public consultation on the issue conducted last January. The press release added:

'A large number of submissions expressed concerns and general opposition to fracking, calling for a 'ban on fracking in Ireland' until more information is available about the potential environmental and health impacts.

'Many concerns were raised in the submissions regarding the potential impacts ... such as water resource depletion, water contamination, air and noise emissions, traffic, farming and tourism.'

The draft terms of reference were amended and strengthened after this public consultation, according to the EPA.

Management

The research programme will be managed by a steering committee comprising the EPA, DCENR and NIEA, as well as the Department of Environment, Community & Local Government, Geological Survey of Ireland, the Commission for Energy Regulation, An Bord Pleanála, Geological Survey of Northern Ireland and the Health Services Executive (nominated following the Public Consultation).

Anti-fracking sentiment is strong in Leitrim and Fermanagh.

Irish Water to fund *An Taisce* Green Schools water module

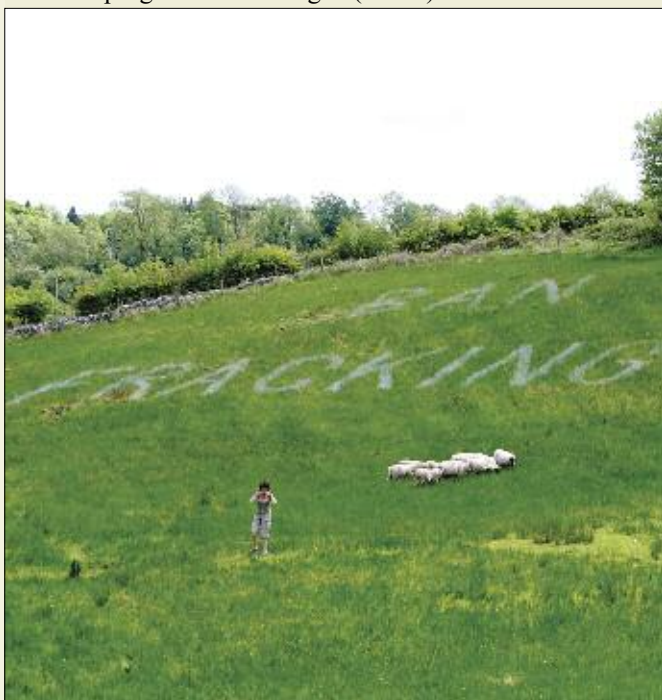
Irish Water has teamed up with *An Taisce* to support schools undertaking the water theme of the Green Schools programme, which aims to encourage participating schools to improve water efficiency and to conserve water by adopting simple measures through a 7-step framework.

Commenting on the partnership, Elizabeth Arnett of Irish Water said that the company 'is committed to supporting the education and engagement of school students in water efficiency and conservation and is delighted to partner with *An Taisce* to help increase participation in its Green Schools programme'.

An Taisce's Environmental Education Unit Director, Patricia Oliver said that the partnership with Irish Water will 'enable us to continue supporting schools who are tackling the water theme of our programme'. She added:

'Last year schools in Ireland saved 300,000,000 litres of water. We are confident that with the assistance and support of Irish Water we can increase this figure, while raising awareness of the need for water conservation among school children, their families and the wider community.'

A competition for schools applying for the Green Flag for Water in the 2013/2014 academic year, 'will reward innovation and creativity among primary and secondary schools that have achieved success in reducing their water consumption, spreading awareness about water issues and involving their community in their Green Schools Water Programme'.



On the water front

by Brian MacDonald

Before rushing to abstract water from the Shannon to address shortages in the Dublin area, it would be well to consider the points raised by Sandra Postel of National Geographic at a recent conference in Mayo, titled *Clean Water 2040: From Local to Global, What is the Future of our Water Resource Management?*, as her comments reflect GWS experience.

Questioning the prevailing wisdom that the future of Dublin's water supply depends on diverting water from the Shannon, Ms Postel recalled a similar debate in the 1980s when the power-that-be planned to divert water from the Connecticut River to address shortages in Boston Massachusetts, a city similar in size to Dublin. Conservation and citizens groups succeeded in persuading them to adopt an alternative course of action. This included aggressive investment in demand management – including leak repair, pricing, education and the retrofitting of water saving fixtures in homes.

Thanks to these measures, Boston's water use dropped 43 per cent and according to Ms Postel, 'usage today is back where it was fifty years ago'. Better still, 'the conservation strategy cost about half as much as the river diversion would have, saving ratepayers money and the river from ecological harm'. We can only repeat her final comment on the matter: 'It's a success Irish Water might take to heart.'

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Hats off to the management and board of Killaturley GWS in Mayo for successfully engaging with Eirgrid to ensure that proposed pylons would be kept at a safe distance from the vulnerable groundwater aquifer feeding their spring sources.

The valuable work done as part of Tellus Border project is paying dividends for those interested in devising sensible and defensible source protection plans. Topsoil, stream sediment and stream water geochemical point data for Donegal, Sligo, Leitrim, Cavan, Monaghan and Louth is now available free of charge. Data for over 50 determinants are available to download as Excel files from the Tellus Border site.

Scéim Uisce Loch hÍbirte agus Leitir Mealláin, has engaged with Muintearas, the Gaeltacht educational organisation, to create an awareness campaign aimed at bringing the importance and necessity of a clean water supply to the attention of all sectors of the community in south Connemara.

Young people are being used to convey this important message through a video production highlighting the importance of water from ancient times to the present day and via murals on the subject of water and its value.

Several organisations, including Údarás na Gaeltachta, SOLAS, Galway Co. Co., Muintearas and Forum Connemara are contributing towards the costs of this initiative.

According to Seán Corrigan, *pro tem* manager of the group water scheme, 'the essence of this project is thinking outside the box and getting help from wherever the GWS can'. He adds: 'There are lots of external bodies willing to help good community projects, especially where the projects are innovative.'

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Out of sight, out of mind

Domestic wastewater treatment system awareness

In the last issue of *Rural Water News* (Volume 15, Issue 3), Dónal Daly and Margaret Keegan (EPA) evaluated recent initiatives to address the threat to water quality posed by domestic wastewater systems (DWWTS) in Ireland. They reported, a lack of awareness on behalf of owners and users of treatment systems as one of several factors contributing to malfunctioning DWWTSs.

In this article **Paul Hynds** provides a summary of the main findings of a study he and fellow TCD academic Paul Naughton conducted into DWWTS awareness and behavioural tendencies. These findings are based on responses to a structured questionnaire completed by 1,106 DWWTS owners and users between September 2012 to January 2013. The full study is available and the authors may be contacted at hyndsp@tcd.ie.

Traditional septic tank systems were employed by the majority (87.3%) of respondents, with integrated systems (e.g. Biocycle™) and reedbed systems accounting for the remainder.

Private wells (38.5%) and public mains supplies (33.6%) accounted for the majority of the respondents' water supplies, while those on publicly sourced group water schemes and privately sourced group water schemes accounted for 12% and 13.4% of respondents, respectively.

In all, 78% of respondents agreed that malfunctioning treatment systems pose a threat to the environment, but higher levels of threat aware-

ness were found among respondents using a municipal/public supply than those using a private supply (i.e. private well or group scheme).

Interestingly, younger respondents exhibited lower levels of awareness; for example, younger respondents were less likely to be aware of their treatment system type and were less likely to acknowledge septic tanks as a potential environmental and human health hazard.

Information

The majority of respondents (70.5%) noted that they had not previously been supplied with information regarding the operation or maintenance of their system.

Over half of those surveyed agreed that DWWTS should be regulated through a programme of monitoring and inspection, with homeowners over 3 times more likely to agree than non home owners.

Those exhibiting an awareness of the potential environmental/ human health threats of DWWTSs were 5.5 times more likely to agree with regulatory oversight.

However, only 23% of homeowners agreed that a charge should be levied by the regulatory authority for monitoring and inspection services.

Remediation

25% of respondents expressed a belief that some remedial works would be required for

their system. DWWTS type was the principal determinant in this regard: 27.2% of septic tank owners felt that remediation was likely to be necessary, but only 5.9% and 10% of secondary system and reedbed owners respectively shared this sentiment.

About three quarters of respondents reported that a visual inspection of their DWWTS had previously been undertaken; respondents supplied by a private well and private group water schemes reported previous inspections in 83.6% and 84.1% of cases, respectively.

However, 23% of those surveyed stated that their system had not previously been desludged. 10% were unaware if it had ever been desludged, while only 33% reported regular desludging.

15% of respondents reported rainwater/surface drainage entering their system.

Conclusion

Numerous knowledge gaps were found among respondents. In particular:

- Younger respondents are less likely to view DWWTS as a potential health risk.
- A significant proportion of systems are currently accepting surface runoff/rainwater, thus decreasing both system efficiency and working life.
- De-sludging is not being undertaken in a large proportion of cases, and where employed, is not being done frequently, again decreasing system efficiency.

While public engagement strategies should serve to fill current information gaps, the onus is on system owners and users to ensure their DWWTS doesn't represent an environmental or human health threat.



A malfunctioning domestic wastewater treatment system photographed by Anne Goggins of Limerick County Council is typical of thousands of such systems across Ireland. As Paul Hynds and Owen Naughton discovered, lack of information and awareness are significant contributors to such problems.

Sustainable Water Network launches information pack

When my father was growing up in the 40s and 50s in Clashmore in County Waterford, on the banks of the river Blackwater, everyone fished for salmon. It was a staple food. They knew everyone in the townland of Knockanore on the other side of the river because they all had boats and crossed the river over and back regularly doing business.

By the time I was growing up in the 70s and 80s in Knockanore we had little contact with Clashmore. The salmon were all but gone and so were the most of the boats and it was a 25 mile round trip by car to Clashmore.

As children we were warned to stay away from the river – it was filthy and dangerous – and we mostly did. There were strong tidal currents and every tide washed up what someone else had dumped or discharged: dead farm animals, plastic syringes and old paint and chemical drums were common.

It wasn't a nice place to be. The breen down to the quay grew overgrown and like much of the rest of the country, at that time, we turned our backs on the river.

Recently at an EPA water workshop, the renowned EPA river ecologist, Martin McGarrigle echoed this or at least put me in mind of my childhood experience when he recalled wading around in offal and meat factory waste whilst conducting water monitoring in the 70s.

On 24 October, the Sustainable Water Network (SWAN) launched a water information pack titled 'Integrated Water Management: Ireland and the Water Framework Directive'.

The event featured a series of short contributions from Minister Fergus O'Dowd, TD, senior officials of the DECLG, the EPA and other statutory agencies, as well as from environmental activists.

In her keynote address, SWAN Co-ordinator, Sinéad O'Brien argued that current structures and policies are incapable of delivering on Ireland's obligation to restore water quality and she outlined an alternative strategy proposed by SWAN. Below we reprint Sinéad's address.

I recount this story because when we talk about water quality improvements over the past 30 years – and these are often cited in defence of our poor performance – I want you to reflect on what an extraordinarily low baseline this is against which to assess our progress now in the second decade of the 21st century.

With the Water Framework Directive (WFD), we have a new, more appropriate yardstick for measuring the quality

of our water environment and against this we don't do as well.

What is SWAN?

Before I get ahead of myself, first let me briefly introduce SWAN, a network of key national and local environmental groups that have come together under an umbrella to work on water policy and protection in the context in particular of the WFD and Marine Strategy Framework Directive (MSFD).

Our members include, amongst others, Coastwatch, Birdwatch Ireland, The Irish Whale and Dolphin Group, the Irish Doctors' Environmental Association, Cork Environmental Forum, the Carra Mask Corrib Water Protection Group and the Coomhola Salmon Trust.

SWAN office itself has two staff and we concentrate on policy engagement and the generation of briefings for our members and decision-makers on issues relevant to water protection.

To give you a flavour of what we do, in the last year or so we have engaged in consultation on the establishment of Irish Water, on the new regulations for septic tanks, on the Marine Strategy Framework Directive, the Nitrates Regulations and we commissioned independent reports on the interactions between the Common Agricultural Policy (CAP) and water, which we used to engage in the CAP review and on the MSFD.

We recently commissioned independent research on Integrated Coastal Zone Management (ICZM) and the impact of hydraulic fracturing on water resources.

Part of our mission is also to raise awareness of the value of our natural waters and the pressures on them – and to make recommendations on how to address these and that's what brings us here today to the launch of the Water Information Pack.



Ian Talbot (Chambers Ireland), Sinéad O'Brien (SWAN), Minister Fergus O'Dowd, TD and Mark Boyden (Cathaoirleach SWAN) at the launch of the Water Information Pack. (Photo courtesy of SWAN)

Serious pressure

Despite improvements in some areas, our water environment is under serious pressure and the SWAN Water Information Pack highlights some of the most significant water management issues.

These include intensive agriculture, development planning which is poorly implemented (and not adequately integrated with water resources), climate change, fragmented and inadequate management of the coastal zone and lack of public awareness and engagement in water issues.

This is clearly not an exhaustive list and we hope to produce a further pack in coming years to deal with other issues.

Below is a whistle stop tour of some of the more interesting recommendations from each paper.

AGRICULTURE

1. Tightening of the Nitrates regulations with a requirement for field level soil testing and prohibition on spreading of nutrients/slurry in excess of crop need;
2. Well-funded agri-environmental schemes under Pillar 2 of the new CAP. These should include support for a

comprehensive suite of water protection measures, including low nutrient input farming; watercourse fencing and a specially funded scheme for the protection of our most pristine and sensitive rivers and lakes.

CLIMATE CHANGE

1. The development of a National Strategy to Alleviate the Impacts of Climate Change on Ireland's Water Resources;
2. Where engineered flood controls are planned, an assessment of the feasibility of better environmental alternatives (i.e. restoration of floodplains which absorb flood waters and pollutants and store water during dry spells).

LAND USE PLANNING

1. Independent Planning Authority (proposed Office of Planning Regulator is not fully independent) with full powers to investigate public complaints and to ensure that planning authorities fully integrate the requirements of the WFD and water protection into planning decisions;
2. DECLG must issue Section 28 Planning Policy Guidance.

PUBLIC PARTICIPATION

1. A National Public Awareness Campaign on water;

2. National and regional stakeholder water forums;
3. Catchment-based projects involving local communities and land owners in managing local rivers, lakes and coastal areas.

COASTAL MANAGEMENT

1. An Integrated Coastal Zone Act and dedicated unit to address the current unwieldy and fragmented system of controls on activities and pressures on the coastal zone;
2. Review of all aquaculture licensing to ensure compliance with WFD target and taking into account assimilative capacity and cumulative impacts.

WFD

So what do all these pressures and the many others that we haven't included mean for Ireland's rivers, lakes, groundwaters and coastal waters?

Well, back to the Water Framework Directive yardstick. This imposes a statutory obligation on all EU member states to achieve good water status by 2015.

Firstly almost half of our river stretches and more than half of our lakes are below the mandatory ecological standard set by EU and national law. And perhaps

'... in the drive to establish Irish Water and introduce water charging, the pressing requirements of the wider water environment have been neglected.'

most worrying is the dramatic loss of our most unspoilt river stretches since 1987.

Although similar long term monitoring hasn't been done on lakes, there is every reason – by extrapolation – to believe that the lakes in these catchments have suffered a similar fate.

And you don't need to study the statistics too closely. The closure of beaches in 2012 and 2013 due to the health risk of elevated *E.coli* levels, the continued incidences of 'boil water notices' due to *Cryptosporidium* outbreaks in public water supplies and the ongoing human distress caused by flooding of homes constructed on floodplains, all highlight the urgent need to look beyond the current preoccupation with water meters to address pressing issues for managing our natural water environment.

Water Reform

So where are we now? There has been significant political impetus behind the establishment of Irish Water. After all, it was in the Programme for Government and a commitment to water charging was included in the memorandum of understanding with the Troika.

But in the drive to establish Irish Water and introduce water charging, the pressing requirements of the wider water environment have been neglected.

Tightening of the Nitrates regulations to minimise nutrient loss to water bodies and the provision of well-funded agri-environmental schemes are amongst the measures proposed by SWAN.

Copies of the pack can be secured from Sustainable Water Network (SWAN), 9 Upper Mount Street, Dublin 2 or may be downloaded at www.swanireland.ie.



pic courtesy of SWAN



L-R Karin Dubsky (Coastwatch), Paddy Mathews (Fáilte Ireland), Micheál O’Cinnéide (EPA), Damien Allen (DECLG) and Mary Kelly Quinn (UCD). (Photo courtesy of SWAN)

Plans drawn up in 2010 under the WFD for the management of the natural water environment have been effectively shelved because the current disjointed structures – involving more than 50 state agencies – are incapable of delivering them.

The reform which water experts unanimously agree is needed, has met with little or no political support or funding and River Basin Management Plans have been gathering dust.

Great work is being done in various agencies and by many people, but this is piecemeal and it is carried on despite, rather than thanks to, the current situation, and with little support.

Recommendations

What is SWAN recommending? In addition to the detailed issue-specific recommendations set out in the Information Pack, SWAN is calling for:

- A reformed, joined-up system for water management;
- The integrations of water protection considerations into marine, agriculture, development, energy and other policy areas;
- Special protection for our most valuable unspoiled rivers and lakes and
- A national public awareness campaign which actively involves local residents in the protection and management of their own local rivers, lakes and beaches.

Though ultimately more cost effective in delivering sustainable water management, any management structure will require funding.

SWAN is calling on a portion of the income from water charging to be ring fenced for the protection of our natural waters and the implementation of the Action Plans in the shelved River Basin Management Plans.

National value

Ireland’s natural water resources provide drinking water for our citizens, but our rivers, lakes, coastal waters and groundwater have a national value far beyond this.

A well-managed water environment is essential for healthy communities, healthy ecosystems and thriving businesses. Agriculture, computer & pharmaceutical industries, tourism, nature and human health all depend on the integrity of our water resources.

For all of these reasons, we should do what we can to support and promote more integrated water management.

‘Plans drawn up in 2010 under the WFD for the management of the natural water environment have been effectively shelved because the current disjointed structures – involving more than 50 state agencies – are incapable of delivering them.’

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‘We have Finnegan Insurance for the past 3 years and have always received an exceptional and practical service. Finnegan Insurance represents good value for money and we have no hesitation in recommending them to other group schemes.’
 Seán Corrigan, Manager Ballycroy GWS, Killeen GWS and Kilmeeena GWS

What's new in the Water Industry

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Indepth

The primary objective of water management is the provision of high quality water. To achieve this, water storage tanks, reservoirs, pipes, treatment plants and associated structures all need to meet the very highest standards of hygiene and durability. Regular inspection and safeguards are necessary in order to protect the integrity of the structure and, most importantly, to prevent surfaces in contact with water from deteriorating or breaking down because of physical stresses and chemical attack.

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Indepth surveys will identify any structural problems, such as cracks or fractures in concrete, or corrosion on deteriorating pipe work & fittings.

The company has successfully helped businesses and local authorities carry out inspections of reservoirs and water storage tanks.

In carrying out these surveys, priority works and cleaning requirements could be scheduled.

Indepth also provides a rehabilitation and cleaning service. This is priced separately following the survey results, so that the works are confined to what is needed.

For further information on the ROV underwater camera and our water infrastructure clean-

ing/rehabilitation services visit www.indepth.ie or call their low call number on 1890 77 22 22.

Premier

Mid Roscommon GWS manager, Noel Carroll, is mightily impressed by the Premier boundary box and is currently replacing old and faulty boxes with them.

Apart from the fact that the Premier box is robust and water tight, Noel welcomes the fact that there is an Irish manufactured product on the market that meets the tough demands of a rural water distribution system.

EBSS

Easy Billing Software Solutions (EBSS) is an Information and Communications Technology (ICT) company based in the Innovation in Business Centre Castlebar.

It has been trading since 2008, providing a range of technological products, that cater specifically for the group water scheme sector.

The primary product being marketed by EBSS is QuikWater, a billing software package designed to streamline the billing and administration of water providers. The package makes meter reading easier through the use of barcodes and handheld readers which simplifies the process of transferring meter reading data into the billing system, thereby eliminating transcription errors.

QuikWater then produces a detailed bill, which includes present and previous meter readings, payments received since the previous bill and current amounts due.

The company also provides a



Top: Indepth's new ROV underwater camera, which is capable of inspecting reservoirs while they remain in service.

Bottom: EBSS uses cutting edge technology, including the latest loggers, in ensuring the effective day-to-day management of group water scheme networks.

range of data loggers, which can provide information in real time through a web-based system.

This means that any authorised person can have access to information through an Internet browser.

EBSS supplies loggers that can be installed in remote locations by harnessing solar power. These loggers provide two-way communication through text messages, which makes them very versatile. They can also be configured to send high and low flow alarms as well as no flow alarms and are particularly

useful in booster pump situations where a pump trip alarm can be generated.

The company tells us that it is particularly excited about the latest generation of loggers on offer, which are GPRS based (on-line continuously). These loggers can transmit live data relating to chlorine, pH and turbidity levels that is also electronically recorded for use in Quality Assurance records. EBSS is the technology provider to Killeen, Kilmeena and Ballycroy Group Water Schemes, the first schemes to be awarded the ISO 9001 standard.

Important dates for your GWS diary in 2014

12 March	NFGWS Annual Delegate Conference
31 March	Deadline for submission of Co-op Annual and Triennial Returns to the Registry of Friendly Societies.
30 June	Deadline for receipt of subsidy claims by your Local Authority
10 September	Rural Water Conference, Athlone

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*Karen Carney,
 Paul Connolly and Joe Gallagher*

Galway
 Installation of a validated UV system on Lettergesh Mullaghgloss GWS was completed in December. The system will be commissioned in early January.

Civil works on the variation works to Ballinabanaba and CBC Group Water Schemes began in December and are due to be completed shortly.

Delays on the Lydacan GWS variation mean that it won't be finished until late February.

The go-ahead is still awaited for the proposed variation on Gallagh GWS.

Scéim Uisce Loch hÍbirte agus Leitir Mealláin has become the first GWS in Galway to be approved for ISO 9001 Certification. Comhghairdeas to the recently elected coiste and to Forum Connemara who provided sponsorship for the NFGWS management training course completed on 4 December.

Water demand has been reduced by half and a planned upgrade on four sections of critical mains will yield a similar reduction in UFW (circa 140,000m³ annually).

In October, the new coiste issued bills totalling €50,000 and €44,000 of this sum was paid by members in the first 6 weeks, a remarkable return that demonstrates faith in the new coiste.

Thanking Raidio na Gaeltachta, Glan Agua and

Galway Co. Council for their support, Seán Corrigan said: 'We were told when we started this process that nobody would pay for water in this area. How wrong they were. If the service is good enough people will pay.'

A technical report on the addition of UV treatment to plants in DBO bundle 1 is currently being considered by Galway Co. Council, as is a report on

the proposed installation of ozone treatment in the Claran GWS plant.

Glan Agua Ltd is highlighting the need for raw water back-up systems on schemes. This follows water shortages on Lydacan GWS and Kiltiernan GWS in mid autumn during a dry spell. In Lydacan's case, water rationing measures were needed and there was damage to the borehole pumps.



L-R John Diskin, Engineer, Pamela Bartley, hydrogeologist and Cillian Forde of Tubber/Monreagh GWS. This scheme on the Galway/Clare border hopes to develop a new borehole as part of a wider upgrade strategy.

Tubber/Monreagh GWS is in the process of identifying a new source to replace its existing vulnerable spring well.

Development of a borehole source will have a long-term benefit in reducing operational and maintenance costs.

The GWS has engaged a hydrogeologist and a potential site has been identified near the existing source, so that most of the existing infrastructure would be reusable – thus reducing capital costs.

Planning permission is awaited and the GWS engineer, is working closely with Galway Co. Council on this matter.

Planned upgrades on two other schemes in the area west of Gort have been put on hold, following a request from the council that solutions other than stand-alone upgrades be investigated. The council is asking the engineer acting on behalf of Roo GWS and Tierneevin GWS to report on the potential of linking these

and a third scheme in the area – Seehaun GWS – into a single scheme or into a public supply.

While Seehaun GWS has yet to progress an upgrade proposal, the delay comes as a setback to the other schemes involved.

It is hoped, however, that a report can be completed quickly so that water supplies in the area can be brought into consistent compliance with the Regulations.

The tendering process is completed in respect of a planned upgrade on Moyglass GWS. This will include water conservation works and necessary improvements at the reservoir site.

Disappointingly, there has been no development in relation to the required upgrade on Kilcooly/Gurymadden GWS.

Four publicly sourced schemes – Cosmona GWS



Benny Shiels of Moyglass GWS and Suzanne Tynan, hydrogeologist, pictured during the Zone of Contribution evaluation of the scheme's borehole.

(Loughrea), Masonbrook GWS (Loughrea), Mulrook GWS (Kilcolgan) and Newbridge GWS (Mountbellew) were taken in charge in recent months. The Masonbrook area is supplied via Loughrea Rural GWS.

Zone of contribution reports have been completed in respect of the boreholes supplying Esker GWS, Moyglass GWS and Oldthort GWS.

Tendering for phase 1 of a proposed upgrade on Brockagh Lisduff GWS has been completed. An engineer's report and recommendation is being considered by Galway Co. Co.

We extend best wishes to Mary Power who retired on 19 December. A key member of the Water Services Section in Galway Co. Council, Mary will be sorely missed.



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Leitrim:

A considerable number of small publicly sourced group water schemes have been taken in charge by Leitrim Co. Council in recent times.

Concerns were expressed by many schemes following the receipt of correspondence from Leitrim County Council setting 2 December as the final date for schemes to apply for taking-in-charge.

Schemes felt that there was insufficient information relating to issues that might arise when Irish water takes over to allow them make an informed decision about their future.

A meeting of the Lough Errill GWS decided to delay any decision on taking-in-charge until there is clarity on issues such as water pricing and the domestic allowance under Irish Water.

Mayo

The DBO contractor for bundle 1 is expected to submit proposals in the very near future relating to process modifications at most of the plants in the bundle to deal with raw water variations which are outside the original design specification.

A recent meeting of schemes in bundle 1 agreed to look at employing the services of an hydrologist to examine the feasibility of developing groundwater sources in place of several existing lake sources.

It was also agreed to commence a programme of THM monitoring on eight of the schemes where exceedances have historically occurred.

Part 8 planning for the provision of a raw water holding tank at Belderrig has been published. This will be dealt with at the December meeting of Mayo County Council, as will a submission from the National Parks & Wildlife Service.

Commissioning of the new raw water main in Killeen has caused severe problems for the scheme, with members having to endure periodic water outages. Remote monitoring systems have been installed to allow real time monitoring of flow into the treatment plant as one of a series of measures to improve supply on the scheme.

Callow Lake GWS recently undertook a major project to clean the three reservoirs that supply the Bohola area. This project involved major planning and the three reservoirs – one at Shanaghy and two at Derrycar – were power-washed and super-chlorinated in accordance with EPA guidelines and all without any interruption of service to members.

Commissioning of a secondary chlorination plant at the Redhill reservoir site on the PBKS Group Water Scheme was scheduled for completion before Christmas. This will give the scheme better control over chlorine residual.

The works facilitating the connection of Buckagh Furnace to Clewbay GWS will go to tender shortly. Recommendations from the National Parks & Wildlife Service have been taken into consideration.

Proposed upgrade works on Ayle and Cushin schemes will now not take place in 2013. It is proposed to connect both schemes to the Lough Mask Regional supply as part of the extension of the regional from Srah to Westport.

Tourmakeady and Ramolin/Bordello publicly sourced group water schemes have recently been taken-in-charge by Mayo County Council.

Works have commenced on a contract to install a new rising



Killaturley GWS well-head has been covered as part of a major upgrade. A sluice gate has been positioned at the outflow from the well-head site to ensure that there is a sufficient raw water supply in periods of drought.



main and the installation of additional scour valves on Attymass GWS.

The scheme has changed over from Sanosil disinfection to chlorination in recent weeks and the committee has decided to advertise the position of part-time caretaker.

A members' meeting of Barnacarrall GWS was held

on 7 October. The meeting elected a new management committee and agreed to form a co-operative.

The scheme is working with Mayo County Council to address ongoing serious water quality issues.

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Roscommon

Mid Roscommon GWS was vindicated on two separate occasions recently in legal actions taken against the scheme by members disputing outstanding debts. Armed with a formidable file of information that left no doubt that these were legitimate debts, GWS representatives attended court on both occasions, fully prepared to defend the interests of the scheme before the presiding judge.

Neither case actually came before the court, however, as solicitors for the members met the GWS representatives outside the courtroom, asking for a settlement.

In both cases the full debts to the GWS were cleared by the members and they also had to pay all legal costs incurred by the GWS as well as their own costs.

The GWS intends notifying its members of the results of these cases to illustrate that

there are cheaper solutions to resolving disputed water bills than going to law!

Critical mains replacement has now been completed on Corracreigh GWS and will shortly be completed on Mid Roscommon GWS also.

Roscommon County Council recently purchased 600 *All About Water* books for distribution to primary schools in the county.

Pollacat GWS is awaiting Department approval to proceed with a treatment process variation.

Treated water quality on the scheme improved recently following cleaning of the sump and reservoir.

Peake Mantua GWS has upgraded its treatment process following a positive test for Cryptosporidium in the raw water supply. Following installation of a

new filtering system and UV disinfection, a precautionary boil water notice was lifted.

There was a good attendance by Roscommon schemes at recent training in Distribution Network O&M.

At a recent meeting, members of Woodbrook GWS deferred making a decision on the future of their scheme until they have had an opportunity to assess the charges to be levied by Irish Water versus the annual running costs of the GWS.



Full marks to the contractor replacing critical mains on Mid Roscommon GWS who fabricated a frame for 100 metre pipe rolls. This allows pipes to be laid smoothly and evenly in the trench without being dragged.



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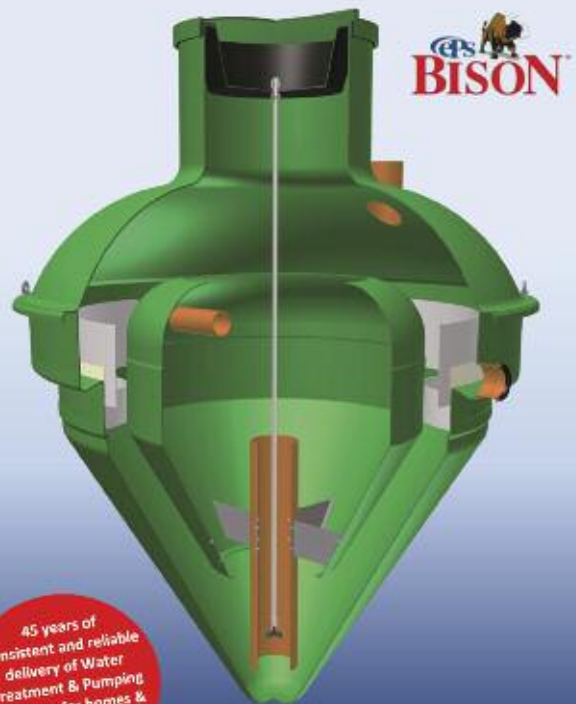
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Leinster Region

by Barry Deane, Julie Brannigan & Joe Gallagher

Carlow

The Rural Water Monitoring Committee met in October to review progress under the Rural Water Programme.

The Co. Co. received an additional allocation of €83,383 during September based on a submission made earlier in the year to deal with water quality issues on small public water supplies. This brought the total allocation for Carlow up to a total of €1,094,348.

It was reported that works had commenced late on St Mullins Parish and Ballinabranna water conservation projects.

Following the meeting the committee members visited the St. Mullins Parish GWS Treatment plant.

Despite a late start, works are now completed on the Ballinabranna GWS water conservation project for 2013. The scheme replaced almost 3km of critical mains as well as installing telemetry on 10 bulk meters strategically located on their distribution network.

St Mullins Parish GWS has completed installing telemetry on the remainder of their consumer meters and has also invested in a telemetry system

for monitoring bulk meters on the distribution network.

The scheme has also replaced over 2km of critical mains on different sections of the distribution network as well as completing Health and Safety works at the reservoir site.

Carlow & Wexford FGWS met in October. At this meeting the schemes discussed a range of issues with the NFGWS including the recently announced funding for specific source protection works. It is hoped that the schemes listed on the Department circular in Carlow will take part in this project next year.

Kildare

Gormanstown GWS has installed a number of bulk meters and isolation valves that will assist the scheme in carrying out a water audit and identifying areas of high water demand.

Kildare Rural Water Monitoring Committee met in October to specifically discuss issues around water and sewerage networks on estates and publicly sourced GWS that have yet to be taken-in-charge. Concern was expressed about how these would be handled when Irish Water takes over the public networks.

It was decided that the committee would make a submission to Irish Water on the issues to be addressed.

In a review of management issues on their scheme, Narraghmore GWS committee is considering the appointment of a caretaker to assist them with maintenance. Currently the scheme is maintained entirely through voluntary effort, which the committee members agree is no longer feasible.

Several members of the committee visited Ballinagar GWS in County Offaly in November to see how that scheme is managed and maintained. They were very impressed with the standards being achieved.

Christopher Heffernan RIP

Christopher (Chris) Heffernan was one of the founder members of Narraghmore Group Water Scheme back in September 1970 when Fr Moynihan, PP, organised a meeting to begin the process of providing a piped water supply to the people of the district.

The other trustees elected were John Donovan, Robert Jackson and Gareth Yates.

After about three years the scheme was completed at a princely cost of £80,000. It served 135 houses and a number of field connections.

From then on and right up until his final illness, Chris was an active member of the scheme and was equally at home at a committee meeting as he was fixing a leak.

When the scheme became a Limited Company in later years, Chris became one of its directors.

In recent years, he saw the scheme expand to about 350 connections.

Chris always reminded people that the original purpose of the scheme was to supply water to neighbours. This typified the importance



he placed on community and one of his legacies is the continued strength of the scheme some 40 years later, still providing a quality supply to the community.

We would like to offer our sincere sympathy to Chris's wife Martha and his family. He will be sadly missed by the directors of the scheme and particularly our long serving committee members, Mark Wright and Don Ashmore.

One of Chris's daughters recounted recently that when she met neighbours who may not have known her and explained that she was Chris Heffernan's daughter, they would often reply, 'Ah yes, The Waterman'. And so he was. May he rest in Peace.

John Fox
GWS Secretary

Kilkenny

Raw water sampling as part of the specific source protection works (ZOC) project was carried out on all 8 participating schemes in Kilkenny in October.

Consultants have now completed the final drafts of their reports. These have been reviewed by the GSI and will be presented to the schemes early in the New Year.

Kilkenny Rural Water Monitoring Committee met in December to review expenditure under the Rural Water Programme. A number of projects were successfully completed in the last quarter of the year.



Members of Narraghmore GWS committee visited Ballinagar GWS recently to see for themselves how best practice is employed in GWS management.

 Dunmore GWS replaced over 2km of mains.

 Refurbishment was completed on Kilashulan GWS reservoir.

 Some critical mains replacement was carried out on the Bawnmore GWS.

 Besides some critical mains replacement, Flagmount Brennan GWS upgraded its pump house with the addition of new chlorine dosing facilities.

 Highrath GWS and Windgap GWS both developed new sources.

 Seskin GWS also hopes to develop a new source and has taken on a hydrogeologist to carry out some geophysical testing on their site.

 A number of smaller upgrades were carried out on

South Leinster DBO bundle

At the Liaison Monitoring Committee meeting in October, EPS reported that the majority of plants are performing well.

While there are still issues with carry-over at the Blackstairs plant, a number of changes have been made and the plant's performance has improved.

A number of schemes, including Maddoxtown GWS, where a new UV system was installed and on Dunbell no. 2 GWS which fenced off its pump house site.

 Two taking-in-charge projects were progressed by Kilkenny County Council during the year, with large scale mains replacement on Newtown Ballinearla GWS and Ballinearla No. 1 GWS. Both publicly sourced schemes hope to be taken in charge in the near future.

Issues regarding UV treatment on plants with a *Cryptosporidium* risk have now been resolved.

EPS issued letters in relation to the Capital Replacement works on 12 schemes due in 2014. The NFGWS is working with the schemes to appoint an Employers Representative.

A new publicly sourced GWS was constructed during 2013 in Molassy (near Callan). This is likely to be taken-in-charge in 2014.

 Baunmore GWS is in discussions with Lisheen Mines regarding development of a new source of water for the scheme to compensate for an existing source that has been depleted over the past year.

 Kilashulan GWS held its AGM in October. Besides agreeing to proceed with a reservoir upgrade (see

above), the scheme hopes to resolve issues with pumps over the coming months.

 Parks Rathclevin GWS held a well-attended AGM in November. The scheme is in a good position to meet future challenges having upgraded a few years ago. It has excellent water quality and the committee is implementing the QA system.

Laois

Upgrade works on Errill GWS are now completed. The scheme replaced another section of critical mains late in the year due to additional funding being made available. GWS secretary, Keith Massey will shortly be moving back to England and will be leaving big boots to fill. An active committee member over the last few years, Keith was instrumental in adopting the NFGWS QA system for the scheme. We wish him all the best for the future.



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Ballacolla GWS is currently finalising phase one works on a pipeline upgrade. The scheme has installed some additional telemetry on bulk meters around its network as well as getting GPS co-ordinates for all services and bulk meters.

Cullahill GWS has replaced a section of critical mains.

The Heath GWS installed an Automatic Meter Reading system, as well as carrying out some work on the cover of their spring.

The committee is considering getting a cryptosporidium risk assessment carried out on their source in the near future.

Laos FGWS met in October and decided to go ahead with a one day Health and Safety training course in relation to road works. This was delivered on 12 December on an outreach basis by Roscrea RTC and was attended by schemes from surrounding counties also.

Laos schemes hope to identify the Zone of Contribution to their sources in 2014 in conjunction with the NFGWS and the GSI. The schemes have completed and submitted the SP1 forms for approval.

Louth

The County Federation AGM will be held on Monday, 27 January.

Upgrade works are completed on Ballymackenny Sandpit GWS. These involved upgrading the pump house – including an extension to accommodate chemical storage and office facilities – as well as the installation of back-up generator facilities.

The scheme is taking action in respect of non payers and a



Boher Leamonaghan GWS in Offaly completed installation of bulk meters at strategic locations on the network.

number of disconnections have been carried out.

Tullyallen GWS reports that refurbishment of its reservoir has helped improve disinfection residual in the network.

The new borehole at Sheepgrange GWS has been commissioned and is performing well. A remote telemetric system is in place and is proving beneficial.

Well head protection works have been completed on Mountain Park GWS. A riparian area close to the spring has been fenced off to prevent livestock access.

UV treatment has been installed on Grangebellew GWS and further improvements to the treatment plant are ongoing.

Louth

At a recent meeting between the Clonmore Kilmore GWS and Longford County Council it was decided that improvement works would be completed at the GWS pump house.

The GWS is working closely with the council to ensure that these works are completed to a high standard.

Meath

Meath Hill GWS has installed 75 meters as part of the Wimbex metering project and has also installed 8 energy harvesters. A field trial will shortly be conducted on its meter reading technology.

Water demand has fallen significantly on Kiltale GWS due to effective leak detection work by the committee.

Offaly

Boher Leamonaghan GWS completed installation of several bulk meters at strategic locations on its pipe network. These works were completed in a short time frame with the assistance of the GWS management and staff.

The GWS is very happy with the standard of the work and already sees the benefits of this investment.

Leamore Leabeg GWS has commenced upgrading work on their GWS as part of a process that will see the scheme being taken-in-charge. The laying of 3km of piping is underway at present, while the remaining works are due to be completed next year. Works are also completed on reinstating a site that will no longer be needed once the

takeover process has been completed.

Rath GWS recently honoured Patsy Spain, retired caretaker, for his hard work down through the years.

An original member of the committee, Patsy took on the burden of the caretaker position and has kept the scheme running for many years.

The committee acknowledged his sterling service at a recent meeting when a special presentation was made to Patsy.

A sincere thank you is due to the management and staff of Ballinagar GWS for recently hosting visits by GWS committees from neighbouring counties.

Over recent years, Ballinagar GWS has willingly given time and resources to facilitating such visits and is to be applauded for doing so.

For visiting schemes, a visit to Ballinagar is both highly educational and inspirational.

Full marks to the county council for the sensible approach being applied in response to non compliance issues on group water schemes, where systems are being assessed before imposition of a boil water notice

Westmeath

Multyfarnham GWS recently invited students from the local primary school to visit their scheme.

Caretaker, Pat Murtagh facilitated this visit and talked the students through the system from source to tap.

The committee of Multyfarnham visited Ballinagar GWS in Offaly to compare pumping and chlorine systems maintenance as well as overall scheme management.

Multyfarnham GWS is now in the process of implementing measures witnessed on Ballinagar.

The main area of focus will be on implementation of the NFGWS Quality Assurance System.

Wexford

Kilanerin GWS elected new officers at a committee meeting in October. Dave Coates was elected as the new chairperson while outgoing assistant secretary Peter Bushe is the new secretary. The scheme has established a number of sub committees to help involve all new committee members.

A meeting took place between Blackstairs GWS, the NFGWS, EPS Limited and T. J. O'Connor & Associates in November to address ongoing issues. It had been hoped that another meeting would not be



Pat Murtagh of Multyfarnham GWS in Westmeath showing the raw water filters to local primary schoolchildren.

required but there had been some additional mechanical failures at the plant.

EPS reported that they have made additional changes and expressed the hope that this will allow better control of the treatment plant.

The UV system now appears to be operating properly and is achieving the required dose for the scheme.

However, EPS is currently investigating a periodic problem in regulating pH.

Wicklow

Hempstown GWS is now fully connected to the Blessington regional scheme. Wicklow Co. Council is currently working with the scheme on finalising the changeover from the old to the new system.

Askinagap GWS has installed a number of bulk meters on its distribution network and these works were recently inspected by Wicklow Co. Council.

Ballyfolan GWS has appointed a contractor to carry out an upgrade to the scheme.

It was hoped that all works, including the installation of a new treatment system, would be completed by 31 December.



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Catherine Boukhima and David Coates from Kilanerin GWS.

Munster Region

by Joe Gallagher &
Barry Deane

Clare

In an effort to secure a raw water supply of consistent quality, Toonagh Dysart GWS recently drilled a trial borehole at its treatment plant site.

As the site is elevated, the borehole is 1,100 feet deep. Having found water, the next step will be to conduct pump testing of the supply.

Assuming that this is successful, it will allow the scheme to move away from its surface water supply, as water quality varies widely depending on weather conditions.

Exceptional water demand management – well below the design capacity of their treatment plant – has allowed Toonagh Dysart GWS to supply some 100 households on a local public scheme.

There was, however, a recent blip in the scheme's excellent record of water conservation when a burst occurred on an older section of mains and just above a PRV that was under high pressure. As the burst occurred at 1:00am the reservoir was almost emptied by morning. The DBO contractor's alarm sounded and they were able to notify the scheme to shut off the mains and repair the leak early the following day.

A meeting of the DBO Liaison monitoring Committee in early December was informed by EPS Ltd that treated water quality on the DBO treatment plants was excellent during the previous quarter.

Lissycasey GWS is in the process of exploring a new borehole, as the levels of iron and manganese in the existing source are high. An appli-

cation is being made for funding under the Rural Water Programme to develop the new borehole source and towards the installation of UV disinfection at the treatment plant.

Lissycasey had significantly reduced water demand over the past few years, but experienced setbacks following a number of leaks on their extensive mains network in the past year.

To assist with the early identification and repair of such leaks in the future, the scheme hopes to install a number of additional bulk meters with telemetry.

The group water schemes in the DBO bundle have selected an engineer to assist them in the process of replacing plant under the Capital Replacement Programme (CRP).

A meeting will be held in the coming weeks between the group schemes, the DBO contractor, the Employer's Representative and Clare Co. Council to finalise the CRP works that are expected to commence early in 2014.

The Rural Water Monitoring Committee met in December to review the programme of works for 2013.

The €100,000 allocated towards the taking-in-charge of Castlequarter GWS, Moyglass GWS and Clonfadda GWS was spent in full. Upgrade works have now been completed on these schemes.

€300,000 allocated towards GWS upgrades was spent on Castlecrine GWS, Corbally GWS & Clarefield GWS upgrades. Other projects supported under this allocation included the installation of bulk meters on Kilnaboy GWS network as well as network upgrades on Monvana GWS & Spancillhill GWS in preparation for their being taken-in-charge.

€100,000 was allocated towards DBO treatment plant variations, of which sum €50,000 was made available for an upgrade of the Killone GWS plant. The work to allow draw-down of this funding did not proceed and, unfortunately, due to the end of year deadline having been reached, the council was unable to reallocate the funding.

€20,000 allocated for connection to public mains went to Ballygannor GWS, a small scheme in the Kilfenora area.

Training was recently completed in secondary chlorination and chlorine handling. Group schemes were well represented at the course.

Cork

The Rural Water Monitoring Committee meeting in October heard that although the council had progressed a number of GWS takeover projects in 2013, it was unlikely that any of the schemes involved would be formally taken-in-charge before 31 December.

Ballinguyroe Tankardstown GWS has now completed installing universal metering and the AMR system is almost up and running.

While Curraglass GWS didn't get to build their new reservoir in 2013, it was expected that the scheme would secure a site, allowing construction to proceed in 2014.

Small upgrading projects were completed on Aghern GWS and Walterstown GWS.

The Distribution System O&M training course was held in Fermoy in November and was well attended with 16 GWS representatives from 8 schemes present.

Kerry

The Rural Water Monitoring Committee met in November. This heard that works to connect Bonane GWS to the public mains are almost complete, with only a booster pumping station remaining to be constructed.

There has been little progress on works to the remaining privately sourced schemes in the county, but meetings with these schemes are to be organised by the county council and the NFGWS over the coming months.

Upgrades in advance of taking-in-charge have been significantly progressed on Rossdohan GWS, Tousist GWS and Clanmaurice GWS.

On Tousist construction is almost completed from the lake source intake to the new treatment plant. When completed, this scheme will be operated by Irish Water.

No fewer than 38 schemes including Ballintarmon GWS, were formally taken-in-charge by 31 December.



Distribution Network O&M training in Fermoy in November.

Limerick

County council audits and inspection visits have been conducted on several schemes within the DBO bundle. These identified a number of areas for improvement, particularly in regard to record keeping.

This highlights the importance of all group schemes implementing the NFGWS Quality Assurance System.

The council is currently working with the schemes involved to ensure that its recommendations are implemented.

Cappagh GWS was placed on a precautionary boil water notice following a visit by council officials who found inadequate maintenance of the network. The scheme is carrying out a flushing and scouring programme at present and will prepare a management plan to be submitted to the county council for approval.

13 schemes have begun the process to replace equipment in their treatment plants under the Capital Replacement Programme (CRP). They have appointed a Employer’s Representative to steer the process.

The schemes must come up with 15% of the costs recently submitted to them by the DBO contractor, EPS Ltd.

It is expected that CRP works will commence in the coming months on these plants – the main items for replacement being dosing pumps, chlorine analysers, level sensors and pressure transducers.

The remaining 5 schemes in the DBO bundle begin the same process in the New Year and the issue of CRP will be discussed at the next LMC meeting.

Works are progressing well on the taking-in-charge of

Newtown Clarina GWS. As this is a large scale job, it will be completed in 2014.

After a positive test for Cryptosporidium on the extremities of their network, Kilfinny GWS is in the process of installing a UV disinfection barrier.

The scheme is currently on a boil water notice and is already receiving complaints from members about paying for water that they can’t use.

Given the urgency of the issue, the GWS is anxious to progress the upgrade without delay and the committee is working closely with Limerick County Council, their Engineer and with the DBO contractor.

The design has been completed and signed off on and is now waiting approval from the Department which is expected early in January.

Croagh GWS has commenced the replacement of critical mains.

Limerick County Council is currently trying to remove any boil water notices that are in place on group schemes and officials are

working very closely with the schemes involved.

Upgrade works have been completed at Clovers GWS and Knockainey GWS treatment facilities and the council laboratory is currently assessing water quality on both supplies.

Following clear results, it is hoped that the the boil water notice can be lifted without delay.

Boherard Crean GWS & Glenbrohane GWS are currently carrying out upgrading works at their pump houses with a view to having the boil water notice currently in place lifted.

Feoghanagh Castlemahon GWS recently held an AGM. As this is a publicly sourced scheme, the issue of Irish Water and its likely impact on the group scheme were discussed in detail.

It was decided to hold an additional meeting in the New Year to discuss the future of the scheme. Through a strategy of universal metering and efficiency in repairing leaks, the committee of Feoghanagh Castlemahon has significantly reduced its water bill to Limerick County Council in

recent years and it hoped to have the final bill paid by 31 December, leaving the account clear for the first time ever.

Great credit is due to the GWS management and staff for achieving this.

Tipperary

North Tipp Rural Water Monitoring Committee met in December to review works completed under the Rural Water Programme in 2013.

Graigue Pouldine GWS has completed rehabilitating its old pump house and, following advice from a hydrogeologist, hopes to develop a new source in 2014.

An Automatic Meter Reading system has now been commissioned on Moyne GWS. Using this technology, the scheme can read nearly 500 meters within six hours.

Newhill Leigh GWS replaced a section of critical mains along the old N8, as well as installing UV treatment.

Brittas GWS has completed a pipeline upgrade, with all service connections and meters now installed.



Air scouring was employed as part of a comprehensive network cleaning programme conducted by Lacka GWS in a successful initiative to remove manganese deposits from the internal lining of pipes.

Two new bulk meters and a number of valves have been installed on Barnane GWS.

A number of small upgrades were completed on Abbeyville GWS, Ashill GWS, Castlough GWS, Mota Coolbawn GWS, Corbally GWS, Ardcroney GWS and Garrynamona/Cormackstown GWS.

Takeover works on the Lisgorruff GWS and Castlcranna GWS are now completed and formal taking-in-charge will go ahead in 2014.

Takeover works were progressed on Drumbane (Upperchurch) GWS. The required upgrade on this scheme is now complete, but the committee will continue to utilise the existing source and treatment facility until the Thurles regional scheme becomes operational.

The county council has also taken-in-charge Clermont

GWS, a small scheme that ran into difficulty with their source earlier in the year.

Lacka GWS has completed some rehabilitation works on a borehole source that had become lined with deposits of manganese over the years. This was treated over a three day period before being scoured out.

The scheme also undertook air scouring on a 2km section of distribution mains that had built up internal deposits of manganese. A number of hydrants had to be installed in advance to allow air scouring. Following this, the scheme took on a contractor to blow a combination of air and water through the mains, which provided a comprehensive cleaning.

GWS chairperson, Jim King expressed satisfaction with the results of these works.

Following a recent committee meeting, Drumbane (Ballina) GWS is considering adopting a co-operative structure.

Water Conservation Works have been completed on Kilcoran New Burgess GWS and on Fennor GWS. Both schemes have installed consumer meters to help pinpoint water loss on the network.

A Quality Assurance site visit was held with the Gurteenakilla GWS in November. The NFGWS is assisting the scheme with the implementation of the system.



NFGWS development officer, Barry Deane taking a sample for dissolved metals on Ashill GWS. Raw water sampling for a wide range of microbiological, chemical and physical parameters was carried out in October on all 14 Tipperary schemes involved in the programme to identify the zone of contribution (ZOC) to drinking water sources. Final ZOC reports will be presented to the schemes involved early in the New Year.



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Cavan

The County Council drew down the full €500,000 allocation towards GWS upgrades under the Rural Water Programme for 2013.

Provisional approval has been secured in respect of upgrade costs under the Capital Replacement Programme (CRP) for a number of schemes in West Cavan.

Applications for approval of CRP costs for schemes in the South West Cavan bundle are currently being considered.

Work to install an automatic meter reading system on Erne Valley GWS is ongoing.

Clifferna GWS has installed 11 bulk meters and associated telemetry. The scheme has submitted an application for funding to install more bulk meters next year. The revised NFGWS management training course was attended by 10 Clifferna board members recently.

Works are almost completed on Phase 2 of the Glangevlin GWS network rehabilitation project. This involves the installation of bulk meters with associated telemetry, as well as pressure reducing valves and sluice valves.

Upgrade works, including, the replacement of pumps, and installation of new operational monitoring equipment and a new chemical mixing system have been completed on Farmoyle/Barraghy GWS.

Dhuish GWS has completed upgrade works consisting of

the installation of bulk meters with associated telemetry, replacement of sluice valves and a number of small extensions.

Fencing of the GWS lake source to prevent direct access by livestock is well advanced.

A critical mains replacement contract is underway on Corlough GWS and is expected to continue in 2014.

Mountain Lodge GWS has recently replaced several valves and bulk meters and has installed a number of new bulk meters on branch lines.

Work to install bulk meters across the Drumkeery GWS network is well underway, as is the labelling of marker posts.

Ballymachugh GWS concentrated on network repair/leak detection during 2013 and is planning a water audit for the months ahead.

Mountainlodge GWS has replaced meters on 450 connections.

Castlerahan, Mounnugent, Munterconnacht GWS has completed the replacement of defective meters, as well as damaged surrounds and marker posts.

Crosserlough GWS has finished the installation of new bulk meters.

A training course in Chlorination & Chlorine Handling was held in Cavan on Wednesday, 30 October and was attended by 12 participants representing 5 group water schemes from Cavan and Monaghan.

County Cavan GWS Federation AGM will be held on 22 January.

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Donegal

Townawilly GWS is examining a post chlorination aeration process as a potential solution to a periodic issue the scheme has with THMs. The committee has installed fence-

ing around the lake source to prevent livestock access. Meter installation on the remaining consumers connections is ongoing, as are control measures to ensure water quality.



Her many friends in the GWS sector will wish heartfelt congratulations to Jean Gibson on the recent birth of her daughter, Sarah Jane.

Toraí GWS has been experiencing a number of operational difficulties of late, partly because the island's water assets are in a very corrosive environment. The scheme has asked to be taken-in-charge.

Environmental reports are being prepared in regard to running 1.8km of water main under Maghera Bay (a Special Area of Conservation). This is the only possible route to provide a treated public water supply to an isolated and small community currently supplied by Maghera GWS. Water on the scheme is non-compliant.

Monaghan

Aughnashalvey GWS has been busy on several fronts in recent months.

As part of a concerted effort to stop direct pollution of the lake source by preventing livestock access, an electric fence (powered by two solar panels) has been installed around most of the lake.

A GPS survey was completed internally, training having been procured from Cully Automation who provided the equipment as well as detailed drawings and data which was uploaded to a Sat Nav system. A valve replacement programme is almost completed. This has included installation of 126 air valves, 21 sluice valves, 35 scour valves, 14 fire hydrants, 2 bulk meters a secondary chlorination unit and a turbidity meter at the second reservoir site and a chlorine monitor at an end of the distribution network.

Signs on markers posts were also replaced: fire hydrants in yellow and all others in blue, to improve visibility.

Glaslough/Tyholland GWS is installing online process quality monitoring instruments for turbidity and chlorine on the outlet from their reservoir.

Tenders have been received and works are expected to be completed shortly.

The replacement of 3km of critical mains on Killanny/Reaghstown GWS is currently underway.

The scheme has installed a level sensor logger from Cully Automation on its Reaghstown reservoir.

Tydavnet GWS completed its installation of a duty & stand-by chlorine dosing system at the reservoir site.

Drumgole GWS completed 3.5km of critical mains replacement, as well as installing additional bulk meters, sluice valves and fire hydrants on the network.

Two additional chlorine monitors have been added to the scheme's telemetry system.

Works are well advanced on the construction of a new 100,000 gallon reservoir on Stranooden GWS. The contractor, Shay Murtagh Ltd expects that the reservoir will be in use early in 2014.

Magheracloone GWS has completed installation of 5 pressure reducing valves as part of an ongoing effort to reduce water wastage. Stretches of critical mains to be replaced over a period of several years have been identified.

Welcoming the installation of chlorine residual and turbidity monitoring equipment at Tully reservoir site, Glaslough/Tyholland GWS chairperson, David Wright said:

'This new technology will greatly assist us in our efforts to improve and maintain a high standard of treated water as part of our Quality Assurance Programme and it will also assist us in quickly detecting any turbidity in the water supply.'



Top: Reservoir construction by Shay Murtagh Ltd at Stranooden GWS. Middle: Monaghan GWS representatives who attended the conference marking the unveiling of the Tellus Border Project results. Bottom: Ballyhaise Agricultural College in conjunction with Teagasc organised a recent seminar and tour of the Corduff GWS catchment to raise the awareness of farmers involved in environmental schemes of the importance of protecting streams and rivers.

Monaghan County Federation AGM will be held on Monday, 20 January.

Monaghan County Council held a 'water and biodiversity'

workshop for primary schools recently.

Best wishes to Eilish McShane, who recently retired from Water Services, Monaghan County Council.

NATIONAL FEDERATION OF GROUP WATER SCHEMES

The National Federation of Group Water Schemes was formally established as a Co-operative Society in 1998.

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NATIONAL CO-ORDINATOR

Colm Brady	National Federation of Group Water Schemes 24 Old Cross Square Monaghan	Tel.: 047-72766 Mobile: 087-2300214 E-mail: colm@nfgws.ie
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STRATEGIC POLICY ADVISOR

Seán Clerkin	National Federation of Group Water Schemes 24 Old Cross Square Monaghan	Tel.: 047-72766 Fax: 047-72788 Mobile: 087-2808472 E-mail: sean@nfgws.ie
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STAFF

Julie Brannigan	NFGWS Clerical Officer 24 Old Cross Square Monaghan	Tel.: 047-72766 Mobile: 087-9574892 E-mail: julie@nfgws.ie
Karen Carney	NFGWS Health & Safety Officer Unit 29, N17 Business Park Galway Rd., Tuam, County Galway	Tel./Fax: 093-28712 Mobile: 087-2934297 E-mail: karen@nfgws.ie
Paul Connolly	NFGWS Development Officer Enterprise Centre Aiden Street Kiltimagh, County Mayo	Tel./Fax: 094-9381802 Mobile: 087-7478399 E-mail: paul@nfgws.ie
Barry Deane	NFGWS Joint Training Co-ordinator 12 Henry Street Tullamore, County Offaly	Tel.: 057-9328068 Mobile: 087-6866099 E-mail: barry@nfgws.ie
Catríona Devanny	NFGWS DBO Validation Officer Unit 29, N17 Business Park Galway Rd, Tuam, County Galway	Tel./Fax: 093-28712 Mobile: 087-2357157 E-mail: catriona@nfgws.ie
Joe Gallagher	NFGWS Joint Training Co-ordinator 12 Henry Street Tullamore, County Offaly	Tel./Fax: 057-9328068 Mobile: 087-2808471 E-mail: joe@nfgws.ie
Jean Gibson	NFGWS DBO Quality Assurance Officer 24 Old Cross Square Monaghan	Tel.: 047-72766 Mobile: 087-2509225 E-mail: jean@nfgws.ie
Brian MacDonald	NFGWS Research & Evaluation Officer Boyher, Rockcorry County Monaghan	Tel.: 042-9742228 Mobile: 087-2028051 E-mail: ruralwaternews@gmail.com