



RURAL WATER NEWS

Magazine of the Group Water Scheme Sector

Spring 2014 Volume 16 Issue 1

A matter of urgency publicly sourced GWS sector needs answers

A submission from the National Federation of Group Water Schemes to the Water Services Reform Programme has highlighted three issues that are ‘absolutely critical and in need of immediate attention’, if the growing concerns of the publicly sourced GWS sector are to be allayed.

Although Uisce Éireann/Irish Water assumed control of public water and wastewater assets on 1 January, the

organisers of publicly sourced schemes being supplied by the semi-State company are still none the wiser about their position.

The NFGWS now urges Irish Water to address these issues as a matter of urgency.

Focus Group

In light of growing frustration at the lack of information to date, a focus group comprising representatives of publicly sourced schemes from several counties met with NFGWS management and staff on 26

February to tease out the many issues facing the sector.

The meeting formed the unanimous view that there is urgent need for the development of policies and procedures that will ensure that ‘three areas of immediate and critical concern are proactively addressed’.

Listing these concerns, NFGWS National Co-ordinator, Colm Brady, explained that they need to be addressed without delay, ‘rather than at a later time, perhaps following

the occurrence of a major public health incident involving this sector’.

Inability to plan

Addressing the focus group meeting, GWS representatives admitted that they don’t know what to tell their members. As one commented:

‘How are we to set a price for water at the AGM when we won’t know until later in the year what the bulk price will be and if our costs will be taken into account?’

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Wind and solar energy provide the electricity required to run the drinking water treatment plant at Blakestown/Brittonstown in County Wicklow.

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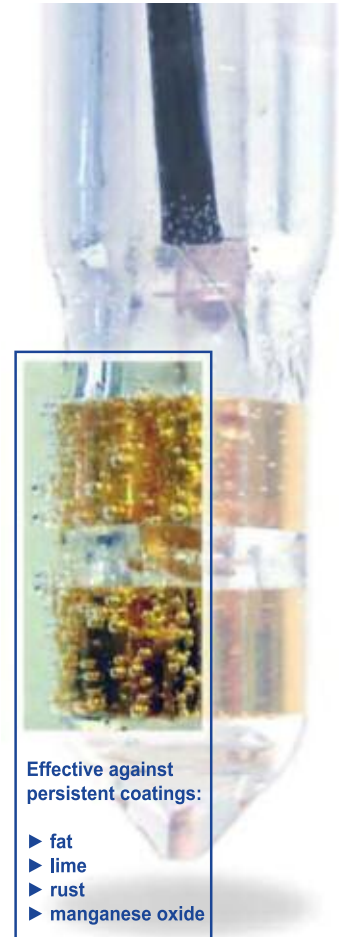
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Comment

We welcome the emerging emphasis on water services, especially vital drinking water services, arising from the huge media interest in the establishment of Uisce Éireann/Irish Water (IW). While IW may not have been overjoyed by the attention focused on its start-up costs (including the engagement of various consultants), nevertheless the new semi-state company must have been delighted with the focus on its new remit of responsibility for the drinking water services formerly delivered by 34 different local authorities.

With the imminent introduction of domestic charges for consumers on public mains, such consumers will inevitably demand value for money and this fact alone should drive better and more efficient quality services. IW has a golden opportunity to set up comprehensive, dedicated and responsive communications systems with its consumers.

A similarly efficient and responsive line of communications will, of course, have to be in place to address their future relationship with publicly source group water schemes.

In his recent address to the Annual Delegate Conference, NFGWS Chairperson, Brendan O'Mahony reiterated that our group schemes will **not** be taken over by IW (unless such schemes vote for takeover **or** in exceptional circumstances, such as where a serious public health issue arises and there is no committee in place to deal with it). Indeed, all of the recent water legislation passed by the Oireachtas provides for the rural water sector to continue to operate independently, supervised by and funded through the local authorities as heretofore.

The GWS sector has 10 times greater lengths of watermains per consumer connection to operate/maintain when compared with the public mains now operated by IW. The flip side is obviously that the rural water sector has 10 times fewer customers/members on which to levy charges. The NFGWS expects such factors to be taken into account in any review of funding requirements for the rural GWS sector.

We believe that rural communities will support their local group schemes in this era of change and would urge GWS boards/committees to do all in their power to encourage a large attendance at AGMs and to encourage members to play an active role in the praiseworthy task of securing the future of their own local group water scheme.

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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VAT payment issue for GWS sector

Arrangements in respect of VAT payments for GWS construction works dominated proceedings at the NFGWS Annual Delegate Conference in Athlone on 12 March.

Addressing delegates on behalf of the NFGWS auditors, Andrew Fuller explained that Principal Contractors must implement 'reverse charge VAT arrangements' in respect of all construction services that are subject to Relevant Contracts Tax (RCT).

Essentially, the system means that the principal contractor is liable to submit the VAT amount, as well as

any relevant contract tax deductions, directly to Revenue.

GWS as Principal Contractors

An issue arose as to whether a group water scheme could be considered to be a principal contractor under these rules.

The message to delegates was that the legislative definition of Principal Contractor appears to include group water schemes as entities that carry on "gas, water, electricity, hydraulic power, dock, canal or railway" undertakings.

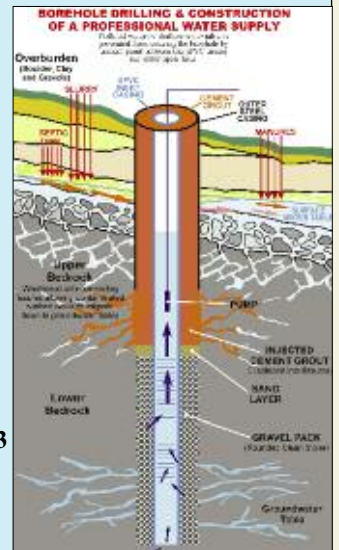
In this context the reverse charge VAT rules would apply to the GWS sector.

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Welcoming the GWS representatives to the focus group (pictured below), Mr Brady gave a presentation on several pertinent issues, including the results of an NFGWS survey in relation to operational issues for publicly sourced group schemes, such as length of network and costs.

He said that summary data from this survey indicates that schemes incur substantial operational and maintenance costs on the safe delivery of water from a connecting bulk meter to their members' taps.

Q&A

The formal presentation was followed by a question and answer session, during which a wide range of issues were discussed.

The consensus of participants was that all of the issues and concerns outlined in an earlier NFGWS submission on the issue of publicly sourced schemes represent real and genuine concerns for the sector.

While none of the issues identified are of lesser importance than others, it became apparent that three

issues [as outlined in the submission below] were considered 'absolutely critical and in need of immediate attention'.

Issues

Amongst other important issues and concerns discussed were the following:

- The need for early information on Irish Water charging policies and levels. Publicly sourced GWSs need to plan now and set their own charging levels for 2014. It is difficult to do this with the uncertainty around proposed IW charges.

- The status quo regarding water charges to these schemes should be left in place for the full 2014 year.
- The "daisy chain" GWS system was discussed. It was suggested that perhaps the most efficient way for these schemes to survive would be through amalgamation. Some incentive should be built into overall policy to encourage this.
- IW is sometimes supplied with its own water through publicly sourced GWSs and there are also instances of shared infrastructure.

Key issues highlighted in NFGWS submission

1. The operating costs incurred on safe delivery of water from the connecting bulk meter to the GWS member must be recognised and catered for in a straight-forward and sustainable manner.

2. Publicly sourced GWS, up until 1 January 2014, had a relationship with their Local Authority which was their water supplier, their funding

conduit and their supervisory authority.

This relationship is now divided between the LA and Irish Water. These relationships, and their many elements and interactions, need to be clearly defined and documented without delay.

3. Legislation continues to provide for the "Taking in Charge" of group water schemes. However there is

an immediate and urgent need to develop definite policies and procedures around this important element of drinking water services provision. There is a clear need to outline in detail the roles and responsibilities of the various entities (DECLG, LA, HSE, EPA, IW, GWS, NFGWS) regarding this function and how they should interact in order to

ensure efficient take-overs when the need arises.

(This particular issue has also been raised as being relevant to the privately sourced GWS sector).

The submission concluded by reiterating the urgent need for the above three issues to get immediate consideration as part of the Water Sector Reform Programme implementation process.'



- Concern that IW could “force” GWSs into a take-over situation by increasing water charges to an unmanageable level. The GWSs’ rights as customers of IW need to be protected.
- The potential for schemes coming together and using their “bulk buying power” to negotiate considerably more favourable terms with IW.

Consensus

The general consensus of the meeting was that there is a real and continuing role for publicly sourced, community-run group water schemes, as they provide a vital resource to many rural communities and need to be supported and encouraged to continue providing that service.

The local community concept of the GWS has worked well and there is no reason that this shouldn’t continue.

The general feeling was that, with a little support, the local GWS will be in a better

position to respond quickly and efficiently to local issues and incidents as they occur and that the local involvement – and the employment provided – contribute to community pride and encourage an additional respect for the service from members.

A number of considerations were put forward as being essential if local communities and GWS organisers are to continue managing and maintaining their water supply service including;

1. The GWS must be in a position to provide a very competitive (including cheaper) service to its members.
2. GWS organisers must not become mere “water charge collection agents” for Irish Water.

Thanks

Concluding the meeting, Mr Brady thanked the GWS personnel for attending and for their valuable input. He advised that further meetings may take place as necessary.



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Annual Delegate Conference

defence of operational subsidy a priority

Mounting concerns over the implications of the water reform programme for the GWS sector, attracted one of the largest attendances ever to the Annual Delegate Conference which was held in Athlone on 12 March.

While the scheduled guest speaker, Environment Minister of State Fergus O'Dowd, TD, was unable to attend, the 93 delegates (77 voting delegates) from 18 counties present approved 41 motions, all of which have since been forwarded to the Minister's Department.

Amongst these, a priority issue for group schemes is the defence of subvention entitlements (including subsidy and capital grant supports). Indeed, this issue accounted for more than half of all motions submitted by county federations.

Cork Federation called on the NFGWS to 'actively canvass' the DECLG 'to ensure that GWS operational subsidies are maintained at current levels at a minimum'.

Cavan Federation linked payment of such subsidies to the future sustainability of the sector, arguing that it is necessary 'to ensure that top quality drinking water standards are maintained'.

For Mayo and Sligo Federations, this is a key issue for group water schemes in DBO projects, as they had agreed long-term arrangements 'on the understanding and in the expectation that subsidy for DBO Operational and Maintenance contracts would continue for the lifetime of the contracts'.

The concerns of small schemes in relation to opera-



Above: A section of the larger than usual attendance at the ADC. **Right:** Andrew Fuller presented the annual audited accounts and also provided an interesting presentation on the rules for payment of VAT in respect of sub-contractors on construction projects (see page 3).

tional subsidy were expressed in a motion from Kildare and Wicklow Federation, asking 'that the considerable financial pressures many smaller group water schemes experience, due to the smaller membership over which to spread costs and their consequently very high water charges, are taken into account in any future review of funding arrangements for the sector'.

Capital

Motions from Clare and Galway linked the issues of operational subsidies and capital grants under the Rural Water Programme, while no fewer than 10 motions dealt specifically with capital supports for GWS infrastructural projects.

For Tipperary and Kilkenny Federations, such supports need to 'remain in place indefinitely at current levels', while



Louth Federation argued that capital support is required towards 'the improvement & necessary expansion' of GWS infrastructure'.

A motion from Roscommon, made the case for capital supports towards 'refurbishment (including the replacement of saddles, joints etc.) of Group Water Scheme distribution mains where full replacement is not necessary'.

Limerick Federation called for capital support for 'additional in-line continuous monitoring equipment to ensure that water quality on the extremi-

ties of Group Water Scheme networks is fully compliant with various parameters'.

A further motion from the same Federation reflected frustration that 'three GWSs in Limerick have unsuccessfully applied for funding for essential upgrading works with estimated costs of in excess of €300,000 each year for the last 3-4 years'.

Similarly, a Mayo motion served to remind delegates that the removal of CLAR funding has prevented the construction of schemes depending on such grant support.

Reform

Motions from Galway, Laois and Monaghan Federations addressed the future of the relationship between the GWS sector and local authorities in the age of water reform, the Laois motion calling on the NFGWS to ensure that the DECLG ‘provides for adequate staffing levels within Local Authorities for the purposes of satisfactorily administering the Rural Water Programme and associated support services for the GWS sector’.

Six Federations submitted motions highlighting the particular concerns of the publicly sourced GWS sector, with Mayo Federation arguing that their ‘unique position ... is acknowledged and catered for as part of the overall Water Sector Reform implementation strategy’.

A Cavan motion demanding that ‘the additional costs associated with maintenance and

administration “downstream” of the bulk meter are given due consideration’, was echoed in the Mayo motion and in a Leitrim motion.

Fracking

Three motions – from Clare, Leitrim and Roscommon – were passed in relation to the controversial process of fracturing for shale gas, all calling on the NFGWS to monitor developments in this area and to ensure that the interests of group schemes are defended.

The Roscommon motion specifically requested the NFGWS to ensure that ‘due consideration is given to GWS source zone of contribution/catchment reports by any organisation (consultants, companies, research teams etc.) involved in environmental impact assessments and site suitability assessments associated with proposals to extract shale gas using hydraulic fracturing’.

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Top: NFGWS development officer, Barry Deane (left), with Tipperary and Mayo GWS personnel at the ADC.

Bottom: Galway delegates to the ADC pictured with NFGWS development staff, Karen Carney (3rd from left) and Catriona Greaney (left).

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Miscellaneous

A Clare motion seeking powers – equal to those given to Irish Water – for group schemes dealing with pipelines through private

lands and a Limerick motion expressing concerns about a proposed mining project were amongst seven topics addressed under the miscellaneous heading.

Donegal Federation called

for the appointment of an NFGWS Health & Safety Advisor, while Carlow/Wexford Federation urged the appointment of additional staff to promote our ‘excellent’ educational curriculum.

Securing group rates for insurance and laboratory costs was proposed by Tipperary and Louth respectively, while Cork Federation suggested a reduction in ICOS affiliation fees.



ADC delegates supported an expansion of the NFGWS Board to 13 members. Three of these – Hugh O’Reilly (Monaghan), Michael Keaveney (Leitrim) and Aidan McNabola (Galway) – join the Board for the first time, following the decision by Michael John Kilgannon (Galway) and Mac Boyd (Monaghan) to stand down after long years of service to the Federation.



Pictures from the NFGWS Annual Delegate Conference

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Representations

NFGWS National Co-ordinator, Colm Brady explained that representations – including to Government at the highest levels – over several years had failed to get clarification on this point and the issue remained unclear until now.

On the day of the ADC a communication was received from the Office of the Minister of Finance via the

DECLG. On the basis of this communication Mr Brady advised:

‘Group schemes hiring contractors for construction works as defined in the legislation (including leak repairs) should register with Revenue and implement the Reverse Charge VAT system.’

GWSs were advised to consult their own financial advisor for assistance in implementing the measure.

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Ambitious programme of ZOC delineation work for 2014

Data has been collated in respect of some 60 GWS groundwater sources that are scheduled to have Zone of Contribution (ZOC) delineation studies completed in 2014, while catchment evaluation work has already begun on a further 18 GWS surface water supplies.

Source data sheets, including co-ordinates, as well as photographs and historic water quality results have been collated by NFGWS staff for spring and borehole sources across Carlow, Galway, Laois, Leitrim, Longford, Mayo, Roscommon, Wexford and Wicklow.

The complex (karst) nature of source catchments in some areas was discussed at a joint NFGWS/GSI meeting, as was the limitation posed by the available funding in evaluating such sources individually.

The GSI agreed to consider grouping some such schemes, so that they might be dealt

with by a consultant hydrogeologist as one large ZOC delineation project, similar to that completed last year in Kilkenny's Nuenna Valley.

Federated

Given the scale of staff resources required to advance ZOC projects, the NFGWS Board has agreed that only schemes federated in 2013 will be assisted this year.

The value of this project was underlined at recent meetings in Kilkenny, Offaly and Tipperary when the hydrogeologists who completed the work joined GSI and NFGWS staff in presenting their findings to GWS representatives.

The remainder of the 44 reports completed thus far will be presented to schemes in North Tipperary and Limerick in April.

Meanwhile, evaluations of surface waters in Cavan and Monaghan are well advanced and work is expected to be completed in the coming months on lake sources in Clare and Mayo.



NFGWS development officer, Barry Deane, addressing GWS representatives from the Nuenna Valley (Kilkenny) at the presentation of ZOC delineation reports by hydrogeologists Coran Kelly, Jenny Deakin and GSI staff.

Presentation of VTEC study results

An information evening was held on February 3 at National University of Ireland, Galway to present the results of a pilot study conducted last autumn into detection of verotoxigenic *E. coli* (VTEC) at group water schemes (GWS) in the East Galway area.

The Antimicrobial Resistance and Microbial Ecology (ARME) Group at the School of Medicine NUI Galway revealed that the study had 'consistently detected VTEC in source waters from participating supplies'.

The study also found that disinfection measures applied by individual schemes were successful in removing VTEC.

Following the presentation, the GWS representatives present gave their thoughts on the findings of the study, opening up a discussion around treatment methods,

potential sources for VTEC contamination of groundwater sources and the importance of source protection.

ENVIRON 2014

Results of this study were also presented at the 24th Irish Environmental Researchers' Colloquium (ENVIRON 2014), held in Trinity College Dublin from 26-28 February.

The presentation generated a

lot of interest amongst audience members, including EPA and Marine Institute representatives and researchers working on groundwater vulnerability.

The ARME group is actively investigating funding opportunities with a view to developing the technology further and expanding their screening of raw and treated waters for VTEC contamination.'



Several participating group schemes were represented at the presentation by the ARME Group of findings from the VTEC study. Also present were NFGWS staff members and the veterinary officer for Galway Co. Council.

New study probes NOM and Pta risk to water supplies

An EPA-funded study has been established to quantify the risk posed to surface and groundwater supplies in Ireland by natural organic matter (NOM) and by ptaquiloside (Pta) which is released from bracken.

Key partners in this project include TCD, NUIG, the NFGWS and the Department of Food, Environment and Rural Affairs in Britain.

Several group water schemes in the West of Ireland will be included in the study.

Natural Organic Matter

NOM is one of the main sources of environmental pollution to surface drinking water supplies.

It contributes to the fouling of membranes, serves as a precursor for the formation

of carcinogen tri-halomethanes (THMs) and increases the exhaustion and usage rate of coagulant and disinfectant dosages.

In recent years, successive EPA reports have shown that an unacceptably high number of drinking water supplies exceeded the parametric value of 100 µg/litre for THMs, while many more recorded Total Organic Carbon levels above 2 mg/l, suggesting a risk of THM formation.

Bracken

There is increased awareness and concern also surrounding the risk posed to our drinking waters by naturally occurring toxins such as ptaquiloside (Pta) released from bracken.

It is expected that the invasion of bracken in Ireland will

be more aggressive in the years ahead.

However, there is no national Pta and bracken distribution data available for water managers on which to form decisions surrounding the management of drinking water resources.

Objective

The overall objective of this project is to quantify accurately the risk posed by NOM and Pta.

High risk surface drinking water supply catchments will be identified, with NOM and Pta monitoring being conducted in selected catchments.

The 30 months research project is scheduled to be completed by September 2016.



Bracken releases a toxin that poses a risk to drinking water supplies.



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Raw sewage & the environment

– EPA report

Seven years after the Galway Cryptosporidium outbreak of 2007, sewage from many municipal wastewater treatment plants continues to pose a risk to environmental and human health.

An EPA report released on 13 March reveals that while 94% of Ireland's urban waste water now gets secondary treatment, untreated sewage is discharged into the aquatic

environment from as many as 42 urban areas, while 44 large urban areas did not comply with EU quality standards.

Data from the EPA's *Focus on Urban Waste Water 2012*, shows that significant improvement is needed in the infrastructure and management of waste water from Ireland's towns and villages.

Gerard O'Leary, Director of the EPA's Office of

Environmental Enforcement said:

"Ireland has made progress in the last decade in treating wastewater by investing in waste water infrastructure. Despite this investment, sewage from 42 towns and villages discharges untreated into our rivers and coastal waters, putting the environment and people's health under threat. This practice needs to be eliminated."

Infrastructure

Seven larger urban areas did not comply with the 1991 EU Directive requirement to provide secondary treatment for waste water (secondary treatment is the minimum treatment level that is required for these areas).

Commenting on evidence of poor plant performance at many waste water treatment facilities, David Flynn of the Office of Environmental Enforcement said:

"The causes of one in three sewage plant incidents reported to the EPA can be attributed to inadequate management practices by operators. Solving these management issues is not just about investment and building new plants – it requires better management of the technology in place."

"Consolidation of water service management in Irish Water now presents an opportunity to deliver consistency and better practice in the operation of these strategic assets."

Best water quality results in over a decade on impacted Monaghan river

Good news on the waterfront, as the EPA's 2013 monitoring programme has shown a very significant water quality improvement in the Blackwater River in North Monaghan.

Environmental Scientist with Monaghan County Council, Bernie O'Flaherty, welcomed 'the best water quality results in over a decade in a 10 km stretch of the Mountain Water river upstream of Emyvale village and in a 20 km stretch of the River Blackwater catchment

upstream of Monaghan town'.

This is particularly good news for Glaslough/Tyholland GWS, as a millrace from the Mountain Water is the main feeder stream to their Emy Lough source.

Investments

According to Ms O'Flaherty, the improvement in water quality is largely attributed to 'significant investments' in farm buildings, reduced fertiliser use and better management of animal manures and effluents by the farming community. She adds:

'Monaghan County Council has dedicated significant resources over recent years in measures to protect waterways. One such measure has been working with the agricultural community to raise awareness and eliminate polluting discharges.'

'Monitoring has shown a steady decline in river phosphate levels. While phosphate is a valuable fertiliser on land it is very damaging in waterways.'

Investigations

Pollution investigations by the Council's Environmental Section have revealed a range of issues to be resolved: dumping of organic materials, neglected waste water treatment systems, excess siltation from river bank erosion and drainage and misuse of drains.

Ms O'Flaherty says that while large point sources of pollution have generally been eliminated, 'the multitude of small point and diffuse sources are still affecting many of our waterways'.

Wetlands resource for schools

The EPA has launched 'Exploring Irish Wetland Habitats', a new teaching resource to support Post Primary schools in subjects such as rivers and lakes, turloughs, bogs and fens.

Speaking at the launch, Tadhg O'Mahony, Senior Scientific Officer, EPA said: 'Rich in biodiversity, wetland habitats provide a wide range of benefits and services.'

'Wetlands have an important role to play in flood relief, landscape, regulation of the water cycle and the provision of water for drinking supplies, agriculture, industry, recreation, transport and fishing.'

While progress in the Blackwater catchment shows what can be achieved, she cautions:

'Reversing the decline in water quality that has occurred over the last 40 years and meeting European targets will take considerable efforts over the coming years.'



Bernie O'Flaherty was one of several County Monaghan-based participants at a recent training course hosted by the University of Ulster on citizen engagement in the protection of the aquatic environment.

On the water front

by Brian MacDonald

A recent visit to The Heath GWS in County Laois provided further evidence of the benefits of a well-managed distribution network. Board member, Louis Troy was telling me that a few years ago this 320-house scheme was pumping upwards of 600m³ each day. The electricity bill in 2011 totalled €10,500. Universal metering was completed by 2012. Since then daily abstraction from their spring source has dropped to less than 300m³ per day, the electricity bill fell to €4,000 for the year and chlorine usage was halved. It's hard to argue with those figures.

The debate over fluoridation of public drinking water supplies is back in the news, with the recent announcement by Agriculture Minister Simon Coveney that an 'independent expert group' will 'review' the controversial practice. Minister Coveney's announcement came as Cork County Council followed the example of several urban councils in calling for an end to the practice of fluoridation.

The fact that a large majority of councillors voted in favour of the motion and that it attracted cross party support is a sure sign that the public mood is decidedly anti-fluoridation.

Weighed against the real (and growing) public perception that fluoridation of drinking water has negative health effects, the

counter-argument – that such claims have yet to be scientifically proven and that there is an established benefit in terms of reducing cavities in teeth – is probably on a hiding to nothing. An end to compulsory water fluoridation in the not too distant future will come as no surprise.

Local Authorities wondering what to do in relation to leakage on publicly sourced group schemes where no active committee is in place might well refer to what Irish Water had to say on that very issue when the question was put to them by Laois County Council. Irish Water pointed out that the council 'should arrange for the repair of any leaks/bursts in any public group water scheme where there is no active committee in place and the size of the leak/burst is a direct threat to security of supply or water quality for existing public supplies/consumers downstream of the leak'.

The advice added that 'the cost of these repairs should be ring-fenced and charged against the appropriate network maintenance code/water conservation code and recouped through the SLA [service level agreement] in the normal manner'.

Where there is an active GWS committee in place the council 'should request the committee to arrange for the repair works to be carried out themselves'. Any costs involving council staff in supervising or checking of these repair works 'should be charged into the appropriate code and recouped through the SLA'.

As regards takeover, the council was advised that 'any future taking in charge of these schemes by Irish Water will involve a full survey and condition assessment of the scheme and an accurate account of its domestic and non-domestic connections'.

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NETLAKE – linking lakes and researchers across Europe

There is now a growing consensus that the best initiatives in the water sector are those that bring together researchers and stakeholders from a range of disciplines, sectors and geographical regions.

The NETLAKE Cost Action is a collaborative network that includes researchers, water managers, local lake groups and policy makers from 24 European countries, with links also to researchers in the USA, Australia and New Zealand.

Chaired by Dr Eleanor Jennings, Director of the Centre for Freshwater and Environmental Studies at Dundalk Institute of Technology, NETLAKE includes representation from the National Federation of Group Water Schemes on its management committee.

Indeed, the initiative may be regarded (in part) as a follow-on from the National Source Protection Pilot Project, and the close collaboration that has

developed over nearly a decade between the NFGWS and the Centre for Freshwater and Environmental Studies.

Automatic sensors

Until recently, monitoring of lakes relied solely on water samples collected at weekly or fortnightly intervals.

NETLAKE participants, however, have a particular interest in the use of automatic sensors on lakes, as these capture data on water quality at high frequency, relaying that data directly from the lake to a computer.

These systems provide a better understanding of changes that happen at short timescales, such as those that control oxygen depletion, changes in water clarity and the occurrence of toxic algal blooms.

Such insights are now becoming more urgent given the current increase in the frequency and severity of extreme weather events due to climate change.



Storm events, for example, result in large pulses in the inflow of nutrients and sediment to lakes and also cause physical mixing of the lake water column.

High frequency measurement of the local weather, water temperature, dissolved oxygen and algal fluorescence by these *in situ* stations can capture both the drivers of changes and the biological responses at the timescales required to understand them.

Working groups

NETLAKE is divided into four working groups which meet at least bi-annually: two focus on the technology of monitoring stations and analysis of resulting data, while the remaining two groups are trying to bridge communication

gaps between scientists and local lake users/water managers (including drinking water providers).

Planned outputs include an on-line database to provide information on where these sites are, what is being measured and how, and a tool-box of data analysis tools and standard operating procedures.

Exchange visits (Short-Term Scientific Missions) between participants from different countries are also being funded to facilitate collaborative research, as are Training Schools for researchers and other lake users, the first of which will take place at the Erken Field Laboratory, Sweden, in June.

Other NETLAKE initiatives include a Water Pals schools project – to both inform children about lakes and allow them to link to schoolchildren in other NETLAKE countries – and a citizen recorder project that will harness local citizens to record supplementary data from NETLAKE sites.

Now in its second year, the NETLAKE COST Action will continue until the end of 2016. For more information, visit www.netlake.org

COST (Collaboration in Science and Technology) has supported networking among scientists in Europe for over twenty years in all areas of science.



NETLAKE scientists, researchers and water managers met in Budapest last August as part of the COST action. Top: The sensor on Lough Feeagh near Newport, County Mayo, is deployed by staff at the Marine Institute to build a better understanding of the dynamic processes impacting on Irish lakes (pic courtesy of Marine Institute).

Climate Change and Group Water Schemes

Perceptions, Risks and Adaptation Options

In their most recent report, the Intergovernmental Panel on Climate Change (IPCC) state that it is 'likely' that there will be increases in extreme high sea levels, droughts and intense tropical cyclones, and 'very likely' that warm spells and heavy precipitation events will increase.

An increase in the frequency and intensity of extreme weather-related events is anticipated worldwide, with Ireland expected to experience an increase in heat waves, intensified storms, droughts and severe flooding annually.

Such alterations have the capacity to have an adverse effect on Irish society including Irish agriculture, health implications and accelerated pressures on water supplies.

It has been acknowledged that climate is the fundamental driver of the hydrological cycle, where a change in either the water cycle or climate system would stimulate variation in the other due to their close connection.

Weather events

Both short-term and long-term climate change, in addition to sporadic extreme weather events, will greatly affect the water sector in Ireland.

Identifying potential risks for case-specific group water schemes, and implementing adaptation measures and strategies is vital to withstanding future climatic events and ensuring that a consistent, good quality supply of water is circulated.

Are GWS stakeholders concerned about climate change? In March 2013, a questionnaire was distributed to atten-

Climate change is considered one of the most complex environmental issues currently facing the global community, being cited as 'the most serious threat of the twenty-first century', but is it a matter that should concern drinking water suppliers? This is the question addressed by NUI Maynooth graduate, **Niamh Carroll**, who recently completed an in-depth study of GWS stakeholders' perceptions of climate change and investigated the risk climate change poses to group water schemes.

Having grown up in the rural water sector, working for several years with Mid-Roscommon GWS, in January 2014 Niamh commenced an internship with the New York based Human Impacts Institute.

dees of the NFGWS Delegate Conference in Athlone, regarding their perceptions of climate change and how prepared their group scheme is for climate change affects.

The results were as follows:

- 83.6% accepted that climate change is happening now.
- 69.9% were concerned about climate change.
- 56.2% believed that climate change needs to be dealt with as a matter of urgency.
- 28.8% considered that current water management practices undertaken in Ireland are robust enough to deal with the impacts of climate change.
- 64.4% thought that every GWS should undertake

assessments regarding their vulnerability to climate change.

- 78% had not taken climate change into consideration in any development projects that occurred on their GWS in the previous year.
- Only 6.8% of respondents conserved water through rainwater harvesting.
- 53.4% stated that their GWS has water storage measures, including reservoirs and water storage tanks.
- 89% considered water charges as the most effective way of conserving water and reducing leakage.
- 76.7% highlighted the need for the introduction of a

nationwide strategic approach to water services policy, incorporating climate change impacts.

- 82.2% thought that an information course on climate change and its relevance to the water sector would be beneficial.
- 86.3% believed that GWS members should be educated on the issue.
- 52.1% stated that the cost involved in implementing adaptation strategies is preventing them being introduced.
- 67.1% accepted that if they knew more about climate change they would do more to reduce its impact on the water sector.

The main areas of concern for respondents can be summarised as follows:

- Source protection
- Excessive rainfall
- Pollution
- Water shortages and drought
- Extreme weather events
- Lack of knowledge
- Funding and ability to adapt
- Deterioration of raw water quality
- Rising water levels and flooding
- Infrastructure failure
- Water supply security

Contrast

In stark contrast to these findings, discussions with GWS managers in June 2013 indicated a lack of concern about the issue, the view being that climate change will not pose any threat to them personally or their group scheme.

Such divergent views highlight the importance of placing the facts about climate change at the centre of public discourse.



With climate change, severe weather events are likely to increase the incidence of sudden and serious flooding and nutrient run-off over large parts of Ireland. Are group water schemes equipped to deal with any resulting (and sudden) rise in turbidity and colour levels in raw water, as well as with the increased risk of microbiological contamination?

Projection

The projection of future alterations in the Irish climate is an important issue for water resource managers.

Using the period 1961-1990 as a baseline, research suggests that the Irish climate will get warmer, especially in summer and autumn, with the greatest warming occurring in the east and south.

Temperature increases of between 0.75-1.0 degree Celsius are projected by the 2020s, with an increase of between 1.4-1.8 degrees Celsius by the 2050s.

An average increase of at least 2 degrees Celsius per season is simulated for the 2080s.

By the 2020s, an increase in winter precipitation of

1.8-4.2% is anticipated, with a decrease in summer precipitation of 0.2-6.7%.

Synoptic weather stations along the south and east coasts will experience summer reductions of 10-16% by the 2020s, with 2050s projections indicating an increase of 12% rainfall in winter and reductions of 12% in summer.

Adverse effects

Such changes in the Irish climate are capable of instigating significant adverse effects on the Irish water supply, with a deterioration in raw water quality being especially problematic given the additional treatment that will be required.

This is an issue particularly for group water schemes involved in DBO contracts,

where treatment processes are designed to cope with agreed parametric values.

In the event of a deterioration in parameters such as colour, turbidity and total organic carbon (all of which are likely to be especially effected by climate change) values may no longer be in spec with those agreed in the contract.

Thus care will be required in tendering such contracts to ensure future proofing for parametric change and this has the potential to increase treatment costs to the scheme.

Any deterioration in raw water quality for non-DBO schemes will entail additional treatment costs also, particularly where the need arises for improved filtration pre-disinfection.

Impact

Climate change will impact on both surface and groundwater sources, but the impact will vary from region to region.

Simulations indicate decreases in stream flow, with the greatest decreases occurring in the late summer and autumn months.

Reduced levels of groundwater in all types of aquifers will have detrimental consequences for the overall water supply (as these feed surface waters during periods of drought).

The availability of groundwater in fissured and karstic aquifers where there is a fast throughput of water could significantly decrease in summer months.

Groundwater sources that flow from poorly productive aquifers will have an increased likelihood of drying up due to reductions during recharge periods.

By contrast, catchments that have a higher storage capacity are considered to be less vulnerable to the impacts

of climate change than those with lower storage capacity, as higher storage will offset summer droughts while also reducing the risk of winter flooding.

Changes in winter precipitation may have substantial impacts for groundwater recharge due to the decrease in the amount of water that is infiltrated to storage.

In addition, alterations in temperature and precipitation conditions (e.g. an increased frequency of shorter, more intense periods of rainfall) will change the growing season.

With such increases in annual temperatures, reductions in mean annual precipitation, prolonged dry periods and drought conditions projected, regional water shortages are a top-priority concern throughout the country, especially for those with spring and lake sources.

As a consequence, we will experience a variation in agricultural practices in Ireland, with increased usage of irrigation systems in the south and east.

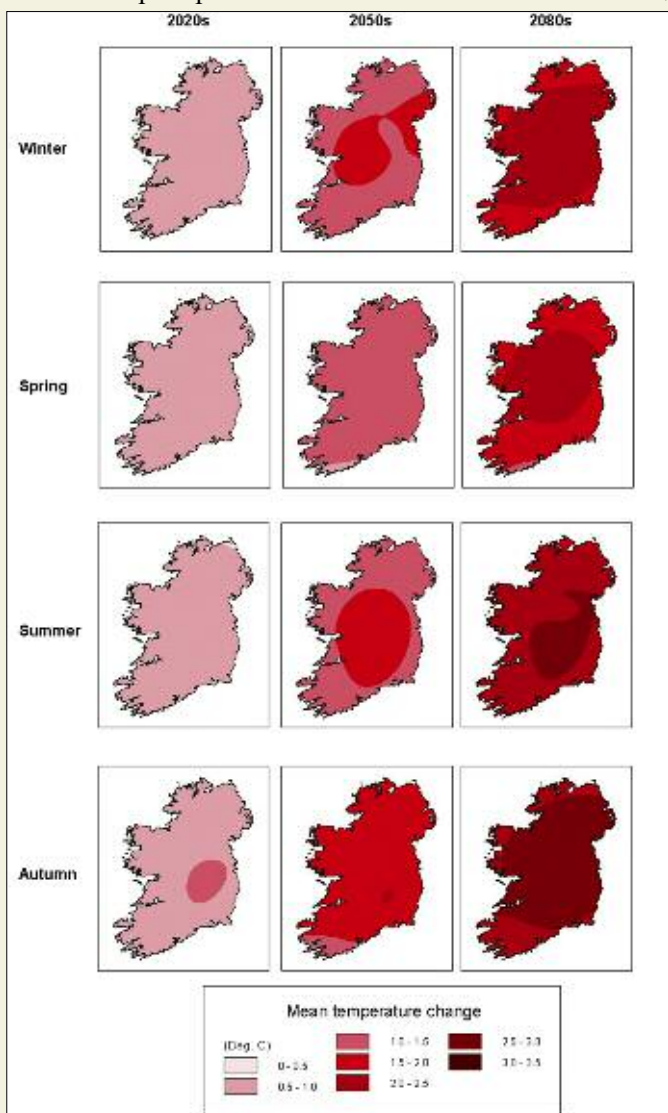
Prolonged dry periods and higher temperatures, followed by intensive rainfall, will increase the likelihood and the intensity of lake stratification and algal blooms, while also increasing the risk of nutrient run-off.

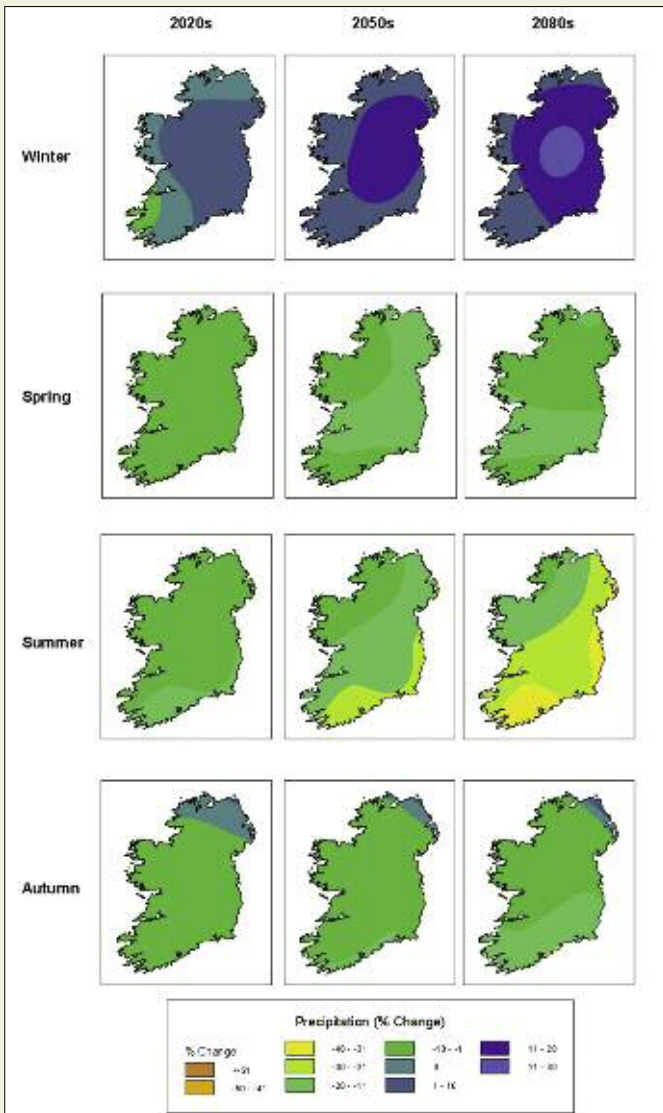
Conversely, an increase in rainfall and flooding also has the potential to contaminate and pollute all types of water sources (as those of us who live in karst regions know only too well).

Adaptation

A key process in alleviating the potential impact of climate change is adaptation. Although they may not know it, various adaptation measures and strategies have already been established and implemented in group schemes around Ireland!

Using statistical downscaling methods, future projections of mean temperature change and precipitation have been generated.





Future projections of mean precipitation.

These include the installation of water meters, construction of reservoirs and interconnections between neighbouring water supply networks, as well as educating school students through initiatives such as the *All About Water* curriculum and the Green Schools Programme.

More needs to be done, but water resource managers maintain that lack of education, finance and technology are the main obstacles to the further application of climate change adaptation measures. Greater awareness at local level would help inform a more sophisticated and targeted approach by group water schemes to the adoption and implementation of adaptation options, assisting

in the conservation of water and leading to a more dependable supply being distributed.

Conclusion

It is accepted that all water resources are vulnerable to weather conditions and to climate events. The water sources of group water schemes are no exception and those who manage such schemes have to prepare now for the major changes in weather patterns and climate that are currently underway.

Their capacity to adjust to a changing climate will be highly dependent on the ability of group water schemes to introduce both technological and scientific advances into their decision-making processes in an integrated and environmentally sustainable fashion.



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Management of potential risks associated with climate variations requires consideration of local factors that may influence potential impacts on group schemes.

Failure to implement adaptation strategies and to ensure that water supplies are sufficiently robust to withstand climate change will increase vulnerability. These are not a sustainable option.

Efforts must be made in the present day to alleviate the likely future impacts of cli-

mate change on the water services sector and to increase education about the issue.

If steps are not taken in the coming years, future generations will certainly suffer the consequences of our neglect.

The author sincerely thanks all of the GWS board members and managers who contributed information to her research.

What's new in the Water Industry

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Manage our Water

The importance (and value) of having effective communications systems in place between a GWS Board/management and the membership cannot be overstated.

This issue is addressed by **Manage our Water**, a simple, easy to use customer data management system designed by a Galway based company, Lurtel Ltd, specifically for Irish group water schemes.

Lurtel Ltd has been providing text message and child data management systems to Irish Primary Schools and preschools for the last 5 years and, in response to demand, has adapted this system to suit the needs of the GWS sector.

This is a cloud based, on-line system, and is available for any size of GWS.

Manage our Water is primarily a text messaging system that allows the GWS Board, manager or caretaker to send bulk text messages to the entire scheme membership, to different routes on the scheme or to specific individuals. Texting allows reminders to be sent for overdue payments, prior notification when meters are being read, alerts in the event of a disruption or emergency, tips and advice to avoid leaks during very cold weather, or simply to keep the customers up to date with all that is taking place within the scheme itself.

98% of people read text messages and it is a proven and very effective method of communication.

A GWS manager in Mayo asserts that the 'system is great as it keeps track of all communications with the customer and is by far the most

cost effective way of communication – particularly when compared to the cost of postage, having to call door to door'.

Lurtel Ltd provides excellent start-up support and can even provide a service to run the system on behalf of the scheme, if necessary.

For more information call the Galway office of Lurtel Ltd on 091 395806 or visit:

www.manageourwater.ie

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Their K-400 chlorine analyser uses unique patented technology that guarantees reliable and accurate operation whatever the conditions. Impurities (e.g. iron, manganese and lime) that can be problematic to other analysers are no problem to the Kuntze K-400, as its automatic cleaning system utilises electrolysis to literally vaporise any contaminant build up on the measuring probes.

Unlike other systems, there are no membranes or electrolyte solutions to replace, no moving parts that physically abrade the measuring electrode and, most importantly, the maintenance and



Above: IPL's DataTaker logging system. Right: The Kuntze K-400 chlorine analyser.



calibration required is very infrequent.

The K-400 also boasts very low power consumption, reliable dosing control and uses only 30 litres/hour of water. IPL Group is currently combining the Kuntze K-400 with their **DataTaker** logging systems, which incorporate strong SCADA features and an in-built GPRS modem that allows plants and pump houses to be viewed live via the internet.

Email and SMS alarms notify schemes of any problems, while data stored on the DataTaker can be emailed automatically to the scheme's PC or can be viewed or downloaded over the internet. The in-built web server in the DataTaker means that there is **no hosting cost** for data and live interaction with the system is always possible.

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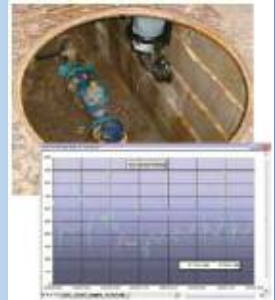
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Regional Reports

Connacht Region

by
Karen Carney,
Paul Connolly and Joe Gallagher

Galway

A technical report on the addition of validated UV systems to treatment plants in Galway DBO bundle 1 has been prepared by the contractor, as has a report on the proposed installation of ozone treatment in the Claran GWS treatment plant to address ongoing THM issues.

The installation of a validated UV system on Lettergesh Mullaghgloss GWS was completed last December. This system was commissioned on 17 February and is now up and running.

Variations to address specific raw water issues on several treatment facilities in DBO bundle 2 are at various stages of development, as follows: Civil works on the variations to Ballinabanaba and CBC GWS treatment plants have been completed in recent weeks.

Civil construction on the variation to Lydacan GWS is also completed and mechanical installation is underway. The go-ahead is still awaited for the proposed variation on Gallagh GWS.

With regard to the advance works 8 contract (i.e. completion of earlier contracts on CBC, Clonbur/Cornamona, Ballinakill, Barnaderg Gortbeg, Bullaun, Gallagh and Kilconieron and additional pipelaying in CBC, Menlough and Ballyaneen Rakerin GWS) all outstanding snagging and reinstatement

works, with minor exceptions, are due to be completed shortly.

Glan Agua Ltd has received the go ahead for a proposed variation of UV disinfection facilities at Loch hÍbirte agus Leitir Mealláin GWS, Barnaderg Gortbeg GWS and Kilconieron GWS.

Further information for each DBO bundle is discussed at LMC meetings that take place quarterly. DBO 2 LMC meeting last met on 13 February, while DBO bundle 1 LMC met on 27 February.

Since these meetings, the issue of bonds has been resolved. The next meetings are scheduled for 15 May and 29 May respectively.



Joe Daly and Pat Reddington of Gurteen Cloonmore GWS at the outflow from their spring source. Excellent work has been done recently in covering the spring and improving the sump and the area surrounding it.

A recent 3.2km critical mains replacement on Barnaderg Gortbeg GWS has resulted in a dramatic reduction in water demand on the scheme.

Source data sheets have been forwarded to the GSI in respect of 20 Galway schemes due to complete ZOC delineation this year.

Three schemes that completed ZOC delineation in 2013 received copies of their reports recently.

At the AGM of Galway GWS Federation on 10 February, the chairperson Aidan McNabola paid tribute to Michael John Kilgannon on his retirement after many years of service to his local GWS, to Galway Federation and to the NFGWS.

At the Federation ADC on 12 March, Aidan McNabola was returned as one of three new NFGWS Board members.

Two privately sourced group schemes, Carrigan GWS and Caherdine Caherdevane GWS were linked into a public water supply late in 2013.

The following group schemes were taken in charge since our last report: Pollagh (Kilcolgan), Lisheenavalla & District and Curry Pollinore.

Esker GWS recently completed universal metering, installing more than 70 meters. All connections were manually dug, either by the owner of the property or by GWS committee members if the owner was unable to do so. After purchasing second hand meters and new meter boxes, the total cost per connection worked out at €80, including fittings and installation.

A large number of leaks were identified. Their repair has resulted in a significant reduction in the volume of water being pumped.



Tobberowen/Lissybroder GWS Chairperson, Seán Prendergast with Eddie Mullin and John Mullin pictured during completion of the source data sheet for the scheme's spring source, as part of the ZOC delineation project.

An engineer's report assessing several possible upgrade options for 3 group schemes in the area west of Gort has been completed.

2 of these schemes, Roo GWS and Tierneevin GWS are anxious to proceed without further delay to address periodic microbiological failures.

A meeting to identify priority schemes requiring treatment

upgrades was held on 21 February between the NFGWS and Galway Co. Co. officials.

Tubber/Monreagh GWS is awaiting planning permission to develop a new borehole source. The proposed site (secured at a very reasonable cost) is close to an historic structure, hence the delay in planning. The current source is prone to contamination.



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Leitrim:

The AGM of the Leitrim Federation took place in February. Michael Keaveney Chairperson of the Federation was nominated to go forward for election to the board of the NFGWS.

Much of the business of the meeting was taken up with discussions on the future of the publicly sourced GWS sector, schemes expressing concern at the lack of information to date on important issues that will have a bearing on such schemes.

A large number of publicly sourced schemes in Leitrim are understood to have applied for taking-in-charge before the end of 2013.

Following advice from their insurance company, Sliabh an Iarainn GWS is considering removing infrastructure from their old source – a mountain lake.

The committee considered leaving the old supply in place to serve a small number of farm connections, but after requesting their insurance company to cover the pipe work and old reservoir they were told that this wouldn't be a good idea. The risk of cross contamination and the possibility that a member of the public would access this supply for potable use meant that it could not be included under their GWS policy.

Mayo

The Federation AGM was held on 28 January. Mayo submitted two motions to the Annual Delegate Conference, one dealing with the shortfall in funding for new schemes following the abolition of Clar funding some time ago. A number of proposed new schemes in Mayo did not proceed even though they had spent considerable member funds on consultants fees and ecological reports.



Pupils and teachers of Midfield NS accompanied by GWS committee members on a tour of the scheme.

Mayo Federation Chairperson, John Gavin said that with the establishment of Irish Water the true value of community owned and run water services will become more apparent.

Part 8 planning permission for the provision of a raw water holding tank at Belderrig was secured at the December meeting of Mayo County Council. This upgrade is to be included as part of the Buckagh Furnace contract [see below].

Commissioning remains to be completed on a secondary chlorination plant at the Redhill reservoir site on the PBKS Group Water Scheme.

Works to facilitate the connection of Buckagh Furnace to Clewbay GWS had still not gone to tender at the time of going to print.

Works are ongoing to install a new rising main and additional scour valves on Attymass GWS.

Fourteen Mayo schemes with spring sources have been identified to take part in Zone of Contribution studies during 2014, while six schemes with surface water sources will also have delineation work completed this year.

John Kelly, the driving force behind Midfield GWS, led local schoolchildren and teachers on a recent tour of the scheme.

After visiting the excellent spring source in Kilkelly, the school party proceeded to Midfield reservoir site, which is also the location of the scheme's committee room and office, as well as a storage area for fixtures and fittings.

They learned about the telemetry installed to manage the network and ensure that quality water is delivered at all times.

One of the teachers present, Susan Lavin, said that both students and teachers had learned from their visit. She added that they 'had not realised all the effort and work that went into the provision of water to the local community'.

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Roscommon

Upgrading of the Corracreigh, Mid Roscommon and Oran Ballintubber DBO treatment plants to cope with raw water variations is progressing well. Most of the civil works are completed, while M&E works were scheduled to start this month (March) on the Mid Roscommon GWS plant at Lismurtagh.

Clarification units, along with pumps, dosing tanks and mixing equipment have been delivered for all three schemes, while the flocculation tanks are fully completed. A mobile Sludge Dewatering unit has been delivered and is fully operational. This will be used between all the plants in the bundle, greatly reducing the costs for sludge removal on all three schemes.

DBO operator, Glan Agua will also be able to use the unit for desludging on DBO schemes in neighbouring counties.

The DBO schemes and Glan Agua recently agreed to change over to the Sofrel system of bulk meter telemetry, in light of concerns at every LMC meeting about the lack of information available from the previous system.

Cheetah Electronics has already installed new loggers and the system is up and running. This has resulted in a great improvement.

Pollacat GWS is currently completing critical mains replacement on its network. The GWS is still waiting on Department approval for a variation to the treatment process and it hopes that this upgrade will be included as part of this year's Rural Water Programme.

All Roscommon schemes are anxious to proceed with ZOC delineation work in 2014. Site visits to collate relevant data are now complete.

Sligo

The AGM of Sligo GWS Federation was told that the issue of arrears on payments to the DBO contractor relating to the discontinuation of certain indices used in the validation of payments to the contractor was currently under discussion between the Department, the NFGWS and the DBO contractor (Coffey Water).

Michael Flemming (Chairperson) said that procedures should be put in place to facilitate schemes that opt for take-over or connection to public mains in the new era of Irish Water. He added that it was vital that clear guidelines be put in place in order to facilitate such schemes.

It was noted that there are not very many Sligo schemes left that require taking-in-charge.



Anthony Lee (Pollacat GWS) with Seán Monaghan and Liam Clear (T. J. O'Connor & Associates).



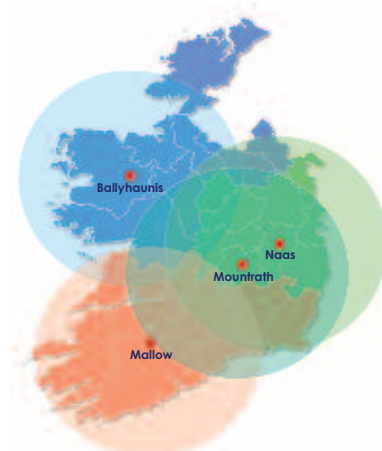
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Leinster Region

by Barry Deane, Julie Brannigan & Joe Gallagher

Carlow

Carlow County Council made its submission for funding under the 2014 RWP in February. Network upgrades/water conservation works are planned for Ballinabranna GWS and St Mullins Parish GWS.

The South Leinster DBO Capital replacement programme also commences for these schemes in 2014.

Ballyellen GWS hopes to join with Ballinabranna and St Mullins Parish in availing of the grant for specific source protection works – i.e. Zone of Contribution (ZOC) delineation.

The NFGWS is currently working with all three schemes, gathering relevant information in advance of a hydrogeological study.

The NFGWS is also working with T. J. O'Connor & Associates, compiling borehole logs and pump test data in respect of the Ballinabranna and St. Mullins Parish raw water sources.

Carlow & Wexford FGWS held its AGM in Kildavin, on 17 February, with 5 of the 8 schemes across both counties represented. The meeting dis-

cussed a wide range of issues including future capital funding and operational subsidy, GWS charging, specific source protection works and also the establishment of Irish water and potential impacts for private GWS.

Following an account by Mike Reddy of Blackstairs GWS on the benefits to be gained from placing the *All About Water* curriculum in local primary schools, the meeting submitted a motion to the ADC asking the NFGWS to consider how this educational resource might be further promoted.

St Mullins Parish GWS recently featured in an interview by Valerie Cox for a piece on RTE Radio One's 'Sean O'Rourke Show'.

The programme was keen to establish how the GWS operates and the challenges it faces, particularly since the establishment of Irish Water. The item featured contributions from founder member and current Chairperson Pat Ryan, Treasurer Pat Cleere, Secretary Larry Wickham and committee member, John Doyle.

Scheme manager, Patricia Lawlor and other GWS staff also featured, as did two members of the scheme who have businesses locally.

The piece was a resounding success, portraying the excellent work being done



Members of Ballycallan GWS committee who recently completed the NFGWS Management Training Course.

by St Mullins Parish GWS and by group schemes across the country.

Kildare

Kildare and Wicklow Federation of GWS met in February, with only 4 out of 13 group schemes represented. Chairperson Pat Martin expressed his disappointment with the turnout. While there were a number of genuine apologies, he felt that schemes should make more of an effort to support Kildare & Wicklow FGWS.

The meeting discussed the various challenges faced by small schemes in relation to funding and the disadvantages of having a smaller base of member to pay for capital and operational works. A motion on this issue, proposed by Syl McEvoy (Ballingate GWS) and seconded by John O'Keeffe (Askinagap GWS) was submitted to the ADC.

Kilkenny

Ballycallan GWS recently completed the revised NFGWS Management Training Course. Members of the new committee appointed last year decided to take part in the course as a way of familiarising themselves with best practice in relation to managing a GWS.

Following the completion during 2013 of Zone of Contribution delineation reports in respect of 8 schemes in the county, there

will not be any schemes from Kilkenny taking part in this work during 2014. However, it is hoped that a number can be completed in 2015. In the meantime schemes should now begin gathering data on their sources, including borehole logs (if available), raw water results and any potentially relevant information on local topography, such as the presence of sinkholes.

Kilkenny GWS Federation held its AGM on 6 February. The meeting was very well attended with 30 GWS personnel present, representing 19 schemes.

Following the development officer's report, there was a lengthy discussion about Irish Water. The unsatisfactory position of publicly sourced GWS in the county was raised, with Lacken Rathmoyle GWS agreeing to send a representative to the then proposed focus group on the issue being set up by the NFGWS.

A number of questions were raised in relation to fire hydrants and what exactly the fire service in Kilkenny want schemes to provide.

Barry Deane of the NFGWS explained that the survey sheets for fire hydrants sent to all GWS by Kilkenny County Council should be completed and returned as soon as possible.

Schemes needing further assistance were asked to contact the NFGWS or Kilkenny County Council.



RTE journalist, Valerie Cox, with committee members and staff of St Mullins Parish GWS.



Relaxing with a cup of tea after the Laois Federation AGM.

Laois

The Capital Replacement Programme is due to commence this year on 3 of the Kilkenny schemes in the South Leinster DBO bundle.

Joe Mernagh has been appointed as GWS engineer with Kilkenny Co. Co., taking over from Alan Hyland. The GWS sector sincerely thanks Alan for his hard work over the last few years and we wish him all the best for the future. We also welcome Joe to his new position.

Laois Federation of GWS met on 21 January, with representatives from 9 group schemes in attendance. The meeting discussed a wide range of topics including the thorny issue of road opening licences. This issue had been discussed in depth at previous meeting but unfortunately after a meeting with Laois Co. Co. last year at which the concerns of the GWS sector had been voiced, nothing had changed. GWS gave examples of initial requests by Laois Co. Co.

roads section for very large refundable deposits which schemes simply could not afford. Thankfully the Water services section stepped in and the schemes only had to pay the normal rates eventually. A delegation was nominated to meet with the Laois Co. Co. Director of Services on the matter along with the NFGWS.

Errill GWS is looking at revising their charging system to one based on usage.

The scheme recently installed consumer meters on all connections and has also invested in an Automatic Meter Reading system which should be up and running shortly. The scheme used the NFGWS financial planner to assist them in setting their proposed new charges.

The NFGWS has gathered data from the 5 Laois schemes that will complete Zone of Contribution delineation work on their sources this year.



Michael Robinson at the Barrowhouse GWS treatment plant. Strict Q&A procedures are followed in the management of the facility



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Source data sheets and other information in respect of the group schemes involved – Ballacolla, Barrowhouse, The Heath, Donaghmore and Errill – have been forwarded to the Geological Survey of Ireland and a suitably qualified hydrogeologist is expected to be appointed in April.

Capital replacement works are due to be completed this year on the Donaghmore and Ballypickas DBO treatment plants, as both schemes are now entering year 6 of their O&M contracts.

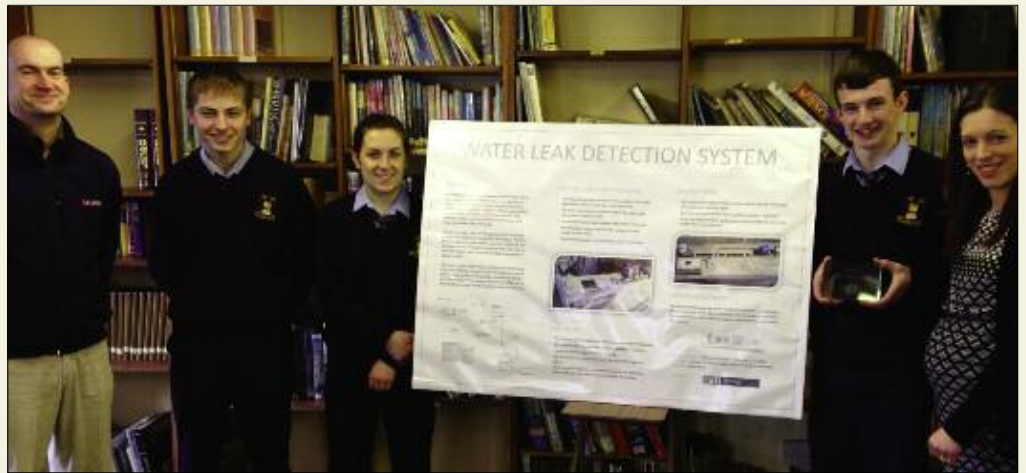
Longford

Clonmore Kilmore GWS has identified a number of works that need to be completed at their pumphouse. The committee has received quotes for these works and has applied for funding under the RWP.

Both Clonmore Kilmore GWS and Fostra GWS plan to take part in the ZOC delineation study with the GSI this year.

Louth

Louth Federation AGM was held on 27 January in Drogheda, attended by 8 representatives from 4 group water schemes.



David Mullaniff (IPL Group) with Lorcan O'Rourke, Emma Kirwan, Gavin Mooney & teacher Elaine Howlin of Tullamore College, marking the school's success in achieving a special award at the prestigious Young Scientists Exhibition for designing a water leak detection system for home-owners. IPL sponsored the the equipment used in the project (having been approached by Lorcan O'Rourke who lives on the Killeigh Group Water Scheme). The system operates by linking a minimum of 2 meters that compare readings on a regular basis. In the event of a major difference being detected between the 2 meters readings, the system either shuts down or sends an alarm to the home owner. The entry attracted huge interest, including offers from investors to buy into it!

County secretary Derek Flynn gave a report on developments in 2013, during which Louth schemes continued to work closely with the county council in progressing upgrade projects.

Work is ongoing on the installation of scour valves on Tullyallen GWS.

Sheepgrange GWS is in the process of investigating options for water conversation at the treatment plant.

Ballymackenny Sandpit GWS will begin work shortly

to install pressure reducing valves and build a storage unit at its reservoir.

After major upgrades in 2013, Grangebellew GWS will be installing a soft start motor in the coming weeks to help reduce pumping costs.

The scheme has employed the services of an accountant to look after book-keeping etc.

Meath

Work is expected to begin shortly in installing bulk meters on the Kiltale GWS network.

After field tests of the Meath Hill GWS meter reading technology proved successful on over ground reading, underground reading is still being investigated.

Further testing as part of the WIMBEX pilot project will be completed during this year.

A universal meter installation project is nearing completion throughout the scheme.

Offaly

Tubber GWS recently developed a new borehole within the site of their existing source. This will give them the security of a continuous

high quality raw water supply. The GWS hopes to construct a reservoir this year after a delay in planning meant that the drawdown of funding was missed last year.

Planning is now finalised and the committee is anxious to proceed as soon as possible, as they need to secure their storage facilities from vandalism.

Group schemes in Offaly recently came together in the office of Ballinagar GWS to have their handheld Chlorine monitoring units calibrated. This was a more cost efficient option than calibrating the units individually.

Hydrogeologists Robbie Meehan & Suzanne Tynan were joined by staff of the GSI and NFGWS to present Zone of Contribution (ZOC) delineation reports completed last year in respect of several Offaly schemes, including Ballykilleen GWS, Boher Leamonaghan GWS, Cadamstown GWS, Killeigh GWS, Tubber GWS and Esker GWS, as well as Moyglass GWS from County Galway. All of these schemes were represented at the information session and a Q&A session proved very valuable.



Liam Murphy and Tommy Nevin of Clonmore Kilmore GWS.

Westmeath

Multyfarnham GWS has begun improvement works at their chlorine facilities in order to improve residual readings on the network and to ensure a more consistent dosing rate.

The committee has plans for several upgrades in 2014 and has recently completed a new Health & Safety statement for the scheme.

Wexford

All 5 privately sourced GWS in Wexford will have ZOC delineation of their sources completed this year. Each scheme has applied for the funding and, with NFGWS assistance, has completed the gathering of relevant data.

Kilanerin GWS committee has been using the NFGWS financial planner to assist them in striking a fair water charge that will cover costs and help them build a reserve fund for future upgrades.



Members of Cornagower GWS who attended their scheme's AGM recently.

Following a major upgrade last year, Knockina GWS has completely cleared its site of overgrowth and has erected security fencing. The scheme now has a pH correction facility and has installed meters on all connections.

Wicklow

A Quality Assurance site visit recently took place on Blakestown Brittonstown

GWS, which supplies 30 members.

Regular monitoring of the sources, treatment system and distribution network are carried out by the committee members, including treasurer Declan O'Connor.

Ballyfolan GWS recently formed a co-operative structure, following a unanimous vote of the members at an SGM in February.

Implementation of improved Quality Assurance procedures are planned on Askinagap GWS following a recent review with NFGWS development officer, Barry Deane.

Cornagower GWS held its AGM in March. The scheme will work with the NFGWS over the coming months to improve QA implementation.

continued on page 27



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Munster Region

by Joe Gallagher & Barry Deane

Clare

There was a good attendance at the county Federation AGM, as many publicly sourced group schemes were anxious to know what impact Irish Water will have on their future.

3 motions were put forward by the meeting to the ADC in relation to pipelines in private property, fracking and funding for the sector.

Work will proceed in the coming months on items due for replacement in DBO plants under the Capital Replacement Programme. A meeting was held between the group schemes, the DBO Contractor (EPS Ltd), the Client's Rep, the NFGWS and Clare County Council to finalise the programme and the Client's Rep has completed preliminary visits to the plants to ascertain the works that need to be completed.

Ranaghan GWS is hoping that the boil water notice currently in place on their supply will be lifted soon. The GWS has had a number of clear results, but changes in the lake source water quality after heavy rainfall have prompted caution on the part of the authorities.

Corbally Danganbrack GWS, Spencil Hill GWS & Castlecrine GWS have all

continued from page 26

Ballingate GWS recently met with the NFGWS to consider introducing a new charging system based on the Federation's financial planner.

Now that the pipe work connecting Hempstown GWS to the Blessington Regional



Above: Some of those who attended Cork GWS Federation AGM. Right: John O'Brien & Paddy Leahy of Kilcredan GWS who were at the AGM.



completed upgrading works and are now ready for taking-in-charge.

Cloonfada GWS completed a leak detection survey on its network recently and recorded high night time flows of over 14 m³/hour. The scheme has applied for upgrading works to resolve this issue.

Cork

The GWS Federation AGM on 20 February was attended by 13 representatives from 10 schemes.

Amongst topics discussed were the delays some schemes continue to experience in relation to payments being received from the County Council.

A meeting was recently held involving Ballyglass GWS, the NFGWS and Cork Co.

scheme is completed, Tinode GWS is hopeful that it is next in line to be connected to the public main.

Wicklow Co. Co. hopes to survey the scheme this year to see what works will be involved and also to ensure that the public supply has the capacity to supply the additional connections.

Council to fast-track the taking-in-charge of the Ballyglass scheme which had been experiencing serious quality issues for some time.

The scheme applied for taking-in-charge in 2006, but numerous delays and complications had arisen since then. At the recent meeting, the council agreed to immediately take over the operation of the GWS in advance of full takeover, which will hopefully be completed in a few months time.

Curraglass GWS secured ownership of a new site for a reservoir in 2013 but were not granted full planning permission until January this year. This, along with other delays, meant the scheme was unable to carry out any construction works last year. The scheme has re-applied for funding this year and is hoping to commence works as soon as the funding is allocated.

Limerick

The Federation AGM was very well attended. Amongst the motions submitted to the NFGWS ADC was one in relation to an ongoing mining project in the Pallas Green area and another in relation to securing funding for water sampling technologies on GWS networks.

Limerick DBO bundle held its first LMC of 2014 in the Kilfinny GWS area.

DBO service provider, EPS Ltd, described conditions since the start of the year as 'very challenging', with severe weather events causing outages and disruption to many supplies.

Nitrate levels had increased on a number of GWSs.

As the capital replacement of plant is due to commence this year, schemes were provided with an update on the progress to date.



Replacing meters on non domestic connections on Lough Gur GWS.

Lough Gur GWS is replacing meters on non domestic connections and intends installing telemetry to facilitate more frequent reading of all farm connections.

There was sad news from Lough Gur too, with the passing of Kevin Doody. His untimely death left his GWS colleagues and the entire area in shock.

Well known within the group water sector in Limerick and nationally, Kevin's vast knowledge of computer technology was a huge asset locally, as he designed a billing system and other management tools for Lough Gur GWS.

An efficient dairy farmer, he also found time to work for the wider development of the Ballyhoura region.

We extend sincere sympathies to his wife and family.

Caherline Newtown GWS met recently with the consultants working on the Pallas Green Zinc Mining Project, a development that may have serious implications for groundwater levels in the area.

If it goes ahead, mining could go as deep as 1,200 meters. Exploratory works are well underway and this has involved some 15 drilling rigs boring to 200m and then laterally 300m in any direction. The GWSs involved have supplied the consultants with ZOC delineation reports that were completed recently on their sources.

The consultants have assured Caherline Newtown that they will not go within 300m of their sources.

Limerick Co. Council recently lifted boil water notices on Knockainey GWS and Clovers GWS, as well as a precautionary boil water notice on Cappagh GWS.

Tipperary

Zone of Contribution (ZOC) delineation on 14 Tipperary GWS is almost complete. The appointed hydrogeologists are putting the final touches to the reports and it is hoped that meetings to explain the reports to the schemes will commence shortly. Fennor Inchourouke GWS already met with its hydrogeologist, while a meeting is currently being arranged for schemes in the Lough Derg area.



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Representatives of Ardcroney GWS and Killeen GWS pictured at the Tipperary GWS Federation AGM in January. With 26 group schemes represented, this was the largest attendance for many years. Above: Thomas Callinane, Thomas Higgins and Pat Mockler pictured at the AGM.



Top: Gerard O'Rourke, Rathfalla GWS and Tim Conway, Drumbane (Ballina) GWS at the Tipperary GWS Federation AGM.

Bottom: The late Michael Ryan with Caoimhe Hickey and Karen Ibbotson.

Tipperary GWS Federation representatives from 26 AGM on 30 January was schemes, making it the largest attended by over 45 GWS attendance for many years.

Many of the schemes were anxious to get an update on Irish Water and on NFGWS progress throughout the year as part of the water sector reform negotiations on work stream 4.

Ardcrony GWS recently completed the NFGWS revised Management Training course.

The committee (first elected in 2012) has formed a co-operative structure and hopes to organise its inaugural AGM shortly.

Our condolences to the Ryan family and to his GWS colleagues on the recent passing of Michael Ryan, aged 74.

Michael was one of the three original trustees of Fenner Inchorourke GWS in 1981 and he served as secretary over many years.

He was actively involved in the day to day running of the scheme up until his final illness and was immensely

proud of all that had been achieved, not least the major upgrade completed some years ago.

Michael was a regular attendee at national conferences on rural water, alongside his beloved wife, Eileen, to whom we extend heartfelt sympathy.

Meetings were held in March with 4 group schemes in the Thurles area that are considering the feasibility of coming together to appoint a manager. Between them the schemes have a combined 450 connections. It is hoped that the position will be advertised in April.

Waterford

A QA site visit took place on the Moonminane GWS in January.

Slady Castle GWS, a small scheme located between Clonmel and Dungarven, was also visited in January.



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Ulster Region

by Julie Brannigan & Brian MacDonald

Cavan

The GWS Federation AGM was held on 22 January in Butlersbridge, attended by 31 representatives from 15 group water schemes. Mairéad Sheridan, Secretary, gave a detailed report, including an overview of the 2013 Rural Water Programme.

County chairperson, Jim Maguire spoke of the importance of the work carried out by the NFGWS.

Catchment delineation reports are currently being prepared in respect of several local GWS sources. The schemes involved include Dernakesh GWS, Farmoyle Barraghy GWS, Gowlan GWS and Milltown GWS.

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

Bulk meter installation work on Drumkeery GWS has been completed.

Further source protection measures continue to be implemented on the scheme. The committee is in discussion with farmers surrounding the lake source with a view to installing stock-proof fencing.

Dernakesh GWS is fixing numbered plates on all meters to ease reading.

Farmoyle Barraghy GWS is currently installing new steel piping in its treatment plant, as well as upgrading high lift and chemical pumps.

A critical mains replacement contract is ongoing on Corlough GWS.

Following the installation of new bulk meters, Cliffernaw GWS is now concentrating on repairing leaks they were unaware of prior to commissioning of the bulk meters.

Mountain Lodge GWS is currently upgrading and replacing scour valves.

Phase 2 of the Glangevlin GWS network rehabilitation project is due to be completed within the next month.

Donegal

NFGWS Quality Assurance site visits were carried out on Bunn GWS, Meenabool GWS and Townawilly GWS over 4 and 5 February.

All three schemes are maintaining QA records and demonstrate a professional level of management.

In an interview with the Letterkenny based Highland Radio on 5 February, NFGWS development officer, Brian MacDonald reiterated the message that privately-sourced schemes have nothing to fear from the advent of Irish Water. He added that many questions remain to be resolved for the hundreds of publicly sourced schemes in Donegal, not least

those schemes that had and in which committees no requested taking-in-charge longer operate.



Top: Bulk meter installation on Drumkeery GWS. Middle: Dr Alec Rolston of the Centre for Freshwater and Environment Studies evaluating potential pressures at an inlet stream to Barraghy Lough, drinking water source for the local GWS. Bottom: Coiste members of Comharchumann Torai held a meeting with GWS representatives from Bunn, Meenabool and Townawilly on 27 February to discuss the future of water supply on the island.





Éamonn McCabe of Bunn GWS discusses the chlorine monitoring system in Meenabool GWS, with local caretaker, Eugene Mooney.

A very successful meeting of Donegal GWS federation was held on 7 February, with the 4 privately sourced schemes in the county represented.

It was decided that more regular meetings should be held so that information might be shared, with schemes learning from one another.

As a direct follow-on from the county meeting, representatives from Bunn, Meenabool and Townawilly Group Water Schemes were joined by Brian MacDonald of the NFGWS on a visit to Toráí GWS on 27 February.

Toráí has been experiencing significant difficulties, not least during the recent storms when their pumphouse was inundated by the Atlantic ocean.

Given earlier difficulties, Comharchumann Toráí had approached the county council to see if the scheme could be taken-in-charge.

The visit by the other GWS representatives was designed to evaluate what would be required for the scheme to remain privately-sourced and in compliance with the Drinking Water Regulations.

Following an assessment from the Loch a' thuaidh source to the reservoir, the considered view of the GWS delegation was that the scheme could be

turned around with a modest, focused investment and by a renewed commitment from the island community to its maintenance.

At a meeting with the GWS representatives, and after hearing this evaluation, members of the coiste of the comharchumann stated that their preference was to continue as a private group scheme.

The issue was to be put to the island community at a public meeting on 25 March.

Monaghan

The county federation AGM was held on 20 January, attended by 25 representatives from 11 group water schemes.

Following 10 years of service, the AGM was informed that Mac Boyd would not be going forward for re-election to the NFGWS Board.

Federation chairperson, Hugh O'Reilly was nominated from the Monaghan Federation and he was confirmed as one of three new Board members at the National Federation ADC on 12 March.

Glaslough Tyholland GWS is in the process of appointing a manager.

Construction works have been completed on the new 100,000 gallon reservoir at Stranooden GWS.

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A source catchment delineation report is currently being prepared for the GWS.

Magheracluone GWS is refurbishing sluice valves on its network.

Killanny & Reaghstown GWS is close to completing the replacement of 3km of critical mains.

The 'All About Water' workbook is an excellent teachers resource for primary schools. Five schools in Monaghan have achieved their Water

Flag in 2013 as part of an Taisce's Green Schools programme with a further 8 schools participating in various Water Workshops organised by Nial O'Connor, Environmental Awareness Officer with Monaghan Co. Council.

The first cross border River Trust was established in the Blackwater Catchment in 2013.

Having secured charity status, the trust has already sourced funding to begin a number of environmental projects.

Important dates for your GWS diary in 2014

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 July: RWN Advertisers' Exhibition, Tullamore

10 September: Rural Water Conference, Athlone



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