Environmental Pillar
WORKING FOR A SUSTAINABLE FUTURE

Environmental Pillar Position on Water Services

April 2015

State of Ireland's Water Infrastructure

Ireland is facing an uncertain future in respect to its antiquated and dilapidated water services infrastructure. Much of our water and wastewater infrastructure dates back to the Victorian age with many aging and leaky water and sewerage pipes in addition to many of our inadequate drinking water and waste water treatment plants. This legacy leaves many areas subject to boil notice orders (Roscommon being the most egregious and long standing problem) and larger urban areas facing periodic shortages. The EU has initiated an infringement case against Ireland in relation to 71 wastewater agglomerations. In addition, 38 of the 162 larger urban agglomerations in the country are not meeting wastewater treatment standards under the Urban Waste Water Treatment Directive.[1]

Infrastructure shortfalls combined with unpredictable weather patterns exacerbated by climate change subject many areas to high risk of either shortages or flooding episodes. If our water services infrastructure continues to breach EU standards, the quality of our ambient waterways is in jeopardy through excessive water abstractions to meet the needs of the population and pollution of surface and ground waters by insufficiently treated sewage discharges.

Septic Tanks

Ireland has 440,000 septic tanks throughout the country-side. Under the Water Services (Amendment) Act 2012, all owners of septic tanks and other small waste water treatment systems must register with their local county councils. The EPA has begun its inspection process on risk-based approach to prioritise areas of higher risk. Approximately 1,000 septic tanks were inspected in 2013-2014. These inspections revealed the following:

[1] Draft Water Services Strategic Plan, Irish Water (2015)

- 987 inspections were carried out
- 476 systems (almost 50%) failed the inspection and received an advisory notice
- The most common reason for failure was lack of de-sludging
- 52% of sites with private wells failed the inspection
- 79% of inspected systems more than 50 years old failed the inspection
- 79% of the inspected systems are now compliant with the regulations[2]

These statistics reveal that the most common reason for tank inspection violations was the failure to de-sludge. The government should initiate a national public awareness 'De-sludging' campaign on the need to de-sludge septic tanks. Owners should also be made aware of the necessity to not use chemicals that kill the bacteria in septic tanks that are degrading the sludge.

At the current rate of the national inspection programme, it will take 440 years to inspect all septic tanks. Historically, many of these were sited improperly, especially during the building boom in the 1990s and early 2000s. Additionally, many householders have failed to desludge their septic tanks, releasing contaminated water that can carry pathogens (bacteria/e-coli) and harmful chemicals into the environment, including ground and surface waters. Since many households that have septic tanks also have their own wells, these releases can contaminate drinking water which can cause serious illness.

The Department of Environment, Community and Local Government has established a grant system to remedy problems raised through the septic tank inspection programme. However, this grant scheme is limited to those tanks that have been inspected. There is no incentive for households to repair, replace or re-site their septic tanks voluntarily. This glacial speed of inspections along with limitations associated with the loan programme cannot yield positive results and will delay any beneficial impacts the registration and inspection regime sought to create.

[2] http://www.epa.ie/pubs/reports/water/wastewater/Report%20National%20Inspection%20Plan%20Web.pdf

Financial Situation of Irish Water

Irish Water, in its Water Charges Plan to the Commission for Energy Regulation (CER) stated that it will cost €2.078 billion to operate from October 2014 until the end of 2016.[3] According to the Office of Public Expenditure, the following table illustrates the costs of Irish Water in 2014:

Irish Water Costs:

Type of Cost	Amount	Financed by
Establishment Costs	€180m	NPRF
Metering Costs*	€539m (excl VAT)	NPRF
New Operational Costs 2014	€120-140m	Third Party sources
Operational Costs 2014	€690m	Local Gov Fund €490m, Non-Domestic Water Charges €200m
Capital Costs 2014	€240m	Equity injection

*Estimated 160,000 (of the total 1.05m) water meters have been installed[4]

According to the Irish Water's 2014 testimony before the Joint Oireachtas Committee on the Environment, Culture and the Gaeltacht, "[i]n 2009 the Water Services Investment Programme would have cost €6bn to implement. Indeed the overall requirement to upgrade services has been estimated at €10bn. Since 2009 we invested €1.5bn in our water services infrastructure."[5] Ireland still has a long way to go to upgrade its services.

Looking at historic costs in relation to the provision of water services, the State has consistently earmarked around €1.3 billion annually for operations and capital investment. In the past, this amount was paid through general taxes and is estimated that in 2010 it cost the State €632 per household to provide

[3] Irish Water Water Charges Plan to the CER (Supporting Information). https://www.cer.ie/docs/000979/A%2003%20CER14408%20-%20Irish%20Water%20%20Water%20Charges%20Plan%20Submission%20Supporting%20Information.pdf

[4] http://*per.gov.ie/wp-content/uploads/46.-**Irish-Water-Costs**.pdf*

[5] http://www.water.ie/news/summary-of-submission-by-/Irish-Waters-Submission-to-the-Joint-Oireachtas-Committee-on-the-Environment-Culture-and-the-Gaeltacht-11th-February-2014..pdf

water services.[6] It is now estimated that it costs the State €594 per annum to provide both drinking water and sewerage treatment services to each household.[7] As each household with two adults will pay €260 gross (not including the €100 water conservation grant) or €160 for single adult households, there will be a significant shortfall in the revenue needed by Irish Water to provide its services. This will be paid through general revenue or through outside investment. Figures provided by the CSO indicate that in 2011, there were over 1.649 million households.[8] Simple calculations demonstrate that it will cost nearly €980 million to provide water services. However, delving further into the types of households in the country, a rough calculation reveals that the current water charging structure will bring in around €330 million[9], €650 million shy of what is needed to simply run the system, let alone invest in the aging infrastructure.

Additionally, the country has committed to invest €600 million each year to improve the infrastructure through capital spending.[10] The question remains, where will this money come from? Either the water charges scheme needs to be re-evaluated or an Irish authority with responsibility for water must be able to raise needed capital from investors. Either way, the financial structure of our national water services entity must meet the fiduciary requirements set by Eurstat that more than 50% of its operations are funded by users to remain off budget. If this test is not met, then the funding of water services goes back on budget and will adversely affect Ireland's deficit level.

The Environmental Pillar, in recognising the gross waste of water through leakages and the antiquated water and wastewater treatment services, advocates a household water charge that achieves the two-pronged result of reducing water consumption and generating revenue to upgrade both the

---

[6] http://www.oireachtas.ie/parliament/media/committees/environmenttransportcultureandthegaeltacht/Revised-Opening-Statement-Dr-Edgar-Morgenroth.pdf

[7] http://www.irishtimes.com/news/consumer/water-in-ireland-to-cost-more-than-in-most-eu-states-1.1884342

[8] http://www.cso.ie/quicktables/GetQuickTables.aspx?FileName=CNA29.asp&TableName=Private+Households+by+size&StatisticalProduct=DB_CN

[9] There are approximately 607,315 single adult households (x€160) and 963,895 two adult households (x€260). This would bring in €347,783,100 plus fees from holiday homes and rental homes €7,211,313 = €354,994,413. However, some households are already paying under the Rural Water Scheme -- around 170,000 households with average fee of €100 calculating that some homes have 1 adult and some have 2 (take away €17,000,000) plus those households with septic tanks not billed by Irish Water (440,000 tanks, of which 170,000 in rural water schemes, 115,000 in holiday homes leaves a remainder of 155,000 with average fee of €50 calculating that some homes have 1 adult and some have 2. (€7,750,000). This leaves a total of around €330,244,413 per annum

[10] https://static.rasset.ie/documents/news/speech-by-minister-alan-kelly.pdf

water and sewerage treatment systems and to repair leaky distribution pipes. This charge must be directly based on the amount of water used and waste services provided.

We support the establishment of a public service Irish water authority to oversee the management of this vital resource. This authority would act on behalf of the government who remain trustees of the water. The Irish water authority must always remain a public entity. This authority should create better economies of scale in the treatment and distribution of drinking water and the treatment of sewerage, and to enable off-balance sheet borrowing to support the necessary infrastructural work. We also believe that a well-managed authority would be well placed to protect drinking water sources and to impose measures to ensure that such waters achieve 'good ecological' status for all waters by 2015, as is required under the EU Water Framework Directive (WFD). The achievement of high quality drinking water is derived not only by effective treatment, but also by protecting the quality of ambient water sources. The regulation, enforcement and monitoring of water, whether it be protecting the quality of source water, or water/sewerage treatment, must go hand in hand to establish a seamless, integrated system to protect water quality and quantity.

Current water regulation

Under the Water Framework Directive (WFD), all EU States must ensure that their waters reach 'good ecological' status by 2015. According to EPA, 84.7% of groundwater, 52% of rivers, 47.3% of lakes and 64% of transitional waters have reached 'good' or 'high' ecological status.[11] While there has been progress made in improving our waters, there is still a long way to go to reach the WFD's 2015 target.

There are so many stresses on the quality of lakes, streams, rivers and other water bodies, including industrial discharges, farming, sewerage treatment plants, forestry, landfills, mining, boating, fishing and other recreation, and aquaculture, with many activities regulated on a county-by-county basis. As river basins cross over county lines, it is crucial that the combination of these stresses do not deteriorate Irish waters any further. As an example, what is done in Dublin can have a huge impact on water quality in Wicklow.

[11] EPA Report, "Water Quality in Ireland 2007-2009"

Additionally, there are so many national departments and agencies that have cross-over authority over different aspects of a water body, for example, the OPW has jurisdiction over flooding, ESB has jurisdiction over power generation and Inland Fisheries Ireland has jurisdiction over fisheries, that we are concerned that the communication between departments/agencies and local authorities are limited and that public participation is scarce.

Licensing

Licensing for discharges into water bodies is currently done by many different agencies, both local and national. IPPC licences for large industries and farms are issued through EPA, Section 16 discharge permits into sewerage treatment plants are now controlled by Irish Water (transferred from local authorities after the establishment of Irish Water) and Section 4 discharge permits directly into water bodies are issued by the relevant local authorities. We fear that there is a lack of communication between the relevant authorities and additionally that the local authorities do not have the capacity to adequately monitor and enforce section 4 licenses as many of the local authority water staff have been seconded onto Irish Water. Water abstractions are currently regulated by local authorities, but the licensing of such activities is sparse with many abstractions being done without permits.

The current regulation of water abstractions is woefully lacking as there are no uniform standards across the country and many abstractions go unlicensed by the local authorities. Irish Water has stated that "Irish Water assets comprise our water resources (in particular our rights of abstraction)".[12] We believe that Irish Water's claim to its 'rights of abstraction' should not be absolute and that these 'rights' should not be included in their list of assets. Assets should refer to the treatment plants and the pipes alone. When granting abstraction licenses, we conclude that Irish Water and rural water schemes should have priority over other commercial abstractions, but all abstractions must be granted only after the water source, the natural environment and habitats and biodiversity is protected under a strict adherence to the Water Framework Directive. In short, abstractions must be centrally controlled and licensed.

[12] Irish Water Water Services Strategic Plan, p. 32

Fluoridation of Drinking Water

Ireland and the UK are the only EU member states that deliberately fluoridate their citizens. Water fluoridation is a crude and rather ineffective form of systemic fluoride treatment for which there is no threshold scientifically determined to prevent dental and bone damage. Scientific studies have determined that ingested fluoride has little bearing on the reduction of dental caries and as such fluoridated water does little to protect teeth. Topical fluoride, such as found in toothpaste, has a better chance at reducing dental decay than any fluoride entering the bloodstream through the ingestion of treated drinking water.[13]

A key concern is overexposure to fluoride. In Ireland there is an epidemic of dental fluorosis in children, as confirmed by the *North South Survey of Children's Oral Health in Ireland 2002*. This survey revealed a seven-fold increase in dental fluorosis in Irish 15-year-olds from 1984 to 2002. Unsafe intake in adults is linked to a wide variety of adverse health effects including impaired thyroid, kidney and pineal function, bone cancer as well as other bone and joint disorders due to lifetime accumulation. In children, besides visible damage to teeth, adverse effects include IQ and brain damage. Dental fluorosis, which manifests as mottling or pitting of tooth enamel, is a sign of bodily overload of fluoride.

The rationale behind the fluoridation of drinking water was to protect against tooth decay in the early 1960s when good dental hygiene was not widespread and toothpaste was fluoride-free. This situation has changed over the past 50 years with most toothpastes now containing fluoride and a more educated population well-informed on the importance of good dental hygiene.

Ireland currently spends around €5 million each year fluoridating drinking water. Now that the responsibility for such activity resides within Irish Water and since we all must pay for the water we use, shouldn't we now have the choice of having our paid-for water fluoride-free? It currently costs around €200 per household to remove fluoride from our taps through reverse osmosis filters. This is will double our drinking water rates to receive the water in the condition we prefer. Ten county councils have all voted to ban the fluoridation

[13] http://fluoridealert.org/issues/caries/topical_systemic/

of drinking water--Dublin, South Dublin, Fingal, Cavan, Galway, Kerry, Cork, Leitrim, Laois, Wexford-- representing over 2 million residents.

Climate Change

A further pressure on our water supplies will be the impacts of climate change. Climate projections for Ireland indicate that there will be reduced rainfall on the East coast. This, combined with the increased demand for water in hotter weather by the growing population will result in water scarcity. Measures to eradicate leaks in our water systems and to reduce consumption of water are urgently needed. In addition, climate change will result in increased rainfall in the North and West of the country, particularly in winter time. Unless the remedial list of works needed in water treatment plants and itemized by the EPA are undertaken, it is likely that an increase in the incidence of waterborne illnesses from the impacts of climate change on health will result.

RECOMMENDATIONS:

1) Water Charges

The Environmental Pillar supports domestic water charges based on a pay-for-use basis through metering. The current rate schedule of charging without regard to the amount of water used is the worst of all worlds. It does not have the intended result of encouraging a reduction of water usage and resembles more of a tax rather than a user charge, like other utilities. We are sensitive to households that are facing hardship and believe that accommodations can and should be made in these situations similar to the current scheme under the Household Benefits Scheme under the Department of Social Protection. Those who can pay, should pay, and those that cannot pay should receive assistance.

Consumer rates must be lower than commercial rates. As industries and other businesses are for-profit companies that use more water and potentially pollute more than individuals, they should pay a higher rate.

TASC, an independent Irish think-tank, has proposed the imposition of water credits whereby all households are charged for the water they consume. However, to address households experiencing deprivation and/or those with special needs (such as for a disability), a water credit system would be in place to offset charges. These households would register for water credits by declaring their incomes and other relevant circumstances through self-assessment, similar to the property tax registration. TASC also calls for the establishment of a progressive water usage rate to increase the per cubic meter rate as consumption rises. The Pillar supports this structure as a better system to award reduced consumption, penalise higher consumption, generate income and to assist those households that find it difficult to pay for their water. Access to good quality drinking water is a human right and those who truly cannot afford to pay should not face water cut-offs or reduced pressure.[14]

2) Water Conservation and Protection Measures

To encourage additional water conservation, the government should provide free low flow shower heads or toilets, or allow tax relief at the standard rate

[14] TASC Policy Brief: Equitable Water Charging.
http://www.tasc.ie/download/pdf/tasc_equitable_water_charging_policy_brief_april_2014.pdf?issuusl=ignore

for the installation of systems that reduce water consumption and/or the installation of rainwater harvesting systems to reduce the demand on treated water supply. Systems that divert rain-water away from public sewers, and so prevent storm overloads at sewage treatment plants, should also be encouraged. In this context, where possible, only permeable surfaces should be acceptable in planning permissions for new developments.

Additionally, the current septic tank grant programme should be extended to assist financially-strapped households to upgrade non-compliant septic tanks as an urgent matter. The grant programme should not be limited to the small amount of tanks that have been inspected and failed to meet quality standards. Separately, a different low- or no-interest loan scheme could be developed for non-compliant tanks that have not been inspected but where the owners want to come into compliance and do not have the financial resources to do so. Lastly, the government should initiate a 'De-sludge Your Septic Tank' public awareness campaign.

3) Licensing

- All water discharge licenses must be issued through a national regulatory entity such as EPA or an Irish water authority. Currently, while the issuance, monitoring and enforcement activities of Section 16 licenses (discharging into wastewater treatment plants) have been transferred to Irish Water, Section 4 licenses (discharging directly into waterways) continue to be issued, monitored and enforced through the local authorities that don't have the resources or personnel necessary to police license infractions.

- There must be three-way communication between EPA, the Irish water authority and the RBD (River Basin District) offices when issuing discharge permits to ensure that such a discharge will not overload the river basin capacity.

- A data base of all current abstractions, both licensed and unlicensed must be compiled and available on a central publicly accessible site.

- Abstraction licensing (Irish Water is the largest abstractor in the country), on-site wastewater systems licensing and land drainage decisions must all be done through the EPA.

4) Water Fluoridation

As ten councils representing over 2 million people have voted to ban the fluoridation of drinking water and as the practice costs the State upwards of €5 million per year, we call on the government to stop this action at once. There are no benefits that justify this mass public medication, or that demonstrate that what was deemed prudent and in the public interest 50 years ago still holds true today.

5) Climate Change

Climate Change prevention and adaptation measures must be integrated into all planning and implementation of water services.

This policy was developed using the Environmental Pillar processes but is not necessarily the policy of each member group in the Pillar.

Contact:
Michael Ewing
Coordinator
Environmental Pillar
Knockvicar, Boyle
Co Roscommon
Tel: +353 71 9667373
Mob: +353 86 8672153
email: michael@environmentalpillar.ie

Environmental Pillar members: An Taisce. Bat Conservation Ireland, BirdWatch Ireland. CELT - Centre for Ecological Living and Training. Coast Watch. Coomhola Salmon Trust. Crann. ECO UNESCO. Feasta. Forest Friends. Friends of the Earth. Good Energies Alliance Ireland. Global Action Plan Ireland, Gluaiseacht. Hedge Laying Association of Ireland. Irish Doctors Environment Association. Irish Natural Forestry Foundation. Irish Peatland Conservation Council. Irish Seal Sanctuary. Irish Seed Saver Association. Irish Whale and Dolphin Group. Irish Wildlife Trust. The Native Woodland Trust. The Organic Centre. Sonairte. Sustainable Ireland Cooperative. VOICE. Zero Waste Alliance Ireland